



# ULTIMHEAT

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## HEAT & CONTROLS



# ENCLOSURES & ACCESSORIES FOR IMMERSION HEATERS & TEMPERATURE SENSORS

- Connection blocks in ceramic & PA66:
- Junction boxes, temperature controls & accessories for heat tracing:

See catalogue No.10

See catalogue No.12

Contact us





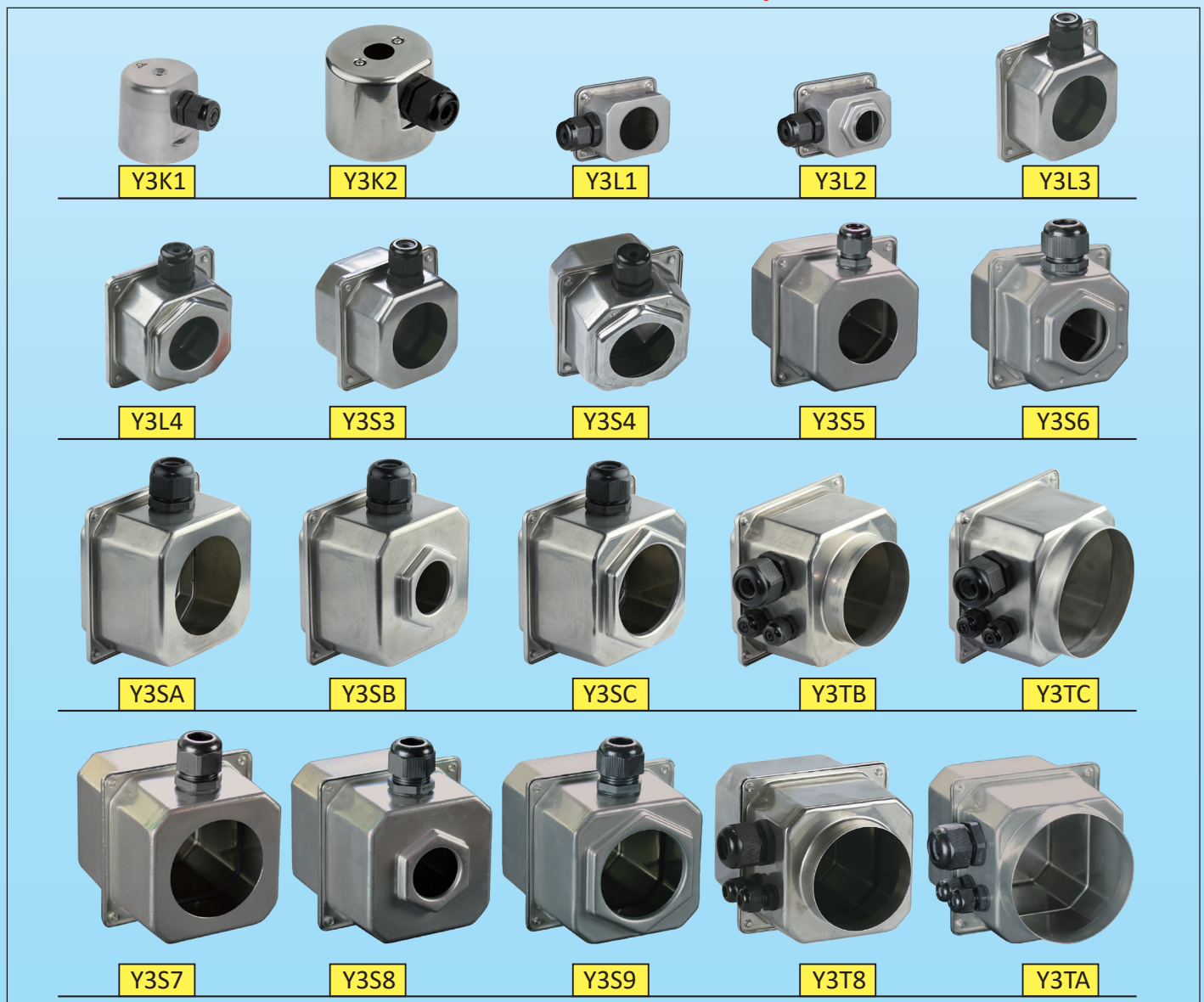


## Summary

### Technical introduction

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### Summary of deep drawn enclosures for average corrosion conditions, AISI 304, AISI 316 stainless steel, or nickel plated steel



Update 2025/10/10

# Summary of deep drawn enclosures for average corrosion conditions, AISI 304 or AISI 316 stainless steel



|                           |                                                                                   |                                                     |                                                                                   |                                                   |                                                                                   |                                                                   |                                                                                     |                               |                                                                                                                           |
|---------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Logo chart<br>explanation |  | Single pole bulb and capillary thermostat           |  | Manual reset 3 pole bulb and capillary limiter    |  | Digital display electronic temperature controller, 77x35 mm       |  | Level float switch            | <br>Electro-mechanical power contactor |
|                           |  | Manual reset single pole bulb and capillary limiter |  | Electronic thermostat or limiter, knob adjustment |  | Digital display electronic temperature controller, 48x48 mm       |  | Single pole solid state relay |                                                                                                                           |
|                           |  | 3 pole bulb and capillary thermostat                |  | Temperature sensor probe                          |  | Din rail mounting 47x52 mm digital display temperature controller |  | 3 pole solid state relay      |                                                                                                                           |

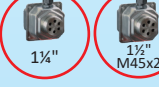
| Type | Compatibility with fittings | Sizes without cable gland                       | IP, IK        | Features                                                                                                                                                                                                                                        | Compatibility with controls | Page |
|------|-----------------------------|-------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------|
| Y3K1 | <br><br><br>                | Dia. 62 x 60 mm<br>(150cm <sup>3</sup> , 98g)   | IP65,<br>IK7  | <b>Round miniature simplified immersion heater enclosure</b><br>- Mounting on single thread brass or stainless steel fittings 1 1/4", 1 1/2" and M45x2, but also on fittings with <b>M4 centre thread</b><br>- Output by M20 or M25 cable gland | <br><br><br><br><br>        | 85   |
| Y3K2 | <br><br>                    | Dia. 86 x 72 mm<br>(390 cm <sup>3</sup> , 180g) | IP69K,<br>IK7 | <b>Round, large diameter, simplified immersion heater enclosure</b><br>- Mounting with an internal bracket on single thread brass or stainless steel fittings, 2 1/2" and M45x2<br>- Output by M25 cable gland                                  | <br><br><br><br><br>        | 86   |
| Y3L1 | <br><br><br>                | 75 x 60 x 44 mm<br>(111cm <sup>3</sup> , 137g)  | IP69K,<br>IK7 | <b>Miniature enclosure for temperature sensor or level sensor</b><br>- Flat lid<br>- Bottom side without hole or with hole for fitting<br>- Hole for M20 cable gland                                                                            | <br><br><br><br><br><br>    | 87   |
| Y3L2 | <br><br>                    | 75 x 60 x 52 mm<br>(119cm <sup>3</sup> , 146g)  | IP69K,<br>IK7 | <b>Miniature enclosure for temperature sensor or level sensor</b><br>- Flat lid<br>- Bottom side with stamped hexagon 35 mm on flat, for TIG welded 1/2" or 3/4" fittings<br>- Hole for M20 cable gland                                         | <br><br><br><br><br><br>    | 88   |
| Y3L3 | <br><br><br><br><br>        | 90 x 90 x 45 mm<br>(206cm <sup>3</sup> , 198g)  | IP69K,<br>IK7 | <b>Miniature enclosure for immersion heater, temperature sensor or level sensor</b><br>- Flat lid<br>- Bottom side without hole, or with hole for orientable fitting with ring or inside nut<br>- Hole for M20 cable gland                      | <br><br><br><br><br><br>    | 89   |

Update 2025/08/21

# Summary of deep drawn enclosures for average corrosion conditions, AISI 304 or AISI 316 stainless steel



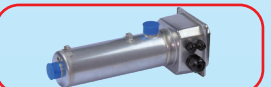
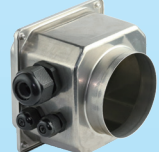
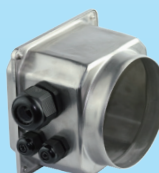
Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Type | Compatibility with fittings                                                                                                                                                                                                                                                                                                                                                                                                         | Sizes without cable gland                         | IP, IK     | Features                                                                                                                                                                                                                                                                                                                                                                                                                               | Compatibility with controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Page |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Y3L4 |                                                                                                                                                                                  | 90 x 90 x 52 mm<br>(232cm <sup>3</sup> , 207g)    | IP69K, IK7 | <b>Enclosure for small storage heater immersion heater</b><br>- Flat lid<br>- Bottom side with stamped 61 mm hexagon, can be used on orientable fitting with ring or inside nut<br>- Hole for M20 cable gland<br>- Can receive a standard storage heater immersion heater, with 1 1/4" brass fitting, with 54 mm on flat hexagon                                                                                                       |                                                                                                                                                                                         | 90   |
| Y3S3 |                                                                                                                                                                                  | 90 x 90 x 75 mm<br>(392cm <sup>3</sup> , 262g)    | IP69K, IK7 | <b>Immersion heater or temperature sensor enclosure</b><br>- High lid<br>- Bottom side without hole, or with hole for orientable fitting with ring or internal nut<br>- Hole for M20 cable gland                                                                                                                                                                                                                                       |                   | 91   |
| Y3S4 |                                                                                                | 90 x 90 x 82 mm<br>(418cm <sup>3</sup> , 271g)    | IP69K, IK7 | <b>Immersion heater enclosure with built-in hexagon for fitting</b><br>- High lid<br>- Bottom side with stamped 61 mm hexagon, can be used on orientable fitting with ring or inside nut<br>- Can be used with 1 1/4" or 1 1/2" or M45 TIG welded fittings<br>- Hole for M20 cable gland<br>- Can receive a standard storage heater immersion heater, with 1 1/4" brass fitting, with 54 mm on flat hexagon                            |             | 92   |
| Y3S5 |                                                                                                                                                                            | 105 x 105 x 102 mm<br>(757cm <sup>3</sup> , 420g) | IP69K, IK7 | <b>Medium size enclosure for immersion heater or temperature sensor</b><br>- Bottom side without hole, or with hole for orientable fitting with ring or internal nut up to 2 1/2"<br>- Fits the 2" plastic nut for swimming pools, spas and aquarium heaters and electronic thermostat control<br>- Hole for M25 cable gland                                                                                                           |       | 93   |
| Y3S6 |                                                                                                                                                                            | 105 x 105 x 110 mm<br>(781cm <sup>3</sup> , 426g) | IP69K, IK7 | <b>Medium size immersion heater enclosure with built-in hexagon for fitting</b><br>- Bottom side with stamped hexagon 58 mm on flat, for 1 1/4" or 1 1/2" or M45 TIG welded fittings<br>- Hole for M25 cable gland                                                                                                                                                                                                                     |       | 94   |
| Y3SA |      | 125 x 125 x 85 mm<br>(970cm <sup>3</sup> , 610g)  | IP69K, IK7 | <b>Immersion heater or temperature sensor, flat cover</b><br>- Bottom side without hole, or with hole for orientable fitting with ring or internal nut, up to M77 or 2 1/2"<br>- Fits the 2" plastic nut for swimming pools, spas and aquarium heaters and electronic thermostat control and electronic manual reset thermostat<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- Optional hole for pilot light |       | 95   |



# Summary of deep drawn enclosures for average corrosion conditions, AISI 304 or AISI 316 stainless steel



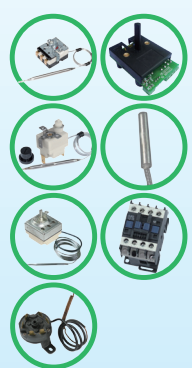
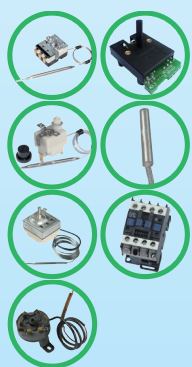
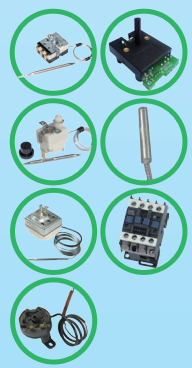
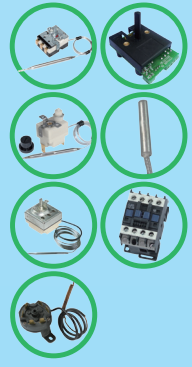
| Type | Compatibility with fittings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sizes without cable gland                          | IP, IK     | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Compatibility with controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Page |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Y3SB | <br><br>                                                                                                                                                                                                                                                                                                                                                          | 125 x 125 x 93 mm<br>(1000cm <sup>3</sup> , 624g)  | IP69K, IK7 | <b>Big immersion heater enclosure, with flat cover and stamped hexagon</b><br>- Bottom side with stamped 58 mm on flat hexagon, for 1 1/4", 1 1/2" or M45 TIG welded fittings<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- <b>Optional hole for pilot light</b>                                                                                                                                                                                                              |  <br> <br>                                                                                                                                                                                             | 96   |
| Y3SC | <br>                                                                                                                                                                                                                                                                                                                                                                                                                                               | 125 x 125 x 85 mm<br>(1000cm <sup>3</sup> , 610g)  | IP69K, IK7 | <b>Big immersion heater enclosure, with flat cover and stamped hexagon, for big immersion heaters</b><br>- Bottom side with stamped 85 mm on flat hexagon, for 2 1/2" or M77 TIG welded fittings<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- <b>Optional hole for pilot light</b>                                                                                                                                                                                           |  <br> <br>                                                                                                                                                                                             | 97   |
| Y3TB | <br>                                                                                                                                                                                                                                                                                                                                                                                                                                             | 125 x 125 x 105 mm<br>(1138cm <sup>3</sup> , 489g) | IP69K, IK7 | <b>Big enclosure, for immersion heaters or instruments, with flat cover, for welding on tubes</b><br>- Bottom side with stamped hole with welding lips for direct welding on in line heaters body or on dia. 80 mm tubes.<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- <b>Optional hole for pilot light</b>                                                                                                                                                                  |  <br> <br>                                                                                                                                                                                       | 98   |
| Y3TC | <br>                                                                                                                                                                                                                                                                                                                                                                                                                                           | 125 x 125 x 105 mm<br>(1138cm <sup>3</sup> , 489g) | IP69K, IK7 | <b>Big enclosure, for immersion heaters or instruments, with flat cover for welding on tubes</b><br>- Bottom side with stamped hole with welding lips for direct welding on in line heaters body or on dia. 100 mm tubes.<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- <b>Optional hole for pilot light</b>                                                                                                                                                                  |  <br> <br>                                                                                                                                                                                 | 99   |
| Y3S7 |    <br><br><br> | 125 x 125 x 130 mm<br>(1505cm <sup>3</sup> , 652g) | IP69K, IK7 | <b>Big size enclosure for immersion heater or temperature sensor</b><br>- Bottom side without hole, or with hole for orientable fitting with ring or internal nut, up to M77 or 2 1/2"<br>- Fits the 2" plastic nut for swimming pools, spas and aquarium heaters and electronic thermostat control and electronic manual reset thermostat<br>- Hole for one M25 cable gland, or holes for one M25 and two M16<br>- <b>Optional hole for pilot light</b><br>- <b>Can receive one or two power relays</b> |  <br> <br> <br>  | 100  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

# Summary of deep drawn enclosures for average corrosion conditions, AISI 304 or AISI 316 stainless steel



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Type | Compatibility with fittings                                                         | Sizes without cable gland                          | IP, IK     | Features                                                                                                                                                                                                                                                                                                                                                                                                                            | Compatibility with controls                                                           | Page |
|------|-------------------------------------------------------------------------------------|----------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Y3S8 |    | 125 x 125 x 138 mm<br>(1525cm <sup>3</sup> , 656g) | IP69K, IK7 | <b>Big size enclosure for immersion heater with built-in hexagon</b> <ul style="list-style-type: none"> <li>- Bottom side with stamped 58 mm on flat hexagon, for 1 1/4", 1 1/2" or M45 TIG welded fittings</li> <li>- Hole for one M25 cable gland, or holes for one M25 and two M16</li> <li>- Optional hole for pilot light</li> <li>- Can receive one or two power relays</li> </ul>                                            |    | 101  |
| Y3S9 |   | 125 x 125 x 138 mm<br>(1551cm <sup>3</sup> , 643g) | IP69K, IK7 | <b>Big size enclosure with built in hexagon for large size immersion heaters</b> <ul style="list-style-type: none"> <li>- Bottom side with stamped 85 mm on flat hexagon, for 2 1/2" or M77 TIG welded fittings</li> <li>- Hole for one M25 cable gland, or holes for one M25 and two M16</li> <li>- Optional hole for pilot light</li> <li>- Can receive one or two power relays</li> </ul>                                        |   | 102  |
| Y3T8 |  | 125 x 125 x 135 mm<br>(1668cm <sup>3</sup> , 634g) | IP69K, IK7 | <b>Big size immersion heater or controls enclosure, for direct welding on pipes</b> <ul style="list-style-type: none"> <li>- Bottom side with stamped hole with welding lips for direct welding on in line heaters body or on dia. 80 or 100 mm tubes.</li> <li>- Hole for one M25 cable gland, or holes for one M25 and two M16</li> <li>- Optional hole for pilot light</li> <li>- Can receive one or two power relays</li> </ul> |  | 103  |
| Y3TA |  | 125 x 125 x 135 mm<br>(1668cm <sup>3</sup> , 634g) | IP69K, IK7 | <b>Big size immersion heater or controls enclosure, for direct welding on pipes</b> <ul style="list-style-type: none"> <li>- Bottom side with stamped hole with welding lips for direct welding on in line heaters body or on dia. 100 mm tubes.</li> <li>- Hole for one M25 cable gland, or holes for one M25 and two M16</li> <li>- Optional hole for pilot light</li> <li>- Can receive one or two power relays</li> </ul>       |  | 104  |



|                        |  |                                                     |  |                                                   |  |                                                                   |  |                               |  |                                    |
|------------------------|--|-----------------------------------------------------|--|---------------------------------------------------|--|-------------------------------------------------------------------|--|-------------------------------|--|------------------------------------|
| Logo chart explanation |  | Single pole bulb and capillary thermostat           |  | Manual reset 3 pole bulb and capillary limiter    |  | Digital display electronic temperature controller, 77x35 mm       |  | Level float switch            |  | Electro-mechanical power contactor |
|                        |  | Manual reset single pole bulb and capillary limiter |  | Electronic thermostat or limiter, knob adjustment |  | Digital display electronic temperature controller, 48x48 mm       |  | Single pole solid state relay |  |                                    |
|                        |  | 3 pole bulb and capillary thermostat                |  | Temperature sensor probe                          |  | Din rail mounting 47x52 mm digital display temperature controller |  | 3 pole solid state relay      |  |                                    |

| Type | Pictures | Sizes                                        | IP, IK       | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Compatible | Page |
|------|----------|----------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3A1 |          | 61 x 33 x 30 mm<br>(52cm <sup>3</sup> , 30g) | IPX4,<br>IK8 | <b>Sub-miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater</b> <ul style="list-style-type: none"> <li>- Can receive a drill up to 21 mm (½") for sensor rod outlet</li> <li>- Includes mounting bosses for PCBs</li> <li>- Includes a removable 3-way 2.5 mm<sup>2</sup> terminal block in the version with M16 cable gland output</li> <li>- Output via M12 connector, Cnomo connector or M16 cable gland</li> </ul>                                                |            | 107  |
| Y3A2 |          | 70 x 33 x 33 mm<br>(72cm <sup>3</sup> , 37g) | IPX4,<br>IK8 | <b>Sub-miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater</b> <ul style="list-style-type: none"> <li>- Includes a moulded pilot light lens</li> <li>- Can receive a drill up to 21 mm (½") for sensor rod outlet</li> <li>- Includes mounting bosses for PCBs</li> <li>- Includes a removable 3-way 2.5 mm<sup>2</sup> terminal block in the version with M16 cable gland output</li> <li>- Output via M12 connector, Cnomo connector or M16 cable gland</li> </ul> |            | 108  |



# Summary

## Enclosures for immersion heaters and temperature sensors in PA66 and PC for industrial environment



| Type | Pictures                                                                            | Sizes                                          | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compatible                                                                            | Page |
|------|-------------------------------------------------------------------------------------|------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Y3A3 |    | 100 x 56 x 37 mm<br>(208cm <sup>3</sup> , 80g) | IP69K, IK10 | <b>Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater</b> <ul style="list-style-type: none"> <li>- Includes two removable brackets for wall mounting</li> <li>- Can receive a drill up to 21 mm (1/2") for sensor rod outlet</li> <li>- Includes mounting bosses for PCBs</li> <li>- Includes a removable 5-way 2.5 mm<sup>2</sup> terminal block</li> <li>- Output via M20 cable gland</li> </ul>                                         |    | 109  |
| Y3A4 |    | 100 x 56 x 48 mm<br>(216cm <sup>3</sup> , 89g) | IP69K, IK10 | <b>Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater</b> <ul style="list-style-type: none"> <li>- Includes two removable brackets for wall mounting</li> <li>- Can receive a drill up to 21 mm (1/2") for sensor rod outlet</li> <li>- Includes mounting bosses for PCBs</li> <li>- Can <b>eventually</b> receive a removable 5-way 2.5 mm<sup>2</sup> terminal block</li> <li>- Output via an IP66 M21 connector, 2 to 5 ways</li> </ul> |    | 110  |
| Y301 |   | 48 x 48 x 41 mm<br>(93cm <sup>3</sup> , 32g)   | IPX5, IK8   | <b>Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater</b> <ul style="list-style-type: none"> <li>- Can accommodate 1/2" threaded fittings with internal lock nut or 3/4" or 1" brass fittings with 2 x M4 screws (Use a flat gasket)</li> <li>- Includes a removable internal 3-way 2.5 mm<sup>2</sup> terminal block</li> <li>- PG11 cable gland outlet</li> </ul>                                                                        |   | 111  |
| Y302 |  | Dia. 54 x 66 mm<br>(160cm <sup>3</sup> , 26g)  | IP69K, IK8  | <b>Simplified immersion heater enclosure for fittings with M4 central screw</b> <ul style="list-style-type: none"> <li>- Mounting on brass fittings 1 1/4", 1 1/2" and M45x2</li> <li>- Output by M20 cable gland</li> </ul>                                                                                                                                                                                                                                                                     |  | 112  |
| Y3C1 |  | Dia. 54 x 74 mm<br>(180cm <sup>3</sup> , 70g)  | IP69K, IK8  | <b>Immersion heater enclosure for standard fittings with three M4 mounting screws at 120°</b> <ul style="list-style-type: none"> <li>- For 1 1/4", 1 1/2" and M45x2 fittings</li> <li>- Features a removable, elevated, 6-way 2.5 mm<sup>2</sup> terminal block</li> <li>- Output by M20 cable gland</li> </ul>                                                                                                                                                                                  |  | 113  |



| Type | Pictures | Sizes                                             | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compatible | Page |
|------|----------|---------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3C2 |          | Dia. 65 x 66 mm<br>(200cm <sup>3</sup> , 33.7g)   | IP69K, IK8  | <b>Miniature Enclosure for 2" fittings</b><br>- Fits the 2" plastic fitting for spas and swimming pools heaters using cartridge heaters diameter 25 mm, stainless steel or titanium<br>- Clamping of the tube by silicone or Viton (FKM) compression seal<br>- The 2" thread and the swivel nut allow attachment to spa heaters, pool or flange heaters, or 2" PVC hoses used on surface treatment baths<br>- Includes a removable 6-way 2.5 mm <sup>2</sup> terminal block<br>- Main output by M20 cable gland<br>- M12 connector, 4 ways, auxiliary output is in option for temperature sensor |            | 114  |
| Y3C3 |          | Dia. 86 x 75 mm<br>(416cm <sup>3</sup> , 55g)     | IP69K, IK9  | <b>Simplified round enclosure for 2½" and M77x2 fittings.</b><br><b>Fits all fittings with 3 screws M5 for rotation ring.</b><br><b>Main output by M25 cable gland</b>                                                                                                                                                                                                                                                                                                                                                                                                                           |            | 115  |
| Y3B1 |          | 105 x 88 x 58.5 mm<br>(550cm <sup>3</sup> , 170g) | IP69K, IK10 | <b>Temperature sensor, thermostat or level sensor enclosure</b><br>- The lid includes a moulded pilot light lens<br>- Includes 2 removable wall mounting brackets<br>- Can receive a hole on the backside for probe<br>- Features a sealed system for lateral sensor cable exit<br>- Optional sensor pocket bracket<br>- Output by one or two M20 cable glands                                                                                                                                                                                                                                   |            | 116  |
| Y3B2 |          | 105 x 88 x 84.5 mm<br>(633cm <sup>3</sup> , 200g) | IP69K, IK10 | <b>Immersion heater housing for commercial water heater tanks</b><br>- Extension on the back for mounting 1½", 1½" and M45x2 immersion heaters fittings with double thread and internal nut, or single thread with rotating ring<br>- The lid includes a moulded pilot light lens<br>- Can be fitted with one or two watertight screwed caps on the lid allowing access to internal settings<br>- Output by one or two M20 cable glands                                                                                                                                                          |            | 117  |

# Summary

## Enclosures for immersion heaters and temperature sensors in **PA66** and **PC** for industrial environment



| Type | Pictures | Sizes                                            | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Compatible | Page |
|------|----------|--------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y306 |          | Dia. 100 x 100 mm<br>(700cm <sup>3</sup> , 168g) | IP69K, IK10 | <b>Round enclosure for immersion heater or temperature sensor</b> <ul style="list-style-type: none"> <li>- Drilling on the bottom possible for probes, or immersion heater fittings</li> <li>- Can receive a boot or a M20 thread on the lid for access to internal adjustment</li> <li>- Features bosses for internal bracket</li> <li>- Admits double threaded or rotating ring fittings up to 2"</li> <li>- Cable outlet up to M25 (2 cable glands possible)</li> </ul>                                                                                                                                |            | 118  |
| Y3C4 |          | Dia. 100 x 125 mm<br>(783cm <sup>3</sup> , 200g) | IP69K, IK10 | <b>Round enclosure for immersion heater or temperature sensor with extension</b> <ul style="list-style-type: none"> <li>- Drilling on the bottom possible for probes, or immersion heater fittings</li> <li>- Can receive a boot or a M20 thread on the lid for access to internal adjustment</li> <li>- Features bosses for internal bracket</li> <li>- Extension on the rear side for mounting, for 1 1/4", 1 1/2" and M45x2 immersion heaters fittings with double thread and internal nut, or single thread with rotating ring</li> <li>- Cable outlet up to M25 (2 cable glands possible)</li> </ul> |            | 120  |
| Y3F1 |          | Dia. 105 x 66 mm<br>(500cm <sup>3</sup> , 225g)  | IP69K, IK10 | <b>Wall mounting temperature sensor enclosure</b> <ul style="list-style-type: none"> <li>- Transparent polycarbonate cover</li> <li>- Features a sealed sensor cable exit system at the top</li> <li>- Includes mounting bosses for printed circuit boards</li> <li>- Includes mounting holes for a 4-20mA temperature converter</li> <li>- Includes two wall brackets</li> <li>- Includes a removable 2.5 mm<sup>2</sup> 6-way terminal block</li> <li>- Output by two M20 cable glands</li> </ul>                                                                                                       |            | 121  |



| Type | Pictures | Sizes                                              | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compatible | Page |
|------|----------|----------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3F2 |          | Dia. 105 x 66 mm<br>(500cm <sup>3</sup> , 220g)    | IP69K, IK10 | <b>Immersion heater, level sensor or temperature sensor enclosure</b> <ul style="list-style-type: none"> <li>- Transparent polycarbonate cover.</li> <li>- Includes two brackets for mounting on tank edge board.</li> <li>- Drilling of different diameters possible on the back for direct probes or for 1 1/4", 1 1/2" and M45x2 immersion heaters with double thread and internal nut, or single thread with rotating ring.</li> <li>- Includes a removable 6-way 2.5 mm<sup>2</sup> terminal block.</li> <li>- Output by two M20 cable glands</li> </ul>                                                                                                                                                                                                                                                                                              |            | 122  |
| Y3F3 |          | Dia. 105 x 87 mm<br>(583cm <sup>3</sup> , 255g)    | IP69K, IK10 | <b>Immersion heater enclosure with extension</b> <ul style="list-style-type: none"> <li>- Transparent polycarbonate cover</li> <li>- Includes two wall brackets</li> <li>- Extension on the back for 1 1/4", 1 1/2" and M45x2 immersion heaters with double thread and internal nut, or single thread with rotating ring</li> <li>- Removable 6-way terminal block</li> <li>- Output by two M20 cable glands</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    |            | 123  |
| Y307 |          | 130 x 130 x 150 mm<br>(2530cm <sup>3</sup> , 515g) | IP65, IK10  | <b>Big size enclosure for immersion heater, temperature sensor, level sensor or controls</b> <ul style="list-style-type: none"> <li>- Can receive one or more waterproof boots or screwed caps on the lid, allowing access to internal adjustment.</li> <li>- The cover can also receive multiple holes for pilot lights, switches, etc.</li> <li>- Can receive one or two power contactors on internal Din rail.</li> <li>- Features bosses and slides for PCBs.</li> <li>- Backside can receive drills for temperature sensor probes, level sensor or immersion heater fittings, up to M77x2.</li> <li>- Internal removable connection block (up to 12 ways, 2.5, 6 and 10mm<sup>2</sup>)</li> <li>- Several models of cable gland can be installed, with many possibilities, including for flat cables, from 1 to 4 outlets, size up to M25.</li> </ul> |            | 124  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



# Summary

## Enclosures for immersion heaters and temperature sensors in **PA66** and **PC** for industrial environment



| Type | Pictures | Sizes                                              | IP, IK         | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compatible | Page |
|------|----------|----------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3M1 |          | 130 x 130 x 190 mm<br>(2836cm <sup>3</sup> , 650g) | IP65,<br>IK10  | <b>Big size enclosure with extension, for immersion heater</b> <ul style="list-style-type: none"> <li>- Can accommodate 1 1/4", 1 1/2", M45x2, 2", 2 1/2", and M77x2 double thread and internal nut fittings, or single thread with rotation ring</li> <li>- Can receive one or more waterproof boots or screwed caps on the lid, allowing access to internal adjustment</li> <li>- The cover can also receive multiple holes for pilot lights, switches, etc</li> <li>- Can receive one or two power contactors on internal Din rail</li> <li>- Features bosses and slides for PCBs</li> <li>- Internal removable connection block (up to 12 ways, 2.5, 6 and 10 mm<sup>2</sup>)</li> <li>- Several models of cable gland plate holder, with many possibilities, including for flat cables, from 1 to 4 outlets, size up to M25</li> </ul> |            | 126  |
| Y3N1 |          | 130 x 180 x 80 mm<br>(1870cm <sup>3</sup> , 1150g) | IP69K,<br>IK10 | <b>Enclosure for controls, connection, temperature sensor, thermostat, level sensor. Removable wall mounting legs</b> <ul style="list-style-type: none"> <li>- Black polycarbonate cover</li> <li>- Includes 4 removable wall brackets</li> <li>- Possibility of PCBs assembly</li> <li>- Can receive a hole on the back side for temperature sensor probe, thermostat rod or level detector probe</li> <li>- Several models of removable internal terminal blocks are available (up to 12 channels, 2.5, 6 and 10 mm<sup>2</sup>)</li> <li>- Several models of cable gland plate holder, with many possibilities, including for flat cables, from 1 to 4 outlets, up to M25</li> </ul>                                                                                                                                                     |            | 128  |
| Y3N2 |          | 130 x 180 x 95 mm<br>(2010cm <sup>3</sup> , 1200g) | IP69K,<br>IK10 | <b>Enclosure with window, for controls, connection, temperature sensor, thermostat, level sensor, GFCI</b> <ul style="list-style-type: none"> <li>- Front panel with hinged polycarbonate porthole</li> <li>- Includes 4 removable wall brackets</li> <li>- Possibility of PCBs assembly</li> <li>- Can receive a hole on the back side for temperature sensor probe, thermostat rod or level detector probe</li> <li>- Several models of removable internal terminal blocks are available (up to 12 channels, 2.5, 6 and 10 mm<sup>2</sup>)</li> <li>- Several models of cable gland plate holder, with many possibilities, including for flat cables, from 1 to 4 outlets, up to M25</li> </ul>                                                                                                                                           |            | 129  |

Update 2025/09/03



| Type | Pictures | Sizes                                               | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compatible | Page |
|------|----------|-----------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3N3 |          | 130 x 180 x 120 mm<br>(2093cm <sup>3</sup> , 1230g) | IP69K, IK10 | <b>Enclosure with window for immersion heaters, with extension</b> <ul style="list-style-type: none"> <li>- Extension on the back for 1 1/4", 1 1/2" and M45x2 immersion heaters with double thread and internal nut, or single thread with rotating ring</li> <li>- Front panel with hinged polycarbonate porthole</li> <li>- Several models of removable internal terminal blocks are available (up to 12 channels, 2.5, 6 and 10 mm<sup>2</sup>)</li> <li>- Several models of cable gland plate holder, with many possibilities, including for flat cables, from 1 to 4 outlets, up to M25</li> </ul>                                                                                                                                                                         |            | 130  |
| Y3N4 |          | 130 x 180 x 132 mm<br>(2580cm <sup>3</sup> , 1650g) | IP69K, IK10 | <b>Enclosure with window, for immersion heater with electronic temperature control with heat sink for solid state relay (SSR)</b> <ul style="list-style-type: none"> <li>- Aluminum extension on rear side with heat exchanger, allows the assembly of static relays</li> <li>- Extension on the back accepts 1 1/4", 1 1/2" and M45x2 immersion heaters with double thread and internal nut, or single thread with rotating ring</li> <li>- Front panel with hinged polycarbonate porthole</li> <li>- Several models of removable internal terminal blocks are available (up to 12 channels, 2.5, 6 and 10 mm<sup>2</sup>)</li> <li>- Several models of cable gland plate holder, with many possibilities, including for flat cables, from 1 to 4 outlets, up to M25</li> </ul> |            | 131  |

## Summary

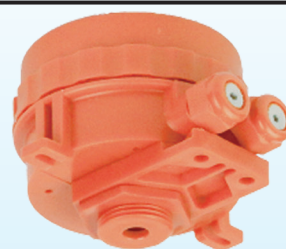
# Immersion heaters and temperature sensors enclosures for highly corrosive environments



Y3C6



Y3C7



Y3C8



Y3E6



Y3E7



Y3E8

|                           |                                                                                    |                                                     |                                                                                    |                                                   |                                                                                    |                                                                   |                                                                                      |                               |                                                                                                                           |
|---------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Logo chart<br>explanation |   | Single pole bulb and capillary thermostat           |   | Manual reset 3 pole bulb and capillary limiter    |   | Digital display electronic temperature controller, 77x35 mm       |   | Level float switch            | <br>Electro-mechanical power contactor |
|                           |   | Manual reset single pole bulb and capillary limiter |   | Electronic thermostat or limiter, knob adjustment |   | Digital display electronic temperature controller, 48x48 mm       |   | Single pole solid state relay |                                                                                                                           |
|                           |  | 3 pole bulb and capillary thermostat                |  | Temperature sensor probe                          |  | Din rail mounting 47x52 mm digital display temperature controller |  | 3 pole solid state relay      |                                                                                                                           |

| Type | Pictures | Sizes without cable gland                    | Material, IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                  | Compatible | Page |
|------|----------|----------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3C6 |          | Dia. 105 x 95 mm (663cm <sup>3</sup> , 174g) | PP<br><br>IP69K, IK10 | <b>Polypropylene immersion heater enclosure for surface treatment baths and highly corrosive environments</b><br>- Viton gasket system for immersion heater pocket with steatite heating element<br>- 2 integrated M20 cable glands with Viton gaskets<br>- Removable polypropylene plate for mounting at the edge of tank<br>- Titanium external screws<br>- Removable 6-way terminal block              |            | 132  |
| Y3C7 | <br>     | Dia. 105 x 95 mm (663cm <sup>3</sup> , 174g) | PP<br><br>IP69K, IK10 | <b>Polypropylene immersion heater enclosure for surface treatment baths and highly corrosive, environments</b><br>- Compatible with conventional 1 1/4", 1 1/2", M45 double thread or rotating ring couplings<br>- 2 integrated M20 cable glands with Viton gaskets<br>- Removable polypropylene plate for mounting at the edge of tank<br>- Titanium external screws<br>- Removable 6-way terminal block |            | 133  |





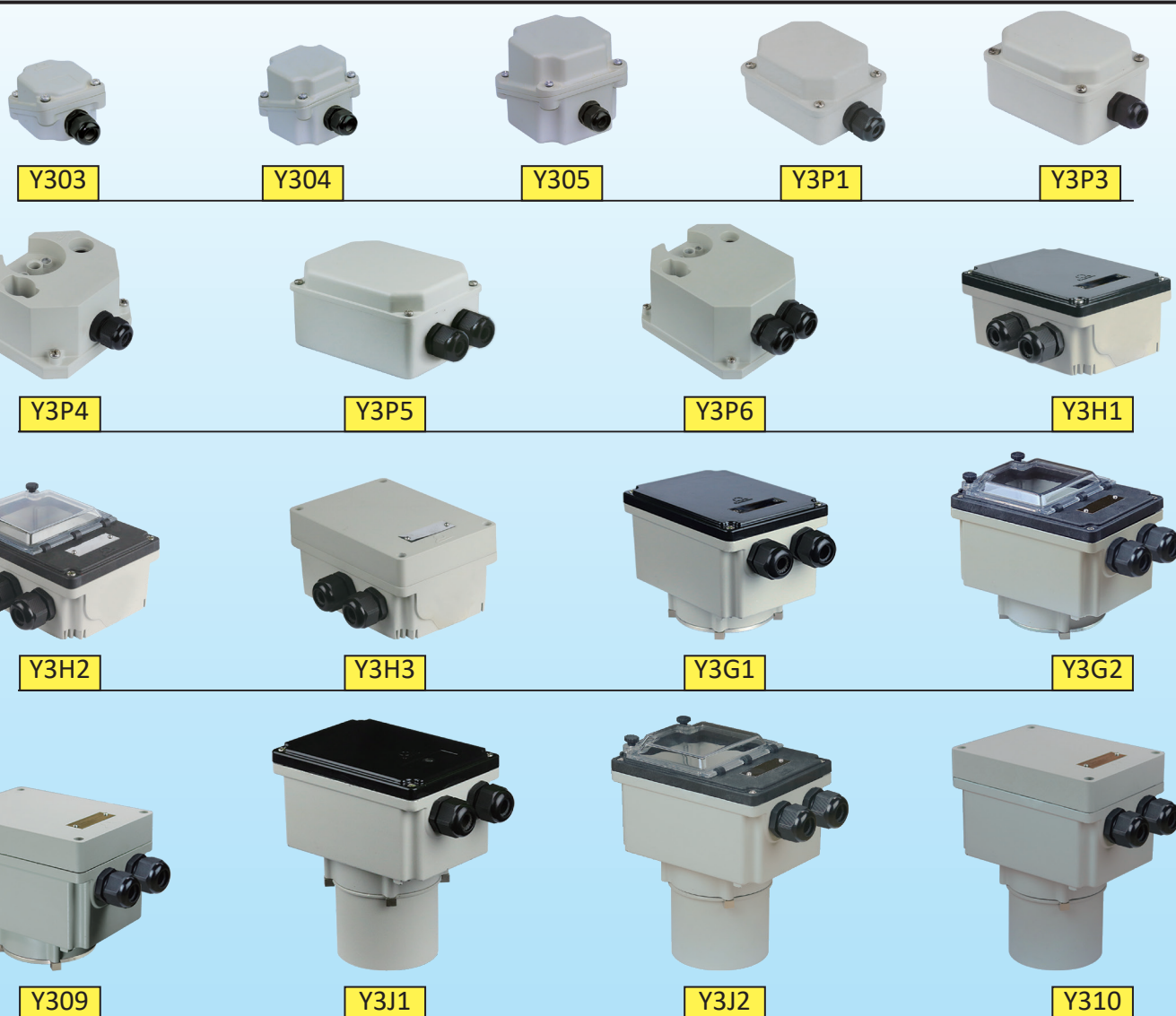
| Type | Pictures | Sizes without cable gland                    | Material, IP, IK                                 | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compatible | Page |
|------|----------|----------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------|
| Y3C8 |          | Dia. 105 x 82 mm (525cm <sup>3</sup> , 159g) | <br>Corrosive environments<br>IP69K, IK10        | <b>Polypropylene temperature sensor enclosure</b> for surface treatment baths and <b>highly corrosive environments</b> <ul style="list-style-type: none"> <li>- Built-in 1" thread, with lock nut and mounting plate</li> <li>- Viton seal system for temperature sensor tube, thermostat, or level sensor</li> <li>- Polypropylene 1" nut and plate for mounting to the edge of tank</li> <li>- 2 integrated M20 cable glands with Viton gaskets</li> <li>- Removable 6-way terminal block</li> </ul> |            | 134  |
| Y3E6 |          | Dia. 105 x 95 mm (663cm <sup>3</sup> , 310g) | <br>highly corrosive environments<br>IP69K, IK10 | <b>PVDF immersion heater enclosure</b> for surface treatment baths and <b>highly corrosive environments</b> <ul style="list-style-type: none"> <li>- Viton gasket system for immersion heater pocket with <b>stearite heating element</b></li> <li>- 2 integrated M20 cable glands with Viton gaskets</li> <li>- Removable PVDF plate for mounting at the edge of tank</li> <li>- Titanium external screws</li> <li>- Removable 6-way terminal block</li> </ul>                                        |            | 135  |
| Y3E7 |          | Dia. 105 x 95 mm (663cm <sup>3</sup> , 310g) | <br>highly corrosive environments<br>IP69K, IK10 | <b>PVDF immersion heater enclosure</b> for surface treatment baths and <b>highly corrosive environments</b> <ul style="list-style-type: none"> <li>- Compatible with conventional 1¼", 1½", M45 double thread or rotating ring couplings</li> <li>- 2 integrated M20 cable glands with Viton gaskets</li> <li>- Removable PVDF plate for mounting at the edge of tank</li> <li>- Titanium external screws</li> <li>- Removable 6-way terminal block</li> </ul>                                         |            | 136  |
| Y3E8 |          | Dia. 105 x 82 mm (525cm <sup>3</sup> , 284g) | <br>highly corrosive environments<br>IP69K, IK10 | <b>PVDF temperature sensor enclosure</b> for surface treatment baths and <b>highly corrosive environments</b> <ul style="list-style-type: none"> <li>- Built-in 1" thread, with lock nut and mounting plate</li> <li>- Viton seal system for temperature sensor tube, thermostat, or level sensor</li> <li>- PVDF 1" nut and plate for mounting to the edge of tank</li> <li>- 2 integrated M20 cable glands with Viton gaskets</li> <li>- Removable 6-way terminal block</li> </ul>                   |            | 137  |

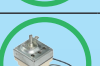


## Summary



**Die cast immersion heaters aluminum enclosures, for industrial applications requesting the highest shock resistance**



|                        |                                                                                     |                                                     |                                                                                     |                                                   |                                                                                     |                                                                   |                                                                                       |                               |                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Logo chart explanation |  | Single pole bulb and capillary thermostat           |  | Manual reset 3 pole bulb and capillary limiter    |  | Digital display electronic temperature controller, 77x35 mm       |  | Level float switch            | <br>Electro-mechanical power contactor |
|                        |  | Manual reset single pole bulb and capillary limiter |  | Electronic thermostat or limiter, knob adjustment |  | Digital display electronic temperature controller, 48x48 mm       |  | Single pole solid state relay |                                                                                                                             |
|                        |  | 3 pole bulb and capillary thermostat                |  | Temperature sensor probe                          |  | Din rail mounting 47x52 mm digital display temperature controller |  | 3 pole solid state relay      |                                                                                                                             |

| Type | Pictures | Sizes without cable gland                      | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                           | Fits thermostat or limiter | Page |
|------|----------|------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|
| Y303 |          | 78 x 66 x 50 mm<br>(210cm <sup>3</sup> , 180g) | IP69K, IK10 | <b>Miniature enclosure for immersion heater, level sensor or temperature sensor</b> <ul style="list-style-type: none"> <li>- Can receive a drill on the back side for immersion heater fitting up to 1 1/2" (double threaded model, only with case tapping)</li> <li>- Can receive a drill on the back side for temperature sensor or level sensor</li> <li>- Output by M20 cable gland</li> </ul> |                            | 141  |



# Summary

## Die cast immersion heaters aluminum enclosures, for industrial applications requesting the highest shock resistance

| Type | Pictures                                                                                                                                                                | Sizes without cable gland                        | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Fits thermostat or limiter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Page |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Y304 |       | 78 x 78 x 74 mm<br>(410cm <sup>3</sup> , 270g)   | IP69K, IK10 | <b>Enclosure for immersion heater, level sensor or temperature sensor</b> <ul style="list-style-type: none"> <li>- Can receive a drill on the back for 1 1/4", 1 1/2" and M45x2 fittings with double thread and inner nut, or single thread with rotating ring</li> <li>- Can receive a 2" double thread fitting (only with thread on the enclosure)</li> <li>- Can receive a drill on the back for temperature sensor or level sensor</li> <li>- Has mounting bosses for internal adjustment backplate</li> <li>- Available in lightened version with reduced wall thickness to 1.7 mm instead of 3 mm</li> <li>- Output by cable gland M20 or M25</li> </ul> |                   | 143  |
| Y305 |      | 105 x 105 x 96 mm<br>(858cm <sup>3</sup> , 490g) | IP69K, IK10 | <b>Enclosure for immersion heater</b> <ul style="list-style-type: none"> <li>- Can receive a drill on the back side for 1 1/4", 1 1/2" and M45x2 fittings with double thread and inner nut, or single thread with rotating ring</li> <li>- Can also accommodate a 2" double threaded fitting (only with threaded ring)</li> <li>- Has mounting bosses for internal adjustment backplate</li> <li>- Output via an M20 or M25 cable gland</li> </ul>                                                                                                                                                                                                             |             | 145  |
| Y3P1 |   | 64 x 84 x 104 mm<br>(510cm <sup>3</sup> , 326g)  | IP69K, IK10 | <b>Small size enclosure for immersion heater, finned heaters or controls</b> <ul style="list-style-type: none"> <li>- Can receive backside holes for 1 1/4", 1 1/2" and M45x2 fittings with double thread and inner nut, or single thread with rotating ring</li> <li>- Can also receive back side holes for finned heating elements</li> <li>- Output by one or two M20 or M25 cable glands</li> </ul>                                                                                                                                                                                                                                                        |       | 147  |
| Y3P3 |   | 66 x 89 x 114 mm<br>(650cm <sup>3</sup> , 417g)  | IP69K, IK10 | <b>Medium size enclosure for immersion heater, finned heaters or controls</b> <ul style="list-style-type: none"> <li>- Can receive backside holes for 1 1/4", 1 1/2", M45x2, fittings with double thread and inner nut, or single thread with rotating ring</li> <li>- Can accommodate stainless steel wall mounting brackets</li> <li>- Output by one or two M20 or M25 cable glands</li> </ul>                                                                                                                                                                                                                                                               |       | 149  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

# **Summary** **Die cast immersion heaters aluminum enclosures, for industrial applications** **requesting the highest shock resistance**



| Type | Pictures | Sizes without cable gland                         | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Fits thermostat or limiter | Page |
|------|----------|---------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|
| Y3P4 |          | 110 x 110 x 70 mm<br>(725cm <sup>3</sup> , 342g)  | IP69K, IK10 | <p><b>Medium size enclosure for immersion heater, finned heaters with external adjustment knob</b></p> <ul style="list-style-type: none"> <li>- Cover has deep recess for protected external knob, access from front or side of cover</li> <li>- Can receive backside holes for 1 1/4", 1 1/2", M45x2, fittings with double thread and inner nut, or single thread with rotating ring</li> <li>- Can accommodate wall mounting brackets</li> <li>- Can also receive back side holes for finned heating elements</li> <li>- Output by one M20 or M25 cable glands</li> </ul>                                                                                                                                                          |                            | 151  |
| Y3P5 |          | 92 x 124 x 159 mm<br>(1790cm <sup>3</sup> , 902g) | IP69K, IK10 | <p><b>Large size enclosure for immersion heater, finned heaters or controls</b></p> <ul style="list-style-type: none"> <li>- Can receive backside holes for 1 1/4", 1 1/2", M45x2, 2", 2 1/2" and M77x2, fittings with double thread and inner nut, or single thread with rotating ring.</li> <li>- Can accommodate <b>stainless steel wall mounting brackets</b></li> <li>- Can also receive back side holes for <b>finned heating elements</b></li> <li>- Output by one, two or three M20 or M25 cable glands</li> </ul>                                                                                                                                                                                                           |                            | 152  |
| Y3P6 |          | 89 x 124 x 155 mm<br>(1600cm <sup>3</sup> , 525g) | IP69K, IK10 | <p><b>Large size enclosure for immersion heater, finned heaters with external adjustment knob</b></p> <ul style="list-style-type: none"> <li>- Cover has deep recess for <b>protected external knob</b>, access from front or side of cover</li> <li>- Can receive backside holes for 1 1/4", 1 1/2", M45x2, 2", 2 1/2" and M77x2, fittings with double thread and inner nut, or single thread with rotating ring.</li> <li>- Designed to receive <b>toggle switch and pilot light</b> on cover, protected against shocks</li> <li>- Can accommodate <b>wall mounting brackets</b></li> <li>- Can also receive back side holes for <b>finned heating elements</b></li> <li>- Output by one or two M20 or M25 cable glands</li> </ul> |                            | 154  |





# Summary

## Die cast immersion heaters aluminum enclosures, for industrial applications requesting the highest shock resistance

| Type | Pictures                                                                                                                                                                | Sizes without cable gland                          | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fits thermostat or limiter                                                            | Page |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Y3H1 |       | 81 x 132 x 182 mm<br>(1870cm <sup>3</sup> , 1070g) | IP69K, IK10 | <p><b>Enclosure with aluminum body, black or transparent polycarbonate cover, for immersion heater or solid state relays (SSR) controls</b></p> <ul style="list-style-type: none"> <li>- The rear side has fins to cool the solid state relays</li> <li>- Size compatible with <b>3-pole static relay or 4 single pole solid state relays</b></li> <li>- Includes slides for printed circuits</li> <li>- The 81x132 mm face can receive piercing for 1 1/4", 1 1/2" and M45x2 fittings, double thread and inner nut, or single twist ring thread</li> <li>- Output from one, two or three M20 or M25 cable glands on 182 x 81 mm faces</li> </ul>  |    | 156  |
| Y3H2 |      | 95 x 132 x 182 mm<br>(2010cm <sup>3</sup> , 1120g) | IP69K, IK10 | <p><b>Enclosure with aluminum body, and plastic cover with transparent window, for immersion heater or solid state relays (SSR) controls</b></p> <ul style="list-style-type: none"> <li>- The rear side has fins to cool the solid state relays</li> <li>- Size compatible with <b>3-pole static relay or 4 single pole solid state relays</b></li> <li>- Includes slides for printed circuits</li> <li>- The 95x132 mm face can receive piercing for 1 1/4", 1 1/2" and M45x2 fittings, double thread and inner nut, or single twist ring thread</li> <li>- Output from one, two or three M20 or M25 cable glands on 182 x 95 mm faces</li> </ul> |   | 157  |
| Y3H3 |   | 96 x 132 x 182 mm<br>(2050cm <sup>3</sup> , 1450g) | IP69K, IK10 | <p><b>All aluminum enclosure, for immersion heater or solid state relays (SSR) controls</b></p> <ul style="list-style-type: none"> <li>- The rear side has fins to cool the solid state relays</li> <li>- Size compatible with <b>3-pole static relay or 4 single pole solid state relays</b></li> <li>- Includes slides for printed circuits</li> <li>- The 96x132 mm face can receive piercing for 1 1/4", 1 1/2" and M45x2 fittings, double thread and inner nut, or single twist ring thread</li> <li>- Output from one, two or three M20 or M25 cable glands on 182 x 96 mm faces</li> </ul>                                                  |  | 158  |

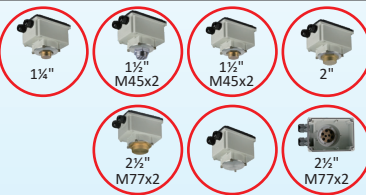
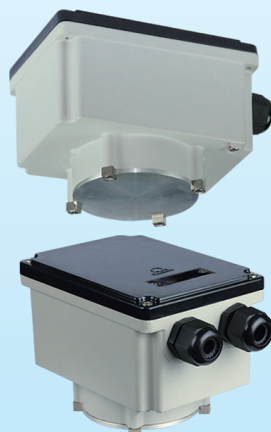
Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



## Summary



# Die cast immersion heaters aluminum enclosures, for industrial applications requesting the highest shock resistance

| Type | Pictures                                                                                                                                                                | Sizes without cable gland                           | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Fits thermostat or limiter                                                            | Page |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Y3G1 |       | 182 x 132 x 130 mm<br>(2435cm <sup>3</sup> , 1210g) | IP69K, IK10 | <p><b>Aluminum and plastic composite enclosure, with polycarbonate cover, for immersion heater with 30 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Can accommodate all types of fittings up to M77x2 (with threaded ring or rotating ring)</li> <li>- Up to 2" the fittings are mounted on an aluminum plate that can be rotated to <b>orient the enclosure during installation, without having to open it</b></li> <li>- Can receive a power contactor</li> <li>- Can receive an internal connection block up to 12 ways and up to 10 mm<sup>2</sup></li> <li>- Output by one or two M25 cable glands</li> </ul>       |    | 159  |
| Y3G2 |      | 182 x 132 x 144 mm<br>(2575cm <sup>3</sup> , 1255g) | IP69K, IK10 | <p><b>Aluminum and plastic composite enclosure, with transparent window cover, for immersion heater with 30 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Can accommodate all types of fittings up to M77x2 (with threaded ring or rotating ring)</li> <li>- Up to 2", the fittings are mounted on an aluminum plate that can be rotated to <b>orient the enclosure during installation, without having to open it</b></li> <li>- Can receive a power contactor</li> <li>- Can receive an internal connection block up to 12 ways and up to 10 mm<sup>2</sup></li> <li>- Output by one or two M25 cable glands</li> </ul> |   | 161  |
| Y309 |   | 182 x 132 x 144 mm<br>(2795cm <sup>3</sup> , 1565g) | IP69K, IK10 | <p><b>All aluminum enclosure, for immersion heater with 30 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Can accommodate all types of fittings up to M77x2 (with threaded ring or rotating ring)</li> <li>- Up to 2", the fittings are mounted on an aluminum plate that can be rotated to <b>orient the enclosure during installation, without having to open it</b></li> <li>- Can receive a power contactor</li> <li>- Can receive an internal connection block up to 12 ways and up to 10 mm<sup>2</sup></li> <li>- Output by one or two M25 cable glands</li> </ul>                                                  |  | 163  |

# Summary

## Die cast immersion heaters aluminum enclosures, for industrial applications requesting the highest shock resistance



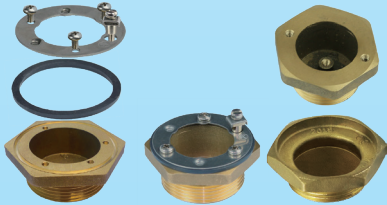
| Type | Pictures                                                                            | Sizes without cable gland                           | IP, IK      | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Fits thermostat or limiter                                                            | Page |
|------|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Y3J1 |    | 182 x 132 x 210 mm<br>(3066cm <sup>3</sup> , 1540g) | IP69K, IK10 | <p><b>Composite aluminum and plastic enclosure, with polycarbonate plain cover, for immersion heater with high 120 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Compatible only with 2½" and M77x2 fittings with rotating ring</li> <li>- The fittings are mounted on an aluminum extension that can be rotated to <b>orient the case during installation, without having to open it</b></li> <li>- Can receive an internal connection block up to 12 terminals and up to 10 mm<sup>2</sup></li> <li>- Can receive a power contactor</li> <li>- Output by one or two M25 cable glands</li> </ul>               |    | 165  |
| Y3J2 |   | 182 x 132 x 225 mm<br>(3206cm <sup>3</sup> , 1290g) | IP69K, IK10 | <p><b>Composite aluminum and plastic enclosure, with polycarbonate transparent window, for immersion heater with high 120 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Compatible only with 2½" and M77x2 fittings with rotating ring</li> <li>- The fittings are mounted on an aluminum extension that can be rotated to <b>orient the case during installation, without having to open it</b></li> <li>- Can receive an internal connection block up to 12 terminals and up to 10 mm<sup>2</sup></li> <li>- Can receive a <b>power contactor</b></li> <li>- Output by one or two M25 cable glands</li> </ul> |   | 167  |
| Y310 |  | 182 x 132 x 225 mm<br>(3426cm <sup>3</sup> , 1895g) | IP69K, IK10 | <p><b>All aluminum enclosure, for immersion heater with high 120 mm offset fitting</b></p> <ul style="list-style-type: none"> <li>- Compatible only with 2½" and M77x2 fittings with rotating ring</li> <li>- The fittings are mounted on an aluminum extension that can be rotated to <b>orient the case during installation, without having to open it</b></li> <li>- Can receive an internal connection block up to 12 terminals and up to 10 mm<sup>2</sup></li> <li>- Can receive a power contactor</li> <li>- Output by one or two M25 cable glands</li> </ul>                                                                 |  | 169  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



## Summary

### Pockets, fittings, gaskets, connection blocks, relay boards

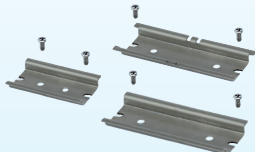
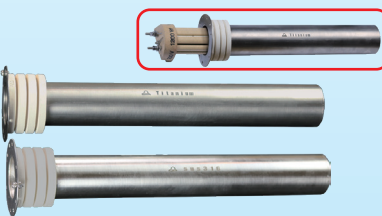
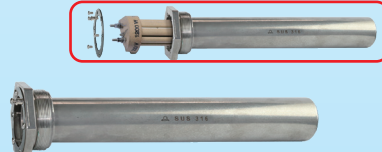
| Pictures                                                                            | Fits types                                                                    | Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Page                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|    | Compatible with almost all enclosures                                         | <b>Stainless steel fitting, with 3 screws rotating ring, deep drawn body and machined thread, for medium corrosive environments.</b> <ul style="list-style-type: none"> <li>- Fully 316L or 304L stainless steel</li> <li>- Available in 1¼", 1½", M42x2, 2½" and M77x2</li> <li>- Allows the assembly of heating elements by <b>TIG welding, brazing or resin filling.</b></li> <li>- Built-in ground terminal</li> <li>- Molded gasket, Silicone or FKM (Viton)</li> <li>- Rotary ring stainless steel.</li> <li>- Stainless steel screws.</li> <li>- Available in <u>unassembled</u> version (to allow TIG welding of the lower plate on the heating elements) or <u>assembled</u> version (for brazing).</li> </ul> | 173<br>174<br>175<br>176               |
|    | Fits only large enclosures                                                    | <b>Stainless steel fitting with wide rotating flange</b> <ul style="list-style-type: none"> <li>- Fully 316L or 304L stainless steel.</li> <li>- Available in 1¼", 1½", M42x2.</li> <li>- Allows the assembly of heating elements by <b>TIG welding, brazing or resin filling.</b></li> <li>- Ground terminal.</li> <li>- Silicone gasketed or FKM (Viton), type O-Ring.</li> <li>- Stainless steel ring.</li> <li>- Stainless steel screws.</li> <li>- Available in <u>unassembled</u> version (to allow TIG welding heating elements on the lower disk) or <u>assembled</u> version (for brazing).</li> </ul>                                                                                                         | 177<br>178<br>179<br>180               |
|   | All enclosure receiving hole for 2" fitting, and specially the Y3C2 enclosure | <b>2" plastic fittings for corrosive liquids like swimming pool, spas and aquariums waters. With or without built-in pockets</b> <ul style="list-style-type: none"> <li>- Designed to receive dia 25 mm cartridge heating elements, 316 stainless steel or titanium. Includes a compression gasket in silicone or FKM (Viton) for these heaters.</li> <li>- Exists with or without 2 built-in pockets for electronic temperature controls and safety.</li> </ul>                                                                                                                                                                                                                                                        | 181<br>182                             |
|  | Compatible with almost all enclosures                                         | <b>Brass fittings, double thread</b> <ul style="list-style-type: none"> <li>- Available from 1" to M 77 x 2.</li> <li>- Ground terminal.</li> <li>- Flat silicone gasket.</li> <li>- Available with brass hexagonal counter nut or threaded rotary ring with three M4 screws, nickel plated steel.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 183<br>184<br>185                      |
|  | Compatible with almost all enclosures                                         | <b>Single thread fitting, with or without rotation ring, for usual immersion heaters</b> <ul style="list-style-type: none"> <li>- Available from 1" to M 77 x 2.</li> <li>- Allows the assembly of heating elements by <b>silver solder, tin solder or resin filler.</b></li> <li>- Built-in ground terminal.</li> <li>- Compatible with O-Ring type seal.</li> <li>- Available with flat silicone seal with semi-circular lip</li> <li>- Rotating ring made of stainless steel with centering bosses.</li> <li>- Stainless steel screws.</li> </ul>                                                                                                                                                                    | 186<br>187<br>188                      |
|  | All fittings types                                                            | <b>Fittings gaskets for immersion heaters, thermostats, temperature sensors or level sensors</b> <ul style="list-style-type: none"> <li>- Flat seals in NBR, asbestos-free fiber, silicone, Viton, PTFE.</li> <li>- For sealing the fittings through wall.</li> <li>- Dimensions from ½" to M77x2.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 191<br>192<br>193<br>194<br>195<br>196 |
|  | All fittings types                                                            | <b>Lock nuts for fittings used in immersion heaters or thermostats, temperature sensors or level sensors</b> <ul style="list-style-type: none"> <li>- Brass, or stainless steel 304 or 316.</li> <li>- For tightening the fittings through wall.</li> <li>- Dimensions from ½" to M77x2.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     | 197                                    |
|  | Most immersion heater enclosures, except miniature models                     | <b>Mounting accessories for access to internal and external adjustments</b> <ul style="list-style-type: none"> <li>- Counter brackets for installation of thermostats inside enclosures.</li> <li>- Gasket for thermostat shaft with external knob adjustment.</li> <li>- Silicone boot for access to internal adjustment.</li> <li>- M20 threaded cap for access to internal adjustment with tool.</li> <li>- M25x1.5 waterproof device for 50 mm external knob</li> </ul>                                                                                                                                                                                                                                             | 198<br>199<br>201<br>202<br>203        |





## Summary

### Pockets, fittings, gaskets, connection blocks, relay boards

| Pictures                                                                            | Fits types                                                            | Features                                                                                                                                                                                                                                                                                                                                                                                         | Page                                          |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
|    | Variable models according to enclosures.                              | <b>Din Rails</b><br>- 304 stainless steel.<br>- For internal mounting of one or two contactors, a GFCI or other accessories.<br>- Fixing on existing bosses in the enclosures.                                                                                                                                                                                                                   | 200                                           |
|    | Types adapted to each model of enclosure                              | <b>Plastic connection blocks for installation in immersion heater housings, temperature sensors and level sensors.</b><br>- Numerous models from 3 to 12 ways, from 2.5 mm <sup>2</sup> to 10 mm <sup>2</sup> ,<br>- Surface or raised mounting to escape the heating elements terminals.<br>- Heat resistant polyamide body.<br>- Screw terminals with clamping elastic square washer, captive. | 204<br>205<br>206<br>207                      |
|    | Y3C6 and Y3E6 only                                                    | <b>Dia. 55 mm immersion heaters thermowells, without thread, for corrosive baths.</b><br>- Available in 304L, 316L stainless steel, or titanium.<br>- Length on request<br>- Other diameters on request<br>- Multiple lips gasket in FKM (Viton).<br>- Compatible with the barrels of the standard heating elements in steatite dia. 52 mm.<br>- Built in ground terminal.                       | 208                                           |
|    | All enclosure using 2 1/2" and M77x2 fittings                         | <b>Dia. 55 mm immersion heaters thermowells, with 2 1/2" and M77x2 thread.</b><br>- Available in 304L or 316L stainless steel.<br>- Length on request<br>- Other diameters on request<br>- Compatible with the barrels of the standard heating elements in steatite dia. 52 mm.<br>- Built in ground terminal.                                                                                   | 209                                           |
|  | Y3C2 only                                                             | <b>Dia. 25 mm immersion heaters thermowells, without thread, for corrosive baths.</b><br>- Available in 304L, 316L stainless steel, or titanium.<br>- Length on request<br>- Other diameters on request<br>- Multiple lips gasket in FKM (Viton).<br>- Compatible with the barrels of the standard heating elements in steatite dia. 23 mm.                                                      | 210                                           |
|  | Y3C8 and Y3E8 only                                                    | <b>10 mm diameter pockets for temperature sensors, thermostats or level detectors, without thread, for corrosive baths</b><br>- Can be made in stainless steel 304L, 316L, stainless steel, Teflon and titanium sheathed.<br>- Length on request.<br>- Compatible with probes up to 8 mm in diameter.<br>- Multiple lips gasket in FKM (Viton).<br>- Build-in ground terminal.                   | 211                                           |
|  | For TIG welding on stainless steel enclosures with deep drawn hexagon | <b>Solid or mechanically welded stainless steel fittings for immersion heaters, temperature sensors, level detectors</b><br>- Can be made on request in 304, 304L, 316, 316L stainless steel.<br>- Dimensions from 1/2" to M77x2.                                                                                                                                                                | 212<br>213<br>214                             |
|  | Fittings 2", European standard, and 2 1/2" and 3", US standard        | <b>Split nuts for spas and swimming pools heaters. Exist for 2" BSPP, 2 1/2" and 3" Ansi B1.9 threads (USA).</b>                                                                                                                                                                                                                                                                                 | 215                                           |
|  | Available on some enclosures                                          | <b>Relay boards</b> , with one to 6 miniature relays, rating 16A 250V, coil 220/240V. One of their application is to convert single pole devices into 3 poles.                                                                                                                                                                                                                                   | 217<br>218<br>219                             |
|  | Usable on some specific enclosures                                    | <b>Various accessories, shutters, external rotation rings. Internal mounting boards for enclosure with controls</b>                                                                                                                                                                                                                                                                              | 216<br>220<br>222<br>223<br>224<br>225<br>226 |

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## Technical introduction

We have been building protection boxes for electrical equipment for almost 70 years.

Initially intended to protect rod thermostats, they are now made for many other applications. During their development, we strive to make them in compliance with existing and updated standards, for **professional** applications.

All specifications of our products are thoroughly designed and their performances are **verified**.

Our control laboratory, equipped with more than **600** test machines, is unique, and it is with pleasure that we allow its visit to convince you.

The devices we manufacture aim for the **highest possible quality** and total customer satisfaction.

In our product range:

**No** enclosure said « waterproof », but with water ingress,

**No** stainless steel enclosures that rust,

**No** knobs or enclosures in ABS that deform at low temperature,

**No** plastics that do not tolerate UV or transmit inflammation.







# IP protection classification (Ingress protection)



# Technical introduction: Ingress protection

## IP protection (Ingress protection)

### The first 2 characters of IP codification (upon IEC 60529)

The IP rating defined by the IEC 60529 specifies the degree of protection against ingress of solid bodies (first digit) and against the ingress of water (second digit). Third and fourth characters, optional, provide information on the level of protection. The classification is done by increasing efficiency. There are 7 levels against solid (0: no protection, 6 fully protected) and 9 levels against water (0: no protection, 8: protected against immersion under pressure).

For example, "IP21" means protected against solid objects greater than 12.5 mm (e.g. a finger) and resistant to condensation.

**Caution:** Some IP Protection grades can be given for a specified enclosure position.

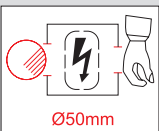
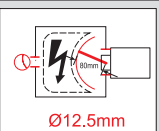
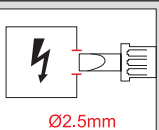
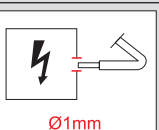
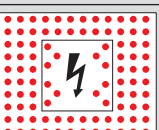
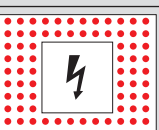
#### X letter in the codification:

The letter X is used in any place in the code where specifying a digit is meant to be avoided. There may be various reasons for choosing this coding variant, such as marketing considerations. Thus, e.g. an IPX7 rating for a consumer device specifies that the device has water protection up to limited immersion, but gives deliberately no information as to whether the device has any protection against mechanical ingress or dust. Among other common IP ratings using the letter X are IPX4. IP2X is frequently used on electrical items to specify the item must prevent finger access to live terminals i.e. plug sockets are IP2X.

### First digit (Solid particle protection)

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects

**Note:** The first digit of the IP marking is not required by EN 60335-1.

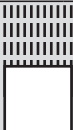
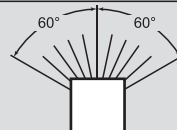
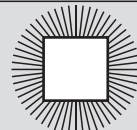
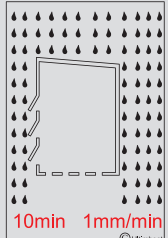
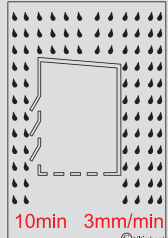
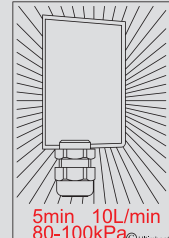
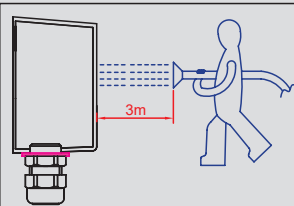
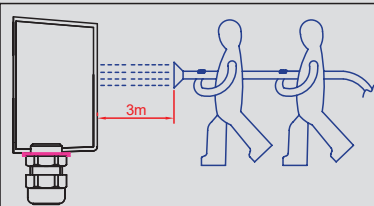
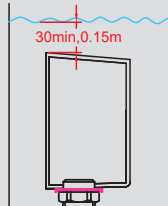
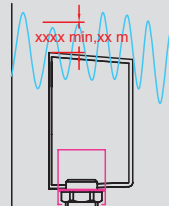
| First digit | IP   | Pic                                                                                 | Protection type                            | Features                                                                                                                                                                                     |
|-------------|------|-------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0           | IPOX |                                                                                     | No protection                              | No protection against contact and ingress of objects                                                                                                                                         |
| 1           | IP1X |  | Protected against solid particles >50 mm   | Protected against any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part.                                                  |
| 2           | IP2X |  | Protected against solid particles >12.5 mm | Protected against fingers or similar objects.                                                                                                                                                |
| 3           | IP3X |  | Protected against solid particles >2.5 mm  | Protected against tools, thick wires, etc.                                                                                                                                                   |
| 4           | IP4X |  | Protected against solid particles >1 mm    | Protected against most wires, screws, etc.                                                                                                                                                   |
| 5           | IP5X |  | Dust protected                             | Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment. Completely protected against contact. |
| 6           | IP6X |  | Dust tight                                 | Completely protected against ingress of dust. Completely protected against contact.                                                                                                          |

# Technical introduction: Ingress protection



## Second digit (Liquid ingress protection)

The second digit indicates the level of protection that the enclosure provides against harmful ingress of water.

| IPX1                                                                                | IPX2                                                                                | IPX3                                                                                                                                                                                                                                                                                                                                     | IPX4                                                                                                                                           |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|    |    |                                                                                                                                                                                                                                                         |                                                             |
|    |    |                                                                                                                                                                                                                                                         |                                                             |
| 10min 1mm/min<br>© Ultimheat                                                        | 10min 3mm/min<br>© Ultimheat                                                        | 5min 0.7L/min<br>80-100kPa<br>© Ultimheat                                                                                                                                                                                                                                                                                                | 5min 10L/min<br>80-100kPa<br>© Ultimheat                                                                                                       |
| Second digit                                                                        | Protection type                                                                     | Effective protection                                                                                                                                                                                                                                                                                                                     | Test description                                                                                                                               |
| 0                                                                                   | Not protected                                                                       |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                |
| 1                                                                                   | Dripping water                                                                      | Dripping water (vertically falling drops) shall have no harmful effect.                                                                                                                                                                                                                                                                  | - Water equivalent to 1 mm rainfall per minute.<br>- Test duration: 10 minutes                                                                 |
| 2                                                                                   | Dripping water when tilted up to 15°                                                | Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.                                                                                                                                                                                                      | - Water equivalent to 3 mm rainfall per minute.<br>- Test duration: 10 minutes                                                                 |
| 3                                                                                   | Spraying water                                                                      | Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.                                                                                                                                                                                                                                          | - Water volume: 0.7 liters per minute<br>- Pressure: 80–100 kPa<br>- Test duration: 5 minutes                                                  |
| 4                                                                                   | Splashing water                                                                     | Water splashing against the enclosure from any direction shall have no harmful effect.                                                                                                                                                                                                                                                   | Test duration: 5 minutes<br>Water volume: 10 liters per minute<br>Pressure: 80–100 kPa                                                         |
| IPX5                                                                                | IPX6                                                                                | IPX7                                                                                                                                                                                                                                                                                                                                     | IPX8                                                                                                                                           |
|  |  |                                                                                                                                                                                                                                                      |                                                           |
| 12.5L/min, 30kPa<br>© Ultimheat                                                     | 30min 100L/min 100kPa<br>© Ultimheat                                                | 30min, 0.15m<br>© Ultimheat                                                                                                                                                                                                                                                                                                              | xxxx min, xxx m<br>© Ultimheat                                                                                                                 |
| Second digit                                                                        | Protection type                                                                     | Effective protection                                                                                                                                                                                                                                                                                                                     | Test description                                                                                                                               |
| 5                                                                                   | Water jets                                                                          | Water projected by a 6.3 mm dia. nozzle against enclosure from any direction shall have no harmful effects.                                                                                                                                                                                                                              | - Water volume: 12.5 litres per minute<br>- Pressure: 30 kPa<br>- Distance: 3 m<br>- Test duration: 3 minutes                                  |
| 6                                                                                   | Powerful water jets                                                                 | Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects.                                                                                                                                                                                                                | - Water volume: 100 litres per minute<br>- Pressure: 100 kPa<br>- Distance: 3 m<br>- Test duration: 3 minutes                                  |
| 7                                                                                   | Immersion up to 1m                                                                  | Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).                                                                                                                                                              | - Immersion at depth of at least 1 m measured at bottom of device, and at least 15 cm measured at top of device<br>- Test duration: 30 minutes |
| 8                                                                                   | Immersion beyond 1m                                                                 | The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects. | Test duration: continuous immersion in water.<br>Depth is specified by manufacturer                                                            |



# Technical introduction: Ingress protection

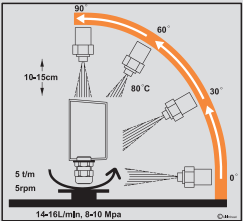
## First additional letter

| Additional letters that can be appended to classify only the level of protection against access to hazardous parts by persons |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Letter                                                                                                                        | Protected against access to hazardous parts with |
| A                                                                                                                             | Back of hand                                     |
| B                                                                                                                             | Fingers                                          |
| C                                                                                                                             | Tools                                            |
| D                                                                                                                             | Wires                                            |

## Second additional letter

| Further letters can be appended to provide additional information related to the protection of the device |                                         |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Letter                                                                                                    | Meaning                                 |
| H                                                                                                         | High voltage device                     |
| M                                                                                                         | Device moving during water test         |
| S                                                                                                         | Device standing still during water test |
| W                                                                                                         | Weather conditions                      |

## IP69K (DIN 40050-9)

| Description                                                                                                                                                                                                                                                                                           |  | Test description                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Specific ingress protection rating for high-pressure, high-temperature washing applications. Such enclosures must not only be dust tight (IP6X), but also able to withstand high-pressure and steam cleaning</p> |  | <ul style="list-style-type: none"> <li>- Water volume: 14-16L liters per minute</li> <li>- Water temperature: 80°C</li> <li>- Pressure: 8-10 Mpa (80-100 bar)</li> <li>- Distance: 10 to 15cm from the tested device at angles of 0°, 30°, 60° and 90° for 30s each. The test device sits on a turntable that rotates once every 12s</li> </ul> |

## Examples of ingress protection requested by standard and applications

Examples of standards which we recommend you refer to define technical needs for domestic appliances: Room heaters (IEC60335-2-30), Heaters that are built into air conditioners (IEC 60335-2-40); Clothes dryers and towel rails (IEC 60335-2-43); Heaters for saunas (IEC 60335-2-53); Thermal-storage room heaters (IEC 60335-2-61); Heating appliances for breeding and rearing animals (IEC 60335-2-71); Foot warmers and heating mats (IEC 60335-2-81); Flexible sheet heating elements for room heating (IEC 60335-2-96); Heating cables (IEC 60800).

| <b>Bath rooms, swimming pools and assimilated</b>      | These rooms are divided in 4 area volumes: 0,1,2,3. These volumes and installation rules are described in the French standard NFC15100, International standard Cenelec HD384 and European standard IEC6.364                                                                                                                                               |                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Areas                                                  | Minimal IP requirements                                                                                                                                                                                                                                                                                                                                   | Electrical protection                                                                                                                                                                                                                                                                    |
| 0                                                      | All electric heaters are prohibited.<br>Other equipments:<br><u>Bathrooms</u> : IPX7<br><u>Pools and similar</u> : IPX8                                                                                                                                                                                                                                   | SELV limited to 12V DC or 30V AC                                                                                                                                                                                                                                                         |
| 1                                                      | All electric heaters are prohibited.<br>Other equipments:<br><u>Bathrooms</u> : IPX4, but IPX5 if this volume can be subjected to water jets for cleaning in public baths.<br><u>Pools and similar</u> : IPX5                                                                                                                                             | SELV limited to 12V DC or 30V AC                                                                                                                                                                                                                                                         |
| 2                                                      | <u>Bathrooms</u> : IP24 mini heaters are authorized<br>Other equipments: IPX3, but IPX5 if this volume can be subjected to water jets for cleaning in public baths.<br><u>Indoors Pools</u> : IP24 mini heaters authorized<br>Other equipment: IPX2, but IPX5 if this volume can be subjected to water jets for cleaning.<br><u>Outdoors Pools</u> : IPX5 | <ul style="list-style-type: none"> <li>- Class 2 devices</li> <li>- Controls should not be accessible from the shower or bath.</li> <li>- Heaters must not be powered by a wall mounted socket.</li> <li>- Line must be protected by a 30 mA residual current circuit breaker</li> </ul> |
| 3                                                      | <u>Bathrooms</u> : IP21 mini heaters are authorized<br>Other equipments: IPX1<br><u>Pools</u> : Heaters authorized IP21 mini<br>Other equipments: IPX1, but IPX5 if this volume can be subjected to water jets for cleaning.<br><u>Outdoors Pools</u> : IPX5                                                                                              | <ul style="list-style-type: none"> <li>- Class 1 or Class 2 devices</li> <li>- Heaters must not be powered by a wall mounted socket.</li> <li>- Line must be protected by a 30 mA residual current circuit breaker</li> </ul>                                                            |
| <b>Saunas</b>                                          | Electrical equipment must have a minimum degree of protection IP24.                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                          |
| <b>Underfloor heating</b>                              | The heating elements intended to be embedded in a concrete or other similar material must be IPX7                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                          |
| <b>Electrical devices that are permanently outdoor</b> | The degree of protection shall be at least IPX4.                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                          |



# Technical introduction: Ingress protection



|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Residential, Offices, Schools</b>                       | Generally clean, dry and free from harmful deposits of dust, but some condensate may be present due to atmospheric conditions. Minimum protection is typically IP2X for dry conditions.                                                                                                                                                                                                                                       |
| <b>Control rooms/ Sub-Stations</b>                         | Generally dry and free from harmful deposits of dust, but some condensate may be present due to atmospheric conditions.<br>Where access is restricted to skilled or instructed persons, IP2X is the typical minimum requirement for dry conditions.                                                                                                                                                                           |
| <b>Commercial, Light industrial premises</b>               | It may not be clean, but normally dry and free from harmful deposits of dust.<br>Suitable minimum protection:<br>- Where condensate is not present: IP2X<br>- Where condensate may be present: IP21.<br>- Equipment installed within range of fire sprinkler systems: IP22.                                                                                                                                                   |
| <b>Machine control equipment</b>                           | Where fluids may be present, e.g. lathes, millers etc., minimum protection typically requested is IP54.<br>Consideration should also be given to the corrosive properties of certain fluids.                                                                                                                                                                                                                                  |
| <b>Heavy Industrial, Chemical.</b>                         | These environments are not usually totally clean, with possible presence of corrosive elements and harmful deposits of dust. Protection to IP54 will be typically required, with special consideration given to the corrosion resisting properties of the enclosure.<br>When risk of explosion exists, enclosures and equipment should meet the specifications of these environments.                                         |
| <b>Food Processing</b>                                     | Will vary depending on the type of food being processed and the possible requirement for washing down.<br>Where fine powders are present, a minimum of IP53 should be used. This should be increased to IP54/65 if the equipment needs to be washed or hosed down. If the equipment is to be washed with hot or cold water under high pressure, the degree of protection IP65 may be insufficient and IP69K may be necessary. |
| <b>Dump trucks, cement mixers, food industry, car wash</b> | In these high-pressure, high-temperature wash-down applications, enclosures must not only be dust tight (IP6X), but also able to withstand high-pressure and steam cleaning. The recommended protection rating is IP69K. (DIN40050-9)                                                                                                                                                                                         |
| <b>Weatherproof equipment</b>                              | If subjected to exposure to any specific weather condition, an agreement between the User and Manufacturer is necessary, with consideration given to specific testing conditions, including the corrosion resisting properties of the enclosure, fittings and cable glands.                                                                                                                                                   |

## Other classifications

NFC 15100 standard also refers to a "water drop" marking that household appliances and lightings can wear depending on their degree of protection. This marking is different from the IP marking. Double marking, the water drops and the IP code, is not allowed because the tests are different.

| Description          | Protected against vertical water drops                                              | Protected against rainfall                                                          | Protected against splashing water                                                   | Protected against water jets                                                          | Protected against immersion up to 1 m                                                 |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>IP equivalent</b> | IPX1                                                                                | IPX3                                                                                | IPX4                                                                                | IPX5                                                                                  | IPX7                                                                                  |
| <b>Standard logo</b> |  |  |  |  |  |

## NEMA (USA) rating equivalences with IP

The United States National Electrical Manufacturers Association (NEMA) also publishes protection ratings for enclosures similar to the IP rating system published by the International Electro-technical Commission (IEC). However, it also dictates other product features not addressed by IP codes, such as corrosion resistance, gasket aging, and construction practices. Thus, while it is possible to map IP Codes to NEMA ratings that satisfy or exceed the IP Code criteria, it is not possible to map NEMA ratings to IP codes, as the IP Code does not mandate the additional requirements. The table above indicates the minimum NEMA rating that satisfies a given IP code, but can only be used in that way, not to map IP to NEMA.

North American enclosure rating systems are defined in NEMA 250, UL 50, UL 508, and CSA C22.2 N°. 94.

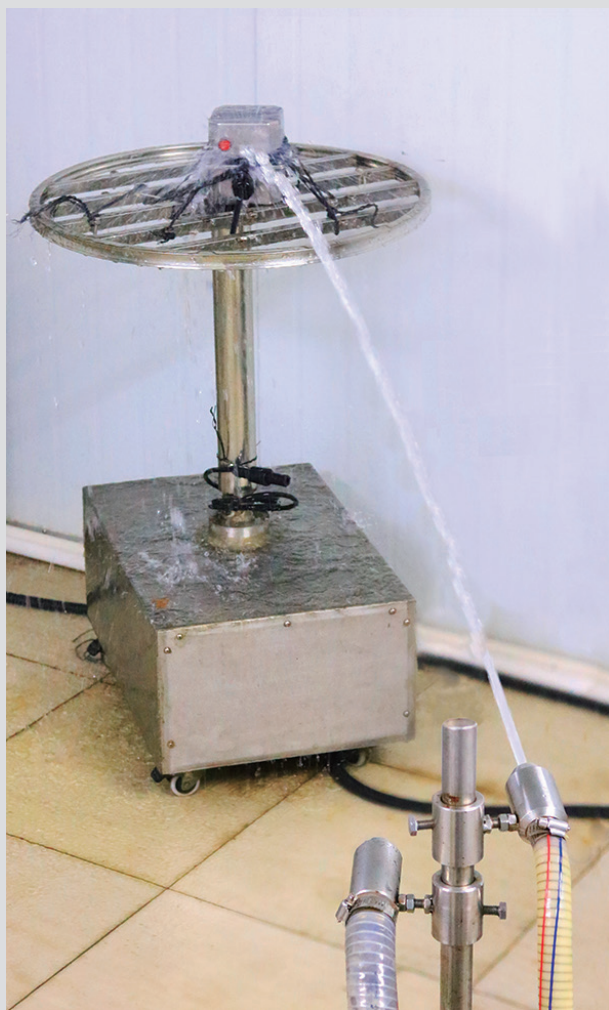
| Equivalent IP Code | Min. NEMA Enclosure rating to satisfy IP Code. |
|--------------------|------------------------------------------------|
| IP20               | NEMA-1                                         |
| IP54               | NEMA-3                                         |
| IP66               | NEMA-4, NEMA-4X                                |
| IP67               | NEMA-6                                         |
| IP68               | NEMA-6P                                        |

# Technical introduction: Ingress protection

## IPx5 and IPx6 testing of enclosures in our laboratory



IPx4 test



IPx5 test



IPx6 test



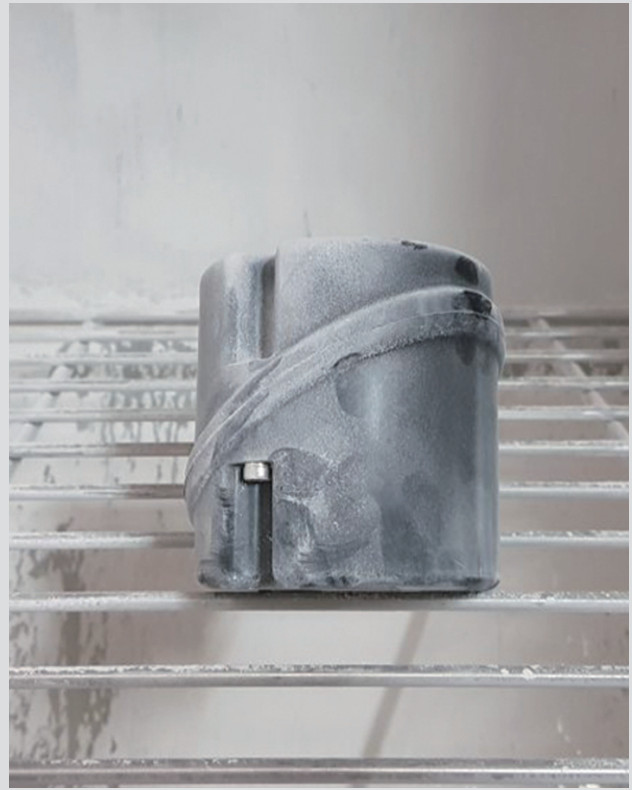


## Technical introduction: Ingress protection

### IP5x and IP6x (Protection against dust) testing of enclosures in our laboratory



Test chamber



Enclosure during IP6x test

### IPx9K testing of enclosures in our laboratory (water jets at High pressure and high temperature)



Test chamber



Enclosure during IPx9k test



# Technical introduction: Ingress protection

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# Electrical protection

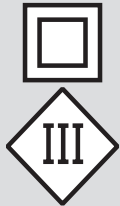
## Electrical protection classes

There are two main types of electrical protection, protection against the risk of **direct contact** (functional isolation) and protection against **indirect contact** hazards.

The functional isolation is not sufficient in case of electrical failure and it is necessary to add protection against the risks of indirect contacts, which can be achieved by the following means:

- The earthing of all metal parts.
- Double or reinforced insulation.
- A low voltage supply via a transformer.

The combination of these protections determines the class of electrical protection device.

| Class | Symbole                                                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     |                                                                                    | Equipment with only functional insulation but not binding to the metal parts. Banned in Europe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1     |   | Material with a functional isolation and earthing of metal parts.<br>These devices must be connected to earth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2     |   | Equipment with dual insulation of live parts (functional insulation and physical insulation). No earthing of metal parts.<br>This double insulation ensures that no accessible part may be subject to dangerous voltages even after a first insulation fault<br>The advantage of this class of appliances is a higher protection to the user regardless of the electrical sockets used (With or without earth terminal).<br>These devices do not need to be connected to earth.                                                                                                                                                                                                                                                                                                                         |
| 3     |  | Equipment class 2 transformer with a SELV (Safety Extra Low Voltage).<br>This solution ensures that no accessible part may be subject to dangerous voltages even after a first and a second insulation fault. The electrical isolation of a device by a transformer located in the gap eliminates the risks for electrical ground return of a user would be accidentally contacted by an electric leakage. On the other hand, the low voltage SELV severely limits the current that can pass through the human body in contact with two elements of the device under different potentials.<br>The advantage of this class of appliances is a higher protection to the user regardless of the electrical sockets used (With or without earth terminal).<br>These devices must not be connected to earth. |

## Earthing provisions of metal enclosures and fittings

The design of the grounding connections was made to meet all the points of the EN60335-1 standard, and to ensure a safe grounding, and specially the following requirements:

EN60335-1, § 27.1: Accessible metal parts of class I appliances that may become live in the event of an insulation fault, shall be permanently and reliably connected to an earthing terminal within the appliance.

*To meet this normative obligation, our metal housings and our brass and stainless steel fittings are equipped with at least one grounded terminal. For stamped sheet metal housings, the grounding is performed by a welded terminal having at least two soldering points.*

EN60335-1, § 27.2: The clamping means of earthing terminals shall be adequately secured against accidental loosening. It shall not be possible to loosen the conductors without the aid of a tool.

*To meet this normative obligation, earthing is made by screws needing a screwdriver to screw and unscrew, and have dented washers.*

EN60335-1, § 27.4: All parts of the earthing terminal intended for the connection of external conductors shall be such that there is no risk of corrosion resulting from contact between these parts and the copper of the earthing conductor or any other metal in contact with these parts.

*To meet this normative obligation, the choice of terminal materials and screws is made taking into account the galvanic voltage between materials, to avoid bimetallic corrosion, and favoring, whenever possible, the stainless steel screws and terminals.*

EN60335-1, § 28.1: Earth connections which failures may provide a lack of earthing continuity shall withstand the mechanical stresses occurring in normal use.

Screws used for connections providing earthing continuity shall screw into metal.

*To meet this normative obligation, earth terminals withstand more than one and a half times the nominal tightening torque required by the standards and are threaded in the mass of the metal of the housing or fitting.*



# Technical introduction: electrical protection

EN60335-1, § 28.2 Connections providing earthing continuity shall be constructed so that contact pressure is not transmitted through insulating material that is liable to shrink or to distort.

- Thread-cutting (self-tapping) screws shall not be used if they are likely to be operated by the user or installer.
- At least two screws must be used for each connection providing earthing continuity unless the screw forms a thread having a length of at least half the diameter of the screw.

*In order to meet this normative obligation, the earthing terminals of the connectors are designed so that, even when they are used with a plastic housing with an interposed gasket, the tightening of the conductor is done only on metallic parts.*

EN60335-1, § 28.2: Self-tapping screws shall not be used if they can be used by the installer or the user. At least two screws shall be used for each earth connector unless the screw forms a thread having a length of at least half the diameter of the screw.

*To meet this normative obligation, self-tapping screws are never used for grounding, and when the grounding is performed by a screw in a tapping, the length of it is always greater to the value given by the standard.*

28.4 Screws and nuts that make a mechanical connection between different parts of the appliance shall be secured against loosening if they also make connections providing earthing continuity.

- Sealing compound that softens on heating provides satisfactory security only for screw connections not subject to torsion in normal use.

*To meet this normative obligation, the screws of metal covers include a mechanical device avoiding accidental loosening. No sealing compound is used on the screws.*

# Technical introduction: electrical protection

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# Mechanical impact resistance



## Mechanical impact resistance

This mechanical impact is identified by the energy needed to qualify a specified resistance level, which is measured in joules (J). Protection class impact resistance was eventually given previously by the third digit of the IP rating. It was dropped during the 3rd edition of IEC60529 (1978), and replaced by an independent marking specified by the EN62262 standard. There is not an exact correspondence of values between the old and new standards.

Although dropped from the 3rd edition of IEC 60529 onwards, and not present in the EN version, older enclosure specifications will sometimes be seen with an optional third IP digit denoting impact resistance. Newer products are likely to be given an IK rating instead.

### Analysis of the results of the impact tests:

The tests are carried out as follows:

#### For plastics:

1. On test pieces of identical size (60 mm x 60 mm), thickness 3 mm. A single shock is made in the center of the test piece This provides a comparative table of strength of different materials.
2. The tests are then carried out on the apparatus, on the cover and on the lateral faces. A first shock is produced in the middle of each face. It is then followed by 4 other shocks evenly distributed over the rest of the surface.

The test is considered successful when the plastic is not split or broken. Of course, the apparatus must retain its ability to function and its degree of tightness.

#### For aluminum or stainless steel cases:

A first shock is produced in the middle of each of the faces of the devices. It is then followed by 4 other shocks evenly distributed over the rest of the tested face.

The test is considered **inconclusive** when the largest deformation measured on the metal at any location of the different impacts is greater than **2mm** Indeed, **although this value is not specified in the standard**, we considered that this permanent deformation would not allow the mounting of accessories.

#### For accessories:

When the cases are equipped with instruments, it is often the accessory which will be the most fragile part and will determine the classification. If the case is equipped with accessories (handle, indicator light, cover, switch, cable gland, etc.), a test is performed in the center of this accessory and in two orthogonal directions. The glands have varying degrees of resistance because they exist in polyamide plastic and also in metal.

The test is considered successful when this accessory is not broken and retains its function.

## IK mechanical impact resistance values upon EN 62262

| IK number | Impact energy (Joules) | Equivalent drop mass and height |
|-----------|------------------------|---------------------------------|
| 00        | Unprotected            | No test                         |
| 01        | 0.15                   | 200 g dropped from 7.5 cm       |
| 02        | 0.2                    | 200 g dropped from 10 cm        |
| 03        | 0.35                   | 200 g dropped from 17.5 cm      |
| 04        | 0.5                    | 200 g dropped from 25 cm        |
| 05        | 0.7                    | 200 g dropped from 35 cm        |
| 06        | 1                      | 500 g dropped from 20 cm        |
| 07        | 2                      | 500 g dropped from 40 cm        |
| 08        | 5                      | 1.7 kg dropped from 29.5 cm     |
| 09        | 10                     | 5 kg dropped from 20 cm         |
| 10        | 20                     | 5 kg dropped from 40 cm         |

## For information: IP third number mechanical impact resistance (Obsolete)

| IP third digit | Impact energy (Joules) | Equivalent drop mass and height |
|----------------|------------------------|---------------------------------|
| 0              | Unprotected            | No test                         |
| 1              | 0.225                  | 150 g dropped from 15 cm        |
| 2              | 0.375                  | 250 g dropped from 15 cm        |
| 3              | 0.5                    | 250 g dropped from 20 cm        |
| 5              | 2                      | 500 g dropped from 40 cm        |
| 7              | 6                      | 1.5 kg dropped from 40 cm       |
| 9              | 20                     | 5.0 kg dropped from 40 cm       |

# Technical introduction: Mechanical impact resistance

## IK testing of enclosures in our laboratory

|                                 |                                 |                           |                        |
|---------------------------------|---------------------------------|---------------------------|------------------------|
|                                 |                                 |                           |                        |
| Test equipment for IK04 to IK06 | Test equipment for IK07 to IK10 | IK 10 testing on specimen | IK10 test on enclosure |

### Comparative test results of 60 x 60mm plastic specimens, 3mm thickness

| Material | PA66, 25%GF | PC | PVDF | PP |
|----------|-------------|----|------|----|
| IK       | 10          | 10 | 09   | 10 |

### Comparative test results of metal specimens of 60 x 60mm, in thicknesses used on enclosures\*

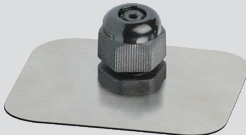
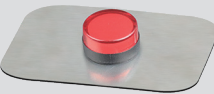
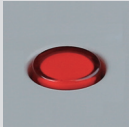
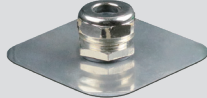
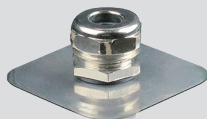
|                  | 304 stainless steel |       |       | Aluminum |     |      |
|------------------|---------------------|-------|-------|----------|-----|------|
| Thickness        | 1mm                 | 1.2mm | 2mm   | 1.7mm    | 2mm | 3mm  |
| IK10 impact bump | 10.6mm              | 7.5mm | 4.4mm | 11.8     | 9.7 | 0.45 |

\* The value of the IK10 impact deformation of flat specimens is indicative but is not representative of the deformation of stamped or molded parts, because the shape is then predominant.

# Technical introduction: Mechanical impact resistance



## IK grade of usual accessories (For information only)

| Description                                        | Photos                                                                              | IK    | Description                            | Photos                                                                                | IK   |
|----------------------------------------------------|-------------------------------------------------------------------------------------|-------|----------------------------------------|---------------------------------------------------------------------------------------|------|
| Unprotected external knob dia. 40mm                |    | IK09  | Internal access soft boot              |    | IK10 |
| External knob dia. 50mm inside a protection recess |    | IK10  | Internal access M25 cap in PA6         |    | IK10 |
| Built in pilot light dia 8mm                       |    | IK08  | M16 cable gland in PA6                 |   | IK10 |
| Unprotected dia. 16mm pilot light                  |  | IK08  | M20 cable gland in PA6                 |  | IK10 |
| Dia 16mm pilot light inside a protection recess    |  | IK10  | M25 cable gland in PA6                 |  | IK10 |
| Unprotected dia. 22mm pilot light                  |  | IK08  | M16 cable gland in nickel plated brass |  | IK10 |
| Unprotected toggle switch                          |  | <IK04 | M20 cable gland in nickel plated brass |  | IK10 |

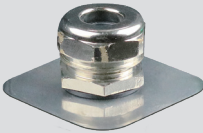
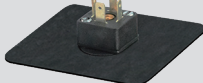
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# Technical introduction: Mechanical impact resistance

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| Description                                         | Photos                                                                              | IK    | Description                                           | Photos                                                                                | IK    |
|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------|---------------------------------------------------------------------------------------|-------|
| Toggle switch inside recess                         |    | IK10  | M25 cable gland in nickel plated brass                |    | IK10  |
| Unprotected dome switch                             |    | IK10  | Miniature Cnomo connector, wall mounted part          |    | <IK04 |
| Dome switch inside recess                           |    | IK10  | Miniature Cnomo connector, assembled with mobile part |    | <IK04 |
| Miniature M12 connector, wall mounted part          |  | IK08  | M21 connector, wall mounted part                      |  | IK10  |
| Miniature M12 connector, assembled with mobile part |  | <IK04 | M21 connector, assembled with mobile part             |  | <IK04 |
| External manual reset cap                           |  | IK10  |                                                       |                                                                                       |       |

# Technical introduction: Mechanical impact resistance

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# Corrosion resistance of aluminum



# Technical introduction: Corrosion resistance of aluminum

## Corrosion resistance of aluminum Chemical composition of standard alloy used

| Standard               | Si       | Cu      | Mg   | Zn   | Mn   | Fe      | Ni   | Sn   | Ti | Al        |
|------------------------|----------|---------|------|------|------|---------|------|------|----|-----------|
| ADC12 (JIS H5302:2000) | 9.6-12.0 | 1.5-3.5 | <0.3 | <1.0 | <0.5 | 0.6-0.9 | <0.5 | <0.2 | -  | Remainder |

### General corrosion resistance of aluminum enclosures when used outdoor

#### General information on the corrosion of aluminum

Aluminum and alloys generally have good resistance to atmospheric corrosion, in marine, urban and industrial environments. Molded under pressure, aluminum enclosures offer many possibilities of forms and treatments of the surface, require little maintenance and resist well in the time. In addition, with a view to sustainable development, aluminum is one of the metals whose recycling is the most economical. Aluminum remelting is only 5% of the energy required to make the metal from the ore. Aluminum naturally overlies with an oxide layer, which protects it most often against corrosion. In neutral aqueous solutions (4 < pH < 9), this oxide film has a thickness of 50 Å and protects the metal (passivation). Aluminum is corroded homogeneously only in a very acidic solution, or in an alkaline solution. The strength and stability of the oxide layer depend on the ambient environment, the alloy composition and the microscopic structure of the metal (depending on the heat treatments applied). The electrochemical behavior of aluminum is influenced by the natural oxide film that governs the corrosion.

The boxes are massive and thick-walled (2 to 4mm); the corrosion is then superficial and affects only the appearance, without modifying the mechanical strength. In neutral environments, the overall corrosion rate of passive aluminum alloys is very small, but it is never totally zero. It thus keeps a value of the order of 5 µm per year, which can lead in the long run to a gradual change in the surface state to an unsightly appearance due to a change in roughness (orange peel).

The most common alteration is in the form of pitting corrosion which develops as cavities of varying depths. This is a very complex phenomenon, the mechanism of which is not fully determined.

In common industrial environments, aluminum housings can therefore be used without surface treatment other than deburring and standard vibration polishing.

### Aluminum Galvanic corrosion, also called Bimetallic Corrosion

Aluminum enclosures may be subject to a particular phenomenon which reduces their service life, can go as far as the perforation of the envelope or the complete locking of the closure screws. It is galvanic or bimetallic corrosion.

Although most standards specify that appropriate safeguards must be in place to prevent galvanic corrosion on aluminum enclosures, none advocates a solution or requires specific material or composition of alloys. However, even if the aluminum is in an unfavorable position in the galvanic scale, it is most often covered with its passive film, which ennobles it considerably and makes it much less sensitive to corrosion.

Galvanic (Bi-Metallic) corrosion is the additional corrosion that occurs when dissimilar metals are in contact in the presence of an electrolyte (e.g. water, sea water). The corrosion of a metal, the anode, results from the positive current flowing from the anode to the less reactive (more noble) metal, the cathode, through the electrolyte.

This process is similar to the conventional corrosion of a single, uncoupled metal but generally proceeds at a higher rate depending on the difference in electrochemical reactivity of the anode and cathode metal.

There is a potential difference between the two metals that depends on both the metal and the solution. Two different metals or two alloys in contact with the same medium usually take two different potentials. If these two metals are electrically connected, their potential difference gives rise to electrochemical reactions and to the circulation of an electric current.

The most negative (the least noble) metal is positively polarized and the most positive metal is negatively polarized. In the vast majority of cases, this configuration corresponds to an increase in the corrosion rate of the most corrodible metal (the most negative), and a decrease in the corrosion rate of the least corrodible metal (the most positive).

### Galvanic corrosion only occurs if the following 4 conditions are present and simultaneous:

- A: An electrolyte bridging the two metals.

When the conductivity of the electrolyte is low, corrosion is localized to the contact areas between the two metals. As the conductivity of the electrolyte increases, the corroded surface increases.





# Technical introduction: Corrosion resistance of aluminum

## - B: An electrical contact between the two metals.

If the electrical contact is not established between the two metals by the interposition of an insulator (aluminum oxide, phosphating, paint, oil, etc.), the current does not circulate, there is no corrosion.

## - C: A difference in potential between the metals to enable a significant galvanic current.

The higher this value, the greater the electromotive force of the phenomenon. A difference of several hundred millivolts will result in strong galvanic corrosion, whereas a difference of less than 200-300mV will not have significant consequences. These galvanic corrosion potentials are given by a table which gives the electric potential of metals, usually measured by a so-called "Standard Calomel Electrode (S.C.E.)" technique. (See below)

## - D: A sustained cathodic reaction on the more noble of the two metals.

## The ratio of the surfaces of the two metals

- The most unfavorable case is that of a large cathodic surface (the most positive material) electrically connected to a small anodic surface (the most negative metal). The corrosion rate of the most negative metal can be multiplied by 100 see per 1000.

For example, stainless steel screws enclosing an aluminum housing will be prone to corrosion due to surface differences.

## Corrosion of the noble metal, and influence of the salts produced by its corrosion

- The corrosion resistance of the noblest metal, regardless of its potential, has a considerable influence on the behavior of the bimetallic corrosion. If the noblest metal corrodes, its corrosion products may, by displacement, accelerate the corrosion of the most corrodable metal. For example, copper, although considered as a noble metal and whose galvanic torque with aluminum is small, produces oxides that can corrode aluminum, which is a critical parameter when designing earth terminal blocks on aluminum housings that can accommodate copper conductors.

## Sacrificial metal coatings

By applying to the cathodic side a sacrificial coating having a potential similar to or near that of the anodic member, the galvanic corrosion is reduced.

Main design rule:

- The sacrificial element should be on the anodic side and smaller.

- Be careful to use fasteners that have an intact coating.

Example:

Zinc plating on steel fasteners will sacrifice the zinc instead of corroding the Aluminum (Potential difference 100 to 200mV).

**Caution:**

Do not use nickel plated steel fasteners, as the potential difference (450mV) between aluminum and nickel is too high and will corrode aluminum.

## Specific issue of galvanic corrosion between Stainless steel and aluminum

The corrosion potentials of the stainless steels are "cathodics" and located in the "noble" area and the corrosion potentials of aluminum are "Anodic" and located in the "non-noble" area, with a large potential difference. This means that there will be no galvanic corrosion on stainless steel when placed in contact with aluminum while aluminum will corrode.

Although aluminum is anodic to stainless steel, large relative surface areas of aluminum to stainless steel can be acceptable, dependent on local conditions.

Stainless steel fasteners in aluminum plates or sheets or massive parts are normally considered safe. Even with no insulation between the metals, there should be little risk of corrosion.

In contrast, in a marine environment, severe localized pitting corrosion to the aluminum treads has been observed where un-insulated stainless steel screws were used.

## Mechanical methods of reducing galvanic corrosion between aluminum and stainless steel

- Isolating the two materials by means of an electrical insulating material, like plastic, wherever practical.

- Avoid relatively small areas of the less noble metal (Aluminum) and large areas of the more noble metal (Stainless steel).

NB: Coupling a relatively wide area of aluminum with a small surface area of a cracked stainless steel part can cause a rapid attack of the material inside the crevice and corrode the stainless steel.

- Protect against the electrolyte presence around the bimetallic junction. For example, if possible, paint both metals.

- Apply corrosion inhibitors under screw heads and threads

- Apply an insulating organic coating to the contact surfaces before assembly.



# Technical introduction: Corrosion resistance of aluminum

Table of electrochemical voltage between aluminum alloys (Names highlighted in yellow and blue) and other common metals, in a 2% salt water solution.

There is no noticeable occurrence of corrosion when the value of the galvanic torque is less than 300mV.

|                                    | Pt (Platinum/ Platine) | Au (Gold/ Or) | Ti (Titanium / Titane) | AlSi 316L (passive/passif) | Ag (Silver/ Argent) | Ni (Nickel/ Nickel) | Ni Cu 30 (Monel 400) | NiCr15 Fe8 (Inconel 600) | Cu55 Zn23 Ni22 (Arcap) | Cu (Copper/ Cuivre) | Al10 Sn66 Pb34 | Cu Zn34 (Brass/ Laiton) | Cu88 Sn12 (Bronze) | Sn (Tin/ Etain) | Pb (Lead / Plomb) | Al Cu Mg1 (Duralumin) | Mild steel / Acier doux | Al Si 10Mg (Alpax H) | Al 99.5 (Aluminum) | Hard steel/ Acier dur | Al Mg5 (Duralinox) | ADC12 (Aluminum alloy) | Cd (Cadmium/ Cadmium) | Fe ( Steel / Fer) | Cr (Chromium/ Chrome) | Al Mg Si0.7 (Almasilium) | Sn75 Zn25 | Zn (Zinc/ Zinc) | Al PVD (Physical vapor deposition) | Mg (Magnesium) |
|------------------------------------|------------------------|---------------|------------------------|----------------------------|---------------------|---------------------|----------------------|--------------------------|------------------------|---------------------|----------------|-------------------------|--------------------|-----------------|-------------------|-----------------------|-------------------------|----------------------|--------------------|-----------------------|--------------------|------------------------|-----------------------|-------------------|-----------------------|--------------------------|-----------|-----------------|------------------------------------|----------------|
| Pt (Platinum/ Platine)             | 0                      | 130           | 250                    | 250                        | 350                 | 430                 | 430                  | 430                      | 450                    | 570                 | 600            | 650                     | 770                | 800             | 840               | 940                   | 1000                    | 1065                 | 1090               | 1095                  | 1100               | 1100                   | 1100                  | 1105              | 1200                  | 1200                     | 1350      | 1400            | 1400                               | 1900           |
| Au (Gold/ Or)                      | 130                    | 0             | 110                    | 110                        | 220                 | 300                 | 300                  | 300                      | 320                    | 410                 | 470            | 520                     | 610                | 670             | 710               | 810                   | 870                     | 935                  | 960                | 965                   | 970                | 970                    | 970                   | 975               | 1070                  | 1070                     | 1230      | 1270            | 1270                               | 1820           |
| Ti (Titanium / Titane)             | 250                    | 110           | 0                      | 0                          | 110                 | 180                 | 180                  | 180                      | 200                    | 320                 | 350            | 400                     | 520                | 550             | 590               | 690                   | 750                     | 815                  | 840                | 845                   | 850                | 850                    | 855                   | 950               | 950                   | 1100                     | 1150      | 1150            | 1700                               |                |
| AlSi 316L (passive/passif)         | 250                    | 110           | 0                      | 0                          | 110                 | 180                 | 180                  | 180                      | 200                    | 320                 | 350            | 400                     | 520                | 550             | 590               | 690                   | 750                     | 815                  | 840                | 845                   | 850                | 850                    | 855                   | 950               | 950                   | 1100                     | 1150      | 1150            | 1700                               |                |
| Ag (Silver/ Argent)                | 350                    | 220           | 100                    | 100                        | 0                   | 80                  | 80                   | 80                       | 100                    | 220                 | 250            | 300                     | 420                | 450             | 490               | 590                   | 650                     | 715                  | 740                | 745                   | 750                | 750                    | 755                   | 850               | 850                   | 1010                     | 1050      | 1050            | 1600                               |                |
| Ni (Nickel/ Nickel)                | 430                    | 300           | 180                    | 180                        | 80                  | 0                   | 0                    | 0                        | 20                     | 110                 | 170            | 220                     | 340                | 370             | 410               | 510                   | 570                     | 635                  | 660                | 665                   | 670                | 670                    | 675                   | 770               | 770                   | 930                      | 970       | 970             | 1520                               |                |
| Ni Cu 30 (Monel 400)               | 430                    | 300           | 180                    | 180                        | 80                  | 0                   | 0                    | 0                        | 20                     | 110                 | 170            | 220                     | 340                | 370             | 410               | 510                   | 570                     | 635                  | 660                | 665                   | 670                | 670                    | 675                   | 770               | 770                   | 930                      | 970       | 970             | 1520                               |                |
| NiCr15 Fe8 (Inconel 600)           | 430                    | 300           | 180                    | 180                        | 80                  | 0                   | 0                    | 0                        | 20                     | 110                 | 170            | 220                     | 340                | 370             | 410               | 510                   | 570                     | 635                  | 660                | 665                   | 670                | 670                    | 675                   | 770               | 770                   | 930                      | 970       | 970             | 1520                               |                |
| Cu55 Zn23 Ni22 (Arcap)             | 450                    | 320           | 200                    | 200                        | 100                 | 20                  | 20                   | 20                       | 0                      | 120                 | 150            | 200                     | 320                | 350             | 380               | 490                   | 550                     | 615                  | 640                | 645                   | 650                | 650                    | 655                   | 750               | 750                   | 910                      | 950       | 950             | 1500                               |                |
| Cu (Copper/ Cuivre)                | 570                    | 440           | 320                    | 320                        | 220                 | 140                 | 140                  | 140                      | 120                    | 0                   | 30             | 80                      | 200                | 230             | 270               | 370                   | 430                     | 495                  | 520                | 525                   | 530                | 530                    | 535                   | 630               | 630                   | 780                      | 830       | 830             | 1380                               |                |
| Al10 Sn66 Pb34                     | 600                    | 470           | 350                    | 350                        | 250                 | 170                 | 170                  | 170                      | 150                    | 30                  | 0              | 50                      | 170                | 200             | 210               | 310                   | 400                     | 465                  | 490                | 495                   | 500                | 500                    | 500                   | 505               | 600                   | 600                      | 760       | 800             | 800                                | 1350           |
| Cu Zn34 (Brass/ Laiton)            | 650                    | 520           | 400                    | 400                        | 300                 | 220                 | 220                  | 220                      | 200                    | 80                  | 50             | 0                       | 120                | 150             | 190               | 290                   | 350                     | 415                  | 410                | 445                   | 450                | 450                    | 455                   | 550               | 550                   | 710                      | 750       | 750             | 1300                               |                |
| Cu88 Sn12 (Bronze)                 | 770                    | 640           | 520                    | 520                        | 420                 | 340                 | 340                  | 340                      | 320                    | 200                 | 170            | 120                     | 0                  | 30              | 70                | 170                   | 230                     | 295                  | 320                | 325                   | 330                | 330                    | 330                   | 335               | 430                   | 430                      | 590       | 630             | 630                                | 1180           |
| Sn (Tin/ Etain)                    | 800                    | 670           | 550                    | 550                        | 450                 | 370                 | 370                  | 370                      | 350                    | 230                 | 200            | 150                     | 30                 | 0               | 40                | 140                   | 200                     | 265                  | 290                | 295                   | 300                | 300                    | 300                   | 305               | 400                   | 400                      | 560       | 600             | 600                                | 1150           |
| Pb (Lead / Plomb)                  | 840                    | 710           | 590                    | 590                        | 490                 | 410                 | 410                  | 410                      | 380                    | 270                 | 240            | 190                     | 70                 | 40              | 0                 | 100                   | 160                     | 225                  | 250                | 255                   | 260                | 260                    | 260                   | 265               | 360                   | 360                      | 520       | 560             | 560                                | 1110           |
| Al Cu Mg1 (Duralumin)              | 940                    | 810           | 690                    | 690                        | 590                 | 510                 | 510                  | 510                      | 490                    | 370                 | 340            | 290                     | 170                | 140             | 100               | 0                     | 60                      | 125                  | 150                | 155                   | 160                | 160                    | 160                   | 165               | 260                   | 260                      | 420       | 460             | 460                                | 1010           |
| Mild steel / Acier doux            | 1000                   | 870           | 750                    | 750                        | 650                 | 570                 | 570                  | 570                      | 550                    | 430                 | 400            | 350                     | 230                | 200             | 150               | 60                    | 0                       | 65                   | 90                 | 95                    | 100                | 100                    | 100                   | 105               | 200                   | 200                      | 360       | 400             | 400                                | 950            |
| Al Si 10Mg (Alpax H)               | 1065                   | 935           | 815                    | 815                        | 715                 | 635                 | 635                  | 635                      | 615                    | 495                 | 465            | 415                     | 295                | 265             | 225               | 125                   | 65                      | 0                    | 25                 | 30                    | 35                 | 35                     | 35                    | 40                | 135                   | 135                      | 295       | 355             | 355                                | 885            |
| Al 99.5 (Aluminum)                 | 1090                   | 960           | 840                    | 840                        | 740                 | 660                 | 660                  | 660                      | 640                    | 520                 | 490            | 440                     | 320                | 290             | 250               | 150                   | 90                      | 25                   | 0                  | 5                     | 10                 | 10                     | 10                    | 15                | 110                   | 110                      | 270       | 310             | 310                                | 860            |
| Hard steel/ Acier dur              | 1095                   | 965           | 845                    | 845                        | 745                 | 665                 | 665                  | 665                      | 645                    | 525                 | 495            | 445                     | 325                | 295             | 255               | 155                   | 95                      | 30                   | 5                  | 0                     | 5                  | 5                      | 5                     | 10                | 105                   | 105                      | 265       | 305             | 305                                | 855            |
| Al Mg5 (Duralinox)                 | 1100                   | 970           | 850                    | 850                        | 750                 | 670                 | 670                  | 670                      | 650                    | 530                 | 500            | 450                     | 330                | 300             | 260               | 160                   | 100                     | 35                   | 10                 | 5                     | 0                  | 0                      | 0                     | 5                 | 100                   | 100                      | 260       | 300             | 300                                | 850            |
| ADC12 (Aluminum alloy)             | 1100                   | 970           | 850                    | 850                        | 750                 | 670                 | 670                  | 670                      | 650                    | 530                 | 500            | 450                     | 330                | 300             | 260               | 160                   | 100                     | 35                   | 10                 | 5                     | 0                  | 0                      | 0                     | 5                 | 100                   | 100                      | 260       | 300             | 300                                | 850            |
| Cd (Cadmium/ Cadmium)              | 1100                   | 970           | 850                    | 850                        | 750                 | 670                 | 670                  | 670                      | 650                    | 530                 | 500            | 450                     | 330                | 300             | 260               | 160                   | 100                     | 35                   | 10                 | 5                     | 0                  | 0                      | 0                     | 5                 | 100                   | 100                      | 260       | 300             | 300                                | 850            |
| Fe ( Steel / Fer)                  | 1105                   | 975           | 855                    | 855                        | 755                 | 675                 | 675                  | 675                      | 655                    | 535                 | 505            | 455                     | 335                | 305             | 265               | 165                   | 105                     | 40                   | 15                 | 10                    | 5                  | 5                      | 5                     | 0                 | 95                    | 95                       | 255       | 295             | 295                                | 845            |
| Cr (Chromium/ Chrome)              | 1200                   | 1070          | 950                    | 950                        | 850                 | 770                 | 770                  | 770                      | 750                    | 630                 | 600            | 550                     | 430                | 400             | 380               | 260                   | 200                     | 135                  | 110                | 105                   | 100                | 100                    | 100                   | 95                | 0                     | 0                        | 160       | 200             | 200                                | 750            |
| Al Mg Si0.7 (Almasilium)           | 1200                   | 1070          | 950                    | 950                        | 850                 | 770                 | 770                  | 770                      | 750                    | 630                 | 600            | 550                     | 430                | 400             | 380               | 260                   | 200                     | 135                  | 110                | 105                   | 100                | 100                    | 100                   | 95                | 0                     | 0                        | 160       | 200             | 200                                | 750            |
| Sn75 Zn25                          | 1350                   | 1230          | 1110                   | 1110                       | 1010                | 930                 | 930                  | 930                      | 910                    | 790                 | 760            | 710                     | 590                | 650             | 520               | 420                   | 360                     | 295                  | 270                | 265                   | 260                | 260                    | 260                   | 225               | 160                   | 160                      | 0         | 40              | 40                                 | 590            |
| Zn (Zinc/ Zinc)                    | 1400                   | 1270          | 1150                   | 1150                       | 1050                | 970                 | 970                  | 970                      | 950                    | 830                 | 800            | 750                     | 630                | 600             | 560               | 460                   | 400                     | 335                  | 310                | 305                   | 300                | 300                    | 300                   | 295               | 200                   | 200                      | 40        | 0               | 0                                  | 550            |
| Zn Al4 (Zamak3/Zamac 3)            | 1400                   | 1270          | 1150                   | 1150                       | 1050                | 970                 | 970                  | 970                      | 950                    | 830                 | 800            | 750                     | 630                | 600             | 560               | 460                   | 400                     | 335                  | 310                | 305                   | 300                | 300                    | 300                   | 295               | 200                   | 200                      | 40        | 0               | 0                                  | 550            |
| Al PVD (Physical vapor deposition) | 1400                   | 1270          | 1150                   | 1150                       | 1050                | 970                 | 970                  | 970                      | 950                    | 830                 | 800            | 750                     | 630                | 600             | 560               | 460                   | 400                     | 335                  | 310                | 305                   | 300                | 300                    | 300                   | 295               | 200                   | 200                      | 40        | 0               | 0                                  | 550            |
| Mg (Magnesium)                     | 1900                   | 1820          | 1700                   | 1700                       | 1600                | 1600                | 1600                 | 1600                     | 1520                   | 1500                | 1390           | 1300                    | 1180               | 1150            | 1110              | 1010                  | 950                     | 885                  | 860                | 850                   | 850                | 850                    | 850                   | 845               | 845                   | 845                      | 590       | 560             | 560                                | 0              |

|          |            |            |          |
|----------|------------|------------|----------|
| 0-300 mV | 301-500 mV | 501-800 mV | > 800 mV |
|----------|------------|------------|----------|



# Stainless steel specifications

# Technical introduction: Stainless steel specifications



## Main stainless steels used in enclosures

| Designation upon American standard AISI | Designation upon European standard EN10027 | Designation upon French Afnor standard NF A 35573 | Specific gravity (g/cm <sup>3</sup> ) | HRB hardness | Tensile Strength, (N/mm <sup>2</sup> ) | Elongation (%) |
|-----------------------------------------|--------------------------------------------|---------------------------------------------------|---------------------------------------|--------------|----------------------------------------|----------------|
| Aisi 304                                | X5CrNi18-10 1.4301                         | Z7CN18-09                                         | 7.93                                  | <92          | >485                                   | >40            |
| Aisi 304L                               | X2CrNi18-09 1.4307                         | Z3CN18-10                                         | 7.93                                  | <92          | >485                                   | >40            |
| Aisi 316L                               | X2CrNiMo17-12-02 1.4404                    | Z2CND17-12                                        | 7.98                                  | <95          | >485                                   | >40            |

**Note:** in bolts, the A2 marking means a composition similar to Aisi 304L stainless steel, and the A4 marking means a composition similar to Aisi 316L.

## Composition

| Type      | C       | Si     | Mn  | P       | S      | Ni     | Cr     | Mo     |
|-----------|---------|--------|-----|---------|--------|--------|--------|--------|
| Aisi 304  | ≤ 0.05% | ≤1.00% | ≤2% | ≤0.045% | ≤0.03% | 8-10%  | 17-19% | -      |
| Aisi 304L | ≤ 0.03% | ≤1.00% | ≤2% | ≤0.045% | ≤0.03% | 9-13%  | 18-20% | -      |
| Aisi 316L | ≤ 0.03% | ≤1.00% | ≤2% | ≤0.045% | ≤0.03% | 16-18% | 12-15% | 2.5-3% |

## Main applications

| AISI      | Overview                                                                                                                                                                                                                                                                                                                                                  | Usable in contact with:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Not usable in contact with:                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AISI 304  | Can be used in contact with water or humid environment. It is the cheapest material mentioned in this list.                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>- Fresh water and natural atmosphere with low chloride content.</li> <li>- Nitric acid up to 52% at all temperatures and 98% cold: 304 or 304L stainless steel resists it particularly well, due to the passivation of its surface. 316L should be used if nitric acid contains impurities.</li> <li>- Organic acids diluted and cold.</li> <li>- Alkaline solutions: the cold solutions have practically no action but it is not the same for concentrated and hot solutions.</li> <li>- Saline solutions not containing chlorides, sulphides and sulphates.</li> <li>- Food products: generally no corrosion problem except with some products that contain sulfur.</li> </ul> | <ul style="list-style-type: none"> <li>- Hydrochloric acid: corrosion increases steadily as the concentration increases.</li> <li>- Chlorinated and hot products.</li> <li>- Bleach at over 60°C and at a high concentration.</li> <li>- Nitric acid mixed with saturated brines.</li> <li>- Saline solutions containing chlorides, sulphides and sulphates.</li> <li>- Food products containing sulfur, such as mustard and white wines.</li> </ul> |
| AISI 304L | The low carbon content (< 0,03 %) provides better intergranular corrosion resistance after TIG welding than 304. Same chemical resistance than 304.                                                                                                                                                                                                       | Similar to AISI 304                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Similar to AISI 304                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| AISI 316L | Excellent resistance to corrosion. The presence of molybdenum enhances chloride resistance by increasing the stability of the superficial passivation layer. The low carbon content (<0.03%) ensures excellent resistance to intergranular corrosion especially after TIG welding. Use in the presence of saline or saline water, and marine environment. | <ul style="list-style-type: none"> <li>- Marine and industrial atmospheres.</li> <li>- Phosphoric acids at all concentrations up to 40°C.</li> <li>- Sulfuric acids less than 10% and more than 80% at 20°C.</li> <li>- Sulphonic mixtures up to 70°C</li> <li>- Sulphurous solutions and vapors, even boiling.</li> <li>- Saline solutions except chlorides.</li> <li>- Alkaline solutions all concentrations below 100°C.</li> <li>- In general: Organic, food and pharmaceutical products.</li> </ul>                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>- Hydrochloric acid: corrosion increases steadily as the concentration increases.</li> <li>- Chlorinated and hot products.</li> <li>- Bleach at over 60°C and at a high concentration.</li> <li>- Nitric acid mixed with saturated brines.</li> </ul>                                                                                                                                                         |



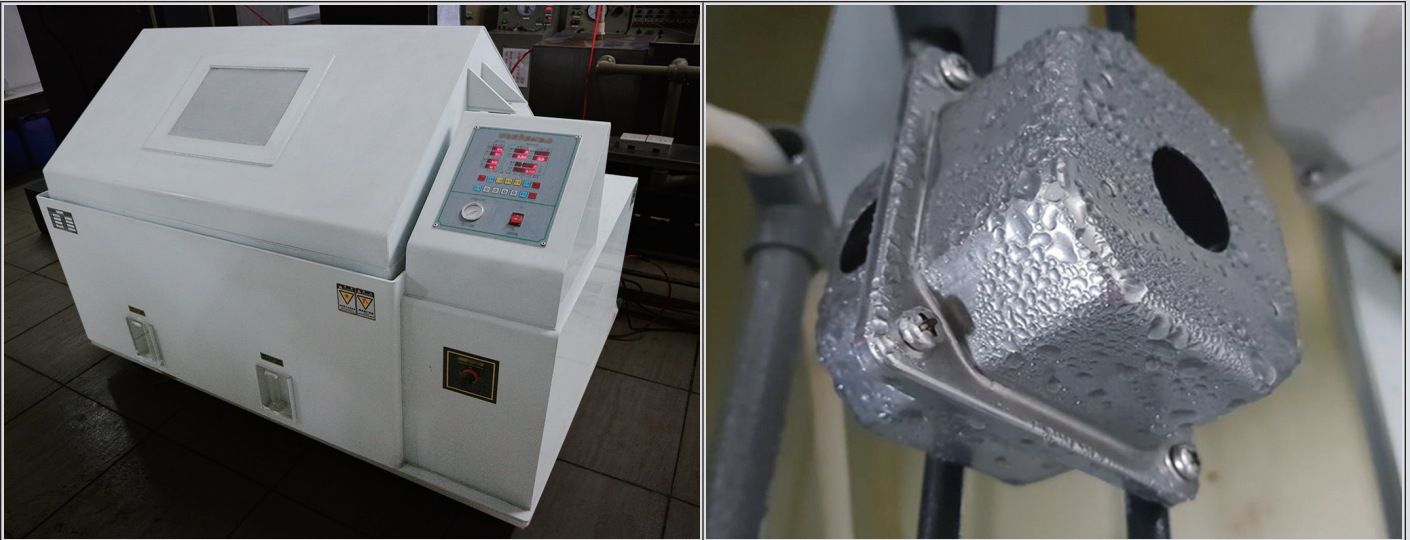


# Technical introduction: Stainless steel specifications

## Resistance to atmospheric corrosion

- The resistance to atmospheric corrosion being improved by a polished surface, the standard finish of the enclosures consists of polishing by vibrations in the last manufacturing step.
- All hardware is in stainless steel to avoid electrochemical corrosion.
- Submitted to a 5% salt spray corrosion test, according to the ASTM 117 standard, the enclosures in Aisi 304 and Aisi 304L do not show any trace of corrosion after 1000 hours, and those in Aisi 316L after 2000 hours.

## Salt spray testing of enclosures in our laboratory



## Galvanic corrosion of stainless steel enclosures

- Galvanized steel in contact with stainless steels is not normally considered to be a serious corrosion risk, except possibly in severe (marine type) environments.
- In these situations, precautions such as insulating barriers are usually considered adequate to avoid bimetallic corrosion in most practical situations.

## Stainless steel Rohs compliance

According to the Directive 2011/65/ dated June 8, 2011 (Rohs), stainless steel alloys are allowed to have a maximum of 0.1% by weight of lead, mercury, hexavalent chromium, PBB (Polybrominated biphenyls), PBDE (Polybrominated Diphenyl Ethers) and 0.01% of Cadmium in weight. (Provisions of Article 4 and paragraph 1 of Annex II)

# Technical introduction: Stainless steel specifications

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# Characteristics of plastics



# Technical introduction: characteristics of plastics

## Electrical and mechanical characteristics of plastics used in immersion heater and temperature sensor housings

### Summary of characteristics

| Material                                | Heat deflection temperature under load according to ISO 75 (Values provided by comparative testing made in our laboratory) | Impact resistance on 3 mm thickness board, at 25°C, according to EN50102 | Loss of mechanical strength After 1000h UV tests, according to ISO4892-1* | Flammability according to UL94             | Mecanical strength according to ISO 572-2 | Glow wire flammability index (GWFI), according to IEC 60695-2-12 | Main use in enclosures                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PC (Transparent)                        | 120°C (1.8 Mpa)                                                                                                            | IK10**                                                                   | Average: loss of 11% of mechanical strength after 1000h                   | UL94-5V                                    | 70 Mpa                                    | 850°C                                                            | Used for clear covers because it offers very good light transmission (85 to 90%), excellent shock resistance, and withstands high ambient temperatures. Its good UV resistance makes it suitable for outdoor use. <b>Limited resistance to acids, oils and fuels.</b>                                                                                                                                            |
| 25% Fiber glass reinforced PA66 (Black) | 226°C (1.8 Mpa)                                                                                                            | IK10**                                                                   | Excellent : loss of only 7% of mechanical strength after 1000h            | UL94 VO and UL94-5V depending of thickness | 150 Mpa                                   | 960°C                                                            | The best compromise between impact resistance, temperature resistance, fire resistance and UV resistance. Usable in most industrial applications, including outdoors exposed to the sun and inclement weather. Its high resistance to deformation under load at high temperatures is recommended for applications in immersion heaters. <b>Sensitive to concentrated acids, good resistance to hydrocarbons.</b> |
| PP (Orange)                             | 64°C (1.8 Mpa)                                                                                                             | IK10**                                                                   | 17.53%                                                                    | UL94V0                                     | 26 MPa                                    | 725°C                                                            | Economical solution for acid resistance. Fragile at low temperature, sensitive to hydrocarbons, solvents, acetones and oils. <b>Must not be used at ambient temperatures above 90 ° C.</b>                                                                                                                                                                                                                       |
| PVDF (White)                            | 80°C (1.8 Mpa)                                                                                                             | IK09                                                                     | 24.78%                                                                    | UL94V0                                     | 57 MPa                                    | 960°C                                                            | The ultimate solution for applications in the presence of concentrated acids, but low resistance to deformation under load and temperature. <b>Must not be used at ambient temperatures above 70 ° C</b>                                                                                                                                                                                                         |

\*: UV resistance is improved by the addition of black pigment (carbon black), and this is the main reason for the black colour of most of boxes for outdoor use.

\*\* : IK10 is the maximum class of impact resistance.

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# Technical introduction: characteristics of plastics

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## Chemical resistance of plastics (indicative list according to data available from different suppliers)

| Material                                       | Good resistance to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Non resistant to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PC (Transparent)</b>                        | Acetamide, Amyl Acetate, Ethyl Acetate, Methyl Acetate, Acetone, Acetylene, Butyric Acid, Carbolic Acid (Phenol), Chloroacetic Acid, 30-100% Hydrochloric Acid, 50% Chromic Acid, Cresyl Acid, Mono-Chloroacetic Acid, Hydrogen Fluoride from 20 to 100%, Benzo-Sulfonic Acid, Sulfuric Acid (75-100%), Acrylonitrile, Benzoic Aldehyde, Butyl Amine, Amines, Ammonia 10%, Ammonia Liquid, Ammonia Anhydrous, Acetic Anhydride, Aniline, Dimethyl Aniline, Antifreeze, Aqua regia (80% HCl, 20% HNO <sub>3</sub> ), Asphalt, Benzene, Benzol, Bisulfate and Calcium bisulfite, Carbon bisulfide, Butadiene, Butyl acetate, Butylene, Ethyl-Methyl-Ketone, Ketones, Mono-Chlorobenzene, Chloroform, Ethyl Chloride, Ferrous Chloride, Cresols, Copper Cyanide, Cyclohexanone, Diacetyl Alcohol, Dichlorobenzene, Dichloroethane, Diethylamine, Diethyl Ether, Dimethyl Formamide, Furfural, Hexane, Hydrazine, Hydroxide e barium, Lithium Hydroxide, Calcium Hypochlorite, Kerosene, Lacquers, Calcium Hydroxide CaC (OH) 2, Potassium Hydroxide KOH, Sodium Hydroxide NaCOH (50% and 80%), Morpholine, Barium Nitrate, Copper Nitrate, Nitrobenzene, Nitromethane, Perchloroethylene, Butyl phthalate, Pyridine, Barium sulphate, Turpentine, Tetrachlorethylene, Carbon tetrachloride, Toluene (Toluol), Xylene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20% Acetic Acid, Arsenical Acid, Carbonic Acid, Citric Acid, Cupric Acid, Fluosilicic Acid, Formic Acid, Nitric Acid (5-10%), Phosphoric Acid (> 40%), Salicylic Acid, Stearic Acid, Sulfuric Acid (< 10%), Butyl Alcohol, Isopropyl Alcohol, Barium Chloride, Benzo-Nitrile, Beer, Barium Carbonate, Gasoil, Ferric Chloride, Cider, Detergents, Petrol, Ferric Nitrate, Formaldehyde 100%, Formaldehyde 40%, Glycerin Engine, Sodium Hydroxide (20%), Aviation Fuel (JP3, JP4, JP5), Lubricants, Calcium Nitrate, Pentane, Brine (Saturated NaCl), Lead Sulphate, Calcium Sulphate, Copper Sulphate, Ferrous Sulphate, Sulfate ferric                                                                                                                                                                                                                                                                       |
| <b>20% Fiber glass reinforced PA66 (Black)</b> | Acetaldehyde, Acetamide, Lead Acetate, Ethyl Acetate, Methyl Acetate, Acetone, Methyl Acetone, Acetylene, Carbonic Acid, Citric Acid, Gallic Acid, Maleic Acid, Malic Acid, Oleic Acid, Salicylic Acid, Stearic Acid, Fatty Acids, Acrylonitrile, Amyl Alcohol, Ethyl Alcohol, Isobutyl Alcohol, Benzoic Aldehyde, Aluns Butyl Amine, Ammonia 10%, Ammonia, Anhydrous, Acetic Anhydride, Carbon Anhydride, Aniline, Dimethylaniline, Asphalt, Barium Chloride, Benzene, Beer, Carbon Bisulfide, Calcium bisulfite, Borax (Sodium borate), Butylacetate, Calgon, Barium carbonate, Calcium carbonate, Gas oil, Ethyl-methyl-ketone, Ketones, Chloroform, Benzyl chloride, Calcium chloride, Ethyl chloride, Ferric chloride, Cider, Barium cyanide, Cyclohexane, Detergents, Diacetone alcohol, Dichloroethane, Diethylamine, Lacquer thinner, Carbonated water, Petrol, Ethanol, Ethanolamine, Ether, Butyl Ether, Diethyl Ether, Ethyl Ether, Ethylene Glycol, Ferric Nitrate, Fuels, Formaldehyde 40%, Dimethyl Formamide, Gelatin, Glycerine, Diethylene Glycol, Heptane, Motor Oil, Mineral and Synthetic Hydraulic Oils, Motor Oils (1, 2, 3, 5A, 5B, 6), Diesel Oils (20, 30, 40, 50), Mineral and Synthetic Oils, Linseed Oil, Barium Hydroxide, Calcium Hydroxide, Sodium Hydroxide (20% and 50%), Sodium Hydroxide (50%), Iodine, Iso-octane, Cane Juice, Grape Juice, Kerosene, Ketchup, Lacquers, Calcium Hydroxide CaC (OH) 2, Sodium Hydroxide NaCOH, Lubricants, Molasses, Naphtha, Barium nitrate, Calcium nitrate, Carbon monoxide, Pentane, Petroleum, Trisodium phosphate, Butyl phthalate, Brine (saturated NaCl), Arsenic salts, Silicone, Liquid beet sugar, Barium sulphate, Ferric sulphate, Barium sulphide, Tetrachlorethylene, Toluene, Varnish, White Spirits, Xylene | Acetic Acid, Benzoic Acid, Hydrobromic Acid, Carbolic Acid (Phenol), Chloroacetic Acid, Hydrochloric Acid, Chloric Acid, Chlorosulfonic Acid, Chromic Acid, Cresylic Acid, Cupric Acid, Fluoboric Acid, Monochloroacetic Acid, Hydrogen Fluoric Acid, Fluosilicic Acid, Formic Acid, Hydrofluorosilic acid, Hydrofluorosilic acid, Nitric acid, Perchloric acid, Benzo-sulphonic acid, Sulfuric acid, Sulfuric acid, Butyl alcohol, Isopropyl alcohol, Propyl alcohol, Amines, Antifreeze, Aqua regia (80% HCl, 20% HNO <sub>3</sub> ), Benzol, Bromine, Chlorine, Chlorobenzene (mono), Copper Chloride, Ferrous Chloride, Cresols, Copper Cyanide, Dichlorobenzene, Ethane, Fluorine, Formaldehyde, Calcium Hypochlorite, Sodium Hypochlorite (100%), Sodium Hypochlorite (<20%), Copper nitrate, Oleum, Phenol, Calcium sulphate, Copper sulphate, Ferrous sulphate, Carbon tetrachloride, Sulfur trioxide |



# Technical introduction: characteristics of plastics

| Material     | Good resistance to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Non resistant to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PP (Orange)  | Acetaldehyde, Acetamide, Lead Acetate, Ethyl Acetate, Acetone, Acetylene, Acetic Acid 20 to 90%, Arsenic Acid, Boric Acid, 20% Hydrogen Bromide, Carbonic Acid, Citric Acid, Cresyl Acid, Cupric Acid, Fluorometric Acid, Hydrogen Fluoride 20% to 50%, Fluosilicic acid, Formic acid, Gallic acid, Glycolic acid, Hydrofluorosilic acid 20% and 100%, Maleic acid, Malic acid, Nitric acid 5 to 20%, Phosphoric acid > 40%, Salicylic acid, Stearic acid, Sulfuric Acid, Sulfuric Acid <75%, Fatty Acids, Acrylonitrile, Rust Removers, Methyl Alcohol 10%, Benzyl Alcohol, Butyl Alcohol, Ethyl Alcohol, Isobutyl Alcohol, Isopropyl Alcohol, Propyl Alcohol, Aluns, Ammonia 10%, Ammonia Liquid, Ammonia, anhydrous, carbonic anhydride (wet), carbon dioxide (dry), aniline, barium chloride, beer, calcium bisulfite, calcium bisulfide, calgon, barium carbonate, carbon carbonate cium, gas oil, chlorobromomethane, calcium chloride, copper chloride, lithium chloride, ferrous chloride, ferric chloride, cider, copper cyanide, detergents, diacetone alcohol, diethylamine, gasoline, ethanol, diethyl ether, ethylene glycol, nitrate Ferric, Fuel oils, Formaldehyde 40%, Dimethylformamide, Gelatin, Glycerin, Diethylene glycol, Motor oil, Aniline, Flaxseed oil, Citric oils, Calcium hydroxide, Sodium hydroxide (20% to 80%), Calcium hypochlorite, Sodium hypochlorite (<20%), Iso-octane, Aviation fuel (JP3, JP4, JP5), Ketchup, Detergent: Calcium hydroxide CaC (OH) 2, Potassium hydroxide KOH, Sodium hydroxide NaCOH, Lubricants, Methylamine, Barium nitrate, Calcium nitrate, Copper nitrate, Lead nitrate, Calcium oxide, Carbon monoxide, Trisodium phosphate, Pyridine, Brine (Saturated NaCl), Silicone, Liquid beet sugar, Lead sulphamate, Calcium sulphate, Copper sulphate > 5%, Sul Iron Ferric Sulfate, Varnish | Methyl Acetate, Chlorosulfonic Acid, 10% Chromic Acid, Concentrated Nitric Acid, Benzosulfonic Acid, Benzoic Aldehyde, Maleic Anhydride, Dimethylaniline, Antifreeze, Benzene, Carbon Bisulfide, Carbon Bisulfide, Bromine, Anhydrous Liquid Chlorine, Amyl Chloride, Ethyl Chloride, Cresols, Barium Cyanide, Cyclohexan, Cyclohexanone, Dichloroethane, Lacquer Thinner, Chlorine Water, Ethane, Ethanolamines, Ether, Butyl Ether, Ethyl Ether, Fluorine, Furfural, Mineral and Synthetic Hydraulic Oils, Mineral and Synthetic Hydraulic Oil, Aromatic hydrocarbons, Lacquers, Oleum 25% to 100%, Diphenyl oxide, Pentane, Perchloroethylene, Turpentine, Tetrachlorethylene, Carbon tetrachloride |
| PVDF (White) | 20% Acetic Acid, Acetic Acid, Adipic Acid, Arsenical Acid, Benzoic Acid, Boric Acid, 20% and 100% Hydrogen Bromide, Butyric Acid, Carbolic Acid (Phenol), Carbonic Acid, Chloroacetic Acid, 20% to 100% Hydrochloric Acid, 5% to 50% chromic acid, citric acid, Fluorometric acid, 20% to 100% hydrofluoric acid, Fluosilicic acid, Formic acid, Gallic acid, 20 and 100% hydrofluorosilicate acid, Linoleic acid, Maleic acid, Malic acid, Nitric acid (20%) 90%), Oleic Acid, Perchloric Acid, Salicylic Acid, Stearic Acid, Sulfuric Acid, Sulfuric Acid (10 to 100%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Acetaldehyde, Ethyl Acetate, Acetone, Methyl Acetone, Chlorosulfonic Acid, Methyl Ethyl Ketone, Cyclohexanone, Diacetone Alcohol, Diethylamine, Dimethyl Formamide, Lacquers, Sodium Hydroxide (NaCOH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Heat deflection temperature under load according to ISO 75-2

Determination of the temperature of deflexion under load upon ISO75-1 and 3,, is an important parameter to judge of the ability of a plastic raw material to withstand a temperature rise without losing its mechanical strength. This value is requested by some appliances and commercial standards. As we need to compare the various raw materials used in enclosures, all tests have been made in the same condition, under 1.8 MPa load applied at the center of the 10mm width, on 80 x10 x 4mm specimen (Method Af), The 4mm thickness as been selected as being, in the standard choice, the nearest value to the thickness used on plastic enclosures. The temperature rise is 2°C per minute.

The final temperature is registered when the deflexion has reached 0.34mm



# Technical introduction: characteristics of plastics

## Heat deflection temperature under load according to ISO 75, made in our laboratory



Test Equipment



Test specimens

### Comparative testing values

| PP     | PC      | PA66 25% FG | PVDF    |
|--------|---------|-------------|---------|
| 63.6°C | 119.6°C | 225.6°C     | 80.4 °C |

## UV resistance, upon ISO4892-1

The main problem of plastic cases is their aging in the presence of UV radiation. Most materials, when exposed to solar radiation, become discoloured and lose their mechanical strength. Therefore, the development of our boxes must take into account this parameter.

The validation tests of the boxes are done by subjecting them to a UV flux, wavelength 315 ~ 400nm, on standardized specimens, at a temperature of 55°C, for 1000 hours, equivalent to several years of sun exposure. These tests are carried out according to standard ISO4892-1.

There is no discoloration noticeable on the PA66 cases, and a slight yellowing on the polycarbonate covers.

The loss of Izod mechanical tensile strength is less than 15%, which further complies with UL 746C for enclosures to resist solar exposure.

For information, under the same conditions current boxes in ABS lose 18 to 20% of their resistance.

### 1000 hours UV resistance testing, made in our laboratory, on plastic specimens

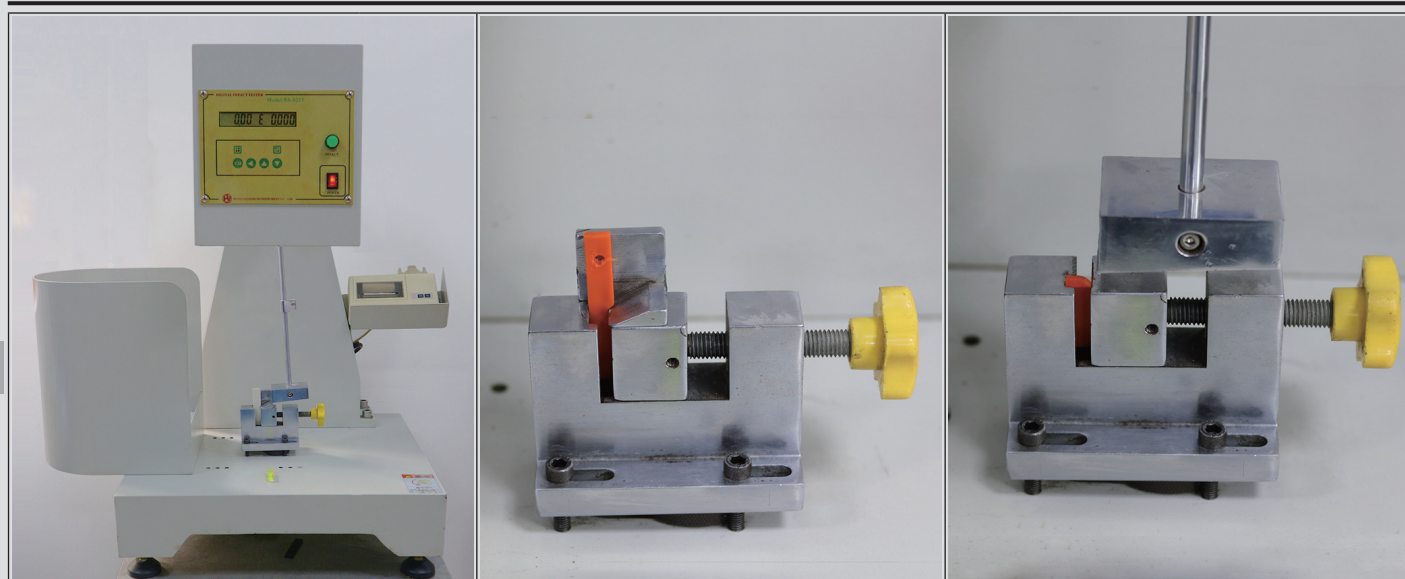


UV chamber





# Technical introduction: characteristics of plastics



Charpy test equipment

Specimen before Charpy impact test

Specimen after Charpy check

Comparative values of loss of mechanical strength (tests made in our laboratory)

| PP     | PC  | PA66 25% FG | PVDF   |
|--------|-----|-------------|--------|
| 17.53% | 12% | 11.7%       | 24.78% |

## UV colour change measurement (Made in our laboratory)

A comparative examination is carried out between tested and non tested specimens, with measurement of the color change. Color fading is measured with an electronic measurement equipment. Colour change is considered as not visible by a non trained observer when the  $\Delta E$  is lower than 2.5. This is therefore the reason why we selected a  $\Delta E$  of 2.5 as the acceptable limit for this test.

For information, a non trained observer can quite easily see the colour difference with a  $\Delta E$  of 5.

A well trained operator can see an average  $\Delta E$  of 2. The human eyes cannot see a  $\Delta E$  of 1.



Measuring equipment

Measuring  $\Delta E$  on an enclosure cover

Comparative values of color fading after UV (tests made in our laboratory)

| PP                | PC                | PA66 25% FG       | PVDF              |
|-------------------|-------------------|-------------------|-------------------|
| $\Delta E$ : 4.58 | $\Delta E$ : 1.29 | $\Delta E$ : 3.19 | $\Delta E$ : 2.88 |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



## Resistance to corrosion by chlorine, tests performed in our laboratory according to ASTM G48

The test of resistance to corrosion by chlorine is intended to verify the behavior of plastic housings in a chlorinated medium, such as swimming pool and water recreation premise. Test is performed according to ASTM G48: it consists in a 96 hours accelerated corrosion test at 70°C in a concentrated solution of 5.25% sodium hypochlorite (bleach).

- The loss of mechanical strength is observed by a shock test on a Charpy notched specimen before and after the test.
- Weight loss is measured.
- A comparative examination is carried out, with measurement of the color change. As for UV, we selected a  $\Delta E$  of 2.5 as the acceptable limit for this test.

### Chlorine resistance test made in our laboratory



|                          | PC                | PA66               | PP                | PVDF              |
|--------------------------|-------------------|--------------------|-------------------|-------------------|
| Weight change            | +1.06%            | +2.34%             | +1.47%            | 0%                |
| Mechanical strenght loss | -10%              | -12.9%             | -10.6%            | -11%              |
| Color change             | $\Delta E$ : 7.44 | $\Delta E$ : 30.67 | $\Delta E$ : 13.7 | $\Delta E$ : 7.96 |





## Flammability checking according to UL94, made in our laboratory

The flammability test of the plastics of the enclosures is intended to verify that the accidental ignition of these will not spread and that the ignition will extinguish itself. The class usually required by certification laboratories is UL94-VO, or for some special cases, the highest class, UL94-5V. All the plastics of the boxes are at least UL94-VO in the thicknesses used.



### Gaskets used on enclosures, cable glands and fittings

These gaskets are made of elastomer because it is their flexibility and resilience that guarantees the tightness of the closure. The elastomer used as standard is silicone, because of its flexibility, its resistance to UV and common atmospheric pollutants, and its durability. The joints are molded and applied in specially designed grooves.

However, silicone is not universal, especially when it comes to applications in surface treatment baths or in the presence of acids. It is therefore possible to equip most enclosures with FKM (Viton) fluoroelastomer gaskets

**Indicative and non-limiting list and products not compatible with silicone seals:** Acetone, Hydrobromic Acid, Butyric Acid, Carboic Acid (Phenol), Hydrochloric Acid, Hydrogen Fluoride, Nitric Acid Phosphoric Acid, Sulfuric Acid, Butyl Alcohol, Benzene, Fuel Diesel, Ethyl methyl ketone, Petrol, Tetrachlorethylene, Carbon tetrachloride, Trichlorethylene, White Spirits, Xylene.

**Non-limiting list of products compatible with FKM gaskets:** Acetone, Acetic acid, Hydrobromic acid, Acid, Carboic acid (Phenol), Hydrochloric acid, Chromic acid, Citric acid, Hydrochloric acid Lactic acid, Linoleic acid, Acid Maleic Acid, Oleic Acid, Phosphoric Acid Sulfuric Acid Methyl Alcohol Ethyl, Methyl, Propyl Alcohols; Benzene, Benzol, Chloroform, Calcium Chloride, Detergents, Ether, Ethylene Glycol, Fuel Oil, Hydraulic Oil and Engine Lubricants, Car and Aircraft Fuel, Calcium Hypochlorite, Sodium Hypochlorite, Tetrachlorethylene, Carbon Tetrachloride, Toluene (Toluol), Trichlorethylene, Xylene.

## ROHS and Reach

**Rohs:** the materials used in the boxes comply with the European directive 2015/863 Annex II amending Directive 2011/65. Certificates made by an accredited external laboratory available on request.

**Reach:** The materials used in the boxes comply with the REACH European Directives according to the June 2017 directive adding 173 substances SVHC (Substances of Very High Concern) from the list published by ECHA on 12 January 2017, applying to the directive Reach 1907/2006.

Certificates made by an accredited external laboratory available on request.



# Surface finish of metal enclosures



# Technical introduction: Surface finish of metal enclosures

## Surface finish of metal enclosures

Surface condition is an essential parameter of resistance against atmospheric corrosion. Both aluminum and stainless steel naturally form a protective oxide layer on the surface. Corrosion occurs only when this protective oxide layer is crossed or destroyed. Microcavities of a rough surface allow atmospheric pollutants to initiate local oxidative conditions. This is particularly critical when these pollutants have a different galvanic potential. For example, iron or iron oxide dust can create favourable conditions for perforating corrosion in stainless steel, as well as zinc in the case of aluminum. It is important that the surface of the metal, if exposed to the weather, be smooth so that these pollutants slide and escape naturally.

### Optional surface treatment

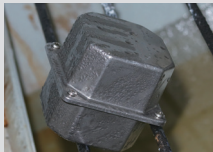
The coating of aluminum boxes with an epoxy-polyester paint will allow them to maintain a better appearance because they cover naturally in the time of an orange-skin-like efflorescent layer, which can be aesthetically detrimental.

This treatment will have the effect of:

- To improve the general protection of the housing surface against corrosion, when their resistance to natural corrosion is considered insufficient. In addition, this treatment, by interposing an electrically insulating layer between the aluminum and the fasteners or the mounting bracket, will limit the creation of thermoelectric couples initiating corrosion.
- Long-lasting appearance by avoiding pitting corrosion or blackening
- Identify products or product families by their color

|                                                                                   |                                                                                                                                                                              |                                                                                     |                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Vibration deburred and polished: this smooth finish improves corrosion resistance.<br>This is the <b>standard</b> surface finish for aluminum and stainless steel enclosures |  | Epoxy-polyester electrostatic painting, oven polymerized. Colour RAL7035. Enclosures are sand blasted before painted to improve bonding.<br>This is an optional surface finish for aluminum enclosures (other colours on request) |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Salt spray testing of metal enclosures in our laboratory

| <br>Test equipment | Material               | Starting                                                                             | After 500h                                                                            | After 1000h*                                                                          |
|------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                      | Not painted aluminum   |  |  |  |
|                                                                                                      | Epoxy painted aluminum |  |  |  |
|                                                                                                      | Stainless steel 304L   |  |  |  |
|                                                                                                      | Stainless steel 316L   |  |  |  |

### Test results

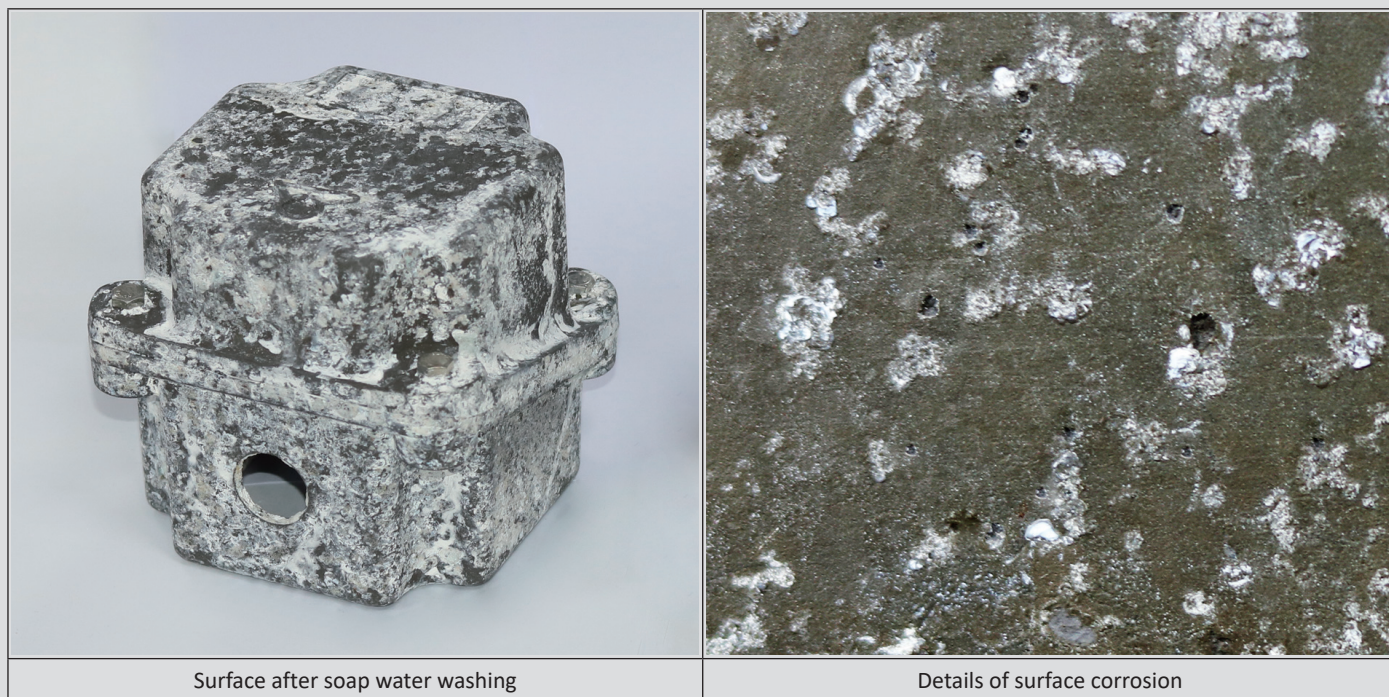
Aisi 304L and 316L enclosures do not show corrosion, and nor the epoxy painted enclosure. Not painted aluminum enclosure is slightly corroded, and we can see efflorescent white colour bubbles. They can be removed less or more by washing. After rinsing small black corrosion points can be seen with different sizes and depths.





## Technical introduction: Surface finish of metal enclosures

**Pictures of the aluminum enclosure, after the 1000h of salt spray test and washing with water**



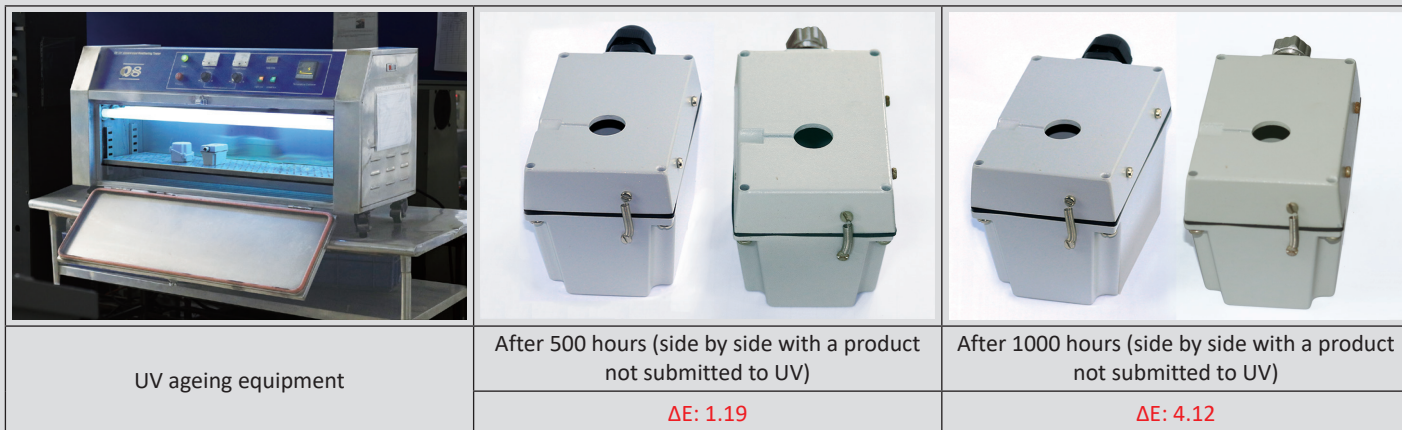
## UV discoloration of epoxy-polyester paint upon ISO4892-1 (comparative tests carried out in our laboratory)

One issue of painted aluminum enclosures cases is their fading in the presence of UV radiation.

The validation tests of the boxes are done by subjecting them to a UV flux, wavelength 315 ~ 400nm, on standardized specimens, at a temperature of 55°C, for 1000 hours, equivalent to several years of sun exposure. These tests are carried out according to standard ISO4892-1.

### 1000 hours UV resistance testing, made in our laboratory, on epoxy painted aluminum enclosures

A comparative examination is carried out between tested and non tested specimens, with measurement of the color change. Color fading is measured with an electronic measurement equipment. As for plastic raw material UV ageing test, colour change is considered as not visible by a non trained observer when the  $\Delta E$  is lower than 5. This is therefore the reason why we selected a  $\Delta E$  of 5 as the acceptable limit for this test.





## Resistance to corrosion by chlorine of metal enclosures

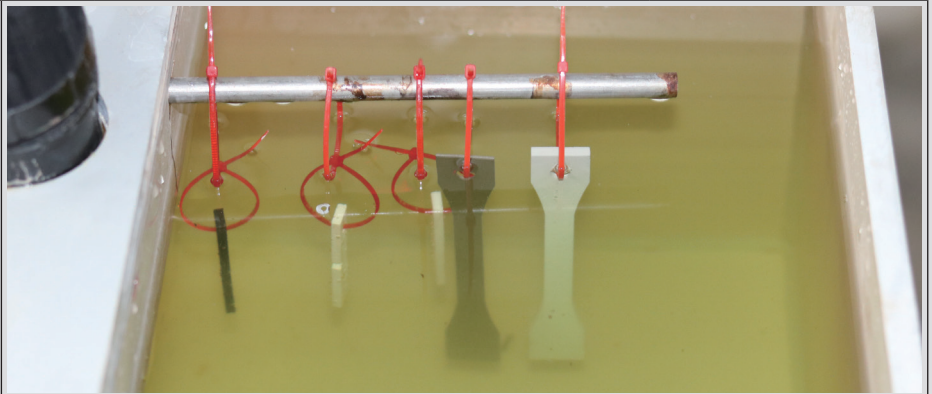
### Tests performed in our laboratory according to ASTM G48

The test of resistance to corrosion by chlorine is intended to verify the behaviour of metal housings in a chlorinated medium, such as swimming pool and water recreation premise. Test is performed according to ASTM G48: it consists in a 96 hours accelerated corrosion test at 70°C in a concentrated solution of 5.25% sodium hypochlorite (bleach).

- The loss of mechanical strength is measured by tensile strength at break specimen
- Weight loss is measured.
- A visual comparative examination is carried out, to check corrosion.



Sodium hypochloride test bath



Specimen location inside the bath



Tensile strength at break measurement equipment

|                                                            |           |  |
|------------------------------------------------------------|-----------|--|
| <b>Not painted aluminum</b><br>(before and after 96h test) |           |  |
|                                                            | After 24h |  |
|                                                            | After 96h |  |
|                                                            |           |  |
|                                                            |           |  |

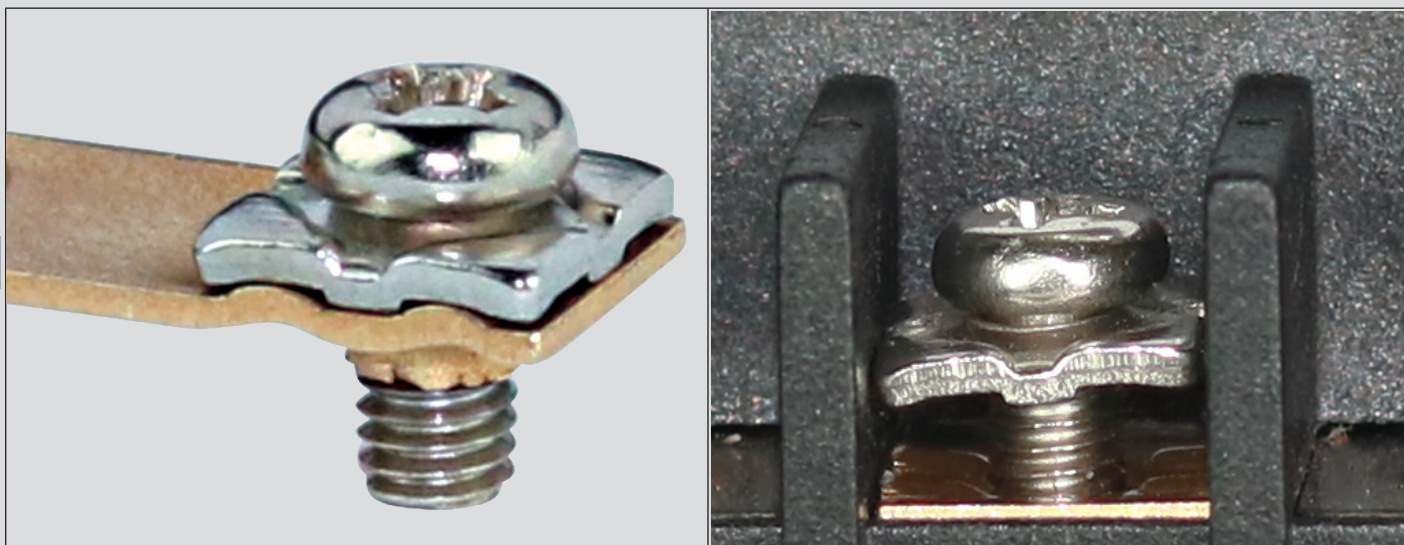
| Tensile strength at break measurement equipment |                                  | Specimens tested before and after corrosion test |                                                                 |                           |
|-------------------------------------------------|----------------------------------|--------------------------------------------------|-----------------------------------------------------------------|---------------------------|
|                                                 | Aluminum                         | Epoxy painted aluminum                           | AISI 304L stainless steel                                       | AISI 316L stainless steel |
| <b>Weight change</b>                            | Specimen destroyed               | Specimen out of use                              | - 0.1%                                                          | - 0.05%                   |
| <b>Mechanical strength loss</b>                 | 100%<br>(Specimen destroyed)     | 100%<br>(specimen out of use)                    | 56%                                                             | 45%                       |
| <b>Corrosion visual inspection</b>              | Specimen quickly fully dissolved | Specimen highly corroded already after 24h       | Deep corrosion at some places, initiated by the laser printing. | Slight corrosion marks.   |



# Connection blocks

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

## Connection blocks



Some enclosures can be supplied with a molded terminal block, standard or optional. These terminal blocks must meet specific specifications because of their application.

However, it is still possible to use ceramic terminal blocks if the ambient temperatures are too high.

### Plastic material

The plastic material of this terminal block, a particular high-end PA66, is different from that of the enclosures, and has been selected to meet the specific constraints of its use.

The most critical constraint that a terminal block can undergo, is a poor tightening of a conductor, the high contact resistance of which causes the terminal to overheat and to melt the plastic material of the support. The class providing the highest resistance to overheating and that of plastics with a GWFI (Glow Wire Ignition Rating) greater than 850°C. **This class is mandatory for applications with unattended use**, according to the specifications of EN60335-1 § 30-2-3-1. The material we use for these terminal blocks has a **GWFI of 960°C**, well above the minimum specifications of this standard. This plastic also offers the best resistance to tracking currents with a CTI > 600 (Class 1, the highest).

Another critical parameter, for these housings intended for immersion heaters or temperature sensors, is the **temperature of deflection under load**. **Measured according to ISO 75**, this plastic material has a particularly high deflection temperature of **282°C** under a 1.8 MPa load.

### Terminals

Depending on the size of the boxes, the terminals include M3, M3.5 or M4 screws. These terminals have the following advantages:

**- Introduction of 2 wires inside each terminal:**

The use of screws with a captive and enveloping square washer, allows to put 2 conductors, even with slightly different size without affecting the quality of tightening.

**- No accidental loosening:**

The elastic effect of the washer also provides good resistance to loosening by vibration.

**- Accept all wires terminations:**

This type of terminal also allows the introduction of single stranded or stranded bare conductors, tinned conductors, fork or eye lugs and conductors with cable shoe.

**- Allows to visualize the good introduction of the wires:**

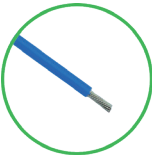
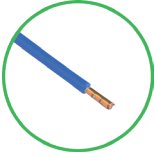
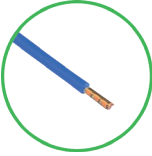
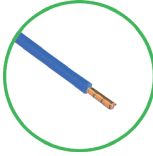
The end of the terminal, not hidden by a plastic, makes possible to clearly visualize the correct introduction of the wire, frequent source of problems in the terminal boxes with cage, where often it is introduced by mistake under the cage and is not tightened.

**- Recommended tightening torques: M3: 50 N.cm; M3.5 N.cm: 80; M4: 120 N.cm**

# Technical introduction: Connections blocks



Comparative table of connection types accepted by the different terminal styles

| Wires termination styles      | Terminal style                                                                      |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                               | Direct screw                                                                        | Screw with plate                                                                    | Cage terminal                                                                        | Screw with notched square washer                                                      |
|                               |    |    |    |    |
| Bare wire (solid or stranded) |    |    |    |    |
| Bare tinned wire              |    |    |    |    |
| Cable shoe                    |   |   |   |   |
| Spade terminal                |  |  |  |  |
| Eyelet terminal               |  |  |  |  |

## Wire pull-out force and vibration loosening resistance

(Tests made in the worst case: a multi-stranded conductor with crimped cable shoe)

Vibration resistance is an important parameter for enclosures terminal blocks, especially if they are installed on trucks, trains or near an engine. In order to verify the effectiveness of the accidental loosening resistance of the terminals, these were subjected to cycles of 10 minutes of variable sinusoidal vibrational sequences covering the range of 1.7 Hz to 5 Hz with variable accelerations from 0.3 to 2.6 G for 48 hours, and the pull-out forces were again measured.

| Type                           | Tightening torque (DaN) | 0.5mm <sup>2</sup> | 0.75mm <sup>2</sup> | 1mm <sup>2</sup> | 1.5mm <sup>2</sup> | 2mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> |
|--------------------------------|-------------------------|--------------------|---------------------|------------------|--------------------|------------------|--------------------|------------------|
| M3 screw (before vibrations)   | 50 N.cm                 | 65                 | 105                 | 134              | 151                | 160              | 211                |                  |
| M3 screw (after vibrations)    | 50 N.cm                 | 62                 | 102                 | 131              | 147                | 155              | 202                |                  |
| M3.5 screw (before vibrations) | 80 N.cm                 | 68                 | 105                 | 142              | 165                | 171              | 220                |                  |





# Technical introduction: Connections blocks

| Type                                | Tightening torque (DaN) | 0.5mm <sup>2</sup> | 0.75mm <sup>2</sup> | 1mm <sup>2</sup> | 1.5mm <sup>2</sup> | 2mm <sup>2</sup> | 2.5mm <sup>2</sup> | 4mm <sup>2</sup> |
|-------------------------------------|-------------------------|--------------------|---------------------|------------------|--------------------|------------------|--------------------|------------------|
| M3.5 screw (after vibrations)       | 80 N.cm                 | 65                 | 102                 | 132              | 162                | 170              | 218                |                  |
| M4 screw (before vibrations)        | 120 N.cm                | 86                 | 110                 | 145              | 157                | 190              | 235                | 260              |
| M4 screw (after vibrations)         | 120 N.cm                | 84                 | 107                 | 138              | 153                | 185              | 231                | 248              |
| Minimum values requested by EN61210 |                         | 60                 | 85                  | 108              | 150                | 200              | 230                | 310              |

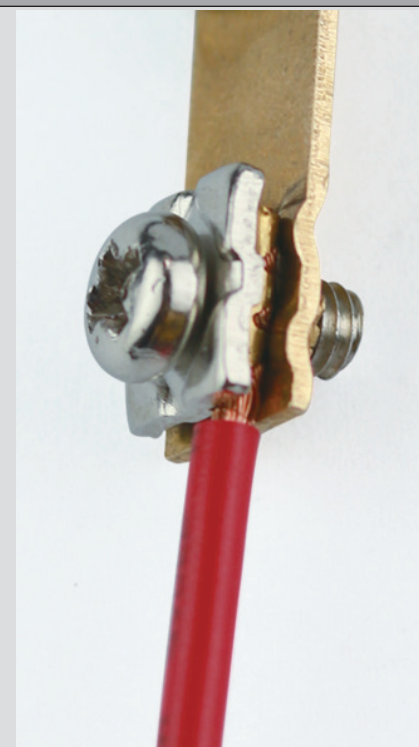
## Pull tests, made in our laboratory



Pull test bench



Jaws detail

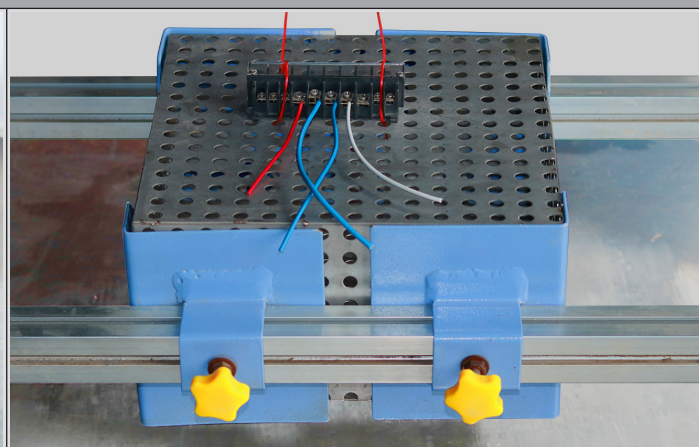


Terminal detail

## Vibration resistance tests, made in our laboratory



Vibration test equipment



Connection block during test



# Immersion heater fittings



# Technical introduction: Immersion heater fittings

## Main threads dimensions in Europe

| Standard size          | ½"    | ¾"     | 1"     | 1¼"     | 1½"     | M45x2 | 2"      | 2½"     | M77x2 |
|------------------------|-------|--------|--------|---------|---------|-------|---------|---------|-------|
| Old French designation | 15-21 | 20-27  | 26-34  | 33-42   | 40-49   |       | 50-60   | 66-76   |       |
| Outside dia.           | 21mm  | 26.4mm | 33.3mm | 41.9 mm | 47.8 mm | 45mm  | 59.6 mm | 75.2 mm | 77 mm |

## Threads main features

In Europe there are two common types of threads used on immersion heaters fittings.

- Threads according ISO 228-1, also said BSPP or cylindrical gas thread (G).
- 2mm pitch metric thread according ISO965-1, little used, which was the subject of an attempt to replace the ISO228-1 in the middle of the 20th century.

The threads are still sometimes described, particularly in France, according to their internal and external diameters.

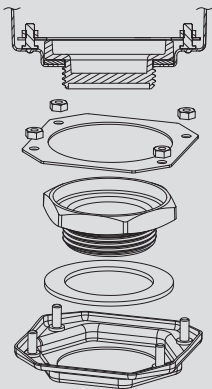
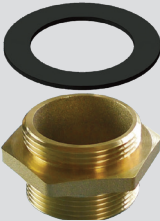
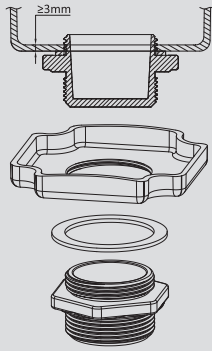
All these threads are parallel, and therefore requiring a gasket surface to ensure proper sealing. They are mounted on female nozzles, or throw wall with a nut.

Selecting a thread diameter is mainly imposed by the minimum possible bending diameter of sheathed elements brazed or soldered on them. Threads of 1" and below are therefore used on the cartridge heaters.

Heaters are often screwed on nozzles welded on the wall of a tank or heater. The seal is obtained by tightening a gasket, it is impossible to predict in advance what will be the position of the fitting and its connection box when tightening will be effective.

For this reason, internal ring fittings have been developed which allow the case to be rotated after tightening on the tank.

## Comparison of the different systems for fixing immersion heater fittings to enclosures

| System                                                     | Pic                                                                                 | Assembly view                                                                       | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                                      | Advantages                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Simple thread fitting, simplified and lightened            |  |  | <ul style="list-style-type: none"> <li>- This type of fitting, designed for small domestic storage water heaters does not have any device to add an enclosure.</li> <li>- Only specially designed enclosures can be added (Y3L4 and Y3S4)</li> </ul>                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>- The cheapest of all models of fittings. Allows assembly of heating elements by soldering, brazing, or filling with epoxy and PU resins.</li> <li>- Allows to use heating elements with ¼"QC terminals, that can be directly connected on rod thermostats.</li> </ul> |
| Double thread fitting, screwed directly on taped enclosure |  |  | <ul style="list-style-type: none"> <li>- Double thread fitting is expensive</li> <li>- Tapping large diameters is difficult and taps are expensive.</li> <li>- No possibility of adjustment of angular position during assembly on field.</li> <li>- Only possible on thick walls, preferably metal.</li> <li>- Obligation to use a wide flat gasket between the housing and the fitting to prevent it from creeping during tightening.</li> </ul> | <ul style="list-style-type: none"> <li>- Good grounding on the metal housings, without the need for a ground terminal on the fitting.</li> <li>- Economical because no need for locknut or threaded ring.</li> </ul>                                                                                          |



# Technical introduction: Immersion heater fittings

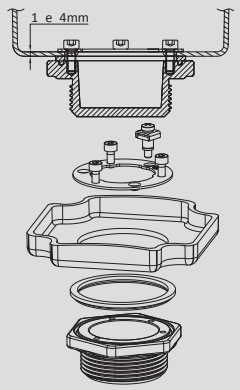
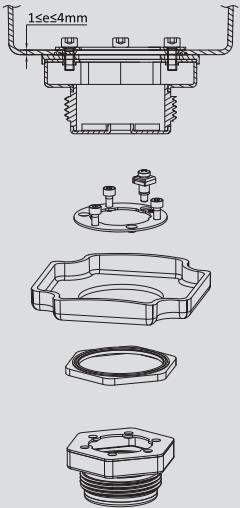
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| System                                                                                                              | Pic | Assembly view | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Advantages                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------|-----|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Double thread fitting, assembled through hole, tightened with internal hexagonal nut                                |     |               | <ul style="list-style-type: none"> <li>- The double thread fitting is expensive.</li> <li>- The inner nut is expensive especially in large diameters.</li> <li>- A special tightening wrench is required to tighten the nut.</li> <li>- The large size of the nut limits the placement in the housings.</li> <li>- Obligation to use a wide flat seal between the housing and the fitting to prevent it from creeping during tightening.</li> <li>- The grounding does not meet the standards due to the flexible seal, unless the fitting has its own ground terminal.</li> </ul> | <ul style="list-style-type: none"> <li>- The hole is easy to make.</li> <li>- The orientation of the enclosure is possible during the installation on field.</li> </ul>                                                                                                                                                                                    |
| Double thread fitting, mounted trough hole, tightened by internal threaded round ring                               |     |               | <ul style="list-style-type: none"> <li>- The double thread fitting is expensive.</li> <li>- The internal threaded ring is expensive especially in large diameters.</li> <li>- The threaded ring must have slots to tighten it with a special tool.</li> <li>- The grounding does not comply with the standards due to the flexible seal, unless the connection has its own earth terminal.</li> <li>- Obligation to use a wide flat seal between the housing and the fitting to prevent it from escaping during tightening.</li> </ul>                                             | <ul style="list-style-type: none"> <li>- The hole is easy to make.</li> <li>- The internal threaded ring is less expensive than a nut.</li> <li>- The size of the ring is smaller than that of a hexagonal nut.</li> <li>- The orientation of the enclosure is possible during the installation on field.</li> </ul>                                       |
| Double thread fitting, mounted trough hole, pressed by internal threaded ring with 2 or 3 tightening screw M4 or M5 |     |               | <ul style="list-style-type: none"> <li>- The double thread fitting is expensive.</li> <li>- The internal threaded ring is expensive especially in large diameters.</li> <li>- The grounding does not comply with the standards due to the flexible seal, unless the connection has its own earth terminal.</li> <li>- Obligation to use a wide flat gasket between the housing and the coupling to prevent it from creeping during tightening.</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>- The hole is easy to make.</li> <li>- The internal threaded ring is less expensive than a nut.</li> <li>- Easy and accessible assembly and tightening of the threaded ring, which does not require special tools.</li> <li>- Orientation of the enclosure is possible during the installation on field.</li> </ul> |





# Technical introduction: Immersion heater fittings

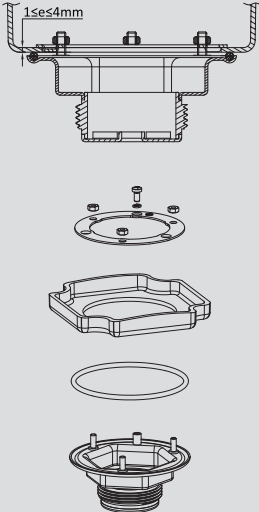
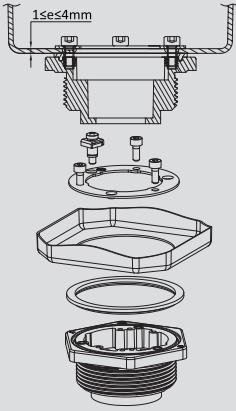
| System                                                                                                        | Pic                                                                                 | Assembly view                                                                       | Disadvantages                                                                                                                                                                                                                                                                                                               | Advantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single thread fitting, with internal rotation ring, tightening with 3 screws                                  |    |    | <ul style="list-style-type: none"> <li>- No disadvantage when used with heating elements brazed on the brass fitting.</li> <li>- If the fittings are solid stainless steel, machining is expensive, and the realization of TIG welding on the heating elements is difficult because of differences in thickness.</li> </ul> | <ul style="list-style-type: none"> <li>- Hole easy to make in the enclosure</li> <li>- Single thread fitting approximately 30% cheaper than double thread.</li> <li>- Stamped rotation washer is much cheaper than a threaded internal ring.</li> <li>- Self-centering of the rotation washer provided by 3 bosses</li> <li>- Grounding is made directly on the fitting, independent of the material of the housing and of the seal.</li> <li>- Excellent guiding of the O-Ring type seal, which is maintained in a groove</li> <li>- Easy and accessible assembly and tightening of the ring, which does not require special tools.</li> <li>- Easy orientation of the enclosure during the installation on field.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                  |
| Stainless steel single thread fitting, deep drawn body, with internal rotation ring, tightening with 3 screws |  |  | <ul style="list-style-type: none"> <li>- Available only in 1¼", 1½", M45x2, 2½" and M77x2</li> <li>- A special gasket must be used to obtain a good seal with the enclosure.</li> </ul>                                                                                                                                     | <ul style="list-style-type: none"> <li>- <b>Much cheaper than a solid machined fitting.</b></li> <li>- In the assembled version, allows the assembly of brazed heating elements or resin filling</li> <li>- In the unassembled version, allows the assembly of TIG welded heating elements, providing <b>100% stainless steel immersion heaters.</b></li> <li>- In this version, easy welding of the heating elements on the cup, made before TIG welding of the cup on the body.</li> <li>- Hole easy to make in enclosure</li> <li>- Stamped rotation washer is much cheaper than a threaded internal ring.</li> <li>- Self-centering of the rotation washer provided by 3 bosses</li> <li>- Grounding is made directly on the fitting, independent of the material of the housing and of the seal.</li> <li>- Excellent guiding of the O-Ring type seal, which is maintained in a groove</li> <li>- Easy and accessible assembly and tightening of the ring, which does not require special tools.</li> <li>- Easy orientation of the enclosure during the installation on field.</li> </ul> |

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# Technical introduction: Immersion heater fittings

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| System                                                                                                                                                                                             | Pic                                                                                | Assembly view                                                                      | Disadvantages                                                                                                                                                                                               | Advantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single thread fitting with large deep drawn flange, tightening by 3 screws on rotation ring                                                                                                        |   |   | <ul style="list-style-type: none"> <li>- Available only with 1¼", 1½" and M 45 x 2 stainless steel fittings.</li> <li>- Cannot be used on small housings due to the big footprint of the flange.</li> </ul> | <ul style="list-style-type: none"> <li>- Hole easy to make.</li> <li>- TIG welding or brazing of heating elements are both possible.</li> <li>- The welded stainless steel fitting on a stamped plate has a removable base allowing to weld TIG directly on heating element tubes.</li> <li>- Stamped rotating washer is much cheaper than a threaded internal ring.</li> <li>- Grounding is made directly on the fitting, independent of the material of the housing and the gasket.</li> <li>- Good guidance of the O-Ring gasket, that is held in a groove.</li> <li>- Easy and accessible assembly and tightening of the washer, which does not require special tools.</li> <li>- Orientation of the enclosure is during the installation on field.</li> </ul> |
| PPS single-threaded plastic fitting 2" with compressive clamping system for a 25mm diameter tubular heating element. Tightening with 3 screws on a rotating inner washer or 2 screws on a bracket. |  |  | <ul style="list-style-type: none"> <li>- Only tooled in 2" thread, for swimming pool heating applications, aquariums and spas with heating by dia. 25mm cartridge.</li> </ul>                               | <ul style="list-style-type: none"> <li>- Intended for screwing on 2" female PVC fittings commonly used in pools, spas and professional aquariums.</li> <li>- Excellent resistance to saline or chlorinated water, (better than 316L or 316Ti stainless steel).</li> <li>- Allows the mounting of simple and economical stainless steel or titanium heating cartridges.</li> <li>- Can accommodate different sizes of stainless steel enclosures, and PA66 enclosures, with or without thermostat.</li> <li>- One of the versions has two pockets, independent of the heating cartridge, allowing the assembly of temperature sensors.</li> </ul>                                                                                                                   |

## Characteristics of brass used for fittings

| GB/T5231-2001 Designation | Nearest equivalences                                                                        | Specific gravity | HB hardness | Tensile strength Rp0,2 (Mpa) | Extension % |
|---------------------------|---------------------------------------------------------------------------------------------|------------------|-------------|------------------------------|-------------|
| H59Pb1                    | CuZn39-Pb2 (Afnor-51-104)<br>CuZn37-Pb0.5, (Din 17760)<br>C37000 (ASTM)<br>CW617N (EN12165) | 8.4              | 80-120      | 350                          | 15-30%      |

## Composition

| Cu     | Fe     | Pb        | Ni   | Zn      | Impurities total |
|--------|--------|-----------|------|---------|------------------|
| 57~60% | ≤ 0.5% | 0.08-1.9% | ≤1 % | surplus | ≤1%              |

## Brass Rohs compliance

According to the Directive 2011/65/ dated June 8, 2011 (Rohs), copper alloys are allowed to have a maximum of 4% by weight of lead as an alloying element. (Provisions of Article 4 and paragraph 1 of Annex II, limit value set by 6c of Annex III)

# Main drill used in temperature sensors and immersion heater enclosures



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| Drill diameter (mm) | Main uses                                                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8                   | Level switches with M8 thread                                                                                                                                     |
| 10                  | - Thermostat with outside manual reset button<br>- Not waterproof outside adjustment thermostat shaft                                                             |
| 10.5                | M12 x 1.5 thread for cable glands that must be tapped in the enclosure                                                                                            |
| 12                  | - M12 x 1.5 cable glands with inside nut<br>- Dia. 12 pilot light                                                                                                 |
| 14.5                | - M16 x 1.5 thread for cable glands that must be tapped in the enclosure<br>- Dia. 16 pilot light<br>- Dia. 16 main switch                                        |
| 16                  | - M16 x 1.5 cable glands with inside nut                                                                                                                          |
| 17.5                | ½" BSPP stainless steel fitting TIG soldered on bottom of enclosure (hole has a soldering lip)                                                                    |
| 18.5                | - M20 x 1.5 thread for cable glands that must be tapped in the enclosure                                                                                          |
| 19                  | ½" BSPP thread that must be tapped in the enclosure                                                                                                               |
| 20                  | M20 x 1.5 cable glands with inside nut                                                                                                                            |
| 21                  | ½" BSPP thread fitting with inside nut                                                                                                                            |
| 22                  | - Dia. 22 pilot light<br>- Dia. 22 main switch                                                                                                                    |
| 22.5                | M24 x 1.5 thread for cable glands that must be tapped in the enclosure                                                                                            |
| 23                  | ¾" BSPP stainless steel fitting TIG soldered on bottom of enclosure (hole has a soldering lip)                                                                    |
| 23.5                | - M25 x 1.5 thread for cable glands or external waterproof thermostat shaft, that must be tapped in the enclosure<br>- Silicone cap for outside access adjustment |
| 24                  | M24 x 1.5 cable glands with inside nut                                                                                                                            |
| 24.5                | ¾" BSPP thread that must be tapped in the enclosure.                                                                                                              |
| 25                  | M25 x 1.5 cable glands with inside nut                                                                                                                            |
| 26.5                | ¾" BSPP thread fitting with inside nut                                                                                                                            |
| 28.5                | M30 x 1.5 thread for cable glands that must be tapped in the enclosure                                                                                            |
| 30                  | M30 x 1.5 cable glands with inside nut                                                                                                                            |
| 30.5                | 1" BSPP thread that must be tapped in the enclosure                                                                                                               |
| 33.5                | 1" BSPP thread fitting with inside nut                                                                                                                            |
| 34.5                | 1¼" BSPP thread that must be tapped in the enclosure                                                                                                              |
| 40.6                | 1½" BSPP and M45x2 stainless steel fitting TIG soldered on bottom of enclosure (hole has a soldering lip)                                                         |
| 42                  | 1¼" BSPP thread fitting with inside nut                                                                                                                           |
| 43                  | M45x2 thread that must be tapped in the enclosure                                                                                                                 |
| 45                  | - M45 thread fitting with inside nut,<br>- 1½" BSPP thread that must be tapped in the enclosure                                                                   |
| 50                  | 1¼" BSPP, 1½" BSPP or M45 thread fitting with inside rotation ring                                                                                                |
| 57                  | 2" BSPP thread that must be tapped in the enclosure, or inside ring                                                                                               |
| 60                  | 2" BSPP thread fitting with inside nut                                                                                                                            |
| 70                  | 2½" BSPP and M77x2 stainless steel fitting TIG soldered on bottom of enclosure (hole has a soldering lip)                                                         |
| 72.5                | 2½" BSPP thread that must be tapped in the enclosure                                                                                                              |
| 75                  | M77x2 thread that must be tapped in the enclosure                                                                                                                 |
| 77                  | 2½" or M77x2 thread fitting with inside nut or rotation ring                                                                                                      |
| 80.5                | TIG soldering on dia. 80mm tube (hole has a soldering lip)                                                                                                        |
| 100.5               | TIG soldering on dia. 100mm tube (hole has a soldering lip)                                                                                                       |



# Adjustment or reset access devices





## Enclosures with devices requiring access from outside

It is often necessary, when the devices include a system of adjustment or a reset, to be able to have access to it, without having to unscrew the lid of the box.

One solution is to use enclosures with an easily opening porthole or window, while protecting the user against electrical contact. This solution is possible for large enclosures.

For small enclosures, special devices have been developed.

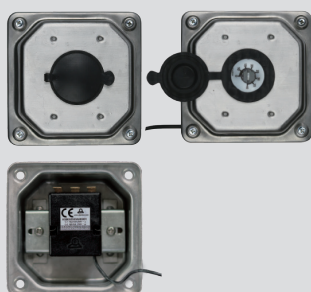
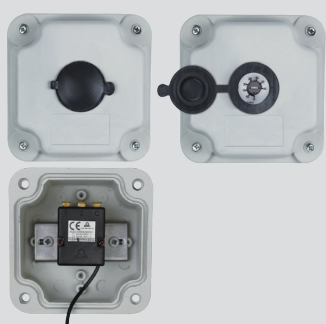
### Access under flexible boot

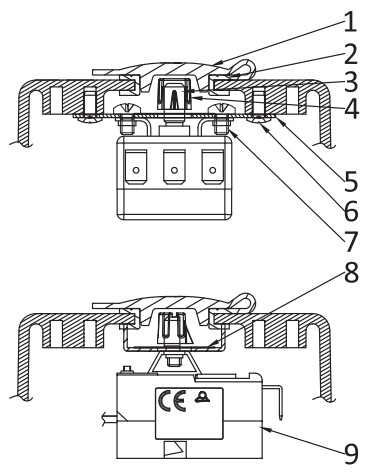
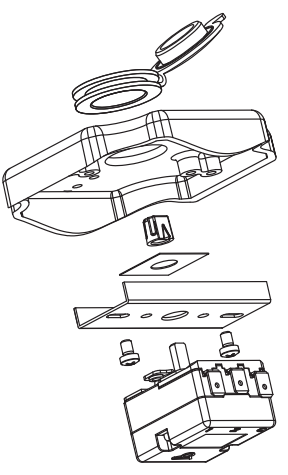
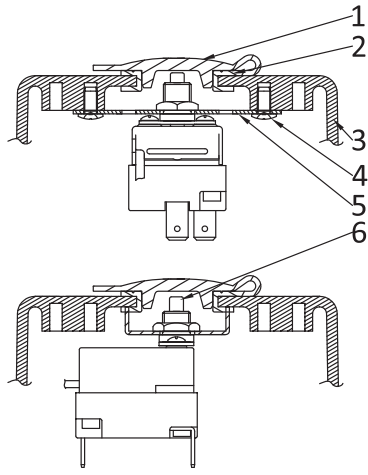
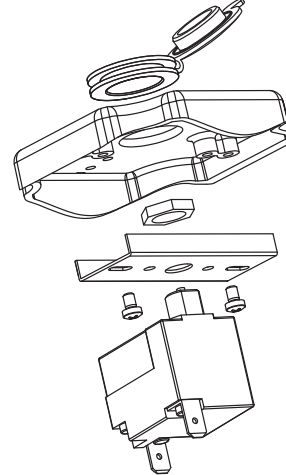
The most common solution is a flexible silicone boot that is easy to open and close.

These boots, whose mobile part is captive, simply install in a hole of 20mm. They can therefore be mounted on all enclosures.

These boots, when closed, comply with an IP66 ingress protection degree, but are not adapted to the conditions of the IP69K.

The mounting of internal components such as adjustable or manual reset thermostats, potentiometers etc., can be done either with a back plate screwed inside on the cover (Most aluminum and stainless steel enclosures, and a large part of the plastic ones have bosses for this purpose), or by direct mounting on the bottom of the enclosure.

| Example of plastic enclosure with thermostat adjustment under a flexible boot      | Example of stainless steel enclosure with thermostat adjustment under a flexible boot | Example of aluminum enclosure with thermostat adjustment under a flexible boot       |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |     |  |

| Adjustable thermostat with access under boot                                                                                                                                                                                                                                                                                                                                    |                                                                                     | Manual reset thermostat with access under boot                                                                                                                                                                                        |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                   |  |
| <ul style="list-style-type: none"><li>1: Silicone boot, fixed part</li><li>2: Silicone boot, moving part</li><li>3: Thermostat with short adjustment shaft</li><li>4: Miniature knob</li><li>5: Inside bracket</li><li>6: Inside bracket screws</li><li>7: Thermostat screws</li><li>8: Adhesive graduated dial</li><li>9: Electromechanical or electronic thermostat</li></ul> |                                                                                     | <ul style="list-style-type: none"><li>1: Silicone boot</li><li>2: Enclosure cover</li><li>3: Inside bracket screws</li><li>4: Inside bracket</li><li>5: Manual reset thermostat mountingnut</li><li>6: Manual reset limiter</li></ul> |                                                                                       |

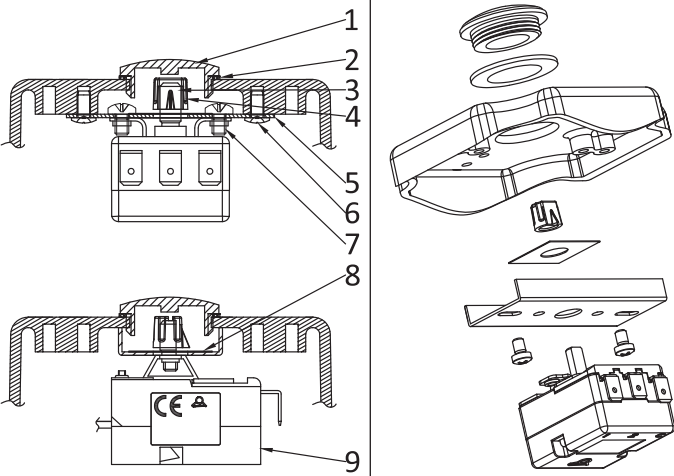
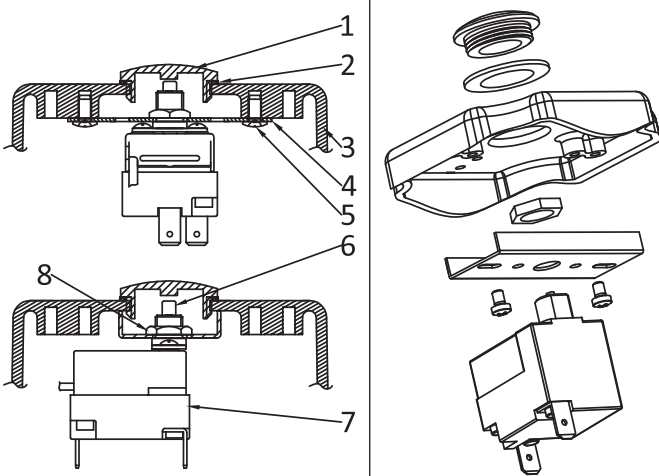


# Technical introduction: Adjustment or reset access devices

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## Access underscrewed cap

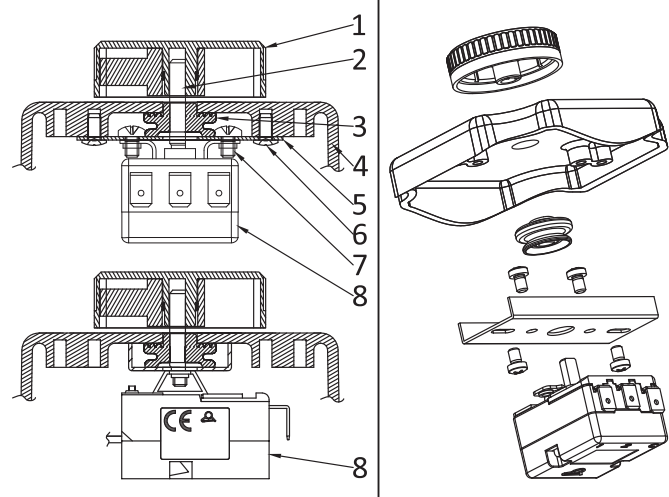
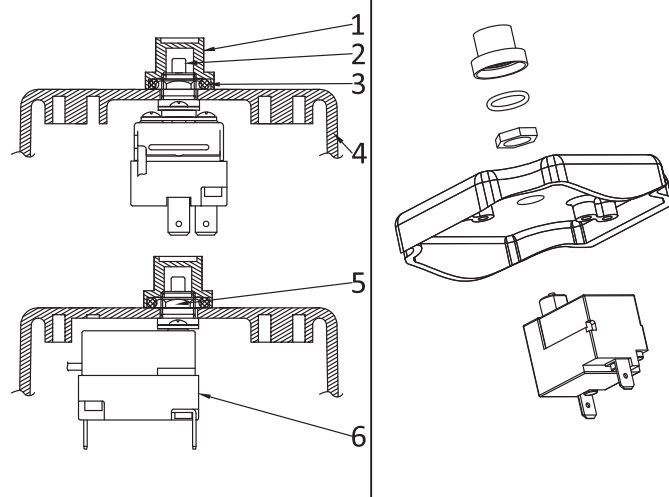
Although less common, it is also possible, on the enclosures whose wall thickness allows it (It must be at least 3mm, which eliminates the stamped metal cases), to make a threaded hole and to install a M20 cable gland cap equipped with a gasket. This solution may be required by the standards, when adjustment or reset can only be done using a tool. With this solution, IP66 and IP69K ingress protection degrees are kept.

| Example of plastic enclosure with access under screwed cap                                                                                                                                                                                                                                                                                                            |  | Examples of Aluminum enclosure with access under screwed cap                                                                                                                                                                                                                          |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                    |  |
| Adjustable thermostat with internal dial, access under screwed cap                                                                                                                                                                                                                                                                                                    |  | Manual reset limiter, access under screwed cap                                                                                                                                                                                                                                        |  |
|                                                                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                   |  |
| <ul style="list-style-type: none"><li>1: Screwed cable gland cap</li><li>2: Gasket</li><li>3: Thermostat with short adjustment shaft</li><li>4: Miniature knob</li><li>5: Internal bracket</li><li>6: Internal bracket screws</li><li>7: Thermostat mounting screw</li><li>8: Adhesive graduated dial</li><li>9: Electromechanical or electronic thermostat</li></ul> |  | <ul style="list-style-type: none"><li>1: Screwed cable gland cap</li><li>2: Gasket</li><li>3: Enclosure cover</li><li>4: Internal bracket screws</li><li>5: Internal bracket</li><li>6: Manual reset button</li><li>7: Manual reset limiter</li><li>8: Limiter mounting nut</li></ul> |  |



## Unprotected External access

Adjustment by a shaft or button located outside the housing is the one that offers the lowest guarantee of resistance to water and dust ingress and shock. It is acceptable only when IP54 degree of protection or less are sufficient. In the case of adjustment by a rotary shaft, it is necessary to insert a special gasket on the shaft, sandwiched between the backplate and the cover of the enclosure. Direct mounting without backplate does not allow for proper sealing, as water and dust can penetrate through the adjustment shaft and mounting screws. In the case of access to a manual reset button, it is essential that the protective cap of this manual reset is present, and is equipped with a seal. The main risk is then the loss of this seal and protective cap.

| Example of plastic enclosure with access by external knob                                                                                                                                                                                                                                                                                               | Example of aluminum enclosure with external access to manual reset button                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                       |                                                                                                                                                                     |
| Enclosure with external thermostat knob                                                                                                                                                                                                                                                                                                                 | Enclosure with external manual reset button                                                                                                                                                                                                            |
|                                                                                                                                                                                  |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"><li>1: Graduated knob</li><li>2: Thermostat with long adjustment shaft</li><li>3: Silicone gasket with flexible lips</li><li>4: Enclosure cover</li><li>5: Internal bracket</li><li>6: Internal bracket screws</li><li>7: Thermostat mounting screws</li><li>8: Electro-mechanical or electronic thermostat</li></ul> | <ul style="list-style-type: none"><li>1: Screwed manual reset button cap</li><li>2: Manual reset button</li><li>3: Manual reset button cap O-Ring</li><li>4: Enclosure cover</li><li>5: Limiter mounting nut</li><li>6: Manual reset limiter</li></ul> |



# Technical introduction: Adjustment or reset access devices

## External access with IP69K ingress protection

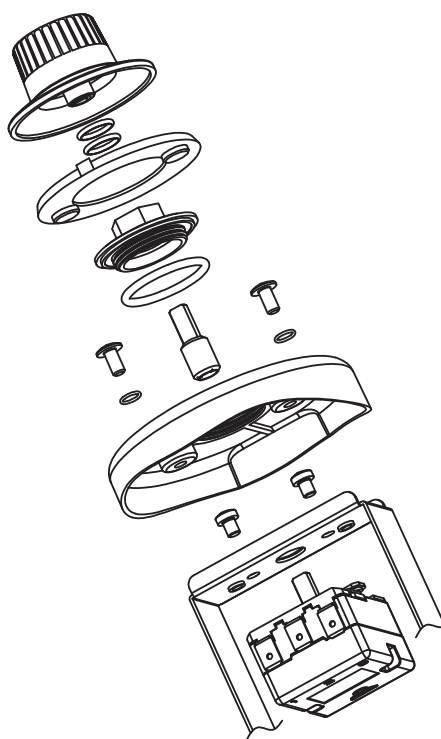
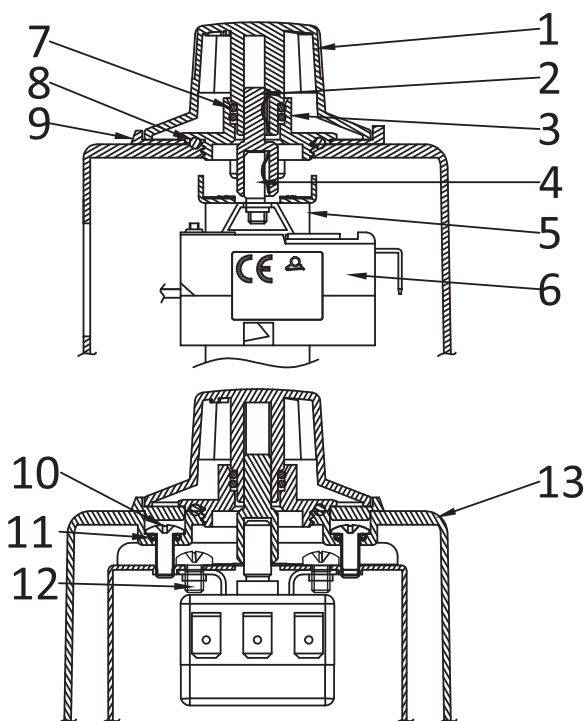
This adjustment by a knob located outside the housing offers a very good guarantee of resistance to water and dust ingress, but limited impact resistance.

This system is suitable for all enclosures in which an M25x1.5 tapping identical to that of screwed cable glands or screw caps can be made. The length of the tapping must be at least 3 mm. The bezel bearing the position marker arrow (Nr 9) can only be used on enclosures with two slots for its pins, such as the Y3C3 model. When this flange is not used, it is necessary to position a marker (paint, blind hole or other) so that the graduation of the controller can refer to it. Only one model of our range of knobs can be used: reference 66MU \*\*\*\*\* , dia. 50mm, with printed. (\*\*\*\*\*= temperature range codification of the knob)

Example of plastic enclosure with access by 50mm external knob, with IP69K ingress protection



Enclosure with external IP69K thermostat knob



- 1: Graduated knob
- 2: Adjustment shaft extension
- 3: M25x1.5 extension
- 4: Thermostat shaft, with standard 10.5mm length
- 5: Internal bracket
- 6: Electro-mechanical or electronic thermostat
- 7: Knob O-rings
- 8: M25x1.5 extension gasket
- 9: Thermostat bezel
- 10: Internal bracket screws
- 11: Internal bracket screw gaskets
- 12: Thermostat mounting screws
- 13: Enclosure cover with m25x1.5 thread





# Technical introduction: Adjustment or reset access devices

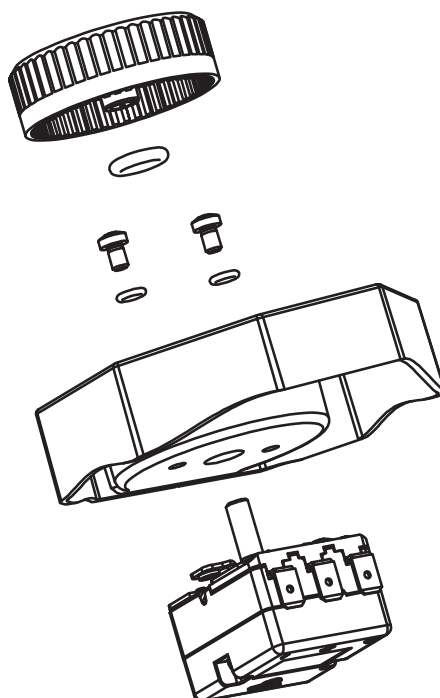
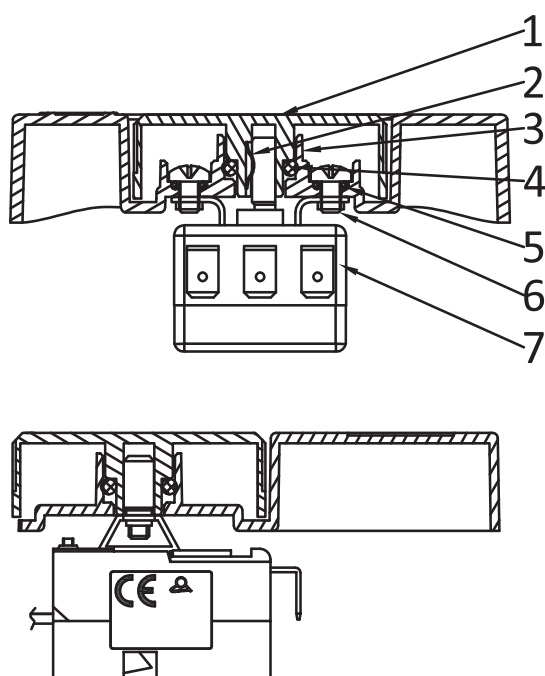
## External access, IP69K ingress protection class, withstand high-temperature and high-pressure cleaning, and shocks resistant

This type of external control by means of a waterproof and shock-resistant knob has been developed for all industrial, commercial and food industry applications, as well as on transport vehicles, for which high-pressure hot water jet cleaning is essential. It allows the setting of a mechanical or electronic thermostat while maintaining its sealing characteristics. The embedding of the control knob provides excellent impact resistance. It also allows access to the adjustment accessible from the front and the upper sides. However, this solution which comprises an O-ring between the central core of the handle and the housing is only feasible on a limited number of moulded boxes, and imposes a knob diameter of 50mm minimum.

Example of aluminum enclosure with external knob, IP69K ingress protection



Enclosure with IP69K external thermostat knob



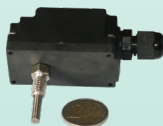
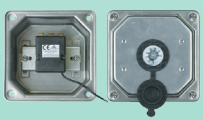
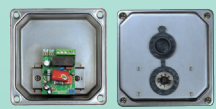
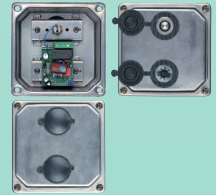
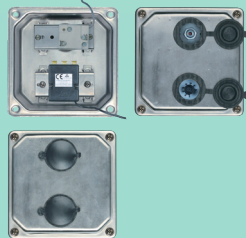
- 1: Graduated knob
- 2: Knob spring
- 3: O-ring gasket tubular seat
- 4: O-Ring
- 5: Mounting screws O-rings
- 6: Control mounting screws
- 7: Electro mechanical or electronic thermostat



## Examples of mounting various devices in our immersion heater housings.

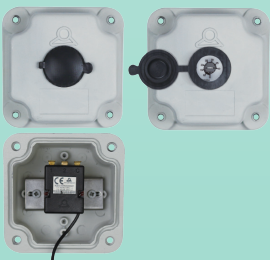
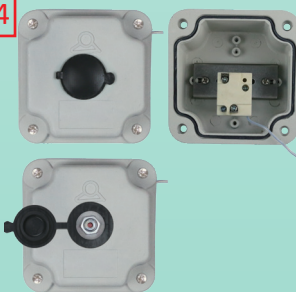
### Examples of mounting various devices in our immersion heater housings.

These products are not fully listed in this catalogue because the possibilities are endless. Our sales department and our engineering department will specifically answer your specifications.

|                                                                                     |                                                                                                                                                                                                                                    |                                                                                      |                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>1</p> <p>Level switch with miniature connection box</p>                                                                                                                                                                         |    | <p>2</p> <p>Level switch with miniature connection box, 16A 230V relay and pilot light</p>                                                                                                                                                                        |
|    | <p>3</p> <p>Small temperature sensor with M8 thread inside miniature enclosure</p>                                                                                                                                                 |    | <p>4</p> <p>Temperature sensor with PTFE coated probe and PVDF enclosure, for corrosive liquids, with or without converter</p>                                                                                                                                    |
|   | <p>5</p> <p>Single pole bulb and capillary thermostat inside round enclosure dia 86mm, inside adjustment under cap.<br/>3 pole version is possible, but depends of length of heating elements inside</p>                           |   | <p>6</p> <p>Single pole bulb and capillary thermostat inside round enclosure dia 86mm, outside adjustment with knob.<br/>3 pole version is possible, but depends of length of heating elements inside. IP40 only</p>                                              |
|  | <p>7</p> <p>Single pole bulb and capillary thermostat inside PA66 round enclosure dia. 86mm, external adjustment. IP69K. Compatible with M77 and 2 1/2" fittings. Also available with internal adjustment under M25 screw cap.</p> |  | <p>8</p> <p>3 poles bulb and capillary thermostat inside PA66 round enclosure dia. 86mm, external adjustment. IP69K. Compatible with M77 and 2 1/2" fittings. Also available with internal adjustment under M25 screw cap.</p>                                    |
|  | <p>9</p> <p>Single pole bulb and capillary thermostat inside stainless steel enclosure, inside adjustment<br/>Some models also available in 3 poles</p>                                                                            |  | <p>10</p> <p>Single pole electronic thermostat with remote sensor, inside stainless steel enclosure, internal adjustment. Center position on 105 x 105mm and 125 x 125mm position. Side position possible only on 125 x 125mm enclosure (NTC or Pt100 sensor)</p> |
|  | <p>11</p> <p>Single pole bulb and capillary manual reset limiter inside stainless steel enclosure, inside adjustment. Some models also available in 3 poles</p>                                                                    |  | <p>12</p> <p>Single pole electronic manual reset limiter with remote sensor, inside stainless steel enclosure, internal adjustment and reset. (NTC or Pt100 sensor)</p>                                                                                           |
|  | <p>13</p> <p>Single pole bulb and capillary thermostat and manual reset limiter inside stainless steel enclosure, inside adjustment. Some models also available in 3 poles</p>                                                     |  | <p>14</p> <p>Single pole electronic thermostat and manual reset limiter with remote sensor, inside stainless steel enclosure, internal adjustment and reset. (NTC or Pt100 sensors)</p>                                                                           |



## Examples of mounting various devices in our immersion heater housings.

|                                                                                               |                                                                                                                                                                                                                                |                                                                                                |                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>15</p>    | <p>Single pole bulb and capillary thermostat inside round plastic enclosure in PA66, PP or PVDF. PC transparent cover only with PA66 body. No 3 poles versions</p>                                                             | <p>16</p>    | <p>Single pole remote sensor electronic thermostat inside round plastic enclosure in PA66, PP or PVDF. PC transparent cover only with PA66 body. No 3 poles versions. NTC or Pt100 sensors.</p>                                                 |
| <p>17</p>    | <p>Single pole bulb and capillary limiter with manual reset inside round plastic enclosure in PA66, PP or PVDF. PC transparent cover only with PA66 body. No 3 poles versions</p>                                              | <p>18</p>    | <p>Single pole remote sensor electronic thermostat inside round plastic enclosure in PA66, PP or PVDF. PC transparent cover only with PA66 body. No 3 poles versions. NTC or Pt100 sensors.</p>                                                 |
| <p>19</p>   | <p>PA66 Plastic housing with one bulb and capillary adjustable thermostat and one fixed setting manual reset thermostat, access under screwed caps. No 3 poles versions.</p>                                                   | <p>20</p>   | <p>PA66 plastic housing with one bulb and capillary adjustable thermostat, one manual reset thermostat, 2 pilot lights and main switch, access from outside. Some models also available in 3 poles. Can also receive one or 2 power relays.</p> |
| <p>21</p>  | <p>PA66 plastic housing with 1 power relay on DIN rail and one connection block 10mm²</p>                                                                                                                                      | <p>22</p>  | <p>PA66 plastic housing with 2 power relays on DIN rail</p>                                                                                                                                                                                     |
| <p>23</p>  | <p>Aluminum enclosure with single pole bulb and capillary thermostat, internal adjustment under silicone boot. Also available with internal adjustment under PA66 screwed cap. Some models also available in 3 poles</p>       | <p>24</p>  | <p>Aluminum enclosure with single pole manual reset bulb and capillary limiter. Internal reset under silicone boot. Also available with internal adjustment under PA66 screwed cap. Some models also available in 3 poles</p>                   |
| <p>25</p>  | <p>Aluminum enclosure with single pole electronic thermostat, NTC or Pt100 temperature sensor. Internal adjustment under silicone boot. Also available with internal adjustment under PA66 screwed cap. No 3 poles models.</p> | <p>26</p>  | <p>Small aluminum enclosure with single pole thermostat with external knob protected against shock, 2 pole main switch and pilot light. Also available with electronic thermostat.</p>                                                          |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice





## Examples of mounting various devices in our immersion heater housings.

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|                                                                                               |                                                                                                                                                                                                                                                  |                                                                                                |                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>27</p>    | <p>Aluminum enclosure with 3 pole <b>thermostat</b> with external knob protected against shock, internal acces 3 pole manual reset (must remove cover for reset), 3 pole main switch and pilot light. Also available in single pole version.</p> | <p>28</p>    | <p>Stainless steel housing with 1 <b>power relay</b> on DIN rail. Can also accept a single pole bulb and capillary <b>thermostat</b> or <b>limiter</b></p>                                                                                                           |
| <p>29</p>    | <p>Stainless steel housing with 2 <b>power relays</b> on DIN rail.</p>                                                                                                                                                                           | <p>30</p>    | <p>PA66 Plastic housing with one bulb and capillary adjustable <b>thermostat</b>, access under clear PC window.<br/>Can also be added one fixed setting <b>manual reset thermostat</b> and <b>power relays</b>.<br/>Some models also available in 3 <b>poles</b></p> |
| <p>31</p>   | <p>Plastic housing with one ON-OFF <b>electronic controller</b> with digital display, access under clear PC window.<br/>Can also be added one fixed setting manual reset thermostat and <b>power relays</b></p>                                  | <p>32</p>   | <p>PA66 Plastic housing with one <b>PID electronic controller</b> with double digital display, access under clear PC window.<br/>Can also receive power relays or <b>SSR</b> output</p>                                                                              |
| <p>33</p>  | <p>PA66 Plastic housing with <b>digital display electronic controller</b> on DIN rail, access under transparent cover.</p>                                                                                                                       | <p>34</p>  | <p>Aluminum housing with 1 <b>power relay</b> and one connection block, access under clear PC window.<br/>Can also receive thermostat or <b>electronic controller</b> control panel.</p>                                                                             |
| <p>35</p>  | <p>PA66 Plastic housing with residual current ground fault <b>breaker</b>, access under clear PC window. Compatible with most of European similar to Merlin Gerin Multi 9, C60 or VIGI C60. Maximum width 4 modules of 18mm.</p>                 | <p>36</p>  | <p>Aluminum enclosure with <b>heat exchanger fins</b>, fitted with one 3 <b>pole solid state relay</b>.</p>                                                                                                                                                          |
| <p>37</p>  | <p>Aluminum enclosure with heat exchanger fins, fitted with <b>one to 4 single pole solid state relays</b>.</p>                                                                                                                                  | <p>38</p>  | <p>Aluminum heat exchange finned enclosure, for assembly on backside of PA66 control enclosures, can receive 1 <b>single pole solid state relay</b></p>                                                                                                              |





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# **Deep drawn enclosure for moderately corrosive media, in stainless steel AISI 304 or AISI 316**

**Made of metal thickness 1mm, these enclosures provide a good compromise between impact resistance, weather resistance and chemicals.**

**They are non-flammable and have a maximum IP69K degree of ingress protection.**

**They can receive many accessories such as terminal blocks, DIN rails, and caps for settings. They are compatible with rotary or double-threaded fittings and some models can incorporate a fully-welded TIG stainless steel fitting for the production of all stainless steel immersion heaters for food or chemical use.**

**In standard, screws and fasteners are stainless steel.**

**In standard, gaskets are in silicone. They can be supplied in NBR or FKM (Viton) on request.**

**Red dimensions inside rectangular frames on drawings are used for accessories assembly.**



Round miniature simplified immersion heater enclosure



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|--------------|--------------------------|-----------------|------------------|-----|-------|
| Dia. 62 x 60 | 150                      | stainless steel | IP65             | IK7 | Y3K1  |

Suitable for

☐ Temperature sensor

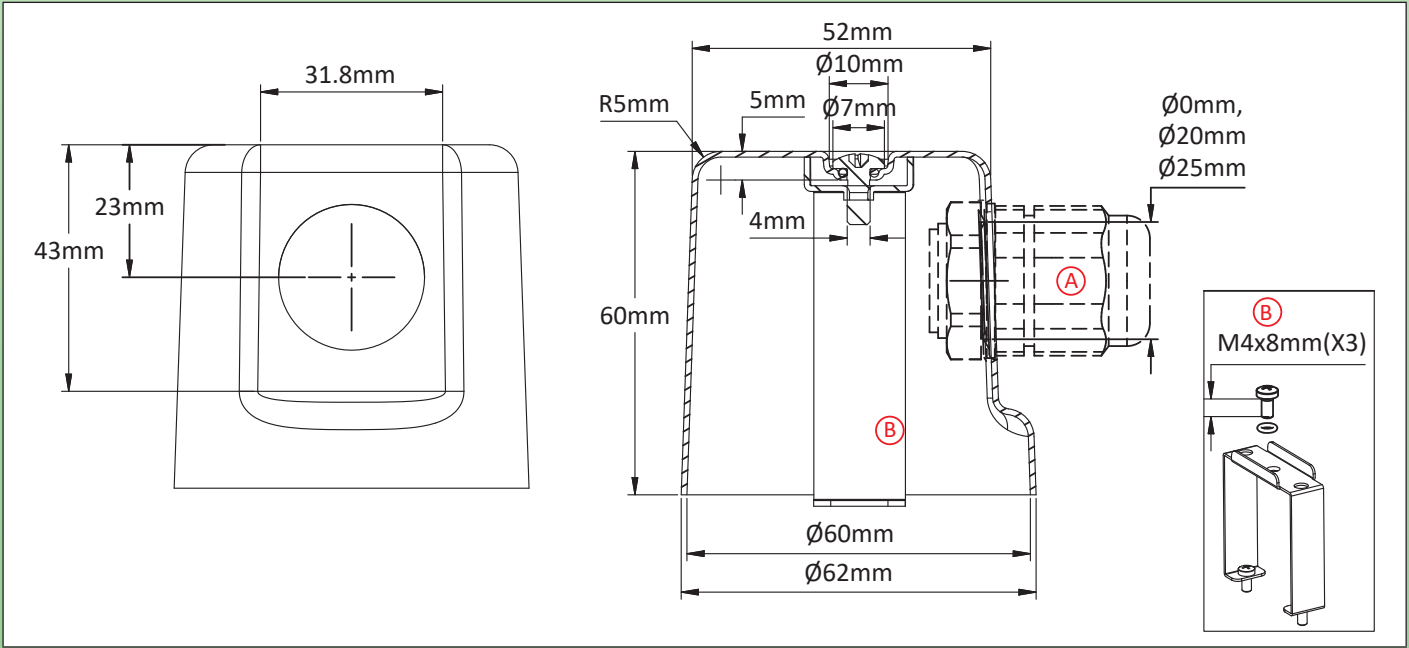
☒ Immersion heater

☐ Finned heater

☐ Thermostat

☐ Level sensor

☐ Electronic board



Main references

| Ⓐ(mm) | Ⓑ | stainless steel  |
|-------|---|------------------|
| 0     | × | Y3K1000100000008 |
|       | ✓ | Y3K10001000E1008 |
| 20    | × | Y3K1000112000008 |
|       | ✓ | Y3K10001120E1008 |
| 25    | × | Y3K1000112500008 |
|       | ✓ | Y3K10001125E1008 |

Cable gland not included in these reference, consult us if you want them.  
Red dimensions inside rectangular frames are used for accessories assembly.

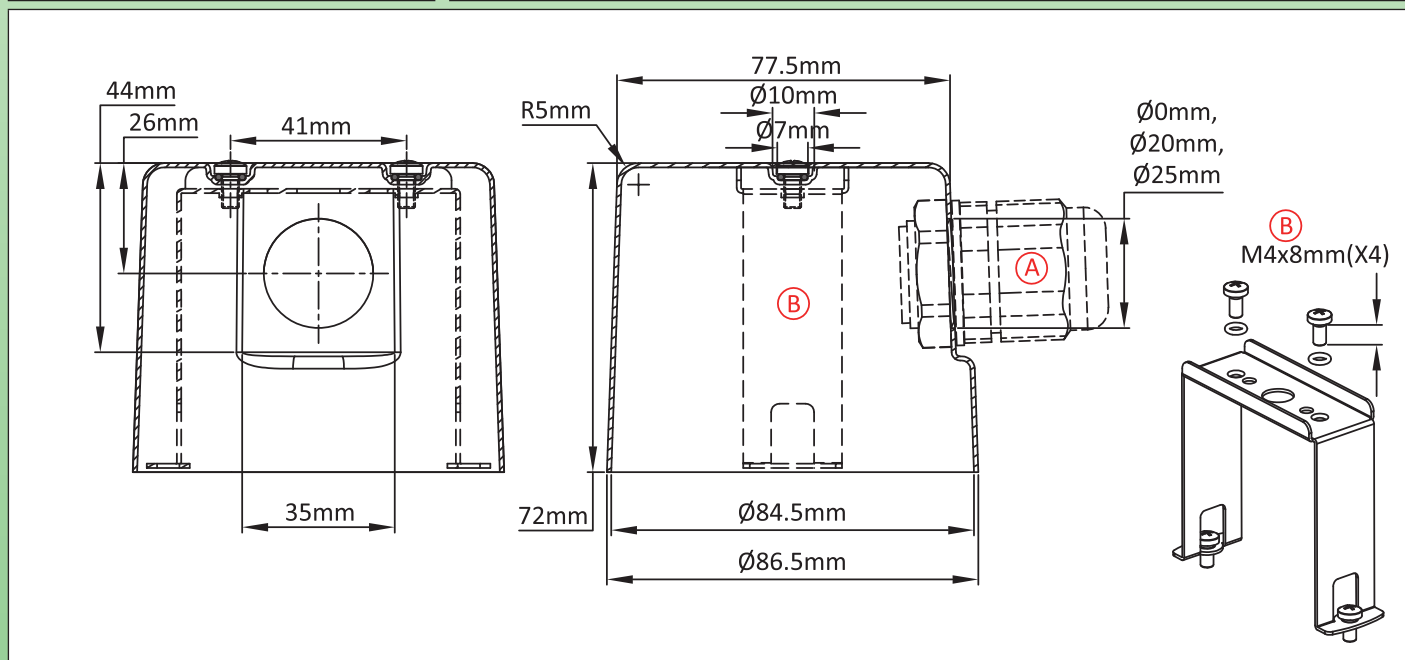


# Round, large diameter, simplified immersion heater enclosure



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model       |
|--------------|--------------------------|-----------------|------------------|-----|-------------|
| Dia. 86 x 72 | 390                      | stainless steel | IP69K            | IK7 | <b>Y3K2</b> |

| Suitable for                                         |  |
|------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> Temperature sensor          |                                                                                    |
| <input checked="" type="checkbox"/> Immersion heater |                                                                                    |
| <input type="checkbox"/> Finned heater               |                                                                                    |
| <input checked="" type="checkbox"/> Thermostat       |                                                                                    |
| <input type="checkbox"/> Level sensor                |                                                                                    |
| <input type="checkbox"/> Electronic board            |                                                                                    |



## Main references

| Ⓐ(mm) | Ⓑ | 304              | 316              |
|-------|---|------------------|------------------|
| 0     | ✓ | Y3K20001000E2008 | Y3K20001000E2009 |
| 20    | ✓ | Y3K20001120E2008 | Y3K20001120E2009 |
| 25    | ✓ | Y3K20001125E2008 | Y3K20001125E2009 |
| 0     | × | Y3K2000100000008 | Y3K2000100000009 |
| 20    | × | Y3K2000112000008 | Y3K2000112000009 |
| 25    | × | Y3K2000112500008 | Y3K2000112500009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

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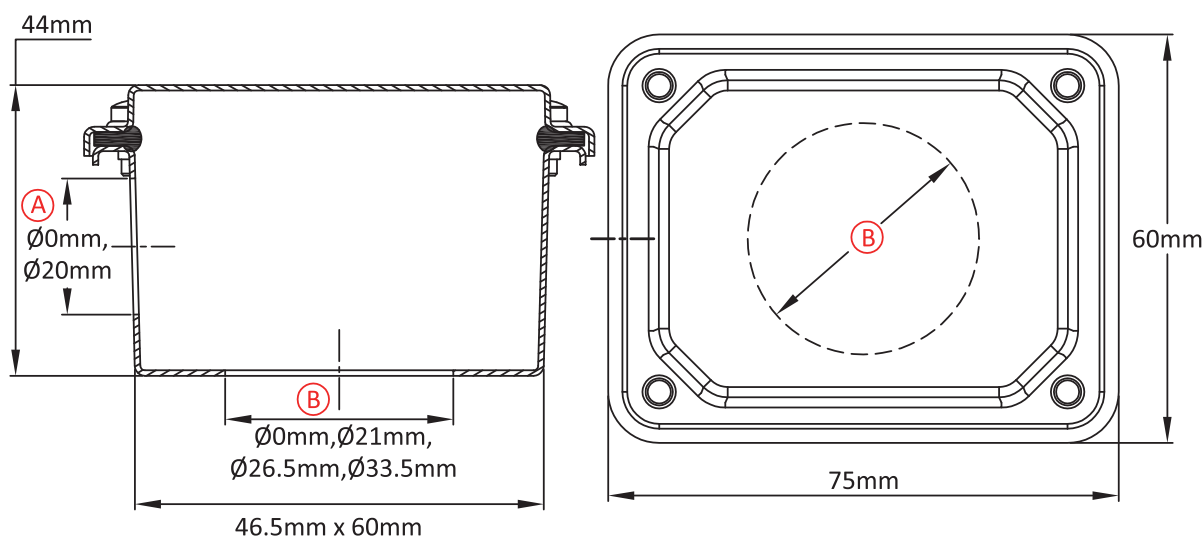


## Miniature enclosure for temperature sensor or level sensor

| Size(mm)            | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|---------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>75 × 60 × 44</b> | <b>111</b>               | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3L1</b> |

### Suitable for

- ☒ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



### Main references

| A(mm) | B | 304              | 316              |
|-------|---|------------------|------------------|
| 0     | ✓ | Y3K20001000E2008 | Y3K20001000E2009 |
| 20    | ✓ | Y3K20001120E2008 | Y3K20001120E2009 |
| 25    | ✓ | Y3K20001125E2008 | Y3K20001125E2009 |
| 0     | × | Y3K2000100000008 | Y3K2000100000009 |
| 20    | × | Y3K2000112000008 | Y3K2000112000009 |
| 25    | × | Y3K2000112500008 | Y3K2000112500009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

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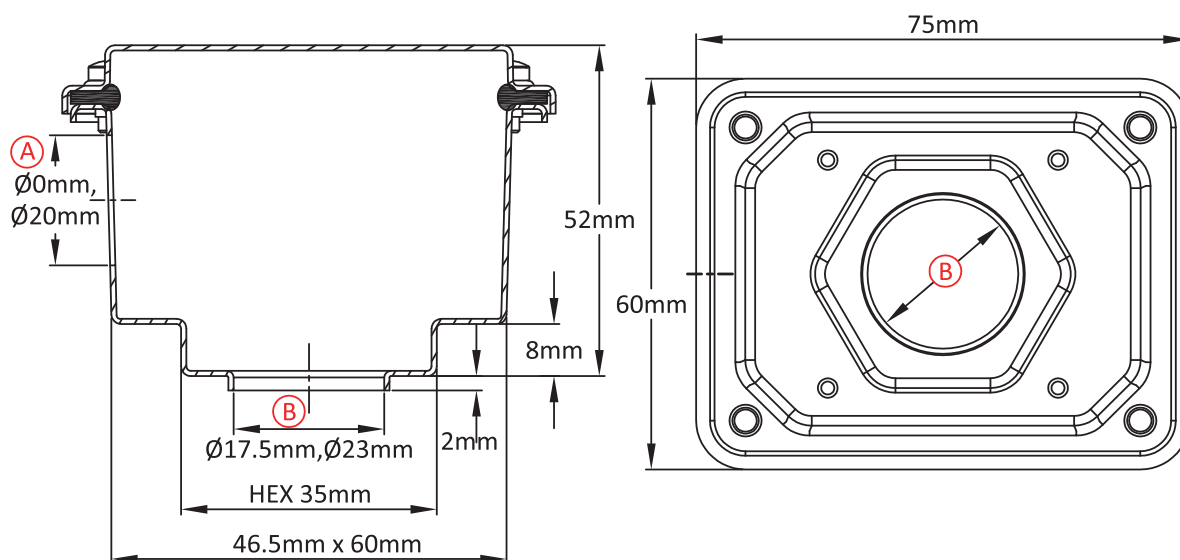
# Miniature enclosure for temperature sensor or level sensor



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model       |
|--------------|--------------------------|-----------------|------------------|-----|-------------|
| 75 × 60 × 52 | 119                      | stainless steel | IP69K            | IK7 | <b>Y3L2</b> |

## Suitable for

- ☒ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | 304              | 316              |
|-------|-------|------------------|------------------|
| 0     | 17.5  | Y3L2175000000008 | Y3L2175000000009 |
| 0     | 23    | Y3L2230000000008 | Y3L2230000000009 |
| 20    | 17.5  | Y3L2175120000008 | Y3L2175120000009 |
| 20    | 23    | Y3L2230120000008 | Y3L2230120000009 |

Cable gland not included in these reference, consult us if you want them.

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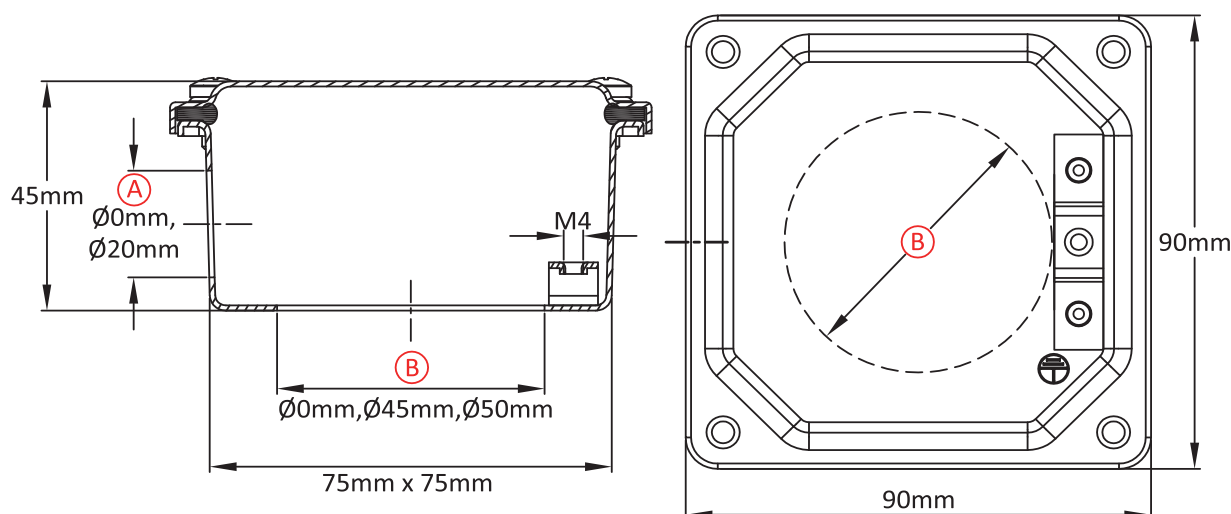


# Miniature enclosure for immersion heater, temperature sensor or level sensor

| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|--------------|--------------------------|-----------------|------------------|-----|-------|
| 90 × 90 × 45 | 206                      | stainless steel | IP69K            | IK7 | Y3L3  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | 304               | 316               |
|-------|-------|-------------------|-------------------|
| 0     | 0     | Y3L30000000000008 | Y3L30000000000009 |
| 0     | 45    | Y3L34500000000008 | Y3L34500000000009 |
| 0     | 50    | Y3L35000000000008 | Y3L35000000000009 |
| 20    | 0     | Y3L30001200000008 | Y3L30001200000009 |
| 20    | 45    | Y3L34501200000008 | Y3L34501200000009 |
| 20    | 50    | Y3L35001200000008 | Y3L35001200000009 |

Cable gland not included in these reference, consult us if you want them.

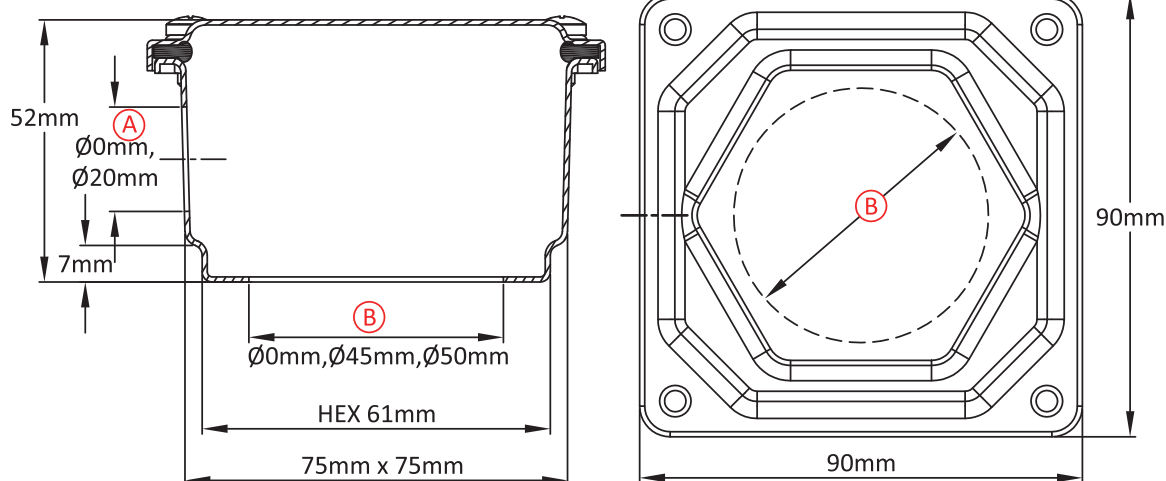
Red dimensions inside rectangular frames are used for accessories assembly.



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|--------------|--------------------------|-----------------|------------------|-----|-------|
| 90 × 90 × 52 | 232                      | stainless steel | IP69K            | IK7 | Y3L4  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| (A)mm) | (B)(mm) | 304              | 316              |
|--------|---------|------------------|------------------|
| 0      | 0       | Y3L4000000000008 | Y3L4000000000009 |
| 0      | 45      | Y3L4450000000008 | Y3L4450000000009 |
| 0      | 50      | Y3L4500000000008 | Y3L4500000000009 |
| 20     | 0       | Y3L4000120000008 | Y3L4000120000009 |
| 20     | 45      | Y3L4450120000008 | Y3L4450120000009 |
| 20     | 50      | Y3L4500120000008 | Y3L4500120000009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Immersion heater or temperature sensor enclosure

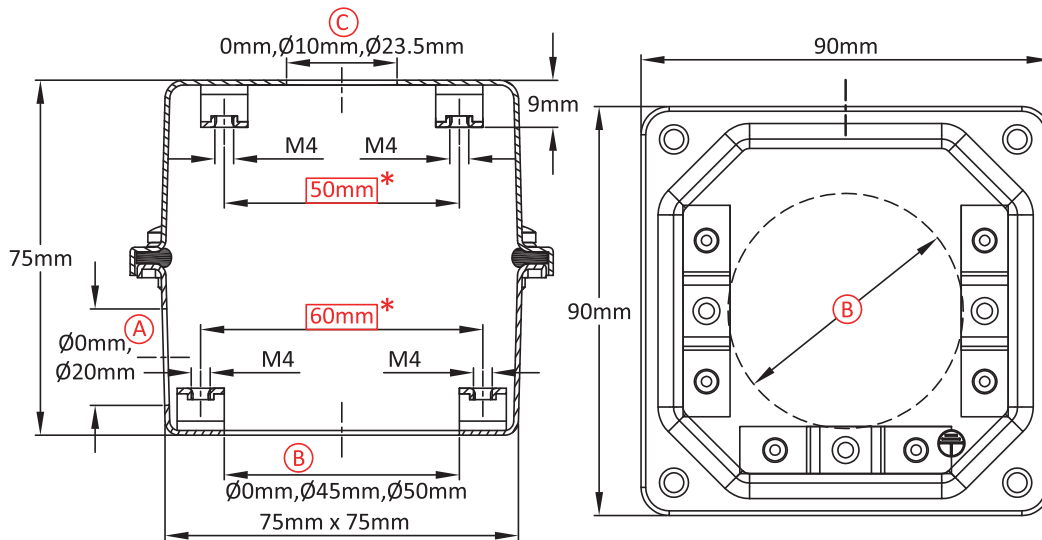
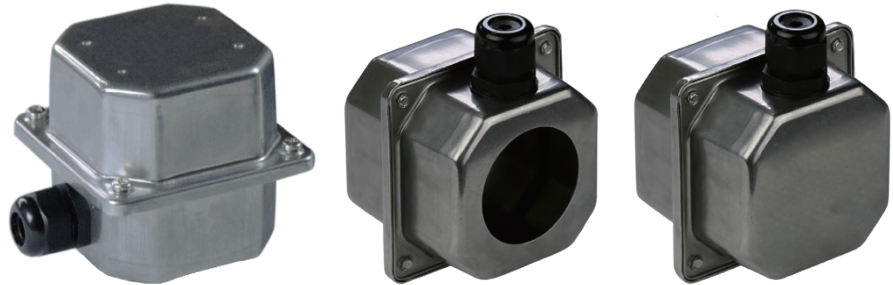


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| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model       |
|--------------|--------------------------|-----------------|------------------|-----|-------------|
| 90 × 90 × 75 | 392                      | stainless steel | IP69K            | IK7 | <b>Y3S3</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y3S30000000G1008 | Y3S30000000G1009 | 20          | 0           | 0           | Y3S30000120G1008 | Y3S30000120G1009 |
| 0           | 0           | 10          | Y3S3000A000G1008 | Y3S3000A000G1009 | 20          | 0           | 10          | Y3S3000A120G1008 | Y3S3000A120G1009 |
| 0           | 0           | 23.5        | Y3S3000D000G1008 | Y3S3000D000G1009 | 20          | 0           | 23.5        | Y3S3000D120G1008 | Y3S3000D120G1009 |
| 0           | 45          | 0           | Y3S34500000G1008 | Y3S34500000G1009 | 20          | 45          | 0           | Y3S34500120G1008 | Y3S34500120G1009 |
| 0           | 45          | 10          | Y3S3450A000G1008 | Y3S3450A000G1009 | 20          | 45          | 10          | Y3S3450A120G1008 | Y3S3450A120G1009 |
| 0           | 45          | 23.5        | Y3S3450D000G1008 | Y3S3450D000G1009 | 20          | 45          | 23.5        | Y3S3450D120G1008 | Y3S3450D120G1009 |
| 0           | 50          | 0           | Y3S35000000G1008 | Y3S35000000G1009 | 20          | 50          | 0           | Y3S35000120G1008 | Y3S35000120G1009 |
| 0           | 50          | 10          | Y3S3500A000G1008 | Y3S3500A000G1009 | 20          | 50          | 10          | Y3S3500A120G1008 | Y3S3500A120G1009 |
| 0           | 50          | 23.5        | Y3S3500D000G1008 | Y3S3500D000G1009 | 20          | 50          | 23.5        | Y3S3500D120G1008 | Y3S3500D120G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

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Cat11-1-91

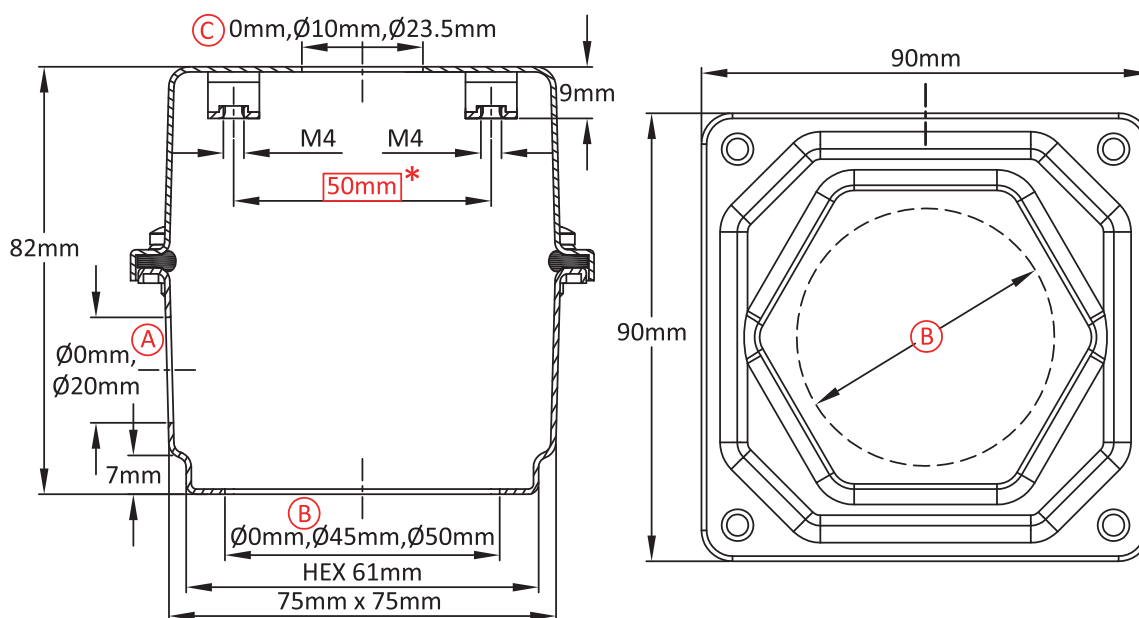
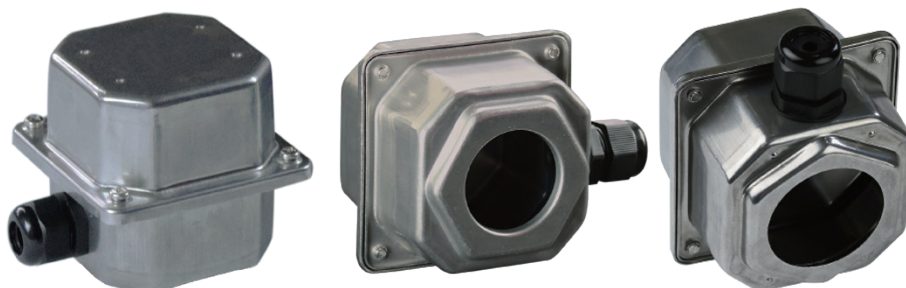
# Immersion heater enclosure with built-in hexagon for fitting



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model       |
|--------------|--------------------------|-----------------|------------------|-----|-------------|
| 90 × 90 × 82 | 418                      | stainless steel | IP69K            | IK7 | <b>Y3S4</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y3S40000000G1008 | Y3S40000000G1009 | 20          | 0           | 0           | Y3S40000120G1008 | Y3S40000120G1009 |
| 0           | 0           | 10          | Y3S4000A000G1008 | Y3S4000A000G1009 | 20          | 0           | 10          | Y3S4000A120G1008 | Y3S4000A120G1009 |
| 0           | 0           | 23.5        | Y3S4000D000G1008 | Y3S4000D000G1009 | 20          | 0           | 23.5        | Y3S4000D120G1008 | Y3S4000D120G1009 |
| 0           | 45          | 0           | Y3S44500000G1008 | Y3S44500000G1009 | 20          | 45          | 0           | Y3S44500120G1008 | Y3S44500120G1009 |
| 0           | 45          | 10          | Y3S4450A000G1008 | Y3S4450A000G1009 | 20          | 45          | 10          | Y3S4450A120G1008 | Y3S4450A120G1009 |
| 0           | 45          | 23.5        | Y3S4450D000G1008 | Y3S4450D000G1009 | 20          | 45          | 23.5        | Y3S4450D120G1008 | Y3S4450D120G1009 |
| 0           | 50          | 0           | Y3S45000000G1008 | Y3S45000000G1009 | 20          | 50          | 0           | Y3S45000120G1008 | Y3S45000120G1009 |
| 0           | 50          | 10          | Y3S4500A000G1008 | Y3S4500A000G1009 | 20          | 50          | 10          | Y3S4500A120G1008 | Y3S4500A120G1009 |
| 0           | 50          | 23.5        | Y3S4500D000G1008 | Y3S4500D000G1009 | 20          | 50          | 23.5        | Y3S4500D120G1008 | Y3S4500D120G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Medium size enclosure for immersion heater or temperature sensor

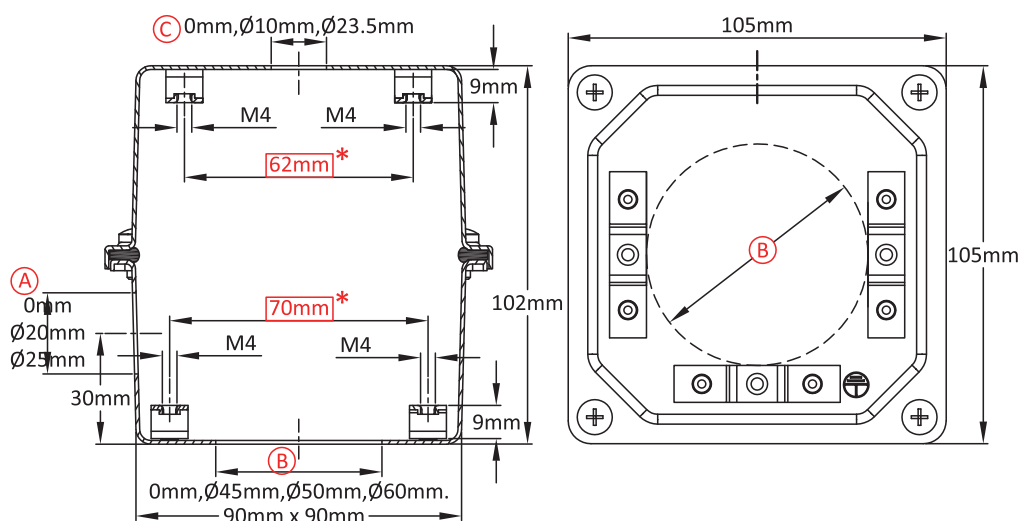


Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>105 × 105 × 102</b> | <b>757</b>               | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3S5</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (mm) | (mm) | (mm) | 304              | 316              | (mm) | (mm) | (mm) | 304              | 316              | (mm) | (mm) | (mm) | 304              | 316              |
|------|------|------|------------------|------------------|------|------|------|------------------|------------------|------|------|------|------------------|------------------|
| 0    | 0    | 0    | Y3S50000000G1008 | Y3S50000000G1009 | 20   | 0    | 0    | Y3S50000120G1008 | Y3S50000120G1009 | 25   | 0    | 0    | Y3S50000125G1008 | Y3S50000125G1009 |
| 0    | 0    | 10   | Y3S5000A000G1008 | Y3S5000A000G1009 | 20   | 0    | 10   | Y3S5000A120G1008 | Y3S5000A120G1009 | 25   | 0    | 10   | Y3S5000A125G1008 | Y3S5000A125G1009 |
| 0    | 0    | 23.5 | Y3S5000D000G1008 | Y3S5000D000G1009 | 20   | 0    | 23.5 | Y3S5000D120G1008 | Y3S5000D120G1009 | 25   | 0    | 23.5 | Y3S5000D125G1008 | Y3S5000D125G1009 |
| 0    | 45   | 0    | Y3S54500000G1008 | Y3S54500000G1009 | 20   | 45   | 0    | Y3S54500120G1008 | Y3S54500120G1009 | 25   | 45   | 0    | Y3S54500125G1008 | Y3S54500125G1009 |
| 0    | 45   | 10   | Y3S5450A000G1008 | Y3S5450A000G1009 | 20   | 45   | 10   | Y3S5450A120G1008 | Y3S5450A120G1009 | 25   | 45   | 10   | Y3S5450A125G1008 | Y3S5450A125G1009 |
| 0    | 45   | 23.5 | Y3S5450D000G1008 | Y3S5450D000G1009 | 20   | 45   | 23.5 | Y3S5450D120G1008 | Y3S5450D120G1009 | 25   | 45   | 23.5 | Y3S5450D125G1008 | Y3S5450D125G1009 |
| 0    | 50   | 0    | Y3S55000000G1008 | Y3S55000000G1009 | 20   | 50   | 0    | Y3S55000120G1008 | Y3S55000120G1009 | 25   | 50   | 0    | Y3S55000125G1008 | Y3S55000125G1009 |
| 0    | 50   | 10   | Y3S5500A000G1008 | Y3S5500A000G1009 | 20   | 50   | 10   | Y3S5500A120G1008 | Y3S5500A120G1009 | 25   | 50   | 10   | Y3S5500A125G1008 | Y3S5500A125G1009 |
| 0    | 50   | 23.5 | Y3S5500D000G1008 | Y3S5500D000G1009 | 20   | 50   | 23.5 | Y3S5500D120G1008 | Y3S5500D120G1009 | 25   | 50   | 23.5 | Y3S5500D125G1008 | Y3S5500D125G1009 |
| 0    | 60   | 0    | Y3S56000000G1008 | Y3S56000000G1009 | 20   | 60   | 0    | Y3S56000120G1008 | Y3S56000120G1009 | 25   | 60   | 0    | Y3S56000125G1008 | Y3S56000125G1009 |
| 0    | 60   | 10   | Y3S5600A000G1008 | Y3S5600A000G1009 | 20   | 60   | 10   | Y3S5600A120G1008 | Y3S5600A120G1009 | 25   | 60   | 10   | Y3S5600A125G1008 | Y3S5600A125G1009 |
| 0    | 60   | 23.5 | Y3S5600D000G1008 | Y3S5600D000G1009 | 20   | 60   | 23.5 | Y3S5600D120G1008 | Y3S5600D120G1009 | 25   | 60   | 23.5 | Y3S5600D125G1008 | Y3S5600D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

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Cat11-1-93

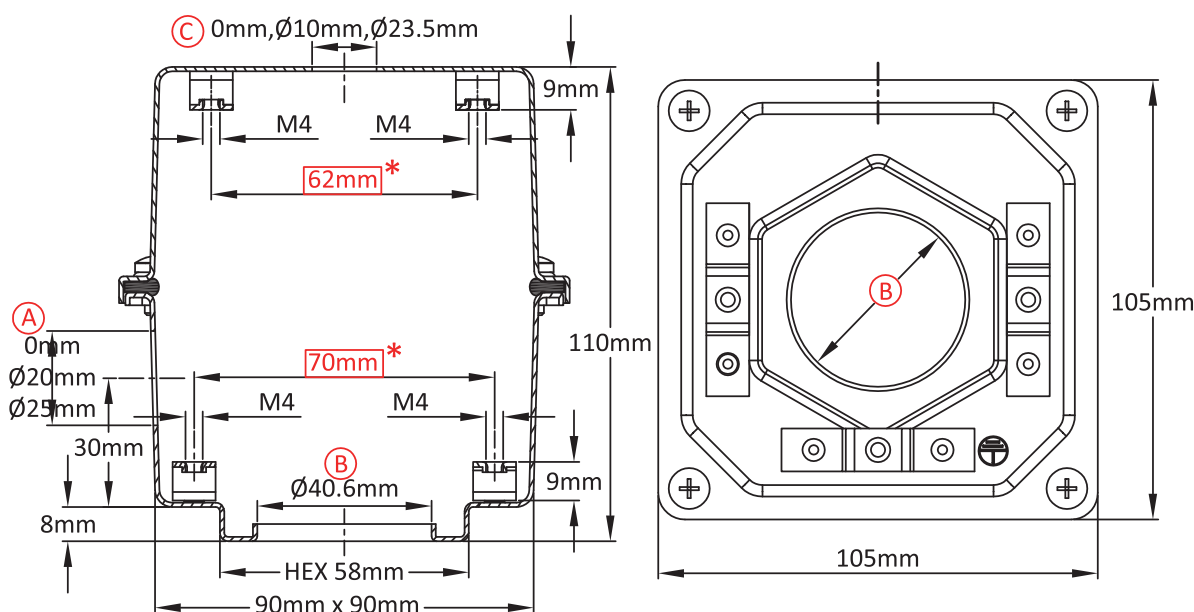




| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>105 × 105 × 110</b> | <b>781</b>               | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3S6</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ(mm) | 304              | 316              |
|-------|-------|-------|------------------|------------------|
| 0     | 40.6  | 0     | Y3S64060000G1008 | Y3S64060000G1009 |
| 0     | 40.6  | 10    | Y3S6406A000G1008 | Y3S6406A000G1009 |
| 0     | 40.6  | 23.5  | Y3S6406D000G1008 | Y3S6406D000G1009 |
| 20    | 40.6  | 0     | Y3S64060120G1008 | Y3S64060120G1009 |
| 20    | 40.6  | 10    | Y3S6406A120G1008 | Y3S6406A120G1009 |
| 20    | 40.6  | 23.5  | Y3S6406D120G1008 | Y3S6406D120G1009 |
| 25    | 40.6  | 0     | Y3S64060125G1008 | Y3S64060125G1009 |
| 25    | 40.6  | 10    | Y3S6406A125G1008 | Y3S6406A125G1009 |
| 25    | 40.6  | 23.5  | Y3S6406D125G1008 | Y3S6406D125G1009 |

Cable gland not included in these reference, consult us if you want them.

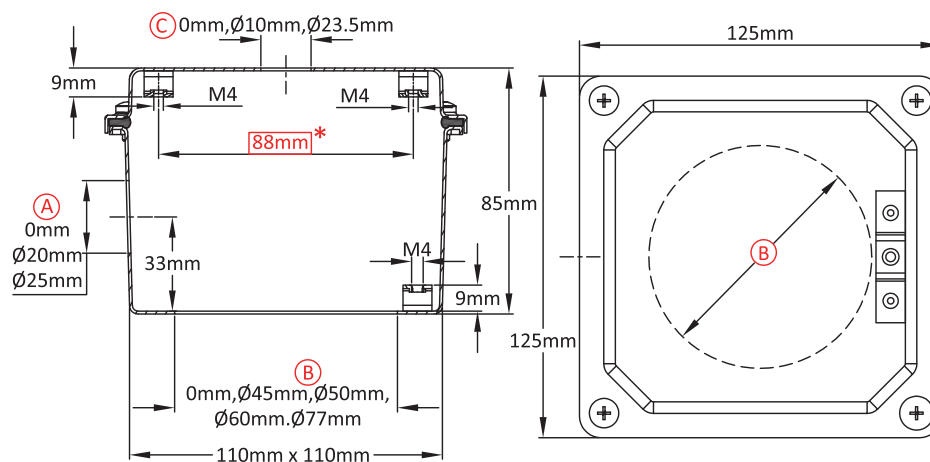
Red dimensions inside rectangular frames are used for accessories assembly.



| Size(mm)       | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|----------------|--------------------------|-----------------|------------------|-----|-------|
| 125 × 125 × 85 | 970                      | stainless steel | IP69K            | IK7 | Y3SA  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | 304              | 316              |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y3SA0000000G1008 | Y3SA0000000G1009 | 20          | 0           | 0           | Y3SA0000120G1008 | Y3SA0000120G1009 | 25          | 0           | 0           | Y3SA0000125G1008 | Y3SA0000125G1009 |
| 0           | 0           | 10          | Y3SA000A000G1008 | Y3SA000A000G1009 | 20          | 0           | 10          | Y3SA000A120G1008 | Y3SA000A120G1009 | 25          | 0           | 10          | Y3SA000A125G1008 | Y3SA000A125G1009 |
| 0           | 0           | 23.5        | Y3SA000D000G1008 | Y3SA000D000G1009 | 20          | 0           | 23.5        | Y3SA000D120G1008 | Y3SA000D120G1009 | 25          | 0           | 23.5        | Y3SA000D125G1008 | Y3SA000D125G1009 |
| 0           | 45          | 0           | Y3SA4500000G1008 | Y3SA4500000G1009 | 20          | 45          | 0           | Y3SA4500120G1008 | Y3SA4500120G1009 | 25          | 45          | 0           | Y3SA4500125G1008 | Y3SA4500125G1009 |
| 0           | 45          | 10          | Y3SA450A000G1008 | Y3SA450A000G1009 | 20          | 45          | 10          | Y3SA450A120G1008 | Y3SA450A120G1009 | 25          | 45          | 10          | Y3SA450A125G1008 | Y3SA450A125G1009 |
| 0           | 45          | 23.5        | Y3SA450D000G1008 | Y3SA450D000G1009 | 20          | 45          | 23.5        | Y3SA450D120G1008 | Y3SA450D120G1009 | 25          | 45          | 23.5        | Y3SA450D125G1008 | Y3SA450D125G1009 |
| 0           | 50          | 0           | Y3SA5000000G1008 | Y3SA5000000G1009 | 20          | 50          | 0           | Y3SA5000120G1008 | Y3SA5000120G1009 | 25          | 50          | 0           | Y3SA5000125G1008 | Y3SA5000125G1009 |
| 0           | 50          | 10          | Y3SA500A000G1008 | Y3SA500A000G1009 | 20          | 50          | 10          | Y3SA500A120G1008 | Y3SA500A120G1009 | 25          | 50          | 10          | Y3SA500A125G1008 | Y3SA500A125G1009 |
| 0           | 50          | 23.5        | Y3SA500D000G1008 | Y3SA500D000G1009 | 20          | 50          | 23.5        | Y3SA500D120G1008 | Y3SA500D120G1009 | 25          | 50          | 23.5        | Y3SA500D125G1008 | Y3SA500D125G1009 |
| 0           | 60          | 0           | Y3SA6000000G1008 | Y3SA6000000G1009 | 20          | 60          | 0           | Y3SA6000120G1008 | Y3SA6000120G1009 | 25          | 60          | 0           | Y3SA6000125G1008 | Y3SA6000125G1009 |
| 0           | 60          | 10          | Y3SA600A000G1008 | Y3SA600A000G1009 | 20          | 60          | 10          | Y3SA600A120G1008 | Y3SA600A120G1009 | 25          | 60          | 10          | Y3SA600A125G1008 | Y3SA600A125G1009 |
| 0           | 60          | 23.5        | Y3SA600D000G1008 | Y3SA600D000G1009 | 20          | 60          | 23.5        | Y3SA600D120G1008 | Y3SA600D120G1009 | 25          | 60          | 23.5        | Y3SA600D125G1008 | Y3SA600D125G1009 |
| 0           | 77          | 0           | Y3SA7700000G1008 | Y3SA7700000G1009 | 20          | 77          | 0           | Y3SA7700120G1008 | Y3SA7700120G1009 | 25          | 77          | 0           | Y3SA7700125G1008 | Y3SA7700125G1009 |
| 0           | 77          | 10          | Y3SA770A000G1008 | Y3SA770A000G1009 | 20          | 77          | 10          | Y3SA770A120G1008 | Y3SA770A120G1009 | 25          | 77          | 10          | Y3SA770A125G1008 | Y3SA770A125G1009 |
| 0           | 77          | 23.5        | Y3SA770D000G1008 | Y3SA770D000G1009 | 20          | 77          | 23.5        | Y3SA770D120G1008 | Y3SA770D120G1009 | 25          | 77          | 23.5        | Y3SA770D125G1008 | Y3SA770D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

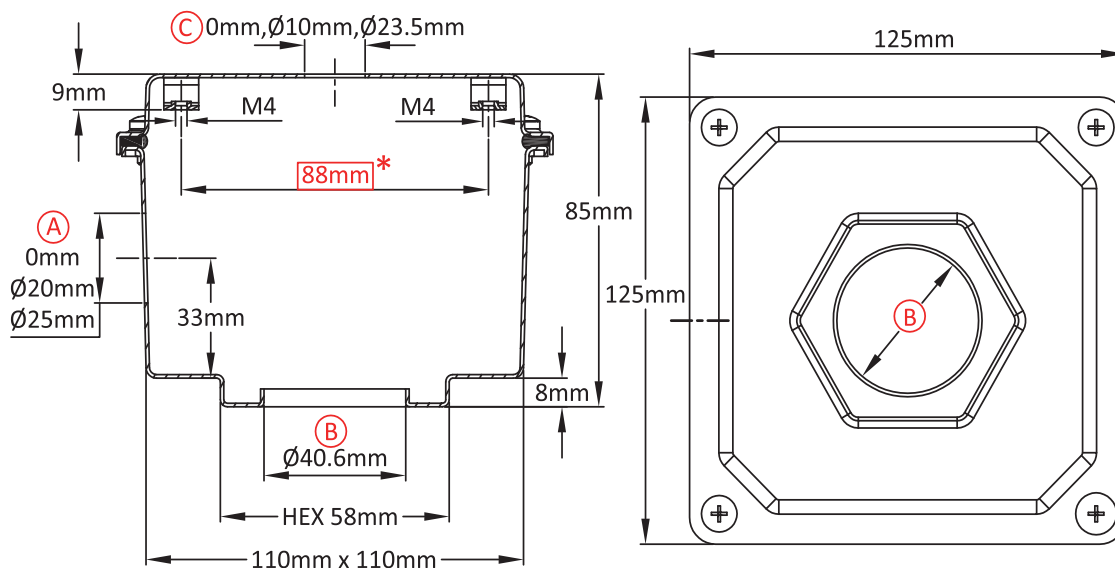
# Big immersion heater enclosure, with flat cover and stamped hexagon



| Size(mm)       | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|----------------|--------------------------|-----------------|------------------|-----|-------|
| 125 × 125 × 93 | 1000                     | stainless steel | IP69K            | IK7 | Y3SB  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| A(mm) | B(mm) | C(mm) | 304              | 316              |
|-------|-------|-------|------------------|------------------|
| 0     | 40.6  | 0     | Y3SB4060000G1008 | Y3SB4060000G1009 |
| 0     | 40.6  | 10    | Y3SB406A000G1008 | Y3SB406A000G1009 |
| 0     | 40.6  | 23.5  | Y3SB406D000G1008 | Y3SB406D000G1009 |
| 20    | 40.6  | 0     | Y3SB4060120G1008 | Y3SB4060120G1009 |
| 20    | 40.6  | 10    | Y3SB406A120G1008 | Y3SB406A120G1009 |
| 20    | 40.6  | 23.5  | Y3SB406D120G1008 | Y3SB406D120G1009 |
| 25    | 40.6  | 0     | Y3SB4060125G1008 | Y3SB4060125G1009 |
| 25    | 40.6  | 10    | Y3SB406A125G1008 | Y3SB406A125G1009 |
| 25    | 40.6  | 23.5  | Y3SB406D125G1008 | Y3SB406D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

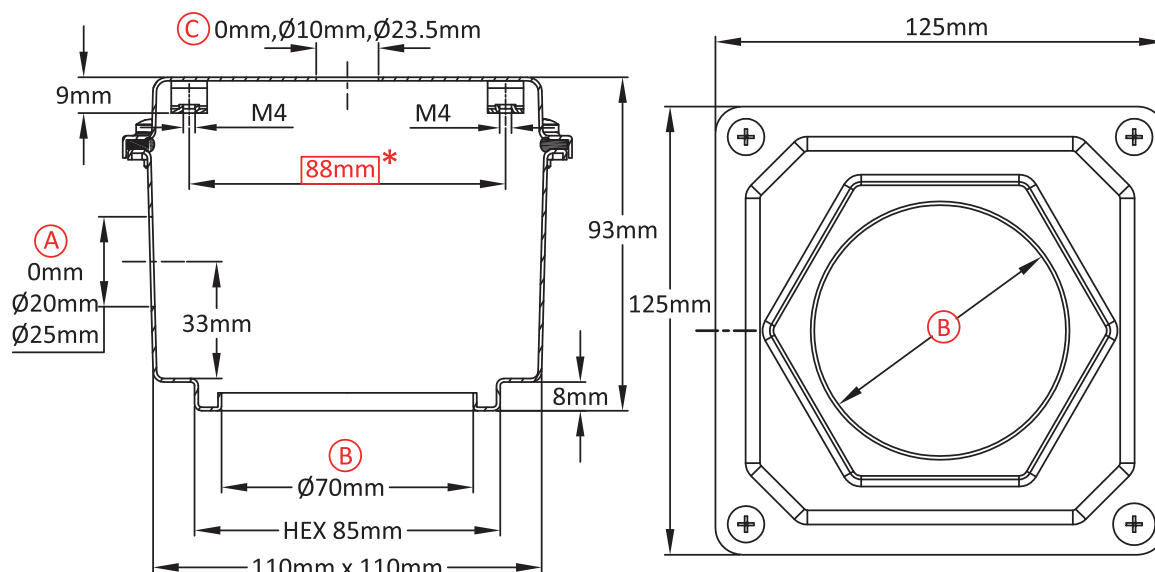
# Big immersion heater enclosure, with flat cover and stamped hexagon, for big immersion heaters



| Size(mm)       | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|----------------|--------------------------|-----------------|------------------|-----|-------|
| 125 × 125 × 85 | 1000                     | stainless steel | IP69K            | IK7 | Y3SC  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ(mm) | 304              | 316              |
|-------|-------|-------|------------------|------------------|
| 0     | 70    | 0     | Y3SC7000000G1008 | Y3SC7000000G1009 |
| 0     | 70    | 10    | Y3SC700A000G1008 | Y3SC700A000G1009 |
| 0     | 70    | 23.5  | Y3SC700D000G1008 | Y3SC700D000G1009 |
| 20    | 70    | 0     | Y3SC7000120G1008 | Y3SC7000120G1009 |
| 20    | 70    | 10    | Y3SC700A120G1008 | Y3SC700A120G1009 |
| 20    | 70    | 23.5  | Y3SC700D120G1008 | Y3SC700D120G1009 |
| 25    | 70    | 0     | Y3SC7000125G1008 | Y3SC7000125G1009 |
| 25    | 70    | 10    | Y3SC700A125G1008 | Y3SC700A125G1009 |
| 25    | 70    | 23.5  | Y3SC700D125G1008 | Y3SC700D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.



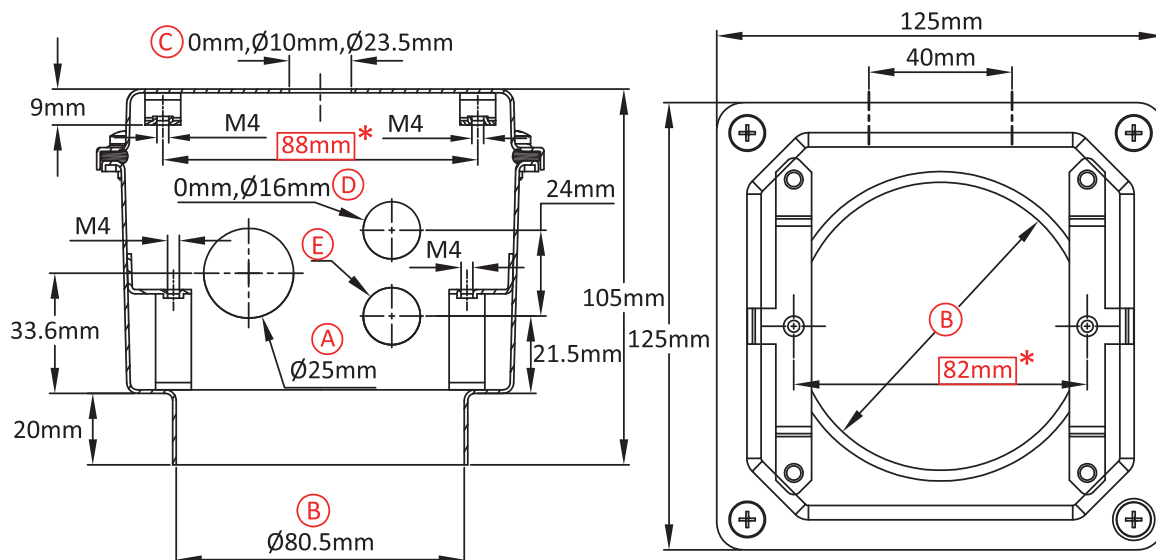


# Big enclosure, for immersion heaters or instruments, with flat cover, for welding on tubes

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>125 × 125 × 105</b> | <b>1138</b>              | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3TB</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ(mm) | Ⓓ(mm) | Ⓔ(mm) | 304              | 316              |
|-------|-------|-------|-------|-------|------------------|------------------|
| 25    | 80.5  | 0     | 16    | 16    | Y3TB80503S3G1008 | Y3TB80503S3G1009 |
| 25    | 80.5  | 10    | 16    | 16    | Y3TB805A3S3G1008 | Y3TB805A3S3G1009 |
| 25    | 80.5  | 23.5  | 16    | 16    | Y3TB805D3S3G1008 | Y3TB805D3S3G1009 |
| 25    | 80.5  | 0     | 0     | 16    | Y3TB80502C5G1008 | Y3TB80502C5G1009 |
| 25    | 80.5  | 10    | 0     | 16    | Y3TB805A2C5G1008 | Y3TB805A2C5G1009 |
| 25    | 80.5  | 23.5  | 0     | 16    | Y3TB805D2C5G1008 | Y3TB805D2C5G1009 |
| 25    | 80.5  | 0     | 0     | 0     | Y3TB8050125G1008 | Y3TB8050125G1009 |
| 25    | 80.5  | 10    | 0     | 0     | Y3TB805A125G1008 | Y3TB805A125G1009 |
| 25    | 80.5  | 23.5  | 0     | 0     | Y3TB805D125G1008 | Y3TB805D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

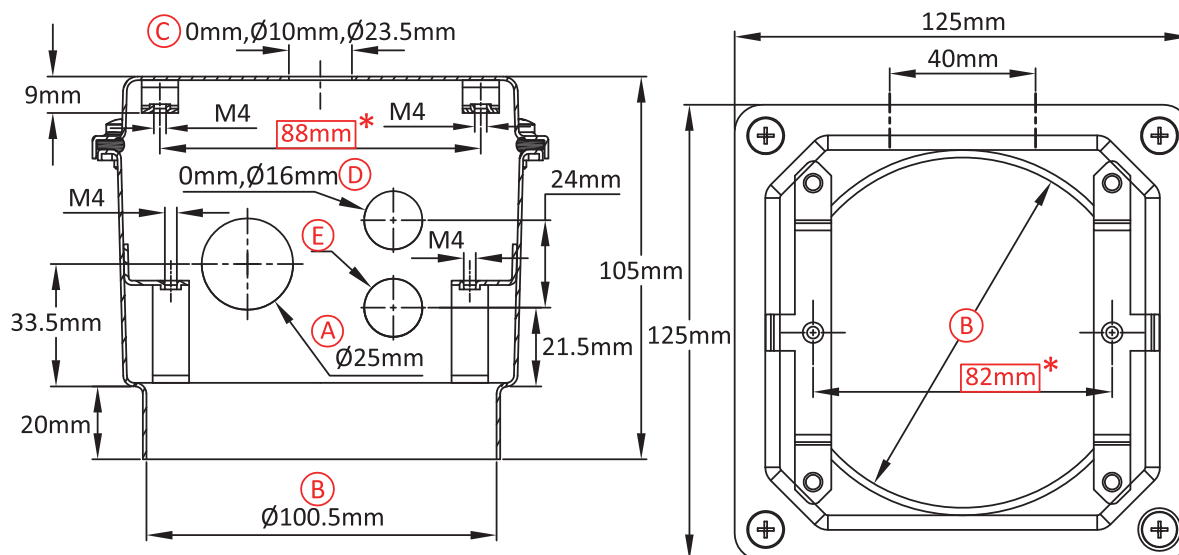


# Big enclosure, for immersion heaters or instruments, with flat cover for welding on tubes

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>125 × 125 × 105</b> | <b>1138</b>              | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3TC</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | (E)(mm) | 304              | 316              |
|---------|---------|---------|---------|---------|------------------|------------------|
| 25      | 100.5   | 0       | 16      | 16      | Y3TCA0503S3G1008 | Y3TCA0503S3G1009 |
| 25      | 100.5   | 10      | 16      | 16      | Y3TCA05A3S3G1008 | Y3TCA05A3S3G1009 |
| 25      | 100.5   | 23.5    | 16      | 16      | Y3TCA05D3S3G1008 | Y3TCA05D3S3G1009 |
| 25      | 100.5   | 0       | 0       | 16      | Y3TCA0502C5G1008 | Y3TCA0502C5G1009 |
| 25      | 100.5   | 10      | 0       | 16      | Y3TCA05A2C5G1008 | Y3TCA05A2C5G1009 |
| 25      | 100.5   | 23.5    | 0       | 16      | Y3TCA05D2C5G1008 | Y3TCA05D2C5G1009 |
| 25      | 100.5   | 0       | 0       | 0       | Y3TCA050125G1008 | Y3TCA050125G1009 |
| 25      | 100.5   | 10      | 0       | 0       | Y3TCA05A125G1008 | Y3TCA05A125G1009 |
| 25      | 100.5   | 23.5    | 0       | 0       | Y3TCA05D125G1008 | Y3TCA05D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

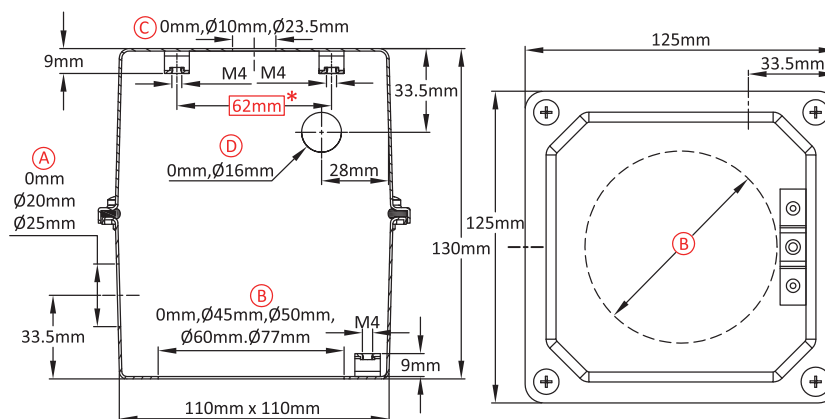
# Big size enclosure for immersion heater or temperature sensor



| Size(mm)        | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|-----------------|--------------------------|-----------------|------------------|-----|-------|
| 125 × 125 × 130 | 1505                     | stainless steel | IP69K            | IK7 | Y3S7  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (mm) | (mm) | (mm) | (mm) | 304              | 316              | (mm) | (mm) | (mm) | (mm) | 304              | 316              | (mm) | (mm) | (mm) | (mm) | 304              | 316              |
|------|------|------|------|------------------|------------------|------|------|------|------|------------------|------------------|------|------|------|------|------------------|------------------|
| 0    | 0    | 0    | 0    | Y3S70000000G1008 | Y3S70000000G1009 | 20   | 0    | 0    | 0    | Y3S70000120G1008 | Y3S70000120G1009 | 25   | 0    | 0    | 0    | Y3S70000125G1008 | Y3S70000125G1009 |
| 0    | 0    | 0    | 16   | Y3S70000116G1008 | Y3S70000116G1009 | 20   | 0    | 0    | 16   | Y3S700002C0G1008 | Y3S700002C0G1009 | 25   | 0    | 0    | 16   | Y3S700002C5G1008 | Y3S700002C5G1009 |
| 0    | 0    | 10   | 0    | Y3S7000A000G1008 | Y3S7000A000G1009 | 20   | 0    | 10   | 0    | Y3S7000A120G1008 | Y3S7000A120G1009 | 25   | 0    | 10   | 0    | Y3S7000A125G1008 | Y3S7000A125G1009 |
| 0    | 0    | 10   | 16   | Y3S7000A116G1008 | Y3S7000A116G1009 | 20   | 0    | 10   | 16   | Y3S7000A2C0G1008 | Y3S7000A2C0G1009 | 25   | 0    | 10   | 16   | Y3S7000A2C5G1008 | Y3S7000A2C5G1009 |
| 0    | 0    | 23.5 | 0    | Y3S7000D000G1008 | Y3S7000D000G1009 | 20   | 0    | 23.5 | 0    | Y3S7000D120G1008 | Y3S7000D120G1009 | 25   | 0    | 23.5 | 0    | Y3S7000D125G1008 | Y3S7000D125G1009 |
| 0    | 0    | 23.5 | 16   | Y3S7000D116G1008 | Y3S7000D116G1009 | 20   | 0    | 23.5 | 16   | Y3S7000D2C0G1008 | Y3S7000D2C0G1009 | 25   | 0    | 23.5 | 16   | Y3S7000D2C5G1008 | Y3S7000D2C5G1009 |
| 0    | 45   | 0    | 0    | Y3S74500000G1008 | Y3S74500000G1009 | 20   | 45   | 0    | 0    | Y3S74500120G1008 | Y3S74500120G1009 | 25   | 45   | 0    | 0    | Y3S74500125G1008 | Y3S74500125G1009 |
| 0    | 45   | 0    | 16   | Y3S74500116G1008 | Y3S74500116G1009 | 20   | 45   | 0    | 16   | Y3S745002C0G1008 | Y3S745002C0G1009 | 25   | 45   | 0    | 16   | Y3S745002C5G1008 | Y3S745002C5G1009 |
| 0    | 45   | 10   | 0    | Y3S7450A000G1008 | Y3S7450A000G1009 | 20   | 45   | 10   | 0    | Y3S7450A120G1008 | Y3S7450A120G1009 | 25   | 45   | 10   | 0    | Y3S7450A125G1008 | Y3S7450A125G1009 |
| 0    | 45   | 10   | 16   | Y3S7450A116G1008 | Y3S7450A116G1009 | 20   | 45   | 10   | 16   | Y3S7450A2C0G1008 | Y3S7450A2C0G1009 | 25   | 45   | 10   | 16   | Y3S7450A2C5G1008 | Y3S7450A2C5G1009 |
| 0    | 45   | 23.5 | 0    | Y3S7450D000G1008 | Y3S7450D000G1009 | 20   | 45   | 23.5 | 0    | Y3S7450D120G1008 | Y3S7450D120G1009 | 25   | 45   | 23.5 | 0    | Y3S7450D125G1008 | Y3S7450D125G1009 |
| 0    | 45   | 23.5 | 16   | Y3S7450D116G1008 | Y3S7450D116G1009 | 20   | 45   | 23.5 | 16   | Y3S7450D2C0G1008 | Y3S7450D2C0G1009 | 25   | 45   | 23.5 | 16   | Y3S7450D2C5G1008 | Y3S7450D2C5G1009 |
| 0    | 50   | 0    | 0    | Y3S75000000G1008 | Y3S75000000G1009 | 20   | 50   | 0    | 0    | Y3S75000120G1008 | Y3S75000120G1009 | 25   | 50   | 0    | 0    | Y3S75000125G1008 | Y3S75000125G1009 |
| 0    | 50   | 0    | 16   | Y3S75000116G1008 | Y3S75000116G1009 | 20   | 50   | 0    | 16   | Y3S750002C0G1008 | Y3S750002C0G1009 | 25   | 50   | 0    | 16   | Y3S750002C5G1008 | Y3S750002C5G1009 |
| 0    | 50   | 10   | 0    | Y3S7500A000G1008 | Y3S7500A000G1009 | 20   | 50   | 10   | 0    | Y3S7500A120G1008 | Y3S7500A120G1009 | 25   | 50   | 10   | 0    | Y3S7500A125G1008 | Y3S7500A125G1009 |
| 0    | 50   | 10   | 16   | Y3S7500A116G1008 | Y3S7500A116G1009 | 20   | 50   | 10   | 16   | Y3S7500A2C0G1008 | Y3S7500A2C0G1009 | 25   | 50   | 10   | 16   | Y3S7500A2C5G1008 | Y3S7500A2C5G1009 |
| 0    | 50   | 23.5 | 0    | Y3S7500D000G1008 | Y3S7500D000G1009 | 20   | 50   | 23.5 | 0    | Y3S7500D120G1008 | Y3S7500D120G1009 | 25   | 50   | 23.5 | 0    | Y3S7500D125G1008 | Y3S7500D125G1009 |
| 0    | 50   | 23.5 | 16   | Y3S7500D116G1008 | Y3S7500D116G1009 | 20   | 50   | 23.5 | 16   | Y3S7500D2C0G1008 | Y3S7500D2C0G1009 | 25   | 50   | 23.5 | 16   | Y3S7500D2C5G1008 | Y3S7500D2C5G1009 |
| 0    | 60   | 0    | 0    | Y3S76000000G1008 | Y3S76000000G1009 | 20   | 60   | 0    | 0    | Y3S76000120G1008 | Y3S76000120G1009 | 25   | 60   | 0    | 0    | Y3S76000125G1008 | Y3S76000125G1009 |
| 0    | 60   | 0    | 16   | Y3S76000116G1008 | Y3S76000116G1009 | 20   | 60   | 0    | 16   | Y3S760002C0G1008 | Y3S760002C0G1009 | 25   | 60   | 0    | 16   | Y3S760002C5G1008 | Y3S760002C5G1009 |
| 0    | 60   | 10   | 0    | Y3S7600A000G1008 | Y3S7600A000G1009 | 20   | 60   | 10   | 0    | Y3S7600A120G1008 | Y3S7600A120G1009 | 25   | 60   | 10   | 0    | Y3S7600A125G1008 | Y3S7600A125G1009 |
| 0    | 60   | 10   | 16   | Y3S7600A116G1008 | Y3S7600A116G1009 | 20   | 60   | 10   | 16   | Y3S7600A2C0G1008 | Y3S7600A2C0G1009 | 25   | 60   | 10   | 16   | Y3S7600A2C5G1008 | Y3S7600A2C5G1009 |
| 0    | 60   | 23.5 | 0    | Y3S7600D000G1008 | Y3S7600D000G1009 | 20   | 60   | 23.5 | 0    | Y3S7600D120G1008 | Y3S7600D120G1009 | 25   | 60   | 23.5 | 0    | Y3S7600D125G1008 | Y3S7600D125G1009 |
| 0    | 60   | 23.5 | 16   | Y3S7600D116G1008 | Y3S7600D116G1009 | 20   | 60   | 23.5 | 16   | Y3S7600D2C0G1008 | Y3S7600D2C0G1009 | 25   | 60   | 23.5 | 16   | Y3S7600D2C5G1008 | Y3S7600D2C5G1009 |
| 0    | 77   | 0    | 0    | Y3S77700000G1008 | Y3S77700000G1009 | 20   | 77   | 0    | 0    | Y3S77700120G1008 | Y3S77700120G1009 | 25   | 77   | 0    | 0    | Y3S77700125G1008 | Y3S77700125G1009 |
| 0    | 77   | 0    | 16   | Y3S77700116G1008 | Y3S77700116G1009 | 20   | 77   | 0    | 16   | Y3S777002C0G1008 | Y3S777002C0G1009 | 25   | 77   | 0    | 16   | Y3S777002C5G1008 | Y3S777002C5G1009 |
| 0    | 77   | 10   | 0    | Y3S7770A000G1008 | Y3S7770A000G1009 | 20   | 77   | 10   | 0    | Y3S7770A120G1008 | Y3S7770A120G1009 | 25   | 77   | 10   | 0    | Y3S7770A125G1008 | Y3S7770A125G1009 |
| 0    | 77   | 10   | 16   | Y3S7770A116G1008 | Y3S7770A116G1009 | 20   | 77   | 10   | 16   | Y3S7770A2C0G1008 | Y3S7770A2C0G1009 | 25   | 77   | 10   | 16   | Y3S7770A2C5G1008 | Y3S7770A2C5G1009 |
| 0    | 77   | 23.5 | 0    | Y3S7770D000G1008 | Y3S7770D000G1009 | 20   | 77   | 23.5 | 0    | Y3S7770D120G1008 | Y3S7770D120G1009 | 25   | 77   | 23.5 | 0    | Y3S7770D125G1008 | Y3S7770D125G1009 |
| 0    | 77   | 23.5 | 16   | Y3S7770D116G1008 | Y3S7770D116G1009 | 20   | 77   | 23.5 | 16   | Y3S7770D2C0G1008 | Y3S7770D2C0G1009 | 25   | 77   | 23.5 | 16   | Y3S7770D2C5G1008 | Y3S7770D2C5G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Big size enclosure for immersion heater with built-in hexagon

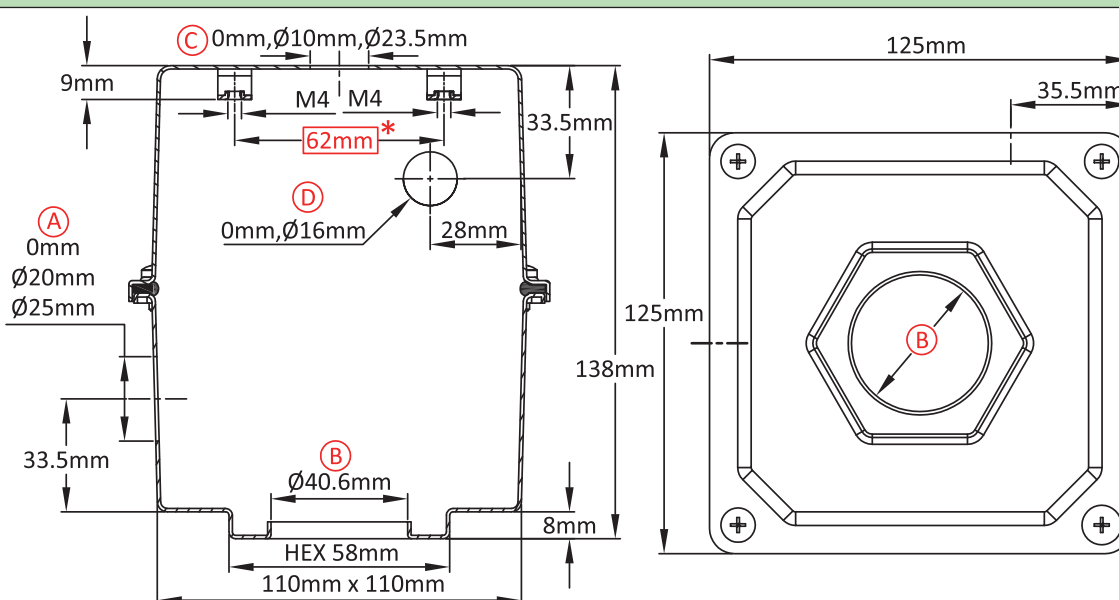


Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>125 × 125 × 138</b> | <b>1525</b>              | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3S8</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | 304              | 316              | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | 304              | 316              |
|-------------|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 40.6        | 0           | 0           | Y3S84060000G1008 | Y3S84060000G1009 | 20          | 40.6        | 10          | 16          | Y3S8406A2C0G1008 | Y3S8406A2C0G1009 |
| 0           | 40.6        | 0           | 16          | Y3S84060116G1008 | Y3S84060116G1009 | 20          | 40.6        | 23.5        | 0           | Y3S8406D120G1008 | Y3S8406D120G1009 |
| 0           | 40.6        | 10          | 0           | Y3S8406A000G1008 | Y3S8406A000G1009 | 20          | 40.6        | 23.5        | 16          | Y3S8406D2C0G1008 | Y3S8406D2C0G1009 |
| 0           | 40.6        | 10          | 16          | Y3S8406A116G1008 | Y3S8406A116G1009 | 25          | 40.6        | 0           | 0           | Y3S84060125G1008 | Y3S84060125G1009 |
| 0           | 40.6        | 23.5        | 0           | Y3S8406D000G1008 | Y3S8406D000G1009 | 25          | 40.6        | 0           | 16          | Y3S840602C5G1008 | Y3S840602C5G1009 |
| 0           | 40.6        | 23.5        | 16          | Y3S8406D116G1008 | Y3S8406D116G1009 | 25          | 40.6        | 10          | 0           | Y3S8406A125G1008 | Y3S8406A125G1009 |
| 20          | 40.6        | 0           | 0           | Y3S84060120G1008 | Y3S84060120G1009 | 25          | 40.6        | 10          | 16          | Y3S8406A2C5G1008 | Y3S8406A2C5G1009 |
| 20          | 40.6        | 0           | 16          | Y3S840602C0G1008 | Y3S840602C0G1009 | 25          | 40.6        | 23.5        | 0           | Y3S8406D125G1008 | Y3S8406D125G1009 |
| 20          | 40.6        | 10          | 0           | Y3S8406A120G1008 | Y3S8406A120G1009 | 25          | 40.6        | 23.5        | 16          | Y3S8406D2C5G1008 | Y3S8406D2C5G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

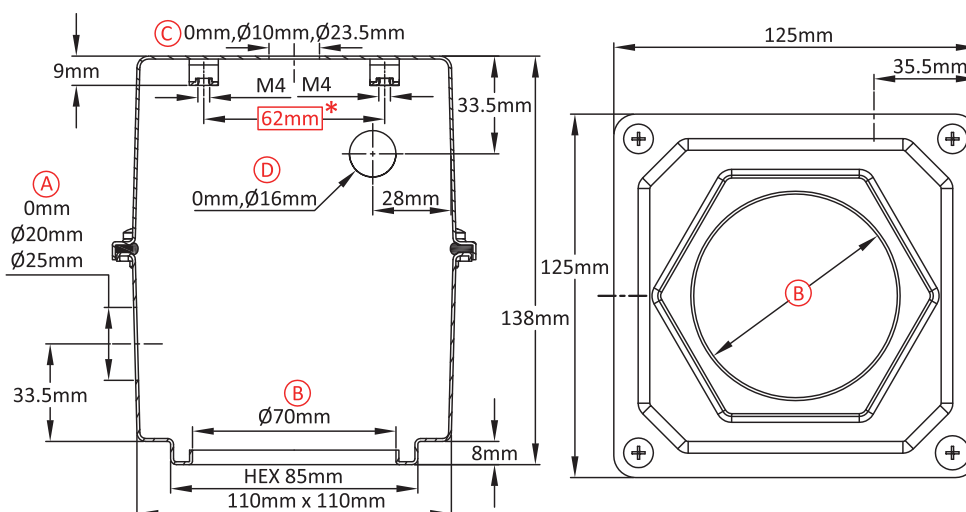




| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>125 × 125 × 138</b> | <b>1551</b>              | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3S9</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | 304              | 316              | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | 304              | 316              |
|-----------|-----------|-----------|-----------|------------------|------------------|-----------|-----------|-----------|-----------|------------------|------------------|
| 0         | 70        | 0         | 0         | Y3S97000000G1008 | Y3S97000000G1009 | 20        | 70        | 10        | 16        | Y3S9700A2C0G1008 | Y3S9700A2C0G1009 |
| 0         | 70        | 0         | 16        | Y3S97000116G1008 | Y3S97000116G1009 | 20        | 70        | 23.5      | 0         | Y3S9700D120G1008 | Y3S9700D120G1009 |
| 0         | 70        | 10        | 0         | Y3S9700A000G1008 | Y3S9700A000G1009 | 20        | 70        | 23.5      | 16        | Y3S9700D2C0G1008 | Y3S9700D2C0G1009 |
| 0         | 70        | 10        | 16        | Y3S9700A116G1008 | Y3S9700A116G1009 | 25        | 70        | 0         | 0         | Y3S97000125G1008 | Y3S97000125G1009 |
| 0         | 70        | 23.5      | 0         | Y3S9700D000G1008 | Y3S9700D000G1009 | 25        | 70        | 0         | 16        | Y3S970002C5G1008 | Y3S970002C5G1009 |
| 0         | 70        | 23.5      | 16        | Y3S9700D116G1008 | Y3S9700D116G1009 | 25        | 70        | 10        | 0         | Y3S9700A125G1008 | Y3S9700A125G1009 |
| 20        | 70        | 0         | 0         | Y3S97000120G1008 | Y3S97000120G1009 | 25        | 70        | 10        | 16        | Y3S9700A2C5G1008 | Y3S9700A2C5G1009 |
| 20        | 70        | 0         | 16        | Y3S970002C0G1008 | Y3S970002C0G1009 | 25        | 70        | 23.5      | 0         | Y3S9700D125G1008 | Y3S9700D125G1009 |
| 20        | 70        | 10        | 0         | Y3S9700A120G1008 | Y3S9700A120G1009 | 25        | 70        | 23.5      | 16        | Y3S9700D2C5G1008 | Y3S9700D2C5G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

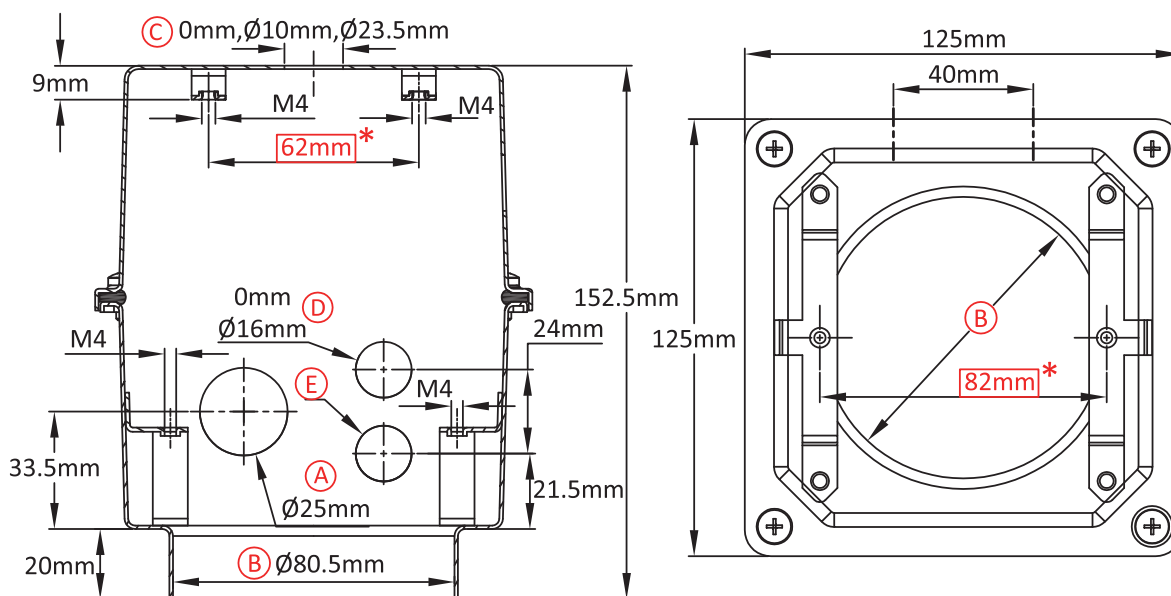
# Big size immersion heater or controls enclosure, for direct welding on pipes



| Size(mm)               | Volume(cm <sup>3</sup> ) | Material               | Protection grade |            | Model       |
|------------------------|--------------------------|------------------------|------------------|------------|-------------|
| <b>125 × 125 × 135</b> | <b>1668</b>              | <b>stainless steel</b> | <b>IP69K</b>     | <b>IK7</b> | <b>Y3T8</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | (E)(mm) | 304              | 316              |
|---------|---------|---------|---------|---------|------------------|------------------|
| 25      | 80.5    | 0       | 16      | 16      | Y3T880503S3G1008 | Y3T880503S3G1009 |
| 25      | 80.5    | 0       | 0       | 16      | Y3T880502C5G1008 | Y3T880502C5G1009 |
| 25      | 80.5    | 0       | 0       | 0       | Y3T88050125G1008 | Y3T88050125G1009 |
| 25      | 80.5    | 10      | 16      | 16      | Y3T8805A3S3G1008 | Y3T8805A3S3G1009 |
| 25      | 80.5    | 10      | 0       | 16      | Y3T8805A2C5G1008 | Y3T8805A2C5G1009 |
| 25      | 80.5    | 10      | 0       | 0       | Y3T8805A125G1008 | Y3T8805A125G1009 |
| 25      | 80.5    | 23.5    | 16      | 16      | Y3T8805D3S3G1008 | Y3T8805D3S3G1009 |
| 25      | 80.5    | 23.5    | 0       | 16      | Y3T8805D2C5G1008 | Y3T8805D2C5G1009 |
| 25      | 80.5    | 23.5    | 0       | 0       | Y3T8805D125G1008 | Y3T8805D125G1009 |

Cable gland not included in these reference, consult us if you want them.

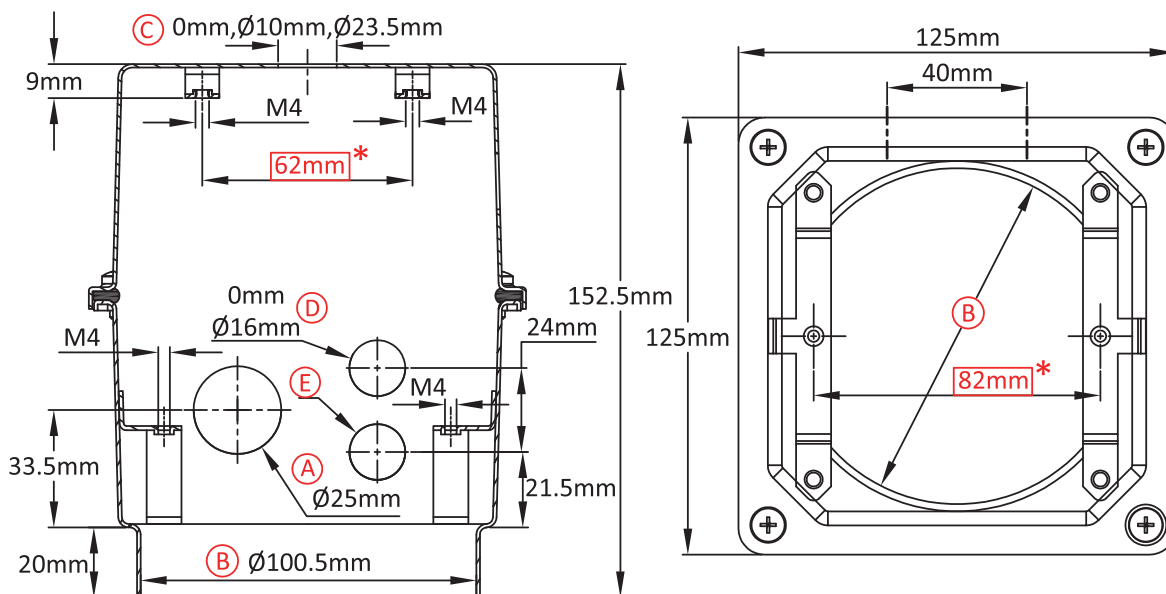
Red dimensions inside rectangular frames are used for accessories assembly.



| Size(mm)        | Volume(cm <sup>3</sup> ) | Material        | Protection grade |     | Model |
|-----------------|--------------------------|-----------------|------------------|-----|-------|
| 125 × 125 × 135 | 1668                     | stainless steel | IP69K            | IK7 | Y3TA  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | (E)(mm) | 304              | 316              |
|---------|---------|---------|---------|---------|------------------|------------------|
| 25      | 100.5   | 0       | 16      | 16      | Y3TAA0503S3G1008 | Y3TAA0503S3G1009 |
| 25      | 100.5   | 10      | 16      | 16      | Y3TAA05A3S3G1008 | Y3TAA05A3S3G1009 |
| 25      | 100.5   | 23.5    | 16      | 16      | Y3TAA05D3S3G1008 | Y3TAA05D3S3G1009 |
| 25      | 100.5   | 0       | 0       | 16      | Y3TAA0502C5G1008 | Y3TAA0502C5G1009 |
| 25      | 100.5   | 10      | 0       | 16      | Y3TAA05A2C5G1008 | Y3TAA05A2C5G1009 |
| 25      | 100.5   | 23.5    | 0       | 16      | Y3TAA05D2C5G1008 | Y3TAA05D2C5G1009 |
| 25      | 100.5   | 0       | 0       | 0       | Y3TAA050125G1008 | Y3TAA050125G1009 |
| 25      | 100.5   | 10      | 0       | 0       | Y3TAA05A125G1008 | Y3TAA05A125G1009 |
| 25      | 100.5   | 23.5    | 0       | 0       | Y3TAA05D125G1008 | Y3TAA05D125G1009 |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.



# Plastic enclosures

**The references given in these documents are the most common. The dotted areas in the plans indicate the options.**

Unless otherwise specified, these enclosures are in fiberglass reinforced PA 6.6 and transparent covers are in polycarbonate.

**Red dimensions inside rectangular frames on drawings are used for accessories assembly.**

For more information consult our technical service.





Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

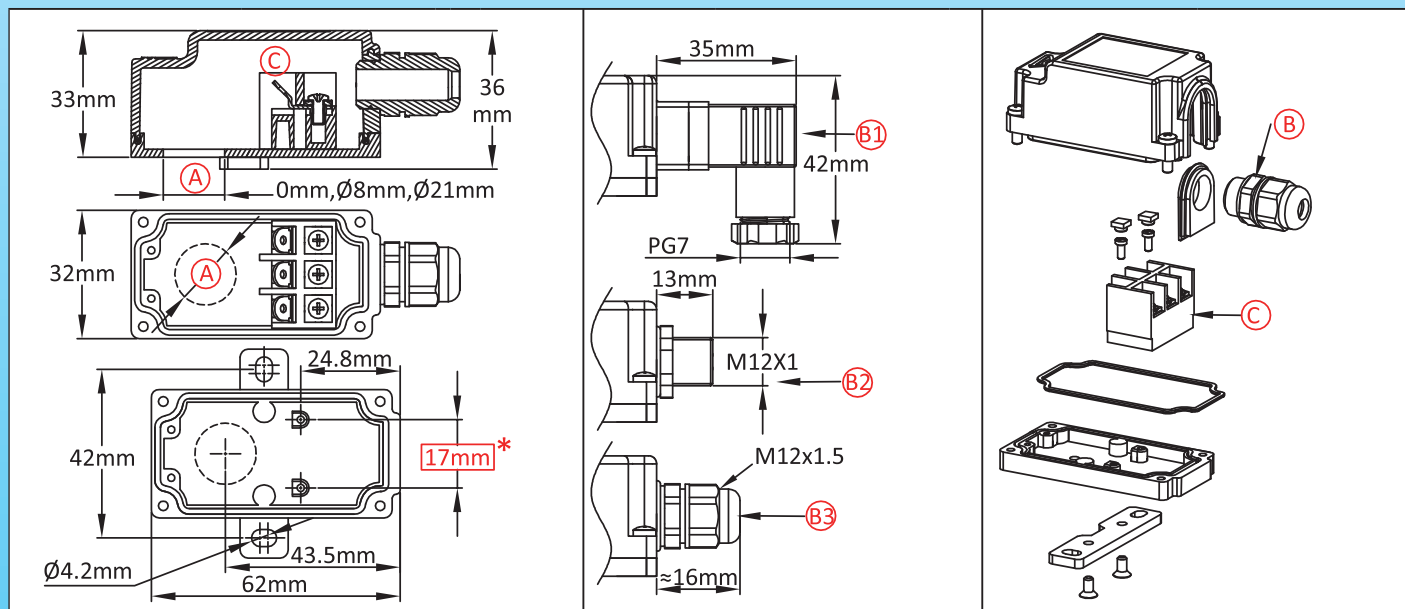


# Sub-miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater, Removable wall mounting bracket

| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model |
|--------------|--------------------------|----------|------------------|-----|-------|
| 61 x 33 x 30 | 52                       | PA66     | IPX4             | IK8 | Y3A1  |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☒ Level sensor
- ☐ Electronic board



## Main references

| (A) (mm) | (B1) | (B2) | (B3) | With connection block (C) | Without connection block (C) |
|----------|------|------|------|---------------------------|------------------------------|
| 0        | ✓    | ×    | ×    | Y3A100001E1F100T          | Y3A100001E10000T             |
| 0        | ×    | ✓    | ×    | Y3A100001E3F100T          | Y3A100001E30000T             |
| 0        | ×    | ×    | ✓    | Y3A100001E2F100T          | Y3A100001E20000T             |
| 8        | ✓    | ×    | ×    | Y3A108001E1F100T          | Y3A108001E10000T             |
| 8        | ×    | ✓    | ×    | Y3A108001E3F100T          | Y3A108001E30000T             |
| 8        | ×    | ×    | ✓    | Y3A108001E2F100T          | Y3A108001E20000T             |
| 21       | ✓    | ×    | ×    | Y3A121001E1F100T          | Y3A121001E10000T             |
| 21       | ×    | ✓    | ×    | Y3A121001E3F100T          | Y3A121001E30000T             |
| 21       | ×    | ×    | ✓    | Y3A121001E2F100T          | Y3A121001E20000T             |

Others drilling diameters on request.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

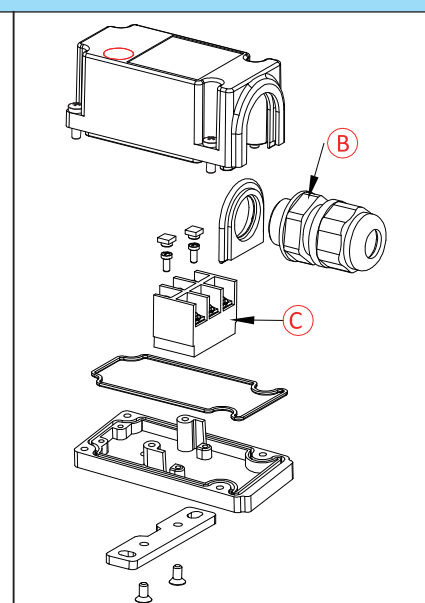
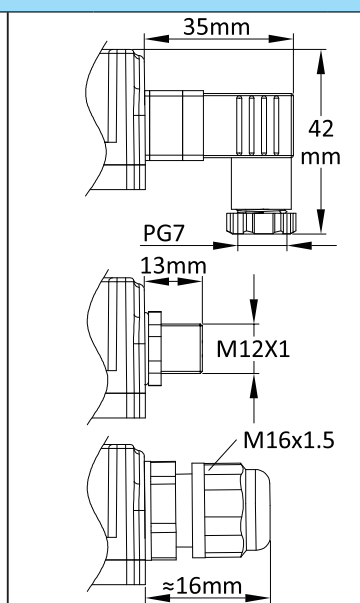
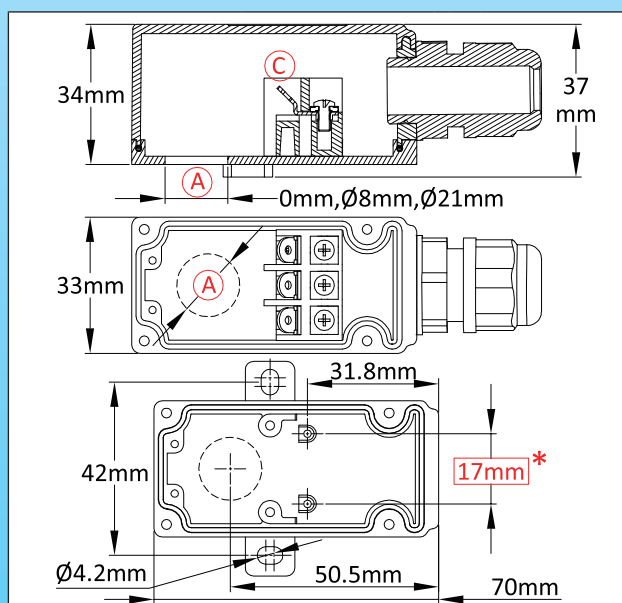
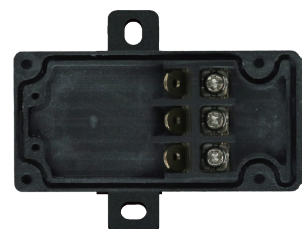
# Sub-miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater, Removable wall mounting bracket



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model |
|--------------|--------------------------|----------|------------------|-----|-------|
| 70 x 33 x 33 | 72                       | PA66     | IPX4             | IK8 | Y3A2  |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☒ Level sensor
- ☒ Electronic board



## Main references

| (A) (mm) | (B1) | (B2) | (B3) | With connection block (C) | Without connection block (C) |
|----------|------|------|------|---------------------------|------------------------------|
| 0        | ✓    | ×    | ×    | Y3A200001E1F100T          | Y3A200001E10000T             |
| 0        | ×    | ✓    | ×    | Y3A200001E3F100T          | Y3A200001E30000T             |
| 0        | ×    | ×    | ✓    | Y3A200001E6F100T          | Y3A200001E60000T             |
| 8        | ✓    | ×    | ×    | Y3A208001E1F100T          | Y3A208001E10000T             |
| 8        | ×    | ✓    | ×    | Y3A208001E3F100T          | Y3A208001E30000T             |
| 8        | ×    | ×    | ✓    | Y3A208001E6F100T          | Y3A208001E60000T             |
| 21       | ✓    | ×    | ×    | Y3A221001E1F100T          | Y3A221001E10000T             |
| 21       | ×    | ✓    | ×    | Y3A221001E3F100T          | Y3A221001E30000T             |
| 21       | ×    | ×    | ✓    | Y3A221001E6F100T          | Y3A221001E60000T             |

Others drilling diameters on request.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

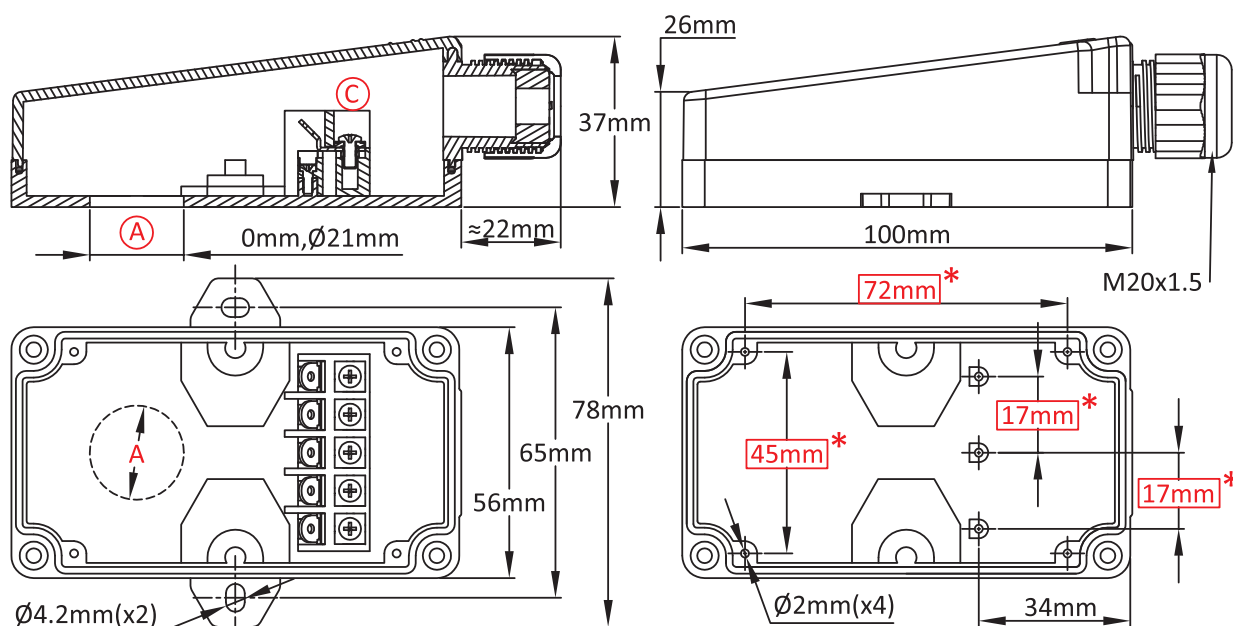
# Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model |
|---------------|--------------------------|----------|------------------|------|-------|
| 100 x 56 x 37 | 208                      | PA66     | IP69K            | IK10 | Y3A3  |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☒ Level sensor
- ☒ Electronic board



## Main references

| (A) (mm) | With connection block (C) | Without connection block (C) |
|----------|---------------------------|------------------------------|
| 0        | Y3A300001E0F100T          | Y3A300001E00000T             |
| 8        | Y3A308001E0F100T          | Y3A308001E00000T             |
| 21       | Y3A321001E0F100T          | Y3A321001E00000T             |

Others drilling diameters on request.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

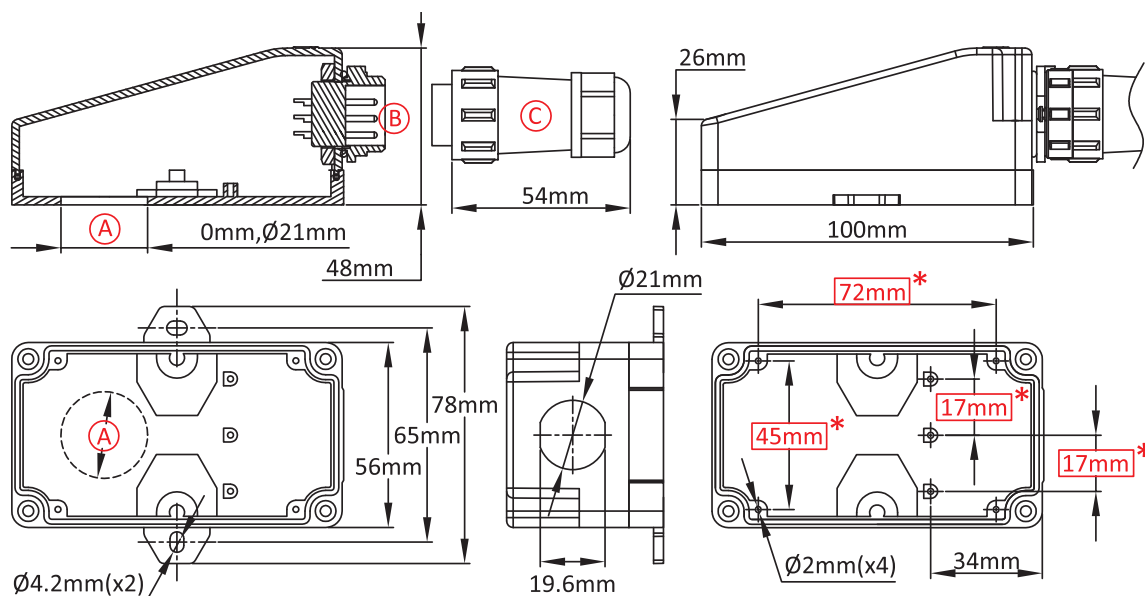
# Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model       |
|---------------|--------------------------|----------|------------------|------|-------------|
| 100 x 56 x 48 | 216                      | PA66     | IP69K            | IK10 | <b>Y3A4</b> |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☒ Level sensor
- ☒ Electronic board



## Main references

| (A)(mm) | (B) | (C) | Without connection block |
|---------|-----|-----|--------------------------|
| 0       | x   | x   | Y3A400001210000T         |
| 0       | ✓   | x   | Y3A400001E80000T         |
| 0       | ✓   | ✓   | Y3A400001E90000T         |
| 8       | x   | x   | Y3A408001210000T         |
| 8       | ✓   | x   | Y3A408001E80000T         |
| 8       | ✓   | ✓   | Y3A408001E90000T         |
| 21      | x   | x   | Y3A421001210000T         |
| 21      | ✓   | x   | Y3A421001E80000T         |
| 21      | ✓   | ✓   | Y3A421001E90000T         |

Others drilling diameters on request.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

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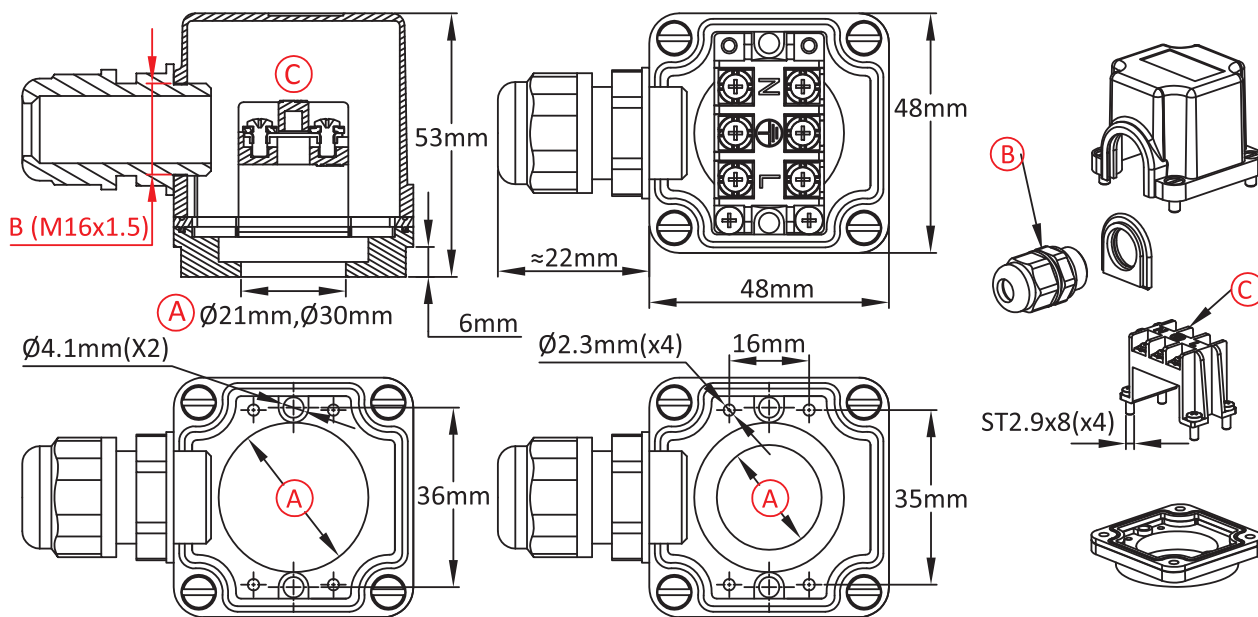
# Miniature enclosure for temperature sensor, level sensor, electronic printed circuit or cartridge heater



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model |
|--------------|--------------------------|----------|------------------|-----|-------|
| 48 x 48 x 41 | 93                       | PA66     | IPX5             | IK8 | Y301  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| (A)(mm) | With connection block (C) | Without connection block (C) |
|---------|---------------------------|------------------------------|
| 21      | Y30121001E6H100T          | Y30121001E60000T             |
| 30      | Y30130001E6H100T          | Y30130001E60000T             |

Cable gland not included in these reference, consult us if you want them.

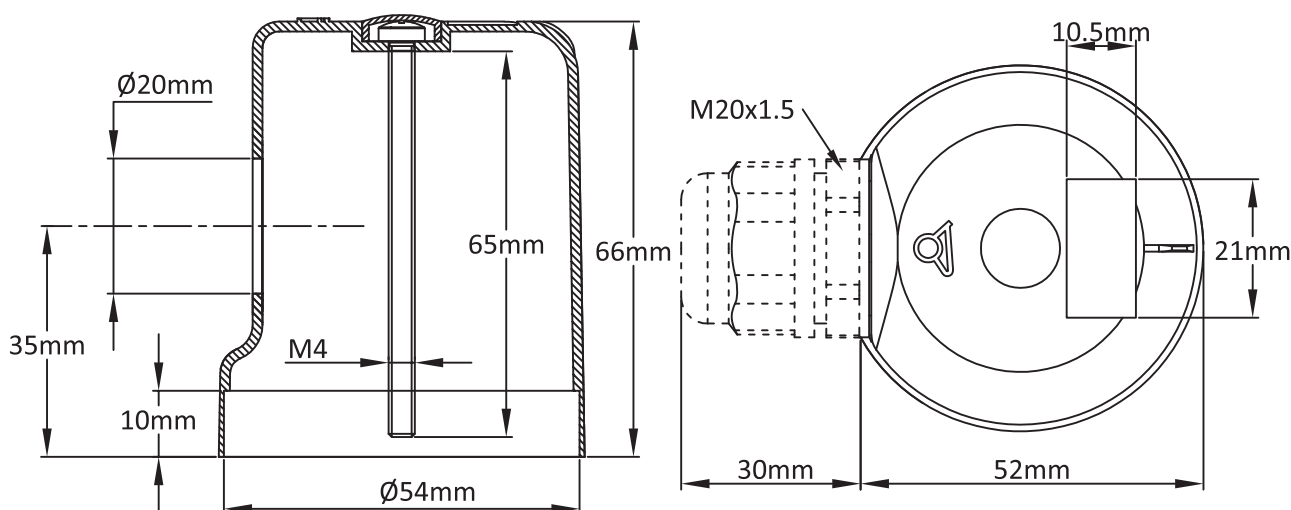
Red dimensions inside rectangular frames on drawings are used for accessories assembly.



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model       |
|--------------|--------------------------|----------|------------------|-----|-------------|
| Dia. 54 x 66 | 160                      | PA66     | IP69K            | IK8 | <b>Y302</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

Y30200011200000T

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

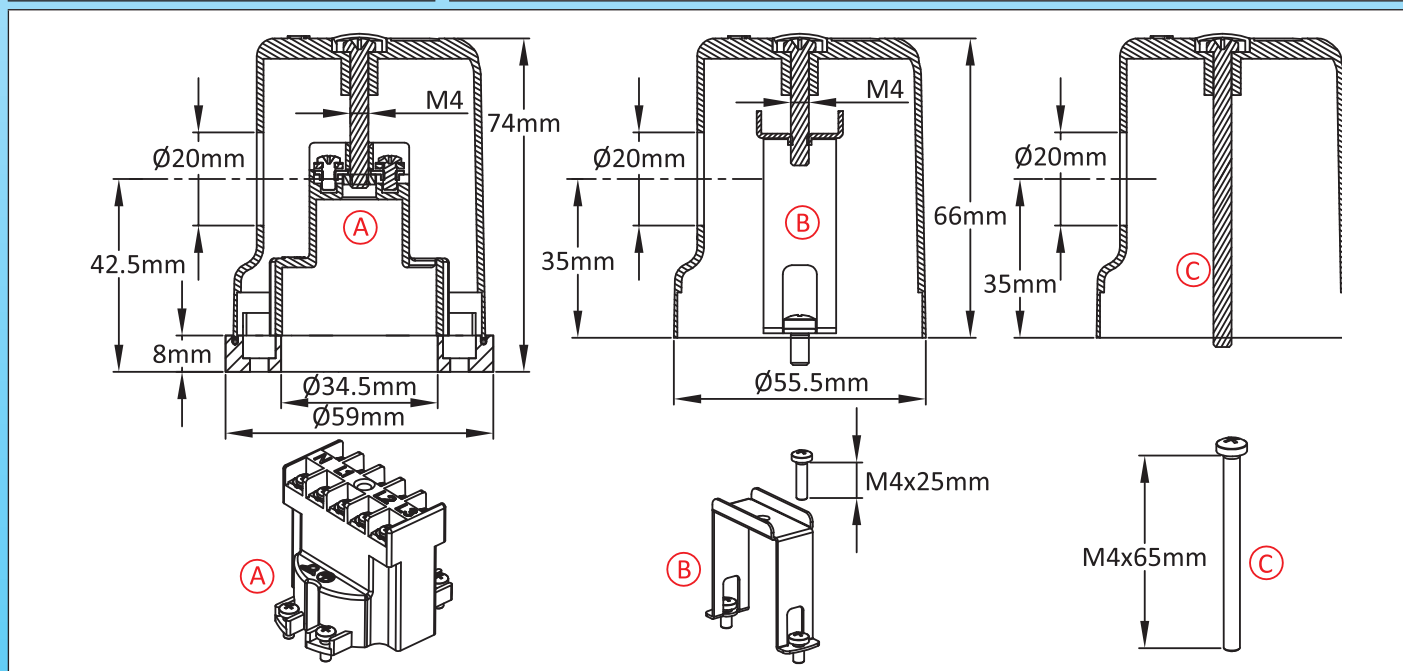
# Immersion heater enclosure for standard fittings with three M4 mounting screws at 120 °



| Size(mm)            | Volume(cm <sup>3</sup> ) | Material    | Protection grade |            | Model       |
|---------------------|--------------------------|-------------|------------------|------------|-------------|
| <b>Dia. 54 x 74</b> | <b>180</b>               | <b>PA66</b> | <b>IP69K</b>     | <b>IK8</b> | <b>Y3C1</b> |

## Suitable for

- ☐ Temperature sensor
- ☐ Immersion heater
- ☒ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ | Ⓑ | Ⓒ | References       |
|---|---|---|------------------|
| ✓ | × | × | Y3C10001120H200T |
| × | ✓ | × | Y3C10001120E100T |
| × | × | ✓ | Y3C100011200100T |

Cable gland not included in these reference, consult us if you want them.

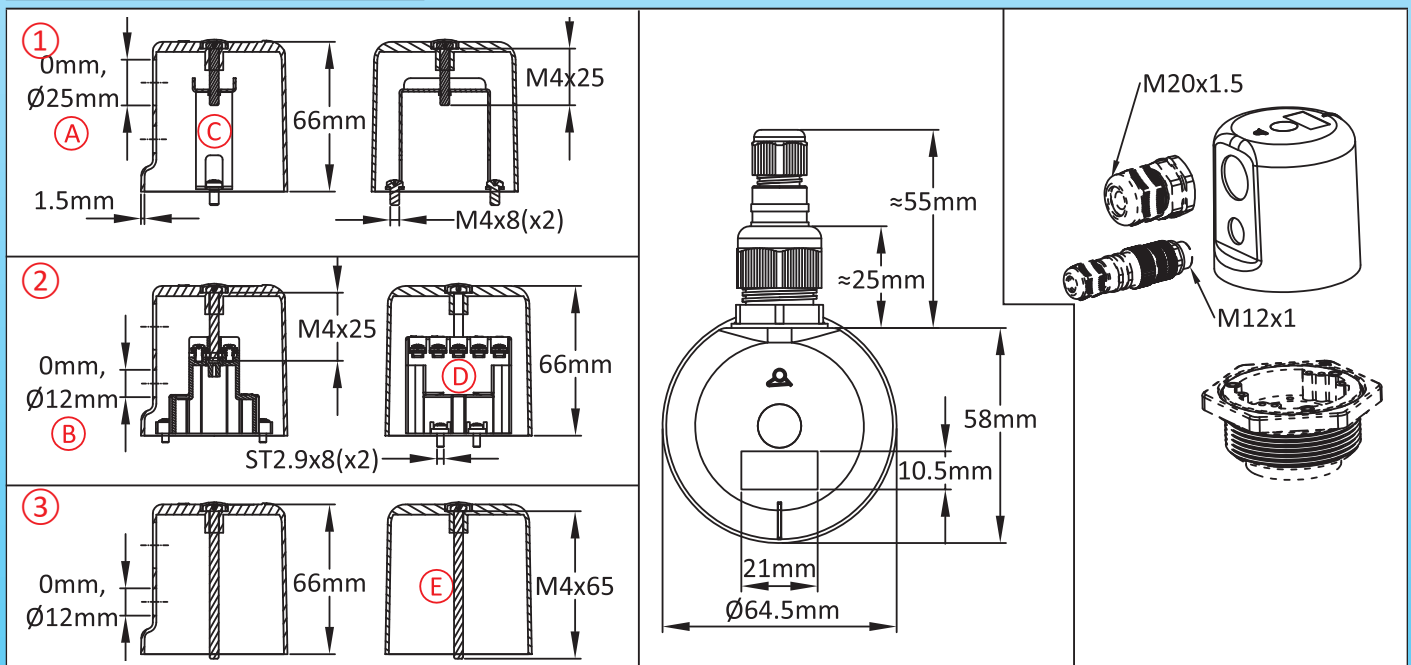
Red dimensions inside rectangular frames on drawings are used for accessories assembly.

# Miniature Enclosure for 2" fittings



| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model       |
|--------------|--------------------------|----------|------------------|-----|-------------|
| Dia. 65 x 66 | 200                      | PA66     | IP69K            | IK8 | <b>Y3C2</b> |

| Suitable for                                                                                                                                                                                                                                                               | ① | ② | ③ |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|
| <input type="checkbox"/> Temperature sensor<br><input checked="" type="checkbox"/> Immersion heater<br><input type="checkbox"/> Finned heater<br><input type="checkbox"/> Thermostat<br><input type="checkbox"/> Level sensor<br><input type="checkbox"/> Electronic board |   |   |   |



## Main references

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ<br>(With saddle) | Ⓓ<br>(With connection block) | Ⓔ<br>(With center screw) | References       |
|-------|-------|--------------------|------------------------------|--------------------------|------------------|
| 0     | 0     | ✓                  | ×                            | ×                        | Y3C20001000E100T |
| 0     | 0     | ×                  | ✓                            | ×                        | Y3C20001000H200T |
| 0     | 0     | ×                  | ×                            | ✓                        | Y3C200010000100T |
| 0     | 12    | ✓                  | ×                            | ×                        | Y3C20001112E100T |
| 0     | 12    | ×                  | ✓                            | ×                        | Y3C20001112H200T |
| 0     | 12    | ×                  | ×                            | ✓                        | Y3C200011120100T |
| 25    | 0     | ✓                  | ×                            | ×                        | Y3C20001125E100T |
| 25    | 0     | ×                  | ✓                            | ×                        | Y3C20001125H200T |
| 25    | 0     | ×                  | ×                            | ✓                        | Y3C200011250100T |
| 25    | 12    | ✓                  | ×                            | ×                        | Y3C200012A0E100T |
| 25    | 12    | ×                  | ✓                            | ×                        | Y3C200012A0H200T |
| 25    | 12    | ×                  | ×                            | ✓                        | Y3C200012A00100T |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

# Simplified round enclosure for 2½" and M77x2 fittings

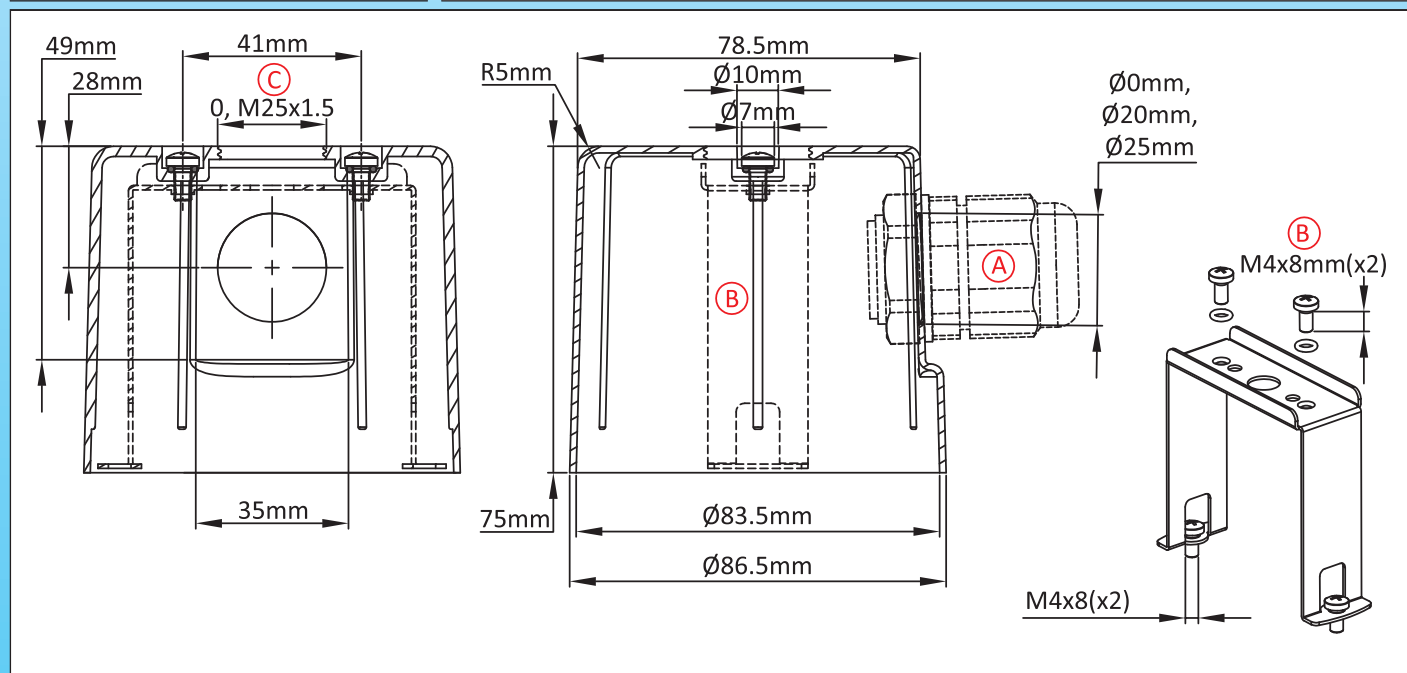


Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Size(mm)     | Volume(cm <sup>3</sup> ) | Material | Protection grade |     | Model       |
|--------------|--------------------------|----------|------------------|-----|-------------|
| Dia. 86 × 75 | 416                      | PA66     | IP69K            | IK9 | <b>Y3C3</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| <b>A</b> (mm) | <b>B</b> (mm) | <b>C</b> (With saddle) | References       |
|---------------|---------------|------------------------|------------------|
| 0             | √             | 0                      | Y3C30000000E200T |
| 0             | √             | M25×1.5                | Y3C3000F000E200T |
| 20            | √             | 0                      | Y3C30000120E200T |
| 20            | √             | M25×1.5                | Y3C3000F120E200T |
| 25            | √             | 0                      | Y3C30000125E200T |
| 25            | √             | M25×1.5                | Y3C3000F125E200T |

Cable gland not included in these reference, consult us if you want them.

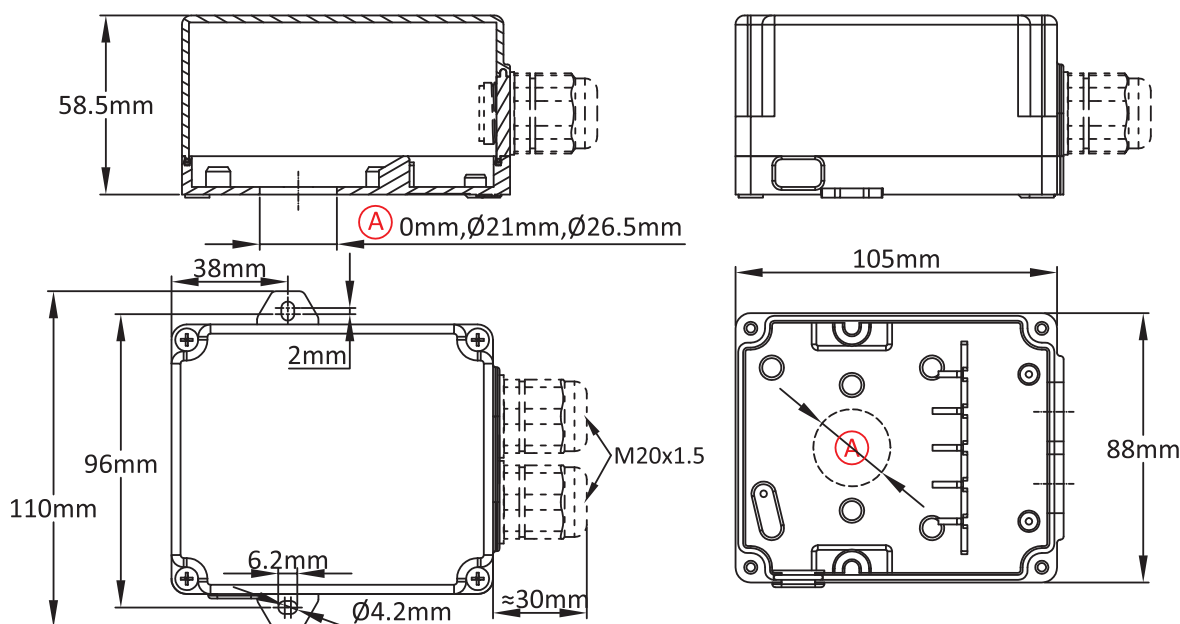
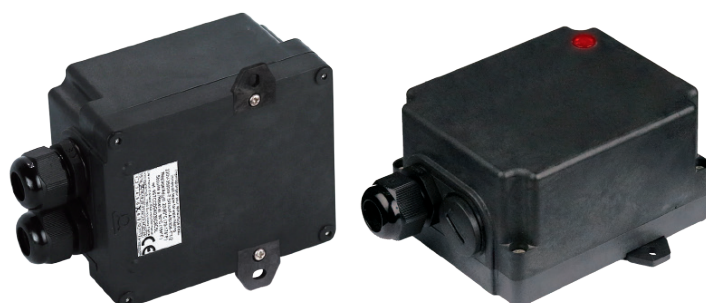
Red dimensions inside rectangular frames on drawings are used for accessories assembly.



| Size(mm)        | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model |
|-----------------|--------------------------|----------|------------------|------|-------|
| 105 x 88 x 58.5 | 550                      | PA66     | IP69K            | IK10 | Y3B1  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| (A)(mm) | References       |
|---------|------------------|
| 0       | Y3B1000022C0000T |
| 21      | Y3B1210022C0000T |
| 26.5    | Y3B1265022C0000T |

Cable gland not included in these reference, consult us if you want them.

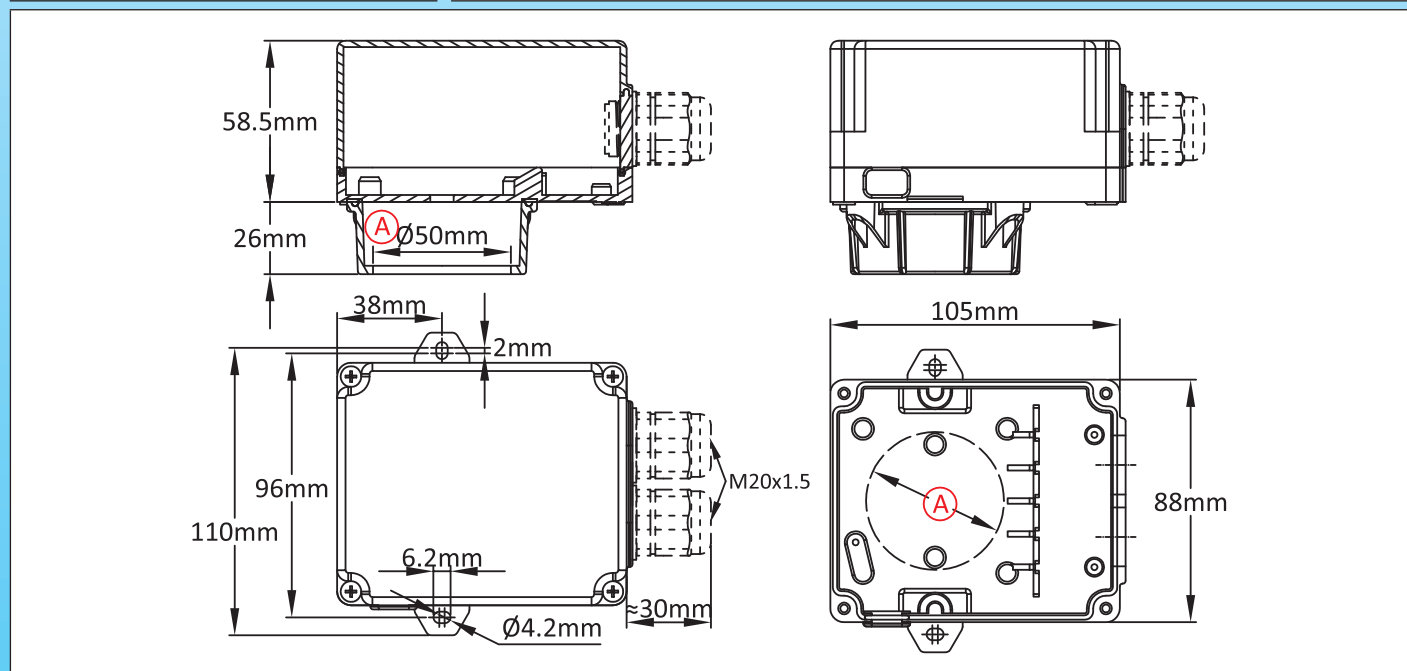
Red dimensions inside rectangular frames on drawings are used for accessories assembly.

# Immersion heater housing for commercial water heater tanks



| Size(mm)               | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model       |
|------------------------|--------------------------|-------------|------------------|-------------|-------------|
| <b>105 X 88 x 84.5</b> | <b>633</b>               | <b>PA66</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3B2</b> |

| Suitable for                                         |  |
|------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> Temperature sensor          |                                                                                    |
| <input checked="" type="checkbox"/> Immersion heater |                                                                                    |
| <input type="checkbox"/> Finned heater               |                                                                                    |
| <input checked="" type="checkbox"/> Thermostat       |                                                                                    |
| <input type="checkbox"/> Level sensor                |                                                                                    |
| <input type="checkbox"/> Electronic board            |                                                                                    |



## Main references

| <b>A</b> (mm) | References       |
|---------------|------------------|
| 50            | Y3B2500022C0000T |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

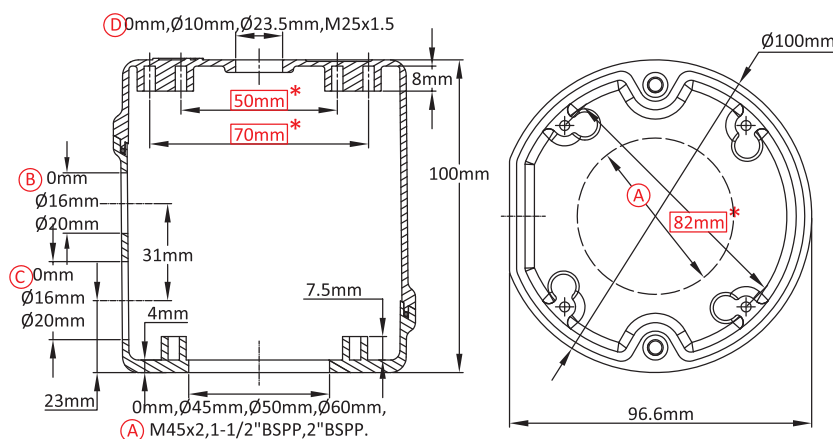
# Round enclosure for immersion heater or temperature sensor



| Size(mm)              | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model                      |
|-----------------------|--------------------------|-------------|------------------|-------------|----------------------------|
| <b>Dia. 100 x 100</b> | <b>700</b>               | <b>PA66</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y306</b><br><b>(P1)</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| A(mm) | B(mm) | C(mm) | D(mm)   | References       | A(mm) | B(mm) | C(mm) | D(mm)   | References       |
|-------|-------|-------|---------|------------------|-------|-------|-------|---------|------------------|
| 0     | 0     | 0     | 0       | Y30600000000000T | 0     | 20    | 20    | M25x1.5 | Y306000F2200000T |
| 0     | 0     | 0     | 10      | Y306000A0000000T | 45    | 0     | 0     | 0       | Y30645000000000T |
| 0     | 0     | 0     | 23.5    | Y306000D0000000T | 45    | 0     | 0     | 10      | Y306450A0000000T |
| 0     | 0     | 0     | M25x1.5 | Y306000F0000000T | 45    | 0     | 0     | 23.5    | Y306450D0000000T |
| 0     | 0     | 16    | 0       | Y30600001160000T | 45    | 0     | 0     | M25x1.5 | Y306450F0000000T |
| 0     | 0     | 16    | 10      | Y306000A1160000T | 45    | 0     | 16    | 0       | Y30645001160000T |
| 0     | 0     | 16    | 23.5    | Y306000D1160000T | 45    | 0     | 16    | 10      | Y306450A1160000T |
| 0     | 0     | 16    | M25x1.5 | Y306000F1160000T | 45    | 0     | 16    | 23.5    | Y306450D1160000T |
| 0     | 0     | 20    | 0       | Y30600001200000T | 45    | 0     | 16    | M25x1.5 | Y306450F1160000T |
| 0     | 0     | 20    | 10      | Y306000A1200000T | 45    | 0     | 20    | 0       | Y30645001200000T |
| 0     | 0     | 20    | 23.5    | Y306000D1200000T | 45    | 0     | 20    | 10      | Y306450A1200000T |
| 0     | 0     | 20    | M25x1.5 | Y306000F1200000T | 45    | 0     | 20    | 23.5    | Y306450D1200000T |
| 0     | 16    | 16    | 0       | Y30600002160000T | 45    | 0     | 20    | M25x1.5 | Y306450F1200000T |
| 0     | 16    | 16    | 10      | Y306000A2160000T | 45    | 16    | 16    | 0       | Y30645002160000T |
| 0     | 16    | 16    | 23.5    | Y306000D2160000T | 45    | 16    | 16    | 10      | Y306450A2160000T |
| 0     | 16    | 16    | M25x1.5 | Y306000F2160000T | 45    | 16    | 16    | 23.5    | Y306450D2160000T |
| 0     | 16    | 20    | 0       | Y30600002C00000T | 45    | 16    | 16    | M25x1.5 | Y306450F2160000T |
| 0     | 16    | 20    | 10      | Y306000A2C00000T | 45    | 16    | 20    | 0       | Y30645002C00000T |
| 0     | 16    | 20    | 23.5    | Y306000D2C00000T | 45    | 16    | 20    | 10      | Y306450A2C00000T |
| 0     | 16    | 20    | M25x1.5 | Y306000F2C00000T | 45    | 16    | 20    | 23.5    | Y306450D2C00000T |
| 0     | 20    | 20    | 0       | Y30600002200000T | 45    | 16    | 20    | M25x1.5 | Y306450F2C00000T |
| 0     | 20    | 20    | 10      | Y306000A2200000T | 45    | 20    | 20    | 0       | Y30645002200000T |
| 0     | 20    | 20    | 23.5    | Y306000D2200000T | 45    | 20    | 20    | 10      | Y306450A2200000T |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

# Round enclosure for immersion heater or temperature sensor

**Y306**  
(P2)

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| A (mm) | B (mm) | C (mm) | D (mm)  | References        |
|--------|--------|--------|---------|-------------------|
| 45     | 20     | 20     | 23.5    | Y306450D2200000T  |
| 45     | 20     | 20     | M25×1.5 | Y306450F2200000T  |
| 50     | 0      | 0      | 0       | Y306500000000000T |
| 50     | 0      | 0      | 10      | Y306500A0000000T  |
| 50     | 0      | 0      | 23.5    | Y306500D0000000T  |
| 50     | 0      | 0      | M25×1.5 | Y306500F0000000T  |
| 50     | 0      | 16     | 0       | Y30650001600000T  |
| 50     | 0      | 16     | 10      | Y306500A1600000T  |
| 50     | 0      | 16     | 23.5    | Y306500D1600000T  |
| 50     | 0      | 16     | M25×1.5 | Y306500F1600000T  |
| 50     | 0      | 20     | 0       | Y30650001200000T  |
| 50     | 0      | 20     | 10      | Y306500A1200000T  |
| 50     | 0      | 20     | 23.5    | Y306500D1200000T  |
| 50     | 0      | 20     | M25×1.5 | Y306500F1200000T  |
| 50     | 16     | 16     | 0       | Y30650002160000T  |
| 50     | 16     | 16     | 10      | Y306500A2160000T  |
| 50     | 16     | 16     | 23.5    | Y306500D2160000T  |
| 50     | 16     | 16     | M25×1.5 | Y306500F2160000T  |
| 50     | 16     | 20     | 0       | Y30650002C00000T  |
| 50     | 16     | 20     | 10      | Y306500A2C00000T  |
| 50     | 16     | 20     | 23.5    | Y306500D2C00000T  |
| 50     | 16     | 20     | M25×1.5 | Y306500F2C00000T  |
| 50     | 20     | 20     | 0       | Y30650002200000T  |
| 50     | 20     | 20     | 10      | Y306500A2200000T  |
| 50     | 20     | 20     | 23.5    | Y306500D2200000T  |
| 50     | 20     | 20     | M25×1.5 | Y306500F2200000T  |
| 60     | 0      | 0      | 0       | Y306600000000000T |
| 60     | 0      | 0      | 10      | Y306600A0000000T  |
| 60     | 0      | 0      | 23.5    | Y306600D0000000T  |
| 60     | 0      | 0      | M25×1.5 | Y306600F0000000T  |
| 60     | 0      | 16     | 0       | Y30660001160000T  |
| 60     | 0      | 16     | 10      | Y306600A1160000T  |
| 60     | 0      | 16     | 23.5    | Y306600D1160000T  |
| 60     | 0      | 16     | M25×1.5 | Y306600F1160000T  |
| 60     | 0      | 20     | 0       | Y30660001200000T  |
| 60     | 0      | 20     | 10      | Y306600A1200000T  |
| 60     | 0      | 20     | 23.5    | Y306600D1200000T  |
| 60     | 0      | 20     | M25×1.5 | Y306600F1200000T  |
| 60     | 16     | 16     | 0       | Y30660002160000T  |
| 60     | 16     | 16     | 10      | Y306600A2160000T  |
| 60     | 16     | 16     | 23.5    | Y306600D2160000T  |
| 60     | 16     | 16     | M25×1.5 | Y306600F2160000T  |
| 60     | 16     | 20     | 0       | Y30660002C00000T  |
| 60     | 16     | 20     | 10      | Y306600A2C00000T  |
| 60     | 16     | 20     | 23.5    | Y306600D2C00000T  |
| 60     | 16     | 20     | M25×1.5 | Y306600F2C00000T  |
| 60     | 20     | 20     | 0       | Y30660002200000T  |
| 60     | 20     | 20     | 10      | Y306600A2200000T  |
| 60     | 20     | 20     | 23.5    | Y306600D2200000T  |
| 60     | 20     | 20     | M25×1.5 | Y306600F2200000T  |
| M45×2  | 0      | 0      | 0       | Y306M45000000000T |
| M45×2  | 0      | 0      | 10      | Y306M45A0000000T  |
| M45×2  | 0      | 0      | 23.5    | Y306M45D0000000T  |
| M45×2  | 0      | 0      | M25×1.5 | Y306M45F0000000T  |
| M45×2  | 0      | 16     | 0       | Y306M4501600000T  |
| M45×2  | 0      | 16     | 10      | Y306M45A1600000T  |
| M45×2  | 0      | 16     | 23.5    | Y306M45D1600000T  |
| M45×2  | 0      | 16     | M25×1.5 | Y306M45F1600000T  |
| M45×2  | 0      | 20     | 0       | Y306M4501200000T  |
| M45×2  | 0      | 20     | 10      | Y306M45A1200000T  |
| M45×2  | 0      | 20     | 23.5    | Y306M45D1200000T  |

| A (mm)  | B (mm) | C (mm) | D (mm)  | References        |
|---------|--------|--------|---------|-------------------|
| M45×2   | 0      | 20     | M25×1.5 | Y306M45F1200000T  |
| M45×2   | 16     | 16     | 0       | Y306M4502160000T  |
| M45×2   | 16     | 16     | 10      | Y306M45A2160000T  |
| M45×2   | 16     | 16     | 23.5    | Y306M45D2160000T  |
| M45×2   | 16     | 16     | M25×1.5 | Y306M45F2160000T  |
| M45×2   | 16     | 20     | 0       | Y306M4502C00000T  |
| M45×2   | 16     | 20     | 10      | Y306M45A2C00000T  |
| M45×2   | 16     | 20     | 23.5    | Y306M45D2C00000T  |
| M45×2   | 16     | 20     | M25×1.5 | Y306M45F2C00000T  |
| M45×2   | 20     | 20     | 0       | Y306M4502200000T  |
| M45×2   | 20     | 20     | 10      | Y306M45A2200000T  |
| M45×2   | 20     | 20     | 23.5    | Y306M45D2200000T  |
| M45×2   | 20     | 20     | M25×1.5 | Y306M45F2200000T  |
| 1½"BSPP | 0      | 0      | 0       | Y306BA2000000000T |
| 1½"BSPP | 0      | 0      | 10      | Y306BA2A00000000T |
| 1½"BSPP | 0      | 0      | 23.5    | Y306BA2D00000000T |
| 1½"BSPP | 0      | 0      | M25×1.5 | Y306BA2F00000000T |
| 1½"BSPP | 0      | 16     | 0       | Y306BA201160000T  |
| 1½"BSPP | 0      | 16     | 10      | Y306BA2A1160000T  |
| 1½"BSPP | 0      | 16     | 23.5    | Y306BA2D1160000T  |
| 1½"BSPP | 0      | 16     | M25×1.5 | Y306BA2F1160000T  |
| 1½"BSPP | 0      | 20     | 0       | Y306BA201200000T  |
| 1½"BSPP | 0      | 20     | 10      | Y306BA2A1200000T  |
| 1½"BSPP | 0      | 20     | 23.5    | Y306BA2D1200000T  |
| 1½"BSPP | 0      | 20     | M25×1.5 | Y306BA2F1200000T  |
| 1½"BSPP | 16     | 16     | 0       | Y306BA202160000T  |
| 1½"BSPP | 16     | 16     | 10      | Y306BA2A2160000T  |
| 1½"BSPP | 16     | 16     | 23.5    | Y306BA2D2160000T  |
| 1½"BSPP | 16     | 16     | M25×1.5 | Y306BA2F2160000T  |
| 1½"BSPP | 16     | 20     | 0       | Y306BA202C00000T  |
| 1½"BSPP | 16     | 20     | 10      | Y306BA2A2C00000T  |
| 1½"BSPP | 16     | 20     | 23.5    | Y306BA2D2C00000T  |
| 1½"BSPP | 16     | 20     | M25×1.5 | Y306BA2F2C00000T  |
| 1½"BSPP | 20     | 20     | 0       | Y306BA202200000T  |
| 1½"BSPP | 20     | 20     | 10      | Y306BA2A2200000T  |
| 1½"BSPP | 20     | 20     | 23.5    | Y306BA2D2200000T  |
| 1½"BSPP | 20     | 20     | M25×1.5 | Y306BA2F2200000T  |
| 2"BSPP  | 0      | 0      | 0       | Y306BB2000000000T |
| 2"BSPP  | 0      | 0      | 10      | Y306BB2A00000000T |
| 2"BSPP  | 0      | 0      | 23.5    | Y306BB2D00000000T |
| 2"BSPP  | 0      | 0      | M25×1.5 | Y306BB2F00000000T |
| 2"BSPP  | 0      | 16     | 0       | Y306BB201160000T  |
| 2"BSPP  | 0      | 16     | 10      | Y306BB2A1160000T  |
| 2"BSPP  | 0      | 16     | 23.5    | Y306BB2D1160000T  |
| 2"BSPP  | 0      | 16     | M25×1.5 | Y306BB2F1160000T  |
| 2"BSPP  | 0      | 20     | 0       | Y306BB201200000T  |
| 2"BSPP  | 0      | 20     | 10      | Y306BB2A1200000T  |
| 2"BSPP  | 0      | 20     | 23.5    | Y306BB2D1200000T  |
| 2"BSPP  | 0      | 20     | M25×1.5 | Y306BB2F1200000T  |
| 2"BSPP  | 16     | 16     | 0       | Y306BB202160000T  |
| 2"BSPP  | 16     | 16     | 10      | Y306BB2A2160000T  |
| 2"BSPP  | 16     | 16     | 23.5    | Y306BB2D2160000T  |
| 2"BSPP  | 16     | 16     | M25×1.5 | Y306BB2F2160000T  |
| 2"BSPP  | 16     | 20     | 0       | Y306BB202C00000T  |
| 2"BSPP  | 16     | 20     | 10      | Y306BB2A2C00000T  |
| 2"BSPP  | 16     | 20     | 23.5    | Y306BB2D2C00000T  |
| 2"BSPP  | 16     | 20     | M25×1.5 | Y306BB2F2C00000T  |
| 2"BSPP  | 20     | 20     | 0       | Y306BB202200000T  |
| 2"BSPP  | 20     | 20     | 10      | Y306BB2A2200000T  |
| 2"BSPP  | 20     | 20     | 23.5    | Y306BB2D2200000T  |
| 2"BSPP  | 20     | 20     | M25×1.5 | Y306BB2F2200000T  |

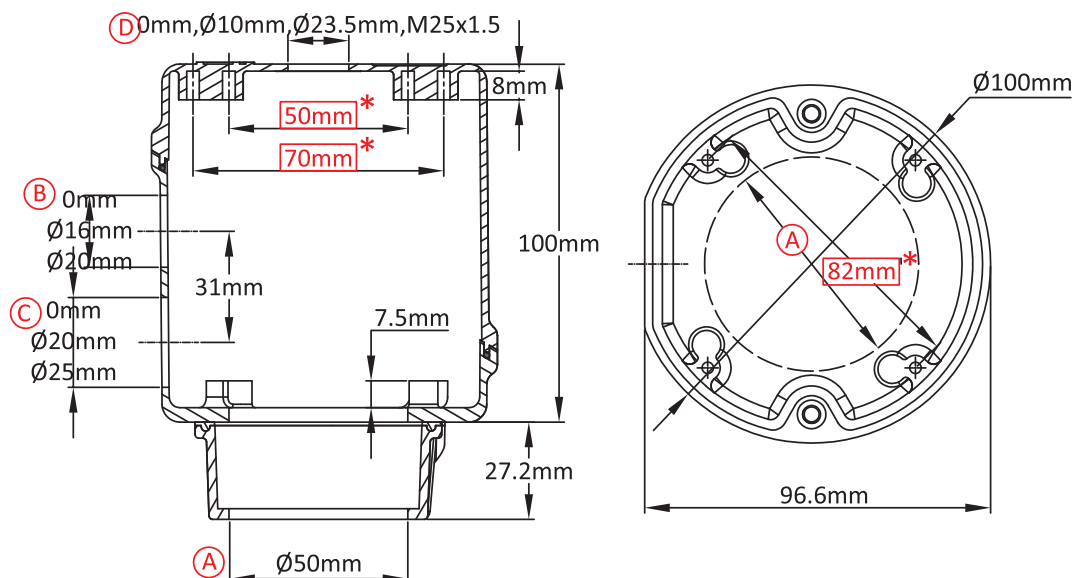
# Round enclosure for immersion heater or temperature sensor with extension



| Size(mm)                  | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model       |
|---------------------------|--------------------------|-------------|------------------|-------------|-------------|
| <b>Dia. 100 X<br/>125</b> | <b>783</b>               | <b>PA66</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3C4</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ(mm) | Ⓓ(mm)   | References       |
|-------|-------|-------|---------|------------------|
| 50    | 0     | 0     | 0       | Y3C450000000000T |
| 50    | 0     | 0     | 10      | Y3C4500A0000000T |
| 50    | 0     | 0     | 23.5    | Y3C4500D0000000T |
| 50    | 0     | 0     | M25x1.5 | Y3C4500F0000000T |
| 50    | 0     | 20    | 0       | Y3C450001200000T |
| 50    | 0     | 20    | 10      | Y3C4500A1200000T |
| 50    | 0     | 20    | 23.5    | Y3C4500D1200000T |
| 50    | 0     | 20    | M25x1.5 | Y3C4500F1200000T |
| 50    | 0     | 25    | 0       | Y3C450001250000T |
| 50    | 0     | 25    | 10      | Y3C4500A1250000T |
| 50    | 0     | 25    | 23.5    | Y3C4500D1250000T |
| 50    | 0     | 25    | M25x1.5 | Y3C4500F1250000T |
| 50    | 16    | 0     | 0       | Y3C450001160000T |
| 50    | 16    | 0     | 10      | Y3C4500A1160000T |
| 50    | 16    | 0     | 23.5    | Y3C4500D1160000T |
| 50    | 16    | 0     | M25x1.5 | Y3C4500F1160000T |

| Ⓐ(mm) | Ⓑ(mm) | Ⓒ(mm) | Ⓓ(mm)   | References       |
|-------|-------|-------|---------|------------------|
| 50    | 16    | 20    | 0       | Y3C450002C00000T |
| 50    | 16    | 20    | 10      | Y3C4500A2C00000T |
| 50    | 16    | 20    | 23.5    | Y3C4500D2C00000T |
| 50    | 16    | 20    | M25x1.5 | Y3C4500F2C00000T |
| 50    | 16    | 25    | 0       | Y3C450002C50000T |
| 50    | 16    | 25    | 10      | Y3C4500A2C50000T |
| 50    | 16    | 25    | 23.5    | Y3C4500D2C50000T |
| 50    | 16    | 25    | M25x1.5 | Y3C4500F2C50000T |
| 50    | 20    | 20    | 0       | Y3C450002200000T |
| 50    | 20    | 20    | 10      | Y3C4500A2200000T |
| 50    | 20    | 20    | 23.5    | Y3C4500D2200000T |
| 50    | 20    | 20    | M25x1.5 | Y3C4500F2200000T |
| 50    | 20    | 25    | 0       | Y3C450002D50000T |
| 50    | 20    | 25    | 10      | Y3C4500A2D50000T |
| 50    | 20    | 25    | 23.5    | Y3C4500D2D50000T |
| 50    | 20    | 25    | M25x1.5 | Y3C4500F2D50000T |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



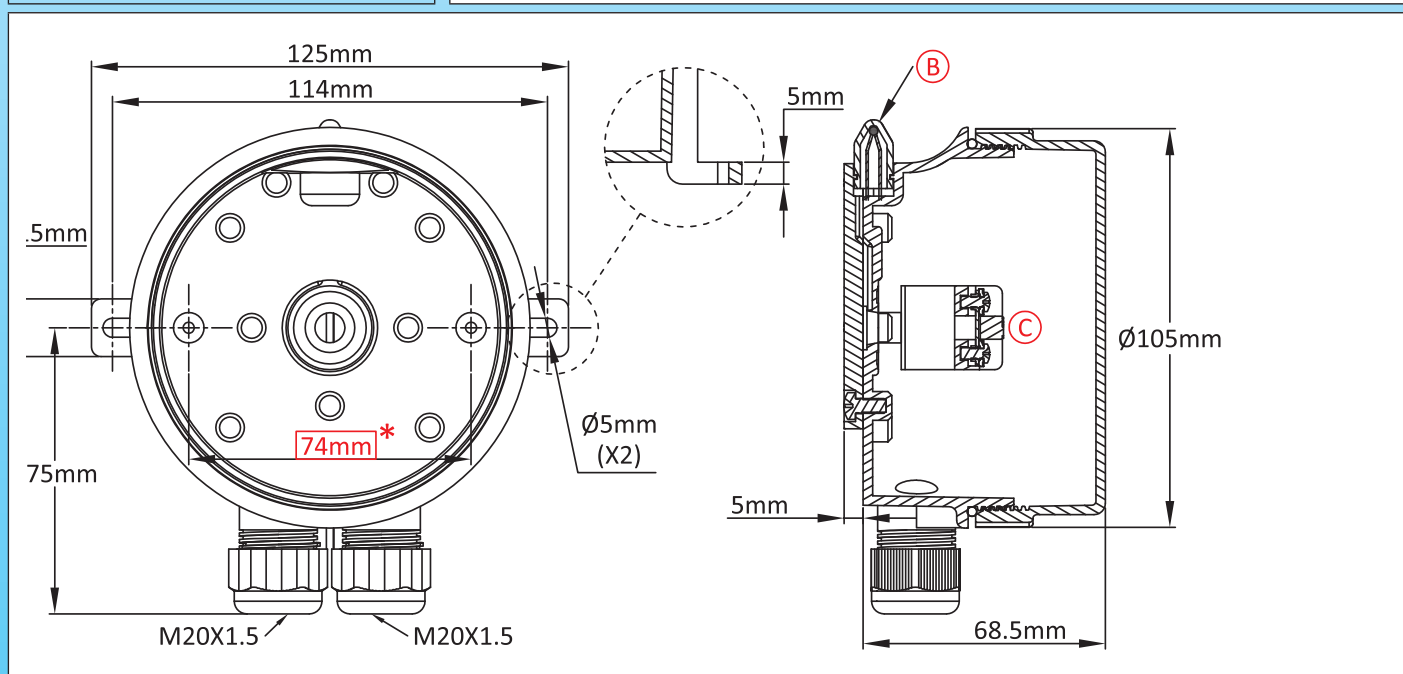
# Wall mounting temperature sensor enclosure. In PA66 and polycarbonate



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material  | Protection grade |      | Model |
|---------------|--------------------------|-----------|------------------|------|-------|
| Dia. 105 X 66 | 500                      | PA66 + PC | IP69K            | IK10 | Y3F1  |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board

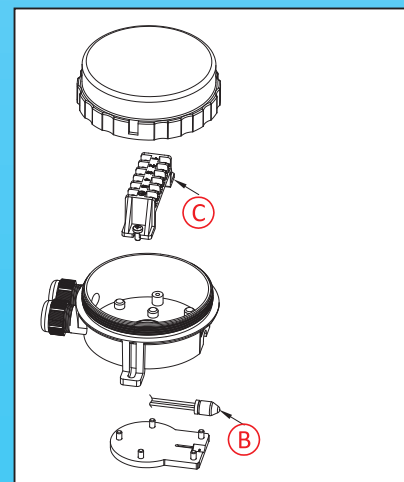


## Main references

| With connection block  | Without connection block  |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Y3F1000022AH400T                                                                                          | Y3F1000022A0000T                                                                                              |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



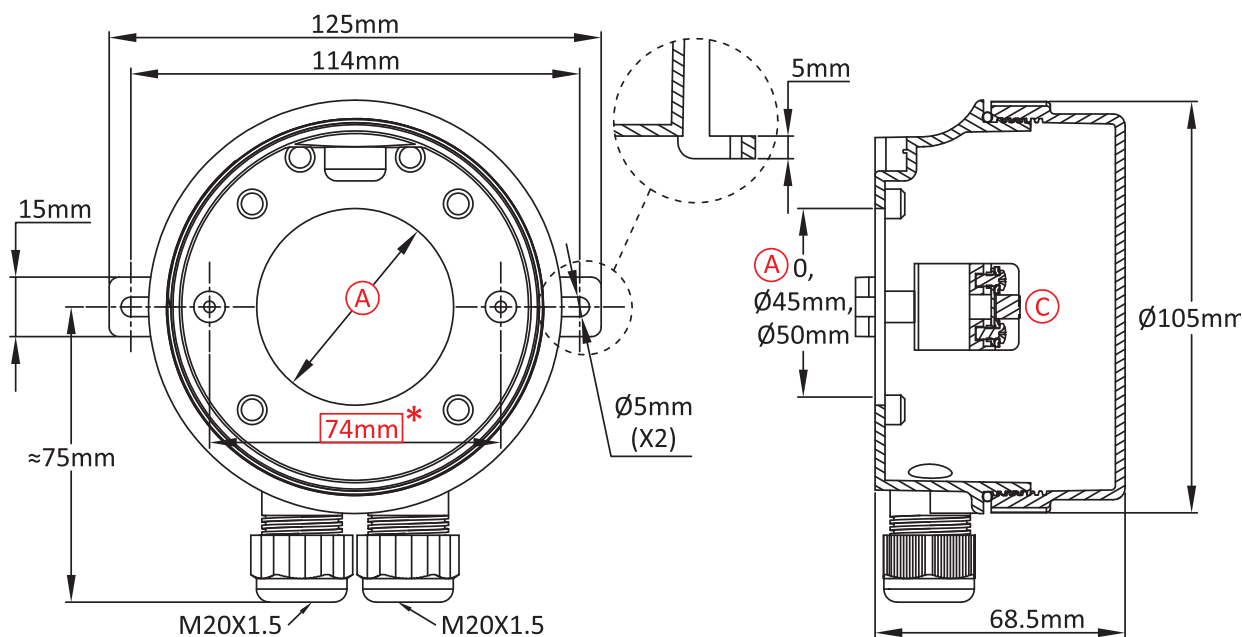
# Immersion heater, level sensor or temperature sensor enclosure. In PA66 and polycarbonate



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material  | Protection grade |      | Model       |
|---------------|--------------------------|-----------|------------------|------|-------------|
| Dia. 105 X 66 | 500                      | PA66 + PC | IP69K            | IK10 | <b>Y3F2</b> |

## Suitable for

- ☒ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☒ Level sensor
- ☐ Electronic board

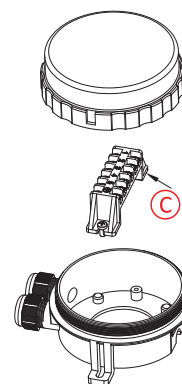


## Main references

| (A)(mm) | With connection block (C) | Without connection block (C) |
|---------|---------------------------|------------------------------|
| 0       | Y3F2000022AH400T          | Y3F2000022A0000T             |
| 45      | Y3F2450022AH400T          | Y3F2450022A0000T             |
| 50      | Y3F2500022AH400T          | Y3F2500022A0000T             |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



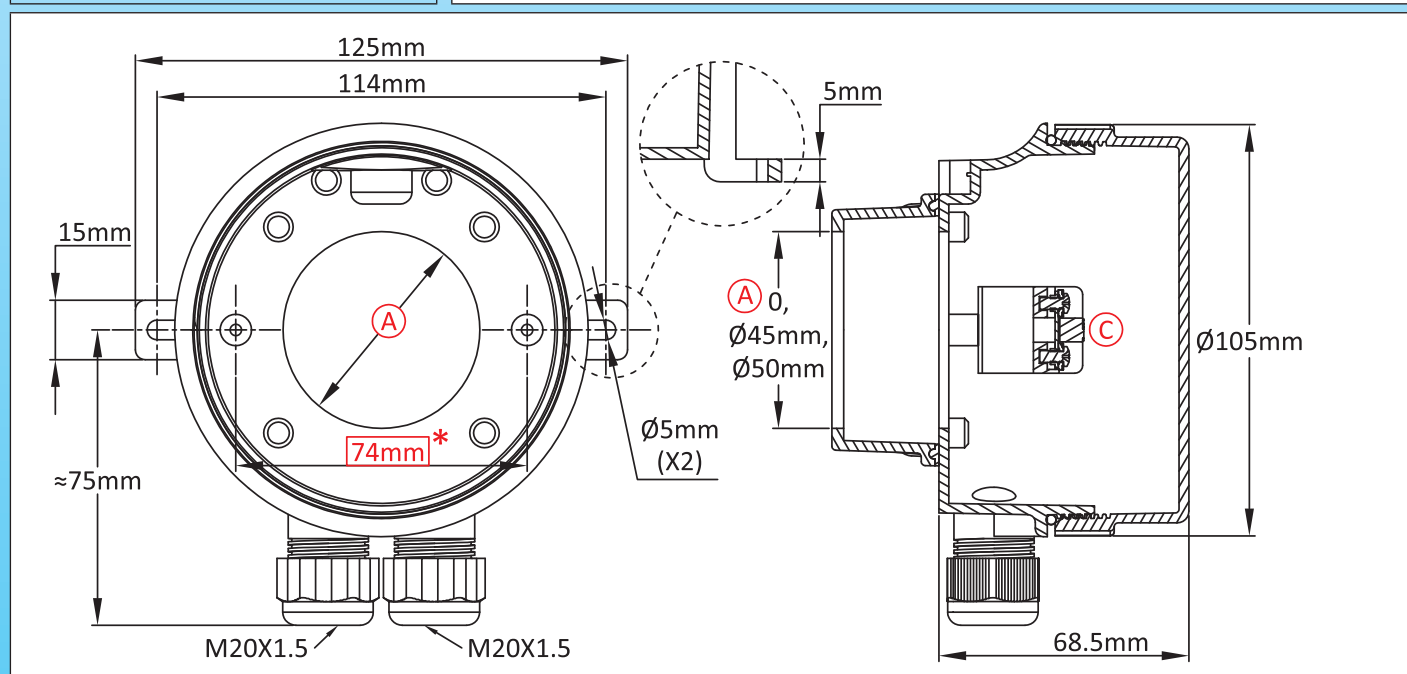


# Immersion heater enclosure with extension. In PA66 and polycarbonate

| Size(mm)             | Volume(cm <sup>3</sup> ) | Material         | Protection grade |             | Model       |
|----------------------|--------------------------|------------------|------------------|-------------|-------------|
| <b>Dia. 105 X 87</b> | <b>583</b>               | <b>PA66 + PC</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3F3</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board

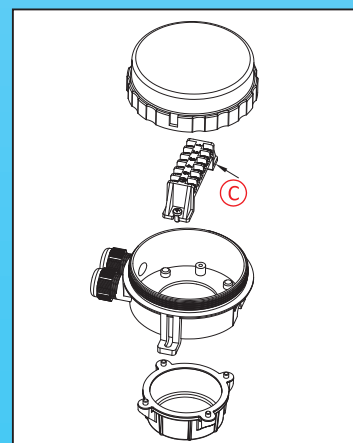


## Main references

| With connection block (C) | Without connection block (C) |
|---------------------------|------------------------------|
| Y3F3500022AH400T          | Y3F3500022A0000T             |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



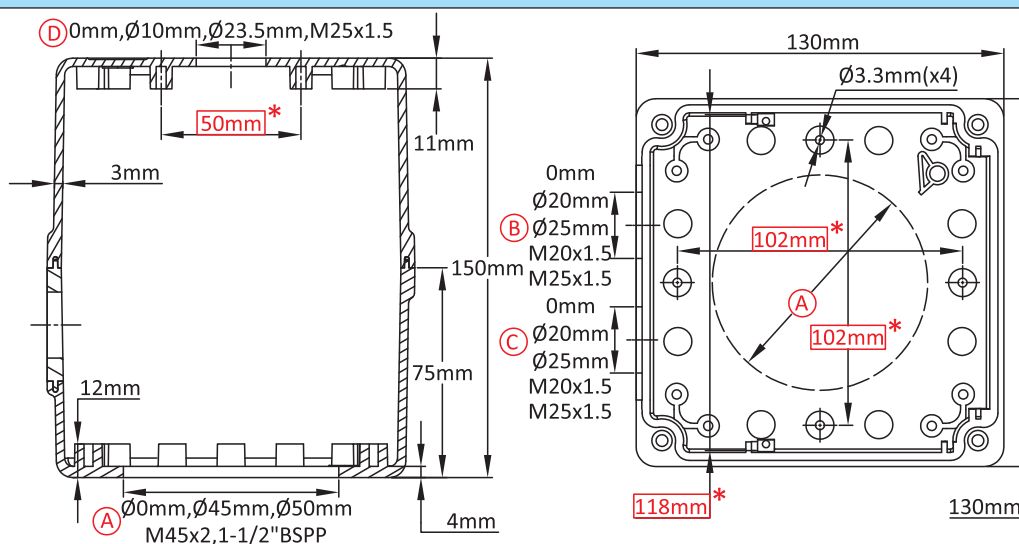
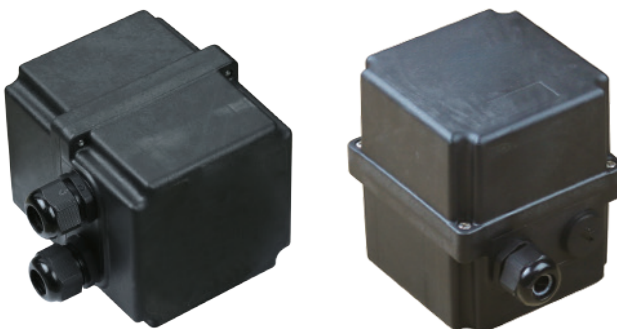
# Big size enclosure for immersion heater, temperature sensor, level sensor or controls



| Size(mm)               | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model                      |
|------------------------|--------------------------|-------------|------------------|-------------|----------------------------|
| <b>130 X 130 X 150</b> | <b>2530</b>              | <b>PA66</b> | <b>IP65</b>      | <b>IK10</b> | <b>Y307</b><br><b>(P1)</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



| A (mm) | B (mm) | C (mm)  | D (mm)  | References        | A (mm) | B (mm)  | C (mm)  | D (mm)  | References        |
|--------|--------|---------|---------|-------------------|--------|---------|---------|---------|-------------------|
| 0      | 0      | 0       | 0       | Y3070000000000T   | 0      | 25      | 25      | 0       | Y30700002250000T  |
| 0      | 0      | 0       | 10      | Y307000A0000000T  | 0      | 25      | 25      | 10      | Y307000A2250000T  |
| 0      | 0      | 0       | 23.5    | Y307000D0000000T  | 0      | 25      | 25      | 23.5    | Y307000D2250000T  |
| 0      | 0      | 0       | M25x1.5 | Y307000F0000000T  | 0      | 25      | 25      | M25x1.5 | Y307000F2250000T  |
| 0      | 0      | 20      | 0       | Y30700001200000T  | 0      | M20x1.5 | M20x1.5 | 0       | Y30700002T000000T |
| 0      | 0      | 20      | 10      | Y307000A1200000T  | 0      | M20x1.5 | M20x1.5 | 10      | Y307000A2T000000T |
| 0      | 0      | 20      | 23.5    | Y307000D1200000T  | 0      | M20x1.5 | M20x1.5 | 23.5    | Y307000D2T000000T |
| 0      | 0      | 20      | M25x1.5 | Y307000F1200000T  | 0      | M20x1.5 | M20x1.5 | M25x1.5 | Y307000F2T000000T |
| 0      | 0      | 25      | 0       | Y30700001250000T  | 0      | M25x1.5 | M25x1.5 | 0       | Y30700002T500000T |
| 0      | 0      | 25      | 10      | Y307000A1250000T  | 0      | M25x1.5 | M25x1.5 | 10      | Y307000A2T500000T |
| 0      | 0      | 25      | 23.5    | Y307000D1250000T  | 0      | M25x1.5 | M25x1.5 | 23.5    | Y307000D2T500000T |
| 0      | 0      | 25      | M25x1.5 | Y307000F1250000T  | 0      | M25x1.5 | M25x1.5 | M25x1.5 | Y307000F2T500000T |
| 0      | 0      | M20x1.5 | 0       | Y30700001T000000T | 45     | 0       | 0       | 0       | Y30745000000000T  |
| 0      | 0      | M20x1.5 | 10      | Y307000A1T000000T | 45     | 0       | 0       | 10      | Y307450A0000000T  |
| 0      | 0      | M20x1.5 | 23.5    | Y307000D1T000000T | 45     | 0       | 0       | 23.5    | Y307450D0000000T  |
| 0      | 0      | M20x1.5 | M25x1.5 | Y307000F1T000000T | 45     | 0       | 0       | M25x1.5 | Y307450F0000000T  |
| 0      | 0      | M25x1.5 | 0       | Y30700001T500000T | 45     | 0       | 20      | 0       | Y30745001200000T  |
| 0      | 0      | M25x1.5 | 10      | Y307000A1T500000T | 45     | 0       | 20      | 10      | Y307450A1200000T  |
| 0      | 0      | M25x1.5 | 23.5    | Y307000D1T500000T | 45     | 0       | 20      | 23.5    | Y307450D1200000T  |
| 0      | 0      | M25x1.5 | M25x1.5 | Y307000F1T500000T | 45     | 0       | 20      | M25x1.5 | Y307450F1200000T  |
| 0      | 20     | 20      | 0       | Y30700002200000T  | 45     | 0       | 25      | 0       | Y30745001250000T  |
| 0      | 20     | 20      | 10      | Y307000A2200000T  | 45     | 0       | 25      | 10      | Y307450A1250000T  |
| 0      | 20     | 20      | 23.5    | Y307000D2200000T  | 45     | 0       | 25      | 23.5    | Y307450D1250000T  |
| 0      | 20     | 20      | M25x1.5 | Y307000F2200000T  | 45     | 0       | 25      | M25x1.5 | Y307450F1250000T  |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

Because of permanent improvement of our products, features used on these data sheets are for guidance only and can be modified without prior advice

# Big size enclosure for immersion heater, temperature sensor, level sensor or controls

**Y307**  
(P2)



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | References        | (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | References        |
|---------|---------|---------|---------|-------------------|---------|---------|---------|---------|-------------------|
| 45      | 0       | M20×1.5 | 0       | Y30745001T00000T  | M45×2   | 0       | 20      | M25×1.5 | Y307M45F1200000T  |
| 45      | 0       | M20×1.5 | 10      | Y307450A1T00000T  | M45×2   | 0       | 25      | 0       | Y307M4501250000T  |
| 45      | 0       | M20×1.5 | 23.5    | Y307450D1T00000T  | M45×2   | 0       | 25      | 10      | Y307M45A1250000T  |
| 45      | 0       | M20×1.5 | M25×1.5 | Y307450F1T00000T  | M45×2   | 0       | 25      | 23.5    | Y307M45D1250000T  |
| 45      | 0       | M25×1.5 | 0       | Y30745001T50000T  | M45×2   | 0       | 25      | M25×1.5 | Y307M45F1250000T  |
| 45      | 0       | M25×1.5 | 10      | Y307450A1T50000T  | M45×2   | 0       | M20×1.5 | 0       | Y307M4501T00000T  |
| 45      | 0       | M25×1.5 | 23.5    | Y307450D1T50000T  | M45×2   | 0       | M20×1.5 | 10      | Y307M45A1T00000T  |
| 45      | 0       | M25×1.5 | M25×1.5 | Y307450F1T50000T  | M45×2   | 0       | M20×1.5 | 23.5    | Y307M45D1T00000T  |
| 45      | 20      | 20      | 0       | Y30745002200000T  | M45×2   | 0       | M20×1.5 | M25×1.5 | Y307M45F1T00000T  |
| 45      | 20      | 20      | 10      | Y307450A2200000T  | M45×2   | 0       | M25×1.5 | 0       | Y307M4501T50000T  |
| 45      | 20      | 20      | 23.5    | Y307450D2200000T  | M45×2   | 0       | M25×1.5 | 10      | Y307M45A1T50000T  |
| 45      | 20      | 20      | M25×1.5 | Y307450F2200000T  | M45×2   | 0       | M25×1.5 | 23.5    | Y307M45D1T50000T  |
| 45      | 25      | 25      | 0       | Y30745002250000T  | M45×2   | 0       | M25×1.5 | M25×1.5 | Y307M45F1T50000T  |
| 45      | 25      | 25      | 10      | Y307450A2250000T  | M45×2   | 20      | 20      | 0       | Y307M4502200000T  |
| 45      | 25      | 25      | 23.5    | Y307450D2250000T  | M45×2   | 20      | 20      | 10      | Y307M45A2200000T  |
| 45      | 25      | 25      | M25×1.5 | Y307450F2250000T  | M45×2   | 20      | 20      | 23.5    | Y307M45D2200000T  |
| 45      | M20×1.5 | M20×1.5 | 0       | Y30745002T00000T  | M45×2   | 20      | 20      | M25×1.5 | Y307M45F2200000T  |
| 45      | M20×1.5 | M20×1.5 | 10      | Y307450A2T00000T  | M45×2   | 25      | 25      | 0       | Y307M4502250000T  |
| 45      | M20×1.5 | M20×1.5 | 23.5    | Y307450D2T00000T  | M45×2   | 25      | 25      | 10      | Y307M45A2250000T  |
| 45      | M20×1.5 | M20×1.5 | M25×1.5 | Y307450F2T00000T  | M45×2   | 25      | 25      | 23.5    | Y307M45D2250000T  |
| 45      | M25×1.5 | M25×1.5 | 0       | Y30745002T50000T  | M45×2   | 25      | 25      | M25×1.5 | Y307M45F2250000T  |
| 45      | M25×1.5 | M25×1.5 | 10      | Y307450A2T50000T  | M45×2   | M20×1.5 | M20×1.5 | 0       | Y307M4502T00000T  |
| 45      | M25×1.5 | M25×1.5 | 23.5    | Y307450D2T50000T  | M45×2   | M20×1.5 | M20×1.5 | 10      | Y307M45A2T00000T  |
| 45      | M25×1.5 | M25×1.5 | M25×1.5 | Y307450F2T50000T  | M45×2   | M20×1.5 | M20×1.5 | 23.5    | Y307M45D2T00000T  |
| 50      | 0       | 0       | 0       | Y307500000000000T | M45×2   | M20×1.5 | M20×1.5 | M25×1.5 | Y307M45F2T00000T  |
| 50      | 0       | 0       | 10      | Y307500A00000000T | M45×2   | M25×1.5 | M25×1.5 | 0       | Y307M4502T50000T  |
| 50      | 0       | 0       | 23.5    | Y307500D00000000T | M45×2   | M25×1.5 | M25×1.5 | 10      | Y307M45A2T50000T  |
| 50      | 0       | 0       | M25×1.5 | Y307500F00000000T | M45×2   | M25×1.5 | M25×1.5 | 23.5    | Y307M45D2T50000T  |
| 50      | 0       | 20      | 0       | Y30750001200000T  | M45×2   | M25×1.5 | M25×1.5 | M25×1.5 | Y307M45F2T50000T  |
| 50      | 0       | 20      | 10      | Y307500A1200000T  | 1½"BSPP | 0       | 0       | 0       | Y307BA2000000000T |
| 50      | 0       | 20      | 23.5    | Y307500D1200000T  | 1½"BSPP | 0       | 0       | 10      | Y307BA2A00000000T |
| 50      | 0       | 20      | M25×1.5 | Y307500F1200000T  | 1½"BSPP | 0       | 0       | 23.5    | Y307BA2D00000000T |
| 50      | 0       | 25      | 0       | Y30750001250000T  | 1½"BSPP | 0       | 0       | M25×1.5 | Y307BA2F00000000T |
| 50      | 0       | 25      | 10      | Y307500A1250000T  | 1½"BSPP | 0       | 20      | 0       | Y307BA201200000T  |
| 50      | 0       | 25      | 23.5    | Y307500D1250000T  | 1½"BSPP | 0       | 20      | 10      | Y307BA2A1200000T  |
| 50      | 0       | 25      | M25×1.5 | Y307500F1250000T  | 1½"BSPP | 0       | 20      | 23.5    | Y307BA2D1200000T  |
| 50      | 0       | M20×1.5 | 0       | Y30750001T00000T  | 1½"BSPP | 0       | 20      | M25×1.5 | Y307BA2F1200000T  |
| 50      | 0       | M20×1.5 | 10      | Y307500A1T00000T  | 1½"BSPP | 0       | 25      | 0       | Y307BA201250000T  |
| 50      | 0       | M20×1.5 | 23.5    | Y307500D1T00000T  | 1½"BSPP | 0       | 25      | 10      | Y307BA2A1250000T  |
| 50      | 0       | M20×1.5 | M25×1.5 | Y307500F1T00000T  | 1½"BSPP | 0       | 25      | 23.5    | Y307BA2D1250000T  |
| 50      | 0       | M25×1.5 | 0       | Y30750001T50000T  | 1½"BSPP | 0       | 25      | M25×1.5 | Y307BA2F1250000T  |
| 50      | 0       | M25×1.5 | 10      | Y307500A1T50000T  | 1½"BSPP | 0       | M20×1.5 | 0       | Y307BA201T00000T  |
| 50      | 0       | M25×1.5 | 23.5    | Y307500D1T50000T  | 1½"BSPP | 0       | M20×1.5 | 10      | Y307BA2A1T00000T  |
| 50      | 0       | M25×1.5 | M25×1.5 | Y307500F1T50000T  | 1½"BSPP | 0       | M20×1.5 | 23.5    | Y307BA2D1T00000T  |
| 50      | 20      | 20      | 0       | Y30750002200000T  | 1½"BSPP | 0       | M20×1.5 | M25×1.5 | Y307BA2F1T00000T  |
| 50      | 20      | 20      | 10      | Y307500A2200000T  | 1½"BSPP | 0       | M25×1.5 | 0       | Y307BA201T50000T  |
| 50      | 20      | 20      | 23.5    | Y307500D2200000T  | 1½"BSPP | 0       | M25×1.5 | 10      | Y307BA2A1T50000T  |
| 50      | 20      | 20      | M25×1.5 | Y307500F2200000T  | 1½"BSPP | 0       | M25×1.5 | 23.5    | Y307BA2D1T50000T  |
| 50      | 25      | 25      | 0       | Y30750002250000T  | 1½"BSPP | 0       | M25×1.5 | M25×1.5 | Y307BA2F1T50000T  |
| 50      | 25      | 25      | 10      | Y307500A2250000T  | 1½"BSPP | 20      | 20      | 0       | Y307BA202200000T  |
| 50      | 25      | 25      | 23.5    | Y307500D2250000T  | 1½"BSPP | 20      | 20      | 10      | Y307BA2A2200000T  |
| 50      | 25      | 25      | M25×1.5 | Y307500F2250000T  | 1½"BSPP | 20      | 20      | 23.5    | Y307BA2D2200000T  |
| 50      | M20×1.5 | M20×1.5 | 0       | Y30750002T00000T  | 1½"BSPP | 20      | 20      | M25×1.5 | Y307BA2F2200000T  |
| 50      | M20×1.5 | M20×1.5 | 10      | Y307500A2T00000T  | 1½"BSPP | 25      | 25      | 0       | Y307BA202250000T  |
| 50      | M20×1.5 | M20×1.5 | 23.5    | Y307500D2T00000T  | 1½"BSPP | 25      | 25      | 10      | Y307BA2A2250000T  |
| 50      | M20×1.5 | M20×1.5 | M25×1.5 | Y307500F2T00000T  | 1½"BSPP | 25      | 25      | 23.5    | Y307BA2D2250000T  |
| 50      | M25×1.5 | M25×1.5 | 0       | Y30750002T50000T  | 1½"BSPP | 25      | 25      | M25×1.5 | Y307BA2F2250000T  |
| 50      | M25×1.5 | M25×1.5 | 10      | Y307500A2T50000T  | 1½"BSPP | M20×1.5 | M20×1.5 | 0       | Y307BA202T00000T  |
| 50      | M25×1.5 | M25×1.5 | 23.5    | Y307500D2T50000T  | 1½"BSPP | M20×1.5 | M20×1.5 | 10      | Y307BA2A2T00000T  |
| 50      | M25×1.5 | M25×1.5 | M25×1.5 | Y307500F2T50000T  | 1½"BSPP | M20×1.5 | M20×1.5 | 23.5    | Y307BA2D2T00000T  |
| M45×2   | 0       | 0       | 0       | Y307M45000000000T | 1½"BSPP | M20×1.5 | M20×1.5 | M25×1.5 | Y307BA2F2T00000T  |
| M45×2   | 0       | 0       | 10      | Y307M45A00000000T | 1½"BSPP | M25×1.5 | M25×1.5 | 0       | Y307BA202T50000T  |
| M45×2   | 0       | 0       | 23.5    | Y307M45D00000000T | 1½"BSPP | M25×1.5 | M25×1.5 | 10      | Y307BA2A2T50000T  |
| M45×2   | 0       | 0       | M25×1.5 | Y307M45F00000000T | 1½"BSPP | M25×1.5 | M25×1.5 | 23.5    | Y307BA2D2T50000T  |
| M45×2   | 0       | 20      | 0       | Y307M4501200000T  | 1½"BSPP | M25×1.5 | M25×1.5 | M25×1.5 | Y307BA2F2T50000T  |
| M45×2   | 0       | 20      | 10      | Y307M45A1200000T  |         |         |         |         |                   |
| M45×2   | 0       | 20      | 23.5    | Y307M45D1200000T  |         |         |         |         |                   |

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Cat11-1-125

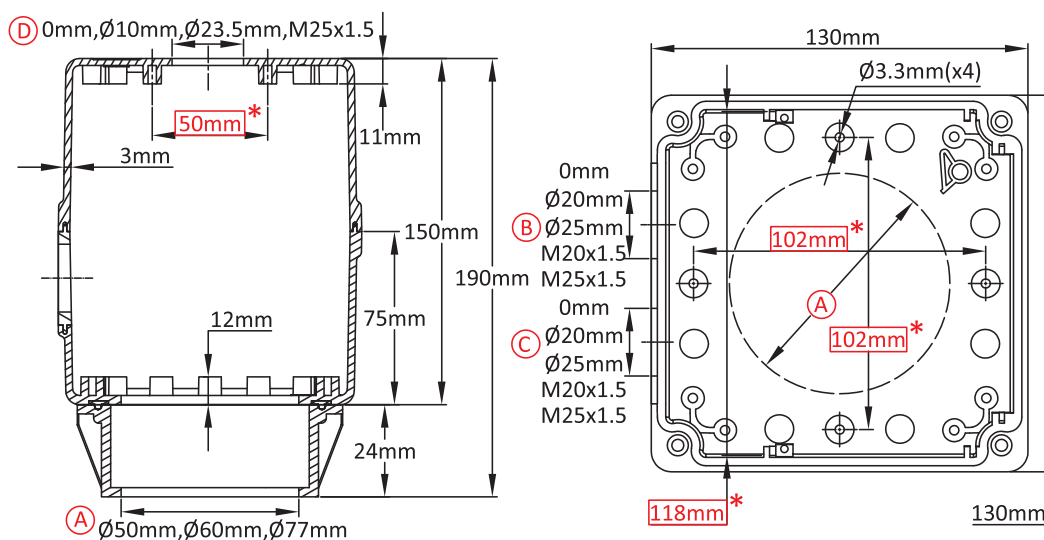
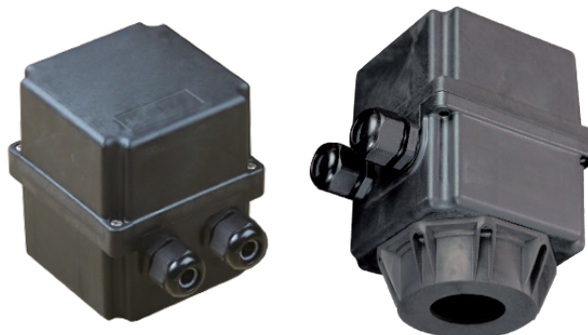




| Size(mm)               | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model                      |
|------------------------|--------------------------|-------------|------------------|-------------|----------------------------|
| <b>130 X 130 X 190</b> | <b>2836</b>              | <b>PA66</b> | <b>IP65</b>      | <b>IK10</b> | <b>Y3M1</b><br><b>(P1)</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | References       | (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | References       |
|---------|---------|---------|---------|------------------|---------|---------|---------|---------|------------------|
| 50      | 0       | 0       | 0       | Y3M15000000000T  | 50      | 20      | 20      | 10      | Y3M1500A2200000T |
| 50      | 0       | 0       | 10      | Y3M1500A0000000T | 50      | 20      | 20      | 23.5    | Y3M1500D2200000T |
| 50      | 0       | 0       | 23.5    | Y3M1500D0000000T | 50      | 20      | 20      | M25x1.5 | Y3M1500F2200000T |
| 50      | 0       | 0       | M25x1.5 | Y3M1500F0000000T | 50      | 25      | 25      | 0       | Y3M150002250000T |
| 50      | 0       | 20      | 0       | Y3M150001200000T | 50      | 25      | 25      | 10      | Y3M1500A2250000T |
| 50      | 0       | 20      | 10      | Y3M1500A1200000T | 50      | 25      | 25      | 23.5    | Y3M1500D2250000T |
| 50      | 0       | 20      | 23.5    | Y3M1500D1200000T | 50      | 25      | 25      | M25x1.5 | Y3M1500F2250000T |
| 50      | 0       | 20      | M25x1.5 | Y3M1500F1200000T | 50      | M20x1.5 | M20x1.5 | 0       | Y3M150002T00000T |
| 50      | 0       | 25      | 0       | Y3M150001250000T | 50      | M20x1.5 | M20x1.5 | 10      | Y3M1500A2T00000T |
| 50      | 0       | 25      | 10      | Y3M1500A1250000T | 50      | M20x1.5 | M20x1.5 | 23.5    | Y3M1500D2T00000T |
| 50      | 0       | 25      | 23.5    | Y3M1500D1250000T | 50      | M20x1.5 | M20x1.5 | M25x1.5 | Y3M1500F2T00000T |
| 50      | 0       | 25      | M25x1.5 | Y3M1500F1250000T | 50      | M25x1.5 | M25x1.5 | 0       | Y3M150002T50000T |
| 50      | 0       | M20x1.5 | 0       | Y3M150001T00000T | 50      | M25x1.5 | M25x1.5 | 10      | Y3M1500A2T50000T |
| 50      | 0       | M20x1.5 | 10      | Y3M1500A1T00000T | 50      | M25x1.5 | M25x1.5 | 23.5    | Y3M1500D2T50000T |
| 50      | 0       | M20x1.5 | 23.5    | Y3M1500D1T00000T | 50      | M25x1.5 | M25x1.5 | M25x1.5 | Y3M1500F2T50000T |
| 50      | 0       | M20x1.5 | M25x1.5 | Y3M1500F1T00000T | 60      | 0       | 0       | 0       | Y3M160000000000T |
| 50      | 0       | M25x1.5 | 0       | Y3M150001T50000T | 60      | 0       | 0       | 10      | Y3M1600A0000000T |
| 50      | 0       | M25x1.5 | 10      | Y3M1500A1T50000T | 60      | 0       | 0       | 23.5    | Y3M1600D0000000T |
| 50      | 0       | M25x1.5 | 23.5    | Y3M1500D1T50000T | 60      | 0       | 0       | M25x1.5 | Y3M1600F0000000T |
| 50      | 0       | M25x1.5 | M25x1.5 | Y3M1500F1T50000T | 60      | 0       | 20      | 0       | Y3M160001200000T |
| 50      | 20      | 20      | 0       | Y3M150002200000T | 60      | 0       | 20      | 10      | Y3M1600A1200000T |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

# Big size enclosure with extension, for immersion heater

**Y3M1**  
(P2)



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| A (mm) | B (mm)  | C (mm)  | D (mm)  | References       | A (mm) | B (mm)  | C (mm)  | D (mm)  | References       |
|--------|---------|---------|---------|------------------|--------|---------|---------|---------|------------------|
| 60     | 0       | 20      | 23.5    | Y3M1600D1200000T | 77     | 0       | 0       | M25×1.5 | Y3M1770F0000000T |
| 60     | 0       | 20      | M25×1.5 | Y3M1600F1200000T | 77     | 0       | 20      | 0       | Y3M177001200000T |
| 60     | 0       | 25      | 0       | Y3M160001250000T | 77     | 0       | 20      | 10      | Y3M1770A1200000T |
| 60     | 0       | 25      | 10      | Y3M1600A1250000T | 77     | 0       | 20      | 23.5    | Y3M1770D1200000T |
| 60     | 0       | 25      | 23.5    | Y3M1600D1250000T | 77     | 0       | 20      | M25×1.5 | Y3M1770F1200000T |
| 60     | 0       | 25      | M25×1.5 | Y3M1600F1250000T | 77     | 0       | 25      | 0       | Y3M177001250000T |
| 60     | 0       | M20×1.5 | 0       | Y3M160001T00000T | 77     | 0       | 25      | 10      | Y3M1770A1250000T |
| 60     | 0       | M20×1.5 | 10      | Y3M1600A1T00000T | 77     | 0       | 25      | 23.5    | Y3M1770D1250000T |
| 60     | 0       | M20×1.5 | 23.5    | Y3M1600D1T00000T | 77     | 0       | 25      | M25×1.5 | Y3M1770F1250000T |
| 60     | 0       | M20×1.5 | M25×1.5 | Y3M1600F1T00000T | 77     | 0       | M20×1.5 | 0       | Y3M177001T00000T |
| 60     | 0       | M25×1.5 | 0       | Y3M160001T50000T | 77     | 0       | M20×1.5 | 10      | Y3M1770A1T00000T |
| 60     | 0       | M25×1.5 | 10      | Y3M1600A1T50000T | 77     | 0       | M20×1.5 | 23.5    | Y3M1770D1T00000T |
| 60     | 0       | M25×1.5 | 23.5    | Y3M1600D1T50000T | 77     | 0       | M20×1.5 | M25×1.5 | Y3M1770F1T00000T |
| 60     | 0       | M25×1.5 | M25×1.5 | Y3M1600F1T50000T | 77     | 0       | M25×1.5 | 0       | Y3M177001T50000T |
| 60     | 20      | 20      | 0       | Y3M160002200000T | 77     | 0       | M25×1.5 | 10      | Y3M1770A1T50000T |
| 60     | 20      | 20      | 10      | Y3M1600A2200000T | 77     | 0       | M25×1.5 | 23.5    | Y3M1770D1T50000T |
| 60     | 20      | 20      | 23.5    | Y3M1600D2200000T | 77     | 0       | M25×1.5 | M25×1.5 | Y3M1770F1T50000T |
| 60     | 20      | 20      | M25×1.5 | Y3M1600F2200000T | 77     | 20      | 20      | 0       | Y3M177002200000T |
| 60     | 25      | 25      | 0       | Y3M160002250000T | 77     | 20      | 20      | 10      | Y3M1770A2200000T |
| 60     | 25      | 25      | 10      | Y3M1600A2250000T | 77     | 20      | 20      | 23.5    | Y3M1770D2200000T |
| 60     | 25      | 25      | 23.5    | Y3M1600D2250000T | 77     | 20      | 20      | M25×1.5 | Y3M1770F2200000T |
| 60     | 25      | 25      | M25×1.5 | Y3M1600F2250000T | 77     | 25      | 25      | 0       | Y3M177002250000T |
| 60     | M20×1.5 | M20×1.5 | 0       | Y3M160002T00000T | 77     | 25      | 25      | 10      | Y3M1770A2250000T |
| 60     | M20×1.5 | M20×1.5 | 10      | Y3M1600A2T00000T | 77     | 25      | 25      | 23.5    | Y3M1770D2250000T |
| 60     | M20×1.5 | M20×1.5 | 23.5    | Y3M1600D2T00000T | 77     | 25      | 25      | M25×1.5 | Y3M1770F2250000T |
| 60     | M20×1.5 | M20×1.5 | M25×1.5 | Y3M1600F2T00000T | 77     | M20×1.5 | M20×1.5 | 0       | Y3M177002T00000T |
| 60     | M25×1.5 | M25×1.5 | 0       | Y3M160002T50000T | 77     | M20×1.5 | M20×1.5 | 10      | Y3M1770A2T00000T |
| 60     | M25×1.5 | M25×1.5 | 10      | Y3M1600A2T50000T | 77     | M20×1.5 | M20×1.5 | 23.5    | Y3M1770D2T00000T |
| 60     | M25×1.5 | M25×1.5 | 23.5    | Y3M1600D2T50000T | 77     | M20×1.5 | M20×1.5 | M25×1.5 | Y3M1770F2T00000T |
| 60     | M25×1.5 | M25×1.5 | M25×1.5 | Y3M1600F2T50000T | 77     | M25×1.5 | M25×1.5 | 0       | Y3M177002T50000T |
| 77     | 0       | 0       | 0       | Y3M177000000000T | 77     | M25×1.5 | M25×1.5 | 10      | Y3M1770A2T50000T |
| 77     | 0       | 0       | 10      | Y3M1770A0000000T | 77     | M25×1.5 | M25×1.5 | 23.5    | Y3M1770D2T50000T |
| 77     | 0       | 0       | 23.5    | Y3M1770D0000000T | 77     | M25×1.5 | M25×1.5 | M25×1.5 | Y3M1770F2T50000T |

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Cat11-1-127

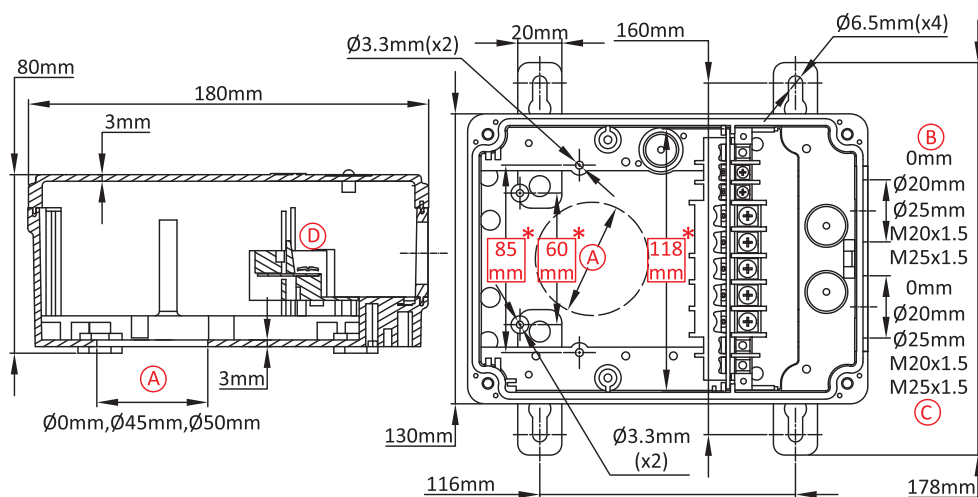
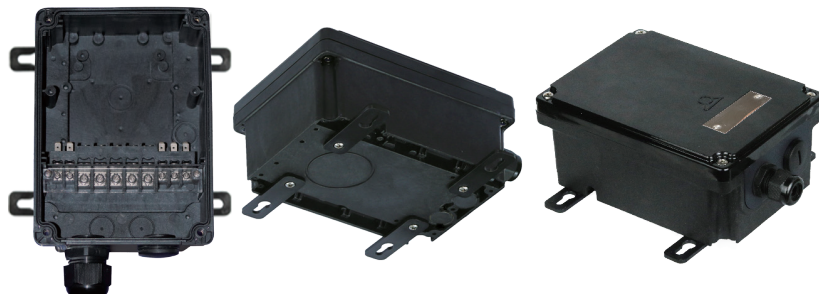
# Enclosure for controls, connection, temperature sensor, thermostat, level sensor. Removable wall mounting legs



| Size(mm)              | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model       |
|-----------------------|--------------------------|-------------|------------------|-------------|-------------|
| <b>130 X 180 X 80</b> | <b>1870</b>              | <b>PA66</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3N1</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With connection block Ⓓ | Without connection block Ⓔ | Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With connection block Ⓓ | Without connection block Ⓔ |
|-------|---------|---------|-------------------------|----------------------------|-------|---------|---------|-------------------------|----------------------------|
| 0     | 0       | 0       | Y3N1000000J100T         | Y3N10000000000T            | 45    | 20      | 20      | Y3N14500220J100T        | Y3N145002200000T           |
| 0     | 0       | 20      | Y3N10000120J100T        | Y3N100001200000T           | 45    | 25      | 25      | Y3N14500225J100T        | Y3N145002250000T           |
| 0     | 0       | 25      | Y3N10000125J100T        | Y3N100001250000T           | 45    | M20x1.5 | M20x1.5 | Y3N145002T0J100T        | Y3N145002T00000T           |
| 0     | 0       | M20x1.5 | Y3N100001T0J100T        | Y3N100001T00000T           | 45    | M25x1.5 | M25x1.5 | Y3N145002T5J100T        | Y3N145002T50000T           |
| 0     | 0       | M25x1.5 | Y3N100001T5J100T        | Y3N100001T50000T           | 50    | 0       | 0       | Y3N15000000J100T        | Y3N150000000000T           |
| 0     | 20      | 20      | Y3N10000220J100T        | Y3N100002200000T           | 50    | 0       | 20      | Y3N15000120J100T        | Y3N150001200000T           |
| 0     | 25      | 25      | Y3N10000225J100T        | Y3N100002250000T           | 50    | 0       | 25      | Y3N15000125J100T        | Y3N150001250000T           |
| 0     | M20x1.5 | M20x1.5 | Y3N100002T0J100T        | Y3N100002T00000T           | 50    | 0       | M20x1.5 | Y3N150001T0J100T        | Y3N150001T00000T           |
| 0     | M25x1.5 | M25x1.5 | Y3N100002T5J100T        | Y3N100002T50000T           | 50    | 0       | M25x1.5 | Y3N150001T5J100T        | Y3N150001T50000T           |
| 45    | 0       | 0       | Y3N14500000J100T        | Y3N145000000000T           | 50    | 20      | 20      | Y3N15000220J100T        | Y3N150002200000T           |
| 45    | 0       | 20      | Y3N14500120J100T        | Y3N145001200000T           | 50    | 25      | 25      | Y3N15000225J100T        | Y3N150002250000T           |
| 45    | 0       | 25      | Y3N14500125J100T        | Y3N145001250000T           | 50    | M20x1.5 | M20x1.5 | Y3N150002T0J100T        | Y3N150002T00000T           |
| 45    | 0       | M20x1.5 | Y3N145001T0J100T        | Y3N145001T00000T           | 50    | M25x1.5 | M25x1.5 | Y3N150002T5J100T        | Y3N150002T50000T           |
| 45    | 0       | M25x1.5 | Y3N145001T5J100T        | Y3N145001T50000T           |       |         |         |                         |                            |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

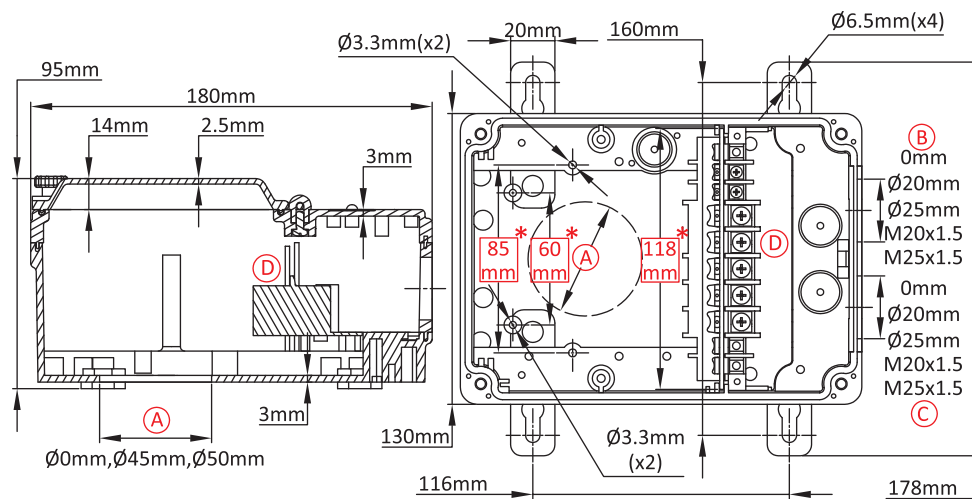
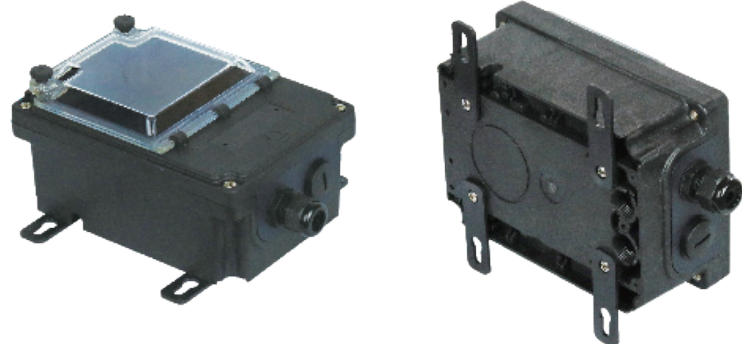


## Enclosure with window, for controls, connection, temperature sensor, thermostat, level sensor, GFCI, removable wall mounting legs

| Size(mm)       | Volume(cm <sup>3</sup> ) | Material  | Protection grade |      | Model |
|----------------|--------------------------|-----------|------------------|------|-------|
| 130 X 180 X 95 | 2010                     | PA66 + PC | IP69K            | IK10 | Y3N2  |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



### Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With con nection block Ⓓ | Without connection block Ⓔ | Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With con nection block Ⓓ | Without connection block Ⓔ |
|-------|---------|---------|--------------------------|----------------------------|-------|---------|---------|--------------------------|----------------------------|
| 0     | 0       | 0       | Y3N2000000J100T          | Y3N200000000000T           | 45    | 20      | 20      | Y3N24500220J100T         | Y3N245002200000T           |
| 0     | 0       | 20      | Y3N20000120J100T         | Y3N200001200000T           | 45    | 25      | 25      | Y3N24500225J100T         | Y3N245002250000T           |
| 0     | 0       | 25      | Y3N20000125J100T         | Y3N200001250000T           | 45    | M20x1.5 | M20x1.5 | Y3N245002T0J100T         | Y3N245002T00000T           |
| 0     | 0       | M20x1.5 | Y3N200001T0J100T         | Y3N200001T00000T           | 45    | M25x1.5 | M25x1.5 | Y3N245002T5J100T         | Y3N245002T50000T           |
| 0     | 0       | M25x1.5 | Y3N200001T5J100T         | Y3N200001T50000T           | 50    | 0       | 0       | Y3N25000000J100T         | Y3N250000000000T           |
| 0     | 20      | 20      | Y3N20000220J100T         | Y3N200002200000T           | 50    | 0       | 20      | Y3N25000120J100T         | Y3N250001200000T           |
| 0     | 25      | 25      | Y3N20000225J100T         | Y3N200002250000T           | 50    | 0       | 25      | Y3N25000125J100T         | Y3N250001250000T           |
| 0     | M20x1.5 | M20x1.5 | Y3N200002T0J100T         | Y3N200002T00000T           | 50    | 0       | M20x1.5 | Y3N250001T0J100T         | Y3N250001T00000T           |
| 0     | M25x1.5 | M25x1.5 | Y3N200002T5J100T         | Y3N200002T50000T           | 50    | 0       | M25x1.5 | Y3N250001T5J100T         | Y3N250001T50000T           |
| 45    | 0       | 0       | Y3N24500000J100T         | Y3N245000000000T           | 50    | 20      | 20      | Y3N25000220J100T         | Y3N250002200000T           |
| 45    | 0       | 20      | Y3N24500120J100T         | Y3N245001200000T           | 50    | 25      | 25      | Y3N25000225J100T         | Y3N250002250000T           |
| 45    | 0       | 25      | Y3N24500125J100T         | Y3N245001250000T           | 50    | M20x1.5 | M20x1.5 | Y3N250002T0J100T         | Y3N250002T00000T           |
| 45    | 0       | M20x1.5 | Y3N245001T0J100T         | Y3N245001T00000T           | 50    | M25x1.5 | M25x1.5 | Y3N250002T5J100T         | Y3N250002T50000T           |
| 45    | 0       | M25x1.5 | Y3N245001T5J100T         | Y3N245001T50000T           |       |         |         |                          |                            |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

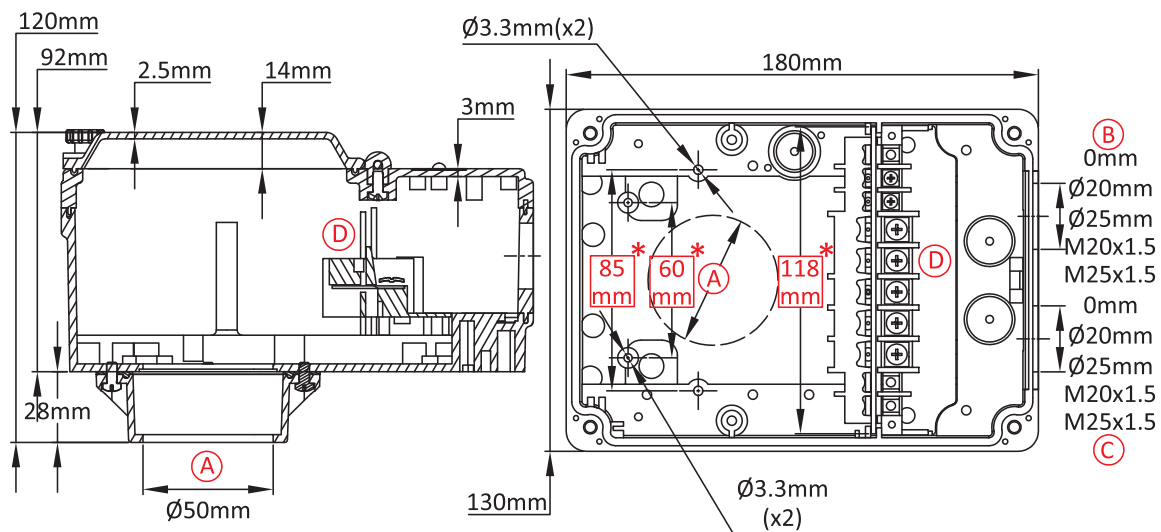
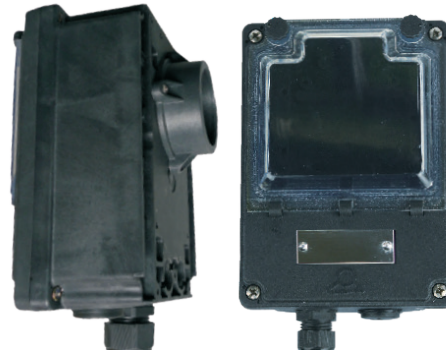


# Enclosure with window for immersion heaters, with extension. Body in PA66

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material         | Protection grade |             | Model       |
|------------------------|--------------------------|------------------|------------------|-------------|-------------|
| <b>130 X 180 X 120</b> | <b>2093</b>              | <b>PA66 + PC</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3N3</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm)   | Ⓒ(mm)   | With connection block Ⓓ | Without connection block Ⓓ |
|---------|---------|-------------------------|----------------------------|
| 0       | 0       | Y3N35000000J100T        | Y3N350000000000T           |
| 0       | 20      | Y3N35000120J100T        | Y3N350001200000T           |
| 0       | 25      | Y3N35000125J100T        | Y3N350001250000T           |
| 0       | M20x1.5 | Y3N350001T0J100T        | Y3N350001T00000T           |
| 0       | M25x1.5 | Y3N350001T5J100T        | Y3N350001T50000T           |
| 20      | 20      | Y3N35000220J100T        | Y3N350002200000T           |
| 25      | 25      | Y3N35000225J100T        | Y3N350002250000T           |
| M20x1.5 | M20x1.5 | Y3N350002T0J100T        | Y3N350002T00000T           |
| M25x1.5 | M25x1.5 | Y3N350002T5J100T        | Y3N350002T50000T           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

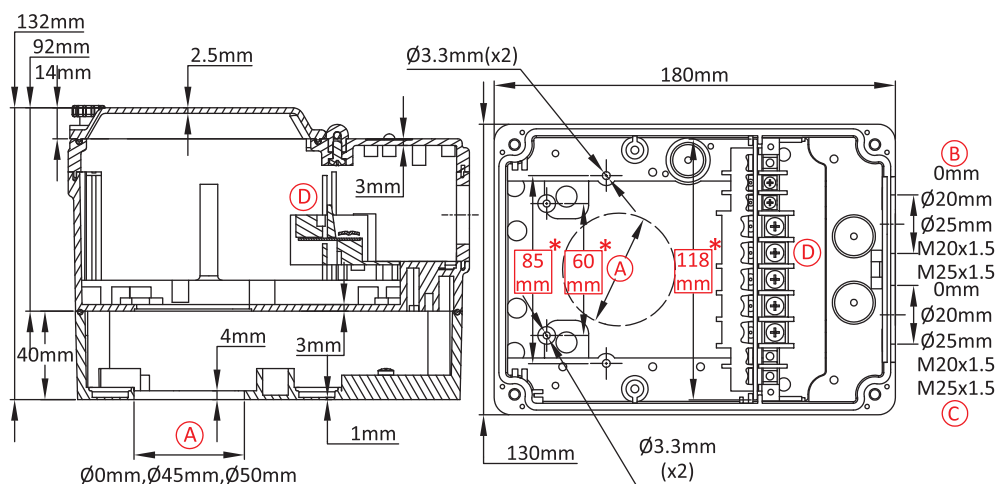
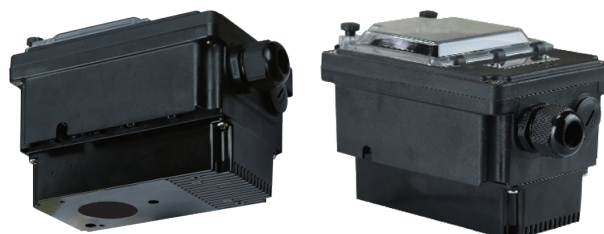


# Enclosure with window, for immersion heater with electronic temperature control with aluminum heat exchanger fins for solid state relay. PA66 + PC + Aluminum

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material                    | Protection grade |             | Model       |
|------------------------|--------------------------|-----------------------------|------------------|-------------|-------------|
| <b>130 X 180 X 132</b> | <b>2580</b>              | <b>PA66 + PC + Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3N4</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With connection block<br>Ⓓ | Without connection<br>block Ⓓ | Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | With connection block<br>Ⓓ | Without connection<br>block Ⓓ |
|-------|---------|---------|----------------------------|-------------------------------|-------|---------|---------|----------------------------|-------------------------------|
| 0     | 0       | 0       | Y3N4000000J100T            | Y3N400000000000T              | 45    | 20      | 20      | Y3N44500220J100T           | Y3N445002200000T              |
| 0     | 0       | 20      | Y3N40000120J100T           | Y3N400001200000T              | 45    | 25      | 25      | Y3N44500225J100T           | Y3N445002250000T              |
| 0     | 0       | 25      | Y3N40000125J100T           | Y3N400001250000T              | 45    | M20x1.5 | M20x1.5 | Y3N445002T0J100T           | Y3N445002T00000T              |
| 0     | 0       | M20x1.5 | Y3N400001T0J100T           | Y3N400001T00000T              | 45    | M25x1.5 | M25x1.5 | Y3N445002T5J100T           | Y3N445002T50000T              |
| 0     | 0       | M25x1.5 | Y3N400001T5J100T           | Y3N400001T50000T              | 50    | 0       | 0       | Y3N45000000J100T           | Y3N450000000000T              |
| 0     | 20      | 20      | Y3N40000220J100T           | Y3N400002200000T              | 50    | 0       | 20      | Y3N45000120J100T           | Y3N450001200000T              |
| 0     | 25      | 25      | Y3N40000225J100T           | Y3N400002250000T              | 50    | 0       | 25      | Y3N45000125J100T           | Y3N450001250000T              |
| 0     | M20x1.5 | M20x1.5 | Y3N400002T0J100T           | Y3N400002T00000T              | 50    | 0       | M20x1.5 | Y3N450001T0J100T           | Y3N450001T00000T              |
| 0     | M25x1.5 | M25x1.5 | Y3N400002T5J100T           | Y3N400002T50000T              | 50    | 0       | M25x1.5 | Y3N450001T5J100T           | Y3N450001T50000T              |
| 45    | 0       | 0       | Y3N44500000J100T           | Y3N445000000000T              | 50    | 20      | 20      | Y3N45000220J100T           | Y3N450002200000T              |
| 45    | 0       | 20      | Y3N44500120J100T           | Y3N445001200000T              | 50    | 25      | 25      | Y3N45000225J100T           | Y3N450002250000T              |
| 45    | 0       | 25      | Y3N44500125J100T           | Y3N445001250000T              | 50    | M20x1.5 | M20x1.5 | Y3N450002T0J100T           | Y3N450002T00000T              |
| 45    | 0       | M20x1.5 | Y3N445001T0J100T           | Y3N445001T00000T              | 50    | M25x1.5 | M25x1.5 | Y3N450002T5J100T           | Y3N450002T50000T              |
| 45    | 0       | M25x1.5 | Y3N445001T5J100T           | Y3N445001T50000T              |       |         |         |                            |                               |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

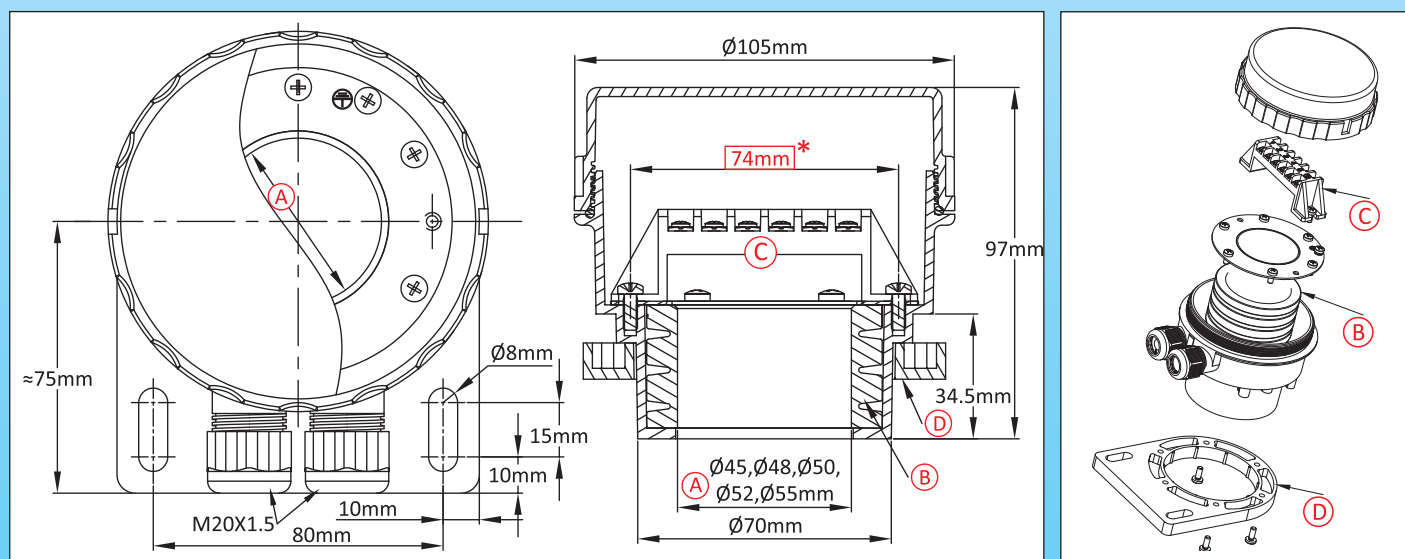
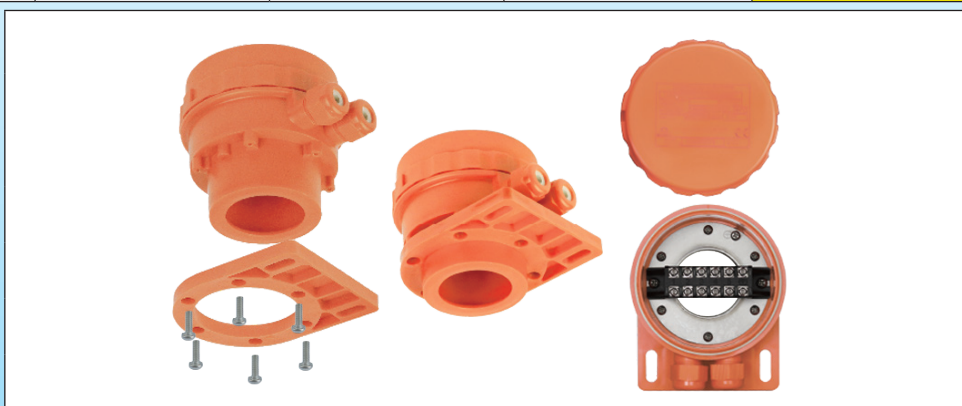
# Polypropylene immersion heater enclosure for surface treatment baths and highly corrosive environments



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material      | Protection grade |      | Model       |
|---------------|--------------------------|---------------|------------------|------|-------------|
| Dia. 105 x 95 | 663                      | Polypropylene | IP69K            | IK10 | <b>Y3C6</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ (mm) | Ⓑ        | Ⓓ | With connection block Ⓒ | Without connection block Ⓒ | Ⓐ (mm) | Ⓑ        | Ⓓ | With connection block Ⓒ | Without connection block Ⓒ |
|--------|----------|---|-------------------------|----------------------------|--------|----------|---|-------------------------|----------------------------|
| 45     | Silicone | ✓ | Y3C6450022BH40XU        | Y3C6450022B000XU           | 50     | FKM      | × | Y3C6500022BH40WU        | Y3C6500022B000WU           |
| 45     | Silicone | × | Y3C6450022BH40UU        | Y3C6450022B000UU           | 50     | NBR      | ✓ | Y3C6500022BH40YU        | Y3C6500022B000YU           |
| 45     | FKM      | ✓ | Y3C6450022BH40ZU        | Y3C6450022B000ZU           | 50     | NBR      | × | Y3C6500022BH40VU        | Y3C6500022B000VU           |
| 45     | FKM      | × | Y3C6450022BH40WU        | Y3C6450022B000WU           | 52     | Silicone | ✓ | Y3C6520022BH40XU        | Y3C6520022B000XU           |
| 45     | NBR      | ✓ | Y3C6450022BH40YU        | Y3C6450022B000YU           | 52     | Silicone | × | Y3C6520022BH40UU        | Y3C6520022B000UU           |
| 45     | NBR      | × | Y3C6450022BH40VU        | Y3C6450022B000VU           | 52     | FKM      | ✓ | Y3C6520022BH40ZU        | Y3C6520022B000ZU           |
| 48     | Silicone | ✓ | Y3C6480022BH40XU        | Y3C6480022B000XU           | 52     | FKM      | × | Y3C6520022BH40WU        | Y3C6520022B000WU           |
| 48     | Silicone | × | Y3C6480022BH40UU        | Y3C6480022B000UU           | 52     | NBR      | ✓ | Y3C6520022BH40YU        | Y3C6520022B000YU           |
| 48     | FKM      | ✓ | Y3C6480022BH40ZU        | Y3C6480022B000ZU           | 52     | NBR      | × | Y3C6520022BH40VU        | Y3C6520022B000VU           |
| 48     | FKM      | × | Y3C6480022BH40WU        | Y3C6480022B000WU           | 55     | Silicone | ✓ | Y3C6550022BH40XU        | Y3C6550022B000XU           |
| 48     | NBR      | ✓ | Y3C6480022BH40YU        | Y3C6480022B000YU           | 55     | Silicone | × | Y3C6550022BH40UU        | Y3C6550022B000UU           |
| 48     | NBR      | × | Y3C6480022BH40VU        | Y3C6480022B000VU           | 55     | FKM      | ✓ | Y3C6550022BH40ZU        | Y3C6550022B000ZU           |
| 50     | Silicone | ✓ | Y3C6500022BH40XU        | Y3C6500022B000XU           | 55     | FKM      | × | Y3C6550022BH40WU        | Y3C6550022B000WU           |
| 50     | Silicone | × | Y3C6500022BH40UU        | Y3C6500022B000UU           | 55     | NBR      | ✓ | Y3C6550022BH40YU        | Y3C6550022B000YU           |
| 50     | FKM      | ✓ | Y3C6500022BH40ZU        | Y3C6500022B000ZU           | 55     | NBR      | × | Y3C6550022BH40VU        | Y3C6550022B000VU           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

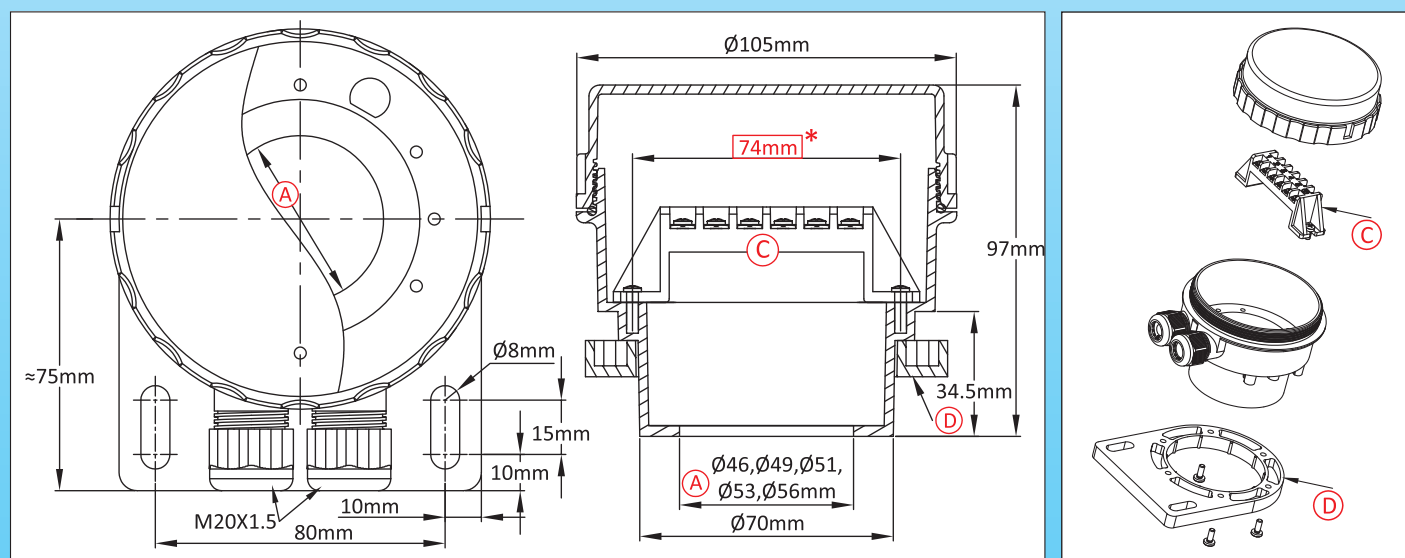
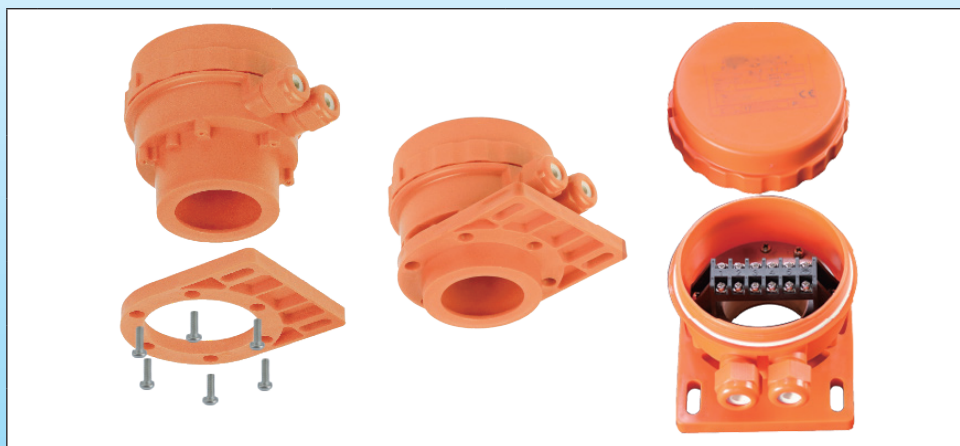
# Polypropylene immersion heater enclosure for surface treatment baths and highly corrosive, environments



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material      | Protection grade |      | Model |
|---------------|--------------------------|---------------|------------------|------|-------|
| Dia. 105 x 95 | 663                      | Polypropylene | IP69K            | IK10 | Y3C7  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ (mm) | Ⓢ | With connection block Ⓢ | Without connection block Ⓢ |
|--------|---|-------------------------|----------------------------|
| 46     | ✓ | Y3C7460022BH40TU        | Y3C7460022B000TU           |
| 46     | × | Y3C7460022BH400U        | Y3C7460022B0000U           |
| 49     | ✓ | Y3C7490022BH40TU        | Y3C7490022B000TU           |
| 49     | × | Y3C7490022BH400U        | Y3C7490022B0000U           |
| 51     | ✓ | Y3C7510022BH40TU        | Y3C7510022B000TU           |
| 51     | × | Y3C7510022BH400U        | Y3C7510022B0000U           |
| 53     | ✓ | Y3C7530022BH40TU        | Y3C7530022B000TU           |
| 53     | × | Y3C7530022BH400U        | Y3C7530022B0000U           |
| 56     | ✓ | Y3C7560022BH40TU        | Y3C7560022B000TU           |
| 56     | × | Y3C7560022BH400U        | Y3C7560022B0000U           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

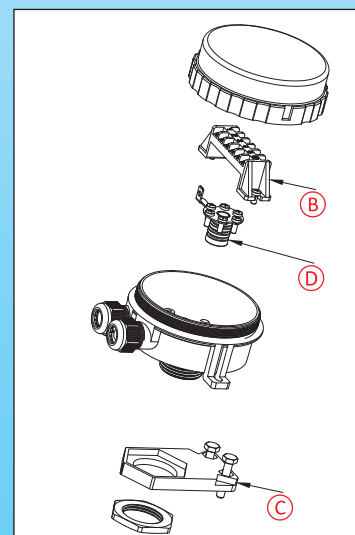
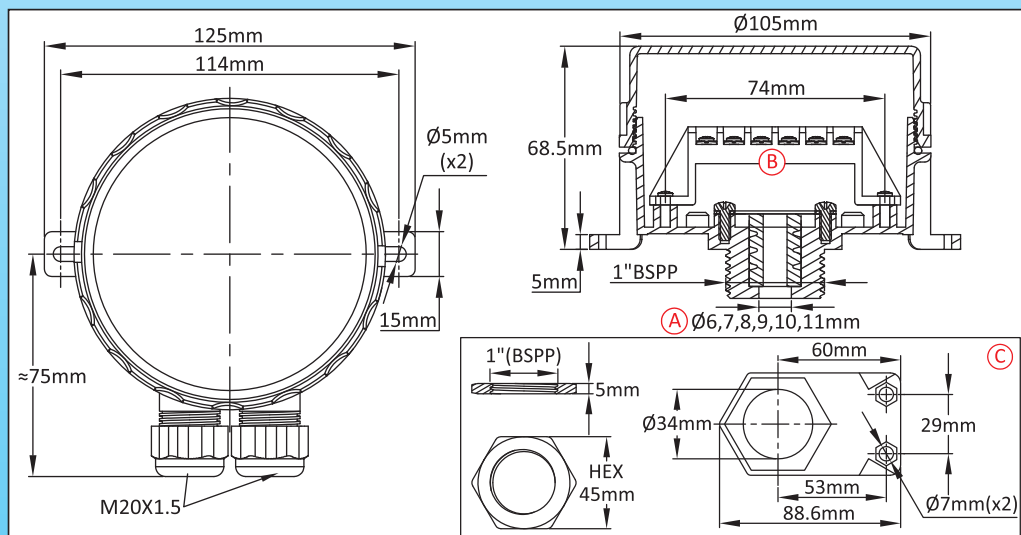
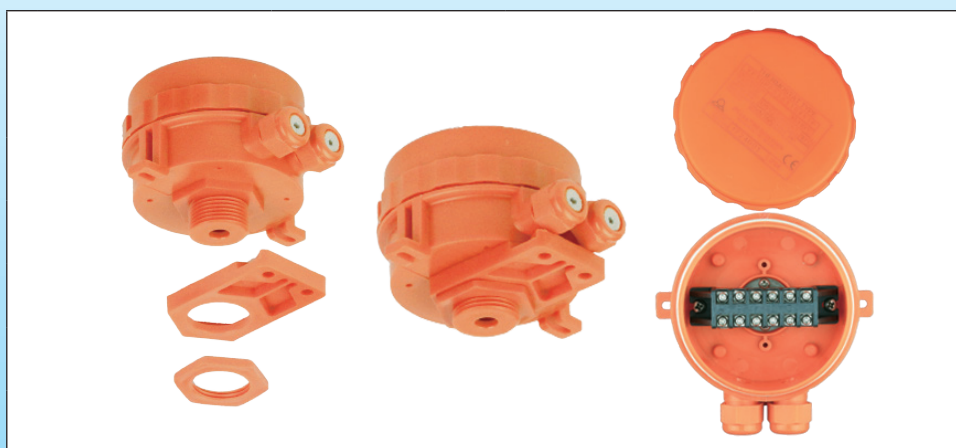
# Polypropylene temperature sensor enclosure for surface treatment baths and highly corrosive environments



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material      | Protection grade |      | Model       |
|---------------|--------------------------|---------------|------------------|------|-------------|
| Dia. 105 x 82 | 525                      | Polypropylene | IP69K            | IK10 | <b>Y3C8</b> |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☒ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ (mm) | Ⓓ        | Ⓒ | With connection block Ⓑ | Without connection block Ⓑ | Ⓐ (mm) | Ⓓ        | Ⓒ | With connection block Ⓑ | Without connection block Ⓑ |
|--------|----------|---|-------------------------|----------------------------|--------|----------|---|-------------------------|----------------------------|
| 6      | Silicone | ✓ | Y3C8060022BH40XU        | Y3C8060022B000XU           | 9      | Silicone | ✓ | Y3C8090022BH40XU        | Y3C8090022B000XU           |
| 6      | Silicone | × | Y3C8060022BH40UU        | Y3C8060022B000UU           | 9      | Silicone | × | Y3C8090022BH40UU        | Y3C8090022B000UU           |
| 6      | FKM      | ✓ | Y3C8060022BH40ZU        | Y3C8060022B000ZU           | 9      | FKM      | ✓ | Y3C8090022BH40ZU        | Y3C8090022B000ZU           |
| 6      | FKM      | × | Y3C8060022BH40WU        | Y3C8060022B000WU           | 9      | FKM      | × | Y3C8090022BH40WU        | Y3C8090022B000WU           |
| 6      | NBR      | ✓ | Y3C8060022BH40YU        | Y3C8060022B000YU           | 9      | NBR      | ✓ | Y3C8090022BH40YU        | Y3C8090022B000YU           |
| 6      | NBR      | × | Y3C8060022BH40VU        | Y3C8060022B000VU           | 9      | NBR      | × | Y3C8090022BH40VU        | Y3C8090022B000VU           |
| 7      | Silicone | ✓ | Y3C8070022BH40XU        | Y3C8070022B000XU           | 10     | Silicone | ✓ | Y3C8100022BH40XU        | Y3C8100022B000XU           |
| 7      | Silicone | × | Y3C8070022BH40UU        | Y3C8070022B000UU           | 10     | Silicone | × | Y3C8100022BH40UU        | Y3C8100022B000UU           |
| 7      | FKM      | ✓ | Y3C8070022BH40ZU        | Y3C8070022B000ZU           | 10     | FKM      | ✓ | Y3C8100022BH40ZU        | Y3C8100022B000ZU           |
| 7      | FKM      | × | Y3C8070022BH40WU        | Y3C8070022B000WU           | 10     | FKM      | × | Y3C8100022BH40WU        | Y3C8100022B000WU           |
| 7      | NBR      | ✓ | Y3C8070022BH40YU        | Y3C8070022B000YU           | 10     | NBR      | ✓ | Y3C8100022BH40YU        | Y3C8100022B000YU           |
| 7      | NBR      | × | Y3C8070022BH40VU        | Y3C8070022B000VU           | 10     | NBR      | × | Y3C8100022BH40VU        | Y3C8100022B000VU           |
| 8      | Silicone | ✓ | Y3C8080022BH40XU        | Y3C8080022B000XU           | 11     | Silicone | ✓ | Y3C8110022BH40XU        | Y3C8110022B000XU           |
| 8      | Silicone | × | Y3C8080022BH40UU        | Y3C8080022B000UU           | 11     | Silicone | × | Y3C8110022BH40UU        | Y3C8110022B000UU           |
| 8      | FKM      | ✓ | Y3C8080022BH40ZU        | Y3C8080022B000ZU           | 11     | FKM      | ✓ | Y3C8110022BH40ZU        | Y3C8110022B000ZU           |
| 8      | FKM      | × | Y3C8080022BH40WU        | Y3C8080022B000WU           | 11     | FKM      | × | Y3C8110022BH40WU        | Y3C8110022B000WU           |
| 8      | NBR      | ✓ | Y3C8080022BH40YU        | Y3C8080022B000YU           | 11     | NBR      | ✓ | Y3C8110022BH40YU        | Y3C8110022B000YU           |
| 8      | NBR      | × | Y3C8080022BH40VU        | Y3C8080022B000VU           | 11     | NBR      | × | Y3C8110022BH40VU        | Y3C8110022B000VU           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



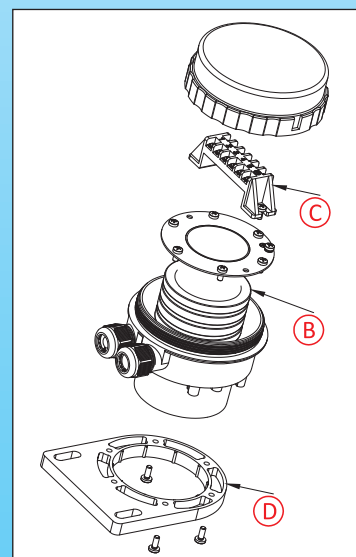
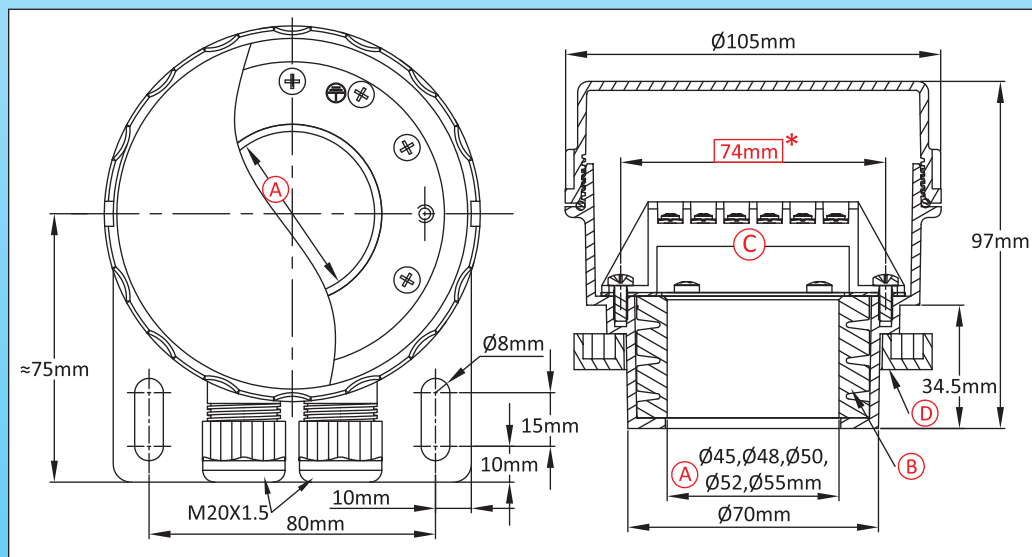
# PVDF immersion heater enclosure for surface treatment baths and highly corrosive environments

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Size(mm)             | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model       |
|----------------------|--------------------------|-------------|------------------|-------------|-------------|
| <b>Dia. 105 x 95</b> | <b>663</b>               | <b>PVDF</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3E6</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ (mm) | Ⓑ        | Ⓓ | With connection block Ⓒ | Without connection block Ⓒ | Ⓐ (mm) | Ⓑ        | Ⓓ | With connection block Ⓒ | Without connection block Ⓒ |
|--------|----------|---|-------------------------|----------------------------|--------|----------|---|-------------------------|----------------------------|
| 45     | Silicone | ✓ | Y3E6450022BH40XT        | Y3E6450022B000XT           | 50     | FKM      | × | Y3E6500022BH40WT        | Y3E6500022B000WT           |
| 45     | Silicone | × | Y3E6450022BH40UT        | Y3E6450022B000UT           | 50     | NBR      | ✓ | Y3E6500022BH40YT        | Y3E6500022B000YT           |
| 45     | FKM      | ✓ | Y3E6450022BH40ZT        | Y3E6450022B000ZT           | 50     | NBR      | × | Y3E6500022BH40VT        | Y3E6500022B000VT           |
| 45     | FKM      | × | Y3E6450022BH40WT        | Y3E6450022B000WT           | 52     | Silicone | ✓ | Y3E6520022BH40XT        | Y3E6520022B000XT           |
| 45     | NBR      | ✓ | Y3E6450022BH40YT        | Y3E6450022B000YT           | 52     | Silicone | × | Y3E6520022BH40UT        | Y3E6520022B000UT           |
| 45     | NBR      | × | Y3E6450022BH40VT        | Y3E6450022B000VT           | 52     | FKM      | ✓ | Y3E6520022BH40ZT        | Y3E6520022B000ZT           |
| 48     | Silicone | ✓ | Y3E6480022BH40XT        | Y3E6480022B000XT           | 52     | FKM      | × | Y3E6520022BH40WT        | Y3E6520022B000WT           |
| 48     | Silicone | × | Y3E6480022BH40UT        | Y3E6480022B000UT           | 52     | NBR      | ✓ | Y3E6520022BH40YT        | Y3E6520022B000YT           |
| 48     | FKM      | ✓ | Y3E6480022BH40ZT        | Y3E6480022B000ZT           | 52     | NBR      | × | Y3E6520022BH40VT        | Y3E6520022B000VT           |
| 48     | FKM      | × | Y3E6480022BH40WT        | Y3E6480022B000WT           | 55     | Silicone | ✓ | Y3E6550022BH40XT        | Y3E6550022B000XT           |
| 48     | NBR      | ✓ | Y3E6480022BH40YT        | Y3E6480022B000YT           | 55     | Silicone | × | Y3E6550022BH40UT        | Y3E6550022B000UT           |
| 48     | NBR      | × | Y3E6480022BH40VT        | Y3E6480022B000VT           | 55     | FKM      | ✓ | Y3E6550022BH40ZT        | Y3E6550022B000ZT           |
| 50     | Silicone | ✓ | Y3E6500022BH40XT        | Y3E6500022B000XT           | 55     | FKM      | × | Y3E6550022BH40WT        | Y3E6550022B000WT           |
| 50     | Silicone | × | Y3E6500022BH40UT        | Y3E6500022B000UT           | 55     | NBR      | ✓ | Y3E6550022BH40YT        | Y3E6550022B000YT           |
| 50     | FKM      | ✓ | Y3E6500022BH40ZT        | Y3E6500022B000ZT           | 55     | NBR      | × | Y3E6550022BH40VT        | Y3E6550022B000VT           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.



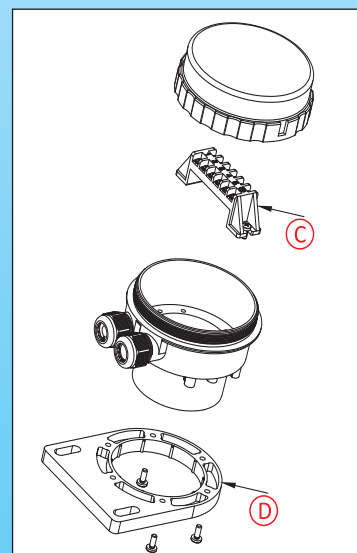
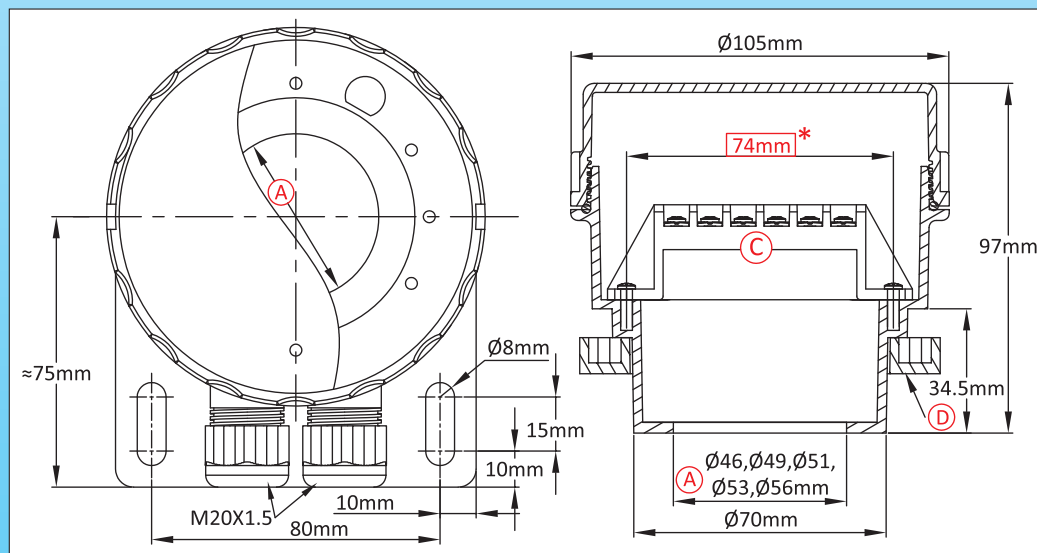
# PVDF immersion heater enclosure for surface treatment baths and highly corrosive environments



| Size(mm)      | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model       |
|---------------|--------------------------|----------|------------------|------|-------------|
| Dia. 105 x 95 | 663                      | PVDF     | IP69K            | IK10 | <b>Y3E7</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ (mm) | Ⓑ | With connection block Ⓒ | Without connection block Ⓒ |
|--------|---|-------------------------|----------------------------|
| 46     | ✓ | Y3E7460022BH40TT        | Y3E7460022B000TT           |
| 46     | × | Y3E7460022BH400T        | Y3E7460022B0000T           |
| 49     | ✓ | Y3E7490022BH40TT        | Y3E7490022B000TT           |
| 49     | × | Y3E7490022BH400T        | Y3E7490022B0000T           |
| 51     | ✓ | Y3E7510022BH40TT        | Y3E7510022B000TT           |
| 51     | × | Y3E7510022BH400T        | Y3E7510022B0000T           |
| 53     | ✓ | Y3E7530022BH40TT        | Y3E7530022B000TT           |
| 53     | × | Y3E7530022BH400T        | Y3E7530022B0000T           |
| 56     | ✓ | Y3E7560022BH40TT        | Y3E7560022B000TT           |
| 56     | × | Y3E7560022BH400T        | Y3E7560022B0000T           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.

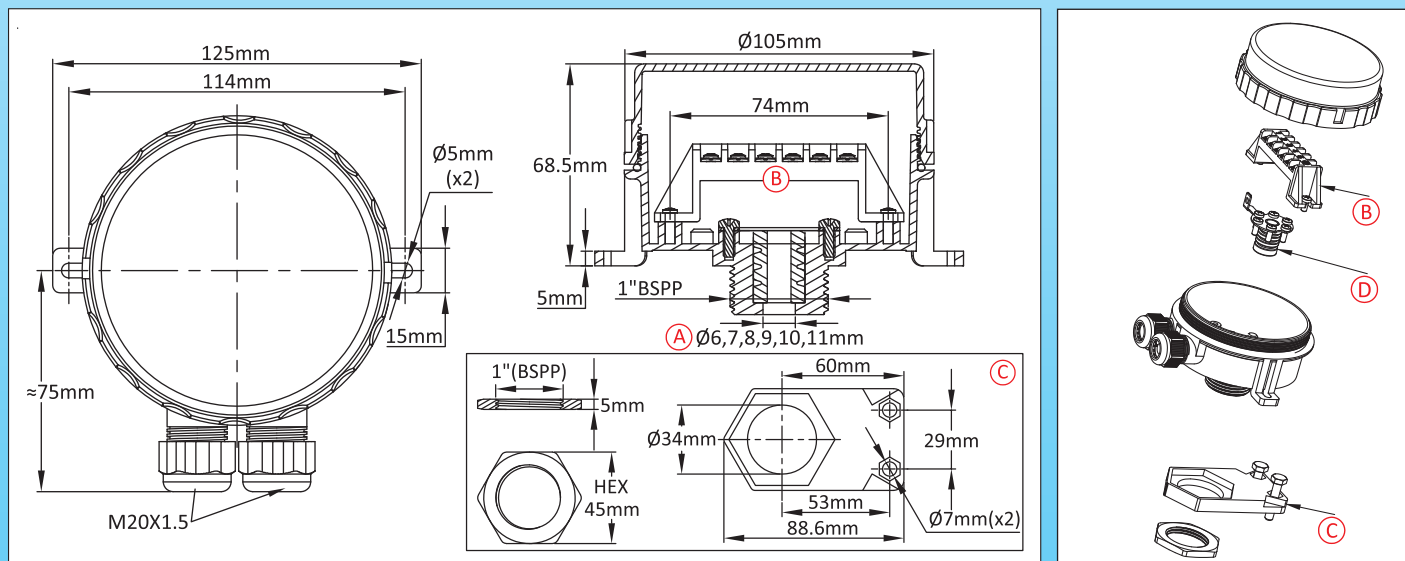
# PVDF temperature sensor enclosure for surface treatment baths and highly corrosive environments



| Size(mm)             | Volume(cm <sup>3</sup> ) | Material    | Protection grade |             | Model       |
|----------------------|--------------------------|-------------|------------------|-------------|-------------|
| <b>Dia. 105 x 82</b> | <b>525</b>               | <b>PVDF</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3E8</b> |

## Suitable for

- ☒ Temperature sensor
- ☐ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☒ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓓ        | Ⓒ | With connection block Ⓑ | Without connection block Ⓑ | Ⓐ(mm) | Ⓓ        | Ⓒ | With connection block Ⓑ | Without connection block Ⓑ |
|-------|----------|---|-------------------------|----------------------------|-------|----------|---|-------------------------|----------------------------|
| 6     | Silicone | ✓ | Y3E8060022BH40XT        | Y3E8060022B000XT           | 9     | Silicone | ✓ | Y3E8090022BH40XT        | Y3E8090022B000XT           |
| 6     | Silicone | × | Y3E8060022BH40UT        | Y3E8060022B000UT           | 9     | Silicone | × | Y3E8090022BH40UT        | Y3E8090022B000UT           |
| 6     | FKM      | ✓ | Y3E8060022BH40ZT        | Y3E8060022B000ZT           | 9     | FKM      | ✓ | Y3E8090022BH40ZT        | Y3E8090022B000ZT           |
| 6     | FKM      | × | Y3E8060022BH40WT        | Y3E8060022B000WT           | 9     | FKM      | × | Y3E8090022BH40WT        | Y3E8090022B000WT           |
| 6     | NBR      | ✓ | Y3E8060022BH40YT        | Y3E8060022B000YT           | 9     | NBR      | ✓ | Y3E8090022BH40YT        | Y3E8090022B000YT           |
| 6     | NBR      | × | Y3E8060022BH40VT        | Y3E8060022B000VT           | 9     | NBR      | × | Y3E8090022BH40VT        | Y3E8090022B000VT           |
| 7     | Silicone | ✓ | Y3E8070022BH40XT        | Y3E8070022B000XT           | 10    | Silicone | ✓ | Y3E8100022BH40XT        | Y3E8100022B000XT           |
| 7     | Silicone | × | Y3E8070022BH40UT        | Y3E8070022B000UT           | 10    | Silicone | × | Y3E8100022BH40UT        | Y3E8100022B000UT           |
| 7     | FKM      | ✓ | Y3E8070022BH40ZT        | Y3E8070022B000ZT           | 10    | FKM      | ✓ | Y3E8100022BH40ZT        | Y3E8100022B000ZT           |
| 7     | FKM      | × | Y3E8070022BH40WT        | Y3E8070022B000WT           | 10    | FKM      | × | Y3E8100022BH40WT        | Y3E8100022B000WT           |
| 7     | NBR      | ✓ | Y3E8070022BH40YT        | Y3E8070022B000YT           | 10    | NBR      | ✓ | Y3E8100022BH40YT        | Y3E8100022B000YT           |
| 7     | NBR      | × | Y3E8070022BH40VT        | Y3E8070022B000VT           | 10    | NBR      | × | Y3E8100022BH40VT        | Y3E8100022B000VT           |
| 8     | Silicone | ✓ | Y3E8080022BH40XT        | Y3E8080022B000XT           | 11    | Silicone | ✓ | Y3E8110022BH40XT        | Y3E8110022B000XT           |
| 8     | Silicone | × | Y3E8080022BH40UT        | Y3E8080022B000UT           | 11    | Silicone | × | Y3E8110022BH40UT        | Y3E8110022B000UT           |
| 8     | FKM      | ✓ | Y3E8080022BH40ZT        | Y3E8080022B000ZT           | 11    | FKM      | ✓ | Y3E8110022BH40ZT        | Y3E8110022B000ZT           |
| 8     | FKM      | × | Y3E8080022BH40WT        | Y3E8080022B000WT           | 11    | FKM      | × | Y3E8110022BH40WT        | Y3E8110022B000WT           |
| 8     | NBR      | ✓ | Y3E8080022BH40YT        | Y3E8080022B000YT           | 11    | NBR      | ✓ | Y3E8110022BH40YT        | Y3E8110022B000YT           |
| 8     | NBR      | × | Y3E8080022BH40VT        | Y3E8080022B000VT           | 11    | NBR      | × | Y3E8110022BH40VT        | Y3E8110022B000VT           |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames on drawings are used for accessories assembly.





# Aluminum enclosures

**The references given in these documents are the most common.**

**The dotted areas in the plans indicate the options.**

These enclosures are in pressure die cast aluminum. Depending of models, covers can be in aluminum, polycarbonate or fiberglass reinforced PA 6.6.

In standard, screws and fasteners are stainless steel.

In standard, gaskets are in silicone. They can be supplied in NBR or FKM (Viton) on request.

**Red dimensions inside rectangular frames on drawings are used for accessories assembly.**

For more information consult our technical service.



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



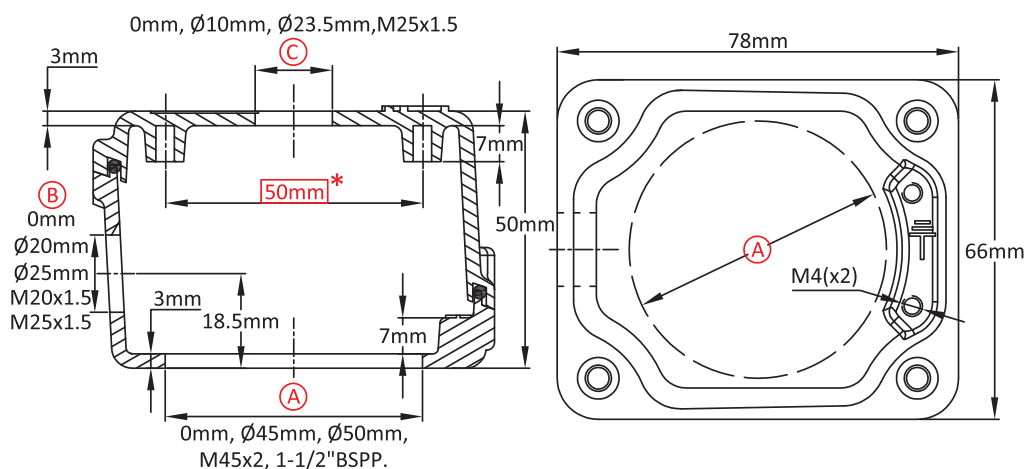


## Miniature enclosure for immersion heater, level sensor or temperature sensor

| Size(mm)            | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model                      |
|---------------------|--------------------------|-----------------|------------------|-------------|----------------------------|
| <b>78 x 66 x 50</b> | <b>210</b>               | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y303</b><br><b>(P1)</b> |

### Suitable for

- ☒ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☒ Level sensor
- ☒ Electronic board



### Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y303000000000007 | Y30300000000000G | 0           | M20x1.5     | 0           | Y30300001T000007 | Y30300001T00000G |
| 0           | 0           | 10          | Y303000A00000007 | Y303000A0000000G | 0           | M20x1.5     | 10          | Y303000A1T000007 | Y303000A1T00000G |
| 0           | 0           | 23.5        | Y303000D00000007 | Y303000D0000000G | 0           | M20x1.5     | 23.5        | Y303000D1T000007 | Y303000D1T00000G |
| 0           | 0           | M25x1.5     | Y303000F00000007 | Y303000F0000000G | 0           | M20x1.5     | M25x1.5     | Y303000F1T000007 | Y303000F1T00000G |
| 0           | 20          | 0           | Y303000012000007 | Y30300001200000G | 0           | M25x1.5     | 0           | Y30300001T500007 | Y30300001T50000G |
| 0           | 20          | 10          | Y303000A12000007 | Y303000A1200000G | 0           | M25x1.5     | 10          | Y303000A1T500007 | Y303000A1T50000G |
| 0           | 20          | 23.5        | Y303000D12000007 | Y303000D1200000G | 0           | M25x1.5     | 23.5        | Y303000D1T500007 | Y303000D1T50000G |
| 0           | 20          | M25x1.5     | Y303000F12000007 | Y303000F1200000G | 0           | M25x1.5     | M25x1.5     | Y303000F1T500007 | Y303000F1T50000G |
| 0           | 25          | 0           | Y303000012500007 | Y30300001250000G | 45          | 0           | 0           | Y303450000000007 | Y30345000000000G |
| 0           | 25          | 10          | Y303000A12500007 | Y303000A1250000G | 45          | 0           | 10          | Y303450A00000007 | Y303450A0000000G |
| 0           | 25          | 23.5        | Y303000D12500007 | Y303000D1250000G | 45          | 0           | 23.5        | Y303450D00000007 | Y303450D0000000G |
| 0           | 25          | M25x1.5     | Y303000F12500007 | Y303000F1250000G | 45          | 0           | M25x1.5     | Y303450F00000007 | Y303450F0000000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Miniature enclosure for immersion heater, level sensor or temperature sensor

**Y303**  
(P2)



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           |
|-------------|-------------|-------------|-------------------|-------------------|-------------|-------------|-------------|-------------------|-------------------|
| 45          | 20          | 0           | Y303450012000007  | Y30345001200000G  | M45×2       | 0           | 23.5        | Y303M45D000000007 | Y303M45D00000000G |
| 45          | 20          | 10          | Y303450A12000007  | Y303450A1200000G  | M45×2       | 0           | M25×1.5     | Y303M45F000000007 | Y303M45F00000000G |
| 45          | 20          | 23.5        | Y303450D12000007  | Y303450D1200000G  | M45×2       | 20          | 0           | Y303M45012000007  | Y303M4501200000G  |
| 45          | 20          | M25×1.5     | Y303450F12000007  | Y303450F1200000G  | M45×2       | 20          | 10          | Y303M45A12000007  | Y303M45A1200000G  |
| 45          | 25          | 0           | Y303450012500007  | Y30345001250000G  | M45×2       | 20          | 23.5        | Y303M45D12000007  | Y303M45D1200000G  |
| 45          | 25          | 10          | Y303450A12500007  | Y303450A1250000G  | M45×2       | 20          | M25×1.5     | Y303M45F12000007  | Y303M45F1200000G  |
| 45          | 25          | 23.5        | Y303450D12500007  | Y303450D1250000G  | M45×2       | 25          | 0           | Y303M45012500007  | Y303M4501250000G  |
| 45          | 25          | M25×1.5     | Y303450F12500007  | Y303450F1250000G  | M45×2       | 25          | 10          | Y303M45A12500007  | Y303M45A1250000G  |
| 45          | M20×1.5     | 0           | Y30345001T000007  | Y30345001T00000G  | M45×2       | 25          | 23.5        | Y303M45D12500007  | Y303M45D1250000G  |
| 45          | M20×1.5     | 10          | Y303450A1T000007  | Y303450A1T00000G  | M45×2       | 25          | M25×1.5     | Y303M45F12500007  | Y303M45F1250000G  |
| 45          | M20×1.5     | 23.5        | Y303450D1T000007  | Y303450D1T00000G  | M45×2       | M20×1.5     | 0           | Y303M4501T000007  | Y303M4501T00000G  |
| 45          | M20×1.5     | M25×1.5     | Y303450F1T000007  | Y303450F1T00000G  | M45×2       | M20×1.5     | 10          | Y303M45A1T000007  | Y303M45A1T00000G  |
| 45          | M25×1.5     | 0           | Y30345001T500007  | Y30345001T50000G  | M45×2       | M20×1.5     | 23.5        | Y303M45D1T000007  | Y303M45D1T00000G  |
| 45          | M25×1.5     | 10          | Y303450A1T500007  | Y303450A1T50000G  | M45×2       | M20×1.5     | M25×1.5     | Y303M45F1T000007  | Y303M45F1T00000G  |
| 45          | M25×1.5     | 23.5        | Y303450D1T500007  | Y303450D1T50000G  | M45×2       | M25×1.5     | 0           | Y303M4501T500007  | Y303M4501T50000G  |
| 45          | M25×1.5     | M25×1.5     | Y303450F1T500007  | Y303450F1T50000G  | M45×2       | M25×1.5     | 10          | Y303M45A1T500007  | Y303M45A1T50000G  |
| 50          | 0           | 0           | Y303500000000007  | Y30350000000000G  | M45×2       | M25×1.5     | 23.5        | Y303M45D1T500007  | Y303M45D1T50000G  |
| 50          | 0           | 10          | Y303500A000000007 | Y303500A00000000G | M45×2       | M25×1.5     | M25×1.5     | Y303M45F1T500007  | Y303M45F1T50000G  |
| 50          | 0           | 23.5        | Y303500D000000007 | Y303500D00000000G | 1½" BSPP    | 0           | 0           | Y303BA2000000007  | Y303BA200000000G  |
| 50          | 0           | M25×1.5     | Y303500F000000007 | Y303500F00000000G | 1½" BSPP    | 0           | 10          | Y303BA2A000000007 | Y303BA2A00000000G |
| 50          | 20          | 0           | Y303500012000007  | Y30350001200000G  | 1½" BSPP    | 0           | 23.5        | Y303BA2D000000007 | Y303BA2D00000000G |
| 50          | 20          | 10          | Y303500A12000007  | Y303500A1200000G  | 1½" BSPP    | 0           | M25×1.5     | Y303BA2F000000007 | Y303BA2F00000000G |
| 50          | 20          | 23.5        | Y303500D12000007  | Y303500D1200000G  | 1½" BSPP    | 20          | 0           | Y303BA2012000007  | Y303BA201200000G  |
| 50          | 20          | M25×1.5     | Y303500F12000007  | Y303500F1200000G  | 1½" BSPP    | 20          | 10          | Y303BA2A12000007  | Y303BA2A1200000G  |
| 50          | 25          | 0           | Y303500012500007  | Y30350001250000G  | 1½" BSPP    | 20          | 23.5        | Y303BA2D12000007  | Y303BA2D1200000G  |
| 50          | 25          | 10          | Y303500A12500007  | Y303500A1250000G  | 1½" BSPP    | 20          | M25×1.5     | Y303BA2F12000007  | Y303BA2F1200000G  |
| 50          | 25          | 23.5        | Y303500D12500007  | Y303500D1250000G  | 1½" BSPP    | 25          | 0           | Y303BA2012500007  | Y303BA201250000G  |
| 50          | 25          | M25×1.5     | Y303500F12500007  | Y303500F1250000G  | 1½" BSPP    | 25          | 10          | Y303BA2A12500007  | Y303BA2A1250000G  |
| 50          | M20×1.5     | 0           | Y30350001T000007  | Y30350001T00000G  | 1½" BSPP    | 25          | 23.5        | Y303BA2D12500007  | Y303BA2D1250000G  |
| 50          | M20×1.5     | 10          | Y303500A1T000007  | Y303500A1T00000G  | 1½" BSPP    | 25          | M25×1.5     | Y303BA2F12500007  | Y303BA2F1250000G  |
| 50          | M20×1.5     | 23.5        | Y303500D1T000007  | Y303500D1T00000G  | 1½" BSPP    | M20×1.5     | 0           | Y303BA201T000007  | Y303BA201T00000G  |
| 50          | M20×1.5     | M25×1.5     | Y303500F1T000007  | Y303500F1T00000G  | 1½" BSPP    | M20×1.5     | 10          | Y303BA2A1T000007  | Y303BA2A1T00000G  |
| 50          | M25×1.5     | 0           | Y30350001T500007  | Y30350001T50000G  | 1½" BSPP    | M20×1.5     | 23.5        | Y303BA2D1T000007  | Y303BA2D1T00000G  |
| 50          | M25×1.5     | 10          | Y303500A1T500007  | Y303500A1T50000G  | 1½" BSPP    | M20×1.5     | M25×1.5     | Y303BA2F1T000007  | Y303BA2F1T00000G  |
| 50          | M25×1.5     | 23.5        | Y303500D1T500007  | Y303500D1T50000G  | 1½" BSPP    | M25×1.5     | 0           | Y303BA201T500007  | Y303BA201T50000G  |
| 50          | M25×1.5     | M25×1.5     | Y303500F1T500007  | Y303500F1T50000G  | 1½" BSPP    | M25×1.5     | 10          | Y303BA2A1T500007  | Y303BA2A1T50000G  |
| M45×2       | 0           | 0           | Y303M45000000007  | Y303M4500000000G  | 1½" BSPP    | M25×1.5     | 23.5        | Y303BA2D1T500007  | Y303BA2D1T50000G  |
| M45×2       | 0           | 10          | Y303M45A000000007 | Y303M45A00000000G | 1½" BSPP    | M25×1.5     | M25×1.5     | Y303BA2F1T500007  | Y303BA2F1T50000G  |

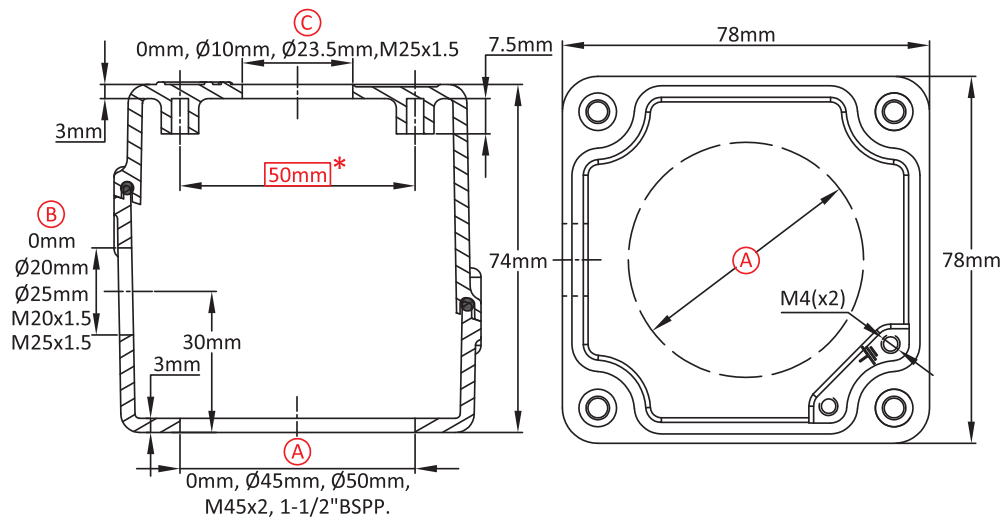


## Enclosure for immersion heater, level sensor or temperature sensor

| Size(mm)            | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model                      |
|---------------------|--------------------------|-----------------|------------------|-------------|----------------------------|
| <b>78 x 78 x 74</b> | <b>410</b>               | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y304</b><br><b>(P1)</b> |

### Suitable for

- ☒ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☒ Level sensor
- ☒ Electronic board



### Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|-------------------|-------------------|
| 0           | 0           | 0           | Y304000000000007 | Y30400000000000G | 0           | M20x1.5     | 0           | Y30400001T000007  | Y30400001T00000G  |
| 0           | 0           | 10          | Y304000A00000007 | Y304000A0000000G | 0           | M20x1.5     | 10          | Y304000A1T000007  | Y304000A1T00000G  |
| 0           | 0           | 23.5        | Y304000D00000007 | Y304000D0000000G | 0           | M20x1.5     | 23.5        | Y304000D1T000007  | Y304000D1T00000G  |
| 0           | 0           | M25x1.5     | Y304000F00000007 | Y304000F0000000G | 0           | M20x1.5     | M25x1.5     | Y304000F1T000007  | Y304000F1T00000G  |
| 0           | 20          | 0           | Y304000012000007 | Y30400001200000G | 0           | M25x1.5     | 0           | Y30400001T500007  | Y30400001T50000G  |
| 0           | 20          | 10          | Y304000A12000007 | Y304000A1200000G | 0           | M25x1.5     | 10          | Y304000A1T500007  | Y304000A1T50000G  |
| 0           | 20          | 23.5        | Y304000D12000007 | Y304000D1200000G | 0           | M25x1.5     | 23.5        | Y304000D1T500007  | Y304000D1T50000G  |
| 0           | 20          | M25x1.5     | Y304000F12000007 | Y304000F1200000G | 0           | M25x1.5     | M25x1.5     | Y304000F1T500007  | Y304000F1T50000G  |
| 0           | 25          | 0           | Y304000012500007 | Y30400001250000G | 45          | 0           | 0           | Y3044500000000007 | Y304450000000000G |
| 0           | 25          | 10          | Y304000A12500007 | Y304000A1250000G | 45          | 0           | 10          | Y304450A000000007 | Y304450A00000000G |
| 0           | 25          | 23.5        | Y304000D12500007 | Y304000D1250000G | 45          | 0           | 23.5        | Y304450D000000007 | Y304450D00000000G |
| 0           | 25          | M25x1.5     | Y304000F12500007 | Y304000F1250000G | 45          | 0           | M25x1.5     | Y304450F000000007 | Y304450F00000000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

Contact us

[www.ultimheat.com](http://www.ultimheat.com)

Cat11-1-143

# Enclosure for immersion heater, level sensor or temperature sensor

**Y304**  
(P2)



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           |
|-------------|-------------|-------------|-------------------|-------------------|-------------|-------------|-------------|-------------------|-------------------|
| 45          | 20          | 0           | Y304450012000007  | Y30445001200000G  | M45x2       | 0           | 23.5        | Y304M45D000000007 | Y304M45D00000000G |
| 45          | 20          | 10          | Y304450A12000007  | Y304450A1200000G  | M45x2       | 0           | M25x1.5     | Y304M45F000000007 | Y304M45F00000000G |
| 45          | 20          | 23.5        | Y304450D12000007  | Y304450D1200000G  | M45x2       | 20          | 0           | Y304M45012000007  | Y304M4501200000G  |
| 45          | 20          | M25x1.5     | Y304450F12000007  | Y304450F1200000G  | M45x2       | 20          | 10          | Y304M45A12000007  | Y304M45A1200000G  |
| 45          | 25          | 0           | Y304450012500007  | Y30445001250000G  | M45x2       | 20          | 23.5        | Y304M45D12000007  | Y304M45D1200000G  |
| 45          | 25          | 10          | Y304450A12500007  | Y304450A1250000G  | M45x2       | 20          | M25x1.5     | Y304M45F12000007  | Y304M45F1200000G  |
| 45          | 25          | 23.5        | Y304450D12500007  | Y304450D1250000G  | M45x2       | 25          | 0           | Y304M45012500007  | Y304M4501250000G  |
| 45          | 25          | M25x1.5     | Y304450F12500007  | Y304450F1250000G  | M45x2       | 25          | 10          | Y304M45A12500007  | Y304M45A1250000G  |
| 45          | M20x1.5     | 0           | Y30445001T000007  | Y30445001T00000G  | M45x2       | 25          | 23.5        | Y304M45D12500007  | Y304M45D1250000G  |
| 45          | M20x1.5     | 10          | Y304450A1T000007  | Y304450A1T00000G  | M45x2       | 25          | M25x1.5     | Y304M45F12500007  | Y304M45F1250000G  |
| 45          | M20x1.5     | 23.5        | Y304450D1T000007  | Y304450D1T00000G  | M45x2       | M20x1.5     | 0           | Y304M4501T000007  | Y304M4501T00000G  |
| 45          | M20x1.5     | M25x1.5     | Y304450F1T000007  | Y304450F1T00000G  | M45x2       | M20x1.5     | 10          | Y304M45A1T000007  | Y304M45A1T00000G  |
| 45          | M25x1.5     | 0           | Y30445001T500007  | Y30445001T50000G  | M45x2       | M20x1.5     | 23.5        | Y304M45D1T000007  | Y304M45D1T00000G  |
| 45          | M25x1.5     | 10          | Y304450A1T500007  | Y304450A1T50000G  | M45x2       | M20x1.5     | M25x1.5     | Y304M45F1T000007  | Y304M45F1T00000G  |
| 45          | M25x1.5     | 23.5        | Y304450D1T500007  | Y304450D1T50000G  | M45x2       | M25x1.5     | 0           | Y304M4501T500007  | Y304M4501T50000G  |
| 45          | M25x1.5     | M25x1.5     | Y304450F1T500007  | Y304450F1T50000G  | M45x2       | M25x1.5     | 10          | Y304M45A1T500007  | Y304M45A1T50000G  |
| 50          | 0           | 0           | Y304500000000007  | Y30450000000000G  | M45x2       | M25x1.5     | 23.5        | Y304M45D1T500007  | Y304M45D1T50000G  |
| 50          | 0           | 10          | Y304500A000000007 | Y304500A00000000G | M45x2       | M25x1.5     | M25x1.5     | Y304M45F1T500007  | Y304M45F1T50000G  |
| 50          | 0           | 23.5        | Y304500D000000007 | Y304500D00000000G | 1½" BSPP    | 0           | 0           | Y304BA2000000007  | Y304BA200000000G  |
| 50          | 0           | M25x1.5     | Y304500F000000007 | Y304500F00000000G | 1½" BSPP    | 0           | 10          | Y304BA2A000000007 | Y304BA2A00000000G |
| 50          | 20          | 0           | Y304500012000007  | Y30450001200000G  | 1½" BSPP    | 0           | 23.5        | Y304BA2D000000007 | Y304BA2D00000000G |
| 50          | 20          | 10          | Y304500A12000007  | Y304500A1200000G  | 1½" BSPP    | 0           | M25x1.5     | Y304BA2F000000007 | Y304BA2F00000000G |
| 50          | 20          | 23.5        | Y304500D12000007  | Y304500D1200000G  | 1½" BSPP    | 20          | 0           | Y304BA2012000007  | Y304BA201200000G  |
| 50          | 20          | M25x1.5     | Y304500F12000007  | Y304500F1200000G  | 1½" BSPP    | 20          | 10          | Y304BA2A12000007  | Y304BA2A1200000G  |
| 50          | 25          | 0           | Y304500012500007  | Y30450001250000G  | 1½" BSPP    | 20          | 23.5        | Y304BA2D12000007  | Y304BA2D1200000G  |
| 50          | 25          | 10          | Y304500A12500007  | Y304500A1250000G  | 1½" BSPP    | 20          | M25x1.5     | Y304BA2F12000007  | Y304BA2F1200000G  |
| 50          | 25          | 23.5        | Y304500D12500007  | Y304500D1250000G  | 1½" BSPP    | 25          | 0           | Y304BA2012500007  | Y304BA201250000G  |
| 50          | 25          | M25x1.5     | Y304500F12500007  | Y304500F1250000G  | 1½" BSPP    | 25          | 10          | Y304BA2A12500007  | Y304BA2A1250000G  |
| 50          | M20x1.5     | 0           | Y30450001T000007  | Y30450001T00000G  | 1½" BSPP    | 25          | 23.5        | Y304BA2D12500007  | Y304BA2D1250000G  |
| 50          | M20x1.5     | 10          | Y304500A1T000007  | Y304500A1T00000G  | 1½" BSPP    | 25          | M25x1.5     | Y304BA2F12500007  | Y304BA2F1250000G  |
| 50          | M20x1.5     | 23.5        | Y304500D1T000007  | Y304500D1T00000G  | 1½" BSPP    | M20x1.5     | 0           | Y304BA201T000007  | Y304BA201T00000G  |
| 50          | M20x1.5     | M25x1.5     | Y304500F1T000007  | Y304500F1T00000G  | 1½" BSPP    | M20x1.5     | 10          | Y304BA2A1T000007  | Y304BA2A1T00000G  |
| 50          | M25x1.5     | 0           | Y30450001T500007  | Y30450001T50000G  | 1½" BSPP    | M20x1.5     | 23.5        | Y304BA2D1T000007  | Y304BA2D1T00000G  |
| 50          | M25x1.5     | 10          | Y304500A1T500007  | Y304500A1T50000G  | 1½" BSPP    | M20x1.5     | M25x1.5     | Y304BA2F1T000007  | Y304BA2F1T00000G  |
| 50          | M25x1.5     | 23.5        | Y304500D1T500007  | Y304500D1T50000G  | 1½" BSPP    | M25x1.5     | 0           | Y304BA201T500007  | Y304BA201T50000G  |
| 50          | M25x1.5     | M25x1.5     | Y304500F1T500007  | Y304500F1T50000G  | 1½" BSPP    | M25x1.5     | 10          | Y304BA2A1T500007  | Y304BA2A1T50000G  |
| M45x2       | 0           | 0           | Y304M450000000007 | Y304M45000000000G | 1½" BSPP    | M25x1.5     | 23.5        | Y304BA2D1T500007  | Y304BA2D1T50000G  |
| M45x2       | 0           | 10          | Y304M45A000000007 | Y304M45A00000000G | 1½" BSPP    | M25x1.5     | M25x1.5     | Y304BA2F1T500007  | Y304BA2F1T50000G  |

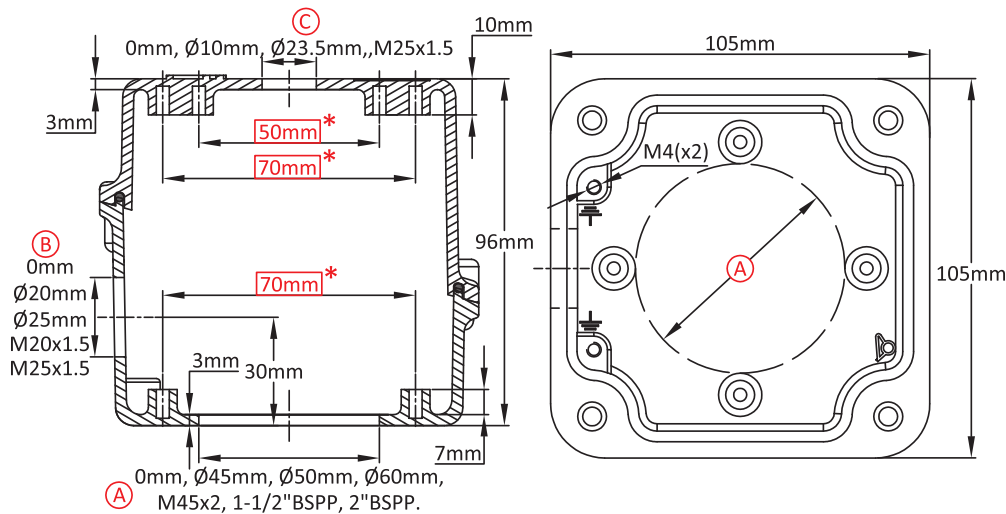


## Enclosure for immersion heater

| Size(mm)              | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model                      |
|-----------------------|--------------------------|-----------------|------------------|-------------|----------------------------|
| <b>105 x 105 x 96</b> | <b>858</b>               | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y305</b><br><b>(P1)</b> |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



### Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y305000000000007 | Y30500000000000G | 0           | M25x1.5     | 0           | Y30500001T500007 | Y30500001T50000G |
| 0           | 0           | 10          | Y305000A00000007 | Y305000A0000000G | 0           | M25x1.5     | 10          | Y305000A1T500007 | Y305000A1T50000G |
| 0           | 0           | 23.5        | Y305000D00000007 | Y305000D0000000G | 0           | M25x1.5     | 23.5        | Y305000D1T500007 | Y305000D1T50000G |
| 0           | 0           | M25x1.5     | Y305000F00000007 | Y305000F0000000G | 0           | M25x1.5     | M25x1.5     | Y305000F1T500007 | Y305000F1T50000G |
| 0           | 20          | 0           | Y305000012000007 | Y30500001200000G | 45          | 0           | 0           | Y305450000000007 | Y30545000000000G |
| 0           | 20          | 10          | Y305000A12000007 | Y305000A1200000G | 45          | 0           | 10          | Y305450A00000007 | Y305450A0000000G |
| 0           | 20          | 23.5        | Y305000D12000007 | Y305000D1200000G | 45          | 0           | 23.5        | Y305450D00000007 | Y305450D0000000G |
| 0           | 20          | M25x1.5     | Y305000F12000007 | Y305000F1200000G | 45          | 0           | M25x1.5     | Y305450F00000007 | Y305450F0000000G |
| 0           | 25          | 0           | Y305000012500007 | Y30500001250000G | 45          | 20          | 0           | Y305450012000007 | Y30545001200000G |
| 0           | 25          | 10          | Y305000A12500007 | Y305000A1250000G | 45          | 20          | 10          | Y305450A12000007 | Y305450A1200000G |
| 0           | 25          | 23.5        | Y305000D12500007 | Y305000D1250000G | 45          | 20          | 23.5        | Y305450D12000007 | Y305450D1200000G |
| 0           | 25          | M25x1.5     | Y305000F12500007 | Y305000F1250000G | 45          | 20          | M25x1.5     | Y305450F12000007 | Y305450F1200000G |
| 0           | M20x1.5     | 0           | Y30500001T000007 | Y30500001T00000G | 45          | 25          | 0           | Y305450012500007 | Y30545001250000G |
| 0           | M20x1.5     | 10          | Y305000A1T000007 | Y305000A1T00000G | 45          | 25          | 10          | Y305450A12500007 | Y305450A1250000G |
| 0           | M20x1.5     | 23.5        | Y305000D1T000007 | Y305000D1T00000G | 45          | 25          | 23.5        | Y305450D12500007 | Y305450D1250000G |
| 0           | M20x1.5     | M25x1.5     | Y305000F1T000007 | Y305000F1T00000G | 45          | 25          | M25x1.5     | Y305450F12500007 | Y305450F1250000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

Contact us

[www.ultimheat.com](http://www.ultimheat.com)

Cat11-1-145



# Enclosure for immersion heater

**Y305**  
(P2)



| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           |
|-------------|-------------|-------------|-------------------|-------------------|-------------|-------------|-------------|-------------------|-------------------|
| 45          | M20×1.5     | 0           | Y30545001T000007  | Y30545001T00000G  | M45×2       | 20          | 23.5        | Y305M45D12000007  | Y305M45D1200000G  |
| 45          | M20×1.5     | 10          | Y305450A1T000007  | Y305450A1T00000G  | M45×2       | 20          | M25×1.5     | Y305M45F12000007  | Y305M45F1200000G  |
| 45          | M20×1.5     | 23.5        | Y305450D1T000007  | Y305450D1T00000G  | M45×2       | 25          | 0           | Y305M45012500007  | Y305M4501250000G  |
| 45          | M20×1.5     | M25×1.5     | Y305450F1T000007  | Y305450F1T00000G  | M45×2       | 25          | 10          | Y305M45A12500007  | Y305M45A1250000G  |
| 45          | M25×1.5     | 0           | Y30545001T500007  | Y30545001T50000G  | M45×2       | 25          | 23.5        | Y305M45D12500007  | Y305M45D1250000G  |
| 45          | M25×1.5     | 10          | Y305450A1T500007  | Y305450A1T50000G  | M45×2       | 25          | M25×1.5     | Y305M45F12500007  | Y305M45F1250000G  |
| 45          | M25×1.5     | 23.5        | Y305450D1T500007  | Y305450D1T50000G  | M45×2       | M20×1.5     | 0           | Y305M4501T000007  | Y305M4501T00000G  |
| 45          | M25×1.5     | M25×1.5     | Y305450F1T500007  | Y305450F1T50000G  | M45×2       | M20×1.5     | 10          | Y305M45A1T000007  | Y305M45A1T00000G  |
| 50          | 0           | 0           | Y3055000000000007 | Y305500000000000G | M45×2       | M20×1.5     | 23.5        | Y305M45D1T000007  | Y305M45D1T00000G  |
| 50          | 0           | 10          | Y305500A000000007 | Y305500A00000000G | M45×2       | M20×1.5     | M25×1.5     | Y305M45F1T000007  | Y305M45F1T00000G  |
| 50          | 0           | 23.5        | Y305500D000000007 | Y305500D00000000G | M45×2       | M25×1.5     | 0           | Y305M4501T500007  | Y305M4501T50000G  |
| 50          | 0           | M25×1.5     | Y305500F000000007 | Y305500F00000000G | M45×2       | M25×1.5     | 10          | Y305M45A1T500007  | Y305M45A1T50000G  |
| 50          | 20          | 0           | Y305500012000007  | Y30550001200000G  | M45×2       | M25×1.5     | 23.5        | Y305M45D1T500007  | Y305M45D1T50000G  |
| 50          | 20          | 10          | Y305500A12000007  | Y305500A1200000G  | M45×2       | M25×1.5     | M25×1.5     | Y305M45F1T500007  | Y305M45F1T50000G  |
| 50          | 20          | 23.5        | Y305500D12000007  | Y305500D1200000G  | 1½" BSPP    | 0           | 0           | Y305BA2000000007  | Y305BA200000000G  |
| 50          | 20          | M25×1.5     | Y305500F12000007  | Y305500F1200000G  | 1½" BSPP    | 0           | 10          | Y305BA2A000000007 | Y305BA2A00000000G |
| 50          | 25          | 0           | Y305500012500007  | Y30550001250000G  | 1½" BSPP    | 0           | 23.5        | Y305BA2D000000007 | Y305BA2D00000000G |
| 50          | 25          | 10          | Y305500A12500007  | Y305500A1250000G  | 1½" BSPP    | 0           | M25×1.5     | Y305BA2F000000007 | Y305BA2F00000000G |
| 50          | 25          | 23.5        | Y305500D12500007  | Y305500D1250000G  | 1½" BSPP    | 20          | 0           | Y305BA2012000007  | Y305BA201200000G  |
| 50          | 25          | M25×1.5     | Y305500F12500007  | Y305500F1250000G  | 1½" BSPP    | 20          | 10          | Y305BA2A12000007  | Y305BA2A1200000G  |
| 50          | M20×1.5     | 0           | Y30550001T000007  | Y30550001T00000G  | 1½" BSPP    | 20          | 23.5        | Y305BA2D12000007  | Y305BA2D1200000G  |
| 50          | M20×1.5     | 10          | Y305500A1T000007  | Y305500A1T00000G  | 1½" BSPP    | 20          | M25×1.5     | Y305BA2F12000007  | Y305BA2F1200000G  |
| 50          | M20×1.5     | 23.5        | Y305500D1T000007  | Y305500D1T00000G  | 1½" BSPP    | 25          | 0           | Y305BA2012500007  | Y305BA201250000G  |
| 50          | M20×1.5     | M25×1.5     | Y305500F1T000007  | Y305500F1T00000G  | 1½" BSPP    | 25          | 10          | Y305BA2A12500007  | Y305BA2A1250000G  |
| 50          | M25×1.5     | 0           | Y30550001T500007  | Y30550001T50000G  | 1½" BSPP    | 25          | 23.5        | Y305BA2D12500007  | Y305BA2D1250000G  |
| 50          | M25×1.5     | 10          | Y305500A1T500007  | Y305500A1T50000G  | 1½" BSPP    | 25          | M25×1.5     | Y305BA2F12500007  | Y305BA2F1250000G  |
| 50          | M25×1.5     | 23.5        | Y305500D1T500007  | Y305500D1T50000G  | 1½" BSPP    | M20×1.5     | 0           | Y305BA201T000007  | Y305BA201T00000G  |
| 50          | M25×1.5     | M25×1.5     | Y305500F1T500007  | Y305500F1T50000G  | 1½" BSPP    | M20×1.5     | 10          | Y305BA2A1T000007  | Y305BA2A1T00000G  |
| 60          | 0           | 0           | Y3056000000000007 | Y305600000000000G | 1½" BSPP    | M20×1.5     | 23.5        | Y305BA2D1T000007  | Y305BA2D1T00000G  |
| 60          | 0           | 10          | Y305600A000000007 | Y305600A00000000G | 1½" BSPP    | M20×1.5     | M25×1.5     | Y305BA2F1T000007  | Y305BA2F1T00000G  |
| 60          | 0           | 23.5        | Y305600D000000007 | Y305600D00000000G | 1½" BSPP    | M25×1.5     | 0           | Y305BA201T500007  | Y305BA201T50000G  |
| 60          | 0           | M25×1.5     | Y305600F000000007 | Y305600F00000000G | 1½" BSPP    | M25×1.5     | 10          | Y305BA2A1T500007  | Y305BA2A1T50000G  |
| 60          | 20          | 0           | Y305600012000007  | Y30560001200000G  | 1½" BSPP    | M25×1.5     | 23.5        | Y305BA2D1T500007  | Y305BA2D1T50000G  |
| 60          | 20          | 10          | Y305600A12000007  | Y305600A1200000G  | 1½" BSPP    | M25×1.5     | M25×1.5     | Y305BA2F1T500007  | Y305BA2F1T50000G  |
| 60          | 20          | 23.5        | Y305600D12000007  | Y305600D1200000G  | 2" BSPP     | 0           | 0           | Y305BB2000000007  | Y305BB200000000G  |
| 60          | 20          | M25×1.5     | Y305600F12000007  | Y305600F1200000G  | 2" BSPP     | 0           | 10          | Y305BB2A000000007 | Y305BB2A00000000G |
| 60          | 25          | 0           | Y305600012500007  | Y30560001250000G  | 2" BSPP     | 0           | 23.5        | Y305BB2D000000007 | Y305BB2D00000000G |
| 60          | 25          | 10          | Y305600A12500007  | Y305600A1250000G  | 2" BSPP     | 0           | M25×1.5     | Y305BB2F000000007 | Y305BB2F00000000G |
| 60          | 25          | 23.5        | Y305600D12500007  | Y305600D1250000G  | 2" BSPP     | 20          | 0           | Y305BB2012000007  | Y305BB201200000G  |
| 60          | 25          | M25×1.5     | Y305600F12500007  | Y305600F1250000G  | 2" BSPP     | 20          | 10          | Y305BB2A12000007  | Y305BB2A1200000G  |
| 60          | M20×1.5     | 0           | Y30560001T000007  | Y30560001T00000G  | 2" BSPP     | 20          | 23.5        | Y305BB2D12000007  | Y305BB2D1200000G  |
| 60          | M20×1.5     | 10          | Y305600A1T000007  | Y305600A1T00000G  | 2" BSPP     | 20          | M25×1.5     | Y305BB2F12000007  | Y305BB2F1200000G  |
| 60          | M20×1.5     | 23.5        | Y305600D1T000007  | Y305600D1T00000G  | 2" BSPP     | 25          | 0           | Y305BB2012500007  | Y305BB201250000G  |
| 60          | M20×1.5     | M25×1.5     | Y305600F1T000007  | Y305600F1T00000G  | 2" BSPP     | 25          | 10          | Y305BB2A12500007  | Y305BB2A1250000G  |
| 60          | M25×1.5     | 0           | Y30560001T500007  | Y30560001T50000G  | 2" BSPP     | 25          | 23.5        | Y305BB2D12500007  | Y305BB2D1250000G  |
| 60          | M25×1.5     | 10          | Y305600A1T500007  | Y305600A1T50000G  | 2" BSPP     | 25          | M25×1.5     | Y305BB2F12500007  | Y305BB2F1250000G  |
| 60          | M25×1.5     | 23.5        | Y305600D1T500007  | Y305600D1T50000G  | 2" BSPP     | M20×1.5     | 0           | Y305BB201T000007  | Y305BB201T00000G  |
| 60          | M25×1.5     | M25×1.5     | Y305600F1T500007  | Y305600F1T50000G  | 2" BSPP     | M20×1.5     | 10          | Y305BB2A1T000007  | Y305BB2A1T00000G  |
| M45×2       | 0           | 0           | Y305M450000000007 | Y305M45000000000G | 2" BSPP     | M20×1.5     | 23.5        | Y305BB2D1T000007  | Y305BB2D1T00000G  |
| M45×2       | 0           | 10          | Y305M45A000000007 | Y305M45A00000000G | 2" BSPP     | M20×1.5     | M25×1.5     | Y305BB2F1T000007  | Y305BB2F1T00000G  |
| M45×2       | 0           | 23.5        | Y305M45D000000007 | Y305M45D00000000G | 2" BSPP     | M25×1.5     | 0           | Y305BB201T500007  | Y305BB201T50000G  |
| M45×2       | 0           | M25×1.5     | Y305M45F000000007 | Y305M45F00000000G | 2" BSPP     | M25×1.5     | 10          | Y305BB2A1T500007  | Y305BB2A1T50000G  |
| M45×2       | 20          | 0           | Y305M45012000007  | Y305M4501200000G  | 2" BSPP     | M25×1.5     | 23.5        | Y305BB2D1T500007  | Y305BB2D1T50000G  |
| M45×2       | 20          | 10          | Y305M45A12000007  | Y305M45A1200000G  | 2" BSPP     | M25×1.5     | M25×1.5     | Y305BB2F1T500007  | Y305BB2F1T50000G  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

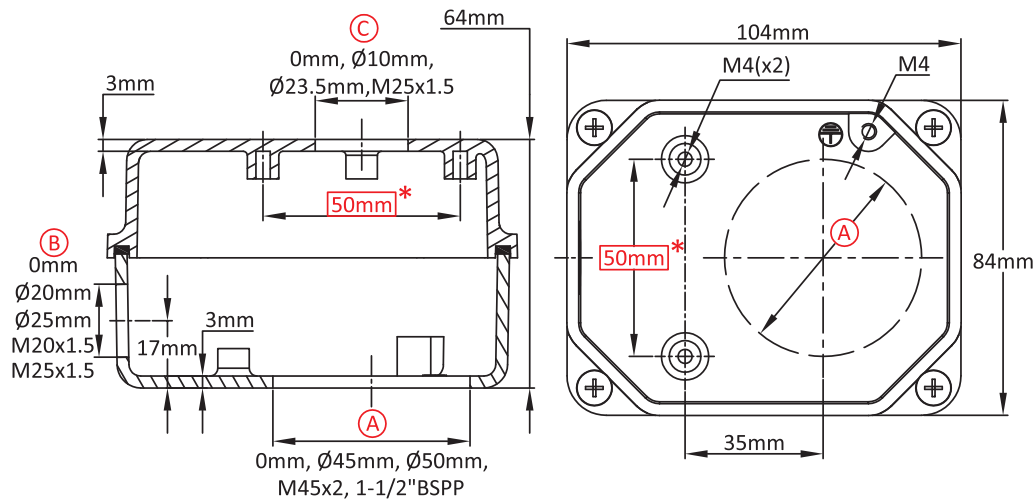
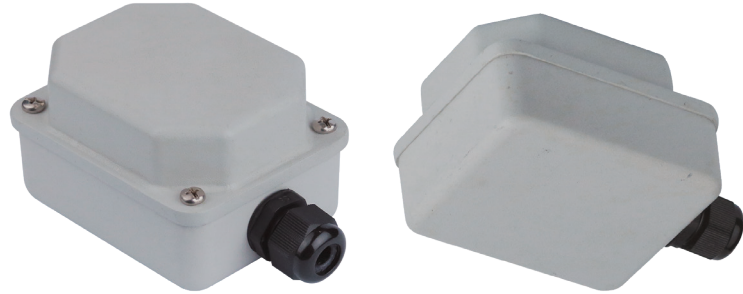


## Small size enclosure for immersion heater, finned heaters or controls

| Size(mm)             | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model                      |
|----------------------|--------------------------|-----------------|------------------|-------------|----------------------------|
| <b>64 x 84 x 104</b> | <b>510</b>               | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3P1</b><br><b>(P1)</b> |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



### Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y3P1000000000007 | Y3P100000000000G | 0           | M20x1.5     | 0           | Y3P100001T000007 | Y3P100001T00000G |
| 0           | 0           | 10          | Y3P1000A00000007 | Y3P1000A0000000G | 0           | M20x1.5     | 10          | Y3P1000A1T000007 | Y3P1000A1T00000G |
| 0           | 0           | 23.5        | Y3P1000D00000007 | Y3P1000D0000000G | 0           | M20x1.5     | 23.5        | Y3P1000D1T000007 | Y3P1000D1T00000G |
| 0           | 0           | M25x1.5     | Y3P1000F00000007 | Y3P1000F0000000G | 0           | M20x1.5     | M25x1.5     | Y3P1000F1T000007 | Y3P1000F1T00000G |
| 0           | 20          | 0           | Y3P1000012000007 | Y3P100001200000G | 0           | M25x1.5     | 0           | Y3P100001T500007 | Y3P100001T50000G |
| 0           | 20          | 10          | Y3P1000A12000007 | Y3P1000A1200000G | 0           | M25x1.5     | 10          | Y3P1000A1T500007 | Y3P1000A1T50000G |
| 0           | 20          | 23.5        | Y3P1000D12000007 | Y3P1000D1200000G | 0           | M25x1.5     | 23.5        | Y3P1000D1T500007 | Y3P1000D1T50000G |
| 0           | 20          | M25x1.5     | Y3P1000F12000007 | Y3P1000F1200000G | 0           | M25x1.5     | M25x1.5     | Y3P1000F1T500007 | Y3P1000F1T50000G |
| 0           | 25          | 0           | Y3P1000012500007 | Y3P100001250000G | 45          | 0           | 0           | Y3P1450000000007 | Y3P145000000000G |
| 0           | 25          | 10          | Y3P1000A12500007 | Y3P1000A1250000G | 45          | 0           | 10          | Y3P1450A00000007 | Y3P1450A0000000G |
| 0           | 25          | 23.5        | Y3P1000D12500007 | Y3P1000D1250000G | 45          | 0           | 23.5        | Y3P1450D00000007 | Y3P1450D0000000G |
| 0           | 25          | M25x1.5     | Y3P1000F12500007 | Y3P1000F1250000G | 45          | 0           | M25x1.5     | Y3P1450F00000007 | Y3P1450F0000000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Small size enclosure for immersion heater, finned heaters or controls

**Y3P1**  
(P2)

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted       | Painted           | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|-------------------|-------------------|-------------|-------------|-------------|------------------|------------------|
| 45          | 20          | 0           | Y3P1450012000007  | Y3P145001200000G  | M45x2       | 0           | 23.5        | Y3P1M45D00000007 | Y3P1M45D0000000G |
| 45          | 20          | 10          | Y3P1450A12000007  | Y3P1450A1200000G  | M45x2       | 0           | M25x1.5     | Y3P1M45F00000007 | Y3P1M45F0000000G |
| 45          | 20          | 23.5        | Y3P1450D12000007  | Y3P1450D1200000G  | M45x2       | 20          | 0           | Y3P1M45012000007 | Y3P1M4501200000G |
| 45          | 20          | M25x1.5     | Y3P1450F12000007  | Y3P1450F1200000G  | M45x2       | 20          | 10          | Y3P1M45A12000007 | Y3P1M45A1200000G |
| 45          | 25          | 0           | Y3P1450012500007  | Y3P145001250000G  | M45x2       | 20          | 23.5        | Y3P1M45D12000007 | Y3P1M45D1200000G |
| 45          | 25          | 10          | Y3P1450A12500007  | Y3P1450A1250000G  | M45x2       | 20          | M25x1.5     | Y3P1M45F12000007 | Y3P1M45F1200000G |
| 45          | 25          | 23.5        | Y3P1450D12500007  | Y3P1450D1250000G  | M45x2       | 25          | 0           | Y3P1M45012500007 | Y3P1M4501250000G |
| 45          | 25          | M25x1.5     | Y3P1450F12500007  | Y3P1450F1250000G  | M45x2       | 25          | 10          | Y3P1M45A12500007 | Y3P1M45A1250000G |
| 45          | M20x1.5     | 0           | Y3P145001T000007  | Y3P145001T00000G  | M45x2       | 25          | 23.5        | Y3P1M45D12500007 | Y3P1M45D1250000G |
| 45          | M20x1.5     | 10          | Y3P1450A1T000007  | Y3P1450A1T00000G  | M45x2       | 25          | M25x1.5     | Y3P1M45F12500007 | Y3P1M45F1250000G |
| 45          | M20x1.5     | 23.5        | Y3P1450D1T000007  | Y3P1450D1T00000G  | M45x2       | M20x1.5     | 0           | Y3P1M4501T000007 | Y3P1M4501T00000G |
| 45          | M20x1.5     | M25x1.5     | Y3P1450F1T000007  | Y3P1450F1T00000G  | M45x2       | M20x1.5     | 10          | Y3P1M45A1T000007 | Y3P1M45A1T00000G |
| 45          | M25x1.5     | 0           | Y3P145001T500007  | Y3P145001T50000G  | M45x2       | M20x1.5     | 23.5        | Y3P1M45D1T000007 | Y3P1M45D1T00000G |
| 45          | M25x1.5     | 10          | Y3P1450A1T500007  | Y3P1450A1T50000G  | M45x2       | M20x1.5     | M25x1.5     | Y3P1M45F1T000007 | Y3P1M45F1T00000G |
| 45          | M25x1.5     | 23.5        | Y3P1450D1T500007  | Y3P1450D1T50000G  | M45x2       | M25x1.5     | 0           | Y3P1M4501T500007 | Y3P1M4501T50000G |
| 45          | M25x1.5     | M25x1.5     | Y3P1450F1T500007  | Y3P1450F1T50000G  | M45x2       | M25x1.5     | 10          | Y3P1M45A1T500007 | Y3P1M45A1T50000G |
| 50          | 0           | 0           | Y3P15000000000007 | Y3P1500000000000G | M45x2       | M25x1.5     | 23.5        | Y3P1M45D1T500007 | Y3P1M45D1T50000G |
| 50          | 0           | 10          | Y3P1500A00000007  | Y3P1500A0000000G  | M45x2       | M25x1.5     | M25x1.5     | Y3P1M45F1T500007 | Y3P1M45F1T50000G |
| 50          | 0           | 23.5        | Y3P1500D00000007  | Y3P1500D0000000G  | 1½" BSPP    | 0           | 0           | Y3P1BA2000000007 | Y3P1BA200000000G |
| 50          | 0           | M25x1.5     | Y3P1500F00000007  | Y3P1500F0000000G  | 1½" BSPP    | 0           | 10          | Y3P1BA2A00000007 | Y3P1BA2A0000000G |
| 50          | 20          | 0           | Y3P1500012000007  | Y3P150001200000G  | 1½" BSPP    | 0           | 23.5        | Y3P1BA2D00000007 | Y3P1BA2D0000000G |
| 50          | 20          | 10          | Y3P1500A12000007  | Y3P1500A1200000G  | 1½" BSPP    | 0           | M25x1.5     | Y3P1BA2F00000007 | Y3P1BA2F0000000G |
| 50          | 20          | 23.5        | Y3P1500D12000007  | Y3P1500D1200000G  | 1½" BSPP    | 20          | 0           | Y3P1BA2012000007 | Y3P1BA201200000G |
| 50          | 20          | M25x1.5     | Y3P1500F12000007  | Y3P1500F1200000G  | 1½" BSPP    | 20          | 10          | Y3P1BA2A12000007 | Y3P1BA2A1200000G |
| 50          | 25          | 0           | Y3P1500012500007  | Y3P150001250000G  | 1½" BSPP    | 20          | 23.5        | Y3P1BA2D12000007 | Y3P1BA2D1200000G |
| 50          | 25          | 10          | Y3P1500A12500007  | Y3P1500A1250000G  | 1½" BSPP    | 20          | M25x1.5     | Y3P1BA2F12000007 | Y3P1BA2F1200000G |
| 50          | 25          | 23.5        | Y3P1500D12500007  | Y3P1500D1250000G  | 1½" BSPP    | 25          | 0           | Y3P1BA2012500007 | Y3P1BA201250000G |
| 50          | 25          | M25x1.5     | Y3P1500F12500007  | Y3P1500F1250000G  | 1½" BSPP    | 25          | 10          | Y3P1BA2A12500007 | Y3P1BA2A1250000G |
| 50          | M20x1.5     | 0           | Y3P150001T000007  | Y3P150001T00000G  | 1½" BSPP    | 25          | 23.5        | Y3P1BA2D12500007 | Y3P1BA2D1250000G |
| 50          | M20x1.5     | 10          | Y3P1500A1T000007  | Y3P1500A1T00000G  | 1½" BSPP    | 25          | M25x1.5     | Y3P1BA2F12500007 | Y3P1BA2F1250000G |
| 50          | M20x1.5     | 23.5        | Y3P1500D1T000007  | Y3P1500D1T00000G  | 1½" BSPP    | M20x1.5     | 0           | Y3P1BA201T000007 | Y3P1BA201T00000G |
| 50          | M20x1.5     | M25x1.5     | Y3P1500F1T000007  | Y3P1500F1T00000G  | 1½" BSPP    | M20x1.5     | 10          | Y3P1BA2A1T000007 | Y3P1BA2A1T00000G |
| 50          | M25x1.5     | 0           | Y3P150001T500007  | Y3P150001T50000G  | 1½" BSPP    | M20x1.5     | 23.5        | Y3P1BA2D1T000007 | Y3P1BA2D1T00000G |
| 50          | M25x1.5     | 10          | Y3P1500A1T500007  | Y3P1500A1T50000G  | 1½" BSPP    | M20x1.5     | M25x1.5     | Y3P1BA2F1T000007 | Y3P1BA2F1T00000G |
| 50          | M25x1.5     | 23.5        | Y3P1500D1T500007  | Y3P1500D1T50000G  | 1½" BSPP    | M25x1.5     | 0           | Y3P1BA201T500007 | Y3P1BA201T50000G |
| 50          | M25x1.5     | M25x1.5     | Y3P1500F1T500007  | Y3P1500F1T50000G  | 1½" BSPP    | M25x1.5     | 10          | Y3P1BA2A1T500007 | Y3P1BA2A1T50000G |
| M45x2       | 0           | 0           | Y3P1M450000000007 | Y3P1M45000000000G | 1½" BSPP    | M25x1.5     | 23.5        | Y3P1BA2D1T500007 | Y3P1BA2D1T50000G |
| M45x2       | 0           | 10          | Y3P1M45A00000007  | Y3P1M45A0000000G  | 1½" BSPP    | M25x1.5     | M25x1.5     | Y3P1BA2F1T500007 | Y3P1BA2F1T50000G |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

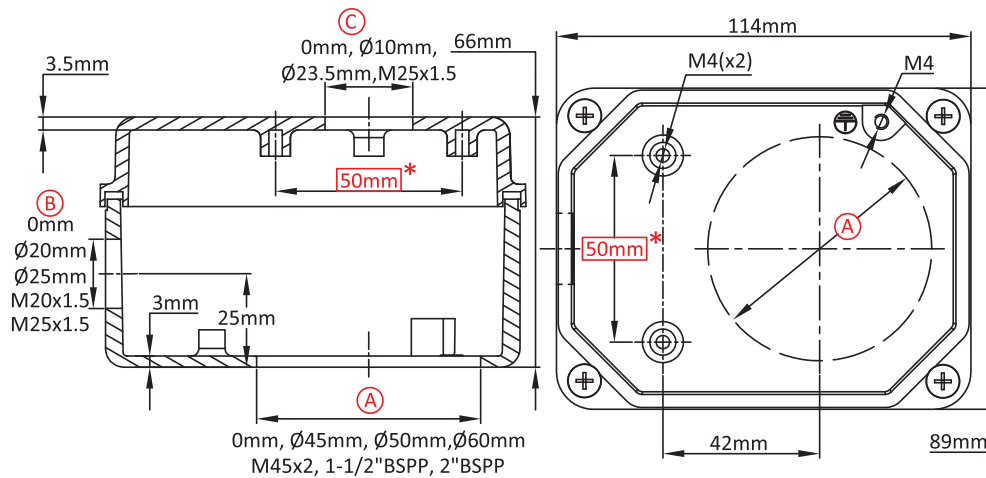


## Medium size enclosure for immersion heater, finned heaters or controls

| Size(mm)      | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model               |
|---------------|--------------------------|----------|------------------|------|---------------------|
| 66 x 89 x 114 | 650                      | Aluminum | IP69K            | IK10 | <b>Y3P3</b><br>(P1) |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



### Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | Y3P3000000000007 | Y3P300000000000G | 0           | M25x1.5     | 0           | Y3P300001T500007 | Y3P300001T50000G |
| 0           | 0           | 10          | Y3P3000A00000007 | Y3P3000A0000000G | 0           | M25x1.5     | 10          | Y3P3000A1T500007 | Y3P3000A1T50000G |
| 0           | 0           | 23.5        | Y3P3000D00000007 | Y3P3000D0000000G | 0           | M25x1.5     | 23.5        | Y3P3000D1T500007 | Y3P3000D1T50000G |
| 0           | 0           | M25x1.5     | Y3P3000F00000007 | Y3P3000F0000000G | 0           | M25x1.5     | M25x1.5     | Y3P3000F1T500007 | Y3P3000F1T50000G |
| 0           | 20          | 0           | Y3P3000012000007 | Y3P300001200000G | 45          | 0           | 0           | Y3P3450000000007 | Y3P345000000000G |
| 0           | 20          | 10          | Y3P3000A12000007 | Y3P3000A1200000G | 45          | 0           | 10          | Y3P3450A00000007 | Y3P3450A0000000G |
| 0           | 20          | 23.5        | Y3P3000D12000007 | Y3P3000D1200000G | 45          | 0           | 23.5        | Y3P3450D00000007 | Y3P3450D0000000G |
| 0           | 20          | M25x1.5     | Y3P3000F12000007 | Y3P3000F1200000G | 45          | 0           | M25x1.5     | Y3P3450F00000007 | Y3P3450F0000000G |
| 0           | 25          | 0           | Y3P3000012500007 | Y3P300001250000G | 45          | 20          | 0           | Y3P3450012000007 | Y3P345001200000G |
| 0           | 25          | 10          | Y3P3000A12500007 | Y3P3000A1250000G | 45          | 20          | 10          | Y3P3450A12000007 | Y3P3450A1200000G |
| 0           | 25          | 23.5        | Y3P3000D12500007 | Y3P3000D1250000G | 45          | 20          | 23.5        | Y3P3450D12000007 | Y3P3450D1200000G |
| 0           | 25          | M25x1.5     | Y3P3000F12500007 | Y3P3000F1250000G | 45          | 20          | M25x1.5     | Y3P3450F12000007 | Y3P3450F1200000G |
| 0           | M20x1.5     | 0           | Y3P300001T000007 | Y3P300001T00000G | 45          | 25          | 0           | Y3P3450012500007 | Y3P345001250000G |
| 0           | M20x1.5     | 10          | Y3P3000A1T000007 | Y3P3000A1T00000G | 45          | 25          | 10          | Y3P3450A12500007 | Y3P3450A1250000G |
| 0           | M20x1.5     | 23.5        | Y3P3000D1T000007 | Y3P3000D1T00000G | 45          | 25          | 23.5        | Y3P3450D12500007 | Y3P3450D1250000G |
| 0           | M20x1.5     | M25x1.5     | Y3P3000F1T000007 | Y3P3000F1T00000G | 45          | 25          | M25x1.5     | Y3P3450F12500007 | Y3P3450F1250000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Medium size enclosure for immersion heater, finned heaters or controls

**Y3P3  
(P2)**



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|------------------|------------------|
| 45          | M20×1.5     | 0           | Y3P345001T000007 | Y3P345001T00000G | M45×2       | 20          | 23.5        | Y3P3M45D12000007 | Y3P3M45D1200000G |
| 45          | M20×1.5     | 10          | Y3P3450A1T000007 | Y3P3450A1T00000G | M45×2       | 20          | M25×1.5     | Y3P3M45F12000007 | Y3P3M45F1200000G |
| 45          | M20×1.5     | 23.5        | Y3P3450D1T000007 | Y3P3450D1T00000G | M45×2       | 25          | 0           | Y3P3M45012500007 | Y3P3M4501250000G |
| 45          | M20×1.5     | M25×1.5     | Y3P3450F1T000007 | Y3P3450F1T00000G | M45×2       | 25          | 10          | Y3P3M45A12500007 | Y3P3M45A1250000G |
| 45          | M25×1.5     | 0           | Y3P345001T500007 | Y3P345001T50000G | M45×2       | 25          | 23.5        | Y3P3M45D12500007 | Y3P3M45D1250000G |
| 45          | M25×1.5     | 10          | Y3P3450A1T500007 | Y3P3450A1T50000G | M45×2       | 25          | M25×1.5     | Y3P3M45F12500007 | Y3P3M45F1250000G |
| 45          | M25×1.5     | 23.5        | Y3P3450D1T500007 | Y3P3450D1T50000G | M45×2       | M20×1.5     | 0           | Y3P3M4501T000007 | Y3P3M4501T00000G |
| 45          | M25×1.5     | M25×1.5     | Y3P3450F1T500007 | Y3P3450F1T50000G | M45×2       | M20×1.5     | 10          | Y3P3M45A1T000007 | Y3P3M45A1T00000G |
| 50          | 0           | 0           | Y3P3500000000007 | Y3P350000000000G | M45×2       | M20×1.5     | 23.5        | Y3P3M45D1T000007 | Y3P3M45D1T00000G |
| 50          | 0           | 10          | Y3P3500A00000007 | Y3P3500A0000000G | M45×2       | M20×1.5     | M25×1.5     | Y3P3M45F1T000007 | Y3P3M45F1T00000G |
| 50          | 0           | 23.5        | Y3P3500D00000007 | Y3P3500D0000000G | M45×2       | M25×1.5     | 0           | Y3P3M4501T500007 | Y3P3M4501T50000G |
| 50          | 0           | M25×1.5     | Y3P3500F00000007 | Y3P3500F0000000G | M45×2       | M25×1.5     | 10          | Y3P3M45A1T500007 | Y3P3M45A1T50000G |
| 50          | 20          | 0           | Y3P3500012000007 | Y3P350001200000G | M45×2       | M25×1.5     | 23.5        | Y3P3M45D1T500007 | Y3P3M45D1T50000G |
| 50          | 20          | 10          | Y3P3500A12000007 | Y3P3500A1200000G | M45×2       | M25×1.5     | M25×1.5     | Y3P3M45F1T500007 | Y3P3M45F1T50000G |
| 50          | 20          | 23.5        | Y3P3500D12000007 | Y3P3500D1200000G | 1½" BSPP    | 0           | 0           | Y3P3BA2000000007 | Y3P3BA200000000G |
| 50          | 20          | M25×1.5     | Y3P3500F12000007 | Y3P3500F1200000G | 1½" BSPP    | 0           | 10          | Y3P3BA2A00000007 | Y3P3BA2A0000000G |
| 50          | 25          | 0           | Y3P3500012500007 | Y3P350001250000G | 1½" BSPP    | 0           | 23.5        | Y3P3BA2D00000007 | Y3P3BA2D0000000G |
| 50          | 25          | 10          | Y3P3500A12500007 | Y3P3500A1250000G | 1½" BSPP    | 0           | M25×1.5     | Y3P3BA2F00000007 | Y3P3BA2F0000000G |
| 50          | 25          | 23.5        | Y3P3500D12500007 | Y3P3500D1250000G | 1½" BSPP    | 20          | 0           | Y3P3BA2012000007 | Y3P3BA201200000G |
| 50          | 25          | M25×1.5     | Y3P3500F12500007 | Y3P3500F1250000G | 1½" BSPP    | 20          | 10          | Y3P3BA2A12000007 | Y3P3BA2A1200000G |
| 50          | M20×1.5     | 0           | Y3P350001T000007 | Y3P350001T00000G | 1½" BSPP    | 20          | 23.5        | Y3P3BA2D12000007 | Y3P3BA2D1200000G |
| 50          | M20×1.5     | 10          | Y3P3500A1T000007 | Y3P3500A1T00000G | 1½" BSPP    | 20          | M25×1.5     | Y3P3BA2F12000007 | Y3P3BA2F1200000G |
| 50          | M20×1.5     | 23.5        | Y3P3500D1T000007 | Y3P3500D1T00000G | 1½" BSPP    | 25          | 0           | Y3P3BA2012500007 | Y3P3BA201250000G |
| 50          | M20×1.5     | M25×1.5     | Y3P3500F1T000007 | Y3P3500F1T00000G | 1½" BSPP    | 25          | 10          | Y3P3BA2A12500007 | Y3P3BA2A1250000G |
| 50          | M25×1.5     | 0           | Y3P350001T500007 | Y3P350001T50000G | 1½" BSPP    | 25          | 23.5        | Y3P3BA2D12500007 | Y3P3BA2D1250000G |
| 50          | M25×1.5     | 10          | Y3P3500A1T500007 | Y3P3500A1T50000G | 1½" BSPP    | 25          | M25×1.5     | Y3P3BA2F12500007 | Y3P3BA2F1250000G |
| 50          | M25×1.5     | 23.5        | Y3P3500D1T500007 | Y3P3500D1T50000G | 1½" BSPP    | M20×1.5     | 0           | Y3P3BA201T000007 | Y3P3BA201T00000G |
| 50          | M25×1.5     | M25×1.5     | Y3P3500F1T500007 | Y3P3500F1T50000G | 1½" BSPP    | M20×1.5     | 10          | Y3P3BA2A1T000007 | Y3P3BA2A1T00000G |
| 60          | 0           | 0           | Y3P3600000000007 | Y3P360000000000G | 1½" BSPP    | M20×1.5     | 23.5        | Y3P3BA2D1T000007 | Y3P3BA2D1T00000G |
| 60          | 0           | 10          | Y3P3600A00000007 | Y3P3600A0000000G | 1½" BSPP    | M20×1.5     | M25×1.5     | Y3P3BA2F1T000007 | Y3P3BA2F1T00000G |
| 60          | 0           | 23.5        | Y3P3600D00000007 | Y3P3600D0000000G | 1½" BSPP    | M25×1.5     | 0           | Y3P3BA201T500007 | Y3P3BA201T50000G |
| 60          | 0           | M25×1.5     | Y3P3600F00000007 | Y3P3600F0000000G | 1½" BSPP    | M25×1.5     | 10          | Y3P3BA2A1T500007 | Y3P3BA2A1T50000G |
| 60          | 20          | 0           | Y3P3600012000007 | Y3P360001200000G | 1½" BSPP    | M25×1.5     | 23.5        | Y3P3BA2D1T500007 | Y3P3BA2D1T50000G |
| 60          | 20          | 10          | Y3P3600A12000007 | Y3P3600A1200000G | 1½" BSPP    | M25×1.5     | M25×1.5     | Y3P3BA2F1T500007 | Y3P3BA2F1T50000G |
| 60          | 20          | 23.5        | Y3P3600D12000007 | Y3P3600D1200000G | 2" BSPP     | 0           | 0           | Y3P3BB2000000007 | Y3P3BB200000000G |
| 60          | 20          | M25×1.5     | Y3P3600F12000007 | Y3P3600F1200000G | 2" BSPP     | 0           | 10          | Y3P3BB2A00000007 | Y3P3BB2A0000000G |
| 60          | 25          | 0           | Y3P3600012500007 | Y3P360001250000G | 2" BSPP     | 0           | 23.5        | Y3P3BB2D00000007 | Y3P3BB2D0000000G |
| 60          | 25          | 10          | Y3P3600A12500007 | Y3P3600A1250000G | 2" BSPP     | 0           | M25×1.5     | Y3P3BB2F00000007 | Y3P3BB2F0000000G |
| 60          | 25          | 23.5        | Y3P3600D12500007 | Y3P3600D1250000G | 2" BSPP     | 20          | 0           | Y3P3BB2012000007 | Y3P3BB201200000G |
| 60          | 25          | M25×1.5     | Y3P3600F12500007 | Y3P3600F1250000G | 2" BSPP     | 20          | 10          | Y3P3BB2A12000007 | Y3P3BB2A1200000G |
| 60          | M20×1.5     | 0           | Y3P360001T000007 | Y3P360001T00000G | 2" BSPP     | 20          | 23.5        | Y3P3BB2D12000007 | Y3P3BB2D1200000G |
| 60          | M20×1.5     | 10          | Y3P3600A1T000007 | Y3P3600A1T00000G | 2" BSPP     | 20          | M25×1.5     | Y3P3BB2F12000007 | Y3P3BB2F1200000G |
| 60          | M20×1.5     | 23.5        | Y3P3600D1T000007 | Y3P3600D1T00000G | 2" BSPP     | 25          | 0           | Y3P3BB2012500007 | Y3P3BB201250000G |
| 60          | M20×1.5     | M25×1.5     | Y3P3600F1T000007 | Y3P3600F1T00000G | 2" BSPP     | 25          | 10          | Y3P3BB2A12500007 | Y3P3BB2A1250000G |
| 60          | M25×1.5     | 0           | Y3P360001T500007 | Y3P360001T50000G | 2" BSPP     | 25          | 23.5        | Y3P3BB2D12500007 | Y3P3BB2D1250000G |
| 60          | M25×1.5     | 10          | Y3P3600A1T500007 | Y3P3600A1T50000G | 2" BSPP     | 25          | M25×1.5     | Y3P3BB2F12500007 | Y3P3BB2F1250000G |
| 60          | M25×1.5     | 23.5        | Y3P3600D1T500007 | Y3P3600D1T50000G | 2" BSPP     | M20×1.5     | 0           | Y3P3BB201T000007 | Y3P3BB201T00000G |
| 60          | M25×1.5     | M25×1.5     | Y3P3600F1T500007 | Y3P3600F1T50000G | 2" BSPP     | M20×1.5     | 10          | Y3P3BB2A1T000007 | Y3P3BB2A1T00000G |
| M45×2       | 0           | 0           | Y3P3M45000000007 | Y3P3M4500000000G | 2" BSPP     | M20×1.5     | 23.5        | Y3P3BB2D1T000007 | Y3P3BB2D1T00000G |
| M45×2       | 0           | 10          | Y3P3M45A00000007 | Y3P3M45A0000000G | 2" BSPP     | M20×1.5     | M25×1.5     | Y3P3BB2F1T000007 | Y3P3BB2F1T00000G |
| M45×2       | 0           | 23.5        | Y3P3M45D00000007 | Y3P3M45D0000000G | 2" BSPP     | M25×1.5     | 0           | Y3P3BB201T500007 | Y3P3BB201T50000G |
| M45×2       | 0           | M25×1.5     | Y3P3M45F00000007 | Y3P3M45F0000000G | 2" BSPP     | M25×1.5     | 10          | Y3P3BB2A1T500007 | Y3P3BB2A1T50000G |
| M45×2       | 20          | 0           | Y3P3M45012000007 | Y3P3M4501200000G | 2" BSPP     | M25×1.5     | 23.5        | Y3P3BB2D1T500007 | Y3P3BB2D1T50000G |
| M45×2       | 20          | 10          | Y3P3M45A12000007 | Y3P3M45A1200000G | 2" BSPP     | M25×1.5     | M25×1.5     | Y3P3BB2F1T500007 | Y3P3BB2F1T50000G |



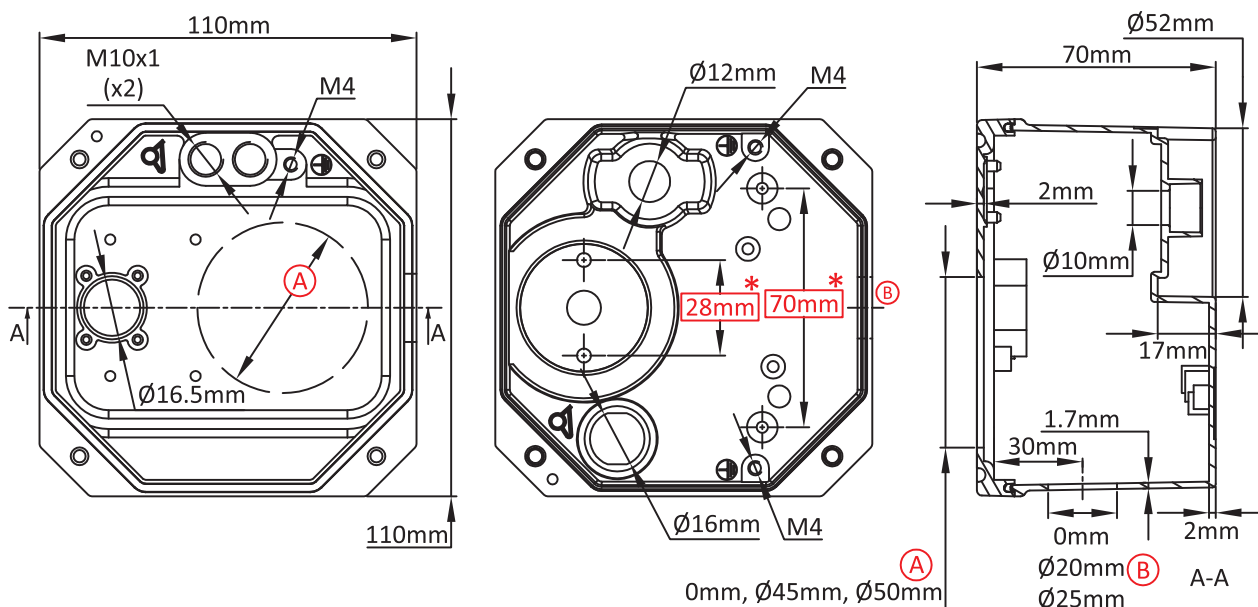
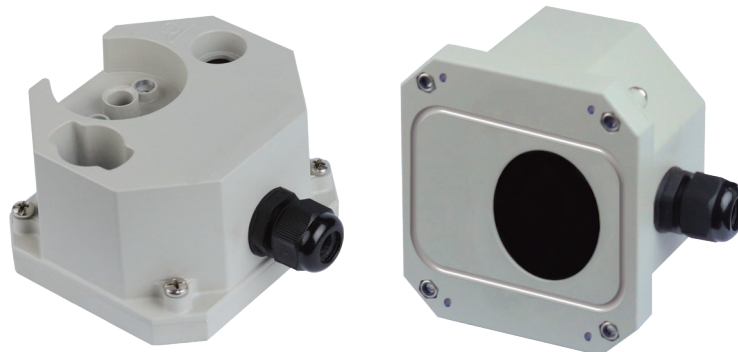
# Medium size enclosure for immersion heater, finned heaters with external adjustment knob



| Size(mm)              | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model       |
|-----------------------|--------------------------|-----------------|------------------|-------------|-------------|
| <b>110 x 110 x 70</b> | <b>725</b>               | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3P4</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| (A)(mm) | (B)(mm) | Not painted      | Painted           |
|---------|---------|------------------|-------------------|
| 0       | 0       | Y3P4000000000007 | Y3P4000000000000G |
| 0       | 20      | Y3P4000012000007 | Y3P400001200000G  |
| 0       | 25      | Y3P4000012500007 | Y3P400001250000G  |
| 45      | 0       | Y3P4450000000007 | Y3P445000000000G  |
| 45      | 20      | Y3P4450012000007 | Y3P445001200000G  |
| 45      | 25      | Y3P4450012500007 | Y3P445001250000G  |
| 50      | 0       | Y3P4500000000007 | Y3P450000000000G  |
| 50      | 20      | Y3P4500012000007 | Y3P450001200000G  |
| 50      | 25      | Y3P4500012500007 | Y3P450001250000G  |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

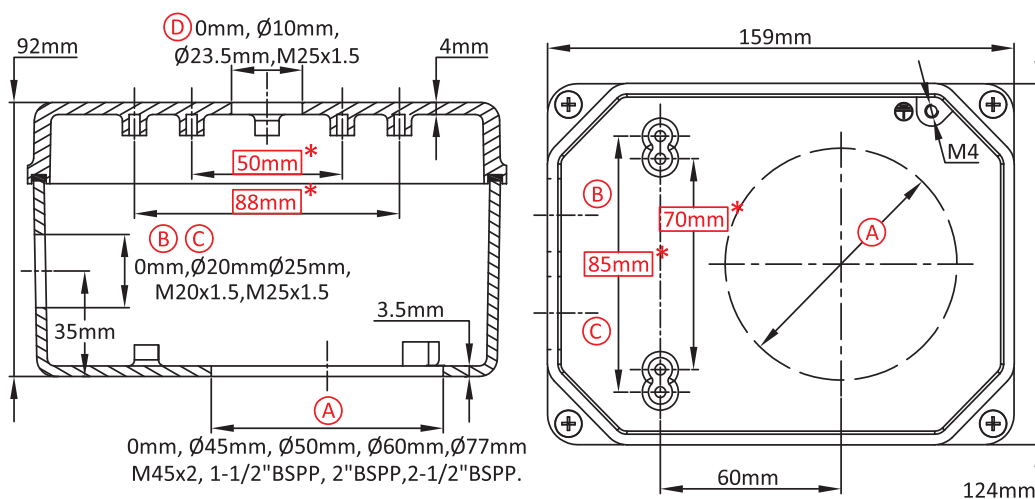


## Large size enclosure for immersion heater, finned heaters or controls

| Size(mm)       | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model               |
|----------------|--------------------------|----------|------------------|------|---------------------|
| 92 x 124 x 159 | 1790                     | Aluminum | IP69K            | IK10 | <b>Y3P5</b><br>(P1) |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



### Main references

| (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | Not painted      | Painted          | (A)(mm) | (B)(mm) | (C)(mm) | (D)(mm) | Not painted       | Painted           |
|---------|---------|---------|---------|------------------|------------------|---------|---------|---------|---------|-------------------|-------------------|
| 0       | 0       | 0       | 0       | Y3P5000000000007 | Y3P500000000000G | 0       | M25x1.5 | M25x1.5 | 10      | Y3P5000A2T5000007 | Y3P5000A2T500000G |
| 0       | 0       | 0       | 10      | Y3P5000A00000007 | Y3P5000A0000000G | 0       | M25x1.5 | M25x1.5 | 23.5    | Y3P5000D2T5000007 | Y3P5000D2T500000G |
| 0       | 0       | 0       | 23.5    | Y3P5000D00000007 | Y3P5000D0000000G | 0       | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5000F2T5000007 | Y3P5000F2T500000G |
| 0       | 0       | 0       | M25x1.5 | Y3P5000F00000007 | Y3P5000F0000000G | 45      | 0       | 0       | 0       | Y3P5450000000007  | Y3P545000000000G  |
| 0       | 20      | 20      | 0       | Y3P5000D22000007 | Y3P5000D2200000G | 45      | 0       | 0       | 10      | Y3P5450A00000007  | Y3P5450A0000000G  |
| 0       | 20      | 20      | 10      | Y3P5000A22000007 | Y3P5000A2200000G | 45      | 0       | 0       | 23.5    | Y3P5450D00000007  | Y3P5450D0000000G  |
| 0       | 20      | 20      | 23.5    | Y3P5000D22000007 | Y3P5000D2200000G | 45      | 0       | 0       | M25x1.5 | Y3P5450F00000007  | Y3P5450F0000000G  |
| 0       | 20      | 20      | M25x1.5 | Y3P5000F22000007 | Y3P5000F2200000G | 45      | 20      | 20      | 0       | Y3P5450D22000007  | Y3P5450D2200000G  |
| 0       | 25      | 25      | 0       | Y3P5000D22500007 | Y3P5000D2250000G | 45      | 20      | 20      | 10      | Y3P5450A22000007  | Y3P5450A2200000G  |
| 0       | 25      | 25      | 10      | Y3P5000A22500007 | Y3P5000A2250000G | 45      | 20      | 20      | 23.5    | Y3P5450D22000007  | Y3P5450D2200000G  |
| 0       | 25      | 25      | 23.5    | Y3P5000D22500007 | Y3P5000D2250000G | 45      | 20      | 20      | M25x1.5 | Y3P5450F22000007  | Y3P5450F2200000G  |
| 0       | 25      | 25      | M25x1.5 | Y3P5000F22500007 | Y3P5000F2250000G | 45      | 25      | 25      | 0       | Y3P5450D22500007  | Y3P5450D2250000G  |
| 0       | M20x1.5 | M20x1.5 | 0       | Y3P5000D2T000007 | Y3P5000D2T00000G | 45      | 25      | 25      | 10      | Y3P5450A22500007  | Y3P5450A2250000G  |
| 0       | M20x1.5 | M20x1.5 | 10      | Y3P5000A2T000007 | Y3P5000A2T00000G | 45      | 25      | 25      | 23.5    | Y3P5450D22500007  | Y3P5450D2250000G  |
| 0       | M20x1.5 | M20x1.5 | 23.5    | Y3P5000D2T000007 | Y3P5000D2T00000G | 45      | 25      | 25      | M25x1.5 | Y3P5450F22500007  | Y3P5450F2250000G  |
| 0       | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5000F2T000007 | Y3P5000F2T00000G | 45      | M20x1.5 | M20x1.5 | 0       | Y3P5450D2T000007  | Y3P5450D2T00000G  |
| 0       | M25x1.5 | M25x1.5 | 0       | Y3P5000D2T500007 | Y3P5000D2T50000G | 45      | M20x1.5 | M20x1.5 | 10      | Y3P5450A2T000007  | Y3P5450A2T00000G  |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

Because of permanent improvement of our products, features used on these data sheets are for guidance only and can be modified without prior advice

# Large size enclosure for immersion heater, finned heaters or controls

**Y3P5  
(P2)**

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| A (mm) | B (mm)  | C (mm)  | D (mm)  | Not painted       | Painted           | A (mm)   | B (mm)  | C (mm)  | D (mm)  | Not painted      | Painted          |
|--------|---------|---------|---------|-------------------|-------------------|----------|---------|---------|---------|------------------|------------------|
| 45     | M20x1.5 | M20x1.5 | 23.5    | Y3P5450D2T000007  | Y3P5450D2T00000G  | M45x2    | 20      | 20      | M25x1.5 | Y3P5M45F22000007 | Y3P5M45F2200000G |
| 45     | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5450F2T000007  | Y3P5450F2T00000G  | M45x2    | 25      | 25      | 0       | Y3P5M45022500007 | Y3P5M4502250000G |
| 45     | M25x1.5 | M25x1.5 | 0       | Y3P545002T500007  | Y3P545002T50000G  | M45x2    | 25      | 25      | 10      | Y3P5M45A22500007 | Y3P5M45A2250000G |
| 45     | M25x1.5 | M25x1.5 | 10      | Y3P5450A2T500007  | Y3P5450A2T50000G  | M45x2    | 25      | 25      | 23.5    | Y3P5M45D22500007 | Y3P5M45D2250000G |
| 45     | M25x1.5 | M25x1.5 | 23.5    | Y3P5450D2T500007  | Y3P5450D2T50000G  | M45x2    | 25      | 25      | M25x1.5 | Y3P5M45F22500007 | Y3P5M45F2250000G |
| 45     | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5450F2T500007  | Y3P5450F2T50000G  | M45x2    | M20x1.5 | M20x1.5 | 0       | Y3P5M4502T000007 | Y3P5M4502T00000G |
| 50     | 0       | 0       | 0       | Y3P55000000000007 | Y3P5500000000000G | M45x2    | M20x1.5 | M20x1.5 | 10      | Y3P5M45A2T000007 | Y3P5M45A2T00000G |
| 50     | 0       | 0       | 10      | Y3P5500A00000007  | Y3P5500A0000000G  | M45x2    | M20x1.5 | M20x1.5 | 23.5    | Y3P5M45D2T000007 | Y3P5M45D2T00000G |
| 50     | 0       | 0       | 23.5    | Y3P5500D00000007  | Y3P5500D0000000G  | M45x2    | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5M45F2T000007 | Y3P5M45F2T00000G |
| 50     | 0       | 0       | M25x1.5 | Y3P5500F00000007  | Y3P5500F0000000G  | M45x2    | M25x1.5 | M25x1.5 | 0       | Y3P5M4502T500007 | Y3P5M4502T50000G |
| 50     | 20      | 20      | 0       | Y3P5500022000007  | Y3P550002200000G  | M45x2    | M25x1.5 | M25x1.5 | 10      | Y3P5M45A2T500007 | Y3P5M45A2T50000G |
| 50     | 20      | 20      | 10      | Y3P5500A22000007  | Y3P5500A2200000G  | M45x2    | M25x1.5 | M25x1.5 | 23.5    | Y3P5M45D2T500007 | Y3P5M45D2T50000G |
| 50     | 20      | 20      | 23.5    | Y3P5500D22000007  | Y3P5500D2200000G  | M45x2    | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5M45F2T500007 | Y3P5M45F2T50000G |
| 50     | 20      | 20      | M25x1.5 | Y3P5500F22000007  | Y3P5500F2200000G  | 1½" BSPP | 0       | 0       | 0       | Y3P5BA2000000007 | Y3P5BA200000000G |
| 50     | 25      | 25      | 0       | Y3P5500022500007  | Y3P550002250000G  | 1½" BSPP | 0       | 0       | 10      | Y3P5BA2A00000007 | Y3P5BA2A0000000G |
| 50     | 25      | 25      | 10      | Y3P5500A22500007  | Y3P5500A2250000G  | 1½" BSPP | 0       | 0       | 23.5    | Y3P5BA2D00000007 | Y3P5BA2D0000000G |
| 50     | 25      | 25      | 23.5    | Y3P5500D22500007  | Y3P5500D2250000G  | 1½" BSPP | 0       | 0       | M25x1.5 | Y3P5BA2F00000007 | Y3P5BA2F0000000G |
| 50     | 25      | 25      | M25x1.5 | Y3P5500F22500007  | Y3P5500F2250000G  | 1½" BSPP | 20      | 20      | 0       | Y3P5BA2022000007 | Y3P5BA202200000G |
| 50     | M20x1.5 | M20x1.5 | 0       | Y3P550002T000007  | Y3P550002T00000G  | 1½" BSPP | 20      | 20      | 10      | Y3P5BA2A22000007 | Y3P5BA2A2200000G |
| 50     | M20x1.5 | M20x1.5 | 10      | Y3P5500A2T000007  | Y3P5500A2T00000G  | 1½" BSPP | 20      | 20      | 23.5    | Y3P5BA2D22000007 | Y3P5BA2D2200000G |
| 50     | M20x1.5 | M20x1.5 | 23.5    | Y3P5500D2T000007  | Y3P5500D2T00000G  | 1½" BSPP | 20      | 20      | M25x1.5 | Y3P5BA2F22000007 | Y3P5BA2F2200000G |
| 50     | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5500F2T000007  | Y3P5500F2T00000G  | 1½" BSPP | 25      | 25      | 0       | Y3P5BA2022500007 | Y3P5BA202250000G |
| 50     | M25x1.5 | M25x1.5 | 0       | Y3P550002T500007  | Y3P550002T50000G  | 1½" BSPP | 25      | 25      | 10      | Y3P5BA2A22500007 | Y3P5BA2A2250000G |
| 50     | M25x1.5 | M25x1.5 | 10      | Y3P5500A2T500007  | Y3P5500A2T50000G  | 1½" BSPP | 25      | 25      | 23.5    | Y3P5BA2D22500007 | Y3P5BA2D2250000G |
| 50     | M25x1.5 | M25x1.5 | 23.5    | Y3P5500D2T500007  | Y3P5500D2T50000G  | 1½" BSPP | 25      | 25      | M25x1.5 | Y3P5BA2F22500007 | Y3P5BA2F2250000G |
| 50     | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5500F2T500007  | Y3P5500F2T50000G  | 1½" BSPP | M20x1.5 | M20x1.5 | 0       | Y3P5BA202T000007 | Y3P5BA202T00000G |
| 60     | 0       | 0       | 0       | Y3P56000000000007 | Y3P5600000000000G | 1½" BSPP | M20x1.5 | M20x1.5 | 10      | Y3P5BA2A2T000007 | Y3P5BA2A2T00000G |
| 60     | 0       | 0       | 10      | Y3P5600A00000007  | Y3P5600A0000000G  | 1½" BSPP | M20x1.5 | M20x1.5 | 23.5    | Y3P5BA2D2T000007 | Y3P5BA2D2T00000G |
| 60     | 0       | 0       | 23.5    | Y3P5600D00000007  | Y3P5600D0000000G  | 1½" BSPP | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5BA2F2T000007 | Y3P5BA2F2T00000G |
| 60     | 0       | 0       | M25x1.5 | Y3P5600F00000007  | Y3P5600F0000000G  | 1½" BSPP | M25x1.5 | M25x1.5 | 0       | Y3P5BA202T500007 | Y3P5BA202T50000G |
| 60     | 20      | 20      | 0       | Y3P5600022000007  | Y3P560002200000G  | 1½" BSPP | M25x1.5 | M25x1.5 | 10      | Y3P5BA2A2T500007 | Y3P5BA2A2T50000G |
| 60     | 20      | 20      | 10      | Y3P5600A22000007  | Y3P5600A2200000G  | 1½" BSPP | M25x1.5 | M25x1.5 | 23.5    | Y3P5BA2D2T500007 | Y3P5BA2D2T50000G |
| 60     | 20      | 20      | 23.5    | Y3P5600D22000007  | Y3P5600D2200000G  | 1½" BSPP | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5BA2F2T500007 | Y3P5BA2F2T50000G |
| 60     | 20      | 20      | M25x1.5 | Y3P5600F22000007  | Y3P5600F2200000G  | 2" BSPP  | 0       | 0       | 0       | Y3P5BB2000000007 | Y3P5BB200000000G |
| 60     | 25      | 25      | 0       | Y3P5600022500007  | Y3P560002250000G  | 2" BSPP  | 0       | 0       | 10      | Y3P5BB2A00000007 | Y3P5BB2A0000000G |
| 60     | 25      | 25      | 10      | Y3P5600A22500007  | Y3P5600A2250000G  | 2" BSPP  | 0       | 0       | 23.5    | Y3P5BB2D00000007 | Y3P5BB2D0000000G |
| 60     | 25      | 25      | 23.5    | Y3P5600D22500007  | Y3P5600D2250000G  | 2" BSPP  | 0       | 0       | M25x1.5 | Y3P5BB2F00000007 | Y3P5BB2F0000000G |
| 60     | 25      | 25      | M25x1.5 | Y3P5600F22500007  | Y3P5600F2250000G  | 2" BSPP  | 20      | 20      | 0       | Y3P5BB2022000007 | Y3P5BB202200000G |
| 60     | M20x1.5 | M20x1.5 | 0       | Y3P560002T000007  | Y3P560002T00000G  | 2" BSPP  | 20      | 20      | 10      | Y3P5BB2A22000007 | Y3P5BB2A2200000G |
| 60     | M20x1.5 | M20x1.5 | 10      | Y3P5600A2T000007  | Y3P5600A2T00000G  | 2" BSPP  | 20      | 20      | 23.5    | Y3P5BB2D22000007 | Y3P5BB2D2200000G |
| 60     | M20x1.5 | M20x1.5 | 23.5    | Y3P5600D2T000007  | Y3P5600D2T00000G  | 2" BSPP  | 20      | 20      | M25x1.5 | Y3P5BB2F22000007 | Y3P5BB2F2200000G |
| 60     | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5600F2T000007  | Y3P5600F2T00000G  | 2" BSPP  | 25      | 25      | 0       | Y3P5BB2022500007 | Y3P5BB202250000G |
| 60     | M25x1.5 | M25x1.5 | 0       | Y3P560002T500007  | Y3P560002T50000G  | 2" BSPP  | 25      | 25      | 10      | Y3P5BB2A22500007 | Y3P5BB2A2250000G |
| 60     | M25x1.5 | M25x1.5 | 10      | Y3P5600A2T500007  | Y3P5600A2T50000G  | 2" BSPP  | 25      | 25      | 23.5    | Y3P5BB2D22500007 | Y3P5BB2D2250000G |
| 60     | M25x1.5 | M25x1.5 | 23.5    | Y3P5600D2T500007  | Y3P5600D2T50000G  | 2" BSPP  | 25      | 25      | M25x1.5 | Y3P5BB2F22500007 | Y3P5BB2F2250000G |
| 60     | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5600F2T500007  | Y3P5600F2T50000G  | 2" BSPP  | M20x1.5 | M20x1.5 | 0       | Y3P5BB202T000007 | Y3P5BB202T00000G |
| 77     | 0       | 0       | 0       | Y3P57700000000007 | Y3P5770000000000G | 2" BSPP  | M20x1.5 | M20x1.5 | 10      | Y3P5BB2A2T000007 | Y3P5BB2A2T00000G |
| 77     | 0       | 0       | 10      | Y3P5770A00000007  | Y3P5770A0000000G  | 2" BSPP  | M20x1.5 | M20x1.5 | 23.5    | Y3P5BB2D2T000007 | Y3P5BB2D2T00000G |
| 77     | 0       | 0       | 23.5    | Y3P5770D00000007  | Y3P5770D0000000G  | 2" BSPP  | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5BB2F2T000007 | Y3P5BB2F2T00000G |
| 77     | 0       | 0       | M25x1.5 | Y3P5770F00000007  | Y3P5770F0000000G  | 2" BSPP  | M25x1.5 | M25x1.5 | 0       | Y3P5BB202T500007 | Y3P5BB202T50000G |
| 77     | 20      | 20      | 0       | Y3P5770022000007  | Y3P577002200000G  | 2" BSPP  | M25x1.5 | M25x1.5 | 10      | Y3P5BB2A2T500007 | Y3P5BB2A2T50000G |
| 77     | 20      | 20      | 10      | Y3P5770A22000007  | Y3P5770A2200000G  | 2" BSPP  | M25x1.5 | M25x1.5 | 23.5    | Y3P5BB2D2T500007 | Y3P5BB2D2T50000G |
| 77     | 20      | 20      | 23.5    | Y3P5770D22000007  | Y3P5770D2200000G  | 2" BSPP  | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5BB2F2T500007 | Y3P5BB2F2T50000G |
| 77     | 20      | 20      | M25x1.5 | Y3P5770F22000007  | Y3P5770F2200000G  | 2½" BSPP | 0       | 0       | 0       | Y3P5BC2000000007 | Y3P5BC200000000G |
| 77     | 25      | 25      | 0       | Y3P5770022500007  | Y3P577002250000G  | 2½" BSPP | 0       | 0       | 10      | Y3P5BC2A00000007 | Y3P5BC2A0000000G |
| 77     | 25      | 25      | 10      | Y3P5770A22500007  | Y3P5770A2250000G  | 2½" BSPP | 0       | 0       | 23.5    | Y3P5BC2D00000007 | Y3P5BC2D0000000G |
| 77     | 25      | 25      | 23.5    | Y3P5770D22500007  | Y3P5770D2250000G  | 2½" BSPP | 0       | 0       | M25x1.5 | Y3P5BC2F00000007 | Y3P5BC2F0000000G |
| 77     | 25      | 25      | M25x1.5 | Y3P5770F22500007  | Y3P5770F2250000G  | 2½" BSPP | 20      | 20      | 0       | Y3P5BC2022000007 | Y3P5BC202200000G |
| 77     | M20x1.5 | M20x1.5 | 0       | Y3P577002T000007  | Y3P577002T00000G  | 2½" BSPP | 20      | 20      | 10      | Y3P5BC2A22000007 | Y3P5BC2A2200000G |
| 77     | M20x1.5 | M20x1.5 | 10      | Y3P5770A2T000007  | Y3P5770A2T00000G  | 2½" BSPP | 20      | 20      | 23.5    | Y3P5BC2D22000007 | Y3P5BC2D2200000G |
| 77     | M20x1.5 | M20x1.5 | 23.5    | Y3P5770D2T000007  | Y3P5770D2T00000G  | 2½" BSPP | 20      | 20      | M25x1.5 | Y3P5BC2F22000007 | Y3P5BC2F2200000G |
| 77     | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5770F2T000007  | Y3P5770F2T00000G  | 2½" BSPP | 25      | 25      | 0       | Y3P5BC2022500007 | Y3P5BC202250000G |
| 77     | M25x1.5 | M25x1.5 | 0       | Y3P577002T500007  | Y3P577002T50000G  | 2½" BSPP | 25      | 25      | 10      | Y3P5BC2A22500007 | Y3P5BC2A2250000G |
| 77     | M25x1.5 | M25x1.5 | 10      | Y3P5770A2T500007  | Y3P5770A2T50000G  | 2½" BSPP | 25      | 25      | 23.5    | Y3P5BC2D22500007 | Y3P5BC2D2250000G |
| 77     | M25x1.5 | M25x1.5 | 23.5    | Y3P5770D2T500007  | Y3P5770D2T50000G  | 2½" BSPP | 25      | 25      | M25x1.5 | Y3P5BC2F22500007 | Y3P5BC2F2250000G |
| 77     | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5770F2T500007  | Y3P5770F2T50000G  | 2½" BSPP | M20x1.5 | M20x1.5 | 0       | Y3P5BC202T000007 | Y3P5BC202T00000G |
| M45x2  | 0       | 0       | 0       | Y3P5M450000000007 | Y3P5M45000000000G | 2½" BSPP | M20x1.5 | M20x1.5 | 10      | Y3P5BC2A2T000007 | Y3P5BC2A2T00000G |
| M45x2  | 0       | 0       | 10      | Y3P5M45A00000007  | Y3P5M45A0000000G  | 2½" BSPP | M20x1.5 | M20x1.5 | 23.5    | Y3P5BC2D2T000007 | Y3P5BC2D2T00000G |
| M45x2  | 0       | 0       | 23.5    | Y3P5M45D00000007  | Y3P5M45D0000000G  | 2½" BSPP | M20x1.5 | M20x1.5 | M25x1.5 | Y3P5BC2F2T000007 | Y3P5BC2F2T00000G |
| M45x2  | 0       | 0       | M25x1.5 | Y3P5M450000000007 | Y3P5M45000000000G | 2½" BSPP | M25x1.5 | M25x1.5 | 0       | Y3P5BC202T500007 | Y3P5BC202T50000G |
| M45x2  | 20      | 20      | 0       | Y3P5M45022000007  | Y3P5M4502200000G  | 2½" BSPP | M25x1.5 | M25x1.5 | 10      | Y3P5BC2A2T500007 | Y3P5BC2A2T50000G |
| M45x2  | 20      | 20      | 10      | Y3P5M45A22000007  | Y3P5M45A2200000G  | 2½" BSPP | M25x1.5 | M25x1.5 | 23.5    | Y3P5BC2D2T500007 | Y3P5BC2D2T50000G |
| M45x2  | 20      | 20      | 23.5    | Y3P5M45D22000007  | Y3P5M45D2200000G  | 2½" BSPP | M25x1.5 | M25x1.5 | M25x1.5 | Y3P5BC2F2T500007 | Y3P5BC2F2T50000G |

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Cat11-1-153

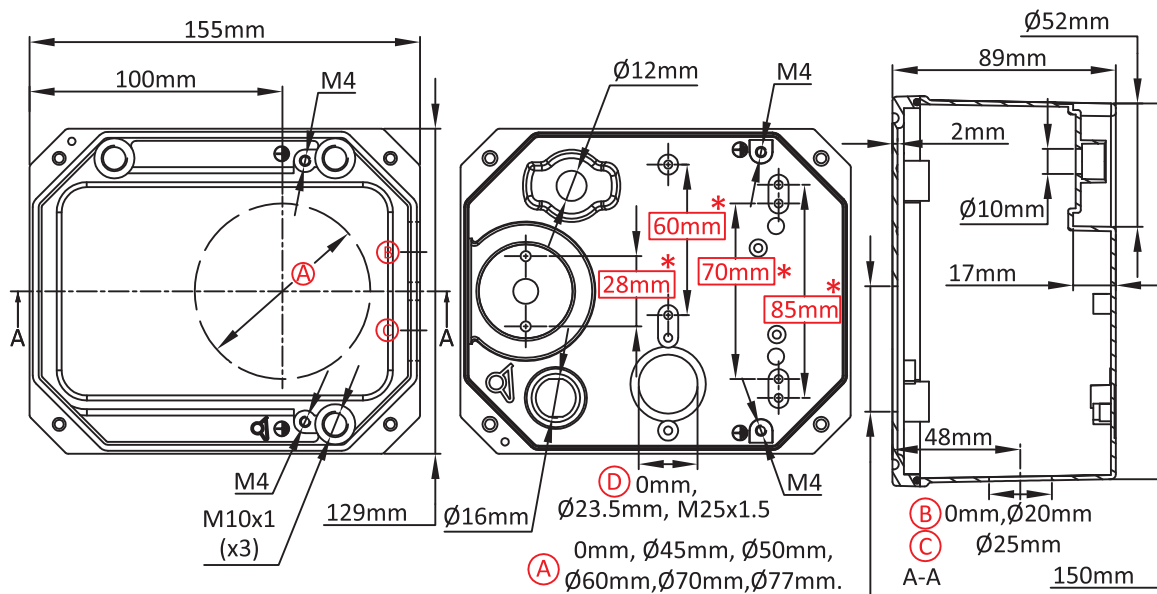
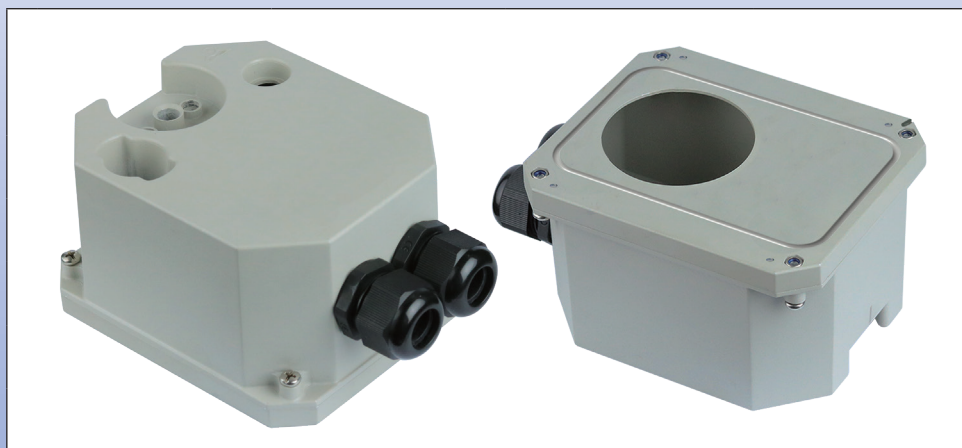
# Large size enclosure for immersion heater, finned heaters with external adjustment knob



| Size(mm)       | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model               |
|----------------|--------------------------|----------|------------------|------|---------------------|
| 89 x 124 x 155 | 1600                     | Aluminum | IP69K            | IK10 | <b>Y3P6</b><br>(P1) |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



## Main references

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | Not painted      | Painted           | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|-------------|------------------|-------------------|-------------|-------------|-------------|-------------|------------------|------------------|
| 0           | 0           | 0           | 0           | Y3P6000000000007 | Y3P6000000000000G | 0           | 25          | 0           | 0           | Y3P6000012500007 | Y3P600001250000G |
| 0           | 0           | 0           | 23.5        | Y3P6000D00000007 | Y3P6000D0000000G  | 0           | 25          | 0           | 23.5        | Y3P6000D12500007 | Y3P6000D1250000G |
| 0           | 0           | 0           | M25x1.5     | Y3P6000F00000007 | Y3P6000F0000000G  | 0           | 25          | 0           | M25x1.5     | Y3P6000F12500007 | Y3P6000F1250000G |
| 0           | 20          | 0           | 0           | Y3P6000012000007 | Y3P600001200000G  | 0           | 25          | 25          | 0           | Y3P6000022500007 | Y3P600002250000G |
| 0           | 20          | 0           | 23.5        | Y3P6000D12000007 | Y3P6000D1200000G  | 0           | 25          | 25          | 23.5        | Y3P6000D22500007 | Y3P6000D2250000G |
| 0           | 20          | 0           | M25x1.5     | Y3P6000F12000007 | Y3P6000F1200000G  | 0           | 25          | 25          | M25x1.5     | Y3P6000F22500007 | Y3P6000F2250000G |
| 0           | 20          | 20          | 0           | Y3P6000022000007 | Y3P600002200000G  | 45          | 0           | 0           | 0           | Y3P6450000000007 | Y3P645000000000G |
| 0           | 20          | 20          | 23.5        | Y3P6000D22000007 | Y3P6000D2200000G  | 45          | 0           | 0           | 23.5        | Y3P6450D00000007 | Y3P6450D0000000G |
| 0           | 20          | 20          | M25x1.5     | Y3P6000F22000007 | Y3P6000F2200000G  | 45          | 0           | 0           | M25x1.5     | Y3P6450F00000007 | Y3P6450F0000000G |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Large size enclosure for immersion heater, finned heaters with external adjustment knob

**Y3P6  
(P2)**



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | Not painted      | Painted          | (A)<br>(mm) | (B)<br>(mm) | (C)<br>(mm) | (D)<br>(mm) | Not painted      | Painted          |
|-------------|-------------|-------------|-------------|------------------|------------------|-------------|-------------|-------------|-------------|------------------|------------------|
| 45          | 20          | 0           | 0           | Y3P6450012000007 | Y3P645001200000G | 60          | 25          | 0           | 0           | Y3P6600012500007 | Y3P660001250000G |
| 45          | 20          | 0           | 23.5        | Y3P6450D12000007 | Y3P6450D1200000G | 60          | 25          | 0           | 23.5        | Y3P6600D12500007 | Y3P6600D1250000G |
| 45          | 20          | 0           | M25×1.5     | Y3P6450F12000007 | Y3P6450F1200000G | 60          | 25          | 0           | M25×1.5     | Y3P6600F12500007 | Y3P6600F1250000G |
| 45          | 20          | 20          | 0           | Y3P6450022000007 | Y3P645002200000G | 60          | 25          | 25          | 0           | Y3P6600022500007 | Y3P660002250000G |
| 45          | 20          | 20          | 23.5        | Y3P6450D22000007 | Y3P6450D2200000G | 60          | 25          | 25          | 23.5        | Y3P6600D22500007 | Y3P6600D2250000G |
| 45          | 20          | 20          | M25×1.5     | Y3P6450F22000007 | Y3P6450F2200000G | 60          | 25          | 25          | M25×1.5     | Y3P6600F22500007 | Y3P6600F2250000G |
| 45          | 25          | 0           | 0           | Y3P6450012500007 | Y3P645001250000G | 70          | 0           | 0           | 0           | Y3P6700000000007 | Y3P670000000000G |
| 45          | 25          | 0           | 23.5        | Y3P6450D12500007 | Y3P6450D1250000G | 70          | 0           | 0           | 23.5        | Y3P6700D00000007 | Y3P6700D0000000G |
| 45          | 25          | 0           | M25×1.5     | Y3P6450F12500007 | Y3P6450F1250000G | 70          | 0           | 0           | M25×1.5     | Y3P6700F00000007 | Y3P6700F0000000G |
| 45          | 25          | 25          | 0           | Y3P6450022500007 | Y3P645002250000G | 70          | 20          | 0           | 0           | Y3P6700012000007 | Y3P670001200000G |
| 45          | 25          | 25          | 23.5        | Y3P6450D22500007 | Y3P6450D2250000G | 70          | 20          | 0           | 23.5        | Y3P6700D12000007 | Y3P6700D1200000G |
| 45          | 25          | 25          | M25×1.5     | Y3P6450F22500007 | Y3P6450F2250000G | 70          | 20          | 0           | M25×1.5     | Y3P6700F12000007 | Y3P6700F1200000G |
| 50          | 0           | 0           | 0           | Y3P6500000000007 | Y3P650000000000G | 70          | 20          | 20          | 0           | Y3P6700022000007 | Y3P670002200000G |
| 50          | 0           | 0           | 23.5        | Y3P6500D00000007 | Y3P6500D0000000G | 70          | 20          | 20          | 23.5        | Y3P6700D22000007 | Y3P6700D2200000G |
| 50          | 0           | 0           | M25×1.5     | Y3P6500F00000007 | Y3P6500F0000000G | 70          | 20          | 20          | M25×1.5     | Y3P6700F22000007 | Y3P6700F2200000G |
| 50          | 20          | 0           | 0           | Y3P6500012000007 | Y3P650001200000G | 70          | 25          | 0           | 0           | Y3P6700012500007 | Y3P670001250000G |
| 50          | 20          | 0           | 23.5        | Y3P6500D12000007 | Y3P6500D1200000G | 70          | 25          | 0           | 23.5        | Y3P6700D12500007 | Y3P6700D1250000G |
| 50          | 20          | 0           | M25×1.5     | Y3P6500F12000007 | Y3P6500F1200000G | 70          | 25          | 0           | M25×1.5     | Y3P6700F12500007 | Y3P6700F1250000G |
| 50          | 20          | 20          | 0           | Y3P6500022000007 | Y3P650002200000G | 70          | 25          | 25          | 0           | Y3P6700022500007 | Y3P670002250000G |
| 50          | 20          | 20          | 23.5        | Y3P6500D22000007 | Y3P6500D2200000G | 70          | 25          | 25          | 23.5        | Y3P6700D22500007 | Y3P6700D2250000G |
| 50          | 20          | 20          | M25×1.5     | Y3P6500F22000007 | Y3P6500F2200000G | 70          | 25          | 25          | M25×1.5     | Y3P6700F22500007 | Y3P6700F2250000G |
| 50          | 25          | 0           | 0           | Y3P6500012500007 | Y3P650001250000G | 77          | 0           | 0           | 0           | Y3P6770000000007 | Y3P677000000000G |
| 50          | 25          | 0           | 23.5        | Y3P6500D12500007 | Y3P6500D1250000G | 77          | 0           | 0           | 23.5        | Y3P6770D00000007 | Y3P6770D0000000G |
| 50          | 25          | 0           | M25×1.5     | Y3P6500F12500007 | Y3P6500F1250000G | 77          | 0           | 0           | M25×1.5     | Y3P6770F00000007 | Y3P6770F0000000G |
| 50          | 25          | 25          | 0           | Y3P6500022500007 | Y3P650002250000G | 77          | 20          | 0           | 0           | Y3P6770012000007 | Y3P677001200000G |
| 50          | 25          | 25          | 23.5        | Y3P6500D22500007 | Y3P6500D2250000G | 77          | 20          | 0           | 23.5        | Y3P6770D12000007 | Y3P6770D1200000G |
| 50          | 25          | 25          | M25×1.5     | Y3P6500F22500007 | Y3P6500F2250000G | 77          | 20          | 0           | M25×1.5     | Y3P6770F12000007 | Y3P6770F1200000G |
| 60          | 0           | 0           | 0           | Y3P6600000000007 | Y3P660000000000G | 77          | 20          | 20          | 0           | Y3P6770022000007 | Y3P677002200000G |
| 60          | 0           | 0           | 23.5        | Y3P6600D00000007 | Y3P6600D0000000G | 77          | 20          | 20          | 23.5        | Y3P6770D22000007 | Y3P6770D2200000G |
| 60          | 0           | 0           | M25×1.5     | Y3P6600F00000007 | Y3P6600F0000000G | 77          | 20          | 20          | M25×1.5     | Y3P6770F22000007 | Y3P6770F2200000G |
| 60          | 20          | 0           | 0           | Y3P6600012000007 | Y3P660001200000G | 77          | 25          | 0           | 0           | Y3P6770012500007 | Y3P677001250000G |
| 60          | 20          | 0           | 23.5        | Y3P6600D12000007 | Y3P6600D1200000G | 77          | 25          | 0           | 23.5        | Y3P6770D12500007 | Y3P6770D1250000G |
| 60          | 20          | 0           | M25×1.5     | Y3P6600F12000007 | Y3P6600F1200000G | 77          | 25          | 0           | M25×1.5     | Y3P6770F12500007 | Y3P6770F1250000G |
| 60          | 20          | 20          | 0           | Y3P6600022000007 | Y3P660002200000G | 77          | 25          | 25          | 0           | Y3P6770022500007 | Y3P677002250000G |
| 60          | 20          | 20          | 23.5        | Y3P6600D22000007 | Y3P6600D2200000G | 77          | 25          | 25          | 23.5        | Y3P6770D22500007 | Y3P6770D2250000G |
| 60          | 20          | 20          | M25×1.5     | Y3P6600F22000007 | Y3P6600F2200000G | 77          | 25          | 25          | M25×1.5     | Y3P6770F22500007 | Y3P6770F2250000G |



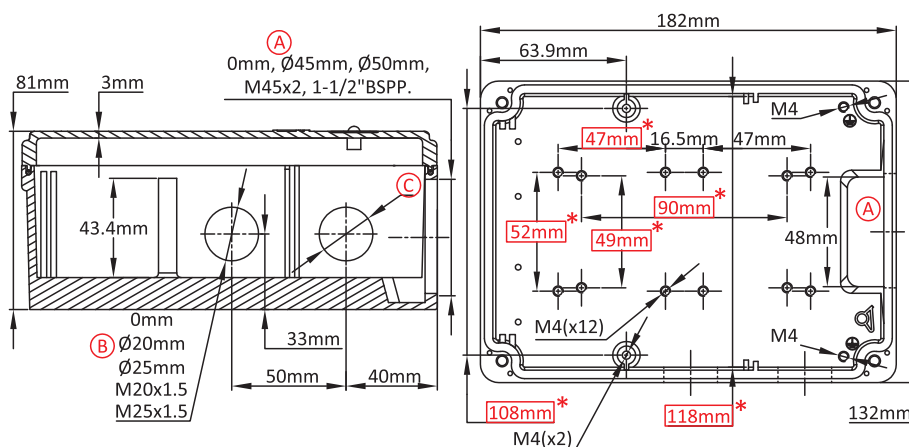
# Enclosure with aluminum body, black or transparent polycarbonate cover, for immersion heater or solid state relays (SSR) controls



| Size(mm)              | Volume(cm <sup>3</sup> ) | Material                        | Protection grade |             | Model       |
|-----------------------|--------------------------|---------------------------------|------------------|-------------|-------------|
| <b>81 x 132 x 182</b> | <b>1870</b>              | <b>Aluminum + Polycarbonate</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3H1</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☐ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted           | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted       | Painted           |
|-------|---------|---------|------------------|-------------------|---------|---------|---------|-------------------|-------------------|
| 0     | 0       | 0       | Y3H1000000000007 | Y3H1000000000000G | 50      | M20x1.5 | M20x1.5 | Y3H150002T000007  | Y3H150002T00000G  |
| 0     | 20      | 0       | Y3H1000012000007 | Y3H100001200000G  | 50      | M25x1.5 | 0       | Y3H150001T500007  | Y3H150001T50000G  |
| 0     | 20      | 20      | Y3H1000022000007 | Y3H100002200000G  | 50      | M25x1.5 | M25x1.5 | Y3H150002T500007  | Y3H150002T50000G  |
| 0     | 25      | 0       | Y3H1000012500007 | Y3H100001250000G  | M45x2   | 0       | 0       | Y3H1M450000000007 | Y3H1M45000000000G |
| 0     | 25      | 25      | Y3H1000022500007 | Y3H100002250000G  | M45x2   | 20      | 0       | Y3H1M45012000007  | Y3H1M4501200000G  |
| 0     | M20x1.5 | 0       | Y3H100001T000007 | Y3H100001T00000G  | M45x2   | 20      | 20      | Y3H1M45022000007  | Y3H1M4502200000G  |
| 0     | M20x1.5 | M20x1.5 | Y3H100002T000007 | Y3H100002T00000G  | M45x2   | 25      | 0       | Y3H1M45012500007  | Y3H1M4501250000G  |
| 0     | M25x1.5 | 0       | Y3H100001T500007 | Y3H100001T50000G  | M45x2   | 25      | 25      | Y3H1M45022500007  | Y3H1M4502250000G  |
| 0     | M25x1.5 | M25x1.5 | Y3H100002T500007 | Y3H100002T50000G  | M45x2   | M20x1.5 | 0       | Y3H1M4501T000007  | Y3H1M4501T00000G  |
| 45    | 0       | 0       | Y3H1450000000007 | Y3H145000000000G  | M45x2   | M20x1.5 | M20x1.5 | Y3H1M4502T000007  | Y3H1M4502T00000G  |
| 45    | 20      | 0       | Y3H1450012000007 | Y3H145001200000G  | M45x2   | M25x1.5 | 0       | Y3H1M4501T500007  | Y3H1M4501T50000G  |
| 45    | 20      | 20      | Y3H1450022000007 | Y3H145002200000G  | M45x2   | M25x1.5 | M25x1.5 | Y3H1M4502T500007  | Y3H1M4502T50000G  |
| 45    | 25      | 0       | Y3H1450012500007 | Y3H145001250000G  | 1½"BSPP | 0       | 0       | Y3H1BA20000000007 | Y3H1BA2000000000G |
| 45    | 25      | 25      | Y3H1450022500007 | Y3H145002250000G  | 1½"BSPP | 20      | 0       | Y3H1BA2012000007  | Y3H1BA201200000G  |
| 45    | M20x1.5 | 0       | Y3H145001T000007 | Y3H145001T00000G  | 1½"BSPP | 20      | 20      | Y3H1BA2022000007  | Y3H1BA202200000G  |
| 45    | M20x1.5 | M20x1.5 | Y3H145002T000007 | Y3H145002T00000G  | 1½"BSPP | 25      | 0       | Y3H1BA2012500007  | Y3H1BA201250000G  |
| 45    | M25x1.5 | 0       | Y3H145001T500007 | Y3H145001T50000G  | 1½"BSPP | 25      | 25      | Y3H1BA2022500007  | Y3H1BA202250000G  |
| 45    | M25x1.5 | M25x1.5 | Y3H145002T500007 | Y3H145002T50000G  | 1½"BSPP | M20x1.5 | 0       | Y3H1BA201T000007  | Y3H1BA201T00000G  |
| 50    | 0       | 0       | Y3H1500000000007 | Y3H150000000000G  | 1½"BSPP | M20x1.5 | M20x1.5 | Y3H1BA202T000007  | Y3H1BA202T00000G  |
| 50    | 20      | 0       | Y3H1500012000007 | Y3H150001200000G  | 1½"BSPP | M25x1.5 | 0       | Y3H1BA201T500007  | Y3H1BA201T50000G  |
| 50    | 20      | 20      | Y3H1500022000007 | Y3H150002200000G  | 1½"BSPP | M25x1.5 | M25x1.5 | Y3H1BA202T500007  | Y3H1BA202T50000G  |
| 50    | 25      | 0       | Y3H1500012500007 | Y3H150001250000G  |         |         |         |                   |                   |
| 50    | 25      | 25      | Y3H1500022500007 | Y3H150002250000G  |         |         |         |                   |                   |
| 50    | M20x1.5 | 0       | Y3H150001T000007 | Y3H150001T00000G  |         |         |         |                   |                   |

Cable gland not included in these reference, consult us if you want them.

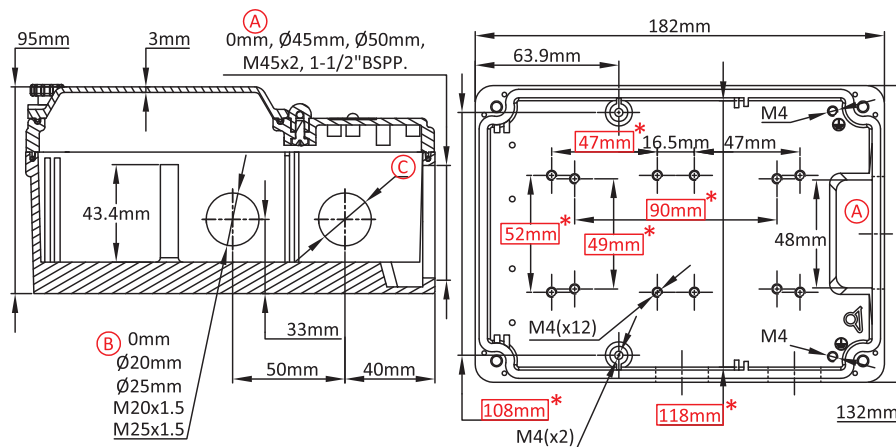
Red dimensions inside rectangular frames are used for accessories assembly.

# Enclosure with aluminum body, and plastic cover with transparent window, for immersion heater or solid state relays (SSR) controls

| Size(mm)              | Volume(cm <sup>3</sup> ) | Material                               | Protection grade |             | Model       |
|-----------------------|--------------------------|----------------------------------------|------------------|-------------|-------------|
| <b>95 x 132 x 182</b> | <b>2010</b>              | <b>Aluminum + PA66 + Polycarbonate</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3H2</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3H2000000000007 | Y3H200000000000G | 50      | M20x1.5 | 0       | Y3H250001T000007 | Y3H250001T00000G |
| 0     | 20      | 0       | Y3H2000012000007 | Y3H200001200000G | 50      | M20x1.5 | M20x1.5 | Y3H250002T000007 | Y3H250002T00000G |
| 0     | 20      | 20      | Y3H2000022000007 | Y3H200002200000G | 50      | M25x1.5 | 0       | Y3H250001T500007 | Y3H250001T50000G |
| 0     | 25      | 0       | Y3H2000012500007 | Y3H200001250000G | 50      | M25x1.5 | M25x1.5 | Y3H250002T500007 | Y3H250002T50000G |
| 0     | 25      | 25      | Y3H2000022500007 | Y3H200002250000G | M45x2   | 0       | 0       | Y3H2M45000000007 | Y3H2M4500000000G |
| 0     | M20x1.5 | 0       | Y3H200001T000007 | Y3H200001T00000G | M45x2   | 20      | 0       | Y3H2M45012000007 | Y3H2M4501200000G |
| 0     | M20x1.5 | M20x1.5 | Y3H200002T000007 | Y3H200002T00000G | M45x2   | 20      | 20      | Y3H2M45022000007 | Y3H2M4502200000G |
| 0     | M25x1.5 | 0       | Y3H200001T500007 | Y3H200001T50000G | M45x2   | 25      | 0       | Y3H2M45012500007 | Y3H2M4501250000G |
| 0     | M25x1.5 | M25x1.5 | Y3H200002T500007 | Y3H200002T50000G | M45x2   | 25      | 25      | Y3H2M45022500007 | Y3H2M4502250000G |
| 45    | 0       | 0       | Y3H2450000000007 | Y3H245000000000G | M45x2   | M20x1.5 | 0       | Y3H2M4501T000007 | Y3H2M4501T00000G |
| 45    | 20      | 0       | Y3H2450012000007 | Y3H245001200000G | M45x2   | M20x1.5 | M20x1.5 | Y3H2M4502T000007 | Y3H2M4502T00000G |
| 45    | 20      | 20      | Y3H2450022000007 | Y3H245002200000G | M45x2   | M25x1.5 | 0       | Y3H2M4501T500007 | Y3H2M4501T50000G |
| 45    | 25      | 0       | Y3H2450012500007 | Y3H245001250000G | M45x2   | M25x1.5 | M25x1.5 | Y3H2M4502T500007 | Y3H2M4502T50000G |
| 45    | 25      | 25      | Y3H2450022500007 | Y3H245002250000G | 1½"BSPP | 0       | 0       | Y3H2BA2000000007 | Y3H2BA200000000G |
| 45    | M20x1.5 | 0       | Y3H245001T000007 | Y3H245001T00000G | 1½"BSPP | 20      | 0       | Y3H2BA2012000007 | Y3H2BA201200000G |
| 45    | M20x1.5 | M20x1.5 | Y3H245002T000007 | Y3H245002T00000G | 1½"BSPP | 20      | 20      | Y3H2BA2022000007 | Y3H2BA202200000G |
| 45    | M25x1.5 | 0       | Y3H245001T500007 | Y3H245001T50000G | 1½"BSPP | 25      | 0       | Y3H2BA2012500007 | Y3H2BA201250000G |
| 45    | M25x1.5 | M25x1.5 | Y3H245002T500007 | Y3H245002T50000G | 1½"BSPP | 25      | 25      | Y3H2BA2022500007 | Y3H2BA202250000G |
| 50    | 0       | 0       | Y3H2500000000007 | Y3H250000000000G | 1½"BSPP | M20x1.5 | 0       | Y3H2BA201T000007 | Y3H2BA201T00000G |
| 50    | 20      | 0       | Y3H2500012000007 | Y3H250001200000G | 1½"BSPP | M20x1.5 | M20x1.5 | Y3H2BA202T000007 | Y3H2BA202T00000G |
| 50    | 20      | 20      | Y3H2500022000007 | Y3H250002200000G | 1½"BSPP | M25x1.5 | 0       | Y3H2BA201T500007 | Y3H2BA201T50000G |
| 50    | 25      | 0       | Y3H2500012500007 | Y3H250001250000G | 1½"BSPP | M25x1.5 | M25x1.5 | Y3H2BA202T500007 | Y3H2BA202T50000G |
| 50    | 25      | 25      | Y3H2500022500007 | Y3H250002250000G |         |         |         |                  |                  |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

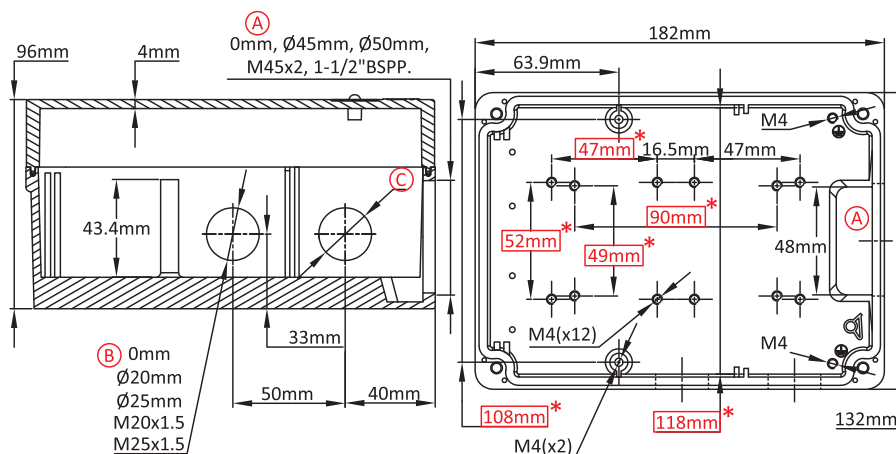
# All aluminum enclosure, for immersion heater or solid state relays (SSR) controls



| Size(mm)       | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model |
|----------------|--------------------------|----------|------------------|------|-------|
| 96 x 132 x 182 | 2050                     | Aluminum | IP69K            | IK10 | Y3H3  |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☐ Electronic board



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted           | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|-------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3H3000000000007 | Y3H3000000000000G | 50      | M20×1.5 | M20×1.5 | Y3H350002T000007 | Y3H350002T00000G |
| 0     | 20      | 0       | Y3H3000012000007 | Y3H300001200000G  | 50      | M25×1.5 | 0       | Y3H350001T500007 | Y3H350001T50000G |
| 0     | 20      | 20      | Y3H3000022000007 | Y3H300002200000G  | 50      | M25×1.5 | M25×1.5 | Y3H350002T500007 | Y3H350002T50000G |
| 0     | 25      | 0       | Y3H3000012500007 | Y3H300001250000G  | M45×2   | 0       | 0       | Y3H3M45000000007 | Y3H3M4500000000G |
| 0     | 25      | 25      | Y3H3000022500007 | Y3H300002250000G  | M45×2   | 20      | 0       | Y3H3M4501200007  | Y3H3M450120000G  |
| 0     | M20×1.5 | 0       | Y3H300001T000007 | Y3H300001T00000G  | M45×2   | 20      | 20      | Y3H3M4502200007  | Y3H3M450220000G  |
| 0     | M20×1.5 | M20×1.5 | Y3H300002T000007 | Y3H300002T00000G  | M45×2   | 25      | 0       | Y3H3M4501250007  | Y3H3M450125000G  |
| 0     | M25×1.5 | 0       | Y3H300001T500007 | Y3H300001T50000G  | M45×2   | 25      | 25      | Y3H3M4502250007  | Y3H3M450225000G  |
| 0     | M25×1.5 | M25×1.5 | Y3H300002T500007 | Y3H300002T50000G  | M45×2   | M20×1.5 | 0       | Y3H3M4501T000007 | Y3H3M4501T00000G |
| 45    | 0       | 0       | Y3H3450000000007 | Y3H3450000000000G | M45×2   | M20×1.5 | M20×1.5 | Y3H3M4502T000007 | Y3H3M4502T00000G |
| 45    | 20      | 0       | Y3H3450012000007 | Y3H345001200000G  | M45×2   | M25×1.5 | 0       | Y3H3M4501T500007 | Y3H3M4501T50000G |
| 45    | 20      | 20      | Y3H3450022000007 | Y3H345002200000G  | M45×2   | M25×1.5 | M25×1.5 | Y3H3M4502T500007 | Y3H3M4502T50000G |
| 45    | 25      | 0       | Y3H3450012500007 | Y3H345001250000G  | 1½"BSPP | 0       | 0       | Y3H3BA2000000007 | Y3H3BA200000000G |
| 45    | 25      | 25      | Y3H3450022500007 | Y3H345002250000G  | 1½"BSPP | 20      | 0       | Y3H3BA2012000007 | Y3H3BA201200000G |
| 45    | M20×1.5 | 0       | Y3H345001T000007 | Y3H345001T00000G  | 1½"BSPP | 20      | 20      | Y3H3BA2022000007 | Y3H3BA202200000G |
| 45    | M20×1.5 | M20×1.5 | Y3H345002T000007 | Y3H345002T00000G  | 1½"BSPP | 25      | 0       | Y3H3BA2012500007 | Y3H3BA201250000G |
| 45    | M25×1.5 | 0       | Y3H345001T500007 | Y3H345001T50000G  | 1½"BSPP | 25      | 25      | Y3H3BA2022500007 | Y3H3BA202250000G |
| 45    | M25×1.5 | M25×1.5 | Y3H345002T500007 | Y3H345002T50000G  | 1½"BSPP | M20×1.5 | 0       | Y3H3BA201T000007 | Y3H3BA201T00000G |
| 50    | 0       | 0       | Y3H3500000000007 | Y3H3500000000000G | 1½"BSPP | M20×1.5 | M20×1.5 | Y3H3BA202T000007 | Y3H3BA202T00000G |
| 50    | 20      | 0       | Y3H3500012000007 | Y3H350001200000G  | 1½"BSPP | M25×1.5 | 0       | Y3H3BA201T500007 | Y3H3BA201T50000G |
| 50    | 20      | 20      | Y3H3500022000007 | Y3H350002200000G  | 1½"BSPP | M25×1.5 | M25×1.5 | Y3H3BA202T500007 | Y3H3BA202T50000G |
| 50    | 25      | 0       | Y3H3500012500007 | Y3H350001250000G  |         |         |         |                  |                  |
| 50    | 25      | 25      | Y3H3500022500007 | Y3H350002250000G  |         |         |         |                  |                  |
| 50    | M20×1.5 | 0       | Y3H350001T000007 | Y3H350001T00000G  |         |         |         |                  |                  |

Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

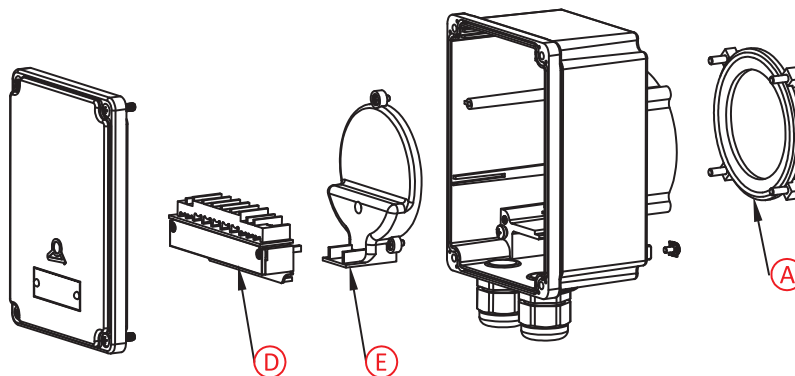
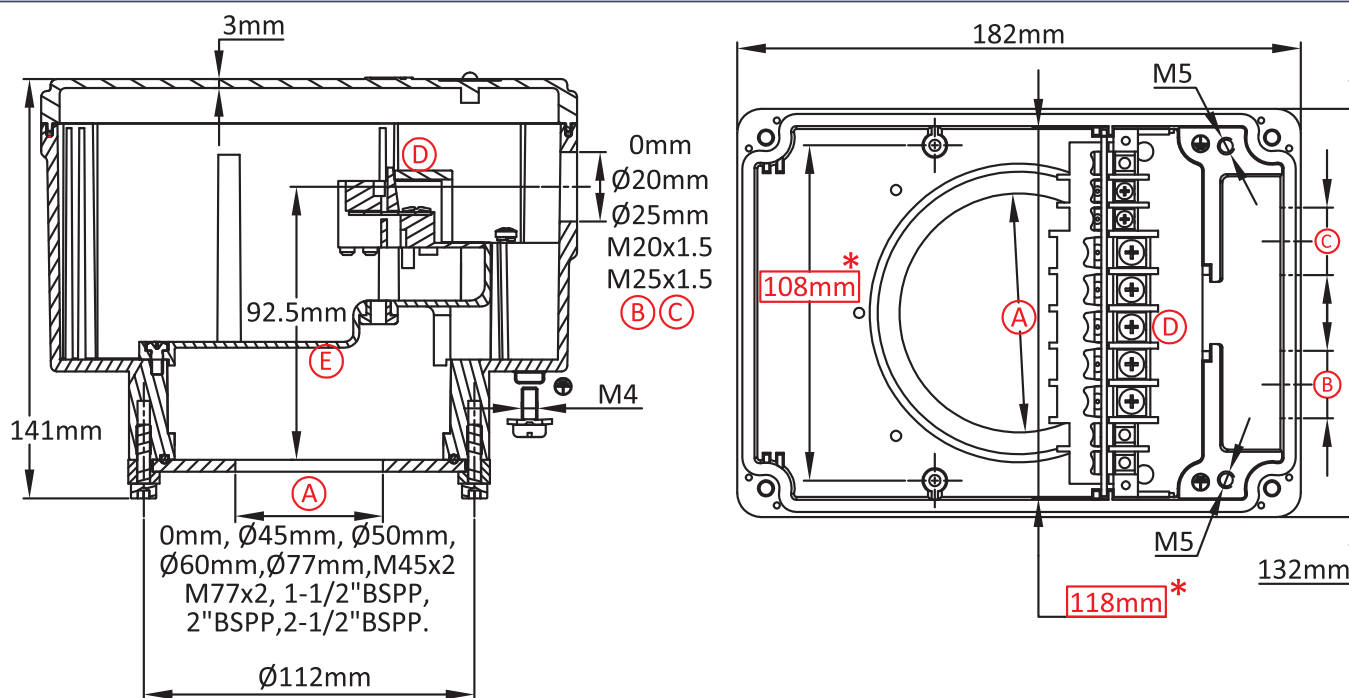


# Aluminum and plastic composite enclosure, with polycarbonate cover, for immersion heater with 30 mm offset fitting

| Size(mm)        | Volume(cm <sup>3</sup> ) | Material                 | Protection grade |      | Model               |
|-----------------|--------------------------|--------------------------|------------------|------|---------------------|
| 182 x 132 x 130 | 2435                     | Aluminum + Polycarbonate | IP69K            | IK10 | <b>Y3G1</b><br>(P1) |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☒ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# Aluminum and plastic composite enclosure, with polycarbonate cover, for immersion heater with 30 mm offset fitting

**Y3G1**  
(P2)



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3G1000000J1007  | Y3G1000000J100G  | M45×2   | 0       | 0       | Y3G1M450000J1007 | Y3G1M450000J100G |
| 0     | 20      | 0       | Y3G10000120J1007 | Y3G10000120J100G | M45×2   | 20      | 0       | Y3G1M450120J1007 | Y3G1M450120J100G |
| 0     | 20      | 20      | Y3G10000220J1007 | Y3G10000220J100G | M45×2   | 20      | 20      | Y3G1M450220J1007 | Y3G1M450220J100G |
| 0     | 25      | 0       | Y3G10000125J1007 | Y3G10000125J100G | M45×2   | 25      | 0       | Y3G1M450125J1007 | Y3G1M450125J100G |
| 0     | 25      | 25      | Y3G10000225J1007 | Y3G10000225J100G | M45×2   | 25      | 25      | Y3G1M450225J1007 | Y3G1M450225J100G |
| 0     | M20×1.5 | 0       | Y3G100001T0J1007 | Y3G100001T0J100G | M45×2   | M20×1.5 | 0       | Y3G1M4501T0J1007 | Y3G1M4501T0J100G |
| 0     | M20×1.5 | M20×1.5 | Y3G100002T0J1007 | Y3G100002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y3G1M4502T0J1007 | Y3G1M4502T0J100G |
| 0     | M25×1.5 | 0       | Y3G100001T5J1007 | Y3G100001T5J100G | M45×2   | M25×1.5 | 0       | Y3G1M4501T5J1007 | Y3G1M4501T5J100G |
| 0     | M25×1.5 | M25×1.5 | Y3G100002T5J1007 | Y3G100002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y3G1M4502T5J1007 | Y3G1M4502T5J100G |
| 45    | 0       | 0       | Y3G1450000J1007  | Y3G1450000J100G  | M77×2   | 0       | 0       | Y3G1M770000J1007 | Y3G1M770000J100G |
| 45    | 20      | 0       | Y3G14500120J1007 | Y3G14500120J100G | M77×2   | 20      | 0       | Y3G1M770120J1007 | Y3G1M770120J100G |
| 45    | 20      | 20      | Y3G14500220J1007 | Y3G14500220J100G | M77×2   | 20      | 20      | Y3G1M770220J1007 | Y3G1M770220J100G |
| 45    | 25      | 0       | Y3G14500125J1007 | Y3G14500125J100G | M77×2   | 25      | 0       | Y3G1M770125J1007 | Y3G1M770125J100G |
| 45    | 25      | 25      | Y3G14500225J1007 | Y3G14500225J100G | M77×2   | 25      | 25      | Y3G1M770225J1007 | Y3G1M770225J100G |
| 45    | M20×1.5 | 0       | Y3G145001T0J1007 | Y3G145001T0J100G | M77×2   | M20×1.5 | 0       | Y3G1M7701T0J1007 | Y3G1M7701T0J100G |
| 45    | M20×1.5 | M20×1.5 | Y3G145002T0J1007 | Y3G145002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y3G1M7702T0J1007 | Y3G1M7702T0J100G |
| 45    | M25×1.5 | 0       | Y3G145001T5J1007 | Y3G145001T5J100G | M77×2   | M25×1.5 | 0       | Y3G1M7701T5J1007 | Y3G1M7701T5J100G |
| 45    | M25×1.5 | M25×1.5 | Y3G145002T5J1007 | Y3G145002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y3G1M7702T5J1007 | Y3G1M7702T5J100G |
| 50    | 0       | 0       | Y3G1500000J1007  | Y3G1500000J100G  | 1½"BSPP | 0       | 0       | Y3G1BA20000J1007 | Y3G1BA20000J100G |
| 50    | 20      | 0       | Y3G15000120J1007 | Y3G15000120J100G | 1½"BSPP | 20      | 0       | Y3G1BA20120J1007 | Y3G1BA20120J100G |
| 50    | 20      | 20      | Y3G15000220J1007 | Y3G15000220J100G | 1½"BSPP | 20      | 20      | Y3G1BA20220J1007 | Y3G1BA20220J100G |
| 50    | 25      | 0       | Y3G15000125J1007 | Y3G15000125J100G | 1½"BSPP | 25      | 0       | Y3G1BA20125J1007 | Y3G1BA20125J100G |
| 50    | 25      | 25      | Y3G15000225J1007 | Y3G15000225J100G | 1½"BSPP | 25      | 25      | Y3G1BA20225J1007 | Y3G1BA20225J100G |
| 50    | M20×1.5 | 0       | Y3G150001T0J1007 | Y3G150001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y3G1BA201T0J1007 | Y3G1BA201T0J100G |
| 50    | M20×1.5 | M20×1.5 | Y3G150002T0J1007 | Y3G150002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y3G1BA202T0J1007 | Y3G1BA202T0J100G |
| 50    | M25×1.5 | 0       | Y3G150001T5J1007 | Y3G150001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y3G1BA201T5J1007 | Y3G1BA201T5J100G |
| 50    | M25×1.5 | M25×1.5 | Y3G150002T5J1007 | Y3G150002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y3G1BA202T5J1007 | Y3G1BA202T5J100G |
| 60    | 0       | 0       | Y3G1600000J1007  | Y3G1600000J100G  | 2"BSPP  | 0       | 0       | Y3G1BB20000J1007 | Y3G1BB20000J100G |
| 60    | 20      | 0       | Y3G16000120J1007 | Y3G16000120J100G | 2"BSPP  | 20      | 0       | Y3G1BB20120J1007 | Y3G1BB20120J100G |
| 60    | 20      | 20      | Y3G16000220J1007 | Y3G16000220J100G | 2"BSPP  | 20      | 20      | Y3G1BB20220J1007 | Y3G1BB20220J100G |
| 60    | 25      | 0       | Y3G16000125J1007 | Y3G16000125J100G | 2"BSPP  | 25      | 0       | Y3G1BB20125J1007 | Y3G1BB20125J100G |
| 60    | 25      | 25      | Y3G16000225J1007 | Y3G16000225J100G | 2"BSPP  | 25      | 25      | Y3G1BB20225J1007 | Y3G1BB20225J100G |
| 60    | M20×1.5 | 0       | Y3G160001T0J1007 | Y3G160001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y3G1BB201T0J1007 | Y3G1BB201T0J100G |
| 60    | M20×1.5 | M20×1.5 | Y3G160002T0J1007 | Y3G160002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y3G1BB202T0J1007 | Y3G1BB202T0J100G |
| 60    | M25×1.5 | 0       | Y3G160001T5J1007 | Y3G160001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y3G1BB201T5J1007 | Y3G1BB201T5J100G |
| 60    | M25×1.5 | M25×1.5 | Y3G160002T5J1007 | Y3G160002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y3G1BB202T5J1007 | Y3G1BB202T5J100G |
| 77    | 0       | 0       | Y3G1770000J1007  | Y3G1770000J100G  | 2½"BSPP | 0       | 0       | Y3G1BC20000J1007 | Y3G1BC20000J100G |
| 77    | 20      | 0       | Y3G17700120J1007 | Y3G17700120J100G | 2½"BSPP | 20      | 0       | Y3G1BC20120J1007 | Y3G1BC20120J100G |
| 77    | 20      | 20      | Y3G17700220J1007 | Y3G17700220J100G | 2½"BSPP | 20      | 20      | Y3G1BC20220J1007 | Y3G1BC20220J100G |
| 77    | 25      | 0       | Y3G17700125J1007 | Y3G17700125J100G | 2½"BSPP | 25      | 0       | Y3G1BC20125J1007 | Y3G1BC20125J100G |
| 77    | 25      | 25      | Y3G17700225J1007 | Y3G17700225J100G | 2½"BSPP | 25      | 25      | Y3G1BC20225J1007 | Y3G1BC20225J100G |
| 77    | M20×1.5 | 0       | Y3G177001T0J1007 | Y3G177001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y3G1BC201T0J1007 | Y3G1BC201T0J100G |
| 77    | M20×1.5 | M20×1.5 | Y3G177002T0J1007 | Y3G177002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y3G1BC202T0J1007 | Y3G1BC202T0J100G |
| 77    | M25×1.5 | 0       | Y3G177001T5J1007 | Y3G177001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y3G1BC201T5J1007 | Y3G1BC201T5J100G |
| 77    | M25×1.5 | M25×1.5 | Y3G177002T5J1007 | Y3G177002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y3G1BC202T5J1007 | Y3G1BC202T5J100G |



Aluminum and plastic composite enclosure, with transparent window cover, for immersion heater with 30 mm offset fitting



| Size(mm)        | Volume(cm <sup>3</sup> ) | Material                        | Protection grade |      | Model     |
|-----------------|--------------------------|---------------------------------|------------------|------|-----------|
| 182 x 132 x 144 | 2575                     | Aluminum + PA66 + Polycarbonate | IP69K            | IK10 | Y3G2 (P1) |

Suitable for

☐ Temperature sensor

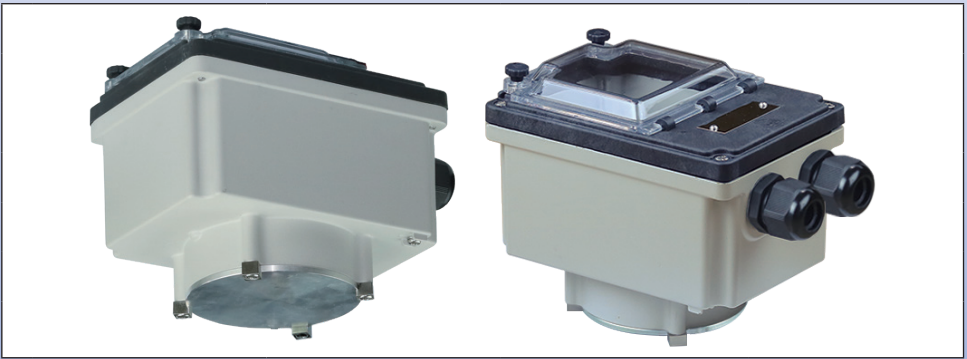
☒ Immersion heater

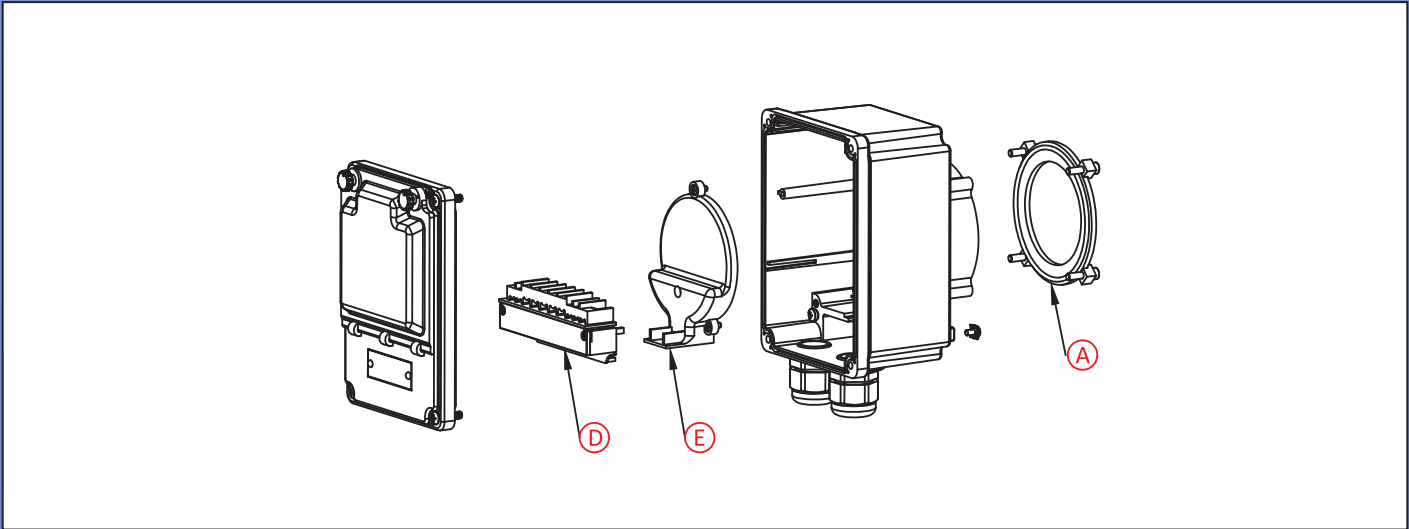
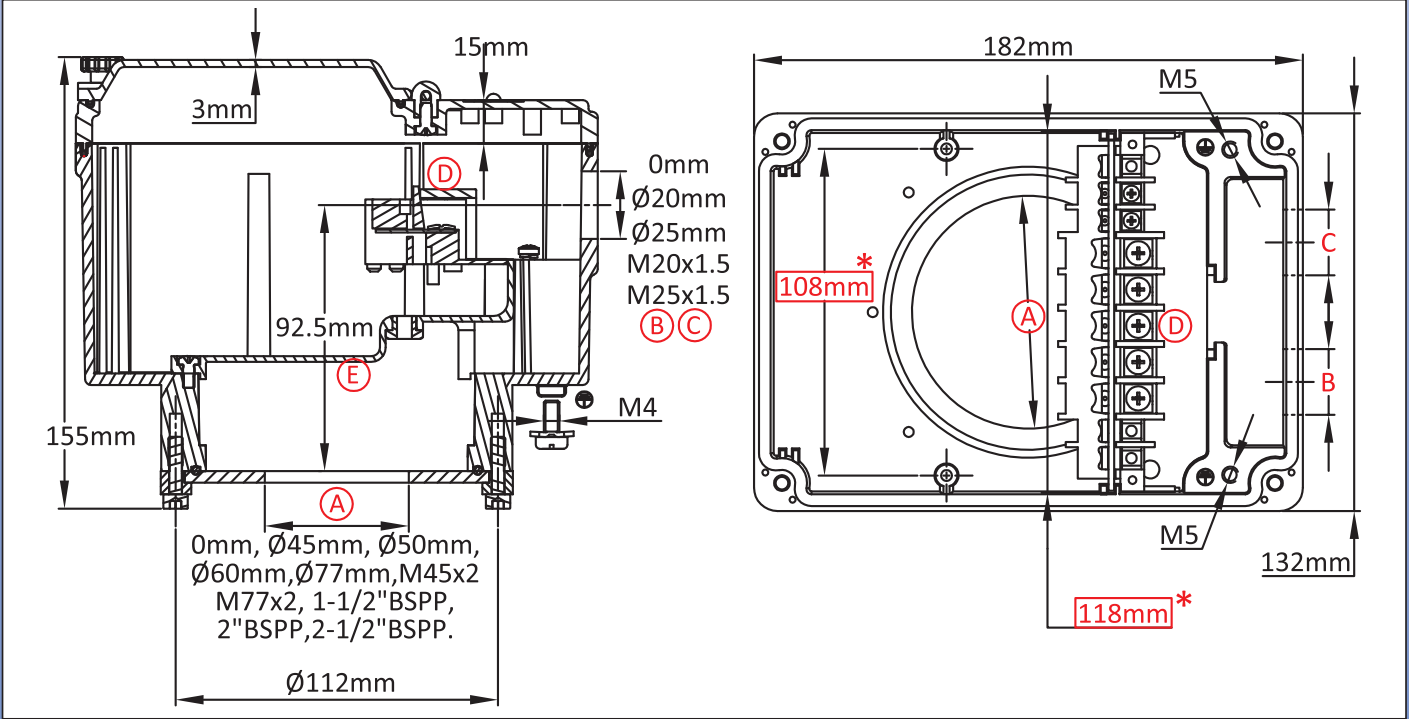
☐ Finned heater

☒ Thermostat

☐ Level sensor

☒ Electronic board





Cable gland not included in these reference, consult us if you want them.  
 Red dimensions inside rectangular frames are used for accessories assembly.



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3G20000000J1007 | Y3G20000000J100G | M45×2   | 0       | 0       | Y3G2M450000J1007 | Y3G2M450000J100G |
| 0     | 20      | 0       | Y3G20000120J1007 | Y3G20000120J100G | M45×2   | 20      | 0       | Y3G2M450120J1007 | Y3G2M450120J100G |
| 0     | 20      | 20      | Y3G20000220J1007 | Y3G20000220J100G | M45×2   | 20      | 20      | Y3G2M450220J1007 | Y3G2M450220J100G |
| 0     | 25      | 0       | Y3G20000125J1007 | Y3G20000125J100G | M45×2   | 25      | 0       | Y3G2M450125J1007 | Y3G2M450125J100G |
| 0     | 25      | 25      | Y3G20000225J1007 | Y3G20000225J100G | M45×2   | 25      | 25      | Y3G2M450225J1007 | Y3G2M450225J100G |
| 0     | M20×1.5 | 0       | Y3G200001T0J1007 | Y3G200001T0J100G | M45×2   | M20×1.5 | 0       | Y3G2M4501T0J1007 | Y3G2M4501T0J100G |
| 0     | M20×1.5 | M20×1.5 | Y3G200002T0J1007 | Y3G200002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y3G2M4502T0J1007 | Y3G2M4502T0J100G |
| 0     | M25×1.5 | 0       | Y3G200001T5J1007 | Y3G200001T5J100G | M45×2   | M25×1.5 | 0       | Y3G2M4501T5J1007 | Y3G2M4501T5J100G |
| 0     | M25×1.5 | M25×1.5 | Y3G200002T5J1007 | Y3G200002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y3G2M4502T5J1007 | Y3G2M4502T5J100G |
| 45    | 0       | 0       | Y3G24500000J1007 | Y3G24500000J100G | M77×2   | 0       | 0       | Y3G2M770000J1007 | Y3G2M770000J100G |
| 45    | 20      | 0       | Y3G24500120J1007 | Y3G24500120J100G | M77×2   | 20      | 0       | Y3G2M770120J1007 | Y3G2M770120J100G |
| 45    | 20      | 20      | Y3G24500220J1007 | Y3G24500220J100G | M77×2   | 20      | 20      | Y3G2M770220J1007 | Y3G2M770220J100G |
| 45    | 25      | 0       | Y3G24500125J1007 | Y3G24500125J100G | M77×2   | 25      | 0       | Y3G2M770125J1007 | Y3G2M770125J100G |
| 45    | 25      | 25      | Y3G24500225J1007 | Y3G24500225J100G | M77×2   | 25      | 25      | Y3G2M770225J1007 | Y3G2M770225J100G |
| 45    | M20×1.5 | 0       | Y3G245001T0J1007 | Y3G245001T0J100G | M77×2   | M20×1.5 | 0       | Y3G2M7701T0J1007 | Y3G2M7701T0J100G |
| 45    | M20×1.5 | M20×1.5 | Y3G245002T0J1007 | Y3G245002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y3G2M7702T0J1007 | Y3G2M7702T0J100G |
| 45    | M25×1.5 | 0       | Y3G245001T5J1007 | Y3G245001T5J100G | M77×2   | M25×1.5 | 0       | Y3G2M7701T5J1007 | Y3G2M7701T5J100G |
| 45    | M25×1.5 | M25×1.5 | Y3G245002T5J1007 | Y3G245002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y3G2M7702T5J1007 | Y3G2M7702T5J100G |
| 50    | 0       | 0       | Y3G25000000J1007 | Y3G25000000J100G | 1½"BSPP | 0       | 0       | Y3G2BA20000J1007 | Y3G2BA20000J100G |
| 50    | 20      | 0       | Y3G25000120J1007 | Y3G25000120J100G | 1½"BSPP | 20      | 0       | Y3G2BA20120J1007 | Y3G2BA20120J100G |
| 50    | 20      | 20      | Y3G25000220J1007 | Y3G25000220J100G | 1½"BSPP | 20      | 20      | Y3G2BA20220J1007 | Y3G2BA20220J100G |
| 50    | 25      | 0       | Y3G25000125J1007 | Y3G25000125J100G | 1½"BSPP | 25      | 0       | Y3G2BA20125J1007 | Y3G2BA20125J100G |
| 50    | 25      | 25      | Y3G25000225J1007 | Y3G25000225J100G | 1½"BSPP | 25      | 25      | Y3G2BA20225J1007 | Y3G2BA20225J100G |
| 50    | M20×1.5 | 0       | Y3G250001T0J1007 | Y3G250001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y3G2BA201T0J1007 | Y3G2BA201T0J100G |
| 50    | M20×1.5 | M20×1.5 | Y3G250002T0J1007 | Y3G250002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y3G2BA202T0J1007 | Y3G2BA202T0J100G |
| 50    | M25×1.5 | 0       | Y3G250001T5J1007 | Y3G250001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y3G2BA201T5J1007 | Y3G2BA201T5J100G |
| 50    | M25×1.5 | M25×1.5 | Y3G250002T5J1007 | Y3G250002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y3G2BA202T5J1007 | Y3G2BA202T5J100G |
| 60    | 0       | 0       | Y3G26000000J1007 | Y3G26000000J100G | 2"BSPP  | 0       | 0       | Y3G2BB20000J1007 | Y3G2BB20000J100G |
| 60    | 20      | 0       | Y3G26000120J1007 | Y3G26000120J100G | 2"BSPP  | 20      | 0       | Y3G2BB20120J1007 | Y3G2BB20120J100G |
| 60    | 20      | 20      | Y3G26000220J1007 | Y3G26000220J100G | 2"BSPP  | 20      | 20      | Y3G2BB20220J1007 | Y3G2BB20220J100G |
| 60    | 25      | 0       | Y3G26000125J1007 | Y3G26000125J100G | 2"BSPP  | 25      | 0       | Y3G2BB20125J1007 | Y3G2BB20125J100G |
| 60    | 25      | 25      | Y3G26000225J1007 | Y3G26000225J100G | 2"BSPP  | 25      | 25      | Y3G2BB20225J1007 | Y3G2BB20225J100G |
| 60    | M20×1.5 | 0       | Y3G260001T0J1007 | Y3G260001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y3G2BB201T0J1007 | Y3G2BB201T0J100G |
| 60    | M20×1.5 | M20×1.5 | Y3G260002T0J1007 | Y3G260002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y3G2BB202T0J1007 | Y3G2BB202T0J100G |
| 60    | M25×1.5 | 0       | Y3G260001T5J1007 | Y3G260001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y3G2BB201T5J1007 | Y3G2BB201T5J100G |
| 60    | M25×1.5 | M25×1.5 | Y3G260002T5J1007 | Y3G260002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y3G2BB202T5J1007 | Y3G2BB202T5J100G |
| 77    | 0       | 0       | Y3G27700000J1007 | Y3G27700000J100G | 2½"BSPP | 0       | 0       | Y3G2BC20000J1007 | Y3G2BC20000J100G |
| 77    | 20      | 0       | Y3G27700120J1007 | Y3G27700120J100G | 2½"BSPP | 20      | 0       | Y3G2BC20120J1007 | Y3G2BC20120J100G |
| 77    | 20      | 20      | Y3G27700220J1007 | Y3G27700220J100G | 2½"BSPP | 20      | 20      | Y3G2BC20220J1007 | Y3G2BC20220J100G |
| 77    | 25      | 0       | Y3G27700125J1007 | Y3G27700125J100G | 2½"BSPP | 25      | 0       | Y3G2BC20125J1007 | Y3G2BC20125J100G |
| 77    | 25      | 25      | Y3G27700225J1007 | Y3G27700225J100G | 2½"BSPP | 25      | 25      | Y3G2BC20225J1007 | Y3G2BC20225J100G |
| 77    | M20×1.5 | 0       | Y3G277001T0J1007 | Y3G277001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y3G2BC201T0J1007 | Y3G2BC201T0J100G |
| 77    | M20×1.5 | M20×1.5 | Y3G277002T0J1007 | Y3G277002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y3G2BC202T0J1007 | Y3G2BC202T0J100G |
| 77    | M25×1.5 | 0       | Y3G277001T5J1007 | Y3G277001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y3G2BC201T5J1007 | Y3G2BC201T5J100G |
| 77    | M25×1.5 | M25×1.5 | Y3G277002T5J1007 | Y3G277002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y3G2BC202T5J1007 | Y3G2BC202T5J100G |

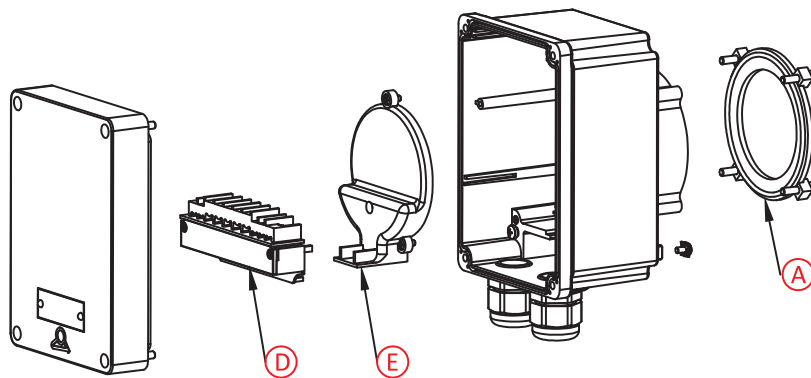
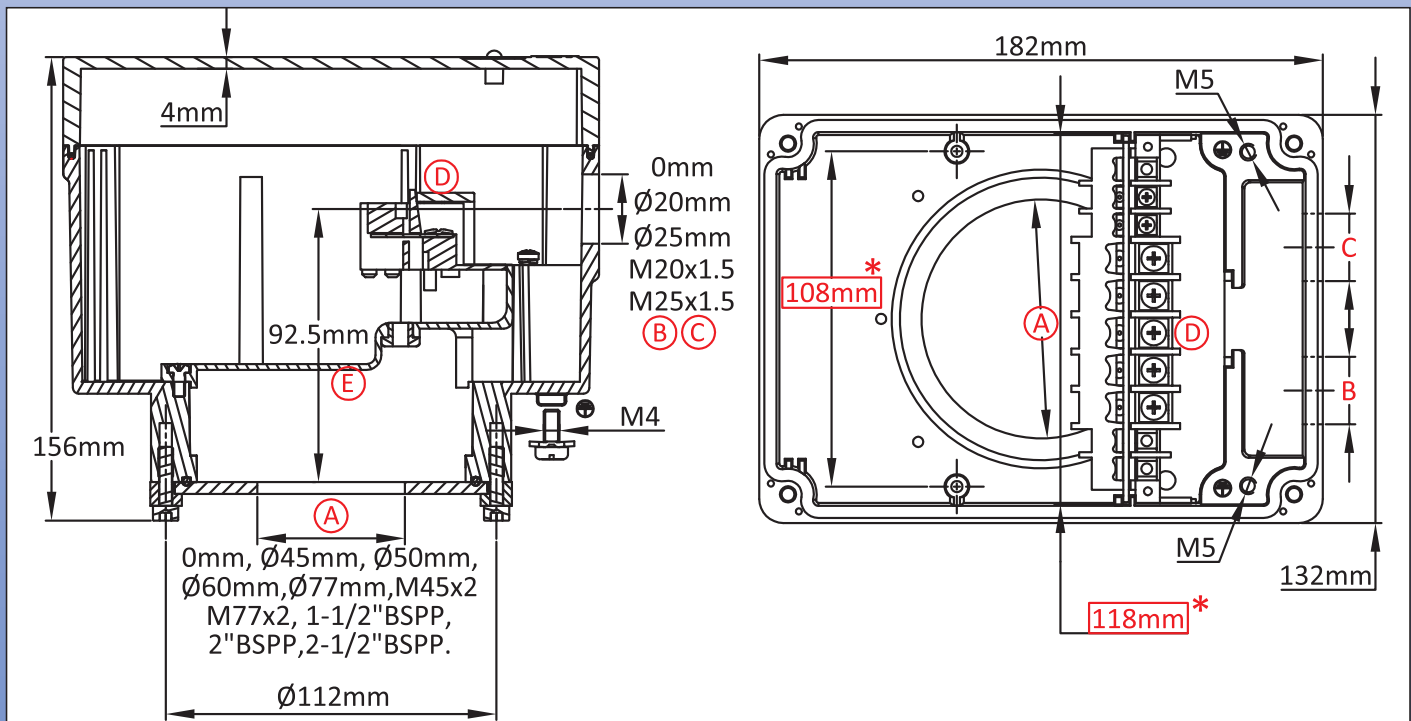


## All aluminum enclosure, for immersion heater with 30 mm offset fitting

| Size(mm)        | Volume(cm <sup>3</sup> ) | Material | Protection grade |      | Model               |
|-----------------|--------------------------|----------|------------------|------|---------------------|
| 182 x 132 x 144 | 2795                     | Aluminum | IP69K            | IK10 | <b>Y309</b><br>(P1) |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y309000000J1007  | Y309000000J100G  | M45×2   | 0       | 0       | Y309M450000J1007 | Y309M450000J100G |
| 0     | 20      | 0       | Y3090000120J1007 | Y3090000120J100G | M45×2   | 20      | 0       | Y309M450120J1007 | Y309M450120J100G |
| 0     | 20      | 20      | Y3090000220J1007 | Y3090000220J100G | M45×2   | 20      | 20      | Y309M450220J1007 | Y309M450220J100G |
| 0     | 25      | 0       | Y3090000125J1007 | Y3090000125J100G | M45×2   | 25      | 0       | Y309M450125J1007 | Y309M450125J100G |
| 0     | 25      | 25      | Y3090000225J1007 | Y3090000225J100G | M45×2   | 25      | 25      | Y309M450225J1007 | Y309M450225J100G |
| 0     | M20×1.5 | 0       | Y30900001T0J1007 | Y30900001T0J100G | M45×2   | M20×1.5 | 0       | Y309M4501T0J1007 | Y309M4501T0J100G |
| 0     | M20×1.5 | M20×1.5 | Y30900002T0J1007 | Y30900002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y309M4502T0J1007 | Y309M4502T0J100G |
| 0     | M25×1.5 | 0       | Y30900001T5J1007 | Y30900001T5J100G | M45×2   | M25×1.5 | 0       | Y309M4501T5J1007 | Y309M4501T5J100G |
| 0     | M25×1.5 | M25×1.5 | Y30900002T5J1007 | Y30900002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y309M4502T5J1007 | Y309M4502T5J100G |
| 45    | 0       | 0       | Y309450000J1007  | Y309450000J100G  | M77×2   | 0       | 0       | Y309M770000J1007 | Y309M770000J100G |
| 45    | 20      | 0       | Y3094500120J1007 | Y3094500120J100G | M77×2   | 20      | 0       | Y309M770120J1007 | Y309M770120J100G |
| 45    | 20      | 20      | Y3094500220J1007 | Y3094500220J100G | M77×2   | 20      | 20      | Y309M770220J1007 | Y309M770220J100G |
| 45    | 25      | 0       | Y3094500125J1007 | Y3094500125J100G | M77×2   | 25      | 0       | Y309M770125J1007 | Y309M770125J100G |
| 45    | 25      | 25      | Y3094500225J1007 | Y3094500225J100G | M77×2   | 25      | 25      | Y309M770225J1007 | Y309M770225J100G |
| 45    | M20×1.5 | 0       | Y30945001T0J1007 | Y30945001T0J100G | M77×2   | M20×1.5 | 0       | Y309M7701T0J1007 | Y309M7701T0J100G |
| 45    | M20×1.5 | M20×1.5 | Y30945002T0J1007 | Y30945002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y309M7702T0J1007 | Y309M7702T0J100G |
| 45    | M25×1.5 | 0       | Y30945001T5J1007 | Y30945001T5J100G | M77×2   | M25×1.5 | 0       | Y309M7701T5J1007 | Y309M7701T5J100G |
| 45    | M25×1.5 | M25×1.5 | Y30945002T5J1007 | Y30945002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y309M7702T5J1007 | Y309M7702T5J100G |
| 50    | 0       | 0       | Y309500000J1007  | Y309500000J100G  | 1½"BSPP | 0       | 0       | Y309BA2000J1007  | Y309BA2000J100G  |
| 50    | 20      | 0       | Y3095000120J1007 | Y3095000120J100G | 1½"BSPP | 20      | 0       | Y309BA20120J1007 | Y309BA20120J100G |
| 50    | 20      | 20      | Y3095000220J1007 | Y3095000220J100G | 1½"BSPP | 20      | 20      | Y309BA20220J1007 | Y309BA20220J100G |
| 50    | 25      | 0       | Y3095000125J1007 | Y3095000125J100G | 1½"BSPP | 25      | 0       | Y309BA20125J1007 | Y309BA20125J100G |
| 50    | 25      | 25      | Y3095000225J1007 | Y3095000225J100G | 1½"BSPP | 25      | 25      | Y309BA20225J1007 | Y309BA20225J100G |
| 50    | M20×1.5 | 0       | Y30950001T0J1007 | Y30950001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y309BA201T0J1007 | Y309BA201T0J100G |
| 50    | M20×1.5 | M20×1.5 | Y30950002T0J1007 | Y30950002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y309BA202T0J1007 | Y309BA202T0J100G |
| 50    | M25×1.5 | 0       | Y30950001T5J1007 | Y30950001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y309BA201T5J1007 | Y309BA201T5J100G |
| 50    | M25×1.5 | M25×1.5 | Y30950002T5J1007 | Y30950002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y309BA202T5J1007 | Y309BA202T5J100G |
| 60    | 0       | 0       | Y309600000J1007  | Y309600000J100G  | 2"BSPP  | 0       | 0       | Y309BB2000J1007  | Y309BB2000J100G  |
| 60    | 20      | 0       | Y3096000120J1007 | Y3096000120J100G | 2"BSPP  | 20      | 0       | Y309BB20120J1007 | Y309BB20120J100G |
| 60    | 20      | 20      | Y3096000220J1007 | Y3096000220J100G | 2"BSPP  | 20      | 20      | Y309BB20220J1007 | Y309BB20220J100G |
| 60    | 25      | 0       | Y3096000125J1007 | Y3096000125J100G | 2"BSPP  | 25      | 0       | Y309BB20125J1007 | Y309BB20125J100G |
| 60    | 25      | 25      | Y3096000225J1007 | Y3096000225J100G | 2"BSPP  | 25      | 25      | Y309BB20225J1007 | Y309BB20225J100G |
| 60    | M20×1.5 | 0       | Y30960001T0J1007 | Y30960001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y309BB201T0J1007 | Y309BB201T0J100G |
| 60    | M20×1.5 | M20×1.5 | Y30960002T0J1007 | Y30960002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y309BB202T0J1007 | Y309BB202T0J100G |
| 60    | M25×1.5 | 0       | Y30960001T5J1007 | Y30960001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y309BB201T5J1007 | Y309BB201T5J100G |
| 60    | M25×1.5 | M25×1.5 | Y30960002T5J1007 | Y30960002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y309BB202T5J1007 | Y309BB202T5J100G |
| 77    | 0       | 0       | Y309770000J1007  | Y309770000J100G  | 2½"BSPP | 0       | 0       | Y309BC2000J1007  | Y309BC2000J100G  |
| 77    | 20      | 0       | Y3097700120J1007 | Y3097700120J100G | 2½"BSPP | 20      | 0       | Y309BC20120J1007 | Y309BC20120J100G |
| 77    | 20      | 20      | Y3097700220J1007 | Y3097700220J100G | 2½"BSPP | 20      | 20      | Y309BC20220J1007 | Y309BC20220J100G |
| 77    | 25      | 0       | Y3097700125J1007 | Y3097700125J100G | 2½"BSPP | 25      | 0       | Y309BC20125J1007 | Y309BC20125J100G |
| 77    | 25      | 25      | Y3097700225J1007 | Y3097700225J100G | 2½"BSPP | 25      | 25      | Y309BC20225J1007 | Y309BC20225J100G |
| 77    | M20×1.5 | 0       | Y30977001T0J1007 | Y30977001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y309BC201T0J1007 | Y309BC201T0J100G |
| 77    | M20×1.5 | M20×1.5 | Y30977002T0J1007 | Y30977002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y309BC202T0J1007 | Y309BC202T0J100G |
| 77    | M25×1.5 | 0       | Y30977001T5J1007 | Y30977001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y309BC201T5J1007 | Y309BC201T5J100G |
| 77    | M25×1.5 | M25×1.5 | Y30977002T5J1007 | Y30977002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y309BC202T5J1007 | Y309BC202T5J100G |

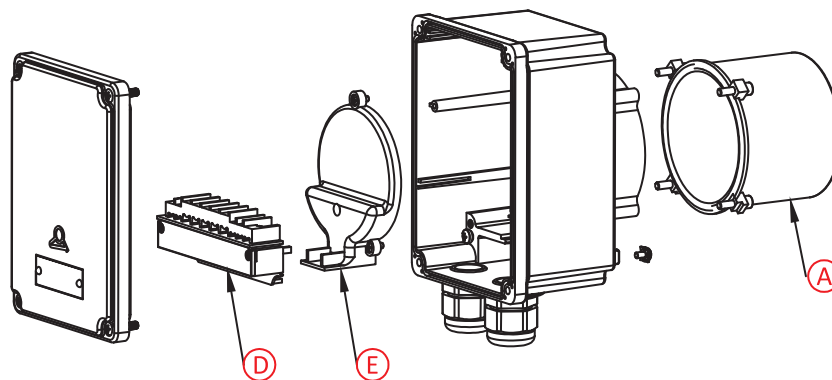
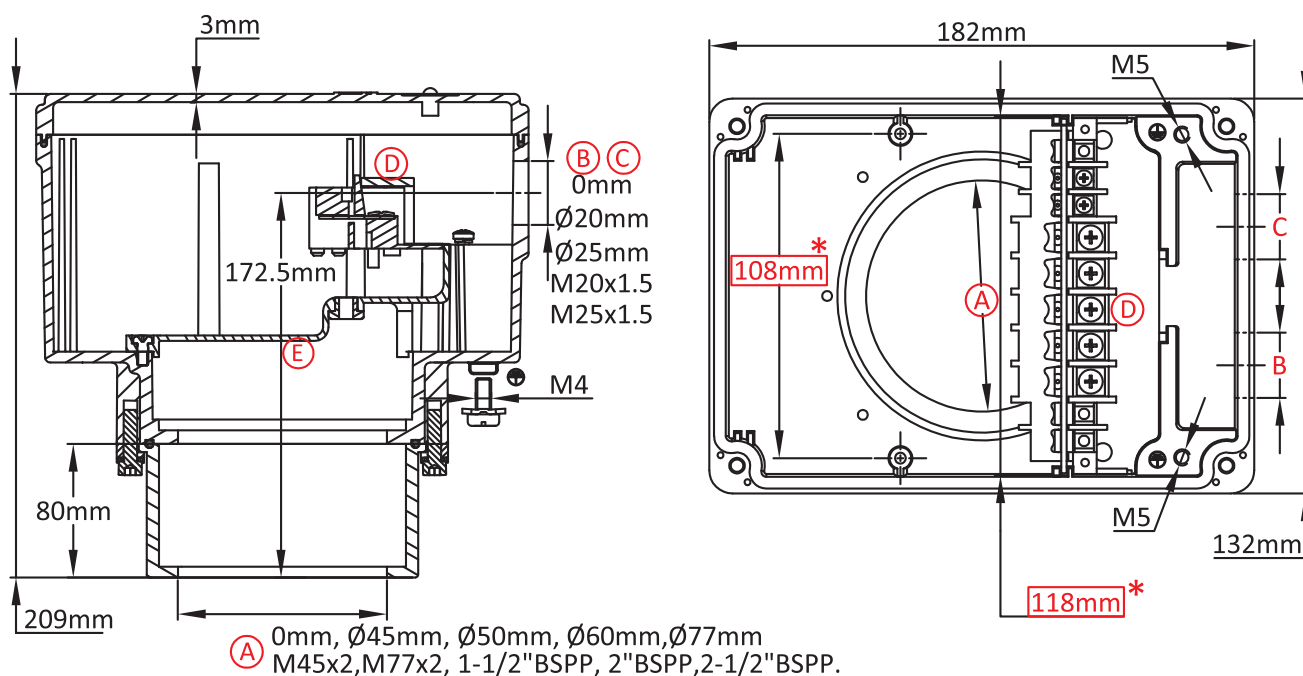
# Composite aluminum and plastic enclosure, with polycarbonate plain cover, for immersion heater with high 120mm offset fitting



| Size(mm)               | Volume(cm <sup>3</sup> ) | Material                        | Protection grade |             | Model                      |
|------------------------|--------------------------|---------------------------------|------------------|-------------|----------------------------|
| <b>182 x 132 x 210</b> | <b>3066</b>              | <b>Aluminum + Polycarbonate</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3J1</b><br><b>(P1)</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.





## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted       | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          |
|-------|---------|---------|-------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3J10000000J1007  | Y3J10000000J100G | M45×2   | 0       | 0       | Y3J1M450000J1007 | Y3J1M450000J100G |
| 0     | 20      | 0       | Y3J10000120J1007  | Y3J10000120J100G | M45×2   | 20      | 0       | Y3J1M450120J1007 | Y3J1M450120J100G |
| 0     | 20      | 20      | Y3J10000220J1007  | Y3J10000220J100G | M45×2   | 20      | 20      | Y3J1M450220J1007 | Y3J1M450220J100G |
| 0     | 25      | 0       | Y3J10000125J1007  | Y3J10000125J100G | M45×2   | 25      | 0       | Y3J1M450125J1007 | Y3J1M450125J100G |
| 0     | 25      | 25      | Y3J10000225J1007  | Y3J10000225J100G | M45×2   | 25      | 25      | Y3J1M450225J1007 | Y3J1M450225J100G |
| 0     | M20×1.5 | 0       | Y3J100001T0J1007  | Y3J100001T0J100G | M45×2   | M20×1.5 | 0       | Y3J1M4501T0J1007 | Y3J1M4501T0J100G |
| 0     | M20×1.5 | M20×1.5 | Y3J100002T0J1007  | Y3J100002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y3J1M4502T0J1007 | Y3J1M4502T0J100G |
| 0     | M25×1.5 | 0       | Y3J100001T5J1007  | Y3J100001T5J100G | M45×2   | M25×1.5 | 0       | Y3J1M4501T5J1007 | Y3J1M4501T5J100G |
| 0     | M25×1.5 | M25×1.5 | Y3J100002T5J1007  | Y3J100002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y3J1M4502T5J1007 | Y3J1M4502T5J100G |
| 45    | 0       | 0       | Y3J14500000J1007  | Y3J14500000J100G | M77×2   | 0       | 0       | Y3J1M770000J1007 | Y3J1M770000J100G |
| 45    | 20      | 0       | Y3J14500120J1007  | Y3J14500120J100G | M77×2   | 20      | 0       | Y3J1M770120J1007 | Y3J1M770120J100G |
| 45    | 20      | 20      | Y3J14500220J1007  | Y3J14500220J100G | M77×2   | 20      | 20      | Y3J1M770220J1007 | Y3J1M770220J100G |
| 45    | 25      | 0       | Y3J14500125J1007  | Y3J14500125J100G | M77×2   | 25      | 0       | Y3J1M770125J1007 | Y3J1M770125J100G |
| 45    | 25      | 25      | Y3J14500225J1007  | Y3J14500225J100G | M77×2   | 25      | 25      | Y3J1M770225J1007 | Y3J1M770225J100G |
| 45    | M20×1.5 | 0       | Y3J145001T0J1007  | Y3J145001T0J100G | M77×2   | M20×1.5 | 0       | Y3J1M7701T0J1007 | Y3J1M7701T0J100G |
| 45    | M20×1.5 | M20×1.5 | Y3J145002T0J1007  | Y3J145002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y3J1M7702T0J1007 | Y3J1M7702T0J100G |
| 45    | M25×1.5 | 0       | Y3J145001T5J1007  | Y3J145001T5J100G | M77×2   | M25×1.5 | 0       | Y3J1M7701T5J1007 | Y3J1M7701T5J100G |
| 45    | M25×1.5 | M25×1.5 | Y3J145002T5J1007  | Y3J145002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y3J1M7702T5J1007 | Y3J1M7702T5J100G |
| 50    | 0       | 0       | Y3J15000000J1007  | Y3J15000000J100G | 1½"BSPP | 0       | 0       | Y3J1BA20000J1007 | Y3J1BA20000J100G |
| 50    | 20      | 0       | Y3J15000120J1007  | Y3J15000120J100G | 1½"BSPP | 20      | 0       | Y3J1BA20120J1007 | Y3J1BA20120J100G |
| 50    | 20      | 20      | Y3J15000220J1007  | Y3J15000220J100G | 1½"BSPP | 20      | 20      | Y3J1BA20220J1007 | Y3J1BA20220J100G |
| 50    | 25      | 0       | Y3J15000125J1007  | Y3J15000125J100G | 1½"BSPP | 25      | 0       | Y3J1BA20125J1007 | Y3J1BA20125J100G |
| 50    | 25      | 25      | Y3J15000225J1007  | Y3J15000225J100G | 1½"BSPP | 25      | 25      | Y3J1BA20225J1007 | Y3J1BA20225J100G |
| 50    | M20×1.5 | 0       | Y3J150001T0J1007  | Y3J150001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y3J1BA201T0J1007 | Y3J1BA201T0J100G |
| 50    | M20×1.5 | M20×1.5 | Y3J150002T0J1007  | Y3J150002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y3J1BA202T0J1007 | Y3J1BA202T0J100G |
| 50    | M25×1.5 | 0       | Y3J150001T5J1007  | Y3J150001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y3J1BA201T5J1007 | Y3J1BA201T5J100G |
| 50    | M25×1.5 | M25×1.5 | Y3J150002T5J1007  | Y3J150002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y3J1BA202T5J1007 | Y3J1BA202T5J100G |
| 60    | 0       | 0       | Y3J16000000J1007  | Y3J16000000J100G | 2"BSPP  | 0       | 0       | Y3J1BB20000J1007 | Y3J1BB20000J100G |
| 60    | 20      | 0       | Y3J16000120J1007  | Y3J16000120J100G | 2"BSPP  | 20      | 0       | Y3J1BB20120J1007 | Y3J1BB20120J100G |
| 60    | 20      | 20      | Y3J16000220J1007  | Y3J16000220J100G | 2"BSPP  | 20      | 20      | Y3J1BB20220J1007 | Y3J1BB20220J100G |
| 60    | 25      | 0       | Y3J16000125J1007  | Y3J16000125J100G | 2"BSPP  | 25      | 0       | Y3J1BB20125J1007 | Y3J1BB20125J100G |
| 60    | 25      | 25      | Y3J16000225J1007  | Y3J16000225J100G | 2"BSPP  | 25      | 25      | Y3J1BB20225J1007 | Y3J1BB20225J100G |
| 60    | M20×1.5 | 0       | Y3J160001T0J1007  | Y3J160001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y3J1BB201T0J1007 | Y3J1BB201T0J100G |
| 60    | M20×1.5 | M20×1.5 | Y3J160002T0J1007  | Y3J160002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y3J1BB202T0J1007 | Y3J1BB202T0J100G |
| 60    | M25×1.5 | 0       | Y3J160001T5J1007  | Y3J160001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y3J1BB201T5J1007 | Y3J1BB201T5J100G |
| 60    | M25×1.5 | M25×1.5 | Y3J160002T5J1007  | Y3J160002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y3J1BB202T5J1007 | Y3J1BB202T5J100G |
| 77    | 0       | 0       | Y3J17700000J1007  | Y3J17700000J100G | 2½"BSPP | 0       | 0       | Y3J1BC20000J1007 | Y3J1BC20000J100G |
| 77    | 20      | 0       | Y3J17700120J1007  | Y3J17700120J100G | 2½"BSPP | 20      | 0       | Y3J1BC20120J1007 | Y3J1BC20120J100G |
| 77    | 20      | 20      | Y3J17700220J1007  | Y3J17700220J100G | 2½"BSPP | 20      | 20      | Y3J1BC20220J1007 | Y3J1BC20220J100G |
| 77    | 25      | 0       | Y3J17700125J1007  | Y3J17700125J100G | 2½"BSPP | 25      | 0       | Y3J1BC20125J1007 | Y3J1BC20125J100G |
| 77    | 25      | 25      | Y3J17700225J1007  | Y3J17700225J100G | 2½"BSPP | 25      | 25      | Y3J1BC20225J1007 | Y3J1BC20225J100G |
| 77    | M20×1.5 | 0       | Y3J177001T0J1007  | Y3J177001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y3J1BC201T0J1007 | Y3J1BC201T0J100G |
| 77    | M20×1.5 | M20×1.5 | Y3J177002T0J1007  | Y3J177002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y3J1BC202T0J1007 | Y3J1BC202T0J100G |
| 77    | M25×1.5 | 0       | Y3J177001T5J1007  | Y3J177001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y3J1BC201T5J1007 | Y3J1BC201T5J100G |
| 77    | M25×1.5 | M25×1.5 | Y3J177002T5 J1007 | Y3J177002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y3J1BC202T5J1007 | Y3J1BC202T5J100G |

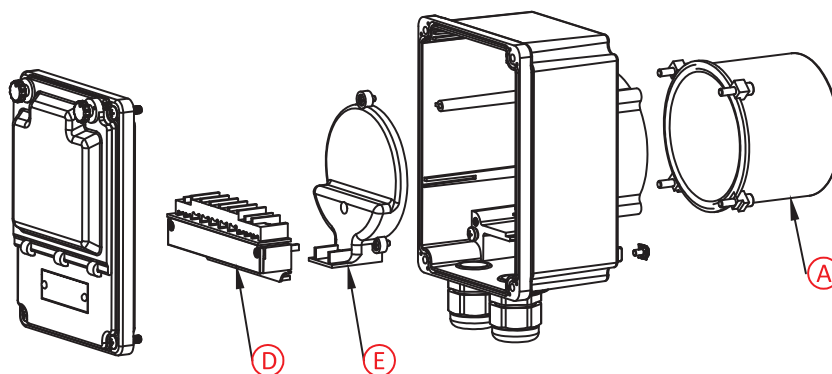
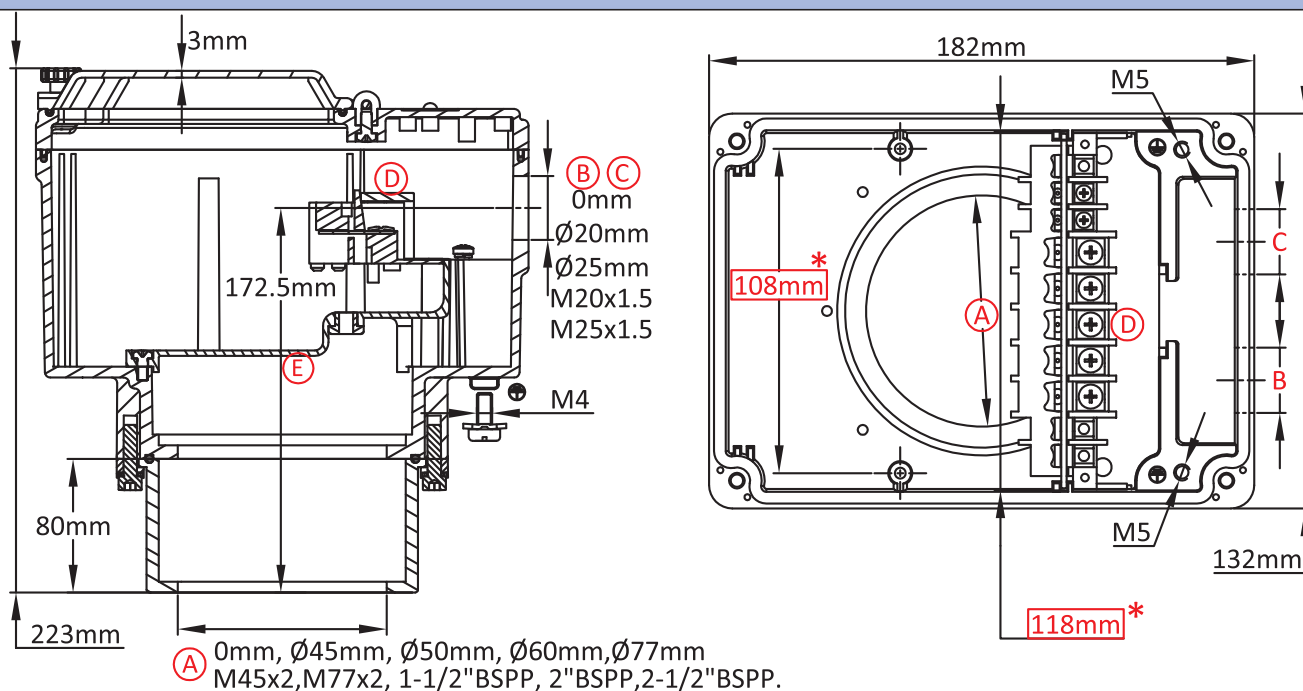
# Composite aluminum and plastic enclosure, with polycarbonate transparent window, for immersion heater with high 120mm offset fitting



| Size(mm)               | Volume(cm <sup>3</sup> ) | Material                               | Protection grade |             | Model                      |
|------------------------|--------------------------|----------------------------------------|------------------|-------------|----------------------------|
| <b>182 x 132 x 225</b> | <b>3206</b>              | <b>Aluminum + PA66 + Polycarbonate</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y3J2</b><br><b>(P1)</b> |

## Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.



## Main references

| A(mm) | B(mm)   | C(mm)   | Not painted      | Painted          | A(mm)   | B(mm)   | C(mm)   | Not painted      | Painted          |
|-------|---------|---------|------------------|------------------|---------|---------|---------|------------------|------------------|
| 0     | 0       | 0       | Y3J20000000J1007 | Y3J20000000J100G | M45×2   | 0       | 0       | Y3J2M450000J1007 | Y3J2M450000J100G |
| 0     | 20      | 0       | Y3J20000120J1007 | Y3J20000120J100G | M45×2   | 20      | 0       | Y3J2M450120J1007 | Y3J2M450120J100G |
| 0     | 20      | 20      | Y3J20000220J1007 | Y3J20000220J100G | M45×2   | 20      | 20      | Y3J2M450220J1007 | Y3J2M450220J100G |
| 0     | 25      | 0       | Y3J20000125J1007 | Y3J20000125J100G | M45×2   | 25      | 0       | Y3J2M450125J1007 | Y3J2M450125J100G |
| 0     | 25      | 25      | Y3J20000225J1007 | Y3J20000225J100G | M45×2   | 25      | 25      | Y3J2M450225J1007 | Y3J2M450225J100G |
| 0     | M20×1.5 | 0       | Y3J200001T0J1007 | Y3J200001T0J100G | M45×2   | M20×1.5 | 0       | Y3J2M4501T0J1007 | Y3J2M4501T0J100G |
| 0     | M20×1.5 | M20×1.5 | Y3J200002T0J1007 | Y3J200002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y3J2M4502T0J1007 | Y3J2M4502T0J100G |
| 0     | M25×1.5 | 0       | Y3J200001T5J1007 | Y3J200001T5J100G | M45×2   | M25×1.5 | 0       | Y3J2M4501T5J1007 | Y3J2M4501T5J100G |
| 0     | M25×1.5 | M25×1.5 | Y3J200002T5J1007 | Y3J200002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y3J2M4502T5J1007 | Y3J2M4502T5J100G |
| 45    | 0       | 0       | Y3J24500000J1007 | Y3J24500000J100G | M77×2   | 0       | 0       | Y3J2M770000J1007 | Y3J2M770000J100G |
| 45    | 20      | 0       | Y3J24500120J1007 | Y3J24500120J100G | M77×2   | 20      | 0       | Y3J2M770120J1007 | Y3J2M770120J100G |
| 45    | 20      | 20      | Y3J24500220J1007 | Y3J24500220J100G | M77×2   | 20      | 20      | Y3J2M770220J1007 | Y3J2M770220J100G |
| 45    | 25      | 0       | Y3J24500125J1007 | Y3J24500125J100G | M77×2   | 25      | 0       | Y3J2M770125J1007 | Y3J2M770125J100G |
| 45    | 25      | 25      | Y3J24500225J1007 | Y3J24500225J100G | M77×2   | 25      | 25      | Y3J2M770225J1007 | Y3J2M770225J100G |
| 45    | M20×1.5 | 0       | Y3J245001T0J1007 | Y3J245001T0J100G | M77×2   | M20×1.5 | 0       | Y3J2M7701T0J1007 | Y3J2M7701T0J100G |
| 45    | M20×1.5 | M20×1.5 | Y3J245002T0J1007 | Y3J245002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y3J2M7702T0J1007 | Y3J2M7702T0J100G |
| 45    | M25×1.5 | 0       | Y3J245001T5J1007 | Y3J245001T5J100G | M77×2   | M25×1.5 | 0       | Y3J2M7701T5J1007 | Y3J2M7701T5J100G |
| 45    | M25×1.5 | M25×1.5 | Y3J245002T5J1007 | Y3J245002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y3J2M7702T5J1007 | Y3J2M7702T5J100G |
| 50    | 0       | 0       | Y3J25000000J1007 | Y3J25000000J100G | 1½"BSPP | 0       | 0       | Y3J2BA20000J1007 | Y3J2BA20000J100G |
| 50    | 20      | 0       | Y3J25000120J1007 | Y3J25000120J100G | 1½"BSPP | 20      | 0       | Y3J2BA20120J1007 | Y3J2BA20120J100G |
| 50    | 20      | 20      | Y3J25000220J1007 | Y3J25000220J100G | 1½"BSPP | 20      | 20      | Y3J2BA20220J1007 | Y3J2BA20220J100G |
| 50    | 25      | 0       | Y3J25000125J1007 | Y3J25000125J100G | 1½"BSPP | 25      | 0       | Y3J2BA20125J1007 | Y3J2BA20125J100G |
| 50    | 25      | 25      | Y3J25000225J1007 | Y3J25000225J100G | 1½"BSPP | 25      | 25      | Y3J2BA20225J1007 | Y3J2BA20225J100G |
| 50    | M20×1.5 | 0       | Y3J250001T0J1007 | Y3J250001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y3J2BA201T0J1007 | Y3J2BA201T0J100G |
| 50    | M20×1.5 | M20×1.5 | Y3J250002T0J1007 | Y3J250002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y3J2BA202T0J1007 | Y3J2BA202T0J100G |
| 50    | M25×1.5 | 0       | Y3J250001T5J1007 | Y3J250001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y3J2BA201T5J1007 | Y3J2BA201T5J100G |
| 50    | M25×1.5 | M25×1.5 | Y3J250002T5J1007 | Y3J250002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y3J2BA202T5J1007 | Y3J2BA202T5J100G |
| 60    | 0       | 0       | Y3J26000000J1007 | Y3J26000000J100G | 2"BSPP  | 0       | 0       | Y3J2BB20000J1007 | Y3J2BB20000J100G |
| 60    | 20      | 0       | Y3J26000120J1007 | Y3J26000120J100G | 2"BSPP  | 20      | 0       | Y3J2BB20120J1007 | Y3J2BB20120J100G |
| 60    | 20      | 20      | Y3J26000220J1007 | Y3J26000220J100G | 2"BSPP  | 20      | 20      | Y3J2BB20220J1007 | Y3J2BB20220J100G |
| 60    | 25      | 0       | Y3J26000125J1007 | Y3J26000125J100G | 2"BSPP  | 25      | 0       | Y3J2BB20125J1007 | Y3J2BB20125J100G |
| 60    | 25      | 25      | Y3J26000225J1007 | Y3J26000225J100G | 2"BSPP  | 25      | 25      | Y3J2BB20225J1007 | Y3J2BB20225J100G |
| 60    | M20×1.5 | 0       | Y3J260001T0J1007 | Y3J260001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y3J2BB201T0J1007 | Y3J2BB201T0J100G |
| 60    | M20×1.5 | M20×1.5 | Y3J260002T0J1007 | Y3J260002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y3J2BB202T0J1007 | Y3J2BB202T0J100G |
| 60    | M25×1.5 | 0       | Y3J260001T5J1007 | Y3J260001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y3J2BB201T5J1007 | Y3J2BB201T5J100G |
| 60    | M25×1.5 | M25×1.5 | Y3J260002T5J1007 | Y3J260002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y3J2BB202T5J1007 | Y3J2BB202T5J100G |
| 77    | 0       | 0       | Y3J27700000J1007 | Y3J27700000J100G | 2½"BSPP | 0       | 0       | Y3J2BC20000J1007 | Y3J2BC20000J100G |
| 77    | 20      | 0       | Y3J27700120J1007 | Y3J27700120J100G | 2½"BSPP | 20      | 0       | Y3J2BC20120J1007 | Y3J2BC20120J100G |
| 77    | 20      | 20      | Y3J27700220J1007 | Y3J27700220J100G | 2½"BSPP | 20      | 20      | Y3J2BC20220J1007 | Y3J2BC20220J100G |
| 77    | 25      | 0       | Y3J27700125J1007 | Y3J27700125J100G | 2½"BSPP | 25      | 0       | Y3J2BC20125J1007 | Y3J2BC20125J100G |
| 77    | 25      | 25      | Y3J27700225J1007 | Y3J27700225J100G | 2½"BSPP | 25      | 25      | Y3J2BC20225J1007 | Y3J2BC20225J100G |
| 77    | M20×1.5 | 0       | Y3J277001T0J1007 | Y3J277001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y3J2BC201T0J1007 | Y3J2BC201T0J100G |
| 77    | M20×1.5 | M20×1.5 | Y3J277002T0J1007 | Y3J277002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y3J2BC202T0J1007 | Y3J2BC202T0J100G |
| 77    | M25×1.5 | 0       | Y3J277001T5J1007 | Y3J277001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y3J2BC201T5J1007 | Y3J2BC201T5J100G |
| 77    | M25×1.5 | M25×1.5 | Y3J277002T5J1007 | Y3J277002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y3J2BC202T5J1007 | Y3J2BC202T5J100G |

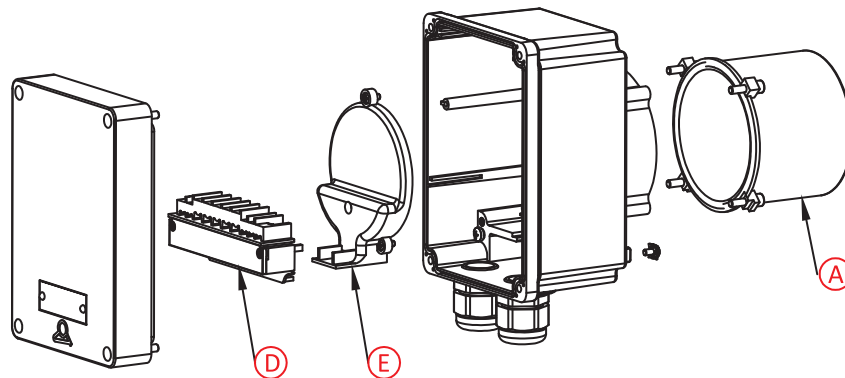
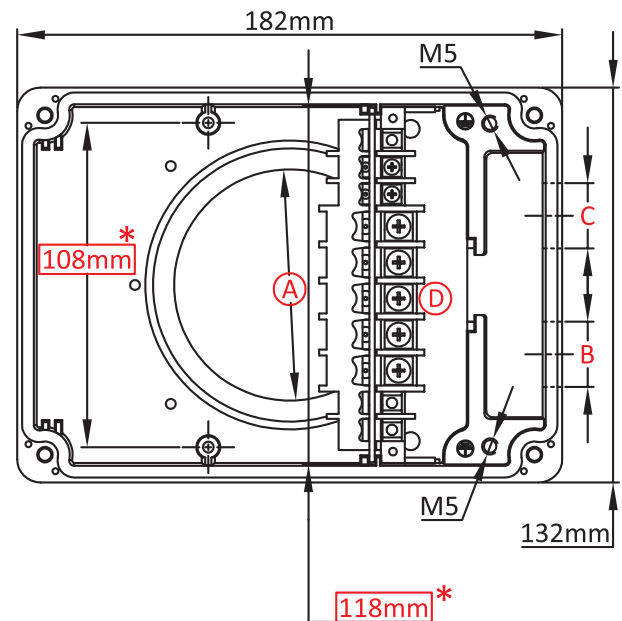
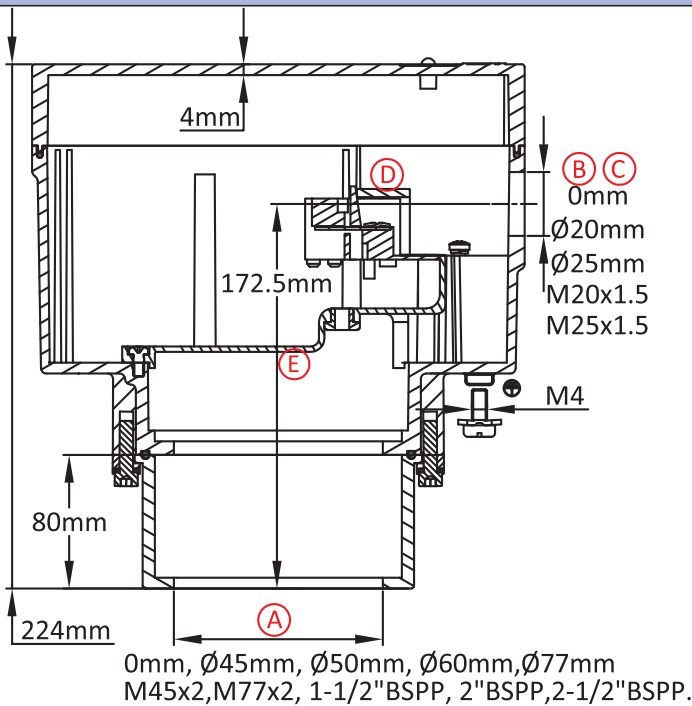


## All aluminum enclosure, for immersion heater with high 120mm offset fitting

| Size(mm)               | Volume(cm <sup>3</sup> ) | Material        | Protection grade |             | Model                      |
|------------------------|--------------------------|-----------------|------------------|-------------|----------------------------|
| <b>182 x 132 x 225</b> | <b>3426</b>              | <b>Aluminum</b> | <b>IP69K</b>     | <b>IK10</b> | <b>Y310</b><br><b>(P1)</b> |

### Suitable for

- ☐ Temperature sensor
- ☒ Immersion heater
- ☐ Finned heater
- ☒ Thermostat
- ☐ Level sensor
- ☒ Electronic board



Cable gland not included in these reference, consult us if you want them.

Red dimensions inside rectangular frames are used for accessories assembly.

# All aluminum enclosure, for immersion heater with high 120mm offset fitting

**Y310**  
(P2)



## Main references

| Ⓐ(mm) | Ⓑ(mm)   | Ⓒ(mm)   | Not painted      | Painted          | Ⓐ(mm)   | Ⓑ(mm)   | Ⓒ(mm)   | Not painted       | Painted           |
|-------|---------|---------|------------------|------------------|---------|---------|---------|-------------------|-------------------|
| 0     | 0       | 0       | Y310000000J1007  | Y310000000J100G  | M45×2   | 0       | 0       | Y310M450000J1007  | Y310M450000J100G  |
| 0     | 20      | 0       | Y3100000120J1007 | Y3100000120J100G | M45×2   | 20      | 0       | Y310M450120J1007  | Y310M450120J100G  |
| 0     | 20      | 20      | Y3100000220J1007 | Y3100000220J100G | M45×2   | 20      | 20      | Y310M450220J1007  | Y310M450220J100G  |
| 0     | 25      | 0       | Y3100000125J1007 | Y3100000125J100G | M45×2   | 25      | 0       | Y310M450125J1007  | Y310M450125J100G  |
| 0     | 25      | 25      | Y3100000225J1007 | Y3100000225J100G | M45×2   | 25      | 25      | Y310M450225J1007  | Y310M450225J100G  |
| 0     | M20×1.5 | 0       | Y31000001T0J1007 | Y31000001T0J100G | M45×2   | M20×1.5 | 0       | Y310M4501T0J1007  | Y310M4501T0J100G  |
| 0     | M20×1.5 | M20×1.5 | Y31000002T0J1007 | Y31000002T0J100G | M45×2   | M20×1.5 | M20×1.5 | Y310M4502T0J1007  | Y310M4502T0J100G  |
| 0     | M25×1.5 | 0       | Y31000001T5J1007 | Y31000001T5J100G | M45×2   | M25×1.5 | 0       | Y310M4501T5J1007  | Y310M4501T5J100G  |
| 0     | M25×1.5 | M25×1.5 | Y31000002T5J1007 | Y31000002T5J100G | M45×2   | M25×1.5 | M25×1.5 | Y310M4502T5J1007  | Y310M4502T5J100G  |
| 45    | 0       | 0       | Y3104500000J1007 | Y3104500000J100G | M77×2   | 0       | 0       | Y310M770000J1007  | Y310M770000J100G  |
| 45    | 20      | 0       | Y3104500120J1007 | Y3104500120J100G | M77×2   | 20      | 0       | Y310M770120J1007  | Y310M770120J100G  |
| 45    | 20      | 20      | Y3104500220J1007 | Y3104500220J100G | M77×2   | 20      | 20      | Y310M770220J1007  | Y310M770220J100G  |
| 45    | 25      | 0       | Y3104500125J1007 | Y3104500125J100G | M77×2   | 25      | 0       | Y310M770125J1007  | Y310M770125J100G  |
| 45    | 25      | 25      | Y3104500225J1007 | Y3104500225J100G | M77×2   | 25      | 25      | Y310M770225J1007  | Y310M770225J100G  |
| 45    | M20×1.5 | 0       | Y31045001T0J1007 | Y31045001T0J100G | M77×2   | M20×1.5 | 0       | Y310M7701T0J1007  | Y310M7701T0J100G  |
| 45    | M20×1.5 | M20×1.5 | Y31045002T0J1007 | Y31045002T0J100G | M77×2   | M20×1.5 | M20×1.5 | Y310M7702T0J1007  | Y310M7702T0J100G  |
| 45    | M25×1.5 | 0       | Y31045001T5J1007 | Y31045001T5J100G | M77×2   | M25×1.5 | 0       | Y310M7701T5J1007  | Y310M7701T5J100G  |
| 45    | M25×1.5 | M25×1.5 | Y31045002T5J1007 | Y31045002T5J100G | M77×2   | M25×1.5 | M25×1.5 | Y310M7702T5J1007  | Y310M7702T5J100G  |
| 50    | 0       | 0       | Y3105000000J1007 | Y3105000000J100G | 1½"BSPP | 0       | 0       | Y310BA20000J1007  | Y310BA20000J100G  |
| 50    | 20      | 0       | Y3105000120J1007 | Y3105000120J100G | 1½"BSPP | 20      | 0       | Y310BA20120 J1007 | Y310BA20120 J100G |
| 50    | 20      | 20      | Y3105000220J1007 | Y3105000220J100G | 1½"BSPP | 20      | 20      | Y310BA20220J1007  | Y310BA20220J100G  |
| 50    | 25      | 0       | Y3105000125J1007 | Y3105000125J100G | 1½"BSPP | 25      | 0       | Y310BA20125J1007  | Y310BA20125J100G  |
| 50    | 25      | 25      | Y3105000225J1007 | Y3105000225J100G | 1½"BSPP | 25      | 25      | Y310BA20225J1007  | Y310BA20225J100G  |
| 50    | M20×1.5 | 0       | Y31050001T0J1007 | Y31050001T0J100G | 1½"BSPP | M20×1.5 | 0       | Y310BA201T0J1007  | Y310BA201T0J100G  |
| 50    | M20×1.5 | M20×1.5 | Y31050002T0J1007 | Y31050002T0J100G | 1½"BSPP | M20×1.5 | M20×1.5 | Y310BA202T0J1007  | Y310BA202T0J100G  |
| 50    | M25×1.5 | 0       | Y31050001T5J1007 | Y31050001T5J100G | 1½"BSPP | M25×1.5 | 0       | Y310BA201T5J1007  | Y310BA201T5J100G  |
| 50    | M25×1.5 | M25×1.5 | Y31050002T5J1007 | Y31050002T5J100G | 1½"BSPP | M25×1.5 | M25×1.5 | Y310BA202T5J1007  | Y310BA202T5J100G  |
| 60    | 0       | 0       | Y3106000000J1007 | Y3106000000J100G | 2"BSPP  | 0       | 0       | Y310BB20000J1007  | Y310BB20000J100G  |
| 60    | 20      | 0       | Y3106000120J1007 | Y3106000120J100G | 2"BSPP  | 20      | 0       | Y310BB20120J1007  | Y310BB20120J100G  |
| 60    | 20      | 20      | Y3106000220J1007 | Y3106000220J100G | 2"BSPP  | 20      | 20      | Y310BB20220J1007  | Y310BB20220J100G  |
| 60    | 25      | 0       | Y3106000125J1007 | Y3106000125J100G | 2"BSPP  | 25      | 0       | Y310BB20125J1007  | Y310BB20125J100G  |
| 60    | 25      | 25      | Y3106000225J1007 | Y3106000225J100G | 2"BSPP  | 25      | 25      | Y310BB20225J1007  | Y310BB20225J100G  |
| 60    | M20×1.5 | 0       | Y31060001T0J1007 | Y31060001T0J100G | 2"BSPP  | M20×1.5 | 0       | Y310BB201T0J1007  | Y310BB201T0J100G  |
| 60    | M20×1.5 | M20×1.5 | Y31060002T0J1007 | Y31060002T0J100G | 2"BSPP  | M20×1.5 | M20×1.5 | Y310BB202T0J1007  | Y310BB202T0J100G  |
| 60    | M25×1.5 | 0       | Y31060001T5J1007 | Y31060001T5J100G | 2"BSPP  | M25×1.5 | 0       | Y310BB201T5J1007  | Y310BB201T5J100G  |
| 60    | M25×1.5 | M25×1.5 | Y31060002T5J1007 | Y31060002T5J100G | 2"BSPP  | M25×1.5 | M25×1.5 | Y310BB202T5J1007  | Y310BB202T5J100G  |
| 77    | 0       | 0       | Y3107700000J1007 | Y3107700000J100G | 2½"BSPP | 0       | 0       | Y310BC20000J1007  | Y310BC20000J100G  |
| 77    | 20      | 0       | Y3107700120J1007 | Y3107700120J100G | 2½"BSPP | 20      | 0       | Y310BC20120J1007  | Y310BC20120J100G  |
| 77    | 20      | 20      | Y3107700220J1007 | Y3107700220J100G | 2½"BSPP | 20      | 20      | Y310BC20220 J1007 | Y310BC20220J100G  |
| 77    | 25      | 0       | Y3107700125J1007 | Y3107700125J100G | 2½"BSPP | 25      | 0       | Y310BC20125 J1007 | Y310BC20125J100G  |
| 77    | 25      | 25      | Y3107700225J1007 | Y3107700225J100G | 2½"BSPP | 25      | 25      | Y310BC20225 J1007 | Y310BC20225J100G  |
| 77    | M20×1.5 | 0       | Y31077001T0J1007 | Y31077001T0J100G | 2½"BSPP | M20×1.5 | 0       | Y310BC201T0 J1007 | Y310BC201T0J100G  |
| 77    | M20×1.5 | M20×1.5 | Y31077002T0J1007 | Y31077002T0J100G | 2½"BSPP | M20×1.5 | M20×1.5 | Y310BC202T0 J1007 | Y310BC202T0 J100G |
| 77    | M25×1.5 | 0       | Y31077001T5J1007 | Y31077001T5J100G | 2½"BSPP | M25×1.5 | 0       | Y310BC201T5 J1007 | Y310BC201T5J100G  |
| 77    | M25×1.5 | M25×1.5 | Y31077002T5J1007 | Y31077002T5J100G | 2½"BSPP | M25×1.5 | M25×1.5 | Y310BC202T5 J1007 | Y310BC202T5J100G  |

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice





# Immersion heaters fitting

**The references given in these documents are the most common.**

**The dotted areas in the plans indicate the options.**

Fittings can be made in 304 and 316 stainless steel, brass or PPS. Diameters and threads are of the metric system. **USA or UK dimensions can be made on request**





# Stainless steel fitting, with 3 screws rotating ring, deep drawn body and machined thread, for medium corrosive environments.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Minimum Size | Maximum Size | Material        | Type                         | Model                              |
|--------------|--------------|-----------------|------------------------------|------------------------------------|
| 1" ½         | 2" ½         | Stainless steel | Rotation ring and welded cup | <b>66RJ (304L)<br/>66RU (316L)</b> |

| Compatible accessories |        |        |        |
|------------------------|--------|--------|--------|
| ☒ 66JE                 | ☒ 66XF |        |        |
| ☒ 66JF                 | ☒ 66Z1 |        |        |
| ☒ 66JP                 | ☒ 66Z2 |        |        |
| ☒ 66NL                 |        |        |        |
| Compatible enclosures  |        |        |        |
| ☒ Y302                 | ☒ Y3C1 | ☒ Y3J2 | ☒ Y3P1 |
| ☒ Y303                 | ☒ Y3C3 | ☒ Y3K1 | ☒ Y3P3 |
| ☒ Y304                 | ☒ Y3C4 | ☒ Y3K2 | ☒ Y3P4 |
| ☒ Y305                 | ☒ Y3G1 | ☒ Y3L3 | ☒ Y3P5 |
| ☒ Y306                 | ☒ Y3G2 | ☒ Y3M1 | ☒ Y3P6 |
| ☒ Y307                 | ☒ Y3H1 | ☒ Y3N1 | ☒ Y3S3 |
| ☒ Y309                 | ☒ Y3H2 | ☒ Y3N2 | ☒ Y3S5 |
| ☒ Y310                 | ☒ Y3H3 | ☒ Y3N3 | ☒ Y3S7 |
| ☒ Y3B2                 | ☒ Y3J1 | ☒ Y3N4 | ☒ Y3SA |



|              |                                                  |  |  |  |  |
|--------------|--------------------------------------------------|--|--|--|--|
| 1-1/2" M45x2 |                                                  |  |  |  |  |
| A            | Ø38                                              |  |  |  |  |
| B            | 31                                               |  |  |  |  |
| C            | M4(x6)                                           |  |  |  |  |
| D            | 1-1/2"                                           |  |  |  |  |
| E            | 12                                               |  |  |  |  |
| F            | Ø8.6(x0,x1)<br>Ø10(x0,x1)                        |  |  |  |  |
| G            | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6)                     |  |  |  |  |
| H            | 20                                               |  |  |  |  |
| I            | 65.5                                             |  |  |  |  |
| J            | Hex 58                                           |  |  |  |  |
| K            | 4                                                |  |  |  |  |
| L            | Ø26.4                                            |  |  |  |  |
| M            | Ø44                                              |  |  |  |  |
| 2-1/2" M77x2 |                                                  |  |  |  |  |
| A            | Ø66                                              |  |  |  |  |
| B            | 31                                               |  |  |  |  |
| C            | M5(x6)                                           |  |  |  |  |
| D            | 2-1/2"                                           |  |  |  |  |
| E            | 12                                               |  |  |  |  |
| F            | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) |  |  |  |  |
| G            | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   |  |  |  |  |
| H            | 20                                               |  |  |  |  |
| I            | 102.5                                            |  |  |  |  |
| J            | Hex 90                                           |  |  |  |  |
| K            | 4                                                |  |  |  |  |
| L            | Ø46                                              |  |  |  |  |
| M            | Ø70                                              |  |  |  |  |

## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66RJA3T*****0000       | 66RUA3T*****0000       |
| 1½"        | ①+②         | 66RJA3T*****0005       | 66RUA3T*****0005       |
| M45x2      | ①           | 66RJMDT*****0000       | 66RUMDT*****0000       |
| M45x2      | ①+②         | 66RJMDT*****0005       | 66RUMDT*****0005       |
| 2½"        | ③           | 66RJA7T*****0000       | 66RUA7T*****0000       |
| 2½"        | ③+④         | 66RJA7T*****0005       | 66RUA7T*****0005       |
| M77x2      | ③           | 66RJMG7*****0000       | 66RUMGT*****0000       |
| M77x2      | ③+④         | 66RJMG7*****0005       | 66RUMGT*****0005       |

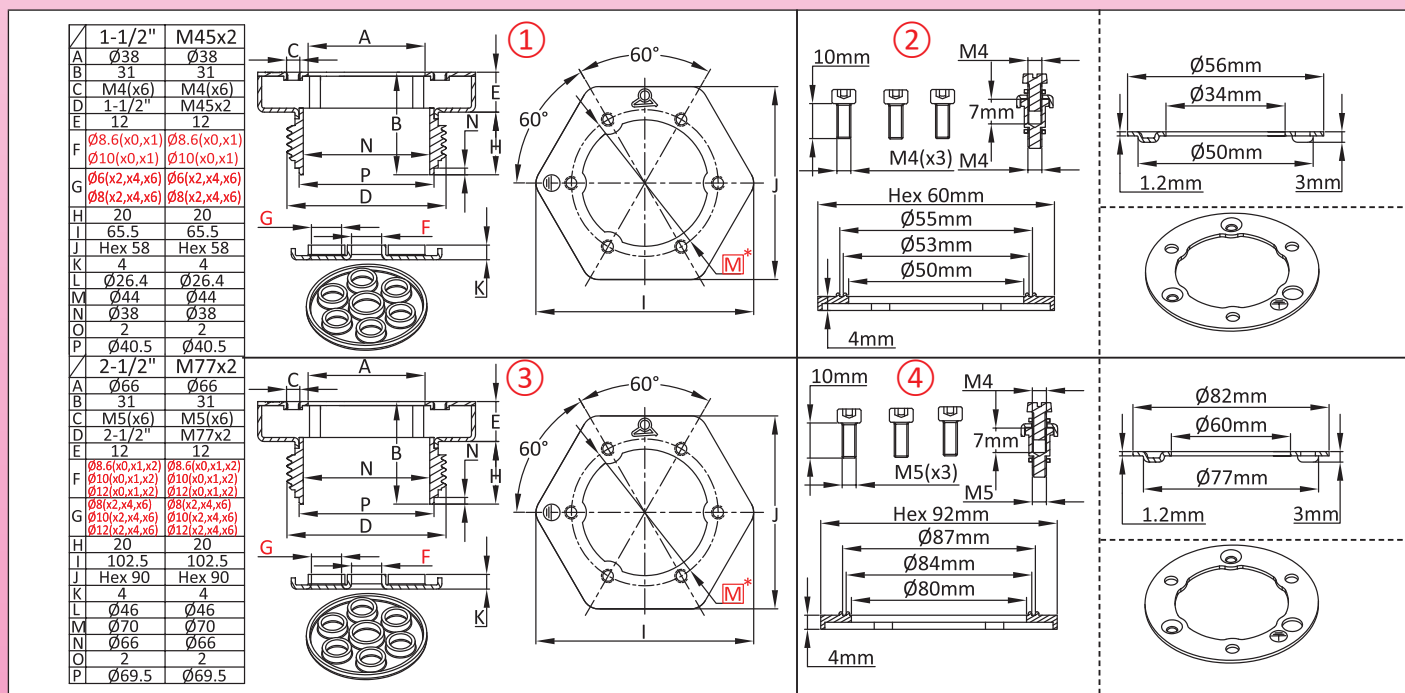
Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



**Stainless steel fitting with 3 screws stamped rotation ring, with deep drawn body and machined thread, for medium corrosive environments. Non-welded heating elements flange**

| Minimum Size | Maximum Size | Material        | Type                         | Model                              |
|--------------|--------------|-----------------|------------------------------|------------------------------------|
| 1" ½         | 2" ½         | Stainless steel | Rotation ring+ un-welded cup | <b>66RK (304L)<br/>66RV (316L)</b> |

| Compatible accessories |        |        |        |
|------------------------|--------|--------|--------|
| ☑ 66JE                 | ☑ 66XF |        |        |
| ☑ 66JF                 | ☑ 66Z1 |        |        |
| ☑ 66JP                 | ☑ 66Z2 |        |        |
| ☑ 66NL                 |        |        |        |
| Compatible enclosures  |        |        |        |
| ☑ Y302                 | ☑ Y3C1 | ☑ Y3J2 | ☑ Y3P1 |
| ☑ Y303                 | ☑ Y3C3 | ☑ Y3K1 | ☑ Y3P3 |
| ☑ Y304                 | ☑ Y3C4 | ☑ Y3K2 | ☑ Y3P4 |
| ☑ Y305                 | ☑ Y3G1 | ☑ Y3L3 | ☑ Y3P5 |
| ☑ Y306                 | ☑ Y3G2 | ☑ Y3M1 | ☑ Y3P6 |
| ☑ Y307                 | ☑ Y3H1 | ☑ Y3N1 | ☑ Y3S3 |
| ☑ Y309                 | ☑ Y3H2 | ☑ Y3N2 | ☑ Y3S5 |
| ☑ Y310                 | ☑ Y3H3 | ☑ Y3N3 | ☑ Y3S7 |
| ☑ Y3B2                 | ☑ Y3J1 | ☑ Y3N4 | ☑ Y3SA |



### Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66RKA3T*****0000       | 66RVA3T*****0000       |
| 1½"        | ①+②         | 66RKA3T*****0005       | 66RVA3T*****0005       |
| M45x2      | ①           | 66RKMDT*****0000       | 66RVMDT*****0000       |
| M45x2      | ①+②         | 66RKMDT*****0005       | 66RVMDT*****0005       |
| 2½"        | ③           | 66RKA7T*****0000       | 66RVA7T*****0000       |
| 2½"        | ③+④         | 66RKA7T*****0005       | 66RVA7T*****0005       |
| M77x2      | ③           | 66RKMGT*****0000       | 66RVMG T*****0000      |
| M77x2      | ③+④         | 66RKMGT*****0005       | 66RVMG T*****0005      |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.

**Stainless steel fitting with 3 screws stamped rotation ring, with deep drawn body and massive machined thread, for medium corrosive environments.**

| Minimum Size | Maximum Size | Material        | Type                             | Model                      |
|--------------|--------------|-----------------|----------------------------------|----------------------------|
| 1" ½         | 2" ½         | Stainless steel | Rotation ring and massive thread | 66RO (304L)<br>66RP (316L) |

## Compatible accessories

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> 66JE | <input checked="" type="checkbox"/> 66XF |
| <input checked="" type="checkbox"/> 66JF | <input checked="" type="checkbox"/> 66Z1 |
| <input checked="" type="checkbox"/> 66JP | <input checked="" type="checkbox"/> 66Z2 |
| <input checked="" type="checkbox"/> 66NL |                                          |

## Compatible enclosures

|        |        |        |        |
|--------|--------|--------|--------|
| ✘ Y302 | ✘ Y3C1 | ✘ Y3J2 | ✘ Y3P1 |
| ✘ Y303 | ✘ Y3C3 | ✘ Y3K1 | ✘ Y3P3 |
| ✘ Y304 | ✘ Y3C4 | ✘ Y3K2 | ✘ Y3P4 |
| ✘ Y305 | ✘ Y3G1 | ✘ Y3L3 | ✘ Y3P5 |
| ✘ Y306 | ✘ Y3G2 | ✘ Y3M1 | ✘ Y3P6 |
| ✘ Y307 | ✘ Y3H1 | ✘ Y3N1 | ✘ Y3S3 |
| ✘ Y309 | ✘ Y3H2 | ✘ Y3N2 | ✘ Y3S5 |
| ✘ Y310 | ✘ Y3H3 | ✘ Y3N3 | ✘ Y3S7 |
| ✘ Y3B2 | ✘ Y3J1 | ✘ Y3N4 | ✘ Y3S4 |



|   |                              |                              |
|---|------------------------------|------------------------------|
| A | 1-1/2"                       | M45x2                        |
| B | 31                           | 31                           |
| C | M4(x6)                       | M4(x6)                       |
| D | 1-1/2"                       | M45x2                        |
| E | 12                           | 12                           |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) |
| H | 17                           | 17                           |
| I | 65.5                         | 65.5                         |
| J | Hex 58                       | Hex 58                       |
| K | 5                            | 5                            |
| L | Ø26.4                        | Ø26.4                        |
| M | Ø44                          | Ø44                          |

|   |                                                  |                                                  |
|---|--------------------------------------------------|--------------------------------------------------|
| A | 2-1/2"                                           | M77x2                                            |
| B | 31                                               | 31                                               |
| C | M5(x6)                                           | M5(x6)                                           |
| D | 2-1/2"                                           | M77x2                                            |
| E | 12                                               | 12                                               |
| F | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) |
| G | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   |
| H | 20                                               | 20                                               |
| I | 102.5                                            | 102.5                                            |
| J | Hex 90                                           | Hex 90                                           |
| K | 5                                                | 5                                                |
| L | Ø46                                              | Ø46                                              |
| M | Ø70                                              | Ø70                                              |

## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66ROA3T*****0000       | 66RPA3T*****0000       |
| 1½"        | ① + ②       | 66ROA3T*****0005       | 66RPA3T*****0005       |
| M45×2      | ①           | 66ROMDT*****0000       | 66RPMDT*****0000       |
| M45×2      | ① + ②       | 66ROMDT*****0005       | 66RPMDT*****0005       |
| 2½"        | ③           | 66ROA7T*****0000       | 66RPA7T*****0000       |
| 2½"        | ③ + ④       | 66ROA7T*****0005       | 66RPA7T*****0005       |
| M77×2      | ③           | 66ROMGT*****0000       | 66RPMGT*****0000       |
| M77×2      | ③ + ④       | 66ROMGT*****0005       | 66RPMGT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.

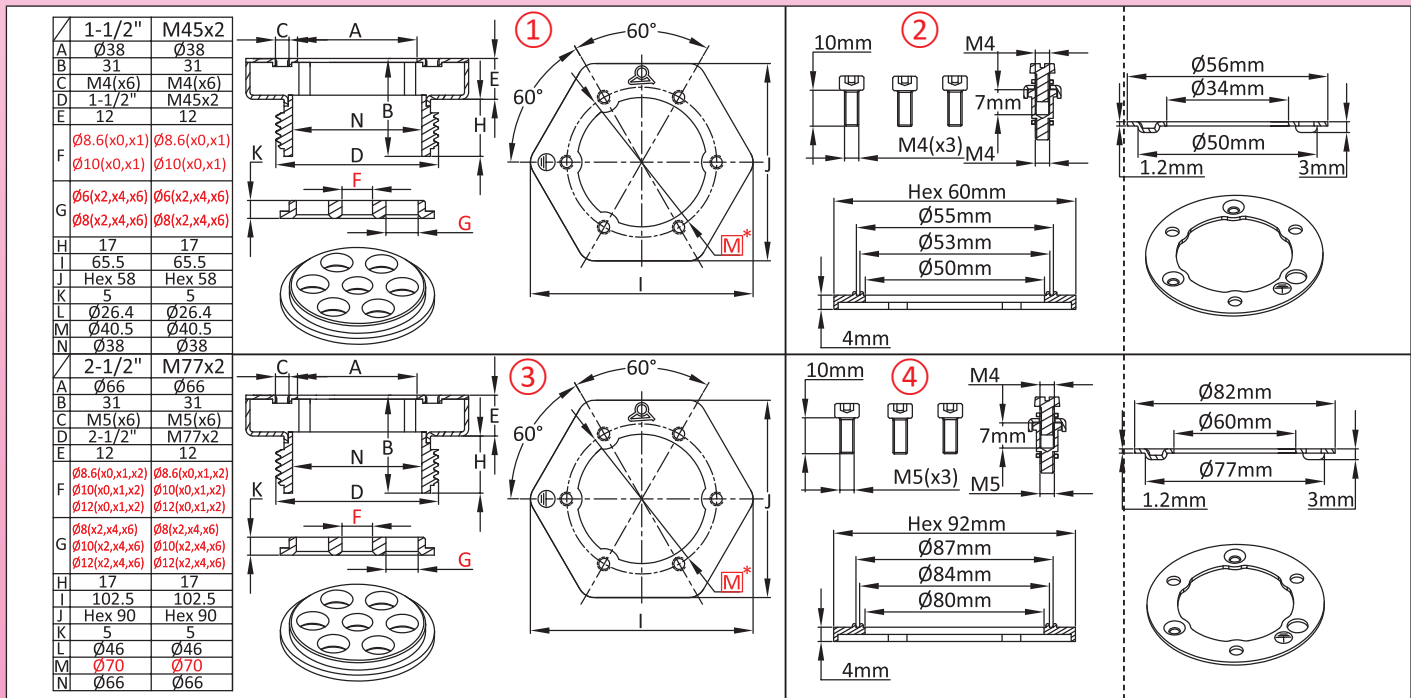




# Stainless steel fitting with 3 screws stamped rotation ring, with deep drawn body and massive machined thread, for medium corrosive environments. Non-welded thread

| Minimum Size | Maximum Size | Material        | Type                                        | Model                                    |
|--------------|--------------|-----------------|---------------------------------------------|------------------------------------------|
| 1" ½         | 2" ½         | Stainless steel | Rotation ring and non-welded massive thread | <b>66RQ (304L)</b><br><b>66RR (316L)</b> |

| Compatible accessories |        |        |        |
|------------------------|--------|--------|--------|
| ☒ 66JE                 | ☒ 66XF |        |        |
| ☒ 66JF                 | ☒ 66Z1 |        |        |
| ☒ 66JP                 | ☒ 66Z2 |        |        |
| ☒ 66NL                 |        |        |        |
| Compatible enclosures  |        |        |        |
| ☒ Y302                 | ☒ Y3C1 | ☒ Y3J2 | ☒ Y3P1 |
| ☒ Y303                 | ☒ Y3C3 | ☒ Y3K1 | ☒ Y3P3 |
| ☒ Y304                 | ☒ Y3C4 | ☒ Y3K2 | ☒ Y3P4 |
| ☒ Y305                 | ☒ Y3G1 | ☒ Y3L3 | ☒ Y3P5 |
| ☒ Y306                 | ☒ Y3G2 | ☒ Y3M1 | ☒ Y3P6 |
| ☒ Y307                 | ☒ Y3H1 | ☒ Y3N1 | ☒ Y3S3 |
| ☒ Y309                 | ☒ Y3H2 | ☒ Y3N2 | ☒ Y3S5 |
| ☒ Y310                 | ☒ Y3H3 | ☒ Y3N3 | ☒ Y3S7 |
| ☒ Y3B2                 | ☒ Y3J1 | ☒ Y3N4 | ☒ Y3SA |



## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66RQA3T*****0000       | 66RRA3T*****0000       |
| 1½"        | ①+②         | 66RQA3T*****0005       | 66RRA3T*****0005       |
| M45x2      | ①           | 66RQMDT*****0000       | 66RRMDT*****0000       |
| M45x2      | ①+②         | 66RQMDT*****0005       | 66RRMDT*****0005       |
| 2½"        | ③           | 66RQA7T*****0000       | 66RRA7T*****0000       |
| 2½"        | ③+④         | 66RQA7T*****0005       | 66RRA7T*****0005       |
| M77x2      | ③           | 66RQMGT*****0000       | 66RRMGT*****0000       |
| M77x2      | ③+④         | 66RQMGT*****0005       | 66RRMGT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



# Stainless steel fitting with wide rotating flange, welded thread and heating elements flange

| Minimum Size | Maximum Size | Material        | Type                                    | Model                                    |
|--------------|--------------|-----------------|-----------------------------------------|------------------------------------------|
| 1" ½         | M45x2        | Stainless steel | - Big deep drawn flange<br>- Welded cup | <b>66R2 (304L)</b><br><b>66R6 (316L)</b> |

## Compatible accessories

- ☒ 66JF
- ☒ 66JP
- ☒ 66JR
- ☒ 66NL
- ☒ 66XF

## Compatible enclosures

- ☒ Y309
- ☒ Y310
- ☒ Y3G1
- ☒ Y3G2
- ☒ Y3G3
- ☒ Y3J1
- ☒ Y3J2
- ☒ Y3M1
- ☒ Y3P5
- ☒ Y3S7
- ☒ Y3SA



|   | 1-1/2"                       | M45x2                        |  |  |  |  |
|---|------------------------------|------------------------------|--|--|--|--|
|   |                              |                              |  |  |  |  |
| A | Ø90                          | Ø90                          |  |  |  |  |
| B | Ø84                          | Ø84                          |  |  |  |  |
| C | M4(x3)                       | M4(x3)                       |  |  |  |  |
| D | 1-1/2"                       | M45x2                        |  |  |  |  |
| E | 8                            | 8                            |  |  |  |  |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    |  |  |  |  |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) |  |  |  |  |
| H | 13.5                         | 13.5                         |  |  |  |  |
| I | M4                           | M4                           |  |  |  |  |
| J | 20                           | 20                           |  |  |  |  |
| K | Ø70                          | Ø70                          |  |  |  |  |
| L | Hex 58                       | Hex 58                       |  |  |  |  |
| M | Ø3                           | Ø3                           |  |  |  |  |

## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66R2A3T*****0000       | 66R6A3T*****0000       |
| 1½"        | ①+②         | 66R2A3T*****0005       | 66R6A3T*****0005       |
| M45x2      | ①           | 66R2MDT*****0000       | 66R6MDT*****0000       |
| M45x2      | ①+②         | 66R2MDT*****0005       | 66R6MDT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.

# Stainless steel fitting with wide rotating flange, welded thread, non-welded heating elements flange



| Minimum Size | Maximum Size | Material        | Type                                        | Model                                    |
|--------------|--------------|-----------------|---------------------------------------------|------------------------------------------|
| 1" ½         | M45x2        | Stainless steel | - Big deep drawn flange<br>- Non-welded cup | <b>66R3 (304L)</b><br><b>66R7 (316L)</b> |

## Compatible accessories

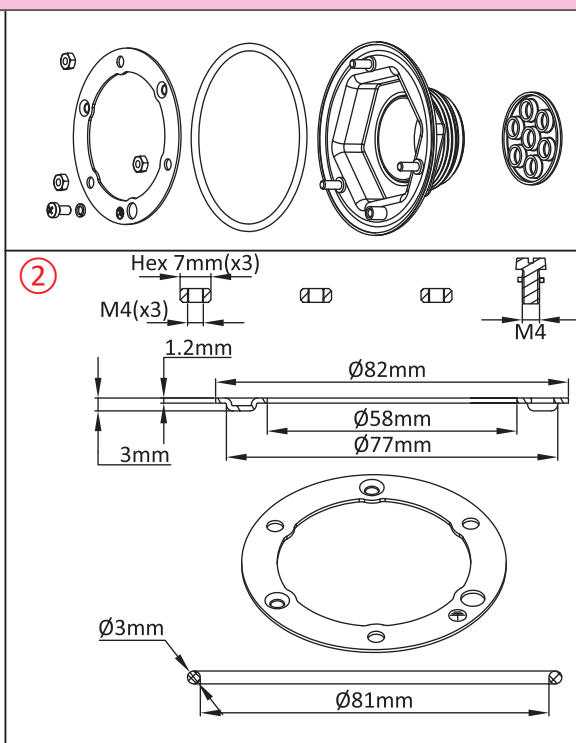
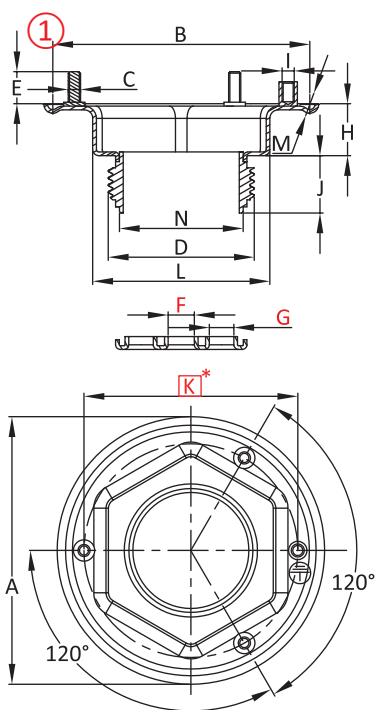
- ☒ 66JF
- ☒ 66JP
- ☒ 66JR
- ☒ 66NL
- ☒ 66XF

## Compatible enclosures

- ☒ Y309
- ☒ Y310
- ☒ Y3G1
- ☒ Y3G2
- ☒ Y3G3
- ☒ Y3J1
- ☒ Y3J2
- ☒ Y3M1
- ☒ Y3P5
- ☒ Y3S7
- ☒ Y3SA



|   | 1-1/2"                       | M45x2                        |
|---|------------------------------|------------------------------|
| A | Ø90                          | Ø90                          |
| B | Ø84                          | Ø84                          |
| C | M4(x3)                       | M4(x3)                       |
| D | 1-1/2"                       | M45x2                        |
| E | 8                            | 8                            |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) |
| H | 13.5                         | 13.5                         |
| I | M4                           | M4                           |
| J | 20                           | 20                           |
| K | Ø70                          | Ø70                          |
| L | Hex 58                       | Hex 58                       |
| M | Ø3                           | Ø3                           |
| N | Ø40.5                        | Ø40.5                        |



## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66R3A3T*****0000       | 66R7A3T*****0000       |
| 1½"        | ①+②         | 66R3A3T*****0005       | 66R7A3T*****0005       |
| M45x2      | ①           | 66R3MDT*****0000       | 66R7MDT*****0000       |
| M45x2      | ①+②         | 66R3MDT*****0005       | 66R7MDT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



# Stainless steel fitting with wide rotating flange, welded massive thread

| Minimum Size | Maximum Size | Material        | Type                                               | Model                                    |
|--------------|--------------|-----------------|----------------------------------------------------|------------------------------------------|
| 1" ½         | M45x2        | Stainless steel | - Big deep drawn flange<br>- Massive welded thread | <b>66R4 (304L)</b><br><b>66R8 (316L)</b> |

## Compatible accessories

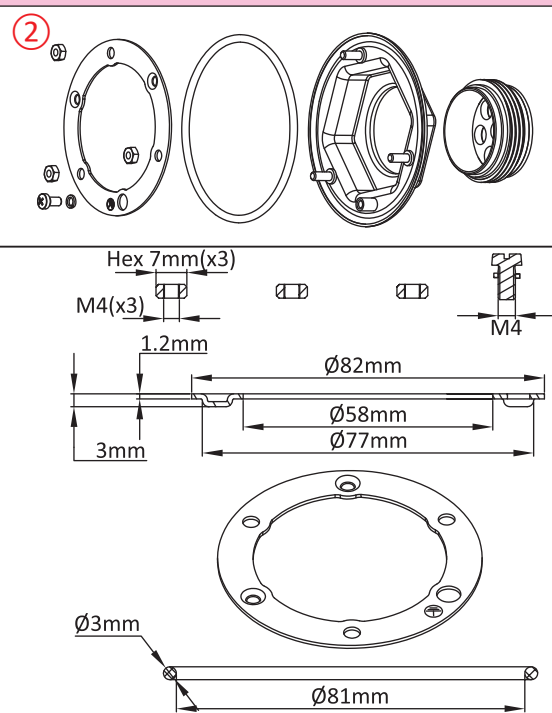
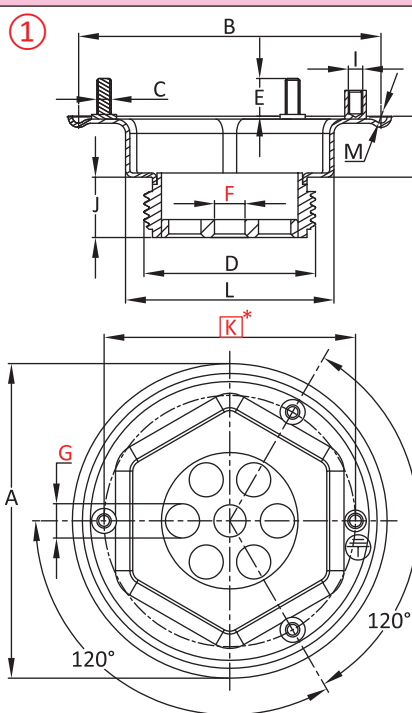
- ☒ 66JF
- ☒ 66JP
- ☒ 66JR
- ☒ 66NL
- ☒ 66XF

## Compatible enclosures

- ☒ Y309
- ☒ Y310
- ☒ Y3G1
- ☒ Y3G2
- ☒ Y3G3
- ☒ Y3J1
- ☒ Y3J2
- ☒ Y3M1
- ☒ Y3P5
- ☒ Y3S7
- ☒ Y3SA



|   | 1-1/2"                       | M45x2                        |
|---|------------------------------|------------------------------|
| A | Ø90                          | Ø90                          |
| B | Ø84                          | Ø84                          |
| C | M4(x3)                       | M4(x3)                       |
| D | 1-1/2"                       | M45x2                        |
| E | 8                            | 8                            |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) |
| H | 13.5                         | 13.5                         |
| I | M4                           | M4                           |
| J | 20                           | 20                           |
| K | Ø70                          | Ø70                          |
| L | Hex 58                       | Hex 58                       |
| M | Ø3                           | Ø3                           |



## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66R4A3T*****0000       | 66R8A3T*****0000       |
| 1½"        | ①+②         | 66R4A3T*****0005       | 66R8A3T*****0005       |
| M45x2      | ①           | 66R4MDT*****0000       | 66R8MDT*****0000       |
| M45x2      | ①+②         | 66R4MDT*****0005       | 66R8MDT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



# Stainless steel fitting with wide rotating flange, non-welded massive thread

| Minimum Size | Maximum Size | Material        | Type                                               | Model                                    |
|--------------|--------------|-----------------|----------------------------------------------------|------------------------------------------|
| 1" ½         | M45x2        | Stainless steel | - Big deep drawn flange<br>- Massive welded thread | <b>66R5 (304L)</b><br><b>66R9 (316L)</b> |

## Compatible accessories

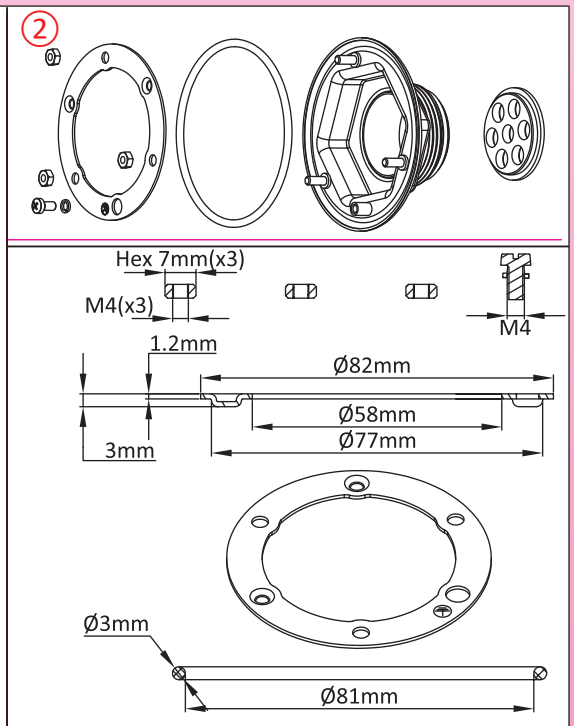
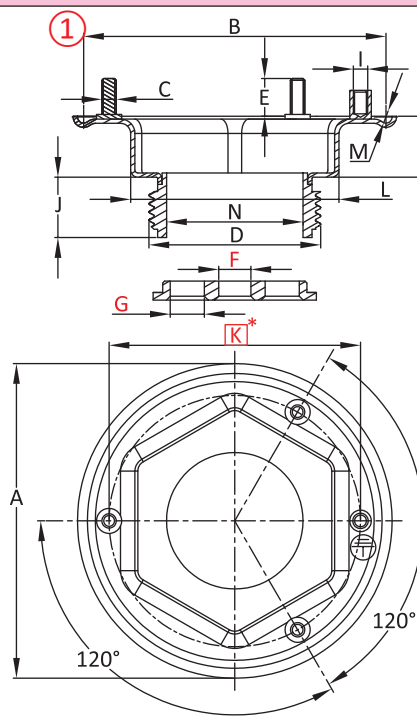
- ☒ 66JF
- ☒ 66JP
- ☒ 66JR
- ☒ 66NL
- ☒ 66XF

## Compatible enclosures

- ☒ Y309
- ☒ Y310
- ☒ Y3G1
- ☒ Y3G2
- ☒ Y3G3
- ☒ Y3J1
- ☒ Y3J2
- ☒ Y3M1
- ☒ Y3P5
- ☒ Y3S7
- ☒ Y3SA



|   | 1-1/2"                       | M45x2                        |
|---|------------------------------|------------------------------|
| A | Ø90                          | Ø90                          |
| B | Ø84                          | Ø84                          |
| C | M4(x3)                       | M4(x3)                       |
| D | 1-1/2"                       | M45x2                        |
| E | 8                            | 8                            |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) |
| H | 13.5                         | 13.5                         |
| I | M4                           | M4                           |
| J | 20                           | 20                           |
| K | Ø70                          | Ø70                          |
| L | Hex 58                       | Hex 58                       |
| M | Ø3                           | Ø3                           |
| N | Ø38                          | Ø38                          |



## Main references

| Dimensions | Composition | Reference in AISI 304L | Reference in AISI 316L |
|------------|-------------|------------------------|------------------------|
| 1½"        | ①           | 66R5A3T*****0000       | 66R9A3T*****0000       |
| 1½"        | ①+②         | 66R5A3T*****0005       | 66R9A3T*****0005       |
| M45x2      | ①           | 66R5MDT*****0000       | 66R9MDT*****0000       |
| M45x2      | ①+②         | 66R5MDT*****0005       | 66R9MDT*****0005       |

Specify dimensions and quantity of holes F and G.  
Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.





## 2" plastic fittings for corrosive liquids like swimming pool, spas and aquariums waters. Without built-in pockets

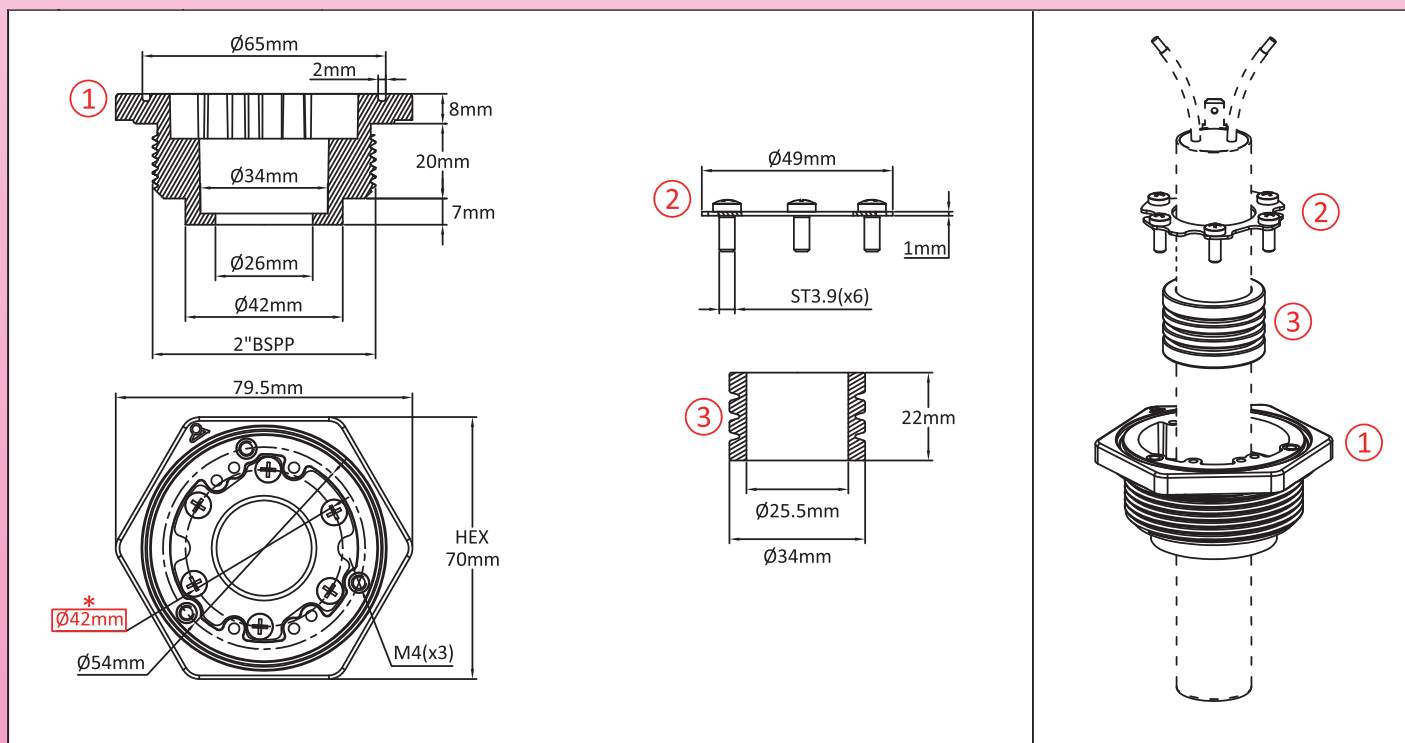
| Minimum Size | Maximum Size | Material | Type                       | Model       |
|--------------|--------------|----------|----------------------------|-------------|
| 2"           | 2"           | PPS      | Compression gasket fitting | <b>66RW</b> |

### Compatible accessories

- ☒ 66XF
- ☒ 66JF
- ☒ 66JP
- ☒ 66NS

### Compatible enclosures

- |        |        |        |
|--------|--------|--------|
| ☒ Y305 | ☒ Y3P6 | ☒ Y3S7 |
| ☒ Y3P3 | ☒ Y3S5 | ☒ Y3C2 |
| ☒ Y3P5 | ☒ Y3SA | ☒ Y306 |



### References

|                  |                  |
|------------------|------------------|
| ①                |                  |
| 66RWA5T026000000 |                  |
| ①+②+③            |                  |
| ③=Silicone       | 66RWA5T026000006 |
| ③=FKM            | 66RWA5T026000008 |
| ③=NBR            | 66RWA5T026000007 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.

## 2" plastic fittings for corrosive liquids like swimming pool, spas and aquariums waters. With built-in pockets



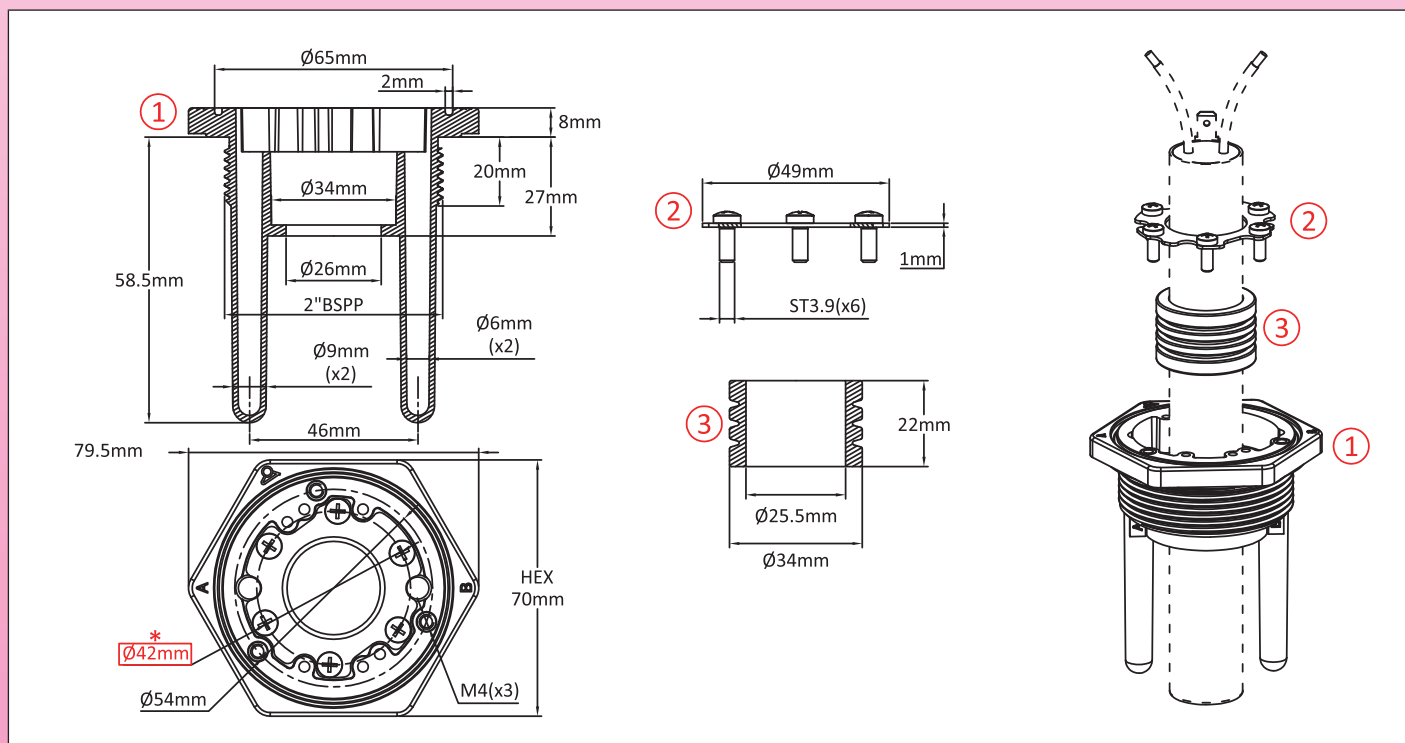
| Minimum Size | Maximum Size | Material | Type                                    | Model       |
|--------------|--------------|----------|-----------------------------------------|-------------|
| 2"           | 2"           | PPS      | Compression gasket fitting with pockets | <b>66RY</b> |

### Compatible accessories

- ☒ 66XF
- ☒ 66JP
- ☒ 66JF
- ☒ 66NS

### Compatible enclosures

- |        |        |        |
|--------|--------|--------|
| ☒ Y305 | ☒ Y3P6 | ☒ Y3S7 |
| ☒ Y3P3 | ☒ Y3S5 | ☒ Y3C2 |
| ☒ Y3P5 | ☒ Y3SA | ☒ Y306 |



### References

|                  |                  |
|------------------|------------------|
| ①                |                  |
| 66RYA5T026000000 |                  |
| ①+②+③            |                  |
| ③=Silicone       | 66RYA5T026000006 |
| ③=FKM            | 66RYA5T026000008 |
| ③=NBR            | 66RYA5T026000007 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



## Brass fittings, double thread, without grounding terminal

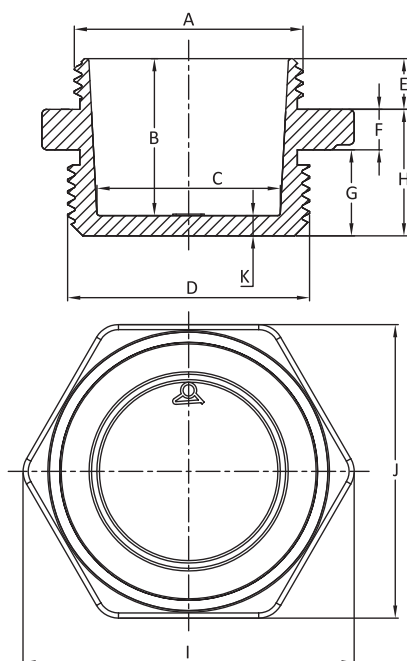
| Minimum Size | Maximum Size | Material | Type                     | Model |
|--------------|--------------|----------|--------------------------|-------|
| 1"           | M77x2        | Brass    | Double thread, no ground | 66RB  |

### Compatible accessories

- ☒ 66JP      ☒ 66NL
- ☒ 66JF      ☒ 66XN

### Compatible enclosures

- ☒ Y303      ☒ Y3P5      ☒ Y3N2
- ☒ Y304      ☒ Y3P6      ☒ Y3N3
- ☒ Y305      ☒ Y3H1      ☒ Y3N4
- ☒ Y306      ☒ Y3H2      ☒ Y3L1
- ☒ Y307      ☒ Y3H3      ☒ Y3L3
- ☒ Y309      ☒ Y3J1      ☒ Y3S3
- ☒ Y310      ☒ Y3J2      ☒ Y3S5
- ☒ Y3P1      ☒ Y3G1      ☒ Y3SA
- ☒ Y3P3      ☒ Y3G2      ☒ Y3S7
- ☒ Y3P4      ☒ Y3N1



|   | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|--------|--------|
| A | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| B | 31     | 31     | 31     | 31     | 34     | 34     | 34     |
| C | Ø27    | Ø35    | Ø36    | Ø36    | Ø50    | Ø66    | Ø66    |
| D | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| E | 10     | 10     | 10     | 10     | 10     | 10     | 10     |
| F | 8      | 8      | 8      | 8      | 8      | 8      | 8      |
| G | 17     | 17     | 17     | 17     | 20     | 20     | 20     |
| H | 25     | 25     | 25     | 25     | 28     | 28     | 28     |
| I | 50.5   | 65.5   | 65.5   | 65.5   | 79.5   | 102.5  | 102.5  |
| J | Hex 45 | Hex 58 | Hex 58 | Hex 58 | Hex 70 | Hex 90 | Hex 90 |
| K | 4      | 4      | 4      | 4      | 4      | 4      | 4      |

### Main references

| Dimension | References       | Dimension | References       |
|-----------|------------------|-----------|------------------|
| 1"        | 66RBA1T000000000 | 2"        | 66RBA5T000000000 |
| 1¼"       | 66RBA2T000000000 | 2½"       | 66RBA7T000000000 |
| 1½"       | 66RBA3T000000000 | M77x2     | 66RBMGT000000000 |
| M45x2     | 66RBMDT000000000 |           |                  |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



## Brass fittings, double thread, with side grounding terminal

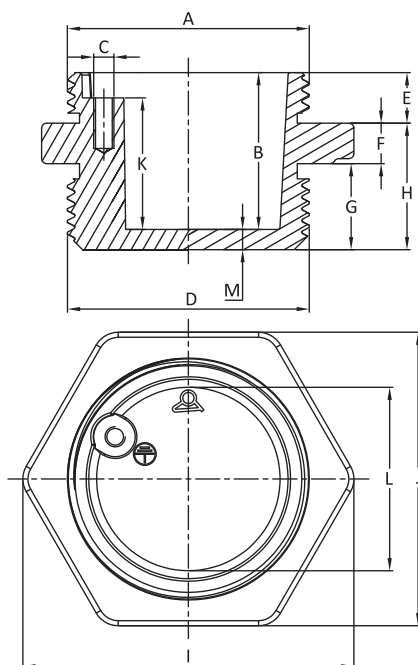
| Minimum Size | Maximum Size | Material | Type                       | Model       |
|--------------|--------------|----------|----------------------------|-------------|
| 1½"          | M77×2        | Brass    | Double thread, side ground | <b>66RC</b> |

### Compatible accessories

|        |        |
|--------|--------|
| ☒ 66JP | ☒ 66NL |
| ☒ 66JF | ☒ 66XN |

### Compatible enclosures

|        |        |        |
|--------|--------|--------|
| ☒ Y303 | ☒ Y3P5 | ☒ Y3N2 |
| ☒ Y304 | ☒ Y3P6 | ☒ Y3N3 |
| ☒ Y305 | ☒ Y3H1 | ☒ Y3N4 |
| ☒ Y306 | ☒ Y3H2 | ☒ Y3L1 |
| ☒ Y307 | ☒ Y3H3 | ☒ Y3L3 |
| ☒ Y309 | ☒ Y3J1 | ☒ Y3S3 |
| ☒ Y310 | ☒ Y3J2 | ☒ Y3S5 |
| ☒ Y3P1 | ☒ Y3G1 | ☒ Y3SA |
| ☒ Y3P3 | ☒ Y3G2 | ☒ Y3S7 |
| ☒ Y3P4 | ☒ Y3N1 |        |



|   | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|
| A | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| B | 31     | 31     | 34     | 34     | 34     |
| C | M4     | M4     | M5     | M5     | M5     |
| D | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| E | 10     | 10     | 10     | 10     | 10     |
| F | 8      | 8      | 8      | 8      | 8      |
| G | 17     | 17     | 20     | 20     | 20     |
| H | 25     | 25     | 28     | 28     | 28     |
| I | 65.5   | 65.5   | 79.5   | 102.5  | 102.5  |
| J | Hex 58 | Hex 58 | Hex 70 | Hex 90 | Hex 90 |
| K | 26     | 26     | 28     | 28     | 28     |
| L | Ø36    | Ø36    | Ø50    | Ø66    | Ø66    |
| M | 4      | 4      | 4      | 4      | 4      |

### Main references

| Dimension | References        | Dimension | References        |
|-----------|-------------------|-----------|-------------------|
| 1½"       | 66RCA3T0000000000 | 2½"       | 66RCA700000000000 |
| M45×2     | 66RCMD0000000000  | M77×2     | 66RCMG0000000000  |
| 2"        | 66RCA500000000000 |           |                   |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



## Brass fittings, double thread, with center grounding terminal

| Minimum Size | Maximum Size | Material | Type                          | Model |
|--------------|--------------|----------|-------------------------------|-------|
| 1"           | 1 1/4"       | Brass    | Double thread, central ground | 66RD  |

### Compatible accessories

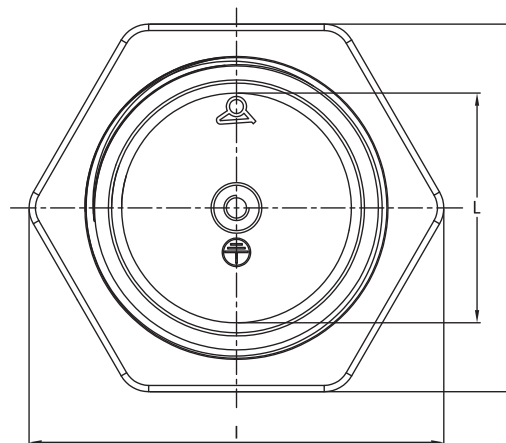
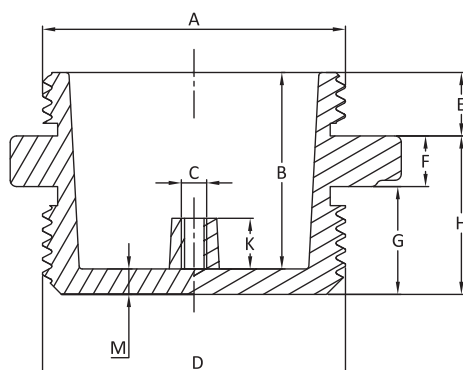
- ☒ 66JP      ☒ 66NL
- ☒ 66JF      ☒ 66XN

### Compatible enclosures

- ☒ Y3L1
- ☒ Y3L3
- ☒ Y3S3
- ☒ Y303
- ☒ Y304



|   | 1"     | 1-1/4" |
|---|--------|--------|
| A | 1"     | 1-1/4" |
| B | 31     | 31     |
| C | M4     | M4     |
| D | 1"     | 1-1/4" |
| E | 10     | 10     |
| F | 8      | 8      |
| G | 17     | 17     |
| H | 25     | 25     |
| I | 50.5   | 65.5   |
| J | Hex 45 | Hex 58 |
| K | 8      | 8      |
| L | Ø27    | Ø35    |
| M | 4      | 4      |



### Main references

| Dimension | References       | Dimension | References       |
|-----------|------------------|-----------|------------------|
| 1"        | 66RDA1T000000000 | 1 1/4"    | 66RDA2T000000000 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.





## Brass fittings, single thread, with center grounding terminal

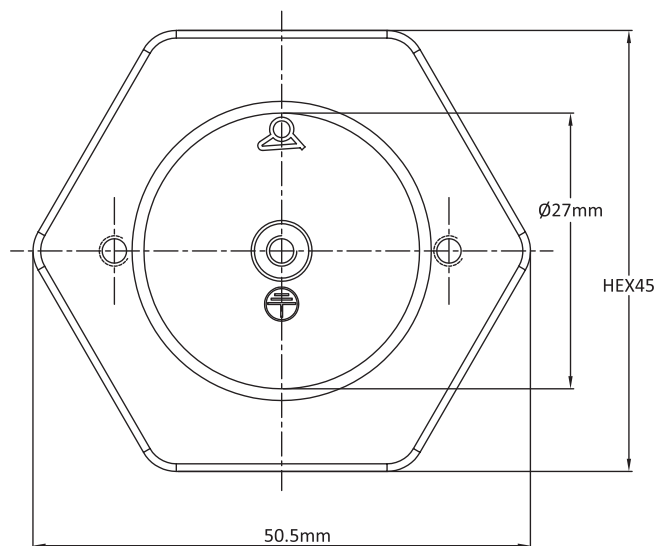
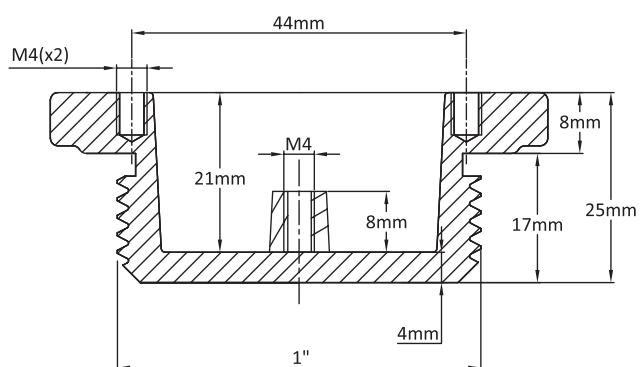
| Minimum Size | Maximum Size | Material | Type                          | Model |
|--------------|--------------|----------|-------------------------------|-------|
| 1"           | 1"           | Brass    | Single thread, central ground | 66RF  |

### Compatible accessories

- ☒ 66JP
- ☒ 66NL
- ☒ 66JF
- ☒ 66XF

### Compatible enclosures

- ☒ Y301



### Main reference

| Dimension | Reference        |
|-----------|------------------|
| 1"        | 66RFA1T000000000 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



## Brass fitting, using 3 screws rotation ring, for common immersion heaters

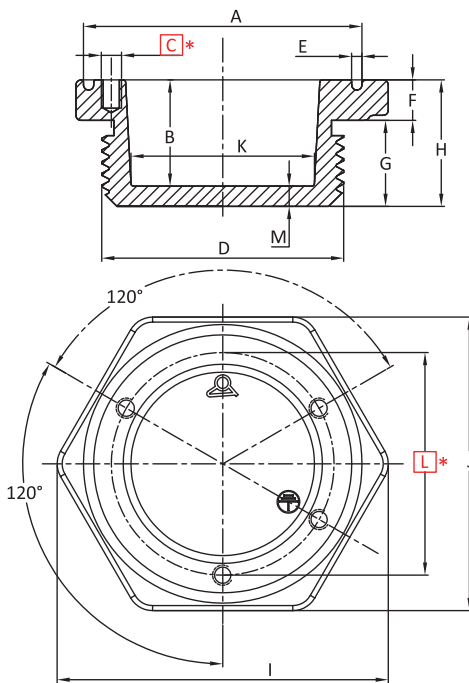
| Minimum Size | Maximum Size | Material | Type                   | Model       |
|--------------|--------------|----------|------------------------|-------------|
| 1¼"          | M77x2        | Brass    | 3 screws rotation ring | <b>66RE</b> |

### Compatible accessories

|        |        |
|--------|--------|
| ☒ 66XF | ☒ 66JP |
| ☒ 66JE | ☒ 66JF |
| ☒ 66NL | ☒ 66JR |

### Compatible enclosures

|        |        |        |        |
|--------|--------|--------|--------|
| ☒ Y303 | ☒ Y3H1 | ☒ Y310 | ☒ Y302 |
| ☒ Y304 | ☒ Y3H2 | ☒ Y3L3 | ☒ Y3C1 |
| ☒ Y305 | ☒ Y3H3 | ☒ Y3S3 | ☒ Y3C3 |
| ☒ Y3P1 | ☒ Y3G1 | ☒ Y3S5 | ☒ Y307 |
| ☒ Y3P3 | ☒ Y3G2 | ☒ Y3N1 | ☒ Y3K1 |
| ☒ Y3P4 | ☒ Y309 | ☒ Y3N2 | ☒ Y3K2 |
| ☒ Y3P5 | ☒ Y3J1 | ☒ Y3N3 | ☒ Y3SA |
| ☒ Y3P6 | ☒ Y3J2 | ☒ Y3N4 | ☒ Y3S7 |
| ☒ Y3B2 | ☒ Y306 | ☒ Y3C4 | ☒ Y3M1 |



|   | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|--------|
| A | Ø55    | Ø55    | Ø55    | Ø65    | Ø82    | Ø82    |
| B | 21     | 21     | 21     | 24     | 24     | 24     |
| C | M4(x4) | M4(x4) | M4(x4) | M4(x4) | M5(x4) | M5(x4) |
| D | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| E | 2      | 2      | 2      | 2      | 2      | 2      |
| F | 8      | 8      | 8      | 8      | 8      | 8      |
| G | 17     | 17     | 17     | 20     | 20     | 20     |
| H | 25     | 25     | 25     | 28     | 28     | 28     |
| I | 65.5   | 65.5   | 65.5   | 79.5   | 102.5  | 102.5  |
| J | Hex 58 | Hex 58 | Hex 58 | Hex 70 | Hex 90 | Hex 90 |
| K | Ø35    | Ø36    | Ø36    | Ø50    | Ø66    | Ø66    |
| L | Ø44    | Ø44    | Ø44    | Ø54    | Ø70    | Ø70    |
| M | 4      | 4      | 4      | 4      | 4      | 4      |

### Main references

| Dimension | References       | Dimension | References       |
|-----------|------------------|-----------|------------------|
| 1¼"       | 66REA2T000000000 | 2"        | 66REA5T000000000 |
| 1½"       | 66REA3T000000000 | 2½"       | 66REA7T000000000 |
| M45x2     | 66REMDT000000000 | M77x2     | 66REMGT000000000 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



## Lightened brass fittings, single thread

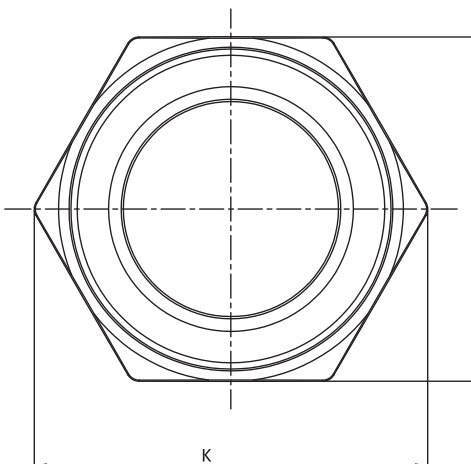
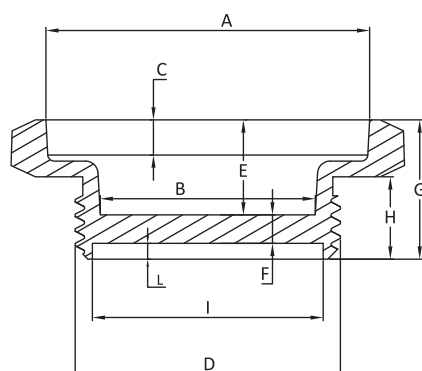
| Minimum Size | Maximum Size | Material | Type          | Model       |
|--------------|--------------|----------|---------------|-------------|
| 1¼"          | M45x2        | Brass    | Single thread | <b>66RG</b> |

### Compatible accessories

- ☒ 66JP
- ☒ 66JF
- ☒ 66NL

### Compatible enclosures

- ☒ Y3L4
- ☒ Y3S4



|   | 1-1/4" | 1-1/2" | M45x2  |
|---|--------|--------|--------|
| A | Ø50.5  | Ø55    | Ø55    |
| B | Ø34    | Ø40    | Ø40    |
| C | 5.5    | 5.5    | 5.5    |
| D | 1-1/4" | 1-1/2" | M45x2  |
| E | 15     | 15     | 15     |
| F | 4.5    | 4.5    | 4.5    |
| G | 22     | 22     | 22     |
| H | 13     | 13     | 13     |
| I | Ø36.5  | Ø36.5  | Ø36.5  |
| J | Hex 54 | Hex 58 | Hex 58 |
| K | 61     | 65.5   | 65.5   |
| L | 2.5    | 2.5    | 2.5    |

### Main references

| Dimension | References       |
|-----------|------------------|
| 1¼"       | 66RGA2T000000000 |
| 1½"       | 66RGA3T000000000 |
| M45x2     | 66RGMDT000000000 |

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



# Enclosure accessories

**The references given in these documents are the most common. The dotted areas in the plans indicate the options.**

**Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.**

**For more information consult our technical service.**





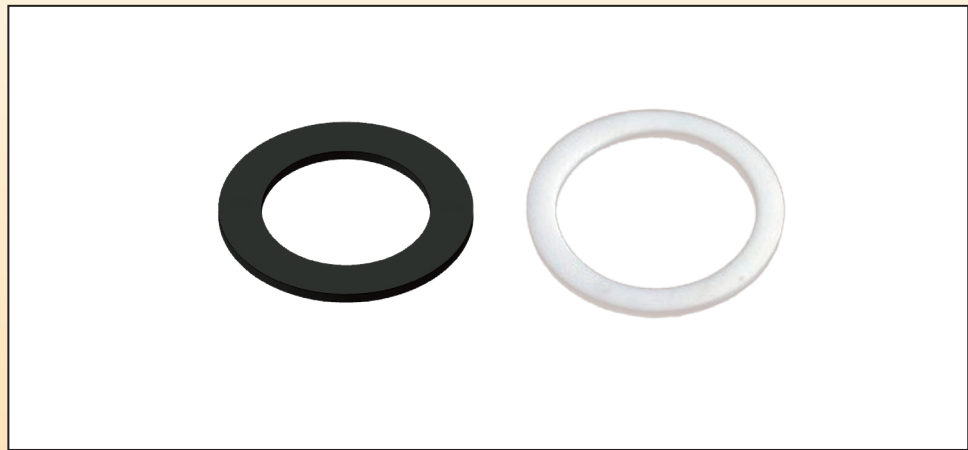


# Fitting gaskets for immersion heaters, thermostats, temperature sensors or level sensors in silicone, NBR, PTFE

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Minimum Size | Maximum Size | Material                | Type                     | Model       |
|--------------|--------------|-------------------------|--------------------------|-------------|
| 1"           | M77 × 2      | Silicone<br>NBR<br>PTFE | Elastomeric flat gaskets | <b>66JP</b> |

| Compatible with: |        |
|------------------|--------|
| ☒ 66RJ           | ☒ 66R3 |
| ☒ 66RU           | ☒ 66R4 |
| ☒ 66RK           | ☒ 66R5 |
| ☒ 66RV           | ☒ 66R6 |
| ☒ 66RO           | ☒ 66R7 |
| ☒ 66RP           | ☒ 66R8 |
| ☒ 66RQ           | ☒ 66R9 |
| ☒ 66RR           | ☒ 66RW |
| ☒ 66R2           | ☒ 66RY |



|  |    |        |        |       |     |        |       |
|--|----|--------|--------|-------|-----|--------|-------|
|  |    |        |        |       |     |        |       |
|  | 1" | 1-1/4" | 1-1/2" | M45x2 | 2"  | 2-1/2" | M77x2 |
|  | A  | Ø32    | Ø40    | Ø44   | Ø44 | Ø58    | Ø74   |
|  | B  | Ø50    | Ø62    | Ø62   | Ø62 | Ø76    | Ø95   |
|  | C  | 2      | 2      | 2     | 2   | 2      | 2     |

## Main references

| Dimensions   | References in Silicone | References in NBR | References in PTFE |
|--------------|------------------------|-------------------|--------------------|
| 1"           | 66JPS32020500000       | 66JPN32020500000  | 66JPP32020500000   |
| 1¼"          | 66JPS40020620000       | 66JPN40020620000  | 66JPP40020620000   |
| 1½"<br>M45×2 | 66JPS44020620000       | 66JPN44020620000  | 66JPP44020620000   |
| 2"           | 66JPS58020760000       | 66JPN58020760000  | 66JPP58020760000   |
| 2½"<br>M77×2 | 66JPS74020950000       | 66JPN74020950000  | 66JPP74020950000   |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

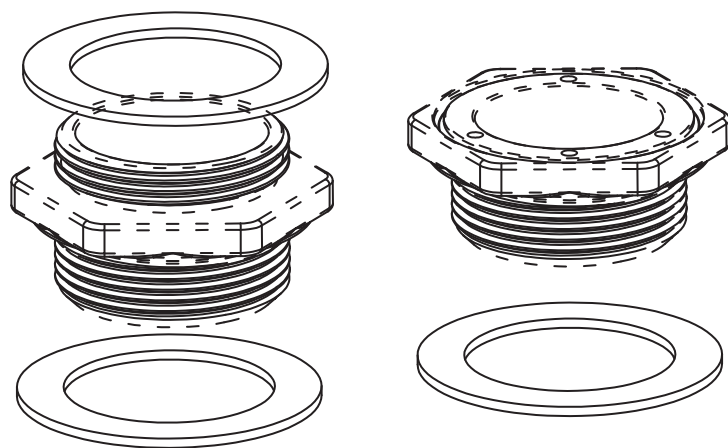
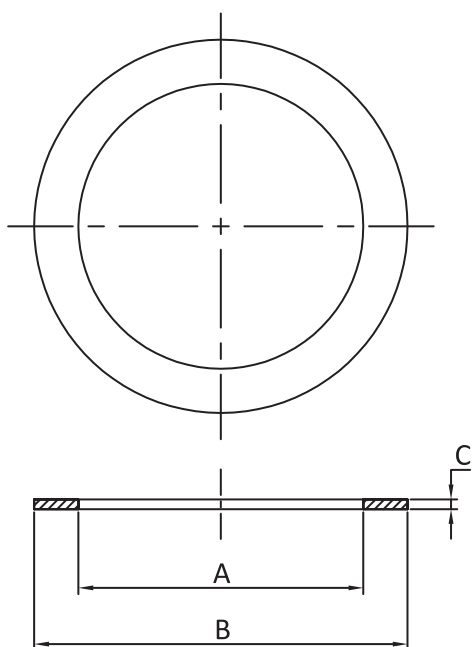
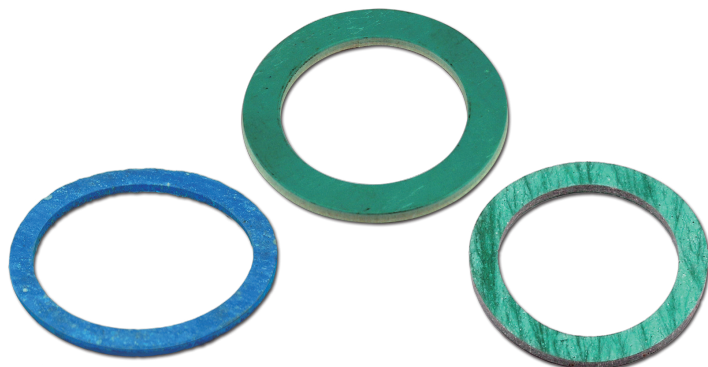
# Fitting gaskets for immersion heaters, thermostats, temperature sensors or level sensors in compressed fiber without asbestos



| Minimum Size | Maximum Size | Material                       | Type               | Model       |
|--------------|--------------|--------------------------------|--------------------|-------------|
| 1"           | M77 × 2      | Asbestos-free compressed fiber | Rigid flat gaskets | <b>66JF</b> |

## Compatible with:

|        |        |
|--------|--------|
| ☒ 66RJ | ☒ 66R3 |
| ☒ 66RU | ☒ 66R4 |
| ☒ 66RK | ☒ 66R5 |
| ☒ 66RV | ☒ 66R6 |
| ☒ 66RO | ☒ 66R7 |
| ☒ 66RP | ☒ 66R8 |
| ☒ 66RQ | ☒ 66R9 |
| ☒ 66RR | ☒ 66RW |
| ☒ 66R2 | ☒ 66RY |



|   | 1"  | 1-1/4" | 1-1/2" | M45x2 | 2"  | 2-1/2" | M77x2 |
|---|-----|--------|--------|-------|-----|--------|-------|
| A | Ø32 | Ø40    | Ø44    | Ø44   | Ø58 | Ø74    | Ø74   |
| B | Ø50 | Ø62    | Ø62    | Ø62   | Ø76 | Ø95    | Ø95   |
| C | 2.2 | 2.2    | 2.2    | 2.2   | 2.2 | 2.2    | 2.2   |

## Main references

| Dimensions   | References       | Dimensions   | References       |
|--------------|------------------|--------------|------------------|
| 1"           | 66JFC32022500000 | 2"           | 66JFC58022760000 |
| 1¼"          | 66JFC40022620000 | 2½"<br>M77x2 | 66JFC74022950000 |
| 1½"<br>M45x2 | 66JFC44022620000 |              |                  |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

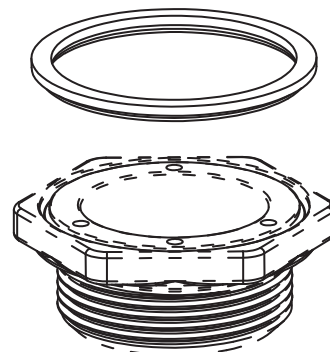
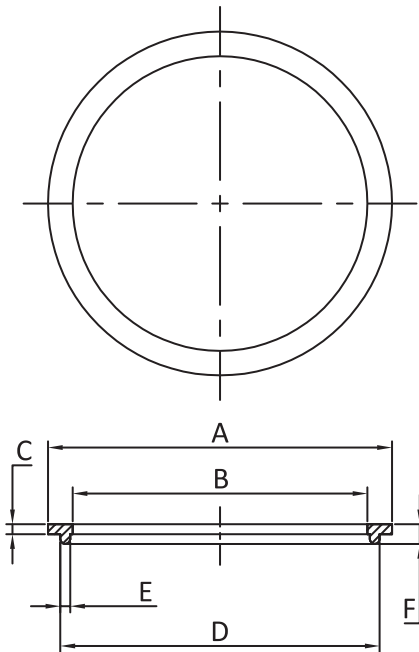


## Gaskets with centering lip, for fittings with rotation ring, in silicone or NBR

| Minimum Size | Maximum Size | Material                       | Type                                        | Model       |
|--------------|--------------|--------------------------------|---------------------------------------------|-------------|
| 1"           | M77 × 2      | Silicone<br>NBR<br>FKM (Viton) | Elastomeric<br>gasket with<br>centering lip | <b>66JL</b> |

### Compatible with:

|        |        |
|--------|--------|
| ☒ 66RJ | ☒ 66R3 |
| ☒ 66RU | ☒ 66R4 |
| ☒ 66RK | ☒ 66R5 |
| ☒ 66RV | ☒ 66R6 |
| ☒ 66RO | ☒ 66R7 |
| ☒ 66RP | ☒ 66R8 |
| ☒ 66RQ | ☒ 66R9 |
| ☒ 66RR | ☒ 66RW |
| ☒ 66R2 | ☒ 66RY |



|   | 1"  | 1-1/4" | 1-1/2" | M45x2 | 2"  | 2-1/2" | M77x2 |
|---|-----|--------|--------|-------|-----|--------|-------|
| A | Ø32 | Ø58    | Ø58    | Ø58   | Ø70 | Ø90    | Ø90   |
| B | Ø50 | Ø50    | Ø50    | Ø50   | Ø60 | Ø77    | Ø77   |
| C | 2   | 2      | 2      | 2     | 2   | 2      | 2     |
| D |     | Ø55    | Ø55    | Ø55   | Ø65 | Ø81    | Ø81   |
| E |     | 2      | 2      | 2     | 2   | 2      | 2     |
| F |     | 4      | 4      | 4     | 4   | 4      | 4     |

### Main references

| Dimensions          | References<br>in Silicone | References<br>in NBR | References<br>in FKM(Viton) |
|---------------------|---------------------------|----------------------|-----------------------------|
| 1"                  | 66JLS32040500000          | 66JLN32040500000     | 66JLV32040500000            |
| 1¼"<br>1½"<br>M45×2 | 66JLS58040500000          | 66JLN58040500000     | 66JLV58040500000            |
| 2"                  | 66JLS70040600000          | 66JLN70040600000     | 66JLV70040600000            |
| 2½"<br>M77×2        | 66JLS90040770000          | 66JLN90040770000     | 66JLV90040770000            |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

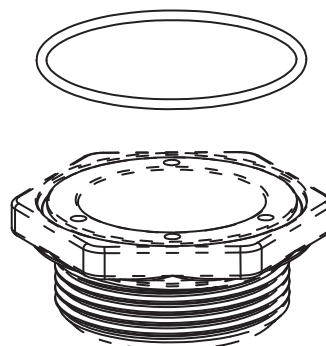
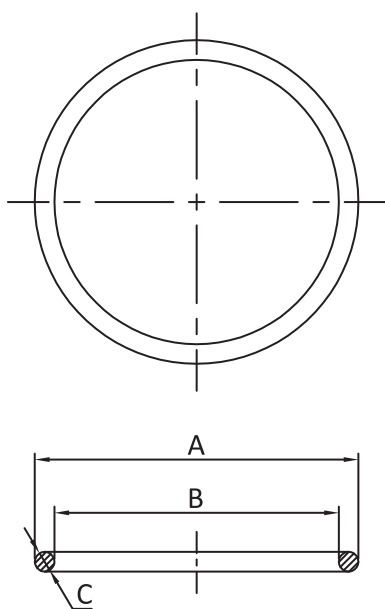
# O-ring type gaskets for immersion heaters, thermostats, temperature sensors or level sensors fittings, in NBR or silicone



| Minimum Size | Maximum Size | Material        | Type                     | Model               |
|--------------|--------------|-----------------|--------------------------|---------------------|
| 1¼"          | M77 × 2      | Silicone<br>NBR | O-ring for rotation ring | <b>66JR</b><br>(P1) |

Compatible with:

- ☒ 66RE
- ☒ 66RW
- ☒ 66RY



|   | 1-1/4" | 1-1/2" | M45x2 | 2"  | 2-1/2" | M77x2 |
|---|--------|--------|-------|-----|--------|-------|
| A | Ø55    | Ø55    | Ø55   | Ø65 | Ø82    | Ø82   |
| B | Ø51    | Ø51    | Ø51   | Ø61 | Ø78    | Ø78   |
| C | Ø2     | Ø2     | Ø2    | Ø2  | Ø2     | Ø2    |

## Main references

| Dimensions | References in Silicone | References in NBR |
|------------|------------------------|-------------------|
| 1¼"        | 66JRS55020510000       | 66JRN55020510000  |
| 1½"        |                        |                   |
| M45x2      | 66JRS65020610000       | 66JRN65020610000  |
| 2"         |                        |                   |
| 2½"        | 66JRS82020780000       | 66JRN82020780000  |
| M77x2      |                        |                   |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

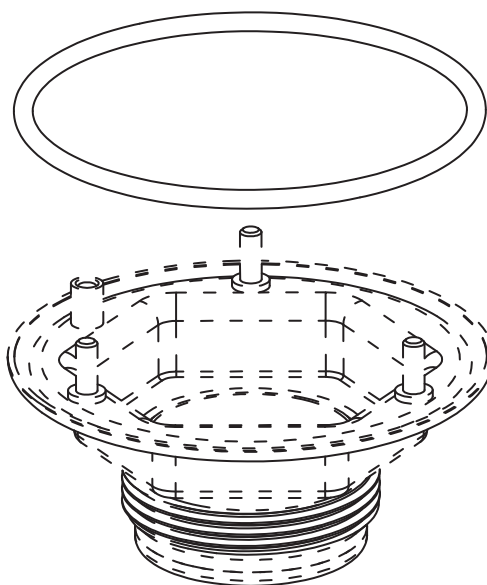
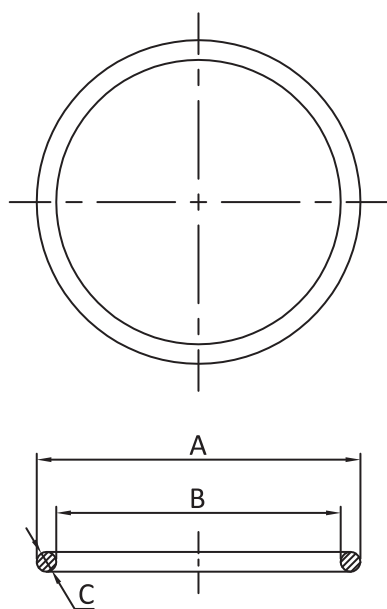


## O-ring type gaskets for large stamped immersion heaters fittings, in NBR or silicone

| Minimum Size | Maximum Size | Material        | Type                     | Model               |
|--------------|--------------|-----------------|--------------------------|---------------------|
| 1¼"          | M45 × 2      | Silicone<br>NBR | O-ring for large fitting | <b>66JR</b><br>(P2) |

### Compatible with:

|        |        |
|--------|--------|
| ☒ 66R2 | ☒ 66R6 |
| ☒ 66R3 | ☒ 66R7 |
| ☒ 66R4 | ☒ 66R8 |
| ☒ 66R5 | ☒ 66R9 |



|   | 1-1/4" | 1-1/2" | M45x2 |
|---|--------|--------|-------|
| A | Ø87    | Ø87    | Ø87   |
| B | Ø81    | Ø81    | Ø81   |
| C | Ø3     | Ø3     | Ø3    |

### Main references

| Dimensions          | References in NBR | References in silicone |
|---------------------|-------------------|------------------------|
| 1¼"<br>1½"<br>M45×2 | 66JRN87030810000  | 66JRS87030810000       |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



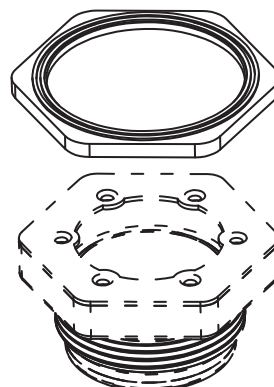
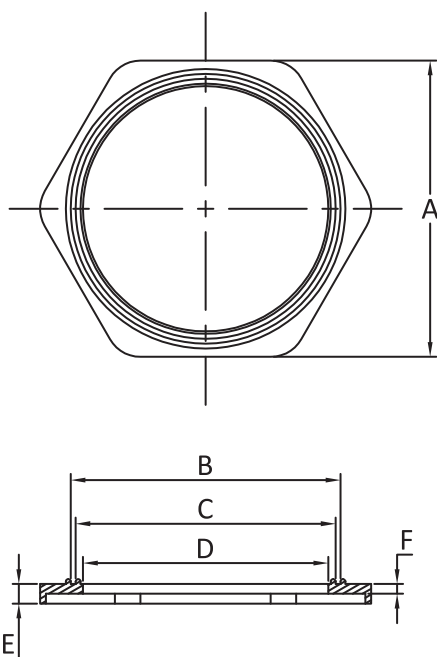


## Hexagonal capping gasket for deep drawn stainless steel fittings

| Minimum Size | Maximum Size | Material        | Type                | Model       |
|--------------|--------------|-----------------|---------------------|-------------|
| 1¼"          | M77 × 2      | Silicone<br>NBR | Wrapping<br>gaskets | <b>66JE</b> |

### Compatible with:

|        |        |
|--------|--------|
| ☒ 66RJ | ☒ 66RO |
| ☒ 66RU | ☒ 66RP |
| ☒ 66RK | ☒ 66RQ |
| ☒ 66RV | ☒ 66RR |



|   | 1-1/4" | 1-1/2" | M45x2  | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|
| A | Hex 60 | Hex 60 | Hex 60 | Hex 92 | Hex 92 |
| B | Ø55    | Ø55    | Ø55    | Ø87    | Ø87    |
| C | Ø53    | Ø53    | Ø53    | Ø84    | Ø84    |
| D | Ø50    | Ø50    | Ø50    | Ø80    | Ø80    |
| E | 4      | 4      | 4      | 4      | 4      |
| F | 2      | 2      | 2      | 2      | 2      |

### Main references

| Dimensions          | References in NBR | References in silicone |
|---------------------|-------------------|------------------------|
| 1¼"<br>1½"<br>M45×2 | 66JEN50040H60000  | 66JES50040H60000       |
| 2½"<br>M77×2        | 66JEN80040H92000  | 66JES80040H92000       |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

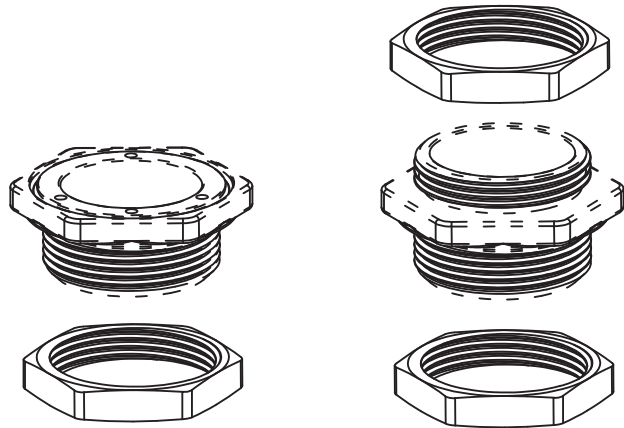
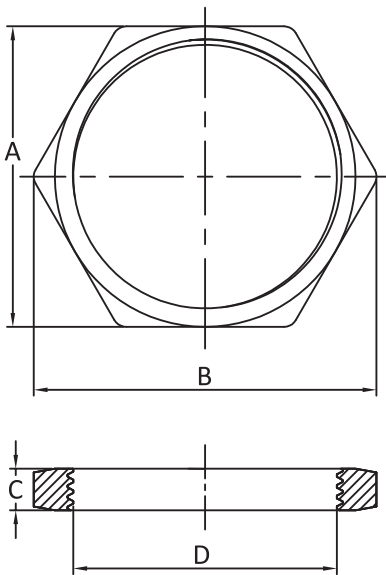
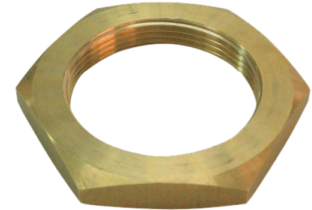


## Lock nuts for fittings, in 304, 316 stainless steel, and brass

| Minimum Size | Maximum Size | Material                            | Type | Model                                                                   |
|--------------|--------------|-------------------------------------|------|-------------------------------------------------------------------------|
| 1/2"         | M77 x 2      | 304, 316 stainless steel, and brass | Nuts | 66NL (Brass)<br>66NI (304)<br>66NT (316)<br>66NK (Brass, Nickel plated) |

### Compatible with:

|        |        |
|--------|--------|
| ☒ 66RJ | ☒ 66R3 |
| ☒ 66RU | ☒ 66R4 |
| ☒ 66RK | ☒ 66R5 |
| ☒ 66RV | ☒ 66R6 |
| ☒ 66RO | ☒ 66R7 |
| ☒ 66RP | ☒ 66R8 |
| ☒ 66RQ | ☒ 66R9 |
| ☒ 66RR | ☒ 66RW |
| ☒ 66R2 | ☒ 66RY |



|   | 1/2"   | 3/4"   | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| A | Hex 44 | Hex 44 | Hex 44 | Hex 50 | Hex 52 | Hex 52 | Hex 65 | Hex 85 | Hex 85 |
| B | 24     | 30     | 50     | 57     | 59     | 59     | 74     | 97     | 97     |
| C | 3      | 3      | 5.5    | 6.5    | 8      | 8      | 8      | 8      | 8      |
| D | 1/2"   | 3/4"   | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |

### Main references

| Dimensions | Reference in Brass | Reference in nickel plated brass | Reference in AISI 304 | Reference in AISI 316 |
|------------|--------------------|----------------------------------|-----------------------|-----------------------|
| 1/2"       | 66NLC01230H44000   | 66NKC01230H44000                 | 66NIC01230H44000      | 66NTC01230H44000      |
| 3/4"       | 66NLC03430H44000   | 66NKC03430H44000                 | 66NIC03430H44000      | 66NTC03430H44000      |
| 1"         | 66NLC10055H44000   | 66NKC10055H44000                 | 66NIC10055H44000      | 66NTC10055H44000      |
| 1 1/4"     | 66NLC11465H50000   | 66NKC11465H50000                 | 66NIC11465H50000      | 66NTC11465H50000      |
| 1 1/2"     | 66NLC11280H52000   | 66NKC11280H52000                 | 66NIC11280H52000      | 66NTC11280H52000      |
| M45x2      | 66NLM45280H52000   | 66NKM45280H52000                 | 66NIM45280H52000      | 66NTM45280H52000      |
| 2"         | 66NLC20080H65000   | 66NKC20080H65000                 | 66NIC20080H65000      | 66NTC20080H65000      |
| 2 1/2"     | 66NLC21280H85000   | 66NKC21280H85000                 | 66NIC21280H85000      | 66NTC21280H85000      |
| M77x2      | 66NLM77280H85000   | 66NKM77280H85000                 | 66NIM77280H85000      | 66NTM77280H85000      |

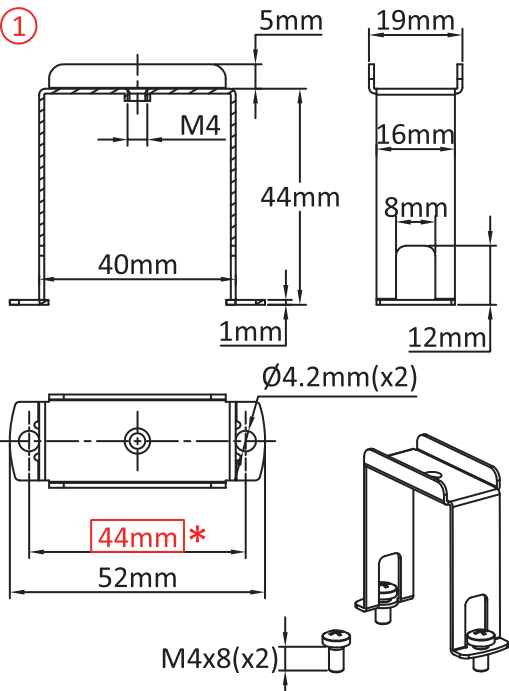
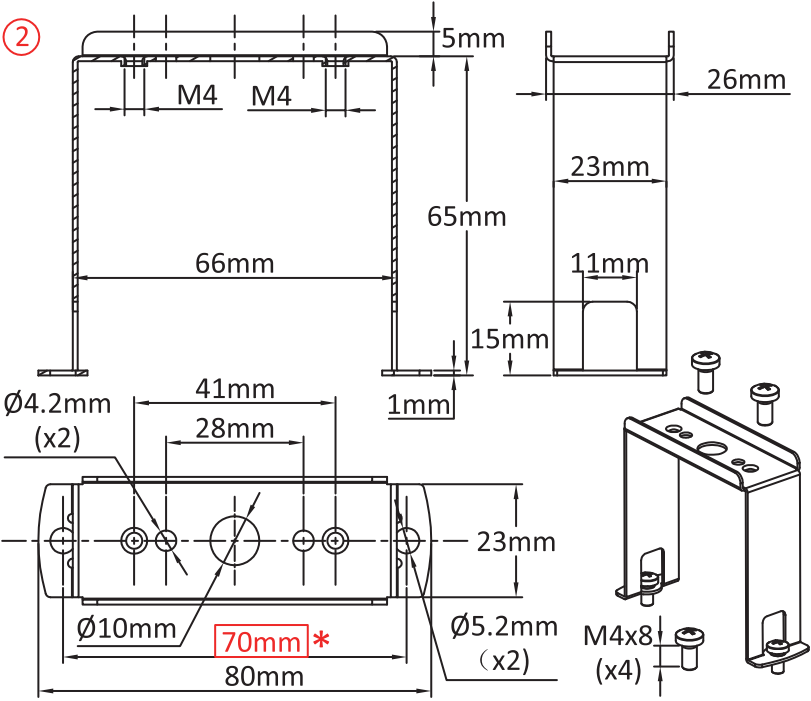
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Internal saddles for round enclosures assembly on fittings

| Minimum Size | Maximum Size | Material            | Type             | Model       |
|--------------|--------------|---------------------|------------------|-------------|
| 1½"          | 2½"          | 304 Stainless steel | Internal saddles | <b>66KE</b> |

| Compatible with:                                                                                                                                                             |                                                                                      | ①                                                                                 | ②                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| ①                                                                                                                                                                            | ②                                                                                    |                                                                                   |                                                                                     |
| <input checked="" type="checkbox"/> Y302<br><input checked="" type="checkbox"/> Y3K1<br><input checked="" type="checkbox"/> Y3C1<br><input checked="" type="checkbox"/> Y3C2 | <input checked="" type="checkbox"/> Y3K2<br><input checked="" type="checkbox"/> Y3C3 |  |  |

|                                                                                                                                                                                                |                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>①</p>  <p>Dimensions: 40mm, 5mm, 19mm, 16mm, 8mm, 12mm, 44mm, 1mm, Ø4.2mm(x2), 52mm, 44mm*, M4x8(x2).</p> | <p>②</p>  <p>Dimensions: 66mm, 5mm, M4, M4, 26mm, 23mm, 11mm, 15mm, 1mm, 65mm, Ø4.2mm (x2), 41mm, 28mm, 23mm, Ø10mm, 70mm*, 80mm, Ø5.2mm (x2), M4x8 (x4).</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Main references

| ①                | ②                |
|------------------|------------------|
| 66KE1I0000000000 | 66KE2I0000000000 |

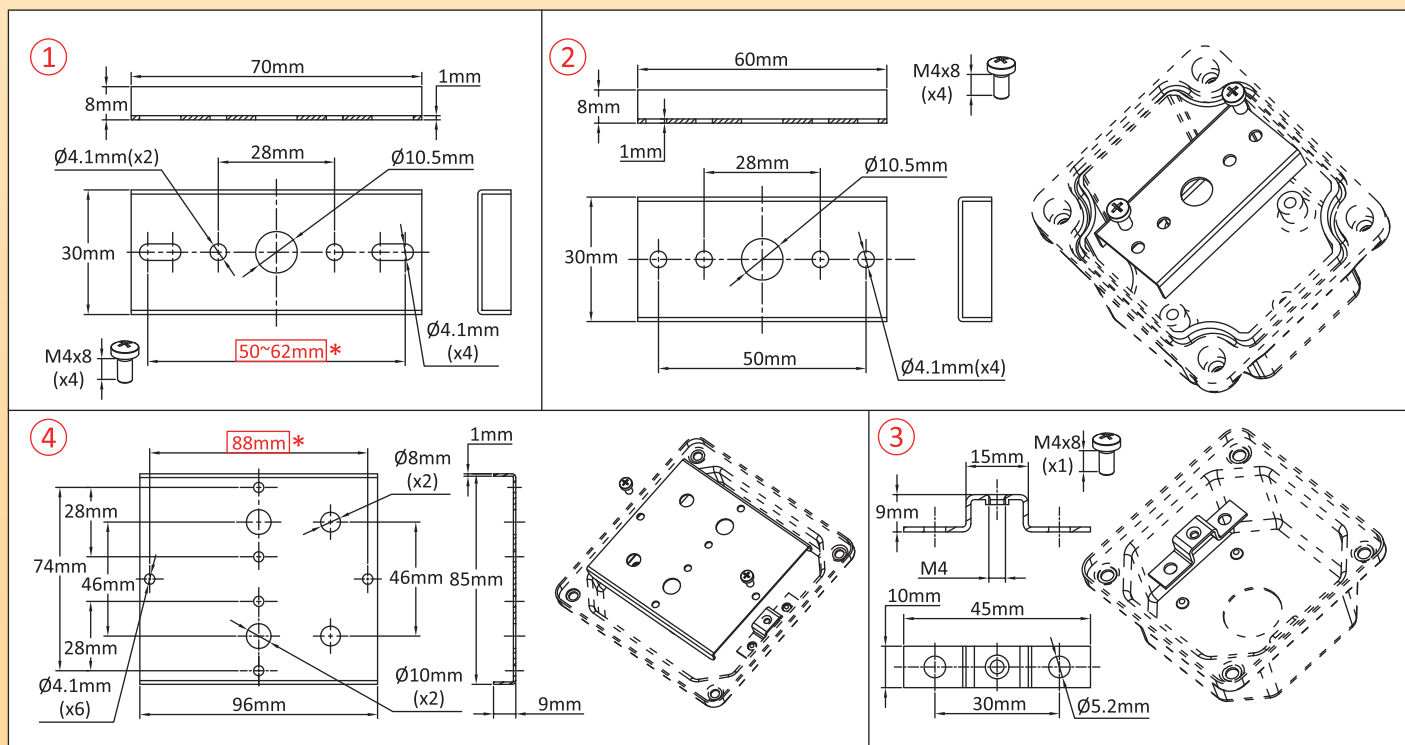
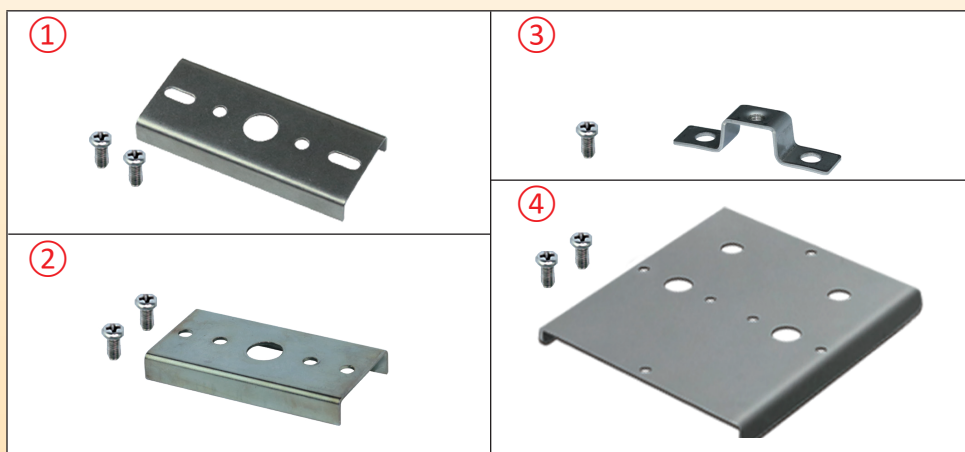
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Rails for assembly of thermostats

| Minimum Size | Maximum Size  | Material            | Type                 | Model                |
|--------------|---------------|---------------------|----------------------|----------------------|
| 1 thermostat | 2 thermostats | 304 Stainless steel | Thermostats mounting | <b>66KP<br/>66KG</b> |

| Compatible with: |                                                                                                                                                                                                                                         |  |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| ①                | <div> <div> <div>✗ Y3S5</div> <div>✗ Y3S8</div> <div>✗ Y3TA</div> <div>✗ Y3C4</div> </div> <div> <div>✗ Y3S6</div> <div>✗ Y3S9</div> <div>✗ Y305</div> </div> <div> <div>✗ Y3S7</div> <div>✗ Y3T8</div> <div>✗ Y306</div> </div> </div> |  |
| ②                | <div> <div>✗ Y3S3</div> <div>✗ Y304</div> <div>✗ Y3P5</div> </div> <div> <div>✗ Y3S4</div> <div>✗ Y3P1</div> <div>✗ Y307</div> </div> <div> <div>✗ Y303</div> <div>✗ Y3P3</div> <div>✗ Y3M1</div> </div>                                |  |
| ③                | <div> <div>✗ Y3L3</div> <div>✗ Y3S5</div> <div>✗ Y3SB</div> </div> <div> <div>✗ Y3S3</div> <div>✗ Y3S6</div> <div>✗ Y3SC</div> </div> <div> <div>✗ Y3S4</div> <div>✗ Y3SA</div> <div>✗ Y3TB</div> </div>                                |  |
| ④                | <div> <div>✗ Y3SA</div> <div>✗ Y3TB</div> </div> <div> <div>✗ Y3SB</div> <div>✗ Y3TC</div> </div> <div> <div>✗ Y3SC</div> <div>✗ Y3P5</div> </div>                                                                                      |  |



### Main references

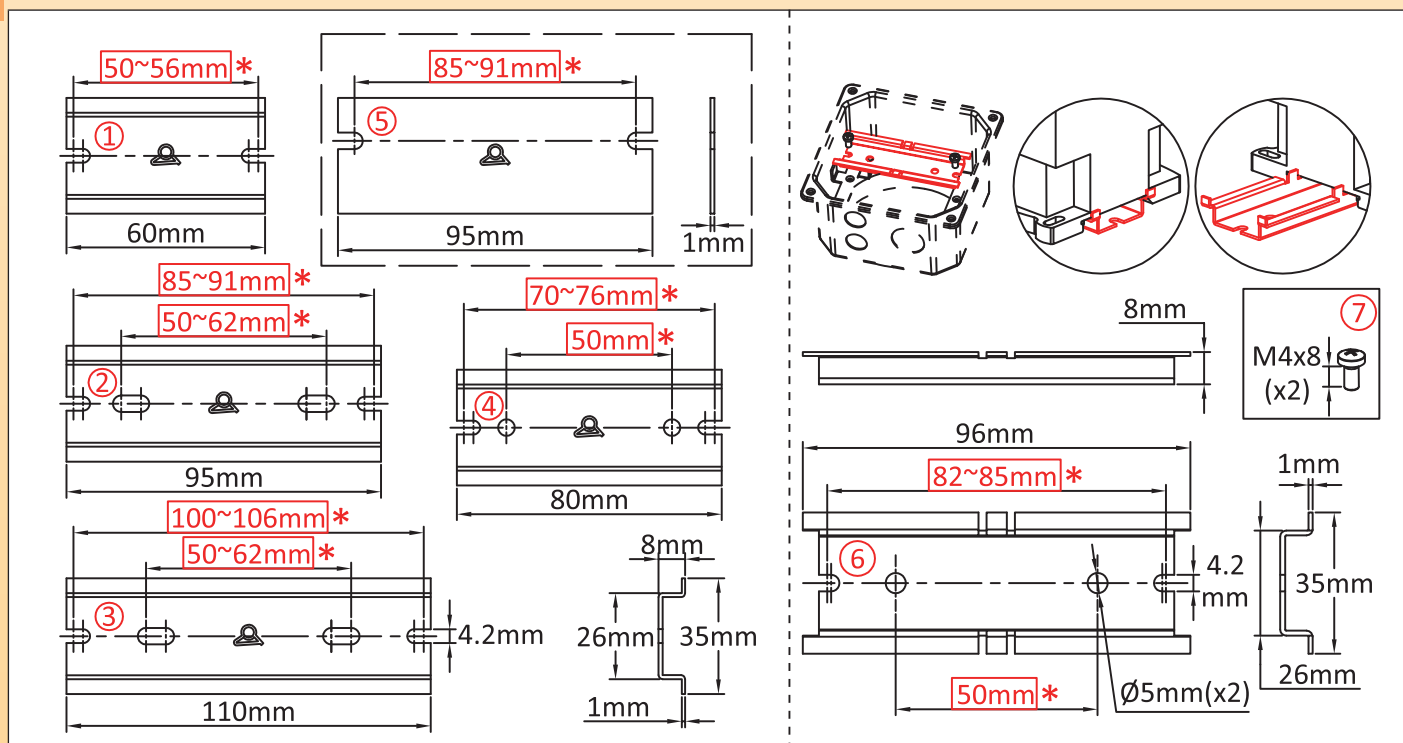
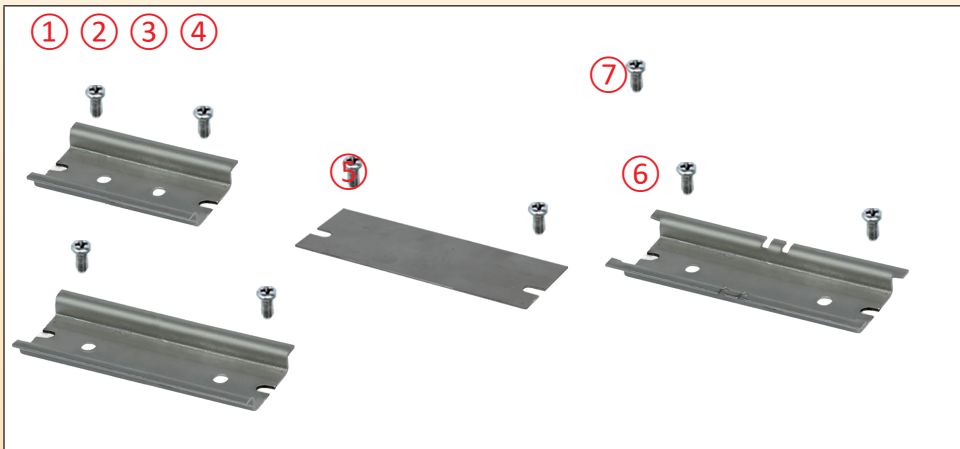
| ①     | ②     | ③     | ④     |
|-------|-------|-------|-------|
| 66KU2 | 66KU1 | 66KG1 | 66KU3 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

| Minimum Size | Maximum Size  | Material            | Type     | Model |
|--------------|---------------|---------------------|----------|-------|
| 1 contacteur | 2 contacteurs | 304 Stainless steel | Din rail | 66KD  |

Compatible with:

| ① ② ③ ④                                  |                                          |                                          |
|------------------------------------------|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y303 | <input checked="" type="checkbox"/> Y3S4 | <input checked="" type="checkbox"/> Y3M1 |
| <input checked="" type="checkbox"/> Y304 | <input checked="" type="checkbox"/> Y3S5 | <input checked="" type="checkbox"/> Y3N1 |
| <input checked="" type="checkbox"/> Y305 | <input checked="" type="checkbox"/> Y3P1 | <input checked="" type="checkbox"/> Y3N2 |
| <input checked="" type="checkbox"/> Y306 | <input checked="" type="checkbox"/> Y3P3 | <input checked="" type="checkbox"/> Y3N3 |
| <input checked="" type="checkbox"/> Y307 | <input checked="" type="checkbox"/> Y3P5 | <input checked="" type="checkbox"/> Y3N4 |
| <input checked="" type="checkbox"/> Y3S3 | <input checked="" type="checkbox"/> Y3C4 |                                          |
| ⑤                                        |                                          |                                          |
| <input checked="" type="checkbox"/> Y3N1 | <input checked="" type="checkbox"/> Y3N2 | <input checked="" type="checkbox"/> Y3N3 |
| <input checked="" type="checkbox"/> Y3N4 |                                          |                                          |
| ⑥                                        |                                          |                                          |
| <input checked="" type="checkbox"/> Y3TB | <input checked="" type="checkbox"/> Y3TC | <input checked="" type="checkbox"/> Y3T8 |
| <input checked="" type="checkbox"/> Y3TA |                                          |                                          |



## Main references

|       |                  |       |                  |
|-------|------------------|-------|------------------|
| ① + ⑦ | 66KD3I0000000000 | ④ + ⑦ | 66KD6I0000000000 |
| ② + ⑦ | 66KD4I0000000000 | ⑤ + ⑦ | 66KD1I0000000000 |
| ③ + ⑦ | 66KD5I0000000000 | ⑥ + ⑦ | 66KD2I0000000000 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



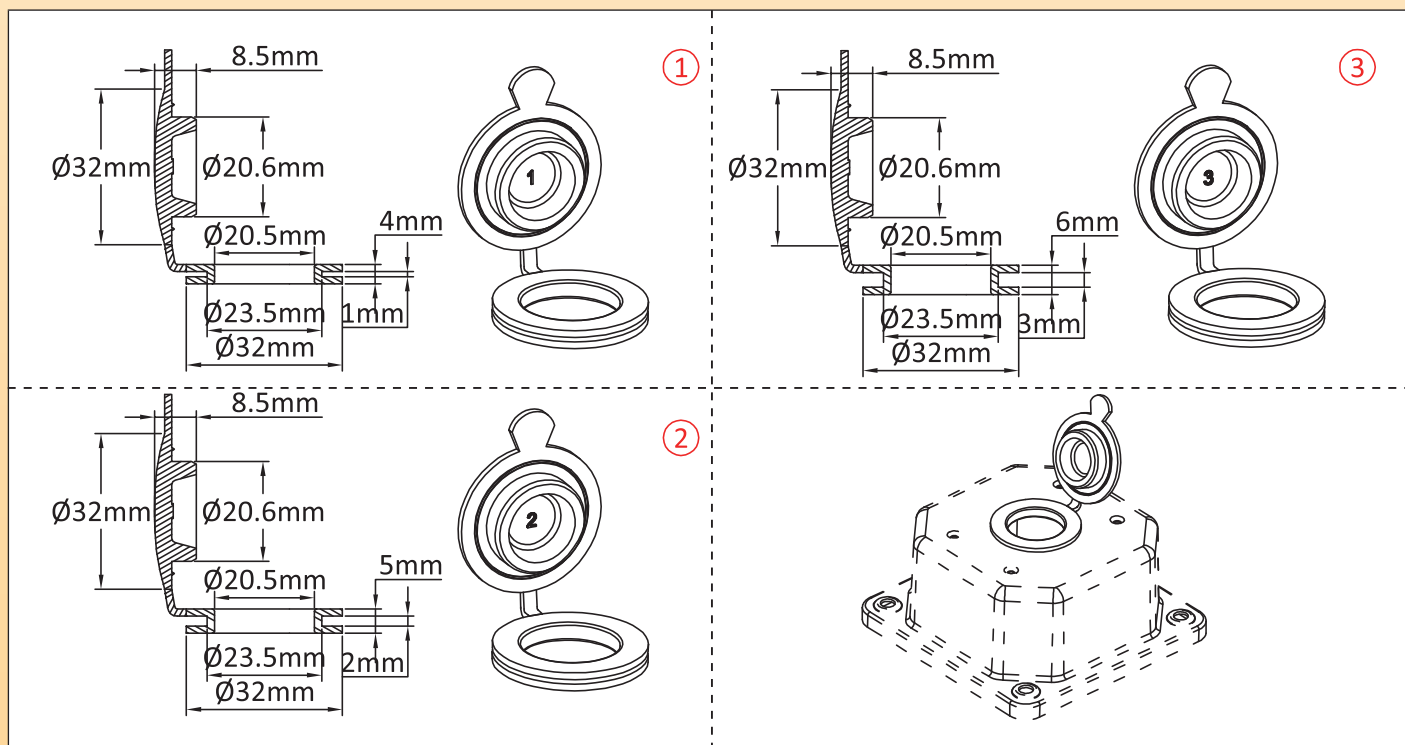


## Grommets used to close access to internal adjustment shafts, in silicone

| Minimum Size | Maximum Size | Material | Type | Model       |
|--------------|--------------|----------|------|-------------|
| Dia. 23.5mm  | Dia. 23.5mm  | Silicone | Plug | <b>66Q1</b> |

### Compatible with:

|                                          |                                          |                                          |
|------------------------------------------|------------------------------------------|------------------------------------------|
| ①                                        | <input checked="" type="checkbox"/> Y3S3 | <input checked="" type="checkbox"/> Y3S4 |
| <input checked="" type="checkbox"/> Y3S5 | <input checked="" type="checkbox"/> Y3S6 | <input checked="" type="checkbox"/> Y3SA |
| <input checked="" type="checkbox"/> Y3SB | <input checked="" type="checkbox"/> Y3SC | <input checked="" type="checkbox"/> Y3TB |
| <input checked="" type="checkbox"/> Y3TC | <input checked="" type="checkbox"/> Y3S7 | <input checked="" type="checkbox"/> Y3S8 |
| <input checked="" type="checkbox"/> Y3S9 | <input checked="" type="checkbox"/> Y3T8 | <input checked="" type="checkbox"/> Y3TA |
| ②                                        |                                          |                                          |
| ③                                        | <input checked="" type="checkbox"/> Y303 | <input checked="" type="checkbox"/> Y304 |
| <input checked="" type="checkbox"/> Y305 | <input checked="" type="checkbox"/> Y3P1 | <input checked="" type="checkbox"/> Y3P3 |
| <input checked="" type="checkbox"/> Y3P6 | <input checked="" type="checkbox"/> Y3P5 | <input checked="" type="checkbox"/> Y306 |
| <input checked="" type="checkbox"/> Y3C4 | <input checked="" type="checkbox"/> Y307 | <input checked="" type="checkbox"/> Y3M1 |



### Main references

| Drawing | Wall thickness | References       |
|---------|----------------|------------------|
| ①       | 1mm            | 66Q1S01235000000 |
| ②       | 2mm            | 66Q1S02235000000 |
| ③       | 3mm            | 66Q1S03235000000 |

Model Nr 3: specify the knob temperature range printing

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Caps used on internal and external access to IP69K adjustment shafts, in PA66

| Minimum Size | Maximum Size | Material | Type | Model                      |
|--------------|--------------|----------|------|----------------------------|
| M25 × 1.5    | M25 × 1.5    | PA66     | Plug | <b>66Q2</b><br><b>66Q3</b> |

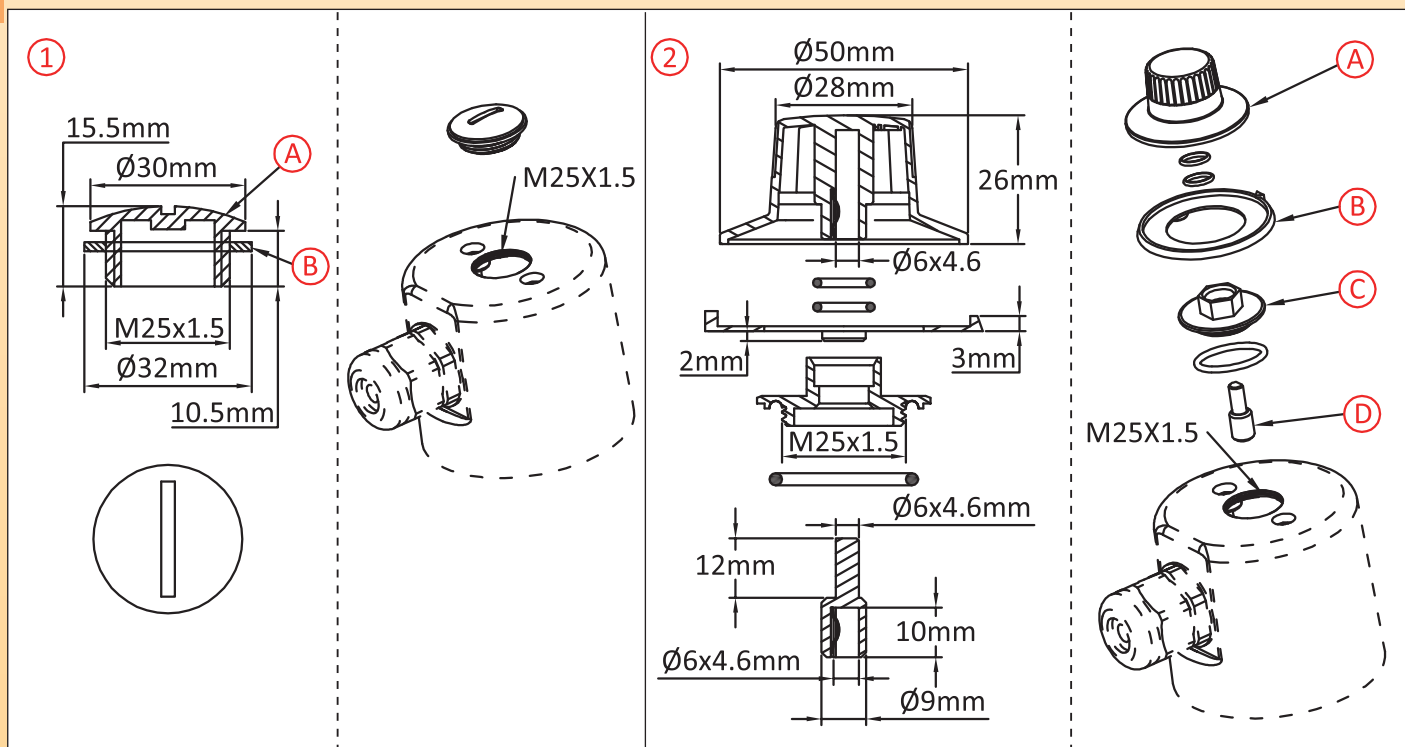
| Compatible with:                         |                                          |
|------------------------------------------|------------------------------------------|
| ①                                        |                                          |
| <input checked="" type="checkbox"/> Y3C3 | <input checked="" type="checkbox"/> Y303 |
| <input checked="" type="checkbox"/> Y304 | <input checked="" type="checkbox"/> Y305 |
| <input checked="" type="checkbox"/> Y3P1 | <input checked="" type="checkbox"/> Y3P3 |
| <input checked="" type="checkbox"/> Y3P6 | <input checked="" type="checkbox"/> Y3P5 |
| <input checked="" type="checkbox"/> Y306 | <input checked="" type="checkbox"/> Y3C4 |
| <input checked="" type="checkbox"/> Y307 | <input checked="" type="checkbox"/> Y3M1 |
| ②                                        |                                          |
| <input checked="" type="checkbox"/> Y3C3 |                                          |

①



②





### Main references

| ①                | ② (A+B+C+D)      | ② (A+C+D)        |
|------------------|------------------|------------------|
| 66Q2PM1M25000000 | 66Q3PM3M25B00000 | 66Q3PM3M25K00000 |

For the model N°2, please specify the printing requested on the knob.

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Waterproof shaft gasket for external knob

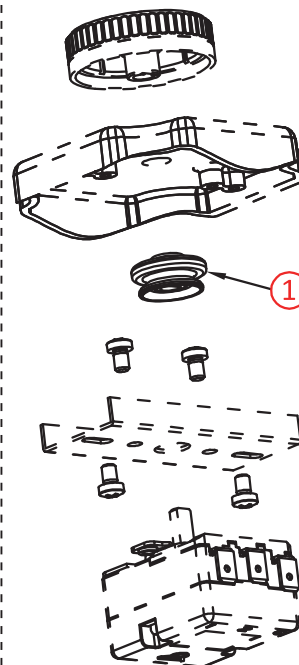
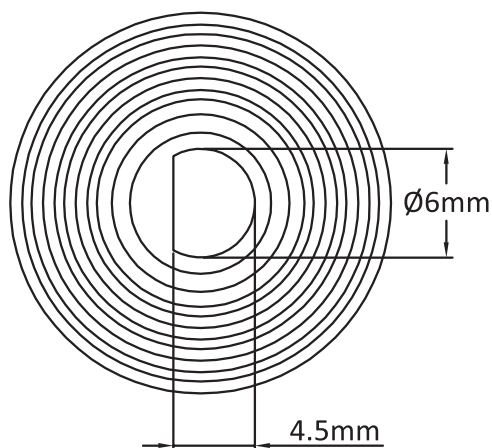
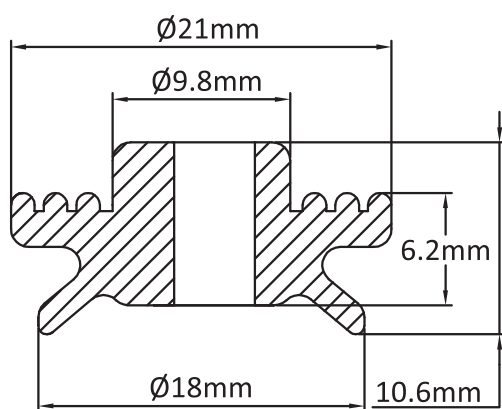
| Minimum Size | Maximum Size | Material | Type                | Model |
|--------------|--------------|----------|---------------------|-------|
| Dia. 10mm    | Dia. 10mm    | Silicone | Shaft gasket (IP54) | 66Q4  |

### Compatible with:

|        |        |
|--------|--------|
| ☒ Y303 | ☒ Y3C4 |
| ☒ Y304 | ☒ Y3P1 |
| ☒ Y305 | ☒ Y3P3 |
| ☒ Y306 | ☒ Y3P5 |
| ☒ Y307 | ☒ Y3M1 |



①



### Main reference

66Q4SM3100000000

# Miniature connection blocks in PA66, one side screw terminals, one side solder terminals, surface mounting



| Minimum Size   | Maximum Size   | Material | Type                                                  | Model              |
|----------------|----------------|----------|-------------------------------------------------------|--------------------|
| 16 × 19 × 27mm | 16 × 19 × 44mm | PA66     | 2.5mm <sup>2</sup> connection block, surface mounting | <b>BEN<br/>BEO</b> |

|                  |        |
|------------------|--------|
| Compatible with: |        |
| ①                |        |
| ☒ Y3A1           | ☒ Y3A2 |
| ②                |        |
| ☒ Y3A3           |        |

①



A black plastic terminal block with three vertical slots. Each slot contains a silver-colored screw terminal. The block is shown from a three-quarter perspective.

②



A black plastic terminal block with five vertical slots. Each slot contains a silver-colored screw terminal. The block is shown from a three-quarter perspective.

| <br><b>3 x 2.5mm²</b> | <br><b>5 x 2.5mm²</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
|-----------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|------------|---|----|----|---|----|----|---|----|----|---|----|----|---|-------|-------|---|---------------------|---------------------|---|--------|--------|---|--------|--------|
|                       |                       | <table><tr><th></th><th>2.5mm²(x3)</th><th>2.5mm²(x5)</th></tr><tr><td>A</td><td>27</td><td>44</td></tr><tr><td>B</td><td>19</td><td>19</td></tr><tr><td>C</td><td>19</td><td>19</td></tr><tr><td>D</td><td>16</td><td>16</td></tr><tr><td>E</td><td>7(x3)</td><td>7(x5)</td></tr><tr><td>F</td><td>Holes for ST2.2(x2)</td><td>Holes for ST2.2(x3)</td></tr><tr><td>G</td><td>M3(x3)</td><td>M3(x5)</td></tr><tr><td>H</td><td>Ø2(x3)</td><td>Ø2(x5)</td></tr></table> |  | 2.5mm²(x3) | 2.5mm²(x5) | A | 27 | 44 | B | 19 | 19 | C | 19 | 19 | D | 16 | 16 | E | 7(x3) | 7(x5) | F | Holes for ST2.2(x2) | Holes for ST2.2(x3) | G | M3(x3) | M3(x5) | H | Ø2(x3) | Ø2(x5) |
|                       | 2.5mm²(x3)            | 2.5mm²(x5)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| A                     | 27                    | 44                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| B                     | 19                    | 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| C                     | 19                    | 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| D                     | 16                    | 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| E                     | 7(x3)                 | 7(x5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| F                     | Holes for ST2.2(x2)   | Holes for ST2.2(x3)                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| G                     | M3(x3)                | M3(x5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |
| H                     | Ø2(x3)                | Ø2(x5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |            |            |   |    |    |   |    |    |   |    |    |   |    |    |   |       |       |   |                     |                     |   |        |        |   |        |        |

## Main references

| ①                | ②                |
|------------------|------------------|
| BENF3K3000000P00 | BEOF3K3000000P00 |

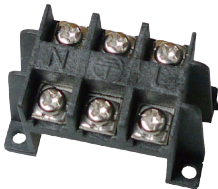
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

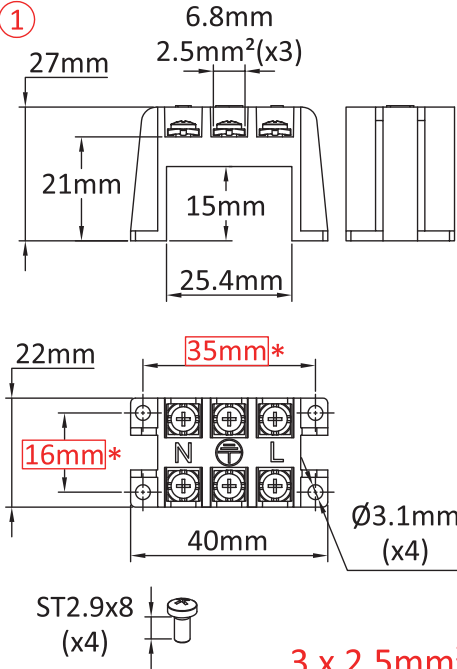
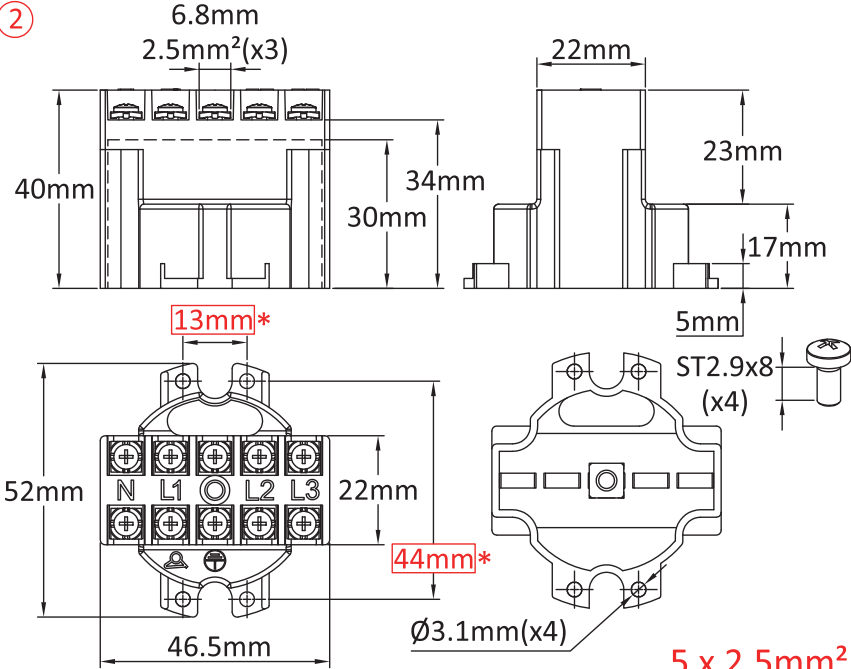
Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



## Special elevated PA66 connection blocks, screw terminals on both sides

| Minimum Size   | Maximum Size     | Material | Type                                                     | Model              |
|----------------|------------------|----------|----------------------------------------------------------|--------------------|
| 22 × 40 × 27mm | 52 × 46.5 × 40mm | PA66     | Special design<br>2.5mm <sup>2</sup><br>connection block | <b>BEJ<br/>BEL</b> |

| Compatible with: | ①                                                                                 | ②                                                                                   |
|------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>①</b>         |  |  |
| ☒ Y301           |                                                                                   |                                                                                     |
| <b>②</b>         |                                                                                   |                                                                                     |
| ☒ Y3C1    ☒ Y3C2 |                                                                                   |                                                                                     |

| ①                                                                                  | ②                                                                                   |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

### Main references

| ①                | ②                |
|------------------|------------------|
| BEJF3F3000000P00 | BELF5F5000000P00 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

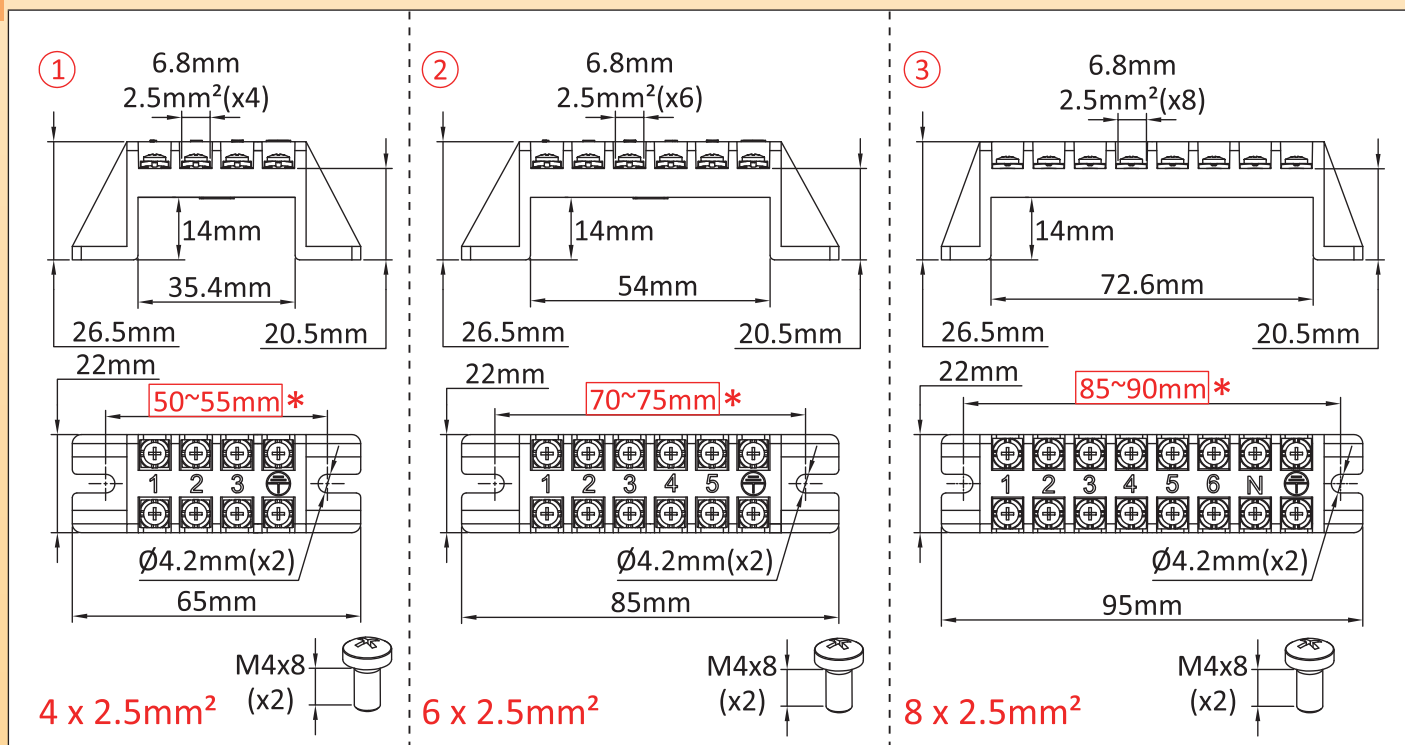
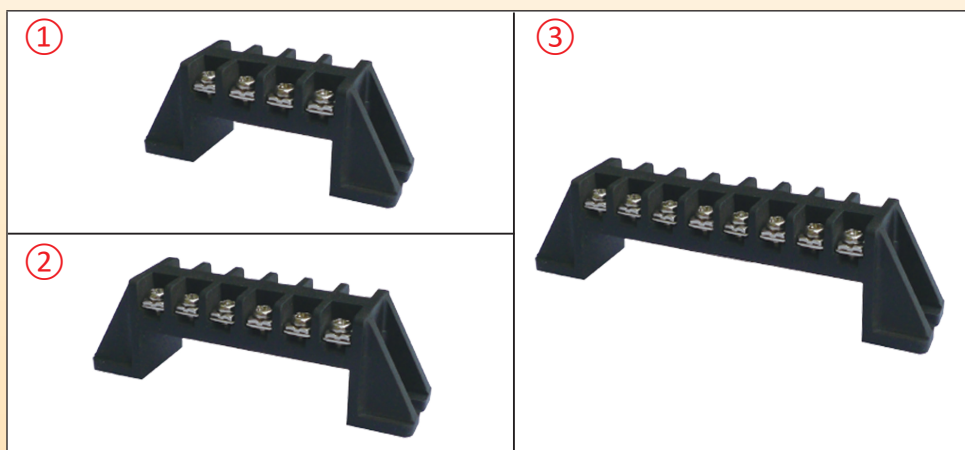




## 14mm elevated connection blocks, screw terminals on both sides

| Minimum Size     | Maximum Size     | Material | Type                                         | Model             |
|------------------|------------------|----------|----------------------------------------------|-------------------|
| 22 × 65 × 26.5MM | 22 × 95 × 26.5mm | PA66     | Elevated 2.5mm <sup>2</sup> connection block | BEP<br>BEQ<br>BER |

| Compatible with: |        |
|------------------|--------|
| ①                |        |
| ☒ Y3P1           | ☒ Y3P3 |
| ②                |        |
| ☒ Y3F1           | ☒ Y3F2 |
| ☒ Y3F3           | ☒ Y3C6 |
| ☒ Y3C7           | ☒ Y3C8 |
| ☒ Y305           | ☒ Y3P4 |
| ☒ Y3S5           | ☒ Y3S6 |
| ③                |        |
| ☒ Y3P6           | ☒ Y3P5 |



### Main references

| ①                | ②                | ③                |
|------------------|------------------|------------------|
| BEPF4F4000000P00 | BEQF6F6000000P00 | BERF8F8000000P00 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Snap-On PA66 terminal, for large enclosures, mixed size terminals

| Minimum Size      | Maximum Size      | Material | Type                                           | Model      |
|-------------------|-------------------|----------|------------------------------------------------|------------|
| 119 × 49.5 × 34mm | 119 × 49.5 × 34mm | PA66     | Mixed terminal sizes snap-on connection blocks | BES<br>BET |

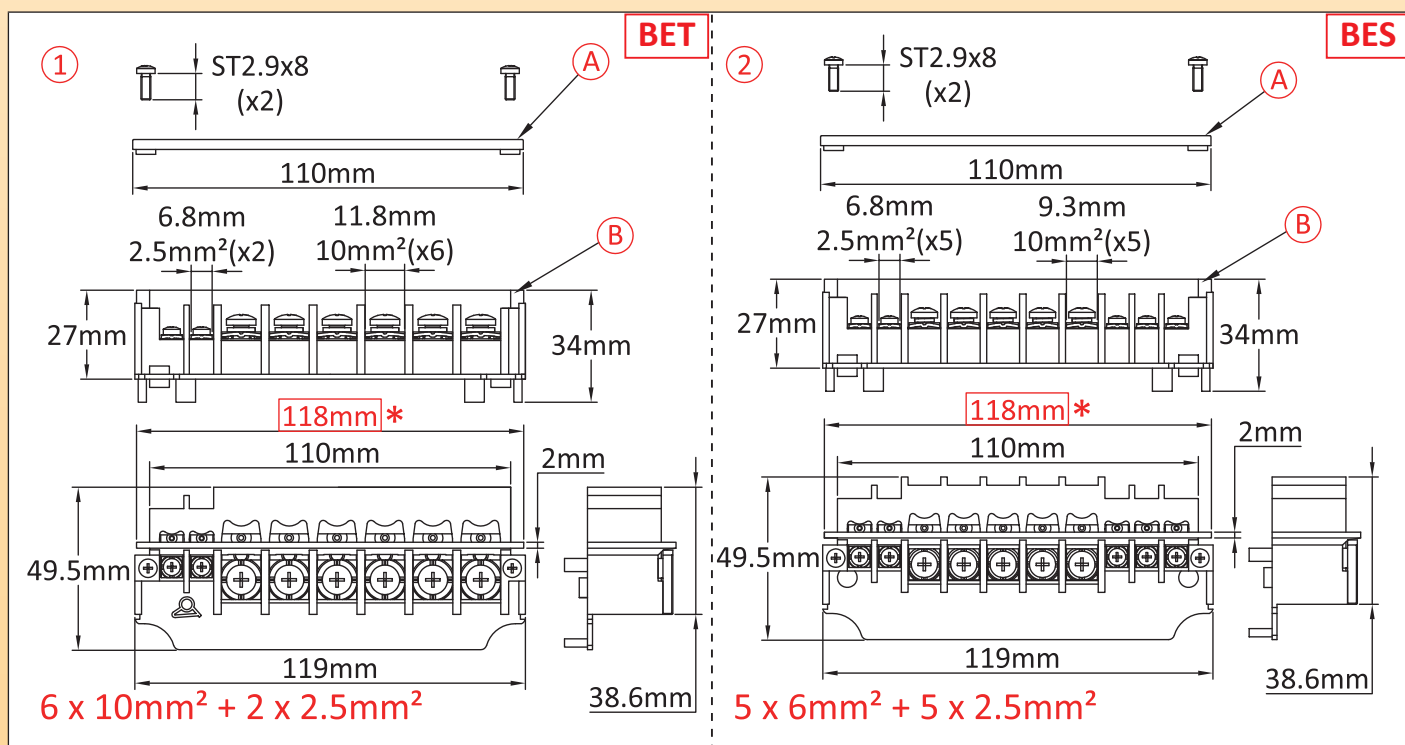
### Compatible with:

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3G1 | <input checked="" type="checkbox"/> Y3G2 |
| <input checked="" type="checkbox"/> Y307 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y310 | <input checked="" type="checkbox"/> Y3J1 |
| <input checked="" type="checkbox"/> Y3J2 | <input checked="" type="checkbox"/> Y3M1 |
| <input checked="" type="checkbox"/> Y3N1 |                                          |

①



②



### Main references

| ① (A+B)          | ① (B)            | ② (A+B)          | ② (B)            |
|------------------|------------------|------------------|------------------|
| BETLAQA000000P01 | BETLAQA000000P00 | BESMAPA000000P01 | BESMAPA000000P00 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



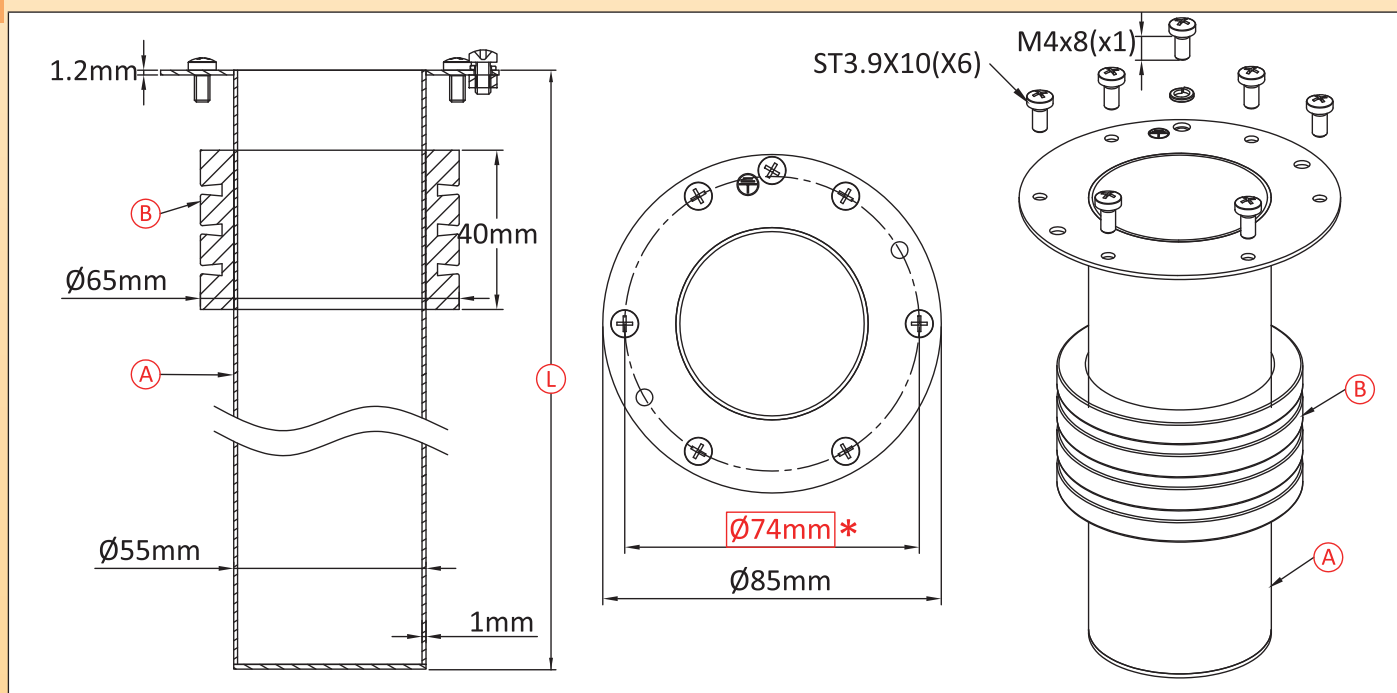
## Dia. 55mm immersion heaters thermowells, without thread, for corrosive baths

| Minimum Size    | Maximum Size     | Material                        | Type                                      | Model                          |
|-----------------|------------------|---------------------------------|-------------------------------------------|--------------------------------|
| Dia. 55 × 110mm | Dia. 55 × 1000mm | 316 stainless steel<br>Titanium | Pocket with<br>compression type<br>gasket | <b>66TTW8</b><br><b>66TNW8</b> |

### Compatible with:

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3C6 | <input checked="" type="checkbox"/> Y3E6 |
| <input checked="" type="checkbox"/> Y3C7 | <input checked="" type="checkbox"/> Y3E7 |
| <input checked="" type="checkbox"/> Y3C8 | <input checked="" type="checkbox"/> Y3E8 |

☒ Designed to fit dia. 52mm  
steatite heating elements.



### Main references

| (A)      | (B)        | (L)   | References       |
|----------|------------|-------|------------------|
| 316L     | Silicone   | 450mm | 66TTW800450A550S |
| 316L     | Silicone   | 600mm | 66TTW800600A550S |
| 316L     | Silicone   | 800mm | 66TTW800800A550S |
| 316L     | FKM(Viton) | 450mm | 66TTW800450A550K |
| 316L     | FKM(Viton) | 600mm | 66TTW800600A550K |
| 316L     | FKM(Viton) | 800mm | 66TTW800800A550K |
| Titanium | FKM(Viton) | 450mm | 66TNW800450A550K |
| Titanium | FKM(Viton) | 600mm | 66TNW800600A550K |
| Titanium | FKM(Viton) | 800mm | 66TNW800800A550K |

L length can be made on request. Gasket B can be made in NBR.

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

# Dia. 55mm immersion heaters thermowells, with 2½" and M77x2 threads



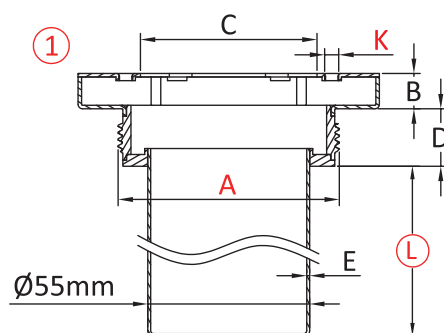
Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Minimum Size | Maximum Size         | Material            | Type            | Model       |
|--------------|----------------------|---------------------|-----------------|-------------|
| 2½", L=110mm | M77 × 2,<br>L=1000mm | 316 stainless steel | Threaded pocket | <b>66UT</b> |

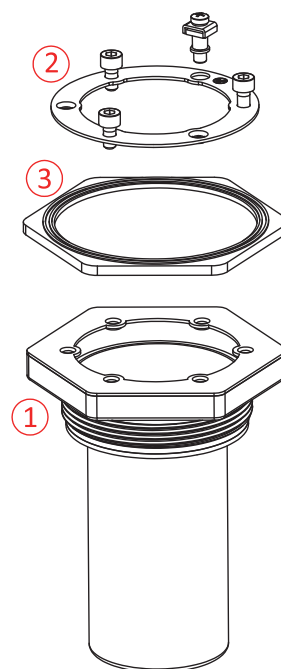
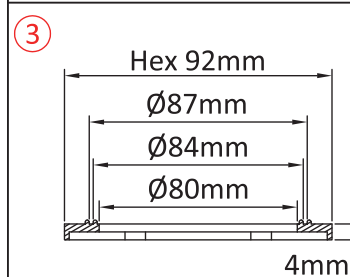
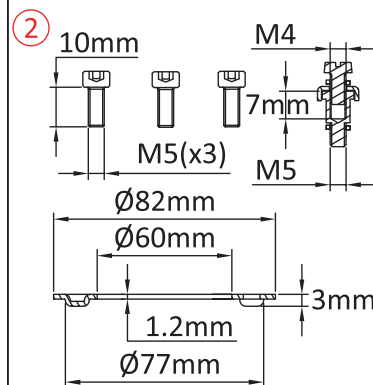
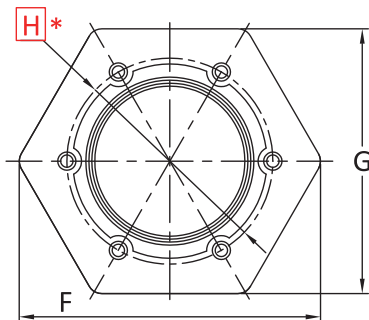
## Compatible with:

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3S7 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y3SA | <input checked="" type="checkbox"/> Y310 |
| <input checked="" type="checkbox"/> Y3G1 | <input checked="" type="checkbox"/> Y3J1 |
| <input checked="" type="checkbox"/> Y3G2 | <input checked="" type="checkbox"/> Y3J2 |
|                                          | <input checked="" type="checkbox"/> Y3M1 |

☒ Designed to fit dia. 52mm  
steatite heating elements



|   |        |        |
|---|--------|--------|
| A | 2-1/2" | M77x2  |
| B | 12     | 12     |
| C | Ø66    | Ø66    |
| D | 20     | 20     |
| E | 1      | 1      |
| F | 102.5  | 102.5  |
| G | Hex 90 | Hex 90 |
| H | Ø70    | Ø70    |
| K | M5(x6) | M5(x6) |



## Main references

| Ⓐ     | Ⓛ   | ①                | ①+②+③            |
|-------|-----|------------------|------------------|
| 2½"   | 450 | 66UT0035450A5500 | 66UT0035450A550A |
| 2½"   | 600 | 66UT0035600A5500 | 66UT0035600A550A |
| 2½"   | 800 | 66UT0035800A5500 | 66UT0035800A550A |
| M77×2 | 450 | 66UTW335450A5500 | 66UTW335450A550A |
| M77×2 | 600 | 66UTW335600A5500 | 66UTW335600A550A |
| M77×2 | 800 | 66UTW335800A5500 | 66UTW335800A550A |

The length L can be made on request. Gasket N°3 is in silicone in standard. Can be made in NBR or FKM on request.  
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Dia. 25mm immersion heaters thermowells, without thread, for corrosive baths

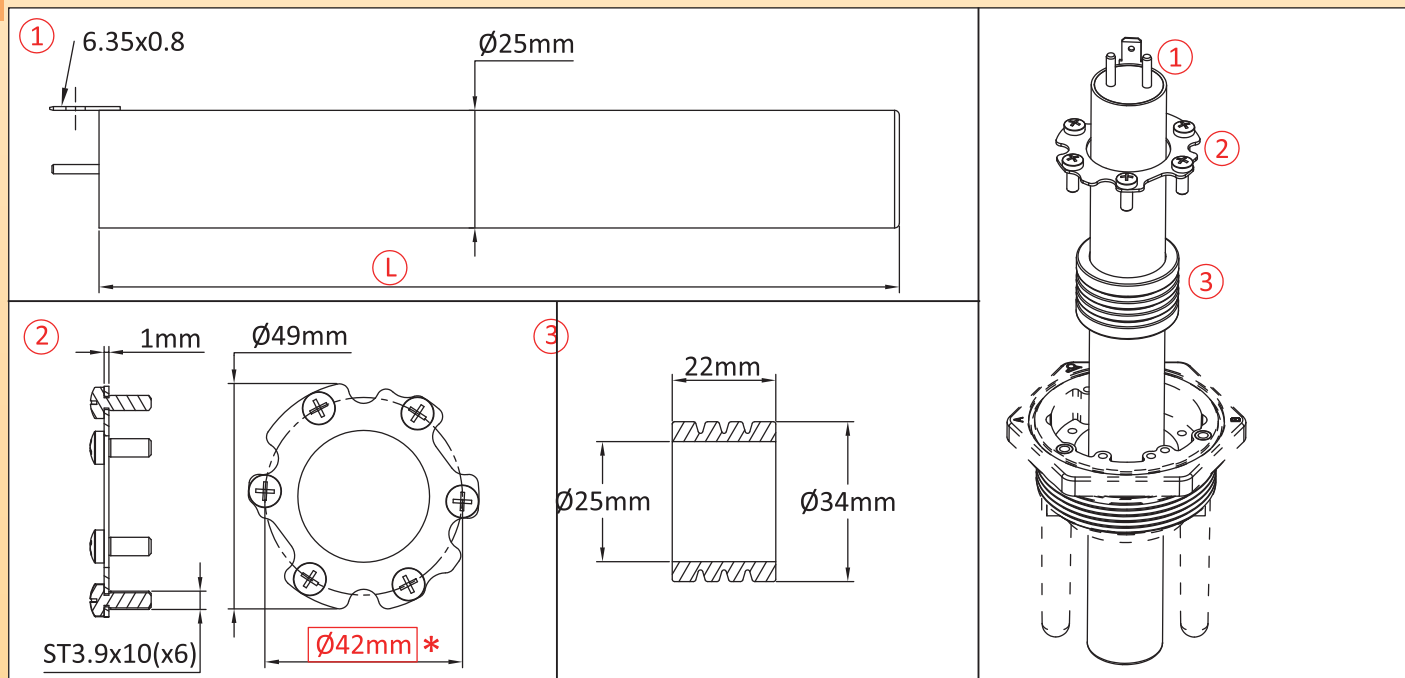
| Minimum Size    | Maximum Size     | Material                        | Type                                | Model                          |
|-----------------|------------------|---------------------------------|-------------------------------------|--------------------------------|
| Dia. 25 × 110mm | Dia. 25 × 1000mm | 316 stainless steel<br>Titanium | Pocket with compression type gasket | <b>66TTL4</b><br><b>66TNL4</b> |

### Compatible with:

☒ 66RW

☒ 66RY

☒ Designed to fit 25mm cartridge heaters or 25mm dia. pockets.



### Main references

| With empty dia. 25mm pocket |            |       |                         | Gasket and ring only,<br>for customer's own<br>cartridge heater |
|-----------------------------|------------|-------|-------------------------|-----------------------------------------------------------------|
| (1)                         | (3)        | L     | References((1)+(2)+(3)) |                                                                 |
| 316L                        | Silicone   | 450mm | 66TTL4264507250S        | Reference((2)+(3))<br>with silicone gasket                      |
| 316L                        | Silicone   | 600mm | 66TTL4266007250S        |                                                                 |
| 316L                        | Silicone   | 800mm | 66TTL4268007250S        |                                                                 |
| 316L                        | FKM(Viton) | 450mm | 66TTL4264507250K        | Reference((2)+(3))<br>with FKM gasket                           |
| 316L                        | FKM(Viton) | 600mm | 66TTL4266007250K        |                                                                 |
| 316L                        | FKM(Viton) | 800mm | 66TTL4268007250K        |                                                                 |
| Titanium                    | FKM(Viton) | 450mm | 66TNL4264507250K        | 66TOL4260000000S                                                |
| Titanium                    | FKM(Viton) | 600mm | 66TNL4266007250K        |                                                                 |
| Titanium                    | FKM(Viton) | 800mm | 66TNL4268007250K        |                                                                 |

L length can be made on request. Gasket 3 can be made in NBR.

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.





## 10mm diameter pockets for temperature sensors, thermostats or level detectors, without thread, for corrosive baths

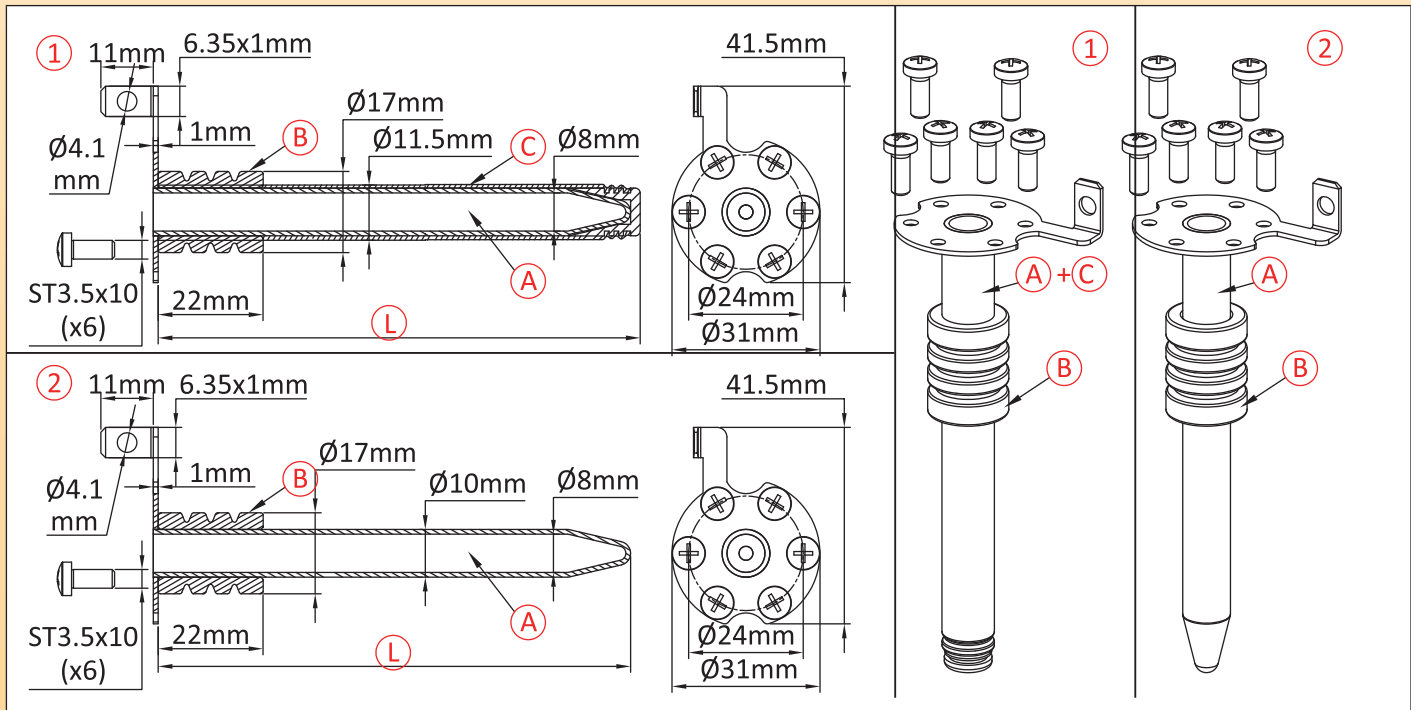
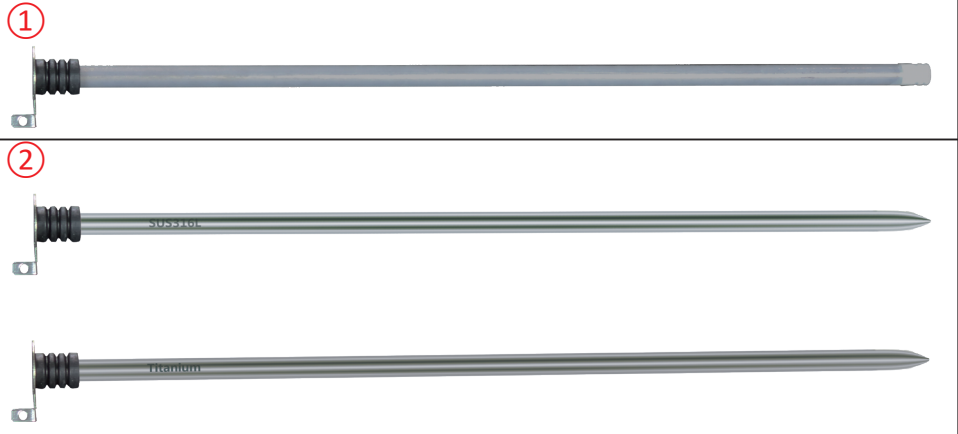
| Minimum Size    | Maximum Size     | Material                                                  | Type                                | Model                          |
|-----------------|------------------|-----------------------------------------------------------|-------------------------------------|--------------------------------|
| Dia. 10 × 110mm | Dia. 10 × 1000mm | 316 stainless steel<br>316 with PTFE sleeving<br>Titanium | Pocket with compression type gasket | <b>66TTW3</b><br><b>66TNW3</b> |

### Compatible with:

☒ Y3C8

☒ Y3E8

☒ Designed to receive thermostats bulbs or temperature sensors.



### Main references

| Model ② without sleeving |            |       |                  | Model ① with sleeving |                  |
|--------------------------|------------|-------|------------------|-----------------------|------------------|
| (A)                      | (B)        | (L)   | References       | (C)                   | References       |
| 316L                     | Silicone   | 230mm | 66TTW300230A100S | PTFE                  | 66TTW300230A1B0S |
| 316L                     | Silicone   | 300mm | 66TTW300300A100S | PTFE                  | 66TTW300300A1B0S |
| 316L                     | Silicone   | 450mm | 66TTW300450A100S | PTFE                  | 66TTW300450A1B0S |
| 316L                     | Silicone   | 600mm | 66TTW300600A100S | PTFE                  | 66TTW300600A1B0S |
| 316L                     | FKM(Viton) | 230mm | 66TNW300230A100K | PTFE                  | 66TNW300230A1B0K |
| 316L                     | FKM(Viton) | 300mm | 66TNW300300A100K | PTFE                  | 66TNW300300A1B0K |
| 316L                     | FKM(Viton) | 450mm | 66TNW300450A100K | PTFE                  | 66TNW300450A1B0K |
| 316L                     | FKM(Viton) | 600mm | 66TNW300600A100K | PTFE                  | 66TNW300600A1B0K |

L length can be made on request. Gasket B can be made in NBR. Diameters smaller than 10mm available on request.

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

# Stainless steel fittings, machined and welded threads with deep drawn flange, for immersion heaters



| Minimum Size | Maximum Size | Material             | Type                                  | Model       |
|--------------|--------------|----------------------|---------------------------------------|-------------|
| 1½"          | M77 × 2      | AISI 304<br>AISI 316 | Tig welded<br>thread for<br>enclosure | <b>66YS</b> |

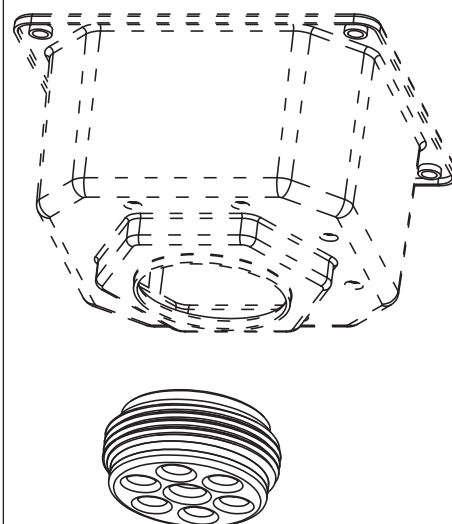
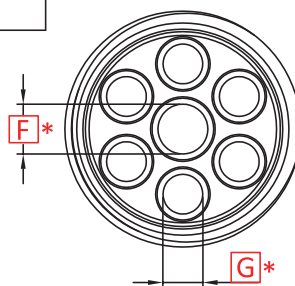
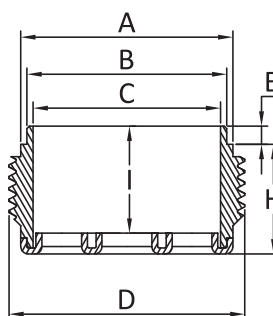
## Compatible with:

- ☒ Y3S6      ☒ Y3SB
- ☒ Y3S8      ☒ Y3SC
- ☒ Y3S9

☒ Designed for direct welding on enclosures or deep drawn fittings with soldering lip.



|   | 1-1/2"                       | M45x2                        | 2-1/2"                                           | M77x2                                            |
|---|------------------------------|------------------------------|--------------------------------------------------|--------------------------------------------------|
| A | Ø43                          | Ø43                          | Ø72                                              | Ø72                                              |
| B | Ø40.5                        | Ø40.5                        | Ø69.5                                            | Ø69.5                                            |
| C | Ø38                          | Ø38                          | Ø66.5                                            | Ø66.5                                            |
| D | 1-1/2"                       | M45x2                        | 2-1/2"                                           | M77x2                                            |
| E | 3.7                          | 3.7                          | 3.7                                              | 3.7                                              |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   |
| H | 22                           | 22                           | 22                                               | 22                                               |
| I | 21.5                         | 21.5                         | 21.5                                             | 21.5                                             |



## Main references

| Dimensions | References in 304 | References in 316 |
|------------|-------------------|-------------------|
| 1½"        | 66YSC112I22*****  | 66YSC112T22*****  |
| M45×2      | 66YSM452I22*****  | 66YSM452T22*****  |
| 2½"        | 66YSC212I22*****  | 66YSC212T22*****  |
| M77×2      | 66YSM772I22*****  | 66YSM772T22*****  |

Specify dimensions and quantity of holes F and G.

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



# Stainless steel fittings, machined and welded threads for immersion heaters

| Minimum Size | Maximum Size | Material             | Type                        | Model |
|--------------|--------------|----------------------|-----------------------------|-------|
| 1½"          | M77 × 2      | AISI 304<br>AISI 316 | Plain fitting for enclosure | 66YU  |

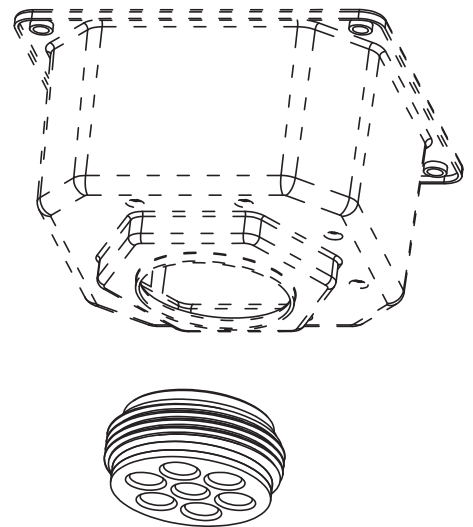
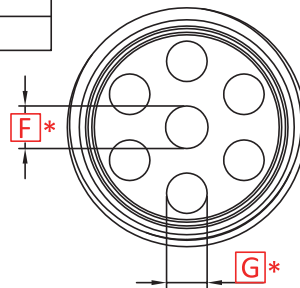
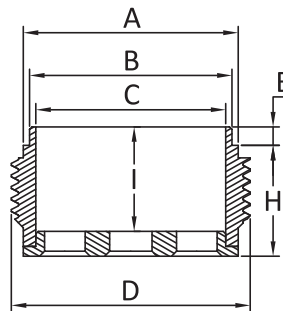
## Compatible with:

- ☒ Y3S6      ☒ Y3SB
- ☒ Y3S8      ☒ Y3SC
- ☒ Y3S9

☒ Designed for direct welding on enclosures or deep drawn fittings with soldering lip.



|   | 1-1/2"                       | M45x2                        | 2-1/2"                                           | M77x2                                            |
|---|------------------------------|------------------------------|--------------------------------------------------|--------------------------------------------------|
| A | Ø43                          | Ø43                          | Ø72                                              | Ø72                                              |
| B | Ø40.5                        | Ø40.5                        | Ø69.5                                            | Ø69.5                                            |
| C | Ø38                          | Ø38                          | Ø66.5                                            | Ø66.5                                            |
| D | 1-1/2"                       | M45x2                        | 2-1/2"                                           | M77x2                                            |
| E | 3.7                          | 3.7                          | 3.7                                              | 3.7                                              |
| F | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1)<br>Ø10(x0,x1)    | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) | Ø8.6(x0,x1,x2)<br>Ø10(x0,x1,x2)<br>Ø12(x0,x1,x2) |
| G | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø6(x2,x4,x6)<br>Ø8(x2,x4,x6) | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   | Ø8(x2,x4,x6)<br>Ø10(x2,x4,x6)<br>Ø12(x2,x4,x6)   |
| H | 22                           | 22                           | 22                                               | 22                                               |
| I | 21                           | 21                           | 21                                               | 21                                               |



## Main references

| Dimensions | References in 304 | References in 316 |
|------------|-------------------|-------------------|
| 1½"        | 66YUC112I22*****  | 66YUC112T22*****  |
| M45×2      | 66YUM452I22*****  | 66YUM452T22*****  |
| 2½"        | 66YUC212I22*****  | 66YUC212T22*****  |
| M77×2      | 66YUM772I22*****  | 66YUM772T22*****  |

Specify dimensions and quantity of holes F and G.

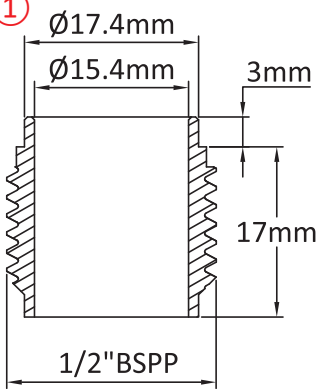
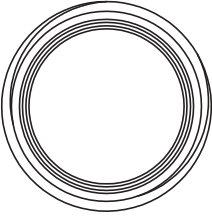
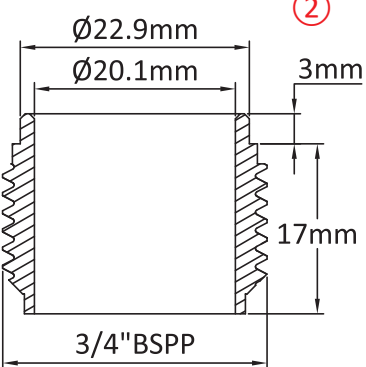
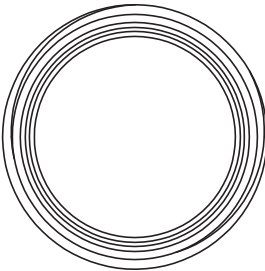
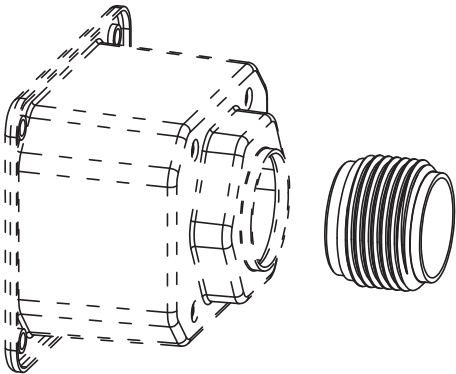
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



# Stainless steel, machined threads for temperature sensors and level sensors

| Minimum Size | Maximum Size | Material             | Type                        | Model |
|--------------|--------------|----------------------|-----------------------------|-------|
| 1/2"         | 3/4"         | AISI 304<br>AISI 316 | Plain fitting for enclosure | 66YQ  |

|                                                                                                                              |                                                                                   |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Compatible with:                                                                                                             | ①                                                                                 | ②                                                                                   |
| <input checked="" type="checkbox"/> Y3L2                                                                                     |  |  |
| <input checked="" type="checkbox"/> Y3L2                                                                                     |                                                                                   |                                                                                     |
| <input checked="" type="checkbox"/> Designed for direct welding on deep drawn stainless steel enclosures with soldering lip. |                                                                                   |                                                                                     |

|                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>①</p>   | <p>②</p>   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|

## Main references

| Dimensions | References in 304 | References in 316 |
|------------|-------------------|-------------------|
| 1/2"       | 66YQC012I1710000  | 66YQC012T1710000  |
| 3/4"       | 66YQC034I1710000  | 66YQC034T1710000  |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



# Split nuts for spa and swimming pool heaters. Exist for 2" BSPP, 2½" and 3" Ansi B1.9 threads (USA)

| Minimum Size | Maximum Size | Material | Type      | Model |
|--------------|--------------|----------|-----------|-------|
| 2"(BSPP)     | 3"(ANSI)     | ABS      | Split nut | 66NS  |

## Compatible with:

☒ 66RW

☒ 66RY

☒ Designed to connect spa, swimming pools and aquarium heaters in stainless steel tube, on PVC fittings.

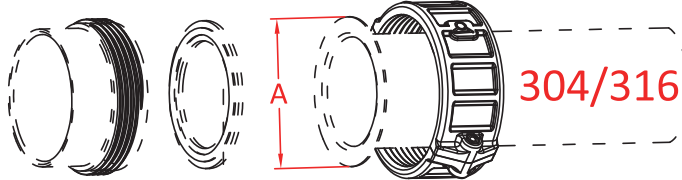
①



②



③



|          |          |          |
|----------|----------|----------|
| <p>①</p> | <p>②</p> | <p>③</p> |
|----------|----------|----------|

## Main references

|                  |                  |                  |
|------------------|------------------|------------------|
| ①                | ②                | ③                |
| 66NSC20060R66000 | 66NSA25060R70000 | 66NSA300A1R80000 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.





## Shutters of deep drawn stainless steel fittings

| Minimum Size | Maximum Size | Material | Type    | Model                |
|--------------|--------------|----------|---------|----------------------|
| 1¼"          | 2½"          | PA66     | Shutter | <b>66Z1<br/>66Z2</b> |

### Compatible with:

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> 66RJ | <input checked="" type="checkbox"/> 66RK |
| <input checked="" type="checkbox"/> 66RO | <input checked="" type="checkbox"/> 66RP |
| <input checked="" type="checkbox"/> 66RQ | <input checked="" type="checkbox"/> 66RR |
| <input checked="" type="checkbox"/> 66RU | <input checked="" type="checkbox"/> 66RV |

☒ Designed to close deep drawn stainless steel fittings after heating elements soldering.

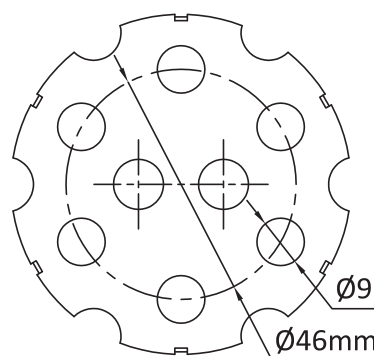
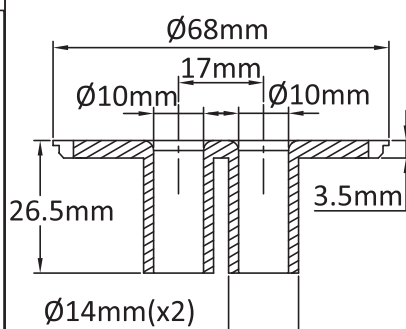
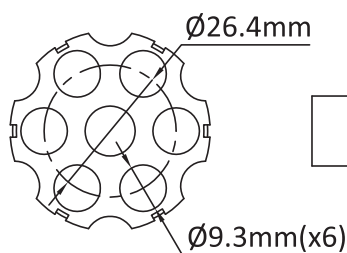
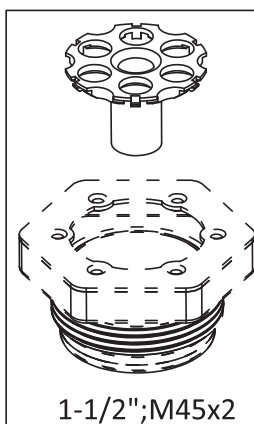
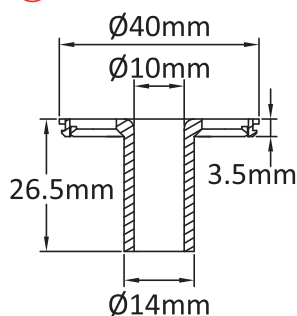
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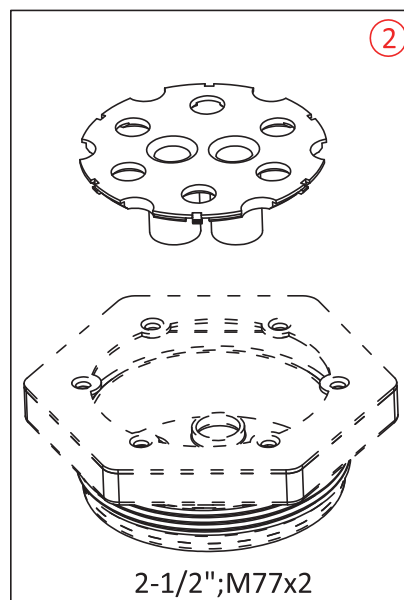
②



①



②



### Main references

| ①                | ②                |
|------------------|------------------|
| 66Z1P60931010265 | 66Z2P60952010265 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

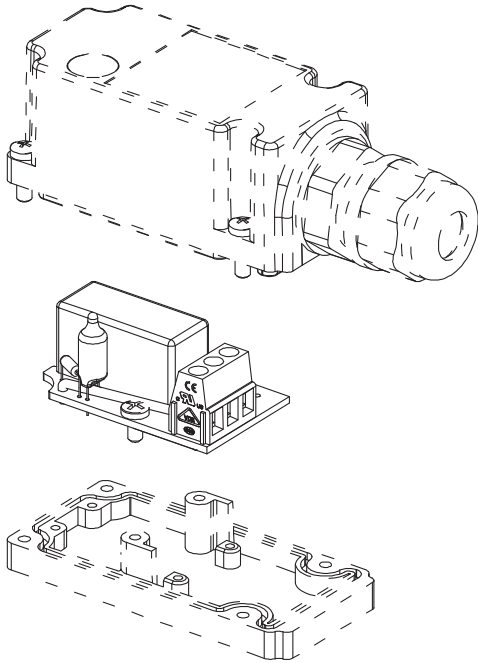
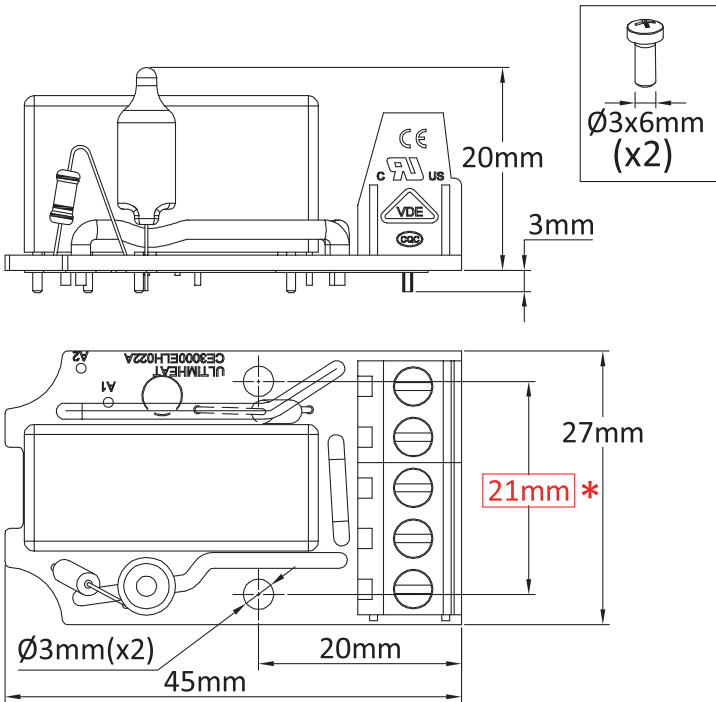
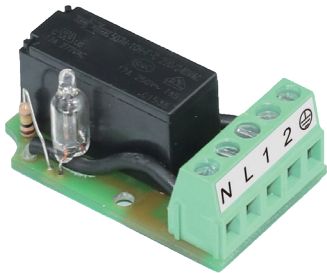
PCB with one miniature relay, rating 16A 250V. Allows to increase the rating of devices using reed switches.



| Minimum Size   | Maximum Size   | Material | Type         | Model |
|----------------|----------------|----------|--------------|-------|
| 45 × 27 × 23mm | 45 × 27 × 23mm | PCB      | Relay boards | 6YRM  |

Compatible with:

☒ Y3A2



Main reference

6YRMA230116MF000

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Relay boards, with 2 to 3 miniature relays, rating 16A 250V, coil 220/240V.

One of their application is to convert single pole devices into 3 poles

| Minimum Size     | Maximum Size     | Material | Type         | Model |
|------------------|------------------|----------|--------------|-------|
| 38 × 60 × 19.4mm | 31 × 70 × 19.4mm | PCB      | Relay boards | 6YRC  |

### ① Model 1 compatible with:

|        |        |
|--------|--------|
| ☒ Y3N2 | ☒ Y310 |
| ☒ Y3N3 | ☒ Y3G2 |
| ☒ Y3N4 | ☒ Y3J2 |
| ☒ Y309 |        |

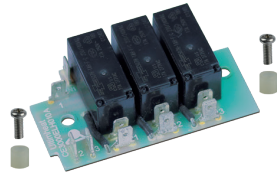
### ② Model 2 compatible with:

|        |
|--------|
| ☒ Y3P6 |
|--------|

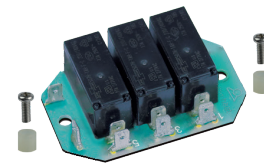
### ③ Model 3 compatible with:

|        |        |
|--------|--------|
| ☒ Y303 | ☒ Y305 |
| ☒ Y304 | ☒ Y3P5 |

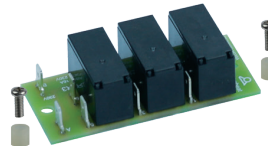
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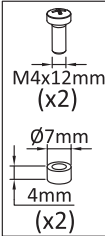
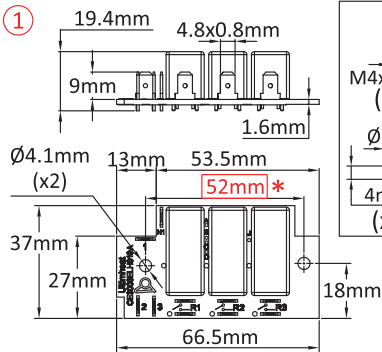
③



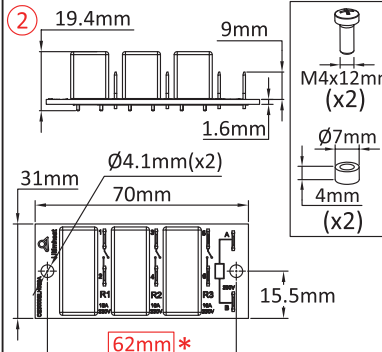
②



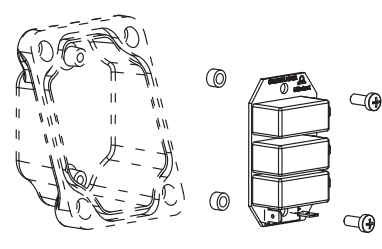
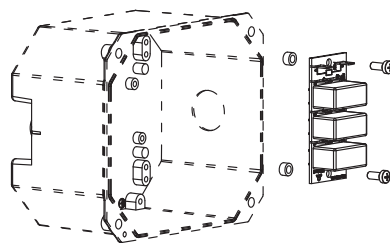
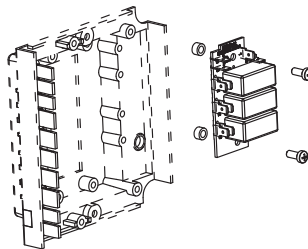
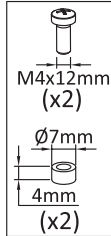
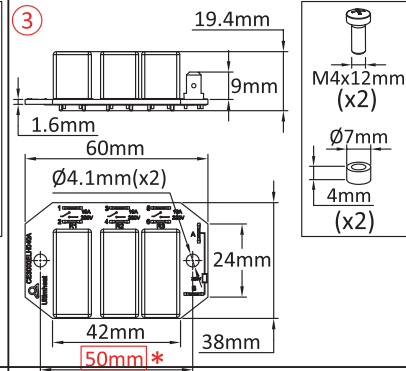
①



②



③



### Main references

| Model | Quantity of relays | Independent relays | Coupled relays   |
|-------|--------------------|--------------------|------------------|
| ①     | 2                  | 6YRCD230216SF000   | 6YRCD230216PF000 |
| ①     | 3                  | 6YRCD230316SF000   | 6YRCD230316PF000 |
| ②     | 2                  | 6YRCB230216NF000   | 6YRCB230216PF000 |
| ②     | 3                  | 6YRCB230316NF000   | 6YRCB230316PF000 |
| ③     | 2                  | 6YRCE230216NF000   | 6YRCE230216PF000 |
| ③     | 3                  | 6YRCE230316NF000   | 6YRCE230316PF000 |

The relay coil is 230V 50 Hz. 24V on request. Maximum load 16A resistive, 100000 cycles. Maximum potential difference between contacts: 250V AC

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.



## Relay boards, with 4 to 6 miniature relays, rating 16A 250V, coil 220/240V.

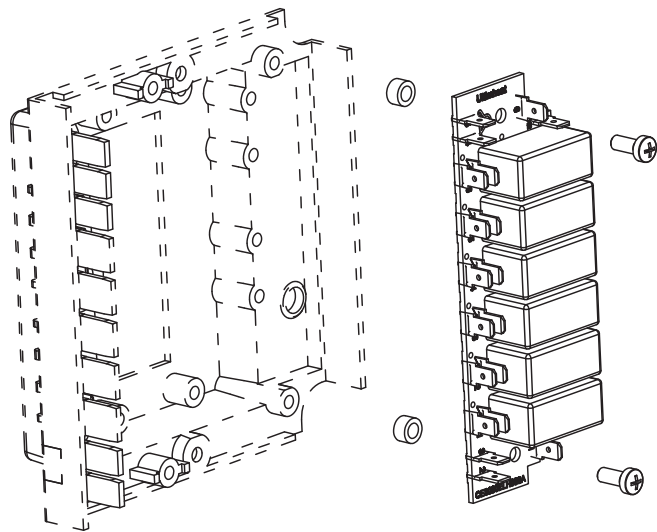
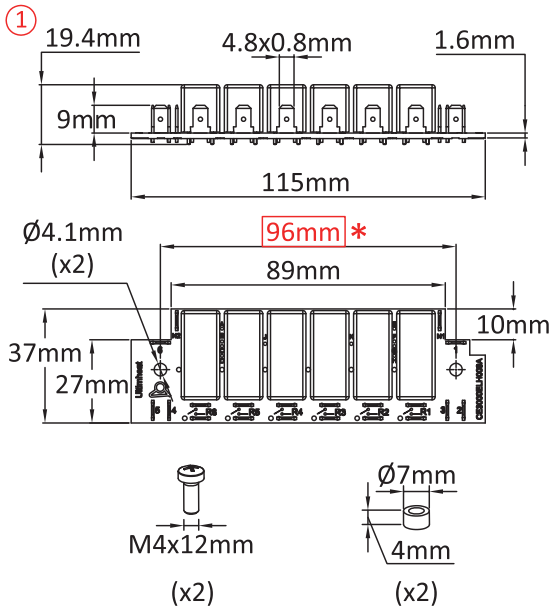
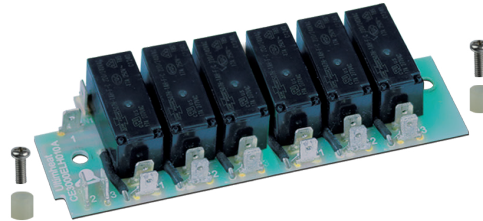
One of their application is to convert single pole devices into 3 poles

| Minimum Size      | Maximum Size      | Material | Type         | Model |
|-------------------|-------------------|----------|--------------|-------|
| 37 × 115 × 19.4mm | 37 × 115 × 19.4mm | PCB      | Relay boards | 6YRE  |

### Compatible with:

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3N2 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y3N3 | <input checked="" type="checkbox"/> Y3J2 |
| <input checked="" type="checkbox"/> Y3N4 | <input checked="" type="checkbox"/> Y3G2 |
| <input checked="" type="checkbox"/> Y310 |                                          |

①



### Main references

| Quantity of relays | Independent relays | Coupled relays   |
|--------------------|--------------------|------------------|
| 4                  | 6YREC230416SF000   | 6YREC230416PF000 |
| 5                  | 6YREC230516SF000   | 6YREC230516PF000 |
| 6                  | 6YREC230616SF000   | 6YREC230616PF000 |
| 2×3                | -----              | 6YREC230616DF000 |

The relay coil is 230V 50 Hz. 24V on request. Maximum load 16A resistive, 100000 cycles. Maximum potential difference between contacts: 250V AC

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

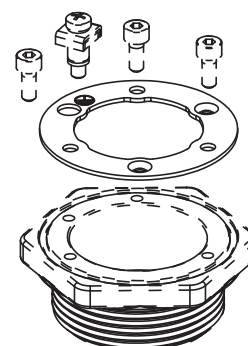
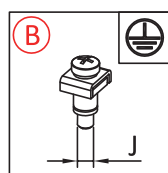
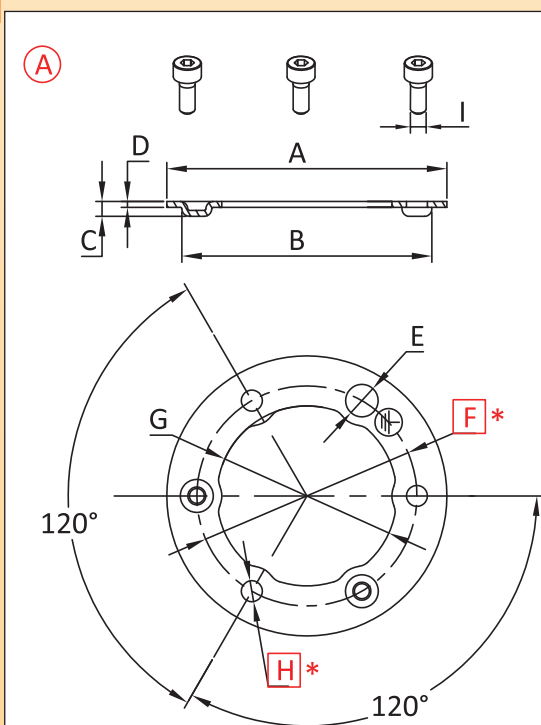
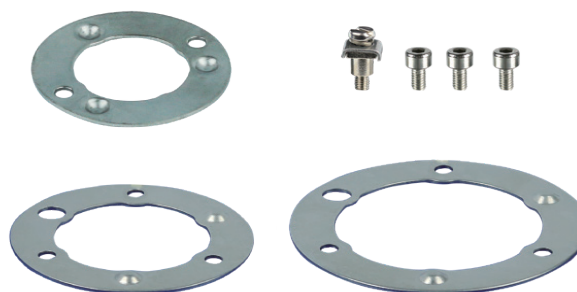


## Internal rotation stamped rings, for immersion heaters fittings

| Minimum Size | Maximum Size | Material                    | Type                          | Model       |
|--------------|--------------|-----------------------------|-------------------------------|-------------|
| 1"           | M77 × 2      | Stainless steel<br>AISI 304 | Rotation flanges for fittings | <b>66XF</b> |

### Compatible with:

|        |        |
|--------|--------|
| ☒ 66R2 | ☒ 66RJ |
| ☒ 66R3 | ☒ 66RK |
| ☒ 66R4 | ☒ 66RO |
| ☒ 66R5 | ☒ 66RP |
| ☒ 66R6 | ☒ 66RQ |
| ☒ 66R7 | ☒ 66RR |
| ☒ 66R8 | ☒ 66RU |
| ☒ 66R9 | ☒ 66RV |
| ☒ 66RE | ☒ 66RW |
| ☒ 66RF | ☒ 66RY |



|   | 1"           | 1-1/4"       | 1-1/2"       | M45x2        | 2"           | 2-1/2"       | M77x2        |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| A | Ø45          | Ø56          | Ø56          | Ø56          | Ø66          | Ø90          | Ø90          |
| B | Ø40          | Ø50          | Ø50          | Ø50          | Ø60          | Ø77          | Ø77          |
| C | 3            | 3            | 3            | 3            | 3            | 3            | 3            |
| D | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          | 1.2          |
| E |              | Ø6.5         | Ø6.5         | Ø6.5         | Ø6.5         | Ø7.5         | Ø7.5         |
| F | Ø36          | Ø44          | Ø44          | Ø44          | Ø54          | Ø70          | Ø70          |
| G | Ø26          | Ø36          | Ø36          | Ø36          | Ø46          | Ø60          | Ø60          |
| H | Ø4.1<br>(x2) | Ø4.1<br>(x3) | Ø4.1<br>(x3) | Ø4.1<br>(x3) | Ø4.1<br>(x3) | Ø5.2<br>(x3) | Ø5.2<br>(x3) |
| I | M4<br>(x2)   | M4<br>(x3)   | M4<br>(x3)   | M4<br>(x3)   | M4<br>(x3)   | M5<br>(x3)   | M5<br>(x3)   |
| J | M4           | M4           | M4           | M4           | M4           | M5           | M5           |

### Main references

| Dimension                 | (A)              | (A)+(B)          |
|---------------------------|------------------|------------------|
| 1"                        | 66XF236I120NU000 | 66XF236I120NU100 |
| 1 1/4"<br>1 1/2"<br>M45x2 | 66XF344I120NU000 | 66XF344I120NU300 |
| 2"                        | 66XF354I120NU000 | 66XF354I120NU300 |
| 2 1/2"<br>M77x2           | 66XF370I120NU000 | 66XF370I120NU500 |

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.





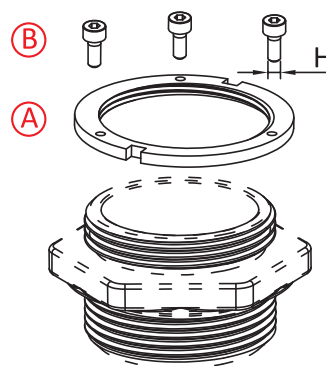
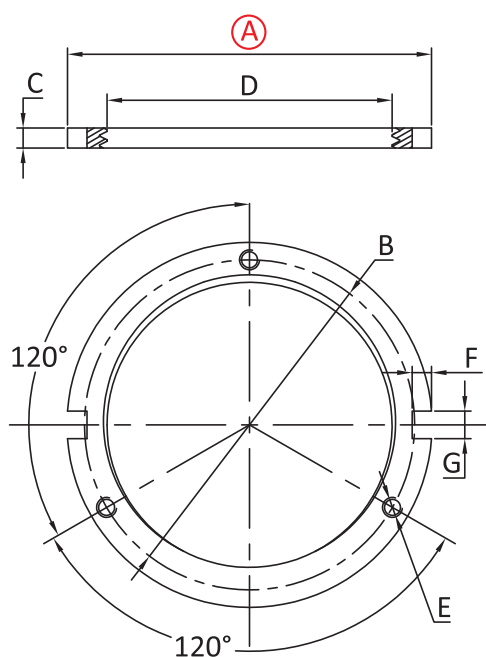
# Threaded internal rotation rings, tightening by 3 screws

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

| Minimum Size | Maximum Size | Material            | Type                             | Model |
|--------------|--------------|---------------------|----------------------------------|-------|
| 1"           | M77 × 2      | Nickel plated steel | Threaded internal rotation rings | 66XN  |

## Compatible with:

|        |        |
|--------|--------|
| ☒ Y303 | ☒ Y3S3 |
| ☒ Y304 | ☒ Y3S5 |
| ☒ Y305 | ☒ Y3S7 |
| ☒ Y306 | ☒ Y3SA |
| ☒ Y307 | ☒ Y3P1 |
| ☒ Y3C4 | ☒ Y3P3 |
| ☒ Y3L1 | ☒ Y3P4 |
| ☒ Y3L3 | ☒ Y3P5 |
| ☒ Y3M1 | ☒ Y3P6 |



|   | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
|---|--------|--------|--------|--------|--------|--------|--------|
| A | Ø47.5  | Ø56    | Ø62    | Ø59    | Ø74    | Ø92    | Ø94    |
| B | Ø40.5  | Ø49    | Ø55    | Ø52    | Ø67    | Ø84    | Ø86    |
| C | 4      | 4      | 4      | 4      | 4      | 4      | 4      |
| D | 1"     | 1-1/4" | 1-1/2" | M45x2  | 2"     | 2-1/2" | M77x2  |
| E | M4(x3) | M4(x3) | M4(x3) | M4(x3) | M4(x3) | M5(x3) | M5(x3) |
| F | 4      | 4      | 4      | 4      | 4      | 4      | 4      |
| G | 5.5    | 5.5    | 5.5    | 5.5    | 5.5    | 5.5    | 5.5    |
| H | M4x8   | M4x8   | M4x8   | M4x8   | M4x8   | M5x8   | M5x8   |

## Main references

| Dimension | Reference (A)    | Reference (A+B)  |
|-----------|------------------|------------------|
| 1"        | 66XN000A40T10000 | 66XN000A40T10200 |
| 1¼"       | 66XN000A40T14000 | 66XN000A40T14200 |
| 1½"       | 66XN000A40T12000 | 66XN000A40T12200 |
| M45x2     | 66XN000A40T45000 | 66XN000A40T45200 |
| 2"        | 66XN000A40T20000 | 66XN000A40T20200 |
| 2½"       | 66XN000A40T21000 | 66XN000A40T21200 |
| M77x2     | 66XN000A40T77000 | 66XN000A40T77200 |

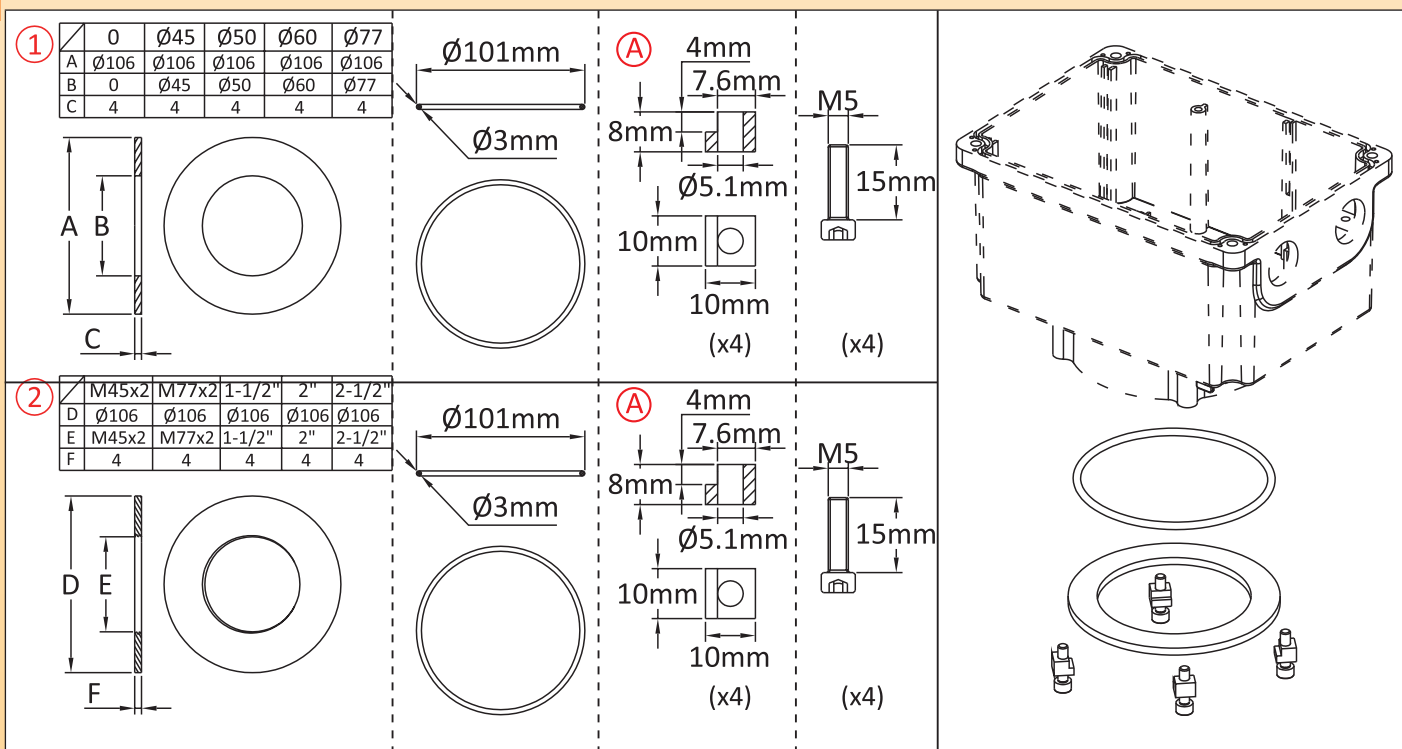
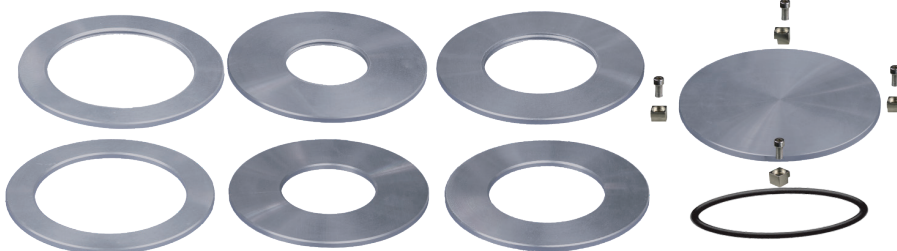
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

**External rotation rings, for immersion heater fittings. Allow to adjust angular position of immersion heater enclosure after assembly on tank, without need to open it**

| Minimum Size | Maximum Size | Material | Type                                         | Model       |
|--------------|--------------|----------|----------------------------------------------|-------------|
| 0            | M77 × 2      | Aluminum | External rotation ring for fittings assembly | <b>66XE</b> |

**Compatible with:**

- ☒ Y3G1
- ☒ Y3G2
- ☒ Y309



**Main references**

| Drilled hole ① |                  | Drilled hole ① + A | Drilled hole ② |                  | Drilled hole ② + A |
|----------------|------------------|--------------------|----------------|------------------|--------------------|
| Drill          | References       | References         | Thread         | References       | References         |
| 0              | 66XE106L4000000  | 66XE106L400006RS   | M45×2          | 66XE106L40T45000 | 66XE106L40T456RS   |
| 45mm           | 66XE106L40D45000 | 66XE106L40D456RS   | M77×2          | 66XE106L40T77000 | 66XE106L40T776RS   |
| 50mm           | 66XE106L40D50000 | 66XE106L40D506RS   | 1½"            | 66XE106L40T12000 | 66XE106L40T126RS   |
| 60mm           | 66XE106L40D60000 | 66XE106L40D606RS   | 2"             | 66XE106L40T20000 | 66XE106L40T206RS   |
| 77mm           | 66XE106L40D77000 | 66XE106L40D776RS   | 2½"            | 66XE106L40T21000 | 66XE106L40T216RS   |

Other drilled or tapped holes diameters on request

Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

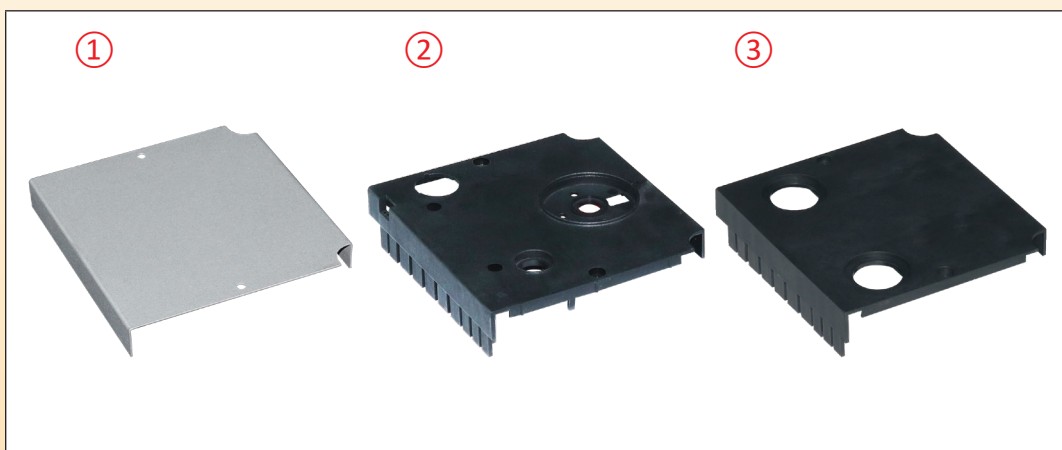


## Internal mounting boards for enclosures with controls

| Mounting style                                                 | Material        | Type                | Model |
|----------------------------------------------------------------|-----------------|---------------------|-------|
| Assembly on enclosure with 2 mounting holes at 108 mm distance | PA66 / aluminum | Flat Internal board | 6YFB  |

### Compatible with:

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3N1 | <input checked="" type="checkbox"/> Y3G1 |
| <input checked="" type="checkbox"/> Y3N2 | <input checked="" type="checkbox"/> Y3G2 |
| <input checked="" type="checkbox"/> Y3N3 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y3N4 | <input checked="" type="checkbox"/> Y3J1 |
| <input checked="" type="checkbox"/> Y3H1 | <input checked="" type="checkbox"/> Y3J2 |
| <input checked="" type="checkbox"/> Y3H2 | <input checked="" type="checkbox"/> Y310 |
| <input checked="" type="checkbox"/> Y3H3 |                                          |



|                                                                     |                                                                                                                            |                                                                                                     |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <p>①</p> <p>Aluminum board. For customer drilling and mounting.</p> | <p>②</p> <p>PA66, for thermostat, with hole for fusible holder, on-off switch and 2 pilot lights. No studs for relays.</p> | <p>③</p> <p>PA66, 2 holes for 22mm pilot lights, one hole for fusible holder. Studs for relays.</p> |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

### Main references

|   |            |
|---|------------|
| ① | 6YFBCALF01 |
| ② | 6YFBCPAF01 |
| ③ | 6YFBCPAF02 |

These mounting boards are provided with removable caps for non-used holes. Ask our engineering department for controls you would like to put on them.

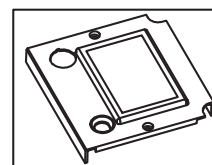
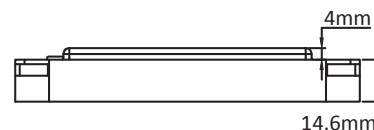
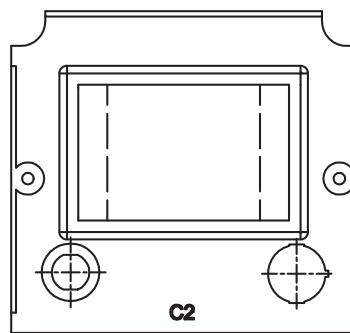
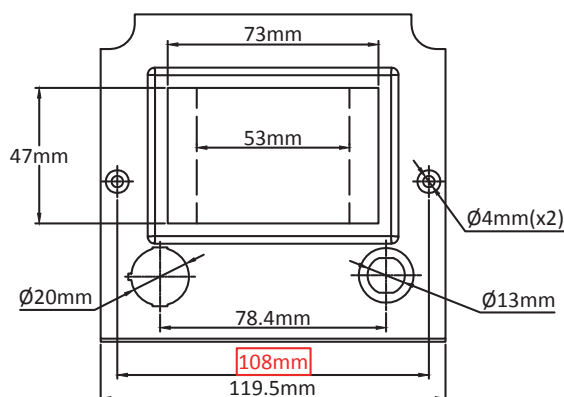
Red dimensions inside rectangular frames on drawings are used for assembly on enclosures or on fittings.

## Internal mounting boards for enclosures with controls

| Mounting style                                                 | Material | Type                         | Model       |
|----------------------------------------------------------------|----------|------------------------------|-------------|
| Assembly on enclosure with 2 mounting holes at 108 mm distance | PA66     | 5 mm elevated Internal board | <b>6YFC</b> |

### Compatible with:

|        |        |
|--------|--------|
| ☒ Y3N1 | ☒ Y3G1 |
| ☒ Y3N2 | ☒ Y3G2 |
| ☒ Y3N3 | ☒ Y309 |
| ☒ Y3N4 | ☒ Y3J1 |
| ☒ Y3H2 | ☒ Y3J2 |
| ☒ Y3H3 | ☒ Y310 |



PA66, one rectangular hole 73x47mm. With two mobile caps for reduce and move hole to 53x47mm. Can be used for 2DNA and ground fault detection contactor. Hole for on-off switch and hole for fusible holder. No studs for relays or contactors. When used with 2DNA, fits flat cover enclosures.

### Main reference

6YFCCPAG01

These mounting boards are provided with removable caps for non-used holes. Ask our engineering department for controls you would like to put on them.

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.



## Internal mounting boards for enclosures with controls

| Mounting style                                                 | Material | Type                            | Model |
|----------------------------------------------------------------|----------|---------------------------------|-------|
| Assembly on enclosure with 2 mounting holes at 108 mm distance | PA66     | 15.5 mm elevated Internal board | 6YFD  |

### Compatible with:

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3N2 | <input checked="" type="checkbox"/> Y3G2 |
| <input checked="" type="checkbox"/> Y3N3 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y3N4 | <input checked="" type="checkbox"/> Y3J2 |
| <input checked="" type="checkbox"/> Y3H2 | <input checked="" type="checkbox"/> Y310 |
| <input checked="" type="checkbox"/> Y3H3 |                                          |



|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>①</p> <p>B1</p> <p>PA66, hole for single pole or 3 pole bulb and capillary thermostat. Hole for fuse holder. Hole for on-Off switch. 2 holes for manual reset. 2 holes for pilot lights. Studs for relays boards 3 and 6 relays</p> | <p>②</p> <p>B3</p> <p>PA66, hole for 3 pole bulb and capillary thermostat and control. Manual reset 3 pole combination thermostat. No hole for fuse holder. No hole for on-Off switch. 2 holes for manual reset (must be drilled). 2 holes for pilot lights. No studs for relays boards.</p> | <p>③</p> <p>B2</p> <p>PA66, hole for single pole commercial bulb and capillary thermostat (type K). Hole for fuse holder. Hole for On-Off switch. 3 holes for manual reset. 2 holes for pilot lights. Studs for relays boards 3 and 6 relays, holes for contactor</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Main references

|   |            |
|---|------------|
| ① | 6YFDCPAB06 |
| ② | 6YFDCPAB08 |
| ③ | 6YFDCPAB07 |

These mounting boards are provided with removable caps for non-used holes. Ask our engineering department for controls you would like to put on them.

Red dimensions inside rectangular frames are used for assembly on enclosures or on fittings.





## Internal mounting boards for enclosures with controls

| Mounting style                                                 | Material | Type                          | Model       |
|----------------------------------------------------------------|----------|-------------------------------|-------------|
| Assembly on enclosure with 2 mounting holes at 108 mm distance | PA66     | 19 mm elevated Internal board | <b>6YFE</b> |

### Compatible with:

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <input checked="" type="checkbox"/> Y3N2 | <input checked="" type="checkbox"/> Y3G2 |
| <input checked="" type="checkbox"/> Y3N3 | <input checked="" type="checkbox"/> Y309 |
| <input checked="" type="checkbox"/> Y3N4 | <input checked="" type="checkbox"/> Y3J2 |
| <input checked="" type="checkbox"/> Y3H2 | <input checked="" type="checkbox"/> Y310 |
| <input checked="" type="checkbox"/> Y3H3 |                                          |

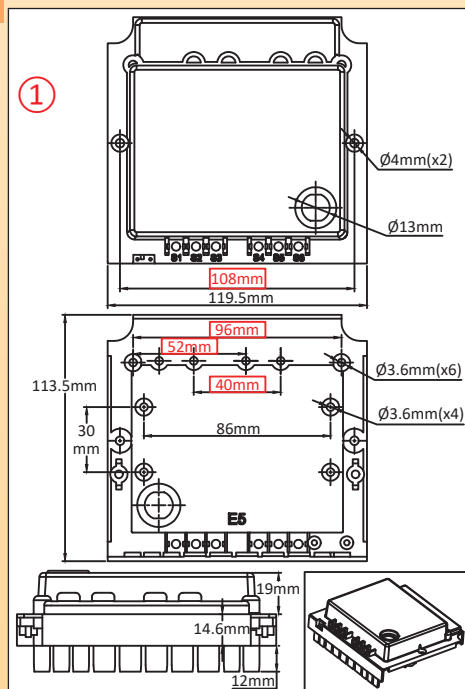
①



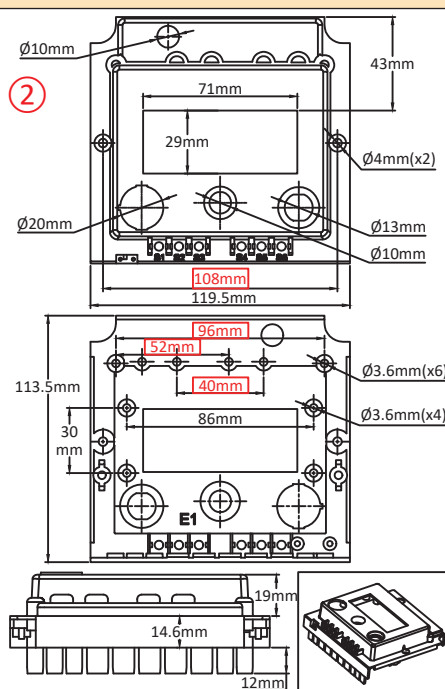
②



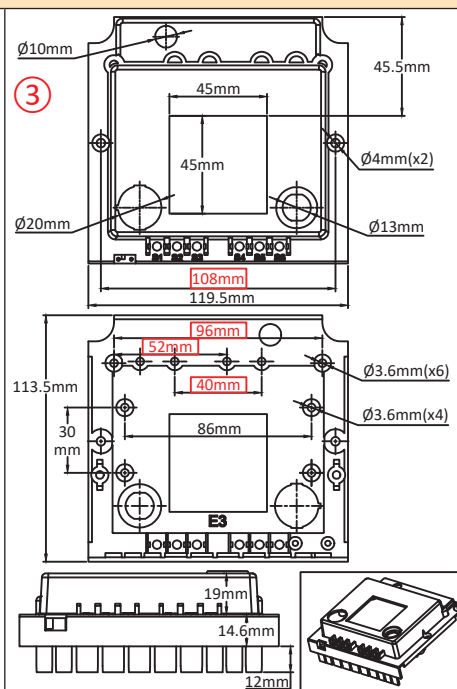
③



PA66, for customer drilling. Hole for fuse holder, hole for manual reset. Holes for 6 ways low voltage electronic connection block. Studs for relays boards 3 and 6 relays. 4 studs for customer electronic board.



PA66, hole 71x29mm for 78x35 electronic controller. Hole for fuse holder, hole for manual reset. Holes for 6 ways low voltage electronic connection block. Studs for relays boards 3 and 6 relays. 4 studs for customer electronic board.



PA66, hole 45x45mm for 48x48 electronic controller or two 45x22mm controllers. Hole for fuse holder, hole for manual reset. Holes for 6 ways low voltage electronic connection block. Studs for relays boards 3 and 6 relays. 4 studs for customer electronic board.

### Main references

|   |            |
|---|------------|
| ① | 6YFECBAB01 |
| ② | 6YFECBAB03 |
| ③ | 6YFBCBAB04 |

These mounting boards are provided with removable caps for non-used holes. Ask our engineering department for controls you would like to put on them.

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# Alphabetical list of subfamilies references

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# Alphabetical list of products references used in this catalogue

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| 66JEN80040H92000  | 196  | 66Q1503235000000  | 201  | 66RQA7T*****0005  | 176  | 66XE106L40T126RS  | 222  | Y30300001T00000G  | 141  | Y303500D1200000G  | 142  |
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| 66JES80040H92000  | 196  | 66Q3PM3M25B00000  | 202  | 66RQMDT*****0005  | 176  | 66XE106L40T206RS  | 222  | Y30300001T50000G  | 141  | Y303500D1250000G  | 142  |
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| Y3S4500D000G1009 | 92   | Y3S70000120G1008 | 100  | Y3S7500D120G1009 | 100  | Y3S8406A125G1008 | 101  | Y3SA500A000G1009 | 95   | Y3T8805D2C5G1008 | 103  |
| Y3S4500D120G1008 | 92   | Y3S70000120G1009 | 100  | Y3S7500D125G1008 | 100  | Y3S8406A125G1009 | 101  | Y3SA500A120G1008 | 95   | Y3T8805D2C5G1009 | 103  |
| Y3S4500D120G1009 | 92   | Y3S70000125G1008 | 100  | Y3S7500D125G1009 | 100  | Y3S8406A2C0G1008 | 101  | Y3SA500A120G1009 | 95   | Y3T8805D2C5G1008 | 103  |
| Y3S50000000G1008 | 93   | Y3S70000125G1009 | 100  | Y3S7500D2C0G1008 | 100  | Y3S8406A2C0G1009 | 101  | Y3SA500A125G1008 | 95   | Y3T8805D2C5G1009 | 103  |
| Y3S50000000G1009 | 93   | Y3S700002C0G1008 | 100  | Y3S7500D2C0G1009 | 100  | Y3S8406A2C5G1008 | 101  | Y3SA500A125G1009 | 95   | Y3T8805D3S3G1008 | 103  |
| Y3S50000120G1008 | 93   | Y3S700002C0G1009 | 100  | Y3S7500D2C5G1008 | 100  | Y3S8406A2C5G1009 | 101  | Y3SA500A125G1008 | 95   | Y3T8805D3S3G1009 | 103  |
| Y3S50000120G1009 | 93   | Y3S700002C5G1008 | 100  | Y3S7500D2C5G1009 | 100  | Y3S8406A2C5G1008 | 101  | Y3SA500D000G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S50000125G1008 | 93   | Y3S700002C5G1009 | 100  | Y3S7500D000G1008 | 100  | Y3S8406D000G1008 | 101  | Y3SA500D000G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S50000125G1009 | 93   | Y3S7000A000G1008 | 100  | Y3S7500D000G1009 | 100  | Y3S8406D000G1009 | 101  | Y3SA500D120G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000A000G1008 | 93   | Y3S7000A000G1009 | 100  | Y3S76000116G1008 | 100  | Y3S8406D116G1008 | 101  | Y3SA500D120G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000A000G1009 | 93   | Y3S7000A116G1008 | 100  | Y3S76000116G1009 | 100  | Y3S8406D116G1009 | 101  | Y3SA500D125G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000A120G1008 | 93   | Y3S7000A116G1009 | 100  | Y3S76000120G1008 | 100  | Y3S8406D120G1008 | 101  | Y3SA500D125G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000A120G1009 | 93   | Y3S7000A120G1008 | 100  | Y3S76000120G1009 | 100  | Y3S8406D120G1009 | 101  | Y3SA6000000G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000A125G1008 | 93   | Y3S7000A120G1009 | 100  | Y3S76000125G1008 | 100  | Y3S8406D125G1008 | 101  | Y3SA6000000G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000A125G1009 | 93   | Y3S7000A125G1008 | 100  | Y3S76000125G1009 | 100  | Y3S8406D125G1009 | 101  | Y3SA6000120G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000D000G1008 | 93   | Y3S7000A125G1009 | 100  | Y3S760002C0G1008 | 100  | Y3S8406D2C0G1008 | 101  | Y3SA6000120G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000D000G1009 | 93   | Y3S7000A2C0G1008 | 100  | Y3S760002C0G1009 | 100  | Y3S8406D2C0G1009 | 101  | Y3SA6000125G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000D000G1008 | 93   | Y3S7000A2C0G1009 | 100  | Y3S760002C5G1008 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA6000125G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000D000G1009 | 93   | Y3S7000A2C5G1008 | 100  | Y3S760002C5G1009 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600A000G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000D120G1008 | 93   | Y3S7000A2C5G1009 | 100  | Y3S760002C5G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600A000G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000D120G1009 | 93   | Y3S7000A2C5G1008 | 100  | Y3S7600A000G1008 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600A000G1009 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5000D125G1008 | 93   | Y3S7000D000G1008 | 100  | Y3S7600A000G1009 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600A120G1008 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5000D125G1009 | 93   | Y3S7000D000G1009 | 100  | Y3S7600A116G1008 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600A120G1009 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S54500000G1008 | 93   | Y3S7000D000G1009 | 100  | Y3S7600A116G1009 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600A125G1008 | 95   | Y3T8805D3S3G1009 | 104  |
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| Y3S54500120G1008 | 93   | Y3S7000D116G1009 | 100  | Y3S7600A120G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600D000G1008 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S54500120G1009 | 93   | Y3S7000D120G1008 | 100  | Y3S7600A120G1009 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600D000G1009 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S54500125G1008 | 93   | Y3S7000D120G1009 | 100  | Y3S7600A125G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600D120G1008 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S54500125G1009 | 93   | Y3S7000D125G1008 | 100  | Y3S7600A125G1009 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600D120G1009 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5450A000G1008 | 93   | Y3S7000D125G1009 | 100  | Y3S7600A2C0G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600D125G1008 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5450A000G1009 | 93   | Y3S7000D2C0G1008 | 100  | Y3S7600A2C0G1009 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600D125G1009 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5450A000G1008 | 93   | Y3S7000D2C0G1009 | 100  | Y3S7600A2C5G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600D125G1008 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5450A120G1008 | 93   | Y3S7000D2C5G1008 | 100  | Y3S7600A2C5G1009 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA600A000G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5450A120G1009 | 93   | Y3S7000D2C5G1009 | 100  | Y3S7600D000G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA600A000G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5450A125G1008 | 93   | Y3S74500000G1008 | 100  | Y3S7600D000G1009 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA7700120G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5450A125G1009 | 93   | Y3S74500000G1009 | 100  | Y3S7600D000G1008 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA7700120G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5450D000G1008 | 93   | Y3S74500000G1009 | 100  | Y3S7600D116G1008 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA7700125G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S5450D000G1009 | 93   | Y3S74500116G1008 | 100  | Y3S7600D116G1009 | 100  | Y3S8406D2C5G1009 | 101  | Y3SA7700125G1009 | 95   | Y3T8805D3S3G1009 | 104  |
| Y3S5450D120G1008 | 93   | Y3S74500116G1009 | 100  | Y3S7600D120G1008 | 100  | Y3S8406D2C5G1008 | 101  | Y3SA770A125G1008 | 95   | Y3T8805D3S3G1008 | 104  |
| Y3S              |      |                  |      |                  |      |                  |      |                  |      |                  |      |







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