



English version



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Technology of components used in heating.

## Chapter 26

### Cable gland selection



## Sélection des presse-étoupes

### Technical information N°3 : cable glands selection

To fulfill its function, especially tear strength and ingress protection, cable gland must be adapted to the diameter of the cable.

This diameter is a function of several parameters: the number of conductors, electrical power, voltage insulation, cable length and type of mechanical protection depending its application.

The selection must be done in 3 steps.

#### **Step 1: selection of cable Gauge, upon power and maximum length of cables, single phase and three phase.**

Gauge, mm <sup>2</sup>	Single phase 230V, power factor =1			3 phase, 400V ,power factor = 0.8		
	Power (kw)	Electrical rating (A)	Maximum cable length, with voltage drop less than 3% (m)	Power (kw)	Electrical rating(A)	Longueur maximale de câble de raccordement avec chute de tension inférieure à 5% (m)
1.5	1	4.6	50			
	1.5	6.8	33			
	2	9	25			
	2.5	11.5	20	2.5	5	190
	3	13.5	17	3	6	160
	3.5	16	14	3.5	7	135
				4	8	120
				4.5	9	105
				5	10	96
				6	12	79
				7	14	68
				8	16	60
			9	18	51	
2.5	1	4.6	84			
	1.5	6.8	57			
	2	9	43			
	2.5	11.5	34	2.5	5	325
	3	13.5	29	3	6	270
	3.5	16	24	3.5	7	230
	4	18	21	4	8	200
	4.5	20	19	4.5	9	180
				5	10	165
				6	12	135
				7	14	115
				8	16	105
			9	18	92	
			10	19	84	
			12	23	69	
4	1	4.6	135			
	1.5	6.8	90			
	2	9	88			
	2.5	11.5	54	2.5	5	510
	3	13.5	45	3	6	420
	3.5	16	39	3.5	7	365
	4	18	34	4	8	320
	4.5	20	30	4.5	9	285
	5	23	27	5	10	255
	6	27	23	6	12	210
				7	14	180
				8	16	160
			9	18	145	
			10	19	130	
			12	23	110	
			14	27	94	
			16	31	81	

## Sélection des presse-étoupes

**Step 2, depending of application, select insulation and mechanical protection, and find cable outside diameter  
(Most usual flexible cables)**

Gauge mm <sup>2</sup>	H05- VVF 500V, PVC insula- tion	Cable gland size	H05-RRF 500V, rubber insulation	Cable gland size	H07-RNF, 450/750 V. Can be used in fixed installations with nominal voltages up to 1000V: see NF G 15-100, 512.1.1. Excellent resistance to weathering, oils and fats, resistance to mechanical and thermal stresses, outdoor use, hazardous areas, agricultural areas, connecting mobile devices	Cable gland size
3 x 1	6.8	M16	8.5	M16	11.5	M20, M24
3 x 1.5	7.2	M16	10.4	M20	12.5	M20, M24
3 x 2.5	8	M16, M20	12.4	M20, M24	14.5	M24, M25
3 x 4	10	M16, M20	14.5	M24, M25	16	M24, M25
5 x 1	9.8	M16, M20	10.3	M20	13.5	M24, M25
5 x 1.5	11.6	M20, M24	12.7	M20, M24	15	M24, M25
5 x 2.5	13.9	M24, M25	15.3	M24, M25	17	M25
5 x 4	16	M24-M25				

**Step 3: select cable gland size upon its internal diameter ranges  
(standard models)**

Models	M16	M20	M24	M25
Min and max dia	6-10	8-13	11-16	13-18