

Tubular Heater GR

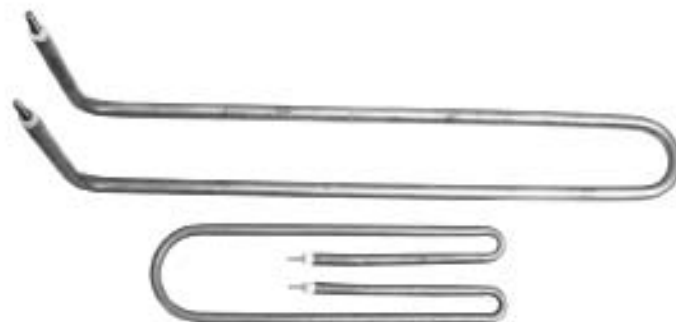
Technical description

Characteristic

- high and stable quality of electric parameters resulting from the central position of the heating coil
- long life and stability of heater operating resulting from the use of homogeneous and dense insulation consisting of the highest quality magnesium oxide (MgO) as well as the use of the highest quality resistance wires;
- high surface loading and high allowable surface temperature of the tube resulting from the application of the highest quality stainless steel tubes

Diameter tolerance

±0,1 mm



Standard diameters

ø [mm]	Tube material			Length [mm]
	copper	steel (C10,IF25)	stainless steel (AISI 321, AISI 316, Incoloy 800)	
6,4	+	+	+	200+3300
6,9	–	–	+	200+3300
8,0	+	–	–	200+3100
8,5	+	+	+	200+3400
10	–	–	+	200+3400
10,2	–	–	+	200+3400
13,0	–	–	+	200+3600

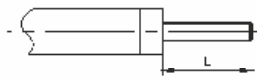
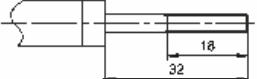
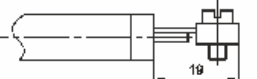
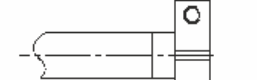

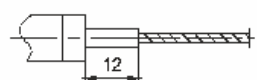
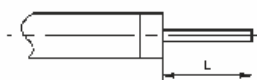
Allowable operating temperature

Sheath material	Allowable operating temperature
A: alloy steel Cr-Ni (np. Incoloy 800)	max. 800 °C
B: alloy steel Cr-Ni (np. AISI-321)	max. 650 °C
C: chromium steel	max. 600 °C
D: carbon steel	max. 350 °C
E: aluminium	max. 300 °C
F: copper, brass	max. 250 °C

Recommended surface loading

Application	Tube material			
	copper	steel	alloy steel (AISI 321,AISI 316)	alloy steel (Incoloy 800)
Standing water	–	–	10	–
Moving water	–	–	14	–
Flowing water (flow heater)	–	–	25	–
Water (steam generator)	–	–	6	–
Thin oil	–	3,5	3,5	–
Thick oil	–	1,2	1,2	–
Special heating oil (heaters)	–	12	12	–
Still air	–	1,7	5	6
Moving air v=2 m/s	–	2	5,5	6,5
Moving air v=10 m/s	–	5	10	10

Termination types

Sign	Drawing	Description
A		threaded mandrel M4
B		threaded terminal M4
C		threaded terminal M4
D		threaded terminal M4
E		straight termination 6.3
F		sleeve and steel or copper stranded wire
G		mandrels (sealed heating elements)



Ordering code

Tubular heater	GR - ... - ... - ... / ... - ...
Diameter* [mm]	
Length* [mm]	
Power* [W]	
Voltage* [V]	
Termination types:	
threaded mandrel M4	A
threaded terminal M4	B
threaded terminal M4	C
threaded terminal M4	D
straight termination 6.3	E
sleeve and steel or copper stranded wire	F
mandrels (sealed heating elements)	G

* Acc. to requirements

Ordering example

Tubular heater GR-ø20-500-300W/230V-A-0-1,5m