

STRAIGHT SINGLE-TUBE HEATERS

Straight single-tube heaters are for a direct-type electric heating that is more suitable for a wide range of process fluids.

Excellent corrosion resistance is ensured by the use of various types of materials. The various mounting possibilities respond to the most diverse heating needs.

The use of materials with a high quality standard is a guarantee for a long life and a good reliability of our products, which allow you to operate plants at a low rate of faults.

The straight single-tube heater has a modular structure and it consists of an outer tubular sheath (built from different types of materials), a "long-life" heating cartridge (inner thermal field), a terminal casing, a power cord (optional).

OUTER TUBULAR SHEATH

We can offer you the most suitable materials for each application.

The heating section has a permanent ring marking (minimum immersion length) and is equal to about two-thirds of the nominal length of the tube.

The part of the pipe that stays above the marking is not heated.

The heated part must always be immersed in the liquid even at large variations of the liquid level!

LONG-LIFE HEATING CARTRIDGE

Long-life heating cartridges have grooved bodies made of a ceramic material with a high degree of electrical insulation and a good mechanical strength. Resistive coils are built with special filaments that withstand high temperatures, and the design parameters ensure an optimal flow of thermal energy to the fluid to be heated. Heating cartridges are available in a wide range of supply voltages, up to a maximum of 500V, with a single-phase or three-phase connection.

BC-LC TERMINAL CASING

The standard terminal block is made of polypropylene. Good mechanical, thermal and chemical resistance ensures they can be used with most process liquids. At very high temperatures (>80°C) or with strong oxidising substances (e.g., electrolytes of chromium or HNO₃), the PVDF (BC/L or LC/L) protection is recommended. The protection rating is IP65 (EN 60529).

Supply cable connection is also possible with the mounted protection, by removing the cover using the SB or SL mounting key.

ELECTRICAL SAFETY

According to EN 60519/1-2 tubular heaters belong to protection class 1.

All metal contact parts are connected to the protection lead. To ensure the grounding protection even to non-electro-conductive sheaths, a protective coil is mounted on the heating cartridge. If the supply circuit provides differential protection, maximum electrical safety is guaranteed.

All heaters are manufactured under the VDE brand name.

ACCESSORIES

- EM - HM - ML sleeve-spacer
- HB - HL support
- SRF protection tube
- SB - SL mounting key
- THB - SHB support

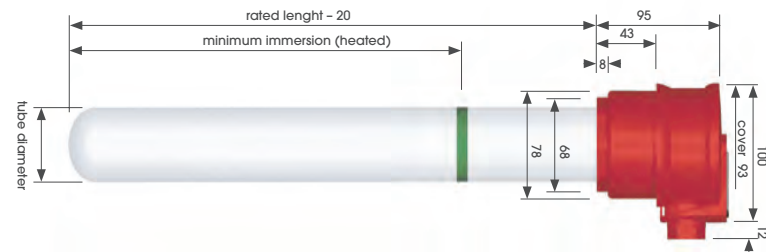
Chemicals in process liquids raise the most varied concerns related to the corrosion resistance of materials used. However, in the selection phase, we must also consider the physical problems that may arise (fouling), and thermal limits (surface load).

Advantages and disadvantages of individual materials are given separately in the list of resistors. The specific surface load for tubes is given in W/cm² based on minimum immersion and rated power.

TUBULAR HEATERS

STRAIGHT SINGLE TUBE HEATERS FOR SPECIAL BATHS

- Special hard porcelain sheath vitrified \varnothing 54 (PS)
- Heating part with permanent ring marking
- Polypropylene terminal block
- IP65 Protection
- Voltage: 230V - 400V
- Box model: BC IP65, polypropylene



AVAILABLE ON REQUEST

Sheath of:

- Technical glass \varnothing 50 (TG)
- Quartz glass \varnothing 52 (QS)
- PTFE \varnothing 48 (FC)
- Stainless steel AISI 316 \varnothing 45 (KB)
- Titanium \varnothing 45 (TI)
- Terminal casing: Box model: BC/L IP65, polyvinyl fluoride (PVDF)

STRAIGHT MINI HEATERS FOR SPECIAL BATHS

- Special hard porcelain sheath vitrified \varnothing 28 (PS)
- Heating part with permanent ring marking
- Polypropylene terminal block
- IP65 Protection
- Voltage: 230V
- Box model: LC IP65, polypropylene



AVAILABLE ON REQUEST

Sheath of:

- Technical glass \varnothing 28 (TG) up to a rated length of 500
- Stainless steel AISI 316 \varnothing 25 (KB)
- Titanium \varnothing 25.4 (TI)
- Terminal casing: Box model: LC/L IP65, polyvinyl fluoride (PVDF)



STRAIGHT HEATERS FOR SPECIAL BATHS - PORCELAIN (PS)					
Lenght (mm)	Power (KW)	Min. immersion (mm)	PS	Voltage 230V	Voltage 400V
315	0,40	225	1,6	113.X.000240	-
	0,63		2,5	113.X.000250	113.X.000560
400	0,63	275	1,9	113.X.000260	113.X.000570
	1,00		3,0	113.X.000270	113.X.000580
500	0,80	360	1,6	113.X.000280	-
	1,00		2,0	113.X.000290	-
	1,40		2,8	113.X.000300	113.X.000590
630	1,25	460	1,9	113.X.000310	-
	1,60		2,4	113.X.000320	113.X.000600
	2,00		3,0	113.X.000330	113.X.000610
800	1,00	560	1,2	113.X.000340	-
	1,60		1,9	113.X.000350	113.X.000620
	2,00		2,4	113.X.000360	113.X.000630
	2,50		3,0	113.X.000370	113.X.000640
1000	1,25	725	1,2	113.X.000380	-
	1,60		1,5	113.X.000390	113.X.000650
	2,00		1,9	113.X.000400	113.X.000660
	2,50		2,3	113.X.000410	113.X.000670
	3,15		2,9	113.X.000420	113.X.000680
	3,50		3,2	113.X.000430	113.X.000690
1250	1,00	875	0,8	113.X.000440	-
	1,60		1,2	113.X.000450	113.X.000700
	2,00		1,5	113.X.000460	113.X.000710
	2,50		1,9	113.X.000470	113.X.000720
	2,80		2,1	113.X.000480	113.X.000730
	3,50		2,6	113.X.000490	113.X.000740
	4,00		3,0	113.X.000500	113.X.000750
1600	2,00	1125		113.X.000510	113.X.000760
	3,15			113.X.000520	113.X.000770

Lenght (mm)	Power (KW)	Min. immersion (mm)	PS	Voltage 230V	Voltage 400V
1600	3,50	1125		113.X.000530	113.X.000780
	4,00			113.X.000540	113.X.000790
	4,50			-	113.X.000800
	6,00			-	113.X.000810
2000	4,00	1400		113.X.000550	113.X.000820
	4,50			-	113.X.000830
	5,00			-	113.X.000840
	6,00			-	113.X.000850
2500	4,50	1750		-	113.X.000860
	6,30			-	113.X.000870
3150	5,00	2200		-	113.X.000880
	7,00			-	113.X.000890
STRAIGHT MINI HEATERS FOR SPECIAL BATHS - PORCELAIN (PS)					
200	0,315	130	3,7	113.X.000900	
300	0,250	180	1,9	113.X.000920	
	0,315		2,4	113.X.000930	
	0,400		3,1	113.X.000940	
400	0,400	280	1,9	113.X.000950	
	0,800		3,7	113.X.000960	
500	0,500	330	1,9	113.X.000970	
	0,800		3,1		
	1,000		3,9	113.X.000980	
630	0,500	460			
	1,000				
	1,250				
800	0,500	560			
	1,000				
	1,500				
1000	1,000	725			
	1,600				