

# ANGULAR IMMERSION HEATERS FOR SPECIAL BATHS (BW)

- Aisi 316 connection (ø 45)
- Heating part with permanent ring marking
- Terminal casing: Box model: BC IP65, polypropylene (PP)

Angular tubular heaters are a form of electric heating that is most suitable for all containers with a low or very variable level of fluid.

The heated horizontal outer tubular sheath allows heating from the bottom of the vessel and ensures an optimal flow of thermal energy to the fluid, as well as a good distribution of heat.

Nominal power is determined decisively by the length of the horizontal outer tubular sheath.

Since you can take advantage of the entire length for heating, a relatively high power is also possible. The unheated vertical outer tubular sheath can be individually adapted to the depth of the vessel. These custom sizes virtually allow any adaptation to vessel geometry.

The compact structure reduces the footprint, thus making the design more effective and economical.

Some standard types of these heaters are given in the table. The surface load is given in W/cm<sup>2</sup>, based on the rated horizontal heated section and on the rated power. By varying the rated power and the length of the outer tubular sheath, the maximum permissible surface load can be adapted to process fluids.

Angular tubular heaters include the horizontal heated outer tubular sheath with a "long-life" heating cartridge, a vertical unheated outer tubular sheath and a terminal casing.

## OUTER TUBULAR SHEATH

The horizontal outer tubular sheath is welded to the vertical one.

The use of different sheath materials ensures an excellent corrosion resistance.

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. To comply with the minimum distance from the bottom of the vessel or for fixing, the angular support feet are welded on the horizontal outer tubular sheath.

## "LONG-LIFE" HEATING CARTRIDGE

The "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 for angular tubular heaters

are available in a wide range of supply voltages, up to 500V, with a single-phase or three-phase connection. Heating cartridges cannot be replaced by the user!

## TERMINAL CASING

The standard BC terminal casing for angular tubular heaters 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 HNO<sub>3</sub>), the BC/L PVDF protection is recommended. The protection rating is IP65 (EN 60529).

Cable connection is also possible with the mounted protection, by removing the cover using the SB mounting key.

## ELECTRICAL SAFETY

We draw attention to the fact that, according to EN 60519/1-2 regulations, users of electric heating systems must ensure their electrical safety (protection against overtemperature and drying).

To achieve this, the optimal solution is to use our level or floating rods with built-in thermal resistors and the related electronic components.

We can offer you the necessary products and advice for all matters related to electrical safety!

## ACCESSORIES


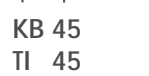
Standard supports are available for a secure fixing of angular tubular heaters or a customised flanged attachment can be provided.

We will be happy to advise you on the optimal attachment possibilities for your applications!

- HWB (PP) support
- HWB/L (PVDF) support
- SB mounting key

Horizontal outer tubular sheath (mm)	Rated power (KW)	Rated voltage 230 V	Rated voltage 400/3 V	KB
250	0,63	113.X.000990	-	3,1
500	2,00	113.X.001000	113.X.001030	3,6
750	3,00	113.X.001010	113.X.001040	3,4
1000	4,00	-	113.X.001050	3,2
1250	5,00	-	113.X.001060	3,2
1500	6,00	-	113.X.001070	3,1
1750	7,00	-	113.X.001080	3,1
2000	8,00	-	113.X.001090	3,1
2250	9,00	-	113.X.001100	3,1
2500	10,00	-	113.X.001110	3,0
2750	11,00	-	113.X.001120	3,0

#### ANGULAR IMMERSION HEATER MATERIALS

	Material logo
	Outer tubular sheath diameter [mm]
<b>KB 45</b>	Stainless steel AISI 316
<b>TI 45</b>	Titanium (material no. 3.7035)

