

IMMERSION HEATERS

OD RANGE



OD RANGE APPLICATION

The OD range of immersion heater is specifically designed for heating open topped tanks used in process operations, where items are lifted into and out of various solutions, e.g. phosphate tanks, caustic tanks, plating tanks, rinse tanks, etc.

The elements are more robust than conventional elements used in Vat heaters and are arranged along the bottom of the tank reducing the risk of entanglement. The elements consist of a ceramic core inserted into a metal sheathed element tube. This allows elements to be inspected or replaced without the need to drain the tank, therefore minimising down time and maintenance costs.

The terminal enclosure is stainless steel and is rated to IP65. As the heater is fitted at the base of the tank, the terminal enclosure is better protected from damage and attack by the contents of the tank compared to over the side heaters.

The heater is fitted by means of a mechanical flange and no welding is required.

STANDARD RANGE

The standard "OD" range of immersion heaters is designed to heat water, phosphate solutions, caustic (sodium hydroxide) solutions and light to medium oil in open topped tanks. kW loadings range from 6kW to 24kW and are available in three phase configurations. OD heaters are wired single circuit, however models are available in two configurations.

Heaters are fitted with mild steel or stainless steel element tubes which have a very low watts density of 1.5 W/cm^2 (10 W/in^2).

LIST No.		kW LOAD @ 415V	No. OF CIRCUITS	IMMERSED LENGTH mm (in)	COLD ZONE mm
MILD STEEL	STAINLESS STEEL				
OD501	OD601	6	1 @ 6	480 (19")	55
OD502	OD602	9	1 @ 9	700* (27.5")	55
OD503	OD603	12	1 @ 12	900* (35.5")	55
OD504	OD604	15	1 @ 15	1100* (43.5")	55
OD505	OD605	18	1 @ 18	1300* (51")	55
OD506	OD606	24	1 @ 24	1700* (67")	55

* Note: if the heater is over 0.5m long, it is important to support the element tube inside the vessel.

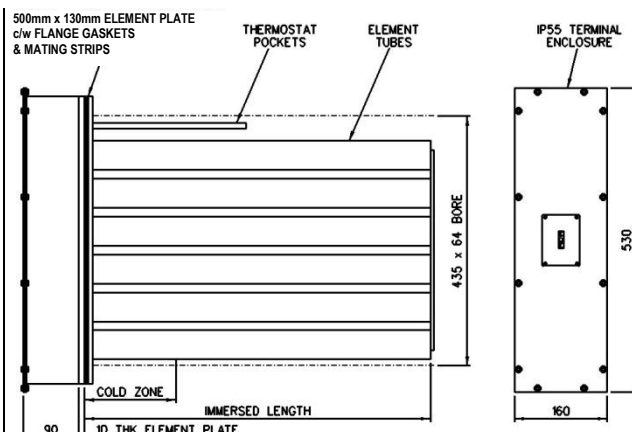
SPECIALIST APPLICATIONS

The OD range is extremely flexible and our Technical Department can provide specifications suitable for various applications. To obtain a quotation or for further information please contact our Technical Department.

MOUNTING

Heaters are suitable for horizontal flanged mounting only. The rectangular fixing flange is 500mm long x 130mm high.

The heater is supplied with gaskets and two mating strips which are used to mechanically fasten the immersion heater to the tank. No welding is required. The standard flange gasket material is EPDM, however other materials can be supplied to suit the application.



TEMPERATURE CONTROL

Standard models are supplied with a factory fitted control thermostat, with a range of 37-90°C rated to 20 Amps and an over-temperature, manual reset, safety cut-out thermostat, with a range of 45-95°C rated to 16 Amps. Alternative thermostat ranges are available. Please contact our Technical Department.

Three phase heaters from our standard range are suitable for all 400/415 volts, 3 or 4 wire supplies.

Where the electricity supply is three phase, the heater must be wired through a contactor switch. Howden Electric can supply control panels incorporating all necessary controls. Please refer to our TC range.

OPERATING TEMPERATURE & PRESSURE

The standard range has a maximum design temperature of 90°C and maximum operating temperature of 75°C due to the thermostats fitted. The maximum operating pressure is 2.5 Bar. Higher operating temperature models can be supplied. Please contact our Technical Department.

VOLTAGE

Three phase heaters from our standard range are suitable for all 400/415 volts, 3 or 4 wire supplies.

Non-standard models can be supplied designed to suit operating voltages from 110V to 480V AC or DC. Please contact our Technical Department.

CONSTRUCTION

Immersion heaters are manufactured generally to BS7798.

The standard construction materials for the element tubes, element plate and mechanical flange is either mild steel or 316L stainless steel.

The terminal enclosure is rated to IP65 and is constructed from painted 304 stainless steel with neoprene gaskets. The heater is fully earth bonded and is fitted with an earth stud inside the terminal enclosure.

COMMON VARIATIONS

Please contact our Technical Department for further details.

- Alternative kW loadings.
- Alternative circuit configurations e.g. 2 circuit.
- Various operating voltages in three phase star or delta.
- Alternative immersed lengths.
- Alternative element watts densities.
- Low water level indication thermostat.
- Alternative thermostat ranges, e.g. 60-120°C, 0-40°C, or PT100 (RTD) or thermocouple sensors.
- Vertical mounting heaters.