



## Immersion Heaters

for Liquids and Gases

Immersion heaters are designed for direct contact with water, solvents, oils, process solutions and gases.

Immersion heaters are mounted sideways into the vessel, preferably close to the bottom. Since the elements are fully immersed, virtually 100% energy efficiency is achieved.

Special elements are available for heating of corrosive solutions, highly viscous oils, high pressure or hazardous areas.

Typically a number of U-shaped heating rods are welded to a threaded boss or a flange. The terminations are usually covered by a termination housing.



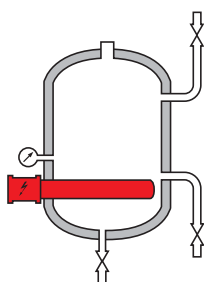
### Design criteria:

**Medium:** Oil, sugar based liquids (e.g. fruit juice) and other solutions may degrade if subjected to a high element temperature. This can also lead to carbon build-up on the element, hindering heat transfer and eventually causing element failure. For these liquids a low watts density is advisable.

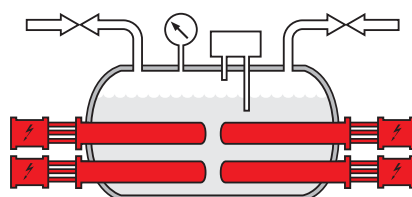
**Flammable substances:** Fuels, oil and generally combustible substances must be heated with care. The element temperature and the operating temperature of the system must be maintained below the flashpoint to prevent fire or explosion. Ex-rated elements are therefore specially designed and equipped with a thermostat to limit element temperature. In addition, approved temperature- and pressure control equipment must be used.

### Applications:

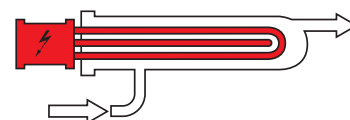
- Hot water tanks
- Electrically heated boilers (better control than with gas or coal burners)
- Control of bulk oil temperature in lube oil reservoirs (improves lubrication)
- For heavy weight oil (for better flow, easier pumping, increased combustion efficiency)
- Industrial water tanks, vessels and process piping
- Cleaning and rinsing tanks
- Heat transfer systems
- Circulation heating
- Steam superheating
- Heating of air or gas



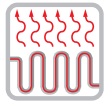
Heating of tanks



Heating for boilers



Ex - in line heaters



## Standard immersion heaters with threaded fitting:

Standard stock items					
stock code	Rating (Watts)	Power supply (Volt)	Immersion length (mm)	Fitting	Options
Elements for water (Incoloy-sheath, 10 Watt/cm <sup>2</sup> )					
UHRBC11K00150N0	1000	230	150	2" Brass	terminals exposed
UHRBC11K00285N1	1000	230	285	2" Brass	terminals exposed, with pocket
UHRBC11K50185N0	1500	230	185	2" Brass	terminals exposed
UHRBC11K50270N1	1500	230	270	2" Brass	terminals exposed, with pocket
UHRBC12K00280N0	2000	230	280	2" Brass	terminals exposed
UHRBC12K00280N1	2000	230	280	2" Brass	terminals exposed, with pocket
UHRBC13K00350N0	3000	230	350	2" Brass	terminals exposed
UHRBC13K00350N1	3000	230	350	2" Brass	terminals exposed, with pocket
UHRBC14K00350N0	4000	230	350	2" Brass	terminals exposed
UHRBC14K00350N1	4000	230	350	2" Brass	terminals exposed, with pocket
UHRBC33K00275N0	3x1000	230 / 400 3ph	275	2" Brass	terminals exposed
UHRBC33K00275NA	3x1000	230 / 400 3ph	275	2" Brass	with terminal cover IP40
UHRBC33K00275NE	3x1000	230 / 400 3ph	275	2" Brass	with terminal cover IP65
UHRBC34K50330N0	3x1500	230 / 400 3ph	330	2" Brass	terminals exposed
UHRBC34K50330NA	3x1500	230 / 400 3ph	330	2" Brass	with terminal cover IP40
UHRBC34K50330NE	3x1500	230 / 400 3ph	330	2" Brass	with terminal cover IP65
UHRBC36K00400N0	3x2000	230 / 400 3ph	400	2" Brass	terminals exposed
UHRBC36K00400NA	3x2000	230 / 400 3ph	400	2" Brass	with terminal cover IP40
UHRBC36K00400NE	3x2000	230 / 400 3ph	400	2" Brass	with terminal cover IP65
UHRBC39K00620N0	3x3000	230 / 400 3ph	620	2" Brass	terminals exposed
UHRBC39K00620NA	3x3000	230 / 400 3ph	620	2" Brass	with terminal cover IP40
UHRBC39K00620NE	3x3000	230 / 400 3ph	620	2" Brass	with terminal cover IP65
UHRBC312K0620N0	3x4000	230 / 400 3ph	620	2" Brass	terminals exposed
UHRBC312K0620NA	3x4000	230 / 400 3ph	620	2" Brass	with terminal cover IP40
UHRBC312K0620NE	3x4000	230 / 400 3ph	620	2" Brass	with terminal cover IP65
Elements for light weight oil (Incoloy-sheath, 3.2 Watt/cm <sup>2</sup> )					
UHRBC31K50340N0	3x500	230 / 400 3ph	340	2" Brass	terminals exposed
UHRBC31K50340NE	3x500	230 / 400 3ph	340	2" Brass	with terminal cover IP65
UHRBC33K00620N0	3x1000	230 / 400 3ph	620	2" Brass	terminals exposed
UHRBC33K00620NE	3x1000	230 / 400 3ph	620	2" Brass	with terminal cover IP65
UHRBC34K50980N0	3x1500	230 / 400 3ph	980	2" Brass	terminals exposed
UHRBC34K50980NE	3x1500	230 / 400 3ph	980	2" Brass	with terminal cover IP65
UHRBC36K01200N0	3x2000	230 / 400 3ph	1200	2" Brass	terminals exposed
UHRBC36K01200NE	3x2000	230 / 400 3ph	1200	2" Brass	with terminal cover IP65
Elements for heavy weight oils (Incoloy-sheath, 1.2 Watt/cm <sup>2</sup> )					
UHRBC31K50810N0	3x500	230 / 400 3ph	810	2" Brass	terminals exposed
UHRBC31K50810NE	3x500	230 / 400 3ph	810	2" Brass	with terminal cover IP65
UHRBC32K21200N0	3x750	230 / 400 3ph	1200	2" Brass	terminals exposed
UHRBC32K21200NE	3x750	230 / 400 3ph	1200	2" Brass	with terminal cover IP65



Terminals exposed



IP40 cover



IP65 cover