

## Ceramic Heating Elements

**heatsystems** ceramic heating elements were designed for indirect heating of various liquid and gaseous media.

**heatsystems** ceramic heating elements are often used for heating:

- drinking water
- cleaning fluids
- heavy oil
- bitumen
- insulating oil
- diphyl
- lubricating oil
- turbine oil
- thermal heating fluid
- other liquid media
- steam generation
- steam superheating
- flue gas
- non-flammable gaseous media and vapours

### Product properties

The basic difference from all other heaters used is the exchangeability.

**heatsystems** ceramic heating elements can be inserted into existing steel or stainless steel protective pipes. The protective pipes are welded, screwed or flanged into the vessel. The heating elements can be changed at any time without draining the medium.



*Ceramic element radiator for horizontal installation.*

### Essential components in **heatsystems** ceramic heating elements

#### Ceramic

The heating element consist of ceramic with high electrical insulation values.

#### Heating wire

The high heat resistant heating wire is pulled into the ceramic in spiral form. Collapsing of the spiral is ruled out by a horizontal arrangement of the heating element. In vertical installation, it is possible to prevent collapsing of the spiral by a special construction.

#### Protective tube

The protective tube with the internal diameter adapted to the external diameter of the ceramic heating elements can be delivered on request. Usually, the protective pipe is made of stainless steel. Special materials are possible.

#### Connection housing

On request a housing made of powder-coated steel sheet or stainless steel can be provided. The housing can be screwed to the vessel or flange.

#### Dimensions

**heatsystems** ceramic heating elements are available in the standard diameters of 21.5 mm; 32.0 mm; 36.5 mm; 46.0 mm and 58.0 mm.

#### Electrical connection

The electrical connection can be designed either as a flexible pure nickel wire or screw pins. Wiring on a motor terminal board is possible.

#### Note

Please state the installation position (horizontal/vertical) in the order.

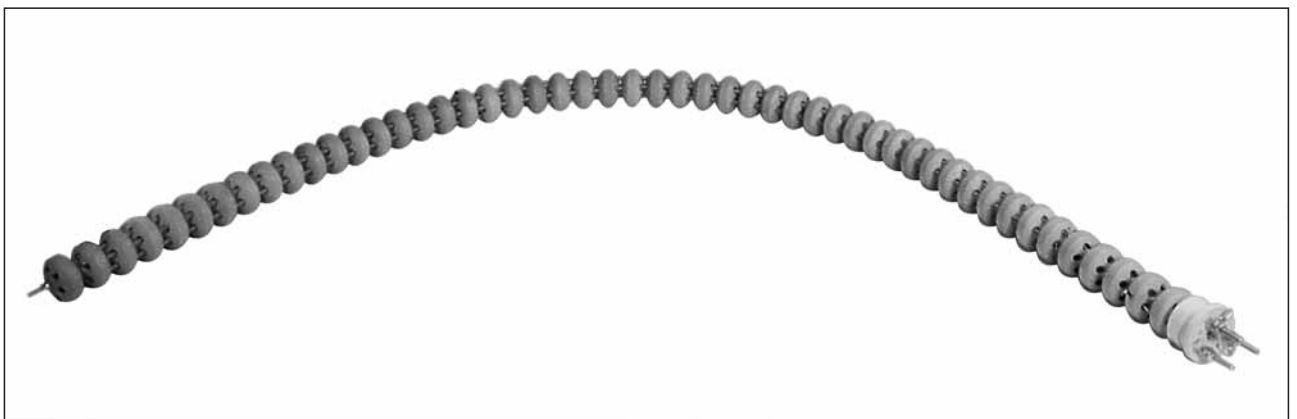
## Ceramic Heating Elements



*Ceramic heating element with stainless steel protective pipe (the cartridge heater can be changed without draining the medium).*



*Electric flange heater with exchangeable oval pipe heaters (the heating element can be exchanged without draining the medium).*



*Flexible ceramic cartridge heating. Used when insufficient installation space is available. Usual diameter 45 mm, other diameters on request.*