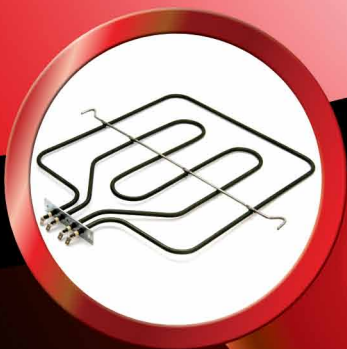
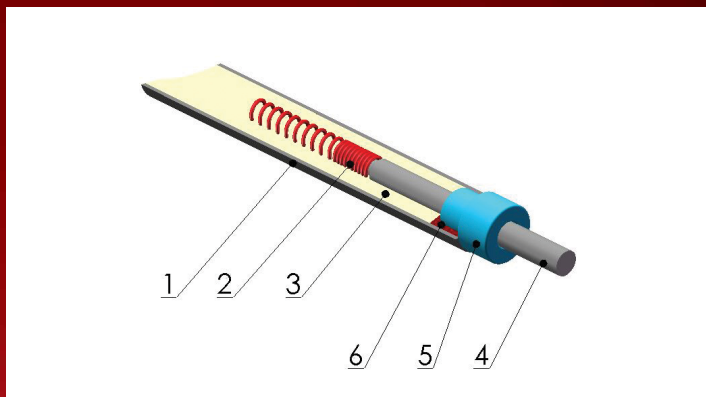


MANUFACTURER OF HEATING ELEMENTS



Tubular heating elements are produced according to KANTHAL – OAKLEY technology on the newest patents and technical solutions of CSM MACHINERY and KANTHAL/GRANLUND. High quality and long life of

the elements guarantee the best materials: magnesium oxide, resistance wires and special tube for heating elements. We produce the elements according to PN-EN 60335-1, „CE“ and VDE.



Construction of tubular heating element

- 1 – Metal sheath
- 2 – Heating coil
- 3 – Magnesium oxide
- 4 – Terminal pin
- 5 – Ceramic insulator
- 6 – Sealing

Available length of the tubular heaters

Tube Material	Diameter of the element	
	6,4mm	8,5mm
Copper	200-3300	200-3400
Stainless steel	200-3300	200-4750

On special orders, we produce also heating elements with diameter 12,5mm and 16mm, Lmax = 4400mm

Diameter tolerance of the element: $\pm 0,05\text{mm}$
 Nominal length tolerance of the element: $\pm 1\%$
 Length tolerance on request: $\pm 1\text{mm}$

Rated power and voltage

Voltage range: 12V...440V
 Power of the element depends on individual requirements of working medium and length.

Power tolerance is according to PN-EN 60335-1 norm: +5% -10%.

Length of typical unheated area: 40 / 60 / 100 / 120 / 150 / 200 / 250 / 350mm

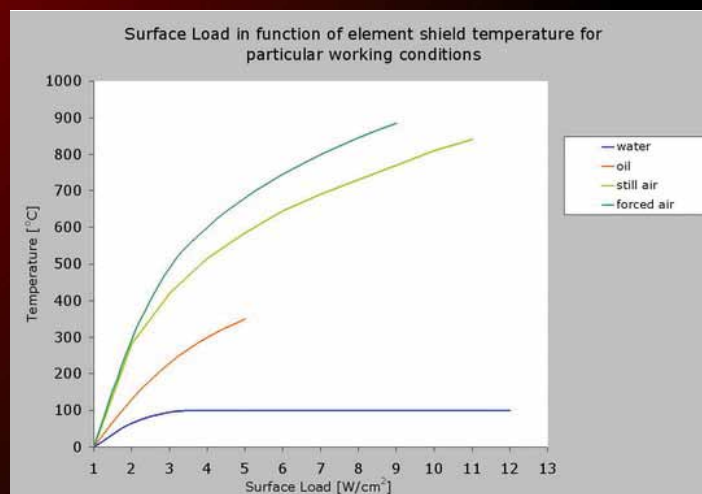
Selection and appliance of tubular heating elements

For heating element selection it is necessary to determine the following parameters:

- application
- voltage, power
- working temperature
- heated medium
- outer dimensions, form
- kind of fastening, electrical connection

To determine the right power of the elements, it is necessary to consider the maximal permissible capacity load depends on the working medium:

Working medium	Material		
	Cu	AISI 316L, 321	Incoloy 800, 825
Still water	10	10	
Running water	15	15	
High pressure water	25,5	25,5	
Steam generators	6,5	6,5	
Oil light		3,5	
Oil heavy		1,3	
Still air		5	6
Air velocity v=3m/s		6,5	8
Air velocity v=9m/s		10	10,5



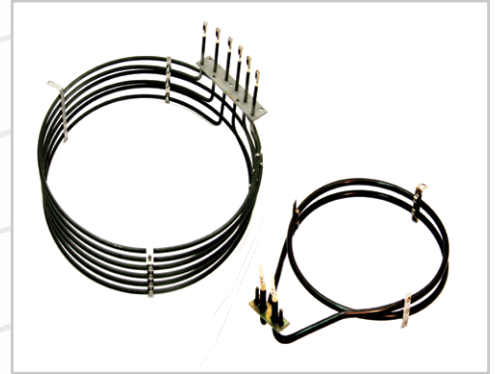
Tubular air heating elements

Tubular air heaters are the most universal type of heaters. For the sake of free forming of the elements, these heaters qualify to many appliances

Diameter:	ø6.4mm, ø8.5mm
Length:	250mm ... 4750mm
Voltage:	12V ... 440V
Metal sheath:	1.4301, 1.4541, 1.4828, 1.4876
Working temperature:	500°C (1.4301), 800°C (1.4876)

Application:

Air heaters, driers, static storage heaters, air conditioning, bakery ovens, electric kitchens, ovens



Finned heating elements

Finned heating elements are used mainly in the air. The advantage of these heaters is a increased surface of heat emission in relation to standard tubular heaters. Mounting of the fins decrease the temperature of the protecting tube and allow to increase the power and life the element. A different forms of the elements are possible.

Tube diameter:	ø8.5mm
Finn diameter:	ø20mm, ø28mm
Length:	250mm ... 3000mm
Sheath material:	1.4301, 1.4541, 1.4828
Working temperature:	500°C

Application:

Air heaters, driers, varnish and paint chambers, air curtains, air blowers, heating tunnels



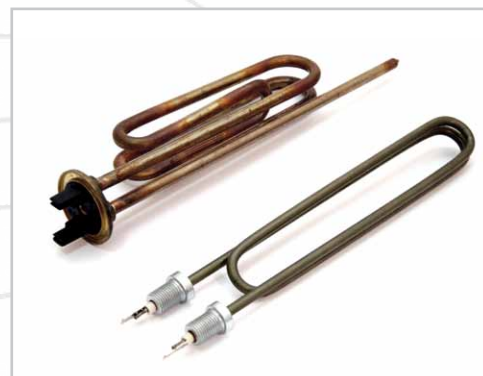
Tubular liquid heaters

Tubular Liquid Heaters is the biggest group of elements designed to direct heating of water, oil, industrial technological fluids, etc.

Diameter:	ø6.4mm, ø8.5mm
Length:	250mm ... 4750mm
Voltage:	12V ... 440V
Metal sheath:	1.4404, 1.4571, 1.4876, 2.4858
Working temperature:	max. 350°C

Application:

Boilers, storage heaters, instant water heaters, washing machines, industrial washers, oil containers, bain-maries, fryers, sterilizers, steam generators



Screw-in immersion heaters

Immersion heating elements are used for direct heating of various liquids. Because of its construction, it allow to put relatively big power in one screw-in head. Version with thermostat allow adjust the requested temperature.

Tube diameter:	ø6.4mm, ø8.5mm
Heater length:	200mm ... 2200mm
Metal sheath:	1.4404, 1.4571, 1.4876, 2.4858, Miedź
Power:	1,5 – 24kW
Voltage:	230V, 400V, 3x400V, inne
Head material:	stal zwykła, stal nierdzewna, mosiądz
Thermostat:	1-fazowy (30-75°C), 3-fazowy (30-75°C), inne

Application:

Storage liquid heaters, cleaning baths, oil pre-heaters, solar systems, exchange heaters, industrial liquid heaters



Industrial liquid heaters

Industrial heaters are mainly used for direct liquid heating. Because of its construction, it allow to put relatively big power in flange.

Diameters:	ø8.5mm, 10mm, 12.5mm, 16mm
Final length:	250mm ... 2200mm
Sheath material:	1.4404, 1.4571, 1.4876, 2.4858
Power:	12 – 96kW
Voltage:	230V, 400V, 3x400V, inne
Flance material:	stal zwykła, stal nierdzewna

Application:

Flow liquid heaters, exchange heaters, industrial air heaters, steam generators, solar systems



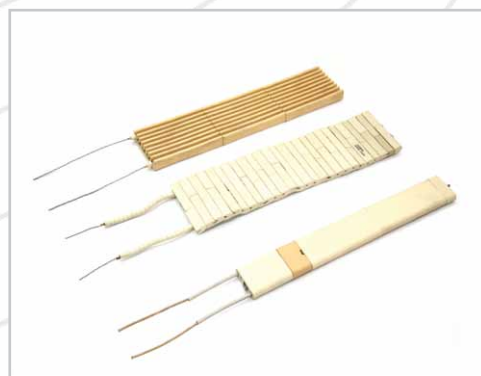
Ceramic heating elements

Ceramic heaters because of its construction are mainly used for air heating, but also liquid (indirect).

Diameters:	ø10mm ... ø57mm
Length:	50mm ... 3000mm
Capacity load:	max. 6W/cm ²
Voltage:	24V ... 400V
Working temperature:	max. 600°C

Application:

Bakery ovens, air dryers, storage water heaters, technological baths, oil pre-heaters



Established in 1992, TERMIK is a Polish manufacturer of electric heating elements. Owing to our experience and dynamic development we are present in many sectors of industry. All the types of heating elements are produced with the use of modern machines and equipment and top quality materials.

Our heaters are installed in household appliances, ventilation devices, water heaters, gastronomic equipment, powder paint shops, meat processing devices, injection moulding machines, injection moulds, plating tanks, etc.

The heating elements produced by our company are sold both on the domestic market and abroad. They have the following certificates: B, CE, VDE.

All elements are customised to meet the customers' needs, they are made according to the documentation and specimens provided by the customer. As a dynamically developing company we are able to meet the challenges presented by orders from our customers.

Thank you for your interest. We will be glad to cooperate with you.



Termik Sp. z o.o.
Marcinkowo 106
11-700 Mragowo

tel +48 89 741 73 75
fax +48 89 741 87 25
E-mail: info@termik.pl

www.termik.pl
GPS: 53°51'08" N
21°16'20" E