Sinus Jevi
Ceramic Heating Elements

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SINUS JEVI

Liquids Gasses Solids Spaces Resistors

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Ceramic Heating Elements

APPLICATION

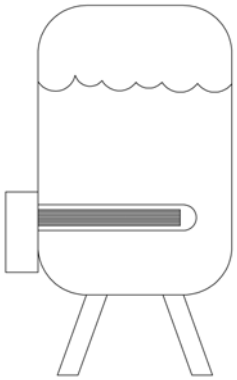
Round ceramic heating elements are primarily used for indirect heating of water, liquids, oil products, ovens and machines. In particular ceramic heating elements are integrated into vessels and containers where the heating element is placed in a tube which is welded or screwed into the vessel. This installation method is an advantage when using direct heating as the heating element can be replaced without emptying the vessel.Ceramic heating elements are also a perfect solution for heating oil and bitumen, as the medium may burn onto the surface of the heating elements due to the high temperatures created during direct heating. By using a tube it is also possible to achieve a large surface for heat distribution and therefore to install a high output.
The table below includes our standard range and gives an indication of guiding load values and connections.

CONSTRUCTION

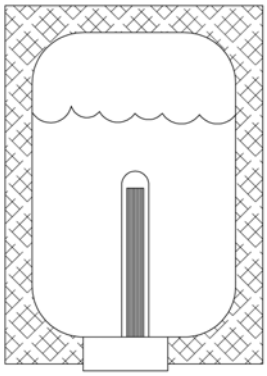
Ceramic heating elements are made of ceramic blocks which, regardless of the diameter, have a length of +/- 50 mm. The ceramic blocks are assembled to complete heating elements with the heating conductor placed in the ceramic grooves and when using large diameters the ceramic elements can be up to 10 - 11 meter long.

If the ceramic element should be installed in vertical position the heating conductor will be fixed to prevent it from "sagging" during use.

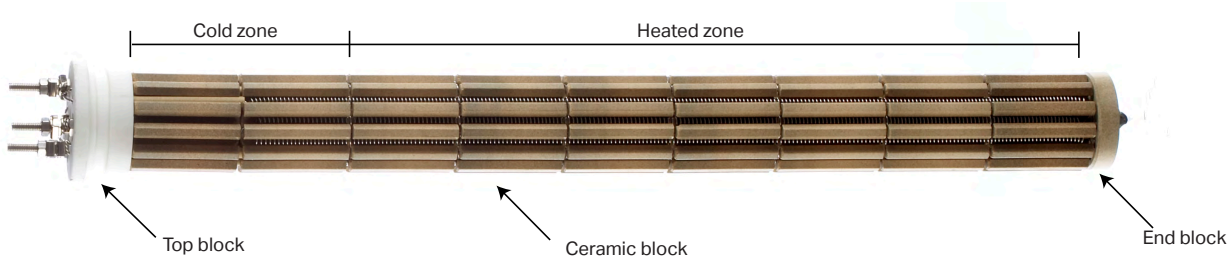
If the heating element is built into a welded pipe and installed horizontally, the welded seam must point upwards so that the surface creeping distance will not reduce.



Mounted horizontal in vessel



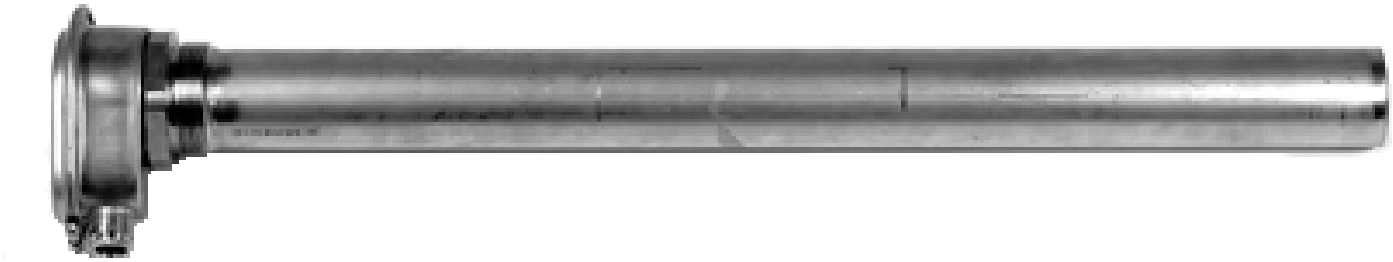
Vertical installed in a hot watertank



Diameter (tolerance +/- 2%)	Pipe Ø inside	Guiding load per 50 mm block			Groove	Number of grooves	Connection
		Air	Oil	Water			
Ø 6.5 mm	7.0 - 8.5 mm	10 Watt	20 Watt	40 Watt	closed	4	wires
Ø 8.3 mm	8.5 - 10.0 mm	13 Watt	26 Watt	55 Watt	closed	4	wires
Ø 10.0 mm	10.5 - 12.5 mm	15 Watt	30 Watt	60 Watt	closed	4	wires
Ø 11.5 mm	12.0 - 14.0 mm	18 Watt	36 Watt	75 Watt	closed	4	wires
Ø 12.5 mm	13.0 - 15.0 mm	20 Watt	40 Watt	80 Watt	closed	6	wires
Ø 15.8 mm	16.0 - 18.0 mm	25 Watt	50 Watt	100 Watt	closed	6	wires
Ø 20.0 mm	20.5 - 22.5 mm	32 Watt	64 Watt	130 Watt	closed	7	wires
Ø 22.0 mm	22.5 - 24.5 mm	35 Watt	70 Watt	140 Watt	closed	7	wires
Ø 26.0 mm	27.0 - 29.0 mm	40 Watt	80 Watt	160 Watt	open	6	M4/wires
Ø 31.0 mm	32.0 - 34.0 mm	50 Watt	100 Watt	200 Watt	open	8	M5/wires
Ø 35.0 mm	36.0 - 38.0 mm	55 Watt	110 Watt	220 Watt	open	8	M5/wires
Ø 36.0 mm	37.0 - 39.0 mm	57 Watt	114 Watt	230 Watt	open	12	M5/wires
Ø 39.0 mm	40.0 - 42.0 mm	62 Watt	124 Watt	250 Watt	open	12	M5/wires
Ø 46.0 mm	47.0 - 49.0 mm	73 Watt	146 Watt	290 Watt	open	12	M5/wires
Ø 57.0 mm	58.5 - 60.5 mm	90 Watt	180 Watt	360 Watt	open	12	M5/wires

The stated wattage is only intended as a guide in connection with choice of physical measures. When preparing the final dimensioning it is important to compensate for the position of the heating element (ability to give off heat to the medium), operation and surrounding temperature.

Cartridge Heating Elements type "J"



APPLICATION

Cartridge heating elements consist of a ceramic heating element which is mounted in a heat transfer tube and are provided with cable or connection box.

It is also possible to provide the cartridge heating element with a nipple so that it can be mounted directly into the object to be heated, e.g. water tanks, oil tanks or vessels.
Only when the ceramic heating element is not sealed into the heat transfer tube, it can be removed to be replaced without emptying the vessel or tank.

When dimensioning the heating element it is important to pay attention to the medium to be heated, as the ability to absorb heat varies per medium.

The heat transfer tube is usually made of stainless steel, AISI 304 or AISI 316, but other materials are possible on request.

The table shows the diameters available.

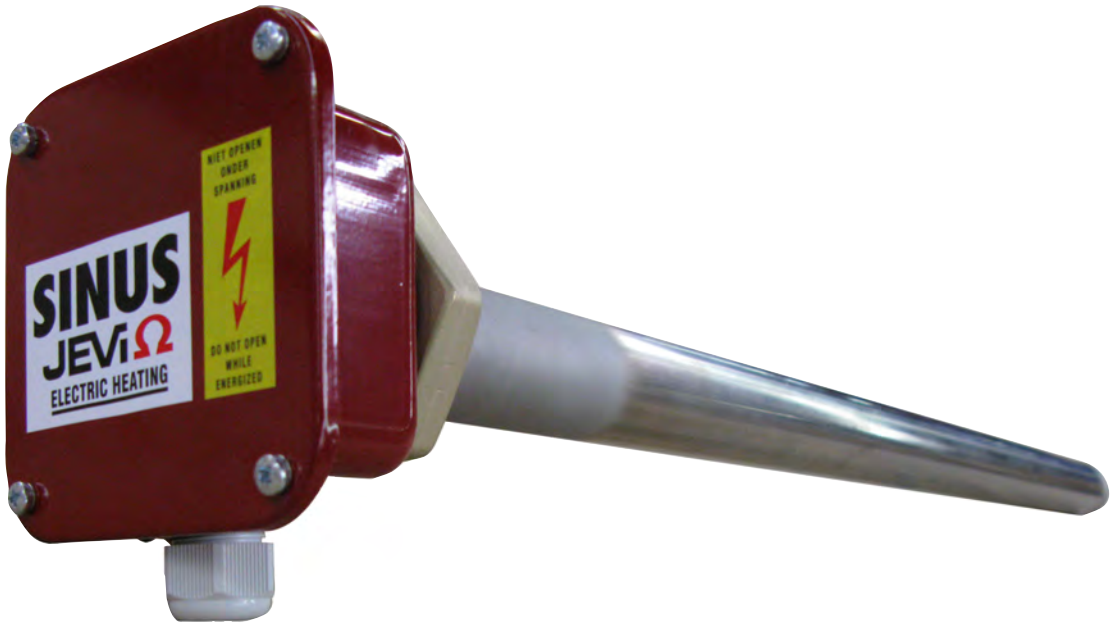
Ceramic blocks	Outer pipe (+/-)	Guiding load per 50 mm block		
		Air	Oil	Water
Ø 6.5 mm	Ø 8.0 mm	12 Watt	20 Watt	40 Watt
Ø 8.3 mm	Ø 10.0 mm	15 Watt	30 Watt	65 Watt
Ø 10.0 mm	Ø 12.0 mm	18 Watt	35 Watt	75 Watt
Ø 11.5 mm	Ø 14.0 mm	22 Watt	45 Watt	90 Watt
Ø 12.5 mm	Ø 14.0 mm	22 Watt	45 Watt	90 Watt
Ø 15.8 mm	Ø 18.0 mm	30 Watt	60 Watt	115 Watt
Ø 20.0 mm	Ø 22.0 mm	35 Watt	70 Watt	140 Watt
Ø 22.0 mm	Ø 24.0 mm	40 Watt	80 Watt	150 Watt
Ø 26.0 mm	Ø 29.0 mm	45 Watt	90 Watt	185 Watt
Ø 31.0 mm	Ø 34.0 mm	55 Watt	110 Watt	215 Watt
Ø 35.0 mm	Ø 38.0 mm	60 Watt	120 Watt	240 Watt
Ø 36.0 mm	Ø 38.0 mm	60 Watt	120 Watt	240 Watt
Ø 39.0 mm	Ø 42.0 mm*	65 Watt	130 Watt	265 Watt
Ø 46.0 mm	Ø 49.0 mm**	77 Watt	155 Watt	310 Watt
Ø 57.0 mm	Ø 60.0 mm	95 Watt	190 Watt	380 Watt

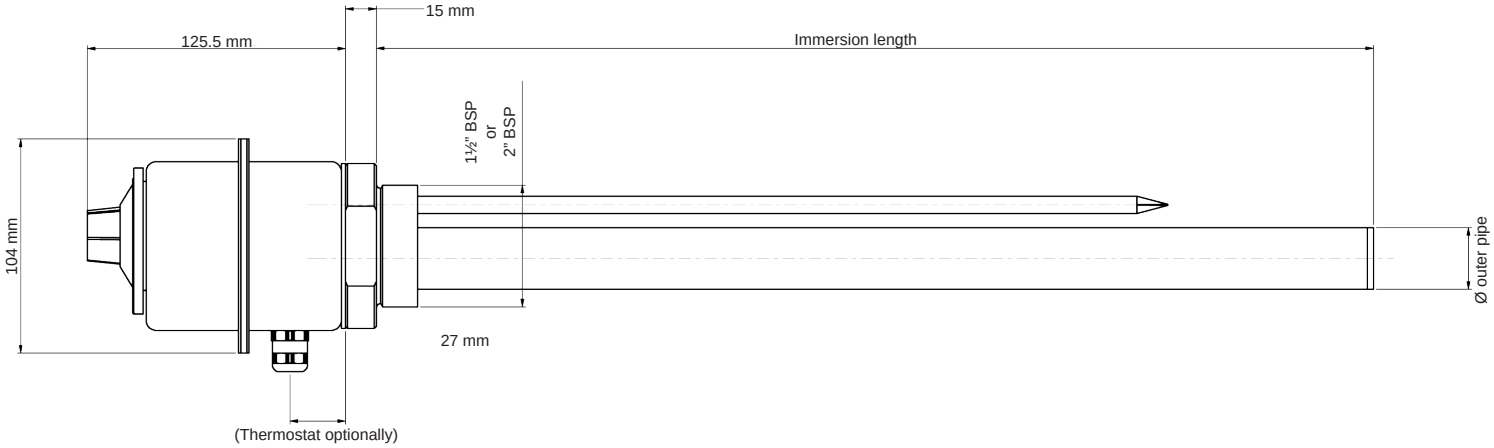
* 1½" BSP
** 2" BSP

Cartridge Heating Elements type “SJ”

Ceramic blocks	Outer pipe (+/-)	Guiding load per 50 mm block		
		Air	Oil	Water
Ø 26 mm	Ø 30 mm	45 Watt	90 Watt	185 Watt
Ø 32 mm	Ø 38 mm	55 Watt	110 Watt	225 Watt
Ø 39 mm	Ø 44.5 mm*	65 Watt	130 Watt	265 Watt
Ø 45 mm	Ø 52 mm**	77 Watt	155 Watt	310 Watt

* 1½” BSP
** 2” BSP





NOTES

SINUS JEVI

Sinus was one of the pioneers in the field of explosion proof heating equipment, today we are still operating at the forefront. We design and manufacture according to ATEX as well as IECEx and EAC directives.

Our company is certified to design and produce Ex-equipment. and we also in the possession of ISO 9001 and ISO 14001 certificates.

NIBE

904.1102E • 07-17

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