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# Sinus Jevi Immersion Heaters

The elements are especially designed for the heating of potable water. The elements can also be used for heating other media. The technical advisers of Sinus Jevi can provide advise of suitability.

- 4 lengths
- 8 connection possibilities
- available with or without thermostat
- single or multiple phase connection
- thermostat available in 3 ranges



**SINUS  
JEVI  $\Omega$**

 Liquids

 Gasses

 Solids

 Spaces

 Resistors

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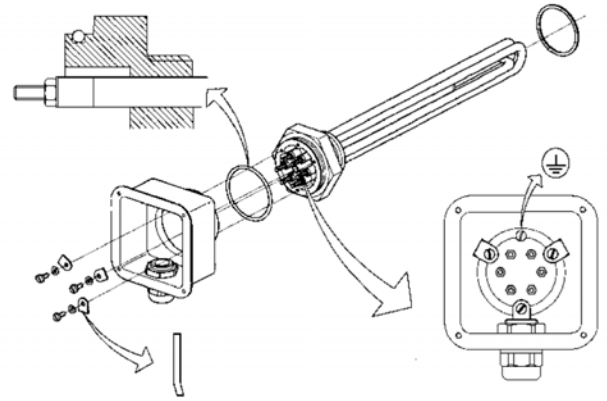
### Immersion Heaters type I.S.

The I.S. Series screw-in heating elements can be supplied in four types. Per type there are eight possibilities for electrical connection. The elements are especially designed for the heating of potable water. The elements can also be used for heating other media. The technical advisers of Sinus Jevi can provide advise of suitability.

For correct operation, the heating element must be screwed direct into the reservoir. To prevent damage to the element, an application should be made to prevent the element in operation to be running "dry". The temperature of the medium to be heated can be set with an adjustable thermostat, which is optionally available. If this option is not used, an external safety provision is required.

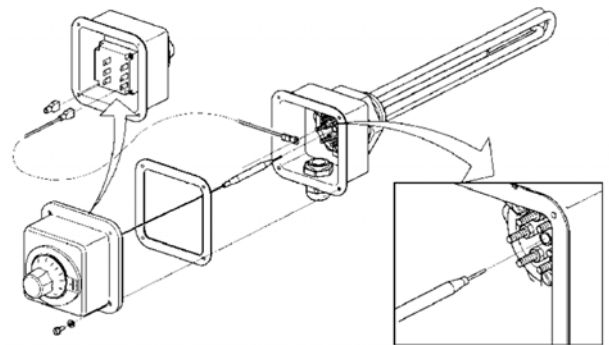
Installation and commissioning should only be undertaken by qualified personnel in accordance with the applicable regulations.

Applicable only in non-hazardous areas.



**YOUR BENEFITS**

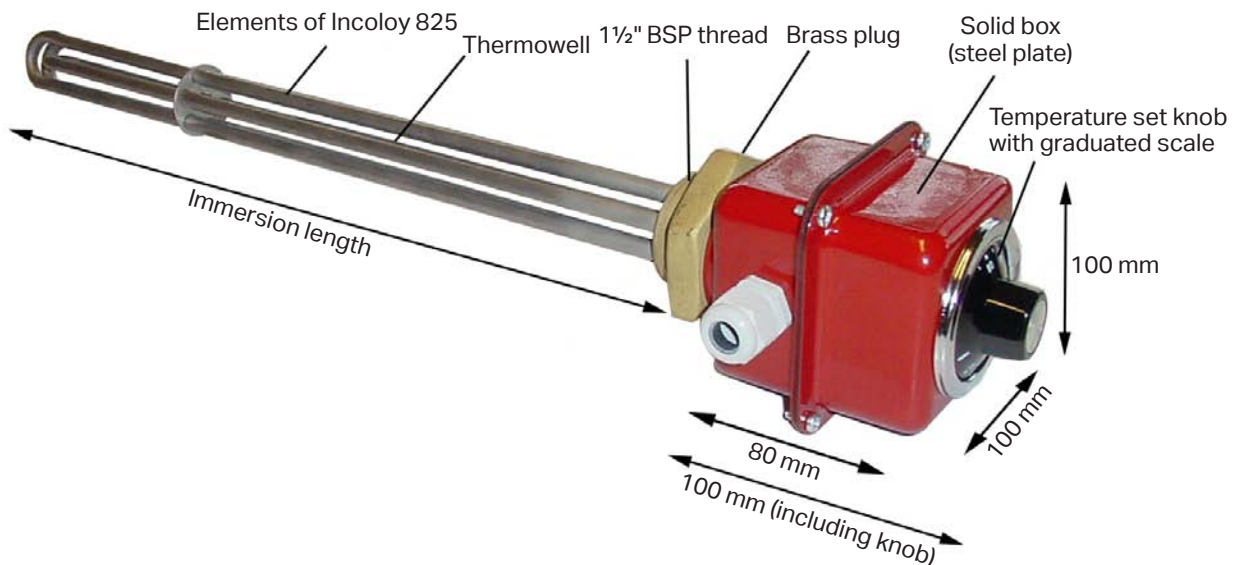
- 8 connection possibilities.
- All in 1 kit. No extra storage.
- Direct delivery by you to your customer.
- Supply from stock.



Dimensions	
Type	Immersion length
I.S. 2510	250 mm
I.S. 3515	350 mm
I.S. 5020	500 mm
I.S. 7530	750 mm

The heaters have a tolerance of 7% on Ohmic resistance. Each IS unit contains three (electrical) U-shaped tubular elements.

- Thread: G 1 1/2" (BSP)
- Brass plug, width: 70 mm
- Pressure: <15 bar
- Application temperature: ≤ 110°C
- Cable gland: 1 piece M20X1,5
- Degree of protection with cover: IP65
- Degree of protection with thermostat: IP54
- Material element: Incoloy 825 (enhanced corrosion resistance)



**Overview I.S.-series screw-in heating elements**

Article number	Type	Immersion length	Power <i>Star configuration</i> (3 X 400 V AC)	Power <i>Delta configuration</i> (max. 3 X 400 V AC)	Ohmic resistance each tube element
560 250 1000A	IS 2510	250 mm	1000 W	3000 W	158 Ω
560 350 1500A	IS 3515	350 mm	1500 W	4500 W	102 Ω
560 500 2000A	IS 5020	500 mm	2000 W	6000 W	80 Ω
560 750 3000A	IS 7530	750 mm	3000 W	9000 W	53 Ω

**Overview I.S.-series thermostats**

Article number	Type	Temperature range	Number of switching contacts	Maximum switching power per contact	Temperature sensor
560 000 040A	T40	0 - 40°C	3	16A - 400 VAC	Ø 6 X 215 mm
560 000 085A	T85	30 - 85°C	3	16A - 400 VAC	Ø 6 X 130 mm
560 000 110A	T110	30 - 110°C	3	16A - 400 VAC	Ø 6 X 140 mm

The above thermostats are lid-mounted and feature a knob with scale.

**Type I.S. 2510**
**Immersion length 250 mm**

Data per wiring diagram, see page 4

No.	U [V]	W	W/cm <sup>2</sup>	I [A]
1	230/400	1000	3.3	1.4
2	3X400	3000	10.0	4.4
3	230	110	0.4	0.5
3	400	335	1.1	0.8
4	230	1000	3.3	4.3
5	230	500	3.3	2.2
6	230	670	3.3	2.9
6	400	2000	10.0	5.0

**Type I.S. 3515**
**Immersion length 350 mm**

Data per wiring diagram, see page 4

Nr.	U [V]	W	W/cm <sup>2</sup>	I [A]
1	230/400	1500	3.3	2.2
2	3X400	4500	10.0	6.6
3	230	170	0.4	0.7
3	400	500	1.1	1.3
4	230	1500	3.3	6.5
5	230	750	3.3	3.3
6	230	1000	3.3	4.3
6	400	3000	10.0	7.5

**Type I.S. 5020**
**Immersion length 500 mm**

Data per wiring diagram, see page 4

Nr.	U [V]	W	W/cm <sup>2</sup>	I [A]
1	230/400	2000	2.9	2.9
2	3X400	6000	8.9	8.8
3	230	220	0.3	1.0
3	400	670	1.0	1.7
4	230	2000	2.9	8.7
5	230	1000	2.9	4.3
6	230	1340	2.9	5.8
6	400	4000	8.9	10.0

**Type I.S. 7530**
**Immersion length 750 mm**

Data per wiring diagram, see page 4

Nr.	U [V]	W	W/cm <sup>2</sup>	I [A]
1	230/400	3000	2.8	4.2
2	3X400	9000	8.6	13.2
3	230	330	0.3	1.5
3	400	1000	1.0	2.5
4	230	3000	2.8	13.0
5	230	1500	2.8	6.5
6	230	2000	2.8	8.7
6	400	6000	8.6	15.0

### Wiring Diagram

#### Connection IS-heating element

The heating element can be connected in the following ways:

#### In a 3-phase circuit:

- Star connection  
3 X 230/400 V AC  
Figure 1 / wiring diagram 1 A/B
- Delta connection  
3 X 400 V AC  
Figure 1 / wiring diagram 2 A/B

#### In a single phase (phase-neutral or phase-phase)

- 3 elements in series,  
both 230 V AC and 400 V AC  
Figure 2 wiring diagram 3 A/B
- 3 elements in parallel,  
230 V AC (phase-neutral) circuit  
Figure 3 wiring diagram 4 A/B
- 2 elements in series and 1 element parallel,  
230 V AC (phase-neutral) circuit  
Figure 3 / wiring diagram 5 A/B
- 2 elements in parallel  
(1x unused), for both 230 V AC  
as for 400 V AC  
Figure 3 / wiring diagram 6 A/B

Wiring diagram "A": IS-element without thermostat.  
Wiring diagram "B": IS-element with thermostat.

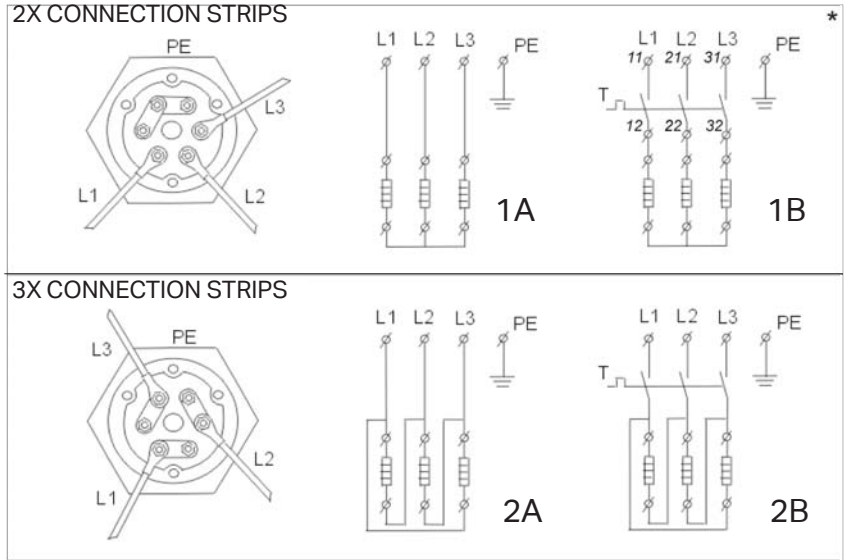


Figure 1

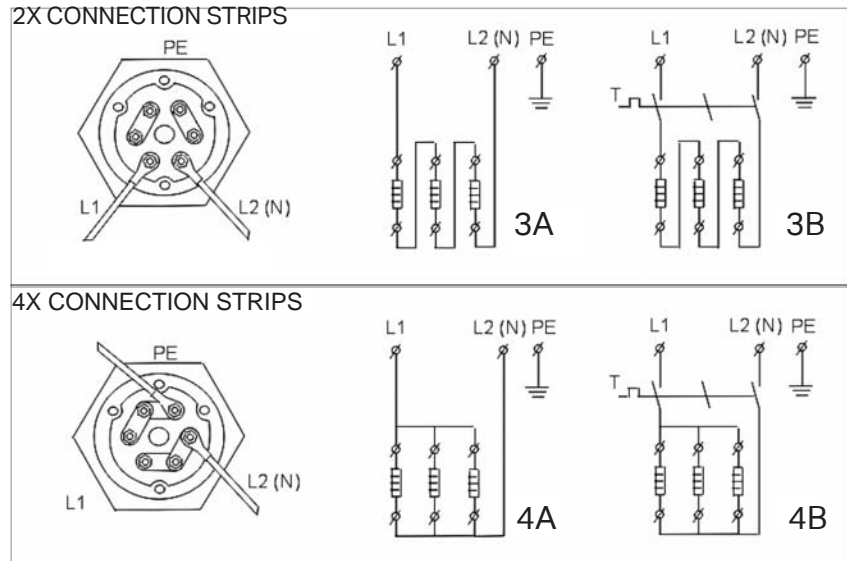


Figure 2

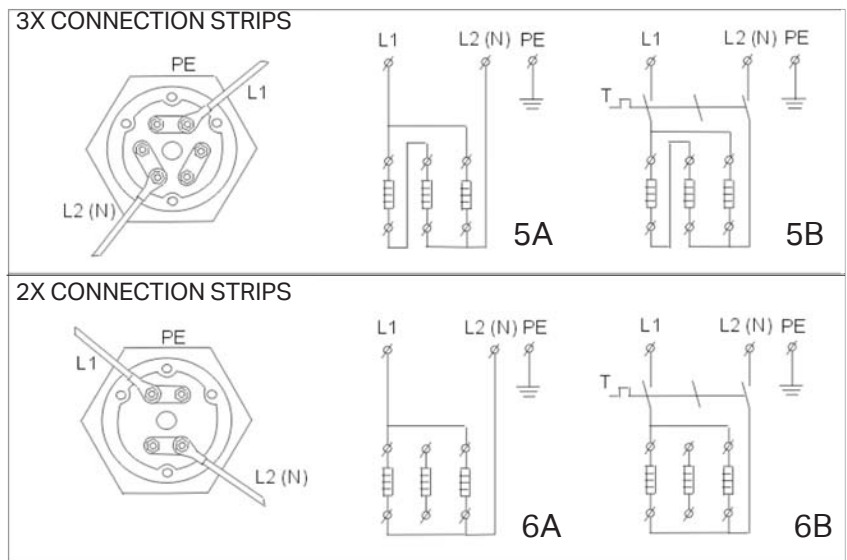


Figure 3

\* note: connection numbering identical for figures 2B to 6B

**Accessories**

*The IS-elements will be supplied including the necessary accessories, including link plates, gasket and internal wiring. Any additional accessories can be ordered seperately.*

**Accessories for IS-elements**

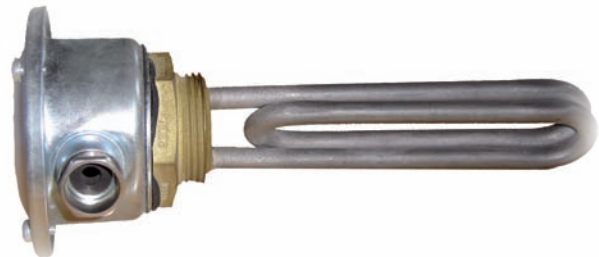
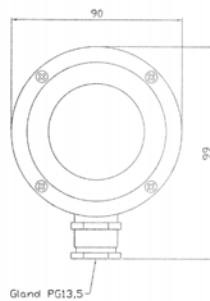
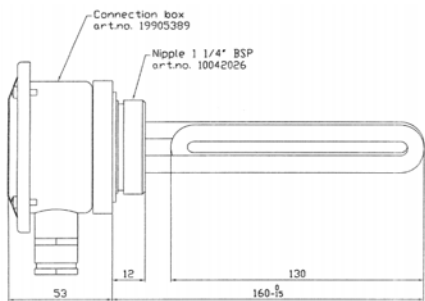
Article number	Description
221 004 150E	Lock nut G 1½" BSP Brass
E547 522 015	Adapter steel G 2" - 1½" BSP
041 0130 600A	NBR-gasket for RG 1½" plug (medium side) to 150°C
041 0040 600A	Copper gasket with ceramic fill for RG 1½" plug (medium side) to 320°C
S59 801 2000	Gasket D8012 (square) for junction box and cover and/or raised lid
S140 800 803	Cover D8008 (plane)
S141 800 201	Raised lid D2002

**Standard screw-in element type ISI-01**

The ISI-01 is ideal for heating water, in which case the element must be very compact. The immersion element consists of a brass cable gland, 1 double electric tubular element and a junction box. A thermostatic control is, because of the small size, not possible to be integrated in the junction box.

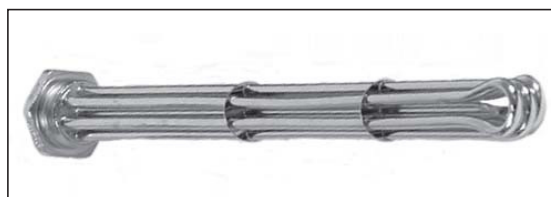
Article number: A110 101 000J (23242365)

- Thread: G 1¼" (BSP)
- Brass plug, width: 50 mm
- Pressure: <15 bar
- Application temperature: ≤ 110°C
- Cable gland: 1 piece PG13.5
- Protection class: IP55
- Voltage: 230 V AC Power: 1000 Watt
- Material element: Incoloy 825 (enhanced corrosion resistance)



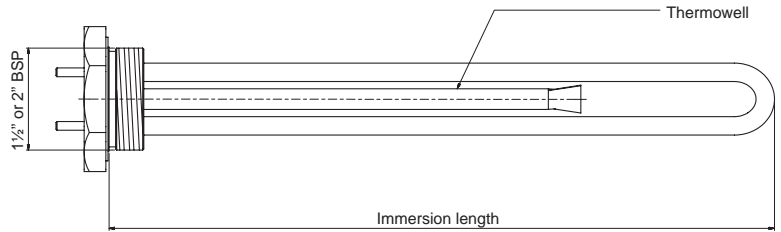
## Immersion Heaters type J.I.S.

- Different lengths, power and materials
- G 1½ " or G 2" brass plug
- With or without junction box available



### Heating elements with a G 1½" or G 2" brass gland for heating water

Screw-in elements of nickel plated copper are designed to heat up water in hot water tanks or open reservoirs. Copper is relatively soft material that expands with heat. This feature makes calcium on the heating element crumble. This contributes to a longer life of the element. This element can also be used as extra back up in heat pumps.



Item number	Watt density	Power	Immersion length	Wiring (3 x 400 Volt)	Plug (Brass)
92809839	10.4 W/cm <sup>2</sup>	2.25 kW	215 mm	Y	G 1½" (BSP)
92809847	8.9 W/cm <sup>2</sup>	3.0 kW	300 mm	Y	G 1½" (BSP)
92809854	8.4 W/cm <sup>2</sup>	4.5 kW	405 mm	Y	G 1½" (BSP)
92809862	8.1 W/cm <sup>2</sup>	6.0 kW	535 mm	Y	G 1½" (BSP)
92809870	8.4 W/cm <sup>2</sup>	7.5 kW	655 mm	Y	G 1½" (BSP)
92809888	8.2 W/cm <sup>2</sup>	9.0 kW	775 mm	Y	G 1½" (BSP)
92809896	8.2 W/cm <sup>2</sup>	10.0 kW	895 mm	Δ	G 1½" (BSP)
92804830	10.4 W/cm <sup>2</sup>	2.25 kW	215 mm	Y	G 2" (BSP)
92804848	8.9 W/cm <sup>2</sup>	3.0 kW	300 mm	Y	G 2" (BSP)
92804855	8.4 W/cm <sup>2</sup>	4.5 kW	405 mm	Y	G 2" (BSP)
92804863	8.1 W/cm <sup>2</sup>	6.0 kW	535 mm	Y	G 2" (BSP)
92800861	11.6 W/cm <sup>2</sup>	6.0 kW	315 mm	Y	G 2" (BSP)
92804871	8.4 W/cm <sup>2</sup>	7.5 kW	655 mm	Y	G 2" (BSP)
92804889	8.2 W/cm <sup>2</sup>	9.0 kW	775 mm	Y	G 2" (BSP)
92800887	11.9 W/cm <sup>2</sup>	9.0 kW	420 mm	Y	G 2" (BSP)
92804897	8.2 W/cm <sup>2</sup>	10.0 kW	895 mm	Δ	G 2" (BSP)

### Immersion heaters with G 1½" or G 2" brass plug for aggressive liquids

Immersion heaters of Incoloy 825 for heating aggressive liquids, chemicals and water. 3 x 400, cold zone is 55 mm.

Item number	Watt density	Power	Immersion length	Wiring (3 x 400 Volt)	Plug (Brass)
92803030	12.5 W/cm <sup>2</sup>	2.25 kW	175 mm	Y	G 1½" (BSP)
92803048	11.3 W/cm <sup>2</sup>	3.0 kW	235 mm	Y	G 1½" (BSP)
92803055	10.7 W/cm <sup>2</sup>	4.5 kW	355 mm	Y	G 1½" (BSP)
92803063	10.7 W/cm <sup>2</sup>	6.0 kW	435 mm	Y	G 1½" (BSP)
92803071	10.7 W/cm <sup>2</sup>	7.5 kW	525 mm	Y	G 1½" (BSP)
92803089	11.0 W/cm <sup>2</sup>	9.0 kW	600 mm	Y	G 1½" (BSP)
92808039	12.5 W/cm <sup>2</sup>	2.25 kW	175 mm	Y	G 2" (BSP)
92808047	11.4 W/cm <sup>2</sup>	3.0 kW	235 mm	Y	G 2" (BSP)
92808054	10.7 W/cm <sup>2</sup>	4.5 kW	355 mm	Y	G 2" (BSP)
92808062	10.7 W/cm <sup>2</sup>	6.0 kW	435 mm	Y	G 2" (BSP)
92808070	10.7 W/cm <sup>2</sup>	7.5 kW	525 mm	Y	G 2" (BSP)
92808088	11.0 W/cm <sup>2</sup>	9.0 kW	600 mm	Y	G 2" (BSP)
92808096	12.7 W/cm <sup>2</sup>	12.0 kW	730 mm	Y	G 2" (BSP)

### Heating elements with a G 2" brass plug for heating of oil

Immersion heating elements, stainless steel (AISI 304) for heating of oil in e.g. oil pre-heaters and frost protection of oil containers. 3 x 400 Volt.



Item number	Watt density	Power	Immerison length	Wiring (3 x 400 Volt)	Plug (Brass)
92201904	1.2 W/cm <sup>2</sup>	0.5 kW	335 mm	Y	G 2" (BSP)
92201912	1.1 W/cm <sup>2</sup>	0.75 kW	485 mm	Y	G 2" (BSP)
92201920	1.1 W/cm <sup>2</sup>	1.0 kW	660 mm	Y	G 2" (BSP)
92201938	1.1 W/cm <sup>2</sup>	1.5 kW	700 mm	Y	G 2" (BSP)
92201946	1.0 W/cm <sup>2</sup>	2.0 kW	1025 mm	Y	G 2" (BSP)
92602911	1.5 W/cm <sup>2</sup>	0.7 kW	360 mm	Y	G 2" (BSP)
92602929	1.6 W/cm <sup>2</sup>	1.0 kW	460 mm	Y	G 2" (BSP)
92602937	1.6 W/cm <sup>2</sup>	1.5 kW	660 mm	Y	G 2" (BSP)
92602945	1.6 W/cm <sup>2</sup>	2.0 kW	660 mm	Y	G 2" (BSP)
92602952	1.5 W/cm <sup>2</sup>	2.5 kW	825 mm	Y	G 2" (BSP)
92602960	1.5 W/cm <sup>2</sup>	3.0 kW	1025 mm	Y	G 2" (BSP)
92602978	1.5 W/cm <sup>2</sup>	4.0 kW	1450 mm	Y	G 2" (BSP)
92202928	2.4 W/cm <sup>2</sup>	1.0 kW	335 mm	Y	G 2" (BSP)
92202936	2.3 W/cm <sup>2</sup>	1.5 kW	485 mm	Y	G 2" (BSP)
92202944	2.1 W/cm <sup>2</sup>	2.0 kW	660 mm	Y	G 2" (BSP)
92202951	2.1 W/cm <sup>2</sup>	3.0 kW	700 mm	Y	G 2" (BSP)
92202969	2.1 W/cm <sup>2</sup>	4.0 kW	1025 mm	Y	G 2" (BSP)
92203934	3.6 W/cm <sup>2</sup>	1.5 kW	335 mm	Δ	G 2" (BSP)
92203942	3.4 W/cm <sup>2</sup>	2.25 kW	485 mm	Δ	G 2" (BSP)
92203959	3.2 W/cm <sup>2</sup>	3.0 kW	660 mm	Δ	G 2" (BSP)
92203967	3.2 W/cm <sup>2</sup>	4.5 kW	700 mm	Δ	G 2" (BSP)
92203975	3.1 W/cm <sup>2</sup>	6.0 kW	1025 mm	Δ	G 2" (BSP)
92605914	4.6 W/cm <sup>2</sup>	2.1 kW	360 mm	Δ	G 2" (BSP)
92605922	4.8 W/cm <sup>2</sup>	3.0 kW	460 mm	Δ	G 2" (BSP)
92605930	4.8 W/cm <sup>2</sup>	4.5 kW	660 mm	Δ	G 2" (BSP)
92605948	4.7 W/cm <sup>2</sup>	6.0 kW	660 mm	Δ	G 2" (BSP)
92605955	4.6 W/cm <sup>2</sup>	7.5 kW	825 mm	Δ	G 2" (BSP)
92605963	4.6 W/cm <sup>2</sup>	9.0 kW	1025 mm	Δ	G 2" (BSP)
92605971	4.6 W/cm <sup>2</sup>	12.0 kW	1450 mm	Δ	G 2" (BSP)

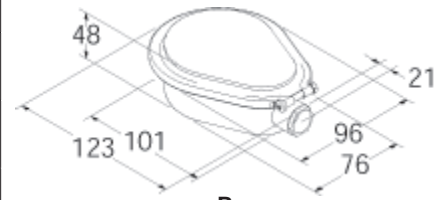
### Gaskets for immersion heaters

Item number	Description
041 013 0600A	for 1½" RG, Ø60 x Ø48 x 3 mm novapress 815, max. 150°C
041 013 0700A	for 2" RG, Ø70 x Ø60 x 3 mm novapress 815, max. 150°C
041 004 0600A	for 1½" RG, Ø55 x Ø48 x 2.5 mm copper/ceramic, max. 320°C
041 004 0700A	for 2" RG, Ø68 x Ø60 x 3 mm copper/ceramic, max. 320°C

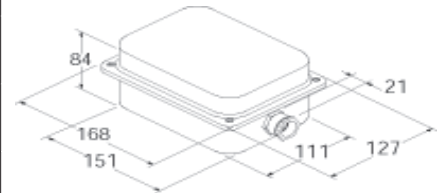


The junction boxes can also be supplied without holes for connection of heating elements, cable assembly, etc.

Item number	Junction box		
19905017	<b>Type B</b>	Oval box for G 1½" (BSP) 10 mm cover, IP55, PG13.5	
19905025		Oval box for G 2" (BSP) 10 mm cover, IP55, PG13.5	
19900554		Oval box in stainless steel for G 1½" (BSP) 10 mm cover, IP55, PG13.5	
19900547		Oval box in stainless steel for G 2" (BSP) 10 mm cover, IP55, PG13.5	
19905033		Oval box for G 1½" (BSP) 35 mm cover, IP55, PG13.5	
19905041		Oval box for G 2" (BSP) 35 mm cover, IP55, PG13.5	
19905058		Square box for G 1½" (BSP), IP55, PG16	
19905066		Square box for G 2" (BSP), IP55, PG16	
19905090		<b>Type D</b>	Square box for G 1½" (BSP) PG 16, 3-pole thermofuse, 110°C manual reset, IP44
19905108			Square box for G 2" (BSP) PG16, as 19905090, IP44
19905116	<b>Type E</b>	Square box for G 1½" (BSP) PG16, 3-pole thermostat 30-85°C Outside knob, IP22	
19905124		Square box for G 2" (BSP) PG16, as 19905116, IP22	
19905199	<b>Type H</b>	Square box for G 1½" (BSP), PG16 3-pole thermostat 30-85°C 3-pole themofuse 110°C, IP22	
19905207		Square box for G 2" (BSP) PG16, as 19905199, IP22	
19900489		Square box for G 1½" (BSP) PG16, as 19905199, inside settings, IP55	
19900471		Square box for G 2" (BSP) PG16, as 19905207, inside settings, IP55	
19900216	<b>Type J</b>	Square box for G 1½" (BSP), PG16, IP22 3-pole thermostat 0-45°C 3-pole thermofuse 76°C, outside knob	
19900265		Square box for G 2" (BSP), PG16, IP22 as 19900216, outside knob	
19900083		Square box for G 1½" (BSP), PG16 as 19900216, IP55	
19900067		Square box for G 2" (BSP), PG16 as 19900216, IP55	
19900018	<b>Type L</b>	Oval box for G 2" (BSP), for special plug, high cover, 2 x PG21, with bracket for 1 thermostat or 1 thermofuse	



**B**



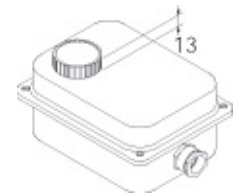
**B**



**D**



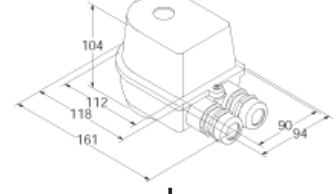
**E**



**H**



**J**



**L**