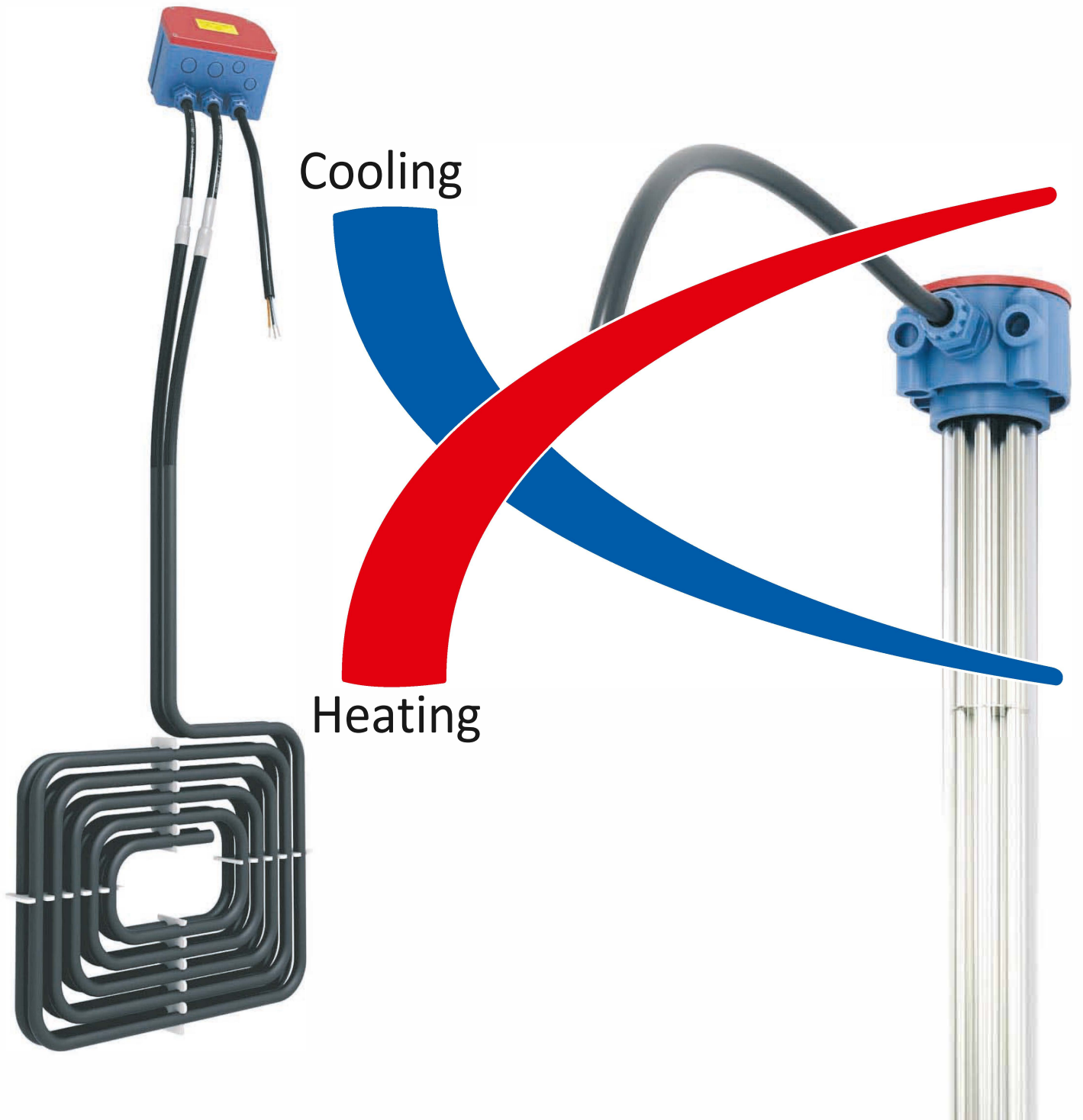




SCANDYMET, Innovative and Technically Advanced Manufacturer of Immersion Heaters, Heat Exchangers and Monitoring Equipment for Surface Treatment

In today's fast-moving world, industries require flexible designs, high-quality manufacturing, and dependable products that drive productivity and profitability.

When it comes to electrical heaters, the choice of materials and technical precision is crucial to delivering reliable, cost-effective solutions. At Scandymet, we combine both to create products that meet the highest standards.

Our product development program is built on four key principles:

- **Proven performance** - reliable and cost-efficient products
- **Customer-driven innovation** - continuous improvements based on user needs
- **In-house expertise** - development of production methods and material adaptation
- **Strict compliance** - all products certified to safety regulations

For decades, our curiosity and creativity have pushed us to address industry challenges where others often fall short. This dedication has provided us with extensive knowledge and experience, enabling us to develop a highly effective and innovative product portfolio.

Est. already in 1977, we have gained extensive experience which gives us confidence that our product program will continue to earn trust of both new and long-standing customers.

VDE Prüf- und Zertifizierungsinstitut



VDE Prüf- und Zertifizierungsinstitut



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STFX - Flexible Fluoropolymer Heaters

Flexible Design, Certified, Flexible Risers

Model Ratings 500-15000 Watts

✕ An all-purpose heater!

Resistant to most acids and alkalines.
Up to 150° C bath temperature.

✕ Safe Heating!

Heating part deeply submerged or placed horizontally on tank bottom.

✕ Efficient!

Superior heating capacity, compared to conventional tubular heater.

✕ Space Saver!

Compact design and flexible riser makes it easy to install these heaters with maintained safety.

✕ Reliable performance! Increased service life!

Unique manufacturing method assures tight bonding between heating element and fluoropolymer PFA layer. Immediate heat transfer from heating element to liquid solution prevents internal heat accumulation, thus increasing element life.

✕ Easy Maintenance!

Simple clear-cut design, easy to overview and clean.

✕ Economic!

Modular system with elements in two or more layers which are individually replaceable. Facilitates maintenance and reduces replacement cost.

✕ Certified adherence to Safety Standards!

Both the conduit and stainless steel element under the Teflon layer are grounded. All elements are individually tested and certified.

✕ Options

- Bimetallic Overheat Protection
- Flexible Riser, Length 1 – 10 m (C)
- Electric Cable, Length 1 – 15 m (E)
- Frames
- L-bent for Bottom installation

Standard Vertical Heater



Option Bottom Mount



Scandymet Fluoropolymer Heaters

All-Purpose Heater + Reliable + Efficient + Space Saving + Easy Maintenance

Heater Identification

All heaters are clearly labeled with power, voltage, and serial numbers. Keep marking outside of tank.

Grounded Cable

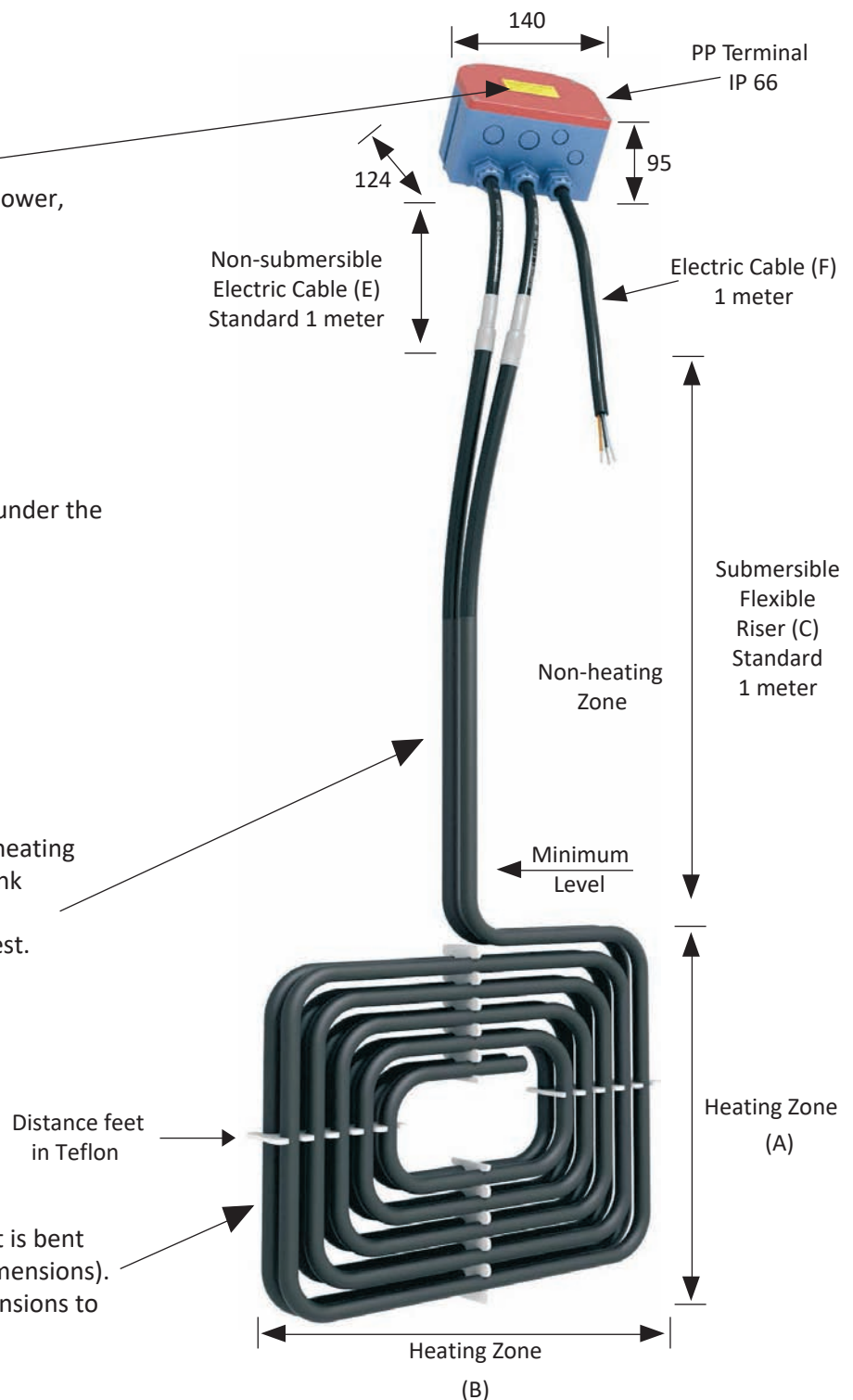
The stainless steel heating element under the Teflon layer is grounded.

Flexible Riser 1-10 meters

The continuous flexible riser is non-heating and suitable for bending over the tank edge. Standard length 1 meter. Additional length according to request.

Custom Design

The hot and rigid part of the element is bent as shown. (See table for standard dimensions). We can customize the element dimensions to suit your requirements.



STFX - Flexible Fluoropolymer Heaters

Flexible Design, Certified, Flexible Risers

Ratings 500-3700 Watts.

Voltage: 1 phase 230 V or 3-phase 400 V

*Also available in 3-phase 230 V

Tmax. up to 150°C.

- Above 85°, please see page 26.

Options:

- Overheat Protection
- Frame
- Bottom Mount

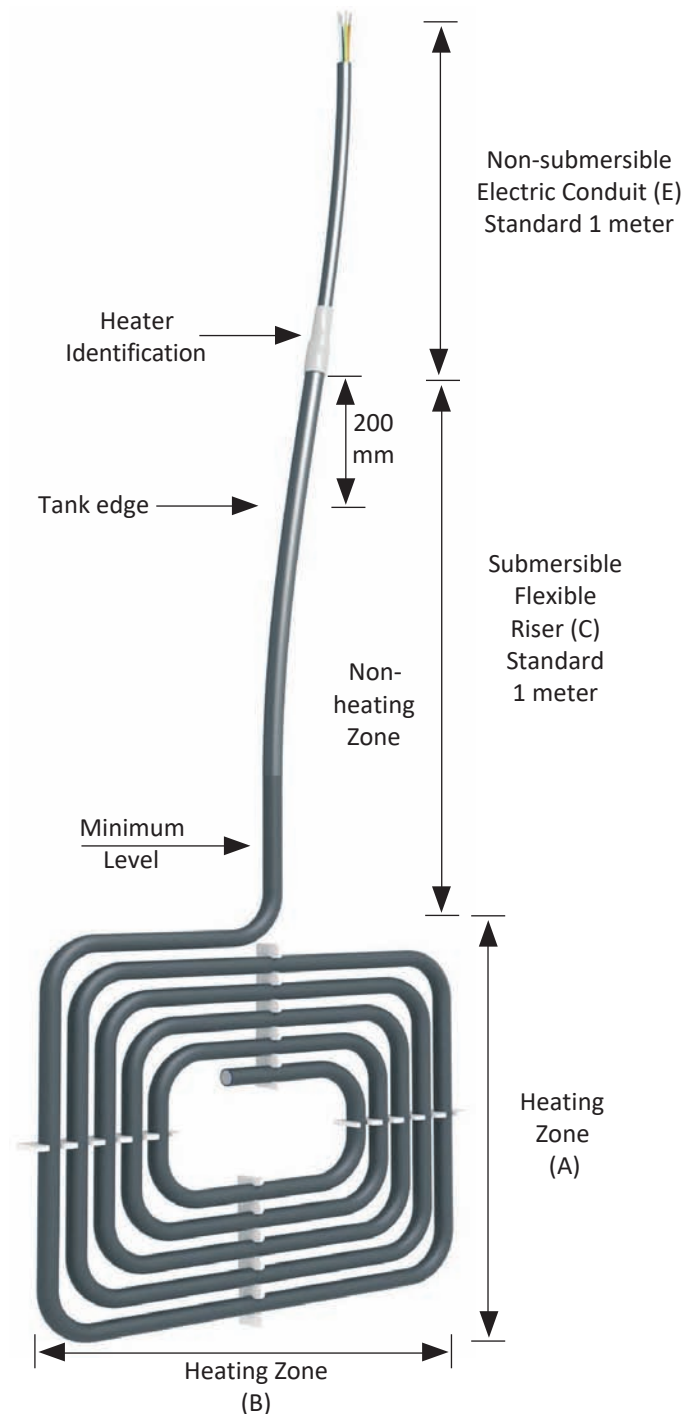
Standard sizes - others on request

1 phase 230 Volts

	A	B	Th.	W/cm ²
0,5kW	230	180	35	1,5
1kW	230	260	35	1,5
1,5kW	260	300	35	1,5
1,5kW	320	260	35	1,5
1,5kW	350	220	35	1,5
1,5kW	420	210	35	1,5
2kW	340	280	35	1,5
2kW	540	200	35	1,5
2kW	290	370	35	1,5
2kW	245	410	35	1,5
3kW	320	420	35	1,5
3kW	410	325	35	1,5
3kW	535	275	35	1,5
3kW	640	245	35	1,5
3kW	680	225	35	1,5
3kW	880	195	35	1,5
3kW	1050	180	35	1,5
4kW	340	280	50	1,5
4kW	540	200	50	1,5
4kW	290	370	50	1,5
4kW	245	410	50	1,5
6kW	320	420	50	1,5
6kW	410	325	50	1,5
6kW	535	275	50	1,5
6kW	640	245	50	1,5
6kW	680	225	50	1,5
6kW	880	195	50	1,5
6kW	1050	180	50	1,5

3 phase 400 Volts

	A	B	Th.	W/cm ²
2,25kW	335	340	35	1,5 *
2,25kW	400	280	35	1,5 *
2,25kW	460	255	35	1,5 *
2,25kW	530	230	35	1,5 *
2,25kW	625	215	35	1,5 *
2,25kW	840	180	35	1,5 *
3kW	320	420	35	1,5 *
3kW	410	325	35	1,5 *
3kW	535	275	35	1,5 *
3kW	640	245	35	1,5 *
3kW	680	225	35	1,5 *
3kW	880	195	35	1,5 *
3kW	1050	180	35	1,5 *
3,7kW	320	420	35	2,0
3,7kW	410	325	35	2,0
3,7kW	535	275	35	2,0
3,7kW	640	245	35	2,0
3,7kW	680	225	35	2,0
3,7kW	880	195	35	2,0
3,7kW	1050	180	35	2,0



STFX - Flexible Fluoropolymer Heaters

Flexible Design, Certified, Flexible Risers

Ratings 4500-15000 Watts

Voltage: 1 Phase 230 V, or 3-Phase 400 V

* Also available in 3-phase 230 V

Important and valuable feature

The heating elements are individually replaceable

In case of failure you only need to replace the failed heating element, not the entire heater.

Tmax. up to 150°C.

- Above 85°, please see page 26.

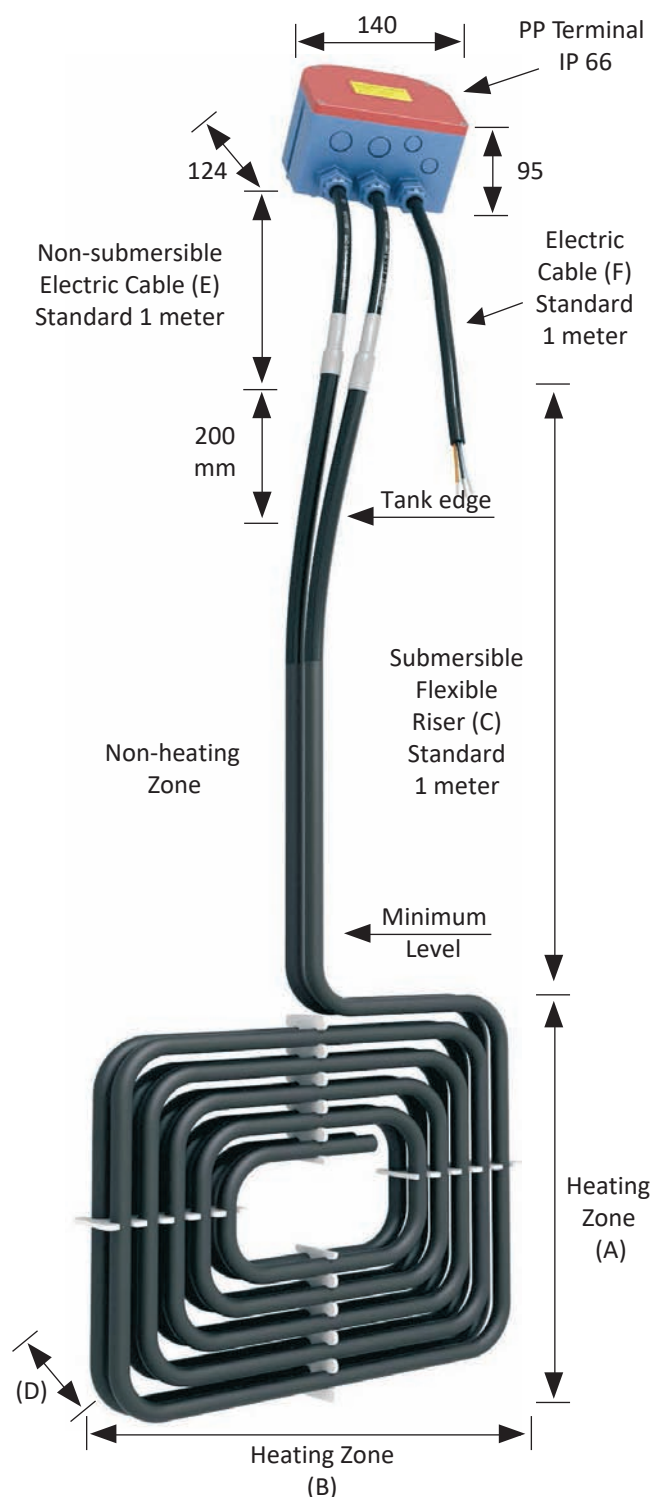
Options:

- Overheat Protection
- Frame
- Bottom Mount

Standard sizes - others on request

3 phase 400 Volts

	A	B	Th.	W/cm ²
4,5kW	335	340	50	1,5 *
4,5kW	400	280	50	1,5 *
4,5kW	460	255	50	1,5 *
4,5kW	530	230	50	1,5 *
4,5kW	625	215	50	1,5 *
4,5kW	840	180	50	1,5 *
6kW	320	420	50	1,5 *
6kW	410	325	50	1,5 *
6kW	535	275	50	1,5 *
6kW	640	245	50	1,5 *
6kW	680	225	50	1,5 *
6kW	880	195	50	1,5 *
6kW	1050	180	50	1,5 *
7,4kW	320	420	50	2,0
7,4kW	410	325	50	2,0
7,4kW	535	275	50	2,0
7,4kW	640	245	50	2,0
7,4kW	680	225	50	2,0
7,4kW	880	195	50	2,0
7,4kW	1050	180	50	2,0
9kW	320	420	75	1,5 *
9kW	410	325	75	1,5 *
9kW	535	275	75	1,5 *
9kW	640	245	75	1,5 *
9kW	680	225	75	1,5 *
9kW	880	195	75	1,5 *
9kW	1050	180	75	1,5 *
11kW	320	420	75	2,0
11kW	410	325	75	2,0
11kW	535	275	75	2,0
11kW	640	245	75	2,0
11kW	680	225	75	2,0
11kW	880	195	75	2,0
11kW	1050	180	75	2,0
12kW	325	825	50	1,5 *
12kW	420	650	50	1,5 *
12kW	550	530	50	1,5 *
12kW	640	480	50	1,5 *
12kW	700	430	50	1,5 *
12kW	860	380	50	1,5 *
12kW	1050	330	50	1,5 *
12kW	1400	280	50	1,5 *
15kW	325	825	50	2,0
15kW	420	650	50	2,0
15kW	550	530	50	2,0
15kW	640	480	50	2,0
15kW	700	430	50	2,0
15kW	860	380	50	2,0
15kW	1050	330	50	2,0
15kW	1400	280	50	2,0



Flexible Metal Heaters

SCAX - Stainless steel, STIX - Titanium

Flexible Design, Certified, Flexible Risers

Tmax. up to 150°C.

- Above 85°, please see page 26.

Ratings 500-12000 Watts

Voltage: 1 Phase 230 V, or 3-Phase 400 V

* Also available in 3-phase 230 V

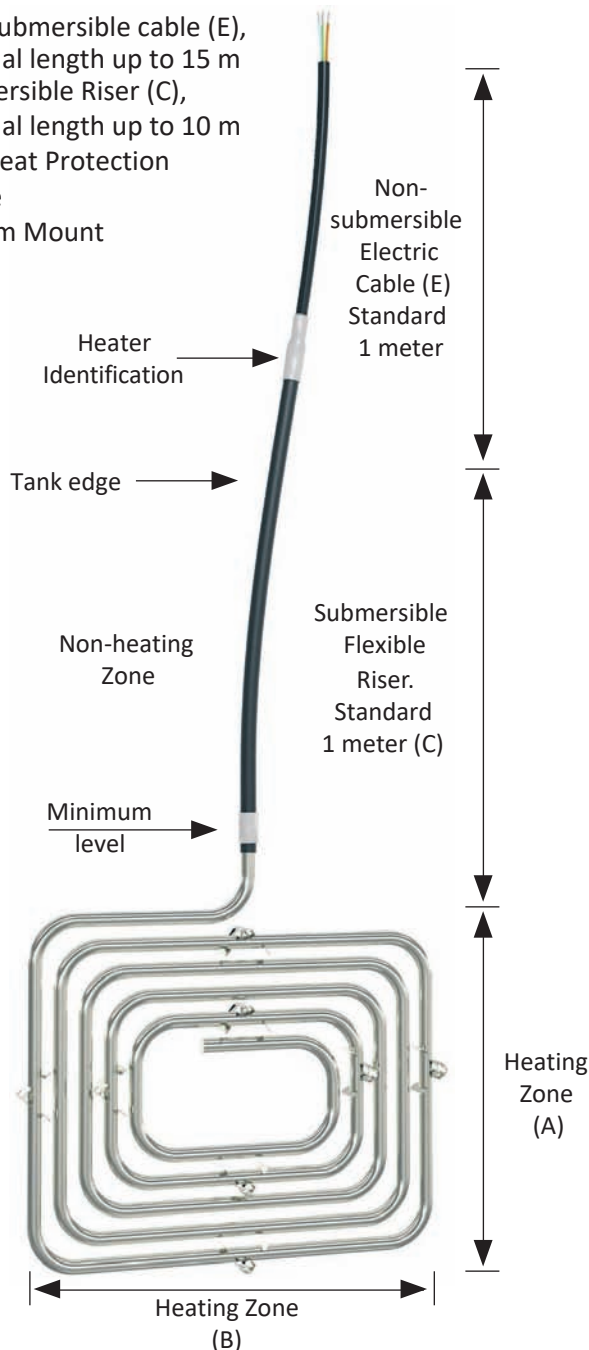
- **Efficient!** Suitable for bottom installation for excellent heat distribution.

- **Flexible!** Cable and Teflon Riser (C) are continuous and flexible. Easy to install over the tank edge.

- **Space saver!** We can customize the element dimensions to suit your requirements.

- **Options:**

- Non-submersible cable (E), optional length up to 15 m
- Submersible Riser (C), optional length up to 10 m
- Overheat Protection
- Frame
- Bottom Mount



Standard sizes - others on request

SCAX Stainless steel, EN 1.4404 / AISI 316L

1 phase 230 Volts

	A	B	Th.	W/cm ²
0,5kW	230	180	35	1,5
1kW	230	260	35	1,5
1,5kW	260	300	35	1,5
1,5kW	320	260	35	1,5
1,5kW	350	220	35	1,5
1,5kW	420	210	35	1,5
2kW	340	280	35	1,5
2kW	540	200	35	1,5
2kW	290	370	35	1,5
2kW	245	410	35	1,5
3kW	320	420	35	1,5
3kW	410	325	35	1,5
3kW	535	275	35	1,5
3kW	640	245	35	1,5
3kW	680	225	35	1,5
3kW	880	195	35	1,5
3kW	1050	180	35	1,5

SCAX Stainless steel, EN 1.4404 / AISI 316L

3 phase 400 Volts

	A	B	Th.	W/cm ²
2,25kW	335	340	35	1,6 *
2,25kW	400	280	35	1,6 *
2,25kW	460	255	35	1,6 *
2,25kW	530	230	35	1,6 *
2,25kW	625	215	35	1,6 *
2,25kW	840	180	35	1,6 *
3kW	320	420	35	1,5 *
3kW	410	325	35	1,5 *
3kW	535	275	35	1,5 *
3kW	640	245	35	1,5 *
3kW	680	225	35	1,5 *
3kW	880	195	35	1,5 *
3kW	1050	180	35	1,5 *
3,7kW	320	420	35	2,0
3,7kW	410	325	35	2,0
3,7kW	535	275	35	2,0
3,7kW	640	245	35	2,0
3,7kW	680	225	35	2,0
3,7kW	880	195	35	2,0
3,7kW	1050	180	35	2,0
4,5kW	320	420	35	2,5
4,5kW	410	325	35	2,5
4,5kW	535	275	35	2,5
4,5kW	640	245	35	2,5
4,5kW	680	225	35	2,5
4,5kW	880	195	35	2,5
4,5kW	1050	180	35	2,5
6kW	320	420	35	3,8
6kW	410	325	35	3,8
6kW	535	275	35	3,8
6kW	640	245	35	3,8
6kW	680	225	35	3,8
6kW	880	195	35	3,8
6kW	1050	180	35	3,8
7,5kW	320	420	35	4,1
7,5kW	410	325	35	4,1
7,5kW	535	275	35	4,1
7,5kW	640	245	35	4,1
7,5kW	680	225	35	4,1
7,5kW	880	195	35	4,1
7,5kW	1050	180	35	4,1

Standard sizes - others on request

SCAX Stainless steel, EN 1.4404 / AISI 316L
3 phase 400 Volts

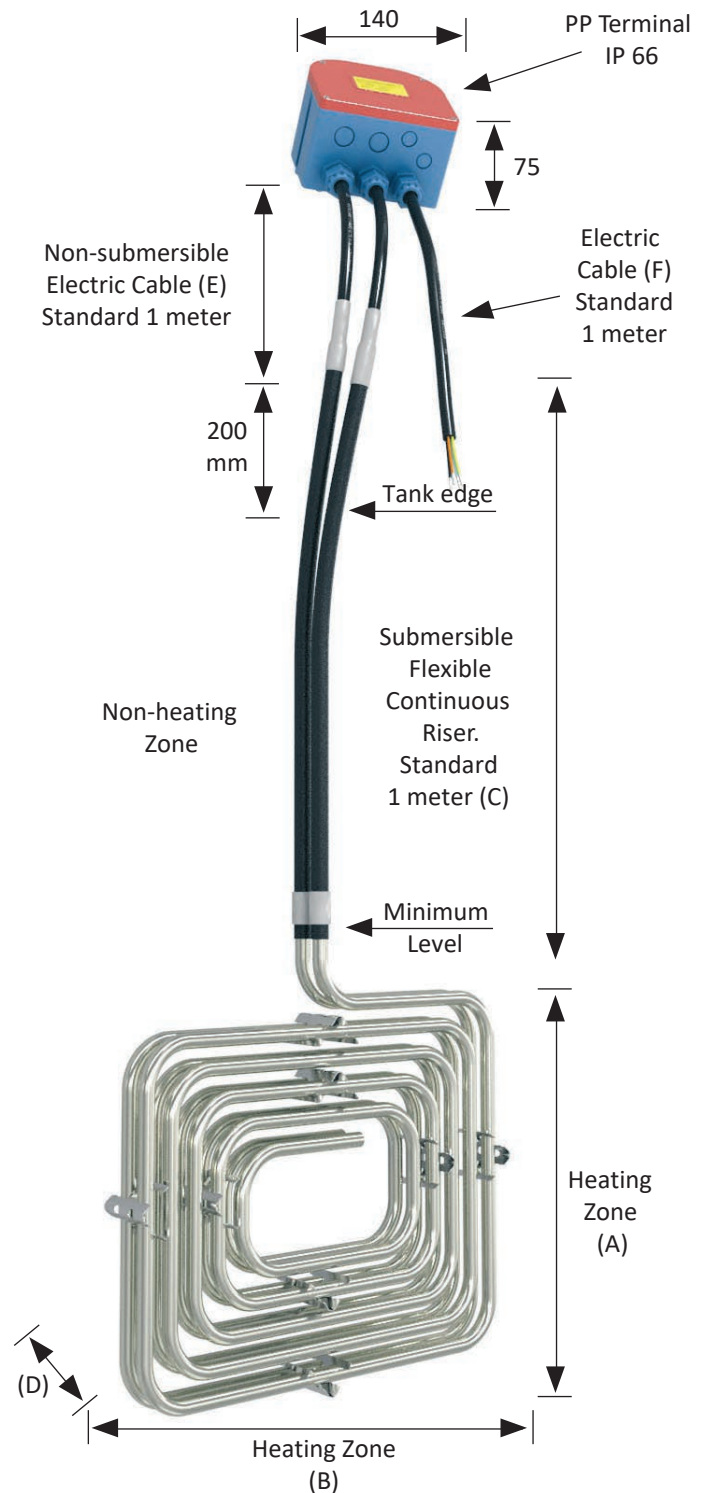
	A	B	Th.	W/cm ²
9kW	320	420	35	5,6
9kW	410	325	35	5,6
9kW	535	275	35	5,6
9kW	640	245	35	5,6
9kW	680	225	35	5,6
9kW	880	195	35	5,6
9kW	1050	180	35	5,6
12kW	320	420	35	6,8
12kW	410	325	35	6,8
12kW	535	275	35	6,8
12kW	640	245	35	6,8
12kW	680	225	35	6,8
12kW	880	195	35	6,8
12kW	1050	180	35	6,8
12kW	320	420	50	3,8
12kW	410	325	50	3,8
12kW	535	275	50	3,8
12kW	640	245	50	3,8
12kW	680	225	50	3,8
12kW	880	195	50	3,8
12kW	1050	180	50	3,8

STIX Titanium, Grade 2 commercial pure
1 phase 230 Volts

	A	B	Th.	W/cm ²
1kW	290	260	35	1,3
2kW	250	350	35	1,8
2kW	340	250	35	1,8
2kW	470	200	35	1,8
3kW	250	350	35	2,8
3kW	340	250	35	2,8
3kW	470	200	35	2,8
4kW	250	350	35	3,8
4kW	340	250	35	3,8
4kW	470	200	35	3,8

STIX Titanium, Grade 2 commercial pure
3 phase 400 Volts

	A	B	Th.	W/cm ²
3kW	230	320	35	3,8
3kW	310	220	35	3,8
3kW	320	290	35	3,8
4,5kW	335	340	35	3,1
4,5kW	400	280	35	3,1
4,5kW	460	255	35	3,1
4,5kW	530	230	35	3,1
4,5kW	625	215	35	3,1
4,5kW	840	180	35	3,1
6kW	335	340	35	4,1
6kW	400	280	35	4,1
6kW	460	255	35	4,1
6kW	530	230	35	4,1
6kW	625	215	35	4,1
6kW	840	180	35	4,1
9kW	320	420	35	4,9
9kW	410	325	35	4,9
9kW	535	275	35	4,9
9kW	640	245	35	4,9
9kW	680	225	35	4,9
9kW	880	195	35	4,9
9kW	1050	180	35	4,9
12kW	320	420	35	6,6
12kW	410	325	35	6,6
12kW	535	275	35	6,6
12kW	640	245	35	6,6
12kW	680	225	35	6,6
12kW	880	195	35	6,6
12kW	1050	180	35	6,6



STFR - Rigid L-bent Fluoropolymer Heaters

Ratings from 2250 - 15000 watts, voltage 3 phase 400 V

An all-round heater: Resistant to most acids and alkaline, max 90° C bath temperature.

L-bended design: For varying liquid levels and even heating.

Reliable duty: Excellent heat transfer, due to positive contact between heating element and Teflon coating. Heat is transferred directly to bath without internal build-up, thus increasing element life.

Heating element: Stainless steel 316L element grounded.

Connection box: Polypropylene material for good chemical resistance and vapor tight construction.

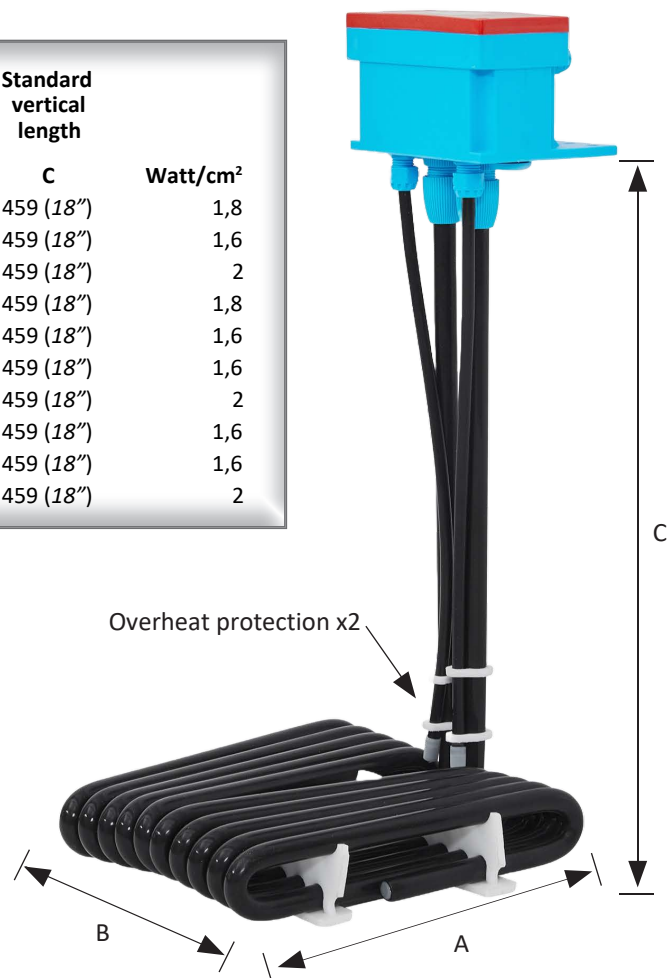
Electrical cabling: Standard electric cabling 4 meters. Other lengths on request.

Overheat protection: 2 exchangeable bimetallic sensors are standard.

Distance feet: Standard material is pure PTFE.

CE-marked product.

kW	Length	Width	Standard vertical length	Watt/cm ²
	A	B	C	
2,25	270 (10,6")	140 (5,5")	459 (18")	1,8
3	270 (10,6")	160 (6,3")	459 (18")	1,6
3,7	270 (10,6")	180 (7,1")	459 (18")	2
4,5	270 (10,6")	240 (9,45")	459 (18")	1,8
6	530 (20,7")	180 (7,1")	459 (18")	1,6
6	450 (17,7")	220 (8,7")	459 (18")	1,6
7,4	450 (17,7")	220 (8,7")	459 (18")	2
9	530 (20,7")	250 (9,84")	459 (18")	1,6
12	730 (28,74")	250 (9,84")	459 (18")	1,6
15	780 (30,7")	240 (9,45")	459 (18")	2



SFO - Tubular Heater for Phosphate

Ratings 1000-3300 Watts

Voltage: 1 phase 230 V or 3 phase 400 V

Tmax. 80° for PP head

- PVDF head for higher temperatures

- Resin-filled PVDF head for Manganese Phosphate

Head

Reinforced PP or PVDF, Ø 85mm

Sealing IP66

Threaded O-ring sealed lid

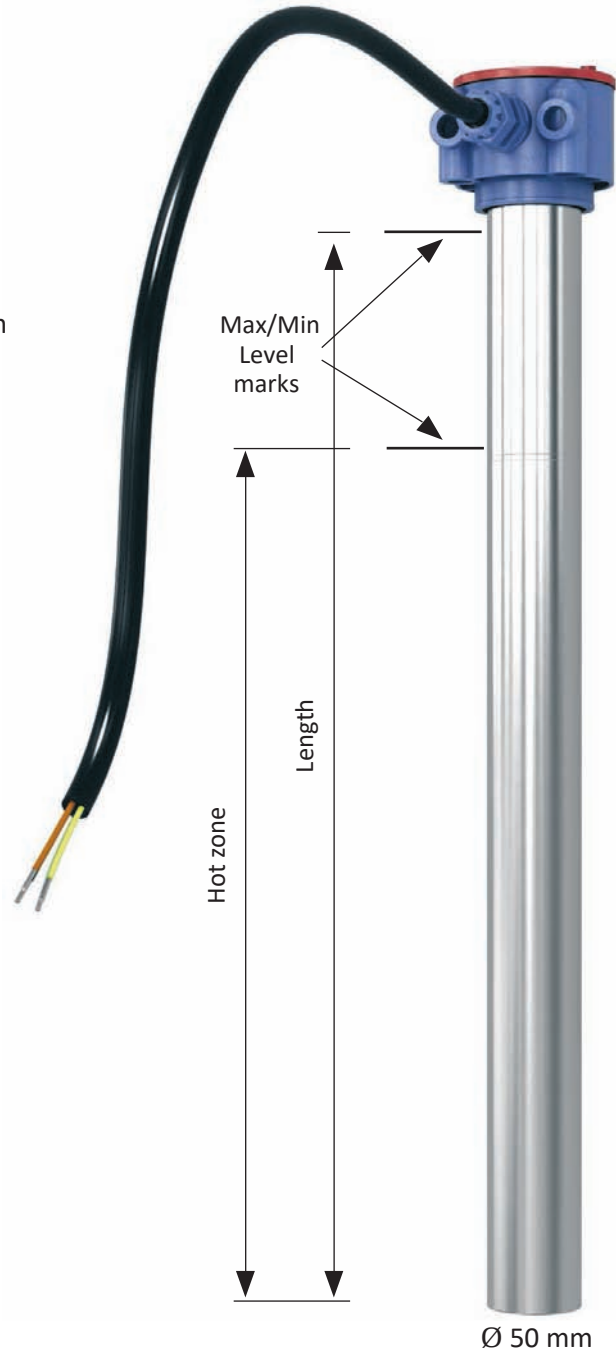
- **SFO** is the answer for your heavy duty service
- Heating element cast in aluminum inside tube Ø 50mm
- Tube Ø50mm of Stainless Steel, EN 1.4404
- Excellent heat transfer
- Impact resistant
- Withstands mechanical cleaning
- Head from Reinforced PP or PVDF, Ø 85mm
- Threaded O-ring sealed lid
- Standard cable length 2m - other lengths on request

EXAMPLE

SFO 600 10 3

Length / 1 KW / Phase

Specify +V: 1 for 1 phase 230 V
2 for 3 phase 230 V
3 for 3 phase 400 V



Model	Watts	Length	Hot Zone	W/cm ²
SFO 60010 +V	1000	570 mm	460 mm	1,5
SFO 80018 +V	1800	780 mm	550 mm	2,0
SFO 10022 +V	2200	980 mm	720 mm	2,0
SFO 12528 +V	2800	1230 mm	870 mm	2,0
SFO 15033 +V	3300	1470 mm	1120 mm	2,0

Tubular Heaters

SRF - Stainless steel, **STI** - Titanium, **SST** - Mild Steel

Ratings 1000-4500 Watts

Voltage: 1 Phase 230 V or 3-Phase 400 V

For 3-Phase 230 V, please consult factory

Tmax. 80° for PP head

- Consult us for higher temperatures on request

Head

Reinforced PP or PVDF, Ø 85mm

Sealing IP66

Threaded O-ring sealed lid

Easy access to replace cable or heating element

Heating element or Ceramic element

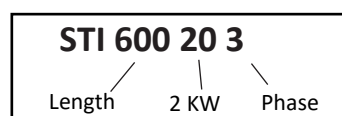
Heat resistant Stainless Steel or Ceramic bodies

Element can easily be changed if necessary

Standard cable length 2 m - other lengths on request

Option: Bi-metallic overheat protection

EXAMPLE



Specify +V: 1 for 1 phase 230 V

2 for 3 phase 230 V

3 for 3 phase 400 V

STI Titanium, grade 2 commercial pure

Dia. 50 mm, thickness 0.9 mm.

Model No.	Watts	Length	Hot Zone	W/cm ²
STI50010 +V	1000	480	370	2,1
STI60020 +V	2000	570	460	3,0
STI80020 +V	2000	780	610	2,3
STI80025 +V	2500	780	610	2,9
STI10030 +V	3000	980	780	2,6
STI12535 +V	3500	1210	900	2,6
STI15045 +V	4500	1470	1150	2,6

SRF Stainless steel tubes, EN 1.4404 / AISI 316L

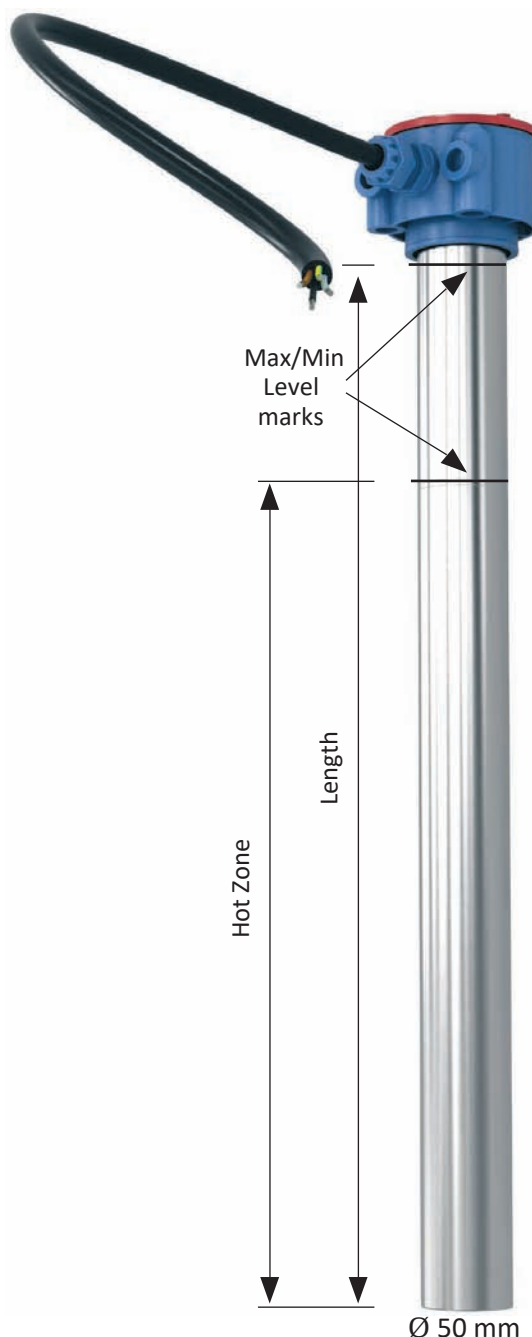
Dia. 50 mm, thickness 1.5 mm.

Model No.	Watts	Length	Hot Zone	W/cm ²
SRF50010 +V	1000	480	370	2,1
SRF60020 +V	2000	570	460	3,0
SRF80020 +V	2000	780	610	2,3
SRF80025 +V	2500	780	610	2,9
SRF10030 +V	3000	980	780	2,6
SRF12535 +V	3500	1210	900	2,6
SRF15045 +V	4500	1470	1150	2,6

SST Steel tubes, EN 1.0037

Dia. 50 mm, thickness 1.5 mm.

Model No.	Watts	Length	Hot Zone	W/cm ²
SST50010 +V	1000	480	370	2,1
SST60020 +V	2000	570	460	3,0
SST80020 +V	2000	780	610	2,3
SST80025 +V	2500	780	610	2,9
SST10030 +V	3000	980	780	2,6
SST12535 +V	3500	1210	900	2,6
SST15045 +V	4500	1470	1150	2,6



Tubular Heaters

STE - Fluoropolymer-coated, **SQG** - Transparent Quartz

Ratings 1000-4500 Watts

Voltage: 1 Phase 230 V or 3-Phase 400 V

For 3-Phase 230 V, please consult factory

Head

Reinforced PP or PVDF, Ø 85mm

Sealing IP66

Threaded O-ring sealed lid

Easy access to replace cable or element

Tmax. 80° for PP head

- Consult us for higher temperatures on request

Standard cable length 2 m - other lengths on request

Option: Bi-metallic Overheat protection

Quartz tubes

Dia. 50 mm, thickness 3,5 mm.

Model No.	Hot		Zone W/cm ²	
	Watts	Length		
SQG50010 +V	1000	480	370	2,1
SQG60020 +V	2000	570	460	2,8
SQG80020 +V	2000	780	610	2,3
SQG80025 +V	2500	780	610	2,6
SQG10030 +V	3000	980	780	2,6
SQG12535 +V	3500	1210	900	2,6
SQG15045 +V	4500	1470	1150	2,6

Teflon tubes

Dia. 50 mm, thickness 2,5 mm.

No.		Hot Model		Zone W/cm ²	
		Watts	Length		
STE60010	+V	1000	570	460	1,5
STE80018	+V	1800	780	550	2,0
STE10022	+V	2200	980	720	2,0
STE12528	+V	2800	1210	900	2,0
STE15033	+V	3300	1470	1150	2,0

EXAMPLE

SQG 600 20 3

Length 2 KW Phase

Specify +V:

1 for 1 phase 230 V

2 for 3 phase 230 V

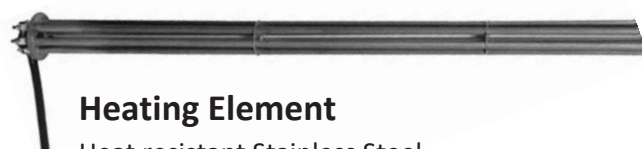
3 for 3 phase 400 V



Ceramic Heating Element

Heat resistant Ceramic bodies

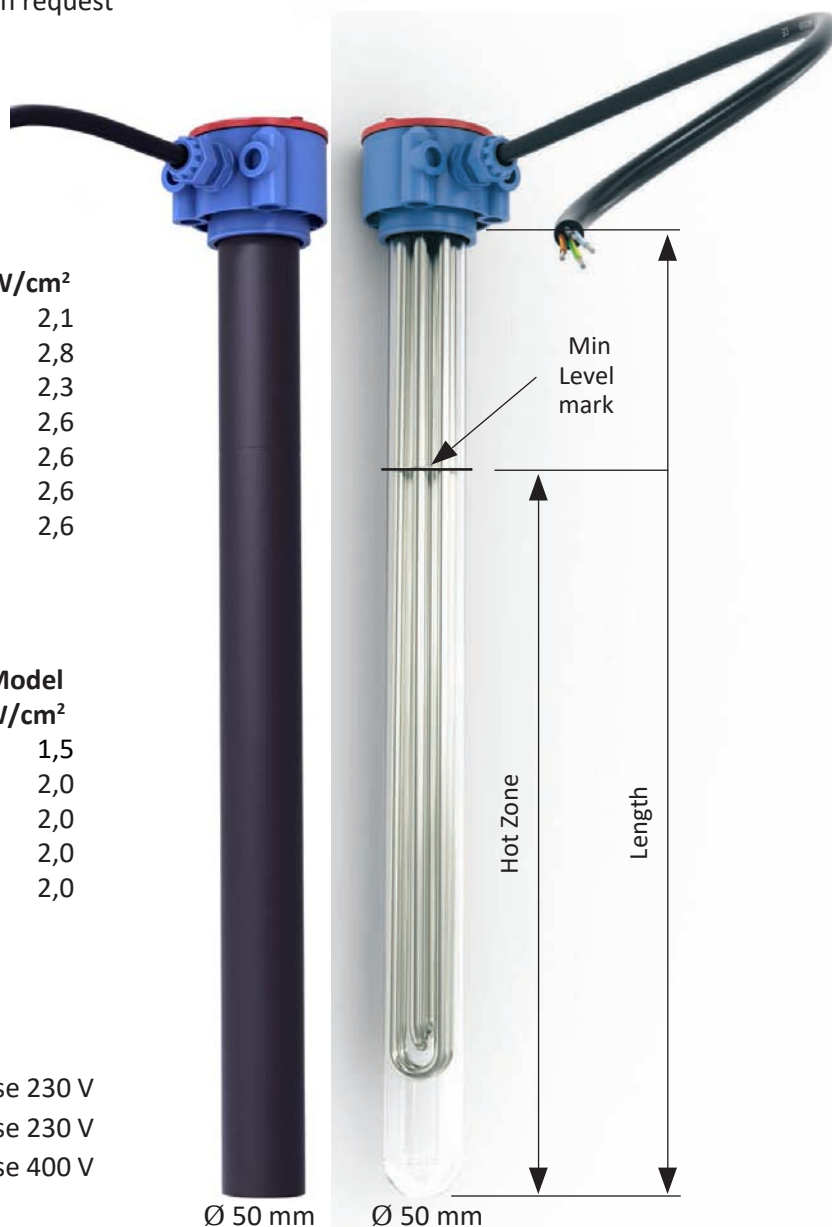
Element can easily be replaceable if necessary



Heating Element

Heat resistant Stainless Steel

Element can easily be replaceable if necessary



VAT Heaters

SSSP - Stainless steel, **STIP** - Titanium, **SMSP** - Mild steel

Ratings 2-4 kW
Voltage: 1 Phase 230 V

Tmax. 80° for PP head
- Consult us for higher temperatures on request

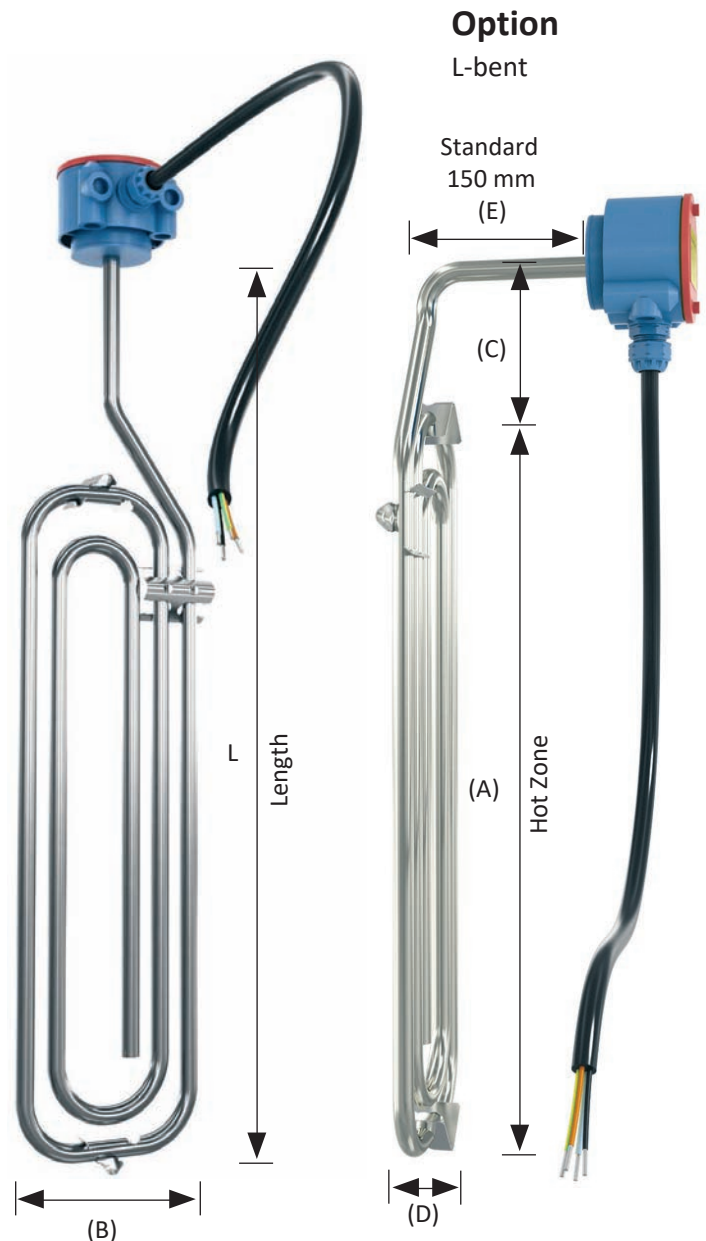
Head

Reinforced PP or PVDF, Ø 85mm
Sealing IP66
Threaded O-ring sealed lid

Grounded to metal parts
Standard length 2 m - other lengths on request
Cable fixed inside head, not replaceable

1-230V Heater with 2 m cable.

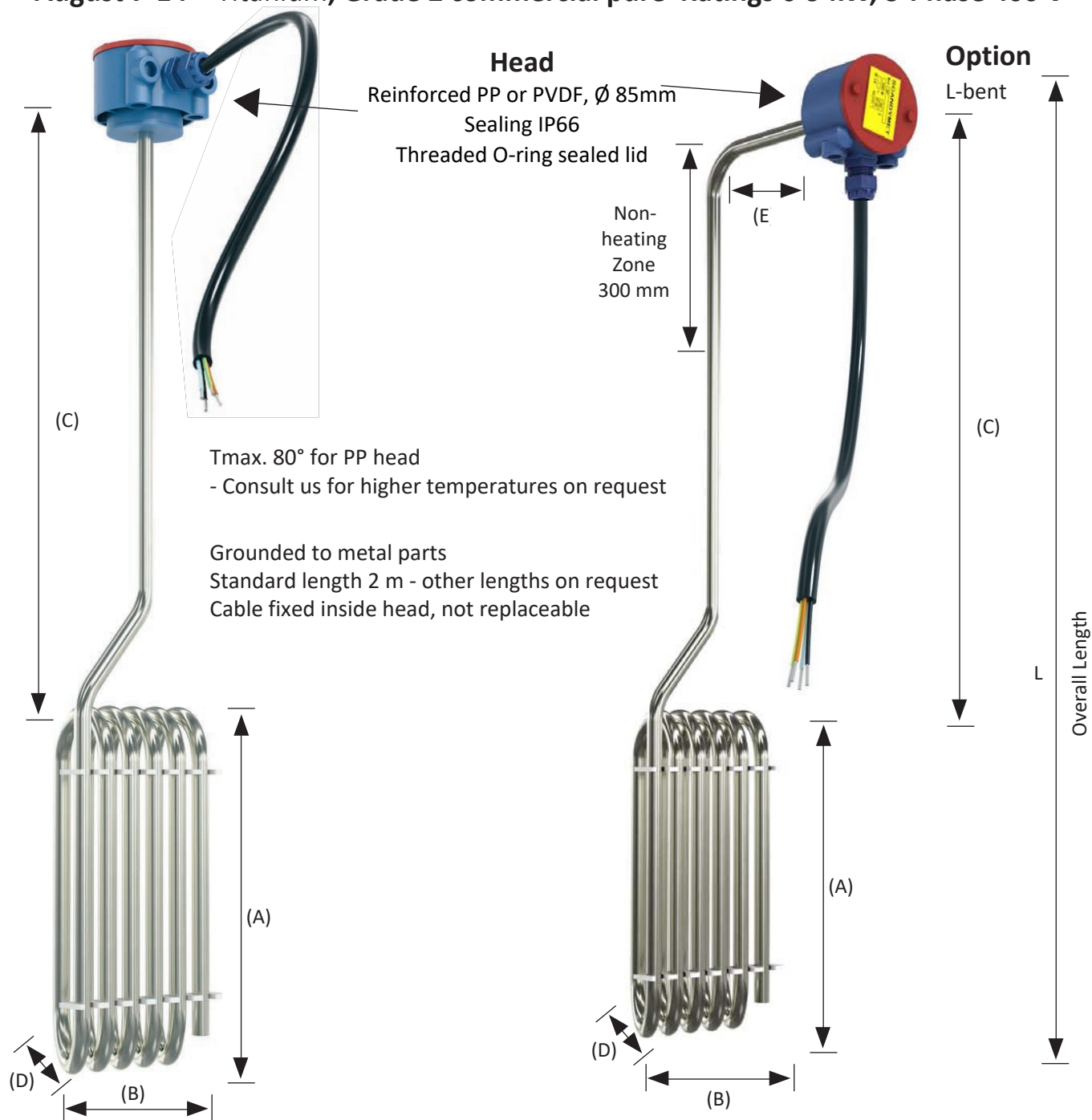
kW	A	B	C	D	E	L	W/cm ²
SMSP Mild steel, EN 1.0037							
2 kW	495	180	200	35	150	685	2,2
3 kW	495	180	200	35	150	685	3,3
4 kW	495	180	200	35	150	685	4,4
SSSP Stainless steel, EN 1.4404 / AISI 316L							
2 kW	495	180	200	35	150	685	2,2
3 kW	495	180	200	35	150	685	3,3
4 kW	495	180	200	35	150	685	4,4
STIP Titanium, Grade 2 commercial pure							
2 kW	495	180	200	35	150	685	2,2
3 kW	495	180	200	35	150	685	3,3
4 kW	495	180	200	35	150	685	4,4



AUGUST VAT Heater

August 1-14 – Stainless Steel, EN 1.4404/AISI 316L Ratings 3-9 kW, 3-Phase 400 V

August 7-14 – Titanium, Grade 2 commercial pure Ratings 6-9 kW, 3-Phase 400 V



3x400 V heater with 2 m cable.

	A	B	C	D	E	L	W/cm ²	Model nr
3 kW	300	180	300	90	150	600	1,5	August 1
	300	180	400	90	150	700	1,5	August 2
	300	180	600	90	150	900	1,5	August 3
4,5 kW	300	180	300	90	150	600	2,5	August 4
	300	180	400	90	150	700	2,5	August 5
	300	180	600	90	150	900	2,5	August 6
6 kW	300	180	300	90	150	600	3,8	August 7
	300	180	400	90	150	700	3,8	August 8
	300	180	600	90	150	900	3,8	August 9
9 kW	300	180	900	90	150	1200	3,8	August 10
	300	180	300	90	150	600	5,6	August 11
	300	180	400	90	150	700	5,6	August 12
	300	180	600	90	150	900	5,6	August 13
	300	180	900	90	150	1200	5,6	August 14

STFP Heater

Rigid Teflon VAT heater

Ratings: 0,5-3,7 kW

Voltage: 1 phase 230 V or 3 phase 400 V

Tmax. 80° for PP head

- Consult us for higher temperatures on request

Head

Reinforced PP or PVDF, Ø 85mm

Sealing IP66

Threaded O-ring sealed lid

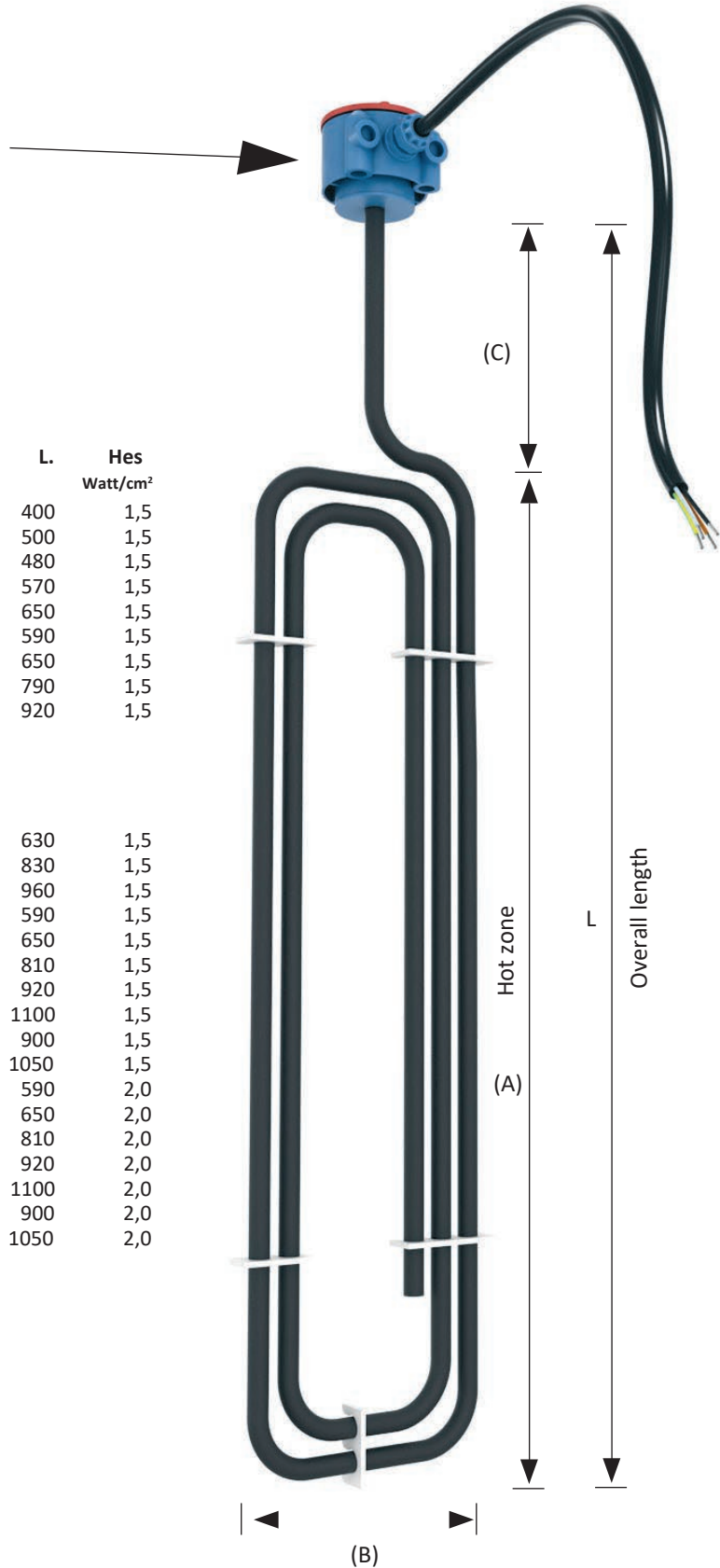
Cable fixed inside head, not replaceable

STFP 1 phase 230 Volts

	A	B	C	Th.	L.	Hes Watt/cm ²
1KW	220	290	200	35	400	1,5
1,5KW	320	240	200	35	500	1,5
2KW	280	340	200	35	480	1,5
2KW	450	210	200	35	570	1,5
2KW	390	240	200	35	650	1,5
3KW	340	420	250	35	590	1,5
3KW	400	320	250	35	650	1,5
3KW	540	260	250	35	790	1,5
3KW	720	220	200	35	920	1,5

STFP 3 phase 400 Volts

2,25KW	430	250	200	35	630	1,5
2,25KW	630	200	200	35	830	1,5
2,25KW	760	175	200	35	960	1,5
3KW	340	420	250	35	590	1,5
3KW	400	320	250	35	650	1,5
3KW	560	260	250	35	810	1,5
3KW	720	220	200	35	920	1,5
3KW	880	195	200	35	1100	1,5
3KW	680	175	220	50	900	1,5
3KW	850	175	200	50	1050	1,5
3,7KW	340	420	250	35	590	2,0
3,7KW	400	320	250	35	650	2,0
3,7KW	560	260	250	35	810	2,0
3,7KW	720	220	200	35	920	2,0
3,7KW	880	195	200	35	1100	2,0
3,7KW	680	175	220	50	900	2,0
3,7KW	850	175	200	50	1050	2,0

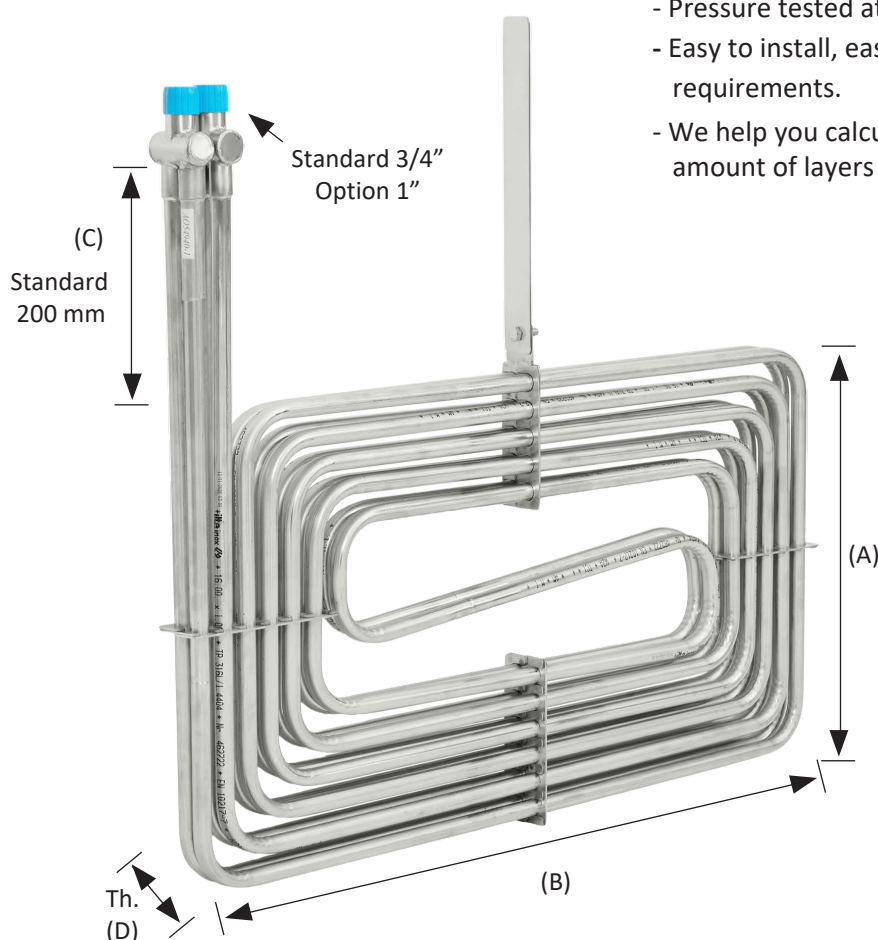


Hampus

Metallic Heat exchanger for liquids

- **HSS904L** - Stainless steel AISI 904L can be used in H₂SO₄ anodizing processes at operating temperatures up to 33°C.
- **HSS** - Stainless Steel, EN 1.4404 / AISI 316L
- **HTI** - Titanium, Grade 2 commercial pure

- For both heating and cooling applications
- Compact and rigid design, requires less space than a serpentine coil.
- Coil is manufactured in Stainless Steel or Titanium.
- Pressure tested at 7 bar.
- Easy to install, easily custom manufactured to meet specific requirements.
- We help you calculate the required surface area and amount of layers based on your tank parameters.



Example dimensions - One layer

A	B	D	Surface area
550	1000	35	0,9 m ²
600	800	35	0,8 m ²
600	1100	35	1,1 m ²
1080	580	35	1,0 m ²

Example dimensions - Two layers

A	B	D	Surface area
550	1000	70	1,8 m ²
600	800	70	1,6 m ²
600	1100	70	2,2 m ²
1080	580	70	2,0 m ²

- Can be manufactured with up to 4 layers as standard. Additional layers on request.
- Other dimensions on request.

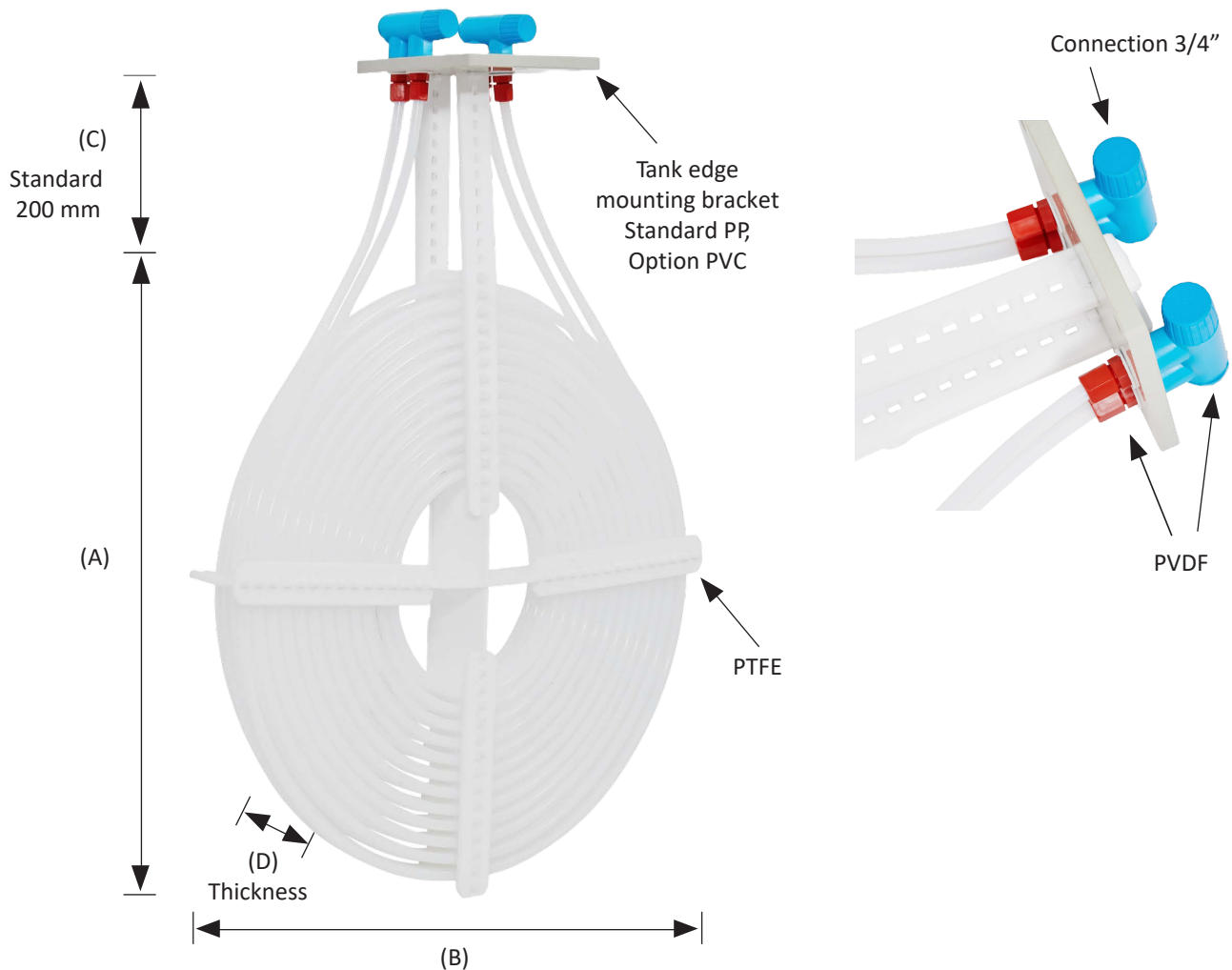
Inga

Teflon Tubular Heat exchanger for corrosive liquids

- For both heating and cooling applications
- Compact design, standard range – much value for money!
- Pressure tested at 5 bar. T.max 95° C
- Easy to install – ready for use
- We help you calculate the required surface area and amount of layers based on your tank parameters.

Options:

- C-measurement can be modified to meet requirements
- Mounting bracket: standard PP, option PVC
- Pipe connection: standard 3/4"



A	B	C	D	Surface area m ²	A	B	C	D	Surface area m ²
530	530	200	60	0,8	680	680	200	130	3,5
580	580	200	60	1,2	680	680	200	150	4,0
630	630	200	80	1,8	805	805	200	105	4,2
705	705	200	80	2,0	710	710	200	150	4,5
760	760	200	80	2,5	805	805	200	130	5,7
805	805	200	80	2,8	710	710	200	180	6,2
710	710	200	130	2,8	805	805	200	150	7,0
650	650	200	150	3,5	805	805	200	180	8,0

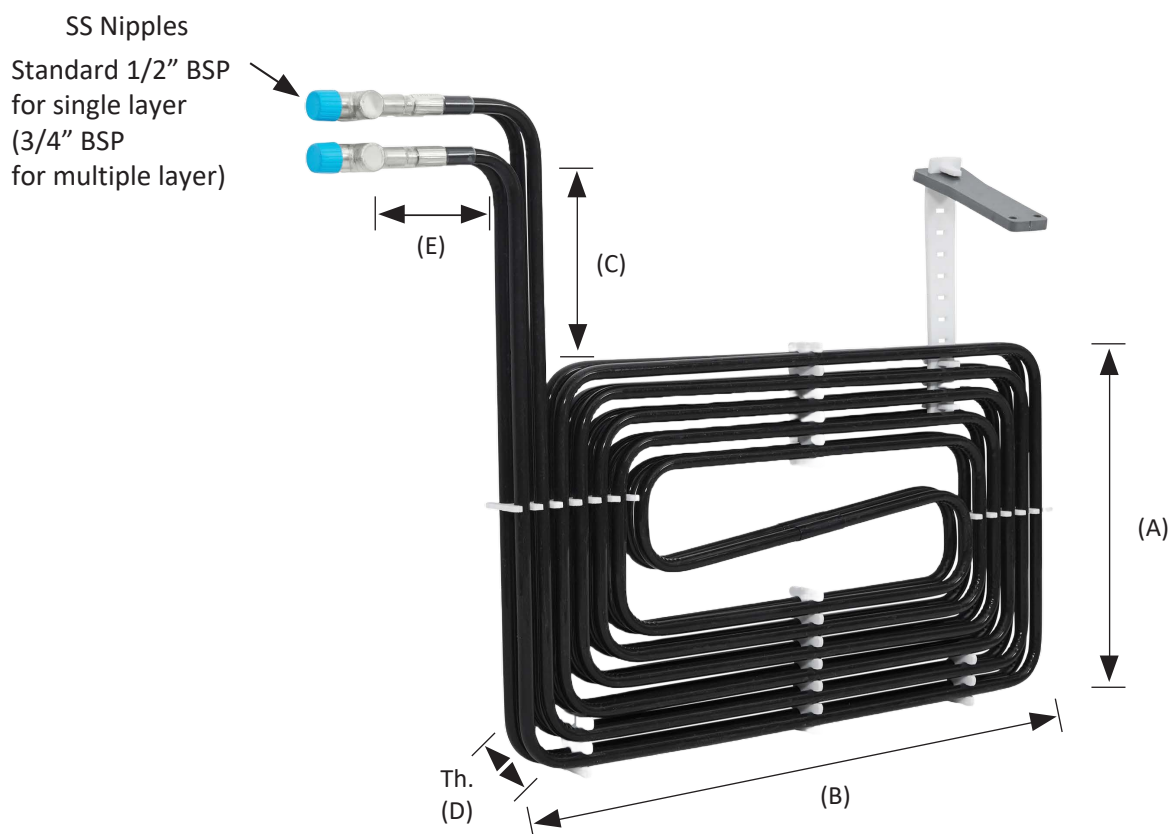
Gunnar

Rigid Tubular Heat exchanger for corrosive liquids

- Standard range, compact, rigid design.
- Open design, easy to inspect and clean.
- Can be custom manufactured to meet specific requirements.
- We help you calculate the required surface area and amount of layers based on your tank parameters.

Teflon coated Heating and Cooling Coil

- Available in Stainless Steel (**GSS**), Teflon coated (**GTF**) and Titanium (**GTI**)
- Pressure tested at 7 bar, 160°C
- Suitable for Thermo-fluid
- Durable design where pressure spikes can occur
- C and E measurement according to your request



Example dimensions - other dimensions on request

A	B	C	E	D	Surface area m ²
425	650	200	200	35	0,45
425	650	200	200	50	0,9
425	650	200	200	75	1,35
425	650	200	200	100	1,8
700	475	200	200	35	0,55
700	475	200	200	50	1,1
700	475	200	200	75	1,65
700	475	200	200	100	2,2
870	525	200	200	35	0,6
870	525	200	200	50	1,2
870	525	200	200	75	1,8
870	525	200	200	100	2,4

Inga - Gunnar - Hampus

Metallic and Fluoropolymer Heat Exchangers Capacity and Size Calculations Example

Heating Coil (Double coils in one plane) Summary of Calculations for Heating Coils

Page
1(1)

Customer:

Project:

Tank no: 1A

Calculation no: 1.

Volume to heat:	2,3	m ³	
Liquid: water	4175	J/kg*oC	
Total power for heating:	432113	kJ	15 kW
Heating time:	8	h	
Starting temp.:	20	°C	
Operating temp.:	65	°C	

Heat supply water	80	°C	input
	70	°C	output

Logarithmic mean temperature: 25,60 °C

Example of valuable
information for your installation

Coil pipe:	dia.out.	25	mm	
	dia. in.	23	mm	
	thickness 1	1	mm	SS
	thickness2	0	mm	SS

Total heat transfer coefficient 708,73 W/m².°C

Minimum flow required

Minimum flow	1,29	m ³ /h
no of parallel coils	1	pcs
flow speed	0,86	m/s

Size of coil

Length of one coil	11,0	m
Area of one coil	0,830	m ²
Area of 1 coils	0,830	m ²
pressure drop of one coil	0,82	m wc

0,08 bar

Pressure drop per coil

Recommended diameter of feeding pipe	#MISSING!	mm
flow speed in feeding pipe	#MISSING!	m/s
	#MISSING!	

The dimensions of the coil are shown in drawing no Offen

Width	810 mm
Height	738 mm

Recommendation for the choice of the feeding pump

Pressure loss for one coil	0,82	m wc
Geodetic difference	2,00	
Extra	5,00	
Total	7,82	m wc

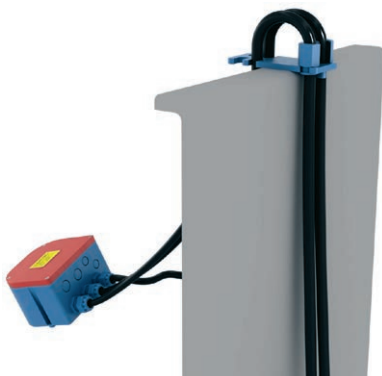
0,78 bar

Calculated pump power	0,042	kW
Pump efficiency	65	%

Needed pump power

Fastening options for Scandymet Products

Heater fasteners



- Fastener in reinforced PP
- For mounting of flexible heaters on tank edge
- Fits all STFX, STIX and SCAX

PP-Fastener for Flexible Heater
2-holes **Product Code 15279**
4-holes **Product Code 15280**



- Fastener in reinforced PP
- For mounting tubular, all straight and rigid heaters on tank edge
- Fits STI, SRF, SST, SQG, STE, STFP, MSP, SSP, TIP and August

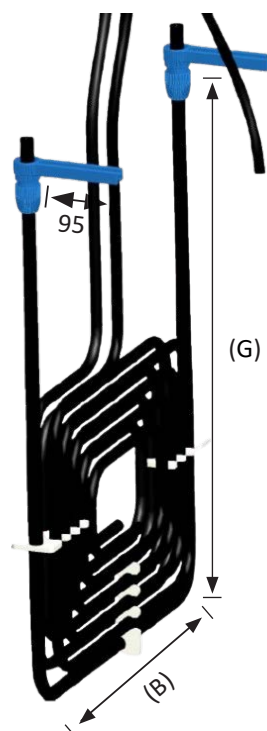
PP-Fastener for Tubular Heater/VAT
Product code 15198

Height adjustable frames for flexible heaters

Available in:

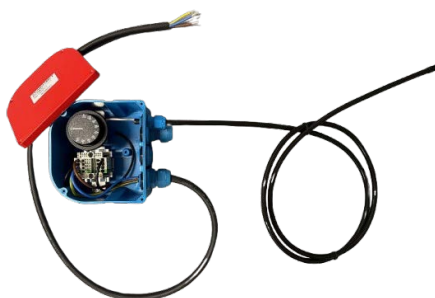
- Teflon coated Stainless steel
- Stainless steel
- Titanium

Frame add 40 mm on (B) heater measurement and 20 mm on (A) heater measurement.



SCANDYMET Thermostat ISABELLE

Non indicating thermostat with plastic junction box.
Temperature sensor Teflon coated for resistance in chemical solutions.



Product code	Power	Max. wattage	Max.amps.	Temp. Range	Sensor length	Accuracy
Isabelle 1	230V	3100	16	30-110°C	1,5 mtr.	+/- 1,5° C
Isabelle 2	400V	9000	16	30-90°C	0,9 mtr.	+/- 1,5° C

SCANDYMET Digital Thermal Regulator KELVIN



Dual LED display to set range.
Provides precise control in most aqueous processes Use with PT-100 sensor
Temperature range with PT-100 sensor
-50° C to +180° C. Accuracy +/- 0,6° C.
Power 230V, 50/ 60 Hz
Additional features: Type J,K,T thermocouples

PT-100 sensors for different liquids



PT-100 Rigid sensor with PP head and fastener

- Teflon coated or Stainless Steel (SS) probe.
- Standard lengths 200-1000 mm.
- Other lengths on request.
- Temperature range -50° C to + 180° C.
- Available with head and bracket in PVDF.

Rigid Teflon coated probe

Length

200 mm
300 mm
400 mm
500 mm
600 mm
700 mm
800 mm
900 mm
1000 mm

Rigid Stainless Steel (SS) probe

Length

200 mm
300 mm
400 mm
500 mm
600 mm
700 mm
800 mm
900 mm
1000 mm



PT-100 Flex sensor

- Teflon coated standard length 1,5 m + 1,5 m cable.
- Available in other lengths, please consult us.
- Temperature range -50° C to +180° C.

Product code

PT-100Flex

Conductive Level Control



Conductive Level sensor with PP head and bracket

- Operates in most electrically conductive solutions
- Probes in Stainless Steel (SS) or Titanium (Ti)
- With or without Teflon coating
- Standard lengths 200 – 1000mm. Up to 5 probes per unit.
- For other lengths please consult us
- Available with head and bracket in PVDF

Place orders according to Product code example below

EXAMPLE

Product code	Base material	Coating	No of probes	Length of probes
CLSS/Teflon3-500	Stainless steel	Teflon	3	500

Graphite Conductive Level sensor with PP head and bracket

- Operates in most electrically conductive acidic solutions
- Graphite probes resistant to most acids
- Standard lengths 100 – 1000mm. Up to 5 probes per unit.
- Exact probe lengths are specified per unit
- Available with PVDF head and fastener

Place orders according to Product code example below

EXAMPLES

Product code	No of probes	Lengths				
		Probe 1	Probe 2	Probe 3	Probe 4	Probe 5
CLGR5P100/150/200/300/500	5	100	150	200	300	500
CLGR3P350/420/570	3	350	420	570		



Float Level Switch



FSPF

Float Level sensor with PP head and bracket

- Operates in most acidic solutions
- Product consisting of PP and PVDF components
- Available in lengths: 100, 200, 300, 400, 600mm

Place orders according to Product code example below

EXAMPLE

Product code	Material	Length
FSPF400	PP	400



FSPVDF

Float Level sensor with PVDF head and bracket

- Operates in most acidic solutions
- Product consisting of PVDF components
- Available in lengths: 100, 200, 300, 400, 600mm

Place orders according to Product code example below

EXAMPLE

Product code	Material	Length
FSPVDF400	PVDF	400

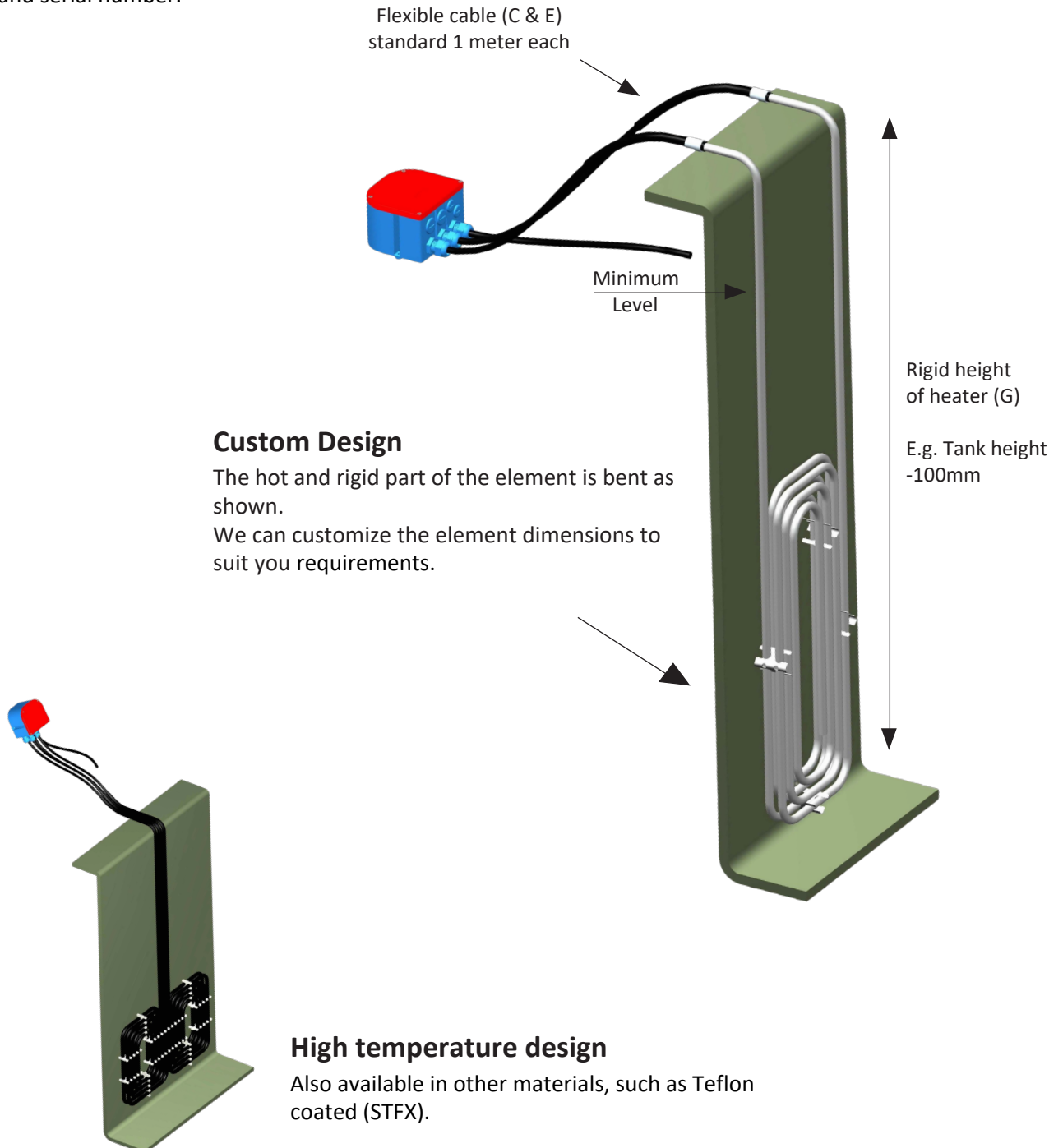
- Made from PP or PVDF for chemical and thermal resistance, it offers a simple solution for liquid level monitoring.
- Reliable operation requires clean, non-encrusting liquids; otherwise, a capacitive sensor is recommended.

High temperature

Metallic and Teflon coated flexible heater design recommended for high temperature processes $+85^{\circ}\text{C}$.

Heater Identification

All heaters are clearly labeled with power, voltage, and serial number.



SCANDYMET Overheat Protection



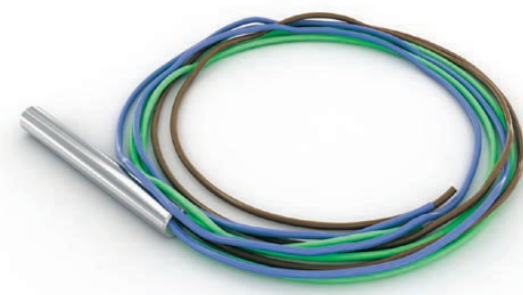
OHP 1

Resettable bimetallic overheat protection for heater type STFX, STIX and SCAX

Teflon coated submersible flexible riser

Length according to length of heater cable

Maximum process temperature +90° C



OHP 1 High-temp

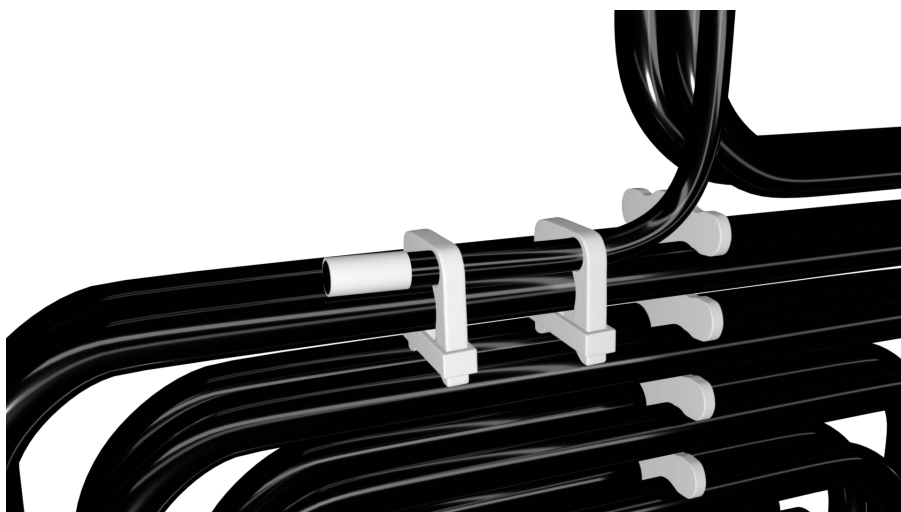
Resettable bimetallic overheat protection for heater type STFX, STIX and SCAX

Teflon coated submersible flexible riser

Length according to length of heater cable

For process temperatures above +90°C

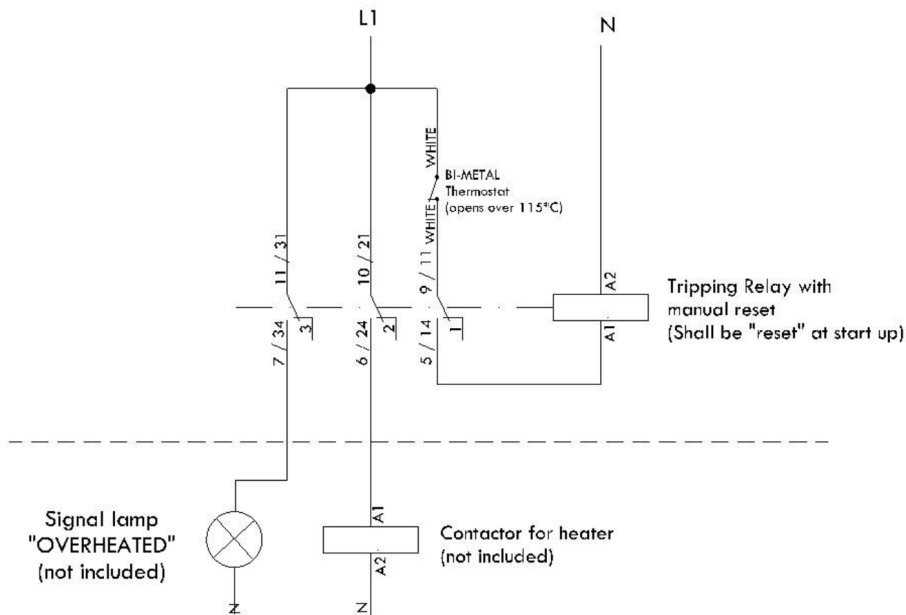
Overheat protection sensor installed on heating element



Overheat protection why and when?

Every electric immersion heater can suddenly be exposed to air e.g. by low fluid level or by being removed from the tank by mistake. Without Overheat Protection it is a matter of minutes before the temperature of the heater is high enough to destroy it and cause damage to the vat or plant.

We particularly recommend Overheat Protection when heaters are installed in tanks of flammable materials such as plastic or steel vats lined with rubber. The wiring diagram shows a fully reliable and low cost method to achieve the securest and highest level of overheat protection.



Tripping Relay
OPEN



CLOSED
"RESET"

Scandymet electrical immersion heaters

Installation manual and maintenance instructions

Before installing:

- ❑ Inspect the heater. Verify it is undamaged after transport, and that there is no damage to the glass, teflon, or electric cable.
- ❑ Check the sheath material to be sure it is compatible with the intended bath solution. If you are even slightly uncertain, contact us!
- ❑ Confirm the heater voltage agree and the cubicle is locked for heating capacity.

During installation

- ❑ Installation must be done by a qualified electrician.
In a stationary electrical installation an Residual Current Device must precede the heater.
- ❑ Confirm all power is disconnected and fuses have been removed at the actual switching point.
- ❑ Heaters without supports have to be installed vertically. The active part should be at least 20 mm from the tank wall, bottom, or sludge accumulation. Otherwise, overheating and/or heater damage can be the consequence.
- ❑ Heaters should be installed for stationary service (anchored) in a bath solution of 95° C max. Min. level and max. level for bath solutions are marked on the heaters. While in service the solution level must be maintained between these markings.
- ❑ For electrical heating, a level control must always be installed. If not, overheating can occur at min. level, which may be a fire hazard.
- ❑ In service, heaters should be protected from contact with moving parts, anodes, cathodes, or any other source of current.

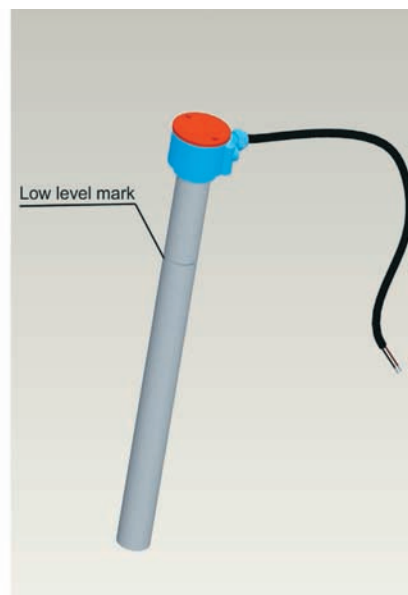
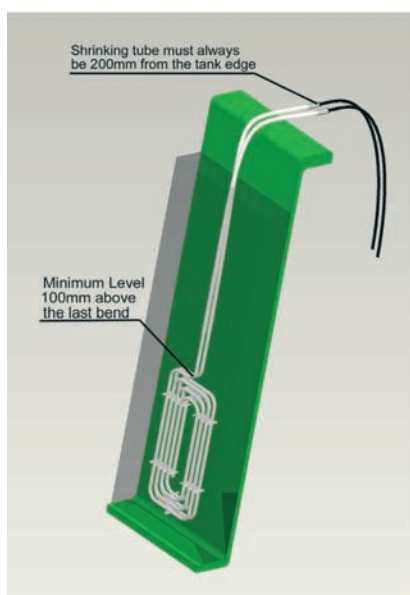
- ❑ When installing heaters with a collecting box, the box must always be located where it will not be subjected to direct flushing, drips, or vapors from bath solution. The collecting box should never be located on the tank edge.

Maintenance and control of immersion heater in service

- ❑ Maintain the solution level between the two level marks.
- ❑ Clean heaters regularly and check function of level control.
- ❑ Check heaters regularly for any sign of potential failure, such as cracks (glass or teflon) or corrosion (metal heater).
- ❑ When checking the element, the electricity supply to the heater must be turned off at least 20 minutes prior to exposing the element to air.
- ❑ The supply cord cannot be replaced. If the cord is damaged the appliance should be scrapped (flexible heaters).
- ❑ If the supply cord is damaged, it must be replaced by manufacturer, its service agent or similiary qualified person in order to avoid a hazard (tubular heaters).

Cleaning of heaters

- ❑ Turn off the heat electric supply for at least 20 min. prior to exposing the element to air.
- ❑ A soft brush or gloved hands are recommended to remove build-up from the element. Be cautious while cleaning to avoid damage.



Heater Selection Guideline

			STFX	SF0	STI	SST
			STFP	SRF	STI	SST
			STE	SCAX	STIX	MSP
				SSP	SQG	
Acetic acid	H3COOH	Quartz or teflon	X		X	
Alkaline cleaner		Stainless steel, steel		X		X
Alkaline soaking cleaners		Stainless steel, steel		X		X
Aluminum bright		Quartz or teflon	X		X	
Aluminium chloride	ALCL3	Quartz or teflon	X		X	
Aluminum sulphate	AL2SO4	Stainless steel		X		
Ammonium fluoride	NH4F	Quartz or teflon	X			
Ammonium chloride	NH4CL	Titan			X	
Ammonium persulphate	(NH4)2S2O8	Stainless steel		X		
Bonderizing	NA2B4O7 10 H2O	Stainless steel		X		
Black oxide		Stainless steel		X		
Boric Acid	H3BO3	Titanium			X	
Bright nickel	Ni3CO3(OH)4 4H2O	Quartz, PTFE or Titanium	X		X	X
Bright copper cyanide		Stainless ,steel or steel		X		X
Bronze		Stainless steel		X		
Brown oxide		Titanium			X	
Butyric acid	CH3CH2CH2-COOH	Titanium			X	
Calcium chloride	CaCL2	Titanium			X	
Carbonic acid	H2CO3	Titanium			X	
Caustics		Steel				X
Chromic acid no fluorides	H2CRO4	Quartz or teflon	X		X	
Chlorosulphuric acid	HSO 3 CL	Titanium			X	
Chromic baths		Quartz or teflon	X		X	
Chromate baths		Teflon	X			
Copper acid		Teflon	X			
Copper fluoborate		Teflon	X			
Copper strike		Stainless steel		X		
Deionized water		Titanium			X	
Deoxidizer etching		Quartz or teflon	X		X	
Electroless copper		Teflon	X			
Electroless nickel		Teflon	X			
Electroless tin		Teflon	X			
Electro cleaner		Stainless steel		X		
Electro Polishing		Teflon or quartz	X		X	
Ferric Chloride	FeCL3	Quartz or teflon	X		X	
Ferric nitrate	FE(NO3)3	Teflon	X			
Fluoborate baths		Teflon	X			
Formic acid	HCOOH	Stainless steel		X		

Heater Selection Guideline

			STFX	SFO	STI	SST
			STFP	SRF	STI	SST
			STE	SCAX	STIX	MSP
				SSP	SQG	
Gold acid		Titanium, quartz or teflon	X		X	X
Hydrochloric acid	HCL	Teflon or quartz	X		X	
Hydrofluoric acid	HF	Teflon	X			
Hydrogen peroxide	H2O2	Quartz or teflon	X		X	
Iron Phosphate	FePO4	Stainless steel		SFO		
Manganese Phosphate	MnPO4	Stainless steel		SFO		
Nickel plating (watts)		Titanium, quartz or teflon	X		X	X
Nickel acetate		Stainless steel		X		
Nickel Chloride	NiCL2	Titanium				X
Nickel sulphate	NiiSO4	Titanium, quartz or teflon	X		X	X
Nitric acid	HNO3	Quartz or teflon	X		X	
Oil		Steel, stainless steel		X		
Oxalic acid	C2O2(OH)2	Quartz or teflon	X		X	
Paint stripper (alkaline)		Stainless steel		X		
Phosphoric acid	H3PO4	Teflon	X			
Phosphate		Stainless steel		X		
Potassium acid		Teflon	X			
Potassium hydroxide	KOH	Stainless steel		X		
Potassium permanganate	KMnO4	Stainless steel		X		
Ruthenium	Ru	Teflon	X			
Sea water		Titanium				X
Silver baths		Stainless steel		X		
Sodium bisulphate	NaHSO4	Teflon	X			
Sodium carbonate	Na2CO3	Titanium				X
Sodium Chlorate	NaCLO3	Titanium				X
Sodium chloride	NaCL	Titanium				X
Sodium persulphate	Na2S2O8	Teflon	X			
Sulphuric acid		Quartz or teflon	X		X	
Tin acid baths		Teflon	X			
Tin alkaline baths		Stainless steel		X		
Zinc acetate	Zn(O2CCH3)2	Titanium or teflon	X			X
Zink ammonium chloride		Titanium				X
Zink phosphate		Stainless steel		X		
Zincate		Stainless steel		X		

This list is provided as a help and guide only and SCANDYMET assumes no responsibility for damages resulting from faulty material choice. Due to the complexities of solutions and applications it is the user's responsibility to check with the supplier of chemicals, regarding immersion heater and heat exchanger material compatibility and recommendations.

Warranty

All Scandymet equipment, heaters and controls have been carefully inspected before shipping and are warranted to be free from defects in workmanship and material for a period of one year from date of purchase on a prorated basis. At its option, Scandymet will repair or replace any defects which are exhibited under proper and normal use. Scandymet disclaims any responsibility for misuse, misapplication, negligence or improper installation of equipment. Scandymet makes no warranty or representation regarding the fitness for use or the application of its products by the purchaser.

Please ensure applicability of heater before installation since we cannot guarantee heaters against premature failure due to corrosion caused by unusual conditions over which we have no control, such as:

- Excessive sludge buildup
- Stagnant or turbulent flow of the solution
- Aeration
- Erosion

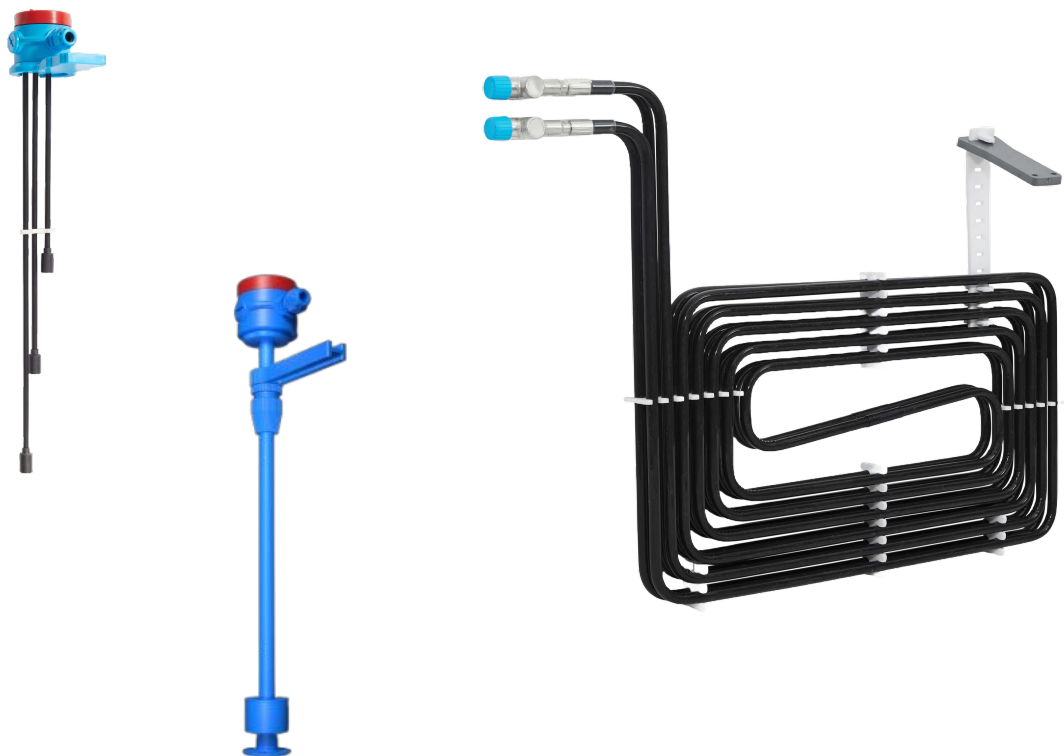
Scandymet is not liable for costs incurred in removal, reinstallation, or unauthorized repair of the product, or for damage of any type whatsoever including incidental or consequential damage.

Transports

If no other agreements have been made, claims against freight carriers for damage in transit must be filed by the buyer and freight must be pre-paid for returned products.

Kindly inform us immediately if you have received damaged products. Specifications of products in catalog are subject to change without notice.

Continuous development since 1977!



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