



ELECRO

Improving water heating and sanitisation globally since 1997

PROUDLY CELEBRATING



ALL TITANIUM

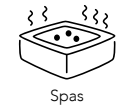
FLOWLINE 2

Reliable, accurate, silent and extremely efficient, the Flowline 2 heater is the perfect choice for residential pools and spas. A rust-resistant, fully titanium flow tube and heating element delivers greater longevity whilst multiple power options provide for a wider range of flow rates from as low as 1m³/h.

FEATURES

- 20 models available, ranging from 1-kW to 24-kW
- Non-wired. Requires connection to external contactor
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation

SUITABLE FOR:



SPECIFICATIONS

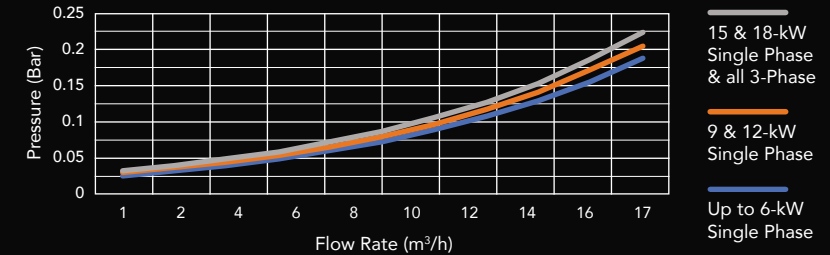
Power supply:	Single phase or 3-Phase
Min. flow rate:	Up to 3-kW: 1m ³ /hr, 4-kW to 6-kW: 1.5m ³ /hr, 8.4-kW & greater: 4m ³ /hr
Max. flow rate:	17m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Gold tipped reed switch with titanium fulcrum pin
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped ABS unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
Ingress protection rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

MODELS

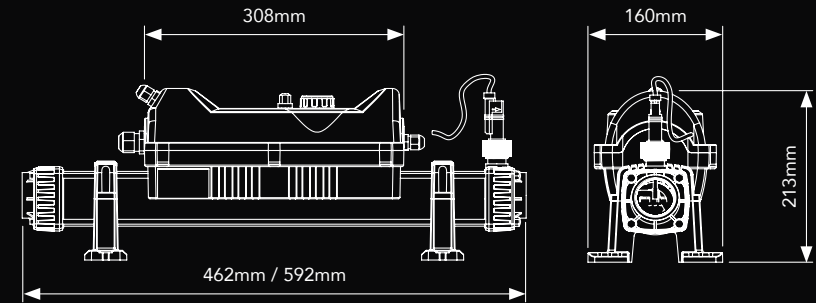
MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
220~240V 1-Phase	1-kW	4.5	462	2.9360	4.2300	0.0464	FL2-1-1
	2-kW	8.5	462	2.9360	4.2300	0.0464	FL2-1-2
	3-kW	13	462	2.9360	4.2300	0.0464	FL2-1-3
	4.5-kW	20	462	2.9360	4.2300	0.0464	FL2-1-4.5
	6-kW	26	462	2.9360	4.2300	0.0464	FL2-1-6
	9-kW	40	462	3.2360	4.5300	0.0464	FL2-1-9
400V 3-Phase*	6-kW	9	592	3.6560	4.9500	0.0464	FL2-3-6
	9-kW	13	592	3.6560	4.9500	0.0464	FL2-3-9
	12-kW	18	592	3.6560	4.9500	0.0464	FL2-3-12
	15-kW	22	592	3.6560	4.9500	0.0464	FL2-3-15
	18-kW	26	592	3.6560	4.9500	0.0464	FL2-3-18
	24-kW	34	592	3.6560	4.9500	0.0464	FL2-3-24
220~240V 3-Phase**	6-kW	15	592	3.7260	5.0200	0.0464	FL2-3-6-D
	9-kW	23	592	3.7260	5.0200	0.0464	FL2-3-9-D
	12-kW	30	592	3.7260	5.0200	0.0464	FL2-3-12-D
	15-kW	38	592	3.7260	5.0200	0.0464	FL2-3-15-D
120V 1-Phase	1-kW	8.5	462	2.9360	4.2300	0.0464	FL2-1-1-120
	1.5-kW	12.5	462	2.9360	4.2300	0.0464	FL2-1-1.5-120
	2-kW	17	462	2.9360	4.2300	0.0464	FL2-1-2-120

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: FL2-3-6-380. ** For voltage 208V please add: -208 at the end of a product code e.g: FL2-3-6-D-208.

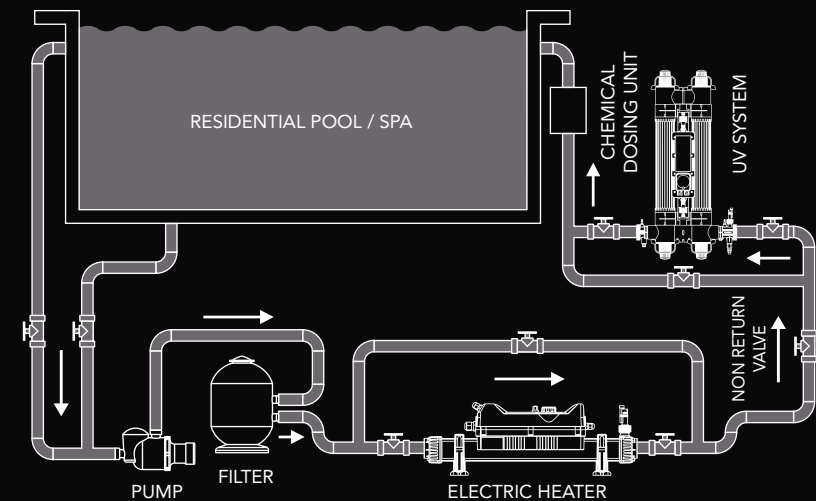
PRESSURE DROP

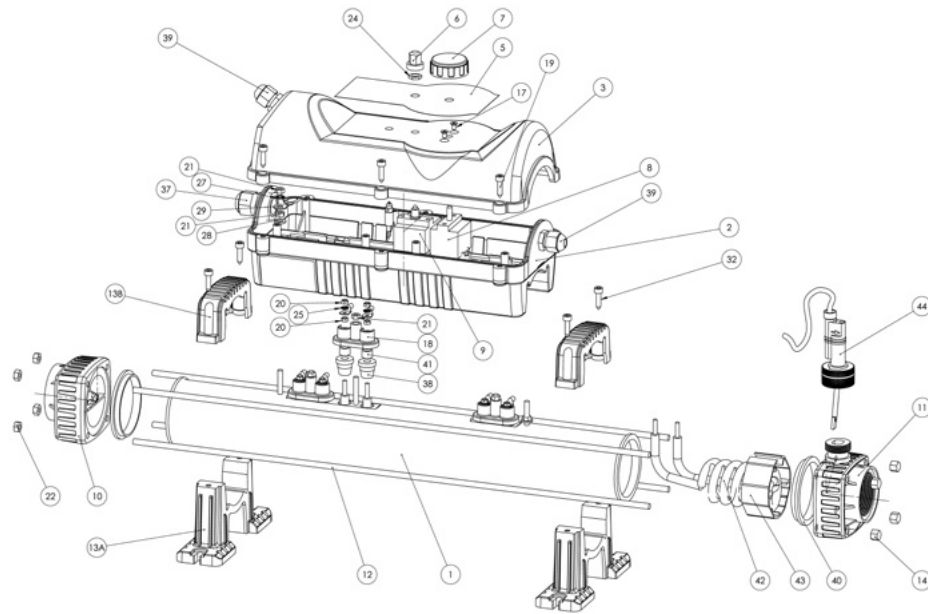


TECHNICAL DRAWINGS

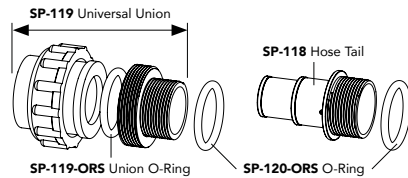


SYSTEM SETUP





Flowline 2 (Component Diagram)



Water Connections

See page opposite for full description and pcs/unit.

SPARE PARTS LIST

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
1	Titanium Flow Tube Up to 6-kW Single Phase	1	X-TUB-TI370-1E
	Titanium Flow Tube 9-kW & 12-kW Single Phase	1	X-TUB-TI370-2E
	Titanium Flow Tube 15-kW, 18-kW Single Phase	1	X-TUB-TI500-3E
	Titanium Flow Tube All 3-Phase	1	X-TUB-TI500-3E
2	Electrical Enclosure Base	1	Z-IM-E2-BC
3	Front Cover	1	Z-IM-E2-FLO-TC
5	Ops Panel Overlay	1	Z-LAB-FL
6	Manual Reset Button Cover	1	Z-MIS-HLS-CVR
7	Control Thermostat Dial	1	Z-IM-OC-ANA
8	Analogue Control Thermostat	1	SP-MIS-CS
9	High Limiting Safety Thermal Cut Out	1	SP-MIS-HLS
10	Left End Fitting (Non Flow Switch)	1	SP-117
11	Right End Fitting (Flow Switch)	1	SP-117B
12	M6 Tie Bar Up to 12-kW 230V Single Phase	4	Z-STU-443
	M6 Tie Bar 15-kW & 18-kW Single Phase	4	Z-STU-573
	M6 Tie Bar All 3-Phase	4	Z-STU-573
13A	Foot Lower	2	Z-IM-E2-FL
13B	Foot Upper	2	Z-IM-E2-FU
14	M6 Dome/Cap Nut	4	Z-FIX-M6CAP
	M4 x 6mm Screw	2	Z-FIX-M4X6CS
	Element Bridge Up to 6-kW Single Phase	1	Z-IM-EL-BRI
	Element Bridge 9-kW & 12-kW Single Phase	2	Z-IM-EL-BRI
Element Bridge 15-kW & 18-kW Single Phase		3	Z-IM-EL-BRI
	Element Bridge All 3-Phase	3	Z-IM-EL-BRI
19	Enclosure Screws	6	Z-FIX-M4.8x19STS-SC
20	M4 Hex Nut Up to 6-kW Single Phase	2	Z-FIX-M4HEX
	M4 Hex Nut 9-kW & 12-kW Single Phase	4	Z-FIX-M4HEX
	M4 Hex Nut 15-kW & 18-kW Single Phase	6	Z-FIX-M4HEX
	M4 Hex Nut All 3-Phase	6	Z-FIX-M4HEX
21	M5 Hex Nut Up to 6-kW Single Phase	1	Z-FIX-M5HEX
	M5 Hex Nut 9-kW & 12-kW Single Phase	2	Z-FIX-M5HEX
	M5 Hex Nut 15-kW & 18-kW Single Phase	3	Z-FIX-M5HEX
	M5 Hex Nut All 3-Phase	3	Z-FIX-M5HEX
22	M6 Hex Nut	4	Z-FIX-M6HEX
24	M8 Hex Nut	1	Supplied with #9
25	M4 Locking Washer Up to 6-kW Single Phase	2	Z-FIX-M4LW
	M4 Locking Washer 9-kW & 12-kW Single Phase	4	Z-FIX-M4LW

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
	M4 Locking Washer 15-kW & 18-kW Single Phase	6	Z-FIX-M4LW
	M4 Locking Washer All 3-Phase	6	Z-FIX-M4LW
27	M5 Locking Washer	2	Z-FIX-M5LW
28	M6 Flat Washer	2	Z-FIX-M6FW
29	Earth Terminal	2	Z-CON-YR53
32	Foot Screws	4	Z-FIX-M4.8x19STS-SC
37	PG-21 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG21BK + Z-CON-PG21NUT
38	Element Ferrule (2pcs per Kit/Element):		
	Up to 6-kW Single Phase	2	Z-IM-EL-FER
	9-kW & 12-kW Single Phase	4	Z-IM-EL-FER
	15-kW & 18-kW Single Phase	6	Z-IM-EL-FER
	All 3-Phase	6	Z-IM-EL-FER
39	PG-9 Cable Entry Gland (Inc Back Nut)	2	Z-CON-PG9BK
40	End Fitting Gasket (Pack of 2pcs)	2	SP-117-GSK
41	Element Stepped Washer (2pcs per Kit):		
	Up to 6-kW Single Phase	2	Z-IM-EL-SW
	9-kW & 12-kW Single Phase	4	Z-IM-EL-SW
	15-kW & 18-kW Single Phase	6	Z-IM-EL-SW
	All 3-Phase	6	Z-IM-EL-SW
42	Titanium Heating Element 2-kW Single Phase	1	SP-EL-Ti2KW7T
	Titanium Heating Element 3-kW Single Phase	1	SP-EL-Ti2.8KW7T
	Titanium Heating Element 4.5-kW Single Phase	1	SP-EL-Ti4.5KW7T
	Titanium Heating Element 6-kW Single Phase	1	SP-EL-Ti6KW7T
	Titanium Heating Element 9-kW Single Phase	2	SP-EL-Ti4.5KW7T
	Titanium Heating Element 12-kW Single Phase	2	SP-EL-Ti6KW7T
	Titanium Heating Element 15-kW Single Phase	3	SP-EL-Ti5KW7T
	Titanium Heating Element 18-kW Single Phase	3	SP-EL-Ti6KW7T
	Titanium Heating Element 6-kW 3-Phase*	3	SP-EL-Ti2KW7T
	Titanium Heating Element 9-kW 3-Phase*	3	SP-EL-Ti2.8KW7T
	Titanium Heating Element 12-kW 3-Phase*	3	SP-EL-Ti4KW7T
	Titanium Heating Element 15-kW 3-Phase*	3	SP-EL-Ti5KW7T
	Titanium Heating Element 18-kW 3-Phase*	3	SP-EL-Ti6KW7T
	Titanium Heating Element 24-kW 3-Phase*	3	SP-EL-Ti8KW7T
43	Element Support (1pc per kit):		
	Up to 6-kW Single Phase	2	Z-IM-EL-SUP
	9-kW & 12-kW Single Phase	4	Z-IM-EL-SUP

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
	15-kW & 18-kW Single Phase	6	Z-IM-EL-SUP
	All 3-Phase	6	Z-IM-EL-SUP
44	Flow Switch Up to 3-kW	1	SP-107-FL-A
	Flow Switch 4-kW to 6-kW	1	SP-107-FL-B
	Flow Switch 9-kW & above	1	SP-107-FL-C

*For all 3-Phase titanium heating elements, please specify the required voltage.

REPLACEMENT TANK ASSEMBLY

MODEL	OUTPUT	DESCRIPTION	PART CODE
1-Phase	2-kW	2-kW 370mm Tank	SP-TA-2-Ti
	3-kW	3-kW 370mm Tank	SP-TA-3-Ti
	4.5-kW	4.5-kW 370mm Tank	SP-TA-4.5-Ti
	6-kW	6-kW 370mm Tank	SP-TA-6-Ti-1P
	9-kW	9-kW 370mm Tank	SP-TA-9-Ti-1P
	12-kW	12-kW 370mm Tank	SP-TA-12-Ti-1P
	15-kW	15-kW 500mm Tank	SP-TA-15-Ti
	18-kW	18-kW 500mm Tank	SP-TA-18-Ti
3-Phase	6-kW	6-kW 500mm Tank	SP-TA-6-Ti-3P
	9-kW	9-kW 500mm Tank	SP-TA-9-Ti-3P
	12-kW	12-kW 500mm Tank	SP-TA-12-Ti-3P
	15-kW	15-kW 500mm Tank	SP-TA-15-Ti
	18-kW	18-kW 500mm Tank	SP-TA-18-Ti
	24-kW	24-kW 500mm Tank	SP-TA-24-Ti-3P

WATER CONNECTION PARTS

DESCRIPTION	PCS/UNIT	PART CODE
1½" BSP Hose Tail 1½"/1¼" Flexible Pipe	2	SP-118
1½" BSP Universal Union for 1½"/50mm Pipe	2	SP-119
'O' Ring (Pack of 2pcs)	2	SP-120-ORS
44mm x 6mm Union 'O' Ring (Pack of 2pcs)	2	SP-119-ORS

ALL TITANIUM

OPTIMA COMPACT

For the home owner who demands the best - the Optima Compact delivers everything you need in a pool heater. Safety, reliability, efficiency and touchscreen digital programming for any modern lifestyle. A highly robust, durable construction, makes this a desirable solution for any residential pool or spa.

FEATURES

- 23 models available, ranging from 1-kW to 24-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation

SUITABLE FOR:



SIMPLIFY YOUR LIFE WITH THE ELECR0 APP

Connection via Bluetooth, Wi-Fi and 4G enables you to take full control of your swimming pool heating from anywhere in your home or office with a simple app on your smartphone.



SPECIFICATIONS

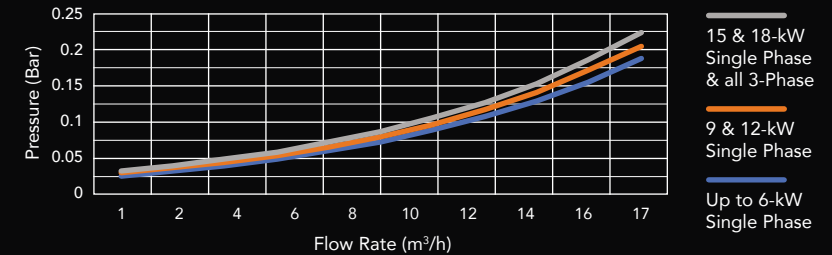
Power supply:	Single phase or 3-Phase
Min. flow rate:	Up to 3-kW: 1m ³ /hr, 4-kW to 6-kW: 1.5m ³ /hr, 8.4-kW & greater: 4m ³ /hr
Max. flow rate:	17m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Touch Screen 0 > 45°C (0.5°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Gold tipped reed switch with titanium fulcrum pin
Contactors:	Dual Siemens 3RT2023 or 3RT2027
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped ABS unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
Ingress protection rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

MODELS

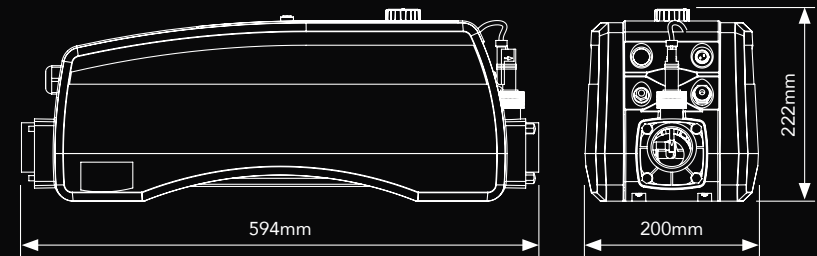
MODEL	POWER OUTPUT	LOAD (amp)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
220~240V 1-Phase	1-kW	4.5	7.1900	8.8300	0.0571	OCPD-1-1
	2-kW	8.5	7.1900	8.8300	0.0571	OCPD-1-2
	3-kW	12	7.1900	8.8300	0.0571	OCPD-1-3
	4.5-kW	20	7.1900	8.8300	0.0571	OCPD-1-4
	6-kW	26	7.1900	8.8300	0.0571	OCPD-1-6
	9-kW	40	7.5100	9.1500	0.0571	OCPD-1-9
	12-kW	53	7.5100	9.1500	0.0571	OCPD-1-12
	15-kW	66	7.8400	9.4800	0.0571	OCPD-1-15
230/400V Versatile*	6-kW	26/8.5	7.7200	9.3600	0.0571	OCPD-V-6
	9-kW	40/13	7.7200	9.3600	0.0571	OCPD-V-9
	12-kW	53/18	7.7200	9.3600	0.0571	OCPD-V-12
400V 3-Phase*	15-kW	22	7.7200	9.3600	0.0571	OCPD-3-15
	18-kW	26	7.7200	9.3600	0.0571	OCPD-3-18
	24-kW	34	7.7200	9.3600	0.0571	OCPD-3-24
220~240V 3-Phase**	6-kW	15	7.7200	9.3600	0.0571	OCPD-3-6-D
	9-kW	23	7.7200	9.3600	0.0571	OCPD-3-9-D
	12-kW	30	7.7200	9.3600	0.0571	OCPD-3-12-D
	15-kW	38	7.7200	9.3600	0.0571	OCPD-3-15-D
120V 1-Phase	1-kW	8.5	7.1900	8.8300	0.0571	OCPD-1-1-120
	1.5-kW	12.5	7.1900	8.8300	0.0571	OCPD-1-1.5-120
	2-kW	17	7.1900	8.8300	0.0571	OCPD-1-2-120

* For voltages other than 400V please add: -380, -415 or -480 at the end of a product code e.g: OCPD-3-15-380. ** For voltage 208V please add: -208 at the end of a product code e.g: OCPD-3-6-D-208.

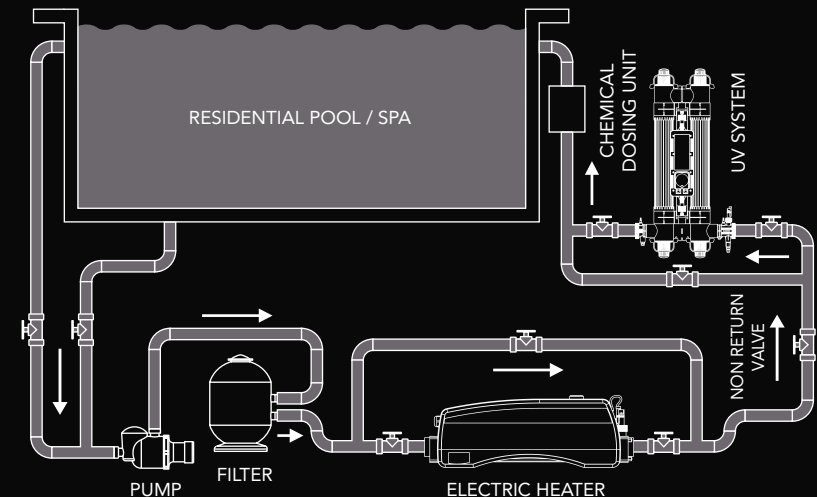
PRESSURE DROP

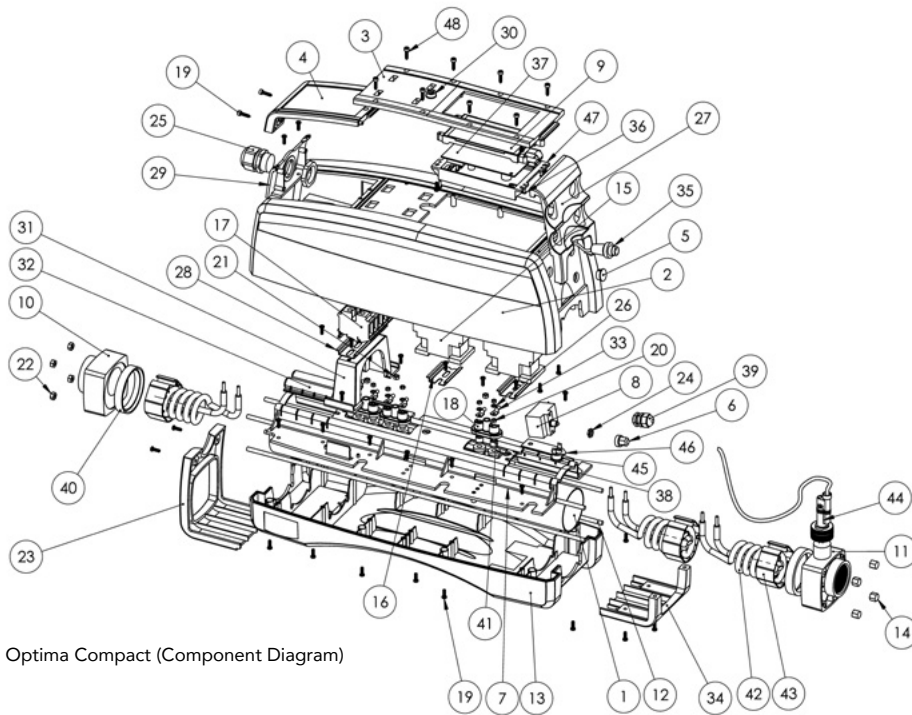


TECHNICAL DRAWINGS



SYSTEM SETUP

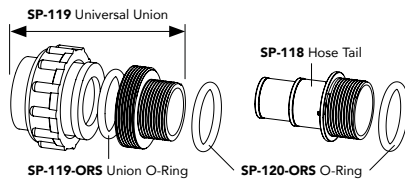




Optima Compact (Component Diagram)

Water Connections

See page opposite for full description and pcs/unit.



SPARE PARTS LIST

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
1	Titanium Flow Tube Up to 6-kW Single Phase	1	X-TUB-TI500-1E-OC
	Titanium Flow Tube 9-kW & 12-kW Single Phase	1	X-TUB-TI500-2E-OC
	Titanium Flow Tube 15-kW & 18-kW Single Phase	1	X-TUB-TI500-3E-C
	Titanium Flow Tube All 3-Phase	1	X-TUB-TI500-3E-C
2	Electrical Enclosure (Top Cover)	1	Z-IM-OC-TC
3	Touch Screen Control Panel	1	Z-IM-OC-CP-DIG
4	Electrical Access Cover	1	Z-IM-OC-AC
5	PG9 Blanking Cap	2	Z-CON-PG9DBC

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
6	Safety Thermal Cut Out Cover	1	Z-MIS-HLS-CVR
7	Chassis Plate (Supplied with item no.8)	1	Z-IM-OC-CP
8	High Limit Safety Thermal Cut Out (Complete)	1	SP-MIS-HLS
9	Touch Screen	1	Z-MIS-BMS-TS
10	Left End Fitting (Non Flow Switch)	1	SP-117
11	Right End Fitting (Flow Switch)	1	SP-117B
12	M6 Tie Bar	4	Z-STU-573
13	Base	1	Z-IM-OC-B
14	M6 Dome/Cap Nut	4	Z-FIX-M6CAP
15	SIEMENS Contactor 2-kW to 18-kW Single Phase	2	SP-SIE-2023-40A
	SIEMENS Contactor 6-kW to 18-kW 3-Phase	2	SP-SIE-2023-40A
	SIEMENS Contactor 24-kW 3-Phase	2	SP-SIE-2027-50A
16	55mm Din Rail	2	X-DIN-55
17	Terminal Block 2-kW to 18-kW Single Phase	3	Z-MIS-TB130A
	Terminal Block 6-kW to 18-kW 220V 3-Phase	4	Z-MIS-TB130A
	Terminal Block 6-kW to 24-kW 400V 3-Phase	5	Z-MIS-TB130A
	Terminal Block 6-kW to 12-kW Versatile	6	Z-MIS-TB130A
18	Element Bridge 2-kW to 6-kW Single Phase	1	Z-IM-EL-BRI
	Element Bridge 9-kW to 12-kW Single Phase	2	Z-IM-EL-BRI
	Element Bridge 6-kW to 24-kW 400V 3-Phase	3	Z-IM-EL-BRI
	Element Bridge 15-kW & 18-kW Single Phase	3	Z-IM-EL-BRI
19	M4 x 12mm Enclosure Screws	30	Z-FIX-M4x12
20	M4 Hex Nut 2-kW to 6-kW Single Phase	2	Z-FIX-M4HEX
	M4 Hex Nut 9-kW to 12-kW Single Phase	4	Z-FIX-M4HEX
	M4 Hex Nut 6-kW to 24-kW 400V 3-Phase	6	Z-FIX-M4HEX
	M4 Hex Nut 15-kW & 18-kW Single Phase	6	Z-FIX-M4HEX
21	M5 Hex Nut 2-kW to 6-kW Single Phase	1	Z-FIX-M5HEX
	M5 Hex Nut 9-kW to 12-kW Single Phase	2	Z-FIX-M5HEX
	M5 Hex Nut 6-kW to 24-kW 400V 3-Phase	3	Z-FIX-M5HEX
	M5 Hex Nut 15-kW & 18-kW Single Phase	3	Z-FIX-M5HEX
22	M6 Hex Nut	4	Z-FIX-M6HEX
23	Lower Left Cover Panel	1	Z-IM-OC-DC-L
24	M8 Hex Nut (Supplied with item no.8)	1	Z-FIX-M8HEX
25	PG21 Cable Entry Gland	1	Z-CON-PG21BK + Z-CON-PG21NUT
26	M4 Locking Washer 2-kW to 6-kW Single Phase	2	Z-FIX-M4LW
	M4 Locking Washer 9-kW to 12-kW Single Phase	4	Z-FIX-M4LW
	M4 Locking Washer 6-kW to 24-kW 400V 3-Phase	6	Z-FIX-M4LW

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
	M4 Locking Washer 15 & 18-kW Single Phase	6	Z-FIX-M4LW
27	Right Upper Cover Panel	1	Z-IM-OC-DC-RT-D
28	115mm Din Rail	1	X-DIN-115
29	Cable Entry Gland Panel	1	Z-IM-OC-CGH
30	Fuse Holder (Complete)	1	Z-MIS-FH
31	Terminal Block Bridge	1	Z-IM-OC-TBB
32	Capillary Bulb Holder	1	Z-IM-OC-BH
33	Copper Tube Terminal		Various
34	Lower Right Cover Panel	1	Z-IM-OC-DC-RB
35	2 Way Connector Cable	1	Z-CAB-ILPM
36	M3x12 Flange Screw	4	Z-FIX-M3x12-FLG
37	PCB Digital Thermostat Board	1	Z-PCB-BMS
38	Element Ferrule (2pcs per Kit/Element):		
	2-kW to 6-kW Single Phase	2	Z-IM-EL-FER
	9-kW & 12-kW Single Phase	4	Z-IM-EL-FER
	6-kW to 24-kW 400V 3-Phase	6	Z-IM-EL-FER
	15-kW and 18-kW Single Phase	6	Z-IM-EL-FER
39	PG-9 Cable Entry Gland (Inc Back Nut)	2	Z-CON-PG9
40	End Fitting Gasket (Pack of 2pcs)	2	SP-117-GSK
41	Element Stepped Washer (2pcs per Kit):		
	2-kW to 6-kW Single Phase	2	Z-IM-EL-SW
	9-kW to 12-kW Single Phase	4	Z-IM-EL-SW
	6-kW to 24-kW 400V 3-Phase	6	Z-IM-EL-SW
	15-kW and 18-kW Single Phase	6	Z-IM-EL-SW
42	Titanium Heating Element 2-kW Single Phase	1	SP-EL-Ti2KW7T
	Titanium Heating Element 3-kW Single Phase	1	SP-EL-Ti2.9KW7T
	Titanium Heating Element 4.5-kW Single Phase	1	SP-EL-Ti4.5KW7T
	Titanium Heating Element 6-kW Single Phase	1	SP-EL-Ti6KW7T
	Titanium Heating Element 9-kW Single Phase	2	SP-EL-Ti4.5KW7T
	Titanium Heating Element 12-kW Single Phase	2	SP-EL-Ti6KW7T
	Titanium Heating Element 15-kW Single Phase	3	SP-EL-Ti5KW7T
	Titanium Heating Element 18-kW Single Phase	3	SP-EL-Ti6KW7T
	Titanium Heating Element 6-kW 3-Phase/Versatile*	3	SP-EL-Ti2KW7T
	Titanium Heating Element 9-kW 3-Phase/Versatile*	3	SP-EL-Ti2.9KW7T
	Titanium Heating Element 12-kW 3-Phase/Versatile*	3	SP-EL-Ti4KW7T
	Titanium Heating Element 15-kW 3-Phase/Versatile*	3	SP-EL-Ti5KW7T
	Titanium Heating Element 18-kW 3-Phase/Versatile*	3	SP-EL-Ti6KW7T
	Titanium Heating Element 24-kW 3-Phase/Versatile*	3	SP-EL-Ti8KW7T

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
43	Element Support (1pc per kit):		
	2-kW to 6-kW Single Phase	1	Z-IM-EL-SUP
	9-kW to 12-kW Single Phase	2	Z-IM-EL-SUP
	6-kW to 24-kW 400V 3-Phase	3	Z-IM-EL-SUP
	15-kW and 18-kW Single Phase	3	Z-IM-EL-SUP
44	Flow Switch 2-kW & 3-kW	1	SP-107-OCD-A
	Flow Switch 4-kW & 6-kW	1	SP-107-OCD-B
	Flow Switch 9-kW & above	1	SP-107-OCD-C
45	High Limit Auto Reset 60°C	1	Z-MIS-BS-60-40
46	High Limit Holder	1	Z-SMW-BSH
47	Digital Controller Mounting Bracket	1	Z-IM-OC-DIG-MB
48	M4x16 Socket Cap	8	Z-FIX-M4x16-SC-ST

*For all 3-Phase/Versatile titanium heating elements, please specify the required voltage.

REPLACEMENT TANK ASSEMBLY

MODEL	OUTPUT	DESCRIPTION	PART CODE
1-Phase	2-kW	2-kW 500mm Tank	SP-TA-OCP-1-2
	3-kW	3-kW 500mm Tank	SP-TA-OCP-1-3
	4.5-kW	4.5-kW 500mm Tank	SP-TA-OCP-1-4
	6-kW	6-kW 500mm Tank	SP-TA-OCP-1-6
	9-kW	9-kW 500mm Tank	SP-TA-OCP-1-9
	12-kW	12-kW 500mm Tank	SP-TA-OCP-1-12
	15-kW	15-kW 500mm Tank	SP-TA-OCP-1-15
	18-kW	18-kW 500mm Tank	SP-TA-OCP-1-18
3-Phase & Versatile	6-kW	6-kW 500mm Tank	SP-TA-OCP-3-6
	9-kW	9-kW 500mm Tank	SP-TA-OCP-3-9
	12-kW	12-kW 500mm Tank	SP-TA-OCP-3-12
	15-kW	15-kW 500mm Tank	SP-TA-OCP-3-15
	18-kW	18-kW 500mm Tank	SP-TA-OCP-3-18
	24-kW	24-kW 500mm Tank	SP-TA-OCP-3-24

WATER CONNECTION PARTS

DESCRIPTION	PCS/UNIT	PART CODE
1½" BSP Hose Tail 1½"/1¼" Flexible Pipe	2	SP-118
1½" BSP Universal Union for 1½"/50mm Pipe	2	SP-119
'O' Ring (Pack of 2pcs)	2	SP-120-ORS
44mm x 6mm Union 'O' Ring (Pack of 2pcs)	2	SP-119-ORS

ALL TITANIUM

SFS JOEY

Reliable, accurate and long-lasting performance. The SFS Joey, fully titanium heater, is the ideal choice for maintaining high temperatures in commercial pools where the water contains high TDS, debris laden water and a reduced flow rate.

FEATURES

- 19 models available, ranging from 18-kW to 120-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential or digital control with 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation

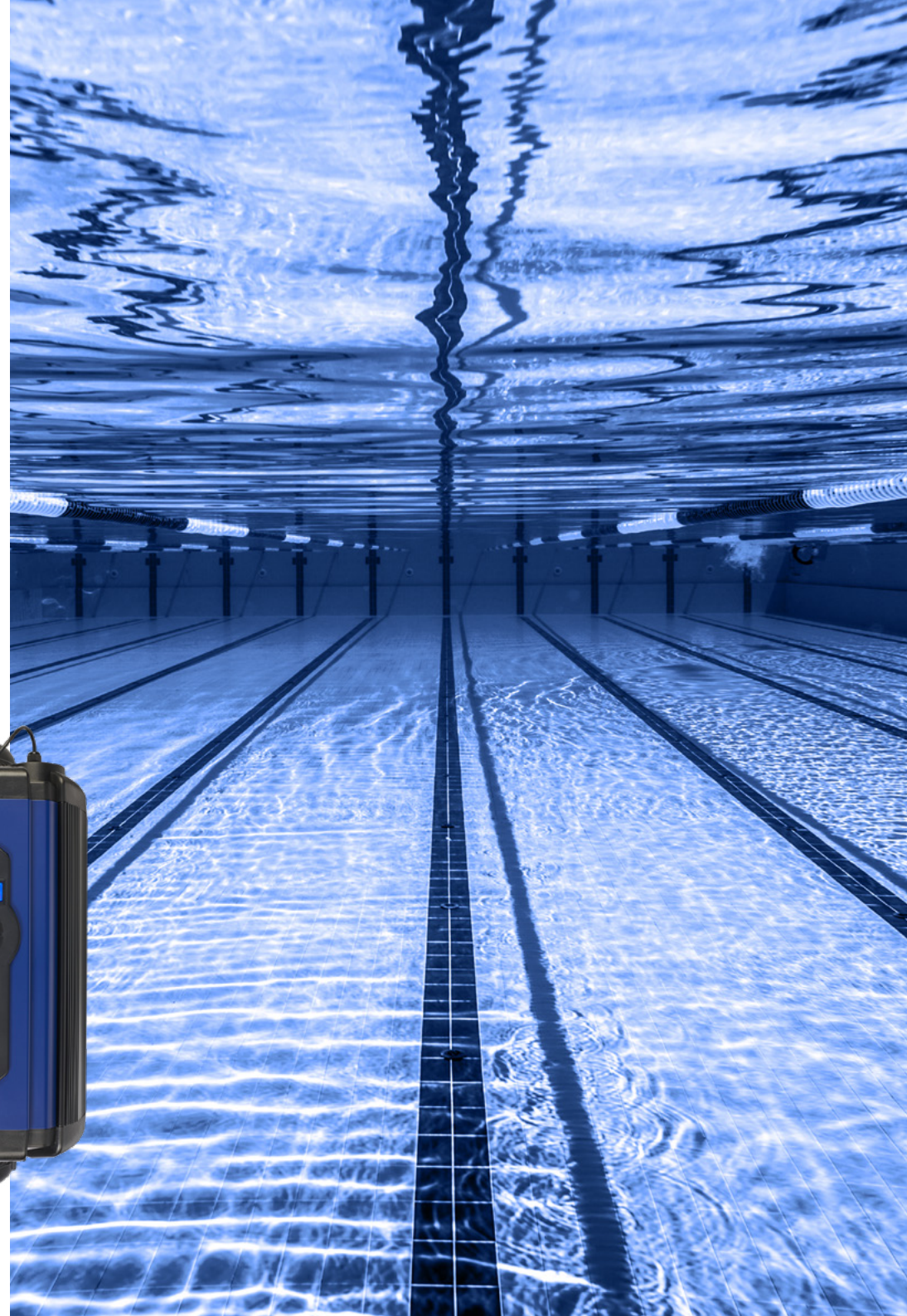
SUITABLE FOR:



SFS Joey (Analogue)



SFS Joey (Digital)



SPECIFICATIONS

Power supply:	3-Phase
Min. flow rate:	8m ³ /h (Recommended)
Max. flow rate:	15m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential), Digital: 0 > 45°C (0.5°C differential)
Safety thermal cut out:	65°C (auto reset) against enclosure over-temperature 60°C (manual reset)
Flow switch:	Gold tipped reed switch with titanium fulcrum pin
Contactors:	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	63mm spigot with 2"/63mm stepped ABS unions
Ingress protection rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

MODELS

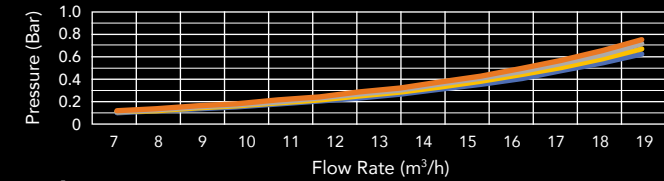
MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE	
							ANALOGUE	DIGITAL
400V 3-Phase*	18-kW	26	699	20.8000	24.4000	0.1880	SFS-18	SFSD-18
	24-kW	34	699	20.8000	24.4000	0.1880	SFS-24	SFSD-24
	30-kW	44	699	20.8000	24.4000	0.1880	SFS-30	SFSD-30
	36-kW	53	699	20.8000	24.4000	0.1880	SFS-36	SFSD-36
	45-kW	66	699	23.2000	26.8000	0.1880	SFS-45	SFSD-45
	54-kW	79	699	23.2000	26.8000	0.1880	SFS-54	SFSD-54
	60-kW	87	699	23.8000	27.4000	0.1880	SFS-60	SFSD-60
	72-kW	105	699	23.8000	27.4000	0.1880	SFS-72	SFSD-72
	96-kW	139	1042	32.8000	36.4000	0.2685	SFS-96	SFSD-96
	120-kW	174	1042	34.1000	38.4000	0.2685	SFS-120	SFSD-120
220~240V 3-Phase**	18-kW	46	699	21.0000	24.6000	0.1880	SFS-18-D	SFSD-18-D
	24-kW	61	699	21.0000	24.6000	0.1880	SFS-24-D	SFSD-24-D
	30-kW	76	699	21.0000	24.6000	0.1880	SFS-30-D	SFSD-30-D
	36-kW	91	699	21.0000	24.6000	0.1880	SFS-36-D	SFSD-36-D
	45-kW	114	699	23.8000	27.4000	0.1880	SFS-45-D	SFSD-45-D
	54-kW	136	699	23.8000	27.4000	0.1880	SFS-54-D	SFSD-54-D
	60-kW	151	1042	32.1000	36.4000	0.2685	SFS-60-D	SFSD-60-D
	72-kW	181	1042	32.1000	36.4000	0.2685	SFS-72-D	SFSD-72-D
	90-kW	227	1042	34.1000	38.4000	0.2685	SFS-90-D	SFSD-90-D

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: SFS-36-380

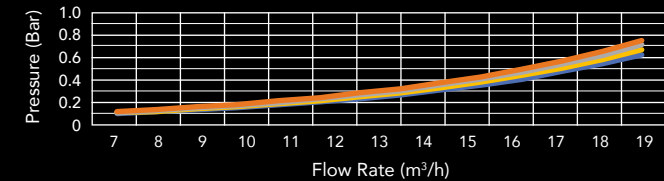
** For voltage 208V please add: -208 at the end of a product code e.g: SFS-18-D-208

PRESSURE DROP

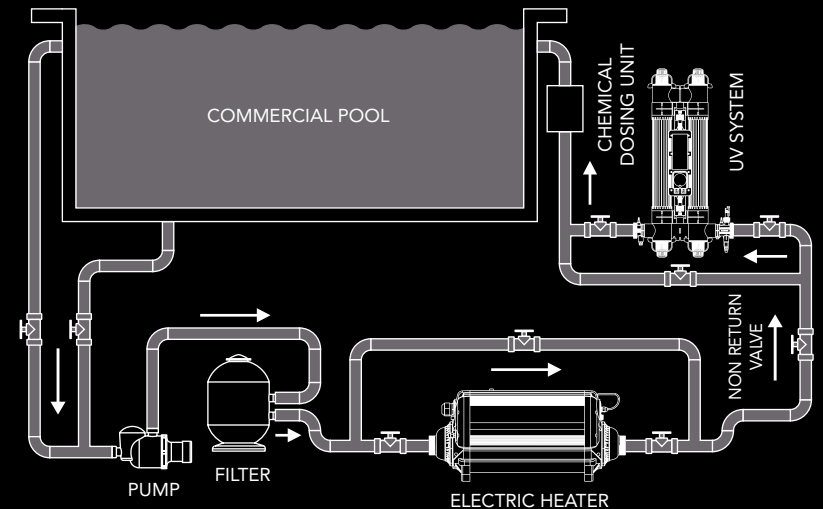
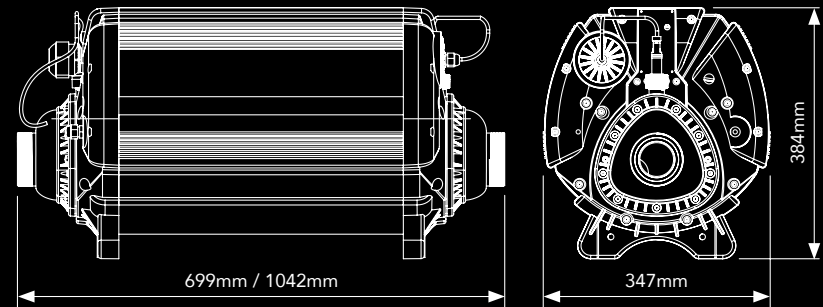
3-Phase 380-415V

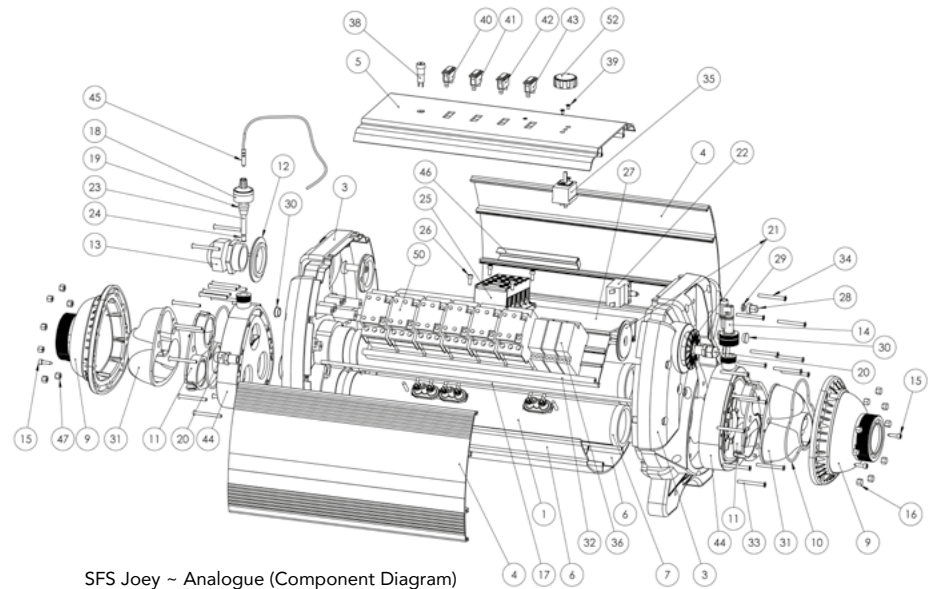


3-Phase 220-240V



TECHNICAL DRAWINGS & SYSTEM SETUP

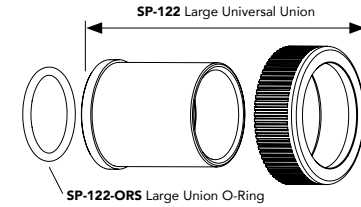




SFS Joey ~ Analogue (Component Diagram)

Water Connections

See page 45 for full description and pcs/unit.



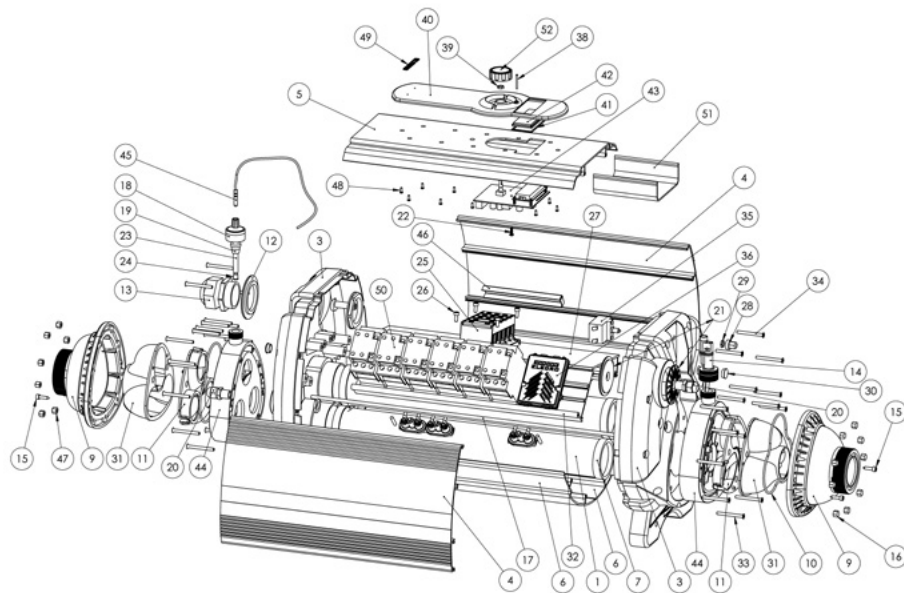
SPARE PARTS LIST

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
1	Titanium Flow Tube 380~440V 3-Phase:		
	18-kW, 24-kW, 30-kW & 36-kW (500mm)	1	X-TUB-TI500-2E-C
	45-kW, 54-kW, 60-kW & 72-kW (500mm)	1	X-TUB-TI500-3E-C
	96-kW (843mm)	1	X-TUB-I843-4E-C
	120-kW (843mm)	1	X-TUB-TI843-5E-C
3	Titanium Flow Tube 220~240V 3-Phase:		
	18-kW, 24-kW, 30-kW & 36-kW (500mm)	1	X-TUB-TI500-2E-C
	45-kW & 54-kW (500mm)	1	X-TUB-TI500-3E-C
	60-kW & 72-kW (843mm)	1	X-TUB-TI843-4E-C
	90-kW (843mm)	1	X-TUB-TI843-5E-C
3	End Panel	2	Z-IM-SFS-EP
4	Silver Side Panel (Small)	2	Z-SMW-SFS-SPS
	Silver Side Panel (Large)	2	Z-SMW-SFS-SPL

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
5	Top Panel (Small)	1	Z-SMW-SFS-TPS-A
	Top Panel (Large)	1	Z-SMW-SFS-TPL-A
6	Bottom Panel (Small)	2	Z-SMW-SFS-BPS
	Bottom Panel (Large)	2	Z-SMW-SFS-BPL
7	HNBR Flow Tube Gasket	6	SP-HE-GSK
9	Manifold Cover	2	Z-IM-SFS-MF-CVR
10	Manifold 'O' Ring	2	Z-ORS-MANI
11	Manifold SFS Insert B	2	Z-IM-SFS-INS-B
12	SFS PG36 Face Plate	1	Z-IM-SFS-PG36-FP
13	PG36 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG36BK + Z-CON-PG36NUT
	PG48 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG48BK + Z-CON-PG48NUT
14	Flow Switch	1	SP-107-D
15	M4.8 x 19mm S/S Socket Cap Screw	4	Q-FIX-M4.8X19STS-SC
16	M6 Cap Nut	9	Z-FIX-M6CAP
17	M6 Tie Bar (Small)	9	Z-STU-604
	M6 Tie Bar (Large)	9	Z-STU-947
18	Thermostat Pocket Cap	1	Z-IM-HE-SPC
19	EPDM Ferrule	1	Z-IM-EL-FER
20	PG9 Cable Entry Gland (Inc Back Nut)	2	Q-CON-PG9BK
21	PG9 Face Plate	2	Z-IM-SFS-PG9-FP
22	Safety Thermal Cut Out	1	SP-MIS-HLS
23	8.5mm ØD Titanium Thermostat Pocket	1	Z-TUB-Ti8.5-90
24	EPDM Thermostat Pocket Seal	1	Z-IM-GSK-BUNG
25	Terminal Block	1	U-TB-230A
26	M5 x 10mm Terminal Block Fixing Set	4	Z-FIX-M5X10SC + Z-FIX-M5HEX + Z-FIX-M5LW
27	Terminal Block Cross Rail (Small)	1	Z-SMW-C-CRS-TB
	Terminal Block Cross Rail (Large)	1	Z-SMW-C-CRL-TB
28	Thermal Cut Out Cover (Black)	1	Z-MIS-HLS-CVR
29	Thermal Cut Out Nut M8	1	Supplied with #22
30	PG9 Blanking Cover	2	Q-CON-PG9DBC
31	Manifold SFS Insert A	2	Z-IM-SFS-INS-A
32	DIN Cross Rail (Small)	1	Z-SMW-C-CRS
	DIN Cross Rail (Large)	1	Z-SMW-C-CRL
33	M5 x 50mm S/S CSK Socket Cap	16	Q-FIX-M5X50CS-SC
34	M5 x 50mm S/S CSK Pozi Drive	4	Q-FIX-M5X50CS-PD

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE	
35	Analogue Control Thermostat	1	SP-MIS-CS	
36	OMRON Delay Timer 3-Phase 380~440V: 18-kW, 24-kW, 30-kW & 36-kW 45-kW, 54-kW, 60-kW & 72-kW 96-kW 120-kW	2	Z-OM-TIM	
		3	Z-OM-TIM	
		4	Z-OM-TIM	
		5	Z-OM-TIM	
	OMRON Delay Timer 3-Phase 220~240V: 18-kW, 24-kW, 30-kW & 36-kW 45-kW & 54-kW 60-kW & 72-kW 90-kW	2	Z-OM-TIM	
		3	Z-OM-TIM	
		4	Z-OM-TIM	
		5	Z-OM-TIM	
38	Fuse Holder	1	Z-MIS-FH	
39	M4 x 6mm Screw	2	Q-FIX-M4-6CS	
40	Over temp. Indicator	1	Z-MIS-NEON-AMB	
41	No/Low Flow Indicator	1	Z-MIS-NEON-CLR	
42	Heater On Indicator	1	Z-MIS-NEON-RED	
43	Power Indicator	1	Z-MIS-NEON-CLR	
44	SFS Manifold	1	Z-IM-SFS-MF	
45	NTC Temperature Sensor	1	U-NTC-EP	
46	Capillary Bulb Holder	1	X-SMW-HLS-CBH	
47	M6 S/S Full Hex Nut	9	Q-FIX-M6HEX	
50	Contactors 380~440V 3-Phase: 18-kW to 36-kW - SIEMENS Contactor 2023 40Amp AC1 45-kW & 54-kW - SIEMENS Contactor 2023 40Amp AC1 60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1 96-kW - SIEMENS Contactor 2027 50Amp AC1 120-kW - SIEMENS Contactor 2027 50Amp AC1	4	Z-SIE-2023-40A	
		6	Z-SIE-2023-40A	
		6	Z-SIE-2027-50A	
		8	Z-SIE-2027-50A	
		10	Z-SIE-2027-50A	
		Contactors 220~240V 3-Phase: 18-kW to 36-kW - SIEMENS Contactor 2027 50Amp AC1 45-kW & 54-kW - SIEMENS Contactor 2027 50Amp AC1 60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1 90-kW - SIEMENS Contactor 2027 50Amp AC1	4	Z-SIE-2027-50A
			6	Z-SIE-2027-50A
			8	Z-SIE-2027-50A
			10	Z-SIE-2027-50A
52	Control Thermostat Dial	1	Z-IM-OC-ANA	

FOR REPLACEMENT HEAT ELEMENTS AND REPLACEMENT TANK ASSEMBLY, SEE PAGE 39.



SFS Joey ~ Digital (Component Diagram)

(For water connections, see illustration on page 36 or full description and pcs/unit on page 45)

SPARE PARTS LIST

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
1	Titanium Flow Tube 3-Phase 380~440V:		
	18-kW, 24-kW, 30-kW & 36-kW (500mm)	1	X-TUB-TI500-2E-C
	45-kW, 54-kW, 60-kW & 72-kW (500mm)	1	X-TUB-TI500-3E-C
	96-kW (843mm)	1	X-TUB-TI843-4E-C
	120-kW (843mm)	1	X-TUB-TI843-5E-C
1	Titanium Flow Tube 3-Phase 220~240V:		
	18-kW, 24-kW, 30-kW & 36-kW ((500mm)	1	X-TUB-TI500-2E-C
	45-kW & 54-kW (500mm)	1	X-TUB-TI500-3E-C
	60-kW & 72-kW (843mm)	1	X-TUB-TI843-4E-C
	90-kW (843mm)	1	X-TUB-TI843-5E-C
3	End Panel	2	Z-IM-SFS-EP
4	Silver Side Panel (Small)	2	Z-SMW-SFS-SPS
	Silver Side Panel (Large)	2	Z-SMW-SFS-SPL
5	Top Panel (Small)	1	Z-SMW-SFS-TPS
	Top Panel (Large)	1	Z-SMW-SFS-TPL
6	Bottom Panel (Small)	2	Z-SMW-SFS-BPS
	Bottom Panel (Large)	2	Z-SMW-SFS-BPL
7	HNBR Flow Tube Gasket	6	SP-HE-GSK
9	Manifold Cover	2	Z-IM-SFS-MF-CVR

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
10	Manifold 'O'Ring	2	Z-ORS-MANI
11	Manifold SFS Insert B	2	Z-IM-SFS-INS-B
12	SFS PG36 Face Plate	1	Z-IM-SFS-PG36-FP
13	PG36 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG36BK + Z-CON-PG36NUT
	PG48 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG48BK + Z-CON-PG48NUT
14	Flow Switch	1	SP-107-D
15	M4.8 x 19mm S/S Socket Cap Screw	4	Q-FIX-M4.8X19STS-SC
16	M6 Cap Nut	9	Z-FIX-M6CAP
17	M6 Tie Bar (Small)	9	Z-STU-604
	M6 Tie Bar (Large)	9	Z-STU-947
18	Thermostat Pocket Cap	1	Z-IM-HE-SPC
19	EPDM Ferrule	1	Z-IM-EL-FER
20	PG9 Cable Entry Gland (Inc Back Nut)	2	Q-CON-PG9BK
21	PG9 Face Plate	2	Z-IM-SFS-PG9-FP
22	M4 x 14-mm S/S Pozi Pan Screw	1	Z-FIX-M4X14
23	8.5mm ØD Titanium Thermostat Pocket	1	Z-TUB-TI8.5-90
24	EPDM Thermostat Pocket Seal	1	Z-IM-GSK-BUNG
25	Terminal Block	1	U-TB-230A
26	M5 x 10mm Terminal Block Fixing Set	4	Z-FIX-M5X10SC + Z-FIX-M5HEX + Z-FIX-M5LW
27	Terminal Block Cross Rail (Small)	1	Z-SMW-C-CRS-TB
	Terminal Block Cross Rail (Large)	1	Z-SMW-C-CRL-TB
28	Thermal Cut Out Cover (Black)	1	Z-MIS-HLS-CVR
29	Thermal Cut Out Nut M8	1	Supplied with #35
30	PG9 Blanking Cover	2	Q-CON-PG9DBC
31	Manifold SFS Insert A	2	Z-IM-SFS-INS-A
32	DIN Cross Rail (Small)	1	Z-SMW-C-CRS
	DIN Cross Rail (Large)	1	Z-SMW-C-CRL
33	M5 x 50mm S/S CSK Socket Cap	16	Q-FIX-M5X50CS-SC
34	M5 x 50mm S/S CSK Pozi Drive	4	Q-FIX-M5X50CS-PD
35	Safety Thermal Cut Out (Manual Reset)	1	SP-MIS-HLS
36	Delay Timer up to 72-kW	1	U-SFS-DT-3
	Delay Timer up to 96-kW & 120-kW	1	U-SFS-DT-5
38	Light Pole	1	Z-MIS-EVO2-LP
39	Encoder Nut	1	Supplied with #43
40	Top cover panel	1	Z-IM-SFS-TCP
41	SFS Window Gasket	1	Z-F-SFS-W
42	SFS Window	1	Z-IM-SFS-W
43	PCB Digital Thermostat	1	Z-PCB-BUD

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
44	SFS Manifold	1	Z-IM-SFS-MF
45	NTC Temperature Sensor	1	Z-MIS-NTC-1000
46	Capillary Bulb Holder	1	X-SMW-HLS-CBH
47	M6 S/S Full Hex Nut	9	Q-FIX-M6HEX
48	M3 x 12mm FLG Pozi Zinc Coated	12	Z-FIX-M3X12-FLG
49	Electro Diamond Cut Aluminium Badge	1	Z-MB-ELE
50	Contactors 380~440V 3-Phase:		
	18-kW to 36-kW - SIEMENS Contactor 2023 40Amp AC1	4	Z-SIE-2023-40A
	45-kW & 54-kW - SIEMENS Contactor 2023 40Amp AC1	6	Z-SIE-2023-40A
	60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1	6	Z-SIE-2027-50A
	96-kW - SIEMENS Contactor 2027 50Amp AC1	8	Z-SIE-2027-50A
	120-kW - SIEMENS Contactor 2027 50Amp AC1	10	Z-SIE-2027-50A
	Contactors 3-Phase 220~240V:		
	18-kW to 36-kW - SIEMENS Contactor 2027 50Amp AC1	4	Z-SIE-2027-50A
	45-kW & 54-kW - SIEMENS Contactor 2027 50Amp AC1	6	Z-SIE-2027-50A
	60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1	8	Z-SIE-2027-50A
	90-kW - SIEMENS Contactor 2027 50Amp AC1	10	Z-SIE-2027-50A
51	PCB Cover	1	Z-SMW-SFS-PCB
52	Encoder Dial	1	Z-IM-OC-ANA

REPLACEMENT HEAT ELEMENTS

MODEL	OUTPUT	DESCRIPTION	PCS/UNIT	PART CODE
380~440V 3-Phase* (Analogue & Digital)	18-kW	Titanium 2.8-kW Kit	6	SP-EL-Ti2.8KW7T
	24-kW	Titanium 4-kW Kit	6	SP-EL-Ti4KW7T
	30-kW	Titanium 5-kW Kit	6	SP-EL-Ti5KW7T
	36-kW	Titanium 6-kW Kit	6	SP-EL-Ti6KW7T
	45-kW	Titanium 5-kW Kit	9	SP-EL-Ti5KW7T
	54-kW	Titanium 6-kW Kit	9	SP-EL-Ti6KW7T
	60-kW	Titanium 6.7-kW Kit	9	SP-EL-Ti6.7KW7T
	72-kW	Titanium 8-kW Kit	9	SP-EL-Ti8KW7T
	96-kW	Titanium 8-kW Kit	12	SP-EL-Ti8KW7T
	120-kW	Titanium 8-kW Kit	15	SP-EL-Ti8KW7T
220~240V 3-Phase* (Analogue & Digital)	18-kW	Titanium 2.8-kW Kit	6	SP-EL-Ti2.8KW7T
	24-kW	Titanium 4-kW Kit	6	SP-EL-Ti4KW7T
	30-kW	Titanium 5-kW Kit	6	SP-EL-Ti5KW7T
	36-kW	Titanium 6-kW Kit	6	SP-EL-Ti6KW7T
	45-kW	Titanium 5-kW Kit	9	SP-EL-Ti5KW7T
	54-kW	Titanium 6-kW Kit	9	SP-EL-Ti6KW7T
	60-kW	Titanium 5-kW Kit	12	SP-EL-Ti5KW7T
	72-kW	Titanium 6-kW Kit	12	SP-EL-Ti6KW7T
	90-kW	Titanium 6-kW Kit	15	SP-EL-Ti6KW7T

*For all 3-Phase titanium heating elements, please specify the required voltage.

REPLACEMENT TANK ASSEMBLY

MODEL	OUTPUT	DESCRIPTION	PART CODE
380~440V 3-Phase (Analogue & Digital)	18-kW	6-kW 500mm Tank 400V	SP-TA-CP-500-6
	18-kW	6-kW 500mm Tank 380V	SP-TA-CP-500-6-380
	18-kW	6-kW 500mm Tank 415V	SP-TA-CP-500-6-415
	24-kW	8-kW 500mm Tank 400V	SP-TA-CP-500-8
	24-kW	8-kW 500mm Tank 380V	SP-TA-CP-500-8-380
	24-kW	8-kW 500mm Tank 415V	SP-TA-CP-500-8-415
	30-kW	10-kW 500mm Tank 400V	SP-TA-CP-500-10
	30-kW	10-kW 500mm Tank 380V	SP-TA-CP-500-10-380
	30-kW	10-kW 500mm Tank 415V	SP-TA-CP-500-10-415
	36-kW	12-kW 500mm Tank 400V	SP-TA-CP-500-12
	36-kW	12-kW 500mm Tank 380V	SP-TA-CP-500-12-380
	36-kW	12-kW 500mm Tank 415V	SP-TA-CP-500-12-415
	45-kW	15-kW 500mm Tank 400V	SP-TA-CP-500-15
	45-kW	15-kW 500mm Tank 380V	SP-TA-CP-500-15-380
	45-kW	15-kW 500mm Tank 415V	SP-TA-CP-500-15-415
	54-kW	18-kW 500mm Tank 400V	SP-TA-CP-500-18
	54-kW	18-kW 500mm Tank 380V	SP-TA-CP-500-18-380
	54-kW	18-kW 500mm Tank 415V	SP-TA-CP-500-18-415
	60-kW	20-kW 500mm Tank 400V	SP-TA-CP-500-20
	60-kW	20-kW 500mm Tank 380V	SP-TA-CP-500-20-380
	60-kW	20-kW 500mm Tank 415V	SP-TA-CP-500-20-415
	72-kW	24-kW 500mm Tank 400V	SP-TA-CP-500-24
	72-kW	24-kW 500mm Tank 380V	SP-TA-CP-500-24-380
	72-kW	24-kW 500mm Tank 415V	SP-TA-CP-500-24-415
	96-kW	32-kW 843mm Tank 400V	SP-TA-CP-843-32
	96-kW	32-kW 843mm Tank 380V	SP-TA-CP-843-32-380
	96-kW	32-kW 843mm Tank 415V	SP-TA-CP-843-32-415
	120-kW	40-kW 843mm Tank 400V	SP-TA-CP-843-40
	120-kW	40-kW 843mm Tank 380V	SP-TA-CP-843-40-380
	120-kW	40-kW 843mm Tank 415V	SP-TA-CP-843-40-415
220~240V 3-Phase (Analogue & Digital)	18-kW	6-kW 500mm Tank	SP-TA-CP-500-6
	24-kW	8-kW 500mm Tank	SP-TA-CP-500-8
	30-kW	10-kW 500mm Tank	SP-TA-CP-500-10
	36-kW	12-kW 500mm Tank	SP-TA-CP-500-12
	45-kW	15-kW 500mm Tank	SP-TA-CP-500-15
	54-kW	18-kW 500mm Tank	SP-TA-CP-500-18
	60-kW	20-kW 843mm Tank	SP-TA-CP-843-20
	72-kW	24-kW 843mm Tank	SP-TA-CP-843-24
	90-kW	32-kW 843mm Tank	SP-TA-CP-843-32

ALL TITANIUM

TITAN OPTIMA

Reliable, accurate and highly efficient, the Titan Optima, fully titanium heater, is a top-of-the-range heater with digital touchscreen display. A robust and durable design makes this the perfect choice for a long-term heater for all commercial pools.

FEATURES

- 19 models available, ranging from 18-kW to 120-kW
- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation

SUITABLE FOR:



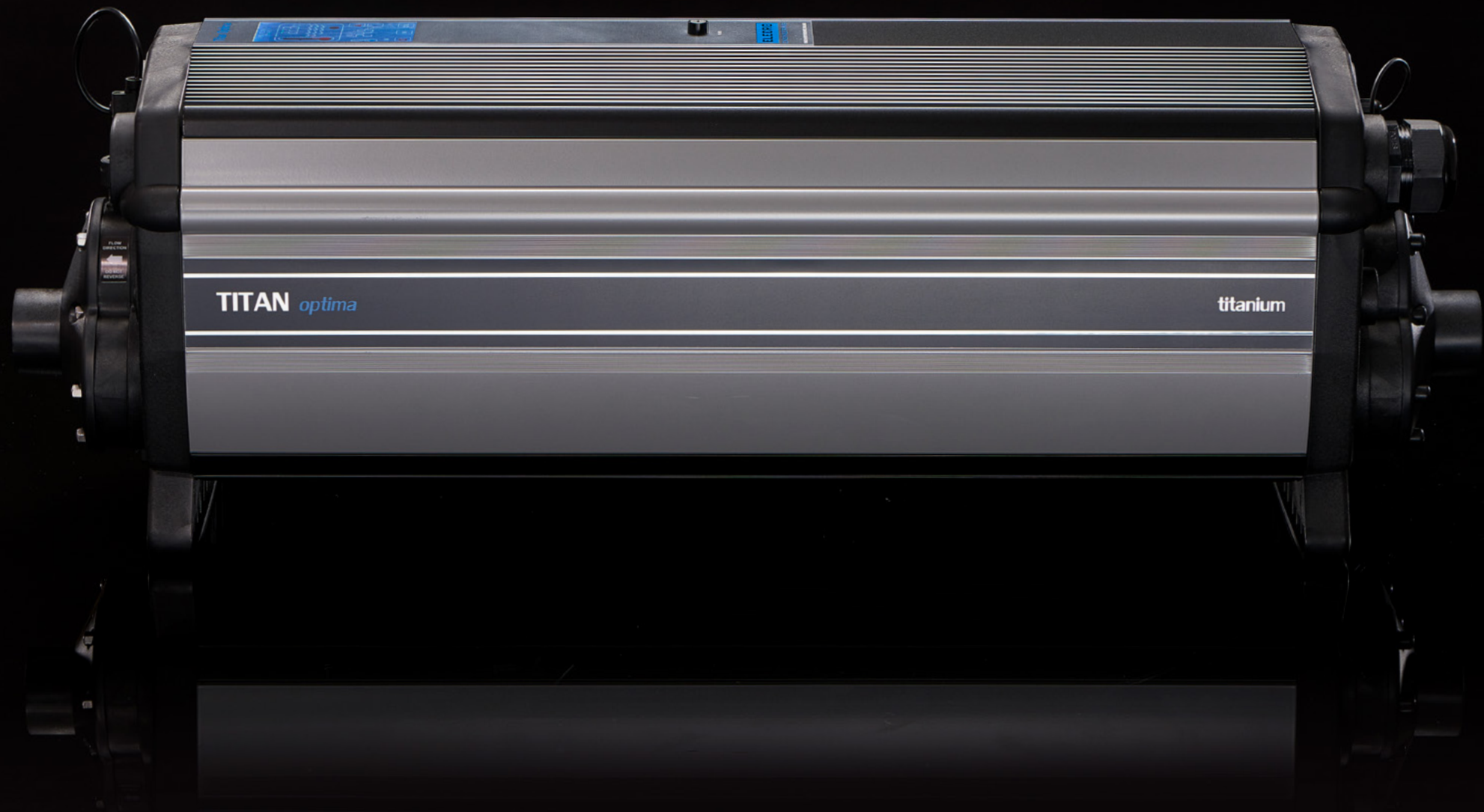
Commercial Pools



SIMPLIFY YOUR LIFE WITH THE ELECTRO APP

Connection via Bluetooth, Wi-Fi and 4G enables you to take full control of your swimming pool heating from anywhere in your home or office with a simple app on your smartphone.





TITAN *optima*

titanium

SPECIFICATIONS

Power supply:	3-Phase
Min. flow rate:	12m ³ /h
Max. flow rate:	45m ³ /h. (Recommended: 30m ³ /h)
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Touch Screen 0 > 45°C (0.5°C differential)
Safety thermal cut out:	65°C (auto reset) against enclosure over-temperature 60°C (manual reset)
Flow switch:	Gold tipped reed switch with titanium fulcrum pin
Contactors:	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	63mm spigot with 2" / 63mm stepped ABS unions
Ingress protection rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

MODELS

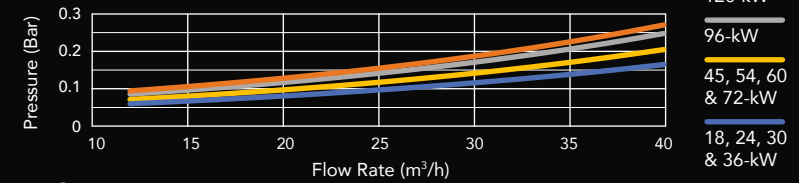
MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
400V 3-Phase*	18-kW	26	699	19.9000	23.5000	0.1880	CP-TS-18
	24-kW	34	699	19.9000	23.5000	0.1880	CP-TS-24
	30-kW	44	699	19.9000	23.5000	0.1880	CP-TS-30
	36-kW	53	699	19.9000	23.5000	0.1880	CP-TS-36
	45-kW	66	699	22.3000	25.9000	0.1880	CP-TS-45
	54-kW	79	699	22.3000	25.9000	0.1880	CP-TS-54
	60-kW	87	699	22.9000	26.5000	0.1880	CP-TS-60
	72-kW	105	699	22.9000	26.5000	0.1880	CP-TS-72
	96-kW	139	1042	31.2000	35.5000	0.2685	CP-TS-96
220~240V 3-Phase**	18-kW	46	699	19.9000	23.5000	0.1880	CP-TS-18-D
	24-kW	61	699	19.9000	23.5000	0.1880	CP-TS-24-D
	30-kW	76	699	19.9000	23.5000	0.1880	CP-TS-30-D
	36-kW	91	699	19.9000	23.5000	0.1880	CP-TS-36-D
	45-kW	114	699	22.3000	25.9000	0.1880	CP-TS-45-D
	54-kW	136	699	22.9000	26.5000	0.1880	CP-TS-54-D
	60-kW	151	1042	22.9000	26.5000	0.1880	CP-TS-60-D
	72-kW	181	1042	22.9000	26.5000	0.1880	CP-TS-72-D
	90-kW	227	1042	33.2000	37.5000	0.2685	CP-TS-90-D

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: CP-TS-18-380

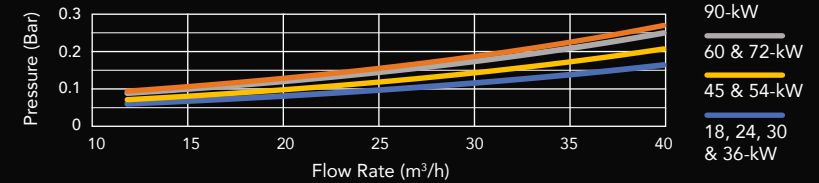
** For voltage 208V please add: -208 at the end of a product code e.g: CP-TS-18-D-208

PRESSURE DROP

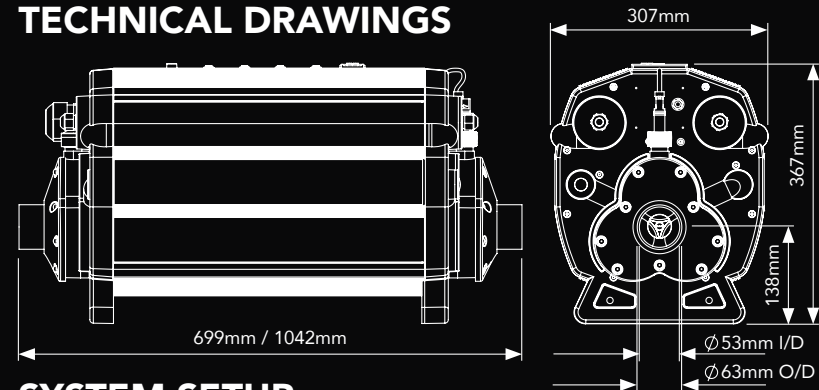
3-Phase 380-415V



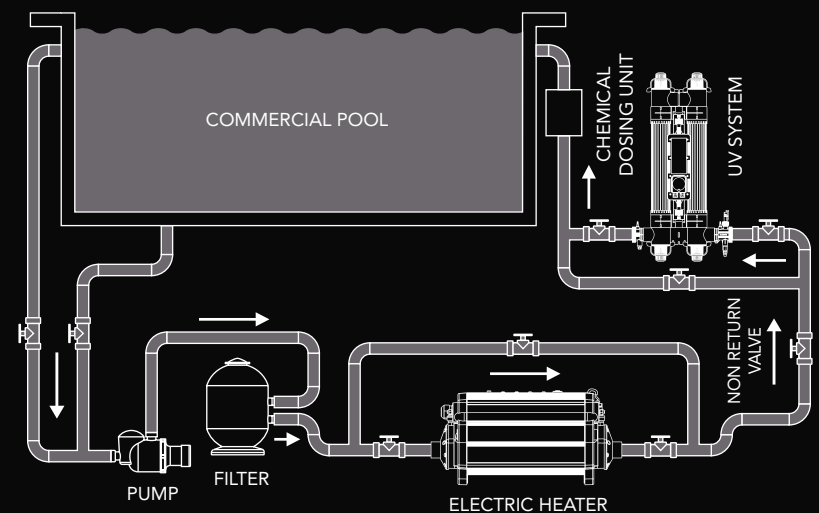
3-Phase 220-240V

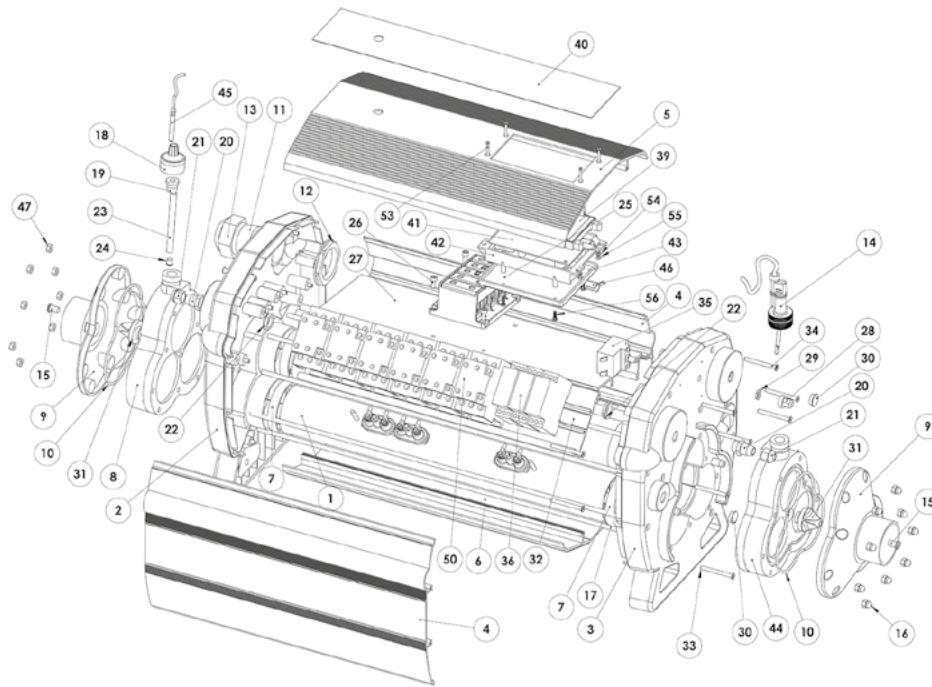


TECHNICAL DRAWINGS

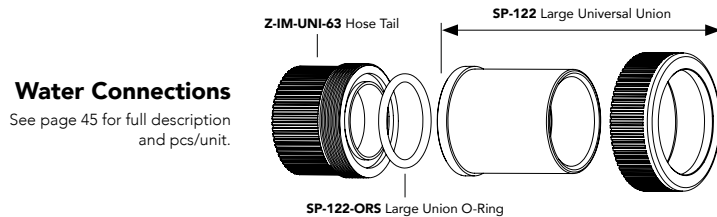


SYSTEM SETUP





Titan Optima (Component Diagram)



Water Connections
See page 45 for full description and pcs/unit.

SPARE PARTS LIST

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
1	Titanium Flow Tube 3-Phase 380V~440V:		
	18-kW, 24-kW, 30-kW & 36-kW (500mm)	1	X-TUB-TI500-2E-C
	45-kW, 54-kW, 60-kW & 72-kW (500mm)	1	X-TUB-TI500-3E-C
	96-kW (843mm)	1	X-TUB-TI843-4E-C
	120-kW (843mm)	1	X-TUB-TI843-5E-C
Titanium Flow Tube 3-Phase 220V~240V:			
	18-kW, 24-kW, 30-kW & 36-kW (500mm)	1	X-TUB-TI500-2E-C
	45-kW & 54-kW (500mm)	1	X-TUB-TI500-3E-C

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
	60-kW & 72-kW (843mm)	1	X-TUB-TI843-4E-C
	90-kW (843mm)	1	X-TUB-TI843-5E-C
2	Left Hand End Panel PG36 18-kW to 54-kW 400V	1	X-IM-C-EP-L
	Left Hand End Panel PG36 24-kW & 36-kW DELTA	1	X-IM-C-EP-L
	Left Hand End Panel PG48 60-kW to 120-kW 400V	1	X-IM-C-EP-L48
	Left Hand End Panel PG48 36-kW to 90-kW DELTA	1	X-IM-C-EP-L48
3	Right Hand End Panel	1	Z-IM-C-EP-R
4	Silver Side Panel (Small)	2	Z-SMW-C-SPS
	Silver Side Panel (Large)	2	Z-SMW-C-SPL
5	Top Panel (Small)	1	Z-SMW-C-TPS
	Top Panel (Large)	1	Z-SMW-C-TPL
6	Bottom Panel (Small)	1	Z-SMW-C-BPS
	Bottom Panel (Large)	1	Z-SMW-C-BPL
7	HNBR Flow Tube Gasket	6	SP-HE-GSK
8	Inlet (Left) Manifold	1	Z-IM-MF-CL
9	Manifold Cover	1	Z-IM-MF-CVR
10	Manifold 'O' Ring	1	Z-ORS-MANI
11	PG36 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG36BK + Z-CON-PG36NUT
13	PG48 Cable Entry Gland (Inc Back Nut)	1	Z-CON-PG48BK + Z-CON-PG48NUT
14	Flow Switch	1	SP-107-D
15	M8 x 12mm S/S Slot Pan Screw	2	Z-FIX-M8X12
16	M6 Cap Nut	9	Z-FIX-M6CAP
17	M6 Tie Bar (Small)	9	Z-STU-604
	M6 Tie Bar (Medium)	9	Z-STU-782
	M6 Tie Bar (Large)	9	Z-STU-947
18	Thermostat Pocket Cap	1	Z-IM-HE-SPC
19	EPDM Ferrule	1	Z-IM-EL-FER
20	PG9 Cable Entry Gland (Inc Back Nut)	2	Z-CON-PG9BK
21	PG9 Cable Entry Gland (Inc Back Nut)	2	Z-CON-PG9BK
22	PG9 Cable Entry Gland (Inc Back Nut)	2	Z-CON-PG9BK
23	8.5mm ØD Titanium Thermostat Pocket	1	Z-TUB-Ti8.5-90
24	EPDM Thermostat Pocket Seal	1	Z-IM-GSK-BUNG
25	Terminal Block	1	U-TB-230A
26	M5 x 10mm Mounting Screw Set	4	Z-FIX-M5X10SC + Z-FIX-M5HEX + Z-FIX-M5LW



ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
27	Terminal Block Cross Rail (Small)	1	Z-SMW-CRS-TB
	Terminal Block Cross Rail (Medium)	1	Z-SMW-CRM-TB
	Terminal Block Cross Rail (Large)	1	Z-SMW-CRL-TB
28	Thermal Cut Out Cover (Black)	1	Z-CON-PG9DBC
29	Thermal Cut Out Nut M8	1	Supplied with #35
30	PG9 Blanking Cover	1	Z-CON-PG9DB
31	Manifold Diffuser	2	Z-IM-MF-DIF
32	DIN Cross Rail (Small)	1	Z-SMW-C-CRS
	DIN Cross Rail (Large)	1	Z-SMW-C-CRL
33	M5 x 50mm S/S CSK Socket Cap	12	Z-FIX-M5X50CS-SC
34	M5 x 50mm S/S CSK Pozi Drive	4	Z-FIX-M5X50CS-PD
35	Safety Thermal Cut Out (Manual Reset)	1	SP-MIS-HLS
36	OMRON Delay Timer 380V~440V 3-Phase:		
	18-kW, 24-kW, 30-kW & 36-kW	2	Z-OM-TIM
	45-kW, 54-kW, 60-kW & 72-kW	3	Z-OM-TIM
	96-kW	4	Z-OM-TIM
	120-kW	5	Z-OM-TIM
	OMRON Delay Timer 220V~240V 3-Phase:		
	18-kW, 24-kW, 30-kW & 36-kW	2	Z-OM-TIM
	45-kW & 54-kW	3	Z-OM-TIM
	60-kW & 72-kW	4	Z-OM-TIM
	90-kW	5	Z-OM-TIM
38	Fuse Holder	1	Z-MIS-FH
39	Touch Screen	1	Z-MIS-BMS-TS
40	Touch Screen Overlay	1	Z-LAB-C-TS
41	PCB Digital Thermostat Board	1	Z-PCB-BMS
42	Digital Controller Mounting Bracket	1	Z-IM-OC-DIG-MB
43	PCB Board Cover	1	Z-SMW-SFS-PCB
44	Outlet (Right) Manifold	1	Z-IM-MF-CR
45	NTC Temperature Sensor	1	Z-MIS-NTC-1000
46	Capillary Bulb Holder	1	X-SMW-HLS-CBH
47	M6 S/S Full Hex Nut	9	Z-FIX-M6HEX
50	Contactor 380V~440V 3-Phase:		
	18-kW to 36-kW - SIEMENS Contactor 2023 40Amp AC1	4	Z-SIE-2023-40A
	45-kW & 54-kW - SIEMENS Contactor 2023 40Amp AC1	6	Z-SIE-2023-40A
	60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1	6	Z-SIE-2027-50A
	96-kW - SIEMENS Contactor 2027 50Amp AC1	8	Z-SIE-2027-50A
	120-kW - SIEMENS Contactor 2027 50Amp AC1	10	Z-SIE-2027-50A

ITEM No.	DESCRIPTION	PCS/UNIT	PART CODE
	Contactors 220V~240V 3-Phase:		
	18-kW to 36-kW - SIEMENS Contactor 2027 50Amp AC1	4	Z-SIE-2027-50A
	45-kW & 54-kW - SIEMENS Contactor 2027 50Amp AC1	6	Z-SIE-2027-50A
	60-kW & 72-kW - SIEMENS Contactor 2027 50Amp AC1	8	Z-SIE-2027-50A
	90-kW - SIEMENS Contactor 2027 50Amp AC1	10	Z-SIE-2027-50A
53-55	M3 x 22mm Mounting Screw Set	4	Z-FIX-M3x22CS-PD + Z-FIX-M3HEX + Z-FIX-M3FW

WATER CONNECTION PARTS

DESCRIPTION	PCS/UNIT	PART CODE
63mm / 2" ABS UV/SST Large Union	2	SP-122
56mm x 5.3mm Large Union 'O' Ring EPDM Shore 70 (Pack of 2pcs)	2	SP-122-ORS
63mm Manifold Socket for Big Union (For Titan Optima model only)	2	Z-IM-UNI-63

REPLACEMENT HEAT ELEMENTS

MODEL	OUTPUT	DESCRIPTION	PCS/UNIT	PART CODE
380~440V 3-Phase*	18-kW	Titanium 2.8-kW Kit	6	SP-EL-Ti2.8KW7T
	24-kW	Titanium 4-kW Kit	6	SP-EL-Ti4KW7T
	30-kW	Titanium 5-kW Kit	6	SP-EL-Ti5KW7T
	36-kW	Titanium 6-kW Kit	6	SP-EL-Ti6KW7T
	45-kW	Titanium 5-kW Kit	9	SP-EL-Ti5KW7T
	54-kW	Titanium 6-kW Kit	9	SP-EL-Ti6KW7T
	60-kW	Titanium 6.7-kW Kit	9	SP-EL-Ti6.7KW7T
	72-kW	Titanium 8-kW Kit	9	SP-EL-Ti8KW7T
	96-kW	Titanium 8-kW Kit	12	SP-EL-Ti8KW7T
	120-kW	Titanium 8-kW Kit	15	SP-EL-Ti8KW7T
220~240V 3-Phase*	18-kW	Titanium 2.8-kW Kit	6	SP-EL-Ti2.8KW7T
	24-kW	Titanium 4-kW Kit	6	SP-EL-Ti4KW7T
	30-kW	Titanium 5-kW Kit	6	SP-EL-Ti5KW7T
	36-kW	Titanium 6-kW Kit	6	SP-EL-Ti6KW7T
	45-kW	Titanium 5-kW Kit	9	SP-EL-Ti5KW7T
	54-kW	Titanium 6-kW Kit	9	SP-EL-Ti6KW7T
	60-kW	Titanium 5-kW Kit	12	SP-EL-Ti5KW7T
	72-kW	Titanium 6-kW Kit	12	SP-EL-Ti6KW7T
	90-kW	Titanium 6-kW Kit	15	SP-EL-Ti6KW7T

*For all 3-Phase titanium heating elements, please specify the required voltage.

REPLACEMENT TANK ASSEMBLY

MODEL	OUTPUT	DESCRIPTION	PART CODE
380~440V 3-Phase	18-kW	6-kW 500mm Tank 400V	SP-TA-CP-500-6
	18-kW	6-kW 500mm Tank 380V	SP-TA-CP-500-6-380
	18-kW	6-kW 500mm Tank 415V	SP-TA-CP-500-6-415
	24-kW	8-kW 500mm Tank 400V	SP-TA-CP-500-8
	24-kW	8-kW 500mm Tank 380V	SP-TA-CP-500-8-380
	24-kW	8-kW 500mm Tank 415V	SP-TA-CP-500-8-415
	30-kW	10-kW 500mm Tank 400V	SP-TA-CP-500-10
	30-kW	10-kW 500mm Tank 380V	SP-TA-CP-500-10-380
	30-kW	10-kW 500mm Tank 415V	SP-TA-CP-500-10-415
	36-kW	12-kW 500mm Tank 400V	SP-TA-CP-500-12
	36-kW	12-kW 500mm Tank 380V	SP-TA-CP-500-12-380
	36-kW	12-kW 500mm Tank 415V	SP-TA-CP-500-12-415
	45-kW	15-kW 500mm Tank 400V	SP-TA-CP-500-15
	45-kW	15-kW 500mm Tank 380V	SP-TA-CP-500-15-380
	45-kW	15-kW 500mm Tank 415V	SP-TA-CP-500-15-415
	54-kW	18-kW 500mm Tank 400V	SP-TA-CP-500-18
	54-kW	18-kW 500mm Tank 380V	SP-TA-CP-500-18-380
	54-kW	18-kW 500mm Tank 415V	SP-TA-CP-500-18-415
	60-kW	20-kW 500mm Tank 400V	SP-TA-CP-500-20
	60-kW	20-kW 500mm Tank 380V	SP-TA-CP-500-20-380
	60-kW	20-kW 500mm Tank 415V	SP-TA-CP-500-20-415
	72-kW	24-kW 500mm Tank 400V	SP-TA-CP-500-24
	72-kW	24-kW 500mm Tank 380V	SP-TA-CP-500-24-380
	72-kW	24-kW 500mm Tank 415V	SP-TA-CP-500-24-415
	96-kW	32-kW 843mm Tank 400V	SP-TA-CP-843-32
	96-kW	32-kW 843mm Tank 380V	SP-TA-CP-843-32-380
	96-kW	32-kW 843mm Tank 415V	SP-TA-CP-843-32-415
	120-kW	40-kW 843mm Tank 400V	SP-TA-CP-843-40
	120-kW	40-kW 843mm Tank 380V	SP-TA-CP-843-40-380
	120-kW	40-kW 843mm Tank 415V	SP-TA-CP-843-40-415
220~240V 3-Phase	18-kW	6-kW 500mm Tank	SP-TA-CP-500-6
	24-kW	8-kW 500mm Tank	SP-TA-CP-500-8
	30-kW	10-kW 500mm Tank	SP-TA-CP-500-10
	36-kW	12-kW 500mm Tank	SP-TA-CP-500-12
	45-kW	15-kW 500mm Tank	SP-TA-CP-500-15
	54-kW	18-kW 500mm Tank	SP-TA-CP-500-18
	60-kW	20-kW 843mm Tank	SP-TA-CP-843-20
	72-kW	24-kW 843mm Tank	SP-TA-CP-843-24
	90-kW	32-kW 843mm Tank	SP-TA-CP-843-32