

# Pumps and accessories for groundwater



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Possibility in every drop

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# Which water supply system suits your needs?

	Features	Standard 3" or 4" pump	Classic solution SQE + pressure switch	New generation Smart Solution SQE + CU 302
Comfort	Constant pressure			•
Build-in Protection	Wide voltage range		•	•
	Soft start		•	•
	Dry-run protection		•	•
	High starting torque		•	•
	Overload protection		•	•
	Over-temperature protection		•	•
Easy to install	Fits in < 4" wells		•	•
	Weight	10-25 kg	Max. 6.7 kg	Max. 6.7 kg
	Need for a starter box?	Yes, for 3-wire and PSC motors	No	No
	Can be installed horizontally	Depends on model, with cooling sleeve	Yes, without cooling sleeve	Yes, without cooling sleeve
Control & monitoring		On/Off work mode	On/Off work mode *	Grundfos GO app via Bluetooth
				Extended sensor/input support (analogue and digital): water on floor, flow meter etc
				Output signal configurable (analogue and digital)
				Low pressure and over pressure warning
				Real time clock with battery backup
				50-entry alarm log with time stamps
				Scheduling
				Support of new applications (tank/level control (empty/filling), pump out, pump monitor, ON/OFF pressure control
				Modbus RTU or Genibus on RS485
				Option to enable low pressure stop
				Option for delay start and stop
				Option to adjust tank size, Kp and Ti for constant pressure
				Option to lock setting with PIN code
				Grundfos Connect via built-in WiFi
			Grundfos Home app for homeowners	

\* Can be upgraded to constant pressure any time with Grundfos CU 30x control unit.

# 3" SQ / SQE

**This section covers our range of fixed and variable speed 3" submersible borehole pumps for the supply of groundwater for domestic and light industrial or agricultural applications.**

At only 3" in diameter, the Grundfos SQ(E) submersible pump is extremely compact and ideal for small or restricted boreholes. Our 3" range is available as either a fixed speed (SQ) or a variable speed option (SQE).

In addition to the features and benefits shared with the renowned SP submersible pump, the SQ(E) offers several motor protection and wear-reducing features that makes it the obvious choice for groundwater extraction at domestic or small waterworks and for irrigation systems.



“At only 3" in diameter, the Grundfos SQ(E) submersible pump is extremely compact and ideal for small or restricted boreholes”

## FEATURES & BENEFITS

- Over and under voltage protection
- Overload protection
- Over temperature protection

## APPLICATIONS

- Groundwater supply for irrigation systems
- Groundwater supply for small waterworks

# SQ / SQE Sizing Table

Groundwater ► Pump Sizing

## Pump sizing

**Important:** The dry-running protection is effective only within the recommended duty range of the pump, indicated by the bold curves. See performance curves.

Pump type	Input power (P1) [kW]	Flow rate Q [m <sup>3</sup> /h] / [l/s]														Max. head [m] (Q = 0 m <sup>3</sup> /h)	Rated current I <sub>r1</sub> [A]		Pipe connection Rp
		0.5/0.14	1.0/0.28	1.5/0.42	2.0/0.56	2.5/0.70	3.0/0.83	3.5/0.97	4.0/1.11	5.0/1.39	6.0/1.67	7.0/1.95	8.0/2.22	9.0/2.50	230 V		200 V		
		Head [m]																	
SQ 1-35	0.58	43	34	20	-	-	-	-	-	-	-	-	-	-	47	2.5	2.9	11/4	
SQ 1-50	0.78	65	52	32	-	-	-	-	-	-	-	-	-	-	71	3.3	4.0	11/4	
SQ 1-65	1.00	88	70	44	-	-	-	-	-	-	-	-	-	-	94	4.3	5.2	11/4	
SQ 1-80	1.18	110	89	56	-	-	-	-	-	-	-	-	-	-	118	5.1	6.0	11/4	
SQ 1-95	1.38	132	107	68	-	-	-	-	-	-	-	-	-	-	142	6.0	7.0	11/4	
SQ 1-110	1.59	155	125	80	-	-	-	-	-	-	-	-	-	-	166	7.0	8.1	11/4	
SQ 1-125	1.82	177	144	93	-	-	-	-	-	-	-	-	-	-	189	7.8	9.3	11/4	
SQ 1-140	2.02	199	162	104	-	-	-	-	-	-	-	-	-	-	213	8.6	10.3	11/4	
SQ 1-155	2.19	222	180	117	-	-	-	-	-	-	-	-	-	-	237	9.6	11.0	11/4	
SQ 2-35	0.71	43	42	39	35	29	19	-	-	-	-	-	-	-	45	3.0	3.6	11/4	
SQ 2-55	1.00	66	63	60	54	45	32	-	-	-	-	-	-	-	68	4.3	5.2	11/4	
SQ 2-70	1.27	87	84	79	72	60	43	-	-	-	-	-	-	-	89	5.5	6.4	11/4	
SQ 2-85	1.55	108	105	99	89	74	54	-	-	-	-	-	-	-	109	6.8	7.9	11/4	
SQ 2-100	1.86	131	128	120	109	91	67	-	-	-	-	-	-	-	132	8.0	9.5	11/4	
SQ 2-115	2.11	154	150	142	129	108	79	-	-	-	-	-	-	-	155	9.3	10.6	11/4	
SQ 2-130	2.30	171	166	157	142	120	88	-	-	-	-	-	-	-	172	10.3	11.5	11/4	
SQ 3-30	0.70	-	-	34	32	30	26	22	-	-	-	-	-	-	36	3.0	3.6	11/4	
SQ 3-40	0.99	-	-	53	50	47	42	36	-	-	-	-	-	-	56	4.2	5.1	11/4	
SQ 3-55	1.25	-	-	70	67	63	56	48	-	-	-	-	-	-	74	5.4	6.6	11/4	
SQ 3-65	1.52	-	-	87	83	78	70	60	-	-	-	-	-	-	92	6.7	7.8	11/4	
SQ 3-80	1.82	-	-	105	100	94	85	73	-	-	-	-	-	-	110	7.8	9.3	11/4	
SQ 3-95	2.09	-	-	123	117	109	99	85	-	-	-	-	-	-	129	9.0	10.7	11/4	
SQ 3-105	2.33	-	-	140	134	125	113	97	-	-	-	-	-	-	147	10.3	11.7	11/4	
SQ 3-120	2.35	-	-	152	146	136	123	106	-	-	-	-	-	-	160	10.4	11.8	11/4	
SQ 5-15	0.53	-	-	-	-	-	15	14	13	11	7	-	-	-	18	2.3	2.7	11/2	
SQ 5-25	0.92	-	-	-	-	-	31	29	28	24	18	-	-	-	36	3.9	4.7	11/2	
SQ 5-35	1.29	-	-	-	-	-	46	44	42	36	28	-	-	-	54	5.6	6.5	11/2	
SQ 5-50	1.70	-	-	-	-	-	62	59	56	49	38	-	-	-	71	7.3	8.7	11/2	
SQ 5-60	2.08	-	-	-	-	-	77	74	70	61	48	-	-	-	89	8.9	10.6	11/2	
SQ 5-70	2.43	-	-	-	-	-	93	89	85	73	58	-	-	-	106	10.7	12.0	11/2	
SQ 7-15	0.73	-	-	-	-	-	-	17	16	14	12	9	6	2	21	3.1	3.7	11/2	
SQ 7-30	1.26	-	-	-	-	-	-	36	35	32	29	24	18	10	42	5.5	6.4	11/2	
SQ 7-40	1.81	-	-	-	-	-	-	56	54	50	45	38	29	19	64	7.8	9.3	11/2	
SQ 7-55								73	71	66	60	52	41	27	107	9.5	10.9	11/2	

### Example

#### Required:

Flow rate: 2.4 m<sup>3</sup>/h

The nearest higher value in the table is 2.5 m<sup>3</sup>/h.

Head: 68.3 m

The nearest higher value in the table is 78 m.

#### Selected:

Pump type: SQ 3-65 (as it offers the best pump efficiency for the required flow and head).

Required pump power input: 1.52 kW

Rated current: I<sub>r1</sub> = 6.7 A at 230 V

I<sub>r1</sub> = 7.8 A at 200 V

Pipe connection: Rp 11/4

Length of pump: 826 mm

# SQ1 / SQ2

Groundwater ► Fixed Speed Pumps - Stainless Steel 304

SQ pumps are designed for pumping clean, non-aggressive and non-explosive liquids, not containing solid particles or fibers. SQ pumps are suitable for both continuous and intermittent operation for a variety of applications; domestic water supply, small waterworks, irrigation, tank applications or pressure boosting.

**Pumps with high efficiency motor and integrated protection against:**

- Dry running (automatic restart every 5 minutes)
- Overvoltage and undervoltage, cuts out below 150 Volt and above 315 Volt (up to 6000 Volt)
- Overtemperature
- Overload

**Liquid temperature:** +2°C to +35°C (+40°C when flow past motor > 0.15 m/sec)

pH: 5 to 9

**Starting method:** Integrated soft start for all SQ pumps

**Mains supply:** 1 x 200-240 Volt - 10 %/+ 6 % 50/60 Hz

**Complete pump material:** Stainless steel AISI 304 (EN 1.4031)

**Minimum borehole diameter:** Min. 76 mm

**Installation depth:** Max. 150 m



## SQ1: 3" SUBMERSIBLE PUMP - FIXED SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/4	0.70	2.9	1.5	34.0	SQE 1-35	96510071
		4		53.0	SQE 1-50	96510141
		5.2		72.0	SQE 1-65	96510142
	1.15	6		91.0	SQE 1-80	96510143
		7		111.0	SQE 1-95	96510144
		8.1		127.0	SQE 1-110	96510145
		9.3		135.0	SQE 1-125	96510146
	1.55	10.3		143.0	SQE 1-140	96510147
		11		151.0	SQE 1-155	96510148

## SQ2: 3" SUBMERSIBLE PUMP - FIXED SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/4	0.70	3.6	1.5	35.0	SQ 2-35	96510198
		5.2		54.0	SQ 2-55	96510199
	1.15	6.4		71.0	SQ 2-70	96510200
		7.9		88.0	SQ 2-85	96510201
		9.5		108.0	SQ 2-100	96510202
	1.55	10.6		128.0	SQ 2-115	96510203
		137.0		SQ 2-130	92994556	

## SQ3: 3" SUBMERSIBLE PUMP - FIXED SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/4	0.70	3.6	1.5	26.0	SQ 3-30	96510204
		5.1		42.0	SQ 3-40	96510205
	1.15	6.3		56.0	SQ 3-55	96510206
		7.8		70.0	SQ 3-65	96510207
	1.55	9.3		84.0	SQ 3-80	96510208
		10.7		98.0	SQ 3-95	96510209
	1.85	11.7		113.0	SQ 3-105	96510210
		11.8		125.0	SQ 3-120	93001417

## SQ5: 3" SUBMERSIBLE PUMP - FIXED SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/2	0.70	2.7	1.5	11.0	SQ 5-15	96510211
		4.7		23.0	SQ 5-25	96510212
	1.15	6.5		36.0	SQ 5-35	96510213
		8.7		48.0	SQ 5-50	96510214
	1.55	10.6		61.0	SQ 5-60	96510215
		12		73.0	SQ 5-70	96510217

## SQ7: 3" SUBMERSIBLE PUMP - FIXED SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/2	0.70	3.7	1.5	9.0	SQ 7-15	96510218
	1.15	6.4		23.0	SQ 7-30	96510219
	1.55	9.3		37.0	SQ 7-40	96510220
	1.85	10.9		57.0	SQ 7-55	93001547

# SQE 1 / SQE 2

Groundwater ► Variable Speed Pumps - Stainless Steel 304

SQE pumps are designed for pumping clean, non-aggressive and non-explosive liquids, not containing solid particles or fibres. Equipped with a high efficiency motor with permanent magnets, they also incorporate a frequency inverter to ensure constant pressure operation.

For variable speed operation SQE pumps require a CU300 or CU301, pressure transducer and a pressure tank. CU301 is easy to use with Up/Down arrows to control pressure. CU300 is advanced control requiring a GrundfosGO.

**SQE pumps are suitable for both continuous and intermittent operation for a variety of applications:** domestic water supply, small waterworks, irrigation, tank applications or pressure boosting.

**Pumps with high efficiency motor and integrated protection against :**

- Dry running (automatic restart every 5 minutes)
- Overvoltage and undervoltage, cuts out below 150 Volt and above 315 Volt (up to 6000 Volt)
- Overtemperature
- Overload

**Liquid temperature :** +2°C to +35°C (+40°C when flow past motor > 0.15 m/sec)

**pH :** 5 to 9

**Starting method :** Integrated soft start for all SQE pumps except when integrating CU300/CU302 for variable speed operation

**Mains supply :** 1 x 200-240 Volt - 10 %/+ 6 % 50/60 Hz

**Complete pump material :** Stainless steel AISI 316

**Minimum borehole diameter :** Min. 76 mm

**Installation depth :** Max. 150 m



## SQE 1: 3" SUBMERSIBLE PUMP - VARIABLE SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No	
1 x 200-240V							
Rp 1 1/4	0.70	2.9	1.5	34.0	SQE 1-35	96510071	
		4		53.0	SQE 1-50	96510141	
	1.15	5.2		72.0	SQE 1-65	96510142	
		6		91.0	SQE 1-80	96510143	
	1.55	7		111.0	SQE 1-95	96510144	
		8.1		127.0	SQE 1-110	96510145	
	1.85	9.3		135.0	SQE 1-125	96510146	
		10.3		143.0	SQE 1-140	96510147	
				11	151.0	SQE 1-155	96510148

## SQE 2: 3" SUBMERSIBLE PUMP - VARIABLE SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 1 1/4	0.70	3.6	1.5	35.0	SQE 2-35	96510150
		5.2		54.0	SQE 2-55	96510151
	1.15	6.4		71.0	SQE 2-70	96510152
		7.9		88.0	SQE 2-85	96510153
	1.55	9.5		108.0	SQE 2-100	96510154
		10.6		128.0	SQE 2-115	96510155

## SQE 3: 3" SUBMERSIBLE PUMP - VARIABLE SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/4	0.70	3.6	1.5	26.0	SQE 3-30	96510156
		5.1		42.0	SQE 3-40	96510157
	1.15	6.3		56.0	SQE 3-55	96510158
		7.8		70.0	SQE 3-65	96510159
	1.55	9.3		84.0	SQE 3-80	96510160
		10.7		98.0	SQE 3-95	96510161
	1.85	11.7		113.0	SQE 3-105	96510162
		11.8		125.0	SQE 3-120	93001424

## SQE 5: 3" SUBMERSIBLE PUMP - VARIABLE SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/2	0.70	2.7	1.5	11.0	SQE 5-15	96510163
		4.7		23.0	SQE 5-25	96510164
	1.15	6.5		36.0	SQE 5-35	96510165
		8.7		48.0	SQE 5-50	96510166
	1.55	10.6		61.0	SQE 5-60	96510167
		12		73.0	SQE 5-70	96510168

## SQE 7: 3" SUBMERSIBLE PUMP - VARIABLE SPEED

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/2	0.70	3.7	1.5	9.0	SQE 7-15	96510169
	1.15	6.4		23.0	SQE 7-30	96510170
	1.55	9.3		37.0	SQE 7-40	96510171
	1.85	10.9		57.0	SQE 7-55	93001549

# SQ(E) Pack

SQ - 3" Submersible Pumps ► SQ / SQE Accessories

## SQ(E) Pack: 3" SUBMERSIBLE PUMP (FIXED OR VARIABLE SPEED) PACKAGE INCLUDING CABLE



SQ and SQE pumps are designed for pumping thin, clean, non-aggressive and non-explosive liquids, **not containing solid particles or fibres**. SQ and SQE pumps are suitable for both continuous and intermittent operation for a variety of applications: domestic water supply, small waterworks, irrigation, tank applications or pressure boosting. SQ(E) packs integrate a submersible pump SQ(E) equipped with a pre-defined length of supply cable, depending on the model between 10 and 80 meters. **Pumps with high efficiency motor, integrating protection against:**

- Dry running
- Overvoltage and undervoltage, cuts out below 150 V and above 315 V
- Overtemperature
- Overload

Connection	P2 [kW]	I [A]	Cable [m]	Nominal head [m]	Type	Part. No
1 x 200-240V						
Rp 11/4	0.70	5.2	30.0	72.0	SQ1-65	96524421
	1.15	6	50.0	91.0	SQ1-80	96524428
					SQ1-80	96524429
	0.70	5.2	15.0	54.0	SQ2-35	96524423
			10.0		SQ2-55	96524430
			15.0		SQ2-55	96524431
			30.0		SQ2-55	96524432
			60.0		SQ2-55	96524433
			30.0		SQ2-70	96524434
	1.15	6.4	60.0	71.0	SQ2-70	96524436
			80.0		SQ2-70	96524435
			40.0		SQ2-85	96524443
			80.0		SQ2-85	96524444
	0.70	5.1	30.0	26.0	SQ3-30	96618723
			15.0		SQ3-40	96524426
			30.0		SQ3-40	96524427
			15.0		SQ3-55	96524437
			30.0		SQ3-55	96524438
7.8			40.0		SQ3-65	96524439
30.0			SQ3-65		96524440	
30.0			SQ3-80		96524445	
50.0			SQ3-80		96524446	
10.7			70.0		SQ3-95	96524447
1.85	11.7	80.0	113.0	SQ3-105	96524448	
Rp 11/2	1.15	15.0	36.0	SQ5-35	96524441	
		30.0		SQ5-35	96160956	
	1.55	15.0	48.0	SQ5-50	96524449	
		30.0		SQ5-50	96524450	
		10.6		30.0	61.0	SQ5-60
	1.85	12	73.0	SQ5-70	96524452	
1.55	9.3	15.0	37.0	SQ7-40	96524453	

# SQ(E) Cable / CU 300 / CU 302

SQ - 3" Submersible Pumps ► SQ / SQE Accessories

## SQ(E) CABLE: Submersible drop cable for SQ, SQE



**Type of cable:** EPR 3 x 1.5 mm<sup>2</sup>, screened

- One cable length with motor plug, packed
- 4 screws (M4) for fitting of plug
- 2 screws (M3 x 6) for fitting of cable guard to suction strainer

Short description	Part. No
SQ Cable 3G1.5, 1.5M EUR/APREG (B)	96160869

## CU 300: Control unit



The CU 300 is a control and communication unit especially developed for the SQE submersible pumps in constant-pressure applications.

**The CU 300 control unit provides the following:**

- Easy adjustment to a specific borehole.
- Full control of the SQE pumps.
- Two-way communication with the SQE pumps.
- Alarm indication of pump operation by diodes on the front.
- Possibility of starting, stopping and resetting the pump.
- Communication with Grundfos Go App.

The CU 300 communicates with the pump via mains-borne signalling (Power Line Communication), meaning that no extra cables are required between the CU 300 and the pump.

Voltage	Product Name	Part. No
1 x 100-240	CU 300 control unit cpl. English	96422775

## CU 302: Monitor & control SQE pumps



Pairing a Grundfos SQE with a CU 302 controller will help you maximise the potential of the pump and achieve constant pressure at all times. Pump speed will automatically be adjusted to avoid fluctuating water pressure, despite changing demands. This solution allows the use of a smaller tank in comparison to traditional pressure control systems.

Short description	Part. No
CU 302 cpl.	92799797

# SQE Constant Pressure Kit / SQ(E) Accessories

SQ - 3" Submersible Pumps ► SQ / SQE Accessories

## SQE CONSTANT PRESSURE KIT: SQE CONSTANT PRESSURE KIT



- Kit comes complete with bore cap (either 32mm or 40mm), 5-way tee, 0-10 Bar pressure sensor, pressure gauge and a pressure tank.
- Add either CU300 or CU301 for pressure control

Short description	Part. No
CU 302 package SQE 2-55 + 40m	93176275
CU 302 package SQE 2-85 + 60m	93176276
CU 302 package SQE 2-130 + 100m	93218720
CU 302 package SQE 3-40 + 20m	93218815
CU 302 package SQE 3-65 + 40m	93176203
CU 302 package SQE 3-120 + 80m	93218784
CU 302 package SQE 5-35 + 20m	93218924
CU 302 package SQE 5-70 + 40m	93176209
CU 302 package SQE 7-55 + 40m	93218937
CU 302 package w/o pump	93187297

## SQ/SQE ACCESSORIES



Accessories suitable for SQ/SQE submersible pumps.

Contact Grundfos for expert advice on which accessories are best for your application.

Short description	Part. No
Flow sleeve Kit SQ/SQE	98148594

# 4", 6", 8", 10" & 12" SP

This section covers our range of fixed and variable speed 4", 6", 8" & 12" submersible borehole pumps for the supply of groundwater for domestic and light industrial, agricultural applications or mining.

Grundfos SP submersible pumps are renowned for their high efficiency and reliability throughout the range. Made entirely of corrosion-resistant stainless steel, SP pumps are ideal for a wide variety of applications.

The Grundfos SP range offers high efficiency, high resistance to sand and other abrasives, motor burnout protection, and easy maintenance. A complete monitoring and control system is available for constant optimisation of the pumping system.

“high efficiency, high resistance to sand and other abrasives, motor burnout protection, and easy maintenance”



## FEATURES & BENEFITS

- State-of-the-art hydraulics provide high efficiency and low operating costs
- 100% stainless steel inside and outside (304, 316, 904 L)
- Sand resistant
- High Corrosive resistance to aggressive water
- Monitoring, protection and communication via the MP 204
- Motor burnout protection
- Dry-running protection

## APPLICATIONS

- Groundwater supply to waterworks
- Irrigation in Horticulture and Agriculture
- Dewatering
- Pressure Boosting
- Industrial Applications

# Type Key

Example of pump: SP 46-9 C Rp4 6" 50/60 SD

Example of pump with motor: SP 125-10 AA N Rp6 8" 3 × 380-415 50 D 92 kW

<b>SP 46</b> <b>SP 125</b>	Type range (SP)		
<b>9</b> <b>10</b>	Number of impellers		
<b>C</b> <b>AA</b>	Reduced impellers (A, B, 0 max. 2)		
<b>Stainless-steel parts of material</b>			
<b>N</b>	N	=	EN 1.4301
	R	=	EN 1.4401
	R	=	EN 1.4539
<b>Rubber parts of material</b>			
<b>E</b>	SP 1A - SP 5A		
	-	=	NBR
	E	=	FKM
	SP 9 - SP 14		
	-	=	LSR/NBR/TPU
	E	=	FKM
	SP 18 - SP 60		
	-	=	LSR/NBR
	E	=	FKM
	SP 77 - SP 215		
	-	=	NBR
	E	=	FKM
<b>Rp6</b> <b>Rp4</b>	<b>Connection</b>		
	Rp thread (RpX)		
	R thread (RX)		
	NPT thread (XNPT)		
	Grundfos flange (GrX)		
<b>6"</b> <b>8"</b>	Inlet motor size		
<b>3 × 380-415</b>	Voltage [V]		
<b>50/60</b> <b>50</b>	Frequency [Hz]		
<b>Starting method</b>			
<b>D</b>	-	=	DOL
	D	=	SD
<b>92 kW</b>	Motor power [KW]		

## Applications

SP pumps are primarily used to pump raw water from the underground. The pumps are installed in boreholes or wells, submerged below the water level.

For industrial purposes, you can place the pump in for example a tank.

The SP A and SP pumps are suitable for the following applications:

- raw-water supply
- irrigation
- groundwater lowering
- pressure boosting
- fountain applications
- mining applications.
- off-shore applications.

# SP 2A Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 2A Pump sizing

Flow Q		m <sup>3</sup> /h																	
		l/s																	
		l/min.																	
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~		I <sub>n</sub> 3 ~		Head											
	Conn	Pump		[A]															
SP 2A-6	Rp 1" ¼	4"	0,37	2,9	1,4	36	33	30	26	24	17	10							
SP 2A-9			0,37	2,9	1,4	53	48	44	38	34	24	13							
SP 2A-13			0,55	4,0	2,2	77	70	64	55	50	35	20							
SP 2A-18			0,75	5,5	2,3	107	97	89	77	69	49	29							
SP 2A-23			1,1	8,2	3,4	137	124	114	99	90	64	36							
SP 2A-28			1,5	10,2	4,2	167	152	140	122	110	79	46							
SP 2A-33			1,5	10,2	4,2	196	178	163	142	128	90	53							
SP 2A-40			2,2	14,0	5,5	245	221	203	176	158	111	63							
SP 2A-48			2,2	14,0	5,5	292	262	240	207	186	129	69							
SP 2A-55			3	-	7,9	336	302	277	240	215	150	84							
SP 2A-65			3	-	7,9	395	353	322	280	250	170	92							
SP 2A-75			4	-	9,6	459	410	380	330	295	215	118							
SPA 2-90			4	-	9,6	545	489	456	375	345	235	130							

For Starter Boxes please refer to page 46.

# SP 2A

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 2A: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
<b>1 x 230V</b>								
Rp 1 1/4	4	0.37	10.2	MS402	DOL	1.70	SP 2A-6	09002F06
		0.55					SP 2A-9	09002F09
		0.75					SP 2A-13	09002F13
		1.10					SP 2A-18	09002F18
		1.50					SP 2A-23	09002F23
							SP 2A-28	09002F28
							SP 2A-33	09002F33
<b>3 x 415V</b>								
Rp 1 1/4	4	0.37	1.5	MS402	DOL	1.70	SP 2A-6	09001K06
		0.55	2.35				SP 2A-9	09001K09
		0.75	2.4				SP 2A-13	09001K13
		1.10	3.65				SP 2A-18	09001K18
		1.50	4.4				SP 2A-23	09001K23
							SP 2A-28	09001K28
							SP 2A-33	09001K33
<b>1 x 220-230V</b>								
Rp 1 1/4	4	2.20	14	MS4000	DOL	1.70 2.50	SP 2A-40	09102F40
							SP 2A-48	09102F48
<b>3 x 380-400-415V</b>								
Rp 1 1/4	4	2.20	5.7	MS402	DOL	1.70	SP 2A-40	09101K40
		3.00	8.1	MS4000		2.50	SP 2A-48	09101K48
		4.00	9.8			5.00	SP 2A-55	09101K55
							SP 2A-65	09101K65
							SP 2A-75	09301K75
							SP 2A-90	09301K90

For Starter Boxes please refer to page 46.

# SP 3A Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 3A Pump sizing

Flow Q		Head														
		m <sup>3</sup> /h														
		0	1	1,4	1,8	2	2,4	2,8	3,4	4	4,4	5	6	6,7		
		l/s														
		l/min.														
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~ [A]	I <sub>n</sub> 3 ~ [A]	Head										
	Conn	Pump				0	1	1,4	1,8	2	2,4	2,8	3,4	4	4,4	5
SP 3A-6			0,37	2,9	1,4	38	35	34	32	31	30	27	22	15	12	
SP 3A-9			0,55	4,0	2,2	57	54	51	49	47	45	41	33	23	19	
SP 3A-12			0,75	5,5	2,3	76	70	68	65	64	60	55	45	31	26	
SP 3A-15			1,1	8,2	3,4	95	87	85	82	80	76	70	57	40	33	
SP 3A-18			1,1	8,2	3,4	113	105	101	97	95	89	82	67	46	38	
SP 3A-22			1,5	10,2	4,2	139	129	125	120	117	110	101	83	57	47	
SP 3A-25	Rp 1" ¼	4"	1,5	10,2	4,2	157	145	140	135	131	124	113	92	63	52	
SP 3A-29			2,2	14,0	5,5	184	171	166	159	156	147	136	111	78	65	
SP 3A-33			2,2	14,0	5,5	209	194	187	180	176	166	152	125	87	72	
SP 3A-39			3	-	7,9	246	230	223	216	212	201	188	160	120	105	
SP 3A-45			3	-	7,9	283	264	255	247	242	229	214	181	135	118	
SP 3A-52			4	-	9,6	328	308	298	289	283	269	251	214	161	141	
SP 3A-60			4	-	9,6	377	350	341	330	323	307	286	242	182	158	

For Starter Boxes please refer to page 46.

# SP 3A

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 3A: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
<b>1 x 220-230-240V</b>								
Rp 1 1/4	4	0.37	2.9	MS402	DOL	1.70	SP 3A-6	10007F06
		0.55	4				SP 3A-9	10007F09
		0.75	5.6				SP 3A-12	10007F12
		1.10	8.4				SP 3A-15	10007F15
<b>1 x 220-230V</b>								
Rp 1 1/4	4	2.20	14	MS4000	DOL	1.70	SP 3A-18	10007F18
<b>1 x 230V</b>								
Rp 1 1/4	4	1.50	10.2	MS402	DOL	1.70	SP 3A-29	10002F29
<b>3 x 380-400-415V</b>								
Rp 1 1/4	4	0.37	1.5	MS402	DOL	1.70	SP 3A-22	10002F22
		0.55	2.35				SP 3A-25	10002F25
		0.75	2.4				SP 3A-29	10001K06
		1.10	3.65				SP 3A-9	10001K09
		1.50	4.4	SP 3A-12			10001K12	
		2.20	5.7	SP 3A-15			10001K15	
		3.00	8.1	SP 3A-18			10001K18	
		4.00	9.8	MS4000			SP 3A-22	10001K22
<b>3 x 380-400-415V</b>								
						2.50	SP 3A-25	10001K25
							SP 3A-29	10001K29
							SP 3A-33	10001K33
							SP 3A-39	10101K39
							SP 3A-45	10101K45
							SP 3A-52	10101K52
							SP 3A-60	10101K60

For Starter Boxes please refer to page 46.

# SP 5A Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 5A Pump sizing

Flow Q		Head																	
		m <sup>3</sup> /h																	
		0	1	1,4	1,8	2	2,4	2,8	3,4	4	4,4	5	6	6,7					
Flow Q		l/s																	
		0	0,28	0,39	0,5	0,56	0,67	0,78	0,95	1,12	1,23	1,4	1,68	1,86					
Flow Q		l/min.																	
		0	16,7	23,4	30,1	33,4	40,1	46,8	56,8	66,8	73,5	83,5	100,2	111,6					
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~ [A]	I <sub>n</sub> 3 ~ [A]	Head													
	Diameter	Pump				26	24	23	23	22	22	21	20	19	18	16	11	-	
SP 5A-4			0,37	2,9	1,4	26	24	23	23	22	22	21	20	19	18	16	11	-	
SP 5A-6			0,55	4,0	2,2	38	36	35	34	33	33	32	30	28	26	24	17	11	
SP 5A-8			0,75	5,5	2,3	51	48	47	46	45	44	43	40	38	36	32	23	15	
SP 5A-12			1,1	8,2	3,4	77	72	70	68	67	65	63	60	56	54	47	35	23	
SP 5A-17			1,5	10,2	4,2	109	100	97	96	94	92	90	85	80	75	67	49	32	
SP 5A-21			2,2	14,0	5,5	135	126	122	120	118	115	112	106	100	95	85	63	42	
SP 5A-25	Rp 1" ½	4"	2,2	14,0	5,5	160	150	145	141	139	135	131	125	118	112	99	72	48	
SP 5A-33			3	-	7,9	211	195	190	186	183	179	173	166	155	148	130	95	62	
SP 5A-38			4	-	9,6	250	233	229	221	219	215	209	199	186	177	157	115	76	
SP 5A-44			4	-	9,6	281	260	257	250	245	240	232	220	207	195	174	127	84	
SP 5A-52				5,5	-	13,6	334	310	302	296	293	285	280	267	249	238	210	155	110
SP 5A-60				5,5	-	13,6	384	360	345	339	335	325	319	303	283	269	238	175	130
SP 5A-75		6"		7,5	-	17,6	480	447	435	423	420	409	398	379	354	332	300	220	128
SP 5A-85				7,5	-	17,6	541	502	490	477	470	460	447	423	396	372	333	240	149

For Starter Boxes please refer to page 46.

# SP 5A

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 5A: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
<b>1 x 220-230-240V</b>								
Rp 1 1/2	4	0.37	2.9	MS402	DOL	1.70	SP 5A-4	05007F04
		0.55	4				SP 5A-6	05007F06
		0.75	5.6				SP 5A-8	05007F08
		1.10	8.4				SP 5A-12	05007F12
<b>1 x 220-230V</b>								
Rp 1 1/2	4	2.20	14	MS4000	DOL	1.70	SP 5A-21	05002B21
<b>1 x 230V</b>								
Rp 1 1/2	4	1.50	0	MS402	DOL	1.70	SP 5A-17	05002B17
<b>3 x 220-230V</b>								
R 1 1/2	6	7.50	31	MS6000	DOL	5.00	SP 5A-75	5301075
<b>3 x 380-400-415V</b>								
Rp 1 1/2	4	0.37	1.5	MS402	DOL	1.70	SP 5A-4	05001K04
		0.55	2.35				SP 5A-6	05001K06
		0.75	2.4				SP 5A-8	05001K08
		1.10	3.65				SP 5A-12	05001K12
		1.50	4.4				SP 5A-17	05001K17
		2.20	5.7	SP 5A-21		05001K21		
		3.00	8.1	MS4000		SP 5A-25	05001K25	
		4.00	9.8			SP 5A-33	05001K33	
		5.50	13.4			SP 5A-38	05101K38	
						SP 5A-44	05101K44	
		SP 5A-52	05171K52					
			SP 5A-60	05171K60				

For Starter Boxes please refer to page 46.

# SP 7 Sizing Table

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 7 Pump sizing

Flow Q		Head														
		m <sup>3</sup> /h	0,0	1,0	2,0	3,0	4,0	5,0	6,0	7,0	8,0	9,0				
		l/s	0,0	0,28	0,56	0,84	1,12	1,40	1,68	1,95	2,24	2,50				
		l/min.	0,0	16,70	33,40	50,40	66,80	83,50	100,2	117,0	137,0	150,0				
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1~ [A]	I <sub>n</sub> 3~ [A]	Head										
	Conn	Pump														
SP 7-3	Rp 1 1/2"	4"	0,55	5,8	2,00	18,5	18,0	18,0	17,0	17,0	16,0	14,5	13,0	11,0	8,5	
SP 7-5			0,75	7,45	2,15	30,5	30,0	30,0	29,0	28,0	26,5	24,6	22,0	18,5	14,2	
SP 7-8			1,1	7,3	3,25	49,0	48,0	47,5	46,7	45,0	42,5	39,3	35,3	30,0	22,5	
SP 7-12			1,5	10,2	4,10	73,0	72,2	71,0	70,0	67,0	63,5	58,8	52,0	43,7	34,0	
SP 7-17			2,2	15	5,50	104,5	103,0	102,0	100,0	96,0	91,5	84,0	75,0	63,0	49,0	
SP 7-23			3	7,70	140,0	140,0	136,5	133,5	129,8	123,0	114,0	101,0	85,5	66,5		
SP 7-27			4	9,75	165,5	164,5	162,0	160,0	154,0	146,5	136,5	121,7	103,0	79,0		
SP 7-31			4	9,75	190,7	188,0	184,5	181,5	175,5	166,5	154,0	137,0	115,0	89,5		
SP 7-37			5,5	13,00	229,0	225,5	224,0	220,0	213,0	202,8	188,0	168,0	143,0	111,0		
SP 7-42			5,5	13,00	257,5	256,0	252,5	242,5	237,0	227,0	210,0	188,0	159,5	123,0		
SP 7-51			7,5	18,40	314,0	311,0	307,5	301,5	292,0	277,0	257,5	230,0	195,0	152,0		
SP 7-59			7,5	18,40	359,5	358,0	353,0	341,5	333,5	316,0	292,0	260,7	219,5	167,0		
SP 7-71			Rp 2"	6"	9,2	21,80	437,0	432,7	427,5	419,5	406,0	386,0	358,0	320,8	271,0	209,0
SP 7-86					11	26,00	529,0	523,0	517,0	506,5	490,5	465,5	431,0	386,0	325,5	254,7
SP 7-100	13	30,00			615,0	609,0	602,0	590,5	572,0	544,5	505,0	435,5	384,0	297,0		

For Starter Boxes please refer to page 46.

# SP 7

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 7: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No	
<b>1 x 220-230V</b>									
Rp1 1/2	4	2.20	14	MS4000	DOL	1.70	SP 7-17	98699153	
<b>1 x 230V</b>									
Rp1 1/2	4	0.55	5.8	MS402	DOL	1.70	SP 7-3	98699149	
		0.75	7.45				SP 7-5	98699150	
		1.10	7.3				SP 7-8	98699151	
		1.50	10.2				SP 7-12	98699152	
<b>3 x 380-400-415V</b>									
R 2	6	9.20	21.2	MS6000		5.00	SP 7-71	98699211	
		11.00	24.8			8.00	SP 7-86	98699212	
		13.00	29			SP 7-100	98699213		
Rp1 1/2	4	0.55	2.35	MS402		1.70	SP 7-3	98699178	
		0.75	2.4				SP 7-5	98699169	
		1.10	3.65				SP 7-8	98699179	
		1.50	4.4				SP 7-12	98699180	
		2.20	5.7				SP 7-17	98699181	
		3.00	8.1				SP 7-23	98699182	
		4.00	9.8				DOL	SP 7-27	98699183
		5.50	13.4				MS4000	SP 7-31	98699184
		7.50	19.6				5.00	SP 7-37	98699196
		5.50	13.6				5.00	SP 7-42	98699197
6	6	5.50	13.6	MS6000		5.00	SP 7-51	98699198	
		7.50	17.2				SP 7-59	98699199	
							SP 7-37	98699207	
							SP 7-42	98699208	
							SP 7-51	98699209	
							SP 7-59	98699210	

For Starter Boxes please refer to page 46.

# SP 9 Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 9 Pump sizing

Flow Q		Head															
		m <sup>3</sup> /h	0,0	1,0	2,0	3,0	4,0	5,0	6,0	7,0	8,0	9,0	10,0	11,0			
		l/s	0,0	0,28	0,56	0,84	1,12	1,40	1,68	1,95	2,24	2,50	2,80	3,08			
		l/min.	0,0	16,70	33,40	50,40	66,80	83,50	100,2	117,0	137,0	150,0	167,0	184,0			
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~ [A]	I <sub>n</sub> 3 ~ [A]	Head											
	Conn	Pump															
SP 9-5	4"		1,1	5,5	2,3	32	32	32	32	32	31	30	29	28	26	23	19
SP 9-8			1,5	10,2	4,2	51	51	51	51	50	50	48	46	44	40	36	31
SP 9-11			2,2	14	5,5	71	71	71	70	70	69	67	65	61	57	51	43
SP 9-13			3,0		7,9	84	84	83	83	83	82	80	77	73	68	61	52
SP 9-16			3,0		7,9	102	102	102	101	101	99	97	93	88	81	73	62
SP 9-18			4,0		9,6	116	116	116	115	115	113	111	107	101	94	84	72
SP 9-21			4,0		9,6	135	135	134	134	133	131	128	123	116	107	96	82
SP 9-23			5,5		13,6	148	149	149	148	147	145	142	138	131	121	109	94
SP 9-25			5,5		13,6	161	161	161	161	159	157	154	149	141	131	118	101
SP 9-29			5,5		13,6	186	186	186	185	183	181	177	170	161	149	134	114
SP 9-32			7,5		17,6	206	206	206	205	204	201	197	190	181	168	151	130
SP 9-36			7,5		17,6	231	231	231	230	228	225	220	212	201	186	167	143
SP 9-40			7,5		17,6	256	256	255	254	252	248	242	233	220	204	182	155
SP 9-23		Rp 2"		5,5	13,6	148	149	149	148	147	145	142	138	131	121	109	94
SP 9-25			5,5	13,6	161	161	161	161	159	157	154	149	141	131	118	101	
SP 9-29			5,5	13,6	186	186	186	185	183	181	177	170	161	149	134	114	
SP 9-32			7,5	17,6	206	206	206	205	204	201	197	190	181	168	151	130	
SP 9-36			7,5	17,6	231	231	231	230	228	225	220	212	201	186	167	143	
SP 9-40			7,5	17,6	256	256	255	254	252	248	242	233	220	204	182	155	
SP 9-44	6"		9,2	21,8	283	283	283	282	280	277	271	262	248	231	207	179	
SP 9-48			9,2	21,8	308	308	307	306	304	300	294	283	269	249	224	192	
SP 9-52			11,0	24,8	334	334	334	333	331	327	320	309	293	272	245	211	
SP 9-56			11,0	24,8	359	359	359	357	355	350	342	330	313	290	261	224	
SP 9-60			13,0	30	386	386	386	385	382	378	370	357	340	315	284	245	
SP 9-65			13,0	30	417	417	417	415	413	407	398	385	365	339	304	262	
SP 9-69			13,0	30	442	442	441	440	437	431	421	406	385	357	320	275	
SP 9-75			15,0	34	482	482	481	480	477	471	460	445	422	392	352	303	
SP 9-79		15,0	34	507	507	506	504	501	494	483	466	442	410	368	316		

For Starter Boxes please refer to page 46.

# SP 9

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 9: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
<b>1 x 220-230V</b>								
Rp 2	4	2.20	14	MS4000	DOL	1.70	SP 9-10	98779770
							SP 9-11	98699024
<b>1 x 230V</b>								
Rp 2	4	0.75	7.45	MS402	DOL	1.70	SP 9-4	98780158
		1.10	7.3				SP 9-5	98699022
		1.50	10.2				SP 9-8	98699023
<b>3 x 380-400-415V</b>								
R 2	6	11.00	24.8	MS6000		5.00	SP 9-56	98699075
		13.00	29				SP 9-60	98699076
		15.00	33.5				SP 9-65	98699077
		18.50	41.5				SP 9-69	98699078
					8.00	SP 9-75	98699079	
						SP 9-79	98699080	
						SP 9-86	98901304	
						SP 9-93	98901305	
Rp 2	4	0.75	2.4	MS402	DOL	1.70	SP 9-4	98779736
		1.10	3.65				SP 9-5	98699053
		1.50	4.4				SP 9-8	98699054
		2.20	5.7				SP 9-10	98779739
		3.00	8.1				SP 9-11	98699055
	4.00	9.8	SP 9-13	98699056				
	5.50	13.4	MS4000	SP 9-16	98699057			
	7.50	19.6		SP 9-18	98699058			
				SP 9-21	98699059			
				SP 9-23	98699060			
				SP 9-25	98699061			
			SP 9-29	98699062				
			SP 9-32	98699063				
			SP 9-36	98699064				
			SP 9-40	98699065				
			SP 9-23	98699066				
			SP 9-25	98699067				
			SP 9-29	98699068				
			SP 9-32	98699069				
			SP 9-36	98699070				
			SP 9-40	98699071				
			SP 9-44	98699072				
			SP 9-48	98699073				
			SP 9-52	98699074				
	6	7.50	17.2	MS6000		5.00		
		9.20	21.2					
		11.00	24.8					

For Starter Boxes please refer to page 46.

# SP 11 Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 11 Pump sizing

Flow Q		m <sup>3</sup> /h													
		l/s													
		l/min.													
		0,0	2,0	4,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0				
		0,0	0,6	1,1	1,7	2,2	2,8	3,4	3,9	4,5	5,0				
		0,0	33,0	66,8	100,0	137,0	167,0	200,0	234,0	266,6	300,0				
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~ [A]	I <sub>n</sub> 3 ~ [A]	Head									
	Conn	Pump													
SP 11-3	4"	Rp 2"	0,75	5,5	2,3	18	17	17	17	16	14	12	9	23	19
SP 11-5			1,1	8,2	3,4	30	29	28	28	26	24	20	16	36	31
SP 11-7			1,5	10,2	4,2	42	40	40	39	36	33	28	22	51	43
SP 11-11			2,2	14	5,5	65	63	62	61	57	52	45	35	61	52
SP 11-15			3,0	7,9	89	86	84	82	78	71	61	48	73	62	
SP 11-20			4,0	9,6	119	115	113	110	104	95	82	64	84	72	
SP 11-24			5,5	13,6	143	139	137	134	127	116	101	80	96	82	
SP 11-28			5,5	13,6	166	161	158	154	146	133	115	90	109	94	
SP 11-33			7,5	17,6	196	190	187	183	174	159	137	108	118	101	
SP 11-24			6"	Rp 2"	5,5	13,6	143	139	137	134	127	116	101	80	134
SP 11-28	5,5	13,6			166	161	158	154	146	133	115	90	151	130	
SP 11-33	7,5	17,6			196	190	187	183	174	159	137	108	167	143	

For Starter Boxes please refer to page 46.

# SP 11

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 11: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No	
<b>1 x 220-230V</b>									
Rp 2	4	2.20	14	MS4000	DOL	1.70	SP 11-11	98699296	
<b>1 x 230V</b>									
Rp 2	4	0.75	7.45	MS402	DOL	1.70	SP 11-3	98699293	
		1.10	7.3				SP 11-5	98699294	
		1.50	10.2				SP 11-7	98699295	
<b>3 x 380-400-415V</b>									
Rp 2	4	0.75	2.4	MS402	DOL	1.70	SP 11-3	98699312	
		1.10	3.65				SP 11-5	98699313	
		1.50	4.4				SP 11-7	98699314	
		2.20	5.7				SP 11-11	98699315	
		3.00	8.1				SP 11-15	98699316	
		4.00	9.8				SP 11-20	98699317	
	6	5.50	13.4	MS4000	DOL	5.00	SP 11-24	98699318	
			7.50				19.6	SP 11-27	98900419
			5.50				13.6	SP 11-33	98699320
		7.50	17.2	MS6000			SP 11-37	98901311	
							SP 11-24	98699329	
							SP 11-27	98900423	
SP 11-33	98699331								
SP 11-37	98901313								

For Starter Boxes please refer to page 46.

# SP 14 Sizing Table

Sp(A) - 4" Submersible Pumps ▶ Stainless Steel 304

## SP 14 Pump sizing

Flow Q		m <sup>3</sup> /h																													
		l/s																													
		l/min.																													
		0,0	2,0	4,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0	0,0	0,6	1,1	1,7	2,2	2,8	3,4	3,9	4,5	5,0	0,0	33,0	66,8	100,0	137,0	167,0	200,0	234,0	266,6	300,0
TYPE	Diameter		P <sub>2</sub> [kW]	I <sub>n</sub> 1 ~ [A]	I <sub>n</sub> 3 ~ [A]	Head																									
	Conn	Pump																													
SP 14-4	4"	Rp 2"	1,1	3,4	24	24	24	23	22	21	20	18	15	11	182	155															
SP 14-6			1,5	4,2	36	36	36	34	33	31	29	26	22	17	109	94															
SP 14-8			2,2	5,5	49	49	48	46	44	42	39	35	30	23	118	101															
SP 14-11			3,0	7,9	67	67	65	63	60	57	53	48	41	32	134	114															
SP 14-13			3,0	7,9	78	79	77	74	70	67	62	55	47	36	151	130															
SP 14-15			4,0	9,6	91	92	89	86	82	78	73	65	56	43	167	143															
SP 14-17			4,0	9,6	103	103	101	97	92	87	81	73	62	48	182	155															
SP 14-20			5,5	13,6	122	122	119	115	110	104	97	88	75	59	207	179															
SP 14-23			6"	Rp 2"	5,5	13,6	139	140	136	131	125	118	110	99	84	65	224	192													
SP 14-27					7,5	17,6	164	165	161	155	148	140	130	118	100	78	245	211													

For Starter Boxes please refer to page 46.

# SP 14

Sp(A) - 4" Submersible Pumps ► Stainless Steel 304

## SP 14: 4" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No	
<b>1 x 220-230V</b>									
Rp 2	4	2.20	14	MS4000	DOL	1.70	SP 14-8	98699338	
<b>1 x 230V</b>									
Rp 2	4	1.10	7.3	MS402	DOL	1.70	SP 14-4	98699336	
		1.50	10.2				SP 14-6	98699337	
<b>3 x 380-400-415V</b>									
Rp 2	4	1.10	3.65	MS402	DOL	1.70	SP 14-4	98699353	
		1.50	4.4				SP 14-6	98699354	
		2.20	5.7				SP 14-8	98699355	
		3.00	8.1	SP 14-11			98699356		
		4.00	9.8	MS4000			2.50	SP 14-13	98699357
		5.50	13.4	SP 14-15			98699358		
	6	5.50	13.6	MS6000	DOL	5.00	SP 14-17	98699359	
		7.50	19.6				SP 14-20	98699360	
		7.50	17.2				SP 14-23	98699361	
		5.50	13.6	SP 14-27			98711397		
		7.50	19.6	SP 14-31			98901319		
		7.50	17.2	SP 14-20			98699371		
				SP 14-23	98699372				
				SP 14-27	98711400				
				SP 14-31	98901321				

For Starter Boxes please refer to page 46.

# SP 18 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 18 Pump sizing

Flow Q	m <sup>3</sup> /h		0		6		9		12		15		18		21		22		
	l/sec.		0		1,67		2,5		3,3		4,2		5		5,8		6,1		
	l/min.		0		100		150		200		250		300		350		367		
TYPE		Puissance Motor P <sub>2</sub>		Head totale H															
		[kW]	I(A)																
SP18	1	0,55	2,2	11	10	10	9	8	6	5	4								
SP18	2	1,1	3,4	22	21	20	18	16	14	11	10								
SP18	3	2,2	5,5	33	32	30	27	24	21	16	15								
SP18	4	2,2	5,5	44	43	40	37	33	28	23	20								
SP18	5	3	7,9	55	54	50	47	42	36	29	26								
SP18	6	4	9,6	65	64	60	55	50	43	34	31								
SP18	7	4	9,6	76	75	71	65	59	51	41	37								
SP18	8	5,5	13	87	85	80	74	66	57	46	42								
SP18	9	5,5	13	99	98	92	85	77	67	54	49								
SP18	10	5,5	13	109	108	102	94	85	74	59	54								
SP18	11	7,5	17,6	121	119	113	104	94	82	66	61								
SP18	12	7,5	17,6	131	130	122	113	102	89	72	65								
SP18	13	7,5	17,6	142	140	132	122	110	96	77	70								
SP18	14	7,5	17,6	152	150	142	131	118	102	82	75								
SP18	15	9,2	21,8	164	162	153	142	128	111	90	82								
SP18	16	9,2	21,8	174	172	163	150	136	118	95	87								
SP18	17	9,2	21,8	185	183	172	159	144	125	100	91								
SP18	18	9,2	21,8	195	193	182	168	152	131	106	96								
SP18	19	11	24,8	207	205	193	179	162	140	113	103								
SP18	20	11	24,8	218	215	203	188	170	147	119	108								
SP18	21	11	24,8	228	225	212	196	177	154	124	113								
SP18	22	13	30	240	238	224	208	188	163	132	120								
SP18	23	13	30	250	248	234	216	196	170	137	125								
SP18	24	13	30	261	258	243	225	203	176	142	129								
SP18	25	13	30	271	268	253	234	211	183	148	134								
SP18	26	15	34	283	281	265	245	222	192	156	142								
SP18	27	15	34	294	291	274	254	229	199	161	146								
SP18	28	15	34	304	301	284	263	237	206	166	151								
SP18	29	15	34	314	311	293	271	245	212	171	156								
SP18	30	18,5	42	329	326	308	286	259	225	183	167								
SP18	31	18,5	42	339	337	318	295	267	232	188	172								
SP18	32	18,5	42	350	347	327	303	275	239	194	177								
SP18	33	18,5	42	360	357	337	312	283	246	199	181								
SP18	34	18,5	42	371	368	347	321	291	252	205	186								
SP18	35	18,5	42	381	378	356	330	298	259	210	191								
SP18	36	18,5	42	392	388	366	339	306	266	215	196								
SP18	37	22	48	403	400	378	350	316	275	223	203								
SP18	38	22	48	414	410	387	359	324	282	228	208								
SP18	39	22	48	424	421	397	367	332	288	233	212								
SP18	40	22	48	435	431	406	376	340	295	239	217								
SP18	41	22	48	445	441	416	385	348	302	244	222								
SP18	42	22	48	456	451	425	394	355	308	249	226								
SP18	43	22	48	466	461	435	402	363	315	254	231								
SP18	44	26	57	480	476	449	416	376	327	265	241								
SP18	45	26	57	490	486	459	425	384	334	270	246								
SP18	46	26	57	500	496	468	433	392	340	276	251								
SP18	47	26	57	511	506	478	442	400	347	281	256								
SP18	48	26	57	521	517	487	451	408	354	286	260								
SP18	49	26	57	532	527	497	460	415	360	291	265								
SP18	50	26	57	542	537	506	468	423	367	296	269								
SP18	51	26	57	552	547	516	477	431	373	301	274								
SP18	52	30	66,5	566	562	530	491	444	386	312	285								
SP18	53	30	66,5	577	572	539	500	452	392	318	289								
SP18	54	30	66,5	587	582	549	508	460	399	323	294								
SP18	55	30	66,5	597	592	559	517	467	406	328	299								
SP18	56	30	66,5	608	602	568	526	475	412	333	303								
SP18	57	30	66,5	618	613	578	535	483	419	338	308								
SP18	58	30	66,5	629	623	587	543	491	425	344	312								
SP18	59	37	82,5	639	633	597	552	498	432	349	317								
SP18	60	37	82,5	653	648	611	566	512	445	360	328								

For Starter Boxes please refer to page 46.

# SP 18

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 18: 6" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Start method	Cable [m]	Type	Product Number				
<b>1 x 220-230V</b>											
Rp 2 1/2	4	2.20	14.6	DOL	1.70	SP 18-3	92959879				
						SP 18-4	92959880				
<b>1 x 230V</b>											
Rp 2 1/2	4	0.55	5.8	DOL	1.70	SP 18-1	92952532				
		1.10	10.8			SP 18-2	92952533				
<b>3 x 380-400-415V</b>											
R 3	6	22.00	46.5	DOL	5.00	SP 18-43	92952127				
				Star / delta		SP 18-43	92952215				
		26.00	55	DOL		SP 18-45	92952128				
				Star / delta		SP 18-48	92952130				
							DOL	SP 18-45	92952216		
							Star / delta	SP 18-48	92952217		
<b>1 x 230V</b>											
Rp 2 1/2	4	0.55	2.35	DOL	1.70	SP 18-1	92951055				
		1.10	3.65			SP 18-2	92868552				
		2.20	5.7			SP 18-3	92868564				
		3.00	8.1			SP 18-4	92868562				
		4.00	9.8			SP 18-5	92868558				
		<b>1 x 230V</b>									
		Rp 2 1/2	4					DOL	2.50	SP 18-6	92868566
										SP 18-7	92868554
										SP 18-8	92868569
										SP 18-9	92868573
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-10	92868556				
						SP 18-8	92951185				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	2.50	SP 18-9	92951186				
						SP 18-10	92951187				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-11	92951051				
						SP 18-12	92951052				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-13	92951053				
						SP 18-8	92952101				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-9	92952102				
						SP 18-10	92952103				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-8	92952184				
						SP 18-9	92952185				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-10	92952186				
						SP 18-11	92952104				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-12	92952106				
						SP 18-13	92868571				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-14	92952107				
						SP 18-11	92952187				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-12	92952189				
						SP 18-13	92952190				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-14	92952191				
						SP 18-15	92952108				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-16	92952109				
						SP 18-17	92952110				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-18	92952111				
						SP 18-15	92952192				
<b>1 x 230V</b>											
Rp 2 1/2	4			DOL	1.70	SP 18-15	92952192				
						SP 18-15	92952192				

For Starter Boxes please refer to page 46.

# SP 32 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 32 Pump sizing

Flow Q	m <sup>3</sup> /h		0	10	15	20	25	30	35	39	
	l/s		0	2,8	4,2	5,6	6,9	8,3	9,7	10,7	
	l/min.		0	167	250	333	417	500	583	642	
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head							
	[kW]	[HP]									
SP 32-1	1,1	1,5	3,4	11	10	10	9	8	7	5	4
SP 32-2	2,2	3	5,5	22	21	20	198	17	14	12	9
SP 32-3	3	4	7,9	33	31	29	27	25	22	18	13
SP 32-4	4	5,5	9,6	44	42	39	37	34	30	24	18
SP 32-5	5,5	7,5	13,6	55	52	49	46	42	37	30	23
SP 32-6	5,5	7,5	13,6	66	63	59	55	51	45	36	28
SP 32-7	7,5	10	17,6	77	73	69	65	60	52	42	33
SP 32-8	7,5	10	17,6	88	84	79	74	68	60	48	38
SP 32-9	7,5	10	17,6	99	94	88	83	76	67	54	42
SP 32-10	9,2	12,5	21,8	110	105	98	92	85	75	61	47
SP 32-11	9,2	12,5	21,8	121	115	108	101	93	82	67	52
SP 32-12	11	15	24,8	132	126	118	111	102	90	73	57
SP 32-13	11	15	24,8	143	136	128	120	111	98	79	62
SP 32-14	13	17,5	30	154	147	138	129	119	105	85	67
SP 32-15	13	17,5	30	165	157	147	138	128	113	91	71
SP 32-16	15	20	34	176	168	157	148	137	121	98	77
SP 32-17	15	20	34	187	178	167	157	145	128	104	81
SP 32-18	15	20	34	198	188	177	166	153	135	110	86
SP 32-19	18,5	25	42	210	199	187	176	162	143	116	91
SP 32-20	18,5	25	42	220	210	197	185	171	151	121	96
SP 32-21	18,5	25	42	231	220	206	194	179	158	128	101
SP 32-22	18,5	25	42	242	230	216	203	188	166	134	105
SP 32-23	22	30	48	254	241	226	213	197	174	141	111
SP 32-24	22	30	48	265	252	236	222	205	181	147	115
SP 32-25	22	30	48	275	262	246	231	214	188	153	120
SP 32-26	22	30	48	286	272	255	240	222	196	159	124
SP 32-27	26	35	57	298	283	266	250	231	204	166	130
SP 32-29	26	35	57	319	304	285	268	248	219	178	139
SP 32-31	26	35	57	341	325	305	286	265	234	190	149
SP 32-33	30	40	66,5	364	346	325	305	282	249	202	159
SP 32-35	30	40	66,5	385	367	344	323	299	264	214	168
SP 32-39	37	50	85,5	430	409	384	361	334	295	240	188
SP 32-43	37	50	85,5	473	451	423	397	368	325	264	207
SP 32-46	45	60	96,5	545	521	490	461	428	380	312	247
SP 32-49	45	60	96,5	565	544	512	479	443	390	311	232
SP 32-52	45	60	96,5	579	553	520	489	455	404	331	262
SP 32-54	55	75	114	601	574	540	508	472	419	344	272

# SP 32

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 32

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Start method	Cable [m]	Type	Product Number
3 x 380-400-415V							
Rp 3	4	1.10	3.65	DOL	1.70	SP 32-1	93101079
		2.20	5.7			SP 32-2	92910835
		3.00	8.1			SP 32-3	92910836
		4.00	9.8			SP 32-4	92910819
		5.50	13.6			SP 32-5	93101243
	7.50	17.2	SP 32-6		93101244		
	9.20	21.2	SP 32-7		92910848		
	11.00	24.8	SP 32-8		92910834		
	13.00	29	SP 32-9		93101245		
	15.00	33.5	SP 32-10		92910849		
	6	18.50	41.5		SP 32-11	93101246	
		22.00	46.5		SP 32-12	92910842	
		26.00	55		SP 32-13	92910839	
		30.00	63		SP 32-14	93101247	
					SP 32-15	93101248	
			SP 32-16	93101249			
			SP 32-17	93101250			
			SP 32-18	93101251			
			SP 32-19	93101252			
			SP 32-20	93101253			
			SP 32-21	93101254			
			SP 32-23	93101255			
			SP 32-24	93101256			
			SP 32-25	93101257			
			SP 32-26	93101258			
			SP 32-27	93101259			
			SP 32-29	93101260			
			SP 32-31	93101261			
			SP 32-33	93101262			
			SP 32-35	93101263			
				8.00			

# SP 46 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 46 Pump sizing

Flow Q	m <sup>3</sup> /h		0	16	24	32	40	48	56	59	
	l/s		0	4,4	6,7	8,9	11,1	13,3	15,6	16,4	
	l/min.		0	267	400	533	667	800	933	983	
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head							
	[kW]	[HP]									
SP 46-1-B	1,1	1,5	3,4	10	9	8	7	6	4	2	0
SP 46-1	2,2	3	5,5	14	12	11	10	9	7	5	4
SP 46-2-BB	2,2	3	5,5	19	18	16	15	12	9	4	2
SP 46-2	3	4	7,9	27	24	23	21	18	15	11	9
SP 46-3-C	4	5,5	9,6	36	32	30	28	24	20	14	12
SP 46-3	5,5	7,5	13,4	41	37	35	32	28	24	18	15
SP 46-4-C	5,5	7,5	13,6	49	45	42	38	34	28	20	15
SP 46-4	7,5	10	17,6	54	50	47	43	38	32	25	21
SP 46-5	7,5	10	17,6	67	62	57	53	47	40	30	26
SP 46-6	9,2	12,5	21,8	81	74	69	63	57	48	36	31
SP 46-7	11	15	24,8	94	87	81	74	66	56	43	37
SP 46-8-C	11	15	24,8	103	94	88	80	72	60	45	37
SP 46-8	13	17,5	30	108	99	93	86	77	65	50	43
SP 46-9-C	13	17,5	30	116	106	100	92	82	69	52	43
SP 46-9	15	20	34	122	112	105	97	87	74	57	49
SP 46-10	15	20	34	135	124	116	107	95	81	62	54
SP 46-11	18,5	25	42	149	137	129	119	107	91	70	61
SP 46-12	18,5	25	42	162	149	140	129	115	98	76	66
SP 46-13	22	30	48	176	162	152	140	126	107	83	72
SP 46-14	22	30	48	189	174	163	150	134	114	88	76
SP 46-15	22	30	48	202	185	173	159	143	121	93	81
SP 46-16	26	35	57	217	199	187	172	155	132	102	89
SP 46-17	26	35	66,5	229	211	198	182	163	139	107	93
SP 46-18	30	40	66,5	244	225	211	195	175	149	116	101
SP 46-19	30	40	66,5	257	237	222	205	183	156	121	105
SP 46-20	30	40	66,5	270	248	232	213	191	163	126	110
SP 46-21	37	50	85,5	283	262	246	226	204	175	135	118
SP 46-22	37	50	85,5	296	273	257	236	212	181	140	122
SP 46-23	37	50	85,5	310	287	269	248	224	191	149	130
SP 46-24	37	50	85,5	323	300	280	258	232	200	155	134
SP 46-26	45	60	96,5	357	331	312	289	261	225	177	155
SP 46-28	45	60	96,5	384	355	334	310	280	241	189	166
SP 46-30	45	60	96,5	410	379	356	325	292	252	195	170
SP 46-33	55	75	114	452	419	395	365	330	284	222	190
SP 46-35	55	75	114	475	440	413	482	345	297	233	200
SP 46-37	63	85	132	508	470	444	411	371	320	250	215

# SP 46

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 46: 6" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
3 x 380-400-415V								
R 4	8	45.00	96	MMS8000		8.00	SP 46-26	15A44326
		1.10	3.65				SP 46-28	15A44328
		2.20	5.7	MS402			SP 46-1B	15A219C1
	4	3.00	8.1			1.70	SP 46-1	15A21901
		4.00	9.8				SP 46-2BB	15A219D2
		5.50	13.4	MS4000			SP 46-2	15A21902
		7.50	17.2				SP 46-3C	15A219F3
		9.20	21.2				SP 46-3	15A21903
		11.00	24.8				SP 46-4C	15A219F4
		13.00	29				SP 46-4	15A21904
		15.00	33.5		DOL		SP 46-5	15A21905
Rp 3		18.50	41.5	MS6000		5.00	SP 46-6	15A21906
	6	22.00	46.5				SP 46-7	15A21907
		26.00	55				SP 46-8C	15A219F8
		30.00	63				SP 46-8	15A21908
		37.00	85	MMS6		8.00	SP 46-9C	15A219F9
							SP 46-9	15A21909
							SP 46-10	15A21910
							SP 46-11	15A21911
							SP 46-12	15A21912
							SP 46-13	15A21913
							SP 46-14	15A21914
							SP 46-15	15A21915
							SP 46-16	15A21916
							SP 46-17	15A21917
							SP 46-18	15A21918
							SP 46-19	15A21919
							SP 46-20	15A21920
							SP 46-22	15A24322
							SP 46-24	15A24324

# SP 60 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 60 Pump sizing

Flow Q			m <sup>3</sup> /h	0	20	30	40	50	60	70	78
			l/s	0	5,6	8,3	11,1	13,9	16,7	19,4	21,5
			l/min.	0	333	500	667	833	1000	1167	1292
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head							
	[kW]	[HP]									
SP 60-1-A	1,5	2	4,2	11	10	8	6	6	4	0	
SP 60-1	2,2	3	5,5	13	13	11	8	7	6	4	1
SP 60-2-B	3	4	7,9	22	21	18	15	13	10	6	1
SP 60-2	4	5,5	9,6	29	26	23	19	16	14	10	5
SP 60-3	5,5	7,5	13,6	42	39	35	30	26	22	16	9
SP 60-4	7,5	10	17,6	66	52	47	40	35	30	22	14
SP 60-5	9,2	12,5	21,8	71	66	59	51	44	38	28	18
SP 60-6	11	15	24,8	85	79	71	62	54	45	34	22
SP 60-7	13	17,5	30	99	92	83	72	63	54	40	26
SP 60-8-B	13	17,5	30	108	100	90	79	68	57	42	26
SP 60-8	15	20	34	114	106	96	84	72	62	46	30
SP 60-9-B	15	20	34	122	114	102	90	78	65	48	30
SP 60-9	18,5	25	42	129	120	109	96	83	70	54	37
SP 60-10	18,5	25	42	143	133	120	106	92	78	60	41
SP 60-11	22	30	48	157	146	132	117	101	85	66	45
SP 60-12	22	30	48	171	159	145	125	110	93	71	49
SP 60-13	26	35	57	186	174	156	138	120	104	80	55
SP 60-14	26	35	57	200	185	169	148	129	110	84	60
SP 60-15	26	35	57	214	196	180	156	136	115	89	60
SP 60-16	30	40	66,5	228	213	192	169	146	125	94	65
SP 60-17	30	40	66,5	243	225	205	180	155	132	104	70
SP 60-18	37	50	85,5	260	240	220	194	166	143	110	80
SP 60-19	37	50	85,5	271	252	230	204	176	150	116	81
SP 60-20	37	50	85,5	287	266	242	212	185	157	125	85
SP 60-21	37	50	85,5	300	279	255	224	195	165	130	88
SP 60-22	45	60	96,5	322	301	274	242	211	180	141	100
SP 60-24	45	60	96,5	351	323	294	258	226	192	150	104
SP 60-26	55	75	96,5	379	354	322	284	248	211	167	120
SP 60-28	55	75	96,5	406	380	345	304	265	226	176	127
SP 60-30	55	75	96,5	433	403	366	322	282	239	187	129

# SP 60

SP - 6"-10" Submersible Pumps ► Stainless Steel 304 - Standard

## SP 60: 6" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
3 x 380-400-415V								
Rp 4	4	1.50	4.4	MS402	DOL	1.70	SP 60-1A	14A019A1
		2.20	5.7				SP 60-1	14A01901
		3.00	8.1	MS4000			SP 60-2B	14A019C2
		4.00	9.8				SP 60-2	14A01902
		5.50	13.4				SP 60-3	14A01903
	7.50	17.2	MS6000	SP 60-4		14AA1904		
	9.20	21.2		SP 60-5		14A01905		
	11.00	24.8		SP 60-6		14A01906		
	13.00	29		SP 60-7		14A01907		
	15.00	33.5		SP 60-8B		14A019C8		
	6	18.50	41.5	MMS6		SP 60-8	14A01908	
	22.00	46.5	SP 60-9B			14A019C9		
	26.00	55	SP 60-9			14A01909		
	30.00	63	SP 60-10			14A01910		
	37.00	85	SP 60-11			14A01911		
Rp 6	6	37.00	85	MMS6	SP 60-12	14A01912		
		42.00	98		SP 60-13	14A01913		
		47.00	111		SP 60-14	14A01914		
		52.00	124		SP 60-15	14A01915		
		57.00	137		SP 60-16	14A01916		
Rp 8	8	57.00	137	MMS6	SP 60-17	14A01917		
		62.00	150		SP 60-18	14A04318		
		67.00	163		SP 60-19	14A04319		
		72.00	176		SP 60-20	14A04320		
		77.00	189		SP 60-21	14AA4321		

# SP 77 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 77 Pump sizing

Flow Q			m <sup>3</sup> /h	0	33	44	55	66	77	88	99
			l/s	0	9,2	12,2	15,3	18,3	21,4	24,4	27,5
			l/min.	0	550	733	917	1100	1283	1467	1650
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head							
	[kW]	[HP]									
SP 77-1	5,5	7,5	13,6	21	18	16	15	14	12	10	7
SP 77-2-B	5,5	7,5	13,6	33	29	26	23	21	18	13	7
SP 77-2	7,5	10	17,6	41	35	32	29	27	24	19	14
SP 77-3-B	9,2	12,5	21,8	53	49	42	38	34	28	23	14
SP 77-3	11	15	24,8	61	53	49	44	40	36	29	21
SP 77-4-B	13	17,5	30	73	65	59	54	48	42	33	21
SP 77-4	15	20	34	81	72	66	60	54	48	40	28
SP 77-5	18,5	25	42	100	90	82	75	68	60	50	36
SP 77-6	22	30	48	120	108	98	90	81	72	59	42
SP 77-7	26	35	57	140	126	115	105	96	85	70	50
SP 77-8-B	26	35	57	151	136	124	113	104	90	72	50
SP 77-8	30	40	66,5	160	144	132	121	110	97	80	57
SP 77-9	30	40	66,5	179	161	147	134	122	108	89	64
SP 77-10	37	50	78,5	201	180	168	154	140	125	104	75
SP 77-11	37	50	78,5	217	295	187	171	156	140	117	85
SP 77-12	45	60	96,5	243	221	203	186	170	151	126	92
SP 77-13	55	75	114	264	241	222	203	186	166	139	102
SP 77-14	55	75	114	284	259	238	218	199	178	149	109
SP 77-15	55	75	114	303	275	254	232	211	189	157	115
SP 77-16	63	85	132	324	295	272	249	227	203	169	124
SP 77-17	63	85	132	345	313	288	263	240	214	179	131
SP 77-18	63	85	132	363	330	304	278	253	226	188	137
SP 77-19	75	100	156	384	351	323	296	271	239	209	148
SP 77-20	75	100	156	404	369	340	308	280	250	212	155
SP 77-21	75	100	156	419	380	349	318	290	257	213	154
SP 77-22	92	125	194	440	403	370	339	309	275	229	166

# SP 77

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 77: 8" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No			
3 x 380-400-415V											
Rp 5	6	5.50	13.6	MS6000	DOL	5.00	SP 77-1	16A01901			
		7.50	17.2				SP 77-2B	16A019C2			
		9.20	21.2				SP 77-2	16A01902			
		11.00	24.8				SP 77-3B	16A019C3			
		13.00	29				SP 77-3	16A01903			
		15.00	33.5				SP 77-4B	16A019C4			
		18.50	41.5				SP 77-4	16A01904			
		22.00	46.5				SP 77-5	16A01905			
		26.00	55				SP 77-6	16A01906			
		30.00	63				SP 77-7	16A01907			
	8	8	37.00	85	MMS6	DOL	8.00	SP 77-8B	16A019C8		
								45.00	96	SP 77-8	16A01908
								55.00	112	SP 77-9	16A01909
								63.00	130	SP 77-10	16A04310
		75.00	152	MMS8000			SP 77-11	16AA4311			
							SP 77-12	16A04312			
							SP 77-13	16A04313			
							SP 77-14	16A04314			
							SP 77-15	16A04315			
							SP 77-16	16A04316			
							SP 77-17	16A04317			
							SP 77-18	16A04318			
							SP 77-19	16A04319			
							SP 77-20	16A04320			

# SP 95 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 95 Pump sizing

Flow Q			m <sup>3</sup> /h	0	30	45	60	75	90	105	120
			l/s	0	8,3	12,5	16,7	20,8	25	29,2	33,3
			l/min.	0	500	750	1000	1250	1500	1750	2000
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head							
	[kW]	[HP]									
SP 95-1	5,5	7,5	13,6	23	20	17	15	14	13	10	6
SP 95-2-BB	5,5	7,5	13,6	27	24	22	20	19	14	8	0
SP 95-2-A	7,5	10	17,6	39	34	30	27	25	21	16	9
SP 95-2	9,2	12,5	21,8	44	39	35	31	28	25	20	13
SP 95-3-BB	9,2	12,5	21,8	48	43	39	35	31	25	17	8
SP 95-3-B	11	15	24,8	56	50	45	40	37	31	23	13
SP 95-3	13	17,5	30	65	58	53	47	43	38	30	20
SP 95-4-B	15	20	34	77	70	63	56	52	44	33	20
SP 95-4	18,5	25	42	86	78	70	63	57	51	40	26
SP 95-5-AB	18,5	25	42	94	84	77	70	64	54	40	24
SP 95-5	22	30	48	106	96	87	78	71	63	50	32
SP 95-6	26	35	57	127	115	104	94	85	75	60	39
SP 95-7	30	40	66,5	147	134	121	109	100	88	70	45
SP 95-8	37	50	73	171	154	140	126	115	102	82	54
SP 95-9	37	50	73	188	171	155	140	127	112	88	58
SP 95-10	45	60	96,5	215	197	179	162	148	132	106	71
SP 95-11	55	75	114	237	218	198	180	164	147	119	80
SP 95-12	55	75	114	258	237	215	195	178	159	129	86
SP 95-13	55	75	114	278	256	233	211	192	171	138	92
SP 95-14	63	85	132	302	278	253	230	210	187	152	103
SP 95-15	75	100	152	322	297	270	245	224	200	162	109
SP 95-16	75	100	152	343	316	288	261	238	212	172	115
SP 95-17	75	100	152	367	339	309	280	256	229	186	126
SP 95-18	92	125	186	388	358	326	296	271	242	197	133
SP 95-19	92	125	186	409	377	344	312	285	255	207	140
SP 95-20	92	125	186	429	396	361	328	300	267	217	146

# SP 95

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 95: 8" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No	
3 x 380-400-415V									
Rp 5	6	5.50	13.6	MS6000	DOL	5.00	SP 95-1	19001901	
		7.50	17.2				SP 95-2BB	190019D2	
		9.20	21.2				SP 95-2A	190019A2	
		11.00	24.8				SP 95-2	19001902	
		13.00	29				SP 95-3BB	190019D3	
		15.00	33.5				SP 95-3B	190019C3	
		18.50	41.5				SP 95-3	19001903	
	22.00	46.5	SP 95-4B	190019C4					
	26.00	55	SP 95-4	19001904					
	30.00	63	MMS6	DOL	8.00	SP 95-5	19001905		
	37.00	85				SP 95-6	19001906		
	45.00	96				SP 95-7	19001907		
	8	8	55.00	112	MMS8000	DOL	8.00	SP 95-8	19004308
			63.00	130				SP 95-10	19004310
75.00			152	SP 95-11				19004311	
92.00			186	SP 95-12				19004312	
				SP 95-13				19004313	
				SP 95-14	19004314				
				SP 95-15	19004315				
				SP 95-16	19004316				
				SP 95-17	19004317				
				SP 95-18	19004318				
				SP 95-19	19004319				
				SP 95-20	19004320				

# SP 125 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 125 Pump sizing

Flow Q			m <sup>3</sup> /h	0	60	80	100	120	140	160
			l/s	0	16,7	22,2	27,8	33,3	38,9	44,4
			l/min.	0	1000	1333	1667	2000	2333	2667
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head						
	[kW]	[HP]								
SP 125-1-A	7,5	10	17,6	21	19	17	16	14	10	6
SP 125-1	11	15	24,8	30	27	24	22	20	17	13
SP 125-2-AA	13	17,5	30	40	37	35	31	27	20	11
SP 125-2-A	18,5	25	42	50	45	42	39	34	28	19
SP 125-2	22	30	48	59	54	50	46	42	35	27
SP 125-3-AA	22	30	48	69	63	59	54	47	36	22
SP 125-3-A	26	35	57	78	72	67	61	54	45	31
SP 125-3	30	40	66,5	88	80	74	69	62	55	37
SP 125-4-AA	37	50	85,5	98	92	86	79	71	58	40
SP 125-4-A	37	50	85,5	107	98	91	84	75	62	45
SP 125-4	37	50	85,5	115	105	98	90	82	70	52
SP 125-5-AA	45	60	96,5	127	120	112	103	93	77	55
SP 125-5-A	45	60	96,5	137	127	120	110	101	84	63
SP 125-5	55	75	114	147	137	128	119	109	94	73
SP 125-6-AA	55	75	114	156	147	138	128	115	96	70
SP 125-6-A	55	75	114	166	155	145	134	122	103	78
SP 125-6	63	85	132	176	165	154	143	131	112	87
SP 125-7-AA	63	85	132	186	175	164	152	138	114	85
SP 125-7-A	63	85	132	195	183	171	159	143	122	91
SP 125-7	75	100	152	204	191	179	166	152	131	102
SP 125-8-AA	75	100	152	214	202	189	175	158	133	99
SP 125-8-A	75	100	152	223	210	196	182	165	141	105
SP 125-8	75	100	152	233	218	203	189	172	149	115
SP 125-9-AA	92	125	186	244	226	212	195	177	149	169
SP 125-9-A	92	125	186	253	234	218	203	184	157	117
SP 125-9	92	125	186	260	242	225	209	191	164	125
SP 125-10-AA	92	125	186	270	252	235	217	196	164	120
SP 125-10-A	92	125	186	279	260	242	224	203	172	128
SP 125-10	92	125	186	289	267	250	232	210	180	136
SP 125-11	110	150	224	317	295	275	255	234	200	155
SP 125-12	132	180	270	350	327	305	285	260	224	175
SP 125-13	132	180	270	377	355	330	307	280	242	186
SP 125-14	147	200	315	408	384	358	335	310	263	205
SP 125-15	147	200	315	437	410	382	357	326	280	220
SP 125-16	170	230	365	466	438	410	382	350	300	235
SP 125-17	170	230	365	495	465	434	410	370	319	249

# SP 125

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 125: 10" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
3 x 380-400-415V								
Rp 6	6	7.50	17.2	MS6000	DOL	5.00	SP 125-1A	17A019A1
		11.00	24.8				SP 125-1	17A01901
		13.00	29				SP 125-2AA	17A019B2
		18.50	41.5				SP 125-2A	17A019A2
		22.00	46.5				SP 125-2	17A01902
		26.00	55				SP 125-3AA	17A019B3
		30.00	63				SP 125-3A	17A019A3
	37.00	85	MMS6	SP 125-3	17A01903			
	45.00	96	MMS8000	SP 125-4	17A24304			
	55.00	112		SP 125-4A	17A243A4			
	63.00	130		SP 125-4AA	17A243B4			
	75.00	152		SP 125-5A	17A043A5			
	92.00	186		SP 125-5AA	17A043B5			
				SP 125-5	17A04305			
		SP 125-6A		17A043A6				
		SP 125-6AA	17A043B6					
		SP 125-6	17A04306					
		SP 125-7A	17A043A7					
		SP 125-7AA	17A043B7					
		SP 125-7	17A04307					
		SP 125-8	17A04308					
		SP 125-8A	17A043A8					
		SP 125-8AA	17A043B8					
		SP 125-9	17A04309					
		SP 125-10	17A04310					
		SP 125-10A	17A043A0					
		SP 125-10AA	17A043B0					
		SP 125-9A	17A043A9					

# SP 160 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 160 Pump sizing

Flow Q	m <sup>3</sup> /h		0	50	100	125	150	175	200	
	l/s		0	13,9	27,8	34,7	41,7	48,6	55,6	
	l/min.		0	833	1667	2083	2500	2917	3333	
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head						
	[kW]	[HP]								
SP 160-1-A	9,2	12,5	21,8	24	21	17	16	14	10	5
SP 160-1	13	17,5	34	34	32	25	23	21	18	14
SP 160-2-AA	18,5	25	42	46	42	36	33	29	22	12
SP 160-2-A	22	30	48	55	53	43	39	35	29	20
SP 160-2	26	35	57	65	62	50	46	42	36	28
SP 160-3-AA	30	40	66,5	77	74	62	56	49	40	27
SP 160-3-A	37	50	85,5	88	84	70	64	58	48	35
SP 160-3	37	50	85,5	97	91	76	70	64	56	42
SP 160-4-AA	45	60	96,5	110	106	89	82	73	62	44
SP 160-4-A	45	60	96,5	120	114	97	89	81	70	53
SP 160-4	55	75	114	130	124	103	95	87	77	60
SP 160-5-AA	55	75	114	142	136	115	105	95	81	59
SP 160-5-A	55	75	114	151	145	121	111	102	87	66
SP 160-5	63	85	132	162	156	130	119	110	96	76
SP 160-6-AA	63	85	132	174	168	141	130	118	101	75
SP 160-6-A	75	100	152	183	176	148	136	124	107	82
SP 160-6	75	100	152	193	185	154	142	131	114	90
SP 160-7-AA	75	100	152	205	197	166	152	139	118	88
SP 160-7-A	92	125	186	213	204	172	157	143	123	95
SP 160-7	92	125	186	225	213	177	163	149	130	101
SP 160-8-AA	92	125	186	234	224	188	173	157	133	99
SP 160-8-A	92	125	186	244	233	195	179	163	139	106
SP 160-8	92	125	186	253	241	201	184	169	146	113
SP 160-9-AA	110	150	224	267	255	214	197	180	153	114
SP 160-9-A	110	150	224	276	264	221	203	185	159	121
SP 160-9	110	150	224	285	272	227	209	192	166	128
SP 160-10-AA	110	150	228	295	284	238	220	198	170	128
SP 160-10-A	132	180	270	310	299	251	230	212	184	140
SP 160-10	132	180	270	320	307	256	237	217	190	150
SP 160-11	132	180	270	350	336	281	260	238	207	160
SP 160-12	147	200	315	385	370	310	285	263	230	180
SP 160-13	170	230	365	416	400	335	310	285	250	195
SP 160-14	170	230	365	447	430	360	334	310	265	210
SP 160-15	190	260	425	476	456	381	353	323	281	218

# SP 160

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 160: 10" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No
3 x 380-400-415V								
Rp 6	6	9.20	21.2	MS6000		5.00	SP 160-1A	200219A1
		13.00	29				SP 160-1	20021901
		18.50	41.5				SP 160-2AA	200219B2
		22.00	46.5				SP 160-2A	200219A2
		26.00	55				SP 160-2	20021902
		30.00	63				SP 160-3AA	200219B3
			37.00	85	MMS6		SP 160-3	20024303
			45.00	96			SP 160-4A	200243A4
							SP 160-4AA	200243B4
			55.00	112			SP 160-4	20024304
			63.00	130			SP 160-5A	200243A5
			75.00	152	MMS8000	DOL	SP 160-5AA	200243B5
			92.00	186			SP 160-5	20024305
			110.00	222			SP 160-6	20024306
			132.00	283			SP 160-6A	200243A6
	10	147.00	320	MMS10000		SP 160-7AA	200243B7	
		170.00	375			SP 160-7	20024307	
		190.00	395			SP 160-7A	200243A7	
	12			MMS12000		SP 160-8	20024308	
						SP 160-8A	200243A8	
						SP 160-8AA	200243B8	
						SP 160-9	20024309	
						SP 160-9A	200243A9	
						SP 160-9AA	200243B9	
						SP 160-10	20064410	
						SP 160-11	20064411	
						SP 160-12	20064412	
						SP 160-13	20060613	
						SP 160-14	20060614	
						SP 160-15	20064415	

# SP 215 Sizing Table

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 215 Pump sizing

Flow Q	m <sup>3</sup> /h		0	40	120	160	200	240	278	
	l/s		0	11,1	33,3	44,4	55,6	66,7	77,2	
	l/min.		0	667	2000	2667	3333	4000	4633	
TYPE	Puissance Motor		I <sub>n</sub> [A]	Head						
	[kW]	[HP]								
SP 215-1-A	15	20	34	26	26	22	19	15	10	4
SP 215-1	18,5	25	42	38	37	30	26	24	20	10
SP 215-2-AA	30	40	66,5	54	54	47	42	35	25	10
SP 215-2-A	37	50	80	66	65	55	50	44	35	19
SP 215-2	45	60	90,9	79	75	64	57	52	44	30
SP 215-3-AA	55	75	114	95	94	82	75	66	52	29
SP 215-3-A	55	75	114	106	105	89	81	72	59	38
SP 215-3	63	85	132	119	116	97	87	79	66	46
SP 215-4-AA	75	100	152	134	132	115	104	92	75	45
SP 215-4-A	75	100	152	146	144	122	110	99	81	54
SP 215-4	75	100	152	157	155	129	116	105	88	61
SP 215-5-AA	92	125	186	172	170	145	132	117	95	59
SP 215-5-A	92	125	186	184	181	154	137	124	101	67
SP 215-5	92	125	186	195	192	160	144	130	108	75
SP 215-6-AA	110	150	228	212	209	178	161	144	117	78
SP 215-6-A	110	150	228	223	219	185	167	150	124	87
SP 215-6	110	150	228	234	230	193	173	156	130	95
SP 215-7-AA	132	180	270	253	249	214	194	174	144	98
SP 215-7-A	132	180	270	266	262	222	201	181	152	108
SP 215-7	132	180	270	277	273	230	208	187	159	117
SP 215-8-AA	147	200	305	294	290	248	225	202	168	117
SP 215-8-A	147	200	305	306	301	255	231	208	174	125
SP 215-8	147	200	305	318	313	263	237	215	182	133
SP 215-9-AA	170	230	345	242	240	177	255	229	190	134
SP 215-9-A	170	230	345	346	341	289	261	235	197	142
SP 215-9	170	230	345	358	352	296	267	240	203	150
SP 215-10-AA	190	260	390	375	370	316	286	257	215	153
SP 215-10-A	190	260	390	385	381	322	292	263	221	161
SP 215-10	190	260	390	398	392	330	298	269	228	170
SP 215-11	220	300	447	438	432	365	330	297	252	185

# SP 215 / Starter Boxes

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - Standard

## SP 215: 10" SUBMERSIBLE PUMP IN STAINLESS STEEL AISI 304

Connection	Diam. Mot. [inch]	P2 [kW]	I [A]	Motor type	Start Method	Cable [m]	Type	Part. No	
3 x 380-400-415V									
Rp 6	6	15.00	33.5	MS6000	DOL	5.00	SP 215-1A	18A019A1	
		18.50	41.5				SP 215-1	18A01901	
		30.00	63				SP 215-2AA	18A219B2	
		37.00	85	MMS6			SP 215-2A	18A243A2	
		45.00	96				SP 215-2	18A04302	
		55.00	111				SP 215-3AA	18A044B3	
	8	55.00	112	MMS8000	SP 215-3A	18A043A3			
		63.00	130		SP 215-3	18A04303			
		75.00	152		SP 215-4	18A04304			
		92.00	186		SP 215-4A	18A043A4			
					SP 215-4AA	18A043B4			
		110.00	222		SP 215-5	18A04305			
		10	12		132.00	270	MMS10000	SP 215-5A	18A043A5
					170.00	375		SP 215-5AA	18A043B5
220.00	450			SP 215-6	18A04306				
MMS12000	SP 215-6A			18A043A6					
12	12	220.00	450	MMS12000	SP 215-6AA	18A043B6			
		SP 215-7AA	18A043B7						
		SP 215-9	18AT0309						
12	12	220.00	450	MMS12000	SP 215-9A	18AT03A9			
					SP 215-9AA	18AT03B9			
12	12	220.00	450	MMS12000	SP 215-11	18AV0611			

### PSC: STARTER BOX FOR SINGLE-PHASE SP PUMPS (1)

Thermal protection: integrated. Protection class: IP55

Description	Part No.	
C-PSC/0.37 16uF	Starter unit C-PSC 0.37KW	91199323
C-PSC/0.55 20uF	Starter unit C-PSC 0.55KW	91199324
C-PSC/0.75 30uF	Starter unit C-PSC 0.75KW	91199325
C-PSC/1.1 40uF	Starter unit C-PSC 1.1KW	91199326
C-PSC/1.5 50uF	Starter unit C-PSC 1.5KW	91199459

(1) PSC motor (Permanent Split Capacitor) - run capacitor is in the motor

### CSCR/CSIR: STARTER BOXES FOR SINGLE-PHASE SP PUMPS (2)

Thermal protection: integrated. Protection class: IP55

Description	Part No.	
CSIR/0,37kW	Control box SA-CSIR .37kW 1x200-240/50Hz	98582272
CSIR/0.55kW	Control box SA-CSIR .55kW 1x200-240/50Hz	98582277
CSIR/0.75kW	Control box SA-CSIR .75kW 1x200-240/50Hz	98582295
CSCR/1.1kW	Control box SA-CSCR 1.1kW 1x200-240/50Hz	98582296
CSCR/1.5kW	Control box SA-CSCR 1.5kW 1x200-240/50Hz	98582381
CSCR/2.2kW	Control box SA-CSCR 2.2kW 1x200-240/50Hz	98582401

(2) CSCR motor (Capacitor Start - Capacitor Run) - from 1,50 to 2,20 kW

(2) CSIR motor (Capacitor Start - Induction Run) - from 0,37 to 0,75 kW

# SPE

**This section covers our range of 6" diameter variable-speed submersible pumps for groundwater supply.**

The submersible pump system combines the optimal hydraulics of the Grundfos SP pump with the efficiency of a permanent magnet motor and the flexibility of a frequency converter. This allows you to meet both high and low demand while protecting your pump and achieving optimal energy efficiency.

Thanks to the frequency converter's ability to adjust the pump speed, you can install a pump that operates at full capacity or at reduced speed during off-peak periods or when the water in the well is insufficient, thus saving energy and protecting the pump.

**“Reduction of energy costs and CO2 emissions”**



## FEATURES & BENEFITS

- Save energy
- Protect the pump - adjustable speed
- Reliable - high-quality components, permanent magnet motor
- Flexible - variable speed
- Preserve water quality - converter ensures a soft start
- Significant savings - high efficiency & quality components

## APPLICATIONS

- Groundwater supply, drilling
- Irrigation for horticulture and agriculture
- Groundwater lowering
- Pressure boosting

# SPE 18/ SPE 32

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - With Pm Motor

Grundfos SPE is a range of frequency regulated submersible pumps for Groundwater. The pumps are all stainless-steel and available in 3 material grades AISI 304, 316 and 904 (sizes: 6", 8" and 10"). The 6" motor (4 to 45 kW) is a permanent magnet type with high energy efficiency and needs a frequency drive to operate.



## SPE 18: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2[kW]	I [A]	Cable[m]
Rp 2 1/2	6	4.00	9.6	5.0
		5.50	12.6	
		7.50	16.6	
		11.00	25	
		13.00	29.2	
		15.00	33.4	
		18.50	40.6	
		22.00	46.2	

Type	Part. No
SPE 18-6	92940983
SPE 18-8	92940984
SPE 18-12	92903143
SPE 18-17	92940985
SPE 18-20	92940986
SPE 18-24	92940987
SPE 18-29	92940988
SPE 18-35	92940989

## SPE 32: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Start Method	Cable [m]
3 x 400V					
R 3		37.00	85.6		8.00
		45.00	103		
Rp 3	6	5.50	12.6	DOL	5.00
		7.50	16.6		
		9.20	21.4		
		11.00	25		
		13.00	29.2		
		15.00	33.4		
		18.50	40.6		
		22.00	46.2		
		26.00	54		
		30.00	61.8		

Type	Part. No
SPE 32-38	93101065
SPE 32-46	93101066
SPE 32-5	93100516
SPE 32-7	92910856
SPE 32-9	93100517
SPE 32-11	93100518
SPE 32-13	93100519
SPE 32-16	93101060
SPE 32-19	93101061
SPE 32-23	93101062
SPE 32-27	93101063
SPE 32-32	93101064

## SPE 46: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 3	6	7.50	16.6	MS6000P	5.0	SPE 46-4	99890594
		11.00	25			SPE 46-6	99890595
		15.00	33.4			SPE 46-9	99890596
		18.50	40.6			SPE 46-11	99890597
		26.00	54			SPE 46-15	99890598
		30.00	61.8			SPE 46-18	99890599
		37.00	85.6			SPE 46-22	99890600
		45.00	103			SPE 46-24	99890601
Rp 4	6	4.00	9.6	MS6000P	5.0	SPE 46-2	99890602
		7.50	16.6			SPE 46-4	99890603
		11.00	25			SPE 46-6	99890604
		15.00	33.4			SPE 46-9	99890605
		18.50	40.6			SPE 46-11	99890606
		26.00	54			SPE 46-15	99890607
		30.00	61.8			SPE 46-18	99890608
		37.00	85.6			SPE 46-22	99890609
		45.00	103			SPE 46-24	99890610

## SPE 60: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 3	6	7.50	16.6	MS6000P	5.0	SPE 60-3	99890611
		11.00	25			SPE 60-5	99890627
		18.50	40.6			SPE 60-8	99890612
		22.00	46.2			SPE 60-11	99890613
		30.00	61.8			SPE 60-15	99890614
		37.00	85.6			SPE 60-19	99890615
Rp 4	6	45.00	103	MS6000P	5.0	SPE 60-23	99890616
		7.50	16.6			SPE 60-3	99890617
		11.00	25			SPE 60-5	99890628
		18.50	40.6			SPE 60-8	99890618
		22.00	46.2			SPE 60-11	99890619
		30.00	61.8			SPE 60-15	99890620
		37.00	85.6			SPE 60-19	99890621
		45.00	103			SPE 60-23	99890622

# SPE 77 / SPE 95 / SPE 125 / SPE 160

SP - 6"-10" Submersible Pumps ▶ Stainless Steel 304 - With Pm Motor

## SPE 77: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 5	6	4.00	9.6	MS6000P	5.0	SPE 77-1	99890629
		9.20	21.4			SPE 77-2	99890630
		13.00	29.2			SPE 77-3	99890631
		18.50	40.6			SPE 77-4	99890632
		22.00	46.2			SPE 77-5	99890633
		26.00	54			SPE 77-6	99890634
		30.00	61.8			SPE 77-7	99890635
		37.00	85.6			SPE 77-9	99890636
		45.00	103			SPE 77-11	99890637

## SPE 95: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 5	6	5.50	12.6	MS6000P	5.0	SPE 95-1	99890638
		11.00	25			SPE 95-2	99890640
		15.00	33.4			SPE 95-3	99890641
		22.00	46.2			SPE 95-4	99890642
		26.00	54			SPE 95-5	99890643
		30.00	61.8			SPE 95-6	99890644
		37.00	85.6			SPE 95-7	99890645
		45.00	103			SPE 95-8	99890646
						SPE 95-9	99890647

## SPE 125: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 6	6	13.00	29.2	MS6000P	5.0	SPE 125-1	99890648
		22.00	46.2			SPE 125-2	99890649
		37.00	85.6			SPE 125-3	99890650
		45.00	103			SPE 125-4	99890651

## SPE 160: SUBMERSIBLE PUMP WITH PERMANENT MAGNET MOTOR

Connection	Diam Pump [inch]	P2 [kW]	I [A]	Motor type	Cable [m]	Type	Part. No
Rp 6	6	15.00	33.4	MS6000P	5.0	SPE 160-1	99890652
		30.00	61.8			SPE 160-2	99890653
		45.00	103			SPE 160-3	99890654

# MS & MMS Submersible Motors

This section covers our wide range of specially designed Grundfos submersible motors for SP pumps, engineered to deliver high performance, reliability, and flexibility across demanding water applications.

## Motor Types

MS canned motors (4" and 6") – compact, hermetically sealed design

MMS rewindable motors (6", 8", 10", and 12") – robust, serviceable solutions



## FEATURES & BENEFITS

- Hermetically sealed MS design ensures long operational life
- Rewindable MMS construction allows easy maintenance
- High-grade stainless steel options: AISI 304, 316, and 904L
- Optional cast iron version for MMS motors
- NEMA standard drive end for easy installation and compatibility
- Wide size range from 4" to 12" for flexibility
- Optimized cooling and low-noise operation
- Suitable for variable speed operation
- Reliable, ready-to-install design
- Low lifecycle cost due to durability and efficiency

## APPLICATIONS

- Irrigation systems
- Groundwater extraction and control
- Water supply systems
- Pressure boosting
- Industrial water transfer

# MS402

## Submersible Motors

The motors are supplied without a motor connection cable.  
When ordering, please include the appropriate short motor cable.

**Max. fluid temperature at 0.15 m/s:** 40°C

**Motor shaft seal:** Lip seal

**Motor material:** Stainless steel DIN W.No. 1.4301, AISI 304

**Max. ambient pressure:** 15 bar

**Mains frequency:** 50 Hz

**Rated voltage:** 1 x 230 V / 3 x 380-400-415 V

**Voltage tolerance:** +6 / -10%

**Drive type:** Direct

**Rated speed:** 2850 - 2860 - 2870 rpm

**Protection rating (IEC 34-5):** IP 68

**Heat class (IEC 85):** B

**Integrated temperature sensor:** No



### MS 402: MS 402 Submersible Motor

Diameter [inch]	P2 [kW]	Engine type	Startup type	In [A]	Cable [m]
<b>1 x 220-230-240</b>					
4	0.37	MS402	DOL	2.90-2.90-2.90	•
	0.55			4.00-4.00-4.00	
	0.75			5.40-5.50-5.60	
	1.10			8.00-8.20-8.40	
<b>1 x 230</b>					
4	1.50	MS402	DOL	10.2	•
<b>3 x 380-400-415</b>					
4	0.37	MS402	DOL	1.30-1.40-1.50	•
	0.55			2.00-2.20-2.35	
	0.75			2.15-2.30-2.40	
	1.10			3.25-3.40-3.65	
	1.50			4.10-4.20-4.40	
	2.20			5.50-5.50-5.70	

Type	Product Number
MS402	96766074
MS402	96766075
MS402	96766077
MS402	96591067
MS402	96765992
MS402	96765806
MS402	96765809
MS402	96765810
MS402	96765811
MS402	96591041
MS402	96591042

## MS 4000: MS 4000 / MS 4000R / MS 4000RE Submersible Motor

Diam Pump [inch]	Temp. transmitter	P2 [kW]	Motor type	Start method	I [A]	With cable	Type	Part. No
<b>1 x 220-230</b>								
4		2.20		DOL	14.6-14	•	MS4000	92960088
							MS4000	92960030
							MS4000	92960335
<b>3 x 380-400-415</b>								
		1.50			4-4-4.1		MS4000	92960123
		2.20	MS4000		6-6-6.3	•	MS4000	92960046
		3.00	MS4000R		7.7-7.9-8.1	•	MS4000	92959936
		4.00	MS4000	DOL	8.1	•	MS4000	92960050
4	•	4.00	MS4000		9.8-9.6-9.8	•	MS4000	92959986
		5.50	MS4000		9.8	•	MS4000	92960056
		7.50			13-13-13.4	•	MS4000	92959937
					13.4	•	MS4000	92960060
					18.4-19.3-19.6	•	MS4000	92959941
							MS4000	92960065
							MS4000	92959992
							MS4000	92960001

# MS6000/MS6/MMS6

## Submersible Motors ► 4" & 6" Submersible Motors

The motors are supplied without a motor connection cable.

When ordering, please include the appropriate short motor cable with cable connector or a complete motor cable (see MS 6000 C cable).

For star/delta connections, order in pairs.

**Max. fluid temperature at 0.15 m/s:** 40°C

**Motor shaft seal:** MS6000 = ceramic/carbon/NBR - MMS6 = SiC/SiC

**Motor material:** Stainless steel 1.4301 (1.4539 on request)

**Maximum ambient pressure:** 60 bar

**Mains frequency:** 50 Hz

**Voltage tolerance:** +6 / -10%

**Connection type:** Direct open circuit (DOL) or star/delta (SD)

**Rated speed:** 2840 - 2860 rpm

**Protection type (IEC 34-5):** IP 68

**Heat class (IEC 85):** F

**Integrated temperature sensor:** Yes (Tempcon)

**Overheat protection:** Optional Pt100/Pt1000 sensor



### MS6000/MS6/MMS6: Submersible motor

Diameter [inch]	Temp. transmitter	P2 [kW]	Engine type	Startup type	In [A]	Type	Product Number
<b>3 x 380-400-415</b>							
6	MMS6	7.50	MMS6	DOL	20-19.4-19.2	MMS6ST50	96880945
		9.20			24-23-22.6	MMS6ST50	96880946
		11.00			28.5-27.5-28	MMS6ST50	96880947
		13.00		Star/delta	33-32.5-33	MMS6ST50	96880948
		15.00			37-36.5-37	MMS6ST50	96880949
		18.50		DOL	45-43.5-44	MMS6ST50	96880950
				Star/delta		MMS6ST50	96880953
		22.00		DOL	52.5-51.5-52.5	MMS6ST50	96879425
				Star/delta		MMS6ST50	96879429
		26.00		DOL	62-61-61.5	MMS6ST50	96879426
				Star/delta		MMS6ST50	96879430
		30.00		DOL	71-68.5-68.5	MMS6ST50	96879427
	Star/delta		MMS6ST50	96879431			
	37.00	DOL	87-84.5-85	MMS6ST50	96879428		
		Star/delta		MMS6ST50	96879432		
	MS6000	MS6000	5.50	DOL	13.6-13.4-13.6	MS6000T40	96649709
				Star/delta		MS6000T40	96651875
			7.50	DOL	17.8-17.2-17.2	MS6000T40	96649723
				Star/delta		MS6000T40	96651876
			9.20	DOL	21.8-21.2-21.2	MS6000T40	96649725
				Star/delta		MS6000T40	96651877
			11.00	DOL	26.0-25.0-24.8	MS6000T40	96649726
				Star/delta		MS6000T40	96651878
			13.00	DOL	30.0-29.0-29.0	MS6000T40	96649727
Star/delta				MS6000T40		96651879	
15.00			DOL	34.5-33.5-33.5	MS6000T40	96649729	
			Star/delta		MS6000T40	96651890	
18.50	DOL	42.0-41.0-41.5	MS6000T40	96649740			
	Star/delta		MS6000T40	96651892			
22.00	DOL	49.5-47.5-46.5	MS6000T40	96649741			
	Star/delta		MS6000T40	96651893			
26.00	DOL	58.0-55.5-55.0	MS6000T40	96764103			
	Star/delta		MS6000T40	96651894			
30.00	DOL	66.5-64.0-63.0	MS6000T40	96649742			
	Star/delta		MS6000T40	96651896			

Submersible motors for 6" or larger wells.

The Grundfos MS6000 product range is a complete range of asynchronous submersible motors 4 kW up to 30 kW in 50 and 60 Hz versions and synchronous submersible motors from 4 Kw to 45 kW in 3000 RPM and 3600 RPM versions.



## MS 6000-P: 6" SUBMERSIBLE MOTORS

Diam Pump [inch]	P2 [kW]	Start method	I [A]	Type	Part. No
<b>3 x 350</b>					
139	7.50	Star / delta	16.6	MS6000P	99917616
	18.50		40.6	MS6000P	99917702
	30.00		61.8	MS6000P	99917617
	45.00		103.0	MS6000P	99917703
					MS6000P
				MS6000P	99917704
				MS6000P	99917619
				MS6000P	99917705

# MMS 8000

Submersible Motors ► 8" Rewindable submersible motors

The motors are supplied without a motor connection cable.  
When ordering, please include the appropriate short motor cable.

- Max. fluid temperature at 0.15 m/s:** 40°C
- Motor shaft seal:** Ceramic/carbon/NBR (SiC/SiC on request)
- Motor material:** EN-GJL-250 cast iron (1.4401, 1.4539 on request)
- Max. ambient pressure:** 60 bar
- Mains frequency:** 50 Hz
- Voltage tolerance:** +6 / -10%
- Connection type:** Direct open circuit (DOL) or star/delta (SD)
- Rated speed:** 2840 - 2860 rpm
- Protection rating (IEC 34-5):** IP 68
- Overheating protection:** Optional Pt100/Pt1000 sensor



## MMS 8000: 8" SUBMERSIBLE MOTORS

Diameter [inch]	P2 [kW]	Engine type	Startup type	In[A]	Type	Product number
<b>3 x 380-400-415</b>						
8	22.00	MMS8000	DOL	50.0-48.0-47.5	MMS8000	96530168
			Star / delta		MMS8000	96530185
	26.00		DOL	59.0-56.5-55.0	MMS8000	96530169
			Star / delta		MMS8000	96530187
	30.00		DOL	66.5-64.0-63.0	MMS8000	96530180
			Star / delta		MMS8000	96530189
	37.00		DOL	81.5-78.5-77.0	MMS8000	96530182
			Star / delta		MMS8000	96530191
	45.00		DOL	95.5-96.5-96.0	MMS8000	96476891
			Star / delta		MMS8000	96530192
	55.00		DOL	116-114-112	MMS8000	96476892
			Star / delta		MMS8000	96530193
	63.00		DOL	132-132-130	MMS8000	96530184
			Star / delta		MMS8000	96530195
	75.00		DOL	156-152-152	MMS8000	96476893
			Star / delta		MMS8000	96489499
	92.00		DOL	194-186-186	MMS8000	96476894
			Star / delta		MMS8000	96489347
110.00	DOL	230-224-222	MMS8000	96511375		
	Star / delta		MMS8000	96530196		

# MMS10000 / MMS12000

Submersible Motors ► 10" Rewindable submersible motors

## MMS 10000: 10" SUBMERSIBLE MOTORS

Diameter [inch]	P2 [kW]	Engine type	Startup type	In[A]	Type	Product number
<b>3 x 380-400-415</b>						
10	132.00	MMS10000	DOL	275-270-270	MMS10000	96521619
			Star / delta		MMS10000	96540306
	147.00		DOL	315-315-320	MMS10000	96540302
			Star / delta		MMS10000	96540307
	170.00		DOL	365-365-375	MMS10000	96457292
			Star / delta		MMS10000	96457303
	190.00		DOL	420-425-440	MMS10000	96463669
			Star / delta		MMS10000	96540308

## MMS 12000: 12" SUBMERSIBLE MOTORS

Diameter [inch]	P2 [kW]	Engine type	Startup type	In[A]	Type	Product number
<b>3 x 380-400-415</b>						
12	220.00	MMS12000	DOL	450-445-450	MMS12000	96540350
			Star / delta		MMS12000	96540354
	250.00		DOL	515-505-510	MMS12000	96540351
			Star / delta		MMS12000	96540355

# Accessories for Submersible SQ & SP

This section presents our comprehensive range of accessories for submersible pumps. From cables and control boxes to remote monitoring and system insights, these solutions are designed to ensure smooth, reliable pump operation - optimizing performance while minimizing downtime.



## Grundfos CUE – Variable Speed Drive

Achieve maximum efficiency with intelligent speed control.

- Energy optimisation through precise speed regulation
- Reduced wear and longer lifetime thanks to smooth operation
- Flexible integration with pump systems and automation setups
- Supports advanced control strategies for varying demand conditions

## LC 232 & LC 242 – Level Controllers

Reliable and flexible pump control for everyday applications.

- Automatic start/stop based on liquid level (float switches or pressure sensors)
- Dual pump capability for increased operational flexibility
- Ideal for dewatering, tank filling and emptying
- Configurable inputs/outputs for additional sensors and system expansion
- Simple onboard monitoring via intuitive front panel

## Grundfos Connect Asset Monitor

Stay connected with your installation at all times.

- Plug-and-play, internet-based monitoring solution
- Remote access to performance data and system status
- Instant notifications and alarms for proactive maintenance
- Detailed reporting and insights to optimise operation and reduce downtime
- Cost-effective solution for continuous monitoring across installations

External frequency converters for wall (IP54/55) or cabinet mounting (IP20/21), specifically designed for pump speed control in a variety of applications.

The CUE provides complete motor protection and features advanced pump control functionalities with hardwire signal inputs and outputs.

SCADA or BMS integration is available as an optional with a separate external communication interface unit (CIU).

Configuration and commissioning is simple and easy using the built-in special start-up guide that guides the user through the setup of the CUE unit.

All single-phase CUE drives have a 3x200-240V output power to drive a tri-phase motor of the same voltage.

Available inputs and outputs:

- RS-485 GENIbus connection
- 2x analog input, 0-10 V, 0/4-20 mA
- 1x analog output, 0/4-20 mA
- 4x configurable digital inputs
- 2x configurable digital inputs / outputs
- 2x configurable signal relays outputs (C/NO/NC)

Available accessories (sold separately):

- Sensors
- MCB 114 sensor input module
- MCO 101 multipump module
- dU/dT output filters
- Sinewave output filters (listed as Related product 2)
- Communication Interface Units (CIU)



## CUE: SINGLE-PHASE EXTERNAL FREQUENCY CONVERTER

Phases	Voltage 50Hz (V)	Type	Part. No
1	1 x 200-240	CUE 1x200-240V IP21 1,5kW	99616602
1	1 x 200-240	CUE 1x200-240V IP21 2,2kW	99616613
1	1 x 200-240	CUE 1x200-240V IP21 3,0kW	99616614
1	1 x 200-240	CUE 1x200-240V IP21 3,7kW	99616615
1	1 x 200-240	CUE 1x200-240V IP55 1,1kW	99616618
1	1 x 200-240	CUE 1x200-240V IP55 1,5kW	99616619
1	1 x 200-240	CUE 1x200-240V IP55 2,2kW	99616620
1	1 x 200-240	CUE 1x200-240V IP55 3,0kW	99616621
1	1 x 200-240	CUE 1x200-240V IP55 3,7kW	99616622
1	1 x 200-240	CUE 1x200-240V IP55 5,5kW	99616623
1	1 x 200-240	CUE 1x200-240V IP55 7,5kW	99616624
3	3 x 400V,50HZ	Control CUE 1x32-44A 3x400V IP54	98816103

# CUE: Three-Phase

Control And Monitoring Devices

## CUE: THREE PHASE EXTERNAL FREQUENCY CONVERTER

Phases	Voltage 50Hz (V)	Type	Part. No
1	1 x 200-240	CUE 1x200-240V IP21 5,5kW	99616616
1	1 x 200-240	CUE 1x200-240V IP21 7,5kW	99616617
3	3 x 380-440/441-500	CUE 3x380-500V IP21 110kW	99616726
3	3 x 380-440/441-500	CUE 3x380-500V IP21 132kW	99616727
3	3 x 380-440/441-500	CUE 3x380-500V IP21 160kW	99616728
3	3 x 380-440/441-500	CUE 3x380-500V IP21 200kW	99616729
3	3 x 380-440/441-500	CUE 3x380-500V IP21 250kW	99616730
3	3 x 380-440/441-500	CUE 3x380-500V IP54 110kW	99616776
3	3 x 380-440/441-500	CUE 3x380-500V IP54 132kW	99616777
3	3 x 380-440/441-500	CUE 3x380-500V IP54 160kW	99616778
3	3 x 380-440/441-500	CUE 3x380-500V IP54 200kW	99616779
3	3 x 380-440/441-500	CUE 3x380-500V IP54 250kW	99616780
3	3 x 380-440/441-500	CUE 3x380-500V IP55 0,55kW	99616756
3	3 x 380-440/441-500	CUE 3x380-500V IP55 0,75kW	99616757
3	3 x 380-440/441-500	CUE 3x380-500V IP55 1,1kW	99616758
3	3 x 380-440/441-500	CUE 3x380-500V IP55 1,5kW	99616759
3	3 x 380-440/441-500	CUE 3x380-500V IP55 11kW	99616765
3	3 x 380-440/441-500	CUE 3x380-500V IP55 15kW	99616766
3	3 x 380-440/441-500	CUE 3x380-500V IP55 18,5kW	99616767
3	3 x 380-440/441-500	CUE 3x380-500V IP55 2,2kW	99616760
3	3 x 380-440/441-500	CUE 3x380-500V IP55 22kW	99616769
3	3 x 380-440/441-500	CUE 3x380-500V IP55 3,0kW	99616761
3	3 x 380-440/441-500	CUE 3x380-500V IP55 30kW	99616770
3	3 x 380-440/441-500	CUE 3x380-500V IP55 37kW	99616771
3	3 x 380-440/441-500	CUE 3x380-500V IP55 4,0kW	99616762
3	3 x 380-440/441-500	CUE 3x380-500V IP55 45kW	99616772
3	3 x 380-440/441-500	CUE 3x380-500V IP55 5,5kW	99616763
3	3 x 380-440/441-500	CUE 3x380-500V IP55 55kW	99616773
3	3 x 380-440/441-500	CUE 3x380-500V IP55 7,5kW	99616764
3	3 x 380-440/441-500	CUE 3x380-500V IP55 75kW	99616774
3	3 x 380-440/441-500	CUE 3x380-500V IP55 90kW	99616775

# CUE ACCESSORIES / SINE WAVE FILTERS

Control And Monitoring Devices

## CUE ACCESSORIES



MCB 114 sensor input module provides the CUE with three additional analogue inputs:

One analogue 0–20 mA input for an additional sensor

Two analogue Pt100/Pt1000 inputs for temperature sensors.

The three analogue inputs are used for monitoring as standard, and can be utilised in a range of functions with the CUE to monitor your application.

Type	Part. No
Module additionnel MCB 114 I/O	96760901

## SINE WAVE FILTERS: IP20 Output Filter



In [A]	Enclosure class NEMA	Gross weight	Part. No
	1	6.3000	97669799
	1	25.5000	97669896
	1	29.8000	97669869
	1	32.0000	97669902
	3	64.5000	97669905
	3	67.5000	97669906
2	1	4.3000	96754941
4	1	4.5000	96754972
8	1	5.5000	96754973
10	1	8.1000	96754974
17	1	10.1000	96754976
24	1	17.0000	96754977
38	1	33.6000	96754978
48	1	40.0000	96755019
62	1	42.0000	96755021
75	1	50.0000	96755032
180	3	237.0000	97775142
260	3	321.0000	97775146
410	3	370.0000	97775148
510	3	425.0000	97775149

# CUE ACCESSORIES / SINE WAVE FILTERS

Groundwater

Quick selection of CUE and sine wave filter for SPE pumps

## SPE pump

Model	Part. No	Motor Part. No	Model	Part. No	Motor Part. No	Model	Part. No	Motor Part. No	Model	Part. No	Motor Part. No
SPE 18-6	92940983		SPE 18-17	92940985		SPE 18-35	92940989		SPE 30-38	99890591	
SPE 18-8	92940984		SPE 18-20	92940986		SPE 30-22	99890588		SPE 30-46	99890592	
SPE 18-12	92903143		SPE 18-24	92940987		SPE 30-27	99890589		SPE 46-22	99890600	
SPE 30-5	99890583		SPE 18-29	92940988		SPE 30-31	99890590		SPE 46-24	99890601	
SPE 30-7	99890625		SPE 30-9	99890626		SPE 46-15	99890598		SPE 46-22	99890609	
SPE 46-4	99890594	76207712 (Motor Part. No 99917616)	SPE 30-11	99890584		SPE 46-18	99890599		SPE 46-24	99890610	
SPE 46-2	99890602		SPE 30-13	99890585		SPE 46-15	99890607		SPE 60-19	99890615	
SPE 46-4	99890603		SPE 30-15	99890586		SPE 46-18	99890608		SPE 60-23	99890616	
SPE 60-3	99890611		SPE 30-19	99890587		SPE 60-11	99890613		SPE 60-19	99890621	76207722 (Motor Part. No 99917619)
SPE 60-3	99890617		SPE 46-6	99890595		SPE 60-15	99890614	76207720 (Motor Part. No 99917618)	SPE 60-23	99890622	
SPE 77-1	99890629		SPE 46-9	99890596		SPE 60-11	99890619		SPE 77-9	99890636	
SPE 95-1	99890638		SPE 46-11	99890597		SPE 60-15	99890620		SPE 77-11	99890637	
			SPE 77-5	99890604	76207717 (Motor Part. No 99917617)	SPE 95-7	99890633		SPE 95-7	99890645	
			SPE 46-9	99890605		SPE 77-6	99890634		SPE 95-8	99890646	
			SPE 46-11	99890606		SPE 77-7	99890635		SPE 95-9	99890647	
			SPE 60-5	99890627		SPE 95-4	99890642		SPE 125-3	99890650	
			SPE 60-8	99890612		SPE 95-5	99890643		SPE 125-4	99890651	
			SPE 60-5	99890628		SPE 95-6	99890644		SPE 160-3	99890654	
			SPE 60-8	99890618		SPE 125-2	99890649		SPE 215-2	99890656	
			SPE 77-2	99890630		SPE 160-2	99890653				
			SPE 77-3	99890631		SPE 215-1	99890655				
			SPE 77-4	99890632							
			SPE 95-2	99890640							
			SPE 95-3	99890641							
			SPE 125-1	99890648							
			SPE 160-1	99890652							

Motor MS6000P		
Voltage 3 x 350 V (3000 RPM)		
Part. No	P2 [kW]	In [A]
76207712	4.0	9.6
	5.5	12.6
	7.5	16.6
76207717	9.2	21.4
	11	25
	13	29.2
	15	33.4
	18.5	40.6
76207720	22	46.2
	26	54.0
	30	61.8
76207722	37	85.6
	45	103.0

CUE (100 Hz)		
3 x 380-440 V		
Part. No	P2 [kW]	In [A]
99616713	4.0	10
99616714	5.5	13
99616716	11	24
99616717	15	32
99616718	18.5	37.5
99616719	22	44
99616720	30	61
99616721	37	73
99616722	45	90
99616723	55	106

Sine Wave Filter (100 Hz)	
3 x 200-500 V	
Part. No	In [A]
96754976	13
96754977	18
96754978	26.5
96755019	36
96755021	46.5
96755032	56
97774436	86
97775142	135

## LC232: LEVEL CONTROLLER FOR GROUNDWATER PUMPS

The LC 232 pump controllers are designed for level control, monitoring and protection of Grundfos pumping systems.

Suitable for one pump or two pumps with direct online starting. Compatible with SP pumps up to 4kW.

### Features include:

- Supports both empty and fill applications
- For use with analogue (eg level transmitter) or digital sensor (eg float switch)
- Grundfos Go support via Bluetooth
- Usage, alarm and warning log
- BMS options (CIM module required)



Start method	Voltage	I [A]	Type	Part. No
<b>1 Pump</b>				
DOL	3 x 110-240	1-12	LC 232 1x 1-12 DOL 3x460 PI CE	99920061
<b>2 Pumps</b>				
DOL	3 x 110-240	1-9	LC 232 2x 1-9 DOL 3x460 PI CE	99920070

## LC 242: Level Controllers

LC 242 level controllers offer a comprehensive range of features for groundwater installation, monitoring and control of one or two pumps, up to 72 Amp. The LC 242 is a metal or plastic cabinet solution offering modularity and customization according to your needs.



Start method	Voltage	I [A]	Type	Part. No
<b>1 Pump</b>				
DOL	3 x 220-240/380-415	0,8-2,7	LC 242 1x 0.8-2.7 DOL 3x230/400 CT	99877269
DOL		9-26	LC 242 1x 9-26 DOL 3x230/400 CT	99877294
DOL		1,9-6,3	LC 242 1x 1.9-6.3 DOL 3x230/400 CT	99877277
DOL		5,7-12	LC 242 1x 5.7-12 DOL 3x230/400 CT	99877286
Star / delta		10-30	LC 242 1x 10-30 SD 3x230/400 CT	99877302
Star / delta		16-44	LC 242 1x 16-44 SD 3x230/400 CT	99877310
Star / delta		26-65,5	LC 242 1x 26-65.5 SD 3x230/400 CT	99877318
<b>2 Pumps</b>				
DOL	3 x 220-240/380-415	0,8-2,7	LC 242 2x 0.8-2.7 DOL 3x230/400 CT	99877273
DOL		9-26	LC 242 2x 9-26 DOL 3x230/400 CT	99877298
DOL		1,9-6,3	LC 242 2x 1.9-6.3 DOL 3x230/400 CT	99877282
DOL		5,7-12	LC 242 2x 5.7-12 DOL 3x230/400 CT	99877290
Star / delta		10-30	LC 242 2x 10-30 SD 3x230/400 CT	99877306
Star / delta		16-44	LC 242 2x 16-44 SD 3x230/400 CT	99877314
Star / delta		26-65,5	LC 242 2x 26-65.5 SD 3x230/400 CT	99877322

# Adapters

Accessories For Submersible Pumps ► Mechanical Accessories

## Connecting piece thread to flange: Connecting pieces / Thread-to-flange



Short description	Part. No
Adapter R2½ - DN50, PN16/40, EN 1.4308	120125
Adapter R2½ - DN50, PN16/40, EN 1.4517	120911
Adapter R2½ - DN65, PN16/40, EN 1.4308	120126
Adapter R2½ - DN65, PN16/40, EN 1.4517	120910
Adapter R2½ - DN80, PN16/40, EN 1.4308	120127
Adapter R2½ - DN80, PN16/40, EN 1.4517	120909
Adapter R3 - DN65, PN16/40, EN 1.4308	130187
Adapter R3 - DN65, PN16/40, EN 1.4517	130920
Adapter R3 - DN80, PN16/40, EN 1.4308	130188
Adapter R3 - DN80, PN16/40, EN 1.4517	130921
Adapter R3 - DN100, PN40, EN 1.4308	130189
Adapter R3 - DN100, PN40, EN 1.4517	130922
Adapter R4 - DN100, PN40, EN 1.4308	140071
Adapter R4 - DN100, PN40, EN 1.4517	140577
Adapter R5 - DN100, PN40, EN 1.4308	160148
Adapter R5 - DN100, PN40, EN 1.4517	160646
Adapter R5 - DN125, PN40, EN 1.4308	160149
Adapter R5 - DN125, PN40, EN 1.4517	160647
Adapter R5 - DN150, PN40, EN 1.4308	160150
Adapter R5 - DN150, PN40, EN 1.4517	160648
Adapter R6 - DN125, PN40, EN 1.4308	170159
Adapter R6 - DN125, PN40, EN 1.4517	170596
Adapter R6 - DN150, PN40, EN 1.4308	170160
Adapter R6 - DN150, PN40, EN 1.4517	170597
Adapter R6 - DN200, PN40, EN 1.4308	170162
Adapter R6 - DN200, PN40, EN 1.4517	170599

## Adapters: Thread to tap



Short description	Part. No
Adapter R5 - Rp4, PN40, EN 1.4301	190063
Adapter R5 - Rp4, PN40, EN 1.4401	190585
Adapter R5 - Rp6, PN40, EN 1.4301	190069
Adapter R5 - Rp6, PN40, EN 1.4401	190591
Adapter R6 - Rp5, PN40, EN 1.4301	200130
Adapter R6 - Rp5, PN40, EN 1.4401	200640

# PT100 & PT1000 SENSOR / TERMINATION KIT / RESIN KIT

Accessories For Submersible Pumps ► Mechanical Accessories

## PT 100 & PT1000 SENSOR



Short description	Part. No
Drop cable for exVoltage: 4 × 1 mm <sup>2</sup> . Mention length when ordering. Maximum recommended length: 350 m. If an exVoltage is needed on a sensor cable, extend it 0.5 m after the pump outlet.	00RM5271
ExVoltage kit for Pt100/Pt1000 sensor cable. For watertight shrink-joining of the sensor cable. Extra sensor cable must be ordered separately.	99039717
Insertion probe for Pt100 / Pt1000 in MMS 10000 and MMS 12000. Material: EN 1.4401 / 316 (N-version). When PT100/PT1000 is used in conjunction with pump and CUE drive an MCB 114 module is needed (see CUE accessories)	96913215
Insertion probe for Pt100 / Pt1000 in MMS 10000 and MMS 12000. Material: EN 1.4539 / AISI 904L (R-version). When PT100/PT1000 is used in conjunction with pump and CUE drive an MCB 114 module is needed (see CUE accessories)	99298250
Kit, PR5714 PT100 Relay/display	96913234
PT100 Sensor including 100m Cable w/Pins	96913263
PT100 Sensor including 20m Cable w/Pins	96913237
PT100 Sensor including 40m Cable w/Pins	96913253
PT100 Sensor including 60m Cable w/Pins	96913256
PT100 Sensor including 80m Cable w/Pins	96913260
PT1000 Sensor including 100mCable w/Pins	96804067
PT1000 Sensor including 20m Cable w/Pins	96804042
PT1000 Sensor including 40m Cable w/Pins	96804044
PT1000 Sensor including 60m Cable w/Pins	96804064
PT1000 Sensor including 80m Cable w/Pins	96804065
Staybolt kit for Pt100 / Pt1000. Material: EN 1.4401 / AISI 316. Only for MS 6000 motors	97550639
Staybolt kit for Pt100. Material: EN 1.4539 / AISI 90L. Only for MS 6000 motors	96803373
Staybolt kit for Pt1000. Material: EN 1.4401 / AISI 316. Only for MS402 en MS4000 motors	98090278
Staybolt kit for Pt1000. Material: EN 1.4539 / AISI 904. Only for MS402 en MS4000 motors	98090341

## TERMINAL KIT: DETACHABLE LEASH



Short description	Part. No
Thermal junction box F - 4x10-50mm <sup>2</sup> + mounting	97710552
Kit, Cable Term. unass.w/plug 1.5-2.5mm <sup>2</sup>	799901
Kit, Cable Term. Unass. 4-6mm <sup>2</sup>	799902

## RESIN KIT



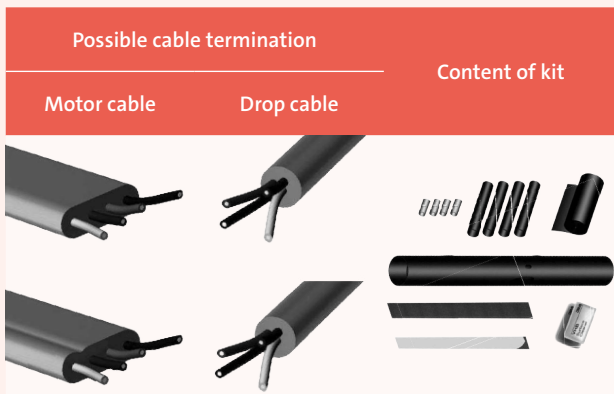
Short description	Part. No
Kit, Cable Term. Type G-0	00GF2520

# Detachable Junction Box / Resin Kit

Accessories For Submersible Pumps ▶ Electrical Accessories

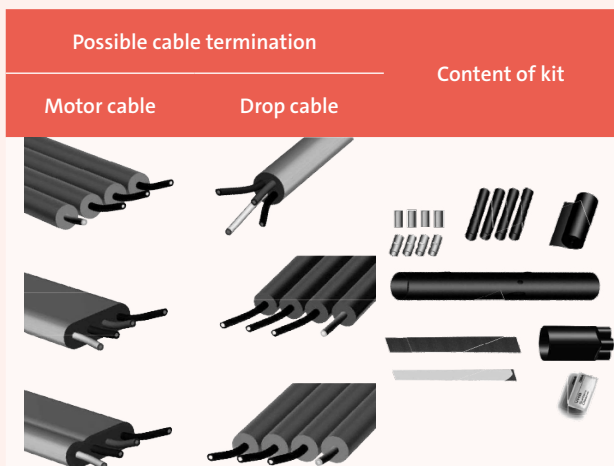
## Submersible drop cables with plug

Submersible drop cable with plug to MS402, MS4000 with 2 plug motor cable.



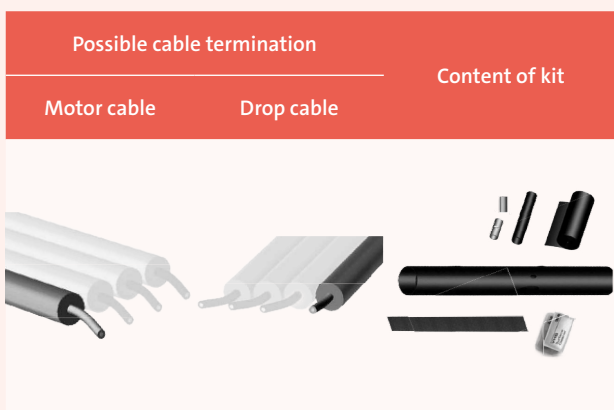
TM059986

Motor cable [mm <sup>2</sup> ]	Drop cable [mm <sup>2</sup> ]	Number of leads	Product number
KM kits with pressed connections:			
1.5 - 6	1.5 - 6	4	00116251
6 - 16	6 - 16	4	00116252
10 - 25	10 - 25	4	00116255
KM kits with screw connectors:			
6 - 35	6 - 35	4	96636867
25 - 27	25 - 70	4	96636868



TM059985

Motor cable [mm <sup>2</sup> ]	Drop cable [mm <sup>2</sup> ]	Number of leads	Product number
KM kits with pressed connections:			
1.5 - 6	1.5 - 6	4	00116257
6 - 16	6 - 16	4	00116258
10 - 50	10 - 50	4	96637330
16 - 70	16 - 70	4	96637332
1.5 - 6	1.5 - 6	3	00116253
10 - 25	10 - 25	3	00116254
10 - 50	10 - 50	3	96637318
16 - 70	16 - 70	3	96637331



TM059987

Motor cable [mm <sup>2</sup> ]	Drop cable [mm <sup>2</sup> ]	Number of leads	Product number
KM kits with pressed connections:			
10 - 70	10 - 70	1	96828296
32 - 120	32 - 120	1	00116256
KM kits with screw connectors:			
90 - 240	90 - 240	1	96637279

Note that a KM termination kit for single conductors only consist of material for one connection. When ordering, keep in mind how many kits are needed for a complete cable termination.

## Motor cables for MS402



TML-B motor cables with EPR outer sheath (ethylene propylene rubber). 1p= motor cable without plug for drop cable, 2p=motor cable with plug for drop cable.

Short description	Part. No
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 1,7 m, 1p	95920873
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 1,7 m, 2p	95920882
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 2,5 m 1p	95920874
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 2,5 m, 2p	95920883
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 5 m, 1p	95920875
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 5 m, 2p	95920884
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 10 m, 1p	95920876
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 10 m, 2p	95920885
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 15 m, 1p	95920877
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 20 m, 1p	95920878
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 30 m, 1p	95920879
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 40 m, 1p	95920880
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 50 m, 1p	95920881
Cable motor - MS402, 4G 1.5 mm <sup>2</sup> , 60 m, 1p	99032060
Cable motor - MS402, 4x1G AWG14, 2,5 m, 1p	95920887

## Motor cables for environmental MS4000 Model C

PTFE sheathed cable for SP-NE pumps



Short description	Part. No
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 1,7 m 2p	93094935
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 1,7 m, 1p	93094907
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 2,5 m, 1p	93094908
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 2,5 m, 2p	93094936
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 5 m, 1p	93094909
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 5 m, 2p	93094937
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 10 m, 1p	93094920
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 10 m, 2p	93094938
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 20 m 2p	93094939
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 20 m, 1p	93094921
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 30 m, 1p	93094922
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 30 m, 2p	93094940
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 40 m, 1p	93094923
Cable motor - MS4000, 4G 1.5 mm <sup>2</sup> , 40 m, 2p	93094941
Cable Motor - MS4000, 4G 1.5 mm <sup>2</sup> , 50 m, 1p	93094924
Cable Motor - MS4000, 4G 1.5 mm <sup>2</sup> , 50 m, 2p	93094942
Cable Motor - MS4000, 4G 1.5 mm <sup>2</sup> , 60 m 1p	93094925
Cable Motor - MS4000, 4G 1.5 mm <sup>2</sup> , 60 m, 2p	93094943
Cable Motor - MS4000, 4G 1.5 mm <sup>2</sup> , 70 m, 2p	93094944

# Cables Continued

Accessories For Submersible Pumps ► Electrical Accessories

## Motor cables for environmental MS4000 Model C

PTFE sheathed cable for SP-NE pumps



Short description	Part. No
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 2 m, 1p	93094954
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 10 m, 1p	93094955
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 20 m, 1p	93094956
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 30 m, 1p	93094957
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 40 m, 1p	93094958
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 50 m, 1p	93094959
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 60 m, 1p	93094960
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 70 m, 1p	93094961
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 80 m, 1p	93094962
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 90 m, 1p	93094963
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 100 m, 1p	93094964
Cable motor - MS4000, RE 4G 2.5 mm <sup>2</sup> , 120 m, 1p	93094965

## Motor cables for MS6000

TML-B motor cables EPR outer sheath (ethylene propylene rubber) without plug for drop cable.



Type	Product Number
Spare, Mot.cable MS6000N 4G6mm <sup>2</sup> 5m	96164236
Spare, Mot.cable MS6000R 4G6mm <sup>2</sup> 5m	96300140
Spare, Mot.cable MS6000N 4G6mm <sup>2</sup> 10m	96164238
Spare, Mot.cable MS6000R 4G6mm <sup>2</sup> 10m	96300141
Spare, Mot.cable MS6000R 4G6mm <sup>2</sup> 20m	96300143
Spare, Mot.cable MS6000N 4G6mm <sup>2</sup> 20m	96164239
Spare, Mot.cable MS6000R 4G6mm <sup>2</sup> 30m	96300145
Spare, Mot.cable MS6000N 4G6mm <sup>2</sup> 30m	96164240
Spare, Mot.cable MS6000N 4G10mm <sup>2</sup> 5m	96164241
Spare, Mot.cable MS6000R 4G10mm <sup>2</sup> 5m	96300146
Spare, Mot.cable MS6000N 4G10mm <sup>2</sup> 10m	96164242
Spare, Mot.cable MS6000R 4G10mm <sup>2</sup> 10m	96300147
Spare, Mot.cable MS6000R 4G10mm <sup>2</sup> 15m	96300148
Spare, Mot.cable MS6000N 4G10mm <sup>2</sup> 20m	96164243
Spare, Mot.cable MS6000N 4G10mm <sup>2</sup> 30m	96164244
Spare, Mot.cable MS6000N 4G10mm <sup>2</sup> 50m	96164245
Spare, Mot.cable MS6000N 4G10 mm <sup>2</sup> 100 m	96164247

## Submersible drop cables



Suitable for the following applications: • continuous application in groundwater and potable water (approved for potable-water applications) • connection of electrical equipment, such as submersible motors • installation depths up to 2000 metres and average loads. Ozone-, water- and weather-resistant insulation and sheath of special EPR-based elastomer materials adapted to applications in water. Maximum permissible water temperature: 60 °C. Maximum permissible lead service temperature: 90 °C.

Type	Product Number
Drop Cable RD TML-B 1x120 mm <sup>2</sup>	001D4077
Drop Cable RD TML-B 1x150 mm <sup>2</sup>	001D4078
Drop Cable RD TML-B 1x185 mm <sup>2</sup>	001D4079
Drop Cable RD TML-B 1x25 mm <sup>2</sup>	001D4072
Drop Cable RD TML-B 1x35 mm <sup>2</sup>	001D4073
Drop Cable RD TML-B 1x50 mm <sup>2</sup>	001D4074
Drop Cable RD TML-B 1x70 mm <sup>2</sup>	001D4075
Drop Cable RD TML-B 1x95 mm <sup>2</sup>	001D4076
Drop Cable RD TML-B 4G 1.5 mm <sup>2</sup>	001D4063
Drop Cable RD TML-B 4G 2.5 mm <sup>2</sup>	001D4064
Drop Cable RD TML-B 4G 4 mm <sup>2</sup>	001D4065
Drop Cable RD TML-B 4G 6 mm <sup>2</sup>	001D4066
Drop Cable RD TML-B 4G 10 mm <sup>2</sup>	001D4067
Drop Cable RD TML-B 4G 16 mm <sup>2</sup>	001D4068
Drop Cable RD TML-B 4G 25 mm <sup>2</sup>	001D4069
Drop Cable RD TML-B 4G 35 mm <sup>2</sup>	96432949

## Submersible drop cables with plug



Submersible drop cable with plug to MS402, MS4000 with 2 plug motor cable.

Type	Product Number
Power cable with plug 4x1,5 mm <sup>2</sup> , 15 m	96737342
Power cable with plug 4x1.5 mm <sup>2</sup> , 20 m	96737343
Power cable with plug 4x1.5 mm <sup>2</sup> , 25 m	96737344
Power cable with plug 4x1.5 mm <sup>2</sup> , 30 m	96737345
Power cable with plug 4x1.5 mm <sup>2</sup> , 40 m	96737347
Power cable with plug 4x1.5 mm <sup>2</sup> , 50 m	96737349
Power cable with plug 4x1.5 mm <sup>2</sup> , 70 m	96737351
Power cable with plug 4x1.5 mm <sup>2</sup> , 100 m	96737354
Power cable with plug 4x2.5 mm <sup>2</sup> , 15 m	0079H021
Power cable with plug 4x2.5 mm <sup>2</sup> , 20 m	0079H022
Power cable with plug 4x2.5 mm <sup>2</sup> , 25 m	0079H023
Power cable with plug 4x2.5 mm <sup>2</sup> , 30 m	0079H024

Continues to next page...

# Cables Continued

Accessories For Submersible Pumps ► Electrical Accessories

## Submersible drop cables with plug (Continued)



Type	Product Number
Power cable with plug 4x2.5 mm <sup>2</sup> , 40 m	0079H025
Power cable with plug 4x2.5 mm <sup>2</sup> , 50 m	0079H026
Power cable with plug 4x2.5 mm <sup>2</sup> , 70 m	0079H028
Power cable with plug 4x2.5 mm <sup>2</sup> , 100 m	0079H029
Power cable with plug 4x4 mm <sup>2</sup> , 15 m	0079H041
Power cable with plug 4x4 mm <sup>2</sup> , 20 m	0079H042
Power cable with plug 4x4 mm <sup>2</sup> , 25 m	0079H043
Power cable with plug 4x4 mm <sup>2</sup> , 30 m	0079H044
Power cable with plug 4x4 mm <sup>2</sup> , 40 m	0079H045
Power cable with plug 4x4 mm <sup>2</sup> , 50 m	0079H046
Power cable with plug 4x4 mm <sup>2</sup> , 70 m	0079H048

# Max. Cable Lengths

Accessories For Submersible Pumps ► Electrical Accessories

Maximum cable length in meters, from the control box to the pump. 3 x 400 V, 50 Hz, DOL

Voltage drop: 3%

Motor	kW	In [A]	Cos φ 100 %	Dimensions [mm <sup>2</sup> ]																
				1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	
4"	0.37	1.4	0.64	462	767															
4"	0.55	2.2	0.64	294	488	777														
4"	0.75	2.3	0.72	250	416	662	987													
4"	1.1	3.4	0.72	169	281	448	668													
4"	1.5	4.2	0.75	132	219	348	520	857												
4"	2.2	5.5	0.82	92	153	244	364	602	951											
4"	3	7.85	0.77	69	114	182	271	447	705											
4"	4	9.6	0.8	54	90	143	214	353	557	853										
4"	5.5	13	0.81	39	66	104	156	258	407	624	855									
4"	7.5	18.8	0.78	28	47	75	112	185	291	445	609	841								
6"	4	9.2	0.82	55	91	146	218	359	566	867										
6"	5.5	13.6	0.77	40	66	105	157	258	407	622	850									
6"	7.5	17.6	0.8	29	49	78	117	193	304	465	637	882								
6"	9.2	21.8	0.81	23	39	62	93	154	243	372	510	706	950							
6"	11	24.8	0.83		34	53	80	132	209	320	440	610	823							
6"	13	30	0.81		28	45	68	112	176	270	370	513	690	893						
6"	15	34	0.82			39	59	97	154	236	324	449	604	783	947					
6"	18.5	42	0.81				48	80	126	193	265	366	493	638	770	914				
6"	22	48	0.84				41	67	107	164	225	313	422	549	665	793	927			
6"	26	57	0.84					57	90	138	189	263	355	462	560	667	781	937		
6"	30	66.5	0.83					49	78	119	164	227	307	398	482	574	670	803	926	
6"	37	85.5	0.79						63	97	133	183	246	317	382	452	525	624	714	
8"	22	48	0.84				41	67	107	164	225	313	422	549	665	793	927			
8"	26	56.5	0.85					57	90	138	189	263	356	464	563	672	787	947		
8"	30	64	0.85					50	79	122	167	233	314	409	497	593	695	836	968	
8"	37	78.5	0.85						65	99	136	190	256	334	405	483	567	682	789	
8"	45	96.5	0.82						54	83	114	158	213	276	334	396	462	553	636	
8"	55	114	0.85							68	94	131	177	230	279	333	390	469	544	
8"	63	132	0.83								83	115	155	201	243	289	338	404	466	
8"	75	152	0.86								70	97	132	171	208	249	292	353	409	
8"	92	186	0.86									79	107	140	170	204	239	288	335	
8"	110	224	0.87										89	116	141	169	198	240	279	
10"	75	156	0.84								69	96	130	169	205	244	285	343	396	
10"	92	194	0.82									79	106	137	166	197	230	275	316	
10"	110	228	0.84										89	116	140	167	195	234	271	
10"	132	270	0.84											98	118	141	165	198	229	
10"	147	315	0.81												103	122	142	169	194	
10"	170	365	0.81													105	122	146	168	
10"	190	425	0.79														106	125	144	
12"	147	305	0.83													105	125	146	175	202
12"	170	345	0.85													92	110	129	155	180
12"	190	390	0.84														98	114	137	158
12"	220	445	0.85															100	120	139
12"	250	505	0.85																106	123
Max intense for cable [A]*				23	30	41	53	74	99	131	162	202	250	301	352	404	461	547	633	

\*Under favorable heat dissipation conditions.

For motors with Y/D starting, the cable length can be calculated by multiplying the values in the table above by 3.

# Sine Wave Filters

## Solar System Equipment

Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced due to the fact that a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped current. The result is a sine-wave-shaped current and reduced motor noise.

Maximum cable length with sine-wave filter is 300 m.

dU/dt filters reduce the voltage peaks and the dU/dt of the pulses at the motor terminals. To some extent, the voltage at the motor terminals is still pulse-shaped; the motor current is sine-wave-shaped without commutation spikes.

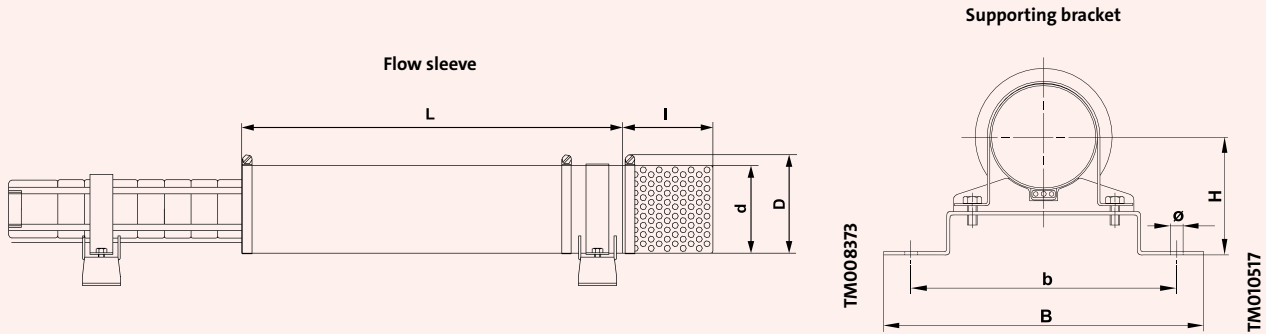
Maximum cable length with dU/dt filter is 150 m.



## SINE WAVE FILTERS: OUTPUT FILTER IP20/IP23

Short description	Part. No
Sine Wave Filter 200-500V IP20 8/7,5/5,5/5,5A	96754973
Sine Wave Filter 200-500V IP20 10/9,5/7,5/7,5A	96754974
Sine Wave Filter 200-500V IP20 17/16/13/12A	96754976
Sine Wave Filter 200-500V IP20 24/23/18/17A	96754977
Sine Wave Filter 200-500V IP20 2,5/2,5/2/2A	96754941
Sine Wave Filter 200-500V IP20 38/36/26,5/24A	96754978
Sine Wave Filter 200-500V IP20 4,5/4/3,5/3,5A	96754972
Sine Wave Filter 200-500V IP20 48/45,5/36/34A	96755019
Sine Wave Filter 200-500V IP20 75/71/56/53A	96755032
Sine Wave Filter 200-500V IP20 62,59 (130B2308)	96755021
Sine Wave Filter 200-500V IP23 180/170/135/112A	97775142
Sine Wave Filter 200-500V IP23 260/246/195/162A	97775146
Sine Wave Filter 200-500V IP23 510/483/383/315A	97775149

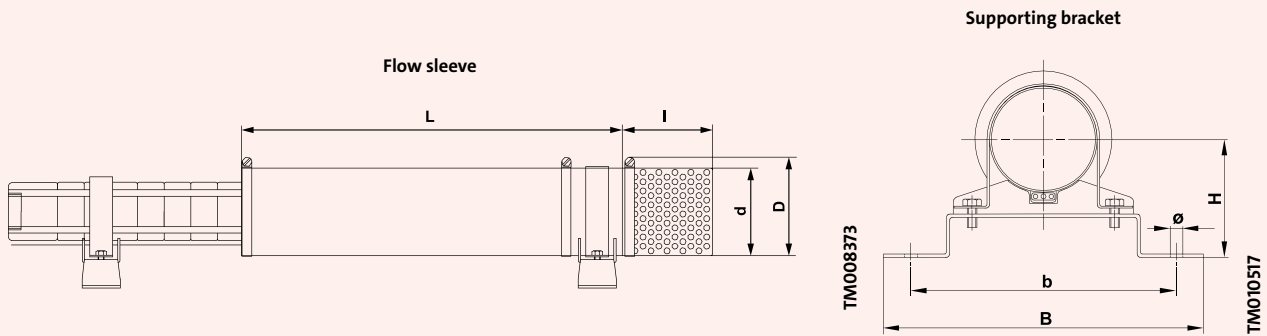
## SP cooling jacket, standard version EN 1.4301 / AISI 304



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP1A-9 to 28 SP2A-6 to 18 SP3A-6 to 12 SP5A-4 to 8	SP1A-9 to 22 SP2A-6 to 15 SP3A-5 to 10 SP5A-3 to 7	<ul style="list-style-type: none"> <li>d115 (130) × L400</li> <li>Motor 4", up to 0.75 kW</li> <li>1.5 kg</li> </ul>	96937110	
SP1A-36 to 57 SP2A-23 to 33 SP3A-15 to 25 SP5A-12 to 17 SP7-1 to 12 SP9-1 to 11 SP11-1 to 11 SP14-1 to 6	SP1A-26 to 39 SP2A-21 to 27 SP3A-14 to 18 SP5A-9 to 11 SP7-1 to 8 SP9-4 to 7 SP11-3 to 7 SP14-1 to 4	<ul style="list-style-type: none"> <li>d115 (130) × 500</li> <li>Motor 4", up to 2.2 kW</li> <li>7 kg</li> </ul>	96937111	96957450 (1 set = 2 brackets) 1.1 kg H100, b185, B220, Ø11
SP2A-40 to 65 SP3A-29 to 60 SP5A-21 to 60 SP7-13 to 42 SP9-13 to 29 SP11-11 to 27 SP14-7 to 23	SP2A-34 to 48 SP3A-24 to 38 SP5A-15 to 39 SP7-8 to 28 SP9-4 to 18 SP11-3 to 18 SP14-5 to 15	<ul style="list-style-type: none"> <li>d115 (130) × 800</li> <li>Motor 4", up to 5.5 kW</li> <li>2.5 kg</li> </ul>	96937179	
SP7-42 to 59 SP9-30 to 40 SP11-28 to 37 SP14-24 to 31	SP7-29 to 38 SP9-19 to 25 SP11-19 to 24 SP14-16 to 20	<ul style="list-style-type: none"> <li>d115 (130) × 1000</li> <li>Motor 4", 7.5 kW (MS 4000)</li> <li>3.1 kg</li> </ul>	96937204	96958279 (1 set = 2 brackets) 1.4 kg H100, b235, B275, Ø11
SP5A-52 to 60 SP7-32 to 59 SP9-23 to 40 SP11-21 to 37 SP14-18 to 31	SP5A-39 SP7-21 to 38 SP9-17 to 25 SP11-14 to 24 SP14-12 to 20	<ul style="list-style-type: none"> <li>d160 (180) × 800</li> <li>Motor 6", up to 7.5 kW (MS 6000)</li> <li>4.0 kg</li> </ul>	96937231	98557132 (1 set = 2 brackets) 1.4 kg H125, b185, B220, Ø11
SP9-41 to 55	SP9-26 to 38	<ul style="list-style-type: none"> <li>d160 (180) × 1000</li> <li>Motor 6" up to 11 kW (MS 6000)</li> <li>4.0 kg</li> </ul>	98779730	
SP2A-75 to 90	SP2A-58 SP3A-56	<ul style="list-style-type: none"> <li>d160 (180) × 1000</li> <li>Motor 4", 7.5 kW (MS 4000)</li> <li>4.3 kg</li> </ul>	96937205	96957525 (1 set = 3 brackets) 1.4 kg H125, b185, B220, Ø11
SP5A-75 to 85 SP7-60 to 100 SP9-56 to 93	SP3A-56 to -75 SP5A-52 SP7-41 to 67 SP9-39 to 63	<ul style="list-style-type: none"> <li>d160 (180) × 1000</li> <li>Motor 6", up to 18.5 kW (MS 6000)</li> <li>4.9 kg</li> </ul>	93120816	

# SP Cooling Jacket

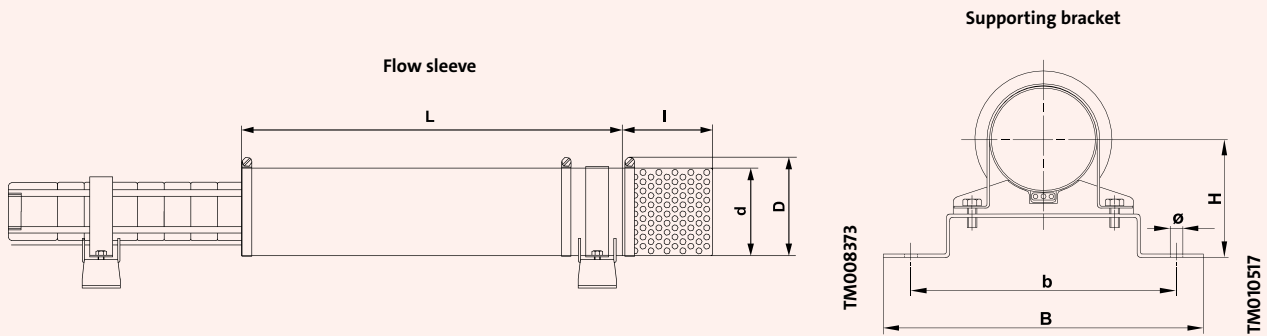
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP17/18-1	-	<ul style="list-style-type: none"> <li>d145 (160) × 450</li> <li>Motor 4", up to 2.2 kW (MS 4000)</li> <li>1.9 kg</li> </ul>		
SP17/18-2 SP17/18-3 SP30/32-1 to 2	SP17/18-1 to 2 SP30/32-1	<ul style="list-style-type: none"> <li>d145 (160) × 550</li> <li>Motor 4", up to 2.2 kW (MS 4000)</li> <li>2.2 kg</li> </ul>	97942214 d145 × 158 0.6 kg	96957523 (1 set = 2 brackets) 2.0 kg H115, b185, B220, Ø11 for pumps up to 50 kg / 4" up to 7.5 kW
SP17/18-4 to 7 SP30/32-3 to 4	SP17/18-3 to 6 SP30/32-2 to 3	<ul style="list-style-type: none"> <li>d145 (160) × 800</li> <li>Motor 4", up to 4 kW (MS 4000)</li> <li>3.1 kg</li> </ul>		
SP17/18-8 to 13 SP30/32-5 to 8	SP17/18-7 to 9 SP30/32-4 to 5	<ul style="list-style-type: none"> <li>d145 (160) × 1000</li> <li>Motor 4", 5.5 - 7.5 kW (MS 4000)</li> <li>3.8 kg</li> </ul>		
SP17/18-8 to 24 SP30/32-5 to 15	SP17/18-5 to 15 SP30/32-3 to 10	<ul style="list-style-type: none"> <li>d180 (200) × 800</li> <li>Motor 6", up to 13 kW (MS 6000)</li> <li>4.0 kg</li> </ul>		
SP17/18-25 to 40 SP30/32-16 to 26	SP17/18-16 to 26 SP30/32-11 to 17	<ul style="list-style-type: none"> <li>d180 (200) × 1000</li> <li>Motor 6", up to 22 kW (MS 6000)</li> <li>4.9 kg</li> </ul>	97942218 d180 × 192 0.9 kg	96957529 (1 set = 2 brackets) 2.1 kg H140, b300, B350, Ø11
SP30/32-27 to 35	SP17/18-27 to 30 SP30/32-18 to 23	<ul style="list-style-type: none"> <li>d180 (200) × 1250</li> <li>Motor 6", 26 à 30 kW (MS 6000)</li> <li>6.0 kg</li> </ul>		
-	SP30/32-24 to 28	<ul style="list-style-type: none"> <li>d180 (200) × 1700</li> <li>Motor 6", up to 26-37 kW (MMS6)</li> <li>8.5 kg</li> </ul>		96957531 (1 set = 3 brackets) 3.1 kg H140, b300, B350, Ø11
SP17/18-43 to 53	SP17/18-33 to 36	<ul style="list-style-type: none"> <li>d200 (220) × 1250</li> <li>Motor 6", 26-30 kW (MS 6000)</li> <li>Pump in sleeve d154</li> <li>6.6 kg</li> </ul>		96957544 (1 set = 2 brackets) 2.3 kg H150, b320, B370, Ø11
SP17/18-43 to 60 SP30/32-39 to 43	SP17/18-39 to 42	<ul style="list-style-type: none"> <li>d200 (220) × 1700</li> <li>Motor 6", 26-37 kW (MMS6)</li> <li>Pump in sleeve d154</li> <li>9.3 kg</li> </ul>	97942247 d200 × 192 1.0 kg	97695369 (1 set = 3 brackets) 3.2 kg H150, b320, B370, Ø11
SP17/18-55 to 60 SP30/32-39 to 49	SP17/18-45 to 50	<ul style="list-style-type: none"> <li>d200 (220) × 1700</li> <li>Motor 6", 37-45 kW (Franklin 6")</li> <li>Pump in sleeve d154</li> <li>9.3 kg</li> </ul>		
SP17/18-45 SP17/18-48 SP30/32-46 to 54	SP17/18-42 to 50 SP30/32-29 to 39	<ul style="list-style-type: none"> <li>d254 (270) × 1500</li> <li>Motor 8", 37-55 kW (MMS 8000 / Franklin 8")</li> <li>Pump in sleeve d154</li> <li>9.8 kg</li> </ul>	97942263 d256 × 325 1.9 kg	96957561 (1 set = 3 brackets) 6.3 kg H200, b380, B430, Ø11

# SP Cooling Jacket

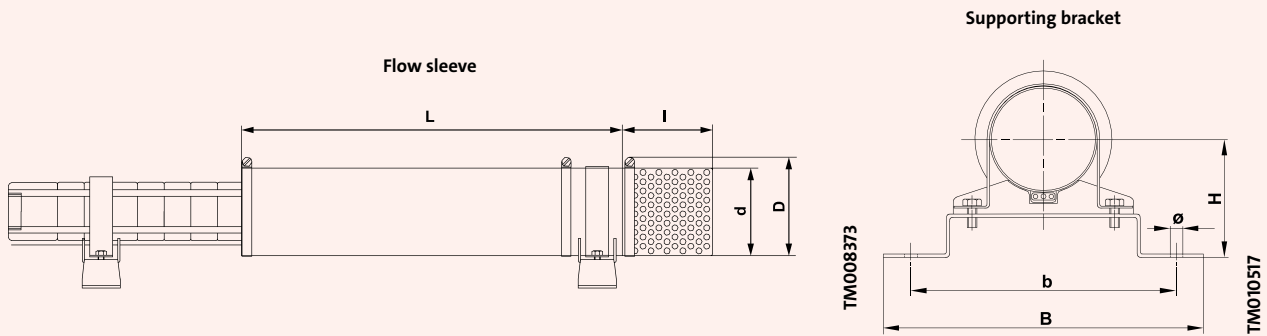
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP46-1-B SP46-1 SP46-2-BB SP60-1-A SP60-1	SP46-1-B SP46-1-B SP46-1-A SP60-1-B	<ul style="list-style-type: none"> <li>d180 (200) × 550</li> <li>Motor 4", up to 2.2 kW (MS 402/MS 4000)</li> <li>2.9 kg</li> </ul>	96937178	
SP46-2 P46-3-C SP60-2-B SP60-2	SP46-1 S P46-2-AB SP60-1-A SP60-1 SP60-2-BB	<ul style="list-style-type: none"> <li>d180 (200) × 800</li> <li>Motor 4" 3.0 - 4.0 kW (MS 4000)</li> <li>4.0 kg</li> </ul>	96937187	96957524 (1 set = 2 brackets) 1.2 kg H140, b225, B260, Ø11 for pumps up to 50 kg / 4" up to 7.5 kW
SP46-3 SP46-4-C SP46-4 SP46-5 SP60-3 SP60-4	SP46-2 SP46-3-BB SP46-3 SP46-4-BC SP60-2 SP60-3-A	<ul style="list-style-type: none"> <li>d180 (200) × 1000</li> <li>Motor 4", 5.5 - 7.5 kW (MS 4000)</li> <li>4.9 kg</li> </ul>	96937190	
SP46-3 SP46-4-C SP46-4 to 10 SP60-3 to 9B	SP46-2 SP46-3BB SP46-3 SP46-4-BC SP46-4 to 7C SP60-2 SP60-3-A SP60-3 to 6B	<ul style="list-style-type: none"> <li>d200 (220) × 800</li> <li>Motor 6", up to 15 kW (MS 6000)</li> <li>5.4 kg</li> </ul>	96937322	96957545 (1 set = 2 brackets) 2.2 kg H150, b320, B370, Ø11
SP46-8 to 15 SP60-7 to 12		<ul style="list-style-type: none"> <li>d200 (220) × 1000</li> <li>Motor 6", up to 22 kW (MS 6000)</li> <li>6.4 kg</li> </ul>	96937323	97942247 d200 × 192 1.0 kg
SP46-13 to 20 SP60-11 to 17	SP46-7 to 13 SP60-6 to 11	<ul style="list-style-type: none"> <li>d200 (220) × 1250</li> <li>Motor 6", 18.5 - 30 kW (MS 6000)</li> <li>6.6 kg</li> </ul>	96937317	
SP46-16 to 24 SP60-13 to 21	SP46-14 to 17 SP60-12 to 14	<ul style="list-style-type: none"> <li>d200 (220) × 1700</li> <li>Motor 6", 26-37 kW (MMS6)</li> <li>9.3 kg</li> </ul>	96937318	96957549 (1 set = 3 brackets)
SP46-21 to 24 SP60-18 to 22	SP60-12 to 17	<ul style="list-style-type: none"> <li>d200 (220) × 1700</li> <li>Motor 6", 26-37 kW (Franklin 6")</li> <li>9.3 kg</li> </ul>	96937448	3.4 kg H150, b320, B370, Ø11

# SP Cooling Jacket

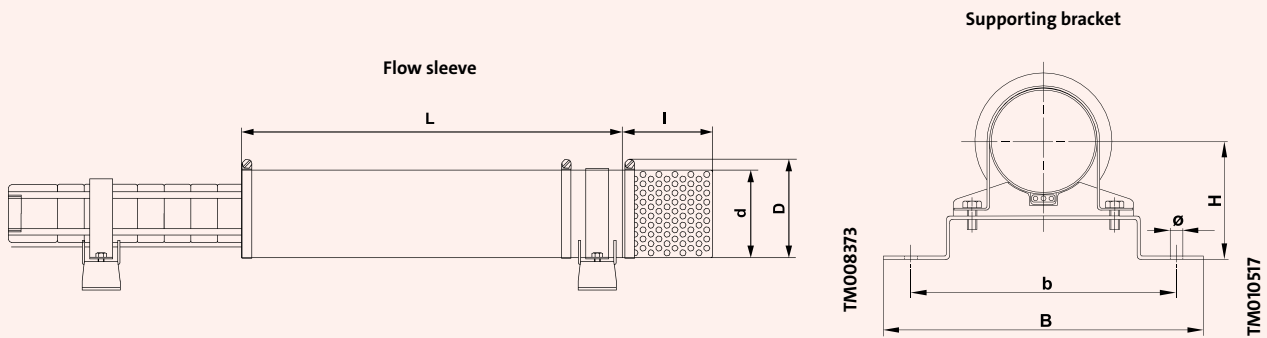
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP46-21 to 24 SP60-18 to 22	SP46-14 to 17 SP60-12 to 14	<ul style="list-style-type: none"> <li>d254 (270) × 1500</li> <li>Motor 8", 37-45 kW (MMS 8000)</li> <li>9.8 kg</li> </ul>		96957592 (1 set = 3 brackets) 6.0 kg H200, b380, B430, Ø11
SP60-22	SP46-18 to 19 SP60-15 to 18	<ul style="list-style-type: none"> <li>d254 (270) × 1250</li> <li>Motor 8", 55 kW (Franklin 8")</li> <li>8.8 kg</li> </ul>		98095530 (1 set = 2 brackets) 6.0 kg H200, b380, B430, Ø11
SP46-26 to 35 SP60-24 to 30	SP46-20 to 24 SP60-19 to 20	<ul style="list-style-type: none"> <li>d254 (270) × 1500</li> <li>Motor 8", 45-55 kW (MMS 8000 / Franklin 8")</li> <li>Pump in sleeve d154</li> <li>9.8 kg</li> </ul>	97942263 d256 × 325 1.9 kg	
SP46-37	SP60-21	<ul style="list-style-type: none"> <li>d254 (270) × 1700</li> <li>Motor 8", 63-75 kW (MMS 8000 / Franklin 8")</li> <li>Pump in sleeve d154</li> <li>9.8 kg</li> </ul>		96957561 (1 set = 3 brackets) 6.3 kg H200, b380, B430, Ø11
SP77-1 to 4 SP95-1 to 4B	SP77-1 SP77-2BA SP77-2-A SP77-2 SP77-3-AA SP77-3-A SP95-1-A SP95-1 SP95-2-AB SP95-2-B SP95-2 SP95-3-BB	<ul style="list-style-type: none"> <li>d210 (225) × 1000</li> <li>Motor 6", up to 18.5 kW (MS 6000)</li> <li>5.6 kg</li> </ul>		96957546 (1 set = 2 brackets) 2.5 kg H160, b330, B380, Ø11
SP77-5 to 9 SP95-4 SP95-5-AB SP95-5 to 7	SP77-3 to 6-B SP95-3-B SP95-3 SP95-4-AB SP95-4 SP95-5-B	<ul style="list-style-type: none"> <li>d210 (225) × 1250</li> <li>Motor 6", up to 30 kW (MS 6000)</li> <li>6.9 kg</li> </ul>	97942261 d210 × 192 1.1 kg	
SP77-7 to 11 SP95-8 to 9	SP77-6 SP77-7 SP95-5 SP95-6	<ul style="list-style-type: none"> <li>d210 (225) × 1700</li> <li>Motor 6", 26-37 kW (MMS6)</li> <li>10.6 kg</li> </ul>		96957553 (1 set = 3 brackets) 6.0 kg H160, b330, B370, Ø11
SP77-10 to 12 SP95-8 to 10	SP77-6 to 8 SP95-5 to 7	<ul style="list-style-type: none"> <li>d210 (225) × 1700</li> <li>Motor 6", 37-45 kW (Franklin 6")</li> <li>9 kg</li> </ul>		

# SP Cooling Jacket

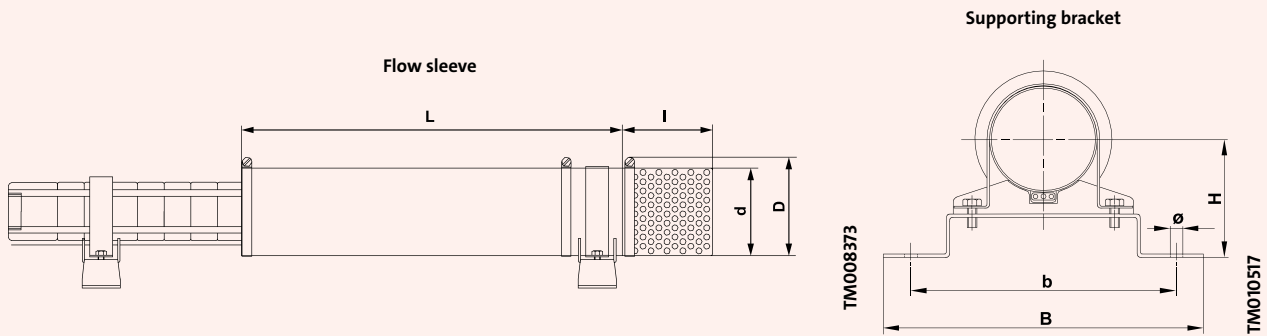
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP77-10 to 15 SP95-8 to 13	SP77-6 to 10 SP95-5 to 8	<ul style="list-style-type: none"> <li>d254 (270) × 1500</li> <li>Motor 8", 37-55 kW (MMS 8000 / Franklin 8")</li> <li>12.4 kg</li> </ul>	96937475	
SP77-16 to 21 SP95-14 to 17	SP77-11 to 13 SP95-9 to 11	<ul style="list-style-type: none"> <li>d254 (270) × 1700</li> <li>Motor 8", 63-75 kW (MMS 8000 / Franklin 8")</li> <li>11 kg</li> </ul>	96937476	96957593 (1 set = 3 brackets) 5.8 kg H200, b380, B430, Ø11
SP77-22 SP95-18 to 20	SP77-14 SP77-15 SP95-12 SP95-13	<ul style="list-style-type: none"> <li>d254 (270) × 2000</li> <li>Motor 8", up to 92 kW (MMS 8000 / Franklin 8")</li> <li>13.4 kg</li> </ul>	96937477	
SP77-19 to 20 SP95-15 to 17	SP95-11	<ul style="list-style-type: none"> <li>d285 (300) × 1500</li> <li>Motor 10", up to 75 kW (MMS 10000)</li> <li>11.4 kg</li> </ul>	96937507	97695337 (1 set = 3 brackets)
SP77-22 SP95-18 to 20	SP95-12 SP95-13	<ul style="list-style-type: none"> <li>d285 (300) × 2000</li> <li>Motor 10", 92 kW (MMS 10000)</li> <li>15.1 kg</li> </ul>	96937508	10.1 kg H225, b410, B460, Ø11
SP125-1-A SP125-1 SP125-2-AA SP160-1-A SP160-1	SP125-1-A SP125-1 SP160-1-A	<ul style="list-style-type: none"> <li>d254 (270) × 1000</li> <li>Motor 6", up to 18.5 kW (MS 6000)</li> <li>6.7 kg</li> </ul>	96937441	96957548 (1 set = 2 brackets) 3.4 kg H200, b380, B430, Ø11
SP125-2-A SP125-2 SP125-3/A/AA SP160-2/A/AA SP160-3-AA	SP125-2-AA SP125-2-A SP125-2 SP160-1 SP160-2-AA	<ul style="list-style-type: none"> <li>d254 (270) × 1250</li> <li>Motor 6", up to 30 kW (MS 6000)</li> <li>8.3 kg</li> </ul>	96937443	
SP125-3/3A SP125-4/A/AA SP160-2 SP160-3/A/AA	SP125-3-AA SP125-3-A SP160-2-A SP160-2 SP160-3-AA	<ul style="list-style-type: none"> <li>d254 (270) × 1700</li> <li>Motor 6", 26-37 kW (MMS6)</li> <li>11.4 kg</li> </ul>	96937320	
SP125-4/A/AA SP125-5-A/AA SP160-3-A SP160-4-A/AA	SP125-3-AA SP125-3-A SP125-3 SP160-2-A to 2 SP160-3-AA	<ul style="list-style-type: none"> <li>d254 (270) × 1700</li> <li>Motor 6", 37-45 kW (Franklin 6")</li> <li>11.4 kg</li> </ul>	96937450	96957560 (1 set = 3 brackets) 5.2 kg H200, b380, B430, Ø11

# SP Cooling Jacket

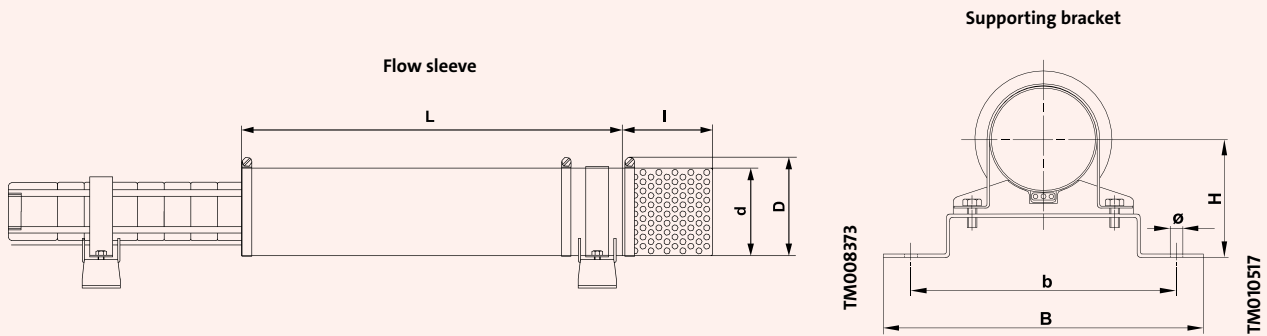
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP125-4/A/AA SP125-5/A/AA SP125-6-AA/6-A SP160-3/3-A SP160-4/A/AA SP160-5-AA/5-A	SP125-3-AA SP125-3-A SP125-3 SP125-4-AA SP125-4-A SP160-3-AA SP160-3-A SP160-3	<ul style="list-style-type: none"> <li>d285 (300) × 1500</li> <li>Motor 8", 37-55 kW (MMS 8000 / Franklin 8")</li> <li>11.4 kg</li> </ul>	96937478	
SP125-6 SP125-7/A/AA SP125-8/A/AA SP160-5 SP160-6/A/AA SP160-7-AA	SP125-4 SP125-5-AA SP125-5-A SP125-5 SP125-6-AA SP160-4-AA SP160-4-A SP160-4	<ul style="list-style-type: none"> <li>d285 (300) × 1700</li> <li>Motor 8", 63-75 kW (MMS 8000 / Franklin 8")</li> <li>12.8 kg</li> </ul>	96937479	96957595 (1 set = 3 brackets) 10.1 kg H225, b410, B460, Ø11
SP125-9/A/AA SP125-10/A/AA SP125-11 SP160-7/A SP160-8/A/AA SP160-9/A/AA SP160-10-AA	SP125-6-A/-6 SP125-7-AA SP125-7-A SP125-7 SP160-5-AA SP160-5-A SP160-5 to 6	<ul style="list-style-type: none"> <li>d285 (300) × 2250</li> <li>Motor 8", up to 92-110 kW (MMS 8000 / Franklin 8")</li> <li>16.8 kg</li> </ul>	96937487	
SP125-7/A/AA SP125-8/A/AA SP125-9/A/AA SP125-10/A/AA SP160-6/6-A SP160-7/A/AA SP160-8/A/AA	-	<ul style="list-style-type: none"> <li>d330 (350) × 1700</li> <li>Motor 10", 75-92 kW (MMS 10000)</li> <li>14.4 kg</li> </ul>	96937510	96957597 (1 set = 3 brackets) 10.5 kg H225, b410, B460, Ø11
-	SP125-8 to 10 SP160-7 to 8	<ul style="list-style-type: none"> <li>d285 (300) × 2600</li> <li>Motor 8", up to 150 kW (Franklin 8")</li> <li>19.1 kg</li> </ul>	96937503	96957595 (1 set = 3 brackets) 10.1 kg H225, b410, B460, Ø11
SP125-12 to 13 SP160-8 to 9/A/AA SP160-10/A SP160-11	96507609 (2502.0261.260)	<ul style="list-style-type: none"> <li>d330 (350) × 2000</li> <li>Motor 10", up to 132 kW (MMS 10000)</li> <li>17.2 kg</li> </ul>	96937522	96957597 (1 set = 3 brackets) 10.5 kg H225, b450, B460, Ø11
SP125-14 to 17 SP160-12 to 14	SP125-10 to 11 SP160-8 to 9	<ul style="list-style-type: none"> <li>d330 (350) × 2500</li> <li>Motor 10", up to 147-170 kW (MMS 10000)</li> <li>21.2 kg</li> </ul>	96937524	
-	SP125-11 to 13 SP160-9 to 10	<ul style="list-style-type: none"> <li>d380 (400) × 2000</li> <li>Motor 12", up to 190 kW (MMS 12000)</li> <li>19.6 kg</li> </ul>	96937555	96957599 (1 set = 3 brackets) 12.1 kg H270, b550, B600, Ø11
SP160-15	-	<ul style="list-style-type: none"> <li>d380 (400) × 2250</li> <li>Motor 12", 190 kW (MMS 12000)</li> <li>21.9 kg</li> </ul>	96937529	

# SP Cooling Jacket

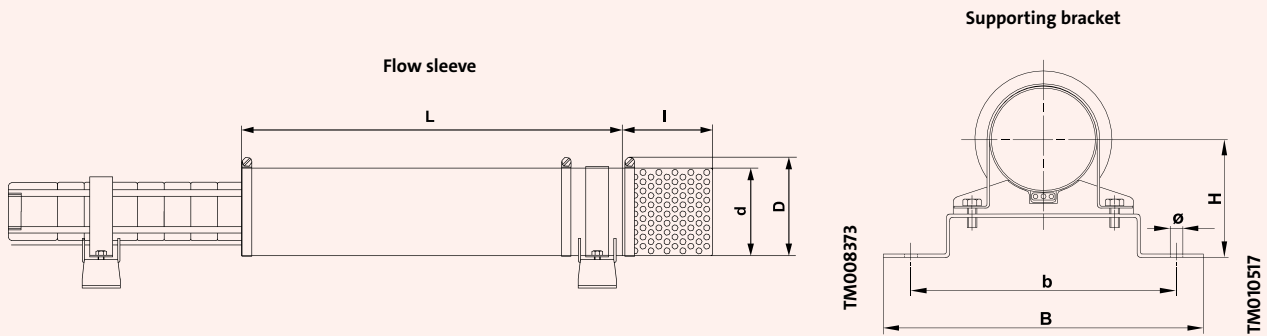
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP215-1-A SP215-1 SP215-2-AA	SP215-1-A SP215-1	<ul style="list-style-type: none"> <li>d330 (350) × 1250</li> <li>Motor 6", up to 30 kW (MS 6000)</li> <li>10.6 kg</li> </ul>		96958364 (1 set = 2 brackets) 10.0 kg H250, b500, B550, Ø11
SP215-2-AA SP215-2A	SP215-1	<ul style="list-style-type: none"> <li>d330 (350) × 1800</li> <li>Motor 6", 30-37 kW (MMS6)</li> <li>16.5 kg</li> </ul>		
SP215-2-A SP215-2	SP215-2-AA	<ul style="list-style-type: none"> <li>d330 (350) × 1800</li> <li>Motor 6", 37-45 kW (Franklin 6")</li> <li>16.5 kg</li> </ul>		
SP215-2-A SP215-2 SP215-3-AA SP215-3-A SP215-3 SP215-4-AA SP215-4-A SP215-4	SP215-2 SP215-2A SP215-2AA SP215-3-AA	<ul style="list-style-type: none"> <li>d330 (350) × 1800</li> <li>Motor 8", up to 75 kW (MMS 8000 / Franklin 8")</li> <li>14.6 kg</li> </ul>		
SP215-5-AA SP215-5-A SP215-5 SP215-6-AA SP215-6-A	SP215-3-A SP215-3 SP215-4-AA SP215-4-A SP215-4	<ul style="list-style-type: none"> <li>d330 (350) × 2250</li> <li>Motor 8", up to 110 kW (MMS 8000 / Franklin 8")</li> <li>19.1 kg</li> </ul>		
SP215-7-AA SP215-7-A SP215-7	SP215-5-AA SP215-5-A	<ul style="list-style-type: none"> <li>d330 (350) × 2500</li> <li>Motor 8", 130 kW (Franklin 8")</li> <li>21.1 kg</li> </ul>	97942268 d330 × 385 1.9 kg	96957555 (1 set = 3 brackets) 10.7 kg H250, b500, B550, Ø11
SP215-8-AA SP215-8-A SP215-8	SP215-5	<ul style="list-style-type: none"> <li>d330 (350) × 2700</li> <li>Motor 8", 150 kW (Franklin 8")</li> <li>22.8 kg</li> </ul>		
SP215-4-AA SP215-4-A SP215-4 S P215-5-AA SP215-5-A SP215-5	-	<ul style="list-style-type: none"> <li>d330 (350) × 1800</li> <li>Motor 10", up to 92 kW (MMS 10000)</li> <li>16.5 kg</li> </ul>		
SP215-6-AA SP215-6-A SP215-6 SP215-7-AA SP215-7-A SP215-7	SP215-5-AA SP215-5-A	<ul style="list-style-type: none"> <li>d330 (350) × 2250</li> <li>Motor 10", up to 132 kW (MMS 10000)</li> <li>19.1 kg</li> </ul>		
SP215-8-AA SP215-8-A SP215-8 SP215-9-AA SP215-9-A SP215-9	SP215-5 SP215-6-AA SP215-6-A SP215-6	<ul style="list-style-type: none"> <li>d330 (350) × 2500</li> <li>Motor 10", up to 170 kW (MMS 10000)</li> <li>21.2 kg</li> </ul>		

# SP Cooling Jacket

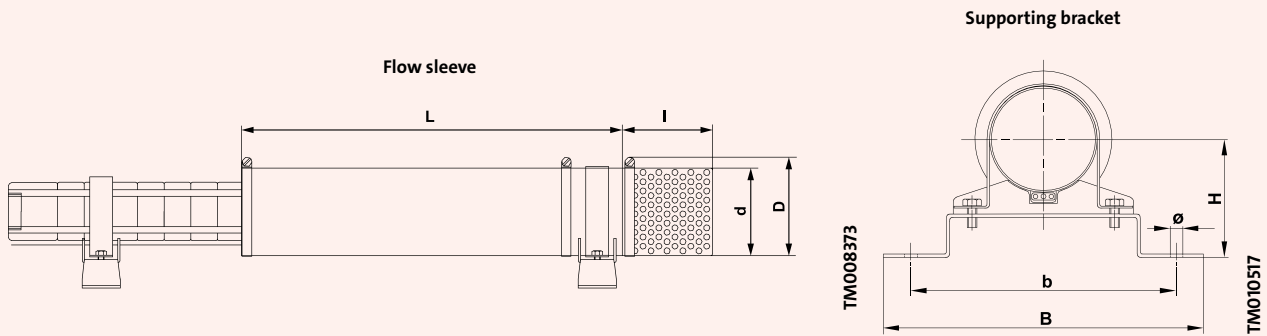
Groundwater



Pump type		Flow sleeve	Strainer	Supporting brackets
50 Hz	60 Hz	Dimensions, d (D) × L Motor type, P2 Weight	Product number Dimensions d × l Weight	Product number Description
SP215-7-AA SP215-7-A SP215-7				
SP215-8-AA SP215-8-A SP215-8	SP215-6-AA SP215-6-A SP215-6	<ul style="list-style-type: none"> <li>d380 (400) × 2250</li> <li>Motor 12", up to 190 kW (MMS 12000)</li> <li>21.9 kg</li> </ul>	96937531  97942272 d380 × 385 4.0 kg	96957600 (1 set = 3 brackets) 12 kg H270, b550, B600, Ø11
SP215-9-AA SP215-9-A SP215-9	SP215-7-AA SP215-7-A SP215-7			
SP215-10-AA SP215-10-A SP215-10				
SP215-11		<ul style="list-style-type: none"> <li>d380 (400) × 2500</li> <li>Motor 12", 220 kW (MMS 12000)</li> <li>24.2 kg</li> </ul>	96937553	

# SP Cooling Jacket

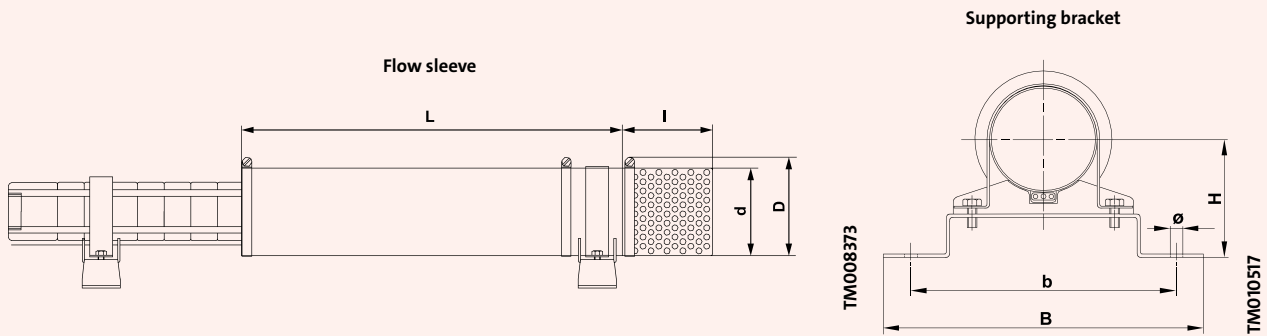
Groundwater



Pump type	Flow sleeve		Strainer	Supporting brackets
	Dimensions, d (D) × L Motor type, P2 Weight	Product number	Product number Dimensions d × l Weight	Product number Description
SPE18-1 to 12 SPE32-1 to 7 SPE18-13 to 29 SPE32-8 to 19	<ul style="list-style-type: none"> <li>d180 (200) × 800</li> <li>Motor 6", up to 18.5kW (MS 6000P)</li> <li>4.0 kg</li> </ul>	96937242		
SPE18-30 to 40 SPE32-20 to 32	<ul style="list-style-type: none"> <li>d180 (200) × 1000</li> <li>Motor 6", 22-30 kW (MS 6000P)</li> <li>4.9 kg</li> </ul>	96937245	97942218 d180 × 192 0.9 kg	96957529 (1 set = 2 brackets) 2.1 kg
SPE32-33 to 37	<ul style="list-style-type: none"> <li>d180 (200) × 1250</li> <li>Motor 6", 37 kW (MS 6000P)</li> <li>6.0 kg</li> </ul>	96937249		
SPE18-41 to 48	<ul style="list-style-type: none"> <li>d200 (220) × 1000</li> <li>Motor 6", 26-30 kW (MS 6000P)</li> <li>Pump in sleeve d154</li> <li>6.7 kg</li> </ul>	93171870	97942247 d200 × 192 1.0 kg	96957544 (1 set = 2 brackets) 2.3 kg
SPE18-49 to 58 SPE32-38 to 46	<ul style="list-style-type: none"> <li>d200 (220) × 1250</li> <li>Motor 6", 37-45 kW (MS 6000P)</li> <li>Pump in sleeve d154</li> <li>6.6 kg</li> </ul>	96937246		
SPE46-1 to 4 SPE60-1 to 3 SPE46-5 to 11 SPE60-4 to 8	<ul style="list-style-type: none"> <li>d200 (220) × 800</li> <li>Motor 6", 4-18.5 kW (MS 6000P)</li> <li>5.4 kg</li> </ul>	96937322		
SPE46-12 to 18 SPE60-9 to 18	<ul style="list-style-type: none"> <li>d200 (220) × 1000</li> <li>Motor 6", 22-30 kW (MS 6000P)</li> <li>6.4 kg</li> </ul>	96937323	97942247 d200 × 192 1.0 kg	96957545 (1 set = 2 brackets) 2.2 kg H150, b320, B370, ø11
SPE46-19 to 24 SPE60-16 to 23	<ul style="list-style-type: none"> <li>d200 (220) × 1250</li> <li>Motor 6", 37-45 kW (MS 6000P)</li> <li>6.6 kg</li> </ul>	96937317		
SPE77-1 SPE95-1 SPE77-2 to 4 SPE95-2 to 3	<ul style="list-style-type: none"> <li>d210 (225) × 1000</li> <li>Motor 6", 4-18.5 kW (MS 6000P)</li> <li>5.6 kg</li> </ul>	96937332	97942261 d210 × 192 1.1 kg	96957546 (1 set = 2 brackets)
SPE77-5 to 7 SPE95-4 to 6 SPE77-8 to 11 SPE95-7 to 9	<ul style="list-style-type: none"> <li>d210 (225) × 1250</li> <li>Motor 6", up to 22-45 kW (MS 6000P)</li> <li>6.9 kg</li> </ul>	96937440		2.5 kg H160, b330, B380, ø11

# SP Cooling Jacket

Groundwater



Pump type	Flow sleeve		Strainer	Supporting brackets
	Dimensions, d (D) × L Motor type, P2 Weight	Product number	Product number Dimensions d × l Weight	Product number Description
SPE125-1 SPE160-1	<ul style="list-style-type: none"> <li>d254 (270) × 1000</li> <li>Motor 6", 13-18.5 kW (MS 6000P)</li> <li>6.7 kg</li> </ul>	96937441	97942263 d256 × 325 1.9 kg	96957548 (1 set = 2 brackets) 3.4 kg H200, b380, B430, Ø11
SPE125-2 SPE160-2 SPE125-3 to 4 SPE160-3	<ul style="list-style-type: none"> <li>d254 (270) × 1250</li> <li>Motor 6", 22-45 kW (MS 6000P)</li> <li>8.3 kg</li> </ul>	96937443	97942268 d330 × 385 1.9 kg	96958364 (1 set = 2 brackets) 10.0 kg H250, b500, B550, Ø11
SPE215-1 SPE215-2	<ul style="list-style-type: none"> <li>d330 (350) × 1250</li> <li>Motor 6", 22-45 kW (MS 6000P)</li> <li>10.6 kg</li> </ul>	96937446		

# Renewable Submersible Pumps

This section covers the full range of submersible renewable products.

SQFlex is the perfect sustainable, reliable and cost-effective alternative to other water supply solutions in remote locations. It provides tailored solutions to water problems where conventional water supply systems fail or simply cannot reach.

The complete SQF pump range consists of a number of pump size:

- 5 helical rotor pumps for high heads and low flows
- 8 centrifugal pumps for shallow heads and high flow
- 3 centrifugal pumps for medium head and medium flow

“reliable and cost-effective alternative to other water supply solutions”



## FEATURES & BENEFITS

- Virtually maintenance free
- Dry running protection
- Wide voltage range on AC/DC power
- Use on Solar, Mains, Generator and Battery back-up

## APPLICATIONS

- Livestock water supply
- Pressure Boosting
- Water supply for off-grid homes
- Water transfer

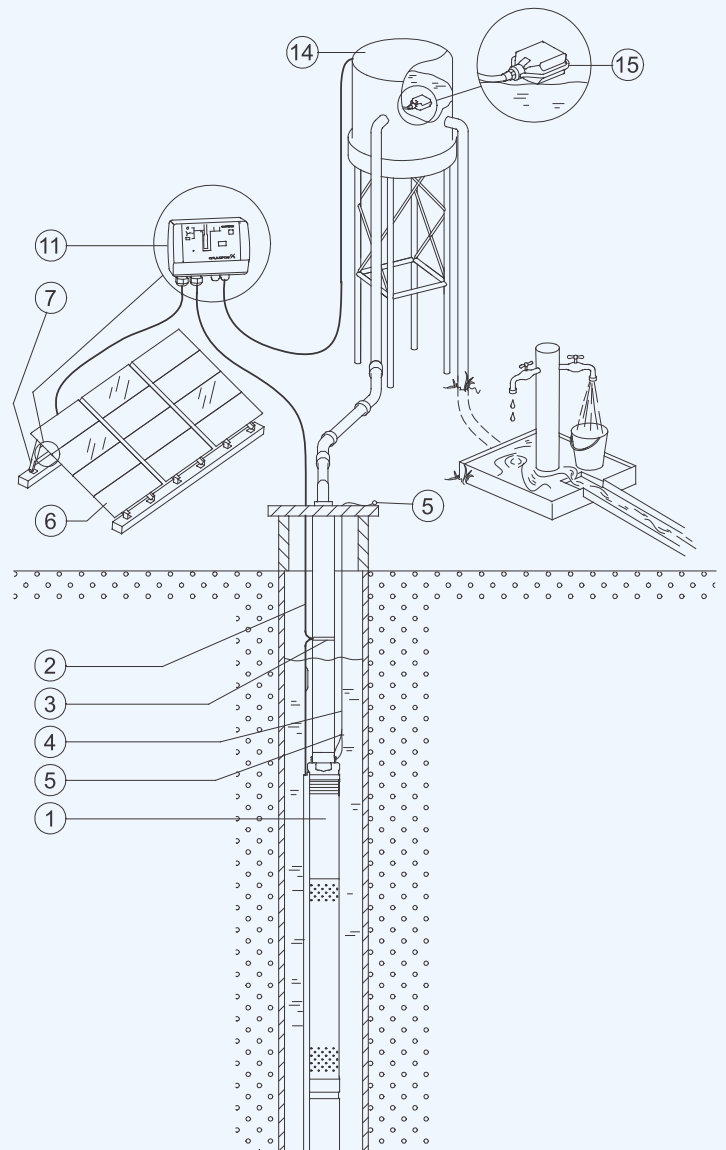
# Pressure Loss Table

Piping Diameter		1" 25.4mm	1.25" 31.75mm	1.5" 38.1mm	2" 50.8mm	1.5" 63.5mm	3" 76.2mm
M <sup>3</sup> per day	Liters Per day	Load head for 1000 meters of polyethylene piping					
2.5	2086	2.0 m	0.7 m				
3	2502	2.8 m	1.0 m				
3.5	2919	3.7 m	1.2 m	0.5 m			
4	3335	4.8 m	1.6 m	0.7 m			
4.5	3751	5.9 m	2.0 m	0.8 m			
5	4168	7.2 m	2.4 m	1.0 m			
5.5	4584	8.6 m	2.9 m	1.2 m			
6	5004	10.1 m	3.4 m	1.4 m			
6.5	5421	11.7 m	4.0 m	1.6 m			
7	5837	13.5 m	4.5 m	1.9 m			
7.5	6254	15.3 m	5.2 m	2.1 m			
8	6670	17.3 m	5.8 m	2.4 m	0.6 m		
8.5	7086	19.3 m	6.5 m	2.7 m	0.7 m		
9	7503	21.5 m	7.2 m	3.0 m	0.7 m		
9.5	7923	23.7 m	8.0 m	3.3 m	0.8 m		
10	8339	26.0 m	8.8 m	3.6 m	0.9 m		
10.5	9756	28.5 m	9.6 m	4.0 m	1.0 m		
11	9172	31.1 m	10.5 m	4.3 m	1.0 m		
11.5	9588	33.8 m	11.4 m	4.7 m	1.1 m		
12	10005	36.5 m	12.3 m	5.0 m	1.2 m		
12.5	10421	39.4 m	13.3 m	5.5 m	1.3 m		
13	10838	42.4 m	14.3 m	5.9 m	1.4 m	0.5 m	
13.5	11258	45.5 m	15.3 m	6.3 m	1.5 m	0.5 m	
14	11674	48.6 m	16.4 m	6.7 m	1.6 m	0.6 m	
14.5	12091	51.9 m	17.5 m	7.2 m	1.7 m	0.6 m	
15	12507	55.2 m	18.6 m	7.6 m	1.9 m	0.6 m	
16	13340	62.3 m	21.0 m	8.6 m	2.1 m	0.7 m	
17	14173		13.5 m	9.7 m	2.4 m	0.8 m	
18	15009		26.1 m	10.8 m	2.6 m	0.9 m	
19	15842		28.8 m	11.9 m	2.9 m	0.9 m	
20	16675		31.7 m	13.0 m	3.2 m	1.1 m	
22	18344		37.8 m	15.6 m	3.8 m	1.3 m	
24	20010		44.5 m	18.3 m	4.7 m	1.5 m	
26	21679		51.6 m	21.2 m	5.2 m	1.7 m	
28	23345		59.2 m	24.4 m	6.0 m	2.0 m	0.8 m
30	25014		67.3 m	27.7 m	6.8 m	2.3 m	0.9 m
32	26680			31.2 m	7.7 m	2.6 m	1.0 m
34	28349			34.9 m	8.6 m	2.9 m	1.2 m
36	30018			38.8 m	9.5 m	3.2 m	1.3 m
38	31684			42.9 m	10.6 m	3.6 m	1.5 m
40	33353			27.2 m	11.6 m	3.9 m	1.6 m
42	35019			51.6 m	12.7 m	4.3 m	1.8 m

## SQFlex solar panel with CU 202 and level sensor

The SQFlex solar system allows you to store solar energy like you would store water in a tank. SQFlex systems with a tank are used in the following cases:

- Water distribution is needed at night.
- For short periods, sunlight is insufficient to operate the pump.
- A secondary water source is required.



**Fig. 7** SQFlex solar panel with CU 202 and level sensor

Pos.	Description
1	SQF Pump
2	Submersible Cable
3	Cable Tie
4	Sling
5	Sling Attachment
6	Solar Panels
7	Support Structure
11	CU 202 SQFlex Control Module
14	Tank
15	Level Sensor

# SQFlex Solar With Generator

Renewable Energies

## SQFlex solar with generator

During periods of limited sunlight, the SQFlex solar system ensures a reliable water supply.

The system is connected to an external generator via the IO 101. The system automatically starts up when the generator starts.

If the generator is manually shut down or runs out of fuel, the IO 101 automatically switches back to solar power.

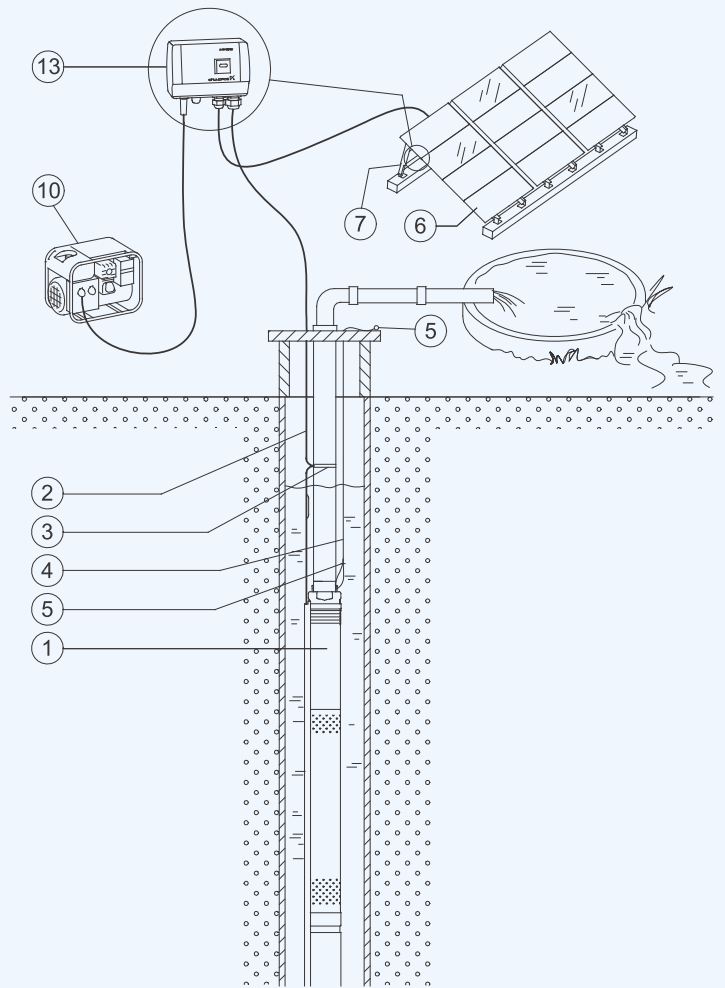


Fig. 8 SQFlex solar with generator

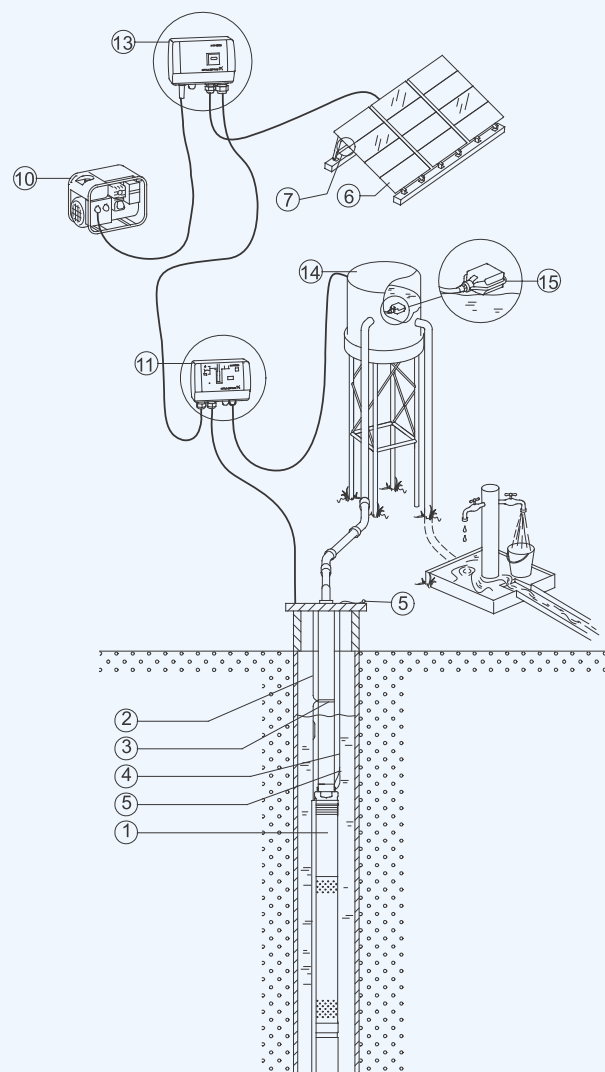
Pos.	Description
1	SQF Pump
2	Submersible Cable
3	Cable Tie
4	Sling
5	Sling Attachment
6	Solar Panels
7	Support Structure
10	Diesel or Gasoline Generator
13	IO 101 SQFlex Switch Box

## SQFlex solar with CU 202 and generator

During periods of limited sunlight, the SQFlex solar system ensures a reliable water supply.

The water supply is provided by a diesel or gasoline generator connected to the system via the IO 101.

The system starts automatically when the generator is started. If the generator is manually shut down or runs out of fuel, the IO 101 automatically switches back to solar power.



**Fig. 9** SQFlex solar with CU 202 and generator

Pos.	Description
1	SQF Pump
2	Submersible Cable
3	Cable Tie
4	Sling
5	Sling Attachment
6	Solar Panels
7	Support Structure
10	Diesel or Gasoline Generator
11	CU 202 SQFlex Control Module
13	IO 101 SQFlex Switch Box
14	Tank
15	Level Sensor

# SQFlex Solar With Backup Batteries

Renewable Energies

## SQFlex solar with backup batteries

During periods of limited sunlight, the SQFlex solar system ensures a reliable water supply.

The water supply is provided by backup batteries connected to the system via a charge controller.

The system is connected as shown in Fig. 10.

- The electricity supplied by the connected solar panels produces a minimum of 60 VDC and a maximum of 110 VDC.
- The current from the solar panels passes through a 48 VDC charge controller, which regulates the power delivered to the batteries.
- From the charge controller, the current flows into a bank of appropriately sized batteries connected in series to achieve a nominal output of 48 VDC. • Power is drawn from the battery and routed via a CU 202 module. Option: An IO 50 or IO 101 module must be installed to allow disconnection from the DC voltage. If an IO 101 module is installed, a generator can be added to the system.
- Power flows from the CU 202 to the SQFlex pump.

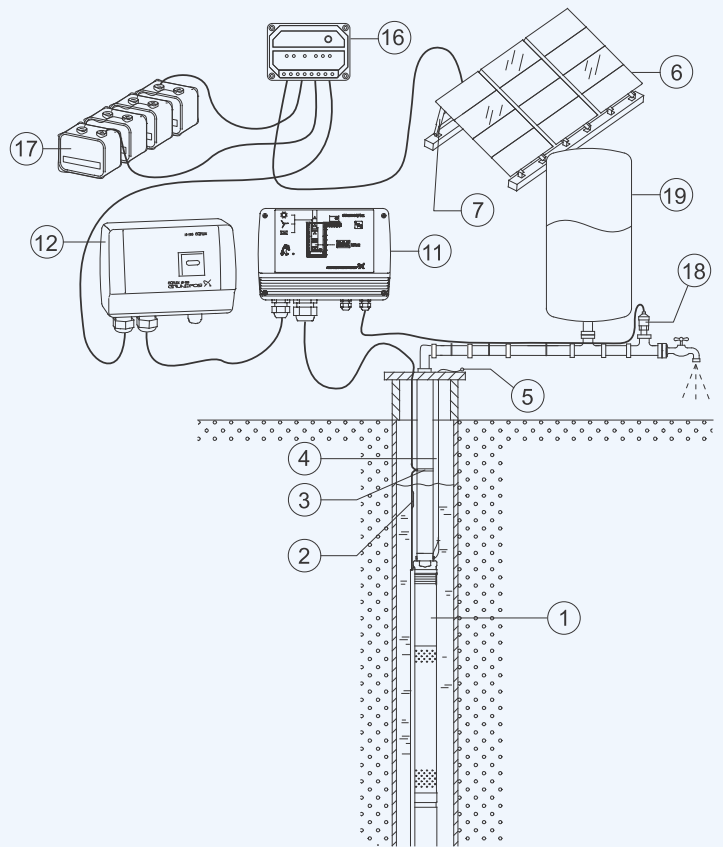


Fig. 10 SQFlex solar with backup batteries

Pos.	Description
1	SQF Pump
2	Submersible Cable
3	Cable Tie
4	Sling
5	Sling Attachment
6	Solar Panels
7	Support Structure
11	CU 202 SQFlex Control Module
12	IO 101 SQFlex Switch Box (optional)
16	Charge Controller
17	Batteries
18	Pressure Sensor
19	Pressure Tank

**Note:** To determine the number of solar panels required, consult the sizing tool. See Grundfos Product Center, page 45.

Grundfos SQFlex is a reliable water supply system based on renewable energy sources (eg. solar panels or wind turbine) and incorporate an SQF submersible pump with integrated motor protections:

- Dry-running protection, with integrated level electrode placed on the motor cable 0.3 to 0.6 metre above the pump (depending on model)
- Over-voltage (DC 438 V - 318 V AC) Overload protection preventing burnout: if speed falls below 500 rpm, motor stops automatically 30 seconds & automatically attempts to restart
- Over-temperature protection: if internal motor temperature rises above +85°C motor is cut out and restarts only in case it drops below +75°C

**For increased in robustness aggressive water conditions, all SQ Flex pumps can be pre-fitted with a zinc base mount anode for increased corrosion resistance.**

**Liquid temperature :** +2°C to +40°C when flow past the motor > 0.15 m/sec pH : 5 to 9

**Sand Handling :** 50 grams/cubic metre

**Pump Material :** Stainless Steel AISI 316

**Enclosure class :** IP 68

**Electrical Boxes :** IO 50, IO 101, and CU 200

**Electric Power :** Any voltage from 1 x 90-240 Volt (-10%/+6%, 50 Hz) VAC or 30-300 VDC, PE with maximum current 8.4



## SQ FLEX: Solar-powered submersible pumps

Inlet type	Inlet	Min borehole dia"	I [A]	Cable [m]
Rp	1 1/4	3	8.4	2

Type	Part. No
SQF 0.6-2	95027324
SQF 0.6-2 N	95027325
SQF 0.6-3	95027326
SQF 0.6-3 N	95027327
SQF 1.2-2	95027328
SQF 1.2-2 N	95027329
SQF 1.2-3	96834838
SQF 1.2-3 N	96834839
SQF 2.5-2	95027330
SQF 2.5-2 N	95027331

## SQ FLEX: 4" SUBMERSIBLE SOLAR PUMPS - CENTRIFUGAL

Inlet type	Inlet	Min borehole dia"	I [A]	Cable [m]
Rp	1 1/2	5	8.4	2
	1 1/4			
	2			

Type	Part. No
SQF 5A-3	95027338
SQF 5A-3 N	95027339
SQF 5A-7	95027342
SQF 5A-7 N	95027343
SQF 7-4	98979253
SQF 7-4 N	98994902
SQF 3A-10	95027336
SQF 3A-10 N	95027337
SQF 9-3	98978826
SQF 9-3 N	98994640
SQF 14-3	98979255
SQF 14-3 N	98994933

## SQ FLEX HIGH SPEED: 3" SUBMERSIBLE SOLAR PUMPS - CENTRIFUGAL

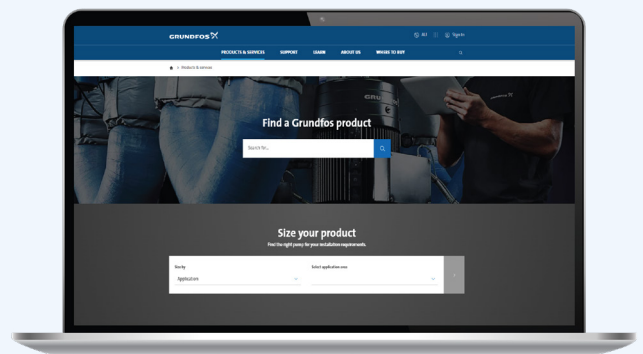
Inlet type	Inlet	Min borehole dia"	I [A]	Cable [m]	Type	Part. No
Rp	1 1/2	3	12.5	2	SQF 5-70	99465250
	1 1/4		8.4		SQF 7-55	99595409
			12.5		SQF 1-30	98842452
					SQF 1-30 N	98842517
					SQF 1-70	99596857
					SQF 3-105	99858114

# Solar selection made simple

Proper sizing, correct selection and a proper installation from the start allow for a surprisingly short return on investment.

To ensure you fully benefit from the low life-cycle costs of a Grundfos solar pumping system, proper sizing, suitable selection and correct installation are essential. The Grundfos Product Center is an online search and sizing tool that helps you choose the right pump for an installation or replacement, or find information about pumps you already own.

Basic solar pump sizing requires only three input values: head, daily water demand, and location. Based on this data, we can quickly size and recommend the most energy-efficient system to meet your needs. For customized and more advanced requirements, options are available for any upgrade recommendation, life-cycle cost calculation, user-defined solar panel configuration, etc. The system can even take into account fluctuations in available solar energy depending on the location of your installation.

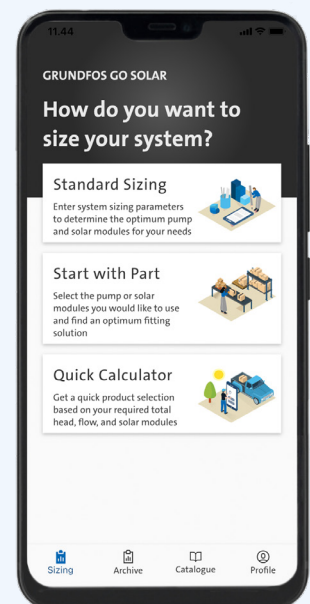


## GO Solar App

Quick and easy solar pump sizing - regardless of your location, internet connectivity, or application needs.

### Size in three different ways:

- ✓ **From a pump you have in stock or on site**  
Never miss an order.
- ✓ **Based on the number of solar panels**  
Always meet application requirements in terms of space or budget.
- ✓ **Based on application needs**  
Ensure the pump is suited for the task.



# SQFlex Anodes

The Grundfos SQFlex pump has proven itself in numerous solar applications since its launch in 2002.

When installed in aggressive conditions, such as pumping highly saline water, the stainless steel can corrode, which reduces the product's lifespan.

To protect the pump against the effects of corrosion under extreme conditions, Grundfos has introduced a base-mounted anode.



## MAINTENANCE

- Check after 6 months to determine wear based on water quality
- Implement a maintenance program
- Anodes will need to be replaced over time (worn anodes offer no protection against corrosion)
- Pumps should run all day to prevent water stagnation
- Ensure proper grounding to prevent stray DC currents
- For more information, contact your Grundfos sales representative

# Accessories for Renewable Submersible Pumps

This section covers the Renewable Accessories. In renewable water solutions, performance goes beyond the core pump system. At Grundfos, renewable accessories are designed to complement our solar and energy-optimized pumping solutions - enhancing system integration, expanding functionality, and safeguarding long-term performance.

From controllers and monitoring devices to mounting solutions, sensors, and protection components, each accessory is engineered to optimize energy usage and maximize uptime.



- **Maximize energy utilization**  
Support smarter energy management, helping systems make the most of available solar power.
- **Enable intelligent control and monitoring**  
Accessories such as controllers and sensors provide greater insight, automation, and system adaptability.
- **Simplify installation and integration**  
Purpose-built components ensure easy setup, compatibility, and reduced installation time.
- **Protect and extend system lifetime**  
Built-in protection features safeguard against electrical and environmental risks, reducing downtime and maintenance.

# RSI

## Solar Inverter

RSI is an off-grid solar inverter converting the DC power output from the solar panels to AC power supply for pump operation. The RSI can be used in both new and existing installations, only condition is that the pump and motor should be suitable for use with frequency converters. It can be used in installations with Grundfos pumps CR, SP, NB, NK, MTR, CM and TP. RSI combined with various sensors can offer the following functions:

- Maximum power point tracking (MPPT)
- DC to three-phase AC conversion
- Connection to dry-running switch
- Connection to level switch
- Operating history enquiry

**Ambient temperature:** -10°C to +60°C

**Input voltage range (DC):** 400-800 Volt

**Output voltage range (AC):** 3x380-415 Volt

**Motor power:** Up to 37 kW

**Enclosure class:** IP 66



## RSI: RENEWABLE SOLAR INVERTER

Voltage	P2 [kW]	I [A]	Product Name	Part.No
3 x 380 - 440	2.20	6	RSI 3x380-440V IP66 2.2kW 5.6A	99044348
	3.00	8	RSI 3x380-440V IP66 3kW 8.0A	99044349
	4.00	10	RSI 3x380-440V IP66 4kW 9.6A	99044350
	5.50	12	RSI 3x380-440V IP66 5.5kW 12A	99044351
	7.50	16	RSI 3x380-440V IP66 7.5kW 16A	99044352
	11.00	23	RSI 3x380-440V IP66 11kW 23A	99044363
	15.00	31	RSI 3x380-440V IP66 15kW 31A	99044364
	18.50	38	RSI 3x380-440V IP66 18.5kW 38A	99044365
	22.00	46	RSI 3x380-440V IP66 22kW 46A	99044366
	30.00	61	RSI 3x380-440V IP66 30kW 61A	99044367
	37.00	72	RSI 3x380-440V IP66 37kW 72A	99044368
	45.00	87	RSI 3x380-440V IP54 45kW 87A	99648886
	55.00	105	RSI 3x380-440V IP54 55kW 105A	99648887
	110.00	205	RSI 3x380-440V IP54 110kW 205A	99648888
	132.00	261	RSI 3x380-440V IP54 132kW 261A	99648889
	160.00	310	RSI 3x380-440V IP54 160kW 310A	99648890
200.00	385	RSI 3x380-440V IP54 200kW 385A	99648891	
250.00	460	RSI 3x380-440V IP54 250kW 460A	99648892	

Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced due to the fact that a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped current. The result is a sine-wave-shaped current and reduced motor noise.

Maximum cable length with sine-wave filter is 300 m.

dU/dt filters reduce the voltage peaks and the dU/dt of the pulses at the motor terminals. To some extent, the voltage at the motor terminals is still pulse-shaped; the motor current is sine-wave-shaped without commutation spikes.

Maximum cable length with dU/dt filter is 150 m.



## SINE WAVE FILTERS: OUTPUT FILTER IP20/IP23

Short description	Part. No
Sine Wave Filter 200-500V IP20 8/7,5/5,5/5,5A	96754973
Sine Wave Filter 200-500V IP20 10/9,5/7,5/7,5A	96754974
Sine Wave Filter 200-500V IP20 17/16/13/12A	96754976
Sine Wave Filter 200-500V IP20 24/23/18/17A	96754977
Sine Wave Filter 200-500V IP20 2,5/2,5/2/2A	96754941
Sine Wave Filter 200-500V IP20 38/36/26,5/24A	96754978
Sine Wave Filter 200-500V IP20 4,5/4/3,5/3,5A	96754972
Sine Wave Filter 200-500V IP20 48/45,5/36/34A	96755019
Sine Wave Filter 200-500V IP20 75/71/56/53A	96755032
Sine Wave Filter 200-500V IP20 62,59 (130B2308)	96755021
Sine Wave Filter 200-500V IP23 180/170/135/112A	97775142
Sine Wave Filter 200-500V IP23 260/246/195/162A	97775146
Sine Wave Filter 200-500V IP23 510/483/383/315A	97775149

# PowerAdapt

Solar System Equipment

Grundfos PowerAdapt is the energy mixing solution that provides consistent power by supplementing solar energy with electricity from an additional source, if needed. With this solution, you maintain solar energy as your primary power source while benefiting from stable operation.

- Mixing of AC and DC power inputs
- Power meters on the grid and generator set
- Protection against phase interruptions
- Shutdown if the product temperature is too high
- Power-on delay timer
- Backfeed protection
- Remote monitoring compatibility



## POWERADAPT: AC/DC mixing solution

Voltage 50Hz (V)	P2 [kW]	In [A]
3 x 380-415	7.50	16.0
	15.00	31.0
	37.00	72.0

Type	Product number
PowerAdapt	99886425
PowerAdapt	99886426
PowerAdapt	99886427

## SOLAR CONTROL BOX



- IO 50 - On/Off Isolator
- IO 101 - Isolator & generator interface
- CU 200 - Status & connection for reverse acting pressure switch/float switch
- CIU 903 - Requires GrundfosGO to configure pressure switch connection (standard or reverse acting) & speed control

Short description	Part. No
CU 202 cpl	92799796
IO 101 B switch box (230V generator)	92622786
IO 101, 115 V	96481502
IO 101, 230 V	96475074

## DRY RUN SENSOR: SUBMERGED DOWN BORE DRY RUN SENSOR FOR SP & RSI

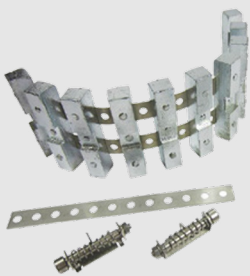
For Submersible Pumps

For Surface Pumps



Short description	Part. No
Electrode (2 pcs)	115041

## Zinc Anode: PROTECTION AGAINST CREVICE CORROSION



Galvanic cathodic protection enables protection of SQF pumps against crevice corrosion caused by chloride-containing liquids, such as seawater and brackish water.

Short description	Part. No
Anode Set w. 2pc.	92836041

## GENERAL SOLAR ACCESSORIES

Short description	Part. No
Attache-Cable, 16 oeillets, 7,5m bande perforée	115016

# Solar control units

## IO50

- Compatible with SQFlex up to 1.4kW & CRFlex
- Manual pump start and stop
- Functions as a junction box for necessary cables
- Max 16 amps



## IO101

- Manual controller start, stop, and reset
- Switch between solar power and backup generator
- Max 8.4 amps
- Compatible with SQFlex up to 1.4kW & CRFlex



## IO 101B

- Designed for SQ Flex systems
- Enables manual pump start and stop
- Switch between solar power and backup generator
- Max 12.5 amps



## CU 202 (SQ FLEX system only)

- Pre-configured and ready for tank filling
- Intuitive and easy-to-use LED display system
- Adjusts maximum speed to match the controller flow rate
- Bluetooth for connection with Grundfos Go
- Real-time clock Ready for scheduling
- 2 configurable input/output ports
- Supports digital and analog inputs
- • Connects to Grundfos Connect via Wi-Fi or Genibus
- • CE and UL approved product range
- • Compatible with the entire SQFlex range



# Grundfos Online Tools & Resources



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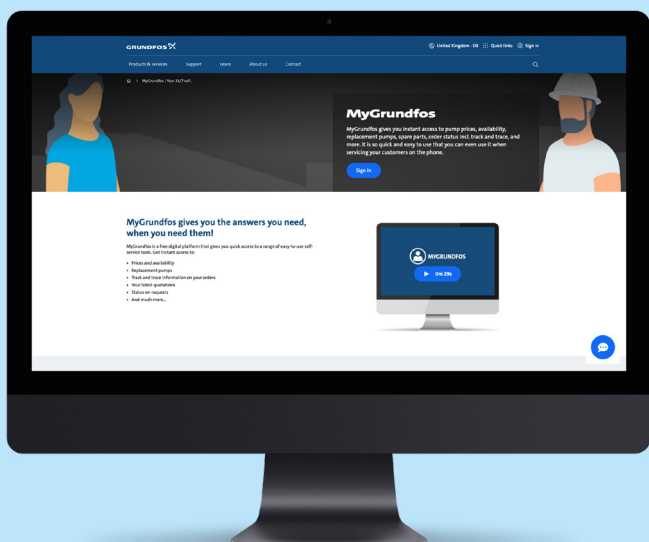
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Online Training Platform

- Learn about the pump industry and controls
- Short 'easy bitesize sessions' - at a time to suit you
- Update your knowledge, skills and competencies
- Investigate new technologies
- Mobile, tablet, desktop access



Explore the Grundfos Ecademy



## Grundfos Cases

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- Learn about the pump industry and controls
- Short 'easy bitesize sessions' - at a time to suit you
- Update your knowledge, skills and competencies
- Investigate new technologies
- Mobile, tablet, desktop access



Discover more

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