



SMALL
SUBMERSIBLE
BORE PUMP
RANGE

be
think
innovate

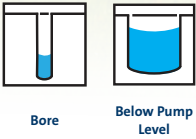
GRUNDFOS 

SQ N

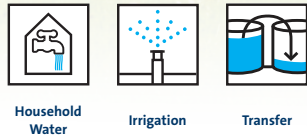
STAINLESS STEEL, FIXED SPEED 3" SUBMERSIBLE PUMP



WATER SOURCE



APPLICATION



- **Long life** - Soft start technology minimises wear on the pump and greatly reduces water hammer in the pipework.
- **Small package - high performance** - Whilst the SQ/SQE is only 3" (74 mm) in diameter, it boasts the performance of a larger pump, making it a perfect replacement for 4" pumps
- **Low running costs** - Industry leading, high efficiency motor keeps running costs low
- **High quality materials** - High grade wear-and-corrosion resistant materials to ensure a long, trouble-free life. Suitable for drinking water.
- **Permanently protected** - If your bore runs dry, the motor is protected and will stop running, restarting automatically. Features electrical and overheating motor protection.
- **Wide voltage range** - Perfect for areas that experience fluctuating voltage, the SQN will keep operating in a voltage range of 150 V - 280 V



CONTROL & OPERATION OPTIONS FOR SQ N

Pressure Manager - PM2

Automatic pump control and configurable pump protection

- Auto Start/Stop control
- Adjustable starting pressure
- Configurable continuous running, anti-cycling and auto-restart



SQ Standard Pressure Kit

Reduces start/stop frequency at desired pressure

Includes:

- Bore cap
- Pressure tank
- Pressure switch
- Pressure gauge
- Fittings



BUILT-IN PROTECTION

Dry Run Protection

Protects the pump against a lack of water in the borehole, preventing motor burnout.

SQ N



Current Overload Protection

If rotor the is prevented from rotating (eg: blocked with debris) the power supply will be cut out.



Thermal Overload Protection

Electronic unit has built-in temperature protection. Once temperature drops the pump restarts automatically.



Under/Over Voltage Protection

May occur in cases of unstable voltage supply.

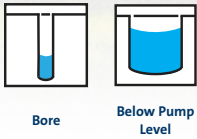


SQE N

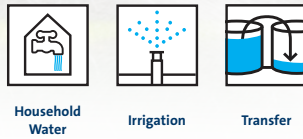
STAINLESS STEEL, VARIABLE SPEED 3" SUBMERSIBLE PUMP



WATER SOURCE



APPLICATION



- **Perfect Pressure** - Inverter Technology (Variable Speed) adjusts motor speed according to demand, delivering perfect pressure to all outlets at all times
- **Long Life** - Soft start technology minimises wear on the pump and greatly reduces water hammer in the pipework
- **Small package - high performance** - Whilst the SQE is only 3" (74 mm) in diameter, it boasts the performance of a larger pump, making it a perfect replacement for 4" pumps
- **Low running costs** - Industry leading, high efficiency motor keeps running costs low
- **High quality materials** - High grade wear-and-corrosion resistant materials to ensure a long, trouble-free life. Suitable for drinking water.
- **Permanently protected** - If your bore runs dry, the motor is protected and will stop running, restarting automatically. Features electrical and overheating motor protection.
- **Wide voltage range** - Perfect for areas that experience fluctuating voltage, the SQE N will keep operating in a voltage range of 150 V - 280 V



CONTROL & OPERATION OPTIONS FOR SQE N

SMARTFLO Constant Pressure Kit

For ultimate Inverter control and perfect pressure to all outlets

- CU301 Controller
- Pressure tank
- Pressure sensor



CU300 Controller

Start/Stop/Reset with options to add multiple sensors, such as constant flow, pressure and water level



SQE Constant Pressure Kit

Reduces start/stop frequency at desired pressure.

Includes:

- Bore cap
- Pressure tank
- Pressure sensor and gauge
- 5 way tee
- Fittings



BUILT-IN PROTECTION

	SQE N
Dry Run Protection Protects the pump against a lack of water in the borehole, preventing motor burnout.	✓
Current Overload Protection If rotor the is prevented from rotating (eg: blocked with debris) the power supply will be cut out.	✓
Thermal Overload Protection Electronic unit has built-in temperature protection. Once temperature drops the pump restarts automatically.	✓
Under/Over Voltage Protection May occur in cases of unstable voltage supply.	✓

TECHNICAL DATA - SQ N/SQE N

OPERATING CONDITIONS

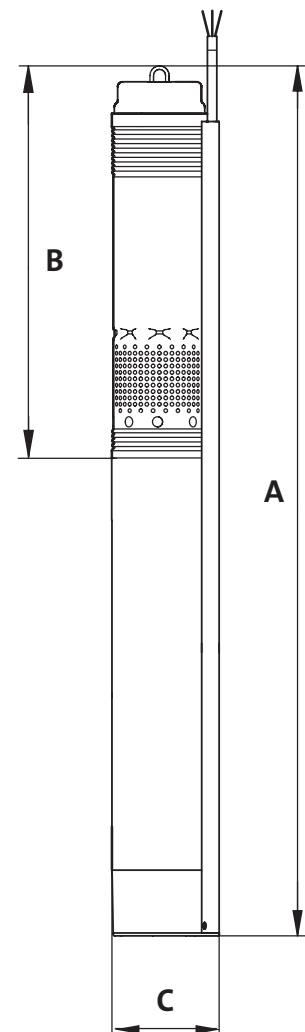
Liquid Temperature	0°C to +30°C (No flow past the motor) 0°C to +40°C (Min 0.15 m/s)
Maximum Suspended Sand Content	SQ N/SQE N 1-7: 50 g/m ³

TECHNICAL DATA

Power Supply Voltage	200-240 Volt, 50 Hz
Power Supply Cable	1.5 m Installation by qualified electrician
Minimum Borehole Diameter	76 mm
Maximum Borehole Diameter	150 mm

PHYSICAL ATTRIBUTES

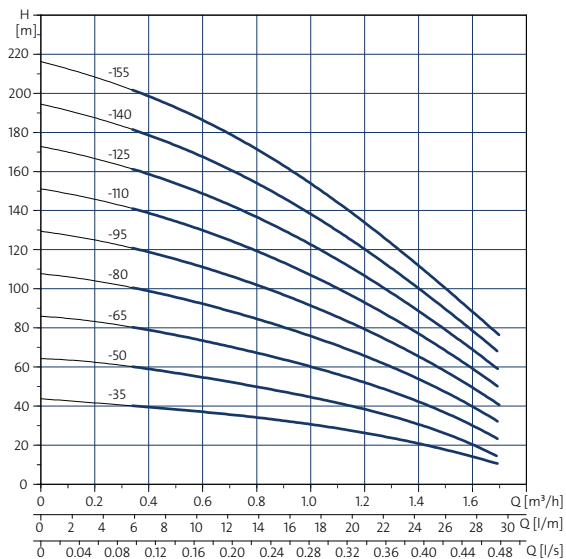
Model (SQ N/ SQE N)	Motor Power P2 (kW)	Connections Outlet	Dimensions (mm)			Weight (kg)
			A (h1)	B (h2)	C (w)	
SQ 1-35N	0.7	1¼" Female	741	265	74	4.7
SQ 1-50N	0.7	1¼" Female	741	265	74	4.8
SQ 1-65N	0.7	1¼" Female	768	292	74	4.9
SQ 1-80N	1.15	1¼" Female	825	346	74	5.6
SQ 1-95N	1.15	1¼" Female	825	346	74	5.6
SQ 1-110N	1.15	1¼" Female	852	373	74	5.7
SQ 1-125N	1.55	1¼" Female	942	427	74	6.4
SQ 1-140N	1.55	1¼" Female	942	427	74	6.5
SQ 1-155N	1.85	1¼" Female	969	454	74	6.7
SQ 2-35N	0.7	1¼" Female	741	265	74	4.7
SQ 2-55N	0.7	1¼" Female	741	265	74	4.8
SQ 2-70N	1.15	1¼" Female	768	292	74	5.4
SQ 2-85N	1.15	1¼" Female	825	346	74	5.5
SQ 2-100N	1.55	1¼" Female	861	346	74	6.2
SQ 2-115N	1.85	1¼" Female	888	373	74	6.3
SQ 3-30N	0.7	1¼" Female	741	265	74	4.8
SQ 3-40N	0.7	1¼" Female	741	265	74	4.8
SQ 3-55N	1.15	1¼" Female	768	292	74	5.4
SQ 3-65N	1.15	1¼" Female	825	346	74	6.1
SQ 3-80N	1.68	1¼" Female	861	346	74	6.3
SQ 3-95N	1.68	1¼" Female	888	373	74	6.4
SQ 3-105N	1.85	1¼" Female	942	427	74	6.5
SQ 5-15N	0.7	1½" Female	743	265	74	4.7
SQ 5-25N	0.7	1½" Female	743	265	74	4.8
SQ 5-35N	1.15	1½" Female	824	346	74	5.5
SQ 5-50N	1.68	1½" Female	860	346	74	6.1
SQ 5-60N	1.68	1½" Female	941	427	74	6.4
SQ 5-70N	1.85	1½" Female	941	427	74	6.4
SQ 7-15N	0.7	1½" Female	743	265	74	4.7
SQ 7-30N	1.15	1½" Female	743	265	74	5.2
SQ 7-40N	1.68	1½" Female	860	346	74	6.1
SQ 7-55N	1.85	1½" Female	864	350	74	6.8



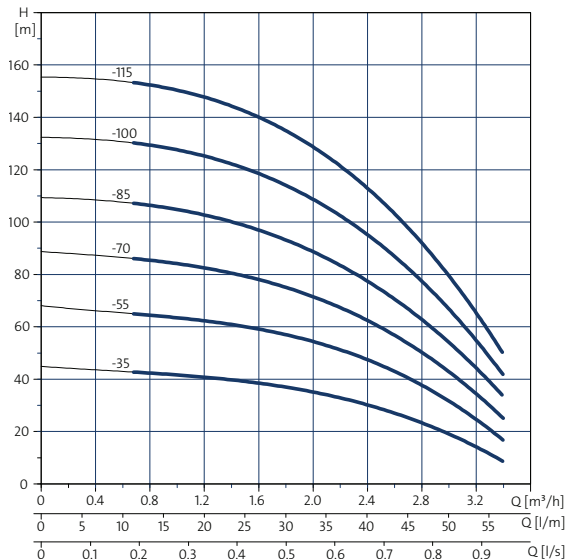
PERFORMANCE DATA - SQ N/SQE N

PERFORMANCE DATA

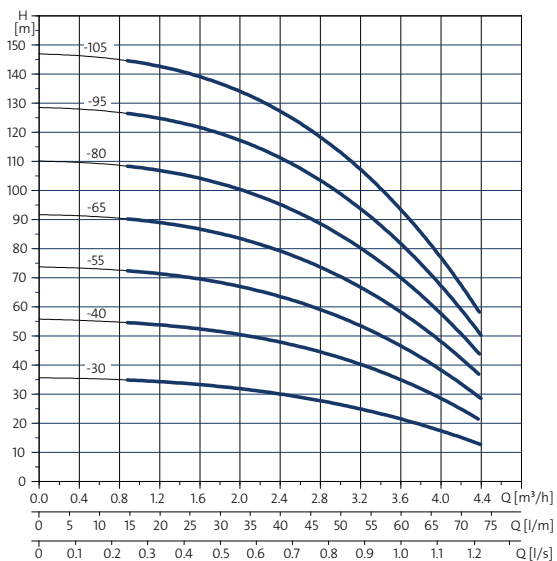
SQ1 N/SQE1 N



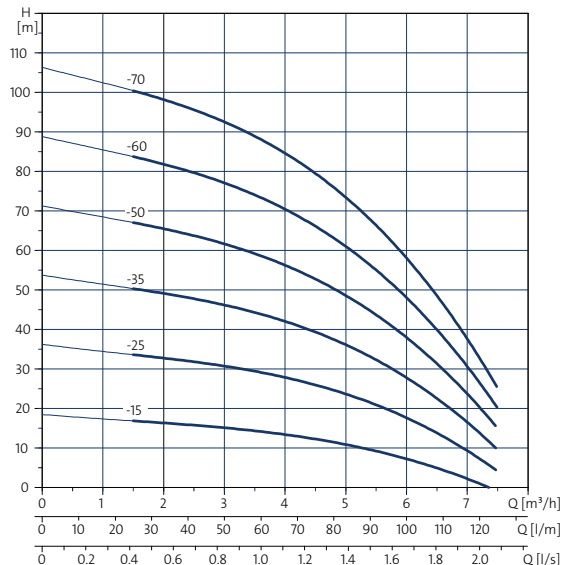
SQ2 N/SQE2 N



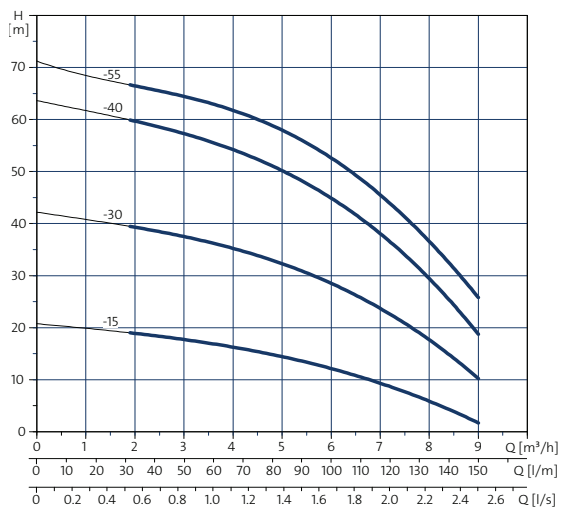
SQ3 N/SQE3 N



SQ5 N/SQE5 N



SQ7 N/SQE7 N



SP

STAINLESS STEEL 4" SUBMERSIBLE PUMP

2
YEAR
WARRANTY

WATER SOURCE



Bore



Below Pump Level



Dam



River

APPLICATION



Household Water



Irrigation



De-watering



Stock Watering

- **Industrial quality** - Stainless steel construction – inside and out. Higher grade stainless steel options available to suit all applications from drinking water to salt water.
- **Low running costs** - State-of-the-art design and highly efficient motor keeps running costs low
- **Long life** - Industry leading sand handling capability (up to 150 mg/Litre)
- **Peace of mind** - Each SP pump is rigorously tested before leaving the factory, so performance is guaranteed from day one
- **Easy installation and service** - The modular design makes it easy to install and service



CONTROL, MONITORING & PROTECTION OPTIONS FOR SP

CUE Constant Pressure Controller

For automatic control and constant pressure to all outlets on single or three phase pumps

- Dry-run protection
- Current overload protection
- Over/Under voltage protection



PRO-TECT

Single or three phase submersible pump control and protection device incorporating:

- Dry-run protection
- Over/under voltage protection
- Short circuit protection
- Phase failure (3 phase version)



Sine-wave Filter

For use with CUE controller to reduce stress on motor and minimises damage by motor bearings



MP204 Monitoring & Protection Kit

For extensive monitoring and protection of your SP Pump:

- Temperature, current and voltage overload protection
- Temperature monitoring (using pump Tempcon transmitter) or with optional PT100 temperature sensor
- Energy consumption monitoring
- Control and monitoring using Grundfos GO App



Starter Unit

Required for single phase SP Pumps (Except RSIR Motors)

Includes integrated thermal protection



TECHNICAL DATA - SP

OPERATING CONDITIONS

Liquid Temperature	0°C to +30°C (No flow past the motor) 0°C to +40°C (Min 0.15 m/s)
Maximum Suspended Sand Content	SP 1A – SP 5A : 50 g/m ³ SP 7 – SP 14 : 150 g/m ³
Stainless Steel Grade	SP AISI 304 (SP1A - SP14) SP N AISI 316 (SP3A - SP14) SP R AISI 904 L (SP5A - SP14)

TECHNICAL DATA

Power Supply Voltage	Single Phase: 240 Volt, 50 Hz Three Phase: 380-400-415 Volt, 50 Hz
Power Supply Cable	1.7 m Installation by qualified electrician
Maximum Installation Depth	MS402 & Ultra motors : 150 m MS 4000 : 600 m
Minimum Borehole Diameter	105 mm

PHYSICAL ATTRIBUTES

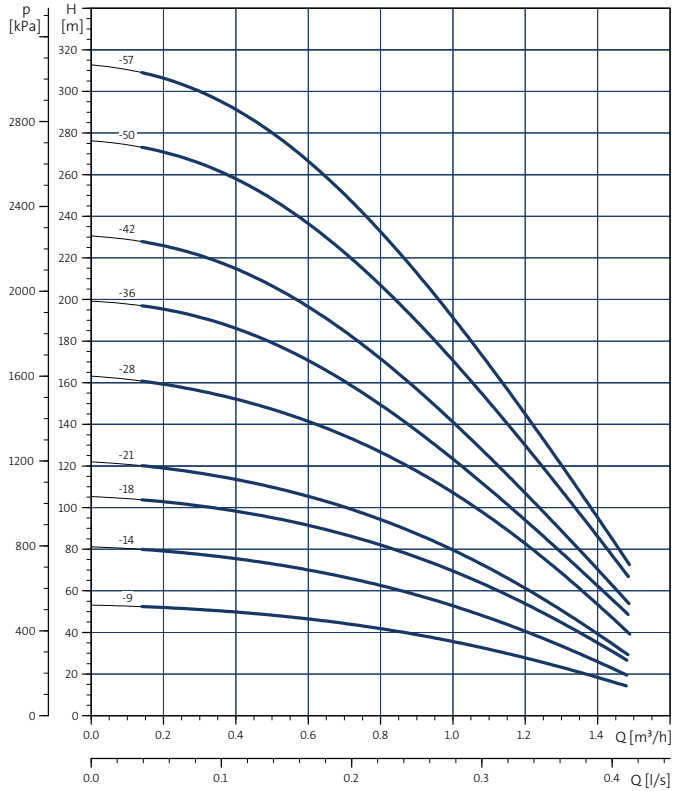
Model (SP)	Phase: Single/Three	Motor Power P2 (kW)	Connections
			Outlet
SP 1A-9 / SP 1A-14	Single & Three	0.37	1 ¼" Female
SP 1A-18 / SP 1A-21	Single & Three	0.55	1 ¼" Female
SP 1A-28	Single & Three	0.75	1 ¼" Female
SP 1A-36 / SP 1A-42	Single & Three	1.1	1 ¼" Female
SP 1A-50 / SP 1A-57	Single & Three	1.5	1 ¼" Female
SP 2A-6 / SP 2A-9	Single & Three	0.37	1 ¼" Female
SP 2A-13	Single & Three	0.55	1 ¼" Female
SP 2A-18	Single & Three	0.75	1 ¼" Female
SP 2A-23	Single & Three	1.1	1 ¼" Female
SP 2A-28 / SP2A-33	Single & Three	1.5	1 ¼" Female
SP 2A-40 / SP 2A-48	Single & Three	2.2	1 ¼" Female
SP 3A-6	Single & Three	0.37	1 ¼" Female
SP 3A-9	Single & Three	0.55	1 ¼" Female
SP 3A-12	Single & Three	0.75	1 ¼" Female
SP 3A-15 / SP 3A-18	Single & Three	1.1	1 ¼" Female
SP 3A-22 / SP 3A-25	Single & Three	1.5	1 ¼" Female
SP 3A-29 / SP 3A-33	Single & Three	2.2	1 ¼" Female
SP 3A-45	Three	3	1 ¼" Female
SP 3A-52 / SP3A-60	Three	4	1 ¼" Female
SP 5A-4	Single & Three	0.37	1 ½" Female
SP 5A-6	Single & Three	0.55	1 ½" Female
SP 5A-8	Single & Three	0.75	1 ½" Female
SP 5A-12	Single & Three	1.1	1 ½" Female
SP 5A-17	Single & Three	1.5	1 ½" Female
SP 5A-21 / SP 5A-25	Single & Three	2.2	1 ½" Female
SP 5A-33	Three	3	1 ½" Female
SP 5A-38 / SP 5A-44	Three	4	1 ½" Female

Model (SP)	Phase: Single/Three	Motor Power P2 (kW)	Connections
			Outlet
SP 7-3	Single & Three	0.55	1 ½" Female
SP 7-5	Single & Three	0.75	1 ½" Female
SP 7-8	Single & Three	1.1	1 ½" Female
SP 7-12	Single & Three	1.5	1 ½" Female
SP 7-17	Single & Three	2.2	1 ½" Female
SP 7-23 / SP 7-27	Single & Three	3.7	1 ½" Female
SP 7-31	Three	4	1 ½" Female
SP 7-37 / SP 7-42	Three	5.5	1 ½" Female
SP 7-51	Three	7.5	1 ½" Female
SP 9-5	Single & Three	1.1	2" Female
SP 9-8	Single & Three	1.5	2" Female
SP 9-11	Single & Three	2.2	2" Female
SP 9-13 / SP 9-16	Single & Three	3.7	2" Female
SP 9-18	Single & Three	4	2" Female
SP 9-23 / SP 9-25 / SP 9-29	Three	4	2" Female
SP 9-32 / SP 9-36 / SP 9-40	Three	7.5	2" Female
SP 11-3	Single & Three	0.75	2" Female
SP 11-5	Single & Three	1.1	2" Female
SP 11-7	Single & Three	1.5	2" Female
SP 11-11	Single & Three	2.2	2" Female
SP 11-15	Single & Three	3.7	2" Female
SP 11-20	Three	4	2" Female
SP 11-24 / 11-27	Three	5.5	2" Female
SP 11-33	Three	7.5	2" Female
SP 14-4	Single & Three	1.1	2" Female
SP 14-6	Single & Three	1.5	2" Female
SP 14-8	Single & Three	2.2	2" Female
SP 14-11/SP 14-13/SP 14-15	Single & Three	3.7	2" Female
SP 14-17	Three	4	2" Female
SP 14-20 / SP 14-23	Three	5.5	2" Female
SP 14-27	Three	7.5	2" Female

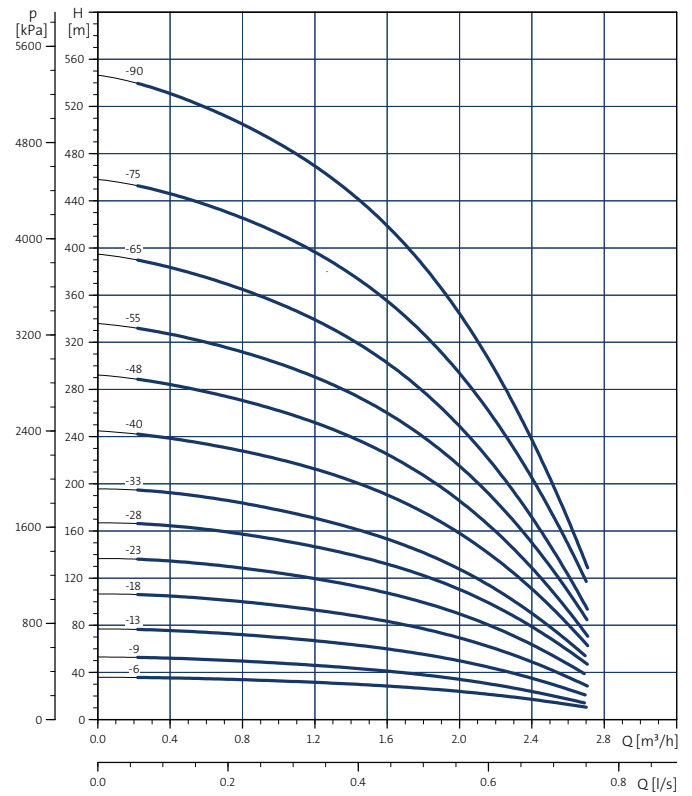
PERFORMANCE DATA - SP

PERFORMANCE DATA

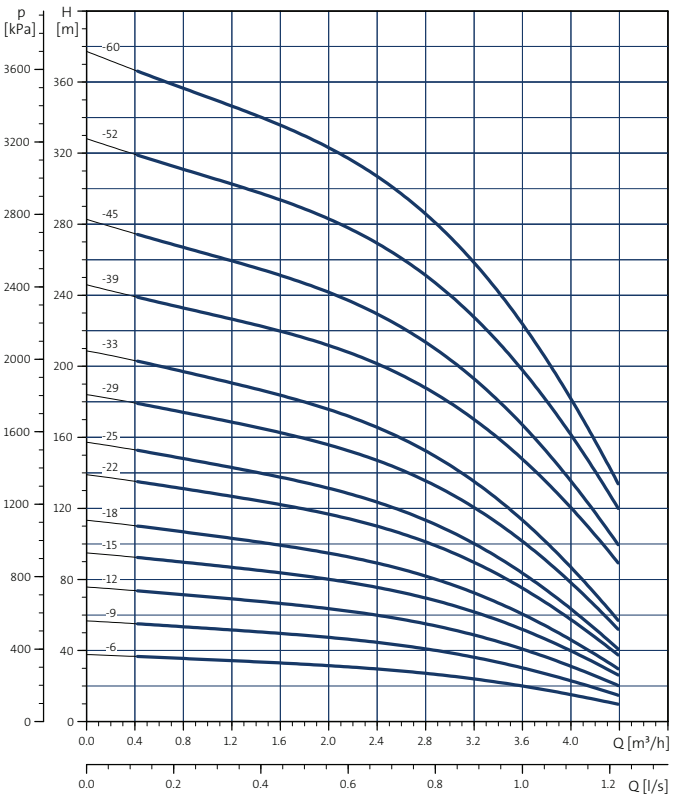
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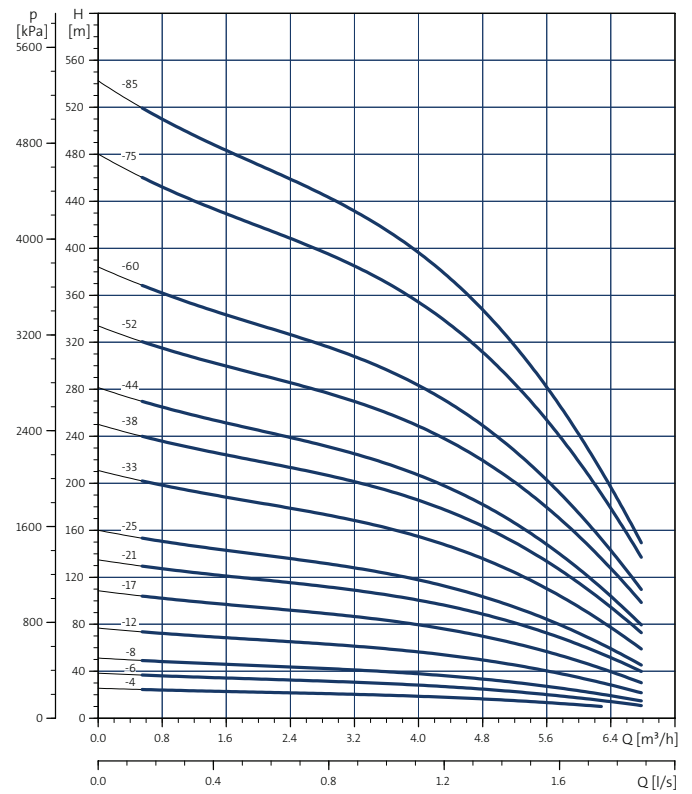
SP 2A



SP 3A



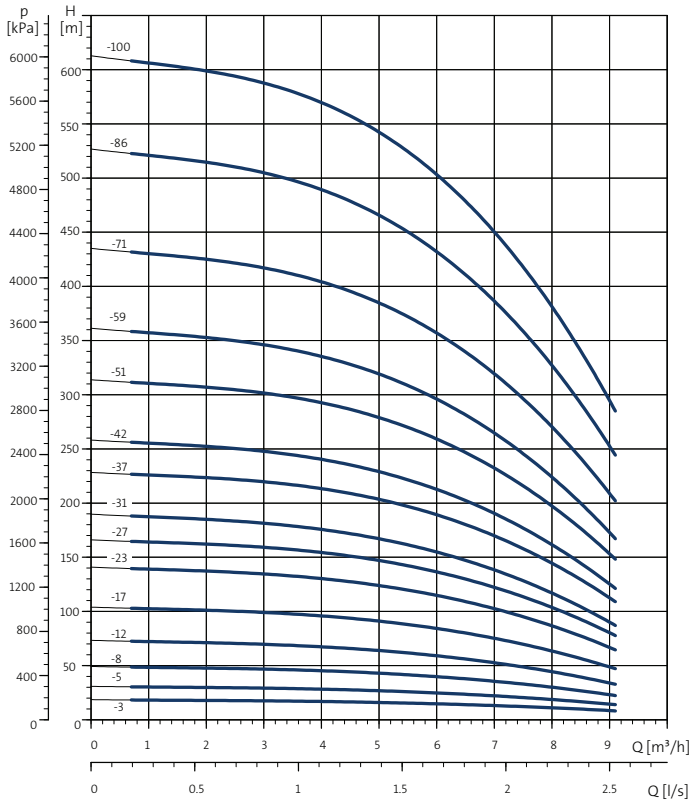
SP 5A



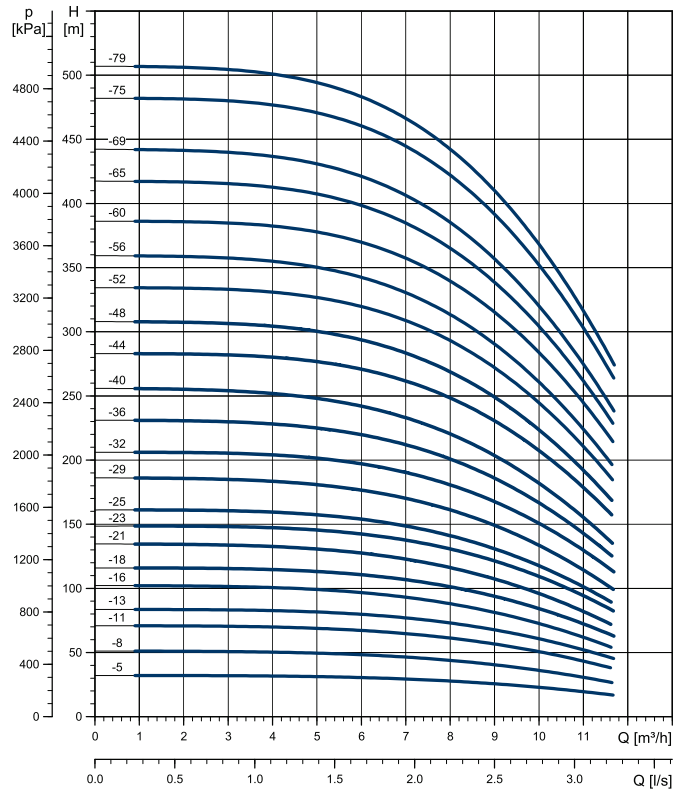
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PERFORMANCE DATA

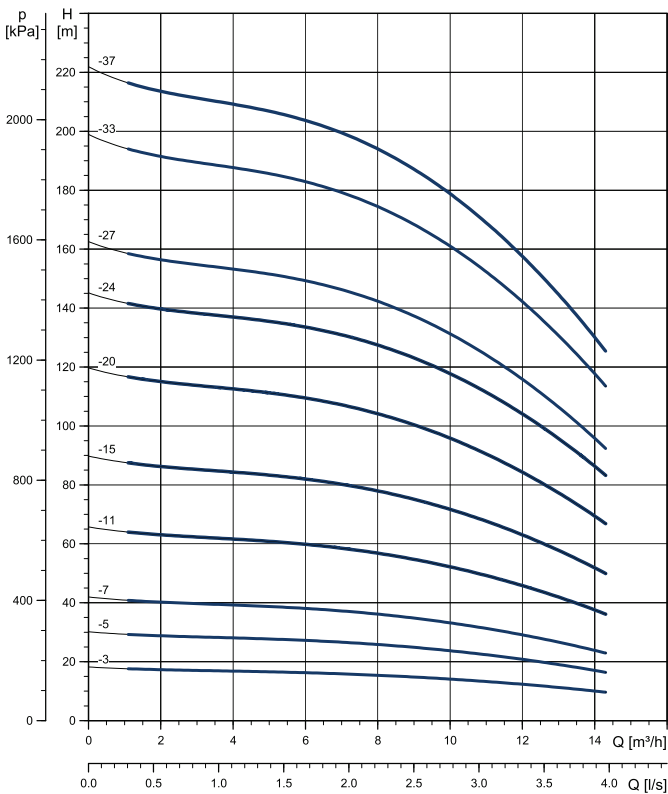
SP 7



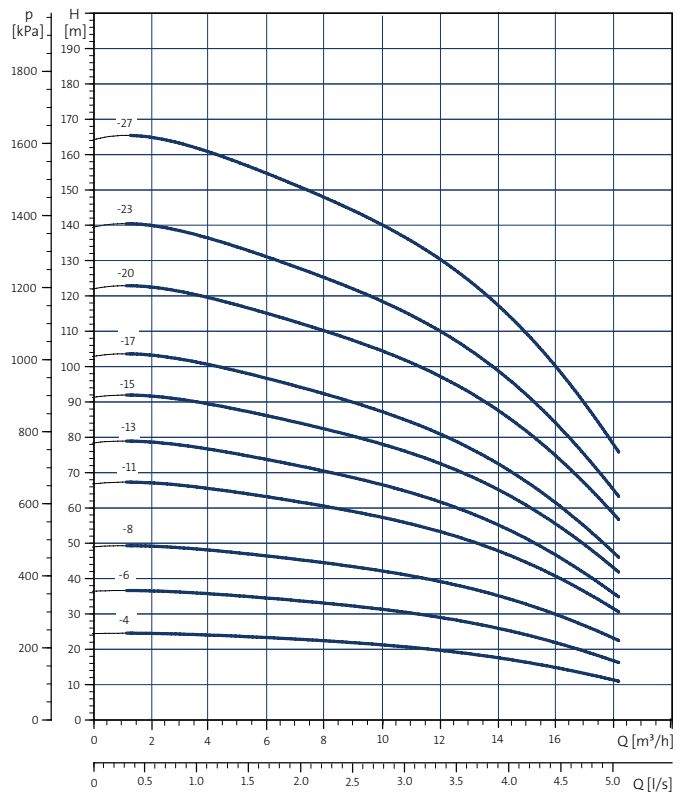
SP 9



SP 11



SP 14



GRUNDFOS SMALL SUBMERSIBLE BORE PUMP RANGE

SELECTION CHART

SQ N / SQE N 3"

Flow		Head (m)								
m ³ /h	l/min	10	20	30	40	50	60	70	80	90
0.5	8	SQN1-35	SQN1-35	SQN1-35	SQN1-35	SQN1-50	SQN1-50	SQN1-65	SQN1-65	SQN1-80
1	17	SQN1-35	SQN1-35	SQN1-35	SQN1-50	SQN1-65	SQN1-65	SQN1-80	SQN1-80	SQN1-95
1.5	25	SQN2-35	SQN2-35	SQN2-35	SQN2-35	SQN2-55	SQN2-55	SQN2-70	SQN2-70	SQN2-85
2	33	SQN2-35	SQN2-35	SQN2-35	SQN2-55	SQN2-55	SQN2-70	SQN2-70	SQN2-85	SQN2-85
3	50	SQN2-35	SQN3-30	SQN3-30	SQN3-40	SQN3-55	SQN3-65	SQN3-65	SQN3-80	SQN3-95
4	67	SQN5-15	SQN5-25	SQN5-35	SQN5-35	SQN5-50	SQN5-60	SQN5-60	SQN5-70	
5	83	SQN5-15	SQN5-25	SQN5-35	SQN5-50	SQN5-50	SQN5-60	SQN5-70		
6	100	SQN7-15	SQN7-30	SQN7-30	SQN7-40	SQN7-55	SQN7-55			
7	117	SQN7-15	SQN7-30	SQN7-30	SQN7-40	SQN7-55				
8	133	SQN7-30	SQN7-40							

SP 4"

Flow		Head (m)								
m ³ /h	l/min	10	20	30	40	50	60	70	80	90
0.5	8	SP1A-9	SP1A-9	SP1A-9	SP1A-9	SP1A-14	SP1A-14	SP1A-14	SP1A-18	SP1A-18
1	17	SP1A-9	SP1A-9	SP1A-9	SP1A-14	SP1A-14	SP1A-18	SP1A-18	SP1A-21	SP1A-28
1.5	25	SP2A-6	SP2A-6	SP2A-6	SP2A-9	SP2A-13	SP2A-13	SP2A-18	SP2A-18	SP2A-23
2	33	SP2A-6	SP2A-6	SP2A-9	SP2A-14	SP2A-13	SP2A-18	SP2A-18	SP2A-23	SP2A-23
3	50	SP3A-6	SP3A-6	SP3A-9	SP3A-9	SP3A-12	SP3A-15	SP3A-18	SP3A-80	SP3A-22
4	67	SP5A-4	SP5A-4	SP5A-6	SP5A-8	SP5A-12	SP5A-12	SP5A-17	SP5A-17	SP5A-21
5	83	SP5A-4	SP5A-6	SP5A-8	SP5A-12	SP5A-17	SP5A-17	SP5A-21	SP5A-21	SP5A-25
6	100	SP7-3	SP7-5	SP7-8	SP7-8	SP7-12	SP7-12	SP7-17	SP7-17	SP7-23
7	117	SP7-3	SP7-5	SP7-8	SP7-12	SP7-12	SP7-17	SP7-17	SP7-23	SP7-23
9	150	SP9-4	SP9-4	SP9-8	SP9-8	SP9-13	SP9-13	SP9-13	SP9-16	SP9-18
11	183	SP11-3	SP11-5	SP11-7	SP11-11	SP11-11	SP11-15	SP11-15	SP11-20	SP11-20
14	233	SP14-4	SP14-6	SP14-8	SP14-11	SP14-13	SP14-15	SP14-17	SP14-20	SP14-20
16	267	SP14-4	SP14-6	SP14-8	SP14-11	SP14-15	SP14-17	SP14-20	SP14-23	SP14-23

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GRUNDFOS 