



Service instructions

SQ, SQE, SQ-N

MS 3, MSE 3

Model A

50/60 Hz

1~

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1. Type identification

This section shows the nameplates, the type keys and the codes that can appear in the variant code.

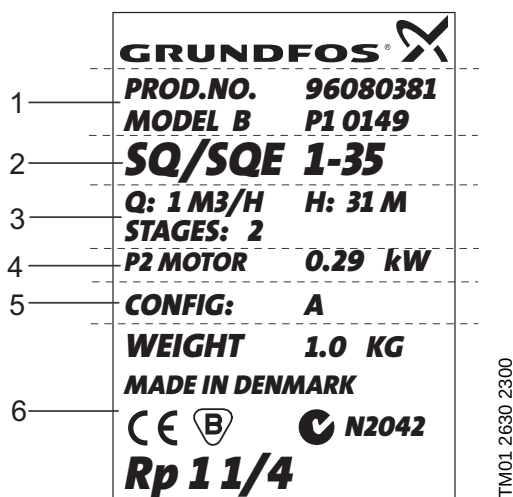
Note: As codes can be combined, a code position may contain more than one code (letter).

1.1 Nameplates

1.1.1 Nameplate, pump

The pump nameplate is engraved into the pump sleeve.

Example of nameplate, Europe, S-AMREG, APREG, Japan, Australia



Pos.	Code	Description
1	PROD.NO. 96033602	Product number.
	MODEL A P1 9744	Production code - Bjerringbro (P1) + year-week code.
2	SQ/SQE 1 - 35	Type designation, see section 1.2.1 Type key, pump .
3	- Q: 1 m³/h - H: 31 m - Stages: 2 - P2 motor 0.29 kW	- Flow (Q) 1 [m³/h]. - Head (H) 31 [m]. - Number of stages 2. - Required input power pump 0.29 [kW].
4	Config:A	Code for dry-running cut-out value.
5	Weight 1.0 kg	Pump net weight in kg.
	MADE IN DENMARK	Country of origin: Denmark.
		Misc. marks of approval: CE etc.
6	Rp 1 ¼	Type and size of connecting thread.

Example of nameplate, N-AMREG

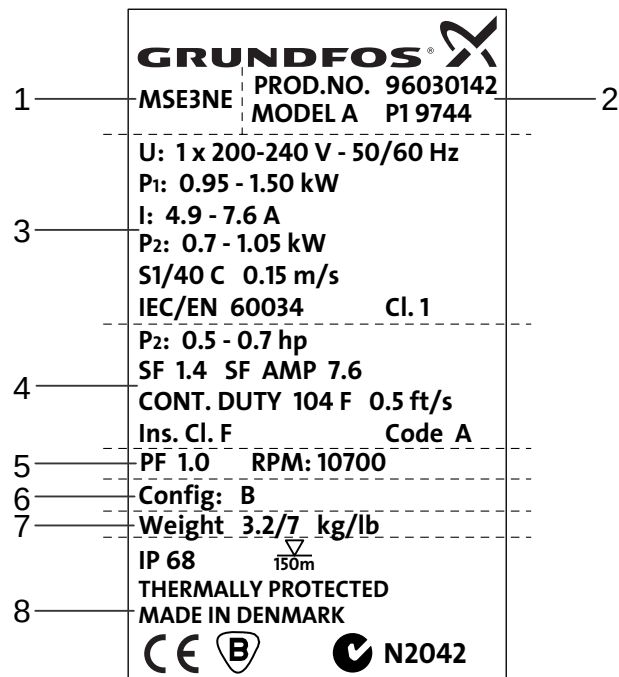
1	GRUNDFOS 
2	PROD.NO. 96080414 MODEL B P1 0149
3	5 SQ/SQE - 90
4	Q: 5 GPM H: 90 ft Stages: 2
5	P2 motor 0.3 HP Config: A
6	Weight 2.2 lb MADE IN DENMARK
7	 LISTED Submersible well pumps I228 NPT 1 CAUTION: This pump has been approved for pumping water only WARNING: To reduce risk of electric shock, see Installation and Operating Instructions

TM01 2631 2300

Pos.	Code	Description
1	PROD.NO. 96033667	Product number.
	MODEL A P1 9744	Production code - Bjerringbro (P1) + year-week code.
2	5 SQ/SQE - 90	Type designation, see section 1.2.1 Type key, pump .
3	- Q: 5 GPM - H: 86 ft - Stages: 2	- Flow (Q) 5 [GPM]. - Head (H) 86 [ft]. - Number of stages 2.
4	P2 motor 0.3 HP	Required input power pump (P2) in hp.
5	Config:A	Code for dry-running cut-out value.
6	Weight 2.2 lb	Pump net weight in pounds.
	MADE IN DENMARK	Country of origin: Denmark.
		Misc. marks of approval: UL etc.
7	NPT 1	Type and size of connecting thread.

1.1.2 Nameplate, motor

The motor nameplate is engraved into the motor sleeve.



Pos.	Code	Description
1	MS 3	Type designation, see section 1.2.2 Type key, motor .
2	PROD.NO. 96xxxxxx	Product number.
	MODEL A P1 9949	Production code - Bjerringbro (P1) + year-week code.
3	U: 1x200-240 V - 50/60 Hz	Required electricity supply [V].
	P ₁ : 0.95 - 1.50 kW	Input power [kW].
	I: 4.9 - 7.6 A	Input current [A].
	P ₂ : 0.7 - 1.05 HP	Output power [kW].
	S1/40C 0.15 m/s IEC 34-1Cl. 1	Continuous operation up to 40°C, min. flow velocity past the motor in m/s. Standard IEC 34-1.
4	P2 0.5 - 0.7 HP	Output power (P2) in hp.
	SF 1.4 SF AMP 7.6	Service factor + max. ampere for a given SF.
	CONT. DUTY 104F 0.5 ft/s	Suitable for continuous operation at 104°F and flow = 0.5 ft/s.
	INS. CL. FCODE A	Insulation class F. Start-kVA per hp.
5	PF 1.0RPM 10700	Power factor = 1. Rated speed 10.700 rpm.
6	Config. B	Code for dry-running cut-out value.
7	Weight x.x/x kg/lb	Motor net weight in kg and pounds.
8		Misc. marks of approval: CE etc.
	THERMALLY PROTECTED	Temperature sensor built into the electronic unit.
	MADE IN DENMARK	Country of origin: Denmark.

1.2 Type keys

1.2.1 Type key, pump

Pump type key, S-AMREG, APREG, Japan, Australia

Example	SQE	2 -	35	N
Type range: • SQ = Basic version, i.e. without communication. • SQE = Electronically controllable pump offering possibility of communication via CU 300 and CU 301.				
Rated flow rate in m ³ /h.				
Head in m at rated flow. Note: Head is an approximated value.				
Material code: • Blank = Stainless steel DIN W.-Nr. 1.4301 - AISI 304. • N = Stainless steel DIN W.-Nr. 1.4401 - AISI 316.				

Pump type key, N-AMREG

Example	10	SQE -	140	N
Rated flow in US GPM.				
Type range: • SQ = Basic version, i.e. without communication. • SQE = Electronically controllable pump offering possibility of communication via CU 300 and CU 301.				
Head in ft at rated flow. Note: Head is an approximated value.				
Material code: • Blank = Stainless steel DIN W.-Nr. 1.4301 - AISI 304. • N = Stainless steel DIN W.-Nr. 1.4401 - AISI 316.				

1.2.2 Type key, motor

Example	MSE	3 -	N
Type range: • MS = Basic version, i.e. without communication. • MSE = Electronically controllable pump offering possibility of communication via CU 300 and CU 301.			
Motor diameter: 3".			
Material code: • Blank = Stainless steel DIN W.-Nr. 1.4301 - AISI 304. • N = Stainless steel DIN W.-Nr. 1.4401 - AISI 316.			

2. Torques and lubricants

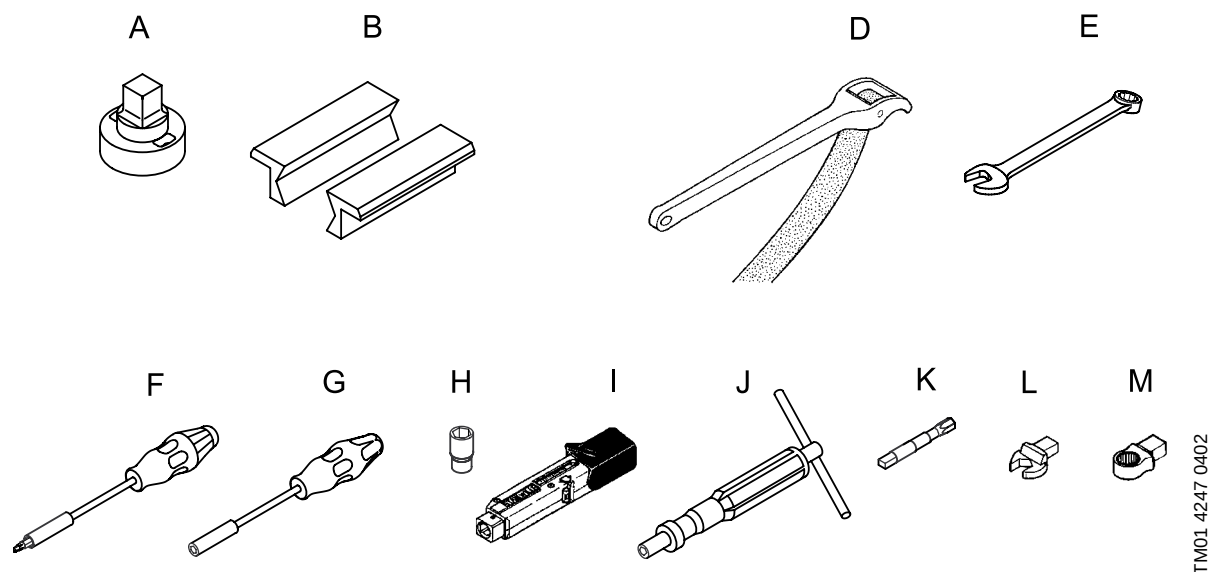
This section shows the parts and nuts that must be tightened to a certain torque and the lubricants to be used.

Pos.	Description	Number	Torque [Nm]	Lubricant
220	End cover with cable	1		Unisilkon
225	Top cover	1	15±5	Unisilkon
232	Lip seal ring	1		Unisilkon
250	Nut	4	1,0	
	Pump	1	55	

Grease, type Unisilkon, L 641, 5 g, part number 96037562.

3. Service tools

The following drawings and tables show special, standard and torque tools for pump service.



3.1 Special tools

Pos.	Description	For pos.	Additional information	Part no.
A	Key for discharge chamber	1a		SV0064
B	Protective clamps			SV0412

3.2 Standard tools

Pos.	Description	For pos.	Additional information	Part no.
D	Band pipe wrench	55		SV0853
E	Ring/open-end spanner	225	27 mm	SV0084
F	Screwdriver (torx)	18a	T10	SV0066
G	Nut driver with socket	250		SV0065
H	Socket for hexagon head screws	K-250	7 mm 1/4"	SV0457

3.3 Torque tools

Pos.	Description	For pos.	Additional information	Part no.
I	Torque wrench	L-M	40-200 Nm 14x18	SV0400
J	Torque screwdriver	K	1-6 Nm 1/4"	SV0438
K	Adapter for torque screwdriver	H-J	1/4"	SV0437
L	Open-end insert tool	A-I	24 mm 14x18	SV0624
M	Ring insert tool	I-225	27 mm 14x18	SV0527

4. Dismantling and assembly

4.1 General

When the pump has been pulled out, possibly because it was running at reduced performance, it is important to note that model A pumps are not serviceable with components/kits. In this situation the pump must be replaced with a model B pump, see section [5. Conversion lists for pumps from model A to model B](#) and to check the submersible motor, please follow the instructions in the following sections.

Position numbers of parts (digits) refer to exploded views, sectional drawings and parts lists for the motor; position numbers of tools (letters) refer to section [3. Service tools](#).

4.1.1 Before dismantling

- Disconnect the electricity supply to the motor.

4.1.2 During dismantling

- When loosening the pump from the motor, take care to apply counterpressure to the pump, see [fig. 1](#). This will prevent the pump or pump parts from being damaged, bent or twisted.

4.1.3 Before assembly

- Clean and check all motor parts, especially the shaft with rotor due to magnetism. Citric acid is recommended for decalcifying.
- Check all parts for fractures and wear.
- Order the necessary service kits and/or parts.
- Replace defective parts by new parts.

4.1.4 During assembly

- Lubricate and/or tighten threads and rubber parts according to section [2. Torques and lubricants](#).
- When tightening the pump to the motor, take care to apply counterpressure to the pump, see [fig. 1](#). This will prevent the pump or pump parts from being damaged, bent or twisted.
- Before connecting the pump to the motor, fill the motor with GRUNDFOS motor liquid SML 2, see section [4.4 Filling of motor liquid](#).

4.1.5 After assembly

- The head and flow should be tested according to the test specifications, see section [6. Test specifications](#)

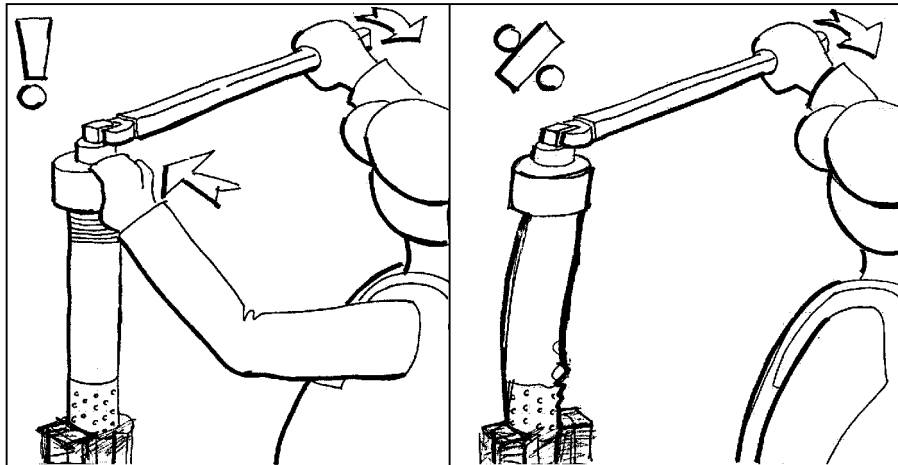
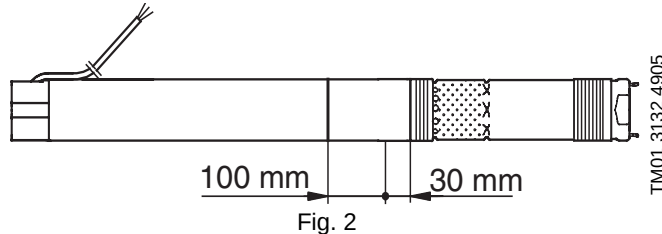


Fig. 1

4.2 Separating and connecting pump and motor

4.2.1 Dismantling

1. Slacken the screws pos. 18a and 18b and remove them together with the cable guard pos. 18.
2. If the motor is intact, the cable need not be removed. If the motor is defective, remove the nuts pos. 250 and pull the end cover with cable and socket out of the motor.
3. Place the motor in a vice, using the two protective clamps [pos. B](#).
Tighten only on the upper 100 mm of the motor, see [fig. 2](#).



4. Place a band pipe wrench [pos. D](#) on the upper pump thread and loosen the pump by max. ½ turn (right-hand thread). *Do not remove the pump from the motor.*
5. Slacken the vice. Stand the motor with pump upright with the motor uppermost and tighten the two clamping faces of the discharge chamber in the vice.
6. Place the band pipe wrench on the pump thread close to the motor and loosen the pump (right-hand thread).
7. Lift the motor with pump off the vice and place it on a plane surface.
8. Screw the pump off the motor.

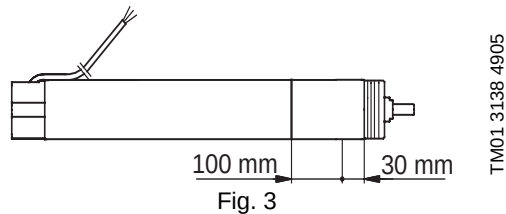
4.2.2 Assembly

1. Place the motor in a vice, using the two protective clamps [pos. B](#).
Tighten only on the upper 100 mm of the motor, see [fig. 3](#).
2. Pull the pump shaft a little out of the pump (approx. corresponding to the length of the coupling).
3. Apply a thin layer of grease to the spline inside the coupling and the thread on the motor.
4. Hold the coupling with your fingers and press the coupling home on the motor shaft.
5. Screw the pump home on the motor.
6. Turn motor and pump to a vertical position with the pump upwards and tighten the vice around the thread below the suction strainer.
7. Using the key for discharge chamber [pos. A](#), the open-end insert tool [pos. L](#) and the torque wrench [pos. I](#) tighten the discharge chamber to the sleeve.
8. Turn motor and pump to a horizontal position and place them in a vice, using the two protective clamps [pos. B](#), see [fig. 2](#).
9. Using the key for discharge chamber [pos. A](#), the open-end insert tool [pos. L](#) and the torque wrench [pos. I](#) tighten the pump to the motor.
10. Clean and apply a thin layer of grease to the end cover.
11. Push the end cover into the motor. Fit and tighten the nuts pos. 250 using the socket for hexagon head screws [pos. H](#), the adapter for torque screwdriver [pos. K](#) and the torque screwdriver [pos. J](#).
12. Place the motor cable along the motor and the pump so that it lies flat.
13. Fit the cable guard over the cable. The two tabs of the cable guard must engage with the upper edge of the pump sleeve. Fit the screws pos. 18a and 18b and tighten them.

4.3 Checking the motor

4.3.1 Dismantling

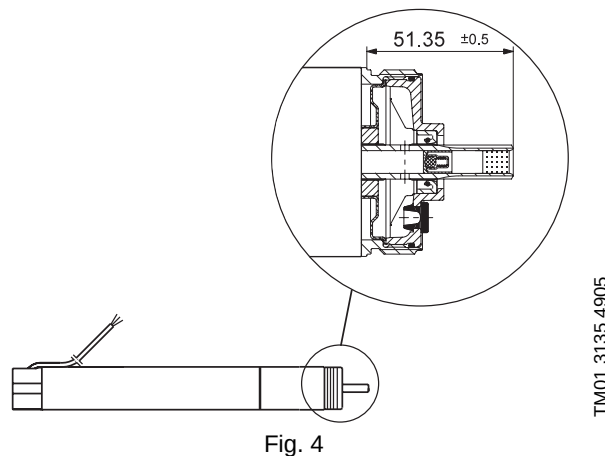
1. Place the motor in a vice, using the two protective clamps [pos. B](#).
Tighten only on the upper 100 mm of the motor, see [fig. 3](#).



2. Prise off the filling plug [pos. 222a](#).
Please note that the motor is full of liquid.
3. Screw the top cover (right-hand thread) out of the motor using the ring of the ring/open-end spanner [pos. E](#).
4. Due to the powerful magnetism of the shaft with rotor, hold the splined shaft end firmly and pull the shaft with rotor and upper radial bearing [pos. 205](#) out of the motor.
The thrust bearing [pos. 203](#) may come out together with the shaft with rotor.
Check if the thrust bearing [pos. 203](#) is in the motor.

4.3.2 Assembly

1. Fit the thrust bearing [pos. 203](#) with the sliding surface uppermost carefully into the motor.
2. Turn the thrust bearing until its three dogs engage with the three notches at the bottom of the motor.
3. Fit the stop ring [pos. 202a](#) on the shaft with rotor with the sliding surface uppermost.
4. Turn the stop ring until the driving dogs engage with the shaft.
5. Hold the splined shaft end firmly due to magnetism and fit the shaft with rotor [pos. 202](#) carefully into the motor. The shaft with rotor must engage with the thrust bearing.
6. Check the shaft height, see [fig. 4](#).



7. Fit the upper radial bearing [pos. 205](#) carefully on the shaft with rotor and press it home in the recess of the motor.
8. Apply a thin layer of grease to the O-ring [pos. 224](#) and the lip seal ring [pos. 232](#).
9. Tighten the top cover [pos. 225](#) into the stator using the ring insert tool [pos. M](#) and the torque wrench [pos. I](#).

Make sure that the cover is under the top of the motor, see [fig. 5](#), and that the axial play is between 0.3 and 1.3 mm.

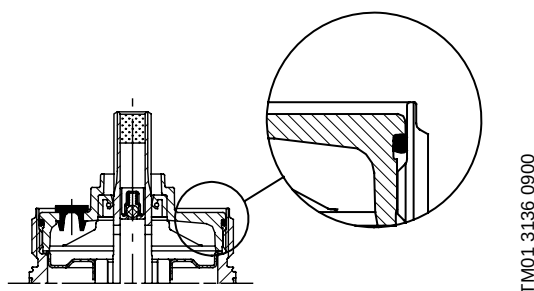


Fig. 5

10. Fill the motor with liquid, see section [4.4 Filling of motor liquid](#).

4.4 Filling of motor liquid

1. Place the motor in vertical position with an inclination of approx. 10°.
2. Remove the filling plug using a screwdriver or a similar tool.
3. Inject motor liquid into the motor with a filling syringe or the like.
4. To allow possible air to escape, move the motor from side to side.
5. Refit the filling plug and make sure that it is tight.
6. The motor is now ready for installation. Fit the pump to the motor, see section [4.2.2 Assembly](#).

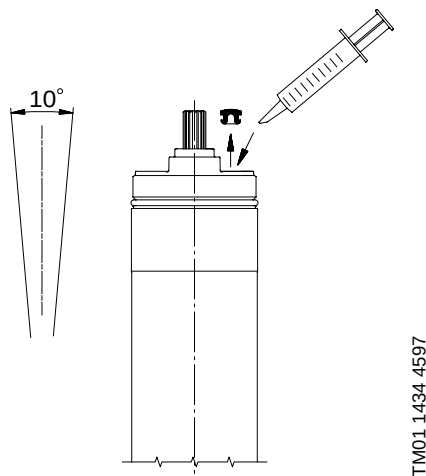


Fig. 6

5. Conversion lists for pumps from model A to model B

5.1 SQ/SQE 1, 5 SQ/SQE

The pump is not serviced with components/kits, but are replaced with complete pump end model B			
Product number model A		Product number model B	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 03 36 02	SQ/SQE 1 - 35	96 08 03 81	SQ/SQE 1 - 35
96 03 36 03	SQ/SQE 1 - 50	96 08 03 82	SQ/SQE 1 - 50
96 03 36 04	SQ/SQE 1 - 65	96 08 03 83	SQ/SQE 1 - 65
96 03 36 05	SQ/SQE 1 - 80	96 08 03 91	SQ/SQE 1 - 80
96 03 36 06	SQ/SQE 1 - 95	96 08 03 92	SQ/SQE 1 - 95
96 03 36 07	SQ/SQE 1 - 110	96 08 03 93	SQ/SQE 1 - 110
96 03 36 08	SQ/SQE 1 - 125	96 08 04 02	SQ/SQE 1 - 125
96 03 36 09	SQ/SQE 1 - 140	96 08 04 03	SQ/SQE 1 - 140
96 03 38 25	SQ/SQE 1 - 155	96 08 04 04	SQ/SQE 1 - 155
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 04 32 16	SQ/SQE 1 - 35 N	96 08 07 16	SQ/SQE 1 - 35 N
96 04 32 17	SQ/SQE 1 - 50 N	96 08 07 17	SQ/SQE 1 - 50 N
96 04 32 18	SQ/SQE 1 - 65 N	96 08 07 18	SQ/SQE 1 - 65 N
96 04 32 26	SQ/SQE 1 - 80 N	96 08 07 26	SQ/SQE 1 - 80 N
96 04 32 27	SQ/SQE 1 - 95 N	96 08 07 27	SQ/SQE 1 - 95 N
96 04 32 28	SQ/SQE 1 - 110 N	96 08 07 28	SQ/SQE 1 - 110 N
96 04 32 37	SQ/SQE 1 - 125 N	96 08 07 37	SQ/SQE 1 - 125 N
96 04 32 38	SQ/SQE 1 - 140 N	96 08 07 38	SQ/SQE 1 - 140 N
96 04 32 39	SQ/SQE 1 - 155 N	96 08 07 39	SQ/SQE 1 - 155 N
North America		NPT 1 1/4"	
96 03 36 67	05 SQ/SQE - 90	96 08 04 14	05 SQ/SQE - 90
96 03 36 68	05 SQ/SQE - 140	96 08 04 15	05 SQ/SQE - 140
96 03 36 69	05 SQ/SQE - 180	96 08 04 16	05 SQ/SQE - 180
96 03 36 70	05 SQ/SQE - 230	96 08 04 24	05 SQ/SQE - 230
96 03 36 71	05 SQ/SQE - 270	96 08 04 25	05 SQ/SQE - 270
96 03 36 72	05 SQ/SQE - 320	96 08 04 26	05 SQ/SQE - 320
96 03 36 73	05 SQ/SQE - 360	96 08 04 35	05 SQ/SQE - 360
96 03 36 74	05 SQ/SQE - 410	96 08 04 36	05 SQ/SQE - 410
96 03 38 27	05 SQ/SQE - 450	96 08 04 37	05 SQ/SQE - 450
JAPAN		Rp 1	
96 04 31 51	SQ/SQE 1 - 35	96 08 04 47	SQ/SQE 1 - 35
96 04 31 52	SQ/SQE 1 - 50	96 08 04 48	SQ/SQE 1 - 50
96 04 31 53	SQ/SQE 1 - 65	96 08 04 49	SQ/SQE 1 - 65
96 04 31 58	SQ/SQE 1 - 80	96 08 04 54	SQ/SQE 1 - 80
96 04 31 59	SQ/SQE 1 - 95	96 08 04 55	SQ/SQE 1 - 95
96 04 31 60	SQ/SQE 1 - 110	96 08 04 56	SQ/SQE 1 - 110
96 04 31 65	SQ/SQE 1 - 125	96 08 06 69	SQ/SQE 1 - 125
96 04 31 66	SQ/SQE 1 - 140	96 08 06 70	SQ/SQE 1 - 140
96 04 31 67	SQ/SQE 1 - 155	96 08 06 71	SQ/SQE 1 - 155
Austria		Rp 1 1/4	
96 04 05 34	SQ/SQE 1 - 35	96 08 06 83	SQ/SQE 1 - 35
96 04 05 35	SQ/SQE 1 - 50	96 08 06 84	SQ/SQE 1 - 50
96 04 05 36	SQ/SQE 1 - 65	96 08 06 85	SQ/SQE 1 - 65
96 04 05 44	SQ/SQE 1 - 80	96 08 06 93	SQ/SQE 1 - 80
96 04 05 45	SQ/SQE 1 - 95	96 08 06 94	SQ/SQE 1 - 95
96 04 05 46	SQ/SQE 1 - 110	96 08 06 95	SQ/SQE 1 - 110
96 04 05 54	SQ/SQE 1 - 125	96 08 07 04	SQ/SQE 1 - 125
96 04 05 55	SQ/SQE 1 - 140	96 08 07 05	SQ/SQE 1 - 140
96 04 05 56	SQ/SQE 1 - 155	96 08 07 06	SQ/SQE 1 - 155

5.2 SQ/SQE 2, 10 SQ/SQE

The pump is not serviced with components/kits, but are replaced with complete pump end model B			
Product number model A		Product number model B	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 03 36 12	SQ/SQE 2 - 35	96 08 03 84	SQ/SQE 2 - 35
96 03 36 13	SQ/SQE 2 - 55	*)	
96 03 36 14	SQ/SQE 2 - 70	96 08 03 94	SQ/SQE 2 - 70
96 03 36 15	SQ/SQE 2 - 85	*)	
96 03 36 16	SQ/SQE 2 - 100	96 08 04 05	SQ/SQE 2 - 100
96 03 37 99	SQ/SQE 2 - 115	96 08 04 06	SQ/SQE 2 - 115
96 03 36 17	SQ/SQE 2 - 130	*)	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 04 32 19	SQ/SQE 2 - 35 N	96 08 07 19	SQ/SQE 2 - 35 N
96 04 32 20	SQ/SQE 2 - 55 N	*)	
96 04 32 29	SQ/SQE 2 - 70 N	96 08 07 29	SQ/SQE 2 - 70 N
96 04 32 30	SQ/SQE 2 - 85 N	*)	
96 04 32 40	SQ/SQE 2 - 100 N	96 08 07 40	SQ/SQE 2 - 100 N
96 04 32 41	SQ/SQE 2 - 115 N	96 08 07 41	SQ/SQE 2 - 115 N
96 04 32 42	SQ/SQE 2 - 130 N	*)	
North America NPT 1 1/4"			
96 03 36 77	10 SQ/SQE - 110	96 08 04 17	10 SQ/SQE - 110
96 03 36 78	10 SQ/SQE - 160	*)	
96 03 36 79	10 SQ/SQE - 200	96 08 04 27	10 SQ/SQE - 200
96 03 36 80	10 SQ/SQE - 240	*)	
96 03 36 81	10 SQ/SQE - 290	96 08 04 38	10 SQ/SQE - 290
96 03 38 01	10 SQ/SQE - 330	96 08 04 39	10 SQ/SQE - 330
96 03 36 82	10 SQ/SQE - 380	*)	
JAPAN Rp 1			
96 04 31 54	SQ/SQE 2 - 35	96 08 04 50	SQ/SQE 2 - 35
96 04 31 55	SQ/SQE 2 - 55	*)	
96 04 31 61	SQ/SQE 2 - 70	96 08 06 65	SQ/SQE 2 - 70
96 04 31 62	SQ/SQE 2 - 85	*)	
96 04 31 68	SQ/SQE 2 - 100	96 08 06 72	SQ/SQE 2 - 100
96 04 31 69	SQ/SQE 2 - 115	96 08 06 73	SQ/SQE 2 - 115
Austria Rp 1 1/4			
96 04 05 37	SQ/SQE 2 - 35	96 08 06 86	SQ/SQE 2 - 35
96 04 05 38	SQ/SQE 2 - 55	*)	
96 04 05 47	SQ/SQE 2 - 70	96 08 06 96	SQ/SQE 2 - 70
96 04 05 48	SQ/SQE 2 - 85	*)	
96 04 05 57	SQ/SQE 2 - 100	96 08 07 07	SQ/SQE 2 - 100
96 04 05 58	SQ/SQE 2 - 115	96 08 07 08	SQ/SQE 2 - 115
96 04 05 59	SQ/SQE 2 - 130	*)	

*) The corresponding model B pump requires a bigger motor. Consequently, EITHER fit a smaller pump OR replace both pump and motor.

5.3 SQ/SQE 3, 15 SQ/SQE

The pump is not serviced with components/kits, but are replaced with complete pump end model B			
Product number model A		Product number model B	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 03 36 18	SQ/SQE 3 - 30	96 08 03 86	SQ/SQE 3 - 30
96 03 36 01	SQ/SQE 3 - 40	96 08 03 87	SQ/SQE 3 - 40
96 03 36 19	SQ/SQE 3 - 55	96 08 03 96	SQ/SQE 3 - 55
96 03 36 20	SQ/SQE 3 - 65	96 08 03 97	SQ/SQE 3 - 65
96 03 36 21	SQ/SQE 3 - 80	96 08 04 08	SQ/SQE 3 - 80
96 03 36 22	SQ/SQE 3 - 95	96 08 04 09	SQ/SQE 3 - 95
96 03 36 23	SQ/SQE 3 - 105	96 08 04 10	SQ/SQE 3 - 105
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 04 32 21	SQ/SQE 3 - 30 N	96 08 07 21	SQ/SQE 3 - 30 N
96 04 32 22	SQ/SQE 3 - 40 N	96 08 07 22	SQ/SQE 3 - 40 N
96 04 32 31	SQ/SQE 3 - 55 N	96 08 07 31	SQ/SQE 3 - 55 N
96 04 32 32	SQ/SQE 3 - 65 N	96 08 07 32	SQ/SQE 3 - 65 N
96 04 32 43	SQ/SQE 3 - 80 N	96 08 07 43	SQ/SQE 3 - 80 N
96 04 32 44	SQ/SQE 3 - 95 N	96 08 07 44	SQ/SQE 3 - 95 N
96 04 32 45	SQ/SQE 3 - 105 N	96 08 07 45	SQ/SQE 3 - 105 N
North America NPT 1 1/4"			
96 03 36 83	15 SQ/SQE - 70	96 08 04 19	15 SQ/SQE - 70
96 03 36 84	15 SQ/SQE - 110	96 08 04 20	15 SQ/SQE - 110
96 03 36 85	15 SQ/SQE - 150	96 08 04 29	15 SQ/SQE - 150
96 03 36 86	15 SQ/SQE - 180	96 08 04 30	15 SQ/SQE - 180
96 03 36 87	15 SQ/SQE - 220	96 08 04 41	15 SQ/SQE - 220
96 03 36 88	15 SQ/SQE - 250	96 08 04 42	15 SQ/SQE - 250
96 03 36 89	15 SQ/SQE - 290	96 08 04 43	15 SQ/SQE - 290
JAPAN Rp 1			
96 04 31 56	SQ/SQE 3 - 30	96 08 04 52	SQ/SQE 3 - 30
96 04 31 57	SQ/SQE 3 - 40	96 08 04 53	SQ/SQE 3 - 40
96 04 31 63	SQ/SQE 3 - 55	96 08 06 67	SQ/SQE 3 - 55
96 04 31 64	SQ/SQE 3 - 65	96 08 06 68	SQ/SQE 3 - 65
96 04 31 70	SQ/SQE 3 - 80	96 08 06 74	SQ/SQE 3 - 80
96 04 31 71	SQ/SQE 3 - 95	96 08 06 75	SQ/SQE 3 - 95
Austria Rp 1 1/4			
96 04 05 39	SQ/SQE 3 - 30	96 08 06 88	SQ/SQE 3 - 30
96 04 05 40	SQ/SQE 3 - 40	96 08 06 89	SQ/SQE 3 - 40
96 04 05 49	SQ/SQE 3 - 55	96 08 06 98	SQ/SQE 3 - 55
96 04 05 50	SQ/SQE 3 - 65	96 08 06 99	SQ/SQE 3 - 65
96 04 05 60	SQ/SQE 3 - 80	96 08 07 10	SQ/SQE 3 - 80
96 04 05 61	SQ/SQE 3 - 95	96 08 07 11	SQ/SQE 3 - 95
96 04 05 62	SQ/SQE 3 - 105	96 08 07 12	SQ/SQE 3 - 105

5.4 SQ/SQE 5, 22 SQ/SQE

The pump is not serviced with components/kits, but are replaced with complete pump end model B			
Product number model A		Product number model B	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 03 36 24	SQ/SQE 5 - 15	96 08 03 88	SQ/SQE 5 - 15
96 03 36 25	SQ/SQE 5 - 25	96 08 03 89	SQ/SQE 5 - 25
96 03 36 26	SQ/SQE 5 - 35	96 08 03 98	SQ/SQE 5 - 35
96 03 36 27	SQ/SQE 5 - 50	*)	
96 03 36 28	SQ/SQE 5 - 60	96 08 04 11	SQ/SQE 5 - 60
96 03 36 29	SQ/SQE 5 - 70	96 08 04 12	SQ/SQE 5 - 70
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 04 32 23	SQ/SQE 5 - 15 N	96 08 07 23	SQ/SQE 5 - 15 N
96 04 32 24	SQ/SQE 5 - 25 N	96 08 07 24	SQ/SQE 5 - 25 N
96 04 32 33	SQ/SQE 5 - 35 N	96 08 07 33	SQ/SQE 5 - 35 N
96 04 32 34	SQ/SQE 5 - 50 N	*)	
96 04 32 46	SQ/SQE 5 - 60 N	96 08 07 46	SQ/SQE 5 - 60 N
96 04 32 47	SQ/SQE 5 - 70 N	96 08 07 47	SQ/SQE 5 - 70 N
North America NPT 1 1/4"			
96 03 36 90	22 SQ/SQE - 40	96 08 04 21	22 SQ/SQE - 40
96 03 36 91	22 SQ/SQE - 80	96 08 04 22	22 SQ/SQE - 80
96 03 36 92	22 SQ/SQE - 120	96 08 04 31	22 SQ/SQE - 120
96 03 36 93	22 SQ/SQE - 160	*)	
96 03 36 94	22 SQ/SQE - 190	96 08 04 44	22 SQ/SQE - 190
96 03 36 95	22 SQ/SQE - 220	96 08 04 45	22 SQ/SQE - 220
JAPAN Rp 1			
96 03 36 24	SQ/SQE 5 - 15	96 08 03 88	SQ/SQE 5 - 15
96 03 36 25	SQ/SQE 5 - 25	96 08 03 89	SQ/SQE 5 - 25
96 03 36 26	SQ/SQE 5 - 35	96 08 03 98	SQ/SQE 5 - 35
96 03 36 27	SQ/SQE 5 - 50	*)	
96 03 36 28	SQ/SQE 5 - 60	96 08 04 11	SQ/SQE 5 - 60
Austria Rp 1 1/4			
96 04 05 41	SQ/SQE 5 - 15	96 08 06 90	SQ/SQE 5 - 15
96 04 05 42	SQ/SQE 5 - 25	96 08 06 91	SQ/SQE 5 - 25
96 04 05 51	SQ/SQE 5 - 35	96 08 07 00	SQ/SQE 5 - 35
96 04 05 63	SQ/SQE 5 - 50	*)	
96 04 05 64	SQ/SQE 5 - 60	96 08 07 13	SQ/SQE 5 - 60
96 04 05 65	SQ/SQE 5 - 70	96 08 07 14	SQ/SQE 5 - 70

*) The corresponding model B pump requires a bigger motor. Consequently, EITHER fit a smaller pump OR replace both pump and motor.

5.5 SQ/SQE 7, 30 SQ/SQE

The pump is not serviced with components/kits, but are replaced with complete pump end model B			
Product number model A		Product number model B	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 03 36 30	SQ/SQE 7 - 15	96 08 03 90	SQ/SQE 7 - 15
96 03 36 31	SQ/SQE 7 - 30	96 08 04 00	SQ/SQE 7 - 30
96 03 36 32	SQ/SQE 7 - 40	96 08 04 01	SQ/SQE 7 - 40
96 03 36 33	SQ/SQE 7 - 55	*)	
Europe, Australia , AISREG, N-APREG Rp 1 1/4			
96 04 32 25	SQ/SQE 7 - 15 N	96 08 07 25	SQ/SQE 7 - 15 N
96 04 32 35	SQ/SQE 7 - 30 N	96 08 07 35	SQ/SQE 7 - 30 N
96 04 32 36	SQ/SQE 7 - 40 N	96 08 07 36	SQ/SQE 7 - 40 N
96 04 32 48	SQ/SQE 7 - 55 N	*)	
North America NPT 1 1/4"			
96 03 36 96	30 SQ/SQE - 40	96 08 04 23	30 SQ/SQE - 40
96 03 36 97	30 SQ/SQE - 90	96 08 04 33	30 SQ/SQE - 90
96 03 36 98	30 SQ/SQE - 130	96 08 04 34	30 SQ/SQE - 130
96 03 36 99	30 SQ/SQE - 170	*)	
JAPAN Rp 1			
96 03 36 30	SQ/SQE 7 - 15	96 08 03 90	SQ/SQE 7 - 15
96 03 36 31	SQ/SQE 7 - 30	96 08 04 00	SQ/SQE 7 - 30
96 03 36 32	SQ/SQE 7 - 40	96 08 04 01	SQ/SQE 7 - 40
Austria Rp 1 1/4			
96 04 05 43	SQ/SQE 7 - 15	96 08 06 92	SQ/SQE 7 - 15
96 04 05 52	SQ/SQE 7 - 30	96 08 07 02	SQ/SQE 7 - 30
96 04 05 53	SQ/SQE 7 - 40	96 08 07 03	SQ/SQE 7 - 40
96 04 05 66	SQ/SQE 7 - 55	*)	

*) The corresponding model B pump requires a bigger motor. Consequently, EITHER fit a smaller pump OR replace both pump and motor.

6. Test specifications

SQ / SQE 1

Type	Stage	Flow m3/h	Pressure min. mvs	Pressure nom. mvs	Pressure max. mvs	Nom. effect P1/115V	Amps 115V	Nom. effect P1/230V	Amps 230V
SQ1-35	2	0	43	46	50	520	4.50	560	2.40
5-SQ-90		1	31	34	36				
SQ1-50	3	0	65	70	76	720	6.30	740	3.20
5-SQ-140		1	48	53	56				
SQ1-65	4	0	87	94	101	910	9.10	930	4.00
5-SQ-180		1	65	71	74				
SQ1-80	5	0	110	118	127			1140	4.90
5-SQ-230		1	83	90	93				
SQ1-95	6	0	132	142	153			1290	5.60
5-SQ-270		1	100	108	112				
SQ1-110	7	0	154	166	178			1490	6.50
5-SQ-320		1	117	126	132				
SQ1-125	8	0	176	190	204			1730	7.50
5-SQ-360		1	134	144	152				
SQ1-140	9	0	198	214	229			1970	8.40
5-SQ-410		1	151	162	171				
SQ1-155	10	0	221	238	255			2190	9.50
5-SQ-450		1	168	181	190				

SQ / SQE 2

Type	Stage	Flow m3/h	Pressure min. mvs	Pressure nom. mvs	Pressure max. mvs	Nom. effect P1/115V	Amps 115V	Nom. effect P1/230V	Amps 230V
SQ2-35	2	0	41	44	49	730	6.40	740	3.20
10-SQ-110		2	32	35	38				
SQ2-55	3	0	62	68	74	1000	8.90	1020	4.40
10-SQ-160		2	50	54	59				
SQ2-70	4	0	81	88	96			1290	5.60
10-SQ-200		2	66	71	78				
SQ2-85	5	0	100	109	119			1450	6.30
10-SQ-240		2	81	88	96				
SQ2-100	6	0	121	132	143			1840	8.00
10-SQ-290		2	100	108	118				
SQ2-115	7	0	143	155	168			2120	9.20
10-SQ-330		2	119	128	139				

Water temperature: 20-25 °C

Max. testtime: 5 min

To be tested at nominal voltage and frequency

Flow adjusted to +/- 0.02

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

SQ / SQE 3

Type	Stage	Flow m3/h	Pressure min. mvs	Pressure nom. mvs	Pressure max. mvs	Nom. effect P1/115V	Amps 115V	Nom. effect P1/230V	Amps 230V
SQ3-30	2	0	32	35	39	720	6.30	740	3.20
15-SQ-70		3	23	26	28				
SQ3-40	3	0	51	55	61	970	8.60	1000	4.30
15-SQ-110		3	38	42	46				
SQ3-55	4	0	67	73	80			1250	5.40
15-SQ-150		3	51	56	61				
SQ3-65	5	0	84	91	99			1490	6.50
15-SQ-180		3	63	70	76				
SQ3-80	6	0	101	110	119			1770	7.70
15-SQ-220		3	76	84	91				
SQ3-95	7	0	118	128	139			1990	8.70
15-SQ-250		3	89	98	107				
SQ3-105	8	0	135	146	159			2300	10.00
15-SQ-290		3	101	113	122				

SQ / SQE 5

Type	Stage	Flow m3/h	Pressure min. mvs	Pressure nom. mvs	Pressure max. mvs	Nom. effect P1/115V	Amps 115V	Nom. effect P1/230V	Amps 230V
SQ5-15	1	0	16	18	20	490	4.20	410	2.20
22-SQ-40		5	9	11	13				
SQ5-25	2	0	33	36	40	850	7.50	880	3.70
22-SQ-80		5	20	23	26				
SQ5-35	3	0	49	53	59			1200	5.20
22-SQ-120		5	31	36	40				
SQ5-50	4	0	65	71	77			1540	6.70
22-SQ-160		5	43	48	53				
SQ5-60	5	0	81	88	96			1880	8.20
22-SQ-190		5	54	61	66				
SQ5-70	6	0	97	106	115			2250	9.80
22-SQ-220		5	65	73	81				

SQ / SQE 7

Type	Stage	Flow m3/h	Pressure min. mvs	Pressure nom. mvs	Pressure max. mvs	Nom. effect P1/115V	Amps 115V	Nom. effect P1/230V	Amps 230V
SQ7-15	1	0	19	20	23	690	6.00	720	3.10
30-SQ-40		7	6	9	12				
SQ7-30	2	0	38	42	46			1280	5.50
30-SQ-90		7	19	23	27				
SQ7-40	3	0	58	63	69			1820	7.90
30-SQ-130		7	32	37	42				

Water temperature: 20-25 °C

Max. testtime: 5 min

To be tested at nominal voltage and frequency

Flow adjusted to +/- 0.02

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