50 Hz

e-SV™ Series
1, 3, 5, 10, 15, 22
33, 46, 66, 92, 125

VERTICAL MULTISTAGE ELECTRIC PUMPS
EQUIPPED WITH IE3 MOTORS

ErP 2009/125/EC

Cod. 191002071 Rev. E Ed.01/2015

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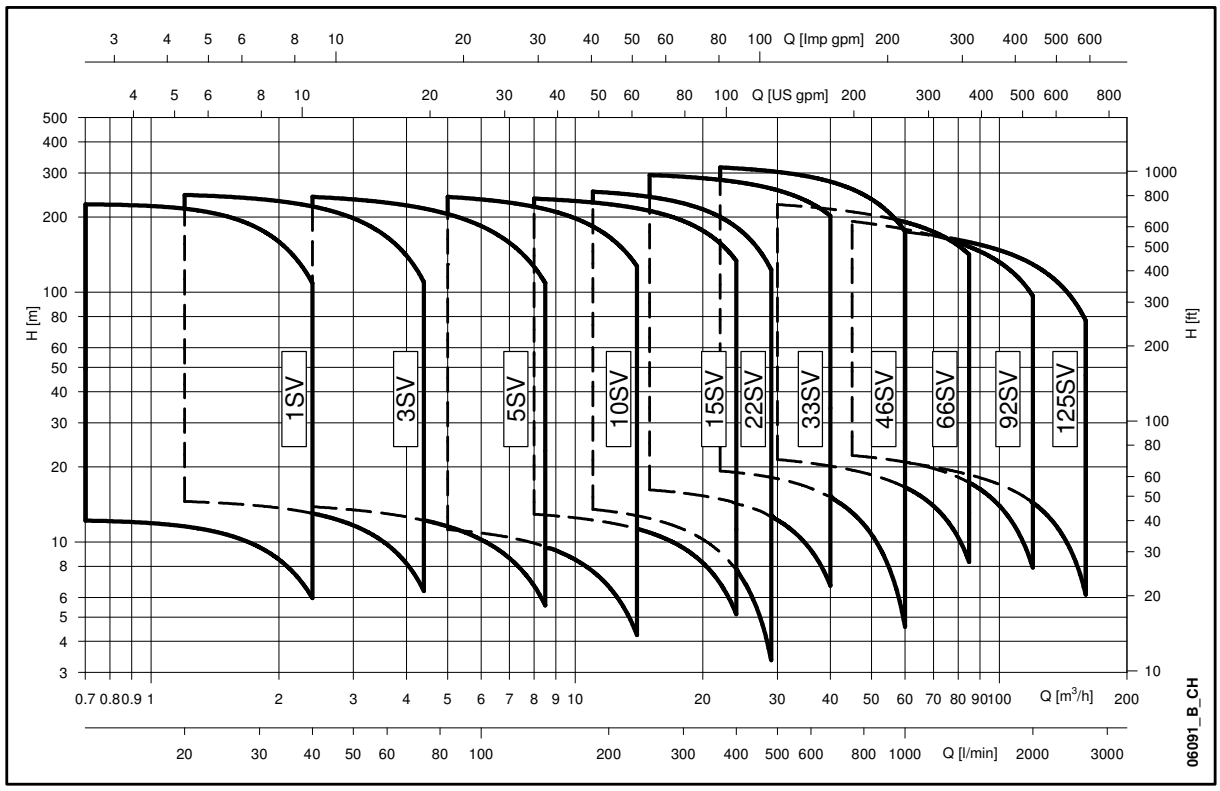
e-SV™ SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz



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CONTENTS

Vertical Multistage Electric Pumps

e-SV™ series

MARKET SECTORS

CIVIL, AGRICULTURAL, LIGHT INDUSTRY, WATER TREATMENT, HEATING AND AIR CONDITIONING.

APPLICATIONS

- Handling of water, free of suspended solids, in the civil, industrial and agricultural sectors.
- Pressure boosting and water supply systems.
- Irrigation systems.
- Wash systems.
- Water treatment plants.
- Handling of moderately aggressive liquids, demineralised water, water and glycol, etc.
- Circulation of hot and cold water for heating, cooling and conditioning systems.
- Boiler feed.
- Pharmaceutical food & beverage industries.

❑ **LIQUID END MADE ENTIRELY OF STAINLESS STEEL IN THE 1, 3, 5, 10, 15, 22 m^3/h STANDARD VERSION**

❑ **STANDARD MECHANICAL SEAL CAN BE REPLACED WITHOUT REMOVING THE MOTOR FROM THE PUMP (FOR 10, 15, 22, 33, 46, 66, 92, 125SV)**

❑ **STANDARD MOTOR**

❑ **CAN BE USED WITH THE HYDROVAR™ CONTROL SYSTEM IN ORDER TO MANAGE THE OPERATION OF THE PUMP BASED ON THE SYSTEM CONDITIONS AND SAVE ENERGY**

SPECIFICATIONS

PUMP

The SV pump is a non-self priming vertical multistage pump coupled to a standard motor.
The liquid end, located between the upper cover and the pump casing, is held in place by tie rods. The pump casing is available with different configurations and connection types.

- Delivery: up to **160 m^3/h**.
- Head: up to **330 m**.
- Temperature of pumped liquid:
  - from -30°C to +120°C for standard version.
- Maximum operating **pressure**:
  - 1, 3, 5, 10, 15, 22SV with oval flanges: 16 bar (PN16) at 50°C.
  - 1, 3, 5, 10, 15, 22SV with round flanges or Victaulic®, Clamp or DIN 11851 connections: 25 bar (PN 25) at 50°C.
  - 33, 46SV: 16, 25, 40 bar (PN 16, PN 25 or PN 40) at 50°C.
  - 66, 92, 125SV: 16 or 25 bar (PN 16 or PN 25) at 50°C.
- Hydraulic performance compliant with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A).
- Direction of rotation: clockwise looking at the pump from the top down (marked with an arrow on the adapter and on the coupling).

MOTOR

- Squirrel cage in short circuit, enclosed construction with external ventilation.
- IP55 protection.
- Class 155 (F) insulation.
- Performances according to EN 60034-1.
- Standard voltage:
  - Single-phase version: 220-240 V, 50 Hz.
  - Three-phase version: 220-240/380-415 V, 50 Hz for power up to 3 kW, 380-415/660-690 V, 50 Hz for power above 3 kW.

i-ALERT™

Patented system which constantly measures vibrations and signals any operating faults that could break the pump.
Available **on request** on all the range of electric pumps e-SV™.

CHARACTERISTICS OF 1, 3, 5, 10, 15, 22SV SERIES

- Vertical multistage centrifugal pump. All metal parts in contact with the pumped liquid are made of stainless steel.
- The following versions are available:
  - **F**: round flanges, in-line delivery and suction ports, AISI 304.
  - **T**: oval flanges, in-line delivery and suction ports, AISI 304.
  - **R**: round flanges, delivery port above the suction port, with four adjustable positions, AISI 304.
  - **N**: round flanges, in-line delivery and suction ports, AISI 316.
  - **V**, **P**: Victaulic® couplings, in-line delivery and suction ports, AISI 316.
  - **C**: Clamp couplings (DIN 32676), in-line delivery and suction ports, AISI 316.
  - **K**: threaded couplings, (DIN 11851), in-line delivery and suction ports, AISI 316.
- Reduced axial thrusts enable the use of **standard motors** that are easily found in the market.
- Mechanical seal according to EN 12756 (ex DIN 24960) and ISO 3069 for 1, 3, 5SV and 10, 15, 22SV (≤ of 4 kW) series.
- **Balanced mechanical seal** according to EN 12756 (ex DIN 24960) and ISO 3069, which **can be replaced without removing the motor from the pump** for 10, 15 and 22SV (≥ of 5,5 kW) series.
- Seal housing chamber designed to prevent the accumulation of air in the critical area next to the mechanical seal.
- A second plug is available for 10, 15, 22SV series.
- Versions with round flanges that can be coupled to counter-flanges, according to EN 1092.
- Threaded, oval counter-flanges made of stainless steel are standard supply for the T versions.
- Round counter-flanges made of stainless steel are available on request for the F, R and N versions.
- Easy maintenance. No special tools required for assembly or disassembly.
- **The pumps for F, T, R, N versions are certified for drinking water use (WRAS and ACS certified)**.
- Standard version for temperatures ranging from -30°C to +120°C.

CHARACTERISTICS OF 33, 46, 66, 92, 125SV SERIES

- The following versions are available:
  - **G**: vertical multistage centrifugal pump with impellers, diffusers and outer sleeve made entirely of stainless steel, and with pump casing and motor adaptor made of cast iron.
  - **N**, **P**: version made entirely of AISI 316 stainless steel.
- Innovative axial load compensation system on pumps with higher head. This ensures reduced axial thrusts and enables the use of **standard motors** that are easily found in the market.
- **Balanced mechanical seal** according to EN 12756 (ex DIN 24960) and ISO 3069, which **can be replaced without removing the motor from the pump**.
- Seal housing chamber designed to prevent the accumulation of air in the critical area next to the mechanical seal.
- **The pumps for G, N versions are certified for drinking water use (WRAS and ACS certified)**.
- Standard version for temperatures ranging from -30°C to +120°C.
- Pump body fitted with couplings for installing pressure gauges on both suction and delivery flanges.
- In-line ports with round flanges that can be coupled to counter-flanges, in compliance with EN 1092.
- Mechanical sturdiness and easy maintenance. No special tools required for assembly or disassembly.

Inlet pressure of the pump plus static pressure of the water within the pump cannot exceed the nominal pressure (PN). Using different motors from those provided could limit inlet pressure.
In this event please contact customer services.

AVAILABLE ON REQUEST

Special versions are available to suit many applications. For details see page 62.

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GENERAL CHARACTERISTICS
2-POLE SV

	1SV	3SV	5SV	10SV	15SV	22SV	33SV	46SV	66SV	92SV	125SV
Max efficiency flow (m^3/h)	1,7	3	5,5	10,5	16,5	20,5	31	43	72	90	120
Flow range (m^3/h)	0,7÷2,4	1,2÷4,4	2,4÷8,5	5÷14	8÷24	11÷29	15÷40	22÷60	30÷85	45÷120	60÷160
Maximum head (m)	230	250	250	250	250	260	300	360	230	210	220
Motor power (kW)	0,37÷2,2	0,37÷3	0,37÷5.5	0,75÷11	1,1÷15	1,1÷18,5	2,2÷30	3÷45	4÷45	5,5÷45	7,5÷55
Max η (%) of pump	50	60	70	71	72	73	77	79	78	80	78
Standard temperature (°C)	-30 +120										

1-125sv_2p50-en_b_tg

1, 3, 5, 10, 15, 22SV VERSIONS

TYPE		2 POLES 1SV	3SV	5SV	10SV	15SV	22SV
F	AISI 304, PN25. In-line ports, round flanges	•	•	•	•	•	•
T	AISI 304, PN16. In-line ports, oval flanges	•	•	•	•	•	•
R	AISI 304, PN25. Discharge port above suction, round flanges	•	•	•	•	•	•
N	AISI 316, PN25. In-line ports, round flanges	•	•	•	•	•	•
V	AISI 316, PN25. Victaulic® couplings	•	•	•	•	•	•
P	AISI 316, PN40. Victaulic® couplings	•	•	•	•	•	•
C	AISI 316, PN25. Clamp couplings (DIN 32676)	•	•	•	•	•	•
K	AISI 316, PN25. Threaded couplings (DIN 11851)	•	•	•	•	•	•

• = Available. For P versions see specific catalogue.

1-22sv_2p50-en_b_tc

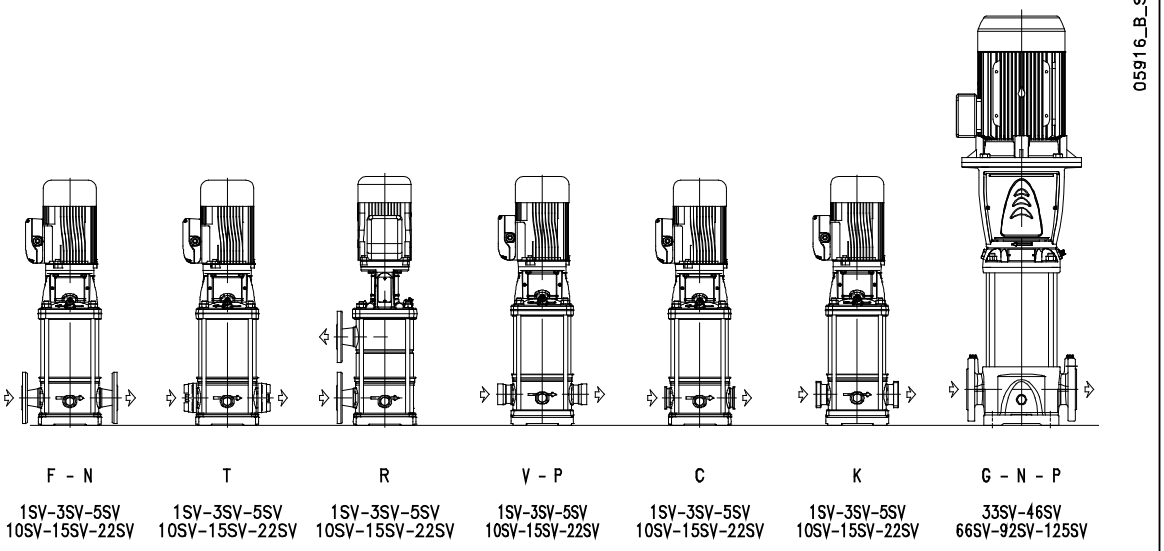
33, 46, 66, 92, 125SV VERSIONS

TYPE		2 POLES SV 33SV	46SV	66SV	92SV	125SV
G	CAST IRON PUMP CASING, LIQUID END MADE OF STAINLESS STEEL, IN-LINE ROUND FLANGES PN16, PN25 OR PN40 DEPENDING ON NUMBER OF STAGES AND MODEL.	•	•	•	•	•
N	ALL AISI 316 STAINLESS STEEL, IN-LINE ROUND FLANGES, PN16, PN25 OR PN40 DEPENDING ON NUMBER OF STAGES AND MODEL.	•	•	•	•	•
P	ALL AISI 316 STAINLESS STEEL. FLANGES,IN-LINE ROUND, PN40.	•	•	•	•	•

• = Available. For P versions see specific catalogue.

33-125sv_2p50-en_a_tc

VERSION DIAGRAM



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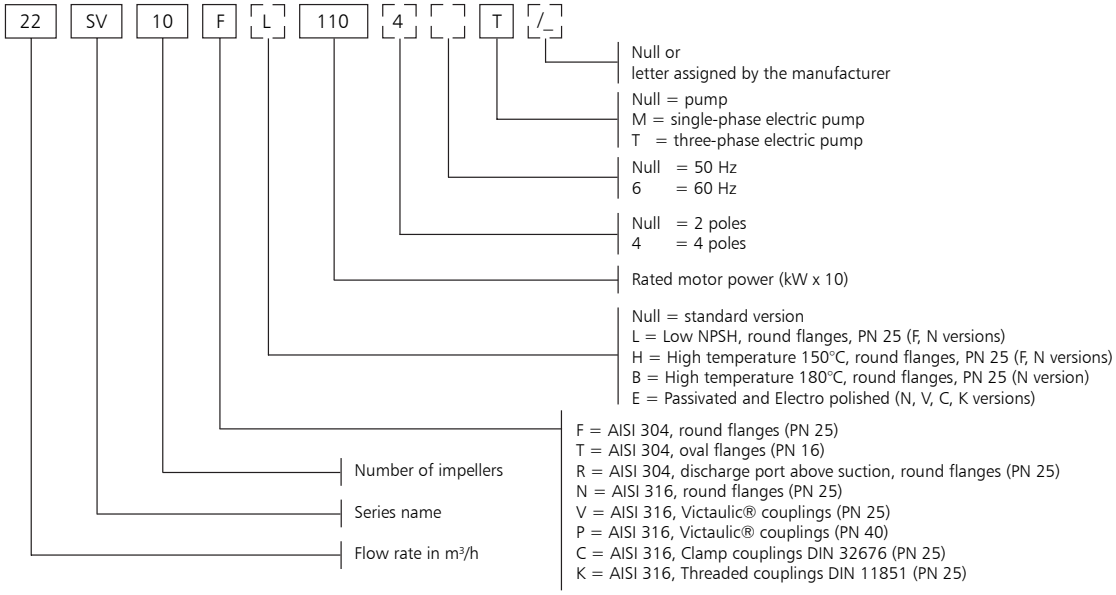
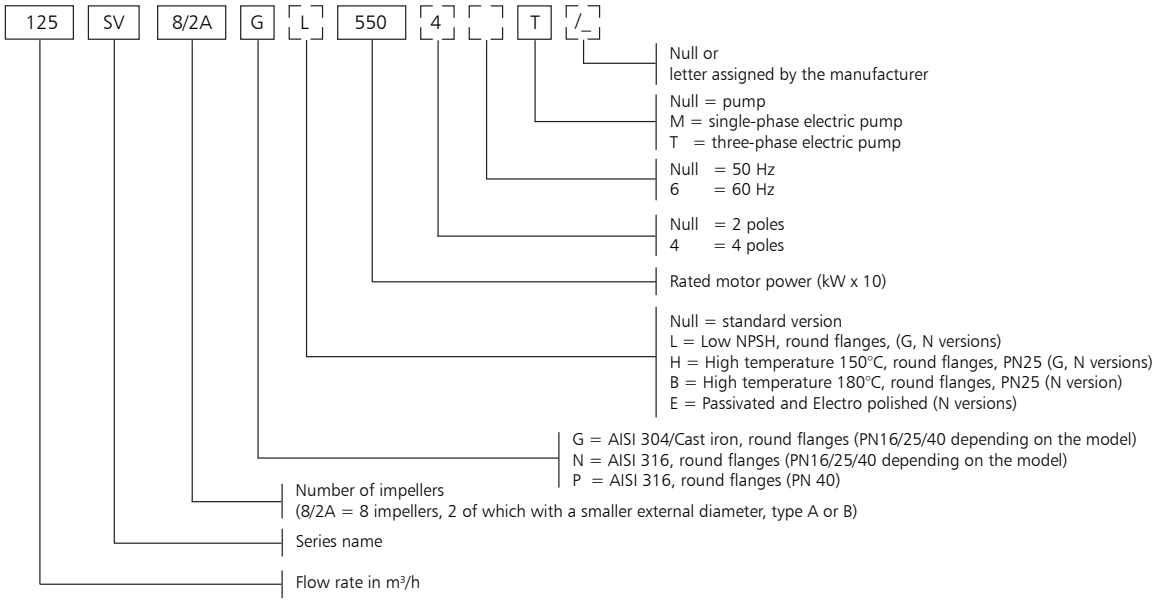
IDENTIFICATION CODE

1, 3, 5, 10, 15, 22SV SERIES



EXAMPLE: 22SV10F110T
SV series electric pump, flow rate 22 m³/h, number of impellers 10,
F version (AISI 304), round flanges, rated motor power 11 kW, 50 Hz frequency, three-phase.

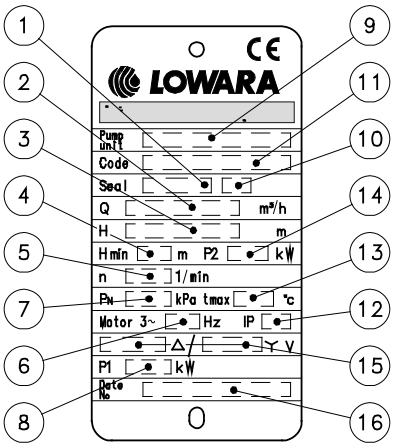
33, 46, 66, 92, 125SV SERIES



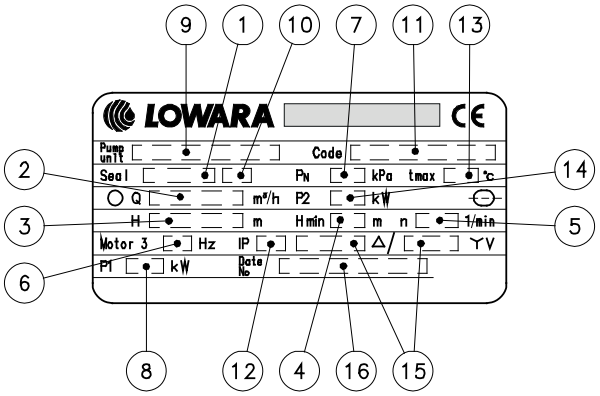
EXAMPLE: 125SV8/2AG550T
SV series electric pump, flow rate 125 m³/h, number of impellers 8, 2 of which with a smaller external diameter
(type A), G version (AISI 304/Cast iron), round flanges, rated motor power 55 kW, 50 Hz frequency, three-phase.

RATING PLATE

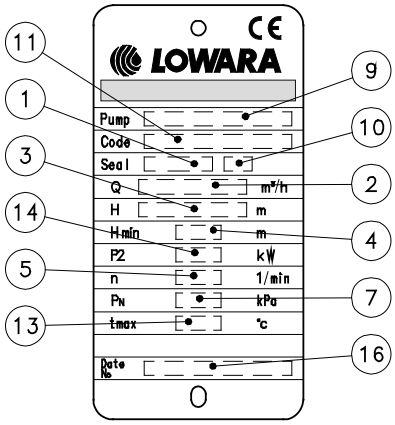
1-22SV (ELECTRIC PUMP)



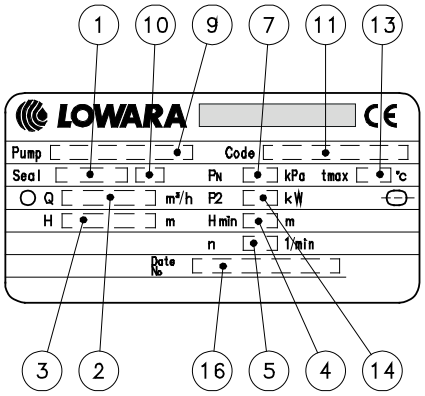
33-125SV (ELECTRIC PUMP)



1-22SV (PUMP)



33-125SV (PUMP)



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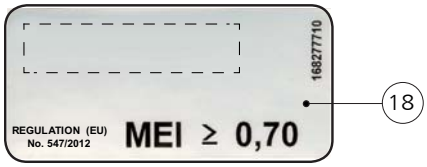
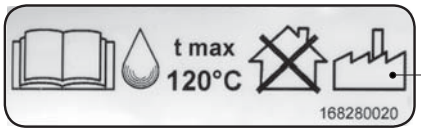
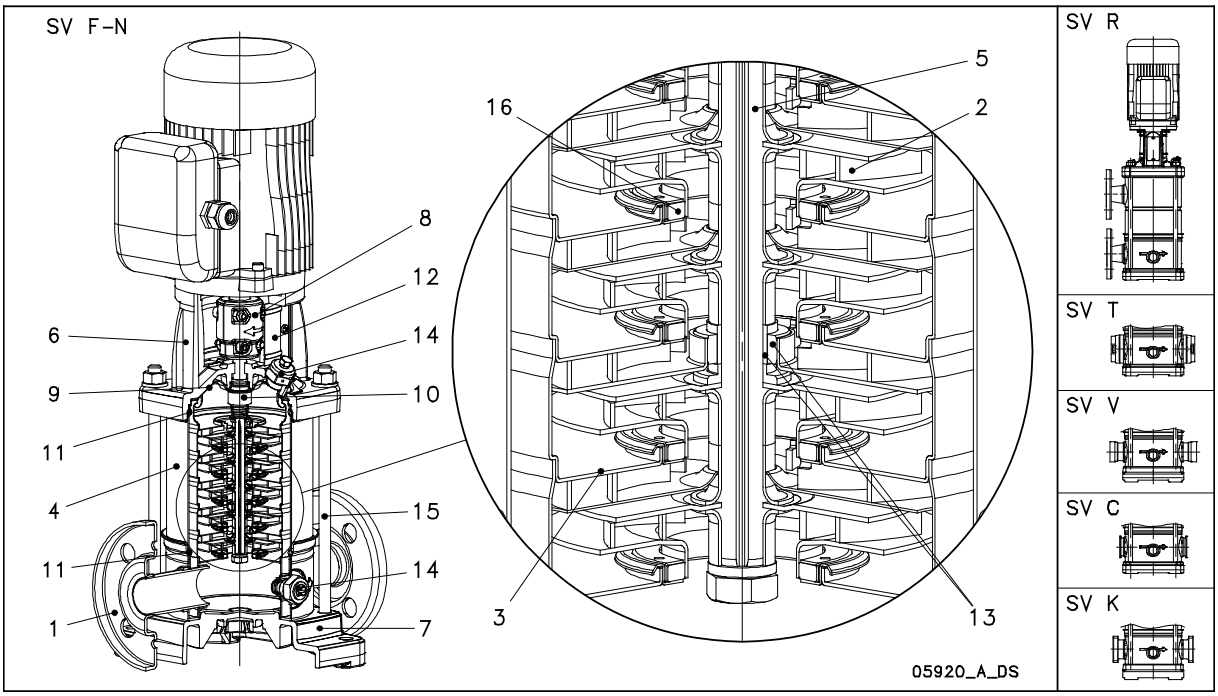




LEGEND

1 - Mechanical seal material identification code
2 - Capacity range
3 - Head range
4 - Minimum head (EN 60335-2-41)
5 - Speed
6 - Frequency
7 - Maximum operating pressure
8 - Electric pump unit absorbed power
9 - Pump / electric pump unit type
10 - O-ring material identification code
11 - Electric pump unit / pump part number
12 - Protection class
13 - Maximum operating liquid temperature (uses as EN 60335-2-41)
14 - Motor nominal power
15 - Rated voltage range
16 - Serial number (date + progressive number)
17 - Maximum operating liquid temperature (uses other than EN 60335-2-41)
18 - MEI label (Regulation (EU) n. 547/2012)

1, 3, 5SV SERIES and 10, 15, 22SV SERIES ≤ 4 kW
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



F, T, R VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Outer sleeve	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Shaft	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
7	Base	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Seal housing	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
15	Tie rods	Galvanized steel	EN 10277-3-36SMnPb14 (1.0765)	
16	Wear ring	Technopolymer PPS		

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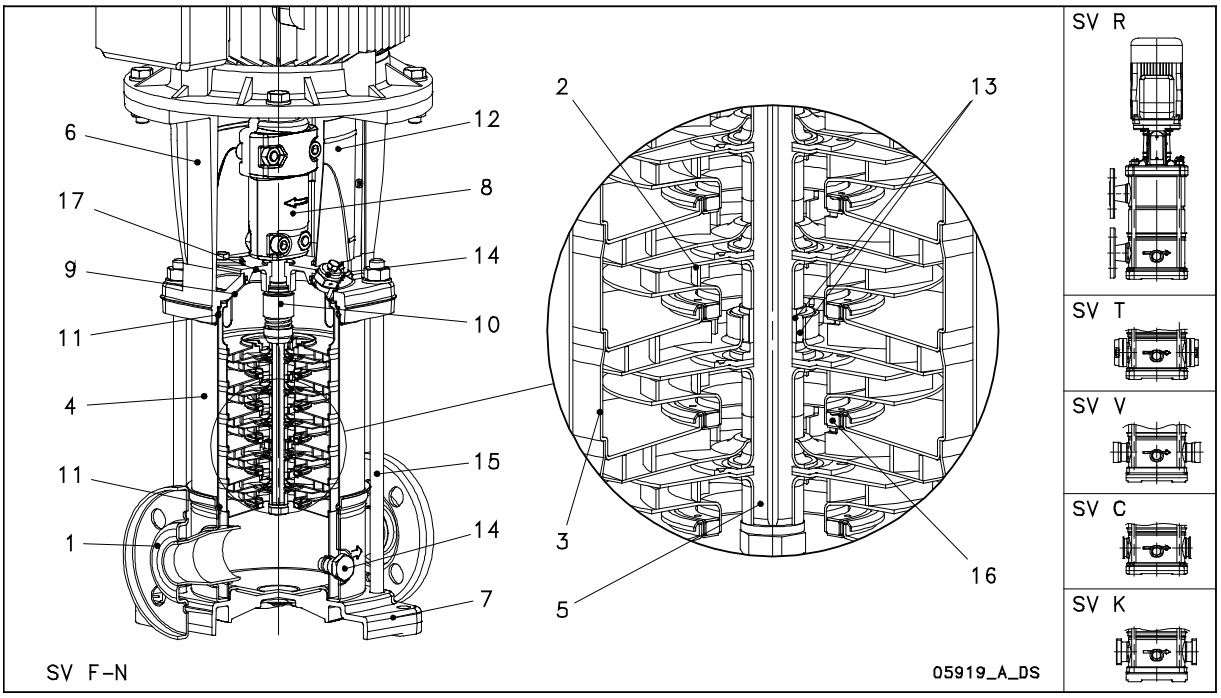
N, V, C, K VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser and upper spacer	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Outer sleeve	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
7	Base	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
15	Tie rods	Stainless steel	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431
16	Wear ring	Technopolymer PPS		

1-22sv-nvck-en_a_tm

10, 15, 22SV SERIES ≥ 5,5 kW
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



F, T, R VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
2	Impeller	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Outer sleeve	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Shaft	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
7	Base	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Seal plate	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
15	Tie rods	Stainless steel	EN 10277-3-36SMnPb14 (1.0765)	
16	Wear ring	Technopolymer PPS		
17	Seal gland	Stainless steel	EN 10213-4-GX5CrNi19-10 (1.4308)	AISI 304

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N, V, C, K VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Outer sleeve	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
7	Base	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Seal plate	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Fill / drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
15	Tie rods	Stainless steel	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431
16	Wear ring	Technopolymer PPS		
17	Seal gland	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	AISI 316

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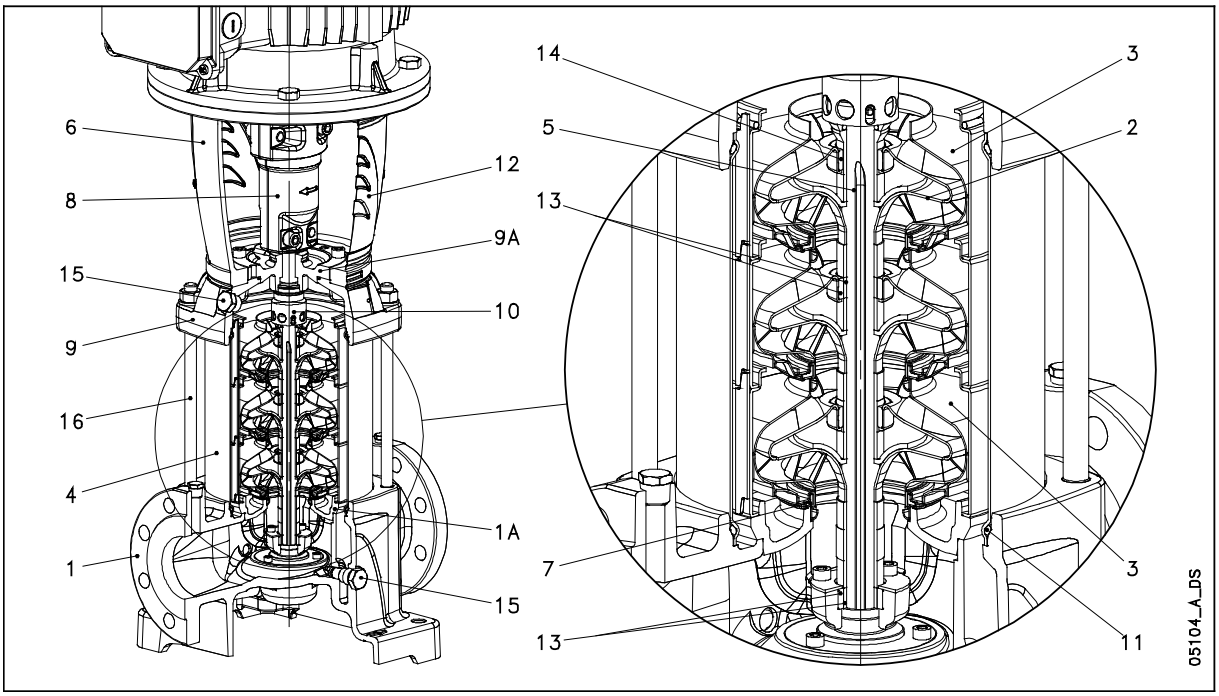
33, 46, 66, 92SV SERIES
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



G VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
1A	Lower support	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
4	Outer sleeve	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Shaft	Stainless steel	EN 10088-1 - X17CrNi16-2 (1.4057)	AISI 431
6	Adapter	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
7	Wear ring	Technopolymer PPS		
8	Coupling	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
9	Upper head	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
9A	Seal housing	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Bushing for diffuser	Carbon		
15	Fill / Drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Tie rods	Galvanized steel	EN 10277-3-36SMnPb14 (1.0765)	-

33-92sv-g-en_a_tm

N VERSIONS

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
1A	Lower support	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
2	Impeller	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
3	Diffuser	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Outer sleeve	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Duplex stainless steel	EN 10088-1-X2CrNiMoN22-5-3 (1.4462)	UNS S 31803
6	Adapter	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
7	Wear ring	Technopolymer PPS		
8	Coupling	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
9	Upper head	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
9A	Seal housing	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
10	Mechanical seal	Silicon carbide / Carbon / EPDM		
11	Elastomers	EPDM		
12	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Shaft sleeve and bushing	Tungsten carbide		
14	Bushing for diffuser	Carbon		
15	Fill / drain / air plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Tie rods	Stainless steel	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431

33-92sv-n-en_a_tm

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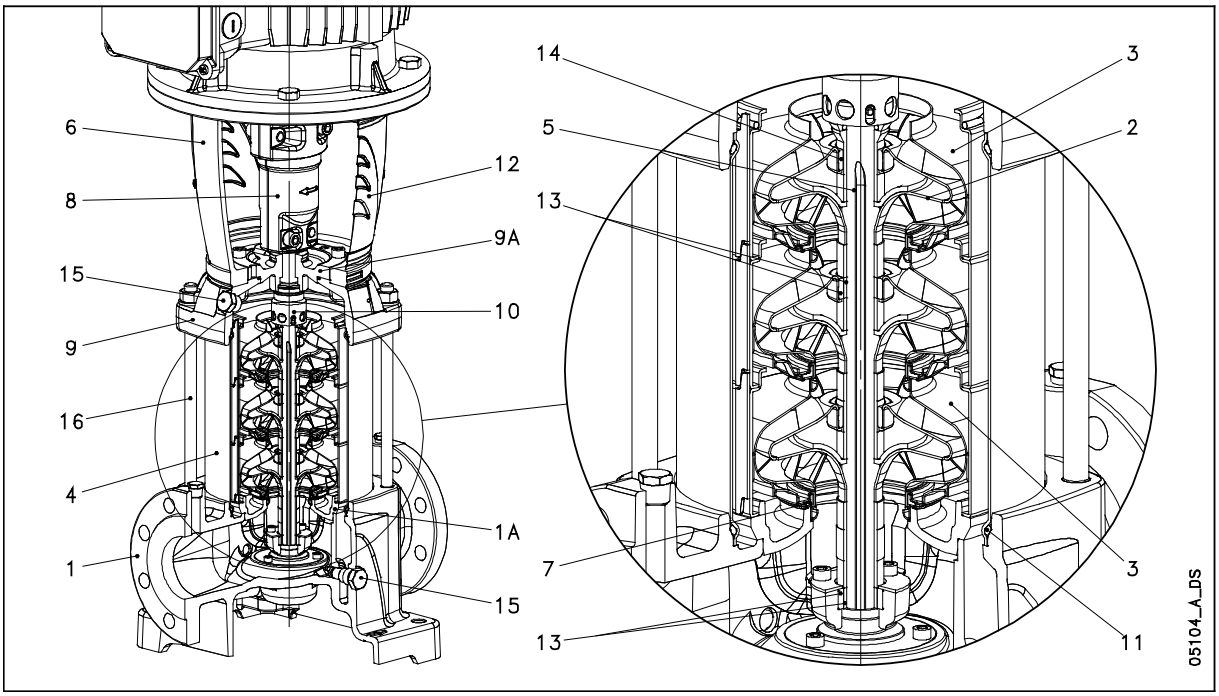
125SV SERIES
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



G VERSIONS

N° RIF.	DENOMINAZIONE	MATERIALE	NORME DI RIFERIMENTO	
			EUROPA	USA
1	Corpo pompa	Ghisa	EN 1561-GJL-250 (JL1040)	ASTM Class 35
1A	Supporto inferiore	Acciaio inox	EN 10213-GX5CrNi19-10 (1.4308)	AISI 304
2-3	Girante, Diffusore	Acciaio inox	EN 10213-GX5CrNi19-10 (1.4308)	AISI 304
4	Camicia esterna	Acciaio inox	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
5	Albero	Acciaio inox	EN 10088-1 - X17CrNi16-2 (1.4057)	AISI 431
6	Lanterna (fino a 45 kW)	Ghisa	EN 1561-GJL-200 (JL1030)	ASTM Class 25
	Lanterna (per potenze maggiori)	Ghisa	EN 1563-GJS-500-7 (JS1050)	ASTM A 536 80-55-06
7	Anello di rasamento	Tecnopolimero PPS		
8	Giunto (fino a 45 kW)	Ghisa	EN 1561-GJL-200 (JL1030)	ASTM Class 25
	Giunto (per potenze maggiori)	Ghisa	EN 1563-GJS-500-7 (JS1050)	ASTM A 536 80-55-06
9-9A	Testata superiore, Portatenuta	Ghisa	EN 1561-GJL-250 (JL1040)	ASTM Class 35
10	Tenuta meccanica	Carburo di silicio / Carbone / EPDM		
11	Elastomeri	EPDM		
12	Protezione giunto	Acciaio inox	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Camicia d'albero e boccola	Carburo di tungsteno		
14	Boccola per diffusore	Carbone		
15	Tappi carico/scarico/sfiato	Acciaio inox	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Tiranti	Acciaio zincato	EN 10277-3-36SMnPb14 (1.0765)	-
17	Anello adattatore	Acciaio inox	EN 10213-GX5CrNi19-10 (1.4308)	AISI 304

125sv-g_a_tm

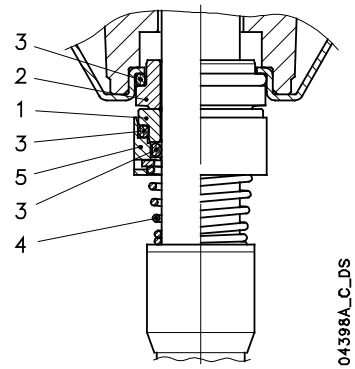
N VERSIONS

N° RIF.	DENOMINAZIONE	MATERIALE	NORME DI RIFERIMENTO	
			EUROPA	USA
1	Corpo pompa	Acciaio inox	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316)
1A	Supporto inferiore	Acciaio inox	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316)
2-3	Girante, Diffusore	Acciaio inox	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316)
4	Camicia esterna	Acciaio inox	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Albero	Acciaio inox duplex	EN 10088-1-X2CrNiMoN22-5-3 (1.4462)	UNS S 31803
6	Lanterna (fino a 45kW)	Ghisa	EN 1561-GJL-200 (JL1030)	ASTM Class 25
	Lanterna (per potenze maggiori)	Ghisa	EN 1563-GJS-500-7 (JS1050)	
7	Anello di rasamento	Tecnopolimero PPS		
8	Giunto (fino a 45kW)	Ghisa	EN 1561-GJL-200 (JL1030)	ASTM Class 25
	Giunto (per potenze maggiori)	Ghisa	EN 1563-GJS-500-7 (JS1050)	
9-9A	Testata superiore, Portatenuta	Acciaio inox	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316)
10	Tenuta meccanica	Carburo di silicio / Carbone / EPDM		
11	Elastomeri	EPDM		
12	Protezione giunto	Acciaio inox	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
13	Camicia d'albero e boccola	Carburo di tungsteno		
14	Boccola per diffusore	Carbone		
15	Tappi carico / scarico /sfiato	Acciaio inox	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Tiranti	Acciaio inox	EN 10088-1-X17CrNi16-2 (1.4057)	AISI 431
17	Anello adattatore	Acciaio inox	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316)

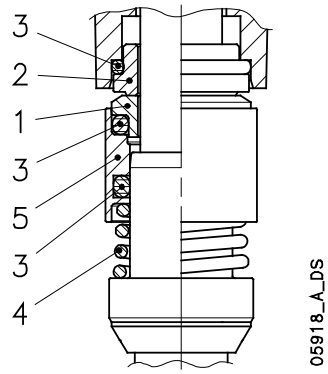
125sv-n_a_tm

e-SV™ SERIES
MECHANICAL SEALS, ACCORDING TO EN 12756

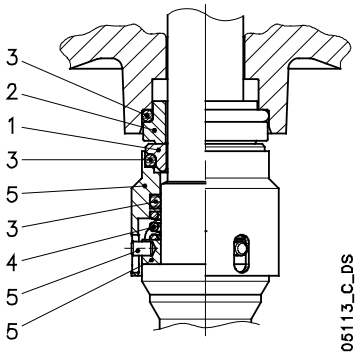
1, 3, 5SV (all models)
10, 15, 22SV ≤ 4 kW



10, 15, 22SV ≥ 5,5 kW



33, 46, 66, 92, 125SV



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
Q_1 : Silicon Carbide	E : EPDM	G : AISI 316
B : Resin impregnated carbon	V : FKM (FPM)	
C : Special resin impregnated carbon	T : PTFE	

TYPE OF SEAL

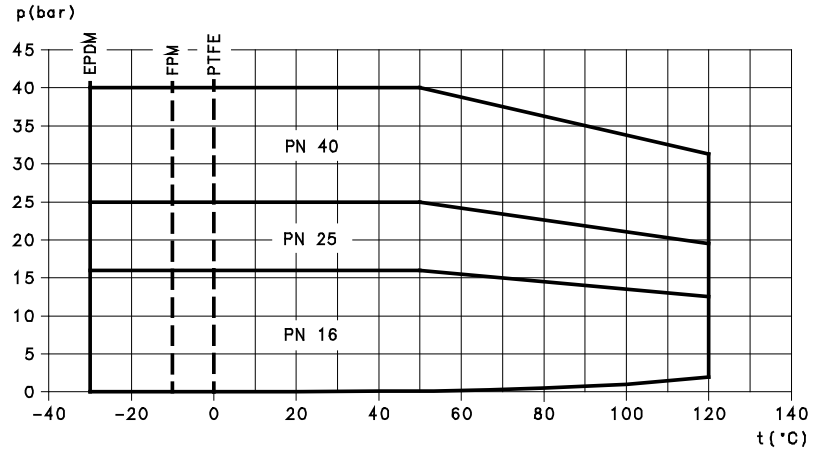
sv_ten-mec-en_b_tm

TYPE	POSITION 1 ROTATING PART	POSITION 2 STATIONARY PART	POSITION 3 ELASTOMERS	POSITION 4 SPRINGS	POSITION 5 OTHER COMPONENTS	TEMPERATURE (°C)
STANDARD MECHANICAL SEAL						
Q_1 B E G G	Q_1	B	E	G	G	-30 +120
OTHER TYPES OF AVAILABLE MECHANICAL SEAL						
Q_1 Q_1 E G G	Q_1	Q_1	E	G	G	-30 +120
Q_1 B V G G	Q_1	B	V	G	G	-10 +120
Q_1 Q_1 V G G	Q_1	Q_1	V	G	G	-10 +120
*Q_1 C T G G	Q_1	C	T	G	G	0 +120
*Q_1 Q_1 T G G	Q_1	Q_1	T	G	G	0 +120

* Versions with anti-rotation lock pin of the fixed part.

sv_tipi-ten-mec-en_b_tc

PRESSURE/TEMPERATURE APPLICATION LIMITS FOR COMPLETE PUMP (APPLICABLE WITH ANY OF THE SEALS LISTED ABOVE)



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COMPATIBILITY CHART FOR MATERIALS IN CONTACT WITH MOST COMMONLY USED LIQUIDS

LIQUID	CONCENTRATION (%)	TEMPERAT. MIN/MAX (°C)	SPECIF. WEIGHT (Kg/dm^3)	1, 3, 5, 10, 15, 22 SV VERSION		33, 46, 66, 92, 125 SV VERSION		RECOMMEND. SEAL	ELASTOM.
				Standard	N	Standard	N		
Acetic acid	80	-10 +70	1,05	•	•		•	Q_1BEGG	E
Alkaline degreaser	5	80		•	•	•	•	Q_1Q_1VGG	V
Aluminium sulfate	30	-5 +50	2,71		•		•	Q_1Q_1EGG	E
Ammonia in water	25	-20 +50	0,99	•	•		•	Q_1BEGG	E
Ammonium sulfate	10	-10 +60	1,77		•		•	Q_1Q_1EGG	E
Benzoic acid	70	0 +70	1,31	•	•		•	Q_1BVGG	V
Boric acid	saturated	-10 +90	1,43	•	•		•	Q_1Q_1VGG	V
Butyl alcohol	100	-5 +80	0,81	•	•	•	•	Q_1BVGG	V
Caustic soda	25	0 +70	2,13	•	•	•	•	Q_1Q_1EGG	E
Chloroform	100	-10 +30	1,48	•	•	•	•	Q_1BVGG	V
Citric acid	5	-10 +70	1,54	•	•		•	Q_1BEGG	E
Cleaning products	10	-5 +100		•	•	•	•	Q_1Q_1VGG	V
Copper sulfate	20	0 +30	2,28		•		•	Q_1Q_1VGG	V
Cutting fluid	100	-5 +110	0,90	•	•	•	•	Q_1BVGG	V
Deionised, demineralised water	100	-25 +110	1	•	•	•	•	Q_1BEGG	E
Denatured alcohol	100	-5 +70	0,81	•	•	•	•	Q_1BEGG	E
Diathermic oil	100	-5 +110	0,90	•	•	•	•	Q_1BVGG	V
Emulsion oil and water	any	-5 +90		•	•	•	•	Q_1BVGG	V
Ethyl alcohol	100	-5 +40	0,81	•	•	•	•	Q_1BEGG	E
Ethylene glycol	30	-30 +120			•		•	Q_1BEGG	E
Formaldehyde	100	0 +30	1,13	•	•	•	•	Q_1Q_1TGG	T
Formic acid	5	-15 +25	1,22	•	•		•	Q_1BEGG	E
Glycerine	100	+20 +90	1,26	•	•	•	•	Q_1BEGG	E
Hydraulic oil	100	-5 +110		•	•	•	•	Q_1BVGG	V
Hydrochloric acid	2	-5 +25	1,20		•		•	Q_1Q_1VGG	V
Hydroxide sodium	25	0 +70		•	•	•	•	Q_1Q_1EGG	E
Iron sulfate	10	-5 +30	2,09		•		•	Q_1BEGG	E
Methyl alcohol	100	-5 +40	0,79	•	•	•	•	Q_1BEGG	E
Mineral oil	100	-5 +110	0,94	•	•	•	•	Q_1BVGG	V
Nitric acid	50	-5 +30	1,48	•	•		•	Q_1Q_1VGG	V
Perchloroethylene	100	-10 +30	1,60	•	•	•	•	Q_1BVGG	V
Phosphates-polyphosphates	10	-5 +90			•		•	Q_1Q_1VGG	V
Phosphoric acid	10	-5 +30	1,33		•		•	Q_1BEGG	E
Propyl alcohol (Propanol)	100	-5 +80	0,80	•	•	•	•	Q_1BEGG	E
Propylene glycol	30	-30 +120		•	•	•	•	Q_1BEGG	E
Sodium bicarbonate (Baking soda)	saturated				•		•	Q_1BEGG	E
Sodium hypochlorite	1	-10 +25			•		•	Q_1Q_1VGG	V
Sodium nitrate	saturated	-10 +80	2,25	•	•	•	•	Q_1BEGG	E
Sodium sulfate	15	-10 +40	2,60	•	•	•	•	Q_1Q_1EGG	E
Sulphuric acid	2	-10 +25	1,84		•		•	Q_1BVGG	V
Tannic acid	20	0 +50			•		•	Q_1BEGG	E
Tartaric acid	50	-10 +25	1,76	•	•		•	Q_1Q_1VGG	V
Trichloroethylene	100	-10 +40	1,46	•	•	•	•	Q_1BVGG	V
Uric acid	80	-10 +80	1,89	•	•		•	Q_1BEGG	E
Vegetable oil	100	-5 +110	0,95	•	•	•	•	Q_1BEGG	E
Water	100	-5 +120		•	•	•	•	Q_1BEGG	E
Water condensate	100	-5 +100	1	•	•	•	•	Q_1BEGG	E
Water detergents, mineral oils mixture	10	-5 +80		•	•	•	•	Q_1Q_1VGG	V

tab-comp-sv-en_b_tm

The above table indicates the compatibility of materials depending on the pumped liquid.
Check the specific weight of the liquid or the viscosity as this could affect the power input of the motor and hydraulic performance. For further details, please contact the sales network.

ErP 2009/125/EC

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e-SV™ SERIES MOTORS

With the "Energy using Products" (EuP 2005/32/EC) and "Energy related Products" (ErP 2009/125/EC) directives, the European Commission has established requirements for promoting the use of products with low power consumption.
The various products considered include **three-phase 50 Hz surface motors with power outputs ranging from 0,75 to 375 kW**, also when integrated with other products, with characteristics as defined by the specific **Regulation (EC) No 640/2009** implementing the requirements of the EuP and ErP Directives which also establish the following deadlines:

from	kW	minimum level of efficiency (IE)
16th June 2011	0,75 ÷ 375	IE2
27th July 2014	0,75 ÷ 375	new exclusion criteria [1])
1st January 2015	< 7,5	IE2
	7,5 ÷ 375	IE3
		IE2 fitted with variable speed drive [2])
1st January 2017	0,75 ÷ 375	IE3
		IE2 fitted with variable speed drive [2])

[1]) Fixed by subsequent **Regulation (EU) No 4/2014**.
[2]) IE 2 motor can be supplied without frequency converter as the obligation to have that device is related to when motor works and not when is placed on the market.

SV electric pumps are equipped with standard motors.

- Short-circuit squirrel-cage motor, enclosed construction with external ventilation (TEFC).
- **IP55** protection degree.
- Insulation class **155 (F)**.
- Electrical performances according to EN 60034-1.
- **Supplied IE3 three-phase surface motors ≥ 0,75 kW as standard**.
- IE efficiency level according to EN 60034-30:2009 and IEC 60034-30-1:2014 (≥ 0,75 kW).
- Metric cable gland according to EN 50262.
- PTC included in motors from 30 to 55 kW (one per phase, 155°C).
- **Single-phase** version:
  0,37 to 2,2 kW (2-pole)
  220-240 V 50 Hz
  Built-in automatic reset overload protection up to 1,5 kW.
  For higher powers the protection must be provided by the user.
- **Three-phase** version:
  0,37 to 55 kW (2-pole)
  220-240/380-415 V 50 Hz for power up to 3 kW.
  380-415/660-690 V 50 Hz for power above 3 kW.
  Overload protection to be provided by the user.

SINGLE-PHASE MOTORS AT 50 Hz, 2-POLE

P_N kW	MOTOR TYPE	IEC SIZE*	Construction Design	INPUT CURRENT In (A) 220-240 V	CAPACITOR µF	CAPACITOR V	DATA FOR 230 V 50 Hz VOLTAGE min^{-1}	Is / In	η %	cosφ	Tn Nm	Ts/Tn	Tm/Tn
0,37	SM71RB14/104	71R	V18/B14	2,79-2,85	14	450	2745	2,64	65,1	0,96	1,39	0,68	1,63
0,55	SM71B14/105	71		3,76-3,99	16	450	2820	3,72	68,9	0,91	1,86	0,61	2,00
0,75	SM80RB14/107	80R		4,90-4,85	20	450	2765	3,42	70,1	0,96	2,59	0,58	1,75
1,1	SM80B14/111	80		6,88-6,65	30	450	2800	3,89	74,7	0,96	3,75	0,46	1,72
1,5	SM90RB14/115	90R		9,21-8,58	40	450	2810	4,00	76,1	0,98	5,09	0,39	1,74
2,2	PLM90B14/122	90		12,5-11,6	70	450	2825	4,47	82,4	0,97	7,43	0,53	1,87

* R = Reduced size of motor casing as compared to shaft extension and flange.

1-22sv-motm-2p50-en_b_te

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e-SV™ SERIES
THREE-PHASE MOTORS AT 50 Hz, 2-POLE (up to 22 kW)

P_N	Efficiency η_N %																		IE	Year of manufacture
	Δ 220 V Y 380 V			Δ 230 V Y 400 V			Δ 240 V Y 415 V			Δ 380 V Y 660 V			Δ 400 V Y 690 V			Δ 415 V				
kW	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
0,37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	From 11/2014
0,55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	3	
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		
1,5	85,6	86,5	85,8	85,9	86,4	84,9	86,0	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0		
2,2	86,5	87,4	86,8	86,4	86,9	85,7	86,6	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0	86,4	86,7	85,0		
3	87,2	88,5	88,3	87,5	88,2	87,5	87,5	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4	87,2	87,8	86,4		
4	89,1	90,1	89,2	89,1	90,1	89,2	89,1	90,1	89,2	89,1	90,3	90,4	89,6	90,4	89,9	89,6	90,1	89,2		
5,5	89,5	89,6	88,0	89,5	89,6	88,0	89,5	89,6	88,0	89,5	90,3	89,9	89,7	90,0	89,0	89,6	89,6	88,0		
7,5	90,6	90,5	89,0	90,6	90,5	89,0	90,6	90,5	89,0	90,6	91,0	90,2	90,8	90,8	89,6	90,7	90,5	89,0		
11	91,3	92,0	91,1	91,3	92,0	91,1	91,3	92,0	91,1	91,3	92,2	92,2	91,6	92,2	91,7	91,7	92,0	91,1		
15	92,5	92,4	91,2	92,5	92,4	91,2	92,5	92,4	91,2	92,7	93,3	92,9	93,1	93,3	92,7	92,5	92,4	91,2		
18,5	92,6	93,1	92,4	92,6	93,1	92,4	92,6	93,1	92,4	92,6	93,2	93,0	92,9	93,3	92,8	92,9	93,1	92,4		
22	93,0	92,7	91,3	93,0	92,7	91,3	93,0	92,7	91,3	93,0	93,2	92,4	93,1	93,0	91,9	93,0	92,7	91,3		

P_N	Manufacturer: Xylem Service Italia Srl, Reg. No. 07520560967, Montecchio Maggiore Vicenza - Italia	IEC SIZE*	Construction Design	N. of Poles	f_N	Data for 400 V / 50 Hz Voltage				
kW	Model				Hz	cosφ	Is / I_N	T_N Nm	Ts/T_N	Tm/Tn
0,37	SM71RB14/304	71R	V18/B14	2	50	0,64	4,35	1,37	4,14	4,10
0,55	SM71B14/305	71				0,74	5,97	1,85	3,74	3,56
0,75	SM80B14/307 PE	80				0,78	7,38	2,48	3,57	3,75
1,1	SM80B14/311 PE	80				0,79	8,31	3,63	3,95	3,95
1,5	SM90RB14/315 PE	90R				0,80	8,80	4,96	4,31	4,10
2,2	PLM90B14/322 E3	90				0,80	8,77	7,28	3,72	3,70
3	PLM100RB14/330 E3	100R				0,79	7,81	9,93	4,26	3,94
4	PLM112RB14S6/340 E3	112R				0,85	9,13	13,2	3,82	4,32
5,5	PLM132RB5/355 E3	132R	V1/B5			0,85	10,5	18,1	4,74	5,11
7,5	PLM132B5/375 E3	132				0,85	10,2	24,4	3,43	4,76
11	PLM160RB5/3110 E3	160R				0,86	9,89	35,9	3,46	4,59
15	PLM160B5/3150 E3	160				0,88	9,51	48,6	2,73	4,32
18,5	PLM160B5/3185 E3	160				0,88	9,81	59,9	2,81	4,53
22	PLM180RB5/3220 E3	180R				0,85	10,9	71,1	3,26	5,12

P_N	Voltage U_N V											n_N	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	Δ			Y			Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
kW	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V	min^{-1}				
	I_N (A)															
0,37	2,03	2,18	2,32	1,17	1,26	1,34	-	-	-	-	-	2745 ÷ 2800				
0,55	2,56	2,56	2,62	1,48	1,48	1,51	-	-	-	-	-	2825 ÷ 2850				
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895				
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,5	5,56	5,49	5,51	3,21	3,17	3,18	3,21	3,18	3,19	1,85	1,84	2870 ÷ 2895				
2,2	7,97	7,90	7,98	4,6	4,56	4,61	4,57	4,54	4,57	2,64	2,62	2880 ÷ 2900				
3	11,0	11,0	11,2	6,35	6,33	6,44	6,29	6,27	6,34	3,63	3,62	2865 ÷ 2895				
4	13,6	13,4	13,4	7,87	7,75	7,74	7,80	7,62	7,61	4,50	4,40	2885 ÷ 2910				
5,5	18,1	17,9	18,1	10,4	10,4	10,4	10,6	10,5	10,7	6,10	6,05	2880 ÷ 2910				
7,5	24,8	24,4	24,3	14,3	14,1	14,0	14,4	14,1	14,2	8,32	8,16	2920 ÷ 2935				
11	35,7	35,0	34,9	20,6	20,2	20,2	20,6	20,2	20,2	11,9	11,7	2910 ÷ 2930				
15	47,6	46,1	45,2	27,5	26,6	26,1	27,5	26,6	26,1	15,9	15,3	2940 ÷ 2950				
18,5	58,3	56,7	55,6	33,7	32,7	32,1	34,0	33,0	32,7	19,6	19,0	2940 ÷ 2950				
22	72,9	73,1	73,7	42,1	42,2	42,6	40,9	40,4	40,6	23,6	23,3	2950 ÷ 2960				
														≤ 1000	-15 / 40	No

* R = Reduced size of motor casing as compared to shaft extension and flange.

sv-IE3-mott22-2p50-en_a_te

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

e-SV™ SERIES
THREE-PHASE MOTORS AT 50 Hz, 2-POLE (from 30 to 55 kW)

P_N	Efficiency η_N %									IE	Year of manufacture
	Δ 380 V Y 660 V			Δ 400 V Y 690 V			Δ 415 V				
kW	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
30	94,0	94,0	93,1	94,1	94,0	92,8	94,2	93,9	92,6	3	By 11/2014
37	94,4	94,0	93,5	94,6	94,0	93,3	94,7	93,9	93,1		
45	94,8	94,9	94,6	95,1	95,1	94,6	95,3	95,2	94,5		
55	95,1	95,0	94,9	95,4	95,3	94,9	95,5	95,3	94,8		

P_N	Manufacturer WEG Equipamentos Eletricos S.A. Reg. No. 07.175.725/0010-50 Jaragua do Sul - SC (Brazil) Model	IEC SIZE	Construction Design	N. of Poles	f_N Hz	Data for 400 V / 50 Hz Voltage				
						cosφ	Is / I_N	T_N Nm	Ts/T_N	Tm/Tn
30	W22 200L V1 30KW E3	200	V1	2	50	0,86	7,30	96,60	2,60	2,90
37	W22 200L V1 37KW E3	200				0,86	7,30	119,2	2,60	2,90
45	W22 225S/M V1 45KW E3	225				0,88	8,00	144,7	2,70	3,20
55	W22 250S/M V1 55KW E3	250				0,89	7,90	177,1	2,80	2,90

P_N	Voltage U_N V					n_N min^{-1}	See note.	Operating conditions **		
	Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	380 V	400 V	415 V	660 V	690 V					
kW	I_N (A)									
30	55,1	53,5	52,7	31,7	31,0	2960 ÷ 2970		≤ 1000	-15 / 40	No
37	67,7	65,6	64,7	39,0	38,0	2960 ÷ 2970				
45	80,1	77,6	74,6	46,1	45,0	2965 ÷ 2970				
55	97,6	93,5	91,0	56,2	54,2	2960 ÷ 2965				

** Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

sv-IE3-mott55-2p50-en_a_te

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

MOTOR NOISE 2-POLE MOTORS

POWER kW	MOTOR TYPE IEC SIZE*	NOISE LpA dB
0,37	71R	<70
0,55	71	<70
0,75	80-80R	<70
1,1	80	<70
1,5	90-90R	<70
2,2	90	<70
3	100R	<70
4	112R	<70
5,5	132R	<70
7,5	132	71
11	160R	73
15	160	71
18,5	160	73
22	180R	70
30	200	72
37	200	72
45	225	75
55	250	75

*R = Reduced motor casing size with respect to shaft extension and related flange.

1-125sv_mott_2p50-en_b_tr

The table show the mean sound pressure (Lp) measured as per Curve A (Standard ISO 1680).
Noise values were measured with the 50 Hz motor running idle with a tolerance of 3 dB (A).

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AVAILABLE VOLTAGES
SM and PLM MOTORS FOR e-SV™ SERIES, 2-POLE

	SINGLE-PHASE								THREE-PHASE														
	50 Hz			60 Hz					50 Hz							60 Hz						50/60 Hz	
P_N kW	1 x 220-240	1 x 100	1 x 110-120	1 x 220-230	1 x 100	1x 110-115	1 x 120-127	1 x 200-210	3 x 220-230-240/380-400-415	3 x 380-400-415/660-690	3 x 200-208/346-360	3 x 255-265/440-460	3 x 290-300/500-525	3 x 440-460/-	3 x 500-525/-	3 x 220-230/380-400	3 x 255-265-277/440-460-480	3 x 380-400/660-690	3 x 440-460-480/-	3 x 110-115/190-200	3 x 200-208/346-360	3 x 330-346/575-600	3 x 575/-	3 x 230/400 50 Hz 3 x 265/460 60 Hz	3 x 400/690 50 Hz 3 x 460/- 60 Hz
0,37	s	o	o	s	-	o	-	-	0,37	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
0,55	s	o	o	s	o	o	o	o	0,55	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
0,75	s	o	o	s	o	o	o	o	0,75	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
1,1	s	-	o	s	-	o	-	o	1,1	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
1,5	s	-	-	s	-	o	-	o	1,5	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
2,2	s	-	-	s	-	-	-	-	2,2	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									3	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									4	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									5,5	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									7,5	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									11	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									15	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									18,5	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o
									22	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o

s = Standard voltage o = voltage upon request - = Not available

sv-volt-lowa-en_b_te

W22 MOTORS FOR e-SV™ SERIES, 2-POLE

	THREE-PHASE																	
	50 Hz								60 Hz								50/60 Hz	
P_N kW	3 x 220-230-240/380-400-415	3 x 380-400-415/660-690	3 x 110/190	3 x 200-208/346-360	3 x 255-265/440-460	3 x 290-300/500-525	3 x 440-460/-	3 x 500-525/-	3 x 230/380	3 x 380-400/660-690	3 x 440-480/-	3 x 110-115/190-200	3 x 200-208/346-360	3 x 255-265-277/440-460-480	3 x 330-346/575-600	3 x 575/-	3 x 230/400 50 Hz 3 x 265/460 60 Hz	3 x 400/690 50 Hz 3 x 460/- 60 Hz
30	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
37	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
45	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
55	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o

s = Standard voltage o = voltage upon request - = Not available

sv-volt-weg-en_c_te

ErP 2009/125/EC

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e-SV™ SERIES PUMPS

With the "Energy using Products" (EuP 2005/32/EC) and "Energy related Products" (ErP 2009/125/EC) directives, the European Commission has established requirements for promoting the use of products with low power consumption.

Among the various products considered there are also some typologies of pumps with the characteristics defined by the specific **Regulation (EU) n. 547/2012** implementing the requirements of Directives EuP and ErP.

For vertical multi-stage pumps (MS-V for the Regulations), the efficiency evaluation refers to:

- just the pump and not the pump and motor assembly (electric or combustion);
- pumps with a nominal pressure PN not higher than 25 bar (2500 kPa);
- pumps designed to operate at a speed of 2900 min^{-1} (for electric pumps this means 50 Hz 2-pole electric motors);
- pumps with a maximum flow of 100 m^3/h;
- use with clean water at a temperature ranging from -10°C to 120°C (the test is performed with cold water at a temperature not higher than 40°C).

The Regulation also establishes the following deadlines:

from	minimum efficiency index (MEI)
1st January 2013	MEI ≥ 0,1
1st January 2015	MEI ≥ 0,4

Regulation (EU) n. 547/2012 – Annex II – point 2 (Product information requirements)

1) Minimum efficiency index: see the MEI column in the tables in the *Hydraulic performance* section.
2) "The benchmark for most efficient water pumps is MEI ≥ 0,70".
3) Year of manufacture: from January 2013.
4) Manufacturer: Lowara srl Unipersonale - Reg. No. 03471820260 - Montecchio Maggiore, Vicenza, Italy.
5) Product type: see the PUMP TYPE column in the tables in the *Hydraulic performance* section.
6) Hydraulic pump efficiency with trimmed impeller: not applicable to these products.
7) Pump performance curves, including the performance curve: see the *Operating Characteristics* graphs in the following pages.
8) "The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter".
9) "The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system".
10) Information relevant for disassembly, recycling or disposal at end-of-life: observe the current laws and by-laws governing sorted waste disposal. Consult the product operating manual.
11) "Designed for use below – 10 °C only": note not applicable to these products.
12) "Designed for use above 120 °C only": note not applicable to these products.
13) Specific instructions for pumps as per points 11 and 12: not applicable to these products.
14) "Information on benchmark efficiency is available at": www.europump.org (Ecodesign section).
15) The benchmark efficiency graphs with MEI = 0.7 and MEI = 0.4 are available at www.europump.org/efficiencycharts or http://europump.net/uploads/Fingerprints.pdf (refer to "Multistage Vertical 2900 rpm").

e-SV™ SERIES - VERSION WITH HYDROVAR™ 50 Hz

Background and context

In all areas of application, such as building services, industry, agriculture and air-handling, the demand for intelligent pumping systems is constantly growing. There are many advantages: reduced cost for pump life cycle, lower environmental impact, longer lifetime of pipes and unions. That's why Lowara has developed the e-SVH: an intelligent pumping system which assures high level performance with energy consumption tailored to demand.

Benefits of e-SVH with HYDROVAR™

Saving: e-SVH transform e-SV™ pumps into variable speed intelligent pumping systems. Thanks to the HYDROVAR™ system, the speed of each pump varies so as to maintain a constant flow or pressure. The pump only receives the energy required, thus allowing considerable savings, especially for those systems in which demands varies during the day.

Easy installation and space-saving: e-SVH save time and space during installation. The HYDROVAR™ frequency converter is installed directly on the motor, cools it and does not require an additional control panel.
Thanks to the HYDROVAR™ technology, there is no need for large diaphragm tanks to complete installation.

Standard motors: e-SVH are fitted with three-phase standard TEFC motors with insulation class 155 (F) and power outputs of up to 22 kW. The wall-mounted HYDROVAR™ version is available for higher power outputs (up to 45 kW).

Identification code

e-SVH models are identified by the letter "**H**" in the standard identification code of the e-SV™ product range.
Example: 3SV**H**13F015T
H = with integrated HYDROVAR™.

Special features / benefits

- **Additional pressure sensors are not required**: **the** e-SVH **pumps** are fitted with a pressure or differential pressure transmitter, depending on the application.
- **There is no need for special pumps or motors**
- **There is no need for bypass or safety systems**: with HYDROVAR™ the pump immediately switches off when demand drops to zero or when it exceeds maximum pump capacity. This makes it unnecessary to install additional safety devices.
- **Anti-condensation device**: all units are fitted with anti-condensation devices which switch on when the pump is in stand-by in order to prevent condensation forming in the unit.
- **i-ALERT™ device** on request to reduce the costs for each lifecycle, thus increasing the mean time between failures (MTBF).

Special configurations

e-SVH have the same range of configurations as the standard e-SV™ series.
- Materials used: see the "Materials" section.
- Options for mechanical seals and gaskets: see the "Mechanical seals and gaskets" section.
- Motor and configuration options: see the "Motor" section.

e-SV™ SERIES - VERSION WITH HYDROVAR™ OPERATING PRINCIPLE

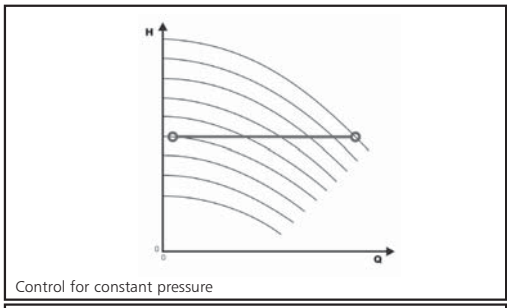
The basic function of the HYDROVAR™ device is to control the pump to meet the system demands.

HYDROVAR™ performs these functions by:

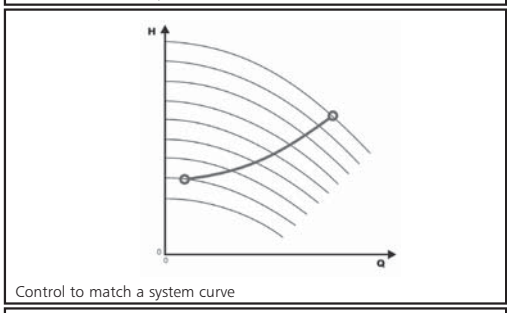
1) Measuring the system pressure or flow via a transmitter mounted on the pump's delivery side.
2) Calculating the motor speed to maintain the correct flow or pressure.
3) Sending out a signal to the pump to start the motor, increase speed, decrease speed or stop.
4) In the case of multiple pump installations, HYDROVAR™ will automatically provide for the cyclic changeover of the pump's starting sequence.

In addition to these basic functions, HYDROVAR™ can do things only by the most advanced computerised control systems, such as:

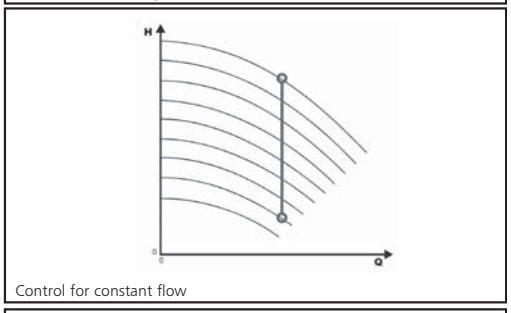
- Stop the pump(s) at zero demand.
- Stop the pump(s) in case of water failure on the suction side (protection against dry running).
- Stop the pump if the required delivery exceeds the pump's capacity (protection against cavitation caused by excessive demand), or automatically switch on the next pump in a multiple series.
- Protect the pump and motor from overvoltage, undervoltage, overload and earth fault.
- Vary the pump speed acceleration and deceleration time.
- Compensate for increased flow resistance at high flow rates.
- Conduct automatic test starts at set intervals.
- Monitor the converter and motor operating hours.
- Display all functions on an LCD in different languages (Italian, English, French, German, Spanish, Portuguese, Dutch).
- Send a signal to a remote control system which is proportional to the pressure and frequency.
- Communicate with another HYDROVAR™ or control system via an RS 485 interface.



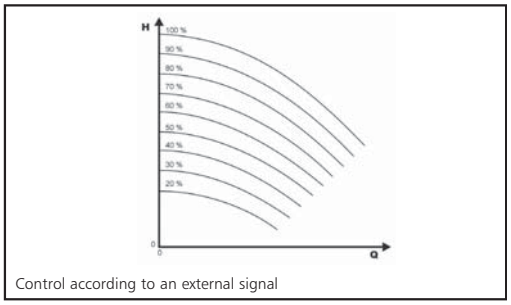
Control for constant pressure



Control to match a system curve



Control for constant flow



Control according to an external signal

TYPICAL EXAMPLE OF ENERGY SAVINGS

System: 22SV07F75T vertical multistage electric pump with 7,5 kW motor equipped with HYDROVAR™, 70 m head. 19 hour/day operation.
Application: maintaining a constant pressure as the flow rate varies according to the system curve.

FLOW	ABSORBED POWER		POWER SAVED	OPERATING TIME	TOTAL ENERGY SAVINGS
	CONSTANT SPEED PUMP	VARIABLE SPEED PUMP			
m^3/h	kW	kW	kW	(hours)	kWh
24	7,4	7,4	0,0	876	-
21	6,9	6,1	0,8	876	701
18	6,5	5,0	1,5	1752	2.628
14	5,6	3,8	1,8	1752	3.154
10	5,1	2,8	2,3	1752	4.030
YEARLY ENERGY SAVINGS (kWh)					**10.512**

sv-hydr-en_a_te

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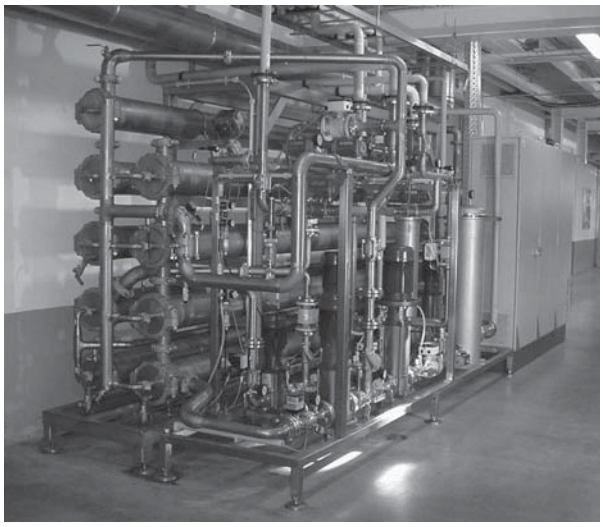
TYPICAL APPLICATIONS OF e-SV™ SERIES ELECTRIC PUMPS

WATER SUPPLY AND PRESSURE BOOSTING

- Pressure boosting in building, hotel, residential complexes.
- Pressure booster stations, supply of water networks.
- Booster packages.

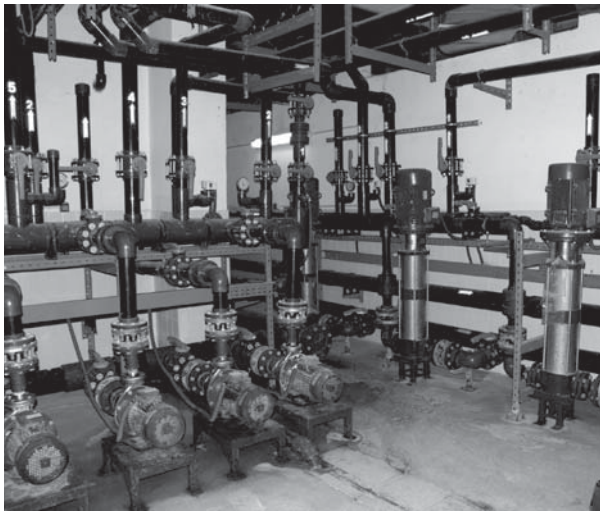


WATER TREATMENT

- Ultrafiltration systems.
- Reverse osmosis systems.
- Water softeners and de-mineralization.
- Distillation systems.
- Filtration.

LIGHT INDUSTRY

- Washing and cleaning plants (washing and degreasing of mechanical parts, car and truck wash tunnels, washing of electronic industry circuits).
- Commercial washers.
- Firefighting system pumps.



PHARMACEUTICAL AND FOOD & BEVERAGE INDUSTRIES

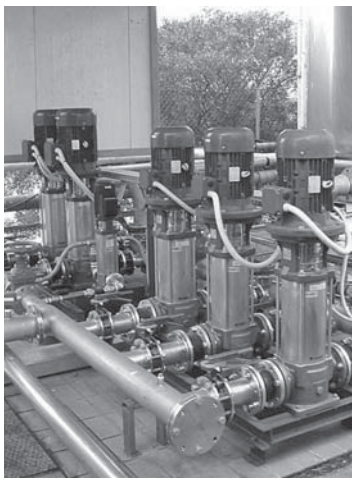
- Production plant where specific sanitary standards are required.

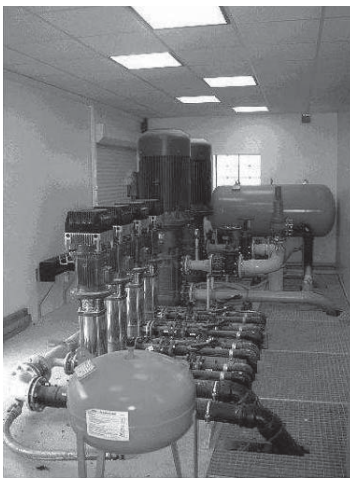
IRRIGATION AND AGRICULTURE

- Greenhouses.
- Humidifiers.
- Sprinkler irrigation.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

- Cooling towers and systems.
- Temperature control systems.
- Refrigerators.
- Induction heating.
- Heat exchangers.
- Boilers, water recirculation and heating.





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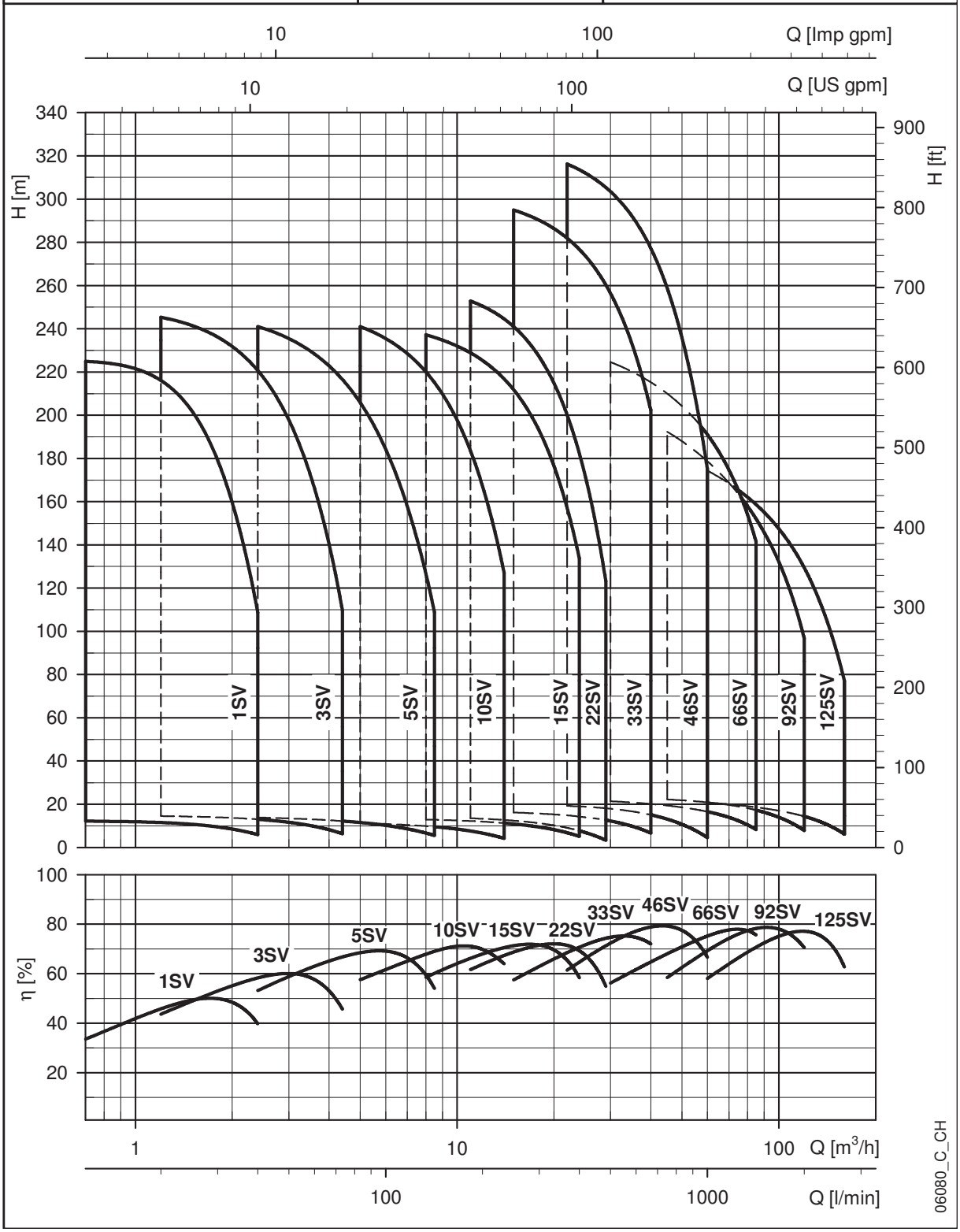
e-SV™ SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES

e-SV™	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



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1, 3, 5SV SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

POMPA TYPE	RATED POWER		MEI ≥	Q = DELIVERY													
				l/min 0	12	20	25	30	35	40	45	50	60	73	100	120	141
				m^3/h 0	0,7	1,2	1,5	1,8	2,1	2,4	2,7	3,0	3,6	4,4	6,0	7,2	8,5
	kW	HP	(1)	H = TOTAL HEAD IN METRES OF COLUMN OF WATER													
1SV02	0,37	0,5	0,70	12,2	12,2	11,5	10,7	9,5	7,9	6,0							
1SV03	0,37	0,5	0,70	18,0	18,0	17,0	15,7	13,8	11,4	8,4							
1SV04	0,37	0,5	0,70	23,7	23,5	22,1	20,4	17,9	14,6	10,6							
1SV05	0,37	0,5	0,70	29,3	28,9	27,0	24,8	21,6	17,4	12,5							
1SV06	0,37	0,5	0,70	34,8	34,2	31,7	28,9	25,0	20,0	14,0							
1SV07	0,37	0,5	0,70	40,2	39,2	36,1	32,7	28,1	22,2	15,2							
1SV08	0,55	0,75	0,70	48,1	47,9	45,2	41,8	36,8	30,4	22,4							
1SV09	0,55	0,75	0,70	53,7	53,4	50,4	46,4	40,8	33,5	24,6							
1SV10	0,55	0,75	0,70	59,4	59,0	55,5	51,0	44,7	36,6	26,6							
1SV11	0,55	0,75	0,70	65,1	64,5	60,4	55,5	48,5	39,5	28,5							
1SV12	0,75	1	0,70	73,3	73,1	69,3	64,3	57,1	47,6	35,7							
1SV13	0,75	1	0,70	79,2	78,9	74,8	69,4	61,6	51,2	38,2							
1SV15	0,75	1	0,70	90,9	90,5	85,6	79,3	70,1	58,1	43,1							
1SV17	1,1	1,5	0,70	105,2	104,9	100,0	93,1	82,6	68,6	51,2							
1SV19	1,1	1,5	0,70	117,0	116,7	111,0	103,2	91,5	75,8	56,3							
1SV22	1,1	1,5	0,70	134,6	134,1	127,4	118,1	104,4	86,1	63,5							
1SV25	1,5	2	0,70	152,6	152,4	145,5	135,4	120,0	99,1	72,7							
1SV27	1,5	2	0,70	164,3	164,0	156,4	145,4	128,8	106,1	77,5							
1SV30	1,5	2	0,70	181,7	181,3	172,6	160,1	141,2	115,7	83,9							
1SV32	2,2	3	0,70	197,2	197,1	188,4	175,8	156,5	130,0	96,3							
1SV34	2,2	3	0,70	209,2	208,9	199,8	186,3	165,5	137,1	101,2							
1SV37	2,2	3	0,70	225,9	224,9	216,1	201,9	179,3	148,1	108,7							
3SV02	0,37	0,5	0,70	14,9		14,5	14,3	14,0	13,5	13,0	12,4	11,7	9,8	6,5			
3SV03	0,37	0,5	0,70	22,0		21,2	20,8	20,3	19,6	18,7	17,7	16,6	13,7	8,6			
3SV04	0,37	0,5	0,70	28,9		27,7	27,1	26,2	25,2	23,9	22,5	20,8	16,8	10,1			
3SV05	0,55	0,75	0,70	37,2		36,4	35,8	35,0	33,9	32,6	31,1	29,2	24,5	16,2			
3SV06	0,55	0,75	0,70	44,4		43,4	42,6	41,6	40,2	38,6	36,6	34,3	28,5	18,5			
3SV07	0,75	1	0,70	52,5		51,8	51,0	50,0	48,7	47,0	45,0	42,5	36,1	24,6			
3SV08	0,75	1	0,70	60,0		59,1	58,2	57,0	55,4	53,4	51,0	48,1	40,7	27,5			
3SV09	1,1	1,5	0,70	67,7		66,8	65,8	64,5	62,8	60,6	57,9	54,6	46,4	31,6			
3SV10	1,1	1,5	0,70	75,0		73,8	72,7	71,3	69,3	66,9	63,8	60,2	51,0	34,5			
3SV11	1,1	1,5	0,70	82,3		81,0	79,7	78,0	75,8	73,1	69,7	65,7	55,5	37,4			
3SV12	1,1	1,5	0,70	89,6		87,8	86,4	84,5	82,1	79,1	75,5	71,1	59,9	40,1			
3SV13	1,5	2	0,70	98,1		96,7	95,4	93,5	91,0	87,8	83,9	79,2	67,2	45,6			
3SV14	1,5	2	0,70	105,6		104,1	102,5	100,4	97,7	94,2	89,9	84,8	71,8	48,5			
3SV16	1,5	2	0,70	119,9		117,8	116,1	113,6	110,5	106,5	101,6	95,8	80,9	54,2			
3SV19	2,2	3	0,70	144,3		142,3	140,3	137,5	133,9	129,2	123,5	116,7	99,1	67,6			
3SV21	2,2	3	0,70	159,3		156,9	154,6	151,4	147,3	142,1	135,7	128,0	108,5	73,6			
3SV23	2,2	3	0,70	174,0		171,1	168,5	165,0	160,4	154,7	147,6	139,2	117,7	79,4			
3SV25	2,2	3	0,70	188,5		186,1	183,3	179,3	174,1	167,6	159,7	150,3	126,6	84,8			
3SV27	3	4	0,70	204,4		201,7	198,8	194,7	189,4	182,7	174,4	164,5	139,4	94,4			
3SV29	3	4	0,70	219,3		216,0	212,8	208,3	202,6	195,3	186,4	175,7	148,6	100,2			
3SV31	3	4	0,70	233,8		230,3	226,8	222,0	215,7	207,8	198,2	186,7	157,6	106,0			
3SV33	3	4	0,70	248,5		245,3	241,5	236,2	229,3	220,7	210,2	197,7	166,3	111,2			
5SV02	0,37	0,5	0,70	14,8						13,8	13,7	13,4	13,0	12,2	10,2	8,2	5,7
5SV03	0,55	0,75	0,70	22,8						21,8	21,6	21,3	20,7	19,7	16,9	14,1	10,3
5SV04	0,55	0,75	0,70	30,0						28,2	27,9	27,5	26,6	25,2	21,2	17,3	12,2
5SV05	0,75	1	0,70	38,0						36,4	36,0	35,5	34,5	32,9	28,2	23,5	17,1
5SV06	1,1	1,5	0,70	45,3						43,7	43,3	42,8	41,6	39,6	33,9	28,1	20,3
5SV07	1,1	1,5	0,70	52,7						50,7	50,1	49,5	48,1	45,8	39,1	32,2	23,1
5SV08	1,1	1,5	0,70	60,1						57,6	57,0	56,2	54,6	51,8	44,1	36,2	25,8
5SV09	1,5	2	0,70	68,0						65,5	64,8	64,0	62,2	59,3	50,6	41,9	30,2
5SV10	1,5	2	0,70	75,5						72,4	71,7	70,8	68,7	65,4	55,7	46,0	33,0
5SV11	1,5	2	0,70	82,8						79,3	78,4	77,5	75,2	71,4	60,7	49,9	35,6
5SV12	2,2	3	0,70	90,8						88,0	87,0	86,0	83,4	79,3	67,4	55,7	40,5
5SV13	2,2	3	0,70	98,3						95,0	94,0	92,8	90,0	85,5	72,6	59,9	43,5
5SV14	2,2	3	0,70	105,7						102,0	100,9	99,6	96,6	91,7	77,8	64,0	46,3
5SV15	2,2	3	0,70	113,1						109,0	107,8	106,4	103,1	97,8	82,8	68,1	49,1
5SV16	2,2	3	0,70	120,5						115,9	114,6	113,1	109,6	103,9	87,8	72,1	51,8
5SV18	3	4	0,70	135,8						131,1	129,7	128,0	124,1	117,8	99,9	82,3	59,5
5SV21	3	4	0,70	157,9						152,0	150,3	148,3	143,6	136,1	114,9	94,2	67,6
5SV23	4	5,5	0,70	174,4						168,9	167,2	165,1	160,2	152,3	129,6	107,2	78,2
5SV25	4	5,5	0,70	189,2						183,1	181,1	178,9	173,5	164,8	140,1	115,7	84,1
5SV28	4	5,5	0,70	211,5						204,2	201,9	199,4	193,3	183,4	155,5	128,0	92,7
5SV30	5,5	7,5	0,70	227,0						219,8	217,5	214,8	208,4	198,1	168,5	139,3	101,5
5SV33	5,5	7,5	0,70	249,2						241,0	238,4	235,5	228,4	216,9	184,2	151,9	110,3

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

1-5sv-2p50-en_d_th

(1) Value referred to the F, T, R, N, V, C, K versions. P version excluded.

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10, 15, 22SV SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		MEI ≥	Q = DELIVERY														
				l/min 0	83,34	100	133	170	183,34	233	270	330	350	400	430	460	483,33
				m^3/h 0	5,0	6,0	8,0	10,2	11,0	14,0	16,2	19,8	21,0	24,0	25,8	27,6	29,0
	kW	HP	(1)	H = TOTAL HEAD IN METRES OF COLUMN OF WATER														
10SV01	0,75	1	0,70	11,8	11,2	10,9	9,9	8,3	7,6	4,3								
10SV02	0,75	1	0,70	23,6	21,9	21,3	19,6	17,0	15,8	10,0								
10SV03	1,1	1,5	0,70	35,7	33,0	32,1	29,6	25,8	24,1	16,0								
10SV04	1,5	2	0,70	47,7	44,2	43,0	39,9	34,8	32,6	21,7								
10SV05	2,2	3	0,70	60,0	56,1	54,7	50,9	44,9	42,2	29,0								
10SV06	2,2	3	0,70	71,8	66,8	65,0	60,4	53,1	49,8	33,9								
10SV07	3	4	0,70	83,6	78,3	76,2	70,8	62,1	58,3	39,8								
10SV08	3	4	0,70	95,3	88,9	86,5	80,1	70,2	65,7	44,5								
10SV09	4	5,5	0,70	106,3	100,1	97,5	90,8	80,0	75,1	52,1								
10SV10	4	5,5	0,70	118,0	110,8	107,9	100,3	88,2	82,8	57,2								
10SV11	4	5,5	0,70	129,6	121,3	118,1	109,6	96,3	90,3	62,1								
10SV13	5,5	7,5	0,70	156,0	146,5	142,7	132,6	116,4	109,2	74,3								
10SV15	5,5	7,5	0,70	179,5	167,9	163,4	151,6	132,8	124,3	83,9								
10SV17	7,5	10	0,70	205,0	193,2	188,5	175,7	154,7	145,2	98,8								
10SV18	7,5	10	0,70	216,9	204,2	199,1	185,5	163,2	153,1	104,0								
10SV20	7,5	10	0,70	240,6	226,0	220,3	205,0	180,2	168,9	114,3								
10SV21	11	15	0,70	253,6	241,0	235,5	220,2	195,0	183,5	127,5								
15SV01	1,1	1,5	0,70	14,0			12,9	12,4	12,2	11,3	10,4	8,4	7,6	5,1				
15SV02	2,2	3	0,70	28,7			26,7	25,9	25,5	23,9	22,4	18,9	17,4	13,1				
15SV03	3	4	0,70	43,3			40,4	39,1	38,6	36,2	33,8	28,7	26,5	20,1				
15SV04	4	5,5	0,70	58,4			54,7	53,1	52,5	49,4	46,3	39,7	36,9	28,7				
15SV05	4	5,5	0,70	72,7			67,8	65,8	65,0	61,0	57,1	48,7	45,2	34,9				
15SV06	5,5	7,5	0,70	87,6			81,5	79,4	78,4	74,1	69,9	60,3	56,3	44,2				
15SV07	5,5	7,5	0,70	101,9			94,5	91,9	90,8	85,7	80,6	69,4	64,7	50,5				
15SV08	7,5	10	0,70	117,4			110,9	108,0	106,8	100,8	94,9	82,0	76,7	60,6				
15SV09	7,5	10	0,70	131,9			124,4	121,0	119,6	112,8	106,1	91,5	85,5	67,4				
15SV10	11	15	0,70	147,7			138,8	135,3	133,8	126,7	119,6	103,9	97,4	77,5				
15SV11	11	15	0,70	162,3			152,4	148,5	146,8	138,9	131,1	113,8	106,5	84,7				
15SV13	11	15	0,70	191,3			179,2	174,5	172,5	163,1	153,7	133,1	124,5	98,6				
15SV15	15	20	0,70	222,1			209,9	204,8	202,6	192,2	181,7	158,3	148,5	118,8				
15SV17	15	20	0,70	251,6			237,3	231,4	228,9	216,9	205,0	178,4	167,3	133,6				
22SV01	1,1	1,5	0,70	14,7					13,5	12,7	12,0	10,4	9,7	7,7	6,3	4,7	3,4
22SV02	2,2	3	0,70	30,4					28,4	27,2	26,0	23,3	22,2	18,9	16,6	13,8	11,5
22SV03	3	4	0,70	45,4					42,2	40,4	38,5	34,5	32,8	27,8	24,2	20,2	16,6
22SV04	4	5,5	0,70	60,9					56,8	54,4	51,9	46,6	44,4	37,9	33,1	27,7	23,0
22SV05	5,5	7,5	0,70	76,0					70,9	67,9	64,9	58,3	55,6	47,4	41,4	34,7	28,8
22SV06	7,5	10	0,70	93,2					88,8	85,7	82,5	75,4	72,4	63,3	56,7	49,1	42,6
22SV07	7,5	10	0,70	108,5					103,1	99,4	95,7	87,2	83,7	73,1	65,3	56,5	48,8
22SV08	11	15	0,70	124,6					119,2	115,2	111,0	101,6	97,7	85,7	77,0	66,9	58,2
22SV09	11	15	0,70	140,1					133,7	129,2	124,4	113,8	109,3	95,8	86,0	74,6	64,8
22SV10	11	15	0,70	155,4					148,2	143,1	137,8	125,9	120,9	105,8	94,8	82,3	71,3
22SV12	15	20	0,70	186,1					178,6	172,9	166,8	152,9	147,0	129,1	115,9	100,7	87,4
22SV14	15	20	0,70	216,6					207,7	200,9	193,7	177,4	170,4	149,4	133,9	116,1	100,6
22SV17	18,5	25	0,70	263,5					252,8	244,7	236,0	216,2	207,8	182,3	163,6	142,0	123,2

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

10-22sv-2p50-en_b_th

(1) Value referred to the F, T, R, N, V, C, K versions. P version excluded.

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33, 46SV SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		MEI ≥	Q = DELIVERY										
				l/min 0	250	300	367	417	500	583	667	750	900	1000
				m^3/h 0	15	18	22	25	30	35	40	45	54	60
	kW	HP	(1)	H = TOTAL HEAD METRES COLUMN OF WATER										
33SV1/1A	2,2	3	0,70	17,4	16,2	15,7	15	14	12,2	9,8	6,7			
33SV1	3	4	0,70	23,8	21,7	21,2	20	20	17,8	15,5	12,7			
33SV2/2A	4	5,5	0,70	35,1	34,1	33,3	32	30	27	22,4	16,6			
33SV2/1A	4	5,5	0,70	40,8	38,8	37,9	36	35	32	27,5	22,3			
33SV2	5,5	7,5	0,70	47,8	45	44,1	43	41	39	35	29,9			
33SV3/2A	5,5	7,5	0,70	57,7	55,2	53,8	51	49	44	38	29,6			
33SV3/1A	7,5	10	0,70	64,5	61,3	60	58	56	51	45	37			
33SV3	7,5	10	0,70	71,5	67,4	66,0	64	62	58	52,0	44,6			
33SV4/2A	7,5	10	0,70	82	78,8	77	74	72	66	58	47,2			
33SV4/1A	11	15	0,70	88,9	85	83	81	78	73	65	55,1			
33SV4	11	15	0,70	95,9	91,1	90	87	85	80	73	63,1			
33SV5/2A	11	15	0,70	106	101,6	100	96	93	85	76	63			
33SV5/1A	11	15	0,70	112,7	107,2	105	102	99	92	82	70			
33SV5	15	20	0,70	120,4	114,9	113	110	107	101	92	80,5			
33SV6/2A	15	20	0,70	131,2	126,9	125	120	116	108	96	81,2			
33SV6/1A	15	20	0,70	139,1	133,5	131	128	124	116	105	90,4			
33SV6	15	20	0,70	145,6	139	137	133	129	121	110	96,1			
33SV7/2A	15	20	0,70	156	149,9	147	143	138	128	115	98,2			
33SV7/1A	18,5	25	0,70	163,3	156,6	154	150	145	136	123	106,2			
33SV7	18,5	25	0,70	170,3	162,8	160	156	152	142	130	113,3			
33SV8/2A	18,5	25	0,70	180,6	173,7	171	166	161	150	135	115,3			
33SV8/1A	18,5	25	0,70	187,4	179,5	177	171	166	156	141	121,7			
33SV8	22	30	0,70	194,1	185,1	182	177	172	161	147	128			
33SV9/2A	22	30	0,70	202,1	194,1	191	185	179	166	150	127,9			
33SV9/1A	22	30	0,70	210,2	201,2	198	192	186	174	157	135,9			
33SV9	22	30	0,70	216,8	206,8	204	198	193	181	165	143,7			
33SV10/2A	22	30	0,70	226,4	217,2	213	207	200	186	168	143,9			
33SV10/1A	30	40	0,70	234,5	225	221	215	209	196	178	154,2			
33SV10	30	40	0,70	241,8	231,3	228	222	216	203	185	162,2			
33SV11/2A	30	40	-	252	244	240	233	226	211	190	163,7			
33SV11/1A	30	40	-	259	249,2	245	238	232	217	197	171			
33SV11	30	40	-	265,7	253,6	250	243	236	222	203	176,9			
33SV12/2A	30	40	-	275,9	266,2	262	254	246	229	207	178,3			
33SV12/1A	30	40	-	282,8	271,5	267	260	252	236	214	185,6			
33SV12	30	40	-	289,8	276,7	272	265	258	242	221	192,9			
33SV13/2A	30	40	-	300,5	291,1	286	278	270	252	228	197,6			
33SV13/1A	30	40	-	306,9	294,9	290	282	274	256	233	202,4			
46SV1/1A	3	4	0,70	19,5			19,2	18,8	17,9	16,7	15,1	13,1	8,5	4,6
46SV1	4	5,5	0,70	27,2			24	23,5	22,5	21,4	19,9	18,2	14,3	10,8
46SV2/2A	5,5	7,5	0,70	38,8			39,8	39,2	37,8	35,7	32,9	29,4	21,1	13,9
46SV2	7,5	10	0,70	52,6			48,5	47,7	46,1	44,2	41,7	38,7	31,4	25,1
46SV3/2A	11	15	0,70	64,7			65,1	64	62	60	56	52	40,4	30,8
46SV3	11	15	0,70	80,8			74,3	73	71	68	65	60	50	40,7
46SV4/2A	15	20	0,70	92,4			90,7	90	87	83	79	73	58	45,6
46SV4	15	20	0,70	107,3			99,8	98	96	92	87	82	68	55,9
46SV5/2A	18,5	25	0,70	117,2			114,8	113	110	106	100	93	75	60,2
46SV5	18,5	25	0,70	134,5			125,1	123	120	116	110	103	86	71,5
46SV6/2A	22	30	0,70	143,7			139,3	138	134	129	122	113	92	73,4
46SV6	22	30	0,70	161			149,9	148	144	139	132	124	104	86
46SV7/2A	30	40	0,70	171,3			164,9	163	158	152	144	134	110	88,6
46SV7	30	40	0,70	188,6			175,5	173	168	162	155	145	122	101,2
46SV8/2A	30	40	0,70	198,2			190	188	182	176	166	155	127	103,1
46SV8	30	40	0,70	213,1			198,6	196	191	184	175	164	137	112,6
46SV9/2A	30	40	0,70	224,8			214,5	212	206	198	187	174	143	116
46SV9	37	50	0,70	240,9			225,2	222	217	209	199	187	157	130,2
46SV10/2A	37	50	-	252,7			241,1	238	232	223	212	198	164	133,9
46SV10	37	50	-	267,6			250,3	247	241	232	221	208	174	144,8
46SV11/2A	45	60	-	280,4			267,4	264	258	249	237	222	184	151,1
46SV11	45	60	-	295,5			276,4	273	266	257	245	230	194	161,3
46SV12/2A	45	60	-	307,3			292,5	289	282	272	259	243	202	165,8
46SV12	45	60	-	321,8			301	297	290	280	267	250	210	175
46SV13/2A	45	60	-	332,5			316,2	312	304	292	277	259	214	175

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

33-46sv-2p50-en_b_th

(1) Value referred to the G and N versions with PN ≤ 25 bar (2500 kPa). G and N versions with PN > 25 bar (2500 kPa) and P version are exclude

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66, 92SV SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		MEI ≥	Q = DELIVERY													
				l/min 0	500	600	700	750	900	1000	1200	1300	1417	1600	1800	2000
				m^3/h 0	30	36	42	45	54	60	72	78	85	96	108	120
	kW	HP	(1)	H = TOTAL HEAD METRES COLUMN OF WATER												
66SV1/1A	4	5,5	0,70	23,8	21,4	20,7	19,9	19,4	17,8	16,6	13,3	11,2	8,3			
66SV1	5,5	7,5	0,70	29,2	25,8	24,8	23,8	23,3	21,8	20,7	17,9	16,1	13,5			
66SV2/2A	7,5	10	0,70	47,5	42,6	41,2	39,5	38,6	36	32,9	26,4	22,2	16,4			
66SV2/1A	11	15	0,70	54,2	49,6	48,2	46,7	45,8	42,9	40,6	34,8	31,2	26,2			
66SV2	11	15	0,70	60,4	55,7	54,4	52,8	52	49,3	47,1	42	38,9	34,7			
66SV3/2A	15	20	0,70	78,4	71,6	70	67	66	62	58	49	43,3	35,3			
66SV3/1A	15	20	0,70	84,7	77,8	76	74	72	68	65	56	51	44,0			
66SV3	18,5	25	0,70	91,4	84,7	83	81	79	75	72	64	60	53,5			
66SV4/2A	18,5	25	0,70	108,9	99,6	97	94	92	86	82	70	63	52,8			
66SV4/1A	22	30	0,70	115,2	105,9	103	100	99	93	89	78	71	61,8			
66SV4	22	30	0,70	121,6	112,5	110	107	105	100	96	86	79	70,8			
66SV5/2A	30	40	0,70	139,1	127,5	124	120	118	111	106	92	83	70,4			
66SV5/1A	30	40	0,70	145,6	134	131	127	125	118	112	99	91	79,5			
66SV5	30	40	0,70	152	140,4	137	133	131	125	119	107	99	88,5			
66SV6/2A	30	40	0,70	169,5	155,6	152	147	144	136	129	113	103	88,1			
66SV6/1A	30	40	0,70	176	162	158	153	151	143	136	121	111	97,2			
66SV6	37	50	0,70	182,4	168,5	164	160	158	150	143	128	119	106,2			
66SV7/2A	37	50	0,70	199,9	183,7	179	174	171	161	153	134	122	105,8			
66SV7/1A	37	50	0,70	206,4	190,1	185	180	177	168	160	142	131	114,9			
66SV7	45	60	0,70	212,8	196,5	192	187	184	174	167	150	139	123,9			
66SV8/2A	45	60	0,70	230,3	211,8	206	200	197	186	177	156	142	123,5			
66SV8/1A	45	60	0,70	236,8	218,2	213	207	204	193	184	163	150	132,6			
66SV8	45	60	0,70	243,2	224,6	219	213	210	199	191	171	159	141,6			
92SV1/1A	5,5	7,5	0,60	24,5				22,2	21,5	20,9	19,4	18,5	17,3	15	11,8	7,9
92SV1	7,5	10	0,60	33,5				28,7	27,2	26,2	24,3	23,3	22,2	20,2	17,6	14,3
92SV2/2A	11	15	0,60	49,4				45,1	43,7	42,5	39,6	37,9	35,5	30,9	24,6	16,8
92SV2	15	20	0,60	67,8				58,2	55	53	49,5	47,6	45,2	41,4	36,3	29,6
92SV3/2A	18,5	25	0,60	82,4				74,4	72	70	65	62	59	52	43,6	32,9
92SV3	22	30	0,60	102,2				88,2	84	81	76	73	69	63	56	46,3
92SV4/2A	30	40	0,60	115,7				104	100	97	90	87	82	74	63	49
92SV4	30	40	0,60	133,1				117	112	108	101	97	92	85	75	62,5
92SV5/2A	37	50	0,60	149				133,2	128	124	116	111	105	95	81	64,6
92SV5	37	50	0,60	166,4				146,3	140	135	126	121	115	106	94	78,1
92SV6/2A	45	60	0,60	183,3				163,1	156	152	141	135	129	117	101	81
92SV6	45	60	0,60	200,9				175,9	168	163	151	146	139	127	113	94,2
92SV7/2A	45	60	0,60	216,8				192,4	184	179	167	160	152	138	120	96,7

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

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(1) Value referred to the G, N versions. P version excluded.

LOWARA
a xylem brand

125SV SERIES
HYDRAULIC PERFORMANCE TABLE AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		MEI ≥	Q = DELIVERY														
				l/min 0	500	600	750	900	1000	1200	1416	1700	1900	2000	2150	2300	2666
				m^3/h 0	30,0	36,0	45,0	54,0	60,0	72,0	85,0	102,0	114,0	120,0	129,0	138,0	160,0
	kW	HP		H = TOTAL HEAD IN METRES OF COLUMN OF WATER														
125SV1	7,5	10	-	27,6					20,8	19,8	18,6	16,8	15,3	14,4	12,9	11,3	6,2
125SV2	15	20	-	53,8					44,4	42,5	40,4	37,1	34,4	32,9	30,4	27,7	19,6
125SV3	22	30	-	80,7					66,5	63,8	60,6	55,7	51,6	49,4	45,7	41,5	29,4
125SV4	30	40	-	107,6					88,7	85,0	80,7	74,2	68,8	65,8	60,9	55,4	39,2
125SV5	37	50	-	134,5					110,9	106,3	100,9	92,8	86,0	82,3	76,1	69,2	49,0
125SV6	45	60	-	161,4					133,1	127,6	121,1	111,3	103,2	98,7	91,3	83,1	58,8
125SV7	55	75	-	188,3					155,2	148,8	141,3	129,9	120,4	115,2	106,6	96,9	68,6
125SV8/2A	55	75	-	211,5					174,4	167,2	158,7	145,9	135,3	129,4	119,7	108,9	77,1

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

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