xylem
Let's Solve Water

50 Hz

e-SVI Series

SUBMERSIBLE VERTICAL ELECTRIC PUMPS

ErP 2009/125/EC

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Cod. 191002451 Rev. D Ed.02/2021

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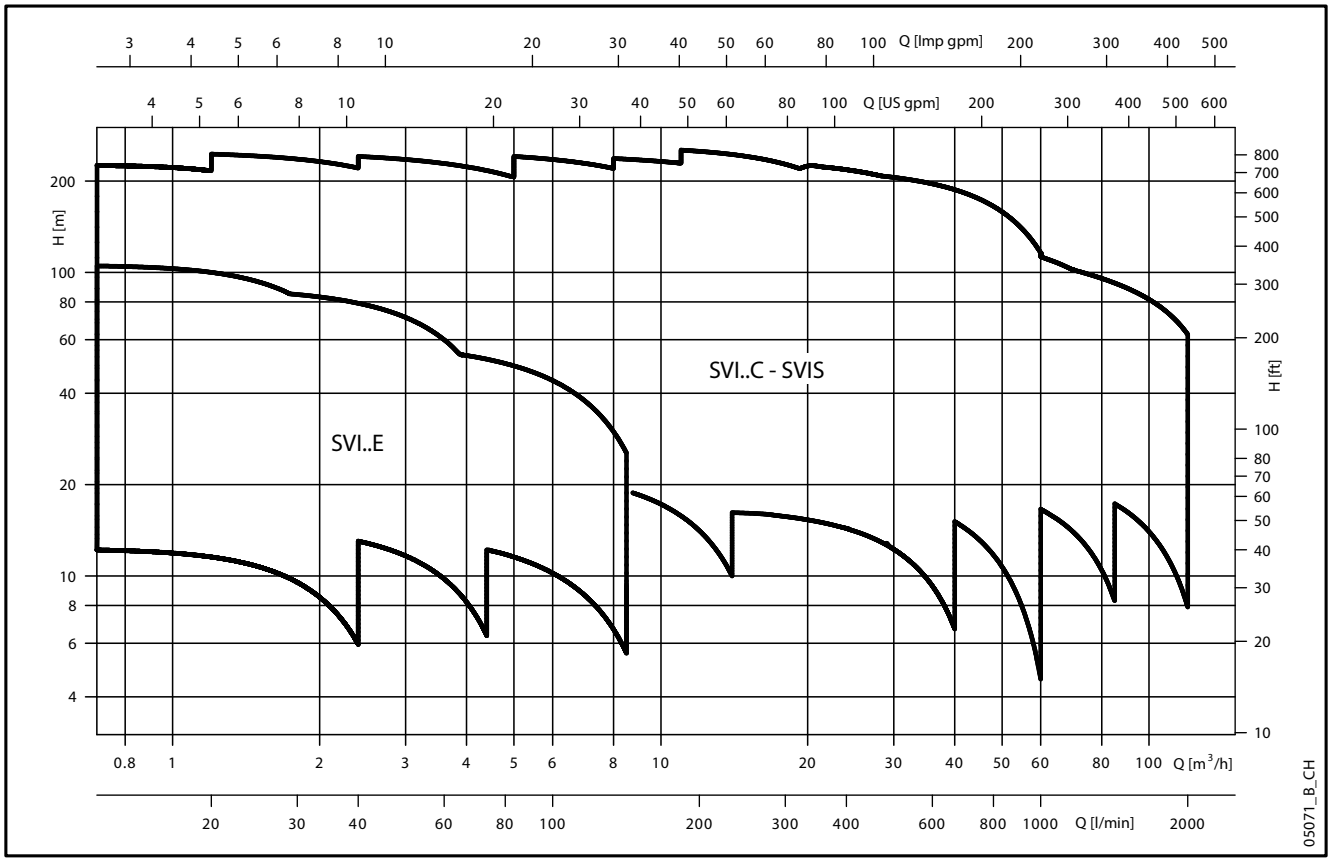
e-SVI SERIES
HYDRAULIC PERFORMANCE RANGE AT 50 Hz



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CONTENTS

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e-SVI SERIES
VERTICAL MULTISTAGE ELECTRIC PUMP WITH SUBMERGED STEM

The e-SVI pump is a vertical axis multistage centrifugal pump with submerged stem for the suction of liquids inside tanks.

The e-SVI pump is available in several hydraulic sizes, with rated flow rates from 1 to 92 m³/h and a variable number of impeller alternatives, capable of dealing with a wide range of duty points. Moreover, it can also be configured by adding empty stages, so that the length of the submerged section may be modified to reach the desired suction depth.

The e-SVI pump is available in two versions:
- coupled with coupling with a standard motor (C and M, S and N version)
- compact version without coupling (version E; 1SVI, 3SVI and 5SVI models only).

The high efficiency hydraulic components, which ensure life savings during the whole life cycle, are designed for maximum reliability and, thanks to the 1 to 22 m³/h impeller design, to also reduce the axial load on the motor.

SPECIFICATIONS

PUMP
- **Delivery**: up to 120 m³/h.
- **Head**: up to 240 m.
- **Temperature** of pumped liquid (with standard mechanical seal):
  - da -10°C a +90°C for version with coupling (C, M, S, N)
  - da -10°C +60°C for version with extended shaft (E)
- Maximum **operating pressure**:
  - PN 25 for version with coupling (C, M, N, S) (PN 16 for SVI 66 and 92 series)
  - PN10 for version with extended shaft (E)
- 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.
- Standard motor for versions with coupling (C, M, S, N)
- Extended shaft motor for the compact version (E)
- **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
- Operating temperature:
  - Single-phase version: from 0°C to +40°C
  - Three-phase version: from 0°C to +55°C

APPLICATIONS

- Cooling and lubricating circuits for tools (emulsions, cutting oil).
- Cooling systems (mixtures water-glycols in high quantity).
- Washing systems (mixtures water-detergents).

CONSTRUCTION

The hydraulic components are in stainless steel, while the pump body with the discharge port is available in both AISI 316 stainless steel and cast iron.

The mechanical seal for 1 to 22 m³/h models with coupling can consist of either a strong cartridge construction (version C), or it can be traditional (version M for 1 to 22 m³/h models and higher).
With motors with powers from 5.5 kW and higher, the traditional seal may be replaced without removing the motor from the pump.

Compact models with motor with extended shaft (version E) are supplied as standard with a chamber for the draining of significant liquid leaks inside the suction tank, caused by a break of the mechanical seal.

e-SVI pumps can be supplied with Hydrovar control system or e-SM drive, for the efficient management of the pump at variable speeds

e-SVI SERIES
CHARACTERISTICS OF 1, 3, 5, 10, 15, 22SVI SERIES

- The following versions are available:
  - C: version with coupling and cartridge mechanical seal.
  - E: version with extended shaft (1, 3, 5 SVI only).
  - M: version with coupling and standard mechanical seal according to EN 12756 (ex DIN 24960) and ISO 3069 for 1, 3, 5SVI series and 10, 15, 22SVI series (up to 4 kW).
- Possible choice of the following materials:
  - G: AISI 304 hydraulic components; cast iron body and discharge port.
  - N: AISI 316 hydraulic components, body and discharge port
- Reduced axial thrusts enable the use of standard motors that are easily found in the market.
- Liquid temperature between -30°C and +90°C, depending on the mechanical seal used.
- Minimum liquid level at the suction 20 mm.

CHARACTERISTICS OF 33, 46, 66, 92SVI SERIES

- Vertical pump with submersible body.
- The following versions are available:
  - S: version with standard motor; impellers, diffusers, tie-rods, suction base and filter made entirely of stainless steel. Adapter and upper head in cast iron.
  - N: version with standard motor; made entirely of AISI 316 stainless steel.
- Delivery port can be coupled to counter-flanges, according to EN 1092.
- Balanced mechanical seal according to EN 12756 (ex DIN 24960) and ISO 3069, which can be replaced without removing the motor from the pump.
- Standard version for liquid temperatures ranging from -10°C e +90°C.

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.

- 4 poles version.
- Special voltages.
- Special materials for mechanical seals and gaskets.
- Horizontal installation.

ErP 2009/125/EC

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.

Regulation (EU) n. 547/2012 – Annex II – point 2 (Product information requirements)
At current status the scope of Regulation does not cover vertical multistage pumps designed to be used with liquids other than clean water.

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GENERAL CHARACTERISTICS
e-SVI 2 POLES

		COMPACT VERSION			VERSION WITH COUPLING									
		1SVI	3SVI	5SVI	1SVI	3SVI	5SVI	10SVI	15SVI	22SVI	SVI 33	SVI 46	SVI 66	SVI92
Max efficiency flow (m³/h)		1,7	3	5,5	1,7	3	5,5	10,5	16,5	20,5	33	42	74	92
Flow range (m³/h)	min	0,7	1,2	2,4	0,7	1,2	2,4	5	8	11	15	22	30	45
	max	2,4	4,4	8,5	2,4	4,4	8,5	14	24	29	40	60	85	120
Maximum head (m)		105	88	58	230	250	250	250	250	260	240	220	150	130
Motor power (kW)	min	0,37	0,37	0,37	0,37	0,37	0,37	0,75	1,1	1,1	2,2	3	4	5,5
	max	1,1	1,1	1,1	2,2	3	5,5	11	15	18,5	30	30	30	30
Max η (%) of pump		50	60	70	50	60	70	71	72	73	76,5	79	78	79,5
Standard temperature (°C)		-10 +60			-10 +90									

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e-SVI VERSIONS

	VERSION	MECH. SEAL	HYDRAULIC	UPPER HEAD	DELIVERY PORT
1-3-5SVI..EG	Close-coupled	Standard	AISI 304	Cast iron	Threaded Rp 3/4
1-3-5SVI..EN	Close-coupled	Standard	AISI 316	AISI 316	Threaded Rp 3/4
1-3-5SVI..CG	With coupling	Cartridge	AISI 304	Cast iron	Threaded Rp 1 1/4
1-3-5SVI..CN	With coupling	Cartridge	AISI 316	AISI 316	Threaded Rp 1 1/4
10-15-22SVI..CG	With coupling	Cartridge	AISI 304	Cast iron	Threaded Rp 2
10-15-22SVI..CN	With coupling	Cartridge	AISI 316	AISI 316	Threaded Rp 2
1-3-5SVI..MG	With coupling	Standard	AISI 304	Cast iron	Threaded Rp 1 1/4
1-3-5SVI..MN	With coupling	Standard	AISI 316	AISI 316	Threaded Rp 1 1/4
10-15-22SVI..MG	With coupling	Standard	AISI 304	Cast iron	Threaded Rp 2
10-15-22SVI..MN	With coupling	Standard	AISI 316	AISI 316	Threaded Rp 2
SVI33-46-66-92S	With coupling	Standard	AISI 304	Cast iron	Flanged DN 80
SVI33-46-66-92N	With coupling	Standard	AISI 316	AISI 316	Flanged DN 80

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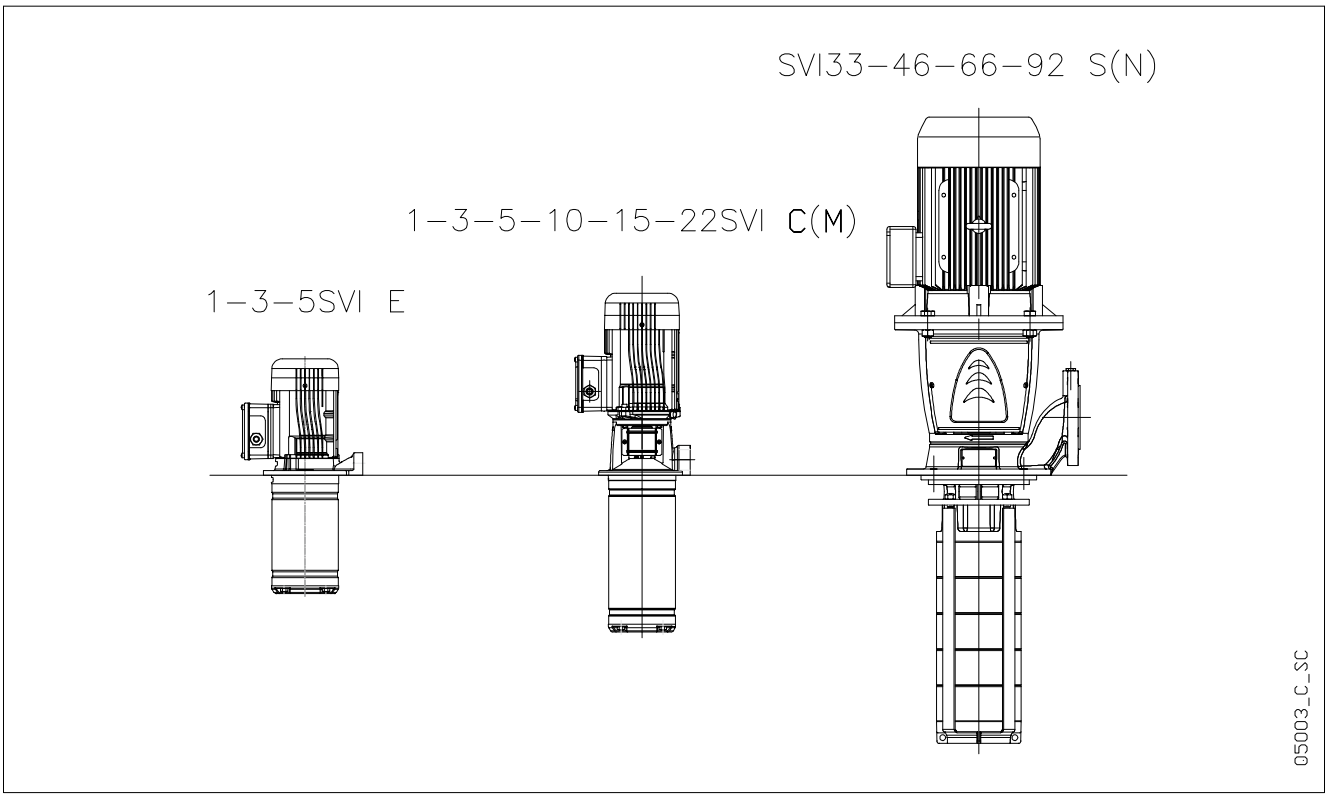
VERSION DIAGRAM



e-SVI SERIES
TYPICAL APPLICATIONS

Thanks to its flexibility and reliability, the e-SVI pump is suitable for use in several industrial applications, from machine tools to filtering systems, to process control, and similar, even outside the industrial sector.

APPLICATIONS

- Cooling circuits and tool lubrication.
- Cooling systems
- Process temperature control
- Industrial washing systems (degreasing of mechanical components).
- Clean liquid pressure boosting.
- Transfer of condensation.
- Filtering systems.
- Washing and cleaning systems (washing of wells, cars and trucks).
- Electronic industrial sector circuit washing.
- Commercial washers.

PUMPED LIQUID

- Coolants.
- Emulsions.
- Cutting oil.
- Condensation.
- Mixtures water-detergents.
- Mixtures water-glycols.

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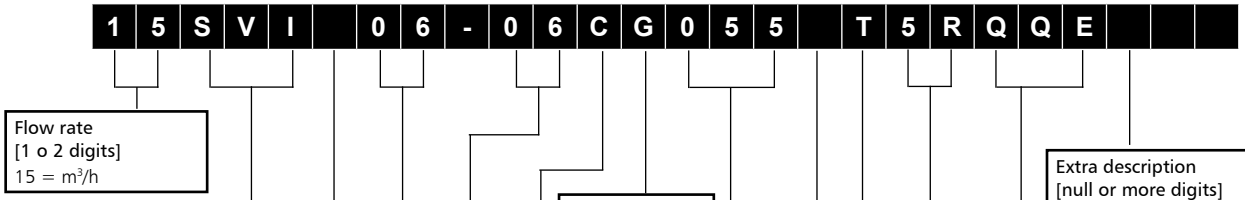
IDENTIFICATION CODE

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



Flow rate
[1 o 2 digits]
15 = m³/h

Series name [3 digits]
SVI

Motor operation
[null o 1 digit]
Null = standard version
H = equipped with HYDROVAR
E = e-SM drive

Number of impellers [2 digits]
06 = 6 impellers

Number of stage [2 digits]
06 = 6 stages

Standard version [1 digit]
E = with extended shaft (1-3-5SVI only)
C = with coupling and cartridge seal
M = with coupling and mechanical seal
X = customized version

Hydraulic components material [1 digit]
G= AISI 304
N= AISI 316

Motor power [3 digits]
kW x 10

N° poles [null or 1 digit]
Null = 2 poles
4 = 4 poles
P = e-SM drive

Phase [null or 1 digit]
Null = bare shaft pump
M = single-phase
T = three-phase

Extra description
[null or more digits]
Null = standard version
P = PTC
S = Motor heater
U = UL approved (cURus)
Z = Other or mixed specifications
C= premium card hydrovar
Y= without inducer

Mechanical seal and elastomers

Supply voltages + Frequency [2 digits]

50 Hz
5H = 1x220-240 V
5R = 3x220-240/380-415 V
5V = 3x380-415/660-690 V
5P = 3x200-208/346-360 V
5S = 3x255-265/440-460 V
5T = 3x290-300/500-525 V
5W = 3x440-460/- V
5X = other voltages

60 Hz
6F = 1x220-230 V
6E = 1x200-210 V
6P = 3x220-230/380-400 V
6R = 3x255-277/440-480 V
6V = 3x440-480/- V
6U = 3x380-400/660-690 V
6N = 3x200-208/346-360 V
6T = 3x330-346/575-600 V
6X = other voltages

Bifrequency
BR = 3x230/400 V 50 Hz
3x265/460 V 60 Hz
BV = 3x400/690 V 50 Hz
3x460/- V 60 Hz

e-SM Drive
02 = 1x208-240 V
04 = 3x380-460 V
05 = 3x208-240/380-460 V

Bare shaft pump
6- = Bare shaft pump to be coupled with 60 Hz fixed speed motor
5- = Bare shaft pump to be coupled with 50 Hz fixed speed motor

Hydrovar supply
02 = HYDROVAR HVL2.015 1~ 208-240 V (50/60 Hz)
03 = HYDROVAR HVL3.015 3~ 208-240 V (50/60 Hz)
04 = HYDROVAR HVL4.015 3~ 380-460 V (50/60 Hz)

EXAMPLE : 15SVI06-06CG055T5RQQE
e-SVI series electric pump, nominal flow 15 m³/h, number of impeller 6, number of stage 6, C version with coupling and cartridge mechanical seal, made of AISI 304, motor power 5,5 kW, 2 pole three-phase 50 Hz version, supply voltage 3x220-240/380-415 V, SiC-SiC-EPDM mech. seal.

e-SVI SERIES 33, 46, 66, 92

Series name [3 digits]
SVI

Flow rate
[1 o 2 digits]
46 = m³/h

Number of impellers [2 digits]
09/2 = 9 total impellers,
including 2 reduced ones

Number of stage [2 digits]
09 = 9 stages

Standard version
[1 digit]
S = version with coupling
N = AISI 316,
version with coupling

Motor power [3 digits]
kW x 10

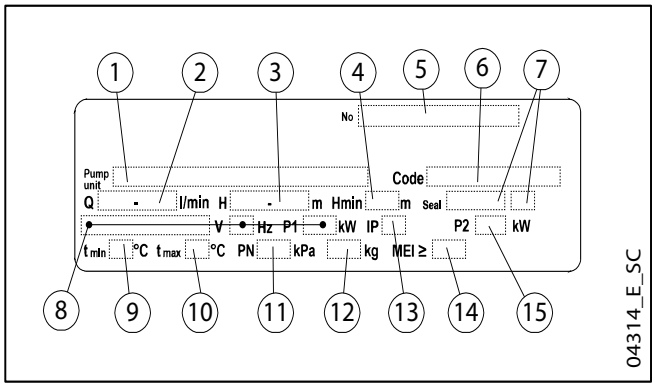
Extra description
[null or more digits]
null or letter assigned by the manufacturer

Phase [null or 1 digit]
Null = bare shaft pump
M = single-phase (on request)
T = three-phase

N° poles [null or 1 digit]
Null = 2 poles
4 = 4 poles (on request)

EXAMPLE : SVI4609/2-09S300T
SVI Series Electric pump, flow rate 46 m3/h, number of impellers 9 including 2 reduced ones, number of stages 9, S version with coupling, rated motor power 30 kW, 50 Hz version, three-phase.

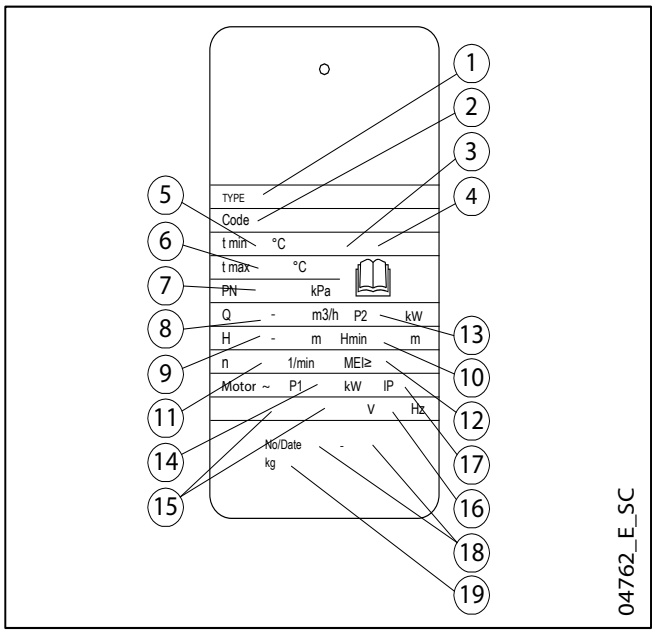
RATING PLATE
1, 3, 5SVI (E) - SINGLE PHASE



LEGEND

1 - Electric pump / Pump type
2 - Delivery range
3 - Head range
4 - Minimum head (EN 60335-2-41)
5 - Serial number
6 - Code
7 - Mechanical seal material identification code
O-ring material identification code
8 - Electrical data (rated voltage range, frequency, electric pump unit absorbed power)
9 - Minimum operating temperature*
10 - Maximum operating liquid temperature* (uses as EN 60335-2-41)
11 - Maximum operating pressure*
12 - Weight
13 - Protection class
14 - MEI (Regulation (EU) n. 547/2012)
15 - Motor nominal power

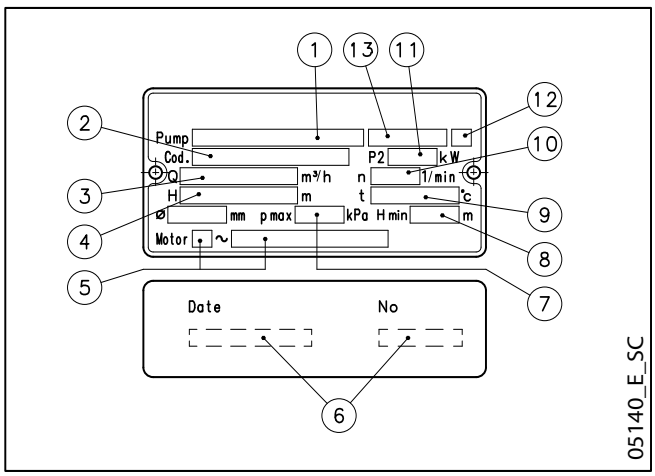
1, 3, 5SVI (E) - THREE PHASE
1, 3, 5, 10, 15, 22SVI (C, M)



LEGEND

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

SVI 33, 46, 66, 92 (S, N)

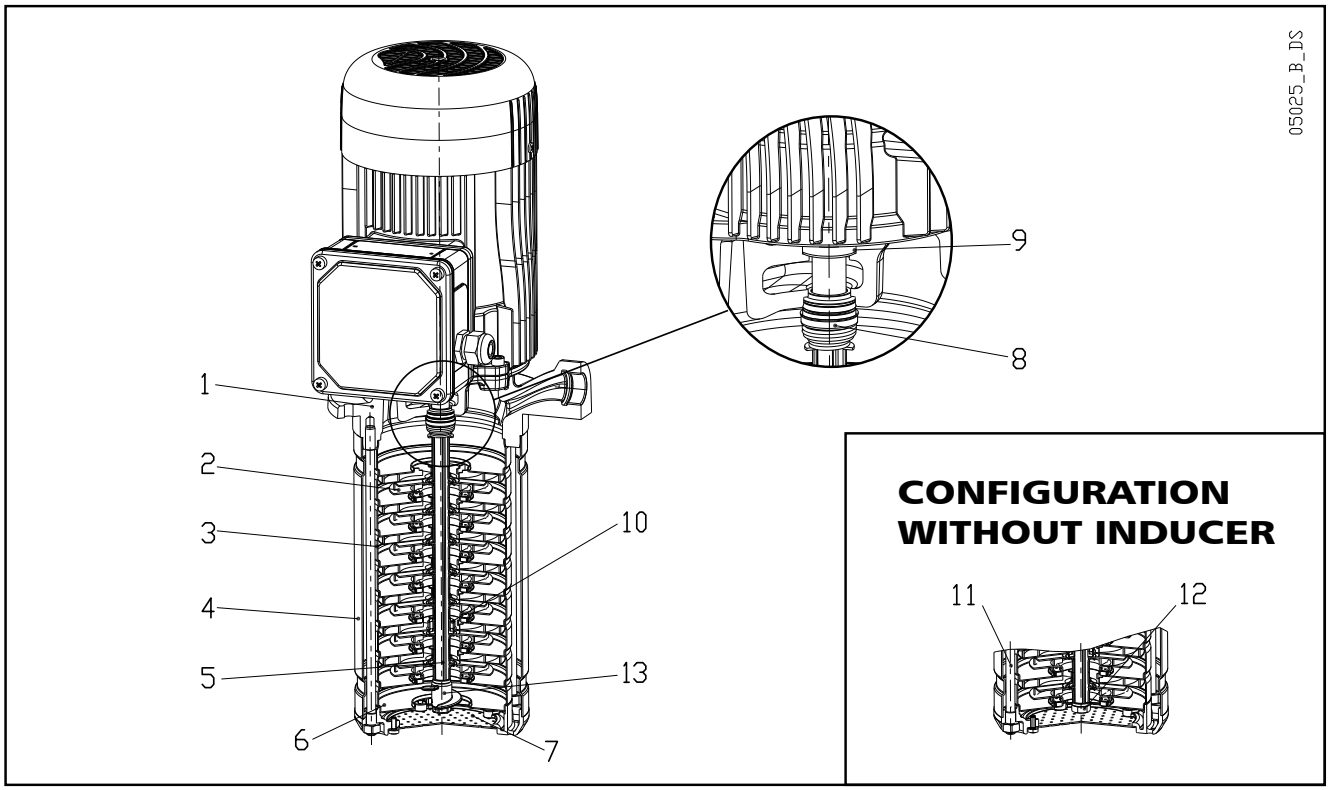


LEGEND

1 - Electrip pump type
2 - Code
3 - Delivery range
4 - Head range
5 - Motor type
6 - Date of manufacturing and serial number
7 - Maximum operating pressure*
8 - Minimum head
9 - Maximum operating temperature*
10 - Speed
11 - Rated power
12 - O-ring material identification code
13 - Mechanical seal material identification code

* Pressure/temperature limit diagrams (pages 14-16).

1, 3, 5SVI SERIES - COMPACT VERSION (E)
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



G VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
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-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
7	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Mechanical seal	Silicon carbide / Carbon / FKM* / AISI 316		
9	Sealing ring	NBR		
10	Shaft sleeve and bushing	Tungsten carbide		
11	Tie rods	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
12	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
13	Inducer	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)

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N VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Adapter	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	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
7	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Mechanical seal	Silicon carbide / Carbon / FKM* / AISI 316		
9	Sealing ring	NBR		
10	Shaft sleeve and bushing	Tungsten carbide		
11	Tie rods	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
12	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
13	Inducer	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)

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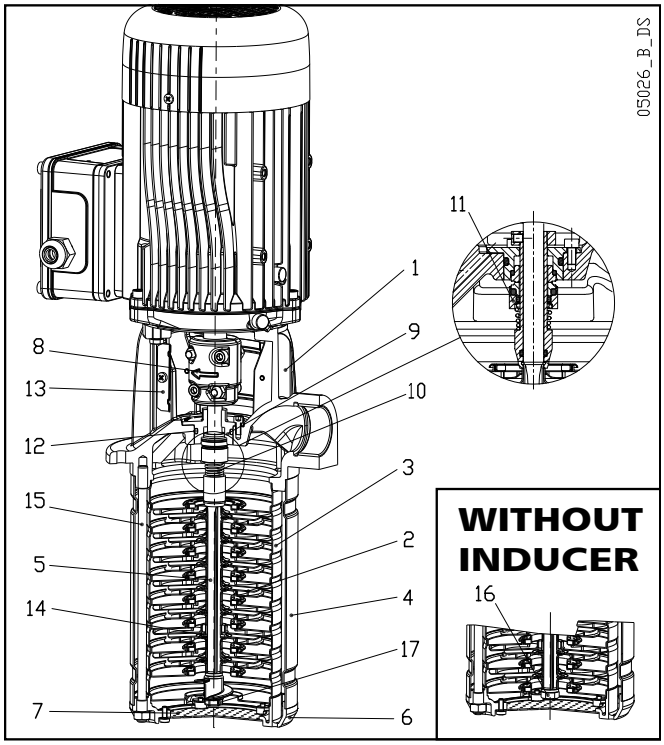
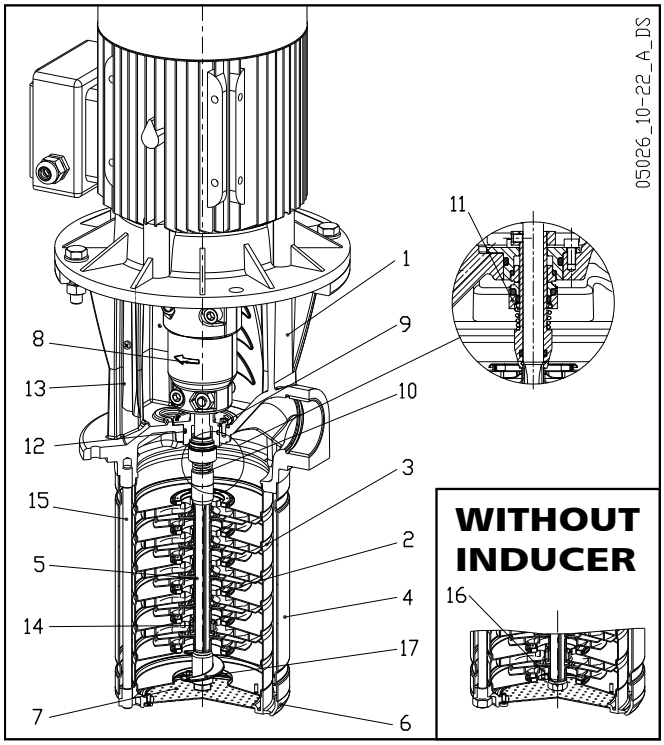
* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

1, 3, 5, 10, 15, 22SVI SERIES - VERSION WITH COUPLING (C, M)
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS





G VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
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-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Shaft	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
6	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
7	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Removable seal housing	Stainless steel	EN 10213-4-GX5CrNiMo19-10-2 (1.4308)	ASTM CF8M (AISI 316 cast)
10	Mechanical seal	Silicon carbide / Carbon / FKM* / AISI 316		
11	Cartrige seal	Silicon carbide / Carbon / FKM* / AISI 316		
12	Elastomers	FKM*		
13	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
14	Shaft sleeve and bushing	Tungsten carbide		
15	Tie rods	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
17	Inducer	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)

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N VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Adapter	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	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
6	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
7	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Coupling	Aluminium	EN 1706-AC-AlSi11Cu2 (Fe) (AC46100)	-
9	Removable seal housing	Stainless steel	EN 10213-4-GX5CrNiMo19-10-2 (1.4308)	ASTM CF8M (AISI 316 cast)
10	Mechanical seal	Silicon carbide / Carbon / FKM* / AISI 316		
11	Cartrige seal	Silicon carbide / Carbon / FKM* / AISI 316		
12	Elastomers	FKM*		
13	Coupling protection	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
14	Shaft sleeve and bushing	Tungsten carbide		
15	Tie rods	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
16	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
17	Inducer	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

svi1-22-n-en_a_tm

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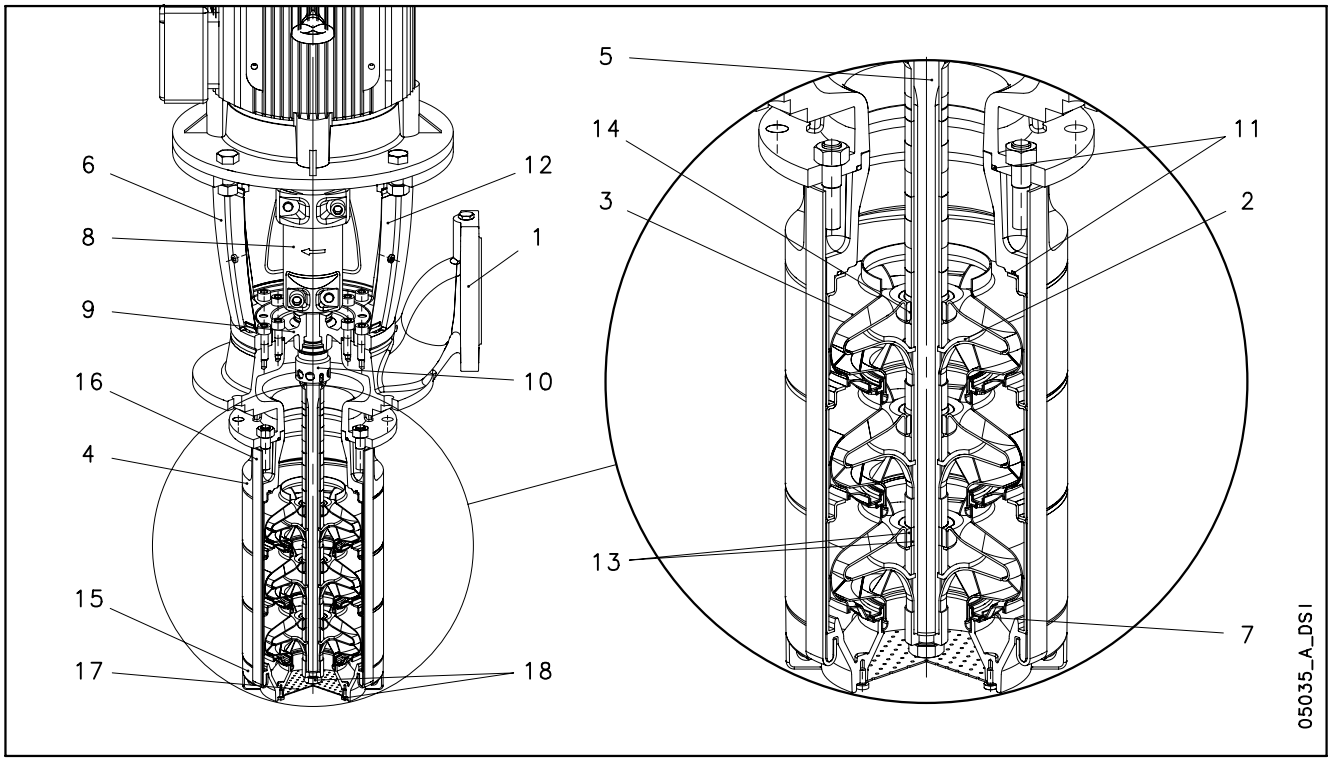
SVI SERIES 33, 46, 66, 92 - VERSION WITH COUPLING (S, N)
ELECTRIC PUMP CROSS SECTION AND MAIN COMPONENTS



S VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Upper head	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	Adapter	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
5	Shaft	Stainless steel	EN 10088-1 - X17CrNi16-2 (1.4057)	AISI 431
6	Motor 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	Seal housing	Cast iron	EN 1561-GJL-250 (JL1040)	ASTM Class 35
10	Mechanical seal	Silicon carbide / Carbon / FKM*		
11	Elastomers	FKM*		
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	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
16	Tie rods	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
17	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
18	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

svi33-92-s-en b tm

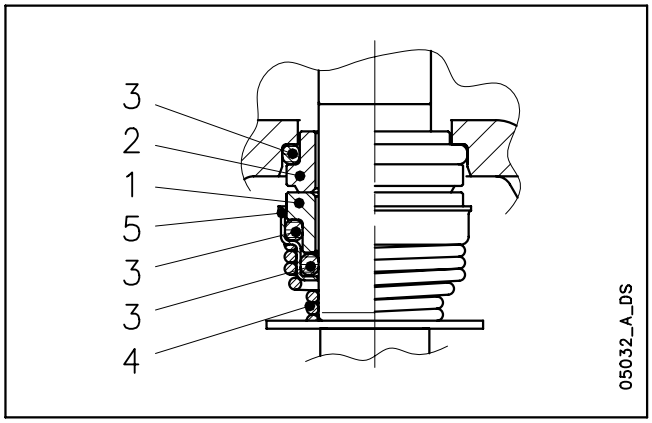
N VERSION

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Upper head	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	Adapter	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
5	Shaft	Duplex stainless steel	EN 10088-1-X2CrNiMoN22-5-3 (1.4462)	UNS S 31803
6	Motor 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	Seal housing	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
10	Mechanical seal	Silicon carbide / Carbon / FKM*		
11	Elastomers	FKM*		
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	Suction base	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (AISI 316 cast)
16	Tie rods	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
17	Strainer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
18	Screws	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316

svi33-92-n-en_b_tm

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

1, 3, 5SVI SERIES - COMPACT VERSION (E) MECHANICAL SEAL, ACCORDING TO EN 12756



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
B_3 : Resin impregnated carbon	V : FKM (FPM)*	G : AISI 316
Q_6 : Silicon Carbide	E : EPDM	
U_1 : Tungsten Carbide		

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

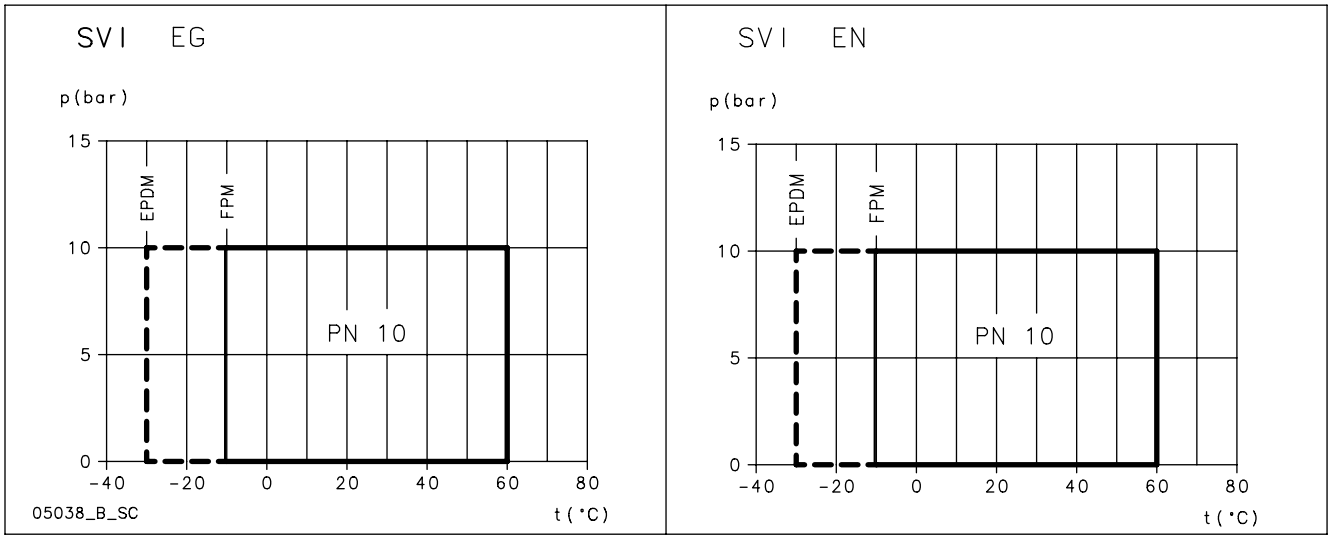
svi-e_ten-mec-en_c_tm

SEAL TYPES

TYPE	POSITION 1 ROTATING PART	2 STATIONARY PART	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	TEMPERATURE (°C)
STANDARD MECHANICAL SEAL						
Q_6 B_3 V G G	Q_6	B_3	V	G	G	-10 +60
OTHER TYPES OF MECHANICAL SEAL						
Q_6 Q_6 E G G	Q_6	Q_6	E	G	G	-30 +60
Q_6 Q_6 V G G	Q_6	Q_6	V	G	G	-10 +60
U_1 U_1 V G G	U_1	U_1	V	G	G	-10 +60

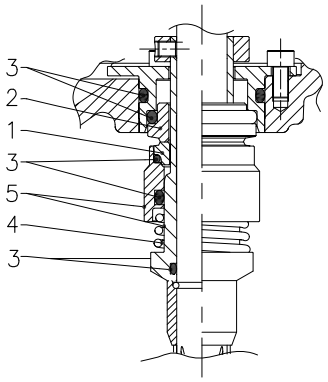
svi-e_tipi-ten-mec-en_c_tc

COMPLETE PUMP PRESSURE / TEMPERATURE OPERATING LIMITS



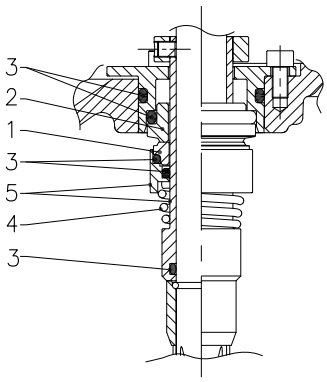
1, 3, 5, 10, 15, 22SVI SERIES - VERSION WITH COUPLING (C, M) MECHANICAL SEAL, ACCORDING TO EN 12756

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

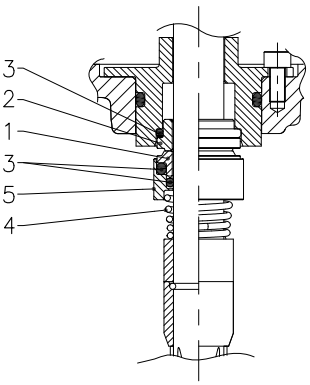


UNBALANCED CARTRIDGE SEAL

10, 15, 22SVI ≥ 5,5 kW



BALANCED CARTRIDGE SEAL



UNBALANCED MECHANICAL SEAL

05113-C_A_DS

LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
Q_1 : Silicon Carbide	V : FKM (FPM)*	G : AISI 316
B : Resin impregnated carbon	E : EPDM	
U_3 : Tungsten Carbide		

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

svi-c_ten-mec-en_a_tm

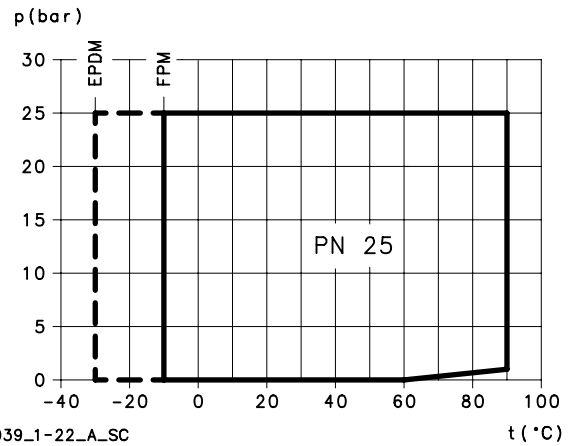
SEAL TYPES

TYPE	POSITION 1	2	3	4	5	TEMPERATURE (°C)
	ROTATING PART	STATIONARY PART	ELASTOMERS	SPRINGS	OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
Q_1 B V G G	Q_1	B	V	G	G	-10 +90
OTHER TYPES OF MECHANICAL SEAL						
Q_1 Q_1 V G G	Q_1	Q_1	V	G	G	-10 +90
Q_1 Q_1 E G G	Q_1	Q_1	E	G	G	-30 +90
U_3 U_3 V G G	U_3	U_3	V	G	G	-10 +90

svi-c_tipi-ten-mec-en_a_tc

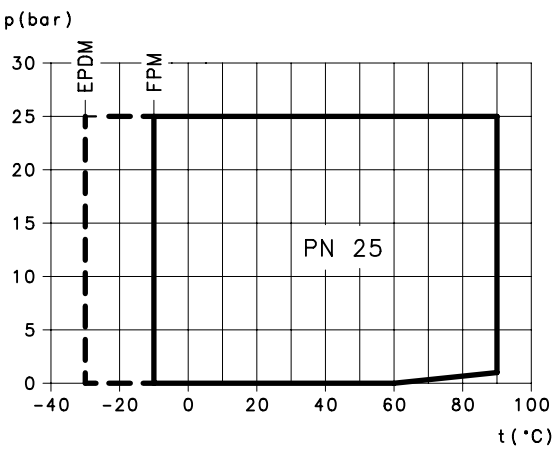
COMPLETE PUMP PRESSURE / TEMPERATURE OPERATING LIMITS

SVI G

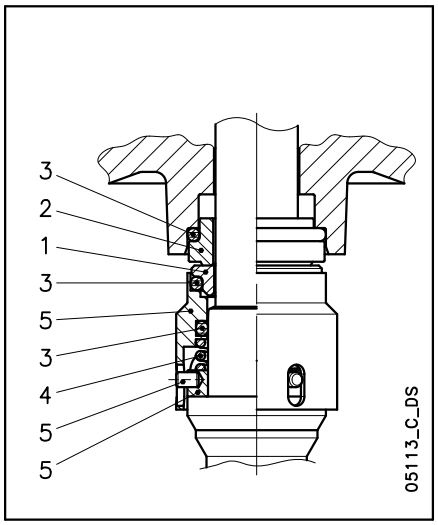


05039_1-22_A_SC

SVI N



e-SVI SERIES 33, 46, 66, 92 - VERSION WITH COUPLING (S, N) MECHANICAL SEAL, ACCORDING TO EN 12756



LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
Q_1 : Silicon Carbide	V : FKM (FPM)*	G : AISI 316
B : Resin impregnated carbon	E : EPDM	
U_3 : Tungsten Carbide	T : PTFE	

* Fluoro-elastomer: FPM (old ISO), FKM (ASTM & new ISO).

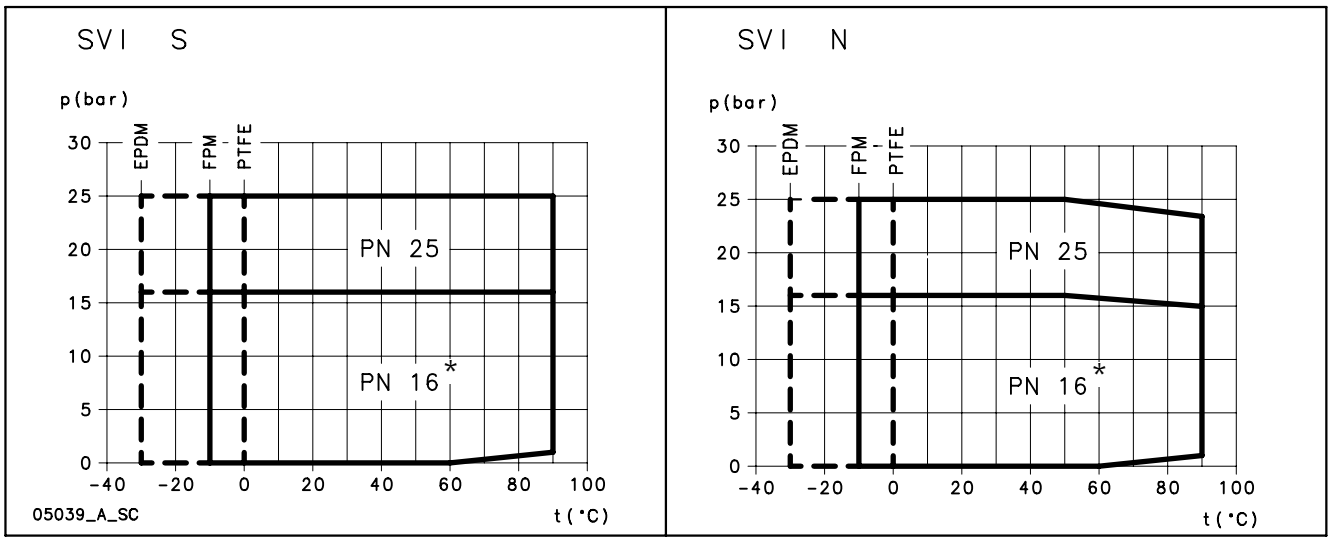
svi-s_ten-mec-en_c_tm

SEAL TYPES

TYPE	POSITION 1	2	3	4	5	TEMPERATURE (°C)
	ROTATING PART	STATIONARY PART	ELASTOMERS	SPRINGS	OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
Q_1 B V G G	Q_1	B	V	G	G	-10 +90
OTHER TYPES OF MECHANICAL SEAL						
Q_1 Q_1 V G G	Q_1	Q_1	V	G	G	-10 +90
Q_1 Q_1 E G G	Q_1	Q_1	E	G	G	-30 +90
Q_1 Q_1 T G G	Q_1	Q_1	T	G	G	0 +90
U_3 U_3 V G G	U_3	U_3	V	G	G	-10 +90

svi-s_tipi-ten-mec-en_b_tc

COMPLETE PUMP PRESSURE / TEMPERATURE OPERATING LIMITS



* = PN16 limit for SVI 66 and SVI 92 series

ErP 2009/125/EC

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e-SVI 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 **Regulations (EC) No 640/2009** and **(EU) No 4/2014** implementing the requirements of the EuP and ErP Directives.

In accordance with regulations, the **three-phase 50 Hz surface motors with power outputs ranging from 0,75 to 375 kW** have a IE3 as minimum level of efficiency or IE2 fitted with variable speed drive. The IE2 efficiency level motor can be supplied without frequency converter, as this is only mandatory when the motor is in operation, but not when sold.

- 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.
- **Standard three-phase surface motors ≥ 0,75 kW supplied as IE3**.
- 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** as standard only for 30 kW motor.
- **Single-phase** version:
  220-240 V 50 Hz.
- **Three-phase** version:
  from 0,37 to30 kW (2 poles)
  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.

e-SVI SERIES - SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

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-SVI (E) SERIES
THREE-PHASE MOTORS AT 50 Hz, 2 POLES

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	By 2020
0,55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82	78,9	82,5	82	78,9	82,5	82	78,9	82,5	82	78,9	3	
1,1	84	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84	84,0	81,4	84	84,0	81,4	84	84,0	81,4		

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	SM63SVIE(N)/304/E	63	SPECIAL	2	50	0,64	4,35	1,37	4,14	4,10
0,55	SM71SVIE(N)/305/E	71				0,69	4,72	1,75	4,08	4,00
0,75	SM80SVIE(N)/307/E PE	80				0,78	7,38	2,48	3,57	3,75
1,1	SM80SVIE(N)/311/E PE	80				0,79	8,31	3,63	3,95	3,95

P_N	Voltage U_N V											n_N	See note.	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	I_N (A)					
0,37	2,03	2,18	2,32	1,17	1,26	1,34	-	-	-	-	-	2745 ÷ 2800				
0,55	2,42	2,51	2,65	1,4	1,45	1,53	-	-	-	-	-	2690 ÷ 2765				
0,75	2,96	2,94	2,96	1,71	1,7	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895		≤ 1000	-15 / 40	No
1,1	4,19	4,14	4,16	2,42	2,39	2,4	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				

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

svi-e-IE3-mott-2p50-en_b_te

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

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e-SVI (C, M, S, N) SERIES
THREE-PHASE MOTORS AT 50 Hz, 2 POLES (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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	By 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		
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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		
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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. Model	IEC SIZE*	Construction Design	N. of Poles	f_N	Data for 400 V / 50 Hz Voltage				
								T_N		
kW	Model				Hz	cosφ	Is / I_N	Nm	Ts/T_N	Tm/Tn
0,37	SM71RB14/304/E	71R	V18/B14	2	50	0,64	4,35	1,37	4,14	4,10
0,55	SM71B14/305/E	71				0,74	5,97	1,85	3,74	3,56
0,75	SM80B14/307/E PE	80				0,78	7,38	2,48	3,57	3,75
1,1	SM80B14/311/E PE	80				0,79	8,31	3,63	3,95	3,95
1,5	SM90RB14/315/E 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	PLM160B5S1/3185 E3	160				0,88	9,81	59,9	2,81	4,53
22	PLM180RB5S1/3220 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 / 50	No

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

svi-s-IE3-mott-2p50-en_b_te

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

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e-SVI (S, N) SERIES
THREE-PHASE MOTORS AT 50 Hz, 2 POLES (above 30 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	93	93,1	93	93,3	93,5	93,4	93,4	93,6	93,4	3	By 04/2020

P_N	Manufacturer: OMEGA MOTOR SANAYİ A.Ş. Dudullu Organize Sanayi Bölgesi 2. Cadde No: 10 34775 Ümraniye İSTANBUL/TURKEY	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
30	3MAS 200LA2 V1 30 kW E3	200	V1	2	50	0,89	7,80	96,9	2,60	3,10

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	55,3	52,2	50,8	31,8	30,3	2965		≤ 1000	-15 / 50	No

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

svi-s-IE3-mott30-2p50-en_b_te

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

MOTOR NOISE

The tables below show the mean sound pressure levels (Lp) measured at 1 meter distance in a free field according to EN ISO 11203. The noise values are measured on 50 Hz motors and have a tolerance of 3 dB (A) according to EN ISO 4871.

e-SVI (E) THREE-PHASE 50 Hz, 2 POLES MOTORS

POWER kW	MOTOR TYPE IEC SIZE	NOISE LpA dB
0,3	63	<70
0,4	63	<70
0,5	63	<70
0,75	80	<70
1,1	80	<70

e-SVI (C, M, S, N) THREE-PHASE 50 Hz, 2 POLES MOTORS

POWER kW	MOTOR TYPE IEC SIZE*	RUMOROSITA' LpA dB
0,37	71R	<70
0,55	71	<70
0,75	80R	<70
1,1	80	<70
1,5	90R	<70
2,2	90R	<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

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

svi_mott-en_d_tr

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AVAILABLE VOLTAGES
MOTORS FOR e-SVI SERIES (up to 22 kW)

	TRIFASE - 2 POLI															
	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 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
0,30	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
0,37	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
0,45	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
0,55	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
0,75	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
1,1	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
1,5	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
2,2	s	o	o	o	o	o	o	s	o	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	o
4	o	s	o	o	o	o	o	s	o	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	o
7,5	o	s	o	o	o	o	o	s	o	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	o
15	o	s	o	o	o	o	o	s	o	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	o
22	o	s	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o

s = Tensione Standard o = Tensione opzionale - = Non disponibile svi-volt-lowa_b_te

For higher power motors special voltages available on request.

Tolerances on nominal voltages

- **50 Hz**:

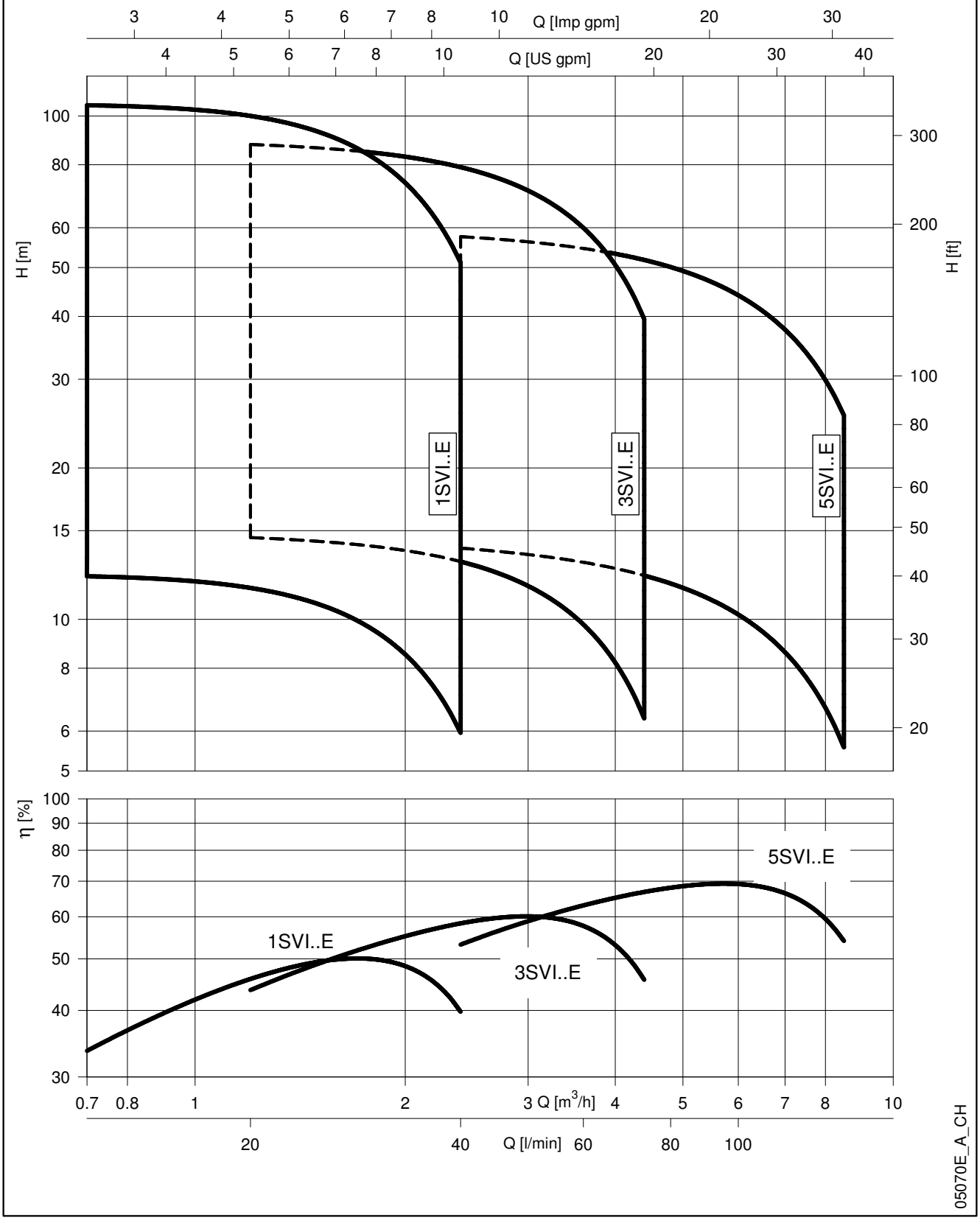
± 10% on the single voltage value shown on the rating plate.
± 5% on voltage range shown on the rating plate.

- **60 Hz**:

± 10% on the voltage values shown on the rating plate.

1, 3, 5SVI SERIES - COMPACT VERSION
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES

SVI..E	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



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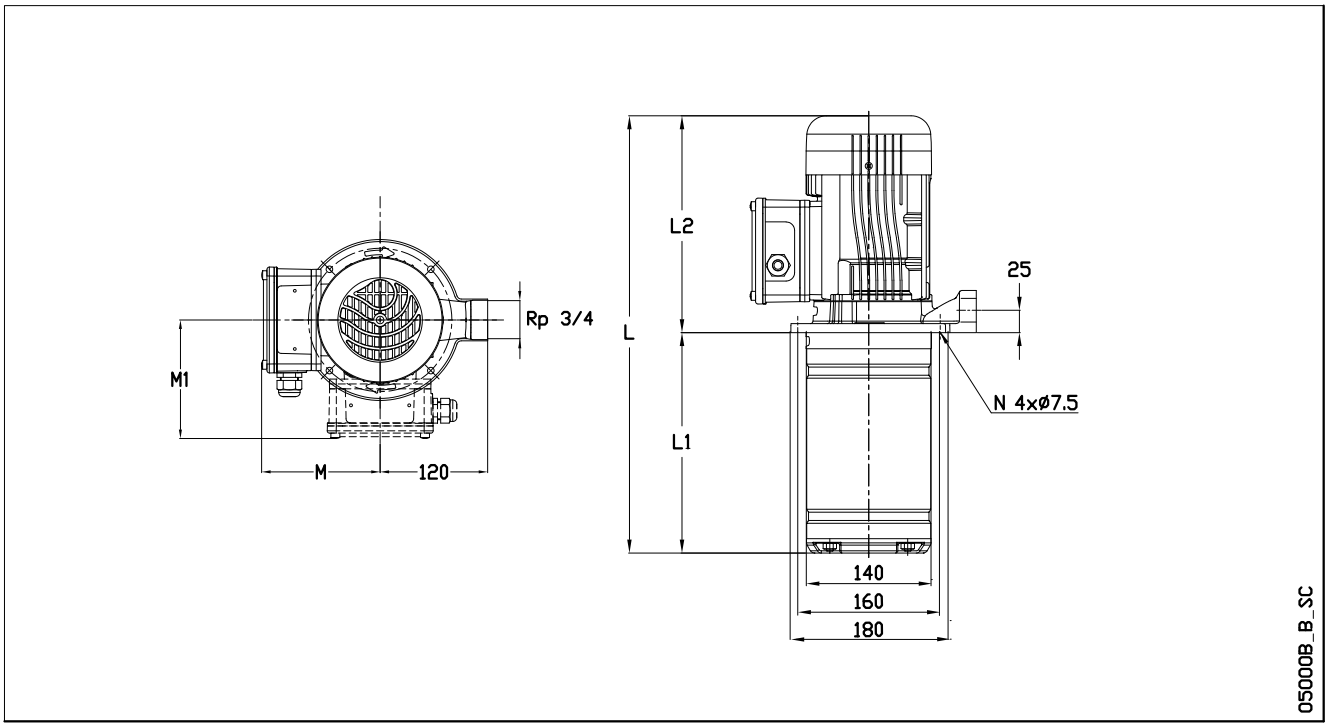
1, 3, 5SVI SERIES - VERSION COMPACT
TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE SVI..E	RATED POWER		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	H = TOTAL HEAD IN METRES OF COLUMN OF WATER													
1SVI02-02E	0,37	0,5	12,2	12,2	11,5	10,7	9,5	7,9	6,0							
1SVI03-03E	0,37	0,5	18,0	18,0	17,0	15,7	13,8	11,4	8,4							
1SVI04-04E	0,37	0,5	23,7	23,5	22,1	20,4	17,9	14,6	10,6							
1SVI05-05E	0,37	0,5	29,3	28,9	27,0	24,8	21,6	17,4	12,5							
1SVI06-06E	0,37	0,5	34,8	34,2	31,7	28,9	25,0	20,0	14,0							
1SVI07-07E	0,37	0,5	40,2	39,2	36,1	32,7	28,1	22,2	15,2							
1SVI08-08E	0,55	0,75	48,1	47,9	45,2	41,8	36,8	30,4	22,4							
1SVI09-09E	0,55	0,75	53,7	53,4	50,4	46,4	40,8	33,5	24,6							
1SVI10-10E	0,55	0,75	59,4	59,0	55,5	51,0	44,7	36,6	26,6							
1SVI11-11E	0,55	0,75	65,1	64,5	60,4	55,5	48,5	39,5	28,5							
1SVI12-12E	0,75	1	73,3	73,1	69,3	64,3	57,1	47,6	35,7							
1SVI13-13E	0,75	1	79,2	78,9	74,8	69,4	61,6	51,2	38,2							
1SVI15-15E	0,75	1	90,9	90,5	85,6	79,3	70,1	58,1	43,1							
1SVI17-17E	1,1	1,5	105,2	104,9	100,0	93,1	82,6	68,6	51,2							
3SVI02-02E	0,37	0,5	14,9		14,5	14,3	14,0	13,5	13,0	12,4	11,7	9,8	6,5			
3SVI03-03E	0,37	0,5	22,0		21,2	20,8	20,3	19,6	18,7	17,7	16,6	13,7	8,6			
3SVI04-04E	0,37	0,5	28,9		27,7	27,1	26,2	25,2	23,9	22,5	20,8	16,8	10,1			
3SVI05-05E	0,55	0,75	37,2		36,4	35,8	35,0	33,9	32,6	31,1	29,2	24,5	16,2			
3SVI06-06E	0,55	0,75	44,4		43,4	42,6	41,6	40,2	38,6	36,6	34,3	28,5	18,5			
3SVI07-07E	0,75	1	52,5		51,8	51,0	50,0	48,7	47,0	45,0	42,5	36,1	24,6			
3SVI08-08E	0,75	1	60,0		59,1	58,2	57,0	55,4	53,4	51,0	48,1	40,7	27,5			
3SVI09-09E	1,1	1,5	67,7		66,8	65,8	64,5	62,8	60,6	57,9	54,6	46,4	31,6			
3SVI10-10E	1,1	1,5	75,0		73,8	72,7	71,3	69,3	66,9	63,8	60,2	51,0	34,5			
3SVI11-11E	1,1	1,5	82,3		81,0	79,7	78,0	75,8	73,1	69,7	65,7	55,5	37,4			
3SVI12-12E	1,1	1,5	89,6		87,8	86,4	84,5	82,1	79,1	75,5	71,1	59,9	40,1			
5SVI02-02E	0,37	0,5	14,8						13,8	13,7	13,4	13,0	12,2	10,2	8,2	5,7
5SVI03-03E	0,55	0,8	22,8						21,8	21,6	21,3	20,7	19,7	16,9	14,1	10,3
5SVI04-04E	0,55	0,75	30,0						28,2	27,9	27,5	26,6	25,2	21,2	17,3	12,2
5SVI05-05E	0,75	1,00	38,0						36,4	36,0	35,5	34,5	32,9	28,2	23,5	17,1
5SVI06-06E	1,1	2	45,3						43,7	43,3	42,8	41,6	39,6	33,9	28,1	20,3
5SVI07-07E	1,1	1,5	52,7						50,7	50,1	49,5	48,1	45,8	39,1	32,2	23,1
5SVI08-08E	1,1	1,5	60,1						57,6	57,0	56,2	54,6	51,8	44,1	36,2	25,8

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

1-5svi-2p50-en_a_th

1SVI..E SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)						ELECTRIC PUMP WEIGHT (kg)
	kW	SIZE	L	L1	L2	M (max)	M1 (max)	D1 (max)	
1SVI02-02E..003	0,37	63	335	126	209	122	-	120	11
1SVI03-03E..003	0,37	63	355	146	209	122	-	120	11
1SVI04-04E..003	0,37	63	375	166	209	122	-	120	11
1SVI05-05E..003	0,37	63	395	186	209	122	-	120	11
1SVI06-06E..003	0,37	63	415	206	209	122	-	120	12
1SVI07-07E..003	0,37	63	435	226	209	122	-	120	12
1SVI08-08E..005	0,55	71	477	246	231	132	-	140	14
1SVI09-09E..005	0,55	71	497	266	231	132	-	140	14
1SVI10-10E..005	0,55	71	517	286	231	132	-	140	15
1SVI11-11E..005	0,55	71	537	306	231	132	-	140	15
1SVI12-12E..007	0,75	80	589	326	263	-	140	155	18
1SVI13-13E..007	0,75	80	609	346	263	-	140	155	18
1SVI15-15E..007	0,75	80	649	386	263	-	140	155	19
1SVI17-17E..011	1,1	80	689	426	263	-	140	155	22

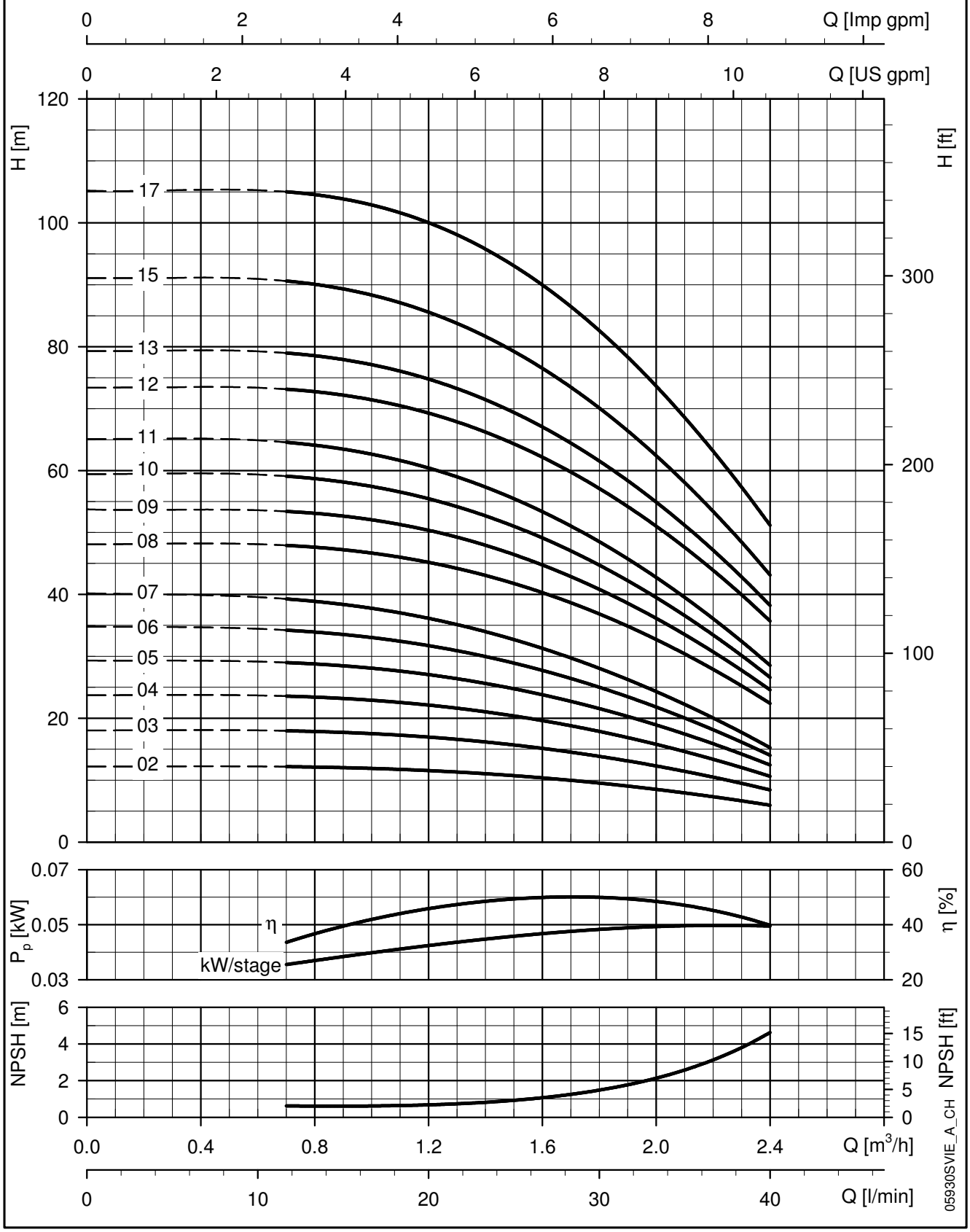
All listed dimensions are with inducer.

1svi_e-2p50-en_a_td

e.g. 1SVI10-10 has 10 stages with impeller and 1 inducer chamber.

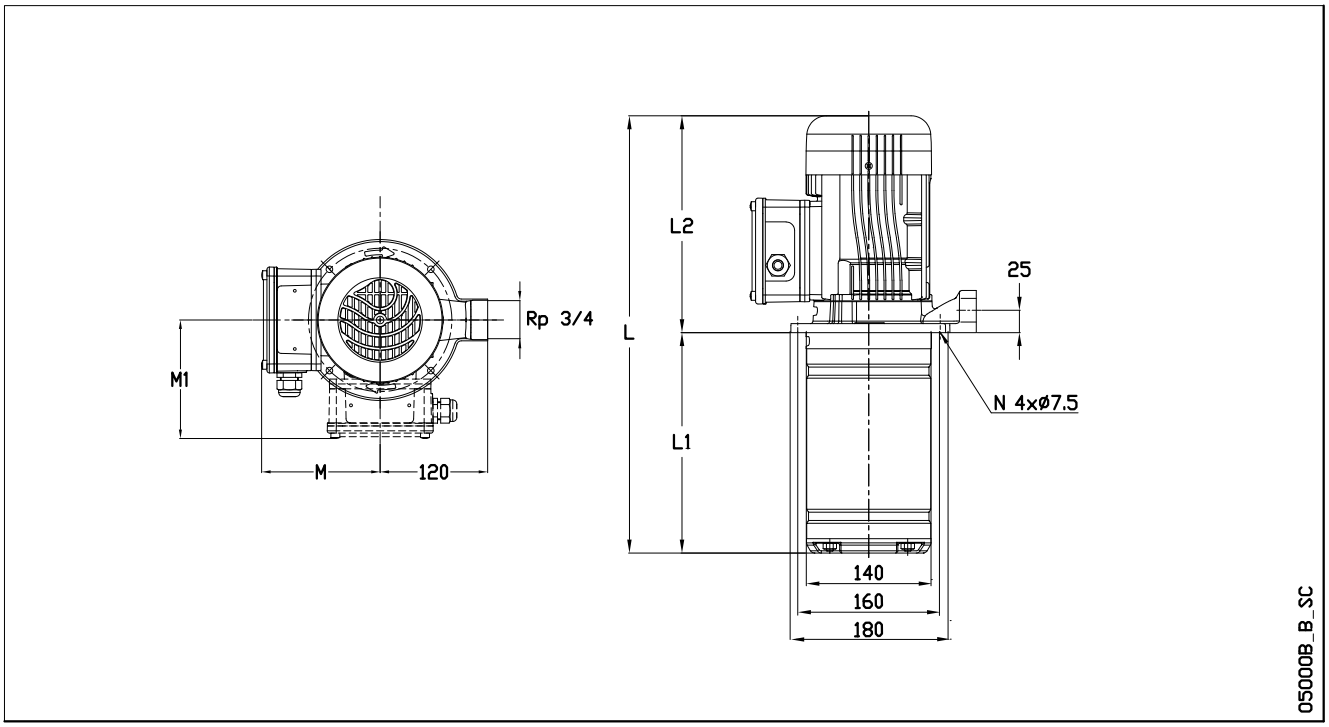
1SVI..E SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

1SVI..E	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

3SVI..E SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



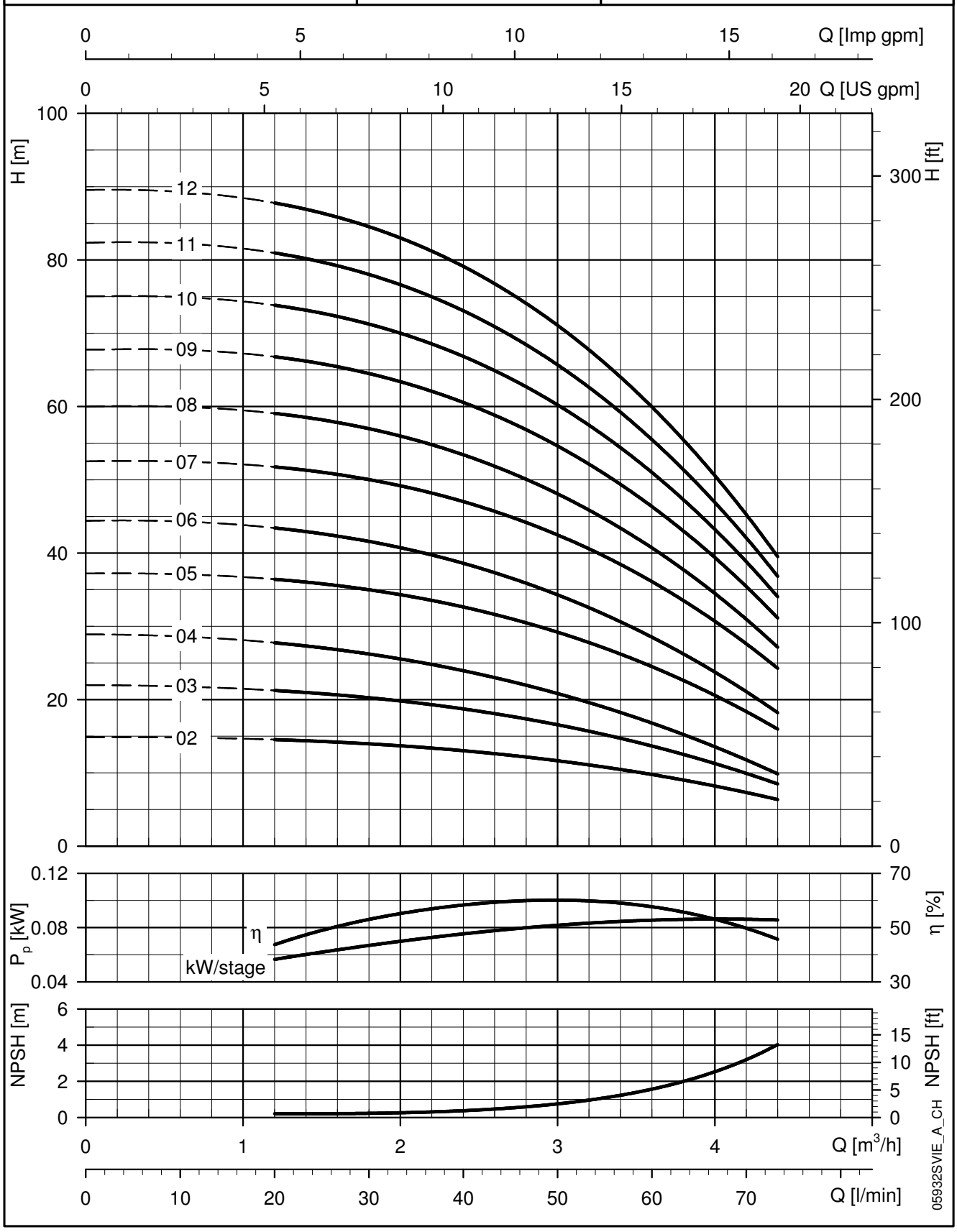
PUMP TYPE	MOTOR		DIMENSIONS (mm)						ELECTRIC PUMP WEIGHT (kg)
	kW	SIZE	L	L1	L2	M (max)	M1 (max)	D1 (max)	
3SVI02-02E..003	0,37	63	335	126	209	122	-	120	11
3SVI03-03E..003	0,37	63	355	146	209	122	-	120	11
3SVI04-04E..003	0,37	63	375	166	209	122	-	120	11
3SVI05-05E..005	0,55	71	417	186	231	132	-	140	13
3SVI06-06E..005	0,55	71	437	206	231	132	-	140	14
3SVI07-07E..007	0,75	80	489	226	263	-	140	155	17
3SVI08-08E..007	0,75	80	509	246	263	-	140	155	17
3SVI09-09E..011	1,1	80	529	266	263	-	140	155	20
3SVI10-10E..011	1,1	80	549	286	263	-	140	155	20
3SVI11-11E..011	1,1	80	569	306	263	-	140	155	20
3SVI12-12E..011	1,1	80	589	326	263	-	140	155	20

All listed dimensions are with inducer.
e.g. 3SVI10-10 has 10 stages with impeller and 1 inducer chamber.

3svi_e-2p50-en_a_td

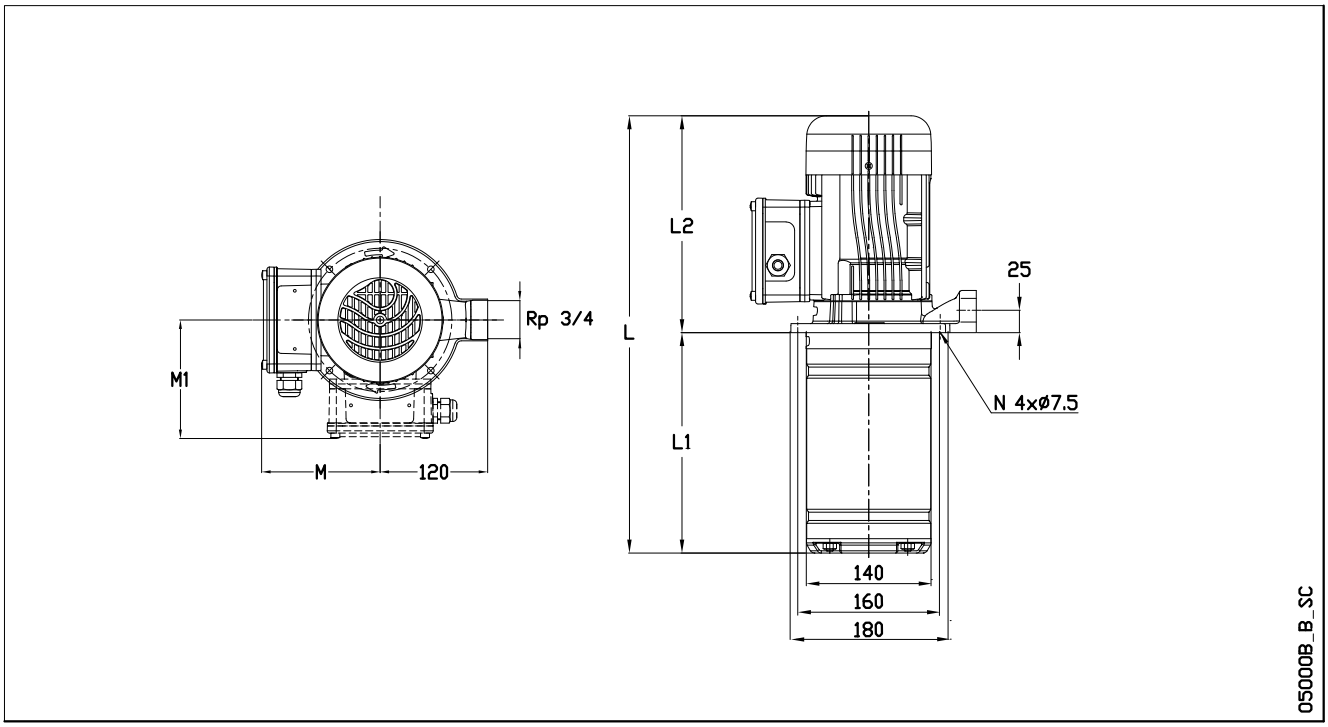
3SVI..E SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

3SVI..E	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

5SVI..E SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)						ELECTRIC PUMP WEIGHT (kg)
	kW	SIZE	L	L1	L2	M (max)	M1 (max)	D1 (max)	
5SVI02-02E..003	0,37	63	350	141	209	122	-	120	11
5SVI03-03E..005	0,55	71	397	166	231	132	-	140	13
5SVI04-04E..005	0,55	71	422	191	231	132	-	140	13
5SVI05-05E..007	0,75	80	479	216	263	-	140	155	17
5SVI06-06E..011	1,1	80	504	241	263	-	140	155	19
5SVI07-07E..011	1,1	80	529	266	263	-	140	155	19
5SVI08-08E..011	1,1	80	554	291	263	-	140	155	20

All listed dimensions are with inducer.
e.g. 5SVI05-05 has 5 stages with impeller and 1 inducer chamber.

5svi_e-2p50-en_a_td

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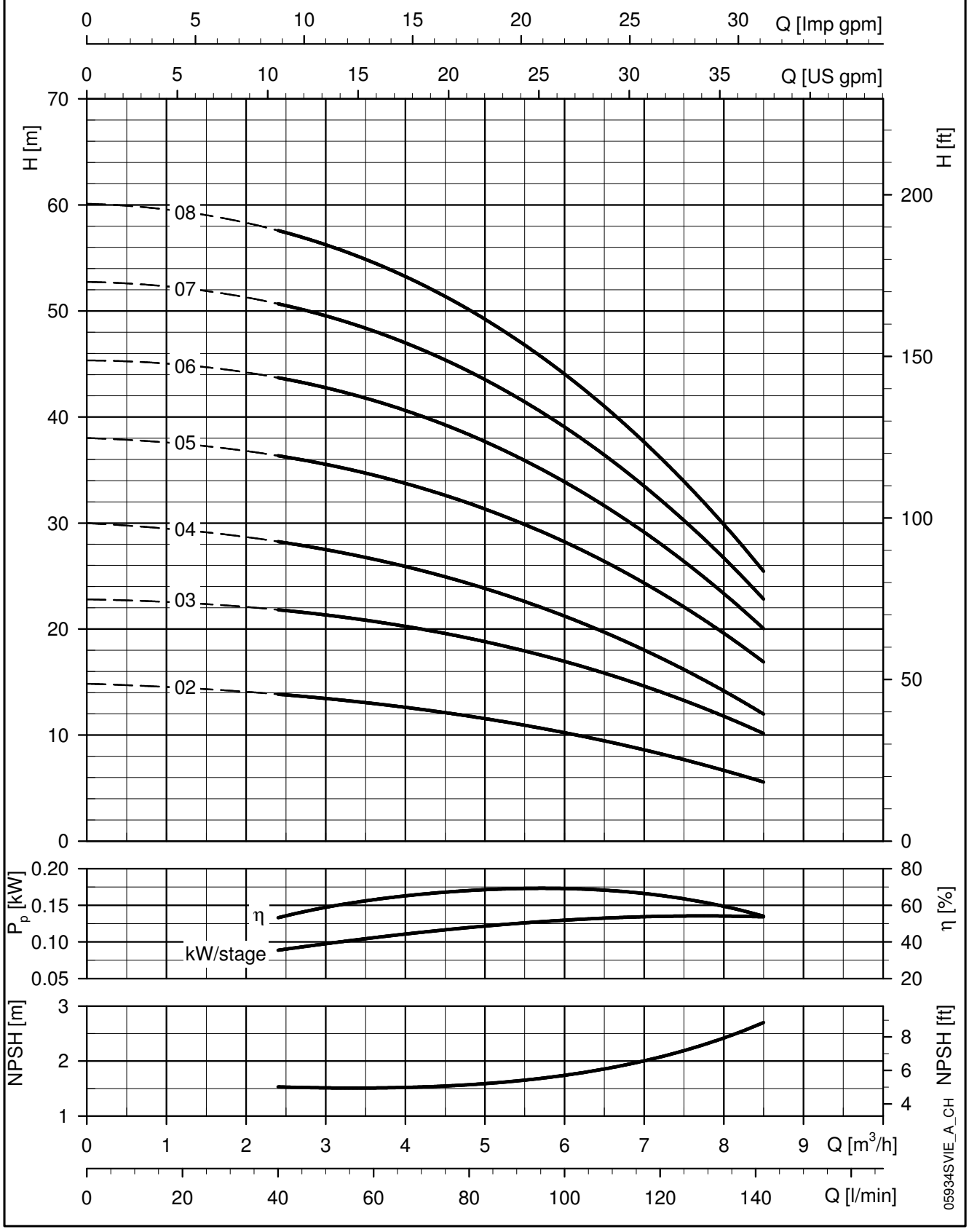
5SVI..E SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

5SVI..E	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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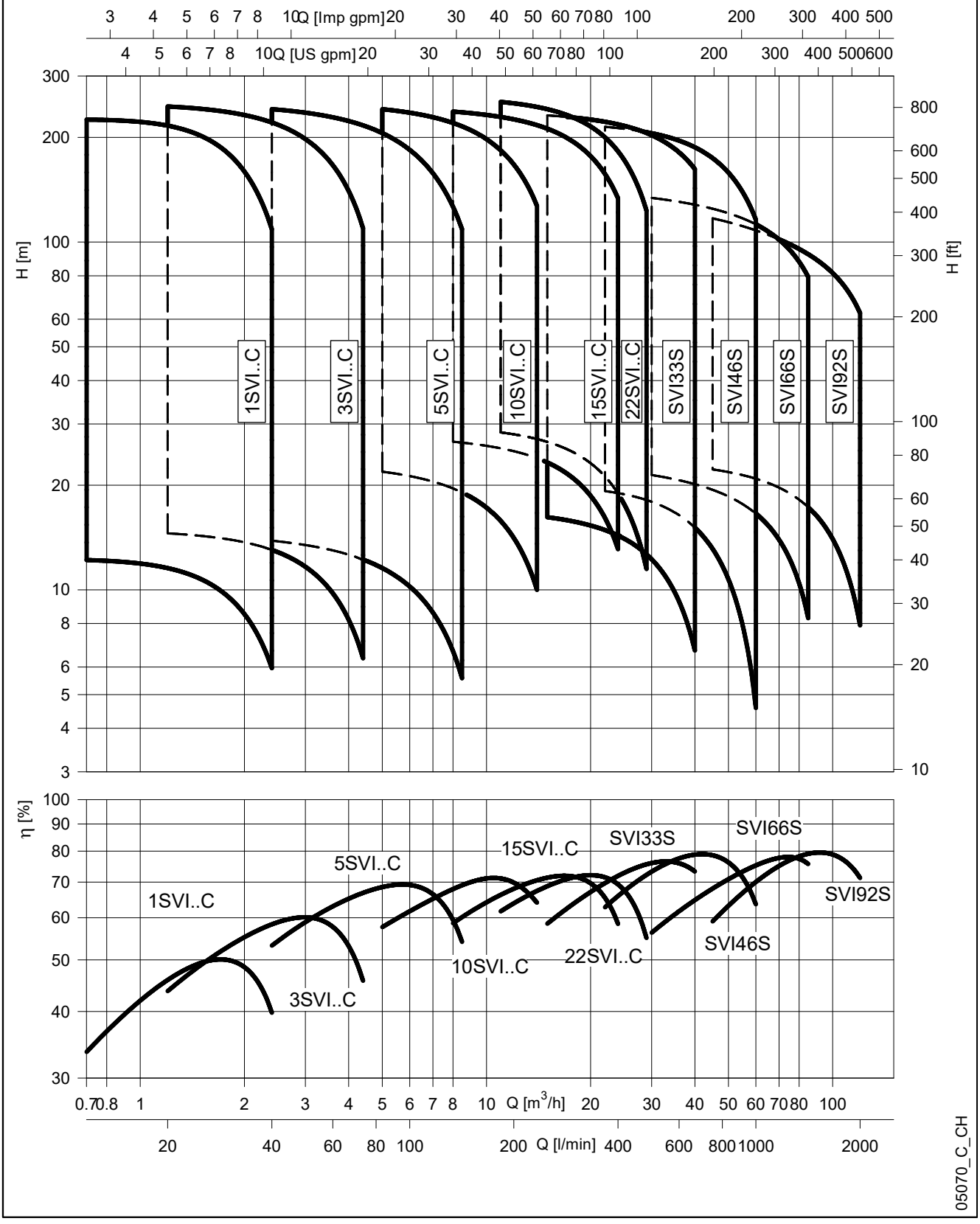
e-SVI SERIES - VERSION WITH COUPLING
HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES

SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



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1, 3, 5SVI SERIES - VERSION WITH COUPLING
TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE SVI..C / SVI..M	RATED POWER kW	RATED POWER HP	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
			H = TOTAL HEAD IN METRES OF COLUMN OF WATER													
1SVI02-02..	0,37	0,5	12,2	12,2	11,5	10,7	9,5	7,9	6,0							
1SVI03-03..	0,37	0,5	18,0	18,0	17,0	15,7	13,8	11,4	8,4							
1SVI04-04..	0,37	0,5	23,7	23,5	22,1	20,4	17,9	14,6	10,6							
1SVI05-05..	0,37	0,5	29,3	28,9	27,0	24,8	21,6	17,4	12,5							
1SVI06-06..	0,37	0,5	34,8	34,2	31,7	28,9	25,0	20,0	14,0							
1SVI07-07..	0,37	0,5	40,2	39,2	36,1	32,7	28,1	22,2	15,2							
1SVI08-08..	0,55	0,75	48,1	47,9	45,2	41,8	36,8	30,4	22,4							
1SVI09-09..	0,55	0,75	53,7	53,4	50,4	46,4	40,8	33,5	24,6							
1SVI10-10..	0,55	0,75	59,4	59,0	55,5	51,0	44,7	36,6	26,6							
1SVI11-11..	0,55	0,75	65,1	64,5	60,4	55,5	48,5	39,5	28,5							
1SVI12-12..	0,75	1	73,3	73,1	69,3	64,3	57,1	47,6	35,7							
1SVI13-13..	0,75	1	79,2	78,9	74,8	69,4	61,6	51,2	38,2							
1SVI15-15..	0,75	1	90,9	90,5	85,6	79,3	70,1	58,1	43,1							
1SVI17-17..	1,1	1,5	105,2	104,9	100,0	93,1	82,6	68,6	51,2							
1SVI19-19..	1,1	1,5	117,0	116,7	111,0	103,2	91,5	75,8	56,3							
1SVI22-22..	1,1	1,5	134,6	134,1	127,4	118,1	104,4	86,1	63,5							
1SVI25-25..	1,5	2	152,6	152,4	145,5	135,4	120,0	99,1	72,7							
1SVI27-27..	1,5	2	164,3	164,0	156,4	145,4	128,8	106,1	77,5							
1SVI30-30..	1,5	2	181,7	181,3	172,6	160,1	141,2	115,7	83,9							
1SVI32-32..	2,2	3	197,2	197,1	188,4	175,8	156,5	130,0	96,3							
1SVI34-34..	2,2	3	209,2	208,9	199,8	186,3	165,5	137,1	101,2							
1SVI37-37..	2,2	3	225,9	224,9	216,1	201,9	179,3	148,1	108,7							
3SVI02-02..	0,37	0,5	14,9		14,5	14,3	14,0	13,5	13,0	12,4	11,7	9,8	6,5			
3SVI03-03..	0,37	0,5	22,0		21,2	20,8	20,3	19,6	18,7	17,7	16,6	13,7	8,6			
3SVI04-04..	0,37	0,5	28,9		27,7	27,1	26,2	25,2	23,9	22,5	20,8	16,8	10,1			
3SVI05-05..	0,55	0,75	37,2		36,4	35,8	35,0	33,9	32,6	31,1	29,2	24,5	16,2			
3SVI06-06..	0,55	0,75	44,4		43,4	42,6	41,6	40,2	38,6	36,6	34,3	28,5	18,5			
3SVI07-07..	0,75	1	52,5		51,8	51,0	50,0	48,7	47,0	45,0	42,5	36,1	24,6			
3SVI08-08..	0,75	1	60,0		59,1	58,2	57,0	55,4	53,4	51,0	48,1	40,7	27,5			
3SVI09-09..	1,1	1,5	67,7		66,8	65,8	64,5	62,8	60,6	57,9	54,6	46,4	31,6			
3SVI10-10..	1,1	1,5	75,0		73,8	72,7	71,3	69,3	66,9	63,8	60,2	51,0	34,5			
3SVI11-11..	1,1	1,5	82,3		81,0	79,7	78,0	75,8	73,1	69,7	65,7	55,5	37,4			
3SVI12-12..	1,1	1,5	89,6		87,8	86,4	84,5	82,1	79,1	75,5	71,1	59,9	40,1			
3SVI13-13..	1,5	2	98,1		96,7	95,4	93,5	91,0	87,8	83,9	79,2	67,2	45,6			
3SVI14-14..	1,5	2	105,6		104,1	102,5	100,4	97,7	94,2	89,9	84,8	71,8	48,5			
3SVI16-16..	1,5	2	119,9		117,8	116,1	113,6	110,5	106,5	101,6	95,8	80,9	54,2			
3SVI19-19..	2,2	3	144,3		142,3	140,3	137,5	133,9	129,2	123,5	116,7	99,1	67,6			
3SVI21-21..	2,2	3	159,3		156,9	154,6	151,4	147,3	142,1	135,7	128,0	108,5	73,6			
3SVI23-23..	2,2	3	174,0		171,1	168,5	165,0	160,4	154,7	147,6	139,2	117,7	79,4			
3SVI25-25..	2,2	3	188,5		186,1	183,3	179,3	174,1	167,6	159,7	150,3	126,6	84,8			
3SVI27-27..	3	4	204,4		201,7	198,8	194,7	189,4	182,7	174,4	164,5	139,4	94,4			
3SVI29-29..	3	4	219,3		216,0	212,8	208,3	202,6	195,3	186,4	175,7	148,6	100,2			
3SVI31-31..	3	4	233,8		230,3	226,8	222,0	215,7	207,8	198,2	186,7	157,6	106,0			
3SVI33-33..	3	4	248,5		245,3	241,5	236,2	229,3	220,7	210,2	197,7	166,3	111,2			
5SVI02-02..	0,37	0,5	14,8						13,8	13,7	13,4	13,0	12,2	10,2	8,2	5,7
5SVI03-03..	0,55	0,75	22,8						21,8	21,6	21,3	20,7	19,7	16,9	14,1	10,3
5SVI04-04..	0,55	0,75	30,0						28,2	27,9	27,5	26,6	25,2	21,2	17,3	12,2
5SVI05-05..	0,75	1	38,0						36,4	36,0	35,5	34,5	32,9	28,2	23,5	17,1
5SVI06-06..	1,1	1,5	45,3						43,7	43,3	42,8	41,6	39,6	33,9	28,1	20,3
5SVI07-07..	1,1	1,5	52,7						50,7	50,1	49,5	48,1	45,8	39,1	32,2	23,1
5SVI08-08..	1,1	1,5	60,1						57,6	57,0	56,2	54,6	51,8	44,1	36,2	25,8
5SVI09-09..	1,5	2	68,0						65,5	64,8	64,0	62,2	59,3	50,6	41,9	30,2
5SVI10-10..	1,5	2	75,5						72,4	71,7	70,8	68,7	65,4	55,7	46,0	33,0
5SVI11-11..	1,5	2	82,8						79,3	78,4	77,5	75,2	71,4	60,7	49,9	35,6
5SVI12-12..	2,2	3	90,8						88,0	87,0	86,0	83,4	79,3	67,4	55,7	40,5
5SVI13-13..	2,2	3	98,3						95,0	94,0	92,8	90,0	85,5	72,6	59,9	43,5
5SVI14-14..	2,2	3	105,7						102,0	100,9	99,6	96,6	91,7	77,8	64,0	46,3
5SVI15-15..	2,2	3	113,1						109,0	107,8	106,4	103,1	97,8	82,8	68,1	49,1
5SVI16-16..	2,2	3	120,5						115,9	114,6	113,1	109,6	103,9	87,8	72,1	51,8
5SVI18-18..	3	4	135,8						131,1	129,7	128,0	124,1	117,8	99,9	82,3	59,5
5SVI21-21..	3	4	157,9						152,0	150,3	148,3	143,6	136,1	114,9	94,2	67,6
5SVI23-23..	4	5,5	174,4						168,9	167,2	165,1	160,2	152,3	129,6	107,2	78,2
5SVI25-25..	4	5,5	189,2						183,1	181,1	178,9	173,5	164,8	140,1	115,7	84,1
5SVI28-28..	4	5,5	211,5						204,2	201,9	199,4	193,3	183,4	155,5	128,0	92,7
5SVI30-30..	5,5	7,5	227,0						219,8	217,5	214,8	208,4	198,1	168,5	139,3	101,5
5SVI33-33..	5,5	7,5	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)

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10, 15, 22SVI SERIES - VERSION WITH COUPLING
TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE SVI..C / SVI..M	RATED POWER kW	RATED POWER HP	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
			H = TOTAL HEAD IN METRES OF COLUMN OF WATER													
10SVI02-02..	0,75	1	23,6	21,9	21,3	19,6	17,0	15,8	10,0							
10SVI03-03..	1,1	1,5	35,7	33,0	32,1	29,6	25,8	24,1	16,0							
10SVI04-04..	1,5	2	47,7	44,2	43,0	39,9	34,8	32,6	21,7							
10SVI05-05..	2,2	3	60,0	56,1	54,7	50,9	44,9	42,2	29,0							
10SVI06-06..	2,2	3	71,8	66,8	65,0	60,4	53,1	49,8	33,9							
10SVI07-07..	3	4	83,6	78,3	76,2	70,8	62,1	58,3	39,8							
10SVI08-08..	3	4	95,3	88,9	86,5	80,1	70,2	65,7	44,5							
10SVI09-09..	4	5,5	106,3	100,1	97,5	90,8	80,0	75,1	52,1							
10SVI10-10..	4	5,5	118,0	110,8	107,9	100,3	88,2	82,8	57,2							
10SVI11-11..	4	5,5	129,6	121,3	118,1	109,6	96,3	90,3	62,1							
10SVI13-13..	5,5	7,5	156,0	146,5	142,7	132,6	116,4	109,2	74,3							
10SVI15-15..	5,5	7,5	179,5	167,9	163,4	151,6	132,8	124,3	83,9							
10SVI17-17..	7,5	10	205,0	193,2	188,5	175,7	154,7	145,2	98,8							
10SVI18-18..	7,5	10	216,9	204,2	199,1	185,5	163,2	153,1	104,0							
10SVI20-20..	7,5	10	240,6	226,0	220,3	205,0	180,2	168,9	114,3							
10SVI21-21..	11	15	253,6	241,0	235,5	220,2	195,0	183,5	127,5							
15SVI02-02..	2,2	3	28,7			26,7	25,9	25,5	23,9	22,4	18,9	17,4	13,1			
15SVI03-03..	3	4	43,3			40,4	39,1	38,6	36,2	33,8	28,7	26,5	20,1			
15SVI04-04..	4	5,5	58,4			54,7	53,1	52,5	49,4	46,3	39,7	36,9	28,7			
15SVI05-05..	4	5,5	72,7			67,8	65,8	65,0	61,0	57,1	48,7	45,2	34,9			
15SVI06-06..	5,5	7,5	87,6			81,5	79,4	78,4	74,1	69,9	60,3	56,3	44,2			
15SVI07-07..	5,5	7,5	101,9			94,5	91,9	90,8	85,7	80,6	69,4	64,7	50,5			
15SVI08-08..	7,5	10	117,4			110,9	108,0	106,8	100,8	94,9	82,0	76,7	60,6			
15SVI09-09..	7,5	10	131,9			124,4	121,0	119,6	112,8	106,1	91,5	85,5	67,4			
15SVI10-10..	11	15	147,7			138,8	135,3	133,8	126,7	119,6	103,9	97,4	77,5			
15SVI11-11..	11	15	162,3			152,4	148,5	146,8	138,9	131,1	113,8	106,5	84,7			
15SVI13-13..	11	15	191,3			179,2	174,5	172,5	163,1	153,7	133,1	124,5	98,6			
15SVI15-15..	15	20	222,1			209,9	204,8	202,6	192,2	181,7	158,3	148,5	118,8			
15SVI17-17..	15	20	251,6			237,3	231,4	228,9	216,9	205,0	178,4	167,3	133,6			
22SVI02-02..	2,2	3	30,4					28,4	27,2	26,0	23,3	22,2	18,9	16,6	13,8	11,5
22SVI03-03..	3	4	45,4					42,2	40,4	38,5	34,5	32,8	27,8	24,2	20,2	16,6
22SVI04-04..	4	5,5	60,9					56,8	54,4	51,9	46,6	44,4	37,9	33,1	27,7	23,0
22SVI05-05..	5,5	7,5	76,0					70,9	67,9	64,9	58,3	55,6	47,4	41,4	34,7	28,8
22SVI06-06..	7,5	10	93,2					88,8	85,7	82,5	75,4	72,4	63,3	56,7	49,1	42,6
22SVI07-07..	7,5	10	108,5					103,1	99,4	95,7	87,2	83,7	73,1	65,3	56,5	48,8
22SVI08-08..	11	15	124,6					119,2	115,2	111,0	101,6	97,7	85,7	77,0	66,9	58,2
22SVI09-09..	11	15	140,1					133,7	129,2	124,4	113,8	109,3	95,8	86,0	74,6	64,8
22SVI10-10..	11	15	155,4					148,2	143,1	137,8	125,9	120,9	105,8	94,8	82,3	71,3
22SVI12-12..	15	20	186,1					178,6	172,9	166,8	152,9	147,0	129,1	115,9	100,7	87,4
22SVI14-14..	15	20	216,6					207,7	200,9	193,7	177,4	170,4	149,4	133,9	116,1	100,6
22SVI17-17..	18,5	25	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)

10-22siv-2p50-en_a_th

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SVI33, 46 SERIES - VERSION WITH COUPLING
TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE SVI..S / SVI..N	RATED POWER kW	RATED POWER HP	Q = DELIVERY l/min 0	250	300	366,7	400	500	600	666,7	700	800	900	1000
			m³/h 0	15	18	22	24	30	36	40	42	48	54	60
			H = TOTAL HEAD METRES COLUMN OF WATER											
SVI 3301/1..	2,2	3	17,4	16,2	15,7	14,9	14,3	12,2	9,3	6,7				
SVI 3301..	3	4	23,8	21,7	21,2	20,3	19,8	17,8	15,0	12,7				
SVI 3302/2..	4	5,5	35,1	34,1	33,3	31,8	30,8	26,9	21,4	16,6				
SVI 3302/1..	4	5,5	40,8	38,8	37,9	36,3	35,4	31,7	26,6	22,3				
SVI 3303/2..	5,5	7,5	57,7	55,2	53,8	51,4	49,9	44,1	36,2	29,6				
SVI 3303..	7,5	10	71,5	67,4	66,2	64,0	62,7	57,7	50,7	44,6				
SVI 3304..	11	15	95,9	91,1	89,7	87,2	85,7	79,6	70,8	63,1				
SVI 3305/1..	11	15	112,7	107,2	105,3	101,9	99,8	91,7	80,0	70,0				
SVI 3306/2..	15	20	131,2	126,9	124,6	120,3	117,7	107,5	93,2	81,2				
SVI 3307/2..	15	20	156,0	149,9	147,3	142,7	139,8	128,4	112,2	98,2				
SVI 3307..	18,5	25	170,3	162,8	160,2	155,7	153,0	142,2	126,7	113,2				
SVI 3308/1..	18,5	25	187,4	179,5	176,5	171,3	168,1	155,5	137,4	121,7				
SVI 3309/1..	22	30	210,2	201,2	197,8	191,8	188,2	173,8	153,4	135,9				
SVI 3310/2..	22	30	226,4	217,2	213,4	206,8	202,6	186,4	163,5	143,9				
SVI 3310..	30	40	241,8	231,3	227,8	221,7	217,9	202,9	181,1	162,1				
SVI 4601/1..	3	4	19,5			19,2	19,0	17,9	16,4	15,1	14,4	11,7	8,5	4,6
SVI 4601..	4	5,5	27,2			24,0	23,7	22,5	21,1	19,9	19,3	17,1	14,3	10,8
SVI 4602/2..	5,5	7,5	38,8			39,8	39,4	37,8	35,2	32,9	31,6	26,9	21,1	13,9
SVI 4602..	7,5	10	52,6			48,5	48,0	46,1	43,7	41,7	40,6	36,5	31,4	25,1
SVI 4603..	11	15	80,8			74,3	73,5	70,9	67,4	64,6	62,9	57,1	49,8	40,7
SVI 4604/2..	15	20	92,4			90,7	89,9	86,9	82,5	78,6	76,3	68,3	58,2	45,6
SVI 4605..	18,5	25	134,5			125,1	124,0	120,0	114,7	110,2	107,6	98,3	86,4	71,5
SVI 4606..	22	30	161,0			149,8	148,5	143,8	137,4	132,0	128,9	117,8	103,7	86,0
SVI 4607/2..	30	40	171,3			164,9	163,6	158,3	150,8	144,3	140,6	127,1	109,9	88,6
SVI 4608/2..	30	40	198,2			190,0	188,4	182,4	173,8	166,4	162,2	146,9	127,3	103,1
SVI 4609/2..	30	40	224,8			214,5	212,6	205,6	195,7	187,3	182,5	165,2	143,2	116,0

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

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SVI66, 92 SERIES - VERSION WITH COUPLING
TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE SVI..S / SVI..N	RATED POWER kW	RATED POWER HP	Q = DELIVERY l/min 0	500	600	750	900	1000	1100	1200	1416,7	1600	1800	2000
			m³/h 0	30	36	45	54	60	66	72	85	96	108	120
			H = TOTAL HEAD METRES COLUMN OF WATER											
SVI 6601/1..	4	5,5	23,8	21,4	20,7	19,4	17,8	16,6	15,1	13,3	8,3			
SVI 6601..	5,5	7,5	29,2	25,8	24,8	23,3	21,8	20,7	19,4	17,9	13,4			
SVI 6602/2..	7,5	10	47,5	42,6	41,2	38,6	35,5	32,9	30,0	26,4	16,4			
SVI 6602..	11	15	60,4	55,7	54,4	52,0	49,3	47,1	44,7	42,0	34,6			
SVI 6603/2..	15	20	78,4	71,6	69,6	65,9	61,5	57,9	53,8	49,0	35,3			
SVI 6603..	18,5	25	91,4	84,7	82,7	79,3	75,2	72,0	68,5	64,4	53,5			
SVI 6604/1..	22	30	115,2	105,9	103,1	98,5	92,9	88,6	83,6	77,8	61,7			
SVI 6605/1..	30	40	145,6	134,0	130,5	124,7	117,8	112,4	106,3	99,2	79,4			
SVI 9201/1..	5,5	7,5	24,5			22,2	21,5	20,9	20,2	19,4	17,3	15,0	11,8	7,9
SVI 9201..	7,5	10	33,5			28,7	27,2	26,2	25,3	24,3	22,2	20,2	17,6	14,3
SVI 9202/2..	11	15	49,4			45,1	43,7	42,5	41,2	39,6	35,5	30,9	24,6	16,8
SVI 9202..	15	20	67,8			58,2	55,3	53,4	51,4	49,5	45,3	41,4	36,3	29,6
SVI 9203/2..	18,5	25	82,4			74,4	71,6	69,6	67,3	64,8	58,6	52,2	43,6	32,9
SVI 9203..	22	30	102,2			88,2	84,0	81,2	78,4	75,5	69,2	63,4	55,9	46,3
SVI 9204/2..	30	40	115,7			104,0	99,9	97,0	93,8	90,4	82,2	73,8	62,8	49,0
SVI 9204..	30	40	133,1			117,0	111,7	108,0	104,4	100,6	92,3	84,6	74,8	62,5

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

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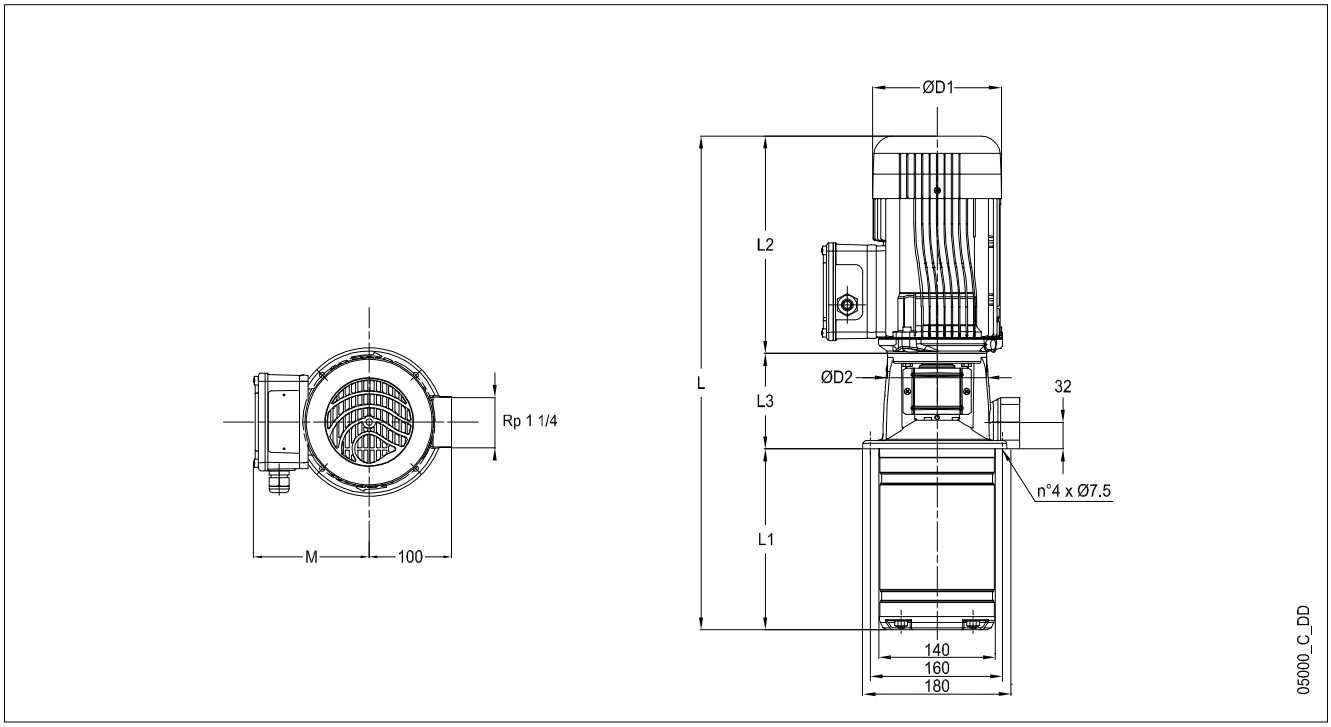
1SVI..C - 1SVI..M SERIES (from 2 to 15 stages)
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)											WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2	PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~			1~	3~
1SVI02-02..003	0,37	71R	433,5	433,5	119	209	209	105,5	111	122	120	120	105	6	12	12
1SVI03-03..003	0,37	71R	453,5	453,5	139	209	209	105,5	111	122	120	120	105	7	12	12
1SVI04-04..003	0,37	71R	473,5	473,5	159	209	209	105,5	111	122	120	120	105	7	12	12
1SVI05-05..003	0,37	71R	493,5	493,5	179	209	209	105,5	111	122	120	120	105	7	13	13
1SVI06-06..003	0,37	71R	513,5	513,5	199	209	209	105,5	111	122	120	120	105	8	13	13
1SVI07-07..003	0,37	71R	533,5	533,5	219	209	209	105,5	111	122	120	120	105	8	14	14
1SVI08-08..005	0,55	71	575,5	575,5	239	231	231	105,5	121	132	140	140	105	9	16	16
1SVI09-09..005	0,55	71	595,5	595,5	259	231	231	105,5	121	132	140	140	105	9	17	16
1SVI10-10..005	0,55	71	615,5	615,5	279	231	231	105,5	121	132	140	140	105	9	17	17
1SVI11-11..005	0,55	71	635,5	635,5	299	231	231	105,5	121	132	140	140	105	10	17	17
1SVI12-12..007	0,75	80	660,5	697,5	319	226	263	115,5	121	140	140	155	120	11	21	21
1SVI13-13..007	0,75	80	680,5	717,5	339	226	263	115,5	121	140	140	155	120	11	21	21
1SVI15-15..007	0,75	80	720,5	757,5	379	226	263	115,5	121	140	140	155	120	12	22	22

All listed dimensions are with inducer.

1svi_c-2p50-1-en_a_td

e.g. 1SVI10-10 has 10 stages with impeller and 1 inducer chamber.

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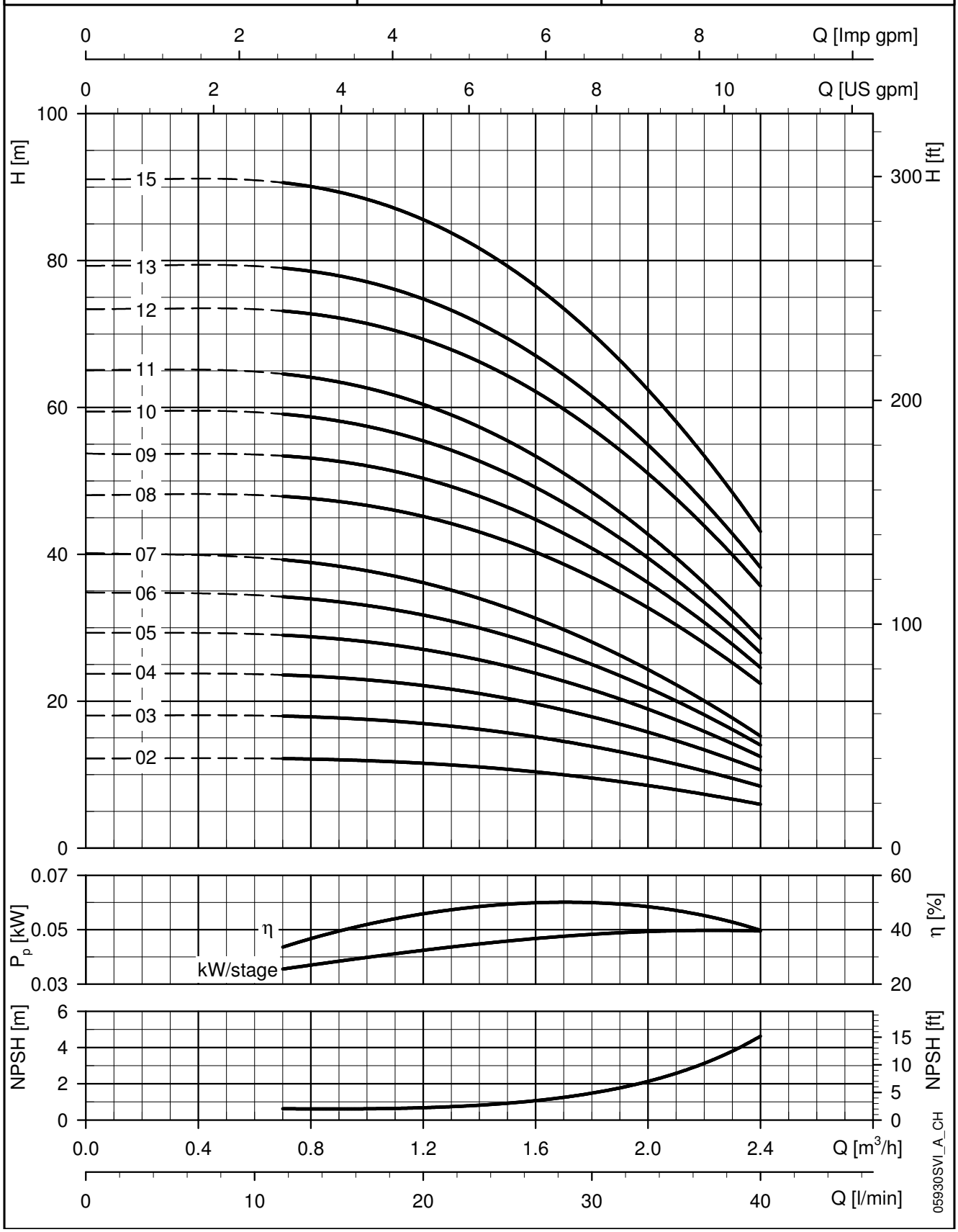
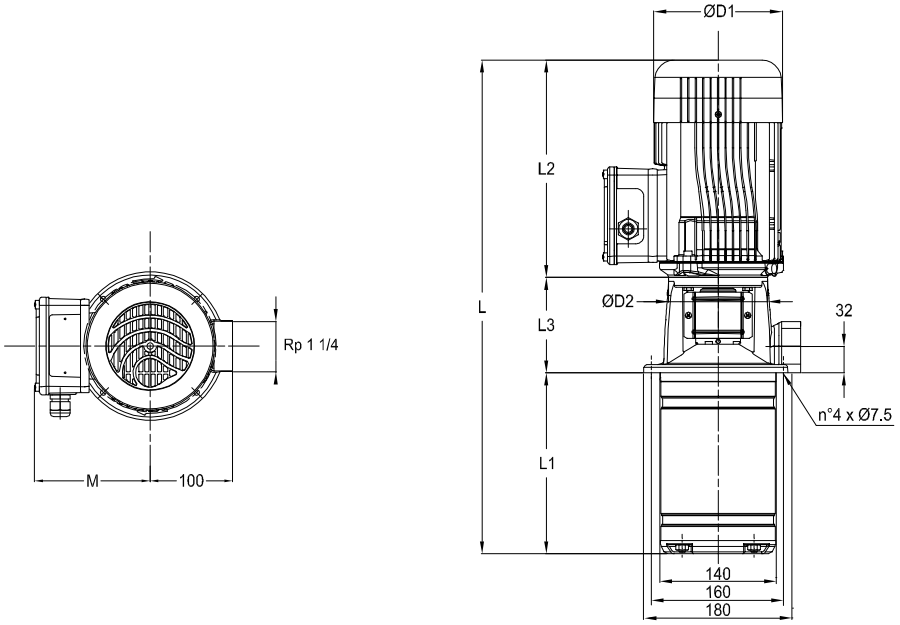
1SVI..C - 1SVI..M SERIES (from 2 to 15 stages)
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

1SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

1SVI..C - 1SVI..M SERIES (from 17 to 37 stages)
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



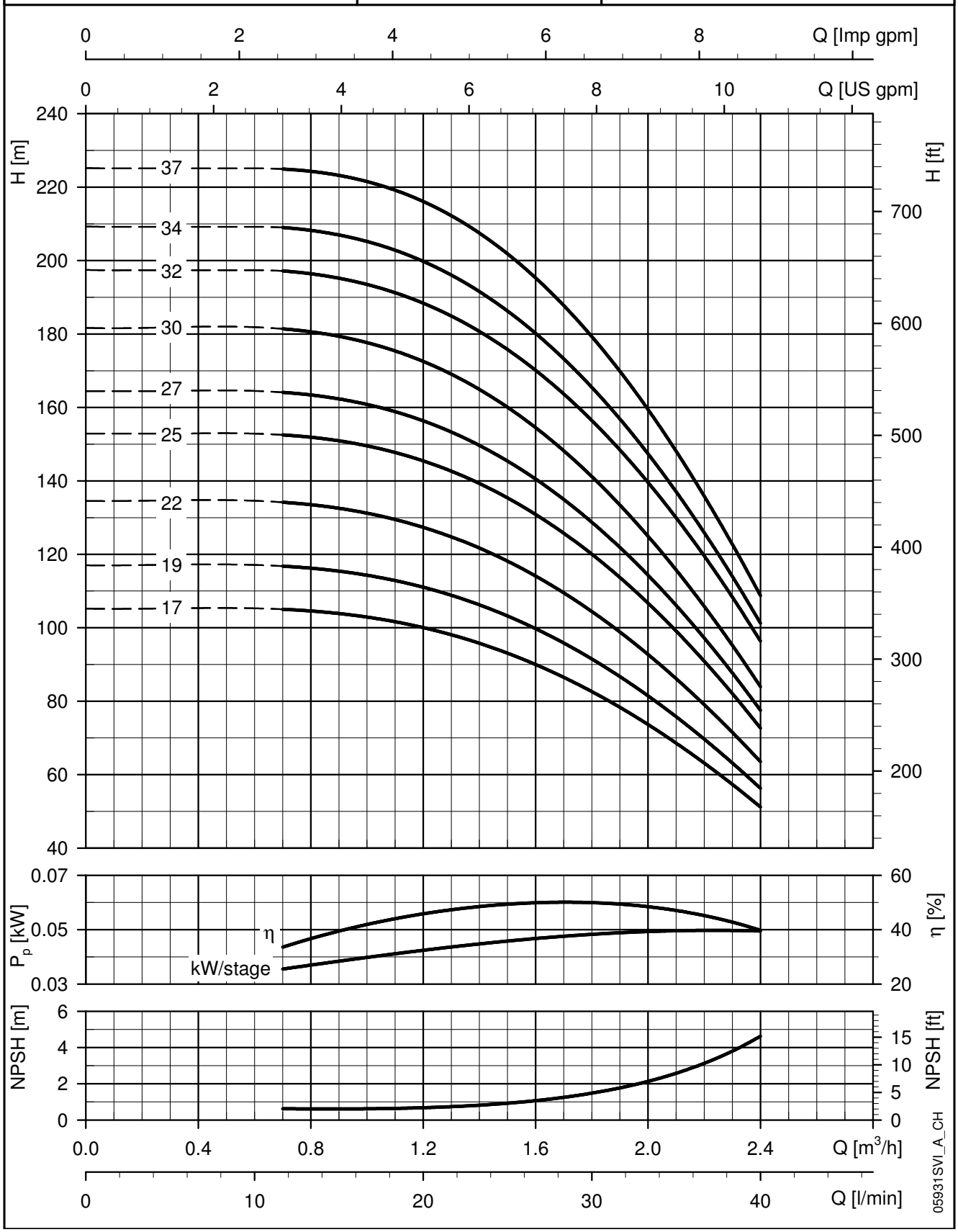
PUMP TYPE	MOTOR		DIMENSIONS (mm)												WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2		PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~				1~	3~
1SVI17-17..011	1,1	80	797,5	797,5	419	263	263	115,5	137	140	155	155	120		13	23	23
1SVI19-19..011	1,1	80	837,5	837,5	459	263	263	115,5	137	140	155	155	120		13	24	23
1SVI22-22..011	1,1	80	897,5	897,5	519	263	263	115,5	137	140	155	155	120		14	25	25
1SVI25-25..015	1,5	90R	967,5	967,5	579	263	263	125,5	137	140	155	155	140		16	29	28
1SVI27-27..015	1,5	90R	1007,5	1007,5	619	263	263	125,5	137	140	155	155	140		17	30	29
1SVI30-30..015	1,5	90R	1067,5	1067,5	679	263	263	125,5	137	140	155	155	140		18	31	30
1SVI32-32..022	2,2	90	1142,5	1142,5	719	298	298	125,5	151	134	174	174	140		19	40	37
1SVI34-34..022	2,2	90	1182,5	1182,5	759	298	298	125,5	151	134	174	174	140		19	40	37
1SVI37-37..022	2,2	90	1242,5	1242,5	819	298	298	125,5	151	134	174	174	140		21	42	39

1svi_c-2p50-2-en_a_td

All listed dimensions are with inducer.
e.g. 1SVI37-37 has 37 stages with impeller and 1 inducer chamber.

1SVI..C - 1SVI..M SERIES (from 17 to 37 stages)
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

1SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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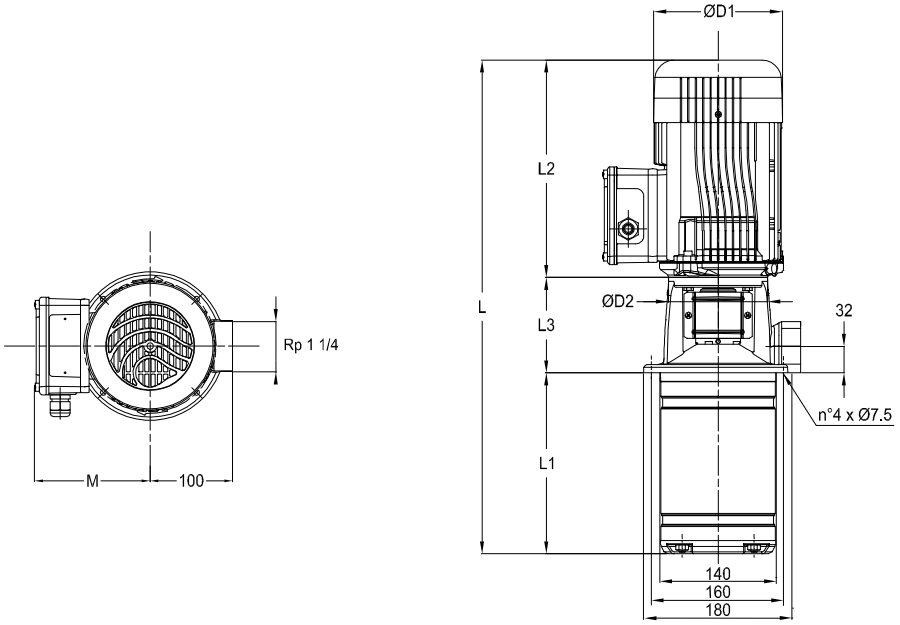
3SVI..C - 3SVI..M SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)												WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2		PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~				1~	3~
3SVI02-02..003	0,37	71R	433,5	433,5	119	209	209	105,5	111	122	120	120	105		6	12	12
3SVI03-03..003	0,37	71R	453,5	453,5	139	209	209	105,5	111	122	120	120	105		7	12	12
3SVI04-04..003	0,37	71R	473,5	473,5	159	209	209	105,5	111	122	120	120	105		7	13	12
3SVI05-05..005	0,55	71	515,5	515,5	179	231	231	105,5	121	132	140	140	105		8	15	15
3SVI06-06..005	0,55	71	535,5	535,5	199	231	231	105,5	121	132	140	140	105		8	15	15
3SVI07-07..007	0,75	80	560,5	597,5	219	226	263	115,5	121	140	140	155	120		9	19	19
3SVI08-08..007	0,75	80	580,5	617,5	239	226	263	115,5	121	140	140	155	120		9	19	19
3SVI09-09..011	1,1	80	637,5	637,5	259	263	263	115,5	137	140	155	155	120		10	20	20
3SVI10-10..011	1,1	80	657,5	657,5	279	263	263	115,5	137	140	155	155	120		10	20	20
3SVI11-11..011	1,1	80	677,5	677,5	299	263	263	115,5	137	140	155	155	120		10	21	20
3SVI12-12..011	1,1	80	697,5	697,5	319	263	263	115,5	137	140	155	155	120		11	21	21
3SVI13-13..015	1,5	90R	727,5	727,5	339	263	263	125,5	137	140	155	155	140		12	25	23
3SVI14-14..015	1,5	90R	747,5	747,5	359	263	263	125,5	137	140	155	155	140		12	25	24
3SVI16-16..015	1,5	90R	787,5	787,5	399	263	263	125,5	137	140	155	155	140		13	26	25
3SVI19-19..022	2,2	90	882,5	882,5	459	298	298	125,5	151	134	174	174	140		14	35	32
3SVI21-21..022	2,2	90	922,5	922,5	499	298	298	125,5	151	134	174	174	140		15	36	33
3SVI23-23..022	2,2	90	962,5	962,5	539	298	298	125,5	151	134	174	174	140		15	36	33
3SVI25-25..022	2,2	90	1003	1003	579	298	298	125,5	151	134	174	174	140		16	37	34
3SVI27-27..030	3	100R	-	1053	619	-	298	135,5	-	134	-	174	160		18	-	39
3SVI29-29..030	3	100R	-	1093	659	-	298	135,5	-	134	-	174	160		18	-	39
3SVI31-31..030	3	100R	-	1133	699	-	298	135,5	-	134	-	174	160		19	-	40
3SVI33-33..030	3	100R	-	1173	739	-	298	135,5	-	134	-	174	160		20	-	41

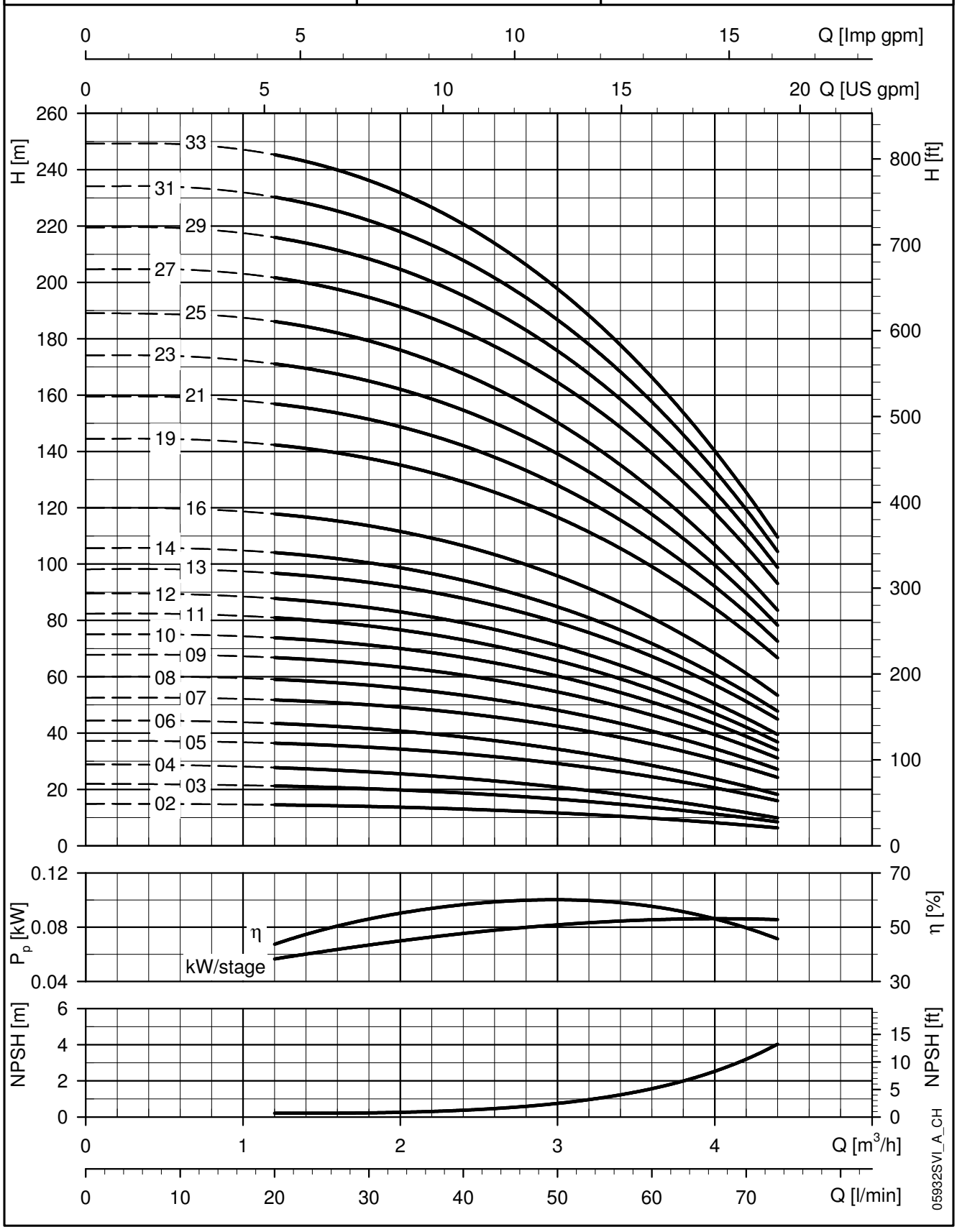
All listed dimensions are with inducer.

3svi_c-2p50-en_a_td

e.g. 3SVI33-33 has 33 stages with impeller and 1 inducer chamber.

3SVI..C - 3SVI..M SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

3SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

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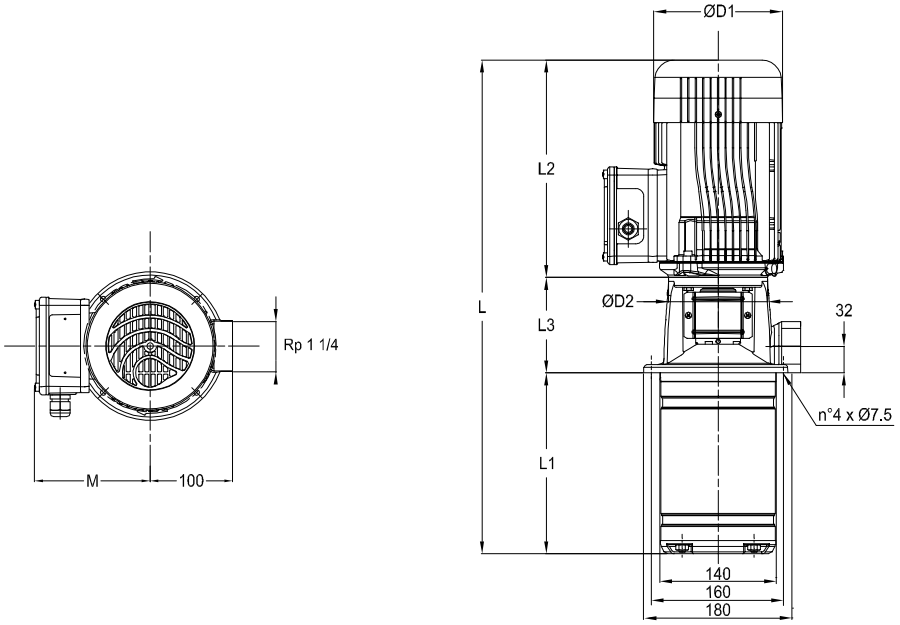
5SVI..C - 5SVI..M SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)												WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2		PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~				1~	3~
5SVI02-02..003	0,37	71R	448,5	448,5	134	209	209	105,5	111	122	120	120	105		7	12	12
5SVI03-03..005	0,55	71	495,5	495,5	159	231	231	105,5	121	132	140	140	105		7	15	14
5SVI04-04..005	0,55	71	520,5	520,5	184	231	231	105,5	121	132	140	140	105		8	15	15
5SVI05-05..007	0,75	80	550,5	587,5	209	226	263	115,5	121	140	140	155	120		8	19	19
5SVI06-06..011	1,1	80	612,5	612,5	234	263	263	115,5	137	140	155	155	120		9	19	19
5SVI07-07..011	1,1	80	637,5	637,5	259	263	263	115,5	137	140	155	155	120		9	20	19
5SVI08-08..011	1,1	80	662,5	662,5	284	263	263	115,5	137	140	155	155	120		10	20	20
5SVI09-09..015	1,5	90R	697,5	697,5	309	263	263	125,5	137	140	155	155	140		11	24	22
5SVI10-10..015	1,5	90R	722,5	722,5	334	263	263	125,5	137	140	155	155	140		11	24	23
5SVI11-11..015	1,5	90R	747,5	747,5	359	263	263	125,5	137	140	155	155	140		11	25	23
5SVI12-12..022	2,2	90	807,5	807,5	384	298	298	125,5	151	134	174	174	140		12	33	30
5SVI13-13..022	2,2	90	832,5	832,5	409	298	298	125,5	151	134	174	174	140		12	33	30
5SVI14-14..022	2,2	90	857,5	857,5	434	298	298	125,5	151	134	174	174	140		13	34	31
5SVI15-15..022	2,2	90	882,5	882,5	459	298	298	125,5	151	134	174	174	140		13	34	31
5SVI16-16..022	2,2	90	907,5	907,5	484	298	298	125,5	151	134	174	174	140		14	35	32
5SVI18-18..030	3	100R	-	967,5	534	-	298	135,5	-	134	-	174	160		15	-	36
5SVI21-21..030	3	100R	-	1043	609	-	298	135,5	-	134	-	174	160		16	-	37
5SVI23-23..040	4	112R	-	1114	659	-	319	135,5	-	154	-	197	160		17	-	44
5SVI25-25..040	4	112R	-	1164	709	-	319	135,5	-	154	-	197	160		18	-	45
5SVI28-28..040	4	112R	-	1239	784	-	319	135,5	-	154	-	197	160		20	-	46
5SVI30-30..055	5,5	132R	-	1365	834	-	375	155,5	-	168	-	214	300		24	-	62
5SVI33-33..055	5,5	132R	-	1440	909	-	375	155,5	-	168	-	214	300		26	-	63

All listed dimensions are with inducer.

5svi_c-2p50-en_a_td

e.g. 5SVI33-33 has 33 stages with impeller and 1 inducer chamber.

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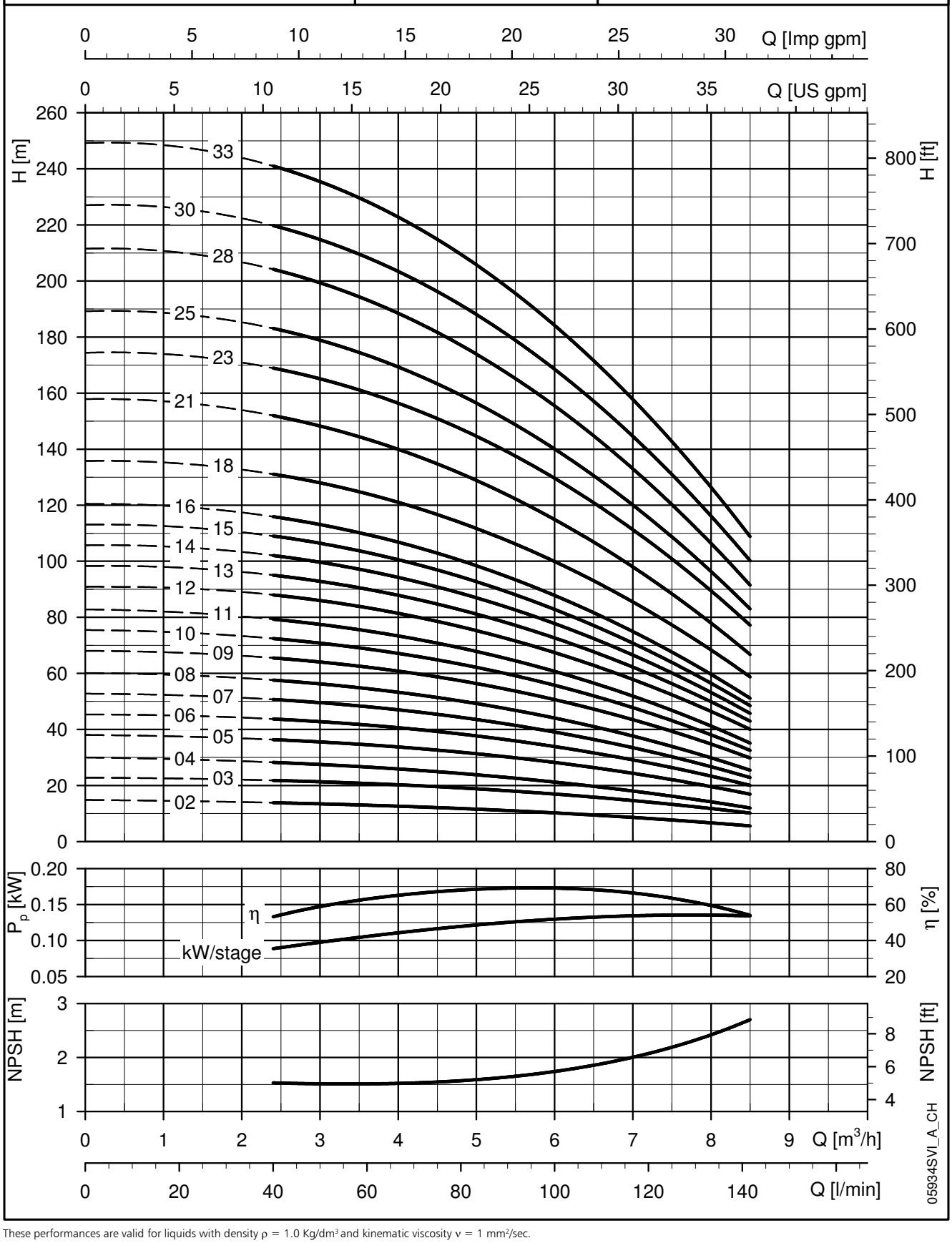
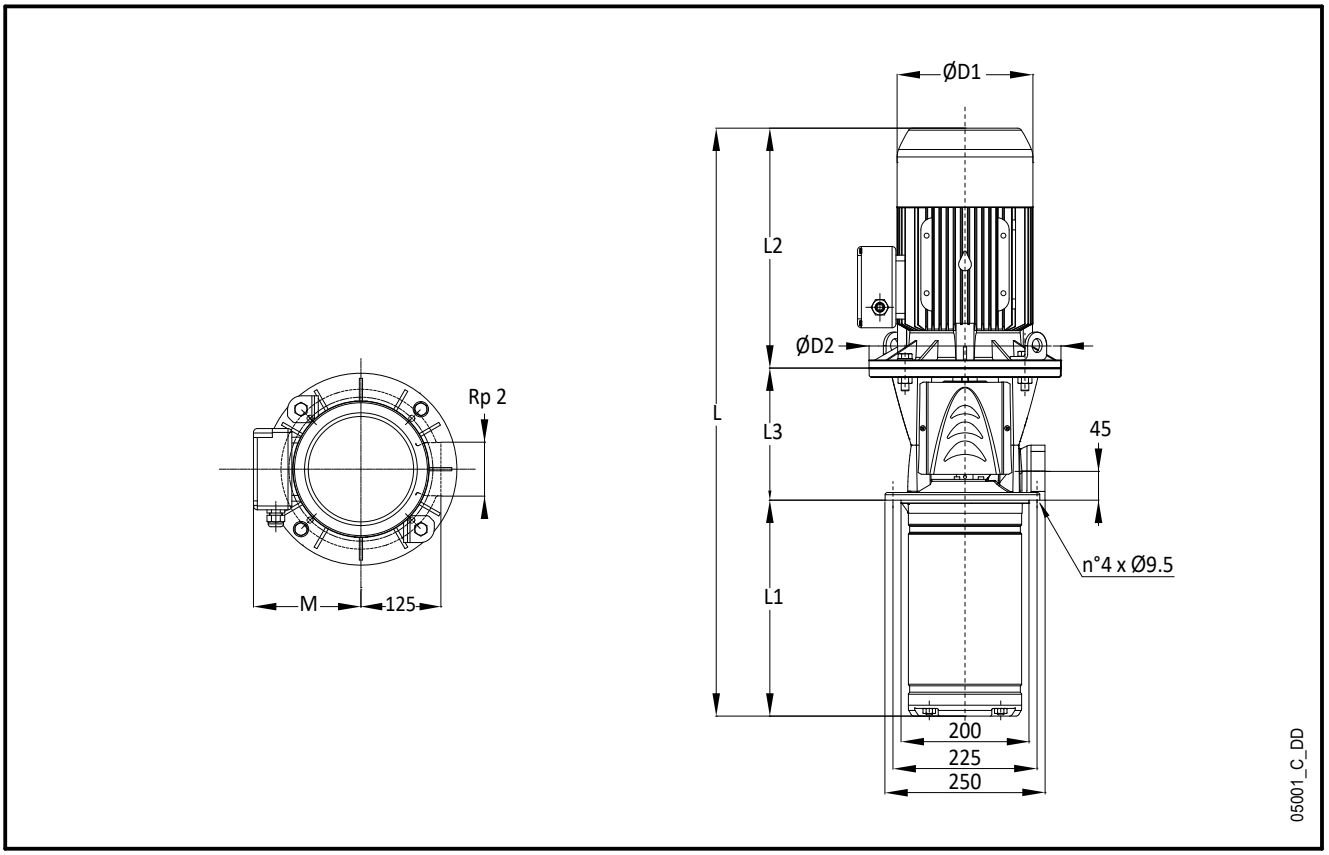
5SVI..C - 5SVI..M SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

5SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

10SVI..C - 10SVI..M SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)												WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2		PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~				1~	3~
10SVI02-02..007	0,75	80	525,5	562,5	177,5	226	263	122	121	140	140	155	120		13	23	23
10SVI03-03..011	1,1	80	594,5	594,5	209,5	263	263	122	137	140	155	155	120		14	24	24
10SVI04-04..015	1,5	90R	636,5	636,5	241,5	263	263	132	137	140	155	155	140		15	28	27
10SVI05-05..022	2,2	90	703,5	703,5	273,5	298	298	132	151	134	174	174	140		16	37	34
10SVI06-06..022	2,2	90	735,5	735,5	305,5	298	298	132	151	134	174	174	140		17	38	35
10SVI07-07..030	3	100R	-	777,5	337,5	-	298	142	-	134	-	174	160		19	-	40
10SVI08-08..030	3	100R	-	809,5	369,5	-	298	142	-	134	-	174	160		20	-	41
10SVI09-09..040	4	112R	-	862,5	401,5	-	319	142	-	154	-	197	160		21	-	47
10SVI10-10..040	4	112R	-	894,5	433,5	-	319	142	-	154	-	197	160		22	-	48
10SVI11-11..040	4	112R	-	926,5	465,5	-	319	142	-	154	-	197	160		23	-	49
10SVI13-13..055	5,5	132R	-	1111	529,5	-	375	206,5	-	168	-	214	300		30	-	68
10SVI15-15..055	5,5	132R	-	1175	593,5	-	375	206,5	-	168	-	214	300		32	-	70
10SVI17-17..075	7,5	132	-	1231	657,5	-	367	206,5	-	191	-	256	300		34	-	91
10SVI18-18..075	7,5	132	-	1263	689,5	-	367	206,5	-	191	-	256	300		35	-	92
10SVI20-20..075	7,5	132	-	1327	753,5	-	367	206,5	-	191	-	256	300		37	-	94
10SVI21-21..110	11	160R	-	1452	785,5	-	428	238,5	-	191	-	256	350		45	-	116

All listed dimensions are with inducer.
e.g. 10SVI21-21 has 21 stages with impeller and 1 inducer chamber.

10svi_c-2p50-en_a_td

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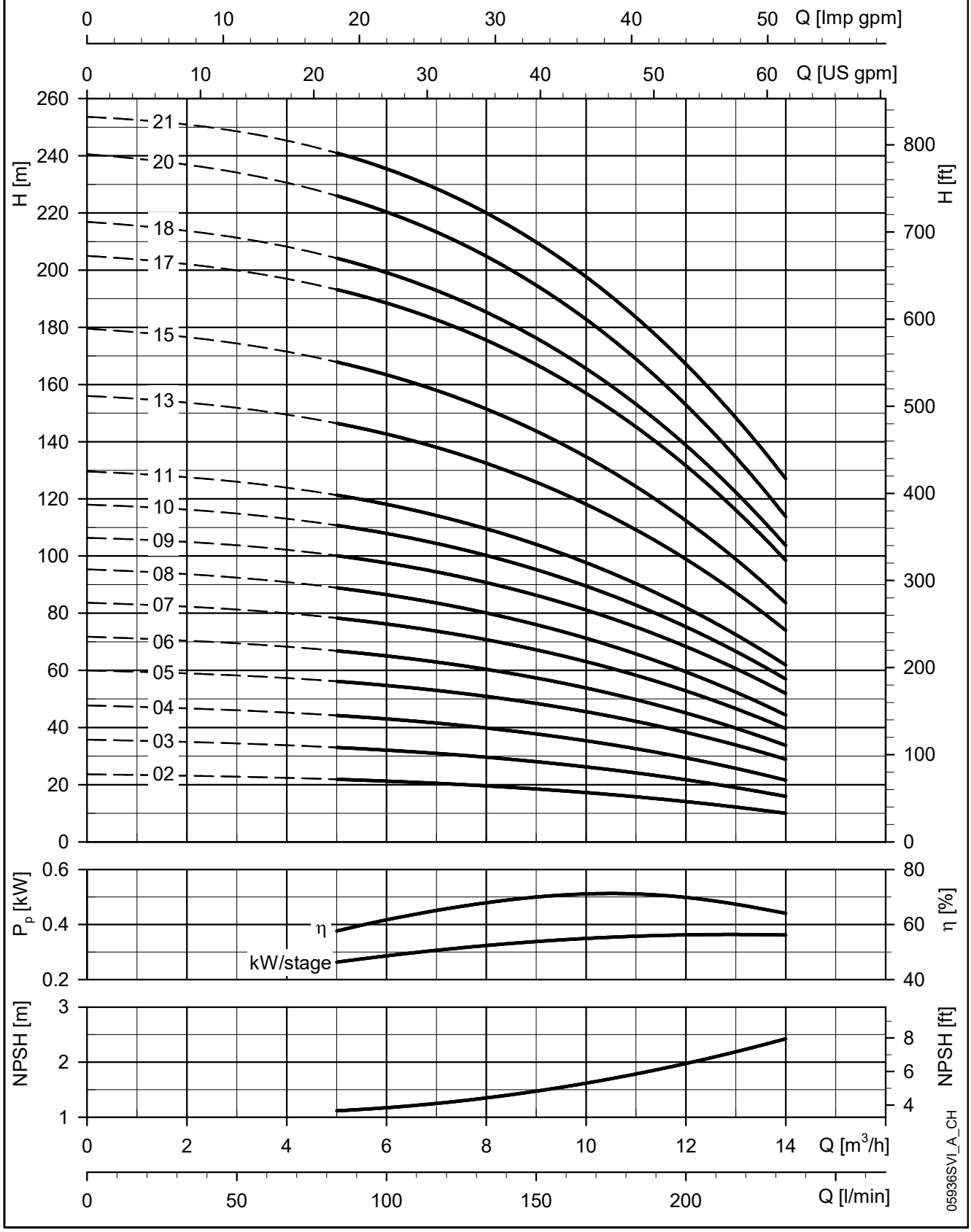
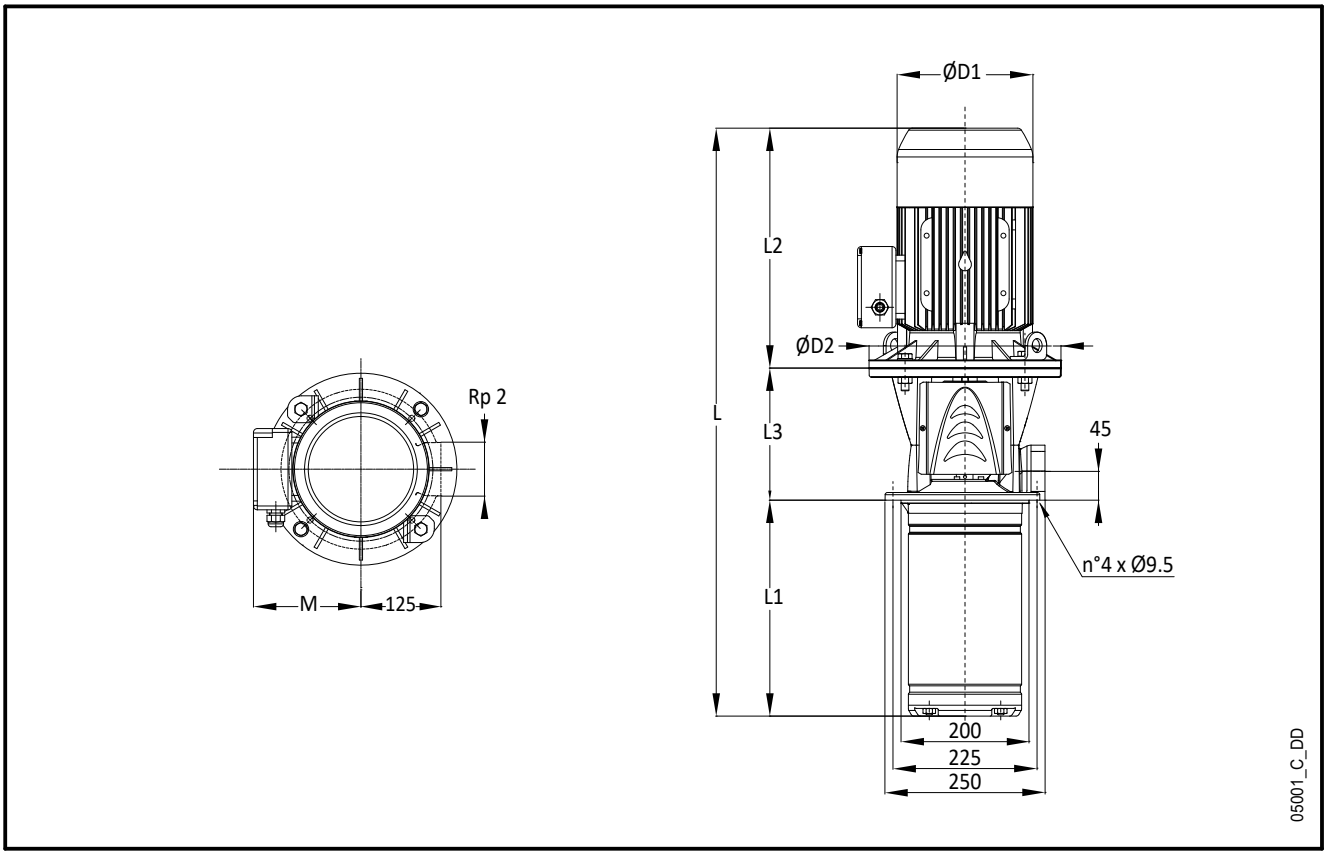
10SVI..C - 10SVI..M SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

10SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

15SVI..C - 15SVI..M SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)												WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2		PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~				1~	3~
15SVI02-02..022	2,2	90	655,5	655,5	225,5	298	298	132	151	134	174	174	140		14	35	32
15SVI03-03..030	3	100R	-	713,5	273,5	-	298	142	-	134	-	174	160		17	-	38
15SVI04-04..040	4	112R	-	782,5	321,5	-	319	142	-	154	-	197	160		18	-	44
15SVI05-05..040	4	112R	-	830,5	369,5	-	319	142	-	154	-	197	160		19	-	45
15SVI06-06..055	5,5	132R	-	999	417,5	-	375	206,5	-	168	-	214	300		26	-	64
15SVI07-07..055	5,5	132R	-	1047	465,5	-	375	206,5	-	168	-	214	300		27	-	65
15SVI08-08..075	7,5	132	-	1087	513,5	-	367	206,5	-	191	-	256	300		29	-	86
15SVI09-09..075	7,5	132	-	1135	561,5	-	367	206,5	-	191	-	256	300		30	-	87
15SVI10-10..110	11	160R	-	1276	609,5	-	428	238,5	-	191	-	256	350		39	-	109
15SVI11-11..110	11	160R	-	1324	657,5	-	428	238,5	-	191	-	256	350		40	-	110
15SVI13-13..110	11	160R	-	1420	753,5	-	428	238,5	-	191	-	256	350		43	-	113
15SVI15-15..150	15	160	-	1582	849,5	-	494	238,5	-	240	-	313	350		45	-	147
15SVI17-17..150	15	160	-	1678	945,5	-	494	238,5	-	240	-	313	350		48	-	150

All listed dimensions are with inducer.
e.g. 15SVI17-17 has 17 stages with impeller and 1 inducer chamber.

15svi_c-2p50-en_a_td

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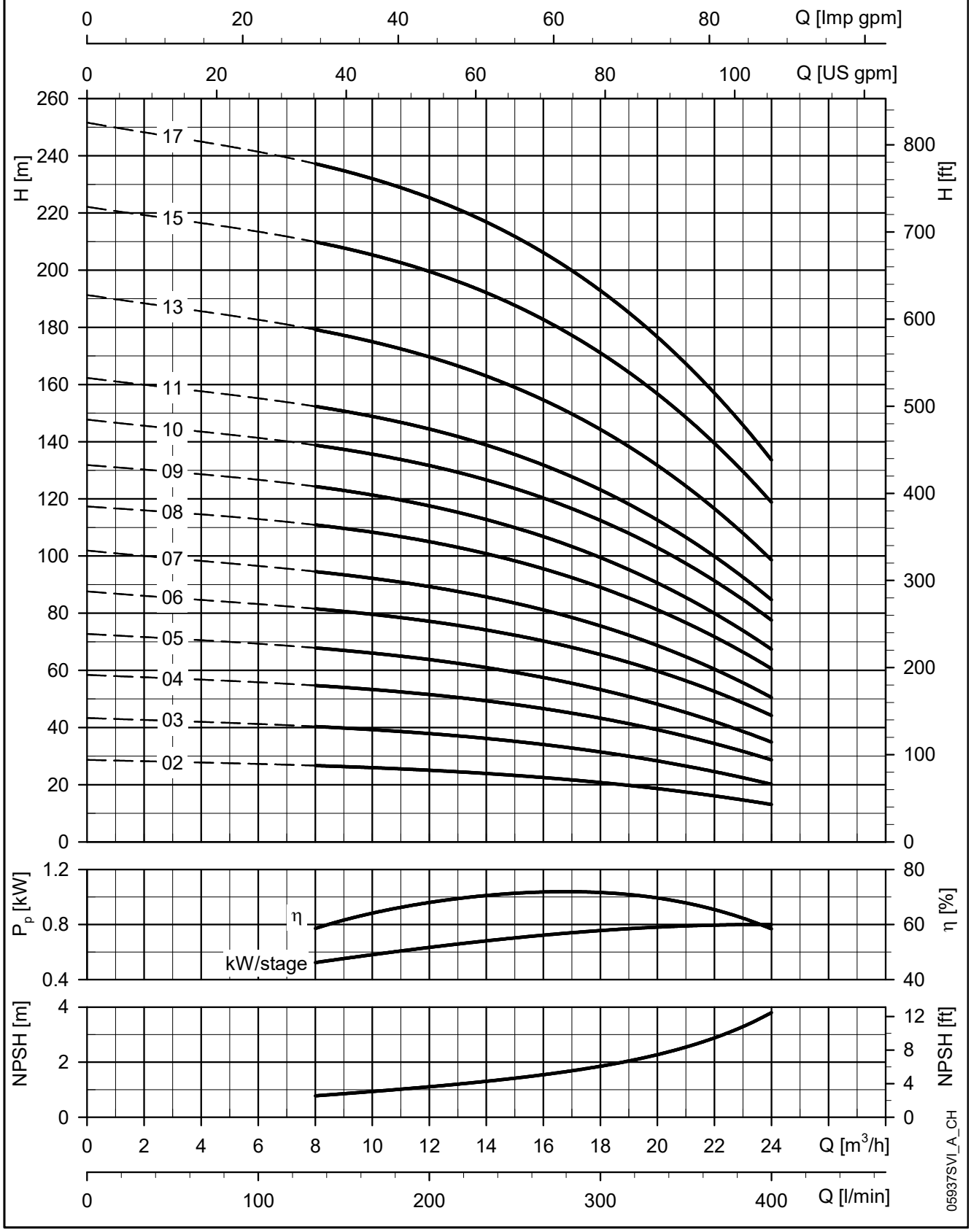
a xylem brand

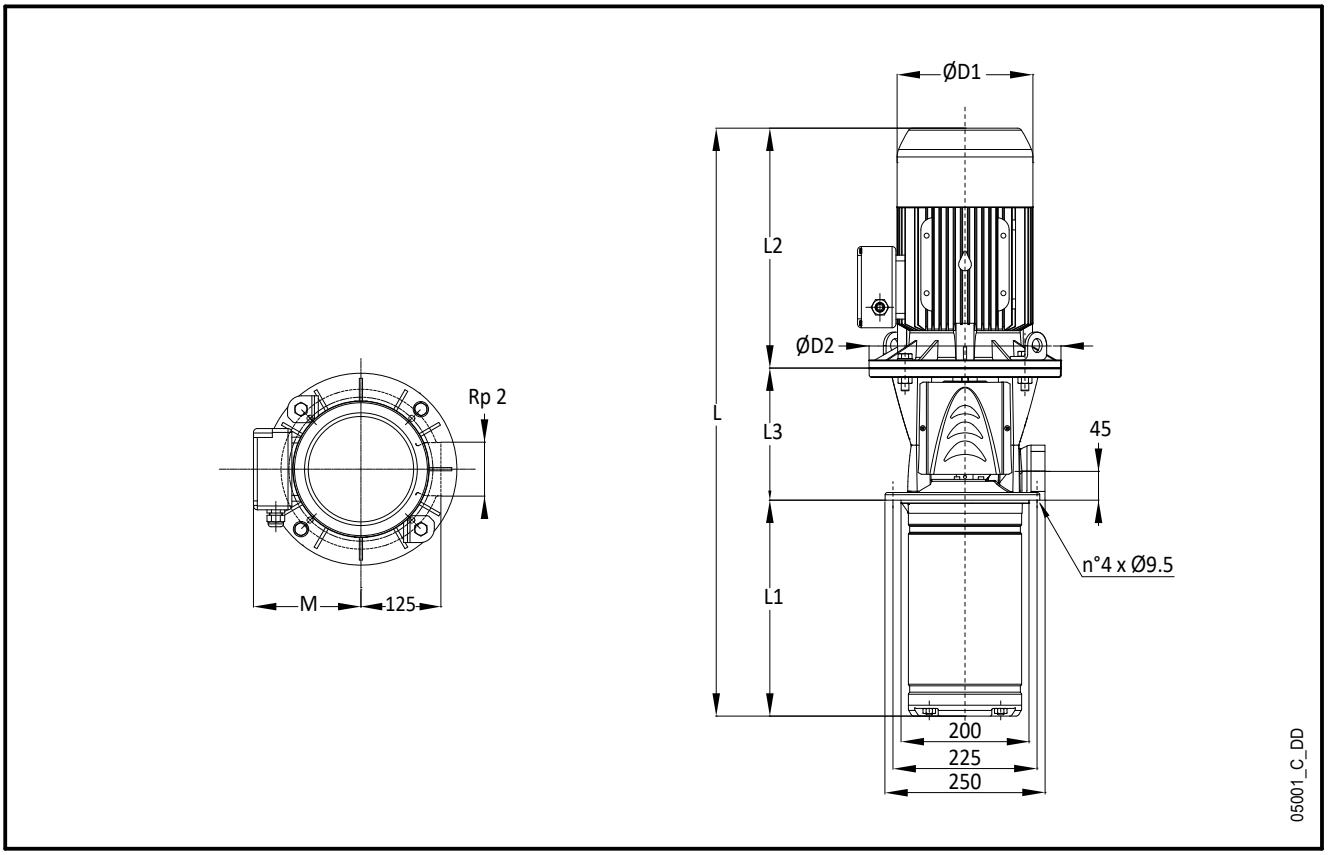
15SVI..C - 15SVI..M SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

15SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

22SVI..C - 22SVI..M SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)											WEIGHT (kg)		
			L		L1	L2		L3	M		D1		D2	PUMP	ELECTRIC PUMP	
	kW	SIZE	1~	3~		1~	3~		1~	3~	1~	3~			1~	3~
22SVI02-02..022	2,2	90	655,5	655,5	225,5	298	298	132	151	134	174	174	140	14	35	32
22SVI03-03..030	3	100R	-	713,5	273,5	-	298	142	-	134	-	174	160	17	-	38
22SVI04-04..040	4	112R	-	782,5	321,5	-	319	142	-	154	-	197	160	18	-	44
22SVI05-05..055	5,5	132R	-	951	369,5	-	375	206,5	-	168	-	214	300	25	-	62
22SVI06-06..075	7,5	132	-	991	417,5	-	367	206,5	-	191	-	256	300	26	-	83
22SVI07-07..075	7,5	132	-	1039	465,5	-	367	206,5	-	191	-	256	300	27	-	84
22SVI08-08..110	11	160R	-	1180	513,5	-	428	238,5	-	191	-	256	350	36	-	107
22SVI09-09..110	11	160R	-	1228	561,5	-	428	238,5	-	191	-	256	350	38	-	108
22SVI10-10..110	11	160R	-	1276	609,5	-	428	238,5	-	191	-	256	350	39	-	109
22SVI12-12..150	15	160	-	1438	705,5	-	494	238,5	-	240	-	313	350	41	-	143
22SVI14-14..150	15	160	-	1534	801,5	-	494	238,5	-	240	-	313	350	44	-	146
22SVI17-17..185	18,5	160	-	1678	945,5	-	494	238,5	-	240	-	313	350	48	-	150

All listed dimensions are with inducer.
e.g. 22SVI17-17 has 17 stages with impeller and 1 inducer chamber.

22svi_c-2p50-en_a_td

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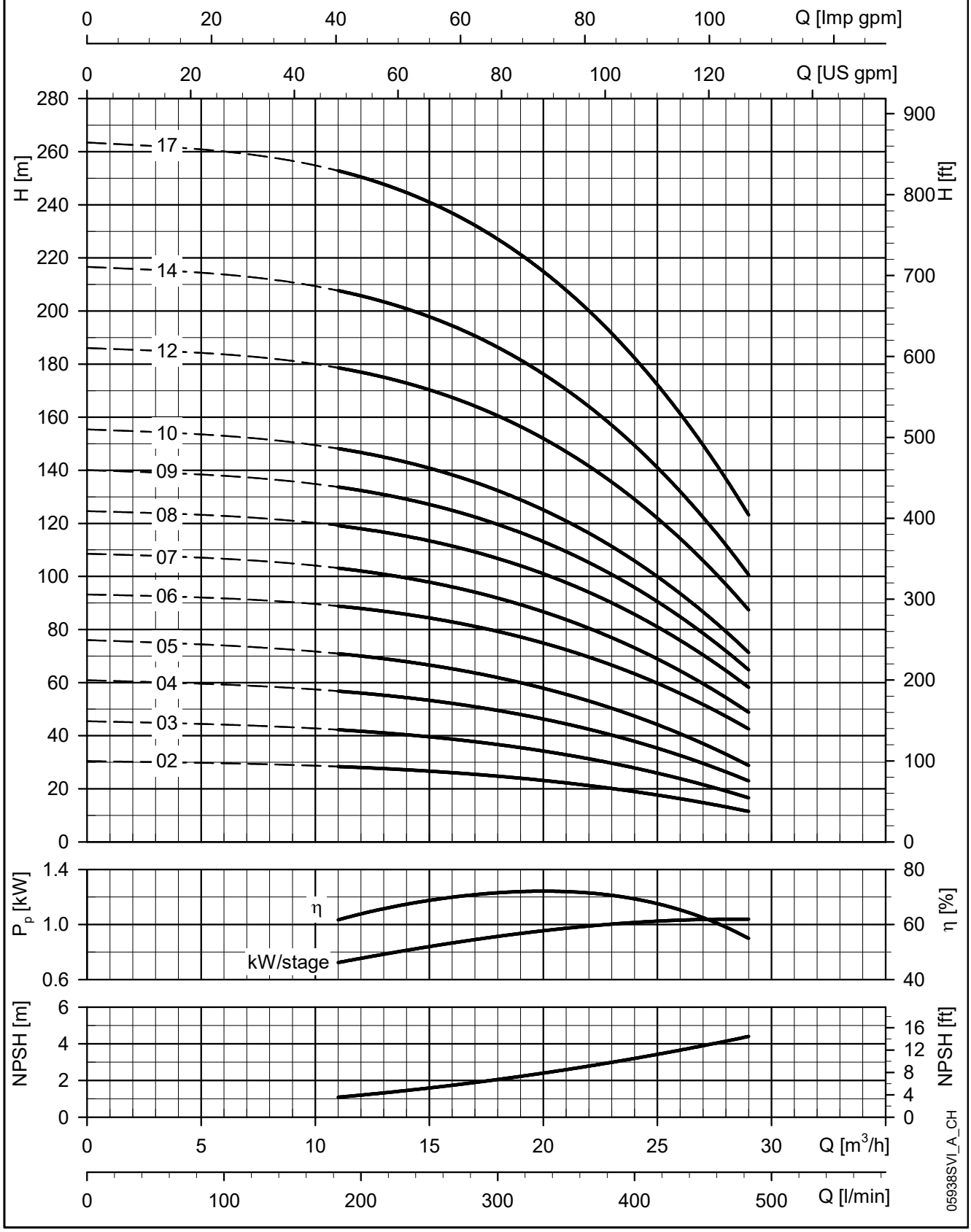
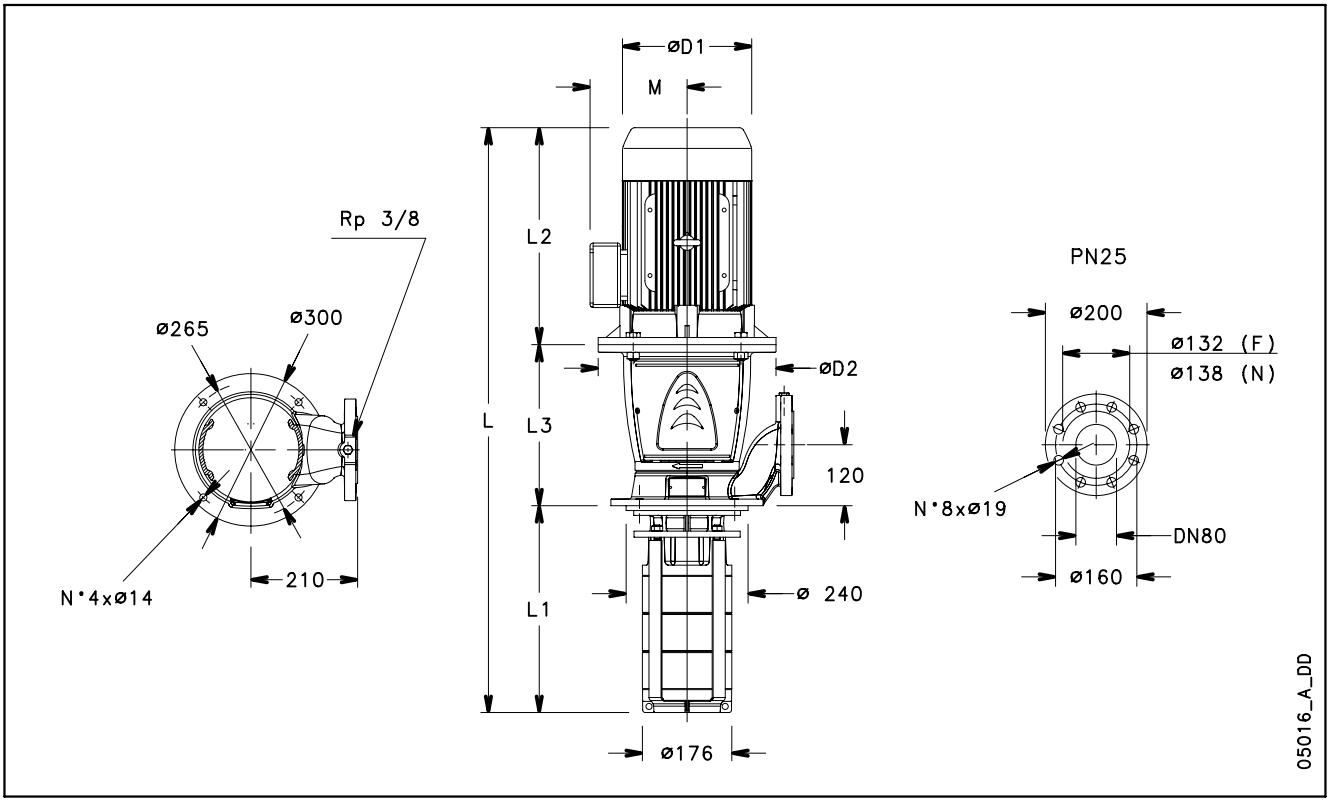
22SVI..C - 22SVI..M SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

22SVI	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

SVI33..S - SVI33..N SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)							WEIGHT (kg)	
	kW	SIZE	L	L1	L2	L3	M	D1	D2	PUMP	ELECTRIC PUMP
SVI3301/1-01..22T/D	2,2	90	817	257	298	262	134	174	140	38	56
SVI3301-01..30T/D	3	100	817	257	298	262	134	174	160	43	64
SVI3302/2-02..40T/D	4	112	913	332	319	262	154	197	160	44	70
SVI3302/1-02..40T/D	4	112	913	332	319	262	154	197	160	44	70
SVI3303/2-03..55T/D	5,5	132	1064	407	375	282	168	214	300	50	88
SVI3303-03..75T/D	7,5	132	1056	407	367	282	191	256	300	50	107
SVI3304-04..110T/D	11	160	1227	482	428	317	191	256	350	58	128
SVI3305/1-05..110T/D	11	160	1302	557	428	317	191	256	350	60	130
SVI3306/2-06..150T/D	15	160	1443	632	494	317	240	313	350	63	165
SVI3307/2-07..150T/D	15	160	1518	707	494	317	240	313	350	66	168
SVI3307-07..185T/D	18,5	160	1518	707	494	317	240	313	350	74	176
SVI3308/1-08..185T/D	18,5	160	1593	782	494	317	240	313	350	77	179
SVI3309/1-09..220T/D	22	180	1668	857	494	317	240	313	350	72	193
SVI3310/2-10..220T/D	22	180	1743	932	494	317	240	313	350	75	196
SVI3310-10..300T/D	30	200	1920	932	671	317	285	408	400	88	296

svi33s-2p50-en_e_td

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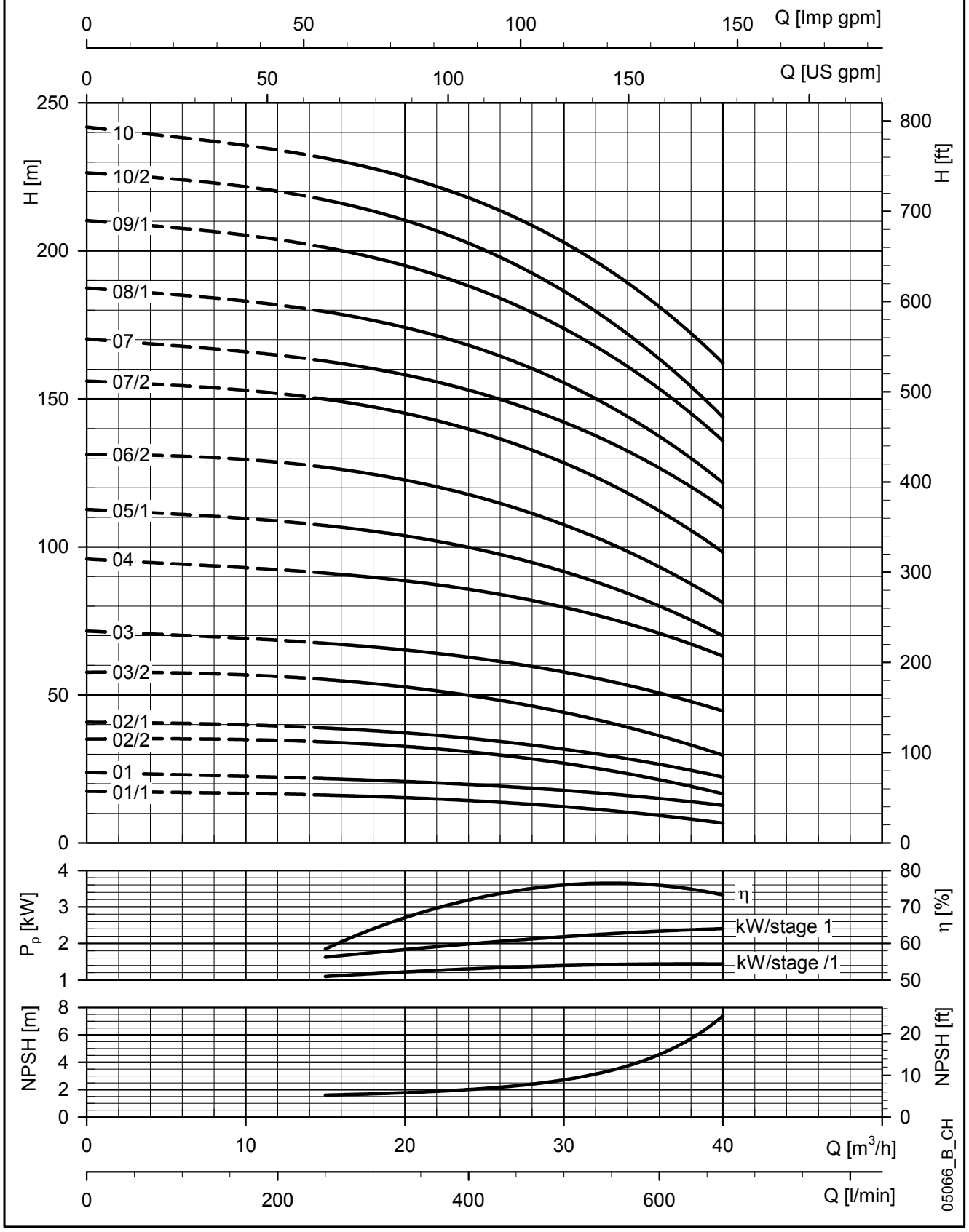
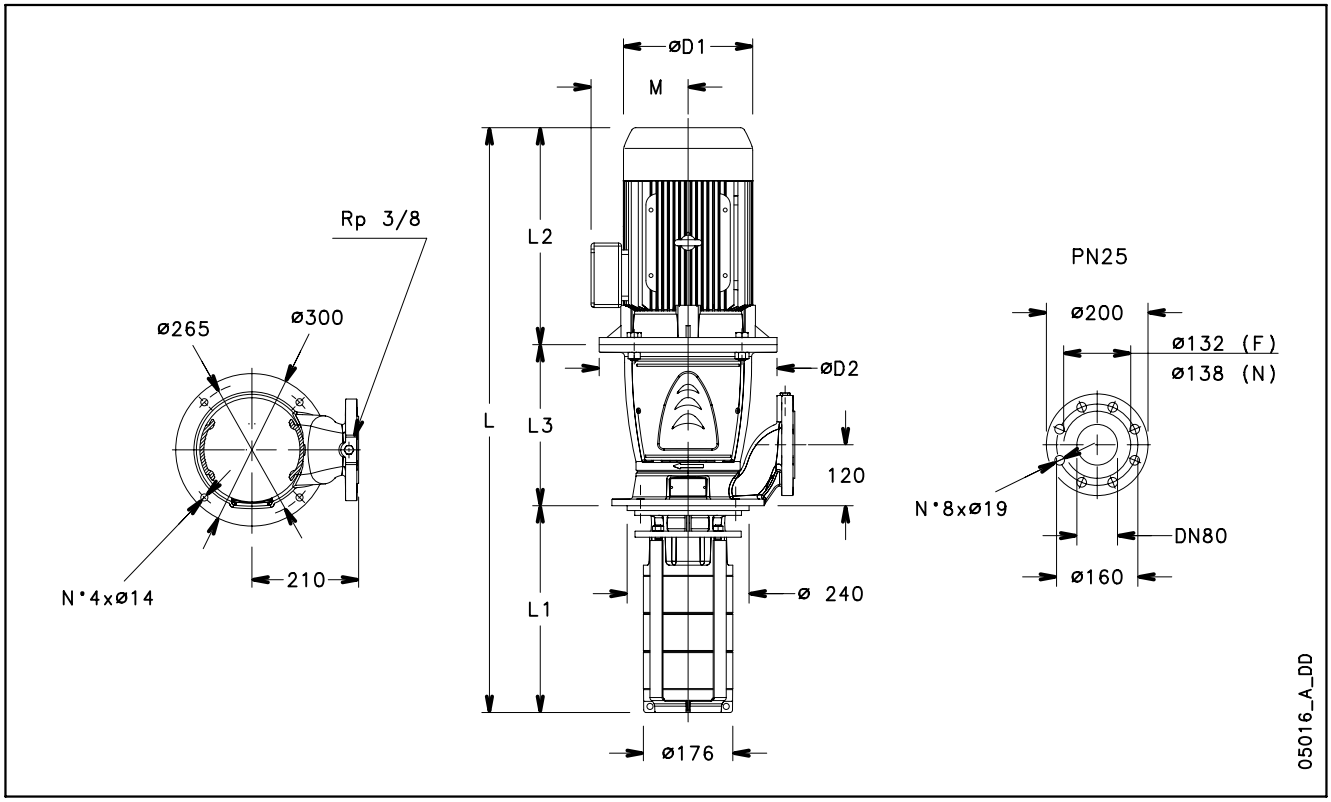
SVI33..S - SVI33..N SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

SVI33	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

SVI46..S - SVI46..N SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)							WEIGHT (kg)	
	kW	SIZE	L	L1	L2	L3	M	D1	D2	PUMP	ELECTRIC PUMP
SVI4601/1-01..30T/D	3	100	817	257	298	262	134	174	160	43	64
SVI4601-01..40T/D	4	112	838	257	319	262	154	197	160	41	67
SVI4602/2-02..55T/D	5,5	132	989	332	375	282	168	214	300	47	85
SVI4602-02..75T/D	7,5	132	981	332	367	282	191	256	300	47	104
SVI4603-03..110T/D	11	160	1152	407	428	317	191	256	350	55	125
SVI4604/2-04..150T/D	15	160	1293	482	494	317	240	313	350	57	159
SVI4605-05..185T/D	18,5	160	1368	557	494	317	240	313	350	69	171
SVI4606-06..220T/D	22	180	1443	632	494	317	240	313	350	64	185
SVI4607/2-07..300T/D	30	200	1695	707	671	317	285	408	400	86	294
SVI4608/2-08..300T/D	30	200	1770	782	671	317	285	408	400	89	297
SVI4609/2-09..300T/D	30	200	1845	857	671	317	285	408	400	91	299

svi46s-2p50-en_e_td

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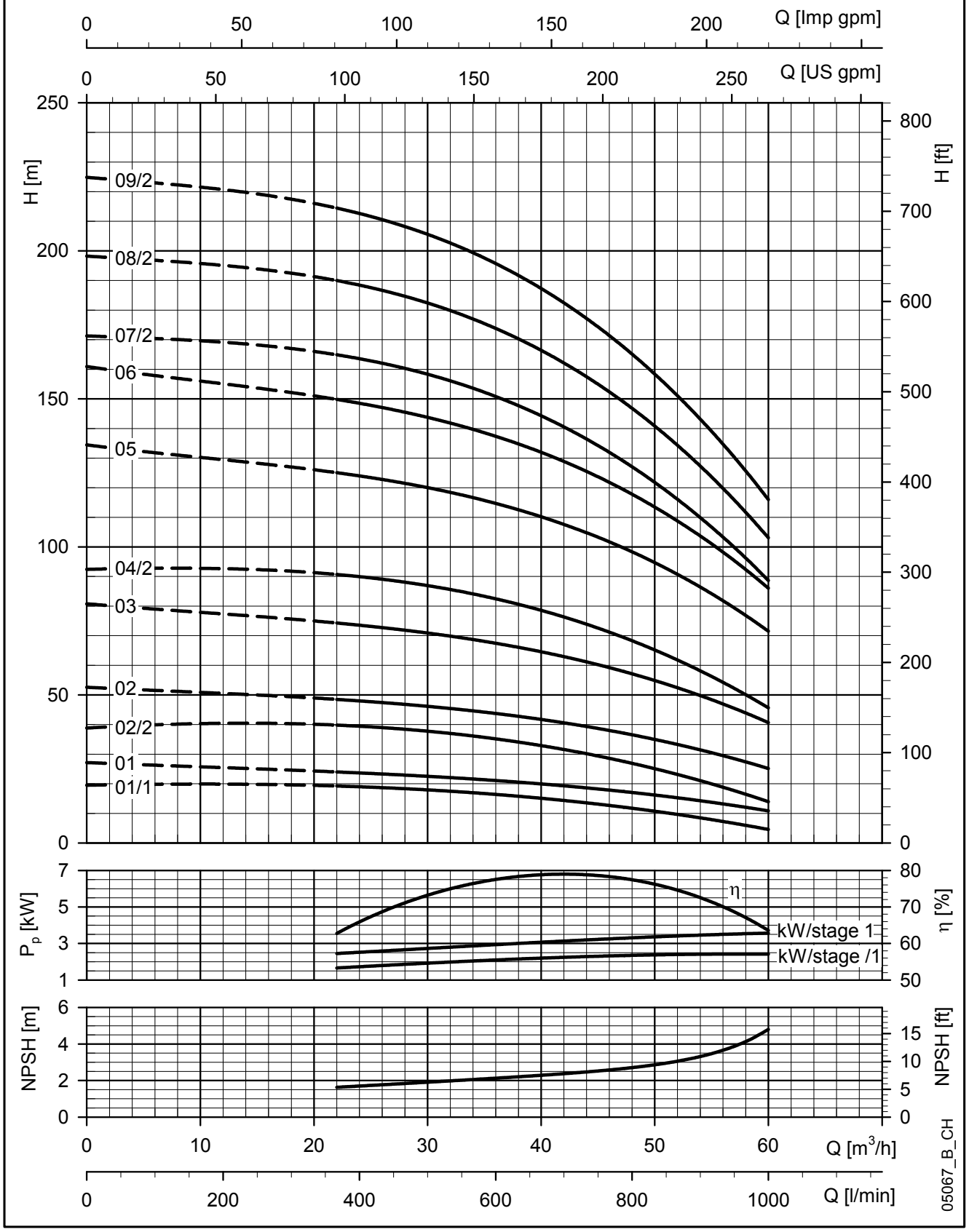
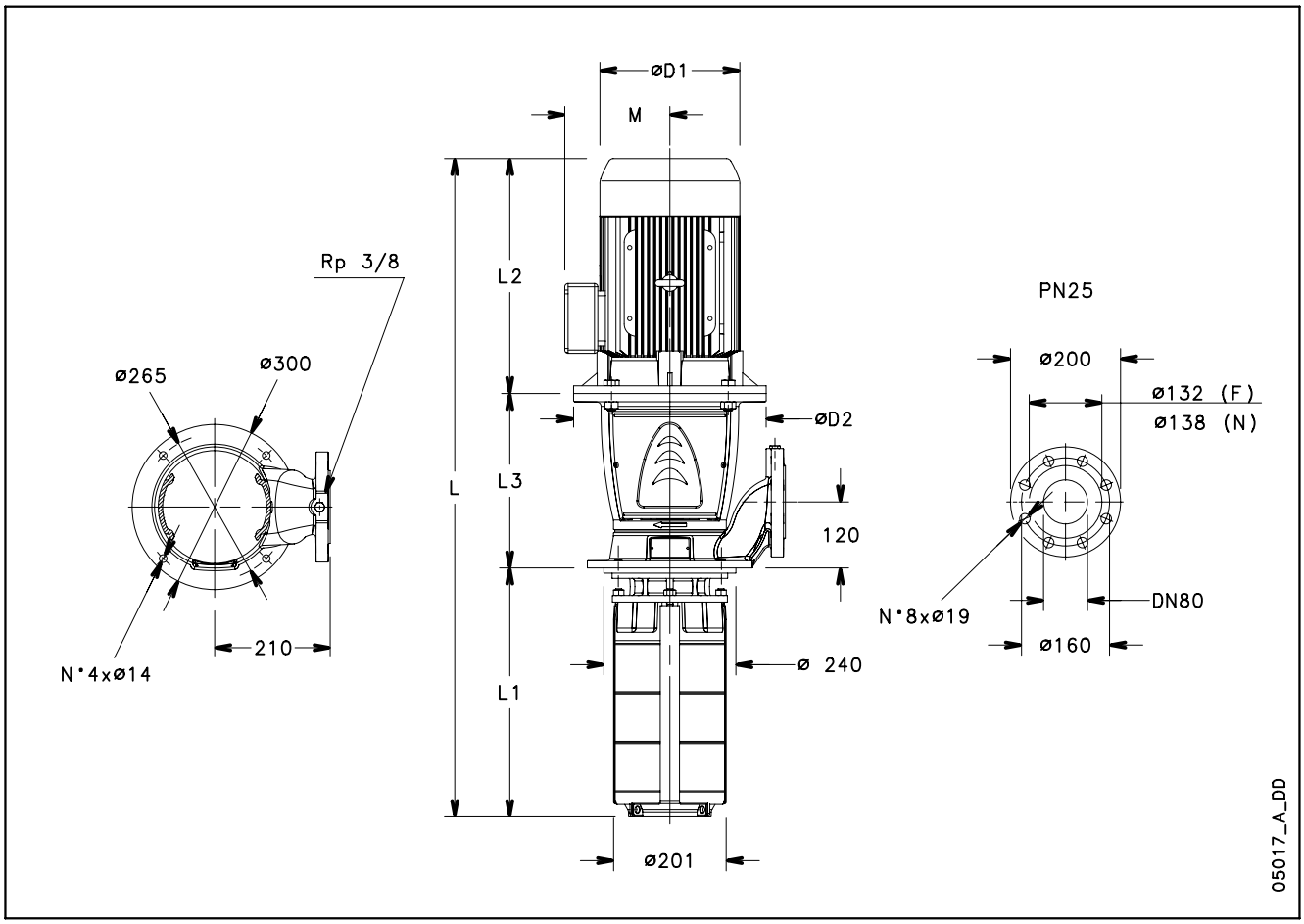
SVI46..S - SVI46..N SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

SVI46	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

SVI66..S - SVI66..N SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)							WEIGHT (kg)	
	kW	SIZE	L	L1	L2	L3	M	D1	D2	PUMP	ELECTRIC PUMP
SVI6601/1-01..40T/D	4	112	853	272	319	262	154	197	160	47	73
SVI6601-01..55T/D	5,5	132	929	272	375	282	168	214	300	45	83
SVI6602/2-02..75T/D	7,5	132	1011	362	367	282	191	256	300	52	109
SVI6602-02..110T/D	11	160	1107	362	428	317	191	256	350	54	124
SVI6603/2-03..150T/D	15	160	1263	452	494	317	240	313	350	57	159
SVI6603-03..185T/D	18,5	160	1263	452	494	317	240	313	350	58	160
SVI6604/1-04..220T/D	22	180	1353	542	494	317	240	313	350	69	190
SVI6605/1-05..300T/D	30	200	1620	632	671	317	285	408	400	84	292

svi66s-2p50-en_e_td

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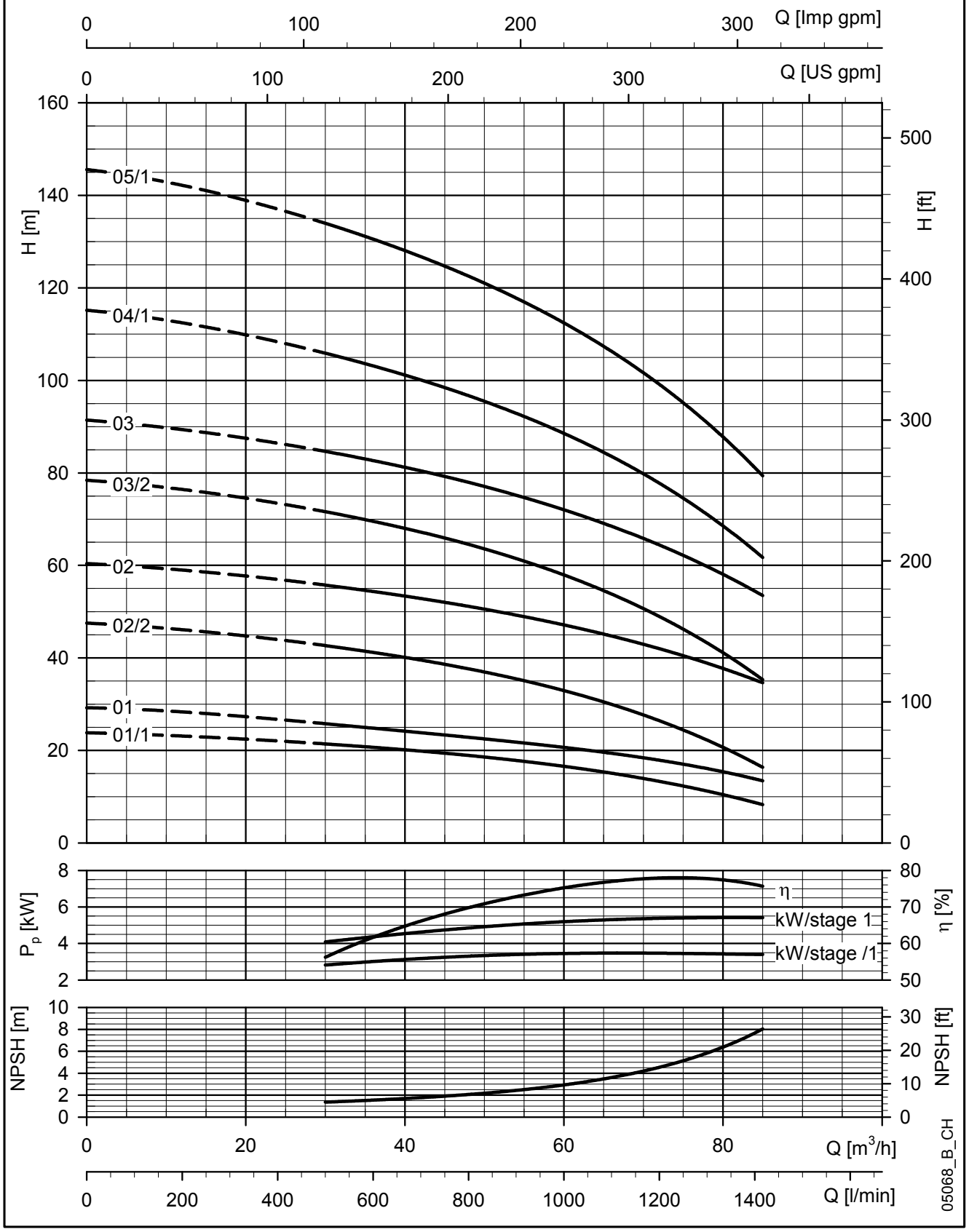
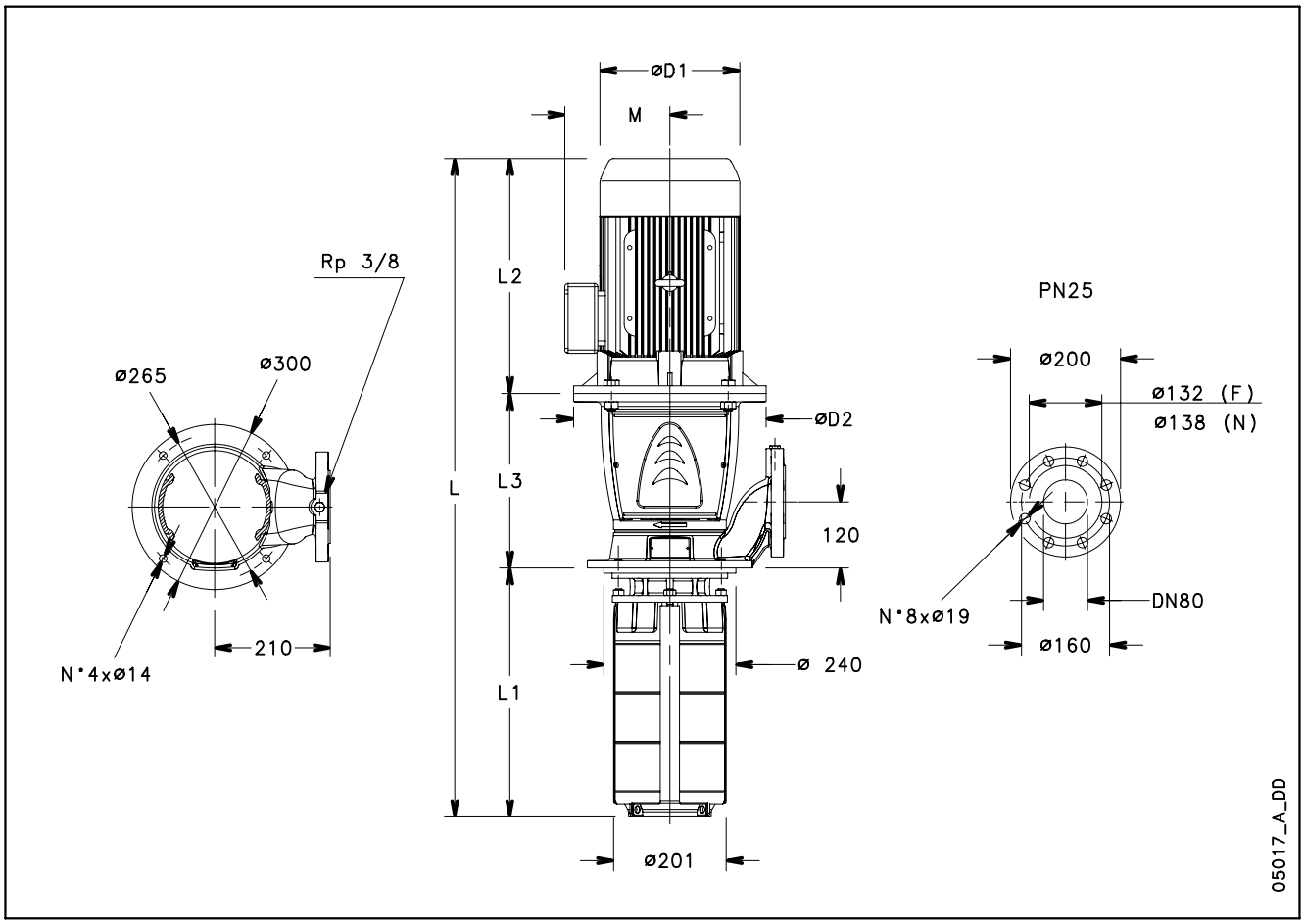
SVI66..S - SVI66..N SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

SVI66	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

SVI92..S - SVI92..N SERIES
DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



PUMP TYPE	MOTOR		DIMENSIONS (mm)							WEIGHT (kg)	
	kW	SIZE	L	L1	L2	L3	M	D1	D2	PUMP	ELECTRIC PUMP
SVI9201/1-01..55T/D	5,5	132	929	272	375	282	168	214	300	45	83
SVI9201-01..75T/D	7,5	132	921	272	367	282	191	256	300	44	101
SVI9202/2-02..110T/D	11	160	1107	362	428	317	191	256	350	53	123
SVI9202-02..150T/D	15	160	1173	362	494	317	240	313	350	53	155
SVI9203/2-03..185T/D	18,5	160	1263	452	494	317	240	313	350	65	167
SVI9203-03..220T/D	22	180	1263	452	494	317	240	313	350	58	179
SVI9204/2-04..300T/D	30	200	1530	542	671	317	285	408	400	81	289
SVI9204-04..300T/D	30	200	1530	542	671	317	285	408	400	81	289

svi92s-2p50-en_e_td

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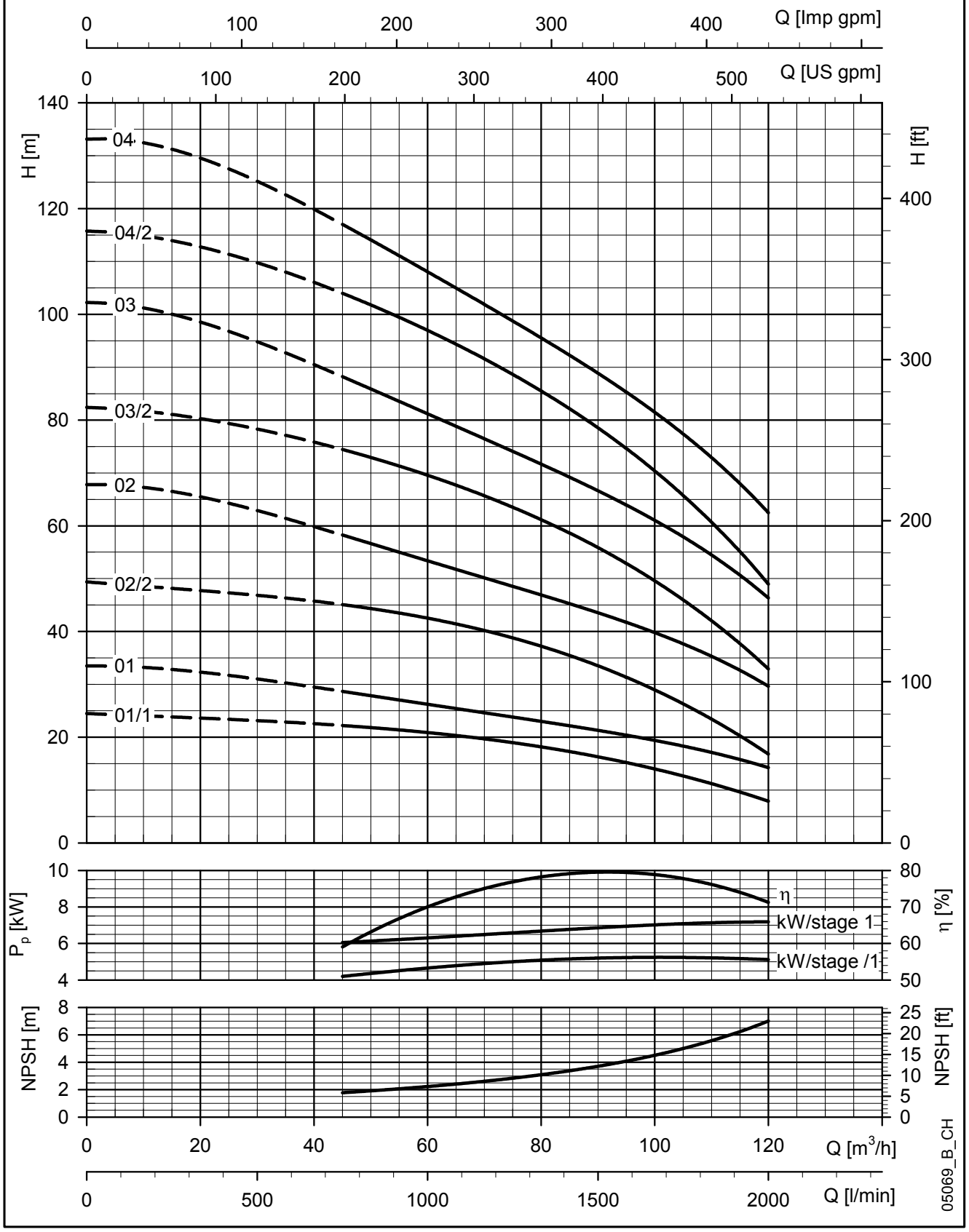
SVI92..S - SVI92..N SERIES
OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES

SVI92	~ 2900 [rpm]	ISO 9906:2012 - Grade 3B



These performances are valid for liquids with density ρ = 1.0 Kg/dm³ and kinematic viscosity ν = 1 mm²/sec.

SVI 33, 46, 66, 92 SERIES (S, N VERSIONS)
DIMENSIONS OF ROUND THREADED COUNTERFLANGES

PUMP TYPE	DN	ø C	DIMENSIONS (mm) ø A	B	ø D	H	HOLES ø F	N°	PN
SVI33	80	Rp 3	160	17	200	27	18	8	16
SVI46									
SVI66									
SVI92									

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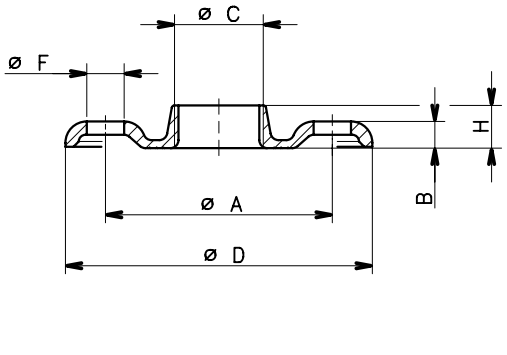
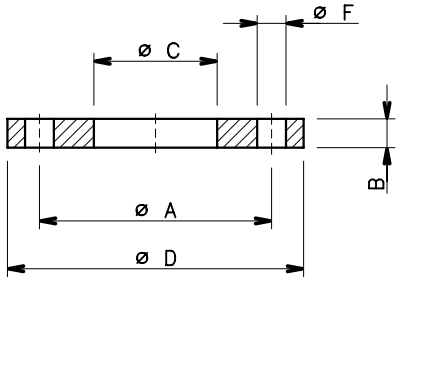


SVI 33, 46, 66, 92 SERIES (S, N VERSIONS)
DIMENSIONS PF ROUND WELD-ON COUNTERFLANGES

PUMP TYPE	DN	ø C	DIMENSIONS (mm) ø A	B	ø D	HOLES ø F	N°	PN
SVI33	80	90	160	20	200	18	8	16
SVI46								
SVI66								
SVI92								
SVI33	80	90	160	24	200	18	8	25
SVI46								
SVI66								
SVI92								

svi-ctf-tonde-s-en_a_td

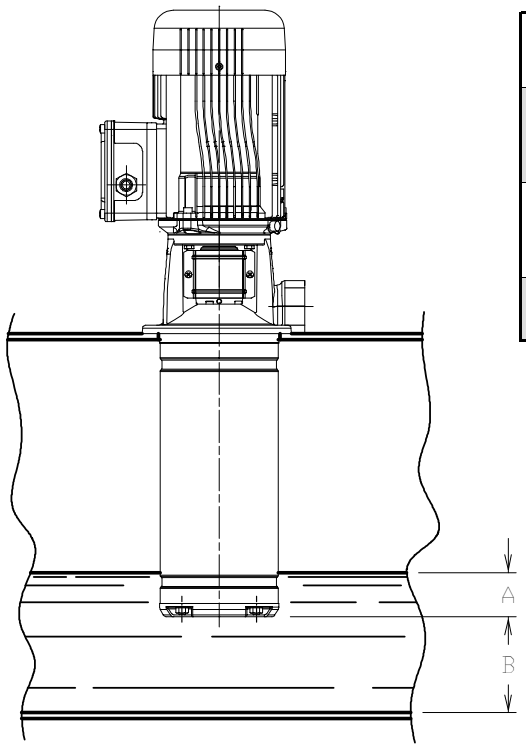


ROUND COUNTERFLANGES

- SVI 33, 46, 66, 92 S versions : Kit containing weld-on counterflange (PN16, PN25) or threaded one PN16 made of galvanized steel. Each Kit contains 1 counterflange plus bolts and gasket.

- SVI 33, 46, 66, 92 N versions : Kit containing weld-on counterflange (PN16, PN25) or threaded one PN16 made of AISI 316L stainless steel. Each Kit contains 1 counterflange plus bolts and gasket.

INSTALLATION



PUMP TYPE	MINIMUM IMMERSION LEVEL A [mm]		DISTANCE FROM THE BOTTOM B [mm]
	WITH INDUCER	WITHOUT INDUCER	
1SVI 3SVI 5SVI	20	30	20
10SVI 15SVI 22SVI	20	30	25
SVI33-46 SVI66-92	-	60	25

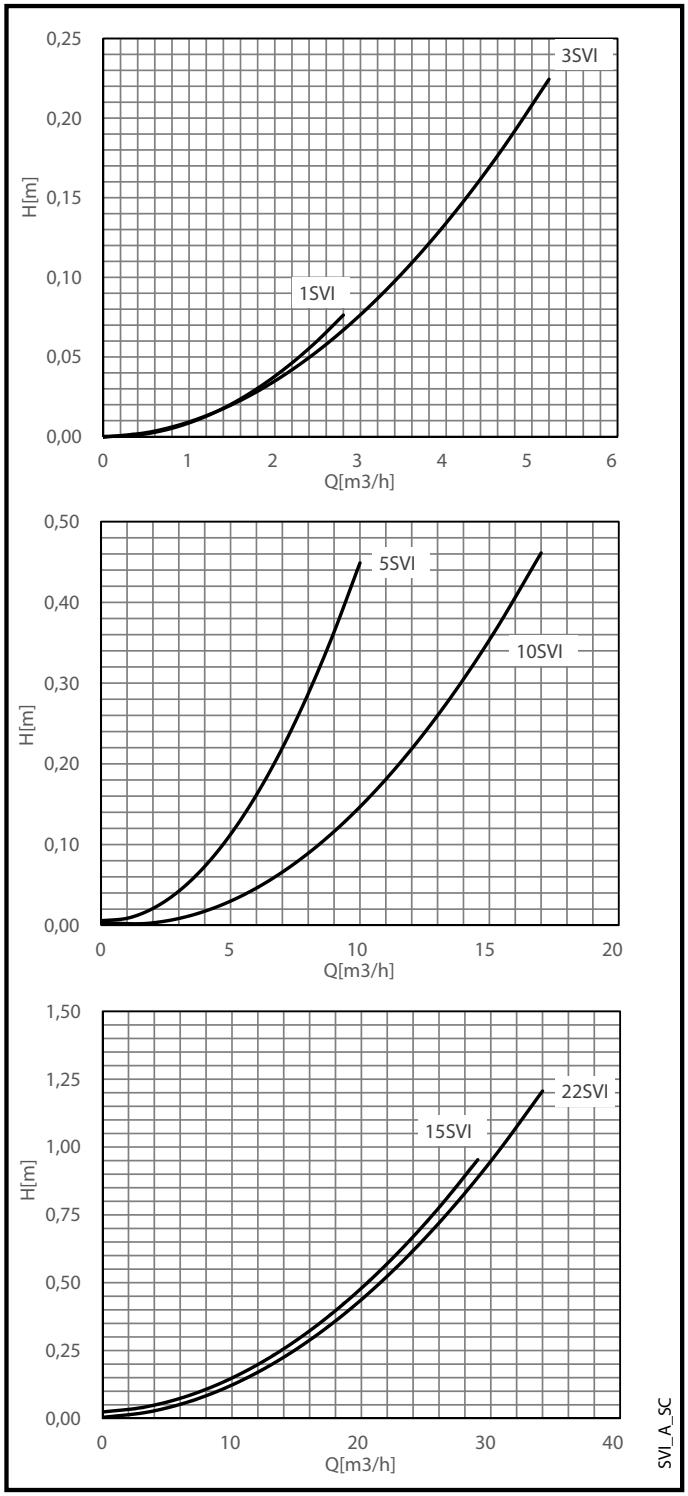
svi-liv-liq_b_td

05005_B_SC

These performances are valid for liquids with density $\rho = 1.0$ Kg/dm^3 and kinematic viscosity $\nu = 1$ mm^2/sec.

EMPTY STAGES
OPERATING CHARACTERISTICS AND DIMENSIONAL DATA

The charts below illustrate the pressure losses to be considered per empty stage when empty stages are used to extend the pump depth.



To calculate the head of a pump with empty stages you can do the calculation as shown below:

Example:

Pump type: 5SVI06-13; 6 impellers, 13 total stages as per nomenclature at page 9
Flow: 6 m^3/h
Head: 33,9 m

The head 33,9 m is read from the performance curve for an 5SVI06-06 pump, see page 41.

The number of empty stages is:
13 total stages - 6 impellers = 7 empty stages

From the pressure loss curve of 5SVI, it appears that the pressure loss of each empty chamber at 6 m^3/h is 0,16 m. This result in a total pressure loss of:
Total pressure loss = 0,16 x 7 = 1,12 m

The reduced head of the 5SVI06-13 pump including pressure losses caused by empty stages is:
Head = 33,9 - 1,12 = 32,78 m

In SVI33,46,66 and 92 pumps, empty stages allow the passage of the liquid through a wide opening, eliminating pressure loss in the pump.

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EMPTY STAGES - VERSION WITH COUPLING
OPERATING CHARACTERISTICS AND DIMENSIONAL DATA

The immersion depth of e-SVI pump can be varied to meet the required depths of different tanks. The table below illustrates the number of total stages to be used to achieve the required depth. The pump head depends on the number of the impeller used (see head curves on the previous pages of this catalogue)

NUMBER OF STAGE	IMMERSION DEPTH (mm)									
	PUMP TYPE									
	1SVI	3SVI	5SVI	10SVI	15SVI	22SVI	SVI 33	SVI 46	SVI 66	SVI 92
1	-	-	-	-	-	-	257	257	272	272
2	119	119	134	177,5	225,5	225,5	332	332	362	362
3	139	139	159	209,5	273,5	273,5	407	407	452	452
4	159	159	184	241,5	321,5	321,5	482	482	542	542
5	179	179	209	273,5	369,5	369,5	557	557	632	632
6	199	199	234	305,5	417,5	417,5	632	632	722	722
7	219	219	259	337,5	465,5	465,5	707	707	812	812
8	239	239	284	369,5	513,5	513,5	782	782	902	902
9	259	259	309	401,5	561,5	561,5	857	857	992	992
10	279	279	334	433,5	609,5	609,5	932	932	1082	1082
11	299	299	359	465,5	657,5	657,5	1007	1007		
12	319	319	384	497,5	705,5	705,5	1082	1082		
13	339	339	409	529,5	753,5	753,5				
14	359	359	434	561,5	801,5	801,5				
15	379	379	459	593,5	849,5	849,5				
16	399	399	484	625,5	897,5	897,5				
17	419	419	509	657,5	945,5	945,5				
18	439	439	534	689,5	993,5	993,5				
19	459	459	559	721,5	1041,5	1041,5				
20	479	479	584	753,5						
21	499	499	609	785,5						
22	519	519	634	817,5						
23	539	539	659	849,5						
24	559	559	684	881,5						
25	579	579	709	913,5						
26	599	599	734	945,5						
27	619	619	759	977,5						
28	639	639	784	1009,5						
29	659	659	809	1041,5						
30	679	679	834							
31	699	699	859							
32	719	719	884							
33	739	739	909							
34	759	759	934							
35	779	779	959							
36	799	799	984							
37	819	819	1009							
38	839	839								
39	859	859								
40	879	879								
41	899	899								
42	919	919								
43	939	939								
44	959	959								
45	979	979								
46	999	999								
47	1019	1019								

svi-en_a_tcm

EMPTY STAGES - COMPACT VERSION
OPERATING CHARACTERISTICS AND DIMENSIONAL DATA

NUMBER OF STAGE	IMMERSION DEPTH (mm)		
	PUMP TYPE		
	1SVI	3SVI	5SVI
1	-	-	-
2	126	126	141
3	146	146	166
4	166	166	191
5	186	186	216
6	206	206	241
7	226	226	266
8	246	246	291
9	266	266	316
10	286	286	341
11	306	306	366
12	326	326	391
13	346	346	416
14	366	366	
15	386	386	
16	406	406	
17	426	426	

svie_a_tcm

EMPTY STAGES - TOTAL WEIGHT CALCULATION

It is possible to calculate the total weight of the pump with empty stages from the weight of the pump with full stages shown in the dimensional tables in this catalog. The table below illustrates for each size the constant weight factor of an empty stage.

PUMP TYPE	WEIGHT (kg)
1-3SVI	0,20
5SVI	0,24
10SVI	0,57
15-22SVI	0,79
SVI33-46	1,35
SVI66-92	1,72

To calculate the real weight you can perform the calculation as shown below:

Example:

Pump type: 5SVI06-13; 6 impellers, 13 total stages as per nomenclature at page 9
Pump weight: 9 kg

The number of empty stages is:
13 total stages - 6 impellers = 7 empty stages

From the above table for size 5SVI the weight of each empty stage is 0,24 kg.
This results in a total weight due to the empty stages of:
Total weight of empty stages = 0.24 x 7 = 1.68 kg

The total weight of the 5SVI06-13 pump is:
Total weight = 9 + 1,68 = 10,68 kg

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e-SVI WITH VARIABLE FREQUENCY DRIVE

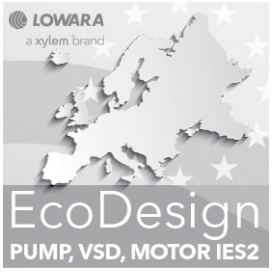
ECODESIGN DIRECTIVE (ErP)

The Ecodesign directive was put in place in 2011 and introduced minimum requirements for the efficiency of **AC motors and pumps**. Over the last few years, these requirements have been gradually intensified.

Motors are classified based on their mode of operation. Fixed speed motors are classified according to IEC 60034-30-1 and the minimum acceptable level of efficiency is IE3 since January 2017 for 0.75 to 375 kW rated powers 3 phase motors, according to the Directive 2009/125/EC.
Variable speed motors (not covered in IEC 60034-30-1), which are not designed to operate direct on-line, are classified according to the technical specification IEC/TS 60034-30-2. This Technical Specification introduced the "ultra-premium" **IE5 efficiency performance**, the best efficiency existing level for this kind of motors.

In 2014, with the standard EN 50598, there was a switch in the definition of efficiency class from an individual component approach towards an overall system one; which is the basic point for the "Extended product approach" (EPA).
Taking this concept further, the EN50598-2 introduced IES efficiency classes for frequency converters + motor systems (known as power drive systems-PDS) with power rating **from 0.12 kW to 1000kW and from 100V to 1000V**.
For Power Drive System (PDS) the defined efficiency classes are IES0, IES1, IES2. If a PDS has 20% greater losses than the reference value of IES1 then it is classified as IES0; if it has 20% lower losses than the reference value of IES1 then it is classified as IES2.

- **With the HYDROVAR connected to a Lowara IE3 motor, the system achieves the highest IES class – IES2.**



- **With the eSM drive, which powers an IE5 permanent magnet motor, the system surpasses the highest IES class – IES2.**

The e-SVI pump series is therefore already ready for the 2020 EU Ecodesign energy efficiency objectives.

e-SVI pumps can be supplied with:
- Hydrovar control system: **e-SVIH series**,
- e-SM drive: **e-SVIE series**.

e-SVIH SERIES
e-SVI WITH HYDROVAR

Background and context

For all pumping needs in commercial or residential building and in industry applications, the demand for intelligent pumping systems is constantly growing. Controlled systems offer many advantages: reduced operating costs for the lifetime of the pump, lower environmental impact, longer lifetime of piping systems and networks.

For this reason, Lowara has developed the e-SVIH: an intelligent pumping system which assures high level performance with energy consumption tailored to the system's demand.

Benefits of e-SVIH with HYDROVAR

Saving: e-SVIH transforms the e-SVI pumps into variable speed intelligent pumping systems. Thanks to the HYDROVAR, the speed of each pump varies so as to maintain a constant flow, a constant pressure, or a differential pressure. In doing so, at any point in time, the pump only receives the energy required. This in turns allows for considerable savings, especially for systems that have varying loads throughout the day.

Easy installation and space-saving: e-SVIH saves time and space during installation. The Hydrovar is delivered already mounted on the motor (for models up to 22kW). The hydrovar is kept cool by the motor fan and does not require a control panel. In order to function, only fuses on the supply line are needed (Check your local electrical installation regulations).

Standard motors: e-SVIH models are fitted with three-phase standard TEFC motors with insulation class 155 (F) and IE3 efficiency level from 0,75 to 22 kW.

Key Features of the HYDROVAR

- **No need for additional pressure sensors**:
  The e-SVIH is fitted with a pressure transmitter or differential pressure transmitters, depending on the application. The pressure sensors(s) are pre-wired. For e-SVI with round flanges (S and N versions) the sensors can be installed on the pump flanges.

- **No need for special pumps or motors**.

- **e-SVIH is already pre-wired**.

- **No need for IN LINE filters**.
  HYDROVAR already includes the THDi filter embedded as standard.

- **No need for bypass or safety systems**:
  The e-SVIH will immediately switch off when demand drops to zero or when it exceeds maximum pump capacity; thus making installation of additional safety devices unnecessary.

- **Anti-condensation device**:
  The HYDROVAR is fitted with anti-condensation devices which switch on when the pump is in standby in order to prevent condensation forming in the unit.

e-SVIH SERIES
e-SVI WITH HYDROVAR

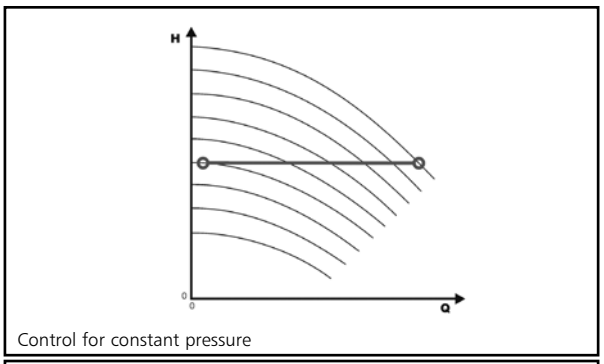
The basic function of the HYDROVAR device is to control the pump to meet the system demands.

HYDROVAR performs these functions by:

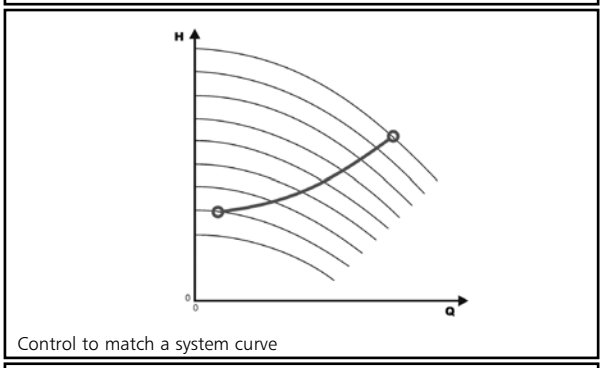
1) Measuring the system pressure or flow via a transmitter mounted on the pump's delivery side.
2) Calculating the motor speed to maintain the correct flow or pressure.
3) Sending out a signal to the pump to start the motor, increase speed, decrease speed or stop.
4) In the case of multiple pump installations,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

In addition to these basic functions, HYDROVAR can perform controls only manageable by the most advanced computerized control systems. Some examples are:

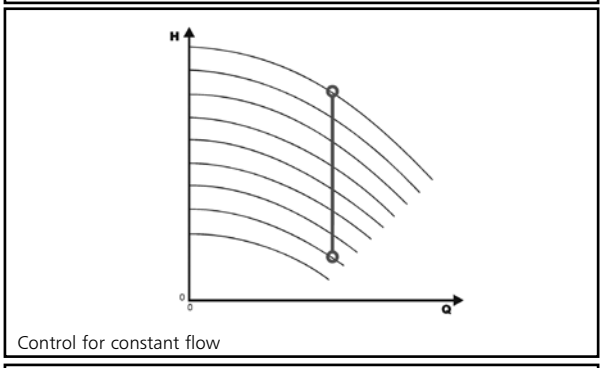
- Stop the pump(s) at zero demand.
- Stop the pump(s) in case of water failure on the suction side (protection against dry running).
- Stop the pump if the required delivery exceeds the pump's capacity (protection against cavitation caused by excessive demand), or automatically switch on the next pump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



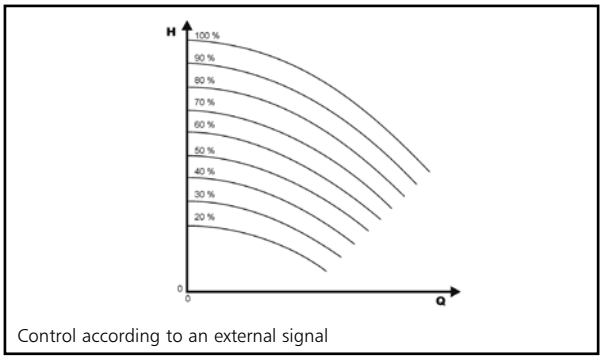
Control for constant pressure



Control to match a system curve



Control for constant flow



Control according to an external signal

HYDROVAR HVL
IDENTIFICATION CODE

H V L 4 . 0 7 5 - A 0 0 1 0

Other options [1 digit]
[0] = reserved for future use

Display [1 digit]
[0] = reserved for future use
[1] = Internal display installed as standard

Optional cards [1 digit]
[0] = no optional cards (as standard)
[1] = Premium Card (option supplied loose)

Enclosure class (IP class) [1 digit]
[A] = IP55 (Type1)
[B] = reserved for future use

Bus communication [1 digit]
0 = Standard Communication (Modbus, Bacnet)
1 = reserved for future use
2 = reserved for future use
3 = reserved for future use
4 = reserved for future use
5 = reserved for future use
6 = reserved for future use

Rated output power
[3 digits]
kW x 10

Power supply [2 digits]
[2.] = 1~ 208-240 V (50/60 Hz)
[3.] = 3~ 208-240 V (50/60 Hz)
[4.] = 3~ 380-460 V (50/60 Hz)

Name [3 digits]
[HVL] = HYDROVAR generation L

EXAMPLE: **HVL4.075-A0010**

HVL=HYDROVAR generation L, **4.**=3~ 380-460 V power supply, **075**=7,5kW rated output power, **A**=IP55 (Type1) enclosure class, **0**=Standard Bus communication, **0**=no optional card, **1**=internal display installed, **0**=no other options installed.
NOTE: HYDROVAR output voltage is three phase.

DIMENSIONS AND WEIGHTS

TYPE	MODELS			DIMENSIONS (mm)				WEIGHT
	/2	/3	/4	L	B	H	X	Kg
SIZE A	HVL2.015 ÷ 2.022	HVL3.015 ÷ 3.022	HVL4.015 ÷ 4.040	216	205	170	243	5,6
SIZE B	HVL2.030 ÷ 2.040	HVL3.030 ÷ 3.055	HVL4.055 ÷ 4.110	276	265	185	305	10,5
SIZE C	-	HVL3.075 ÷ 3.110	HVL4.150 ÷ 4.220	366	337	200	407	15,6

HVL_dim-en_b_td

HYDROVAR HVL
EMC COMPATIBILITY

EMC requirements

HYDROVAR fulfills the product standard EN61800-3:2004 + A1:2012, which defines categories (C1 to C4) for device application areas.
Depending on the motor cable length, a classification of HYDROVAR by category (based on EN61800-3) is reported in the following tables:

HVL	HYDROVAR classification by categories based on EN61800-3
2.015 ÷ 2.040	C1 (*)
3.015 ÷ 3.110	C2 (*)
4.015 ÷ 4.220	C2 (*)

(*) 0,75 motor cable length; contact Xylem for further information En-Rev_A

CARD

Premium Card HYDROVAR (optional)

For the e-SVH series, the Premium Card comes fitted as option on the standalone HYDROVAR.
This allows to control up to five fix speed pumps via an external panel.
The Premium Card will allow additional features listed below:

- 2 additional Analog Inputs
- 2 Analog Outputs
- 1 additional digital input
- 5 relays.

OPTIONAL COMPONENTS

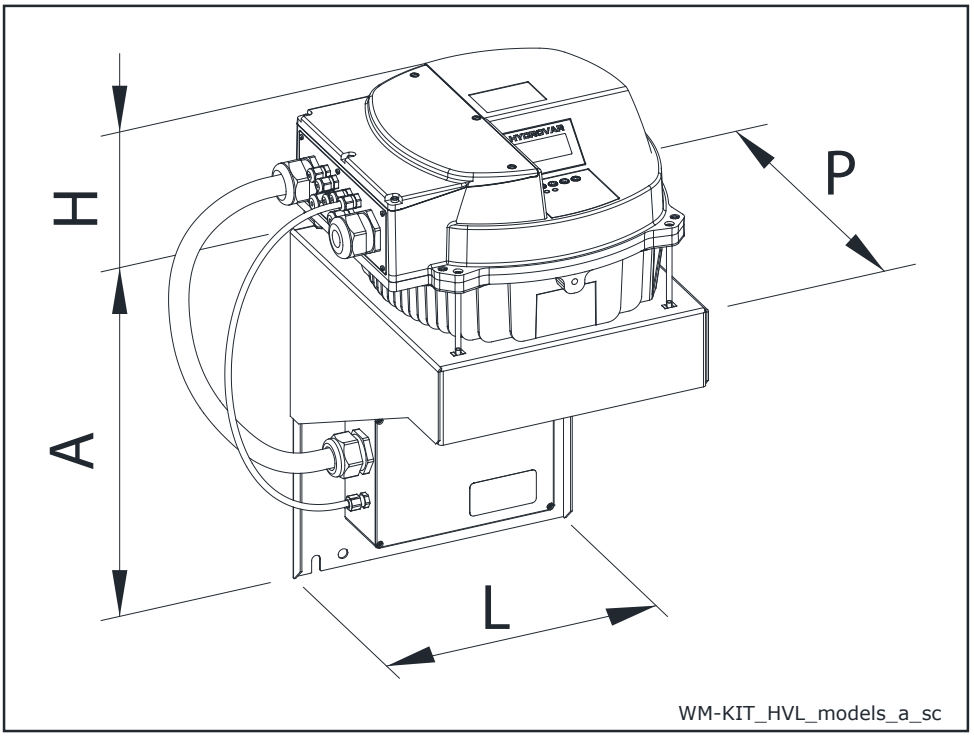
Sensors

The following sensors are available for HYDROVAR:

a. Pressure-transducer
b. Differential pressure-transducer
c. Temperature-sensor
d. Flow indicator (orifice plate, inductive flow meter)
e. Level-sensor.

HYDROVAR HVL (WALL MOUNTING KIT) DIMENSIONS AND WEIGHTS

As an option a HYDROVAR wall mounting kit is also available. This is used where mounting on the pump unit is impossible or where you would like the controls in another location. These are available for the new generation HYDROVAR HVL 2.015-4.220 (22 kW). The speed of the cooling fan modulates with the HYDROVAR usage which optimizes energy consumption and also reduces noise.



WM KIT TIPE	kW	WM KIT POWER SUPPLY	HVL SIZE	DIMENSIONS (mm)				WEIGHT (kg)	
				A	H	L	P	HVL	WM KIT
WM KIT HVL 2.015	1,5	1~ 230V	A	220	170	202	232	5,6	2,6
WM KIT HVL 2.022	2,2			220	170	202	232	5,6	2,6
WM KIT HVL 2.030	3		B	240	175	258	290	10,5	8,2
WM KIT HVL 2.040	4			320	175	288	305	10,5	5,4
WM KIT HVL 3.015	1,5	3~ 230V	A	220	170	202	232	5,6	2,6
WM KIT HVL 3.022	2,2			220	170	202	232	5,6	2,6
WM KIT HVL 3.030	3		B	240	175	258	290	10,5	8,2
WM KIT HVL 3.040	4			240	175	258	290	10,5	8,2
WM KIT HVL 3.055	5,5			240	175	258	290	10,5	8,2
WM KIT HVL 3.075	7,5		C	400	200	325	365	15,6	11,6
WM KIT HVL 3.110	11			400	200	325	365	15,6	11,6
WM KIT HVL 4.015	1,5	3~ 400V	A	240	170	258	290	5,6	8,2
WM KIT HVL 4.022	2,2			240	170	258	290	5,6	8,2
WM KIT HVL 4.030	3			240	170	258	290	5,6	8,2
WM KIT HVL 4.040	4			240	170	258	290	5,6	8,2
WM KIT HVL 4.055	5,5		B	240	175	258	290	10,5	8,2
WM KIT HVL 4.075	7,5			240	175	258	290	10,5	8,2
WM KIT HVL 4.110	11			320	175	288	305	10,5	5,4
WM KIT HVL 4.150	15		C	400	200	325	365	15,6	11,6
WM KIT HVL 4.185	18,5			400	200	325	365	15,6	11,6
WM KIT HVL 4.220	22			400	200	325	365	15,6	11,6

WM-KIT_HVL_models-EN_b_td

e-SVIE SERIES
e-SVI SMART SERIES

Background and context

In every sector, from construction and industry to agriculture and building services the need for intelligent, compact and high-efficiency pumping systems is constantly growing.
That's why Lowara has developed the e-SVI Smart series: an integrated intelligent pumping system with electronically driven, permanent magnet motor (IE5 efficiency level).
The integrated control system, combined with the high performance, power and efficiency from the motor and hydraulics, guarantees impressively low operating costs. You also benefit from flexibility, precision and its ultra-compact size.

Savings

The electronics and permanent magnet motor are highly efficient and minimize power losses while transferring maximum energy to the hydraulic parts of the pump.
The refined control system with integrated microprocessor adjusts the motor speed, matching the required operating point of the pump or system requirements.
This reduces demand on electricity according to the required working conditions.
This creates economies, especially in systems where pump demand varies over time.

Flexibility

The compact size, low loss and increased control make the e-SVI Smart series a good choice in applications and systems where fixed speed pumps are commonly used.
The e-SVI Smart series is easy to integrate in control and regulation loops thanks to the wide availability of compatible communication protocols, including analog and digital inputs.
The pump is supplied with a pressure sensor.

Ease of use and commissioning

e-SVI Smart has an intuitive interface that guides the user through the installation, and a practical area to assist with connections.
The control system is integrated and no additional external electrical panel is required.

Application sectors

- Water supply systems in residential buildings
- Air conditioning
- Water treatment plants
- Industrial installations

e-SM system

- Single-phase power supply:
  208-240V +/- 10%, 50/60 Hz
- Three-phase power supply:
  - from 0,37kW to 1,5kW:
    208-240/380-460V +/- 10%, 50/60 Hz
  - 2,2kW: 380-460V +/- 10%, 50/60 Hz
- Power up to 2,2kW
- Protection class IP55
- Can be linked up to 3 e-SVI Smart pumps

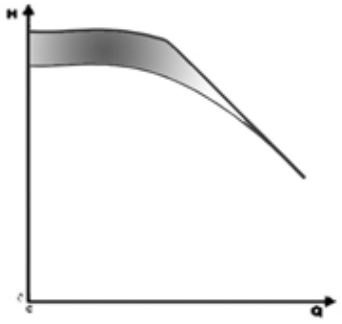
Motor

- IE5 efficiency level (IEC TS 60034-30-2:2016)
- Synchronous electric motor with permanent magnets, (TEFC), closed structure, air-cooled
- Insulation class 155 (F)
- Overload protection and locked rotor with automatic reset incorporated

e-SVIE SERIES
e-SVI SMART SERIES

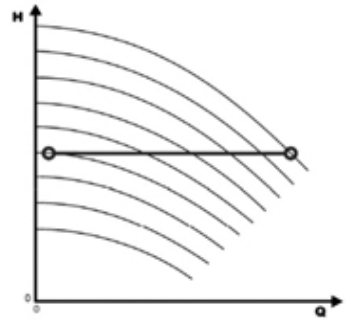
e-SVI Smart series is equipped with an intelligent control that optimizes hydraulic performance while minimizing waste.

Integrated intelligence: The electronic control of the motor enables a 20% increase in performance compared to an equivalent fixed speed pump (area highlighted in figure "Integrated intelligence").

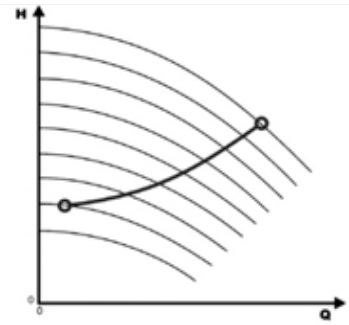


Integrated intelligence

Adjustment: This is possible both at constant pressure and according to the characteristic curve of the system, based on the customer's preferences.
Another option is according to an external signal or at a preset speed.



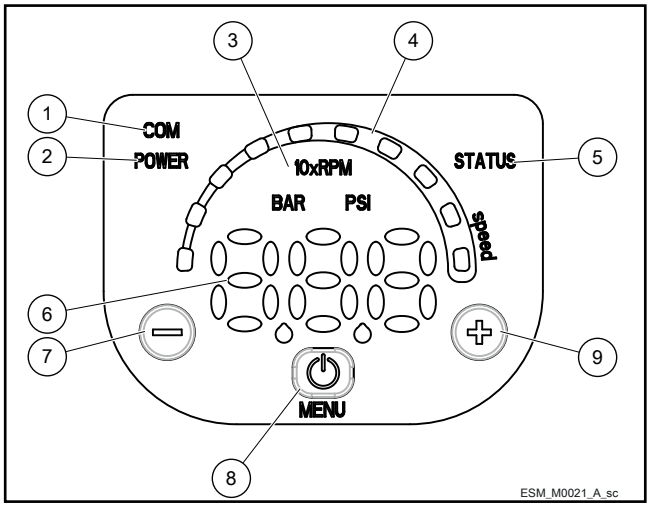
Control for constant pressure



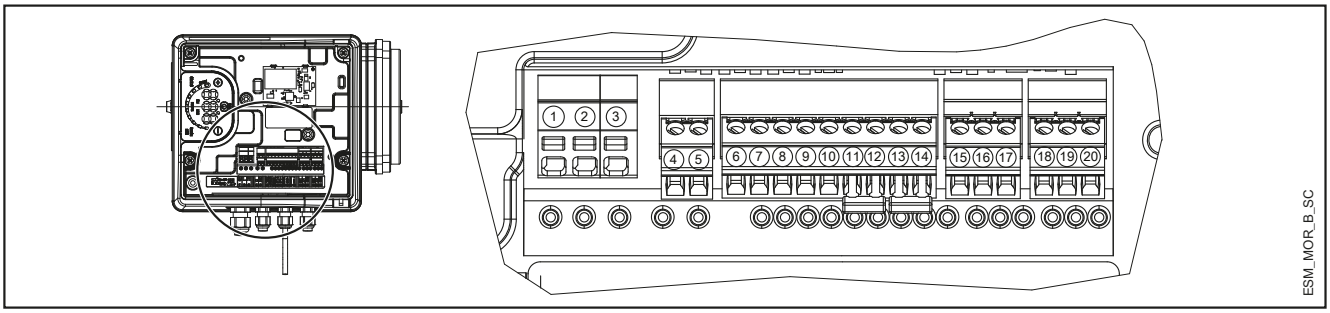
Control to match a system curve

Intuitive and simple interface: You can control the unit from just three buttons, with an easy to read display for parameters and alarms, designed for complete control of system operation.

1. Communication LED
2. Power on LED
3. Unit of measure LED
4. Speed LED bar
5. Status LED
6. Numeric display
7. Decrease key
8. On/off and menu key
9. Increase key



e-SVE SERIES
SINGLE PHASE TERMINAL BLOCK



REF.	ITEM	DESCRIPTION
4	Fault Signal	COM - error status relay
5		NO - error status relay
6	Auxiliary Voltage Supply	Auxiliary voltage supply +15 VDC
7	Analog input 0-10V	Actuator mode 0-10 V input
8		GND for 0-10 V input
9	External Pressure sensor [also Differential]	Power supply external sensor +15 VDC
10		External sensor 4-20 mA input
11	External Start/Stop	External ON/OFF input reference
12		External ON/OFF input
13	External Lack of Water	Low water input
14		Low water reference
15	Communication bus	RS485 port 1: RS485-1N B (-)
16		RS485 port 1: RS485-1P A (+)
17		Electronic GND
18	Communication bus	RS485 port 2: RS485 port 2: RS485-2N B (-) active only with optional module
19		RS485 port 2: RS485 port 2: RS485-2P A (+) active only with optional module
20		Electronic GND

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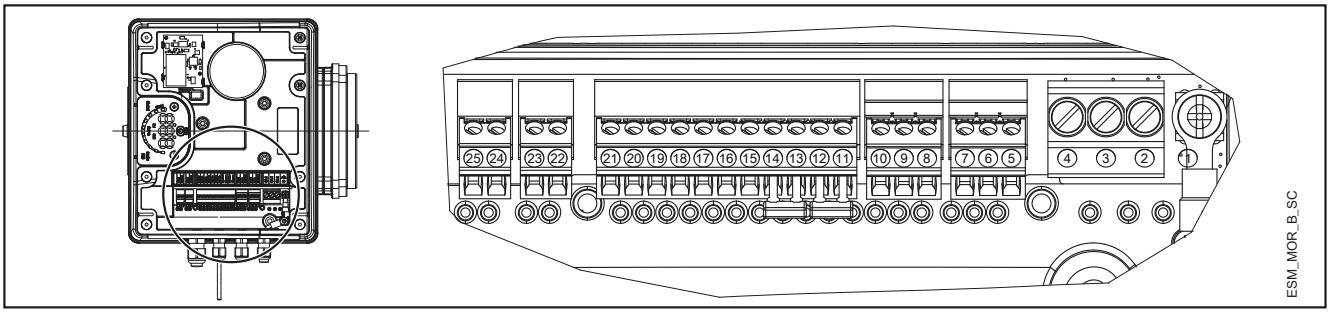
THREE-PHASE TERMINAL BLOCK



REF.	ITEM	DESCRIPTION
5	Communication bus	Electronic GND
6		RS485 port 1: RS485-1P A (+)
7		RS485 port 1: RS485-1N B (-)
8	Communication bus	Electronic GND
9		RS485 port 2: RS485 port 2: RS485-2P A (+) active only with optional module
10		RS485 port 2: RS485 port 2: RS485-2N B (-) active only with optional module
11	External Lack of Water	Low water reference
12		Low water input
13	External Start/Stop	External ON/OFF input reference
14		External ON/OFF input
15	External Pressure sensor	External sensor 4-20 mA input
16		Power supply external sensor +15 VDC
17	External Pressure sensor [also Differential]	External sensor 4-20 mA input
18		Power supply external sensor +15 VDC
19	Analog input 0-10V	GND for 0-10 V input
20		Actuator mode 0-10 V input
21	Auxiliary Voltage Supply	Auxiliary voltage supply +15 VDC
22	Motor running signal	Normally open contact
23		Common contact
24	Fault Signal	NO - error status relay
25		COM - error status relay

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LOWARA
a xylem brand

TECHNICAL APPENDIX

NPSH

The minimum operating values that can be reached at the pump suction end are limited by the onset of cavitation.

Cavitation is the formation of vapour-filled cavities within liquids where the pressure is locally reduced to a critical value, or where the local pressure is equal to, or just below the vapour pressure of the liquid.

The vapour-filled cavities flow with the current and when they reach a higher pressure area the vapour contained in the cavities condenses. The cavities collide, generating pressure waves that are transmitted to the walls. These, being subjected to stress cycles, gradually become deformed and yield due to fatigue. This phenomenon, characterized by a metallic noise produced by the hammering on the pipe walls, is called incipient cavitation.

The damage caused by cavitation may be magnified by electrochemical corrosion and a local rise in temperature due to the plastic deformation of the walls. The materials that offer the highest resistance to heat and corrosion are alloy steels, especially austenitic steel. The conditions that trigger cavitation may be assessed by calculating the total net suction head, referred to in technical literature with the acronym NPSH (Net Positive Suction Head).

The NPSH represents the total energy (expressed in m.) of the liquid measured at suction under conditions of incipient cavitation, excluding the vapour pressure (expressed in m.) that the liquid has at the pump inlet.

To find the static height hz at which to install the machine under safe conditions, the following formula must be verified:

hp + hz $\geq$ **(NPSHr + 0.5) + hf + hpv** ①

where:

hp is the absolute pressure applied to the free liquid surface in the suction tank, expressed in m. of liquid; hp is the quotient between the barometric pressure and the specific weight of the liquid.

hz is the suction lift between the pump axis and the free liquid surface in the suction tank, expressed in m.; hz is negative when the liquid level is lower than the pump axis.

hf is the flow resistance in the suction line and its accessories, such as: fittings, foot valve, gate valve, elbows, etc.

hpv is the vapour pressure of the liquid at the operating temperature, expressed in m. of liquid. hpv is the quotient between the Pv vapour pressure and the liquid's specific weight.

0,5 is the safety factor.

The maximum possible suction head for installation depends on the value of the atmospheric pressure (i.e. the elevation above sea level at which the pump is installed) and the temperature of the liquid.

To help the user, with reference to water temperature (4° C) and to the elevation above sea level, the following tables show the drop in hydraulic pressure head in relation to the elevation above sea level, and the suction loss in relation to temperature.

Water temperature (°C)	20	40	60	80	90	110	120
Suction loss (m)	0,2	0,7	2,0	5,0	7,4	15,4	21,5

Elevation above sea level (m)	500	1000	1500	2000	2500	3000
Suction loss (m)	0,55	1,1	1,65	2,2	2,75	3,3

Friction loss is shown in the tables of this catalogue. To reduce it to a minimum, especially in cases of high suction head (over 4-5 m.) or within the operating limits with high flow rates, we recommend using a suction line having a larger diameter than that of the pump's suction port.
It is always a good idea to position the pump as close as possible to the liquid to be pumped.

Make the following calculation:

Liquid: water at ~15°C γ = 1 kg/dm^3
Flow rate required: 25 m^3/h
Head for required delivery: 70 m.
Suction lift: 3,5 m.
The selection is an 33SV3G075T pump whose NPSH required value is, at 25 m^3/h, of 2 m.

For water at 15 °C

hp = Pa / γ = 10,33m, hpv = Pv / γ = 0,174m (0,01701 bar)

The Hf flow resistance in the suction line with foot valves is ~ 1,2 m.
By substituting the parameters in formula ① with the numeric values above, we have:

10,33 + (-3,5) $\geq$ (2 + 0,5) + 1,2 + 0,17

from which we have: 6,8 > 3,9

The relation is therefore verified.

VAPOUR PRESSURE
VAPOUR PRESSURE ps AND ρ DENSITY OF WATER TABLE

t	T	ps	ρ
°C	K	bar	kg/dm³
0	273,15	0,00611	0,9998
1	274,15	0,00657	0,9999
2	275,15	0,00706	0,9999
3	276,15	0,00758	0,9999
4	277,15	0,00813	1,0000
5	278,15	0,00872	1,0000
6	279,15	0,00935	1,0000
7	280,15	0,01001	0,9999
8	281,15	0,01072	0,9999
9	282,15	0,01147	0,9998
10	283,15	0,01227	0,9997
11	284,15	0,01312	0,9997
12	285,15	0,01401	0,9996
13	286,15	0,01497	0,9994
14	287,15	0,01597	0,9993
15	288,15	0,01704	0,9992
16	289,15	0,01817	0,9990
17	290,15	0,01936	0,9988
18	291,15	0,02062	0,9987
19	292,15	0,02196	0,9985
20	293,15	0,02337	0,9983
21	294,15	0,24850	0,9981
22	295,15	0,02642	0,9978
23	296,15	0,02808	0,9976
24	297,15	0,02982	0,9974
25	298,15	0,03166	0,9971
26	299,15	0,03360	0,9968
27	300,15	0,03564	0,9966
28	301,15	0,03778	0,9963
29	302,15	0,04004	0,9960
30	303,15	0,04241	0,9957
31	304,15	0,04491	0,9954
32	305,15	0,04753	0,9951
33	306,15	0,05029	0,9947
34	307,15	0,05318	0,9944
35	308,15	0,05622	0,9940
36	309,15	0,05940	0,9937
37	310,15	0,06274	0,9933
38	311,15	0,06624	0,9930
39	312,15	0,06991	0,9927
40	313,15	0,07375	0,9923
41	314,15	0,07777	0,9919
42	315,15	0,08198	0,9915
43	316,15	0,09639	0,9911
44	317,15	0,09100	0,9907
45	318,15	0,09582	0,9902
46	319,15	0,10086	0,9898
47	320,15	0,10612	0,9894
48	321,15	0,11162	0,9889
49	322,15	0,11736	0,9884
50	323,15	0,12335	0,9880
51	324,15	0,12961	0,9876
52	325,15	0,13613	0,9871
53	326,15	0,14293	0,9862
54	327,15	0,15002	0,9862
55	328,15	0,15741	0,9857
56	329,15	0,16511	0,9852
57	330,15	0,17313	0,9846
58	331,15	0,18147	0,9842
59	332,15	0,19016	0,9837
60	333,15	0,1992	0,9832
61	334,15	0,2086	0,9826
62	335,15	0,2184	0,9821
63	336,15	0,2286	0,9816
64	337,15	0,2391	0,9811
65	338,15	0,2501	0,9805
66	339,15	0,2615	0,9799
67	340,15	0,2733	0,9793
68	341,15	0,2856	0,9788
69	342,15	0,2984	0,9782
70	343,15	0,3116	0,9777
71	344,15	0,3253	0,9770
72	345,15	0,3396	0,9765
73	346,15	0,3543	0,9760
74	347,15	0,3696	0,9753
75	348,15	0,3855	0,9748
76	349,15	0,4019	0,9741
77	350,15	0,4189	0,9735
78	351,15	0,4365	0,9729
79	352,15	0,4547	0,9723
80	353,15	0,4736	0,9716
81	354,15	0,4931	0,9710
82	355,15	0,5133	0,9704
83	356,15	0,5342	0,9697
84	357,15	0,5557	0,9691
85	358,15	0,5780	0,9684
86	359,15	0,6011	0,9678
87	360,15	0,6249	0,9671
88	361,15	0,6495	0,9665
89	362,15	0,6749	0,9658
90	363,15	0,7011	0,9652
91	364,15	0,7281	0,9644
92	365,15	0,7561	0,9638
93	366,15	0,7849	0,9630
94	367,15	0,8146	0,9624
95	368,15	0,8453	0,9616
96	369,15	0,8769	0,9610
97	370,15	0,9094	0,9602
98	371,15	0,9430	0,9596
99	372,15	0,9776	0,9586
100	373,15	1,0133	0,9581
102	375,15	1,0878	0,9567
104	377,15	1,1668	0,9552
106	379,15	1,2504	0,9537
108	381,15	1,3390	0,9522
110	383,15	1,4327	0,9507
112	385,15	1,5316	0,9491
114	387,15	1,6362	0,9476
116	389,15	1,7465	0,9460
118	391,15	1,8628	0,9445
120	393,15	1,9854	0,9429
122	395,15	2,1145	0,9412
124	397,15	2,2504	0,9396
126	399,15	2,3933	0,9379
128	401,15	2,5435	0,9362
130	403,15	2,7013	0,9346
132	405,15	2,867	0,9328
134	407,15	3,041	0,9311
136	409,15	3,223	0,9294
138	411,15	3,414	0,9276
140	413,15	3,614	0,9258
145	418,15	4,155	0,9214
155	428,15	5,433	0,9121
160	433,15	6,181	0,9073
165	438,15	7,008	0,9024
170	433,15	7,920	0,8973
175	448,15	8,924	0,8921
180	453,15	10,027	0,8869
185	458,15	11,233	0,8815
190	463,15	12,551	0,8760
195	468,15	13,987	0,8704
200	473,15	15,550	0,8647
205	478,15	17,243	0,8588
210	483,15	19,077	0,8528
215	488,15	21,060	0,8467
220	493,15	23,198	0,8403
225	498,15	25,501	0,8339
230	503,15	27,976	0,8273
235	508,15	30,632	0,8205
240	513,15	33,478	0,8136
245	518,15	36,523	0,8065
250	523,15	39,776	0,7992
255	528,15	43,246	0,7916
260	533,15	46,943	0,7839
265	538,15	50,877	0,7759
270	543,15	55,058	0,7678
275	548,15	59,496	0,7593
280	553,15	64,202	0,7505
285	558,15	69,186	0,7415
290	563,15	74,461	0,7321
295	568,15	80,037	0,7223
300	573,15	85,927	0,7122
305	578,15	92,144	0,7017
310	583,15	98,70	0,6906
315	588,15	105,61	0,6791
320	593,15	112,89	0,6669
325	598,15	120,56	0,6541
330	603,15	128,63	0,6404
340	613,15	146,05	0,6102
350	623,15	165,35	0,5743
360	633,15	186,75	0,5275
370	643,15	210,54	0,4518
374,15	647,30	221,20	0,3154

G-at_npsh_b_sc

TABLE OF FLOW RESISTANCE IN 100 m OF STRAIGHT CAST IRON PIPELINE (HAZEN-WILLIAMS FORMULA C=100)

FLOW RATE			NOMINAL DIAMETER in mm and inches																
m^3/h	l/min		15 1/2"	20 3/4"	25 1"	32 1 1/4"	40 1 1/2"	50 2	65 2 1/2"	80 3"	100 4"	125 5"	150 6"	175 7"	200 8"	250 10"	300 12"	350 14"	400 16"
0,6	10	v	0,94	0,53	0,34	0,21	0,13												
		hr	16	3,94	1,33	0,40	0,13												
0,9	15	v	1,42	0,80	0,51	0,31	0,20												
		hr	33,9	8,35	2,82	0,85	0,29												
1,2	20	v	1,89	1,06	0,68	0,41	0,27	0,17											
		hr	57,7	14,21	4,79	1,44	0,49	0,16											
1,5	25	v	2,36	1,33	0,85	0,52	0,33	0,21											
		hr	87,2	21,5	7,24	2,18	0,73	0,25											
1,8	30	v	2,83	1,59	1,02	0,62	0,40	0,25											
		hr	122	30,1	10,1	3,05	1,03	0,35											
2,1	35	v	3,30	1,86	1,19	0,73	0,46	0,30											
		hr	162	40,0	13,5	4,06	1,37	0,46											
2,4	40	v		2,12	1,36	0,83	0,53	0,34	0,20										
		hr		51,2	17,3	5,19	1,75	0,59	0,16										
3	50	v		2,65	1,70	1,04	0,66	0,42	0,25										
		hr		77,4	26,1	7,85	2,65	0,89	0,25										
3,6	60	v		3,18	2,04	1,24	0,80	0,51	0,30										
		hr		108	36,6	11,0	3,71	1,25	0,35										
4,2	70	v		3,72	2,38	1,45	0,93	0,59	0,35										
		hr		144	48,7	14,6	4,93	1,66	0,46										
4,8	80	v		4,25	2,72	1,66	1,06	0,68	0,40										
		hr		185	62,3	18,7	6,32	2,13	0,59										
5,4	90	v			3,06	1,87	1,19	0,76	0,45	0,30									
		hr			77,5	23,3	7,85	2,65	0,74	0,27									
6	100	v			3,40	2,07	1,33	0,85	0,50	0,33									
		hr			94,1	28,3	9,54	3,22	0,90	0,33									
7,5	125	v			4,25	2,59	1,66	1,06	0,63	0,41									
		hr			142	42,8	14,4	4,86	1,36	0,49									
9	150	v				3,11	1,99	1,27	0,75	0,50	0,32								
		hr				59,9	20,2	6,82	1,90	0,69	0,23								
10,5	175	v				3,63	2,32	1,49	0,88	0,58	0,37								
		hr				79,7	26,9	9,07	2,53	0,92	0,31								
12	200	v				4,15	2,65	1,70	1,01	0,66	0,42								
		hr				102	34,4	11,6	3,23	1,18	0,40								
15	250	v				5,18	3,32	2,12	1,26	0,83	0,53	0,34							
		hr				154	52,0	17,5	4,89	1,78	0,60	0,20							
18	300	v					3,98	2,55	1,51	1,00	0,64	0,41							
		hr					72,8	24,6	6,85	2,49	0,84	0,28							
24	400	v					5,31	3,40	2,01	1,33	0,85	0,54	0,38						
		hr					124	41,8	11,66	4,24	1,43	0,48	0,20						
30	500	v					6,63	4,25	2,51	1,66	1,06	0,68	0,47						
		hr					187	63,2	17,6	6,41	2,16	0,73	0,30						
36	600	v						5,10	3,02	1,99	1,27	0,82	0,57	0,42					
		hr						88,6	24,7	8,98	3,03	1,02	0,42	0,20					
42	700	v						5,94	3,52	2,32	1,49	0,95	0,66	0,49					
		hr						118	32,8	11,9	4,03	1,36	0,56	0,26					
48	800	v						6,79	4,02	2,65	1,70	1,09	0,75	0,55					
		hr						151	42,0	15,3	5,16	1,74	0,72	0,34					
54	900	v						7,64	4,52	2,99	1,91	1,22	0,85	0,62					
		hr						188	52,3	19,0	6,41	2,16	0,89	0,42					
60	1000	v							5,03	3,32	2,12	1,36	0,94	0,69	0,53				
		hr							63,5	23,1	7,79	2,63	1,08	0,51	0,27				
75	1250	v							6,28	4,15	2,65	1,70	1,18	0,87	0,66				
		hr							96,0	34,9	11,8	3,97	1,63	0,77	0,40				
90	1500	v							7,54	4,98	3,18	2,04	1,42	1,04	0,80				
		hr							134	48,9	16,5	5,57	2,29	1,08	0,56				
105	1750	v							8,79	5,81	3,72	2,38	1,65	1,21	0,93				
		hr							179	65,1	21,9	7,40	3,05	1,44	0,75				
120	2000	v								6,63	4,25	2,72	1,89	1,39	1,06	0,68			
		hr								83,3	28,1	9,48	3,90	1,84	0,96	0,32			
150	2500	v								8,29	5,31	3,40	2,36	1,73	1,33	0,85			
		hr								126	42,5	14,3	5,89	2,78	1,45	0,49			
180	3000	v									6,37	4,08	2,83	2,08	1,59	1,02	0,71		
		hr									59,5	20,1	8,26	3,90	2,03	0,69	0,28		
210	3500	v									7,43	4,76	3,30	2,43	1,86	1,19	0,83		
		hr									79,1	26,7	11,0	5,18	2,71	0,91	0,38		
240	4000	v									8,49	5,44	3,77	2,77	2,12	1,36	0,94		
		hr									101	34,2	14,1	6,64	3,46	1,17	0,48		
300	5000	v										6,79	4,72	3,47	2,65	1,70	1,18		
		hr										51,6	21,2	10,0	5,23	1,77	0,73		
360	6000	v										8,15	5,66	4,16	3,18	2,04	1,42		
		hr										72,3	29,8	14,1	7,33	2,47	1,02		
420	7000	v											6,61	4,85	3,72	2,38	1,65	1,21	
		hr											39,6	18,7	9,75	3,29	1,35	0,64	
480	8000	v											7,55	5,55	4,25	2,72	1,89	1,39	
		hr											50,7	23,9	12,49	4,21	1,73	0,82	
540	9000	v											8,49	6,24	4,78	3,06	2,12	1,56	1,19
		hr											63,0	29,8	15,5	5,24	2,16	1,02	0,53
600	10000	v												6,93	5,31	3,40	2,36	1,73	1,33
		hr												36,2	18,9	6,36	2,62	1,24	0,65

The hr values must be multiplied by:

0,71 for galvanized or painted steel pipes

0,54 for stainless steel or copper pipes

0,47 for PVC or PE pipes

hr = flow resistance for 100 m of straight pipeline (m)

V = water speed (m/s)

G-at-pct-en_b_th

FLOW RESISTANCE
TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES

The flow resistance is calculated using the equivalent pipeline length method according to the table below:

ACCESSORY TYPE	DN											
	25	32	40	50	65	80	100	125	150	200	250	300
	Equivalent pipeline length (m)											
45° bend	0,2	0,2	0,4	0,4	0,6	0,6	0,9	1,1	1,5	1,9	2,4	2,8
90° bend	0,4	0,6	0,9	1,1	1,3	1,5	2,1	2,6	3,0	3,9	4,7	5,8
90° smooth bend	0,4	0,4	0,4	0,6	0,9	1,1	1,3	1,7	1,9	2,8	3,4	3,9
Union tee or cross	1,1	1,3	1,7	2,1	2,6	3,2	4,3	5,3	6,4	7,5	10,7	12,8
Gate valve	-	-	-	0,2	0,2	0,2	0,4	0,4	0,6	0,9	1,1	1,3
Foot check valve	1,1	1,5	1,9	2,4	3,0	3,4	4,7	5,9	7,4	9,6	11,8	13,9
Non return valve	1,1	1,5	1,9	2,4	3,0	3,4	4,7	5,9	7,4	9,6	11,8	13,9

G-a-pcv-en_b_th

The table is valid for the Hazen Williams coefficient C=100 (cast iron pipework);
for steel pipework, multiply the values by 1,41;
for stainless steel, copper and coated cast iron pipework, multiply the values by 1,85;
When the **equivalent pipeline length** has been determined, the flow resistance is obtained from the table of flow resistance.
The values given are guideline values which are bound to vary slightly according to the model, especially for gate valves and non-return valves, for which it is a good idea to check the values supplied by manufacturers.

VOLUMETRIC CAPACITY

Litres per minute l/min	Cubic metres per hour m^3/h	Cubic feet per hour ft^3/h	Cubic feet per minute ft^3/min	Imperial gallon per minute Imp. gal/min	U.S. gallon per minute US gal/min
1,0000	0,0600	2,1189	0,0353	0,2200	0,2642
16,6667	**1,0000**	35,3147	0,5886	3,6662	4,4029
0,4719	0,0283	**1,0000**	0,0167	0,1038	0,1247
28,3168	1,6990	60,0000	**1,0000**	6,2288	7,4805
4,5461	0,2728	9,6326	0,1605	**1,0000**	1,2009
3,7854	0,2271	8,0208	0,1337	0,8327	**1,0000**

PRESSURE AND HEAD

Newton per square metre N/m^2	kilo Pascal kPa	bar bar	Pound force per square inch psi	Metre of water m H_2O	Millimetre of mercury mm Hg
1,0000	0,0010	1×10^{-5}	$1,45 \times 10^{-4}$	$1,02 \times 10^{-4}$	0,0075
1 000,0000	**1,0000**	0,0100	0,1450	0,1020	7,5006
1×10^5	100,0000	**1,0000**	14,5038	10,1972	750,0638
6 894,7570	6,8948	0,0689	**1,0000**	0,7031	51,7151
9 806,6500	9,8067	0,0981	1,4223	**1,0000**	73,5561
133,3220	0,1333	0,0013	0,0193	0,0136	**1,0000**

LENGTH

Millimetre mm	Centimetre cm	Metre m	Inch in	Foot ft	Yard yd
1,0000	0,1000	0,0010	0,0394	0,0033	0,0011
10,0000	**1,0000**	0,0100	0,3937	0,0328	0,0109
1 000,0000	100,0000	**1,0000**	39,3701	3,2808	1,0936
25,4000	2,5400	0,0254	**1,0000**	0,0833	0,0278
304,8000	30,4800	0,3048	12,0000	**1,0000**	0,3333
914,4000	91,4400	0,9144	36,0000	3,0000	**1,0000**

VOLUME

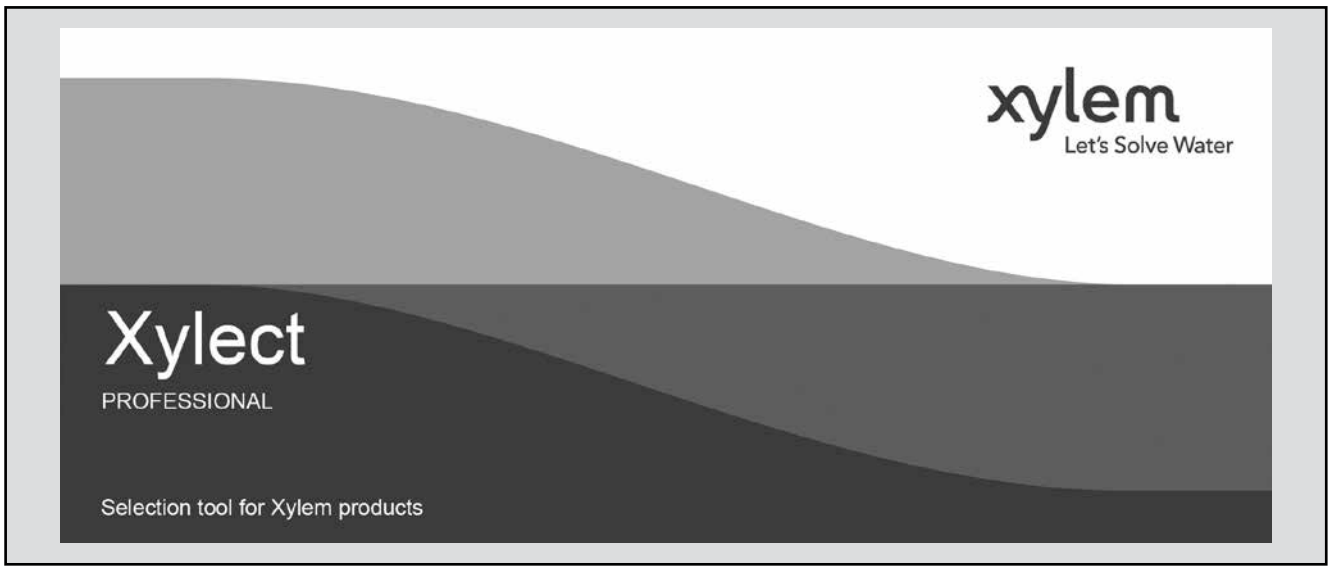
Cubic metre m^3	Litre L	Millilitre ml	Imperial gallon imp. gal.	U.S. gallon US gal.	Cubic foot ft^3
1,0000	1 000,0000	1×10^6	219,9694	264,1720	35,3147
0,0010	**1,0000**	1 000,0000	0,2200	0,2642	0,0353
1×10^{-6}	0,0010	**1,0000**	$2,2 \times 10^{-4}$	$2,642 \times 10^{-4}$	$3,53 \times 10^{-5}$
0,0045	4,5461	4 546,0870	**1,0000**	1,2009	0,1605
0,0038	3,7854	3 785,4120	0,8327	**1,0000**	0,1337
0,0283	28,3168	28 316,8466	6,2288	7,4805	**1,0000**

TEMPERATURE

Water	Kelvin K	Celsius °C	Fahrenheit °F	$°F = °C \times \frac{9}{5} + 32$ $°C = (°F - 32) \times \frac{5}{9}$
icing	273,1500	0,0000	32,0000	
boiling	373,1500	100,0000	212,0000	

G-at_pp-en_b_sc

FURTHER PRODUCT SELECTION AND DOCUMENTATION
Xylect



Xylect is pump solution selection software with an extensive online database of product information across the entire Lowara range of pumps and related products, with multiple search options and helpful project management facilities. The system holds up-to-date product information on thousands of products and accessories.

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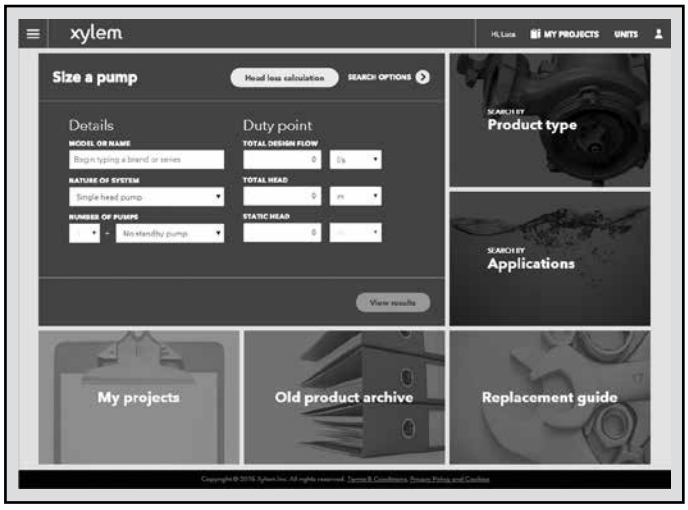

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FURTHER PRODUCT SELECTION AND DOCUMENTATION
Xylect

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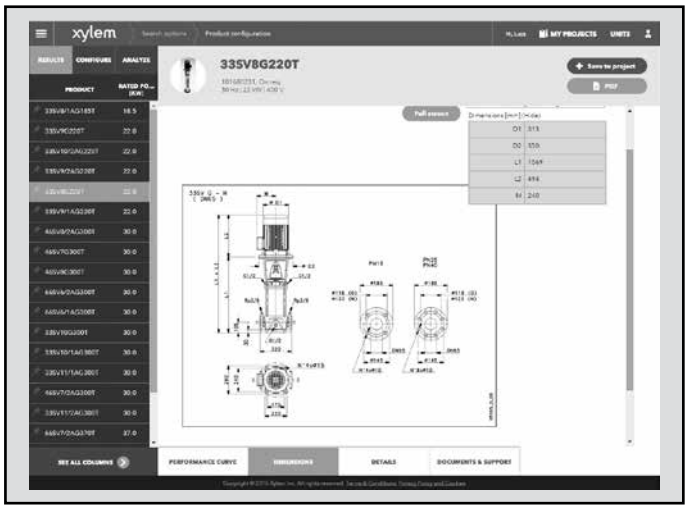

Dimensional drawings appear on the screen and can be downloaded in dxf format.

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