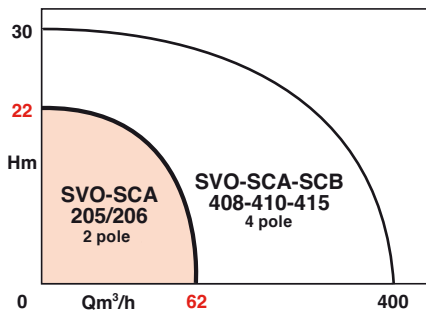


## OPERATING LIMITS

Flow up to:	62 m <sup>3</sup> /h
Head up to:	22 m w.g.
Liquid temperature range:	+3° to 35°C*
Specific gravity of liquid:	1.05 max.
pH of liquid:	6-11
Max. immersion depth:	10 m
Free passage:	Ø 44 mm
ND of discharge port:	50 and 65**

\*+ 60°C for 5 minutes

\*\*SVO-SCA 205 and 206, respectively



## ADVANTAGES

- **Explosion-proof motor (206 3~ only), eliminates all accident risk in an explosive environment.**
- **Operating reliability: oil-filled intermediate chamber assures complete tightness to prevent infiltration of water into motor.**
- **304 and 316 L stainless steel and composite material for corrosion resistance and greater pump reliability.**
- **Pumps with Vortex impeller or single-channel impeller with unobstructed passage, practically impossible to clog.**
- **Protecting ring on mechanical seal.**
- SVO-SCA single-phase motor with capacitor box



# SVO-SCA 205-206

## SUBMERSIBLE PUMPS

**For water with particulate matter**  
**2 pole - 50 Hz**  
**2 ranges : SS 304 & SS 316 L**

## APPLICATIONS

Lifting of water containing particulate matter, in single and multiple dwellings and in industry:

- waste and drainage water,
- foul water,
- sewage,
- emptying of septic tanks, etc.

### Two ranges:

- **304 stainless steel line:**  
– non-corrosive liquids.
- **316 L stainless steel line:**  
corrosive liquids (condensates, seawater, brackish water, de-ionized water, etc.).



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• SVO-SCA 205

• SVO-SCA-206

• VORTEX impellers (SVO)

• Single-channel impellers (SCA)



# SVO-SCA 205-206

## DESIGN

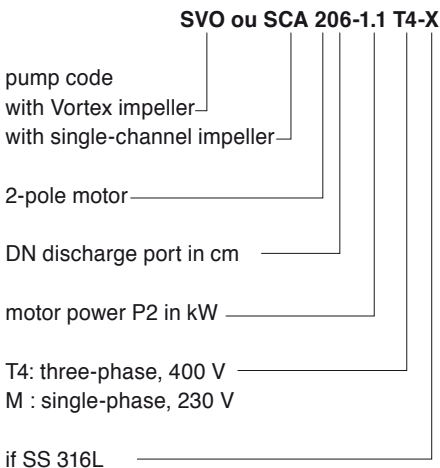
### • Hydraulic part - ATEX (94/9/CE)\*

- Centrifugal, single-stage.
  - Axial suction under casing, horizontal discharge through flange.
  - Double sealing of shaft by mechanical seal (pumped liquid side) and lip sealing ring (motor side).
  - Oil-filled intermediate chamber between pump and motor.
- Two versions according to type of impeller:
- **SVO** : with vortex impeller, for sewage water, liquids containing solid particles and fibers, sludge, and gas;
  - **SCA** : with single-channel impeller, for waste water containing solid particles.

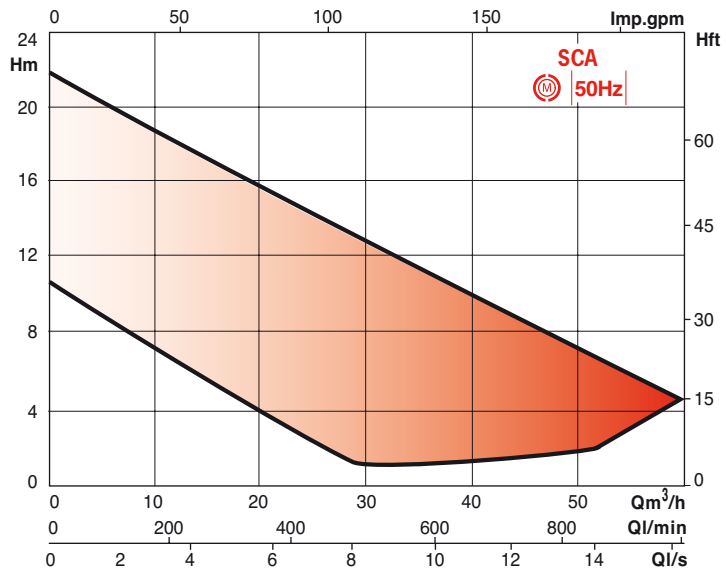
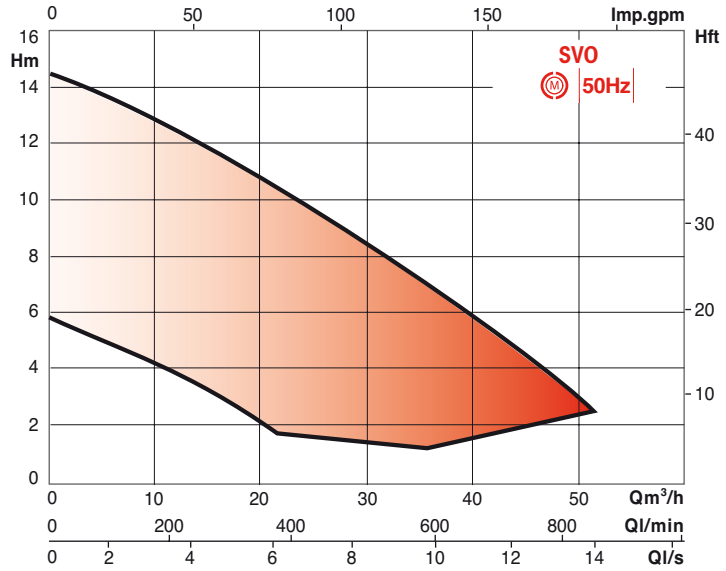
### • Motor - ATEX (94/9/CE)\*

- Submersible, direct starting.
  - With explosion-proofing certified EEx d IIB T4.
  - Shaft guide bearings lubricated for life.
  - Type HO 7RN-F power cord, 10 m long, 4 conductors, bare end.
  - Single-phase motor has built-in thermal protection, automatic reset, with capacitor built into the junction box supplied with the pump.
- Speed of rotation : 2900 rpm  
 Power supply 3-phase : 400 V (T4)  
 1-phase : 230 V (M)  
 Frequency : 50 Hz (60 Hz optional)  
 Insulation class : F (+155°C)  
 Protection index : IP 68 (up to 10 m)  
 \* ATEX : SVO 206-T4 and SCA 206-T4  
 (Protection against explosive atmospheres compliant with directive 94/9/CE)

## IDENTIFICATION



## SELECTION CHARTS

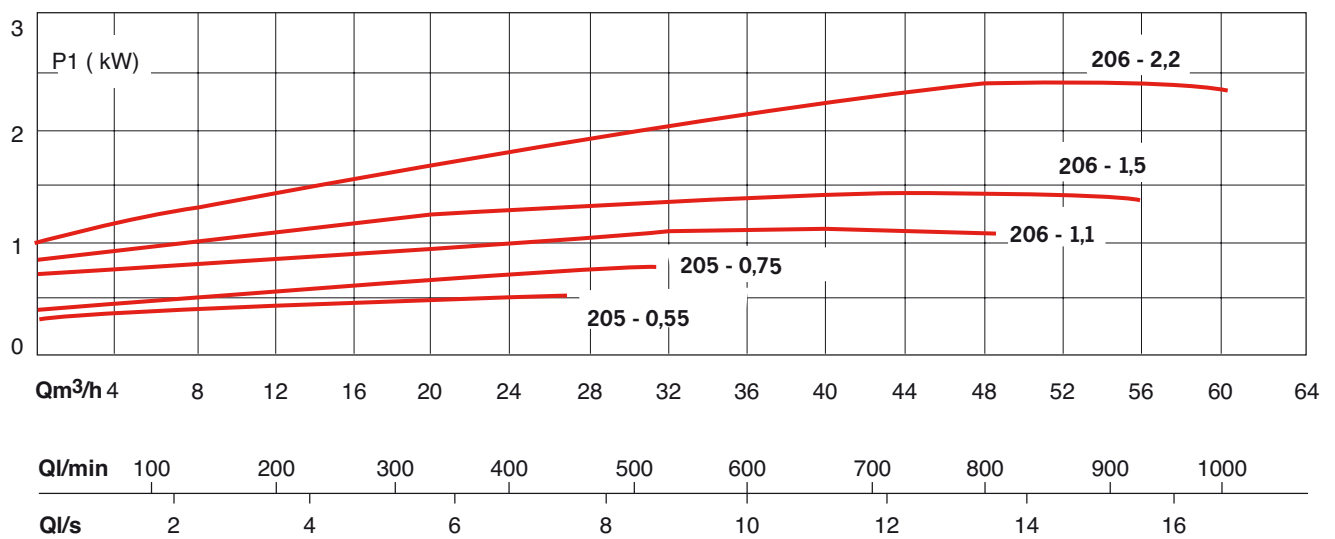
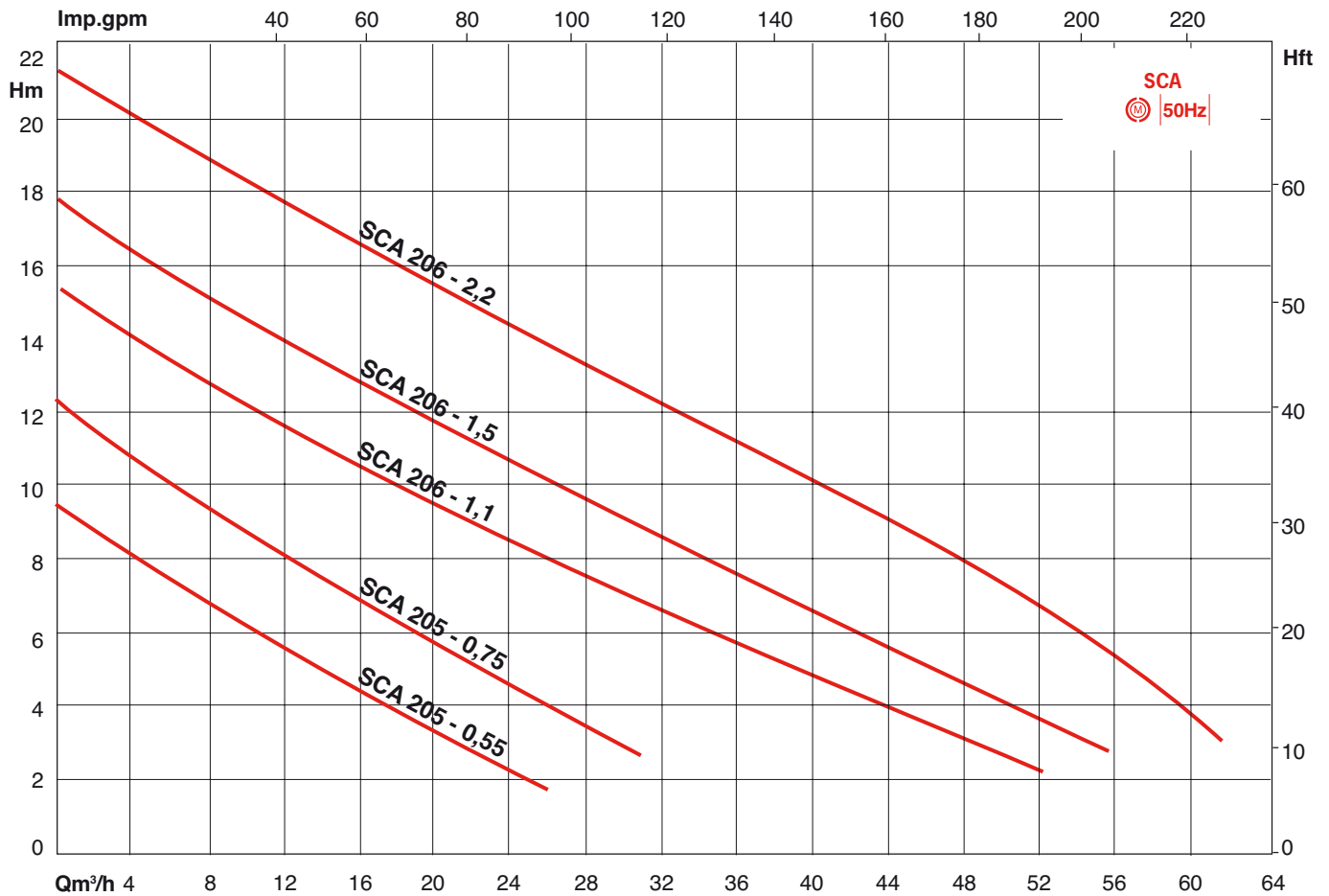


## STANDARD CONSTRUCTION

Main part	Material	
	non-corrosive liquids	corrosive liquids
Suction end 205	composite material	composite material
Suction end 206	composite material	composite material
Impeller	composite material	composite material
Shaft 205	SS 316 L	SS 316 L
Shaft 206	motor side steel/pumped fluid side 316 L	
Pump casing	composite material	composite material
Motor casing	SS 304	SS 316 L
Mechanical seal	Si carbide/nitrile/Si carbide	Si carbide/nitrile/Si carbide
Motor flange	SS 304	SS 316 L
Bolting	SS 304	SS 316 L
Degassing check valve of 205	Nitrile	Nitrile

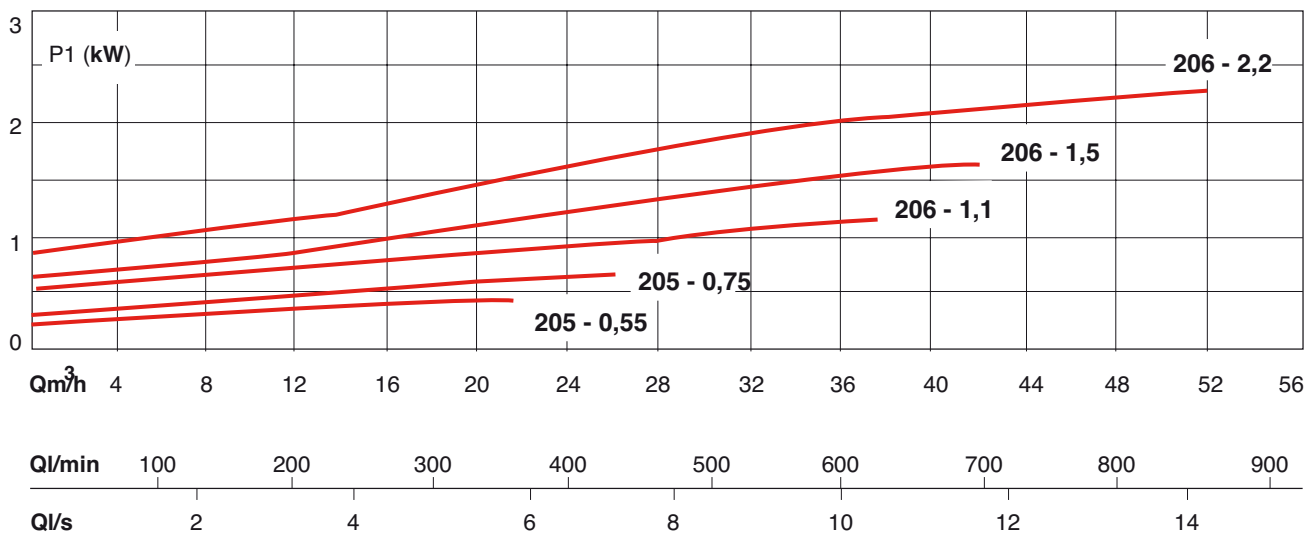
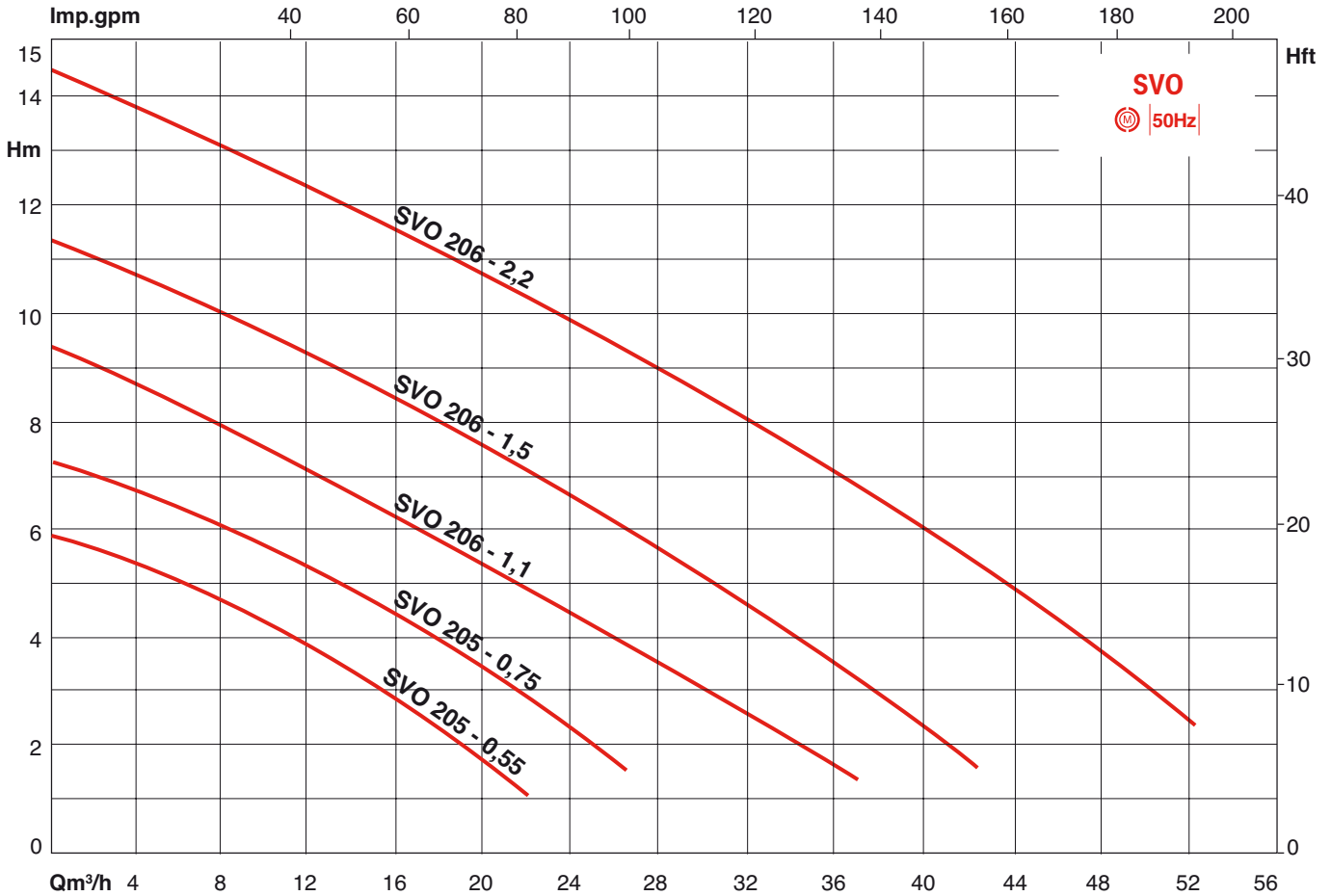
# SVO-SCA 205-206

## HYDRAULIC PERFORMANCES AT 2900 RPM



# SVO-SCA 205-206

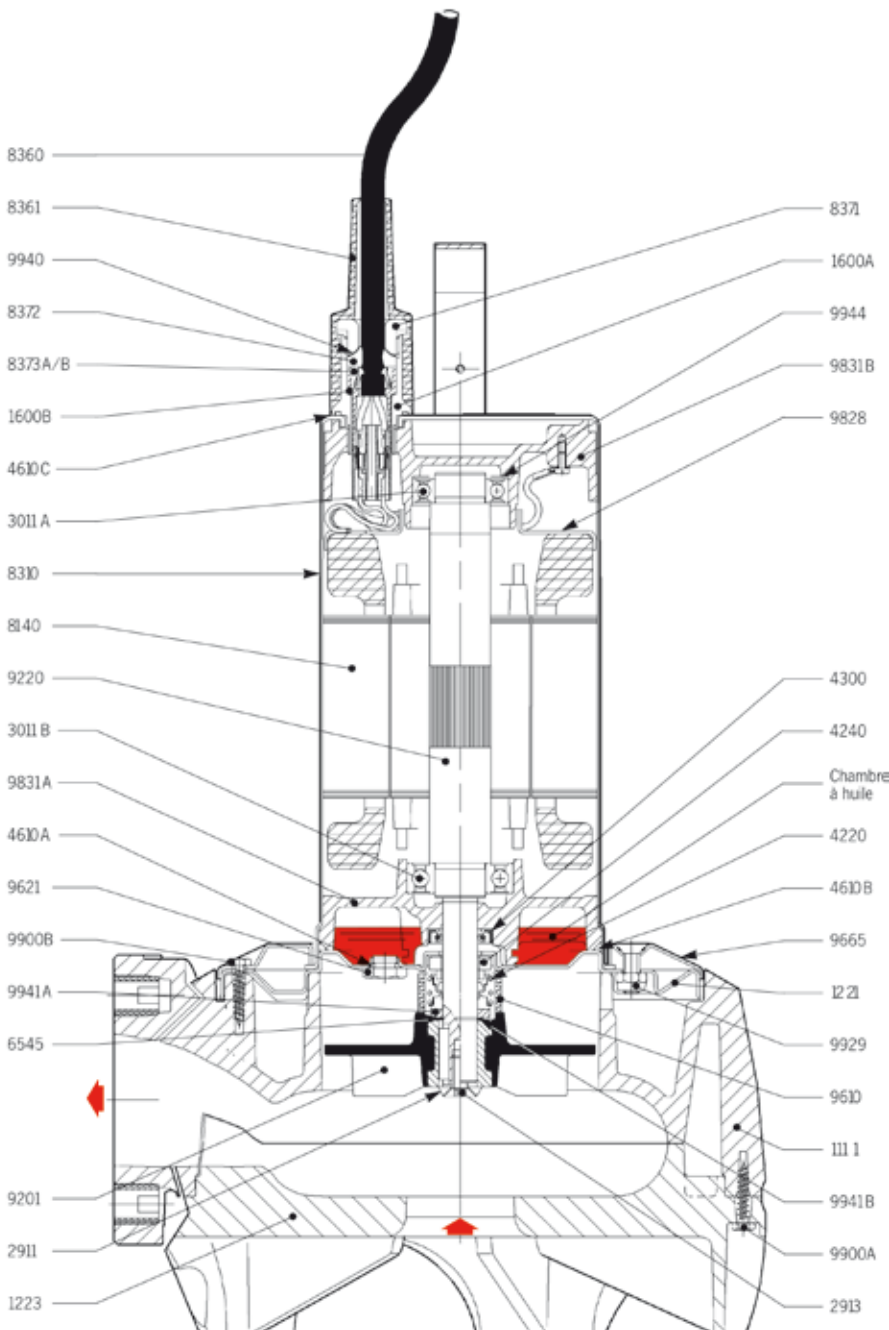
## HYDRAULIC PERFORMANCES AT 2900 RPM



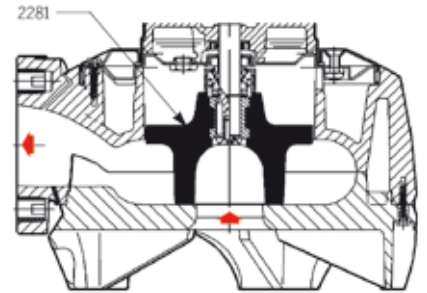
# SVO-SCA 205-206

## SECTIONAL DRAWING

• Installation with vortex impeller (DN 65)



• Installation with single-channel impeller



- 1111 - Pump casing
- 1221 - Motor end
- 1223 - Suction end
- 1600A - Packing box socket
- 1600B - Contact holder
- 2281 - Single-channel impeller
- 2911 - Cup washer
- 2913 - Impeller attachment screw
- 3011A - Upper ball bearing
- 3011B - Lower ball bearing
- 4220 - Rotating part } Mechanical seal
- 4240 - Fixed part }
- 4300 - Lip sealing ring
- 4610A - O-ring under plug 9621
- 4610B - O-ring, casing
- 4610C - O-ring, sleeve 8361
- 6545 - Impeller thrust circlip
- 8140 - Stator
- 8310 - Motor casing
- 8360 - Power cord, 10 m long
- 8361 - Cable sleeve
- 8371 - Packing-box nut
- 8372 - Packing-box seal
- 8373A - Cord clamping cone
- 8373B - Anchor ring
- 9201 - «Vortex» impeller
- 9220 - Shaft-rotor
- 9610 - Mechanical seal protector
- 9621 - Oil chamber plug
- 9665 - Motor flange
- 9828 - Stator cup
- 9831A - Lower bearing
- 9831B - Upper bearing
- 9900A - Attachment screw, suction end casing
- 9900B - Attachment screw, motor flange
- 9929 - Nylstop nut under motor end
- 9940 - Packing box nut
- 9941A - Thrust washer, mechanical seal
- 9941B - Thrust washer
- 9944 - Spring washer

ND 50 pumps also have a degassing check valve.

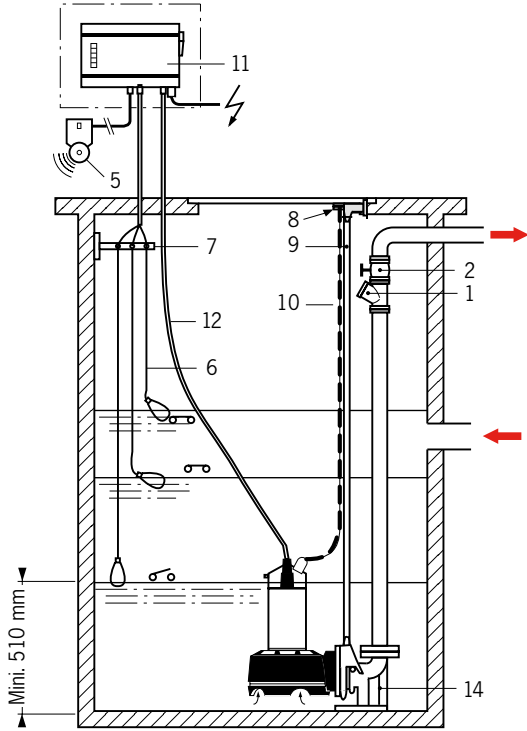
• Recommended spare parts

# SVO-SCA 205-206

## INSTALLATION DIAGRAMS

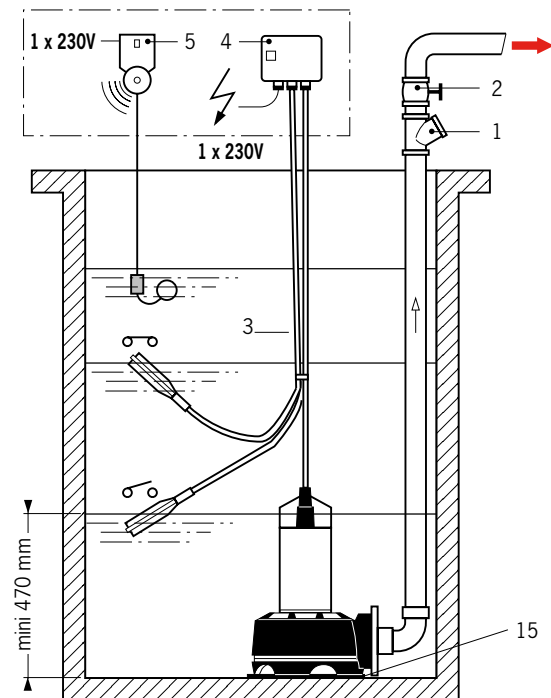
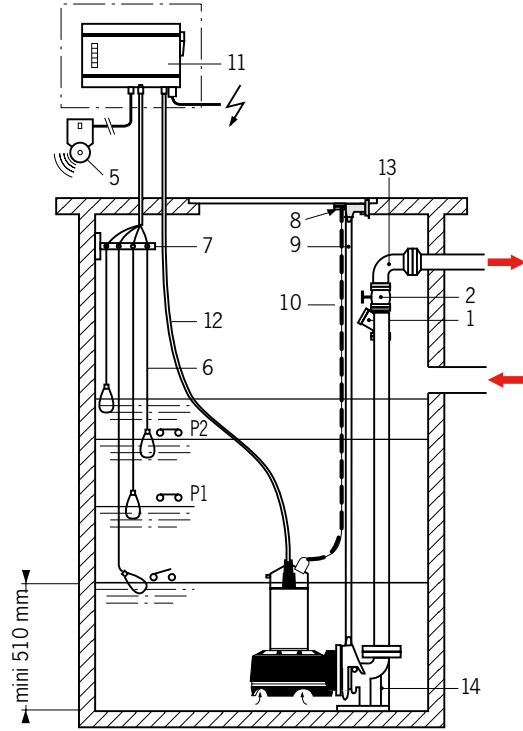
### •Recommended permanent installation\*

\* Pump with mounting base, complete lifting system, control and protection panel with 3 level regulators.

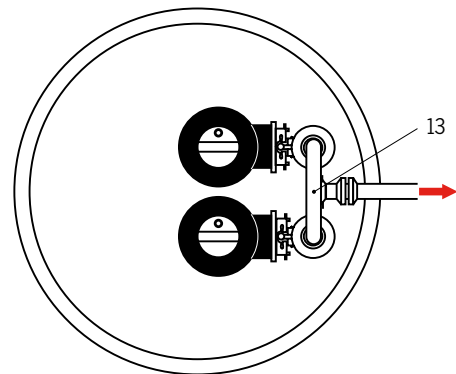


### •Double permanent installation\*\*\*

\*\*\* Two pumps in parallel, joined by pairing pipe, with mounting base, complete lifting system, control and protection panel with 4 level regulators.



\*\*Pump with single-phase motor on bottom plate, with float switch, junction box, and audible overflow alarm.



#### KEY

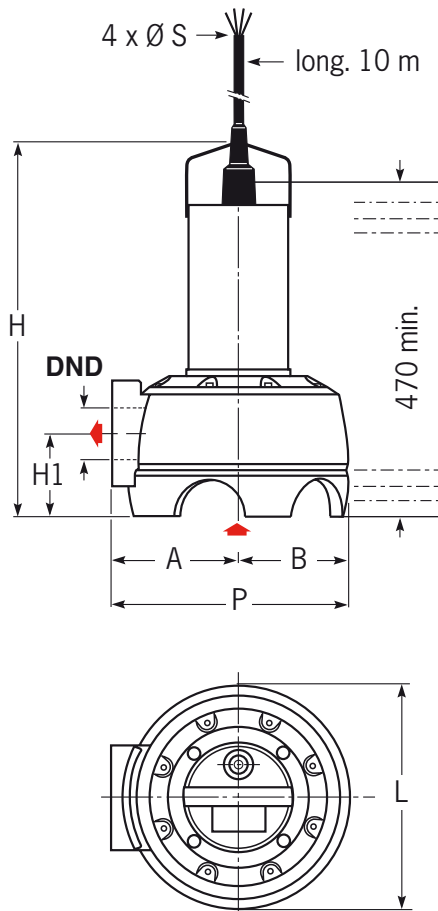
- 1 – Ball check valve.
- 2 – Isolating valve.
- 3 – Pump On/Off float switch.
- 4 – Junction-capacitor box (single-phase motor).
- 5 – Audible overflow alarm.
- 6 – Level regulators with cable 10 m long (or IPAE air-pressure switch).
- 7 – Wall bracket for regulator cables.
- 8 – Top guide bar bracket.

- 9 – Guide bar.
- 10 – Pump lifting chain.
- 11 – Y4000 control and protection box (or Y5000 for explosion-proof installation, with IPAE).
- 12 – Electrical cable, 10 m long.
- 13 – Two-pump pairing pipe.
- 14 – Base elbow.
- 15 – Bottom plate, increases pump support area on silty bottom.

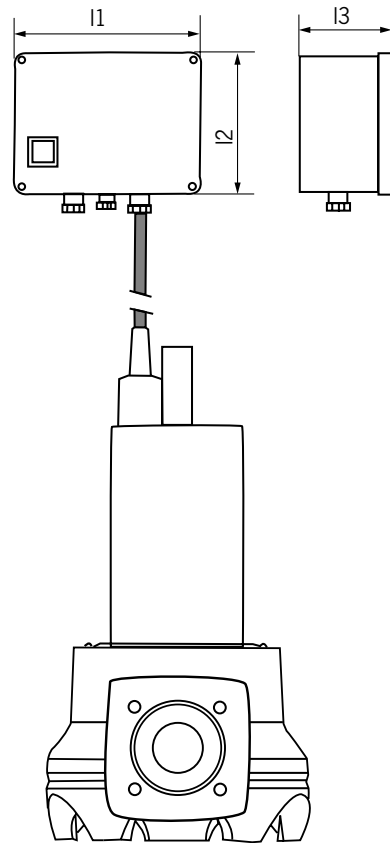
# SVO-SCA 205-206

## ELECTRICAL DATA AND DIMENSIONS

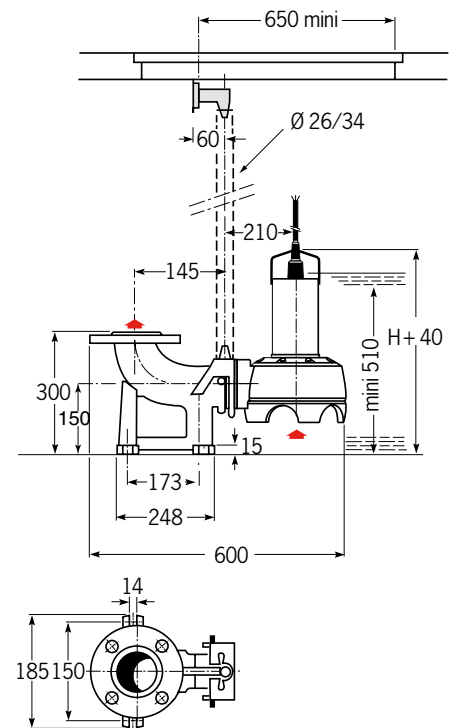
### • Mobile installation



### • Single-phase version with junction box



### • Permanent installation with lifting system



ORDER REFERENCE	MOTOR							PUMP									
	P2 kW	I(A) 1x 230V	I(A) 3x 400V	I(A) 3x 230V	capacit. µF	cable Ø S mm²	ports DND	H mm	L mm	P mm	H1 mm	P1 mm	P2 mm	I1 mm	I2 mm	I3 mm	weight kg
SVO 205-0,55 M	0,55	4,6	-----	-----	12	1	50	481	246	273	96	150	123	150	120	80	14
SVO 205-0,55 T4	0,55	-----	2	3,4	-----	1	50	481	246	273	96	150	123	-	-	-	13,5
SVO 205-0,75 M	0,75	5,84	-----	-----	16	1	50	481	246	273	96	150	123	150	120	80	15
SVO 205-0,75 T4	0,75	-----	2	3,4	-----	1	50	481	246	273	96	150	123	-	-	-	14,5
SCA 205-0,55 M	0,55	4,6	-----	-----	12	1	50	481	246	273	96	150	123	150	120	80	14
SCA 205-0,55 T4	0,55	-----	2	3,4	-----	1	50	481	246	273	96	150	123	-	-	-	13,5
SCA 205-0,75 M	0,75	5,84	-----	-----	16	1	50	481	246	273	96	150	123	150	120	80	15
SCA 205-0,75 T4	0,75	-----	2	3,4	-----	1	50	481	246	273	96	150	123	-	-	-	14,5
SVO 206-1,1 M	1,1	6,9	-----	-----	20	1	65	505	300	320	110	170	150	150	120	80	20
SVO 206-1,1 T4	1,1	-----	3,2	4,5	-----	1	65	505	300	320	110	170	150	-	-	-	21
SVO 206-1,5 M	1,5	9,5	-----	-----	30	1	65	535	300	320	110	170	150	200	150	80	21
SVO 206-1,5 T4	1,5	-----	3,6	6,1	-----	1,5	65	505	300	320	110	170	150	-	-	-	22
SVO 206-2,2 T4	2,2	-----	4,9	8,5	-----	1,5	65	535	300	320	110	170	150	-	-	-	23
SCA 206-1,1 M	1,1	6,9	-----	-----	20	1	65	505	300	320	110	170	150	150	120	80	20
SCA 206-1,1 T4	1,1	-----	3,2	4,5	-----	1	65	505	300	320	110	170	150	-	-	-	21
SCA 206-1,5 M	1,5	9,5	-----	-----	30	1	65	535	300	320	110	170	150	200	150	80	21
SCA 206-1,5 T4	1,5	-----	3,6	6,1	-----	1,5	65	505	300	320	110	170	150	-	-	-	22
SCA 206-2,2 T4	2,2	-----	4,9	8,5	-----	1,5	65	535	300	320	110	170	150	-	-	-	23

# SVO-SCA 205-206

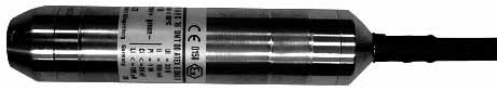
## RECOMMENDED ACCESSORIES



• NIVO 430 mercury-free float switch

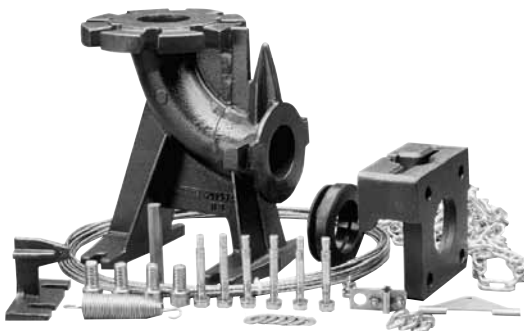


• YN 4200 control box

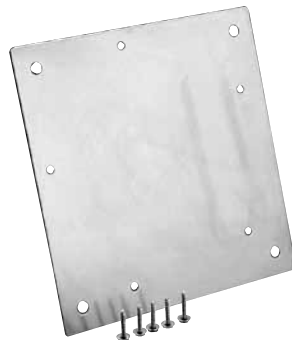


I.P.A.E Air-pressure switch

• Base elbow set



• Bottom plate kit



• Y4000 control and protection box for one or two pumps in non-explosive atmosphere, with three or four level regulators, respectively.

• Yn5000 control and protection box for one or two pumps in explosive atmosphere, with level regulator and IPAE (ref.: 2 016 424).

• Protection circuit-breaker with 24V transformer.

• Two float switches for water containing particulate matter, for operation with circuit-breaker, NIVOSTABLE 430 (ref.: 4 027 584).

• One independent pump On/Off switch.

• Mounting base kits, ND 50 for SVO-SCA 205 and ND 65 for SVO-SCA 206, complete with lifting chain 5 m long and wall bracket for guide bars.

• Round screw-on counter-flange, ND 2», PN10 or ND 2 1/2», PN10.

• «A» upstand kit for 206 pump, raises pump from bottom of sump.

• Bottom plate: increases pump support area on silty bottom.

• Ball check valve, ND 2 1/2» or ND 2», special for water containing particulate matter.

• Wall bracket for electric cables of level regulators.

• KIT ADAPT/C65 (ref.: 4 013 146).

• Control and protection box for three-phase versions, CDE-SECU, ref.:

0,55 :	4 027 522
0,75 :	4 029 560
1,1 :	4 027 763
1,5 :	4 027 764
2,2 :	4 027 765

## FEATURES

### a) Electrical

- "M" : single-phase, 230-V, 50-Hz, permanent capacitor built into box supplied with pump.
- "T4" : three-phase 400 V-50 Hz, or

- Motor protection required, by circuit-breaker (439-E24) or by Yn4000, Yn5000E, or COFSANIT box, with level regulators.

### b) Installation

- Mobile installation or permanent installation with complete lifting system.
- Connection to installation by screw-on counter-flanges (not supplied) for flexible or rigid pipe.

• **These pumps must be installed in wet sumps.**

### c) Packaging

- Pumps delivered packed in recyclable cardboard boxes with 4-conductor power cord 10 m long, without accessories.
- Single-phase model with permanent capacitor box (0.55 and 0.75 kW single-phase, with float).

- The intermediate chamber is filled with oil:

- Single- and three-phase motors up to 0.75 kW : 115 ml.
- Single-phase motors up to 1,1 kW : 150 ml. above : 190 ml.
- Three-phase motors up to 1.5 kW : 150 ml. above : 190 ml.

### d) Maintenance

- Replacement of recommended spare parts (\*), or KITS grouping several spare parts:
- Seals kit.
- Casing-stator kit.
- Electric motor kit.

**Please, contact us.**



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