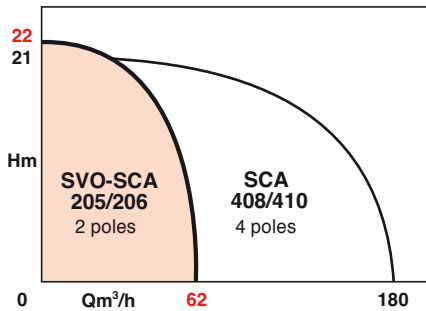


## OPERATING RANGES

Flow rates of up to:	62 m <sup>3</sup> /h
Manometric heads:	22 m CL
Liquid temperature range:	+3° to 35°C*
Liquid density:	1,05 max
Liquid pH:	6-11
Max. submergence depth:	10 m
Max. particle size:	Ø 44 mm
ND of delivery port:	50 and 65**

\*+ 60°C for 5 minutes  
 \*\*SVO-SCA 205 and 206 respectively



## BENEFITS

- **Explosion-proof motor (206-3~ only):** eliminating any accidental risks in explosive environments.
- **Operating safety:** oil-filled intermediate chamber, ensuring complete protection from infiltrations of water into the motor.
- **304 or 316L stainless steel and composite materials:** greater corrosion-resistance, improved safety and reliability of the pump.
- **Pumps equipped with Vortex or single-vane, free-flow impellers** which are virtually impossible to clog.
- **Protective ring on the mechanical seal.**

• SVO - SCA single-phase motor with capacitor box



# SVO-SCA 205-206

## SUBMERSIBLE PUMPS

**For muddy water**  
**2-pole - 50 Hz series**  
**2 ranges: 304 STAINLESS STEEL**  
**& 316L STAINLESS STEEL**

## APPLICATIONS

Lift pumping of muddy water in the single and multiple-family housing and industrial sectors:

- wastewater and drainage water
- sanitary wastewater
- sewage
- emptying of septic tanks, etc.

RANGES:

- **304 Stainless steel range:**  
- non-corrosive liquids.
- **316L Stainless steel range:**  
- corrosive liquids (condensates, seawater, brackish water, demineralised water, etc.).



• SVO-SCA 205

• SVO-SCA-206

• VORTEX (SVO) impellers

• SINGLE-VANE impellers (SCA)



# SVO-SCA 205-206

## DESIGN

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

- Centrifugal, single-stage.
- Axial intake under the housing; horizontal flanged discharge.
- Double sealing of shaft opening by a mechanical seal (on pumped liquid side) and by a lip seal (on motor side).
- Intermediate oil chamber between the hydraulic part and the motor.
- Two versions according to the impeller model:
- SVO: with Vortex impeller for sanitary wastewater, liquids containing solid and fibrous particles, sludge and gases.
- SCA: with single-vane impeller for effluent containing solid particles.

### • Motor - ATEX (94/9/CE)\*

- Submersible, direct starting.
- EEx d IIB T4-certified explosion-proof protection.
- Shaft guide bearings lubricated for life.
- 10 m long HO 7RN-F-type power cable with 4 conductors on the exposed end.
- Single-phase motor with integrated thermal protection and automatic reset, integral capacitor in the terminal box supplied with the pump.

Rotation speed: 2900 rpm  
 Three-phase winding 400 V (T4)  
 Single-phase 230 V (M)  
 Frequencies: 50 Hz (option 60 Hz)  
 Insulation class: 155 (F)  
 Protection class: IP 68 (to 10 m max.)

\* ATEX : SVO 206-T4 and SCA 206-T4 (explosive atmosphere protection conforming to the 94/9/EC directive).

## IDENTIFICATION

SVO or SCA 206-1.1 T4-X

pump code  
 with Vortex impeller  
 single-vane impeller

2-poles motor

discharge DN in cm

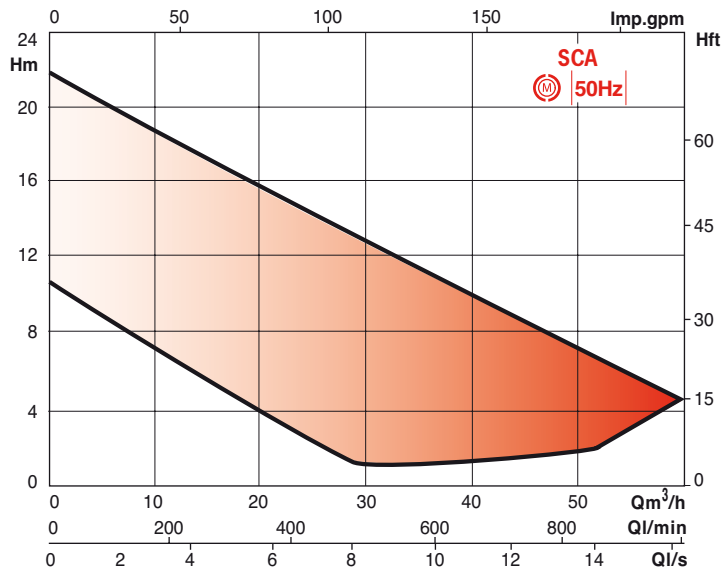
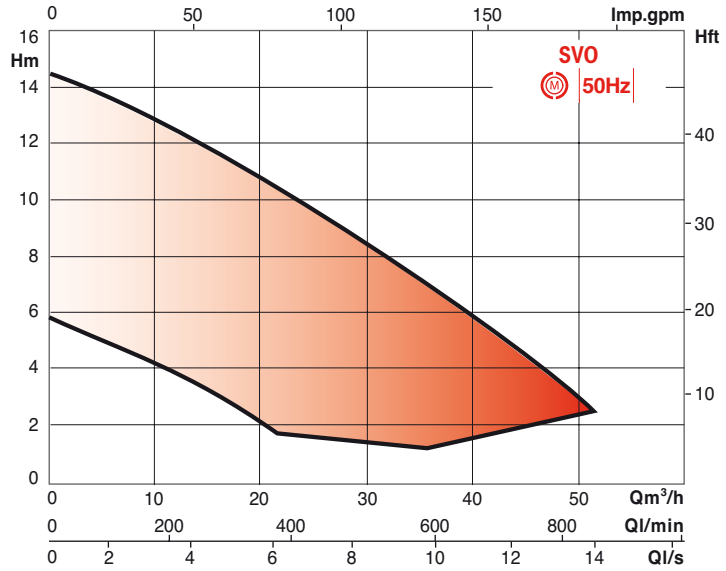
power of P2 motor in kW

T4 : 400 V three-phase

M : 230 V single-phase

if 316L stainless steel

## HYDRAULIC PRE-SELECTION RANGES

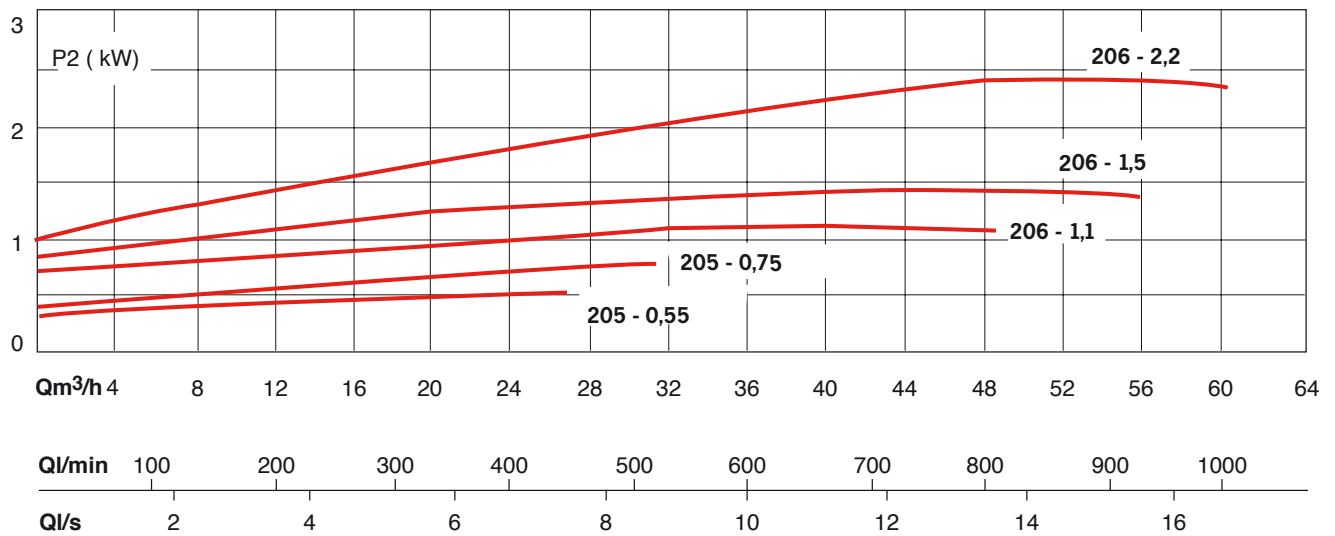
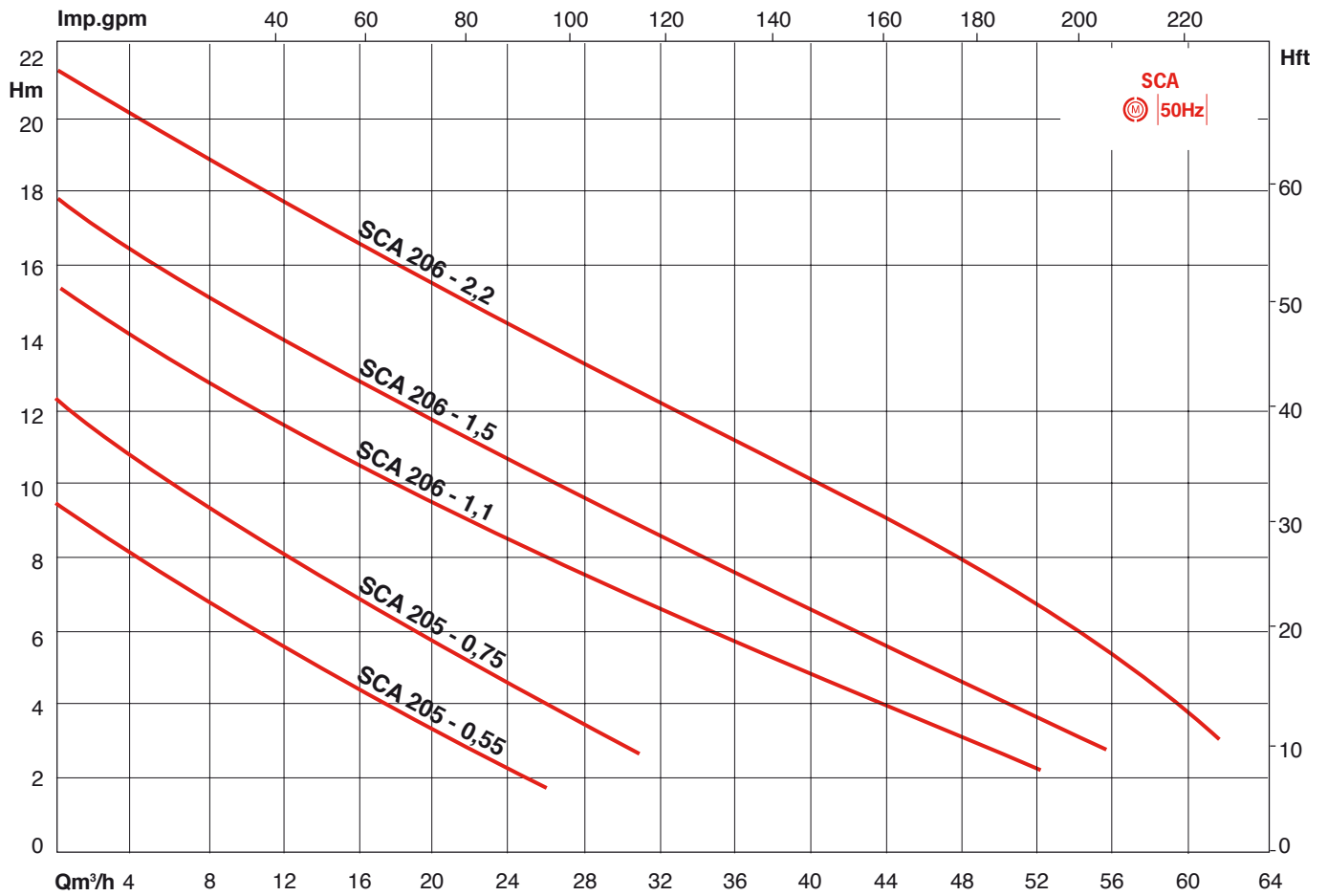


## BASIC CONSTRUCTION

Main parts	Material	
	non-corrosive liquids	corrosive liquids
Suction cover 205	composite	composite
Suction cover 206	composite	composite
Impeller	composite	composite
Shaft 205	316 L stainless steel	316 L stainless steel
Shaft 206	steel (motor)/316 L stainless steel (c. pumped fluid)	
Housing	composite	composite
Motor casing	304 stainless steel	316 L stainless steel
Mechanical seal	Si carbide/Si carbide/Nitrile	Si carbide/Si carbide/Nitrile
Motor flange	304 stainless steel	316 L stainless steel
Fastenings	304 stainless steel	316 L stainless steel
Vapour relief valve 205	Nitrile	Nitrile

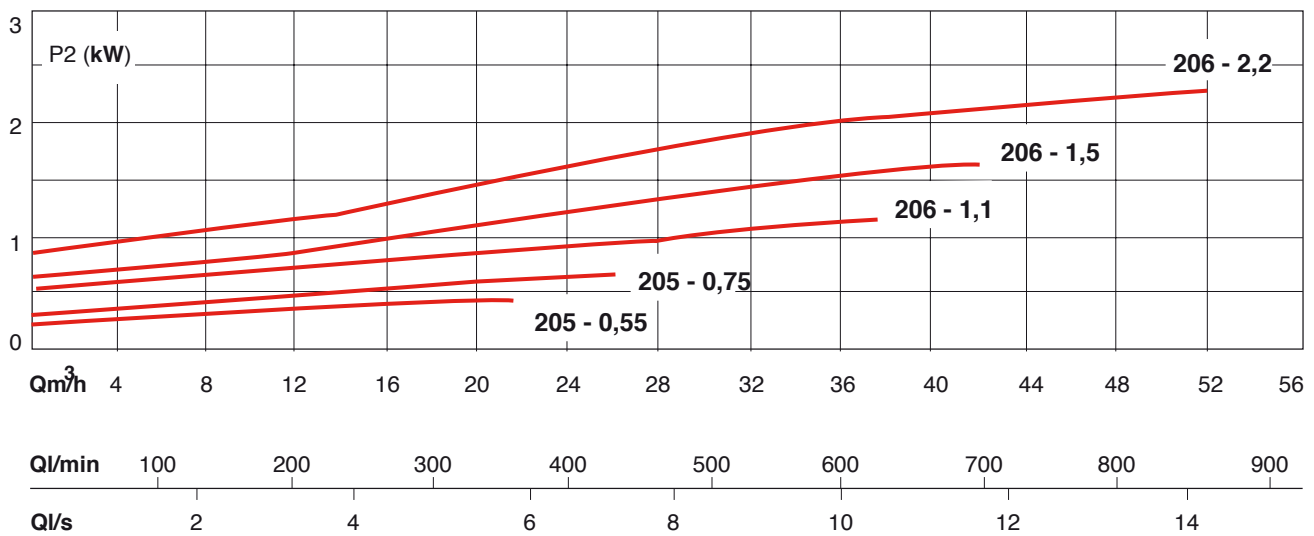
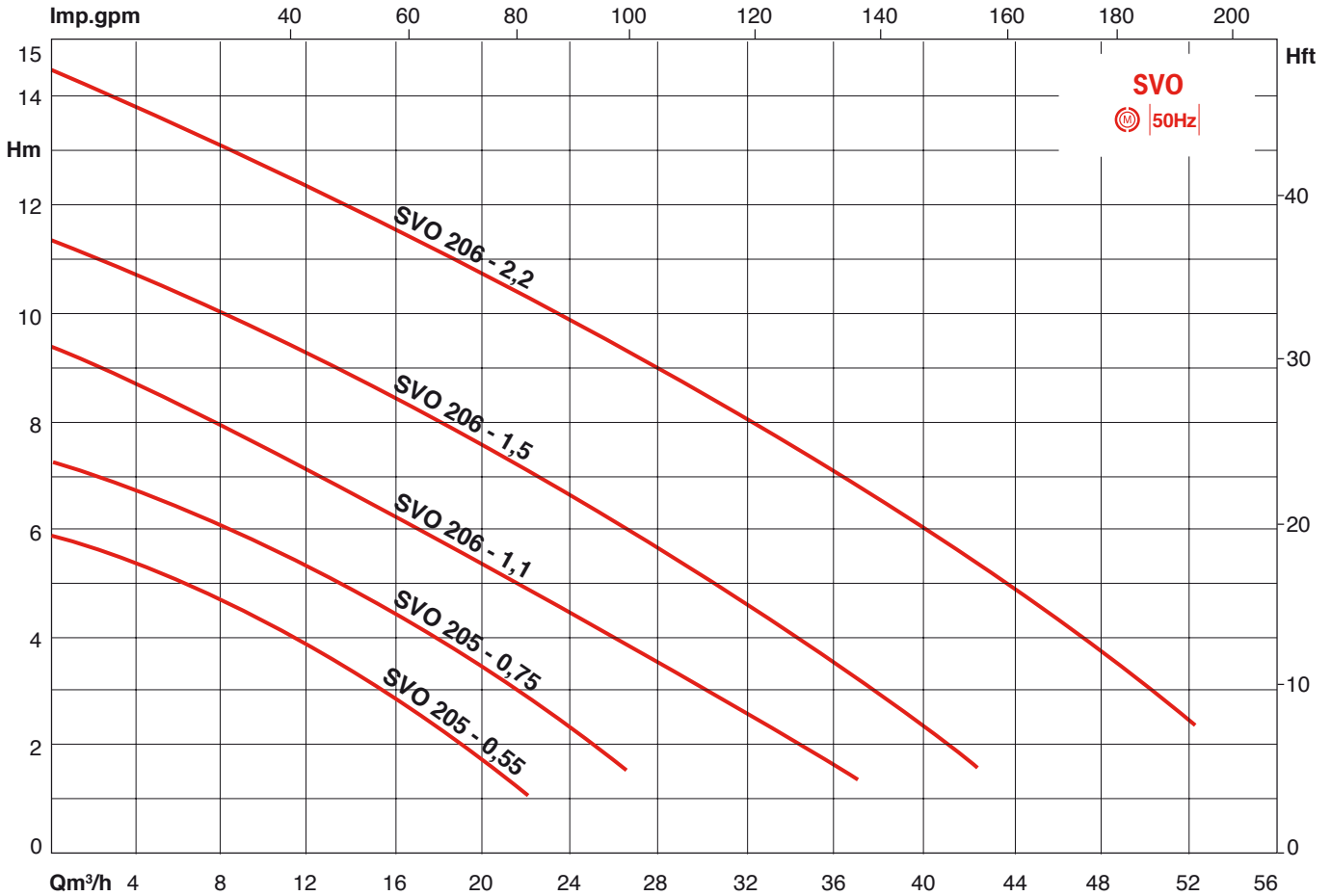
# SVO-SCA 205-206

## HYDRAULIC PERFORMANCE AT 2900 RPM



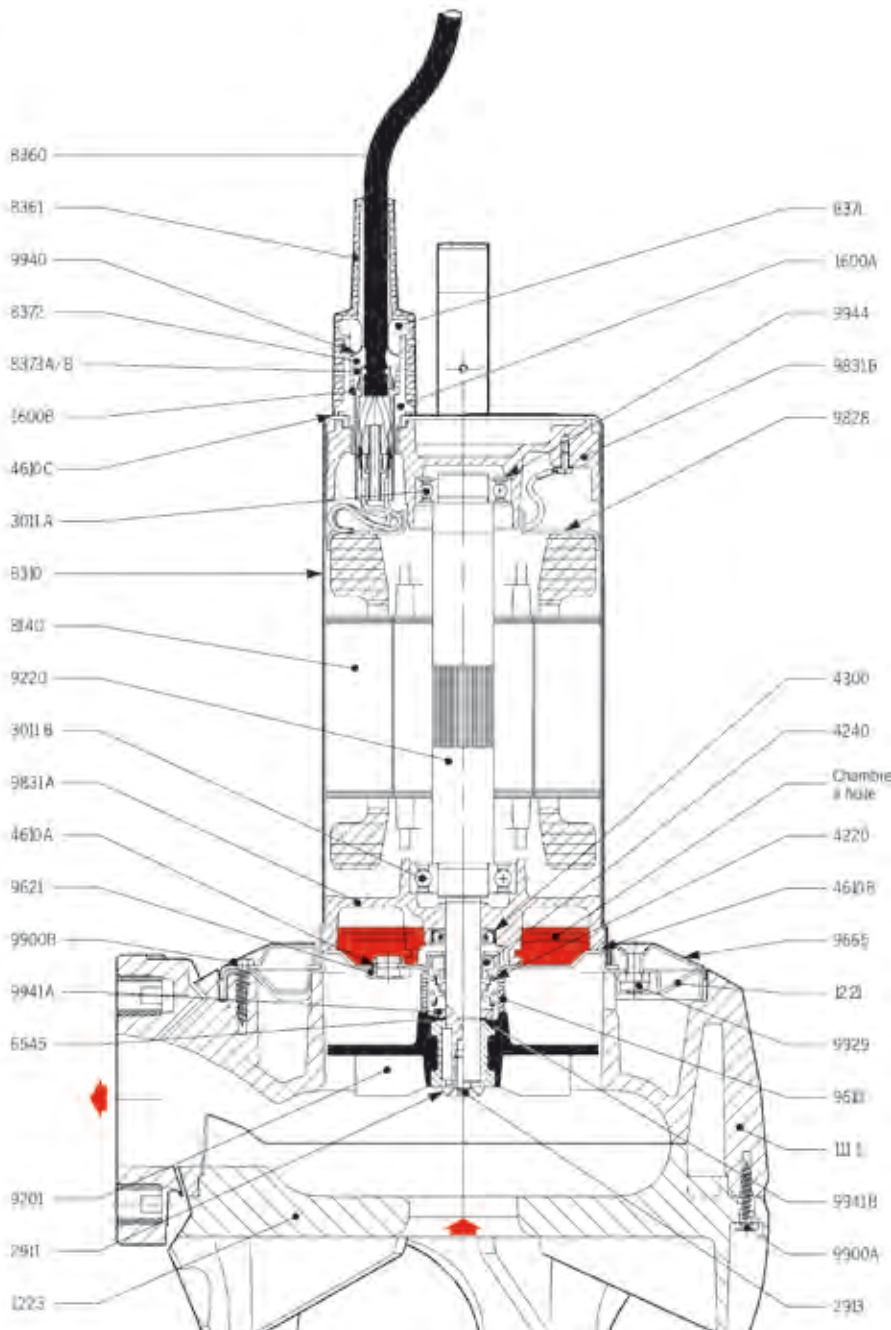
# SVO-SCA 205-206

## HYDRAULIC PERFORMANCE AT 2900 RPM

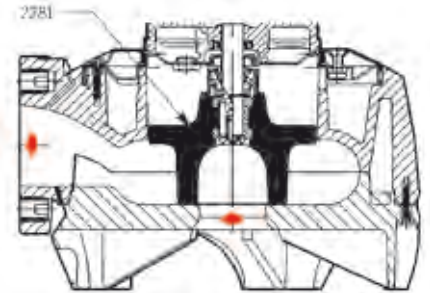


## SECTIONAL DRAWING

• Assembly with Vortex impeller (DN 65)



• Assembly with single-vane impeller



- 1111 - Pump housing
- 1221 - Motor shroud
- 1223 - Suction cover
- 1600A - Cable gland sleeve
- 1600B - Contact holder
- 2281 - Single-vane impeller
- 2911 - Finishing washer
- 2913 - Impeller attachment screw
- 3011A - Upper bearing
- 3011B - Lower bearing
- 4220 - Rotating part seal
- 4240 - Fixed part mechanical
- 4300 - Lip sealing ring
- 4610A - O-ring under plug 9621
- 4610B - Housing O-ring
- 4610C - O-ring for sleeve 8361
- 6545 - Impeller securing circlips
- 8140 - Stator
- 8310 - Ext. motor casing
- 8360 - Power cable: 10 m long
- 8361 - Cable sleeve
- 8371 - Cable gland nut
- 8372 - Cable gland seal
- 8373A - Cable thrust collar
- 8373B - Anchor ring
- 9201 - Vortex impeller
- 9220 - Rotor-shaft
- 9610 - Mechanical seal protector
- 9621 - Oil chamber plug
- 9665 - Motor flange
- 9828 - Stator cap
- 9831A - Lower bearing
- 9831B - Upper bearing
- 9900A - Suction cover fixing screw
- 9900B - Motor flange fixing screw
- 9929 - Nylstop nut under motor shroud
- 9940 - Cable gland washer
- 9941A - Mechanical seal thrust washer
- 9941B - Thrust washer
- 9944 - Spring washer

DN 50 pumps also feature a vapour relief valve.

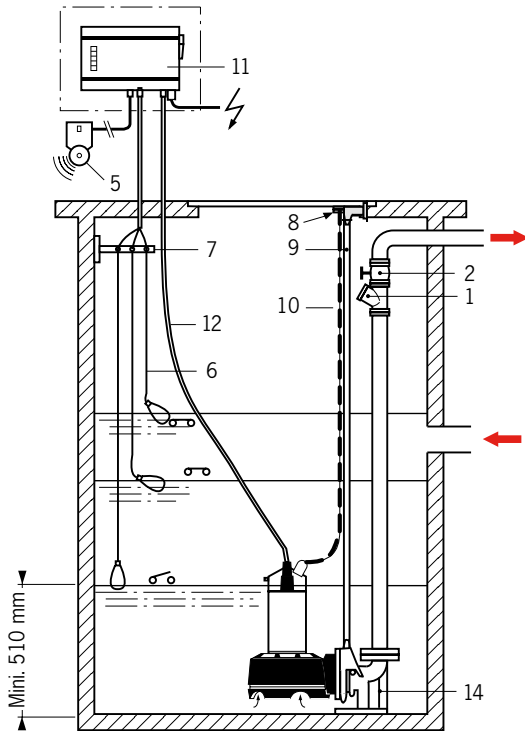
• Recommended spare parts

# SVO-SCA 205-206

## SCHEMATIC INSTALLATION DIAGRAMS

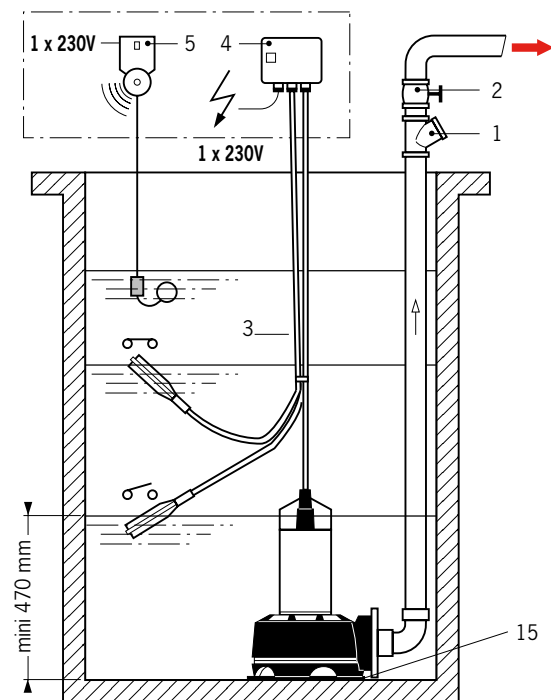
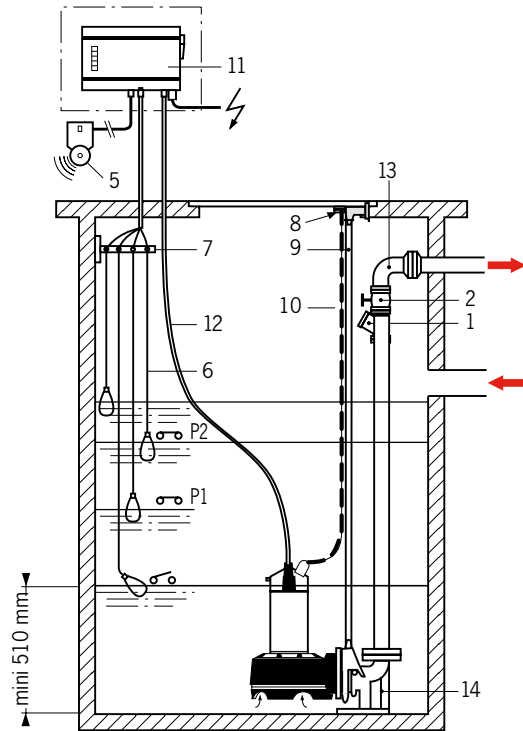
### • Fixed installation recommended\*

\* Pump with mounting base, complete lift-pumping system, switch and protection box with 3 level controllers.

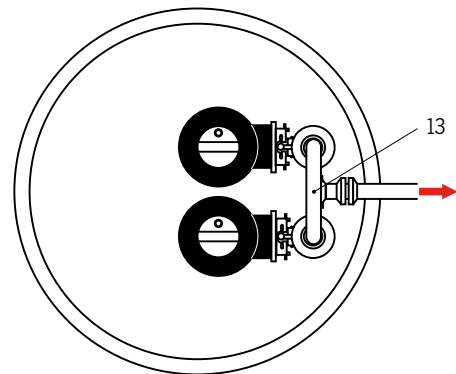


### • Fixed double installation\*\*\*

\*\*\* Two pumps in parallel, linked by a pairing manifold, with mounting base, complete lift-pumping system, switch and protection box with 4 level controllers.



\*\*Pump with single-phase motor on a base plate, with float switch, terminal box and audible overflow alarm.



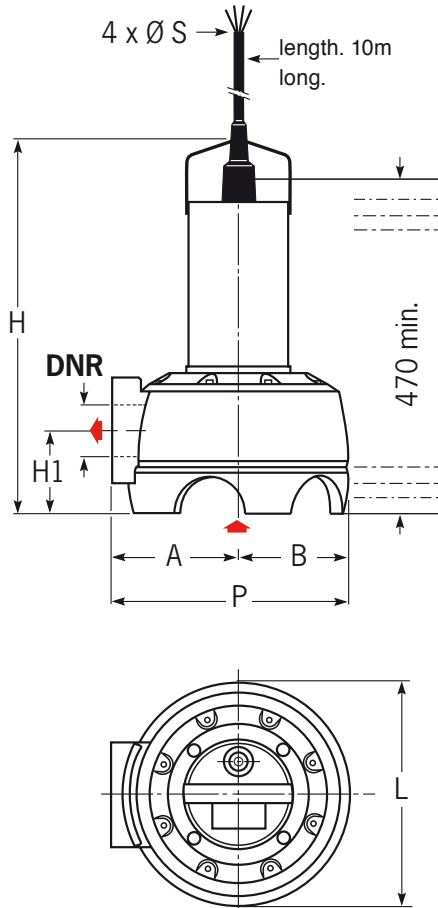
- 1 - Ball-type non-return valve.
- 2 - Shut-off valve.
- 3 - On-off pump float switch.
- 4 - Capacitor - connection box (single-phase motor).
- 5 - Audible overflow alarm.
- 6 - Level controllers or EAPS (electronic air pressure switches).
- 7 - Mounting bracket kit for float switches / cable attachment for EAPS.
- 8 - Upper guide bar bracket.
- 9 - Guide bar.
- 10 - Pump lifting chain.
- 11 - Switch and protection box.

- 12 - Motor power cable.
- 13 - Pairing manifold for two pumps.
- 14 - Mounting base.
- 15 - Base plate - increases the pump support area on a muddy bottom.

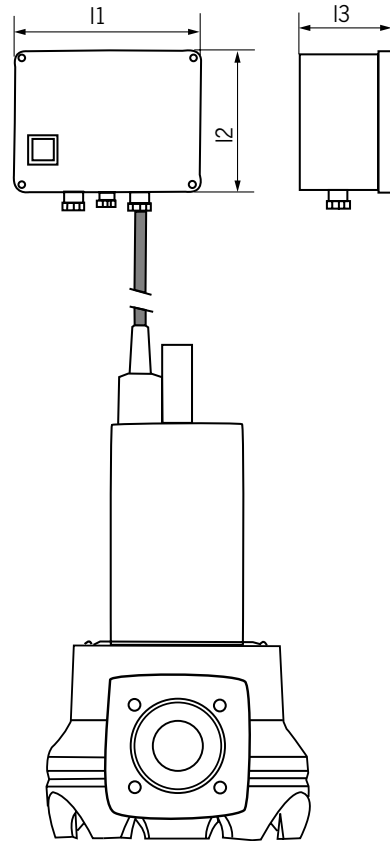
# SVO-SCA 205-206

## ELECTRICAL AND DIMENSIONAL SPECIFICATIONS

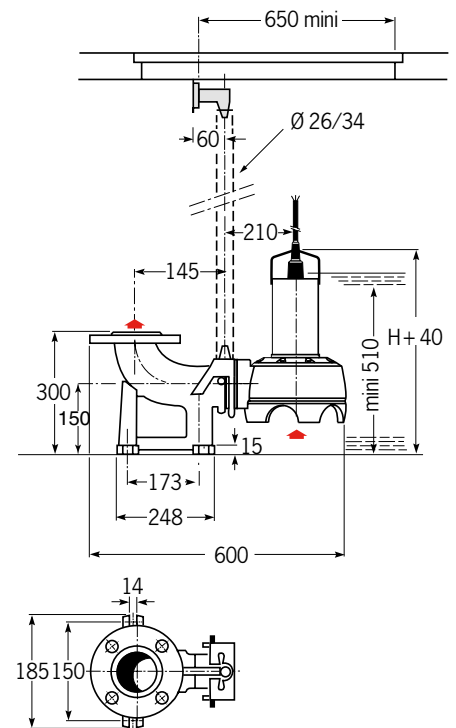
### • Mobile installation



### • Single-phase version with terminal box



### • Fixed installation with lift-pumping system






ORDER REFERENCE	MOTOR							PUMP										weight kg
	P2 kW	I(A) 1x 230V	I(A) 3x 400V	I(A) 3x 230V	capac. µF	cable Ø S mm <sup>2</sup>	ports DNR	H mm	L mm	P mm	H1 mm	A mm	B mm	I1 mm	I2 mm	I3 mm		
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

## CONTROL SYSTEMS

### Electronic switch and protection boxes

Model	YN 3000	YN 7000	MS Lift
<b>Application</b>	Management of sump levels via an EAPS sensor (not supplied)	Management of a submersible, lift or booster pump.	Management of levels in a fixed, sump or dry pit-type installation
<b>Number of pumps</b>			
1 pump	YN3100	YN7100	1x4kW
2 pumps	YN3200	-	2x4kW
<b>Specifications</b>			
1x230V	yes	yes	yes
3x230V	no	yes	no
3x400V	yes	yes	yes
<b>Max. power per pump</b>	4Kw	11Kw	4Kw
<b>Current</b>			
Single-phase	0,3 at 12A	1 at 23A	1,5 at 12A
Three-phase	0,3 at 10A	1 at 23A	1,5 at 12A
<b>Frequency</b>	50/60Hz	50/60Hz	50/60Hz
<b>Protection class</b>	IP65	IP54	IP54
<b>Level detectors</b>			
Float switch	yes	yes	yes
1 pump	3	1 or 2	2
2 pumps	4	no	3
<b>EAPS sensor</b>	yes	-	-
<b>Level electrode</b>	-	2 supplied	-

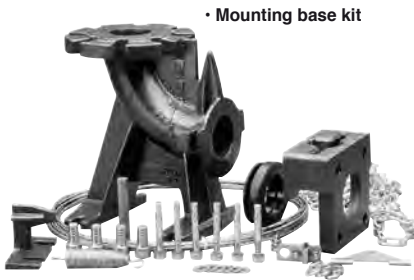
Level detectors		TYPE OF INSTALLATION			Cable length
		Deep well installation	Portable installation	Fixed installation	in metres
Regulation by level electrodes		Recommended	Incompatible	Possible	sold by the metre
Muddy water: Float switch Euroflot 430		Incompatible	Possible	Possible	10 or 20
Regulation by EAPS piezometric sensor		Possible	Possible	Recommended	10 or 30



# SVO-SCA 205-206

## ACCESSORIES

• Base kits, DN 50 for SVO-SCA 205 and DN 65 for SVO-SCA 206, complete with 5 m long lifting chain and guide bar wall bracket.



• Round, screw-on DN 2"- PN10 or DN 2"1/2- PN10 counter-flange.

• «A» extended stand for 206 pump: raises the pump from the bottom of the sump.

For an ATEX installation, use the ADF (Zener barrier) version of the EAPS box.



• Base plate - increases the pump support area on a muddy bottom.



• Ball-type DN 2" and 2"1/2 special non-return valve for muddy water.

• Wall bracket for level controller cable run.

• Alarmson overflow or low water audible alarm control box for clean water and muddy water (ref. 2529590)



## FEATURES

### a) Electrical

- "M": 230 V - 50 Hz single-phase, integral permanent capacitor in the box supplied with the pump.

- "T4": 400 V - 50 Hz three-phase 400 V-50 Hz,

- Mandatory thermal overcurrent protection via a switch and circuit-breaker or via a switch and protection box.

### b) Fitting

- Mobile or fixed installation with complete lift-pumping system.

- Connection to the system via a screw-on counter-flange (not supplied) for flexible hose or rigid pipe.

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

### c) Packaging

- Pumps delivered in recyclable cardboard box packaging with a 10 m long, four-conductor power cable, without accessories.

- Single-phase model with permanent capacitor - box (0.55 and 0.75 kW single-phase, with float switch).

- 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 comprising several spare parts:

• Sealing kit,

• Can kit,

• Electric motor kit.

**Please contact us.**

