

# Close-coupled Submersible Electric Pumps

## SCUBA Series



## MARKET SECTORS

CIVIL, AGRICULTURAL, INDUSTRIAL

## APPLICATIONS

- Water supply from: primary water supply tanks or reservoirs, 6" wells, basins and water courses.
- Sprinkler irrigation systems.
- Pressure boosting with pump directly inserted in tank or well, to avoid suction problems and noise.

- Maximum supply voltage variations:  $\pm 5\%$
- **Class F** windings.
- Can also operate in **horizontal position**.
- Maximum number of starts per hour, at regular intervals:  
25 for motors up to 0.9 kW.  
20 for motors 1.1 kW and up.
- Maximum **temperature** of water in contact with the motor: **40°C** (continuous use).

## MANUFACTURING FEATURES

Standard: see table on page 3.

Single phase model available with float switch (SCUBA CG serie).

On request: different voltages and frequencies.

## CONSTRUCTION FEATURES

- Close-coupled, multiple impeller submersible electric pump.  
The liquid end is located underneath the electric motor which is cooled by the pumped liquid.
- Impellers are radial centrifugal type, made of technopolymer.
- AISI 304 stainless steel diffusers.
- Outer sleeve, motor casing, suction screen and shaft extension are made of AISI 304 stainless steel.
- **Dry motor**  
The electric motor is protected from infiltrations by a double seal with interposed oil chamber. The silicon carbide mechanical seal, highly resistant to abrasion and wear, and the lip seal, lubricated thanks to the special design of the oil chamber, ensure the absolute tightness of the motor seal. In the event of dry running, the sealing system will not be damaged and the motor will not suffer from infiltrations. The oil used complies with standards concerning oils in contact with foodstuffs and satisfies the purity requirements established by the annex to G.U. no. 104 of 20/04/1973; it also complies with FDA (FOOD AND DRUG ADMINISTRATION) standards.

## SPECIFICATIONS

### PUMP

- **Delivery** up to 7 m<sup>3</sup>/h at 2850 rpm.
- **Head** up to 80 m at 2850 rpm.
- Maximum electric pump overall **diameter**: 128 mm.
- **Maximum** immersion depth: 20 m.
- **Maximum** permissible quantity of suspended sand: 25 g/m<sup>3</sup>.
- **Passage** of solids up to 2.5 mm.
- Delivery **outlet**: 1 1/4".
- Motor **power** from 0.55 to 1.1 kW.

### MOTOR

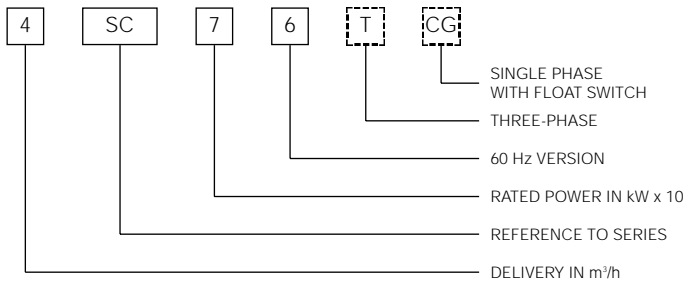
- **Single-phase version**: 220-240 V, 50 Hz, 2 poles (2850 rpm).
- With built-in automatic reset overload protection.
- Available on request, 2-pole cutout and capacitor board with thermoplastic case.
- **Three-phase version**: 380-415 V, 50 Hz, 2 poles (2850 rpm); overload protection to be provided by user and installed in the control panel (see electric panel section).

## STANDARD MATERIAL IDENTIFICATION CODES

COMPONENT	MATERIAL	REFERENCE STANDARDS				REMARKS
		AISI/ASTM	DIN W. No.	EN	UNI	
Outer sleeve	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	Delivery 1"1/4
Upper support	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	
Motor casing	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	
Suction screen	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	
Motor shaft	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	Hexagonal
Screws and tie rods	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	
Impeller	Noryl					Radial
Diffusers	Stainless steel	AISI 304	1.4301	1.4301	X 5 CrNi 1810	
Upper cap	Technopolymer					
Mechanical seal seat	Technopolymer					
Lower bearing support	Die-cast aluminium					
Lower bearing	Special rubber					
Elastomers	Nitrile rubber (NBR)					
Mechanical seal	Silicon carbide					

All the nitrile rubber, polyurethane and polycarbonate components are suitable for usage with foodstuffs and comply with FDA (Food and Drug Administration - US agency dedicated to the safeguard of public health) specifications.

## IDENTIFICATION CODES

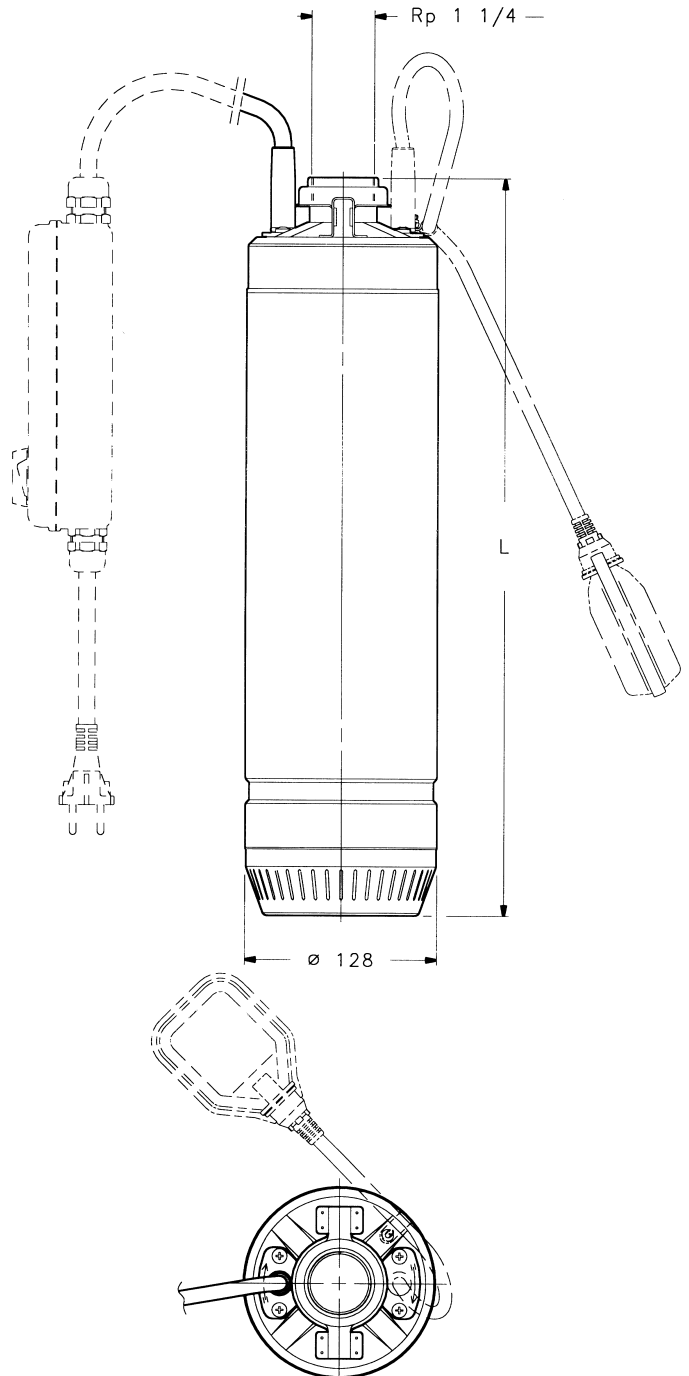


## TECHNICAL DATA TABLE (50 Hz, 2850 rpm) SCUBA SERIES

PUMP TYPE		NUMBER OF STAGES	MOTOR POWER		INPUT POWER		RATED CURRENT		CAPACITOR		Q = DELIVERY										
SINGLE-PHASE 220-240 V 50 Hz	THREE-PHASE 380-415 V 50 Hz		kW	HP	kW SINGLE-PHASE	kW THREE-PHASE	SINGLE-PHASE 220-240 V 50 Hz	THREE-PHASE 380-415 V 50 Hz	µF	V	H = TOTAL HEAD METERS COLUMN OF WATER										
											l/min	0	10	20	30	40	50	60	80	100	120
											m <sup>3</sup> /h	0	0,6	1,2	1,8	2,4	3	3,6	4,8	6	7,2
2SC5	2SC5T	4	0,55	0,75	0,92	0,85	4,2	1,6	18	450	48	46	43	40	36	31	26				
2SC7	2SC7T	5	0,75	1	1,15	1,05	5,2	1,9	25	450	60	57	53	50	45	39	32				
2SC9	2SC9T	6	0,9	1,2	1,32	1,25	5,8	2,1	25	450	72	68	64	60	54	47	39				
2SC11	2SC11T	7	1,1	1,5	1,5	1,5	6,6	2,6	30	450	84	80	75	69	63	54	45				
4SC7	4SC7T	4	0,75	1	1,2	1,1	5,4	2	25	450	45				40	38	36	30	24	17	
4SC9	4SC9T	5	0,9	1,2	1,4	1,35	6,3	2,3	25	450	58				51	48	45	38	30	20	
4SC11	4SC11T	6	1,1	1,5	1,65	1,6	7,4	2,7	30	450	69				61	58	55	46	36	25	

## DIMENSIONS AND WEIGHTS

PUMP TYPE		L mm	WEIGHT kg
SINGLE-PHASE 220-240 V 50 Hz	THREE-PHASE 380-415 V 50 Hz		
2SC5	2SC5T	496	13,5
2SC7	2SC7T	536	15
2SC9	2SC9T	561	16
2SC11	2SC11T	606	18
4SC7	4SC7T	511	14,5
4SC9	4SC9T	536	15,5
4SC11	4SC11T	581	17,5

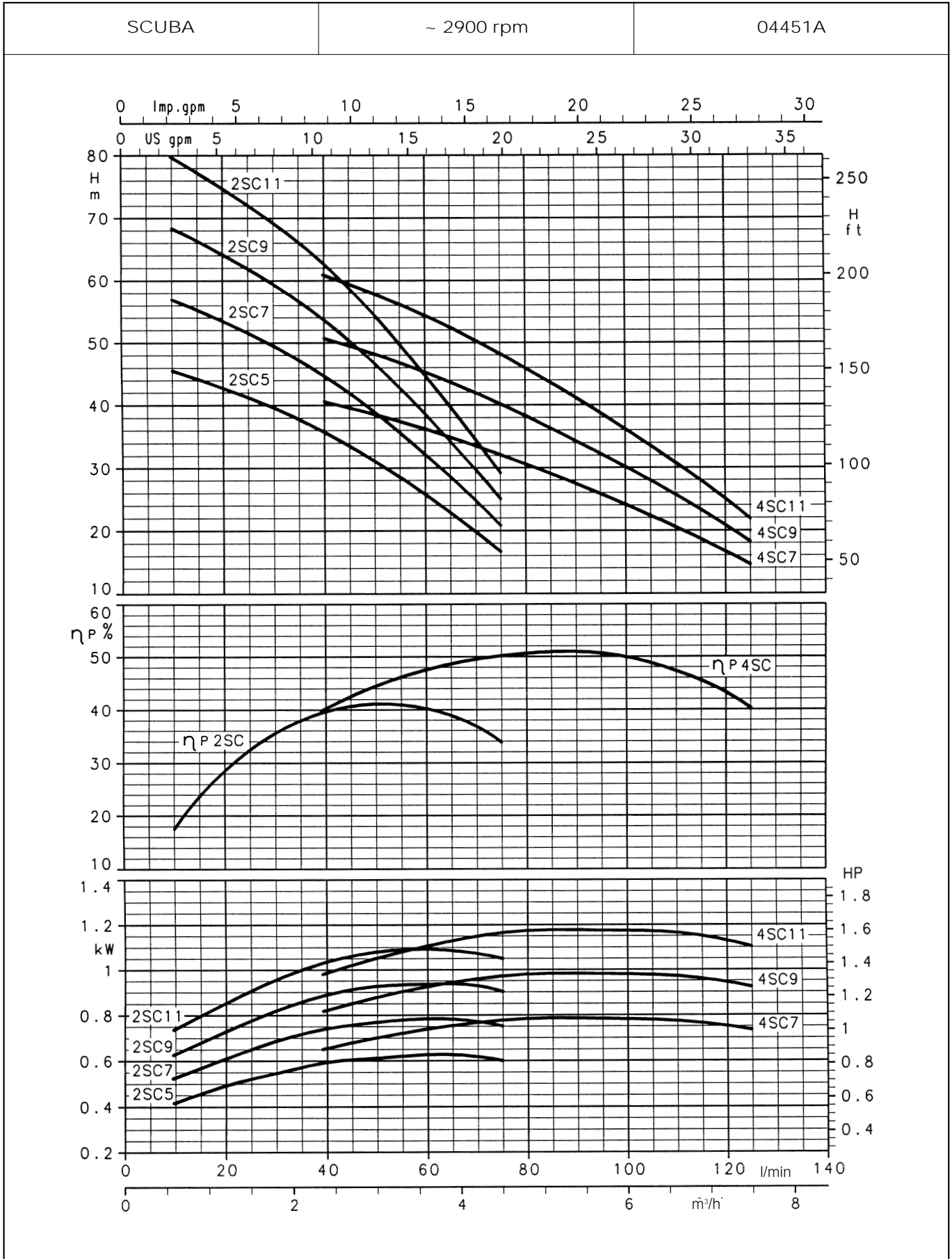


## AVAILABLE FEATURES

MODEL	kW	HP	VOLT	Hz	CROSS SECTION	CABLE TYPE		
LOWARA 50 Hz VERSIONS	SINGLE-PHASE (*)	2SC5-L27	0,55	0,75	220-240	50	4G1	H07RN-F LENGTH 20 mt
		2SC7-L27	0,75	1,00				
		2SC9-L27	0,90	1,20				
		2SC11-L27	1,10	1,50				
		4SC7-L27	0,75	1,00				
		4SC9-L27	0,90	1,20				
	4SC11-L27	1,10	1,50					
	THREE-PHASE	2SC5-L17	0,55	0,75	220-240	50	4G1	H07RN-F LENGTH 10 mt
		2SC7-L17	0,75	1,00				
		2SC9-L17	0,90	1,20				
		2SC11-L17	1,10	1,50				
		4SC7-L17	0,75	1,00				
4SC9-L17		0,90	1,20					
4SC11-L17	1,10	1,50						
LOWARA 50 Hz VERSIONS	SINGLE-PHASE (*)	2SC5-L27+QSM	0,55	0,75	220-240	50	4G1	H07RN-F LENGTH 20 mt + (CONTROL UNIT)
		2SC7-L27+QSM	0,75	1,00				
		2SC9-L27+QSM	0,90	1,20				
		2SC11-L27+QSM	1,10	1,50				
		4SC7-L27+QSM	0,75	1,00				
		4SC9-L27+QSM	0,90	1,20				
	4SC11-L27+QSM	1,10	1,50					
	THREE-PHASE	2SC5T-L17	0,55	0,75	380-415	50	4G1	H07RN-F LENGTH 10 mt
		2SC7T-L17	0,75	1,00				
		2SC9T-L17	0,90	1,20				
		2SC11T-L17	1,10	1,50				
		4SC7T-L17	0,75	1,00				
4SC9T-L17		0,90	1,20					
4SC11T-L17	1,10	1,50						
THREE-PHASE	2SC5T-L27	0,55	0,75	380-415	50	4G1	H07RN-F LENGTH 20 mt	
	2SC7T-L27	0,75	1,00					
	2SC9T-L27	0,90	1,20					
	2SC11T-L27	1,10	1,50					
	2SC7T-L27	0,75	1,00					
	2SC9T-L27	0,90	1,20					
2SC11T-L27	1,10	1,50						

(\*) Single-phase version available with pre-assembled float switch (SCUBA CG series)

HYDRAULIC PERFORMANCE CURVES AT 50 Hz

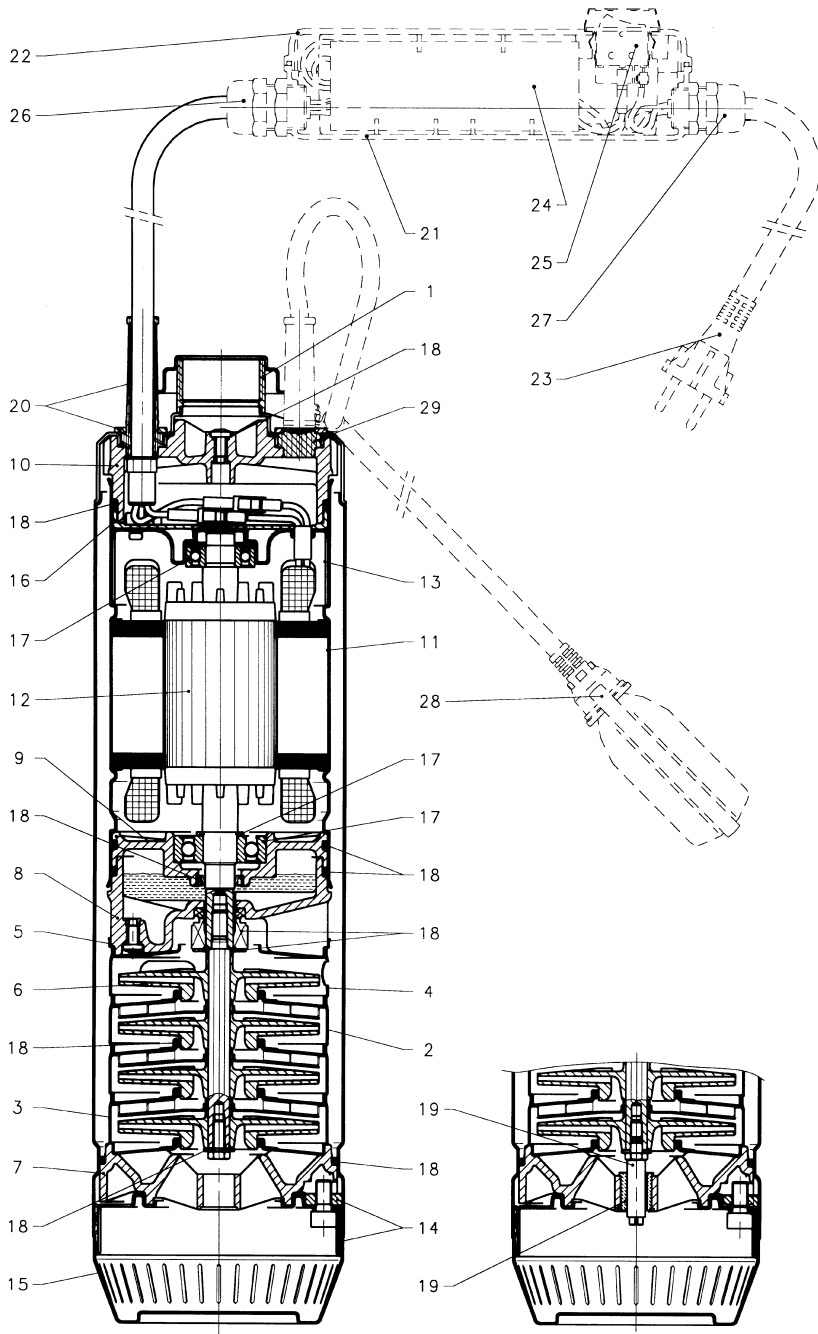


SCUBA

These performances refer to cold water with no dissolved gases.

# PUMP SECTION AND LIST OF MAIN COMPONENTS

SCUBA



REF. N.	DESCRIPTION
1	Sleeve with 1 1/4" delivery port
* 2	Diffuser
* 3	Stage casing
* 4	Final diffuser
* 5	Final diffuser flange
* 6	Impeller
7	Bush support
8	Lower head
9	Lower bearing support
10	Top support
11	Sleeve with wound stator
12	Stainless steel hexagonal type shaft: transmits movement to the impellers without the use of keys
13	Upper bearing support
14	Flange - Lower bush support
15	Strainer
16	Connection protector
* 17	Bearing kit
* 18	Seal kit + OR
* 19	Bush kit
20	Power supply cable
21	Capacitor holder <sup>(2)</sup>
22	Capacitor holder cover <sup>(2)</sup>
23	Cable with plug <sup>(2)</sup>
24	Capacitor <sup>(2)</sup>
25	Switch <sup>(2)</sup>
26	Cable clamp, pump side <sup>(2)</sup>
27	Cable clamp, plug side <sup>(2)</sup>
28	Float switch <sup>(3)</sup>

\* Recommended spare parts  
 (1) Only on versions with more than 4 impellers  
 (2) Supplied only on demand  
 (3) For CG version only

Reference numbers indicate spare parts as per relevant catalogue.