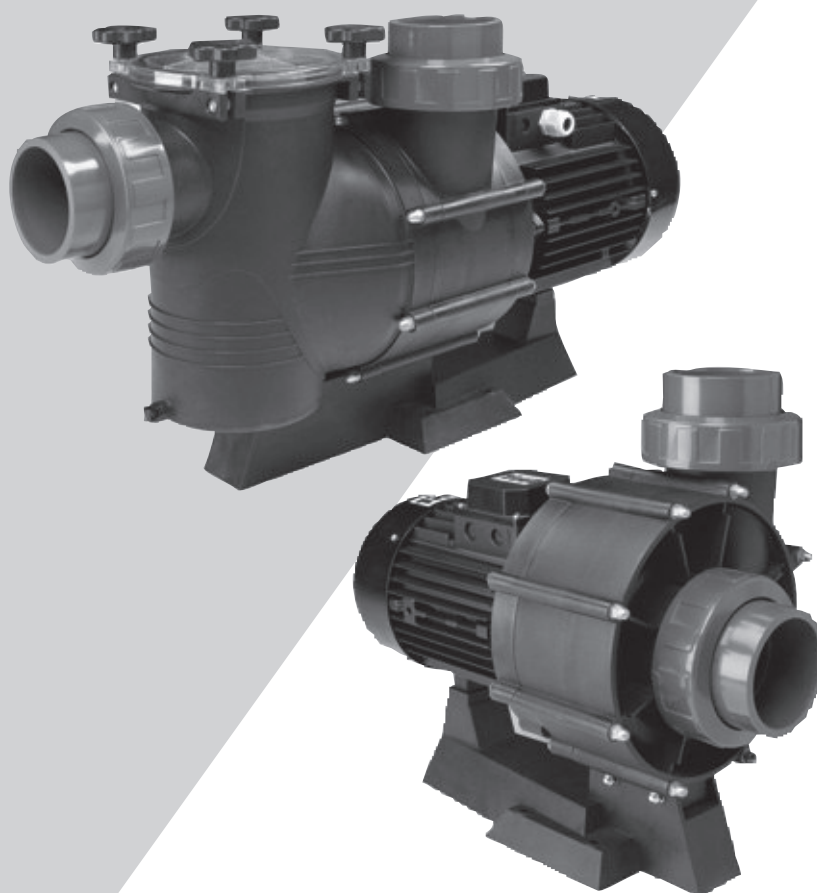





**BOMBAS CENTRÍFUGAS PARA GRANDES CAUDALES
CENTRIFUGAL PUMPS FOR LARGE FLOWS
POMPES CENTRIFUGES POUR GRANDS DÉBITS
POMPE CENTRIFUGHE PER GRANDI PORTATE**



**MANUAL DE INSTALACIÓN Y MANTENIMIENTO
MANUEL D'INSTALLATION ET D'ENTRETIEN
INSTALLATION AND MAINTENANCE MANUAL
MANUALE D'INSTALLAZIONE E MANUTENZIONE**


IMPORTANT: The manual you are reading contains fundamental information regarding the safety measures to be adopted when installing and starting up. It is therefore of utmost importance that both the installer and the user read the instructions before assembling and starting up.


1. GENERAL SAFETY INSTRUCTIONS

These symbols (  ) represent the possibility of danger as a result of not following the corresponding instructions.

 **DANGER. Electrocution risk.**




Non-compliance with this instruction involves a risk of electrocution.

 **DANGER.** Non-compliance with this instruction involves a risk of danger to people or things.

 **ATTENTION.** Non-compliance with this instruction involves a risk of damaging the pump or the unit.

2. GENERAL SAFETY RULES

GENERAL OBSERVATIONS.

-  • The machines mentioned in this manual are especially designed to carry out the pre-filtration and the circulation of water in swimming pools. They are pumps designed for large flows at low pressure.
- They are designed to work with clean water at a temperature that does not exceed 40°C.
-  • Installation should be carried out in accordance with the specific indications for each step.
- The regulations in force for the prevention of accidents should be heeded.
-  • Any modification that may be made to the pump requires the previous authorisation of the manufacturer. The original manufacturer-authorized spares and accessories guarantee greater safety. The pump manufacturer is exempt from all responsibility for damage caused by the use of unauthorized spares or accessories.
- During operation the electrical parts of the pump are live. Work can only be carried out on each machine or on connected-equipment after having disconnected them from the electrical supply network and having disconnected the starting mechanisms.
- The user must make sure that assembly and maintenance work is carried out by qualified and authorised people who have previously carefully read the installation and service instructions.

- The operating safety of the machine is only guaranteed with the compliance and respect for that mentioned in the installation and service instructions.
- The value limits stated in the table of technical specifications must under no circumstances be exceeded.
- In the case of defective operation or breakdown, contact the nearest manufacturer's agent or the manufacturer's Technical Customer Service.





INSTALLATION AND ASSEMBLY WORK WARNINGS

- ⚠ • While connecting electrical cables to the machine's motor, take care of the mechanism inside the connection box, check that no pieces of cable remain inside after closure and that the earth contact is correctly connected. Connect the motor using the electrical diagram attached to the machine.
- Check that the electrical cable connections to the machine's terminal box are well set and firmly attached to the connection terminals.
- The pump electrical installation should have a differential the value of which is not greater than 30mA.
- Check that the terminal box joint is used correctly, thus preventing water from entering the terminal box of the electric motor. Likewise, check that the packing gland has been placed and pressed correctly inside the joint.
- ⚠ • The pumps must be installed on a flat and solid surface, at a distance of minimum 3,5 meters from the pool (according to regulation NF C 15-100 or analogue, valid in each region or country).
- They must be fixed in a horizontal position. These pumps are not self-priming and they should be installed below water level. The suction pipe should be as short as possible in order to reduce the suction time. The place where the pump is installed should be dry and aired at all times.
- Special attention should be paid to ensure that under no circumstances water gets into the motor and the electric voltage parts.
- Should the envisaged use be different from that mentioned, adaptations and supplementary technical regulations may be necessary.


STARTING-UP WARNING.

- ⚠ • Before starting the pump for the first time, verify the calibration of the motor electric protection mechanisms and check that the protectors against electrical and mechanical contacts are correctly positioned and well fixed.
- It is recommended not to use the pool during that first check of the pumping equipment installation.

ASSEMBLY AND MAINTENANCE WORK WARNINGS.

-   • National installation regulations should be taken into account when assembling and installing the pumps.
-  • Special attention should be paid to ensure that under no circumstances water gets into the motor and the electric voltage parts.
- Any contact, even accidental, with the machine's moving parts should be avoided while the machine is operating and/or before it completely stops.
- Wait until the machine has completely stopped in order to carry out any work on it.
- Before undertaking any electrical or mechanical maintenance make sure that the machine has been disconnected from the supply network and starting-up mechanisms are blocked.
-  • Before working on the machine it is advisable to follow the steps below:
 1. Cut the machine voltage.
 2. Block the starting-up mechanisms.
 3. Check that there is no voltage in the circuits, including the auxiliaries and supplementary services.
 4. Wait until the wheel has stopped completely.

The mentioned list should be considered indicative and not binding, since there may be specific safety rules within specific safety procedures.

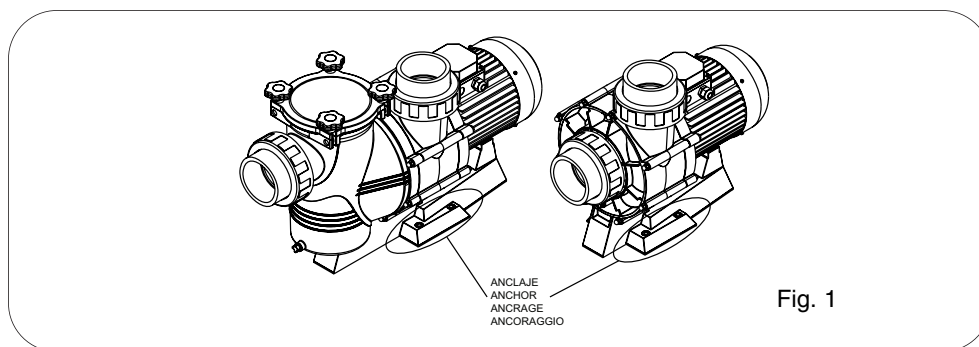
-  • Periodically control:
 - The mechanical parts are firmly secured and the machine support screws are in good condition.
 - Correct positioning and fixing and the condition of the leading-in wires and isolation components.
 - Machine and electric motor temperature. In case of irregularity, stop the machine immediately and proceed with its repair.
 - Machine shake. In case of irregularity, stop the machine immediately and proceed with its repair.

Because of the complexity of cases dealt with, the installation, use and maintenance instructions in this manual do not intend to examine and deal with all possible service and maintenance situations. If supplementary instructions are necessary or if specific problems arise, do not hesitate to contact the machine distributor or the manufacturer.

3. INSTALLATION AND ASSEMBLY

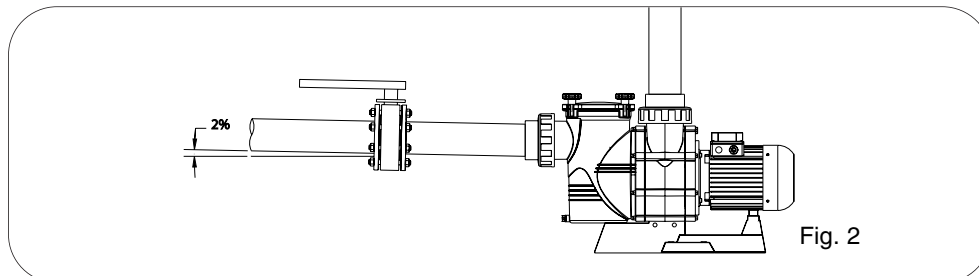
GENERAL

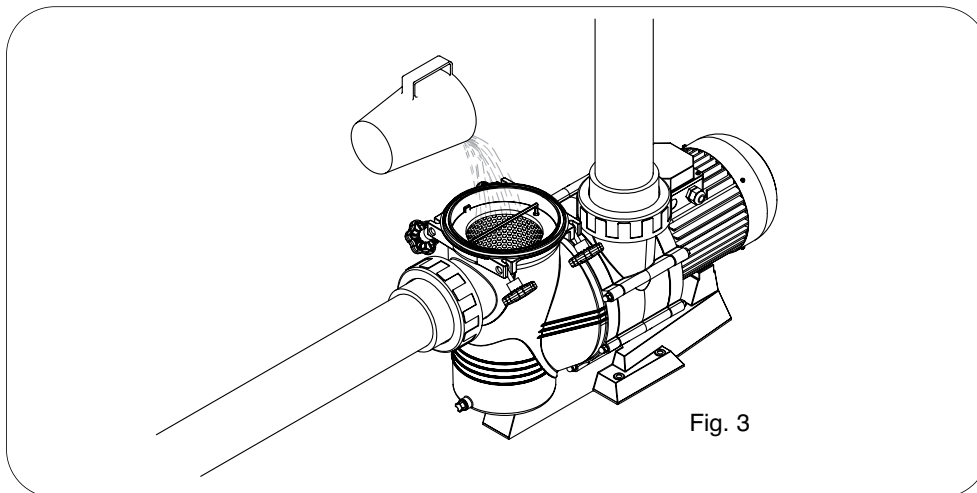
- Assembly and installation of our pumps is only permitted in swimming pools or tanks complying with regulation HD 384.7.702. In case of doubt please consult a technician.
- All pumps come with a two-drill foot to allow it to be fixed to the floor by means of an anchor. (Fig. 1).



TUBING

- The connection of the pipes must be threaded to the outlets of the pump. (Fig.2)
- ⚠ • Impulsion tube installation is done totally perpendicularly and is well centred with respect to the nozzle to be connected so as to avoid external pressure being exerted on the pump and the tube. Apart from making assembly more difficult, this pressure could even break them. (Fig. 2)
- Suction tube installation is done at a slight angle of 2 % towards the pump, thus avoiding siphon formation. (Fig.2).
- ⚠ • For a correct operation, the pump must be primed until water rises from the suction tube. (Fig.3)





POSITIONING

- ⚠ • It is recommended to install the pump below the water level of the swimming pool .
- ⚠ • It should be ensured that the pump is free from possible flooding and it is given dry ventilation.

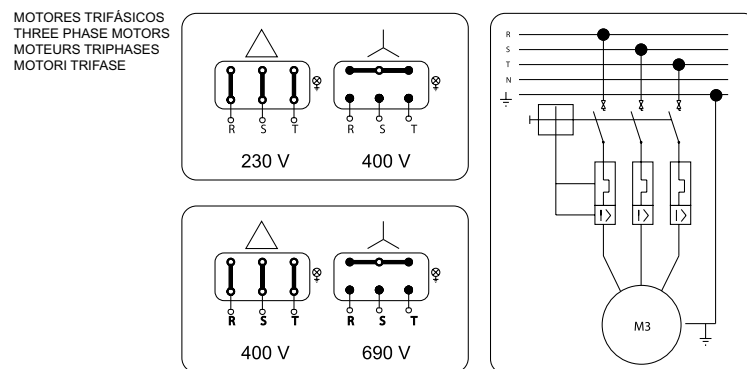
SAFETY INDICATIONS

ALL THE ELECTRICAL INSTALLATIONS MUST COMPLY WITH STANDARD: EN 60335-2-41

“All 230 v single-phase or 400 v three-phase electrical units must be installed at a minimum distance of 3,5 meters from the edge of the pool. In the case of a modification on the filtration system, the manufacturer must be informed”.

ELECTRICAL UNIT

- ⚠ The electrical installation should have a general omni-pole cut-off switch
- The cable used for the connection of the pump, should have terminals to be connected to the pump motor.
- It is necessary to install a magneto-thermic protector.
- The installation of a 0,03A differential protector is needed to prevent electrical leaks.
- The three-phase pumps must be protected from over-load and short circuits by a motor security switch.



HEAT PROTECTOR TABLE

Mod.	HP	KW	V.	Intensity relay regulation (A)
1	4	3	230/400	13,2 / 7,6
2	5,5	4	230/400	17,9 / 10,3
3	7,5	5,5	230/400	22,5 / 13,3
4	10	7,4	230/400	30,5 / 17,6
5	12,5	9,2	230/400	40 / 23,3
6	7,5	5,5	400/690	13,3 / 7,6
7	7,4	5,5	400/690	17,6 / 9,5
8	12,5	9,2	400/690	23,3 / 12,1

- Use a connecting cable type H07 of a suitable section for the consumed intensity by the pump motor.
- Before connecting the motor, check the necessary protection type.
- Adjust the correct thermal value according to the needs of each pump.
- Verify the right connection of the ground cable to the installation.
- It is very important to keep to the installation and electrical connection conditions. Should they not be heeded, the pump manufacturer does not accept any responsibility and considers the guarantee void.
- The motors are subject to EEC regulations with IP-55 protection.
- Special installation regulations may exist.
- The mains cable can only be connected by specialised and authorised technicians.
- Incorrect mains connection could result in death.

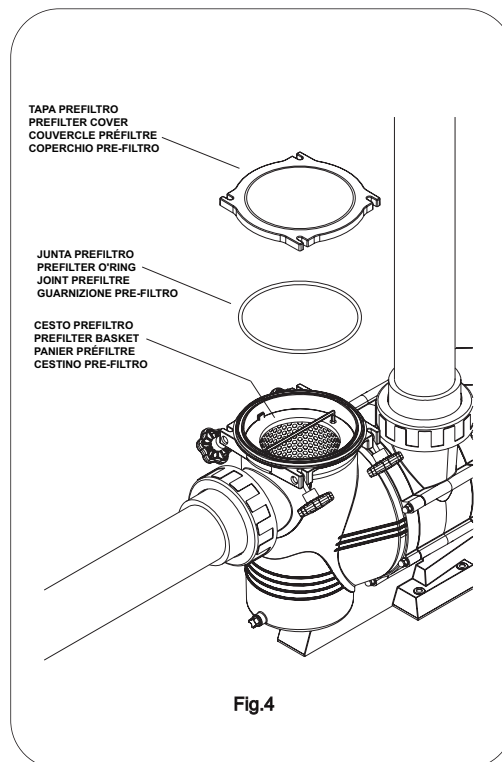
4. START-UP INSTRUCTIONS

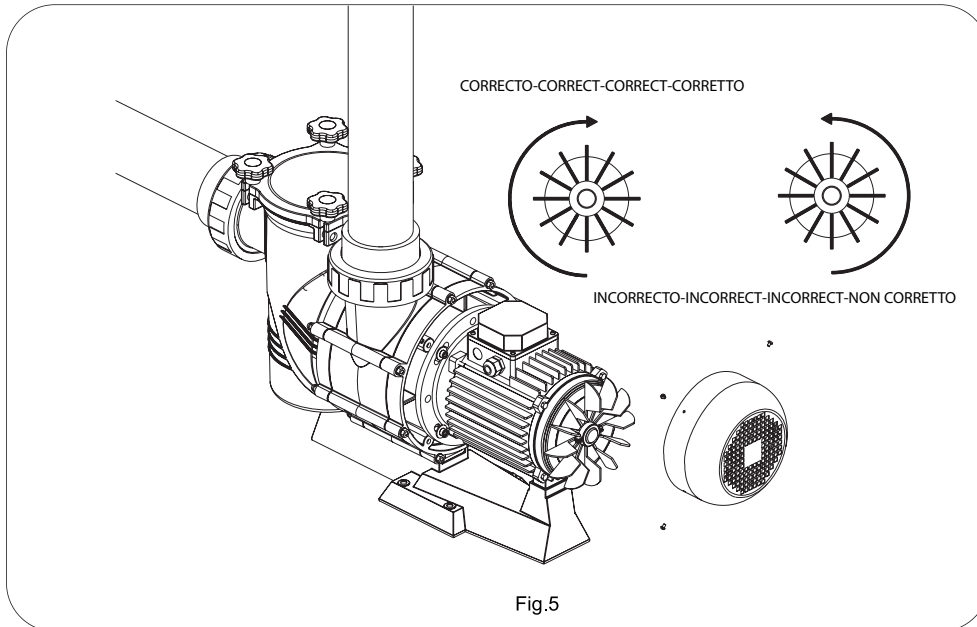
QUESTIONS PRIOR TO START-UP

- Before starting up the pump, the following operations must be done:



- a- If the pump comes with pre-filter:
1. Open the prefilter cover (Fig. 4)
 2. Fill the pump with water, through the prefilter, till the water overflows from the suction outlet.
 3. If, during these operations the prefilter basket was removed, do not forget to replace it inside the pre-filter.
- b- If the pump comes without prefilter, fill the pump with the water from the installation.
- c- Check that the tension and power of the supply correspond to those determined in the features plate of the pump..





- The pumps should never work without having been filled with water beforehand as, otherwise, this could cause a damage to the mechanical seal and eventually producing a water leak. (Fig.3)
- Check that the rotation sense of the motor is correct, by checking the fan at the back of the motor (fig.5)
- Check that the pump axle turns freely.

START-UP

- ! • Open all valves and connect the motor.
- Wait a reasonable time for the self-priming to take place.

5. MAINTENANCE.

- ! • Clean the pre-filter basket regularly in order to avoid drops in pressure. In order to avoid possible basket breakage it is recommended not to knock it during the cleaning process.
- ⚠ • If the pump stops, check that the motor amp consumption during his working is the same or less than that indicated on the manufacturer's specification board, otherwise, contact the nearest Customer Technical Service.
- If the amp rate is higher, consult the manufacturer.

- Empty the pump in cases where it must remain without use for some time, mainly in cold countries where there may be danger of freezing.
- To empty the pump, remove the draining plug from the pump body. (see explosion drawing)
- Each time the pre-filter is opened, clean impurities from the joint seating and the joint itself, to ensure a good sealing of the cover. (fig.4).

6.DISMANTLING.

- The motor unit may be separated from the pump body without needing to disconnect the pump's suction and impulsion tubing.
- To disconnect the motor unit from the pump body, remove the screws (see explosion drawing).

POSSIBLE BREAKDOWNS, CAUSES AND SOLUTIONS

PROBLEMS	REASONS	SOLUTIONS
THE PUMP DOES NOT PRIME	Air entry in suction tube.	Check pipe fittings and suction tube joints.
	Bad filter cover sealing.	Clean the pre-filter cover and check the condition of the joint.
	Incorrect sense of rotation of the motor.	Invert two phases of the mains.
THE PUMP GIVES LOW FLOW	Blocked pre-filter.	Clean the pre-filter.
	Air entry in suction tube.	Check pipe fittings and suction tube joints.
	Incorrect sense of rotation of the motor.	Invert two phases of the mains.
	Load loss in suction.	Prevent as much as possible, elements that produce load loss.
THE MOTOR STOPS	Wrong voltage.	Check that the network voltage corresponds to that on the motor specification board.
	Increase of temperature in the terminal box because of voltage arch effect.	Check terminal box connections.
	Heat protector blows.	Correctly connect cables to box terminals.
	Terminal boxes badly-connected.	Fasten the cable to the terminal. Modify size of connection cable to the box terminals.

7. SPECIFICATIONS

7.1. PRODUCT AND ACCESSORY DESCRIPTION.

The pump body is built in state-of-the-art thermoplastics.

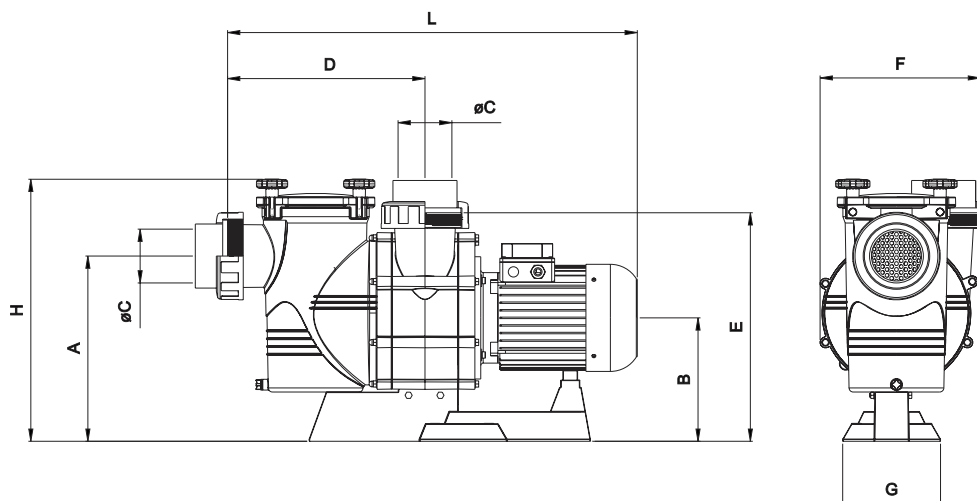
The impeller is made of bronze and both the prefilter basket and the motor shaft are made in stainless steel.

The motors supplied with the pump unit have been protected by IP-55 and are prepared to withstand hot atmospheres and high humidity levels.

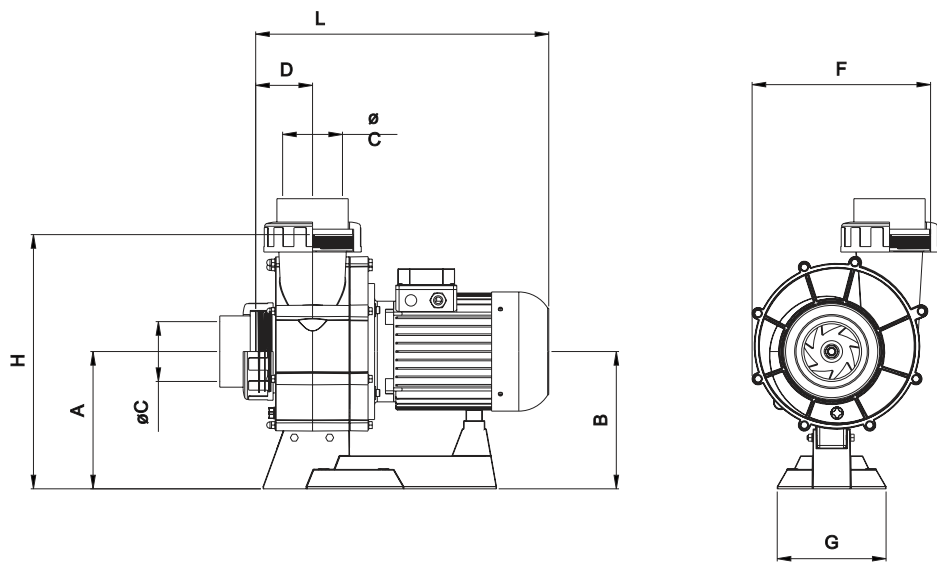
7.2. ELEMENTS SUPPLIED

- Pump for water circulation in swimming pools.
- Pre-filter incorporated in the pump body. (according to model)
- Pre-filter basket (according to model)
- Joints and linking hose unions for impulsion and suction tubing connections.
- Pump installation and maintenance manual.

The functional features of the pump are given in the different characteristic curves.

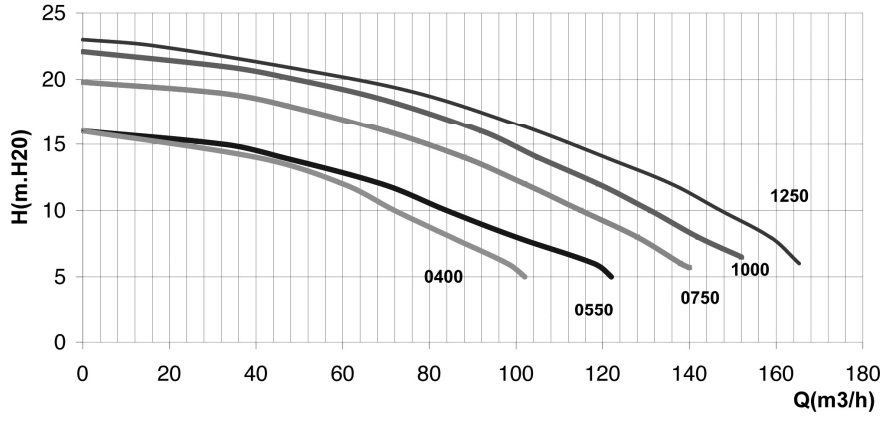


CODE	POWER		DIMENSIONS								
	kW	HP	A	B	Ø C	D	E	F	G	H	L
0400	2,9	4	375	255	90	405	470	330	200	535	820
0550	4	5,5	375	255	110	405	470	330	200	535	840
0750	5,5	7,5	375	255	110	405	470	330	200	535	840
1000	7,4	10	375	255	110	405	470	330	200	535	910
1250	9.2	12.5	375	255	110	405	470	330	200	535	955

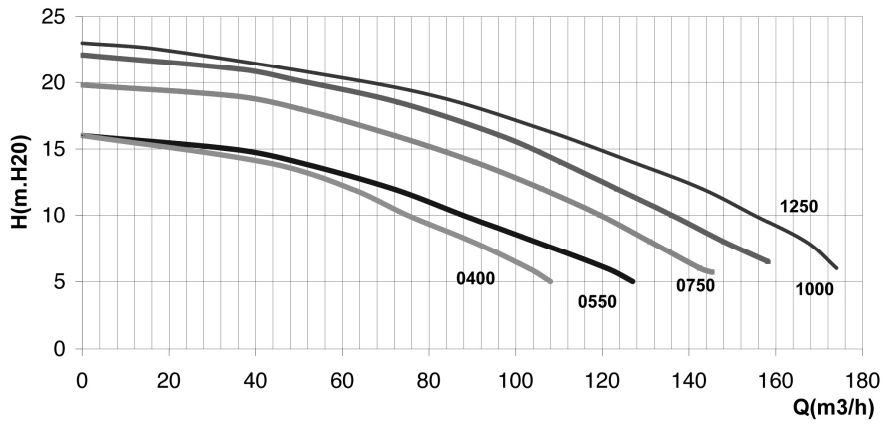


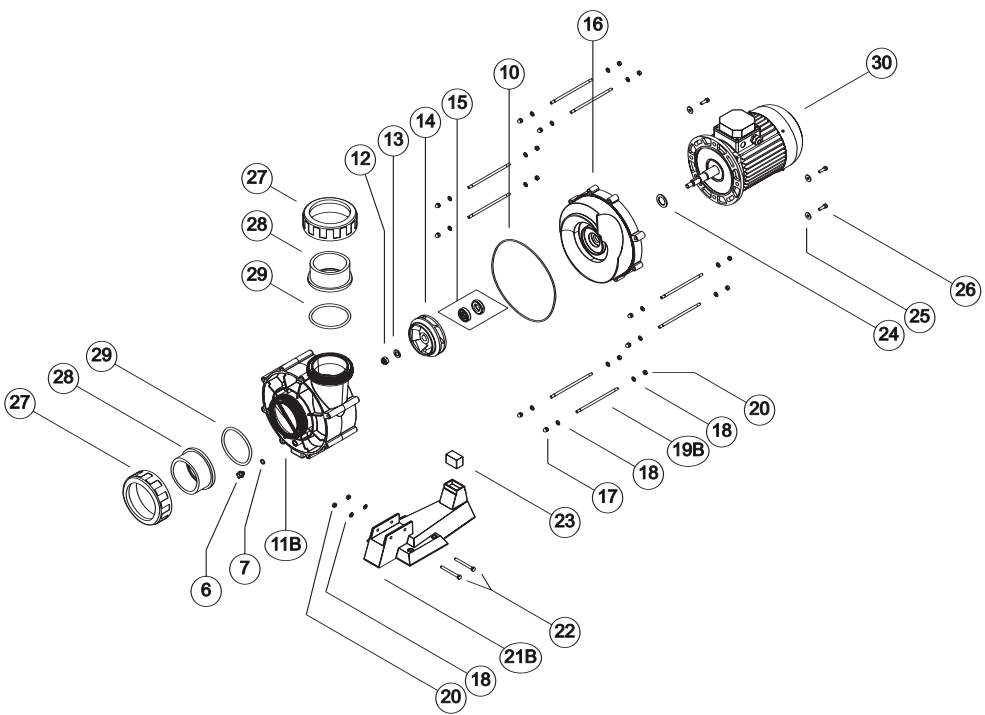
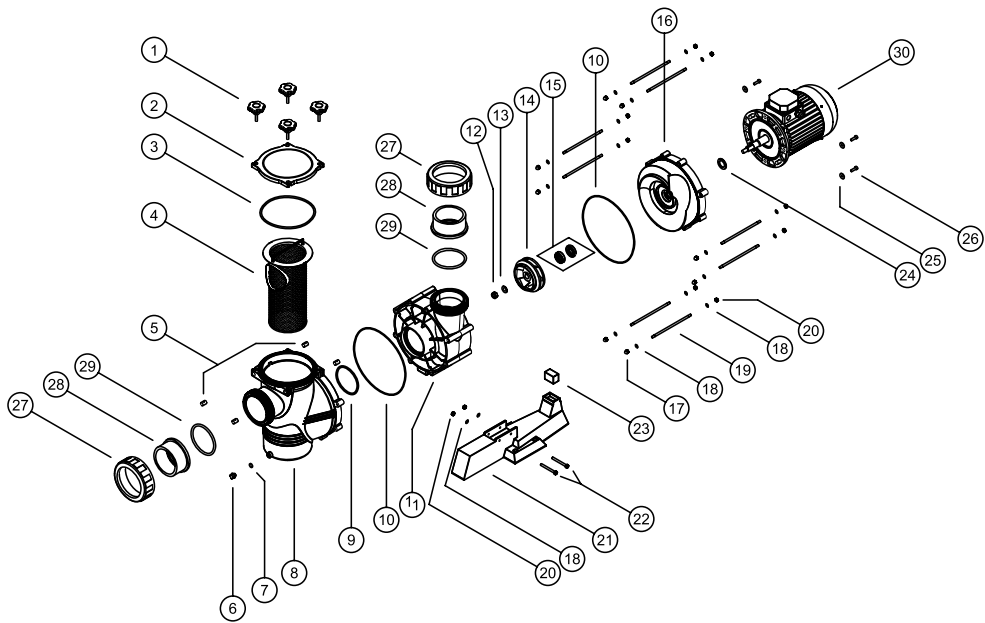
CODE	POWER		DIMENSIONS							
	kW	HP	A	B	Ø C	D	F	G	H	L
0400	2,9	4	255	255	90	105	330	200	470	510
0550	4	5,5	255	255	110	105	330	200	470	530
0750	5,5	7,5	255	255	110	105	330	200	470	530
1000	7,4	10	255	255	110	105	330	200	470	600
1250	9.2	12.5	255	255	110	105	330	200	470	645

FLOW SERIE WITH PREFILTER



FLOW SERIE WITHOUT PREFILTER





N°	NAME OF THE SPARE PART	UNIT	CODE
1	PREFILTER KNOB	4	HD001020
2	PREFILTER COVER	1	HD006025
3	PREFILTER COVER JOINT ø210 x 6.5	1	HD021150
4	PREFILTER BASKET	1	HD091010
5	PIN	4	HD026100
6	DRAIN PLUG 1/4"	1	HD036000
7	DRAIN PLUG O'RING	1	HD021100
8	PREFILTER BODY	1	HD041095
9	PREFILTER BODY UNION GASKET ø114 x 6	1	HD021145
10	BODY COVER JOINT ø288 x 4	2	HD021140
11	PUMP BODY WITHOUT SUCTION THREAD	1	HD041090
11B	PUMP BODY WITH SUCTION THREAD	1	HD041100
12	IMPELLER FIXING NUT M14 DIN 985	1	HD031085
13	IMPELLER WASHER	1	HD031020
14	IMPELLER 4 HP (PLASTIC)	1	HD051230
14	IMPELLER 5,5 HP (PLASTIC)	1	HD051235
14	IMPELLER 4 HP (BRONZE)	1	HD096050
14	IMPELLER 5,5 HP (BRONZE)	1	HD096055
14	IMPELLER 7,5 HP (BRONZE)	1	HD096060
14	IMPELLER 10 HP (BRONZE)	1	HD096065
14	IMPELLER 12,5 HP (BRONZE)	1	HD096070
15	MECHANICAL SEAL ø25	1	HD056015
16	PUMP BODY COVER	1	HD061050
17	BLIND NUT	8	HD031075
18	WASHER M8 DIN 125 A2	18	HD031010
19	ROD M8 x 220	8	HD026125
19B	ROD M8 x 190	8	HD026130
20	NUT M8 934-A2	10	HD031055
21	PUMP BASE, LONG	1	HD066025
21B	PUMP BASE, SHORT	1	HD066030
22	SCREW M8 x 80 exag. Head. Zinc	2	HD026135
23	SILENT-BLOCK AT-400 (50 x 30 x 45)	1	HD071025
23	SILENT-BLOCK AT-550, AT-750 (50 x 30 x 35)	1	HD071030
23	SILENT-BLOCK AT-1000 (50 x 30 x 25)	1	HD071035
23	SILENT-BLOCK AT-1250 (50 x 30 x 17)	1	HD071040
24	V-RING JOINT	1	MT001010
25	WASHER M8 DIN 9021 A2	4	HD031036
26	SCREW M8 x 25 DIN 912 (motor fixing)	4	HD026025
27	SOCKET NUT ø110 (5,5 - 7,5 - 10 - 12,5 CV)	2	HD076040
27B	SOCKET NUT ø90 (4 CV)	2	HD076045
28	ADAPTOR SOCKET ø110 (5,5 - 7,5 - 10 - 12,5 CV)	2	HD076035
28B	ADAPTOR SOCKET ø90 (4 CV)	2	HD076037
29	SOCKET O'RING ø121 x 8	2	HD021155
30	COMPLETE MOTOR 4 CV -3ph (230/400V)	1	MT106062
30	COMPLETE MOTOR 5,5 CV -3ph (230/400V)	1	MT106067
30	COMPLETE MOTOR 7,5 CV -3ph (230/400V)	1	MT106072
30	COMPLETE MOTOR 10 CV -3ph (230/400V)	1	MT106077
30	COMPLETE MOTOR 12,5 CV -3ph (230/400V)	1	MT106082
30	COMPLETE MOTOR 7,5 CV -3ph (400/690V)	1	MT106072-E
30	COMPLETE MOTOR 10 CV -3ph (400/690V)	1	MT106077-E
30	COMPLETE MOTOR 12,5 CV -3ph (400/690V)	1	MT106082-E