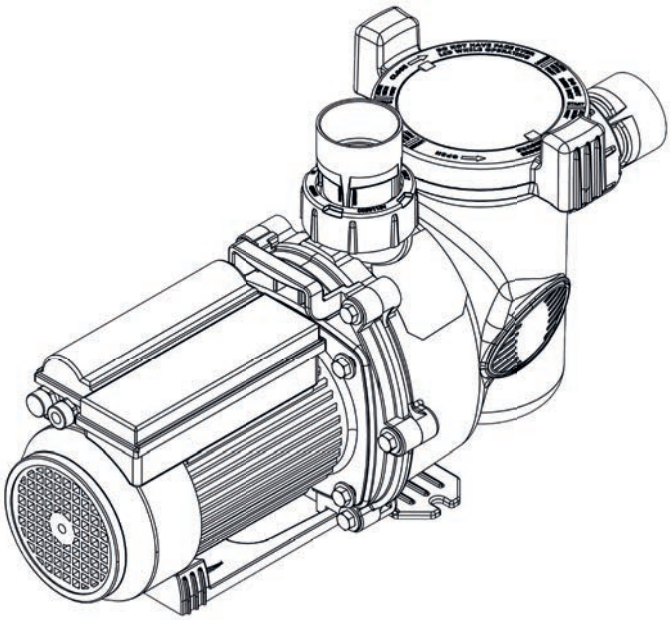
ZODIAC®

FloPro™



Instructions for installation and use
English

EN

More documents on:
www.zodiac-poolcare.com

H0547400.B - 2016/06

WARNINGS

- **Failure to respect the warnings may cause serious damage to the pool equipment or cause serious injury, even death.**
- **The appliance is intended for a specific pool use and must not be used for any use other than that for which it was designed.**
- **It is important that the equipment is operated by competent and qualified (both physically and mentally) people who have previously received the instructions for use. All persons not meeting these criteria must not approach the appliance in order to avoid exposure to dangerous elements.**
- **Keep the appliance out of the reach of children.**
- **The device must be installed by a qualified technician according to the manufacturer's instructions and in compliance with local regulations. The installer is responsible for installation of the equipment and for compliance with national installation regulations. Under no circumstances can the manufacturer be held liable in the event of failure to comply with applicable local standards.**
- **Incorrect installation and/or use may cause serious damage to property or serious injuries (possibly causing death).**
- **All equipment, even postage and packing paid, travels at the risks and perils of the recipient. The consignee shall make reservations in writing on the carrier's bill of lading if damage is detected, caused during transport (confirmation to be sent to the carrier within 48 hours by registered mail with acknowledgement of receipt). In the event of a device containing coolant that has been turned on its side, mention your reservations in writing to the carrier.**
- **If the appliance suffers a malfunction, do not try to repair the appliance yourself, contact a qualified technician.**
- **Refer to the warranty conditions for details of the permitted water balance values for operating the appliance.**
- **Eliminating or shunting one of the safety devices automatically voids the warranty, as does the replacement of parts using parts not manufactured by ourselves.**
- **Do not spray insecticide or any other chemical (inflammable or non-inflammable) in the direction of the appliance, as this may damage the body and cause a fire.**
- **The electrical supply to the appliance must be protected by a dedicated 30 mA differential residual current protection device, complying with the standards and regulations enforced in the country where it is installed.**
- **Before carrying out any operations, check that:**
  - **The voltage indicated on the maker's plate of the appliance corresponds to the mains voltage,**
  - **The power grid is adapted to the power requirements of the appliance, and is grounded.**
  - **The plug (where applicable) is suitable for the socket.**
- **In the event of abnormal function or the release of odours from the appliance, turn it of immediately, unplug it from its power supply and contact a professional.**
- **Before any intervention on the appliance, ensure that the latter is switched off and disconnected from the power supply, in addition to any other equipment connected to the appliance, and that the heating priority (where applicable) is deactivated.**
- **Do not disconnect and reconnect the appliance to the power supply when in operation.**
- **Do not pull on the power cord to disconnect it from the power supply.**
- **Do not handle the electrical elements with wet hands.**
- **Clean the terminal board or the power supply socket before connection.**
- **For any component or sub-assembly containing a battery: do not recharge or dismantle the battery, or throw it into a fire. Do not expose it to high temperatures or direct sunlight.**
- **In stormy weather, unplug the appliance to prevent it from suffering lightning damage.**
- **Do not immerse the appliance in water (with the exception of cleaners) or mud.**

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Recycling

This symbol means that your appliance must not be thrown into a normal bin. It will be selectively collected for the purpose of reuse, recycling or transformation. If it contains any substances that may be harmful to the environment, these will be eliminated or neutralised.
Contact your dealer for recycling information.

- **Before you do anything with the device, it is vital that you read this installation and user manual, as well as the "warnings and warranty" booklet delivered with the device. Failure to do so may result in material damage or serious or fatal injury and will invalidate the warranty.**
- **Save theses instructions during the device's life time.**
- **It is prohibited to distribute or modify this document in any way without authorisation from Zodiac®.**
- **Zodiac® is constantly developing its products to improve their quality; therefore, the information contained in this document may be modified without notice.**

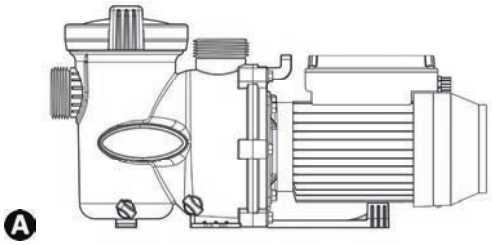
CONTENTS

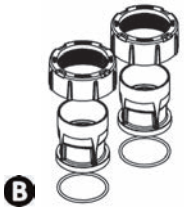
Tip: to make it easier to contact your dealer

- Write down your dealer's contact details to help you find them more easily and fill in the "product" information on the back of the manual; your dealer will ask you for this information.

1 Specifications

1.1 I Description





A	B
FloPro™ pump	2 x Ø63/50 mm union coupling

1.2 I Technical specifications

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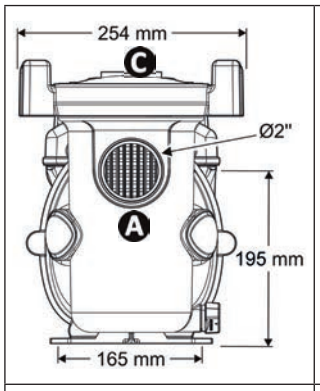
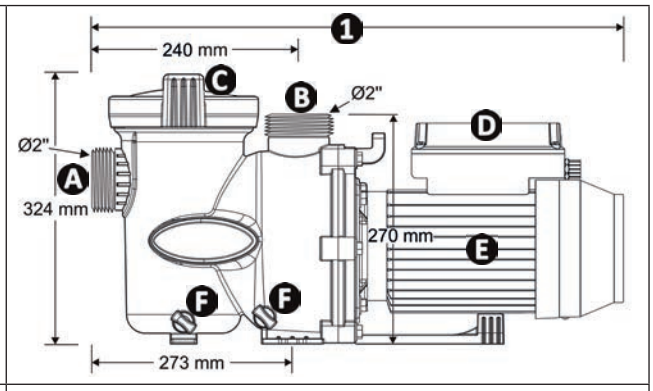
FloPro™	Unit	50M	75M	75T	100M	100T	150M	150T	200M	200T
Operating water temperature		2 to 35°C								
Motor voltage - nominal		230VAC-50Hz	230VAC-50Hz	400VAC-50Hz	230VAC-50Hz	400VAC-50Hz	230VAC-50Hz	230VAC-50Hz	230VAC-50Hz	400VAC-50Hz
Motor power - # phases		1P	1P	3P	1P	3P	1P	1P	1P	3P
Motor acceptable voltage variation		± 10% (during operation)								
Motor rated power HP	HP	0.5	0.75	0.75	1.0	1.0	1.5	1.5	2.0	2.0
Motor maximum input Power (P1)	W	800	800	800	933	1000	1359	1500	1750	2100
Motor rated output Power Watts (P2)	W	550	550	550	750	750	1100	1100	1500	1500
Motor rated amps	A	3.5	3.5	1.2	4.16	1.6	5.98	3.2	7.6	3.5
Motor ingress protection rating		IPX5								
Pump maximum flow	m³/h	16.8	18.6	18.6	22.9	22.9	27.4	27.4	35.5	35.5
Pump flow at 10 metres head	m³/h	10.3	13.2	13.2	15.8	15.8	20.8	20.8	27	27
Pump maximum pressure	mH2O	17.8	20.7	20.7	21.5	21.5	22.3	22.3	24.5	24.5
	bar	1.7	2	2	2.1	2.1	2.2	2.2	2.4	2.4
Pump pipe connections		2” threaded suction/discharge ports plus Ø63/50 mm union couplings								
Pump maximum water salinity		6g/L (6000 ppm)								

1.3 I Dimensions and component identification



Front



Side

A : Pool water intake

B : Pool water output

C : Primary filter cover

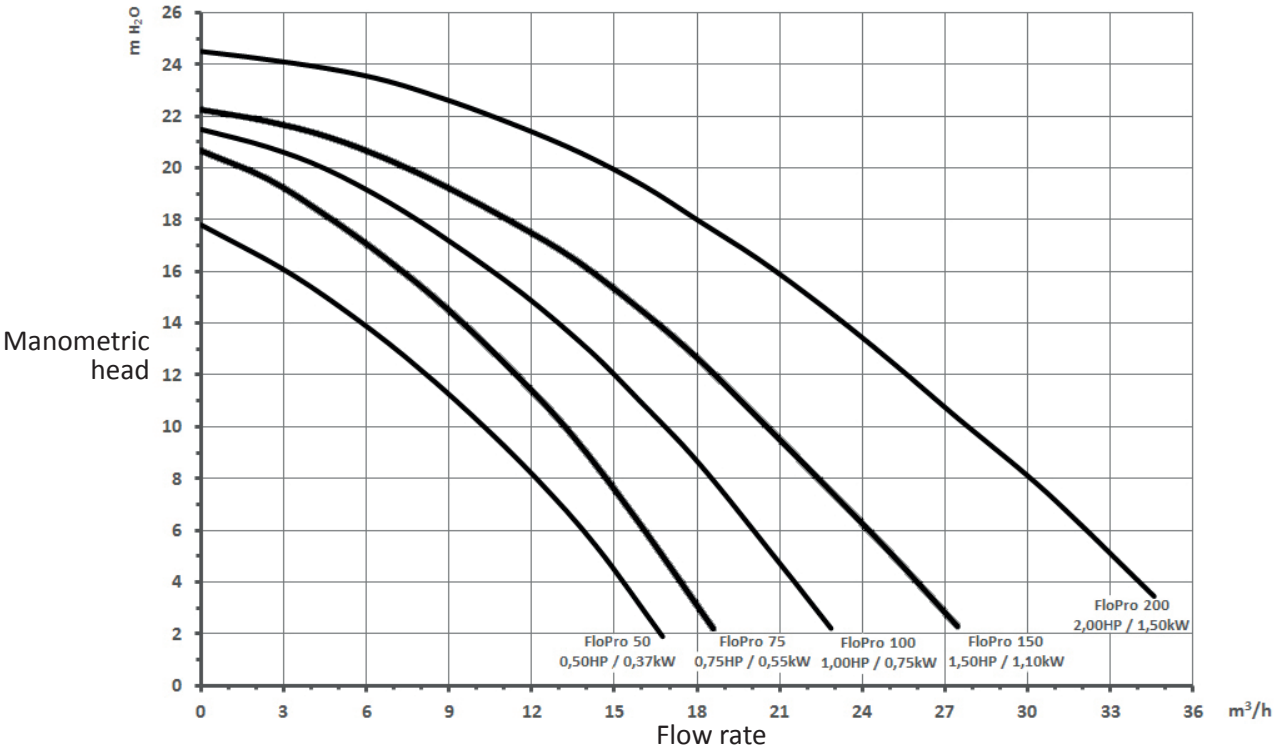
D : Electrical connection box

E : Pump motor

F : Drain

FloPro™	Unit	50M	75M	75T	100M	100T	150M	150T	200M	200T
1	mm	583	583	543	583	553	583	568	583	583
Weight	kg	13.5 (± 1kg depending on model)								

1.4 I Performance curves



2 Installation

2.1 I Selecting the location

- The pump must be installed:
  - before the filter, a heating and/or water treatment system,
  - at a minimum distance of 3.5 metres from the edge of the pool, to avoid any water being sprayed onto the equipment. Some standards allow for other distances. Refer to the regulations in effect in the country of installation.
  - ideally 30 cm below the water level,
  - out of an area subject to flooding, or on a base with drainage,
  - in a ventilated space to enable pump and motor to cool down.
- The pump must not be installed:
  - in an area subject to splashing or rain.
  - more than 1 m above the water level.
  - near a heat source or flammable gas.
- Easy access is required for maintenance work on the equipment.
- Place on a stable, solid (e.g. concrete floor) and level surface.
- If necessary, use the bases (2 types of base, not supplied, available as an option) to raise the pump to the level of the existing pipes.
- Anchor the pump to the ground using the adapted foundation bolt.

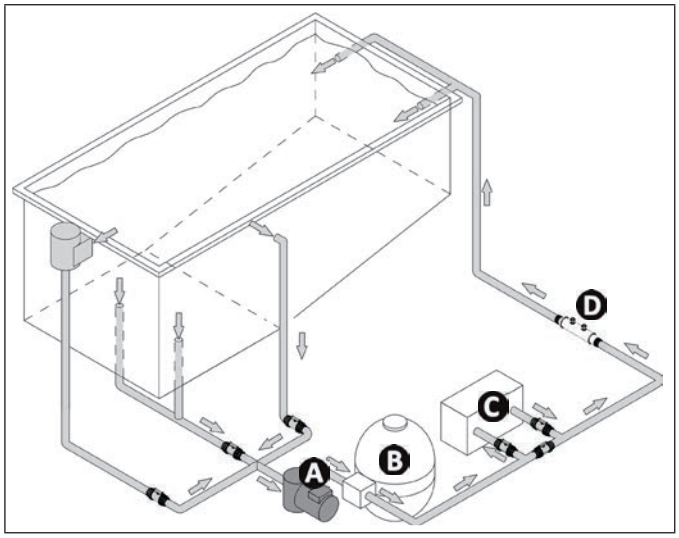
2.2 I Hydraulic connections

• Respect the direction of hydraulic connection (see § "1.3 I Dimensions and marking").

- Choose the dimension of the pipes according to the size of the pool and respecting the hydraulic rules which apply in the installation country.
- Performance curves are available in § "1.4 I Performance curves" for the pipe dimensions.

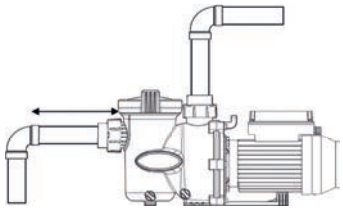
Pipes	Maximum suction rate at 1.8 metres/second	Maximum discharge rate at 2.4 metres/second
Ø 50 mm	14 m³/h	19 m³/h
Ø 63 mm	20 m³/h	27 m³/h

- For hydraulic connections, use the Ø63/50 mm union couplings via bonding (provided) or the 2'' threaded PVC couplings directly screwed onto the pump.
- Fit a non-return valve if the filter is installed above the water level.
- Fit suction and discharge isolation valves if the pump is installed below the water level.
- Avoid high points for more effective priming.
- Check that the hydraulic connections are correctly tightened and that there are no leaks.
- The pipes must be supported to prevent any risk of breakage due to the weight of water.

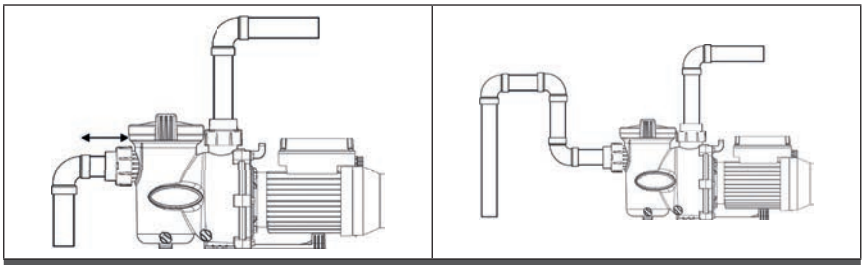


A: pump
B: filter
C: heating system
D: water treatment system

- Use as few elbow joints as possible. If there need to be more than 10 elbow joints on the hydraulic circuit, increase the pipe diameter.



- Suction pipe length = 4 x Ø



- Suction pipe too short
- Risk of cavitation

- Air retention
- Risk of incorrect primary filter filling

2.3 I Electricity supply connections

- **Turn off all switches and the main circuit breaker in pump electrical circuit before starting any servicing procedure. Failure to comply may cause a shock hazard, resulting in severe personal injury or death.**
- **Only a qualified and experienced technician is authorised to carry out cabling in the equipment or to replace the supply cable.**
- **In order to avoid overheating of the terminals which could create a fire hazard, make sure that the wiring terminals are properly tightened. Improperly tightened terminals will also void the warranty.**
- **The equipment must be securely connected to a suitable earth connection.**
- **Any unsuitable electrical connection will invalidate the warranty.**

- The device's electrical supply must be provided through a protection and circuit breaking device (not supplied) complying with the standards and regulations in force in the country where it is installed.
- Electrical protection: by circuit breaker (D curve), with a 30 mA dedicated differential circuit breaker (circuit breaker or switch) at the head of the line.
- The electrical supply must correspond to the voltage indicated on the device's information plate.
- The electrical supply cable must be insulated and protected against any abrasion or damage.
- Use the gland to pass the supply cable into the device.
- The equipment and the swimming pool and any other electrical equipment must be electrically bonded to earth.

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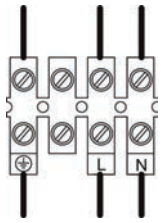
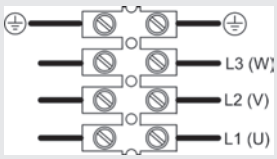
2.4.2 Power supply and clock

Connect the pump to the contact downstream of the swimming pool electrical cabinet's filtration clock.
The filtration unit clock directly controls the pump's electricity supply, which then starts the pump.

2.4.3 Connecting the motor's power supply

- Open the electrical connection box by unscrewing the 6 screws.
- Run the supply cable through the gland and connect it to the terminals in accordance with the power supply:

230 VAC-50Hz power supply = connection to the ⏚ (earth) and L-N terminals	
400 VAC-50Hz power supply = star connection (3x400V) to the L1 (U) -L2 (V) -L3 (W) + ⏚ (earth) terminals	

- **For three-phases models, before allowing water circulation into the pump, check the motor direction of rotation (arrow on the fan cowl).**

- Close the electrical connection box ans properly tighten the 6 screws.

3 Use

3.1 I Operating principle

The filtration pump forms the core of the pool and is essential as it is used to circulate water through the pool's different components, in particular the filter.
Its motor drives the turbine in rotation, which drives the water. The large strainer of the primary filter collects major debris to prevent the filter from becoming clogged too quickly or from becoming damaged.

3.2 I Operation

- **To prevent against any risk of explosion that may cause material damage, serious injury or even death, make sure that the hydraulic circuit is free of any debris or blockage and is not subject to excessive pressure.**
- **Never run the pump "dry" as this may damage it.**
- **The pre-filter strainer cover must be closed by hand (do not use any tools).**

- Check that the hydraulic connections are correctly tightened.
- Check that the pump is stable and level.
- The hydraulic circuit must be bled and not contain any foreign objects.
- The pump pre-filter strainer cover must be correctly closed (by hand) and its seal clean and in place.
- Check that the valves are open.
- Start the pump.
- The pump is self-priming. However, you are strongly recommended to fill the pre-filter strainer with water before starting it up for the first time to facilitate the procedure.
- The pump has a priming capacity up to 3 metres above the swimming pool water level and at sea level elevation (if the hydraulic circuit is perfectly sealed).
- Bleed any air present in the filtration circuit using the bleed normally present on the filter (refer to the swimming pool filter's manual).
- Check that there are no leaks on the hydraulic circuit.

4 Maintenance

4.1 I Winterizing

- **The pump must be fully winterized in the event of a risk of frost or extended electrical disconnection. If the pump freezes it may cause severe damage and invalidate the warranty.**
- **To avoid damaging the equipment with condensation, do not fully cover it.**

- If the pump is positioned below the water level, close the isolation valves at suction and discharge.
- Drain the pump (using the 2 bleed screws) and the hydraulic circuit, following the swimming pool manufacturer's instructions.
- Remove the 2 bleed screws and keep them to reinstall them when the pump is put back into operation.
- You are recommended to disconnect the electrical power cable then unscrew the hydraulic connectors to store the pump in a dry place away from frost.
- Store the pump/unit in a dry environment at a temperature which is as constant as possible to avoid the risks of condensation who can corrode windings and metal parts.

4.2 I Maintenance

- **It is recommended that maintenance be performed on the device at least on a yearly basis to ensure proper operation, maintain performance levels and prevent some potential failures. These operations are carried out at the user's expense, by a technician.**

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4.2.1 User maintenance

- Make sure that the pump and electrical compartment contain no foreign objects.
- Clean the outside of the appliance, do not use solvent-based products.
- Clean the pre-filter strainer, the cover and the seal regularly.
- Check that the pre-filter strainer is correctly in place, or it may prevent the cover from closing fully.

4.2.2 Maintenance to be carried out by a qualified technician

- Check the electrical connection/bonding of the metal parts to earth.
- Check that the electrical cables are correctly tightened and connected and that the electrical unit is clean.

5 Troubleshooting

- **Before you contact your dealer, please carry out these few simple checks using the following tables if a problem occurs.**
- **If the problem continues contact your dealer.**
- **: Actions reserved for a qualified technician**

5.1 I Device behaviour

The pump does not start / the motor does not turn.	• Filtration outside of a scheduled operating range (“Auto” mode). Check the filtration clock settings. • Electric power cut. Check the circuit breaker(s). • Check the connection between the power cable and the motor terminals. • Check that the motor shaft rotates freely. Check that there is no debris in the primary filter strainer. • If debris remains, remove the pump to access the turbine.
The pump doesn’t prime / air can be seen in the primary filter strainer.	• Check the position of all valves in the hydraulic circuit. • Air is stuck in the circuit, drain the hydraulic circuit (drain screw on the filter). • The pool’s water level is too low, air is being sucked into the circuit, fill the pool. • The seal of the primary filter strainer lid is defective, check the condition of the seal and the correct air-tightness of the lid. • For three-phases models, check the motor direction of rotation (arrow on the fan cowl).
Low flow rate / low filter pressure	• Primary filter basked full of debris: clean. • Air leak in the circuit. Check all tightening torques. • The turbine and the pump diffuser are blocked or worn, replace. • The diffuser seal is worn, replace. • For three-phases models, check the motor direction of rotation (arrow on the fan cowl).
Low flow rate / high filter pressure	• The filter is clogged. Wash the filter (or the cartridge depending on the case). • Check the position of all valves in the hydraulic circuit.
Pump making a lot of noise	• Air leak or cavitation in the suction piping. Check the position of the valves and adjust where necessary. • Pump incorrectly positioned on the ground. Check that it is resting in a flat position on a hard, horizontal ground. Use anti-vibration studs where necessary. • A foreign body is present in the primary filter strainer. • A foreign body is present in the pump body (in this case, the pump must be removed). • For three-phases models, check the motor direction of rotation (arrow on the fan cowl).
Leak between the pump body and the motor	• The mechanical seal is damaged or defective, replace
The pump heats up and switches off	• The motor is overheating due to too little ventilation. Check that there is enough clear space around the motor. • There is an electrical fault. Check the power connections and check the mains voltage, which must not vary.

ZODIAC®

Votre revendeur *Your retailer*	
Modèle appareil *Appliance model*	
Numéro de série *Serial number*	

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