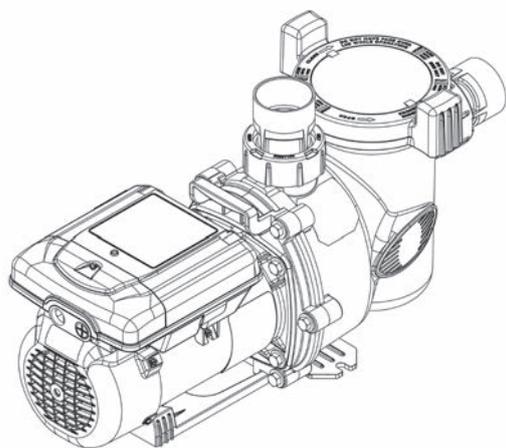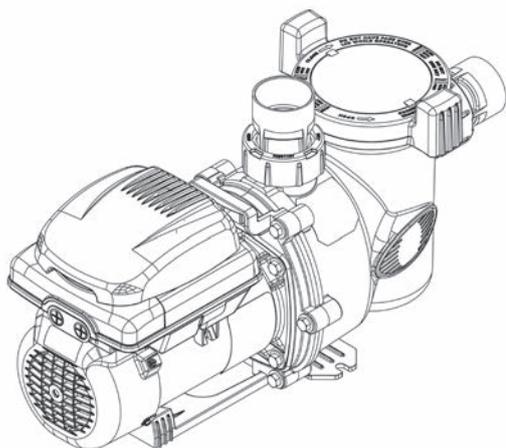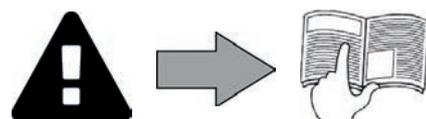# ZODIAC®

FloPro™ VS

Instructions for installation and use - English
Filtration pump
Translation of the original instructions in french

EN

More documents on:
www.zodiac-poolcare.com

⚠️ WARNINGS

- **Failure to respect the warnings may cause serious damage to the pool equipment or cause serious injury, even death.**
- **The appliance is intended to be used only for swimming pools and spas; it must not be used for any purpose other than that for which it has been designed.**
- **It is important that the appliance is operated by people who are competent and qualified (both physically and mentally), after having read 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 appliance must be installed according to the manufacturer's instructions and in compliance with local standards. The installer is responsible for installing the appliance and for compliance with national installation regulations. Under no circumstances may the manufacturer be held liable in the event of failure to comply with applicable local installation 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 latter shall issue reserves in writing on the carrier's delivery slip if damage is detected, caused during transport (confirmation to be sent to the carrier within 48 hours by registered letter). In the event that an appliance containing coolant 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 it yourself. Instead contact a qualified technician.**
- **Refer to the warranty conditions for details of the permitted water balance values for operating the appliance.**
- **If any safety device is removed, bypassed, or shunted, the warranty will automatically be void. This also applies if any parts are replaced with parts that are not acquired from an authorized Zodiac parts outlet.**
- **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 power supply to the appliance must be protected by a dedicated 30 mA residual current device, complying with the standards and regulations in force in the country in which it is installed.**
- **Do not use an extension cord to plug in the appliance; plug it directly into a proper wall socket or outlet.**
- **Before carrying out any operations, check that:**
  - **The voltage indicated on the appliance information plate corresponds to the mains voltage.**
  - **The power grid is adapted to the power requirements of the appliance, and is properly grounded.**
  - **The plug (where applicable) is suitable for the socket.**
- **In the event of abnormal operation or the release of odours from the appliance, turn it off immediately, unplug it from its power supply and contact a professional.**
- **Before any access to the appliance for any required service or maintenance, ensure that it is switched off and disconnected from the power supply.**
- **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 attempt to carry out any servicing or maintenance operations with wet hands or while the appliance is wet.**
- **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.**
- **This pump is compatible with all types of water treatment used in a swimming pool. Refer to the Zodiac® warranty conditions for details of the permitted water balance values.**
- **Never run the pump dry or out of the water (this will invalidate the warranty)**

- **Before handling the appliance, it is essential that you read this installation and user manual, as well as the "warnings and warranty" booklet delivered with the appliance. Failure to do so may result in material damage or serious or fatal injury and will void the warranty.**
- **Keep and pass on these documents for later viewing throughout the appliance's service life.**
- **The distribution or modification of this document in any way is prohibited, without prior authorisation from Zodiac®.**
- **Zodiac® is constantly developing its products to improve their quality. The information contained herein may therefore be modified without notice.**

CONTENTS

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

⚙ ❶ Specifications

❯ 1.1 I Description

or
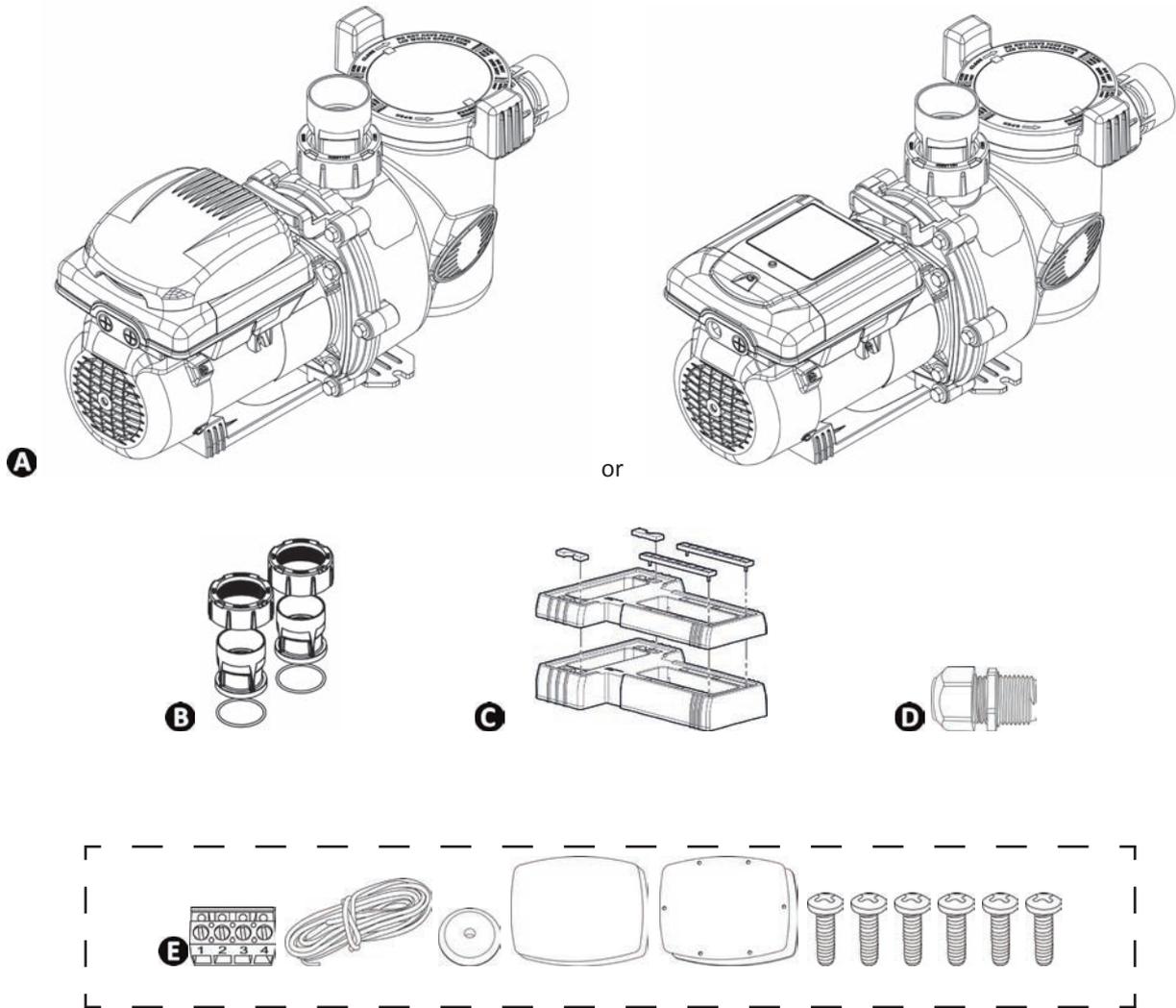
A	FloPro™ VS	JEP (with user interface)	AUT (without user interface)
B	Ø63/50 mm connectors (x2)	✔	✔
C	Pump bases (x2)	✔	✔
D	Cable gland (x2)	✔	✔
E	Remote user interface kit	✔	

❷ 1.2 I Technical specifications

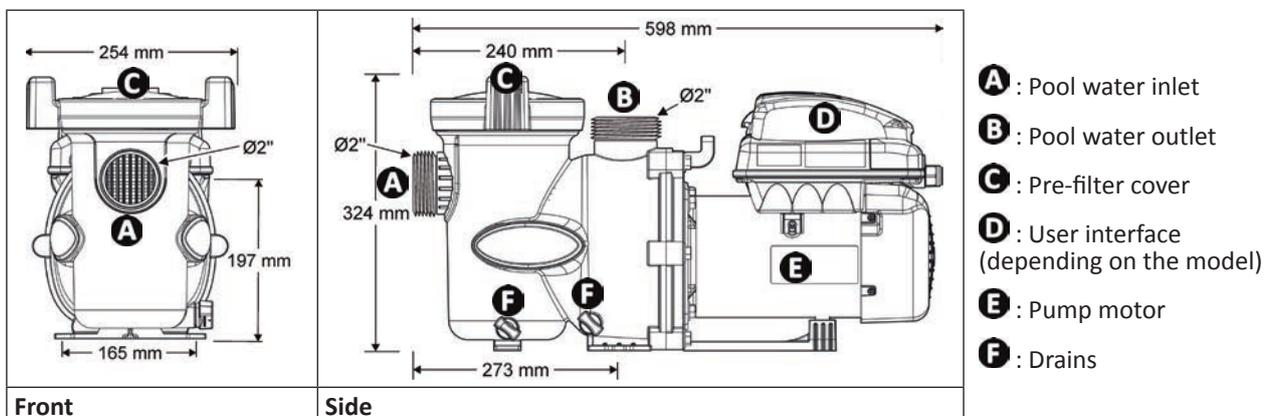| FloPro™ VS	Unit	
Operating water temperature		2 to 35°C
Operating air temperature		2 to 50°C
Nominal voltage of motor		230 Vac-50 Hz
Motor power - phases		1 Ph
Admissible variation in motor voltage		± 10% (during operation)
Motor output power (P2)	HP	1.65
	kW	1.2
Maximum motor input power (P1)	kW	1.5
Maximum motor amperage	A	5.22
Cable cross-section	mm²	3x1.5
		3G1.5
Electrical protection	A	16
Motor protection rating		IPX4
Maximum pump flow	m³/h	30.7
Pump flow rate at 8 metres of head	m³/h	26.0
Maximum pump head	mH₂O	21.5
	bar	2.1
Pump operation		from 600 to 3,450 rpm
Settings		in intervals of 10 rpm
Number of programmable speeds		8
Pump pipe connection		2" threaded suction/discharge Ø63/50 mm union couplings
Maximum pump salinity		6g/L (6000 ppm)

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

❷ 1.3 I Dimensions and marking

Front   **Side**

Ⓐ : Pool water inlet

Ⓑ : Pool water outlet

Ⓒ : Pre-filter cover

Ⓓ : User interface (depending on the model)

Ⓔ : Pump motor

Ⓕ : Drains

Weight	17 Kg (± 0.5 Kg depending on the model)

1.4 I Performance curves

mH₂O

Manometric head

Flow rate
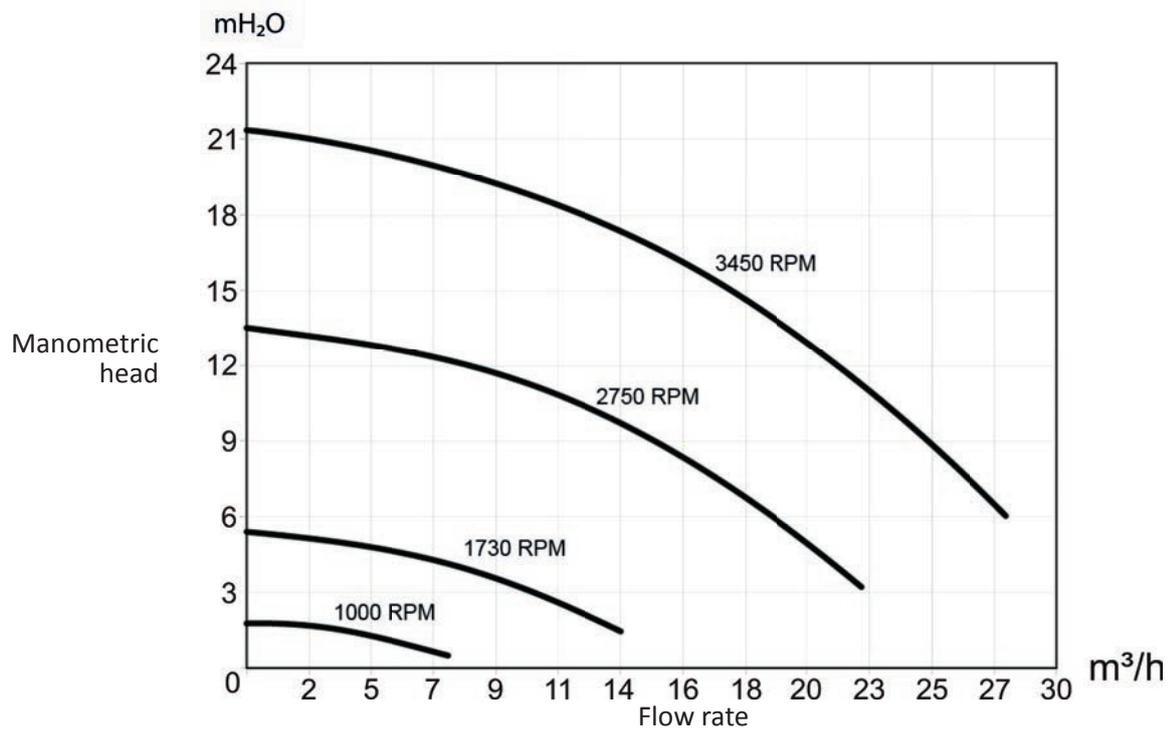
🔧 ② Installation

⊗ 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 appliance. Some standards allow for other distances. Refer to the regulations in effect in the country of installation.
 - ideally 30 cm below the water level,
  - outside areas liable to flooding, or on a base with drainage,
  - in a ventilated area to allow the pump and motor to cool.
- The pump must not be installed:
  - in an area subjected to splashing, rain or exposed to direct sunlight.
  - more than 3 m above the water level.
  - near a heat source or source of flammable gas.
  - in an area that cannot be cleaned or kept free of leaves, dry foliage, and other potentially flammable items
- Easy access is required for maintenance work on the appliance.
- Place on a stable, level and solid surface (e.g. concrete floor).
- If necessary, use the bases provided (1 thin + spacers, 1 thick, use only one or both together) to raise the pump to the level of the existing pipework.
- Anchor the pump (and the base(s) where applicable) to the ground using suitable foundation bolts.
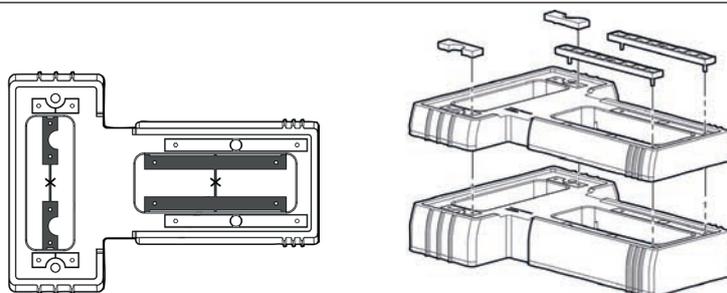

Bases and dividers

⊘ 2.2 I Hydraulic connections

- Choose the piping size according to the pool size and in compliance with the hydraulic rules applicable in the country of installation.
- Performance curves are available in § "1.4 I Performance curves" for the pipe dimensions.
- For hydraulic connections, bond the Ø63/50 mm union couplings (provided) or use the 2'' threaded PVC couplings directly screwed onto the pump.
- Fit a check valve if the pump is installed above the water level.
- Fit suction and discharge isolation valves if the pump is installed below the water level.
- To help prevent difficulty in priming, install the suction pipe without high points, which can trap air
- Check that the hydraulic corrections 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 the water.
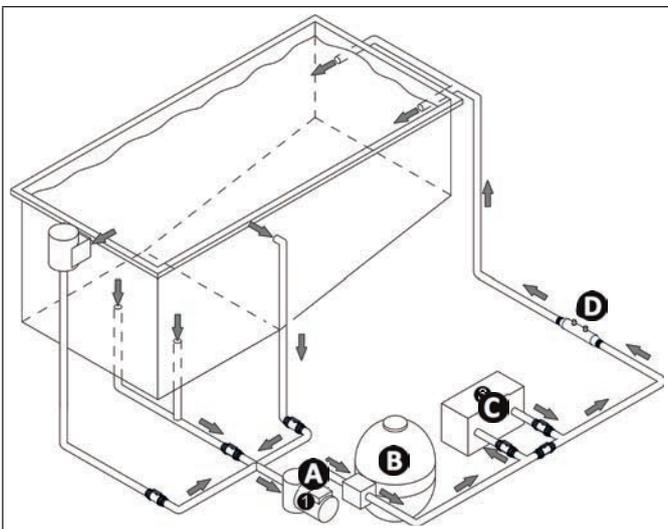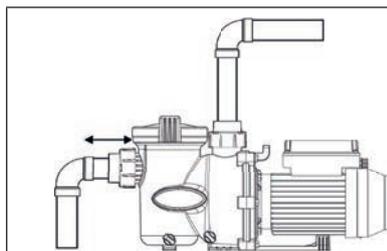
A: pump

B: filter

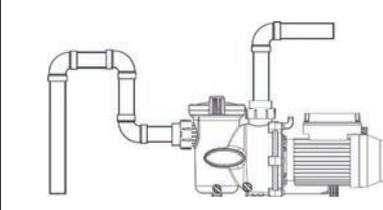**C**: heating system

D: water treatment system

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

✔
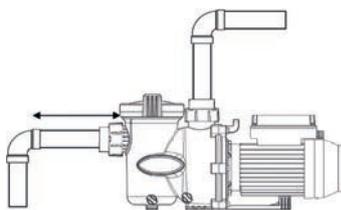
- Suction pipe length = 4 x Ø

✘

- Suction pipe too short
- Risk of cavitation

- Air retention
- Risk of incorrect pre-filter filling

❷ 2.3 I Electricity supply connection

> ⚠️
> - **Connect the pump so that the mains power supply is never inadvertently interrupted when a speed is being used. The speeds are monitored and controlled by the user interface or by the external motor controller, and not by the mains power supply (see § "3.4.4 Timers").**
> - **Before any any work on or inside the appliance you must disconnect the electricity supply to avoid the risk of electric shock which may cause material damage, serious injury or even death.**
> - **Only a qualified and experienced technician is authorised to perform works, including cabling work, or to replace the power cord.**
> - **To prevent overheating of the terminal board, which could create a fire hazard, check that all terminals have been properly tightened. Loose terminals will void the warranty.**
> - **The appliance must be connected to the earth.**
> - **Any unsuitable electrical connection will invalidate the warranty.**

- The pump will only start when commanded to do so via its user interface or via an external controller (for example AquaLink® TRi or iQPUMP).
- The appliance'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 in which it is installed.
- Electrical protection: by circuit breaker, with a 30 mA specific residual-current circuit breaker (circuit breaker or switch) at the head of the line.
- The power supply must correspond to the voltage indicated on the appliance's information plate.
- The power cord must be insulated and protected against abrasions and damage.
- Use the gland to pass the power cord into the appliance.
- The appliance and the swimming pool and any other electrical equipment must be connected to the earth.

- Open the electric box in front of the user interface (where present) by removing its screw.
- Run the power cord through the gland and connect it to the terminals:
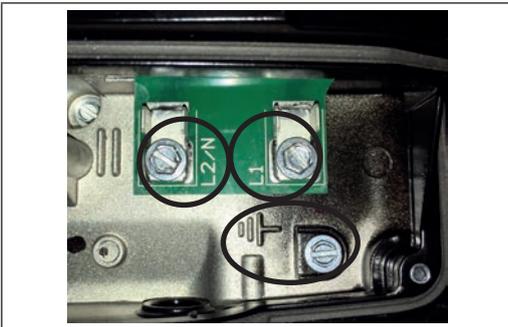
Power supply 230 Vac-50Hz
= connection to the terminals ⏚ (earth), L2/N (neutral) et L1 (phase)

- Close the electric box and properly tighten its screw.

❯ 2.4 I Connecting the user interface (depending on the model)

2.4.1 Default user interface connection

⚠
- **In order to prevent all risk of electrocution, which can result in serious injury or loss of life, check that the appliance has been disconnected from the power supply before performing the following steps.**
- **Connections to an RS485 terminal board: 1 = red ; 2 = black ; 3 = yellow ; 4 = green**
- **Do not cut the RS485 cable as this will prevent the user interface from being reconnected to the pump and will make it impossible to restore the factory settings. The cable is fixed to the pump and cannot be removed or extended.**

• The pump communicates with its user interface using an RS485 cable (4 wires) **C**.

A : pump electric compartment

B : pump RS485 terminal board

C : pump RS485 cable

D : user interface

E : user interface RS485 terminal board

Description of the pump's technical compartment

Position of the switches for control via the user interface
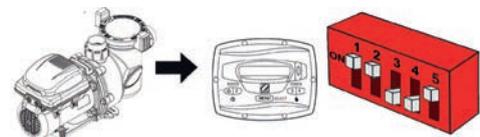
1	ON
2	ON
3	OFF
4	OFF
5	ON

2.4.2 Remote user interface

• This interface can be installed in another location using the supplied remote interface kit.

> ⚠️
> • **In order to prevent risk of electrocution, which can result in serious injury or loss of life, check that the appliance has been disconnected from the power supply before performing the following steps.**
> • **Connections to an RS485 terminal board: 1 = red ; 2 = black ; 3 = yellow ; 4 = green**
> • **Do not cut the RS485 cable as this will prevent the user interface from being reconnected to the pump and will make it impossible to restore the factory settings. The cable is fixed to the pump and cannot be removed or extended.**
> • **Never lay these low-voltage cables in the same pipe as high-voltage cables.**

Ⓐ : pump electric compartment

Ⓑ : pump RS485 terminal board

Ⓒ : pump RS485 cable

Ⓓ : user interface

Ⓔ : user interface RS485 terminal board

Ⓕ : cap to be unscrewed to position the cable gland

Description of the pump's technical compartment
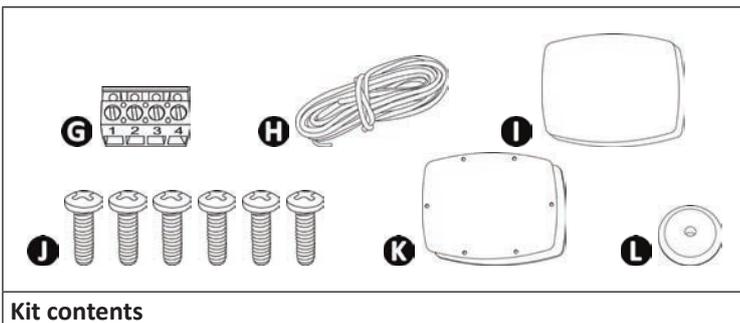
Ⓖ : RS485 terminal board

Ⓗ : RS485 cable extension

Ⓘ : plastic cover + foam gasket

Ⓙ : screws

Ⓚ : user interface wall mount

Ⓛ : grommet

Kit contents

❶

- Open the electrical compartment **Ⓐ** in front of the user interface **Ⓓ** by unscrewing the screw and lifting the cover.
- Unscrew the 6 screws securing the user interface **Ⓓ** to the pump.
- Unscrew the 4 wires from the user interface terminal board **Ⓔ**.

❷

- Disconnect the RS485 terminal board **Ⓑ** and put it aside.
- Unscrew the cap **Ⓖ** and install a cable gland to pass the RS485 cable **Ⓖ** out of the electrical compartment.
- Provide the correct length of cable for the extension and connect it to the RS485 terminal board **Ⓕ**, then connect it inside the electrical compartment **Ⓐ**.

❸

- Fit the cover and the foam gasket **Ⓘ** in the position of the user interface on the pump using the 6 screws **Ⓙ**.

❹

- Drill a hole in the position marked in the centre of the base **Ⓚ**, then install the grommet **Ⓛ**.
- Secure the wall mount **Ⓚ** onto a stable wall (using screws suited to the support, not supplied), away from humidity and direct sunlight.
- Connect the other end of the RS485 cable **Ⓖ** to the user interface terminal board **Ⓔ**.
- Attach the user interface **Ⓓ** onto the base **Ⓚ** using its 6 screws.

2.4.3 Optional connection of an external "on/off" contact

- You can connect an external dry contact **Ⓑ** to activate or deactivate a speed in the case of a backwash or when using a booster pump.
- Access the printed circuit board at the rear of the user interface **Ⓐ**.
- Connect the contact to 2 terminals of the J3 connector: COMMON + INPUT1, 2, 3 or 4 depending on the speed you wish to activate using the contact (INPUT1 = speed 1, INPUT2 = speed 2, INPUT3 = speed 3, INPUT4 = speed 4).
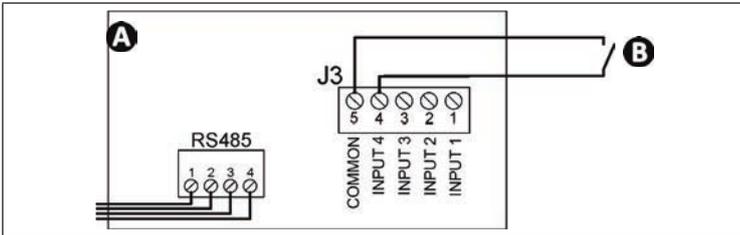
Ⓐ : user interface

Ⓑ : external "on/off" contact

- When the contact is closed, the regulation interface will display:

```
R E M O T E   E N A B L E D
1 2 : 3 0 P M          R P M : 1 2 0 0 ⬍
```
and the pump will start at the speed selected on the J3 connector.

- Speed 4, by default known as | C L E A N E R |, is equipped with a 30-minute timer. When the contact is opened, a countdown is displayed:

```
*   P U M P   W I L L   R E M A I N   *
*       O N   F O R   2 9 : 3 0       *
```
.

> ℹ️ **Tip: instructions to follow to connect an external "on/off" contact**
> - To connect this function, the user interface must be remote in order to pass the cable through the grommet on the base (see procedure § "2.4.2 Remote user interface").
> - In the case of connection to an AquaLink® TRi external controller, this function will be automatically proposed by the controller.

❷ 2.5 I Connection to an external controller

2.5.1 Connection to iQPUMP

> ⚠️
> - **In order to prevent risk of electrocution, which can result in serious injury or loss of life, check that the appliance has been disconnected from the power supply before performing the following steps.**
> - **Connections to an RS485 terminal board: 1 = red ; 2 = black ; 3 = yellow ; 4 = green**
> - **Do not cut the RS485 cable as this will prevent the user interface from being reconnected to the pump and will make it impossible to restore the factory settings. The cable is fixed to the pump and cannot be removed or extended.**
> - **Never lay these low-voltage cables in the same pipe as high-voltage cables.**
> - **The user interface (where present) becomes inactive if the pump is connected to the iQPUMP.**

1	ON
2	ON
3	OFF
4	OFF
5	ON

Position of the switches for control via iQPUMP

- To install and connect the iQPUMP, refer to the instruction manual provided with the appliance.
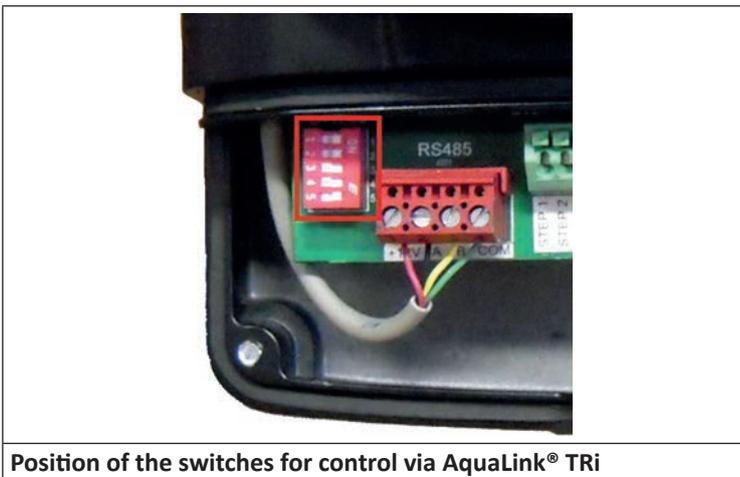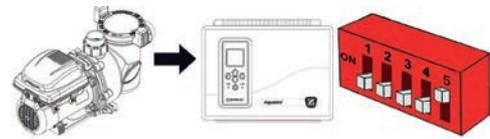
2.5.2 Connection to AquaLink® TRi

⚠
- **In order to prevent risk of electrocution, which can result in serious injury or loss of life, check that the appliance has been disconnected from the power supply before performing the following steps.**
- **Connections to an RS485 terminal board: 1 = red ; 2 = black ; 3 = yellow ; 4 = green**
- **Do not cut the RS485 cable as this will prevent the user interface from being reconnected to the pump and will make it impossible to restore the factory settings. The cable is fixed to the pump and cannot be removed or extended.**
- **Never lay these low-voltage cables in the same pipe as high-voltage cables.**
- **The user interface (where present) becomes inactive if the pump is connected to the AquaLink® TRi.**

- Open the electrical compartment in front of the user interface by unscrewing the screw and lifting the cover.
- Disconnect the RS485 terminal board and put it aside.
- Connect the supplied RS485 cable extension between the AquaLink® TRi and the pump using the RS485 terminal boards.
- Refer to the AquaLink® TRi user and installation manual to register and start using the pump.
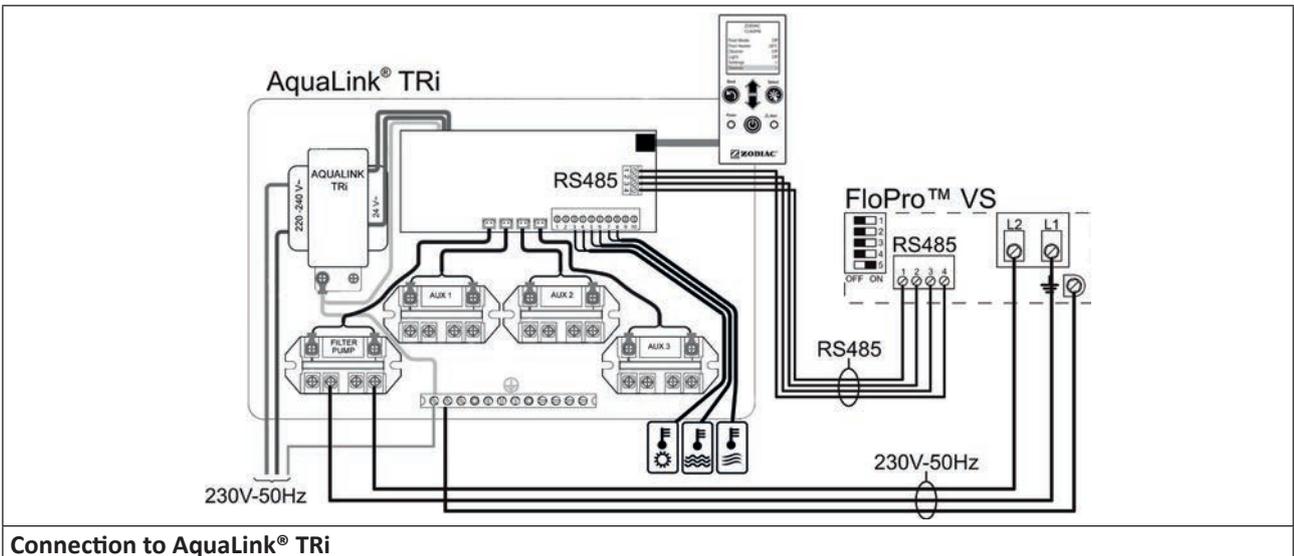
1	OFF
2	OFF
3	OFF
4	OFF
5	ON

Position of the switches for control via AquaLink® TRi

Connection to AquaLink® TRi

❯ 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 pre-filter collects major debris to prevent the filter from becoming clogged too quickly or from becoming damaged.

❯ 3.2 I User interface presentation (depending on the model)

Ⓐ PRESS SPEED OR MENU → **Ⓑ** 12:30PM PUMP IS OFF → **Ⓒ** **Pump off**	**Ⓐ** : Time **Ⓑ** : To activate a speed **Ⓒ** : Pump status
Ⓐ 2:SPEED 2 → **Ⓓ** 12:30PM RPM:1200 ↕ → **Ⓔ** **Pump on**	**Ⓐ** : Time **Ⓓ** : Name of the active speed **Ⓔ** : Pump speed

Symbol	Description
MENU	• Menu access button • Confirm a selection
☆	• Pre-set "eStar" speed button (1,750 rpm) • Sub-menu back button
2 3 4	• Pre-set speed buttons
∧ ∨	• Rotational speed modification keys • Menu browser key (press and hold to scroll through the values at increasing speed)

ⓘ **Tip: pump displays**
- RPM = rotations per minute
- ↕ = indicates that the speed can be increased or reduced in intervals of 10 rpm using the **∧** and **∨** keys.
- To change the screen's display language, see § "3.5 I Additional user functions (model with interface only)"

ⓘ **Tip: saving settings**
The user interface has a battery that is used to save the time and recorded settings in its memory when the pump is disconnected from the power supply.

❯ 3.3 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 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 bodies.
- The pump pre-filter strainer cover must be correctly closed (by hand) and its gasket clean and in place.
- Check that the valves are open.
- Start a speed; the pump always starts in "priming" mode (high speed).
- The pump is self-priming. However, it is strongly recommended that you 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.

❯ 3.4 I User functions (model with interface only)

3.4.1 Locking and unlocking the keypad

- Press and hold ⋀ and ⋁ for 5 seconds: `* KEYPAD LOCKED * 12:30PM PUMP IS OFF` is displayed as long as the keypad is locked.
- To unlock, press and hold ⋀ and ⋁ for 5 seconds; the message disappears.

3.4.2 Starting or stopping a speed

Speed	Keys to start or stop a speed	Default speed
"eStar" speed	✭	1,750 rpm
Speed 2	2	2,750 rpm
Speed 3	3	2,750 rpm
Speed 4	4	2,750 rpm
Speed 5, 6, 7 or 8	MENU then ⋀ or ⋁ then MENU to confirm	2,750 rpm
Priming speed	Automatic at start-up	2,750 rpm for 3 minutes

- When the pump is running, it displays `2:SPEED 2 12:30PM RPM:1200⇕` (speed No. and name, time, operating speed), and an LED lights up over the key corresponding to the speed.
- For speeds 2, 3, 4, 5, 6, 7 and 8, you can change the default speed by pressing ⋀ or ⋁ when the speed is running (from 600 to 3,450 rpm). Any changes made are automatically saved.
- To set the "eStar" default speed, see § "3.6 I Additional functions for professionals only (model with interface only)".
- To stop the pump, press the key for the current operating speed (✭, 2, 3 or 4), or press MENU (speeds 5, 6, 7 or 8).

3.4.4 Timers

⚠️
- **To prevent against any risk of material damage or injury, you are strongly encouraged to use the "Timers" when the pump is not managed by an external controller, in order to ensure that no speed is running in the event of a general power cut.**
- **"Timers" (programmes with scheduled pump start and stop times) can be configured for "eStar" speed and speed No. 2.**
- **"Timers" run in the same manner every day of the week.**

- To access the "Timer" programme, the speed that you want to programme must be running ("eStar" speed or speed No. 2):
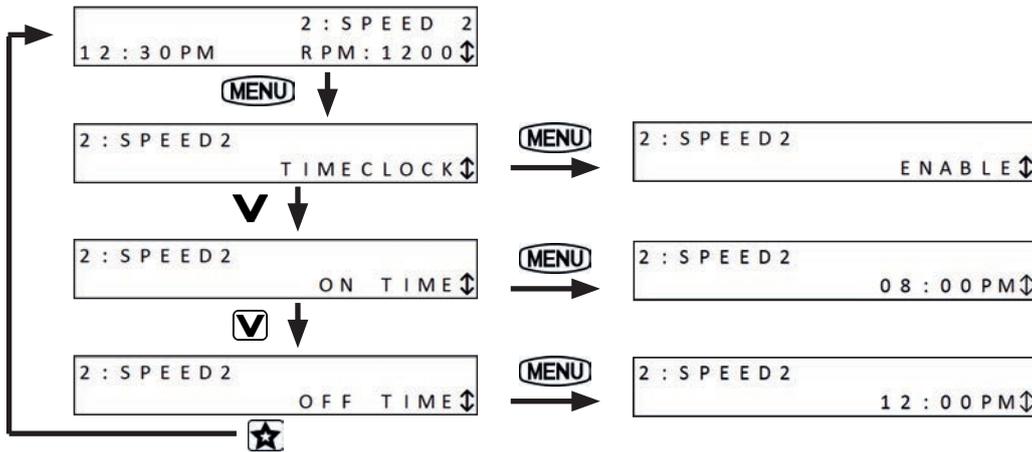
	Speed LED	Clock display
		🕐 2:SPEED2 12:30PM RPM:1200↕
Timer active Pump on	red	yes
Timer active Pump off	green	yes
Timer inactive	/	no

- To deactivate an active Timer:
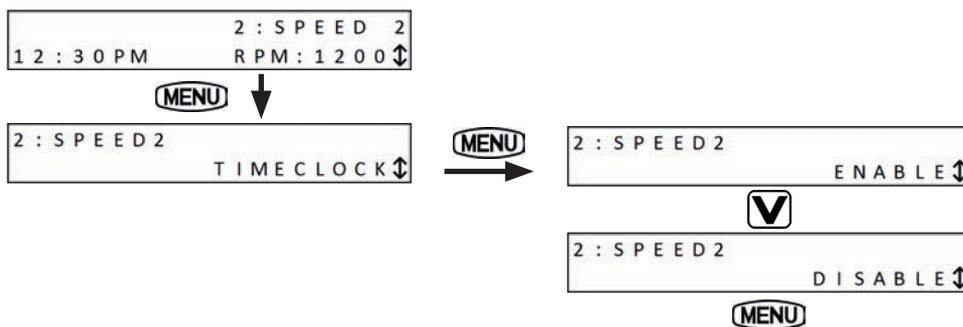
ℹ️ **Tip: Timer operation**
- 2 Timers can be activated at the same time; the Timer with the highest speed will take priority.
- The pump can be stopped manually when a Timer is running by pressing the button for the active speed. The Timer will resume normal activity during the next cycle.
- If the pump is started manually, and a Timer is active, it will stop at the end of the programmed Timer.

❯ 3.5 I Additional user functions (model with interface only)

To access the user menu when the pump is off, press and hold [MENU] for 5 seconds:

```
SELECT  USER  SETUP
              SET  TIME⬍
```

Use the [⋀] or [⋁] keys to browse the menu.

To exit the menu, press the [★] key or refrain from performing any actions for 1 minute.

`SELECT  USER  SETUP`
`              SET  TIME⬍`
	`SET  TIME`
	`              12:30PM⬍`
	The time must be set in order to use the "Timer" function.
	AM = before midday (ante meridiem)
	PM = after midday (post meridiem)

`SELECT  USER  SETUP`
`          LABEL  SPEED⬍`
	To select the speed number that you want to label:
	`SELECT  SPEED`
	`          1:FILTRATION⬍`
	Then select labelling mode:
	`SELECT  LABEL  TYPE`
	`              GENERAL⬍`
	The "General" setting proposes a list of names:
	- Filtration, - Cleaning,
	- Spa, - Spa Jets,
	- Heating, - Cascade,
	- Water curtain - Water animation.
	The "Custom" setting allows you to enter a name.

`SELECT  USER  SETUP`
`          DISPLAY  LIGHT⬍`
	`SELECT  DISPLAY  LIGHT`
	`          2  MIN  TIMEOUT⬍`
	To configure the screen's back-lighting settings:
	- 2 min time delay = turns off the back lighting after the user interface has been idle for 2 minutes
	- Light off: screen not back-lit
	- Light on: screen permanently back-lit

`SELECT  USER  SETUP`
`              LANGUAGE⬍`
	`SELECT  LANGUAGE`
	`              ENGLISH⬍`
	To choose the interface language: English, Spanish, French, German, Italian or Dutch.

`SELECT  USER  SETUP`
`          RUN  DURATION⬍`
	To choose how long the speed will run in the event of manual start-up (not on Timer), available for speeds 3 and 4 only.
	To choose the desired speed:
	`SELECT  SPEED`
	`              4:CLEANER⬍`
	To set the operating time (up to 8 hours in 30-minute intervals):
	`RUN  DURATION`
	`              0:00⬍`

`SELECT  USER  SETUP`
`      PASSWORD  PROTECT⬍`
	MDP = password
	Used to protect access to the user menu with a 4-digit password. This protection will only activate after the user interface has been idle for 10 minutes.
	To select the desired function:
	`PASSWORD  PROTECT?`
	`                  NO⬍`
	- YES = Password-protected
	- NO = not password-protected, the user menu can be accessed by all users
	All 4 digits must be entered to confirm the password:
	`*          PASSWORD          *`
	`*          ACCEPTED          *`
	To deactivate or change the password, return to the menu:
	`CHANGE  PASSWORD?`
	`                  NO⬍`
	- NO: the password is unchanged and protection is activated
	- DELETE: deactivate password protection
	- CHANGE: change the password

➲ 3.6 I Additional functions for professionals only (model with interface only)

To enter the service menu, the pump must be stopped.

Press and hold **MENU**, ★ and **4** at the same time for 5 seconds: `SELECT SERVICE SETUP / LOAD DEFAULTS⇕`.
Use the **∧** or **∨** keys to browse the menu.
To exit the menu, press the ★ key or refrain from performing any actions for 1 minute.

`SELECT SERVICE SETUP` `SET MIN LIMIT⇕`	Limit the pump's minimum operating speed. The user will no longer be able to set the pre-defined speeds 2, 3, 4, 5, 6, 7 and 8 below this speed. The default speed is 600 rpm.
`SELECT SERVICE SETUP` `SET MAX LIMIT⇕`	Limit the pump's maximum operating speed. The user will no longer be able to set the pre-defined speeds 2, 3, 4, 5, 6, 7 and 8 above this speed. The default speed is 3,450 rpm.

`SELECT SERVICE SETUP` `LOAD DEFAULTS⇕`	Restore factory settings:

Setting	By default	Possible values
"eStar" speed	1,750 rpm	
Speed 2, 3, 4, 5, 6, 7 and 8	2,750 rpm	from 600 to 3,450 rpm, in intervals of 10 rpm
Priming speed	2,750 rpm	
Frost protection time	30 minutes	from 0 minutes to 8 hours in 30-minute intervals
Priming time	3 minutes	from 1 to 5 minutes in 1-minute intervals

`SELECT SERVICE SETUP` `LAST FAULT⇕`	View the last 2 pump errors. If the memory contains no errors, the display will show: `* - - - - - - - - - - - - - - - - - - *` `* - - - - - - - - - - - - - - - - - - *`

`SELECT SERVICE SETUP` `PRIMING⇕`	A priming speed greater than 2,500 rpm is highly recommended in order for it to be effective. To set the priming speed (from 600 to 3,450 rpm): `PRIMING` `PRIMING SPEED⇕` Then the priming cycle time (from 1 to 5 minutes): `PRIMING` `PRIMING DURATION⇕` The user interface displays: `2:SPEED2` `12:30PM          PRIMING` / `2:SPEED2` `12:30PM        RPM:2750⇕` when the pump is in the priming cycle.

`SELECT SERVICE SETUP` `SET ESTAR SPEED⇕`	To set the pre-defined "eStar" speed (known by default as "1: Filtration").

`SELECT SERVICE SETUP` `PUMP FREEZE PROTECT⇕`	The pump measures the running motor temperature and estimates the water temperature. It activates the "eStar" speed if the temperature falls too low, in order to protect the pump from freezing temperatures. This setting is used to configure the duration of the frost protection cycle. To set the time (from 0 minutes to 8 hours in 30-minute intervals). To deactivate this function, set the time to "0:00".

⚠ • **The frost protection function is only designed to protect the appliance and pipework during short periods of subzero temperatures. It activates the filtration pump and circulates water to prevent freezing inside the appliance. The frost protection function does not guarantee protection during extended periods of subzero temperatures or power cuts. In these conditions, the pool must be completely winterised. If the pump freezes, it may cause severe damage and invalidate the warranty.**

`SELECT SERVICE SETUP` `PUMP TYPE⇕`	This setting is used to determine the maximum allowable pump speed depending on the type of pump chosen. We recommend not changing this setting to keep optimum pump performance.

`SELECT SERVICE SETUP` `DISPLAY POWER USAGE⇕`	You can display the pump's electricity consumption while running (in Watts). This setting is only displayed on the screen when the pump is running: `2:SPEED2` `12:30PM     PWR:    58W`

4 Maintenance

4.1 I Winterising

> ⚠ • **The frost protection function is only designed to protect the appliance and pipework during short periods of subzero temperatures. It activates the filtration pump and circulates water to prevent freezing inside the appliance. The frost protection function does not guarantee protection during extended periods of subzero temperatures or power cuts. In these conditions, the pool must be completely winterised. If the pump freezes, it may cause severe damage and invalidate the warranty.**
> • **To avoid damaging the appliance 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 encouraged to disconnect the electrical power cable then unscrew the hydraulic connectors to store the pump in a dry place protected from frost.
- Store the pump in a dry environment at a temperature that varies as little as possible to prevent condensation which would damage the pump.

4.2 I Servicing

> ⚠ • **It is recommended that the appliance undergo general servicing at least on a yearly basis to ensure proper operation, maintain performance levels and potentially prevent certain failures. These operations must be carried out at the user's expense by a qualified technician.**

4.2.1 User maintenance

- Make sure that the pump and electrical compartment contain no foreign bodies.
- Clean the outside of the appliance, do not use solvent-based products.
- Clean the pre-filter strainer, the cover and the gasket 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 and confirm that all metal components of the appliance are reliably connected to earth (grounded).
- Check that the electrical cables are correctly tightened and connected and that the switch box is clean.

🔍 ❺ Troubleshooting

⚠️
- **If a problem occurs, before you contact your retailer, please carry out these few simple checks using the following tables.**
- **If the problem continues, contact your retailer.**
- 👷 **: Actions to be performed by a qualified technician only**

❯ 5.1 I Appliance 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 the user interface cable. • Incorrect configuration of the pump address; check the position of the switches (see § "2.4 I Connecting the user interface (depending on the model)"). • Check that the motor shaft rotates freely. Ensure that there is no debris in the pre-filter strainer. • 👷 If debris remains, remove the pump to access the turbine.
The pump doesn't prime / air can be seen in the pre-filter strainer.	• Check the position of all valves in the hydraulic circuit. • Air is stuck in the circuit, drain the hydraulic circuit (bleed screw on the filter). • The pool's water level is too low, air is being sucked into the circuit; fill the pool. • The gasket of the pre-filter strainer lid is defective, check the condition of the gasket and the correct air-tightness of the lid.
Low flow rate / low filter pressure	• Pre-filter strainer 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. • 👷 Reverse motor rotation (three-phase models only). Check the electrical connection at the pump terminals.
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 pre-filter strainer. • 👷 A foreign body is present in the pump body (in this case, the pump must be removed).
Leak between the pump body and the motor	• 👷 The mechanical lining 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.
There is nothing on the user interface or the external controller display	• Incorrect configuration of the pump address; check the position of the switches (see § "2.4 I Connecting the user interface (depending on the model)"). • 👷 Check the user interface cable.
The user interface displays 'PUMP NOT CONNECTED"	• 👷 Check the user interface cable. • Incorrect configuration of the pump address; check the position of the switches (see § "2.4 I Connecting the user interface (depending on the model)").

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