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POOLEX

Poolex Multiline Variable Speed Swimming Pool Pump

Product Specifications

- Silent & efficient operation
- Energy-saving
- Website: www.poolex.fr

USER MANUAL

Dear customer,

Thank you for your purchase and your trust in our products.

Our products are the result of years of research in the design and manufacture of heat pumps for pools. Our goal is to deliver high-quality products with exceptional performance.

We took great care to put together this manual so you can get the most out of your Poolex heat pump.

IMPORTANT NOTICE

This guide provides instructions for installing and using this pump. Consult your distributor if you have any questions about this equipment.

- For the attention of the installer: This guide contains important information on the safe installation, operation and use of this product. This information should be given to the owner and/or operator of this equipment after installation, or left on or near the pump.
- For the attention of the user: This manual contains important information to help you use and maintain this product. Please keep it for future reference.
  These instructions are a guide only. If you, the installer or the owner of the product, are not familiar with the correct installation or operation of this product, you should contact a suitably qualified person for advice.
- FAILURE TO COMPLY WITH ALL INSTRUCTIONS AND WARNINGS MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

THE PUMP MUST BE INSTALLED AND MAINTAINED BY A QUALIFIED PERSON TO AVOID ANY DANGER. IMPROPERLY INSTALLED OR TESTED EQUIPMENT CAN FAIL AND CAUSE SERIOUS INJURY OR MATERIAL DAMAGE.

- INSTALLERS, POOL OPERATORS AND OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS IN THE USER MANUAL BEFORE USING THIS PUMP. THESE WARNINGS AND THE USER MANUAL SHOULD BE LEFT WITH THE POOL OWNER.

READ AND FOLLOW ALL INSTRUCTIONS

 This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following warnings and be alert to the possibility of personal injury.

DANGER – Cautions against hazards that may cause death or serious injury if ignored.
CAUTION – Caution against hazards that may cause serious injury or significant property damage if ignored.
WARNING – Cautions against hazards that may cause minor injury or property damage if ignored.

NOTE : This indicates special instructions not related to hazards.
Read carefully and follow all safety instructions in this manual and on the equipment. Keep safety labels in good condition; replace them if missing or damaged.

KEEP THESE INSTRUCTIONS IN A SAFE AND ACCESSIBLE PLACE FOR FUTURE REFERENCE.

SAFETY INSTRUCTIONS

- When installing and using this electrical equipment, basic safety precautions must always be observed, including the following:
- DANGER – Do not allow children to use this product. Children must be supervised to ensure that they do not play with the pump.
- DANGER – This appliance is not intended for use by persons (including children) with

reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning its use by a person responsible for their safety.

- DANGER – RISK OF ELECTRIC SHOCK. Connect only to a dedicated electrical circuit protected by a differential circuit breaker (DDFT) of 30mA maximum (differential protection). Test its operation regularly. Contact a qualified electrician if you are unable to check that the circuit is protected by residual current protection.
- To test the DDFT, press the test button. The R.C.D. must interrupt the power supply. Press the reset button. Power should be restored. If the R.C.D. does not work in this way, it is faulty. If the DDFT interrupts power to the pump without the test button being pressed, a ground current will flow, indicating the danger of receiving an electric shock. In this case, do not use this pump. Unplug the pump and have the problem corrected by a qualified technician before using it.
- WARNING – This pump is designed for swimming pools, but can also be used with spas if it is specified that they are suitable for this type of pump.
- CAUTION – The circulation pump must be installed upstream of a filter suitable for its flow rate. Make sure you comply with the flow rates set by your filter, otherwise irreversible damage may occur.
- DANGER – Never open the inside of the motor. There is a bank of capacitors which retain a 220-240 VAC charge even when the appliance is switched off.
- DANGER – Before servicing the pump, switch off the power supply to the pump by disconnecting the main circuit from the pump.
- DANGER – Do not connect the system to a high-pressure or mains water supply.
- CAUTION – The pump can provide high flow rates. Be careful when installing and programming the pump so as not to limit the potential performance of the pump with old or questionable equipment.
- NOTE: The standard requirements for electrical connections vary from country to country and municipality to municipality. In France, install the equipment in accordance with NF C15-100 and all applicable local codes and regulations.

DANGER – RISK OF BEING BLOCKED BY SUCTION: Keep away from the main pipe and all suction outlets!
This pump produces high suction levels and creates a strong suction at the main drain at the bottom of the water. This aspiration is so strong that it can trap adults or children under water if they are near a loose or broken drain, cover or drain grate.
Use of an unapproved BDF (bottom drain) or use of the pool or spa when BDFs are missing, cracked or broken can result in body or limb blockage, hair entanglement, evisceration and/or death.

TO MINIMISE THE RISK OF INJURY DUE TO THE DANGER OF BEING BLOCKED BY SUCTION :

- An anti-Vortex BDF, approved and properly installed and fixed according to the standards in force in the country concerned, must be used for each drain.
- Inspect all lids regularly to ensure they are not cracked, damaged or weathered.
- If a BDF is loose, cracked, damaged, broken or missing, replace it with a certified and suitable BDF.
- Replace drain covers if necessary. Drain covers deteriorate over time due to exposure to sunlight and weather.
- Avoid putting hair, limbs or body in close proximity to a suction cover, pool drain or outlet.
- Disable the suction outputs or reconfigure them as return inputs.

CAUTION – A clearly identified emergency stop system (switch, circuit breaker) for the pump must be located in an easily accessible and visible place.
TO MINIMISE THE RISK OF INJURY DUE TO SUCTION BLOCKAGE: Make sure users know where it is and how to use it in an emergency.

To install electrical controls on the equipment control panel :

WARNING – Install all electrical controls on the equipment control panel, such as on/off switches, timers and control systems, etc., to allow operation (start, stop or service) of any pump or filter, so that the user does not place any part of their body on or near the pump strainer cover, filter cover or valve closures. This installation must allow sufficient space for the user to move away from the filter and pump during start-up, shut-down or maintenance of the system filter.

DANGER – DANGEROUS PRESSURE: DO NOT APPROACH THE PUMP OR FILTER DURING START-UP Circulation systems operate under high pressure. When servicing any part of the circulation system, air can enter the system and be compressed. Compressed air can violently separate the pump casing, filter cover and valves, causing serious injury or death. The filter tank cover and the strainer cover must be properly secured to prevent violent dissociation. Keep clear of all equipment in the circulation system when starting up or starting the pump. Before servicing the equipment, take note of the filter pressure. Make sure that all controls are set so that the system cannot start inadvertently during servicing. Switch off the power supply to the pump. IMPORTANT: Place the manual air vent on the filter in the open position and wait for all the pressure to be released from the system. Before starting up the system, fully open the filter's manual air vent and set all the system's valves to the open position to allow water to flow freely in and out of the filter. Keep clear of all equipment and start the pump. IMPORTANT: Do not close the filter air vent until all the pressure has been released from the vent and a steady stream of water appears. Observe the filter pressure gauge and ensure that the pressure value does not exceed that indicated before servicing.

General information about the installation

- All work must be performed by a qualified professional and must comply with all national, provincial and local standards.
- Install to ensure compartment drainage for electrical components.
- These instructions contain information about a variety of pump models and therefore some instructions may not apply to a specific model. All models are intended for use in swimming pools. The pump will only function normally if it is properly dimensioned for a given system and installed correctly.

CAUTION – Improperly sized or installed pumps or pumps used in systems other than

those for which the pump was designed may result in serious injury or death. These risks may include, but are not limited to, electrical shock, fire, flooding, blockage by suction or serious injury or property damage caused by structural failure of the pump or other system component.

CAUTION – If the power cord is damaged, it must be replaced by a qualified person to avoid any danger.

DANGER – The variable speed pump is electrically connected. Ensure that it is isolated from the power supply during installation and any subsequent work.

CAUTION – The pump is not submersible.

CAUTION – Never start the pump if the valves are closed.

CAUTION – Do not operate the pump if the basket is missing or damaged.

DESCRIPTION

Model features

Model	MULTILINE
Input voltage	220-240 V
Input frequency	Single phase, 50 Hz
Input current max.	6.3 A
Input power	950 W
Preset programmes	3 (1600 rpm, 2600 rpm, 3450 rpm)
Speed adjustment range	1000 – 3 450 rpm
Maximum head (m)	15
Protection level	IPX4

Internal thread	2″ x 2″	
Maximum flow rate	22 m3/h	
Operating range (water temperature)	5°C – 35°C	
Maximum ambient temperature	40°C	
Recommended pH	7.0 – 7.8	
Motor	1000 W 6.5A	
Safety devices	• Mains overvoltage, • Mains undervoltage, • overtemperature,	• locked rotor, • overcurrent, • phase disconnection.

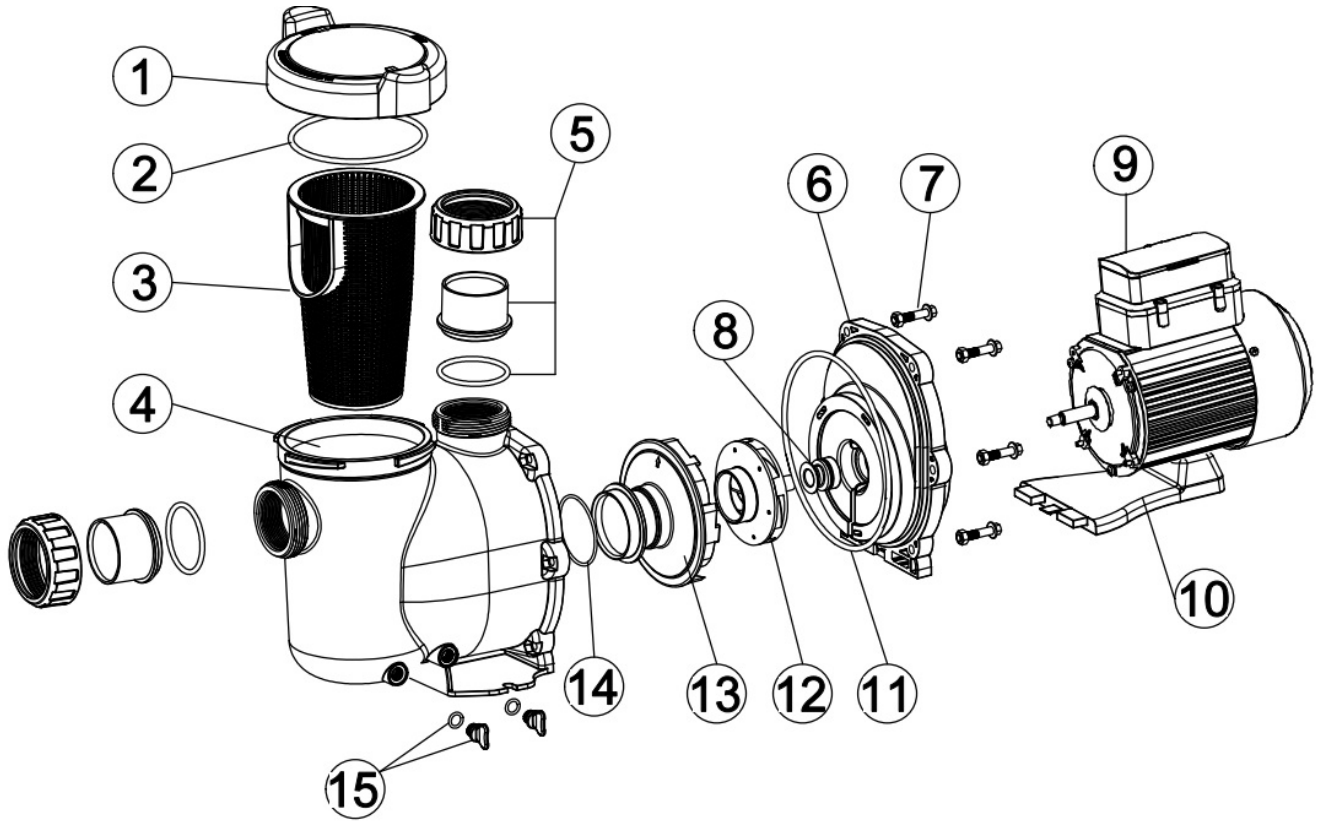
The MULTILINE variable speed pump is the ideal pump for any pool or spa. It uses advanced hydraulic design and the latest technology in permanent magnet and variable speed motors. MULTILINE offers the perfect combination of efficiency and performance: it saves energy and gives you the power you need when you need it. You'll also have the peace of mind of knowing that you're doing your bit for the environment and reducing your carbon footprint.

- With 3 adjustable speeds, MULTILINE lets you manually select the most efficient setting to meet your filtration and cleaning needs. Speed SILENT is ideal at night to filter your pool quietly. Speed NORMAL is ideal during the day, when the need for filtration is greater due to the number of people in the pool. Speed QUICK CLEAN is used to wash the filter.
- The brushless permanent magnet axial flow motor offers high efficiency and low noise levels.
- The fail-safe motor prevents damage by automatically stopping the motor in the event

of rotor lock-up, under-voltage, overvoltage or overcurrent, and automatically reduces speed in the event of overheating.

- Precision-tuned internal components and superior hydraulic design deliver effortless performance, energy savings and extended pump life (Stainless steel shaft, ASI 316 carbon/ceramic mechanical seal).
- A specially designed sound-absorbing pump casing and base make the pump incredibly quiet to operate.
- Constructed from durable thermoplastic composite resin, you can be sure it will withstand the toughest condi-tions. Robust construction and a motor designed for continuous operation make this pump robust and durable.
- The high-capacity filter traps a large amount of debris for optimum cleaning.
- The transparent cover makes it easy to inspect the filter basket.
- MULTILINE is compatible with chemical pool treatments and salt.
- Self-priming makes it quick and easy to start up at depths of up to 1.5 m.
- **Caution**: even automatic priming must always be done in water.
- The IPX4-certified control box is UV and rain resistant.

Exploded view

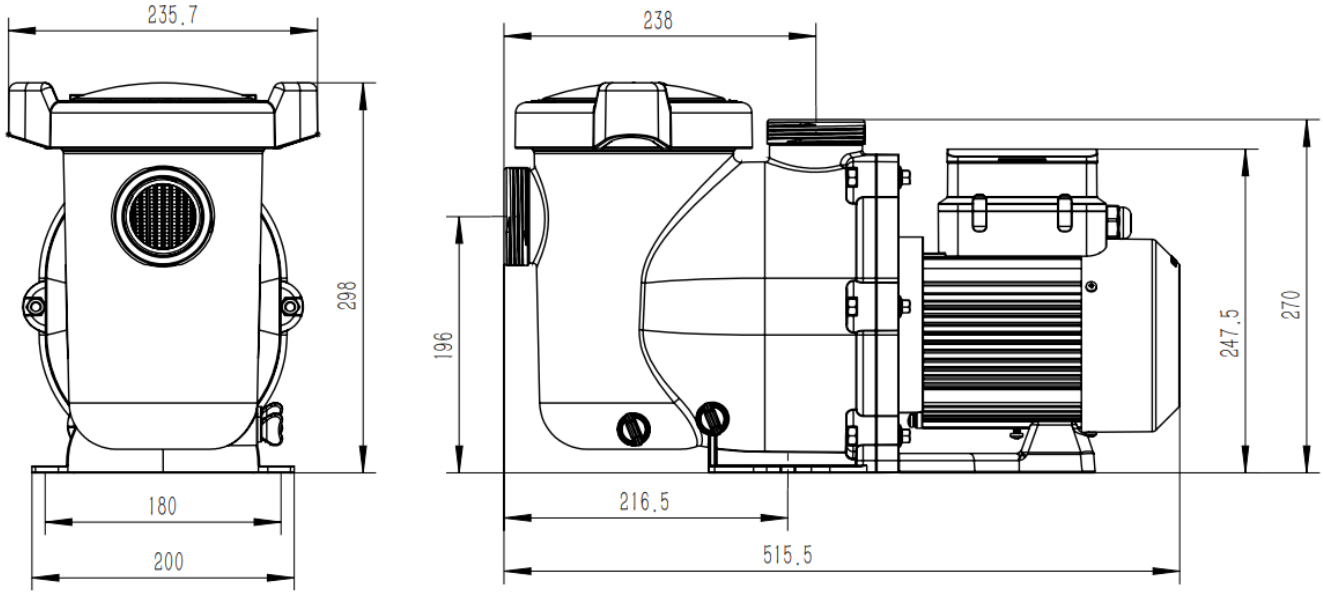


Ref	Description
1	Strainer cover kit
2	Cover O-ring
3	Basket
4	Strainer housing
5	Union connector kit (D50 + D63)
6	Sealing plate
7	Housing cover screw kit (M8X40 6pcs)
8	Mechanical seal
9	VSM10FR-1 motor
10	Mounting foot
11	Sealing plate O-ring
12	Impeller
13	Diffuser
14	Diffuser O-ring
15	Drain plug with O-ring (2 pieces)

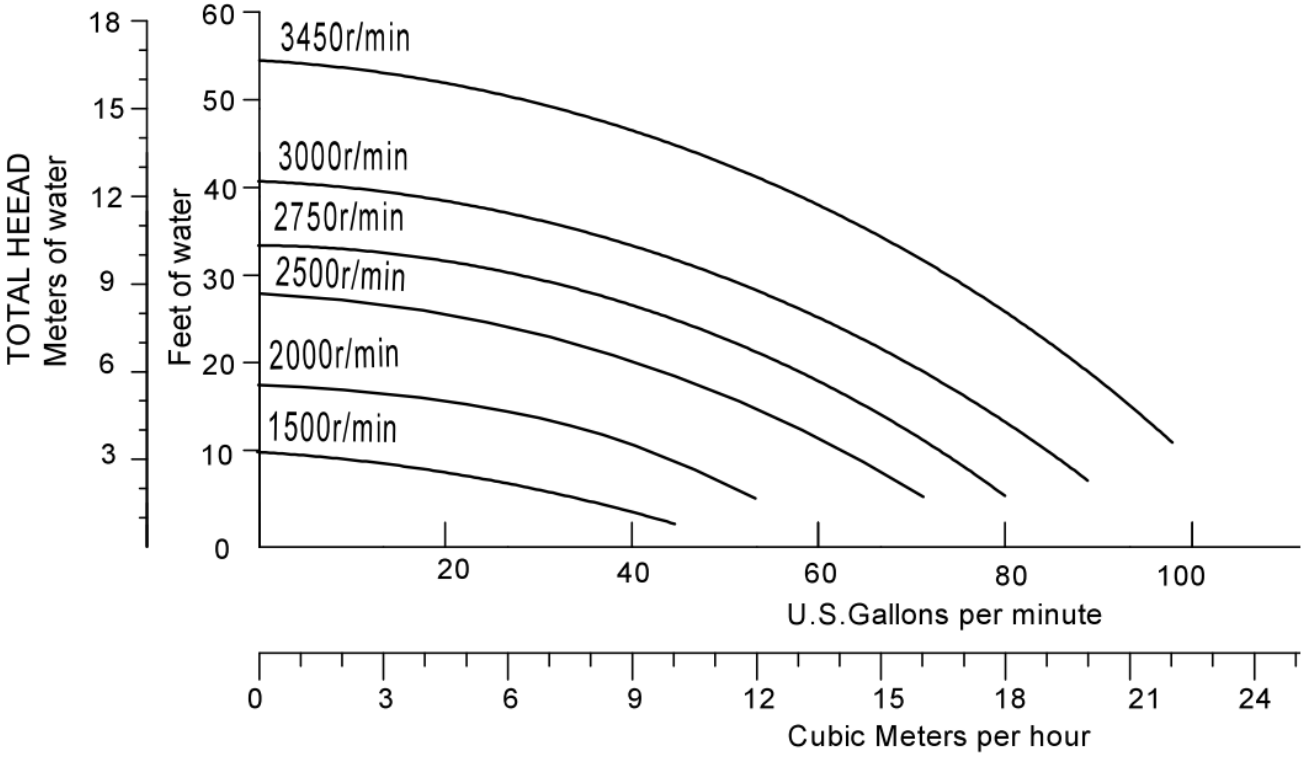
NOTE: It is not necessary to lubricate the O-ring. The original equipment O-ring contains a permanent internal lubricant.

Pump dimensions

Dimensions in mm



Performance curves



INSTALLATION

Only a qualified professional is authorised to install the variable speed pump. For further information on installation and safety, refer to the «Safety instructions».

DANGER – The variable speed pump is electrically connected. Ensure that it is isolated

from the power supply during installation and any subsequent work.

Emplacement

NOTE: Ensure that the pump is connected to the pool control panel.
Make sure that the location of the pump meets the following requirements:

1. Ventilation must be sufficient to keep the ambient temperature below the motor's rated ambient temperature (40°C) when the pump is running.
2. Install the pump in a well-ventilated area protected from excessive humidity, in a machine room.
3. If the pump is installed in an enclosure/pump house, the enclosure must be adequately ventilated (200 cm^2 minimum, inlet and outlet) and there must be sufficient air circulation to ensure that the rear of the motor is clear (200 mm).
4. The floor must have adequate drainage to prevent flooding and be protected against excess moisture.
5. The installation must be solid, level, rigid and vibration-free.
6. To reduce vibration and stress on the pipes, you can bolt the pump to the support. The fixing holes accept 12 mm fasteners.
7. Provide adequate access for servicing the pump and pipework.
8. Install the pump as close as possible to the pool or spa. To reduce losses, use short, direct suction and return pipes with a minimum of bends (to reduce friction losses).
9. In France, install the pool according to NF C15-100. Elsewhere, comply with local regulations.
10. For best performance, the pump suction height should be as close as possible to the water level.

Piping

DANGER – Do not connect the system to a high-pressure or mains water supply.
CAUTION – The pump can deliver high flow rates.Take care when installing and programming the pump so as not to limit the pump's potential output with old or questionable equipment.

To improve your pool's hydraulic system:

- Only use rigid or flexible PVC pressure hoses. Your dealer will be able to advise you.
- Never use a suction pipe smaller than the pump suction fittings (40 mm) and use a larger pipe for long suction distances.
- The diameter of the pipe on the suction side of the pump must be the same as or larger than that of the return pipe. Use a pipe at least 40 mm in diameter for all connections to the pump.
- The pipework on the suction side of the pump should be as short as possible.
- To avoid stress due to a gap at the last connection, start all pipework at the pump.
- To avoid stress on the pump, support the suction and discharge pipes independently of each other. Place these supports as close as possible to the pump.
- Install valves on the pump suction and return pipes so that the pump can be isolated during maintenance operations.

Fittings and valves

1. Preferably, do not install 90° elbows directly at the pump inlet or outlet.
2. Filter pumps installed below water level must be fitted with isolation valves to facilitate maintenance.
3. Use a non-return valve in the discharge line when using this pump for any situation where there is a significant plumbing height downstream of the pump.
4. Be sure to install non-return valves when the plumbing runs parallel to another pump. This prevents reverse rotation of the impeller and motor.
5. The pump’s suction system must offer protection against the risks of entrapment by suction or hair entrapment/entanglement.

Electrical specifications

DANGER – RISK OF ELECTRIC SHOCK OR ELECTROCUTION.
The variable speed pump must be installed by a qualified professional in accordance with standard NF C15-100. A poorly designed electrical installation can result in serious injury or even death to people due to electric shock, and can also cause damage to property.
Always disconnect the power supply to the pump before servicing it.
Read all the maintenance instructions before working on the pump.

CAUTION – The power supply must be disconnected when installing, servicing or repairing electrical components. Observe all warnings on existing equipment, on the pump and in these installation instructions.

- In France, install all equipment in accordance with NF C15-100. Elsewhere, comply with all applicable local codes and regulations.
- An automatic power cut-off protection device must be installed in the fixed wiring with an earth connection to prevent electrocution.
- Do not use extension cords as they are unsafe in and around the pool area.
- The electrical installation must comply with national wiring regulations, taking into account its characteristics (Class I, IPX5).
- A residual current circuit breaker (RCD) with a maximum residual current of 30mA is required for the power supply to the pump. In addition, if a suitable socket outlet is not available, a waterproof socket outlet must be installed by an electrician in a suitable location. Tripping the RCD indicates an electrical problem. If the RCD trips and does not reset, have a qualified electrician inspect and repair the electrical system.
- The voltage at the pump must not be more than 6% above or 10% below the rated voltage shown on the motor nameplate, otherwise the pump may overheat, resulting in an overload trip and reduced component life. If the voltage is less than 90% or more than 106% of the rated voltage when the pump is running at full load, consult the electricity company.
- The variable speed pump must be installed by a qualified professional in accordance with standard NF C15-100. The pump accepts single-phase input power, 220 V-240 V, 50 Hz. The connections must be permanently earthed in accordance with the applicable standards, in particular NF C15-100 for France.
- Ensure that all circuit breakers and electrical switches are switched off before wiring the motor. Always wait five (5) minutes after disconnecting the power supply to the pump before opening or repairing the pump.
- The pump is delivered pre-wired.

WARNING – If the power cord is damaged, it must be replaced by a qualified person to avoid any danger.

Equipotential bonding

Equipotential bonding is required. Connect all metal parts of the pool or spa structure and all electrical equipment, metal conduits and metal piping in accordance with the wiring rules. Run a wire from the pump's equipotential bonding terminal (lower left motor bolt with serrated washer) to the pool's bonding structure, and connect it to an earth rod. Above all, do not connect to the house earth terminal; it should preferably be specific to the pool and its equipment.

Priming

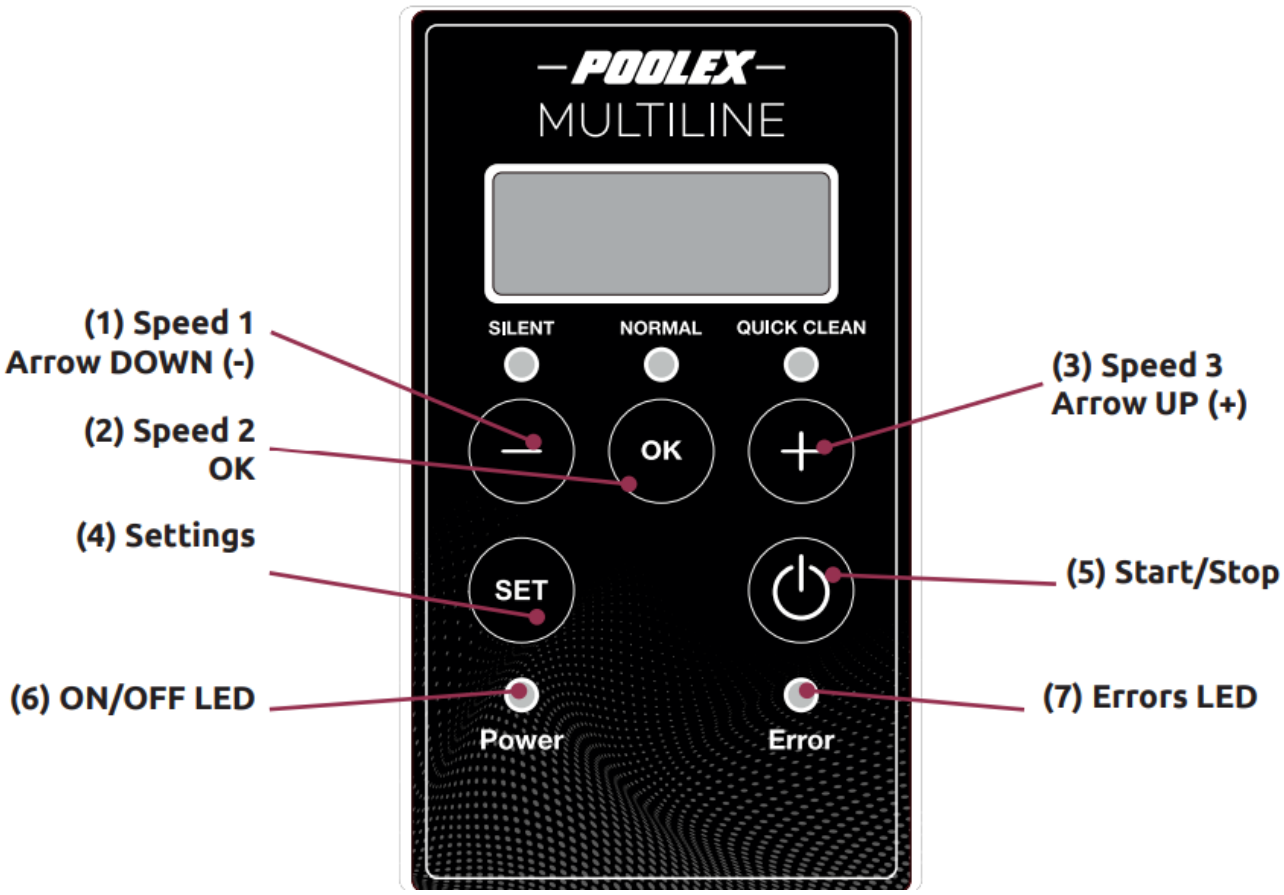
1. Before removing the pump cover, SWITCH OFF THE PUMP SUPPLY.
2. Close the shut-off valves on the suction and discharge lines, if fitted.
3. Remove the pump cover (turn anticlockwise).
4. Fill the pump tank with water.
5. Check the cover O-ring and sealing surface, ensure there is no dust or debris on either and replace the cover (turn clockwise to hand tighten only – no spanner!).
6. Open the shut-off valves on the suction and discharge pipes, if fitted.
7. Switch on the pump to start it up.
8. Bleed the air from the filter, pump and pipework. In a suction system below water level, the pump will prime itself when the suction and discharge valves are open and the air is released.
9. The pump should begin to prime. The priming time depends on the vertical height of the suction system and the horizontal length of the suction pipework, but is generally between 30 seconds and 3 minutes under normal installation conditions.
10. The variable speed pump starts slowly, but ramps up for the first two minutes to aid priming, then switches to the selected speed.

NOTE: If the pump does not prime, make sure all valves are open, the pre-flow tank is clear of debris and the end of the suction hose is immersed in water, and that there are no leaks in the suction hose.

See "6.1 Restart instructions", page 39, and "6.2 Troubleshooting and fault resolution", page 40.

If necessary, after the pump is started, close the discharge valve slightly to facilitate priming. Once the pump is primed and all pipes are filled with water, make sure to fully open the discharge valve.

CONTROL PANEL



The LED display goes out after three minutes if no action is detected on the keypad.

WARNING – If the variable speed pump motor is energised, pressing any of the following buttons mentioned in this section may cause the motor to start. Do not start the motor if any valves are closed. Failure to do so may result in personal injury or damage to the equipment.

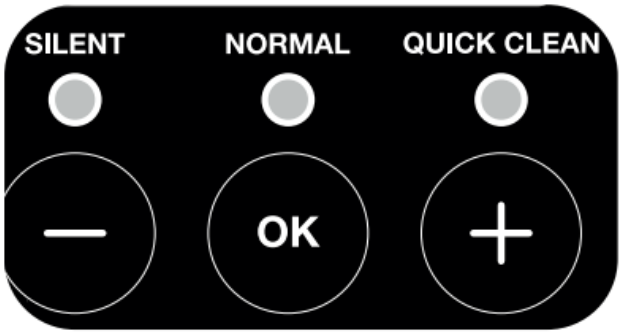
Using the control keypad

1. Speed button 1 – Used to select speed 1. The LED above the speed buttons lights up when given speed is selected or is running. By default, speed 1 is set to 1600 rpm.
   Arrow button DOWN (-) – Used to decrease speed during programming.
2. Speed button 2 – Used to select speed 2. The LED above the speed buttons illuminates when a given speed is selected or is running. The pump will automatically switch from speed 2 to speed 1 after 24 hours of operation. By default, speed 2 is set to 2600 rpm.
   OK Button – Used to confirm and save settings during programming.

3. Speed button 3 – Used to select speed 3. The LED above the speed buttons illuminates when a given speed is selected or is running. The pump will automatically switch from speed 3 to speed 1 after 2 hours of operation. By default, speed 3 is set to 3450 rpm.
   Arrow button UP (+) – Used to increase speed during programming.
4. Parameter button – Used to enter or reset parameter programming.
5. Start/Stop button – Used to start and stop the pump. When the pump is stopped and the LED is not lit, the pump is unable to operate with any type of input.
6. ON/OFF LED – Indicates the status of the pump motor. It is illuminated when it is running and off when it is stopped.
7. Error light – Used to indicate if an error is detected.

Start

To start the pump, press the speed button of your choice to select the preset fixed speed. The pump restarts at the last recorded speed.



Controller function

The variable speed pump uses a high-efficiency variable speed motor that offers great programme flexibility in terms of motor speed. The pump is designed to operate at the lowest speeds necessary to maintain a healthy environment, minimising energy consumption. The size of the pool, the presence of additional aquatic facilities, the chemicals used to maintain sanitary conditions and local environmental factors will all affect the optimum programming required to maximise energy savings.

DANGER – This pump is intended for use with a nominal voltage of 220-240V AC 50Hz, and ONLY for use as a pool or spa pump. Connection to an incorrect voltage or use as part of another system may damage the equipment or cause personal injury.

The built-in electronic interface controls speed settings and running time. The pump can operate at speeds between 1000 and 3450 rpm and will operate within the voltage range 220-240V at an input frequency of 50Hz. Customizing the program may require a certain amount of trial and error to determine the most satisfactory settings for the conditions. In most cases, setting the pump to the lowest speed over a long period of time is the best strategy for minimising energy consumption. However, conditions may require running the pump at a higher speed for a period of time each day to maintain adequate filtration for satisfactory sanitation.

NOTE: Optimise the pump for the specific conditions of your pool. Specific conditions such as pool size, other equipment, features and environmental factors can all have an impact on the optimum settings.

Priming speed and duration

The pump is factory-set with a default priming cycle of 3,450 rpm for 2 minutes.
The following steps show how to change these settings:

1. With the pump switched on, press the Start/Stop button.
   This will stop the pump if it is running, and the LED window will display «OFF».
2. Press and hold the SET button for at least 3 seconds.
   The priming power level should start flashing in the LED window.
3. Press the «DOWN» button to reduce the speed or the «UP» button to increase it.
   The speed will decrease or increase by 50 rpm.
4. Press ‘OK’ to save the priming power level setting.
   The priming time will start flashing in the LED window.
   To cancel and return to the previous mode, press the ‘SET’ button.
5. Press the ‘DOWN’ button to decrease the time or the ‘UP’ button to increase it.
   The time decreases or increases by 1 minute. The priming time is between 0 and 10 minutes.
   To cancel without modifying the priming time, press the ‘SET’ button.
6. Press the «OK» button to save the priming time setting and exit the programming sequence.
   NOTE: Setting the priming time to 0 minutes disables the priming cycle.

Selection of operating speed

You can choose from 3 preset speeds. Press the corresponding button to activate the speed of your choice.

Nr	Button	Mode	Default speed	Recommended setting range	Intended use
1	–	Silent	1600 rpm	1000 – 2000 rpm	Night
2	OK	Normal	2600 rpm	2000 – 3000 rpm	Jour
3	+	Boost	3450 rpm	3000 – 3450 rpm	Cleaning the filter

Modification of preset speed parameters

1. Press a speed button to select the fixed speed to be changed.
   The LED window will display the current speed.
2. Press and hold the SET button for at least 3 seconds until the speed displayed in the LED window starts flashing.
3. The speed can then be changed using the ‘DOWN’ or ‘UP’ buttons.
   The speed decreases or increases by 50 rpm.
   The upper speed limit is 3450 rpm and the lower limit is 1000 rpm.
4. To save the set speed, confirm with the ‘OK’ button.
   To cancel and return to the original speed, press the ‘SET’ button.

Programming the keypad lock

Keyboard programming can be locked for security reasons to prevent unauthorised changes.

To initialise the lock function, press the ‘On/Off’ and ‘SET’ buttons simultaneously.

Once the lock security function has been activated, a ‘.’ (period) mark will appear on the right-hand side of the LED display window.

To unlock the safety lock function, repeat the above operation.

Resetting default speed settings

The motor can be reset to the default speed settings by pressing and releasing the SET

button for at least 15 se-conds. The three fixed speed LEDs and the POWER LED will light up.

ENTRETIEN

WARNING – DO NOT open the prefilter cover if the variable speed pump does not prime or if the pump has been running without water in the filter basket. Pumps used in these circumstances may have increased vapour pressure and contain scalding hot water. Opening the pump can cause serious injury. To avoid any risk of injury, ensure that the suction and discharge valves are open and that the temperature of the strainer is cool to the touch, then open with extreme caution.

WARNING – To avoid damaging the pump and to ensure the system runs smoothly, clean the pump basket and skimmer baskets regularly.

DANGER – To avoid the risk of dangerous or fatal electric shock, switch off the pump and disconnect the plug from the socket before working on the pump.

Regular maintenance is essential for the longevity of the pump. The variable speed pump has high-speed moving parts and pumps water containing chemicals that are aggressive to the pool. Some parts will wear out during nor-mal operation and over the expected life of the pump.

Environmental maintenance

To avoid accidents, clean the area around the pump at least once a week, making sure there are no leaves or debris that could create a fire hazard or choke the motor fan.

Pump pre-filter basket

The pump's pre-filter basket (or 'filter basket', 'pump filter basket') is located in front of the impeller. Inside the chamber is the basket, which must be kept clean of leaves and debris at all times. Observe the basket through the transparent cover to check for leaves and debris.
Regardless of the length of time between filter cleanings, it is very important to visually inspect the basket at least once a week.

Procedure

1. Switch off the pump.
2. Close the suction and discharge valves.
3. Release all system pressure.
4. Remove the trap cover: turn anticlockwise. If necessary, gently tap the handles with a rubber mallet.
5. Remove the strainer basket and clean it:
    - Remove as much waste as possible from the basket.
    - Rinse the basket with water.
    - Make sure all the holes in the basket are clear.
    - Replace the basket in the air vent with the large opening level with the hose connection hole (between the ribs provided).

      Caution: If the basket is replaced upside down, the cover will not fit over the trap body.
    - To clean the transparent cover, use only water and neutral soap. Do not use solvents.
6. Clean and inspect the cover O-ring :
    - Clean the O-ring with a damp cloth.
    - Check that the O-ring is not damaged. Replace if necessary.
    - Clean the O-ring groove on the trap body.
    - Reinstall the O-ring on the trap.
    - Replace the cover. To prevent sticking, tighten the cover by hand only.
7. Prime the pump (see “3.6 Priming”, page 33).

Monthly servicing

At least once a month, please check :

- there are no water leaks from the inlet and outlet seals when the pump is running. If any leaks are found, clean and grease the O-rings or replace them if necessary.
- there are no leaks under the pump. If there are, this may indicate a leak in the mechanical seal. Call a service agent immediately to avoid damaging the motor.
- that the pump and motor are free from insects and pests. Clean if necessary.
- the motor blades are free of dust and dirt. Clean if necessary.

Winter preparation: passive winterisation

It is your responsibility to determine when freezing conditions may occur. If freezing conditions are forecast, take the following steps to reduce the risk of frost damage. Frost damage is not covered by the warranty. To avoid frost damage, follow the procedure below:

1. Press the Start/Stop button to stop the pump and cut off the power supply to the pump at the circuit breaker.
2. Drain the water from the pump casing by unscrewing the two drain plugs from the pump casing. Store the bungs in the pump basket.
3. Cover the motor to protect it from rain, snow and ice.

NOTE: Do not wrap the motor in plastic or other airtight materials during winter storage. The motor may be covered during storms, winter storage, etc., but never during operation or while waiting for operation.

NOTE: In mild climates and when temporary freezing conditions may occur, run your filtration equipment overnight in driver mode to prevent freezing.

Electric motor maintenance

Protection against heat

1. Keep the motor out of direct sunlight, in a well-ventilated technical room.
2. All enclosures must be well ventilated to prevent overheating.
3. Provide sufficient cross-ventilation.

Protection against dirt

1. Protect against foreign objects.
2. Do not store (or spill) chemicals on or near the engine.
3. Avoid sweeping or stirring up dust near the engine while it is running.
4. If a motor has been damaged by dirt, this may invalidate the motor warranty.
5. Clean the cover and locking ring, the O-ring and the sealing surface of the pump casing.

Protection against humidity

1. Protect against splashes or water spray.
2. Protect from extreme weather conditions such as flooding.
3. If internal motor parts are wet, allow them to dry before use. Do not allow the pump to run if it has been flooded.
4. If a motor has been damaged by water, this may invalidate the motor warranty.

TROUBLESHOOTING

CAUTION – DO NOT run the pump dry. If the pump runs dry, the mechanical seal will be damaged and the pump will start to leak. If this happens, the damaged seal must be replaced. ALWAYS maintain an adequate water level. If the water level falls below the suction port, the pump will draw air through the suction port, losing priming and running the pump dry, damaging the seal. Continued operation in this way could result in a loss of pressure which would damage the pump casing, impeller and mechanical seal. This could cause damage to property, personal injury and invalidate the warranty.

CAUTION – THIS SYSTEM OPERATES UNDER HIGH PRESSURE. When servicing any part of the circulation system (e.g. locking ring, pump, filter, valves, etc.), air can enter the system and be compressed. Compressed air can cause the cover to separate, resulting in serious injury, death or property damage. To avoid this risk, follow the instructions above.

CAUTION – Always disconnect the power supply to the variable speed pump at the circuit breaker and disconnect the electrical cable before servicing the pump. Failure to comply with this instruction may result in death or serious injury to maintenance personnel, users or others due to the danger of a potential electric shock. Read all the maintenance instructions before working on the pump.

CAUTION – DO NOT open the prefilter if the pump does not prime or if the pump has been running without water in the basket. Running pumps in these circumstances can build up steam pressure and contain scalding hot water. Opening the pump could cause serious injury. To avoid any risk of injury, ensure that the suction and discharge valves are open and that the prefilter is cool to the touch, then open with extreme caution.

WARNING – Take care not to scratch or damage the polished sealing surfaces of the shaft. The seal will leak if the surfaces are damaged. The polished, overlapping surfaces of the seal can be damaged if they are not handled with care.

Restart instructions

If the variable speed pump is installed below the water level of the pool, close the return and suction pipes before opening the pump's filter basket. Be sure to reopen the valves before putting them into service.

Pump priming

The pump's pre-filter basket must be filled with water before the pump is restarted. Follow these steps to prime the pump:

1. Remove the locking ring from the pump cover. Remove the pump cover.
2. Fill the pump pre-filter with water.
3. Refit the pump cover and locking ring to the pre-filter. The pump can now be primed.
4. Switch on the pump.
5. Open the filter air vent and stand clear of the filter.
6. Press the Start/Stop button on the meter keypad. If the pump is programmed to run at a particular time, it will start at that time.
   NOTE: If the pump is not programmed to start (priming time at 0), press a speed button to initiate a manual override which will prime the pump.
7. When water comes out of the filter air vent, close the valve. The system should now be free of air and water to and from the pool.
   For more information, see paragraph "3.6 Priming", page 33.

CAUTION – The diagnosis of certain indicators may require work to be carried out on components supplied with electricity or in their immediate vicinity. Contact with electricity can cause death, personal injury or damage to property. When troubleshooting the pump, electrical diagnostics must be carried out by an approved professional.

The variable speed pump must only be serviced by certified service agents. For best results and to avoid voiding the warranty, insist on the use of original spare parts. The warranty will be voided if unauthorised modifications are made to any of the

components.

DANGER – To avoid the risk of dangerous or fatal electric shock, switch off the pump and disconnect the plug from the socket before working on the pump.

Troubleshooting and fault resolution

Problems	Possible causes	Corrective measures
Pump failure.	1. Pump does not prime – Air leak or too much air. 2. Pump does not prime – Not enough water. 3. The pump seal is blocked. 4. The pump filter seal is faulty.	1. Check the suction pipework and suction valve glands. Attach the cover to the pump strainer basket and make sure the cover gasket is in place. Check the water level to make sure there is no air in the skimmer. 2. Make sure that the suction pipes, pump, strainer and pump volute are full of water. Make sure the valve in the suction line is working and opens (some systems do not have a valve). Check the water level to make sure there is water in the skimmer. 3. Clean the pump strainer basket. 4. Replace the seal.

Reduced capacity and/ or head.	1. Air pockets or leaks in suction pip e. 2. Turbine blocked. 3. Pump basket clogg ed.	1. Check the suction pipework and suction valve glands. Attach the cover to the pump strainer basket and make sure the cover gasket is in pl ace. Check the water level to make sure there is no air in the skimmer. 2. Switch off the power to the pump. Clean the debris from the turbine. If the debris c annot be removed, follow these steps: 1. Remove the anti-twist bolt and O-ring from the left-hand thread. 2. Remove, clean and reinstall the turbine. 3. Clean the suction trap.
The pump does not start.	1. General power sup ply cut off. 2. The pump shaft is blocked or damage d.	1. Replace the fuse, reset the earth leakage circ uit breaker. Tighten the power cable connectio ns. 2. Check that the pump can turn by hand and re move anything that could block it.
The pump run s and the n stops.	1. OVERHEATING pr oblem 2. OVERCURRENT p roblem	1. Check that the rear of the pump is free of dirt and debris. Use compressed air to clean. Also, check that the pump is installed in a tech nical room or a sufficiently well-ventilated area. 2. The pump will restart automatically after one (1) minute.

The pump is noisy.	1. Debris in contact with the fan. 2. Debris in strainer basket 3. Loose fasteners	1. Check that the rear of the pump is free of dirt and debris. Use compressed air to clean. 2. Clean the strainer basket. 3. Check that the pump mounting bolts are tight.

Problems	**Possible causes**	**Corrective measures**
Pump running without flow. **No water comes out of the pump while it is running.**	1. Turbine is loose 2. Air leak / Air entering the system. 3. Blocked or narrow pipework 4. Turbine is blocked	1. Check that the pump is running by looking at the fan at the back of the variable speed pump. If so, check that the pump impeller is correctly installed. 2. Check the pipe connections and make sure they are tight. 3. Check that there is no obstruction in the strainer or in the suction side pipework. Check that the drain pipework is not obstructed, including if the valve is partially closed or if the pool filter is dirty. 4. Prime the pump. Check that there are no air leaks in the suction pipework or fittings. Make sure the strainer cover is airtight and securely fastened. Check that all O-rings are present.

Low water pressure Low pump output.	Suction leaks / loss of priming.	1. The pump must be primed; make sure the casing and strainer are full of water. See priming instructions. 2. Check that the suction pipework is not leaking and that all the O-rings are present and clean. 3. Make sure that the inlet of the suction pipe is well below the water level to avoid the pump sucking in air. 4. Suction of between 3 and 6 metres will reduce performance. A suction of more than 6 metres will prevent pumping and result in the loss of the pump. In both cases, move the pump closer (vertically) to the water source. 5. Make sure the diameter of the suction pipe is large enough.
	Low speed setting.	Check the speed setting. Refer to the speed selection section of this manual. Reset to default setting if necessary.
	Clogged pipe, strainer, turbine or filter system.	1. Check that the siphon is not blocked by dirt. If necessary, clean the basket and/or filter. 2. Check that the impeller is not clogged. This check should only be carried out by qualified personnel. 3. It is possible that the pump is trying to get the water column too high. If this is the case, a pump with a higher pressure is required.
The pump is	Motor fault	Refer to engine fault codes.

not working.	No current at output.	Use another known electrical appliance to check the plug.
	Blown fuse / circuit breaker.	Check and call an electrician if necessary.
The pump is running too slowly.	Low speed setting.	Check the speed setting. Refer to the speed selection section of this manual. Reset to default setting if necessary.
	High motor temperature limit exceeded.	Ensure that the motor blades are clean and that the fan is intact and unobstructed. Ensure adequate ventilation and reduce the ambient temperature.
Water leak between housing and motor.	1. The crankcase bolts are not sufficiently tight. 2. The worn mechanical seal must be replaced.	1. Switch off the power supply to the pump. Tighten the casing bolts. 2. Replace the mechanical seal.

Errors and alarms

If an alarm is triggered, the meter's LCD screen will display the error code text and the variable speed pump will stop running. Switch off the power to the pump and wait until all the LEDs on the keypad have gone out. At this point, reconnect the power to the pump. If the error has not been corrected, appropriate troubleshooting will be required. Use the error description table below to begin troubleshooting.

Error code	Description	Solution
E-01	Inverter protection	

E-02	Overcurrent during motor accelerati on	**Internal errors:** If this error is displ ayed repeatedly, there may be a pr oblem with the pump's rotating ass embly. Please dismantle the pump and check whether there is a probl em with the impeller or the mechan ical seal.
E-03	Overcurrent during motor decelerati on	
E-04	Overcurrent at constant speed	
E-05	Overvoltage during motor accelerati on	
E-06	Overvoltage during motor decelerati on	
E-07	Overvoltage at constant speed	
E-08	Voltage fault	**Absolute AC undervoltage detec ted:** This indicates that the supply voltage has fallen below the 200 V operating range. This may be due t o a normal variation in the voltage which will disappear on its own. Ot herwise, there may be a voltage su rge caused by improper installation or inadequate supply voltage. This error also occurs for a few mo ments in case of power failure.
E-09	Motor overload	**Internal errors:** If this error is displ ayed repeatedly, there may be a pr oblem with the pump's rotating ass embly. Please dismantle the pump

E-10	Inverter overload	and check whether there is a probl em with the impeller or the mechan ical seal.
E-11	Input phase loss	
E-12	Output phase failure	
E-14	Module overheating	**Module overheating:** This may be caused by a high ambient temperat ure or an overload.
E-16	Communication error: The communi cation link between the HMI and the motor control has been lost.	Check the sheathed wire on the ba ck of the keyboard inside the top c over of the player. Check that the 5 -pin connector is correctly plugged into the socket and that the cable i s not damaged.
E-17	Current detection fault	
E-24	Inverter hardware fault	**Internal errors:** If this error is displ ayed repeatedly, there may be a pr oblem with the pump's rotating ass embly. Please dismantle the pump and check whether there is a probl em with the impeller or the mechan ical seal.

WARRANTY

Poolstar warrants to the original owner that the Poolex Variline will be free from defects in materials and workmanship for a period of three (3) years.
Wearing parts (O-rings, diffuser, impeller, basket, mechanical seal) are guaranteed for

six (6) months.
The warranty takes effect on the date of the first invoice.
The guarantee does not apply in the following cases:

- Malfunction or damage resulting from installation, use or repair that does not comply with the safety instructions.
- Malfunction or damage resulting from a chemical agent unsuitable for the pool.
- Malfunction or damage resulting from conditions unsuitable for the use of the equipment.
- Damage resulting from negligence, accident or force majeure.
- Malfunction or damage resulting from the use of unauthorised accessories.

Repairs carried out during the warranty period must be approved before being carried out by an authorised technician. The warranty is void if the equipment is repaired by a person not authorised by Poolstar.
Guaranteed parts will be replaced or repaired at Poolstar's discretion. Defective parts must be returned to our factory before the end of the warranty period to be covered by the warranty. The warranty does not cover labour charges or unauthorized replacements. The return of the defective part is not covered by the warranty.

Dear Sir/Madam
Do you have a question? Do you have a problem? Or simply register your guarantee, find us on our website: https://assistance.poolstar.fr/
We thank you for your confidence and we wish you an excellent swim.

Your details may be processed in accordance with the Data Protection Act of 6 January 1978 and will not be disclosed to anyone else.

Technical support www.assistance.poolstar.fr

Poolex is a brand of the group :
WWW.POOLEX.FR

Frequently Asked Questions

- **Q: Can children use the heat pump unsupervised?**
  A: No, children should always be supervised when near or using the heat pump to prevent accidents.
- **Q: What maintenance tasks should be performed monthly?**
  A: Monthly servicing tasks include cleaning the pump pre-filter basket and ensuring all components are functioning correctly.
- **Q: How can I troubleshoot errors or alarms?**
  A: Refer to the troubleshooting section of the manual for specific instructions on addressing errors and alarms.

Documents / Resources

	Poolex Multiline Variable Speed Swimming Pool Pump [pdf] User Manual AES-Poolex-Multiline, Multiline Variable Speed Swimming Pool Pump, Multiline, Variable Speed Swimming Pool Pump, Speed Swimming Pool P ump, Pool Pump, Pump

References

- User Manual

POOLEX

AES-Poolex-Multiline, MULTILINE, Multiline Variable Speed Swimming Pool Pump, Pool Pump, POOLEX, pump, Speed Swimming Pool Pump, Variable Speed Swimming Pool Pump

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