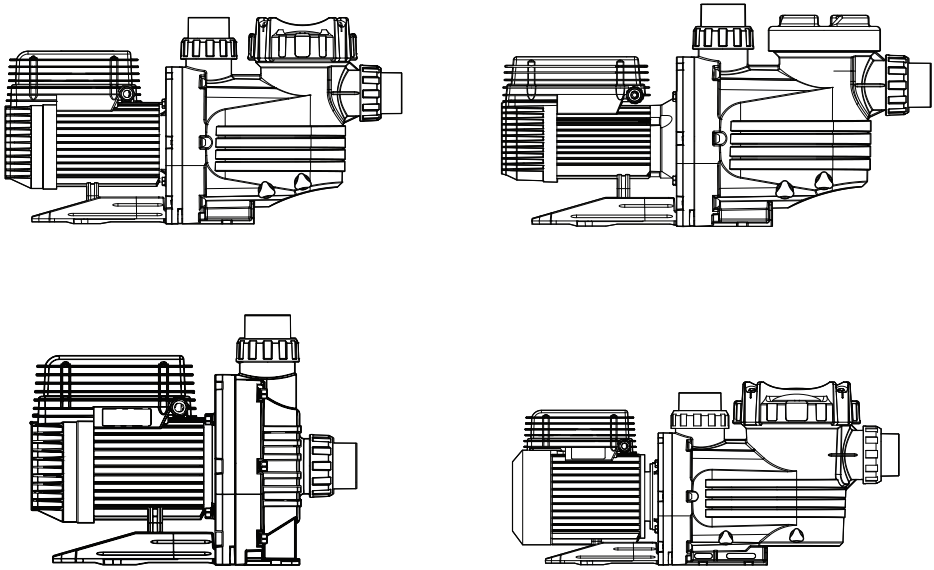


Pumps

Series: CTX, XP, XF, E

⚠ WARNING

FOR YOUR SAFETY – This product must be installed and serviced by a contractor who is licensed and qualified on pool equipment in accordance with the latest applicable version of AS3633, along with any other applicable local or council codes/standards. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation may void the warranty.

Improper installation and/or operation can create unwanted electrical hazards which may cause serious injury, property damage, or death.

ATTENTION INSTALLER – This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

WARRANTY REGISTRATION	Record your equipment details here for quick reference: Model No. :_____ Serial No. :_____
	AUSTRALIA WARRANTY: For full warranty terms and conditions and to register your warranty, visit *www.astralpool.com.au/warranty* and complete your details. ◀ Or scan the QR code to go directly to the registration page.
	NEW ZEALAND WARRANTY: For full warranty terms and conditions and to register your warranty, visit *www.astralpool.co.nz/warranty* and complete your details. ◀ Or scan the QR code to go directly to the registration page.

EQUIPMENT INFORMATION RECORD

Date of Installation _____

Installer Information _____

Filter Model _____

Initial Pressure Gauge Reading (with Clean Filter) _____

Notes _____

Table of Contents

Section 1. Important Safety Instructions

READ AND FOLLOW ALL INSTRUCTIONS

All electrical work must be performed by a licensed electrician and conform to all national, state, and local codes. When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

⚠ WARNING

RISK OF SUCTION ENTRAPMENT HAZARD, WHICH, IF NOT AVOIDED, CAN RESULT IN SERIOUS INJURY OR DEATH.

Do not block pump suction, as this can cause severe injury or death. Do not use this pump for wading pools, shallow pools, or spas containing bottom drains, unless the pump is connected to at least two (2) functioning suction outlets. Drain covers must be certified to the latest published edition of ANSI/ASME A112.19.8 or it's successor standard ANSI/APSP-16. In Australia AS1926.3 is also an acceptable standard.

⚠ WARNING

Pump suction is hazardous and can trap and drown or disembowel bathers. Do not use or operate swimming pools, spas, or hot tubs if a suction outlet cover is missing, broken, or loose. The following guidelines provide information for pump installation that minimizes risk of injury to users of pools, spas, and hot tubs:

Entrapment Protection - The pump suction system must provide protection against the hazards of suction entrapment.

Suction Outlet Covers - All suction outlets must have correctly installed, screw-fastened covers in place. All suction outlet (drain) covers must be properly maintained. They must be replaced if cracked, broken, or missing. Drain covers must be listed/certified to the latest published edition of ANSI®/ASME® A112.19.8 or its successor standard, ANSI/APSP-16. In Australia, AS1926.3 is also an acceptable standard. The pool must be shut down and bathers must be restricted from entering the pool until any cracked, broken, or missing drain covers are replaced.

Number of Suction Outlets Per Pump - Provide at least two (2) hydraulically-balanced suction outlets, with covers, as suction outlets for each circulating pump suction line. The centers of the suction outlets (suction outlets) on any one (1) suction line must be at least three (3) feet apart, centre to centre.

The system must be built to include at least two (2) suction outlets (drains) connected to the pump whenever the pump is running. However, if two (2) suction outlets run into a single suction line, the single suction line may be equipped with a valve that will shut off both suction outlets from the pump. The system shall be constructed such that it shall not allow for separate or independent shutoff or isolation of each drain.

Additional pumps can be connected to a single suction line as long as the requirements above are met.

Water Velocity - The maximum water velocity through the suction outlet assembly and its cover for any suction outlet must not exceed the suction outlet assembly and its cover's maximum design flow rate. The suction outlet (drain) assembly and its cover must comply with the latest version of ANSI®/ASME® A112.19.8, the standard for Suction Fittings For Use in Swimming Pools, Wading Pools, Spas,and Hot Tubs, or its successor standard, ANSI/ASME APSP-16. In Australia, AS1926.3 is also an acceptable standard.

Testing and Certification - Suction outlet covers must have been tested by a nationally recognized testing laboratory and found to comply with the latest published edition of ANSI/ASME A112.19.8 or its successor standard, ANSI/APSP-16, the standard for Suction Fittings For Use in Swimming pools, Wading Pools, Spas, and Hot Tubs. In Australia, AS1926.3 is also an acceptable standard.

Fittings - Fittings restrict flow; for best efficiency use fewest possible fittings (but at least two (2) suction outlets).

Avoid fittings that could cause an air trap.

Pool cleaner suction fittings must conform to applicable International Association of Plumbing and Mechanical Officials (IAPMO) standards.

⚠ WARNING

To reduce the risk of injury, do not permit children to use this product.

⚠ WARNING

A check valve can interfere with the proper operation of certain Suction Vacuum Release System (SVRS) products. To avoid possible entrapment hazard, serious injury, or death, make sure to review the operation/owners manual of your particular SVRS product before installing the check valve.

⚠ WARNING

To reduce the risk of property damage or injury, do not attempt to change the backwash (multiport, slide, or full flow) valve position with the pump running.

⚠ WARNING

AstralPool Pumps are powered by a high-voltage electric motor and must be installed by a licensed or certified electrician or a qualified swimming pool service technician.

⚠ WARNING

The pump is for fixed installations only and to be used in conjunction with swimming pool equipment. (e.g. filters). The pump is to be installed in accordance with the relevant requirements of the Australian wiring rules AS/NZS 3000. Also refer to the installation instructions relating to the swimming pool equipment for which the pump will be an integral part. The pump is to be supplied through a residual current device (RCD) with a rated residual operating current of 30mA. If the supply cord is damaged it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid hazard.

⚠ WARNING

Incorrectly installed equipment may fail, causing severe injury or property damage.

⚠ WARNING

- Do not connect system to an unregulated city water system or other external source of pressurized water producing pressures greater than 250 KPA (35 PSI).
- Trapped air in the system can cause the filter lid to be blown off, which can result in death, serious personal injury, or property damage. Be sure all air is out of the system before operating.

⚠ WARNING

To minimize risk of severe injury or death, the filter and/or pump should not be subjected to the piping system pressurization test.

Local codes may require the pool piping system to be subjected to a pressure test. These requirements are generally not intended to apply to the pool equipment, such as filters or pumps.

AstralPool pool equipment is pressure tested at the factory.

If, however, the WARNING cannot be followed and pressure testing of the piping system must include the filter and/or pump, BE SURE TO COMPLY WITH THE FOLLOWING SAFETY INSTRUCTIONS:

- Check all clamps, bolts, lids, lock rings, and system accessories to ensure they are properly installed and secured before testing.
- **RELEASE ALL AIR** in the system before testing.
- Water pressure for test must NOT EXCEED 250 KPA (35 PSI).
- Water temperature for test must NOT EXCEED 38°C (100°F).
- Limit test to 24 hours. After test, visually check system to be sure it is ready for operation.

Notice: These parameters apply to AstralPool equipment only. For non-AstralPool equipment, consult the equipment manufacturer.

⚠ WARNING

Chemical spills and fumes can weaken pool/spa equipment. Corrosion can cause filters and other equipment to fail, resulting in severe injury or property damage. Do not store pool chemicals near your equipment.

CAUTION

Do not start pump dry! Running the pump dry for any length of time will cause severe damage and will void the warranty.

CAUTION

This pump is for use with permanently installed pools and may also be used with hot tubs and spas, if so marked. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building, such that it cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.

CAUTION

Do not install beneath the skirt of a hot tub. The pump requires adequate ventilation to maintain air temperature at less than the maximum ambient temperature rating listed on the motor rating plate.

SAVE THESE INSTRUCTIONS

Section 2. General Information

This manual provides installation and operation instructions for the AstralPool CTX, XP, XF and E Series pumps.

Read these installation and operation instructions completely before proceeding with the installation.

2.1 Pump Features

- Reinforced precision-moulded impeller, provides extra high-head performance
- Single piece moulded body for added strength and longer life
- Rapid-priming diffuser quickly corrects loss of water flow
- Continuous-duty rated motor at 2850 rpm
- Large capacity basket with easily removed lid
- Quick and easy disassembly for servicing
- Operating temperatures: 2 to 50°C air, 2 to 35°C water
- Protection index: IPX4

The **CTX-Series** pumps provide high head pressure to move water through the pool filter, salt chlorinator, in-floor cleaning systems, or multi-jet spas. Energy efficient. Infrequent cleaning needed thanks to a large hair and lint pot.

The **XP-Series** pump offers high head pressure, energy-efficient operation. Runs cool and quiet. The large hair and lint pot needs infrequent cleaning.

The **XF-Series** pump is designed for flooded suction without the need for a hair and lint pot. Smaller-horsepower XF models are perfect for low-flow applications such as booster pump, solar pump, above-ground pool pump, or heating system circulating pump. The larger-horsepower XF models are suitable for the high-flow needs of swim jets or multi-jet spas.

The **E-Series** pump provides low cost performance and reliability for all pools and spas up to 100,000 litres.

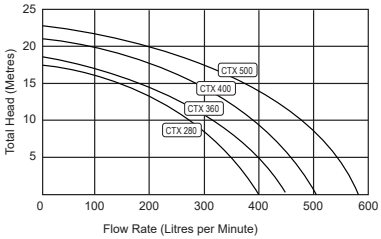
2.2 Specifications

Model	Phase	Voltage	Watts	Amps	Max Flow Suction (8 ft/sec)
CTX 280	1	240V	1260	5.3	280 LPM
CTX 360	1	240V	1360	7.1	360 LPM
CTX 400	1	240V	1500	7.9	400 LPM
CTX 500	1	240V	1900	8.3	500 LPM
XP 1.5	1	240V	1640	6.6	440 LPM
XP 2.0	1	240V	2020	8.5	540 LPM
	3	415V	2440	3.4	540 LPM
XP 3.0	1	240V	2300	12.5	635 LPM
	3	415V	2944	4.1	640 LPM
XF 140	1	240V	500	2.9	140 LPM
XF 250	1	240V	1050	4.3	250 LPM
XF 520	1	240V	1980	8.3	520 LPM
E 140	1	240V	500	2.9	140 LPM
E 170	1	240V	710	3.1	170 LPM
E 230	1	240V	1010	3.5	230 LPM

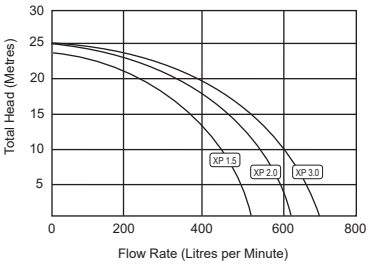
Table 1. Electrical and Flow Specifications

2.3 Performance Curves

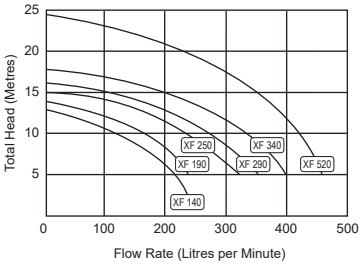
CTX-Series Pump



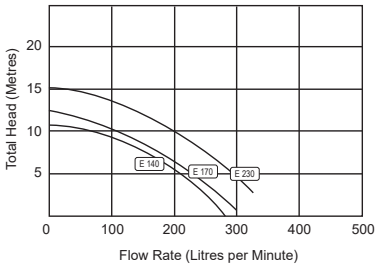
XP-Series Pump



XF-Series Pump



E-Series Pump



2.4 Technical Assistance

Please call **1300 186 875** or visit us on the web at: **astralpool.com.au**

2.5 Dimensions

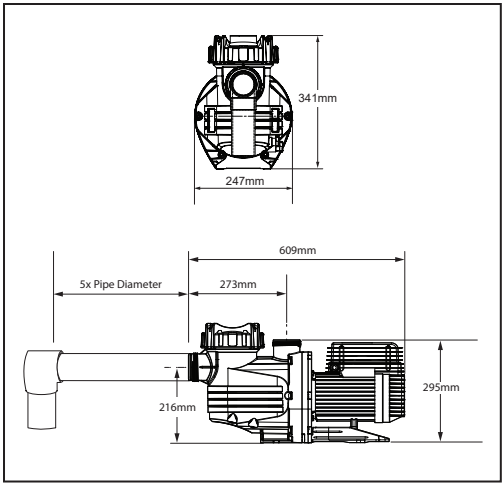


Figure 1. CTX-Series Pump

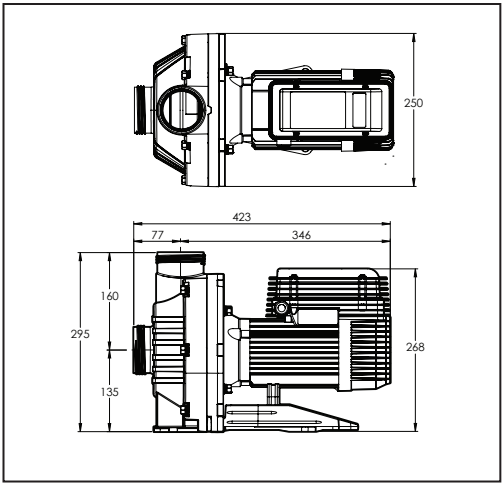


Figure 3. XF-Series Pump

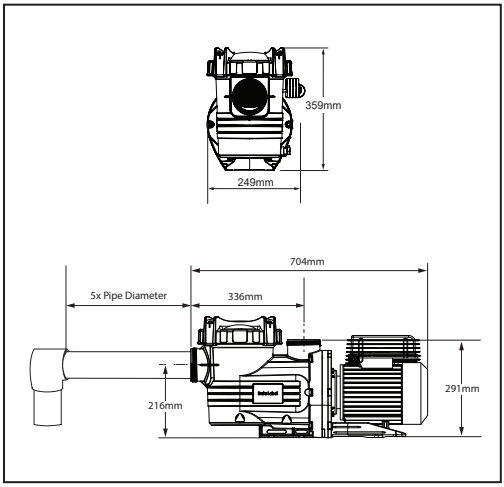


Figure 2. XP-Series Pump

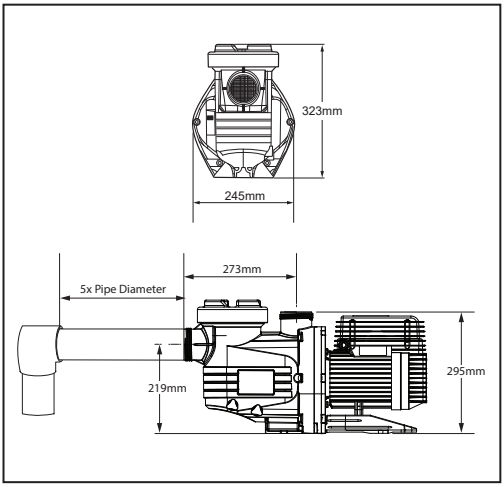


Figure 4. E-Series Pump

Section 3. Getting Started

Install the CTX, XP, XF or E Series Pump following the instructions in this manual, and in accordance with all applicable local and national codes and ordinances.

3.1 Package Contents

Two sets of union fittings are included with each pump (see Figure 5):

a. Union Nuts
b. Union Tails
c. O-Rings

(Please call your distributor or technical support if a part is missing.)

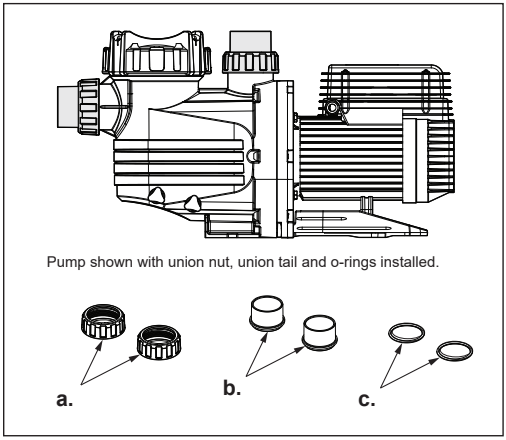


Figure 5. Union Fittings

3.2 Tools for Installation

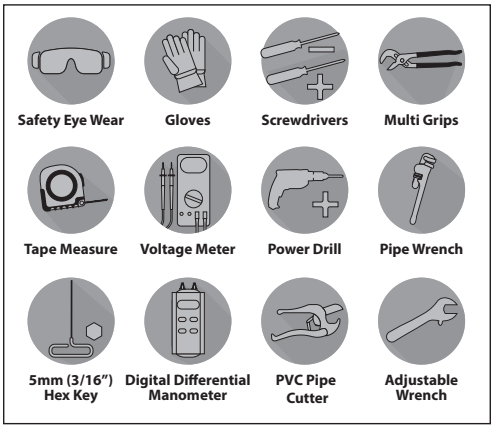


Figure 6. Required Tools

Section 4. Installation

4.1 Pump Location

⚠ WARNING

To Reduce the Risk of Fire, install pool equipment in an area where leaves or other debris will not collect on or around the equipment. Keep surrounding area clear of all debris such as paper, leaves, pine-needles and other combustible materials.

AstralPool recommends installing the pump within 30 cm above the water level. The pump should not be elevated more than 152 cm. If the pump is located below water level, check valves (also known as isolation valves or non-return valves) must be installed on both the suction and return lines to prevent back flow of pool water.

NOTE: When a pump is located below the pool surface, a leak can result in large scale water loss or flooding. AstralPool is not responsible for flood loss or damage.

1. Pumps must be installed in accordance with the regulations of the Australian wiring rules AS/NZS 3000-2018. To facilitate an emergency shutdown, install the General Power Outlet (GPO) or pool timer for the pump, in an easily accessible location.
2. Install the pump on a level, stable foundation, such as a concrete slab. Attach the pump using fasteners appropriate for the foundation surface.
3. Ensure that the foundation has adequate drainage to prevent the pump motor from getting wet.
4. Make sure the pump has the proper ventilation to prevent the motor from overheating. Overheating due to poor ventilation voids the warranty.
5. Provide enough lighting and space around the pump for maintenance.

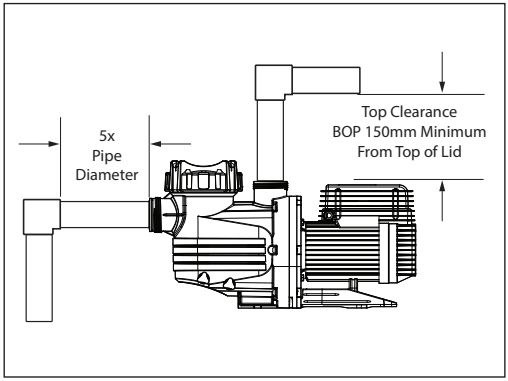


Figure 7. Minimum Pipe Clearances

4.1.1 Plumbing Guidelines

Using the correct pipe size (pipe diameter) is important for the efficiency and effectiveness of the entire system. Pump model and distance to water (pipe length) are used to calculate the recommended minimum pipe diameters below (see Table 2). The number of suction fittings and pump height relative to the water should also be considered.

NOTE If more than 10 suction fittings are needed, the pipe diameter must be increased to the next larger size.

Model	Pump ≤30m from Body of Water	Pump >30m from Body of Water	Next Minimum Size Larger
CTX 280	50 mm	65 mm	80 mm
CTX 360	50 mm	65 mm	80 mm
CTX 400	50 mm	65 mm	80 mm
CTX 500	50 mm	65 mm	80 mm
XF 140	40 mm	50 mm	65 mm
XF 250	40 mm	50 mm	65 mm
XF 520	50 mm	65 mm	80 mm
XP 1.5	50 mm	65 mm	80 mm
XP 2.0	50 mm	65 mm	80 mm
XP 3.0	50 mm	65 mm	80 mm
E 140	40 mm	50 mm	65 mm
E 170	40 mm	50 mm	65 mm
E 230	40 mm	50 mm	65 mm

Table 2. Minimum Pipe Diameters

1. Use the fewest number of fittings possible to maximize plumbing flow efficiency. Use sweep elbows for 90 degree joints wherever possible (see Figure 8).

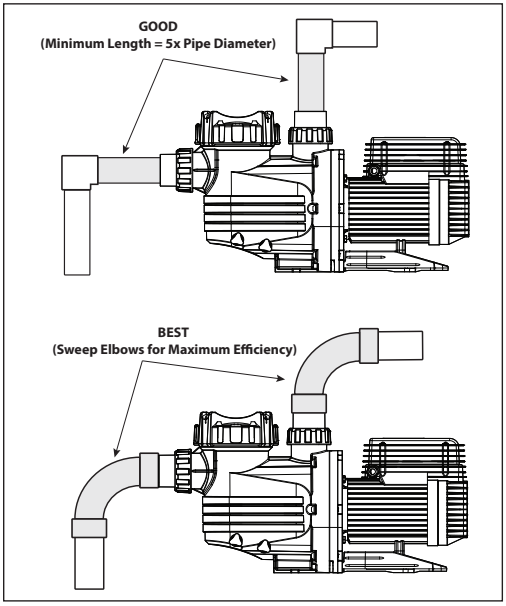


Figure 8. Proper Installation Examples

2. Always use properly sized valves. Jandy® Diverter Valves and Ball Valves offer superior flow capabilities.
3. Unions on both the suction and discharge ports simplify installation and service while minimizing leaks at threaded adapters.
4. Piping must be well supported and not forced together where it will experience constant stress.
5. To ensure easy priming of the pump, avoid creating air locks in the plumbing (looks like an inverted “U” shape). Below are examples of good and bad plumbing practices (see Figure 9).

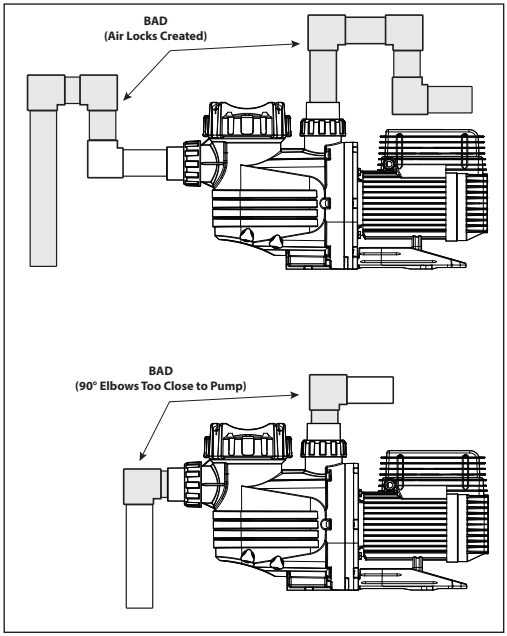


Figure 9. Incorrect Installation Examples

6. Every new installation must be pressure tested according to local codes.

4.2 Pump Installation

⚠ WARNING

AstralPool pumps are powered by a high voltage electric motor and must be installed by a licensed or certified electrician or a qualified swimming pool service technician.

When installing the appliance, ensure all parts are installed in the correct zone in accordance with the wiring rules. In particular refer to AS/NZS 3000 (Australia) and EN 60364 (EU).

1. The pump must be connected to at least two hydraulically-balanced main drains for each pool pump suction line.
2. Each drain (suction outlet) assembly must be provided with covers and must be listed or certified to the latest published edition of ANSI®/ASME® A112.19.8, its successor standard, ANSI/APSP-16 or the AU/NZS 1926.3-2010.
3. The suction fittings of the main drains must be at least 1m apart, center to center, or on different planes. The suction fittings can be a drain and skimmer, two drains, two skimmers, or a skimmer with an equalizer line installed. Check local codes for proper installation.

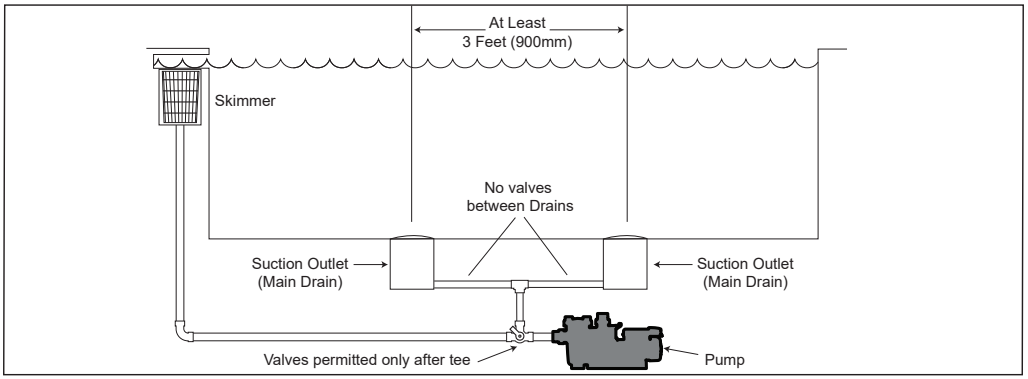


Figure 10. Minimum of Two Suction Outlets Per Pump

NOTE To prevent entrapment, the system must be built so it cannot operate with the pump drawing water from only one main drain. At least two main drains must be connected to the pump when it is in operation. However, if two main drains run into a single suction line, the single suction line may be equipped with a valve that will shut off both main drains from the pump.

4. An external by-pass valve must be installed before the filter if the flow rate exceeds 500 lpm (132 gpm). Refer to the manufacturer's recommendations if using a different brand heater (see Figure 11 Inset).

⚠ WARNING

A check valve can interfere with the proper operation of certain Suction Vacuum Release System (SVRS) products. To avoid possible entrapment hazard, serious injury, or death, make sure to review the operation/owners manual of your particular SVRS product before installing the check valve.

5. Install a corrosion resistant check valve in the return line if sanitation equipment such as erosion feeders and salt chlorination systems are installed (see Figure 11).

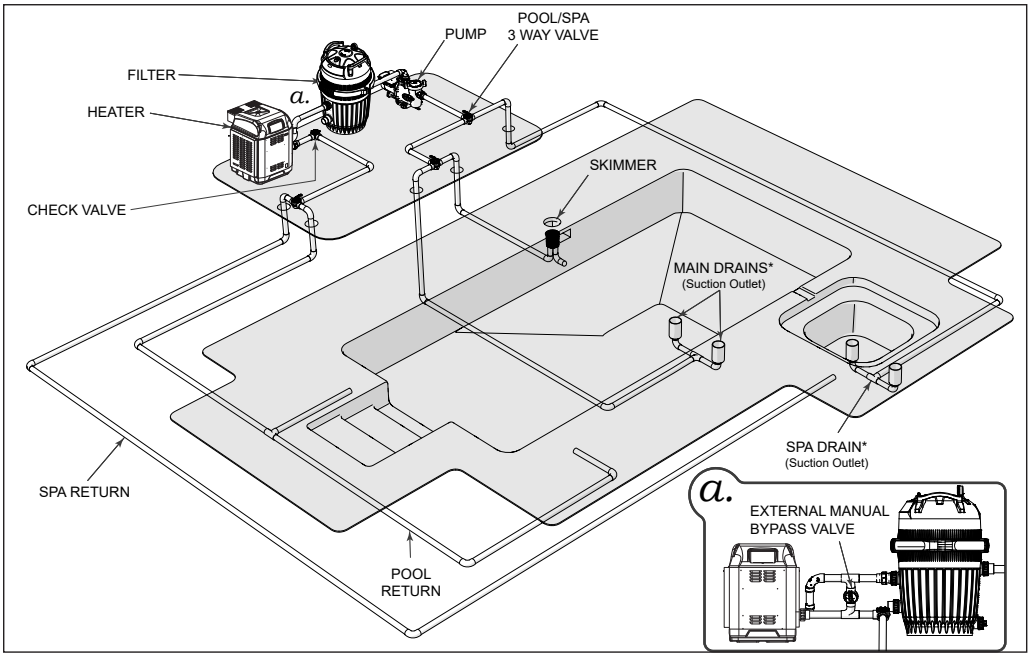


Figure 11. Typical Water Piping Configuration

4.3 Water Connections

The heater should always be installed after the pump and filter. All automatic sanitising devices must be installed after the heater with a check valve between to keep water from the sanitiser entering the heater directly.

A check valve is not required between the filter and the heater.

1. For best pump performance keep suction pipe length as short as possible with minimum number of bends and use 50mm high pressure PVC suction and return pipe. All equipment such as filters, heaters, chlorinators must have a minimum of 50mm connections.
2. Secure unions to the attaching pipe work, using approved priming fluid and solvent cement as normal practice, coating both surfaces.

NOTE: Always wear protective gloves when handling and using glue and priming fluid. Ensure no excess adhesive runs into the union, which may compromise sealing or removal abilities. Allow 24 hours to dry before starting pump. Do not use "green" glue on unions. This can cause damage to the ABS material used to manufacture the unions.

3. Install check valves before the pump section and after equipment if the pump is below the water level of the pool.
4. For pump installations 500mm above water level, it generally requires a foot valve at the pool or check valve in the suction line. Suction lines must be installed below water level until just in front of pump location and vertical riser used to reach pump inlet. AstralPool pumps are rated to a maximum head of 25 meters however refer to your pumps data plate for actual achievable pressure
5. All pumps will operate quieter and perform more efficiently if a straight pipe length of 450mm minimum is plumbed into the front of the pump.
6. Water temperature not to exceed 45 degrees

4.4 Electrical Connections

⚠ WARNING

AstralPool pumps are powered by a high voltage electric motor and must be installed by a licensed or certified electrician or a qualified swimming pool service technician.

When installing the appliance, ensure all parts are installed in the correct zone in accordance with the wiring rules. In particular refer to AS/NZS 3000 (Australia) and EN 60364 (EU)

⚠ WARNING

Failure to provide data plate voltage (+/- 10%) during operation will cause the motor to overheat and void the warranty

It is the responsibility of the installer to ensure that electrical connections are in compliance with all wiring codes, rules and regulations.

4.4.1 Voltage Checks

The correct voltage, as specified on the pump data plate, is necessary for proper performance and long motor life. Incorrect voltage will decrease the pump's ability to perform and could cause overheating, reduce the motor life, and result in higher electric bills.

It is the responsibility of the electrical installer to provide data plate operating voltage to the pump by ensuring proper circuit sizes and wire sizes.

Most applicable wiring/installation codes require pool pump circuits to be protected with a Ground Fault Circuit Interrupter (GFCI), also commonly referred to as a Residual Current Device (RCD). Pump input power must be either supplied by an isolating transformer or through a residual current device (RCD) with a rated residual operating current not exceeding 30mA.

4.4.2 3-Phase Wiring

The 3-Phase XP Pump must be connected with fixed wiring (AS/NZS 3000-2018) to maintain the IP rating. The XP 3-Phase Pump is not suitable for flex and plug connection.

The 3-Phase XP Pump requires a minimum 3 x 1.5mm^2 600/1000V cable with minimum 1.5mm Ø conductors, and a minimum outer 9.0mm Ø to maximum 10.5mm Ø .

The electrician must check the direction of pump rotation at the time of installation. Refer to the arrow on the Seal Plate to confirm the correct rotational direction.

1. Connect power to the motor (switched off).
2. Ensure the pump is empty of all water.
3. For a brief moment, switch on power to check if the motor rotation direction matches the arrow located in the rear of the Seal Plate.
4. Turn off power when rotation check is complete.
5. If the motor is rotating in the opposite direction, correct the phase wiring.
6. Once the correct rotation is confirmed, fill the pump with water, prime the pump and test operation.

Section 5. Operation

5.1 Starting Up the Pump

⚠ WARNING

Never run the pump without water. Running the pump "dry" for any length of time can cause severe damage to both the pump and motor and will void the warranty.

If this is a new pool installation, make sure all piping is clear of construction debris and has been properly pressure tested. The filter should be checked for proper installation, verifying that all connections and clamps are secure according to the manufacturer's recommendations.

⚠ WARNING

To avoid risk of property damage, severe personal injury or death, verify that all power is turned off before starting this procedure.

5.1.1 CTX-, XP- and E-Series Pumps

1. Depending on the location of the pump, do one of the following:
   - If the pump is located below the water level of the pool, open the filter pressure release valve to prime the pump with water.
   - If the pump is located above the water level of the pool, remove the lid and fill the basket with water before starting the pump.
2. Prior to replacing the lid, check for debris around the lid o-ring seat. Debris will cause air to leak into the system and will make it difficult to prime the pump.
3. Hand-tighten the lid to make an air tight seal. Do not use any tools to tighten the lid: hand-tighten only. Make sure all valves are open and the unions are tight. Restore power to the pump.
4. Once all the air has left the filter, close the pressure release valve.
5. Turn on power to the pump.
6. If the water flow is not available within 1 to 2 minutes, turn off the power and prime the pump again. After three (3) attempts at priming, turn off the pump and check for leaks.

NOTE If no leaks are evident, a check valve or foot valve is required to hold water for priming.

7. If water flow is not adequate after cleaning the lint basket, turn off the power and check for other issues such as the check valve, air leaks, faulty seal, cracked lint pot lid, etc.
8. Install a check valve (provided in basket with CTX and E-Series pumps) between the outlet barrel union tail and the pump discharge.

NOTE: A check valve should be installed on spas equipped with cartridge filters, systems with multiple pumps operating from one suction or return line, or any installation with backflow potential when the pump is turned off. The check valve will slightly reduce the pump's performance.

5.1.2 XF Series Pump

1. Open all valves to allow water into the pump.
2. If an air lock occurs with no water filling the pump housing, release the outlet barrel union slowly until a small amount of water escapes from the pump. Retighten the outlet barrel union.
3. Turn on power to the pump.
4. If the water flow is not available within 1 to 2 minutes, turn off the power and prime the pump again. After three (3) attempts at priming, turn off the pump and verify the valves and jets are open.

For assistance, call AstralPool Technical Support at 1300 186 875.

5.2 Pump Lid Removal

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Turn off all switches and the main breaker in the pump electrical circuit before starting the procedure. Failure to comply may cause a shock hazard resulting in severe personal injury or death.

1. Make sure that the pump is turned OFF.
2. Make sure that the switch to the circuit breaker to the motor is turned OFF.
3. Make sure all necessary check valves are closed to prevent water from reaching the pump.
4. Following the markings on the locking ring, turn the ring counter-clockwise until the 'START' markings align with the ports. See Figures 15.
5. Carefully remove the lid with locking ring.

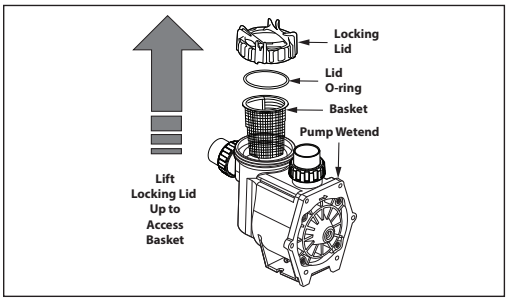


Figure 12. Remove Pump Lid

5.2.1 Pressure Testing

⚠ WARNING

When pressure testing a system with water, air is often trapped in the system during the filling process. This air will compress when the system is pressurized. Should the system fail, this trapped air can propel debris at a high speed and cause injury. Every effort to remove trapped air must be taken, including opening the bleed valve on the filter and loosening the pump basket lid while filling the pump.

⚠ WARNING

Trapped air in the system can cause the filter lid to be blown off, which can result in death, serious injury, or property damage. Be sure all air is properly purged out of the system before operating. DO NOT USE COMPRESSED AIR TO PRESSURE TEST OR CHECK FOR LEAKS.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Do not pressure test above 35 PSI. Pressure testing must be done by a trained pool professional. Circulation equipment that is not tested properly might fail, which could result in severe injury or property damage.

⚠ WARNING

When pressure testing the system with water, it is very important to make sure that the pump basket lid is completely secure.

1. Fill the system with water to eliminate trapped air.
2. Pressurize the system with water to no more than 35 PSI.
3. Close the valve to seal the water in the system.
4. Observe the system for any leaks or pressure decay.
5. If there are lid leaks, repeat this procedure.

For assistance, call AstralPool Technical Support at 1300 186 875.

Section 6. Maintenance

6.1 Routine Maintenance

Inspect the pump filter basket for debris by looking through the clear pump lid. Remove all debris. As debris accumulates, it will reduce the flow of water through the pump. For CTX, E and XP-Series pumps, keep the basket clean to improve the performance of the pump.

1. Turn off the power to the pump. If the pump is located below the water level, close the check valves on the suction and discharge sides of the pump to prevent backflow of water.
2. Turn the locking ring counter-clockwise until 'START' aligns with the ports. Carefully remove the lid.
3. Lift the basket out of the pump.
4. Dispose of the debris and thoroughly clean the basket, making sure all the holes are open. Using a garden hose, spray the basket from the outside to help clear the holes. Remove any remaining debris by hand.
5. Replace the basket in the pump by aligning the opening with the suction pipe. If aligned properly, the basket will drop easily into place. Do not force it into place.

⚠ CAUTION

A misaligned basket will cause the lid to be improperly seated, allowing an air leak, which could result in pump damage.

6. Remove the lid seal and remove debris around the lid seal seat, as this can allow air to leak into the system. Clean the lid seal and place it on the lid.
7. Replace the lid with locking ring. Hand-tighten the lid to make an air-tight seal. Do not use any tools to tighten the lid: **Hand-tighten only.**
8. Verify that all valves have been returned to the proper position for normal operation.
9. Open the pressure release valve on the filter, and make sure it is clean and ready for operation.
10. Turn on the power to the pump. Once all the air has been evacuated from the filter, close the pressure release valve.

6.2 Winterizing the Pump

⚠ CAUTION

The pump must be protected when freezing temperatures are expected. Allowing the pump to freeze will cause severe damage and void the warranty.

⚠ CAUTION

Do not use antifreeze solutions in the pool, spa, or hot tub systems! Antifreeze is highly toxic and may damage the circulation system. The only exception to this is Propylene Glycol. For more information, see your local pool/spa supply store or contact a qualified swimming pool service company.

1. Drain all water from the pump, system equipment, and piping.
2. Remove the two (2) drain plugs. Store the drain plugs in a safe location and reinstall them when the cold weather season is over.
3. Keep the motor covered and dry. Do not cover the pump with plastic, because this will create condensation that will damage the pump.

NOTE AstralPool recommends having a qualified service technician or electrician properly disconnect the electrical wiring at the switch or junction box. Once the power is removed, loosen the two (2) unions and store the pump indoors. For safety, and to prevent entry of contaminants, reinstall all conduit and terminal box covers.

4. When the system is reopened for operation, have a qualified technician or electrician make sure all piping, valves, wiring and equipment are in accordance with the manufacturer's recommendations. Pay close attention to the filter and electrical connections.
5. The pump must be primed prior to starting (see Section 5.1).

6.3 Maintenance Recommendations

1. Keep the lint basket clean – empty it regularly. Blocked lint basket or suction pipe and/or no water flow will cause pump failure and meltdown.
2. Apply suitable waterproof grease to the lint pot "O" ring to ensure positive seal.
3. Ensure electrical passage for cooling airflow to prevent fusing or shock hazards.
4. Maintain clear passage for cooling airflow to the pump to prevent overheating of motor.
5. Maintain water in good chemical balance.
6. Do not allow quantities of sand of grit to continuously pass through pump to prevent "sand blasting" erosions (use filter sock in lint basket if sand, etc. is being picked up by vacuum).
7. Do not over tighten strainer lid. Never use a tool or handle to tighten lid, the lid is designed to prevent this from happening.
8. Do not add pool salt, chlorine, acid or other chemicals directly to your skimmer. This may result in damage to your pump and could void your warranty.

6.4 Maintenance Schedule

Pumps incorporate moving parts and withstand high velocity water and chemicals. Some parts wear out in the normal course of use and require regular checks and maintenance. Performing these checks and maintenance will identify parts that have worn and require repair/replacement before damage occurs. Regular care will help ensure long life and trouble free performance.

Pool equipment is vented to allow electronics to cool. Insects may be attracted to warm, dry environment inside the equipment. We recommend that, with power turned off, you spray surface insecticide on the equipment enclosures to prevent ant and insect ingress. Repeat every three months or as necessary.

Timing	Maintenance Check	Service Action If Required
Weekly or sooner	Check hair and lint basket	Empty all debris.
Three Monthly	Check Lid O-ring and Inlet/Outlet O-rings for leaks	Isolate Pump, turn power off, clean and grease O rings or replace if necessary
	Check surroundings for leaves, debris and flooding	Remove debris and rectify if flooding
Three Monthly	Check for insects/ants ingress into pool equipment enclosures	Spray a surface insecticide on the surfaces around the pool equipment
Three Monthly	Check for leaks under the pump	Call Service technician, repair or replace mechanical seal and motor bearing if necessary

Table 3. Pump Maintenance Schedule

Section 7. Troubleshooting

When there is an error condition, a message is displayed on the screen. When the error situation is corrected, the error message ends automatically. If the pump continues to perform incorrectly, please contact AstralPool at 1 300 186 875.

Issue	Possible Cause	Solution
Pump is noisy or humming	It could either be the impeller, bearings, mechanical seal, capacitor or a burnt out motor.	Call for service.
Pump Not Running	There could be something stuck in the impeller.	• You can try a flat head screwdriver and pop it in underneath the cowl to see if you can get some free movement of the impeller. • If it doesn't move, there could be something stuck inside that needs to be removed. • This is part of general maintenance and will not be covered under warranty. • If it does move, book a technician or service agent to attend as the motor may have failed.
	Check the hair and lint basket	• Damage to the basket could mean a piece of debris has passed through to the impellor which can cause a jam in the pump, which is not covered under warranty.
Pump is leaking under lid or under pump	Leaking from the lid	• The O ring in the lid being cracked from not having Hydroslip applied or the lid itself is not secure. • This is general maintenance and will not be covered under warranty. • If the lid has a crack in it, we can send a new lid and O ring at no charge if under warranty.
	Leaking from underneath	• General wear and tear or poor water chemistry can cause the mechanical seal to leak (poor water chemistry is not covered under warranty). • Book a technician or agent to attend.
Pump is not priming (not filling up)	Maintenance behind schedule due to winter season or other scheduling conflicts.	• Check for debris build up in the skimmer basket. This can cause reduced flow to the pump. • Also ensure that any suction cleaners are disconnected as this can be restrictive. • Check for debris build up in the hair and lint basket of the pump. • Remove and check the basket for any signs of damage or splitting. • Ensure that the hair and lint basket is sitting correctly in the pump as the lid may not close and cause air to enter the system. • Clean the O Ring of the lid and ensure it is greased with HydroSlip. If the O Ring looks damaged, make sure it is replaced. • Also remove fittings from front and top of pump, clean and check O Rings. If damaged, make sure it is replaced. • Wash thread on both sides of fitting with fresh water and refit.

Table 4. Troubleshooting

A Fluidra Brand | AstralPool.com.au | AstralPool.co.nz

Fluidra Group Australia Pty Ltd | 1 Herbert Place, Smithfield NSW 2164, PO Box 7238 Wetherill Park NSW 1851, Australia
ABN: 87 002 641 965 | 1300 186 875

Fluidra NZ Ltd | 13 Douglas Alexander Parade | Rosedale Auckland 0632, New Zealand
NZBN: 942 903 181 70759 | 0800 807 665

H0717800_REVC