

**ASTRALPOOL** 

# Hurlcon Pumps

## CTX Series, E Series

## BX Series & FX Series

## INSTALLATION AND OPERATING INSTRUCTIONS



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A division of

**FLUIDRA**  




## GENERAL

A high performance, high head pump ideally suited for the modern pool or spa with extensive equipment such as chlorinators, heaters and in floor cleaning.

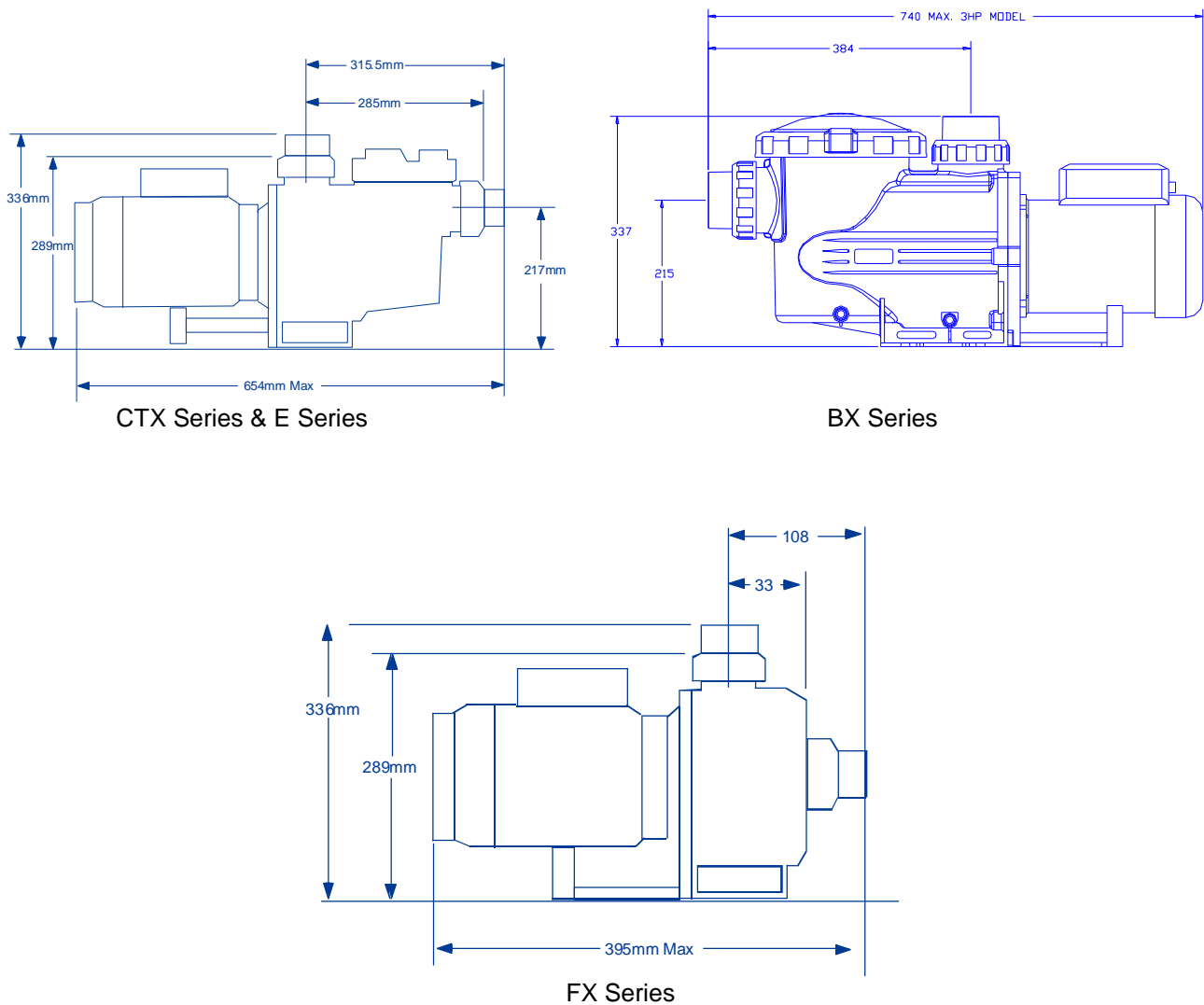
### Note:

The appliance is not intended for use by young children or infirm person without supervision. Please ensure that young children are supervised to ensure that they do not play with the appliance.

## FEATURES

- Continuous duty rated motor
- Precision reinforced moulded high head impeller, giving extra performance
- Single piece moulded body for added strength and longer life
- Rapid priming diffuser quickly corrects loss of water flow
- Quick and easy disassembly for servicing
- Large capacity basket with easily removed ramp on lid

## DIMENSIONS



## INSTALLATION OF BX, CTX & E SERIES PUMPS

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- A.** Plan position of pump so that it will be:
1. Free of water flooding, such as in a sump, garden hollow, ditch or at the bottom of a bank.
  2. On a stable base so that:
    - a) The pump is not left suspended by its fittings, causing a leak or failure with loss of water.
    - b) Movement through vibration is restricted
    - c) No strain is put on attaching pipe or other expensive equipment
  3. Accessible for maintenance and easily removed for service.
  4. Breathing space. Pump should not be crowded which will prevent cooling airflow from fan. Overheating due to lack of cooling voids warranty.
  5. Within reach of power point without extension cables as plugs liable to corrosion, shorting, etc.
  6. At a minimum height of suction lift of water from pool surface to pump inlet.
- B.** For best pump performance keep suction pipe length as short as possible with minimum number of bends and use 50mm PVC suction pipe for 750W (1hp) to 1700 W (2.0 hp). On 3.0 hp models a 65mm or 2 x 50mm suctions should be used.
- C.** Minimum pipe diameters should be used on the following pumps  
40mm - E 140, E190, E230, CTX180  
50mm - E 290, CTX280, CTX360, CTX400, CTX610, BX1.0, BX1.5, BX2.0, BX3.0
- D.** Secure the barrel unions supplied into 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 proper affecting the sealing or removal abilities. Allow 24 hours to dry before starting pump. Do not use "green" glue on barrel unions. This can cause damage to the ABS material used to manufacture the unions.
- E.** Install isolation valves before the pump section and after equipment if the pump is below the water level of the pool.
- F.** 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. Hurlcon pumps are rated to a maximum head of 25 metres however refer to your pumps data plate for actual achievable pressure
- G.** All pumps will operate quieter and perform more efficiently if a straight length of 450mm pipe is plumbed horizontally into the front of the pump.
- H.** Water temperature not to exceed 45 degrees
- I.** Pumps must be either
- supplied by an isolating transformer, or
  - supplied through a residual current device (RCD) with a rated residual operating current not exceeding 30mA.

# INSTALLATION OF FX SERIES PUMPS

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- A.** Plan position of pump so that it will be:
1. Below the pool or spa water level unless pump is primed to be a secondary pump,
  2. Free of water flooding, such as in sump, garden hollow, ditch or at bottom of bank with run off.
  3. On a stable base so that:
    - a) The pump is not left suspended by its fittings, causing a leak or failure with loss of water.
    - b) Movement through vibration is restricted.
    - c) No strain is put on attaching pipe or other expensive equipment.
  4. Accessible for maintenance
  5. Easily removed for service
  6. Breathing space. Pump should not be crowded which will prevent cooling airflow from fan. Overheating due to lack of cooling voids warranty.
  7. Within reach of power point without extension plugs liable to corrosion, shorting, etc.
- B.** For best pump performance keep suction pipe length as short as possible with minimum number of bends and use 50mm PVC suction pipe for 750W (1hp) or larger pumps.
- C.** Minimum pipe diameters should be used on the following pumps
- |        |                      |
|--------|----------------------|
| 40mm - | FX140, FX190, FX 250 |
| 50mm - | FX290, FX340, FX520  |
- D.** Secure the barrel unions supplied into the attaching pipe work, using approved priming fluid and solvent cement as normal practice, coating both surfaces. NOTE: Always wear protective gloves handling and using glue and priming fluid. Ensure no excess adhesive runs into the union proper affecting the sealing or removal abilities. Allow 24 hours to dry before starting pump. Do not use "green" glue on barrel unions. This can cause damage to the ABS material used to manufacture.
- E.** Install isolation valves before the pump section and after equipment.
- F.** All pumps will operate quieter and perform more efficiently if a straight length of 450mm pipe is plumbed horizontally into the front of the pump.
- G.** Water temperature not to exceed 45 degrees C.
- H.** Hurlcon pumps are rated to a maximum head of 25 metres however refer to you pumps data plate for actual achievable pressure
- I.** Pumps must be either
- supplied by an isolating transformer, or
  - supplied through a residual current device (RCD) with a rated residual operating current not exceeding 30mA.

## 3 PHASE PUMP INSTALLATION

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To be performed only by a qualified electrician.

1. Connect power to motor
2. Ensure that pump is empty of all water
3. Momentarily apply power to motor and check rotation direction of motor matches that of the arrow located on the rear of the pump seal plate.
4. If motor is rotating in the opposite direction to arrow on pump, correct phase wiring.
5. Once rotation is correct, fill pump with water, prime as described below and test pump operation.

## OPERATION OF BX, CTX & E SERIES PUMPS

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1. Prime pump if hair and lint pot is dry as follows – Close off valve on suction line if present. Remove lint pot lid. Fill lint pot and chamber with water. Replace and secure lint pot lid and seal.
2. Open all valves, allowing fluid to flow through pump.
3. Switch on power to pump, motor to start.
4. If some flow of water does not establish within on half minute, switch off and prime pump again. If pump does not prime within 3 attempts, check all suction connections for sealing. If these are satisfactory, a check or foot valve is required to hold water for prime.
5. If the water flow through pump is always tedious to obtain at start-up after cleaning the lint basket, then an examination of the system to establish a reason and correct the cause is recommended. Eg. Check valve, air leaks, faulty seal, cracked lint pot lid, etc.
6. A non return valve is supplied loose in the basket of the pump (CTX and E Series only). To install, place between the outlet barrel union tail and the discharge of the pump. The non return valve should be located so that the flap can swing upwards into the union tail. The non return valve should be installed on spas equipped with cartridge filters, any time multiple pumps are operating off one suction or return line or any installation where a back flow of water may occur when the pump is shut down. The non return valve will reduce the performance of the pump slightly.

**Notes:** The pump is not intended for use by young children or infirm persons without supervision. Please ensure that young children are supervised to ensure that they do not play with the pump.

To avoid a safety hazard, the supply cord if damaged, must only be replaced by AstralPool, or its service agent or a suitably qualified person.

## OPERATION OF FX SERIES PUMP

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1. Open all valves, allowing fluid to flow through pump.
2. If an air lock occurs and no water appears to fill pump housing once the valves have been opened, release outlet barrel union slowly until a small amount of water escapes from the pump then re-tighten.
3. Switch on power to pump, motor to start.
4. If some flow of water does not establish within on half minute, switch off and repeat procedure 3 again. If pump does not prime within 3 attempts, check all valves and jets are in the open position.

**Notes:** The pump is not intended for use by young children or infirm persons without supervision. Please ensure that young children are supervised to ensure that they do not play with the pump.

To avoid a safety hazard, the supply cord if damaged, must only be replaced by AstralPool, or its service agent or a suitably qualified person.

## MAINTENANCE

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Hurlcon pumps are designed to operate for extended periods with minimal attention or maintenance. Following are the periodic maintenance requirements:

1. Keep the lint basket clean – empty it regularly. Blocked lint basket or suction pipe and no water flow can cause overheating with consequent pipe and pump components 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 prevent overheating of motor.
5. Maintain water in good chemical balance.
6. Do not allow quantities of sand or 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.

## Maintenance of your pump

**Maintenance Schedule:** Your new product incorporates moving parts and withstands high velocity water with chemicals in it. Some of these parts will wear 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 further serious damage is sustained. A small amount of regular care and attention to your pool equipment will help ensure long life and trouble free performance.

Timing	Maintenance Check	Service action (if required)
Weekly or sooner	Check and empty hair and lint basket	Empty leaves and 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
Three Monthly	Check surroundings for leaves, debris and flooding	Remove debris and rectify if any flooding
<b>Three Monthly</b>	Check for leaks from underneath pump	Call Service technician, repair or replace mechanical seal and motor bearings if necessary

**Important note:** Regular maintenance is important to ensure long life and trouble free performance of your pool equipment. If unable to perform the maintenance yourself, contact your local AstralPool office who will arrange a trained service technician to perform the maintenance for you.

Record your Equipment details here for quick reference:

Model No.: \_\_\_\_\_

Serial No.: \_\_\_\_\_



## Electrical Specifications

Model	Voltage	Phase	Input	Full Load
<b>BX1.0</b>	240	Single	1300	5.5
<b>BX1.5</b>	240	Single	1640	6.6
<b>BX2.0</b>	240	Single	2020	8.5
<b>BX3.0</b>	240	Single	2300	12.5

Model	Voltage	Phase	Input	Full Load
<b>E 140</b>	240	Single	500	2.9
<b>E 170</b>	240	Single	710	3.1
<b>E 230</b>	240	Single	1010	3.5
<b>E 290</b>	240	Single	1140	4.8

Model	HP	Voltage	Phase	Input	Full Load
<b>CTX180</b>	0.75	240	Single	750	3.8
<b>CTX280</b>	1.00	240	Single	1260	5.3
<b>CTX360</b>	1.25	240	Single	1360	7.1
<b>CTX400</b>	1.50	240	Single	1500	7.9
<b>CTX500</b>	2.00	240	Single	1900	8.3
<b>CTX610</b>	3.00	240	Single	2300	12.5

Model	Voltage	Phase	Input	Full Load
<b>FX140</b>	240	Single	500	2.9
<b>FX190</b>	240	Single	750	3.2
<b>FX250</b>	240	Single	1050	4.3
<b>FX290</b>	240	Single	1200	4.9
<b>FX340</b>	240	Single	1490	6.0
<b>FX520</b>	240	Single	1980	8.3

All Astral Pool pumps have double insulation on the water circuit for maximum protection and safety. Pumps manufactured by Astral Pool use P2 rated capacitors for protection against fire.

## WARRANTY

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Your Astral Pool E Series Pumps are covered by a 2 year warranty and BX, CTX & FX pumps are covered by a 3 year warranty against defects in materials and workmanship from the date of purchase (plus 30 days to allow for installation) The warranty covers (infield labour within capital city metropolitan areas or within a 20km radius of an authorized Astral Pool service agent) and the any defective components or parts.

This warranty is subject to the conditions and limitations listed herein. All warranties apply to the original purchaser of the product and are not transferable to new owners. You must notify Astral Pool upon the failure of any component within the warranty period to make a valid claim.

The warranty offered is only valid when the equipment has been used in a normal manner, for the purpose for which it was intended and in accordance with the operating and instruction manual. The replacement of maintenance items used in routine general maintenance are not covered by this warranty. Maintenance items may include (but not limited to);

- Motor bearings
- O'ring and gasket seals
- Mechanical seal

This warranty does not cover any equipment that has been improperly installed, misused, neglected, damaged whether intentionally or accidentally, or repaired/replaced without authorization from Astral Pool or altered in any way from its original form. Specific items that will void warranty are (but not limited to);

- Running the pump dry
- Improper chemical balance
- Water damage from external sources
- Inadequate ventilation
- Addition of chemicals directly through the skimmer
- Use on non-swimming pool applications

Extreme operating conditions beyond the control of Astral Pool such as improper power supply, extreme temperatures or other conditions that adversely affect the performance or life of the equipment will void the warranty. Insect infestation or penetration by sand, dust or other foreign bodies will void warranty.

Where in field labor warranty is provided, a 20km radius from an authorized Astral Pool agent is applied. If the location of the equipment is outside this area, travel charges will apply. If your request for a service call is deemed to be non warranty, you will be charged for a diagnostic service call.

AstralPool reserve the right to repair or replace defective components or products at its sole discretion.

Astral Pool shall have no liability for incidental or consequential damages or delays caused either directly or indirectly by any malfunction of or defect of or failure of the equipment.

Where the equipment is installed in commercial situations including (but not limited to) hotels, motels, caravan parks, health clubs, public pools, body corporate installations, etc the warranty is limited to 12 months.

Proof of Purchase must be retained for all warranty claims. Warranty will not be considered without Proof of Purchase. No person is authorized to make any representation or warranty on behalf of Astral Pool without express written consent from Astral Pool.



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Information and specifications subject to change without notice.

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