



# AstralPool Pumps CTX Series, E Series BX Series & FX Series

## INSTALLATION AND OPERATING INSTRUCTIONS



## GENERAL

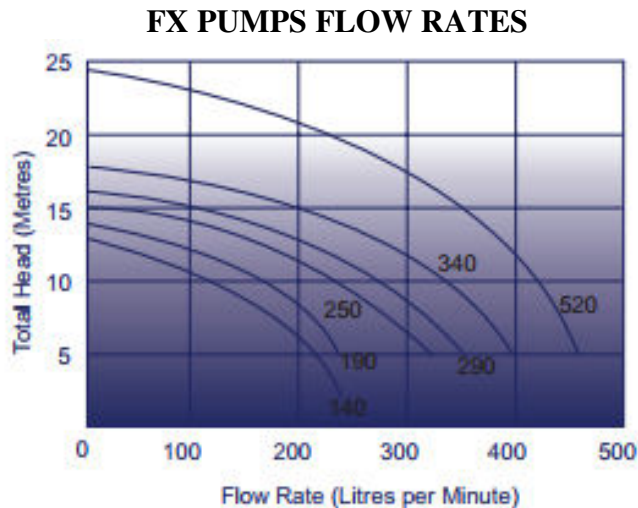
A high performance, high head pump ideally suited for the modern pool or spa with extensive equipment such as chlorinators, heaters and in floor cleaning.

### 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.

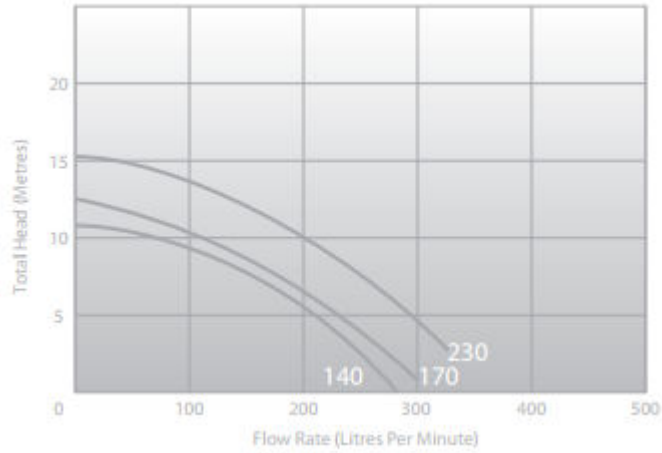
## FEATURES

- 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 lid



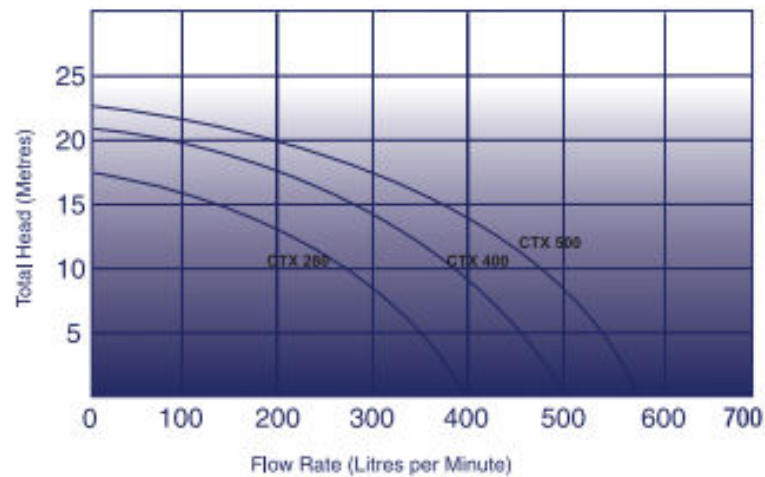
Model	Voltage	Full Load Amps	Phase	In-put	Full Load	Flow Rate @ 8 m/h	Conns "mm"
FX 140 Flooded Suction Pump 0.50 HP	240	2.9	Single	650	2.75	140 lpm	40/50
FX 190 Flooded Suction Pump 0.75 HP	240	3.2	Single	822	3.47	190 lpm	40/50
FX 250 Flooded Suction Pump 1.00 HP	240	4.3	Single	1015	4.38	250 lpm	40/50
FX 340 Flooded Suction Pump 1.50 HP	240	6.6	Single	1617	7.10	340 lpm	40/50
FX 520 Flooded Suction Pump 2.00 HP	240	8.3	Single	1900	8.85	520 lpm	40/50

## E-SERIES PUMPS FLOW RATES



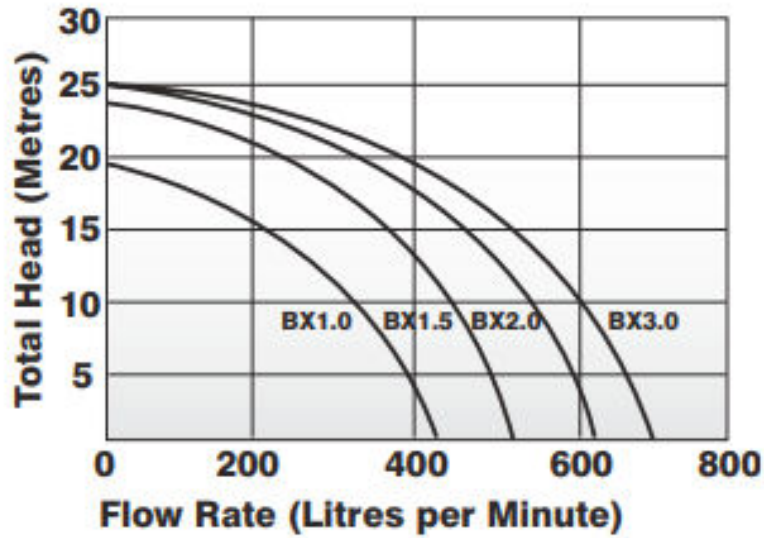
Model	Volts	Phase	Input Watts	Horse Power	Flow Rate Max @ 8 m/h	Noise @ 1m	Full Load Amps
E 140	240	Single	650	0.50	140 lpm	57 dBA	2.9
E 170	240	Single	850	0.75	170 lpm	57 dBA	3.5
E 230	240	Single	925	1.00	230 lpm	57 dBA	3.9

## CTX PUMPS FLOW RATES



Model	Volts	Phase	Input Watts	Horse Power	Flow Rate Max @ 8 m/h	Full Load Amps
CTX 280	240	Single	1070	1.00	280 lpm	4.5
CTX 400	240	Single	1650	1.50	400 lpm	7.2
CTX 500	240	Single	1900	2.00	500 lpm	8.3

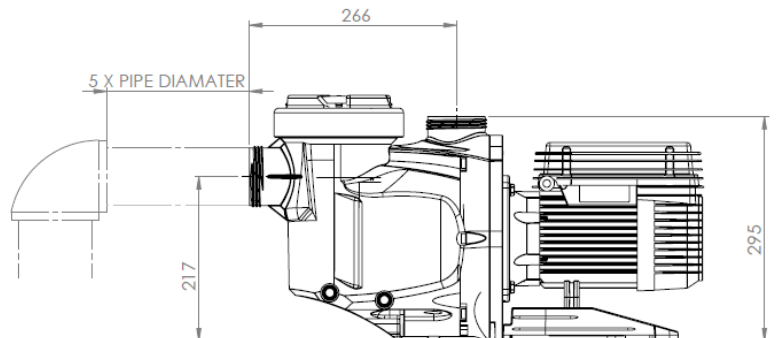
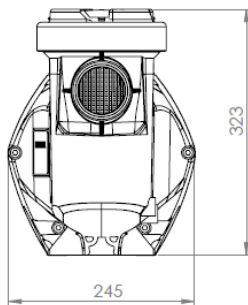
## BX PUMPS FLOW RATE



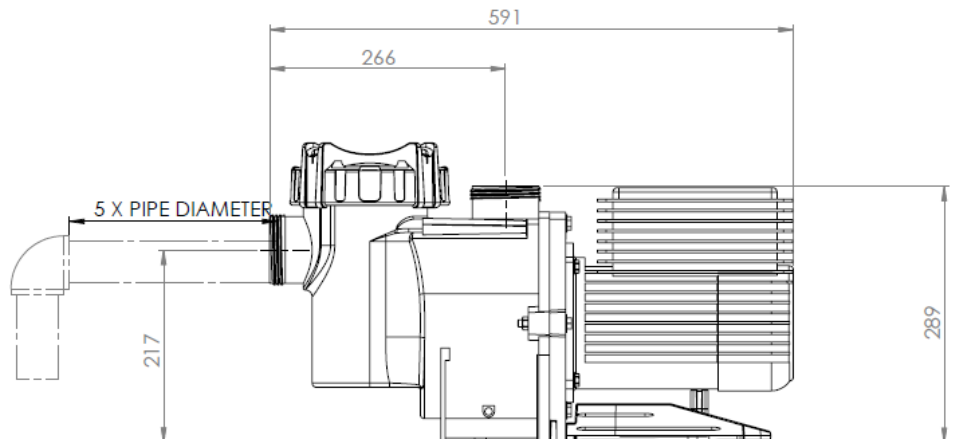
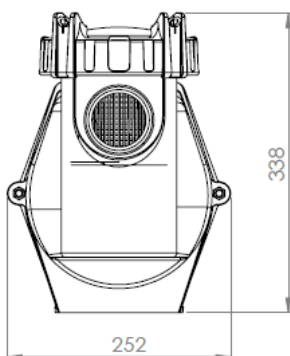
Model	Volts	Phase	Input Watts	Horse Power	Flow Rate Max @ 8 m/h	Full Load Amps
BX 1.0	240	Single	1160	1.005	325 lpm	5.0
BX 1.5	240	Single	1645	1.50	440 lpm	7.2
BX 2.0	240	Single	2030	2.00	540 lpm	8.8
BX 3.0	240	Single	2300	3.00	635 lpm	12.5

## INSTALLATION OF BX, CTX & E SERIES PUMPS

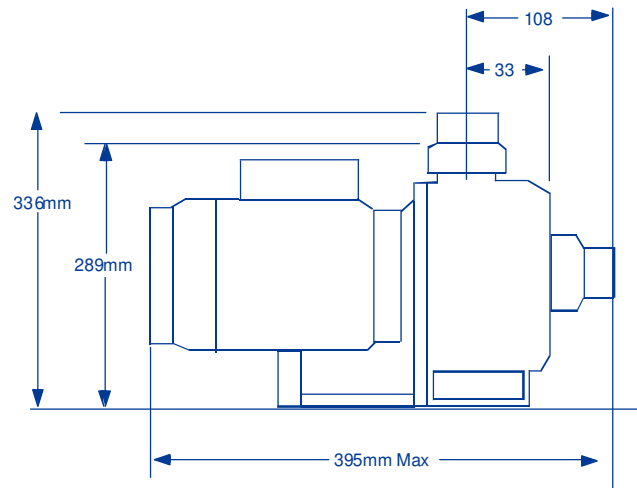
### E-SERIES



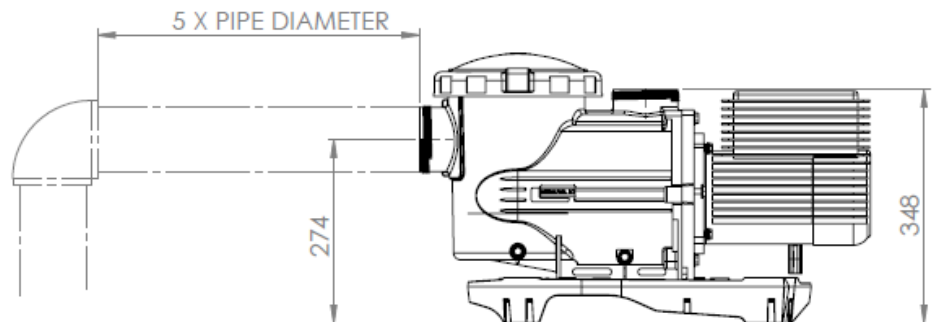
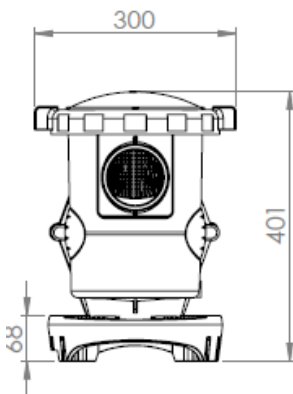
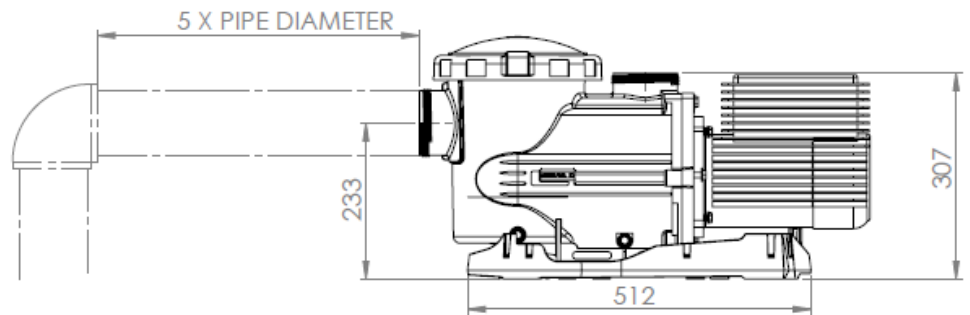
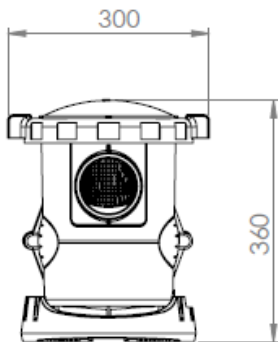
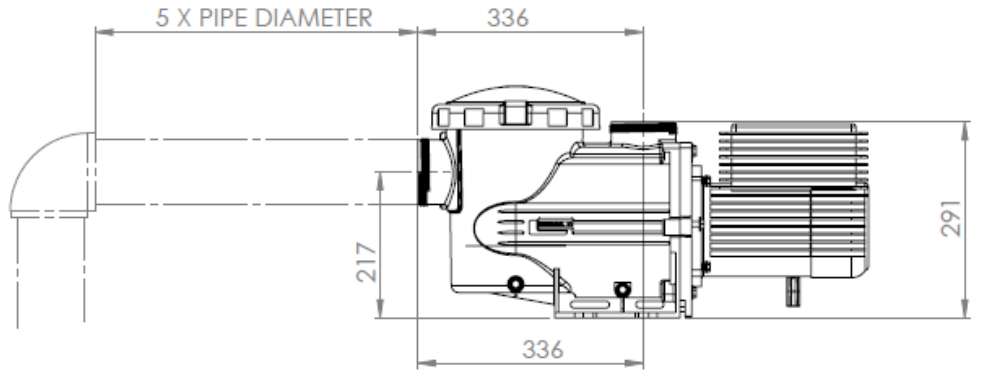
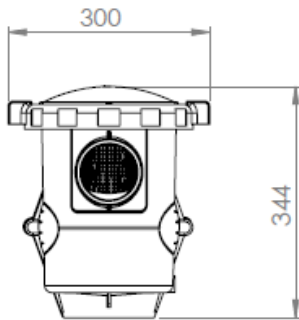
### CTX SERIES



## FX SERIES



## BX SERIES



- 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 (1.0hp) to 1700W (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.
- 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. AstralPool pumps are rated to a maximum head of 25 meters however refer to your pump's 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 C.
- 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.
- 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. AstralPool pumps are rated to a maximum head of 25 meters 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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Only a qualified Electrician may connect or disconnect this pump to or from a power supply. The Pump must be connected by means of fixed wiring (to AS/NZS 3000:2007) so that the IP rating is maintained when doing so. Electrician must check the direction of rotation of the pump at the time of installation, refer to arrow on the seal plate to confirm correct rotation. Minimum 3 x 1.5 sq mm cable 600/1000v with Min 1.5mm Dia conductors to be used.

The Pump is not suitable for flex and plug connection.

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.
4. If some flow of water does not establish within one 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.

- If some flow of water does not establish within one 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

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

- 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.
- Apply suitable waterproof grease to the lint pot “O” ring to ensure positive seal.
- Ensure electrical passage for cooling airflow to prevent fusing or shock hazards.
- Maintain clear passage for cooling airflow to prevent overheating of motor.
- Maintain water in good chemical balance.
- 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.)
- Do not over tighten strainer lid. Never use a tool or handle to tighten lid, the lid is designed to prevent this from happening.
- 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.

To protect against extremes of temperature, your unit is vented to allow expensive electronics to cool. Ants and some insects are often attracted to the warmer, dry environment inside the enclosure. We recommend that, with power turned off, you spray a surface insecticide on the surfaces surrounding the control to prevent ant and insect ingress. Repeat every three months or as necessary.

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  Check for inserts/ants	Remove debris and rectify if any flooding  Turn off power to pump, Spray a surface insecticide on the surfaces around the unit to prevent ant and insect ingress.
Three Monthly	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	AMPS		MODEL	VOLTAGE	PHASE	INPUT	AMPS
BX 1 HP	240V	SINGLE	1300	5.5		E-140	240V	SINGLE	500	2.9
BX 1.5 HP	240V	SINGLE	1640	6.6		E-170	240V	SINGLE	710	3.1
BX 2 HP	240V	SINGLE	2020	8.5		E-230	240V	SINGLE	1010	3.5
BX 3 HP	240V	SINGLE	2300	12.5		E-290	240V	SINGLE	1140	4.8
MODEL	VOLTAGE	PHASE	INPUT	AMPS		MODEL	VOLTAGE	PHASE	INPUT	AMPS
CTX180	240V	SINGLE	750	3.8		FX140	240V	SINGLE	500	2.9
CTX280	240V	SINGLE	1260	5.3		FX190	240V	SINGLE	750	3.2
CTX360	240V	SINGLE	1360	7.1		FX250	240V	SINGLE	1050	4.3
CTX400	240V	SINGLE	1500	7.9		FX290	240V	SINGLE	1200	4.9
CTX500	240V	SINGLE	1900	8.3		FX340	240V	SINGLE	1490	6
CTX610	240V	SINGLE	2300	12.5		FX520	240V	SINGLE	1980	8.3
MODEL	VOLTAGE	PHASE	INPUT	AMPS PER PHASE		MODEL	VOLTAGE	PHASE	INPUT	AMPS PER PHASE
BX 1 HP	415V	3	1300	1.9		CTX180	415V	3	840	1.9
BX 1.5 HP	415V	3	1640	2.1		CTX280	415V	3	1070	2.1
BX 2 HP	415V	3	2440	3.4		CTX360	415V	3	1140	2.3
BX 3 HP	415V	3	2944	4.1		CTX400	415V	3	1650	2.6
BX 4 HP	415V	3	3375	4.7		CTX500	415V	3	1900	3.1
						CTX610	415V	3	2400	4

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

AstralPool Australia Pty Ltd (ABN 97 007 284 504) ("AstralPool") provides the following warranty in relation to its series of Pool & Spa pumps ("Product").

The benefits of this warranty are in addition to any rights and remedies imposed by Australian State and Federal legislation that cannot be excluded. Nothing in this warranty is to be interpreted as excluding, restricting or modifying any State or Federal legislation applicable to the supply of goods and services which cannot be excluded, restricted or modified.

### WARRANTY

AstralPool warrants that, subject to the exclusions and limitations below, the Product will be free from defects in materials and workmanship during the warranty period. The warranty periods are set out below and commence 30 days after the date of purchase (to allow for installation). The warranty period may vary for different parts of the Product.

Parts	Warranty Period
CTX/BX Series	3 years*
FX Series	3 years*
E Series	3 years*

If a defect appears in the Product before the end of the warranty period and AstralPool finds the Product to be defective in materials or workmanship, AstralPool will, in its sole discretion, either:

- (a) Replace or repair the Product or the defective part of the Product free of charge; or
- (b) Cause the Product or the defective part of the Product to be replaced or repaired by an Authorised AstralPool Service Agent free of charge.

AstralPool reserves the right to replace defective parts of the Product with parts and components of similar quality, grade and composition where an identical part or component is not available.

Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

### WARRANTY CLAIMS

1. If a fault covered by warranty occurs, the customer must first contact AstralPool at the contact address listed below, or an Authorised AstralPool Service Agent.
2. Any warranty claim must be accompanied by:
  - (a) Proof of purchase;
  - (b) Full details of the alleged defect; and
  - (c) Appropriate documentation (such as historical and maintenance records).

3. The customer must make the Product available to AstralPool or its Authorised AstralPool Service Agent for inspection and testing. AstralPool or its Authorised AstralPool Service Agent will attend the premises where the Product is installed for inspection and testing. If the Product is installed:
- (a) Outside a capital city metropolitan area; and
  - (b) Is not within a 20 km radius of an Authorised AstralPool Service Agent;
- Then the customer may have to pay a travel fee.
4. If such inspection and testing finds no defect in the Product, the customer must pay AstralPool's usual costs of service work and testing. If such inspection and testing finds a defect that is not covered by this warranty, the customer must pay AstralPool's usual costs of service work plus any parts and labour required to repair the Product, unless recoverable from AstralPool on the failure of any statutory guarantee under the ACL.

**\* Warranty periods may differ from Country to Country. Please refer to your Local supplier for warranty periods**

### **Exclusions**

The warranty will not apply where:

- (a) The customer is in breach of the Terms and Conditions of Sale;
- (b) The Product was used for a purpose other than one it was intended for;
- (c) The Product was repaired, modified or altered by any person other than AstralPool;
- (d) The Product has not been installed, maintained and/or operated in complete compliance with the installation and Operating instructions and any instructions by AstralPool;
- (e) The Product has been subject to accident, negligence, alteration, abuse or misuse.

The warranty does not extend to:

- a) Normal wear and tear;
- b) Weather and other environmental conditions including but not limited to storm, flood, and/or heat wave damage; or
- c) Service and maintenance items.

Examples of exclusions include but are not limited to:

- mechanical seal failure due to insufficient water
- pump failure due to addition of chemicals salt or media through the skimmer

### **Commercial Installations**

On commercial installations, such as health clubs, motels/hotels and hydrotherapy facilities, the warranty is limited to parts and in field labour (within capital city metropolitan areas or 20 km radius of Authorised AstralPool Service Agents) for a period of 12 months from the date of purchase plus 30 days to allow for installation.

### **LIMITATIONS**

AstralPool makes no express warranties or representations other than set out in this warranty.

The repair or replacement of the Product or part of the Product is the absolute limit of AstralPool's liability under this express warranty.

*Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.*



**INST243**



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