

# BIANCO NXT

## pumps

### Close-Coupled Stainless Steel Single Stage Centrifugal Pumps



# 1. Introduction

Congratulations on your purchase of a **BiANCO NXT BLC** pump.

The BLC range is a family of Close-Coupled Stainless Steel Single Stage Centrifugal Pumps suitable for clean water transfer applications. This range of pumps is often employed for Vat Wash or CIP (Clean in Place) duties with water up to 85 °C

# 2. Key Features

- Compact, simple design
- Close coupled 240V single phase TEFC motor with in-built auto reset thermal overload
- Quiet and reliable
- Floating ring nose seal for higher efficiency
- Corrosion resistant 304 stainless steel pump body, impeller, diffuser, seal support and pump shaft. Nitrile o-rings

This pump is intended to transfer clean water or other liquids with physical and chemical properties similar to water. Ph must be between 6.5 and 8.5 and temperatures between 3°C to 85 °C.









It must only be used to transfer clean water and other non-corrosive liquids with low viscosity. It must not be used to transport inflammable, explosive, gasified liquids and liquids containing solid particles.

It can be used to pump clean water from lakes, rivers, tanks, small scale irrigation and for general water transfer. It must not be used to drain spas or swimming pools.






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## 4. Warnings

|   |   |
|---|---|
|    | Read the manual carefully before starting   |
|    | Prior to starting installation or any maintenance the pump must be disconnected from the power supply and pressure relieved from the system including controller, pump and associated pipework.   |
|    | Any changes or modification to the wiring must be carried out by suitably qualified personnel.  |
|    | A qualified electrician should correctly size and install circuit breakers to protect the power supply. The fitment of additional surge protection is recommended.  |
|    | Never open the controller cover or pump terminal box cover while the pump is connected to electrical supply.  |
|   | 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 instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance. |
|  | To avoid excessive thermal shock to the motor the pump should not start more than 20 times in any one hour period.  |
|  | Ensure that the installation will comply with all applicable local regulations.   |

## 5. Symbols used in this manual

|   |  |
|---|--|
|  | Warning - Electrical safety  |
|  | Warning – Potential consequences of use outside of intended application(s). Includes environmental condition warnings. |
|  | Mandatory warning  |
|  | Warning to disconnect power  |
|  | Read carefully   |

## 6. Technical Specifications

| SPECIFICATIONS - SINGLE PHASE |   |          |          |            |             |            |             |
|-------------------------------|---|----------|----------|------------|-------------|------------|-------------|
|                               | BLC70-37  | BLC70-55 | BLC70-75 | BLC120-110 | BLC210-110  | BLC210-220 | BLC370-220  |
| Maximum head                  | 22m   | 29.5m    | 30.4m    | 30.2m      | 19.7m       | 27.5m      | 23.1m       |
| Maximum flow                  | 80 l/min  |          |          | 160 l/min  | 300 l/min   |            | 520 l/min   |
| Input power                   | 230 (-6% / +10%) 1ph 50Hz   |          |          |            |             |            |             |
| Motor                         | Asynchronous TEFC motor with in-built auto reset thermal overload   |          |          |            |             |            |             |
| IP Rating / Insulation        | Ingress Protection - IP44 / F Class Motor Insulation  |          |          |            |             |            |             |
| Motor Rating                  | 0.37kW  | 0.55kW   | 0.75kW   | 1.1kW      | 1.1kW       | 2.2kW      | 2.2kW       |
| Max Amperage                  | 2.5 amps  | 4 amps   | 4.8 amps | 5.8 amps   | 6 amps      | 12 amps    | 12 amps     |
| Start Capacitor               | 12uf  | 16uf     | 20uf     | 30uF       | 30uF        | 32.5uf     | 32.5uF      |
| Pump materials                | Corrosion resistant 304 stainless steel pump body, impeller, diffuser, seal support and pump shaft. Nitrile o-rings |          |          |            |             |            |             |
| Mechanical Seal               | Graphite/Ceramic/Nitrile  |          |          |            |             |            |             |
| Inlet Size                    | 1 1/4" BSPF   |          |          |            | 1 1/2" BSPF |            | 2" BSPF     |
| Outlet Size                   | 1" BSPF   |          |          |            | 1 1/4" BSPF |            | 1 1/4" BSPF |
| Maximum pressure              | 6 bar   |          |          |            |             |            |             |
| Ambiant temp                  | 2 - 40°C  |          |          |            |             |            |             |
| Max water temp                | 85°C  |          |          |            |             |            |             |
| Power Cable                   | 1.2m long 10 amp rated H05 flex with AS/NZ 3112 (Type 1) 3 pin male power plug                                      |          |          |            |             |            |             |
| Weight                        | 11 kg   | 12.5kg   | 14.5kg   | 16kg       | 16.5kg      | 20kg       | 24kg        |
| ITEM CODE                     | 808700  | 802812   | 808403   | 802813     | 808404      | 808406     | 808407      |

| SPECIFICATIONS - Three Phase |   |             |            |            |            |
|------------------------------|---|-------------|------------|------------|------------|
|                              | BLC120-110  | BLC210-75   | BLC210-110 | BLC210-220 | BLC370-220 |
| Maximum head                 | 30.2m   | 20m         | 19.7m      | 27.5m      | 23.1m      |
| Maximum flow                 | 160 l/min   | 300 l/min   |            |            | 520 l/min  |
| Input power                  | 415 (-6% / +10%) 3ph 50Hz   |             |            |            |            |
| Motor                        | Asynchronous TEFC motor with in-built auto reset thermal overload   |             |            |            |            |
| IP Rating / Insulation       | Ingress Protection - IP44 / F Class Motor Insulation  |             |            |            |            |
| Motor Rating                 | 1.1kW   | 0.75kW      | 1.1kW      | 2.2kW      | 2.2kW      |
| Max Amperage                 | 2.4 amps  | 1.8 amps    | 2.4 amps   | 4 amps     | 4 amps     |
| Pump materials               | Corrosion resistant 304 stainless steel pump body, impeller, diffuser, seal support and pump shaft. Nitrile o-rings |             |            |            |            |
| Mechanical Seal              | Graphite/Ceramic/Nitrile  |             |            |            |            |
| Inlet Size                   | 1 1/4" BSPF   | 1 1/2" BSPF |            |            | 2" BSPF    |
| Outlet Size                  | 1" BSPF   | 1 1/4" BSPF |            |            |            |
| Maximum pressure             | 6 Bar   |             |            |            |            |
| Working temp range           | 85°C  |             |            |            |            |
| Weight                       | 15.5kg  | 14kg        | 16kg       | 19.5kg     | 23.5kg     |
| ITEM CODE                    | 808436  | 808815      | 808405     | 802814     | 808437     |

## 7. Electrical Connections



Always use an electrical outlet that is protected by Residual Current Device (RCD) Safety Switch with a trip current of 30mA or less. A Safety switch is required by Australian/New Zealand Standard AU/NZS 60335.1-2011.

The mains supply voltage matches the voltage indicated on the pump identification plate.



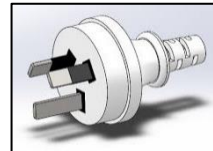
Exercise care with the power cord.

Route the cord carefully to avoid potential snagging or chafing hazards.

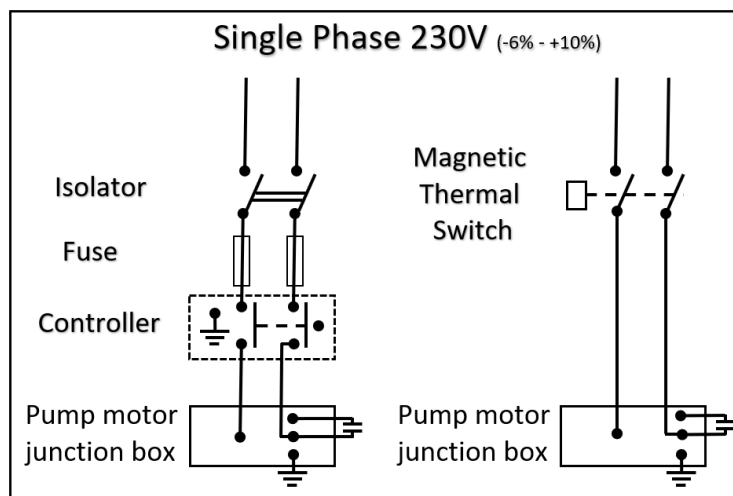
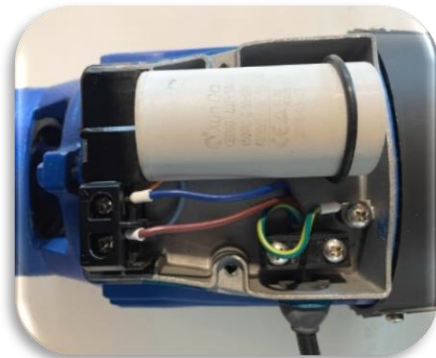
Never lift the pump by the power cord or disconnect from the power supply by pulling the cord.

### Single Phase pumps

Single Phase pumps are supplied with a 10 amp rated lead and AS/NZ 3112 (Type 1) 3 pin male power plug for connecting to mains power.

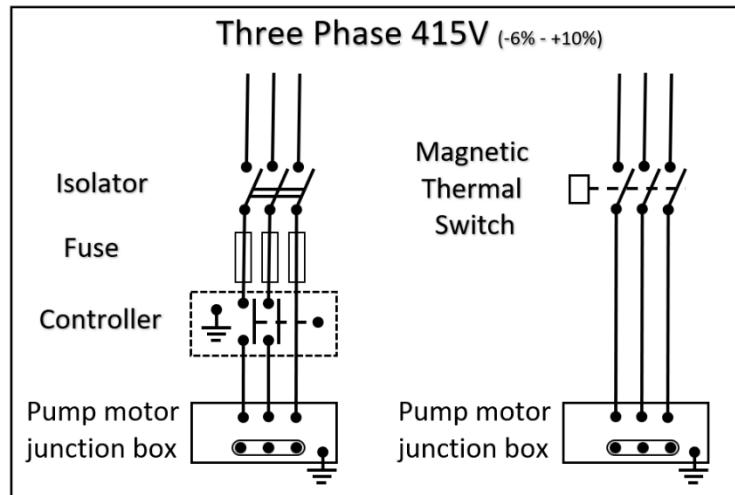


| BIANCO BLC Series | Capacitors | uF   |
|-------------------|------------|------|
| BIA-BLC70-37S2    | PN 811376  | 12   |
| BIA-BLC70-55S2    | PN 805960  | 16   |
| BIA-BLC70-75S2    | PN 811377  | 20   |
| BIA-BLC120-110S2  | PN 805963  | 30   |
| BIA-BLC210-110S2  | PN 811440  | 30   |
| BIA-BLC210-220S2  | PN 811378  | 32.5 |
| BIA-BLC370-220S2  | PN 811378  | 32.5 |



## Three Phase pumps

Three phase pumps must be installed by a licensed electrician and must have suitable overload protections installed.



Check rotation of the motor (three-phase motor). The motor fan should be spinning in a clockwise rotation. If the fan rotation is incorrect, isolate power to the pump and exchange the two supply wires.

## 8. General installation and startup notes

Following the basics will ensure your **BIANCO NXT BLC** will perform reliably

- Install the pump on a firm base as close to your water source as practical and close to a suitable power supply.
- Avoid the use of extension cords as they can result in voltage drop. If an extension cord must be used ensure it is correctly rated.
- Protect the pump and controller from rain and moisture and minimise exposure to extremes of heat and cold. Operating range 2°C - 40°C.
- Install the pump in a weather- proof, free draining, well vented enclosure to protect it from the extremes of temperature, moisture, flooding, chemicals, vermin, insects, dust etc.



If the pump is drawing water from a supply below the level of the pump (suction lift), the pump will need to re-prime each time it starts or may not prime at all. This can be avoided by fitting a non-return valve to the end of the delivery line.

When the pump is controller with a Pressure switch, always install a pressure tank on the delivery side of the pump.

The intake suction piping is the most critical part of the installation. Errors or air leaks will cause significant issues for performance and pump reliability.



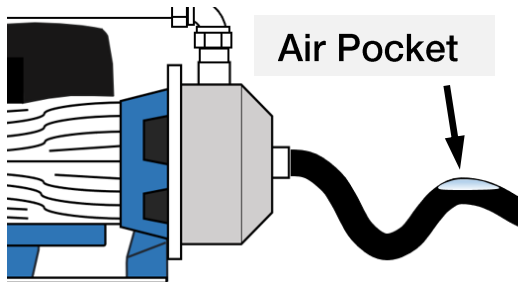
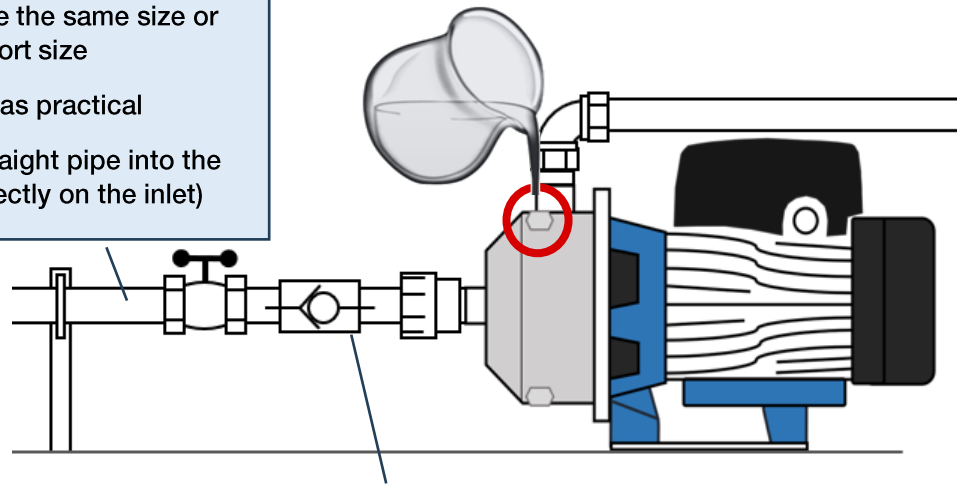
Reminders of best practice:

**Inlet pipe**

The inlet pipe must be the same size or larger than the inlet port size

As short and straight as practical

At least 150mm of straight pipe into the inlet (avoid bends directly on the inlet)



**Inlet pipe**

Fit a non-return valve on the inlet piping

An isolating valve on the inlet is recommended

Unions allow for easy connection/disconnection

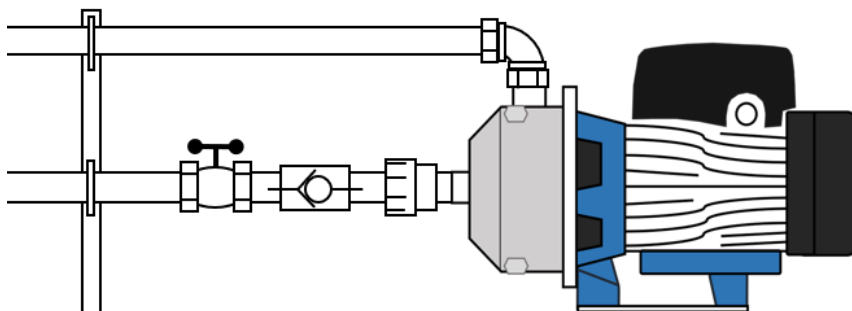
Avoid piping which may result in air pockets



The pump and delivery line **MUST** be manually primed (filled) before the pump is started for the first time to ensure the mechanical seal is well lubricated. Dry operation causes irreparable damage to the mechanical seal.

**Never start a pump until the pump chamber is filled with water.**

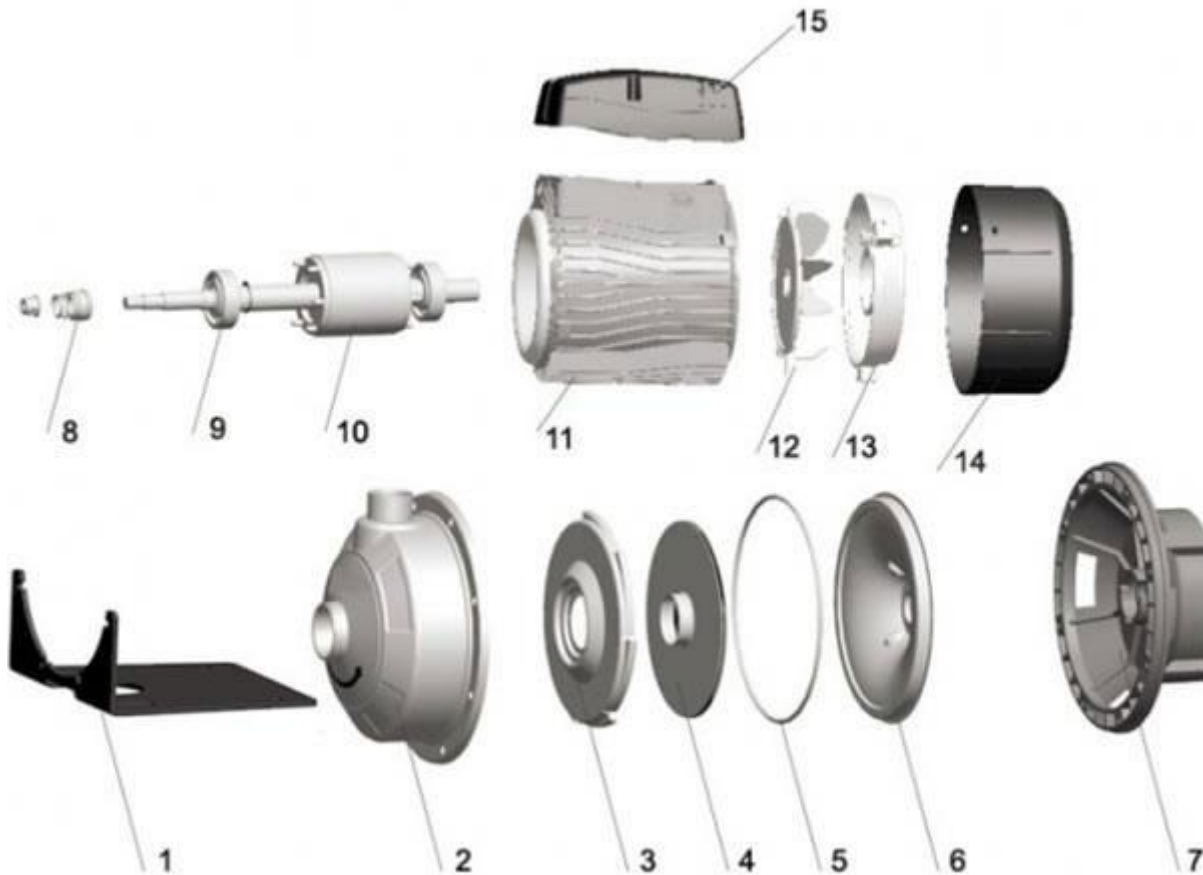
Avoid strain on the pump casing by supporting your pipework.



Mount the pump on a firm base in a dry, free draining area

Protect the pump from weather, dust, insects and extremes of temperature

## 9. Exploded View



|   |                                   |       |                                      |
|---|-----------------------------------|-------|--------------------------------------|
| 1 | Base – Steel                      | 8     | Mech Seal – Carbon / Silicon Carbide |
| 2 | Pump Housing - SS304              | 9     | Deep groove bearing(s)               |
| 3 | Diffuser - SS304                  | 10,11 | Rotor / Stator                       |
| 4 | Impeller - SS 304                 | 12    | Fan – PP                             |
| 5 | O-ring - NBR                      | 13    | Rear housing – Aluminium alloy       |
| 6 | Backplate - SS304                 | 14    | Fan Cover – PP                       |
| 7 | Bearing support – Aluminium alloy | 15    | Terminal Box - ABS                   |

**DANGER OF FROST:** When the pump remains inactive for a long time at temperatures of less than 0°C, the pump body must be completely empty to prevent possible cracking of the hydraulic components.

Draining the pump is advisable even in the event of prolonged inactivity at normal temperature. When starting after long periods of inactivity, the start-up operations listed above must be repeated.



## 10. Warranties – Terms and Conditions

This warranty is given in addition to the consumer guarantees found within the Australian Competition and Consumer Act 2010 (Cth) for goods purchased in Australia and the Consumer Guarantees Act 1993 NZ for goods purchased in New Zealand:



1) White International Pty Ltd / White International NZ Ltd (White International) warrant that all products distributed are free from defects in workmanship and materials, for their provided warranty period as indicated on the top or opposite side of this document. Subject to the conditions of the warranty, White International will repair any defective products free of charge at the premises of our authorised service agents throughout Australia and New Zealand if a defect in the product appears during the warranty period. If you believe that you have purchased a defective product and wish to make a claim under this warranty, contact us on our Sales Hotline on 1300 783 601, or send your claim to our postal address or fax line below and we will advise you as to how next to proceed. You will be required to supply a copy of your proof of purchase to make a claim under this warranty.

2) This warranty excludes transportation costs to and from White International or its appointed service agents and excludes defects due to non-compliance with installation instructions, neglect or misuse, inadequate protection against the elements, low voltage or use or operation for purposes other than those for which they were designed. For further information regarding the suitability of your intended application contact us on our Sales Hotline on 1300 783 601. If you make an invalid claim under this warranty, the original product will be sent back to you unrepai red.

3) This warranty refers only to products sold after the 1st January 2012, and is not transferable to another product type and only applies to the original owner, purchaser or end user, and is in addition to the consumer guarantees found within the Competition and Consumer Act 2010 (Cth) for goods purchased in Australia and the Consumer Guarantees Act 1993 (NZ) for goods purchased in New Zealand.

4) 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. 2 YEAR WARRANTY

5) To the fullest extent permitted by law, White International excludes its liability for all other conditions or warranties which would or might otherwise be implied at law. To the fullest extent permitted by law, White International's liability under this warranty and any other conditions, guarantees or warranties at law that cannot be excluded, including those in the Competition and Consumer Act 2010 (Cth), is expressly limited to: (a) in the case of products, the replacement of the product or the supply of equivalent product, the payment of the cost of replacing the product or of acquiring an equivalent product or the repair of the product or payment of the cost of having the product repaired, is at the discretion of White International or a 3rd party tribunal elected under the Competition and Consumer Act 2010 (Cth) for goods purchased in Australia and the Consumer Guarantees Act 1993 (NZ) for goods purchased in New Zealand; and

6) To the fullest extent permitted by law, this warranty supersedes all other warranties attached to the product or its packaging.

7) In the case of services, supplying the services again or the payment of the cost of having the services supplied again, is at the discretion of White International or a 3rd party tribunal elected under the Competition and Consumer Act 2010 (Cth) for goods purchased in Australia and the Consumer Guarantees Act 1993 (NZ) for goods purchased in New Zealand. 8) Our warranty commences from the date of purchase of the above mentioned pumps. Proof of purchase is required before consideration under warranty is given.

*Record your date of purchase in the space below and retain this copy for your records.*

**Date of Purchase** .....**Model Purchased** .....

## 11. Trouble Shooting Guide

|  | POSSIBLE CAUSE  | POTENTIAL SOLUTIONS   |
|--|---|---|
| The pump won't start and makes no noise              | <ol style="list-style-type: none"> <li>1. No electricity</li> <li>2. Fuses or RCD tripped</li> <li>3. Internal motor fault</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check the power supply.</li> <li>2. Fuses or RCD tripped may indicate more serious problems</li> <li>3. Contact an expert to check the motor</li> </ol>   |
| The pump doesn't start but makes a noise             | <ol style="list-style-type: none"> <li>1. Motor not free to turn i.e. internal jamming</li> <li>2. Faulty capacitor</li> </ol>  | <ol style="list-style-type: none"> <li>1. Check whether pump can rotate freely</li> <li>2. Contact an expert to check/replace capacitor</li> </ol>  |
| The pump runs but there is no flow or only poor flow | <ol style="list-style-type: none"> <li>1. Valves closed</li> <li>2. Air entering suction line (loss of prime)</li> <li>3. The water level may be too low</li> <li>4. Pump may be worn or damaged</li> <li>5. Blockages in the pump, suction or discharge lines</li> <li>6. In-line filters blocked (if fitted)</li> <li>7. The piping may be too long or too small</li> </ol> | <ol style="list-style-type: none"> <li>1. Check suction and discharge isolating valves</li> <li>2. Check for leaks and ensure all joins or fittings are sealed</li> <li>3. Check water availability</li> <li>4. Contact your service agent for repair</li> <li>5. Contact your service agent for repair</li> <li>6. Clean any filters/strainers in the system</li> <li>7. Contact your pump professional</li> </ol> |
| The pump runs. There is flow but poor pressure       | <ol style="list-style-type: none"> <li>1. Excessive flow demand</li> <li>2. Total head requirement too great for the pump</li> <li>3. Pump may be worn or damaged</li> <li>4. Air entering suction line reducing performance</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check that the pump selected is correct for the application</li> <li>2. Check the pump specification</li> <li>3. Contact your service agent</li> <li>4. Ensure the suction line is sealed correctly</li> </ol>  |
| Pump cycling on and off                              | <ol style="list-style-type: none"> <li>1. Small water draw off or leak</li> <li>2. Leak in suction or discharge line</li> <li>3. Contamination in the controller</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check for small leaks i.e. taps or cistern</li> <li>2. Check for leaks including suction line non return valve</li> <li>3. Contact your service agent to inspect</li> </ol>   |
| Pump runs intermittently                             | <ol style="list-style-type: none"> <li>1. Overheating and thermal protection tripping</li> </ol>  | <ol style="list-style-type: none"> <li>1. Ensure the water temp is less than 40 deg C. Ensure sufficient airflow to cool the motor.<br/><i>Note that low voltage can cause the motor to overheat.</i></li> </ol>  |
| Pump vibrates and is noisy                           | <ol style="list-style-type: none"> <li>1. Incorrectly mounted/fixed</li> <li>2. Internal blockage causing impeller imbalance</li> <li>3. If the flow requirement is greater than the pump is capable of it will cavitate.<br/><i>Cavitation sounds like gravel inside pump.</i></li> </ol>  | <ol style="list-style-type: none"> <li>1. Ensure the pump is solidly attached to a base</li> <li>2. Contact your service agent</li> <li>3. Reduce the water demand to see if the noise disappears. Ensure the suction pipe is sized correctly. A different pump model may be required<br/>Contact your service agent</li> </ol>   |
| Water leaking from the centre of the pump            | <ol style="list-style-type: none"> <li>1. The mechanical seal is leaking</li> </ol>   | <ol style="list-style-type: none"> <li>1. Contact your service agent for repair</li> </ol>  |



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**Please always refer to our website for further technical information & new product innovations**

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