

BIANCO NXT

solutions

PACKAGED PUMP STATIONS

250, 700, 1200, 2000 litre



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TANK



PUMP

1. Introduction

A packaged pump station, also known as a pump station package or pump system, is a pre-fabricated unit designed to efficiently collect, store, and pump fluids, typically water or wastewater.

They consist of various components, including pumps, control panels, piping, valves, and other accessories, all housed within a single integrated structure.

These systems are widely used in a variety of applications, such as municipal water supply, sewage systems, stormwater management, industrial processes, and more.

The primary purpose of a packaged pump station is to transport fluids from one location to another, overcoming elevation differences. They are particularly useful in situations where gravity flow is not possible or where the natural topography poses challenges. For example, when wastewater needs to be pumped uphill to a treatment plant, drain or sewer a packaged pump station can provide the necessary lifting force.

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3. Ensuring reliable operation

Your BIANCO NXT Packaged Pump Station will give you many years of service with proper care and complying with a few simple guidelines.

This wastewater disposal solution is part of a low-pressure sewer system. The tank collects the wastewater; the pump generates sufficient pressure to pump this slurry to the sewer main. If a grinder type pump is employed, solids in the sewage/trade waste/effluent are processed into slurry suitable for pumping. Ensuring the pump model has appropriate solids handling capacity for the water type is very important

Points to remember: General Use

Minimize the amount of cooking grease entering the system.

Regulatory agencies recommend that the following items should not be introduced into any sewer, either directly or through a pumping state:



- Glass
- Metal
- Baby wipes
- Socks, rags or cloth
- Plastic objects (e.g. toys, utensils etc.)
- Sanitary wipe or tampons

You must NEVER introduce into any sewer:



- Explosives
- Flammable material
- Lubricating oil and/or grease
- Strong chemicals
- Petrol or gasoline

The tank cover must be fitted securely at all times except when servicing to prevent the entry of foreign materials such as rocks, metals soil etc and to ensure the safety of animals and humans.

Prevent infiltration or direct flow of rain or run-off water into the tank to minimise pump cycling. This assists in preventing the overloading of the treatment facility and wastewater infrastructure.

To reduce the risk of electrical shock, pumps and control panels must be properly earthed in accordance with AS3000 wiring rules and all applicable state or local council ordinances.

During power outages, minimise water consumption in the building to prevent sewage backing up.

Keep the control panel (if installed) locked or confined to prevent unauthorized access.

If the pump is idle for long periods of time, it is advisable to start the pump occasionally by adding water to the tank. Many controllers include an anti-seize timer to automate this task.

When the system is in operation always keep the shut-off valve completely OPEN (unless advised otherwise by proper authorities).

Before removing the pump from the station, be sure to CLOSE the shut off valve to prevent backflow from the pressure sewer.)

4. In the event of a breakdown

Where fitted, the high-level alarm is intended to provide sufficient warning that the level of the pump chamber is of concern.








Failure to rectify the cause of an excessive tank level can lead to an overflow situation and raw sewage spilling onto the surface.

In the event of a high-level alarm (or power outage) try to minimise wastewater entering the tank.

**Contact your service agent IMMEDIATELY
in the event of an alarm condition**



5. Warnings

	Read the manual carefully before starting and retain for future reference.
	Ensure that the installation will comply with all applicable local legislation, standards and regulations.
	A qualified electrician should correctly size and install circuit breakers to protect the power supply. The fitment of additional surge protection is recommended.
	Any changes or modification to the wiring must be carried out by suitably qualified personnel.
	Prior to starting installation or any maintenance the pump must be disconnected from the power supply and pressure relieved from the system including pump and associated pipework.
	To avoid excessive thermal shock to the motor the pump should not start more than 20 times in any one-hour period.
	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.

6. General Safety and Regulatory Considerations

Safety

Work, Health and Safety Legislation differs in each State and Territory. It is essential to refer to all relevant Work, Health and Safety legislation, Regulations and Australian standards in your state or territory at all times during installation, assembly, servicing and repair of Bianco tank systems.

Current statutory regulations and all relevant Australian standards must be taken into consideration at all times.

The system and any of its individual parts must be installed by a licenced person. Installation by a non-licenced person may void warranty.

The entire system must be shut down before any maintenance can be undertaken. Once maintenance is completed the tank must be properly sealed/locked by means provided with the tank to prevent future unauthorized entry.

White International offer a wide range of accessories which all match each other. The use of non-authentic accessories may void the warranty and can indemnify White International against any subsequent claims of liability from any resulting damages.

Identification of water pipes and outlets

All service water pipes and outlets leading from the BiANCO NXT water tank must be identified in accordance with Australian regulations and other relevant local plumbing regulations to avoid inadvertent connection with drinking water supply.

In order to avoid the wrong connection between the drinking water and the rainwater pipe work, all conduits and rainwater taps are to be clearly marked with "RAINWATER" in writing and must be in accordance with local standards.

All non-drinking tank water outlets should be clearly marked "RAINWATER" and we recommend that tamper proof taps be installed.

Maintenance

In the event that work needs to be carried out inside the tank, local Work, Health and Safety legislation for work in confined spaces must be followed.



Site

Work, Health and Safety legislation for the local area must be followed for excavation and trenching and use of equipment for the installation of the tank.

Lifting of tanks

Local Work, Health and Safety legislation must be followed when lifting, handling or moving Bianco water tanks.

Protection of site

It is the responsibility of the installing contractor and the property owner to ensure that the area where the tank/tanks are installed is protected against damage by third parties during and after the completion of the installation. E.g. keep heavy vehicles out of the construction area.

Future landscaping works

When locating the tank, ensure you take into consideration the location and positioning of future landscaping features such as garden beds, paths, driveways, brick walls etc.

7. Tank Installation

Only qualified tradesmen and personnel should install, repair or operate your pump station. Any electrical wiring must be performed by a qualified electrician.

Before installation commences, please consult your local authorities for all applicable codes and regulations.

Prior to installation – Installers checklist



Safety

- Ensure installer is aware of confined spaces guidelines.
- Make sure that there is sufficient oxygen and that no poisonous gasses are present.
- Check the risk of explosion before using electric hand tools.
- Do not ignore health hazards and observe strict cleanliness.
- Ensure that all lifting equipment is in good condition.
- All personnel working with sewage must be vaccinated against diseases that can occur.
- Always keep a first aid kit handy.
- Before installing the pump station, check the depth of the inlet pipe, as this will determine the tank depth (see tank inlet specification.)

Caution:

- Experienced and qualified tradesmen must carry out installation.
- Before digging, call all relevant authorities to locate any underground services.
- The installation of a pump station requires prior approval of local authorities. Questions relating to this must be directed to a responsible officer of local council and/or other relevant authority.

General Installation Guidelines

Determine the best location for your tank, and control panel (if applicable).

Correct appraisal of site conditions is essential before installation of sewage and storm water tanks. **Installers must recognize that these tanks when empty will float on approximately 50mm of water.** The upward thrust at the base of the tank fully immersed in water could exceed 69,000kPa. Close consideration to site conditions is therefore necessary. Consider the following:

- Drainage, particularly at the tank base.
- The rise in water due to tidal conditions, saturation of the ground during heavy rain and likelihood of flooding or run-off water from any source.
- The quality of available back fill.

Where tanks are installed under adverse site conditions, the utmost care is required to prevent any chance of the vessel being forced out of the ground by upward pressure of the water. This can occur if the base is not properly drained.

General Installation Guidelines con't

For installations where the water table is above the bottom of the tank, it is recommended that the tanks be bedded using cement slurry (see installation procedure). This will prevent the base of the tank buckling.

Check for any damage to tanks. During transport and handling over rough ground, be careful to avoid “bruising”. Contact with sharp stones or dropping of the tank may result in fractures, which must be repaired before installation to prevent leakage through the tank wall.

Minimise the use of elbows on the inlet line, if required, use only 45 elbows.

Plan your installation location carefully to ensure that the inlet pipe stays within the allowable inlet height.

Determine where the incoming power will be supplied from, and if it can handle the rated load for your pump station

Mount the control panel, when applicable, in accordance with electrical codes and where the alarm light can be easily seen.

Make sure you have all the necessary equipment and supplies before starting your installation.

Determine the length of electrical cable required, as all joints in cables must be made by approved submersible splice. Only extend cables with cable of equal or greater submersion rating and current carrying capacity.

Tank Installation Guidelines procedure

The hole for the tank should be no greater than 250mm to 300mm oversize to tank diameter, with due regard to the amount of concrete or backfill to be used under and around the tanks.

It is suggested the base of the hole be drained especially in water charged ground, before, during and until concrete encasement has set, to hold the tank securely in the ground.

Lay minimum of 100mm of 20mPa concrete in the bottom of the hole.

Lower the tank into the hole, while concrete it still is its slurry state. Ensure no rocks or sharp objects fall into the hole as damage to the tank wall and base could occur.

Where locking holes are provided in the base of the tank, fit reinforcing rod (reo bar) so it penetrates the concrete slurry to stop the tank base moving.

Level and adjust the tank to suit installation conditions.

Fill tank with water up to at least 300mm-400mm depth.

Secure tank with stabilizing bars or timbers to hold in place before encasing with concrete.

Fit pump(s) into tank and connect unions (where fitted) before installing discharge line, to make sure connections are free and level.

Tank Installation Guidelines procedure con't

The tanks are provided with a collar approximately 360mm from the base. The purpose of this collar is to create a bond between the tank and the backfill material to withstand the upward forces when the tanks are empty.

Check local council and other authority's requirements concerning level. Ensure you have relevant inspector's approval before back filling commences.

Whilst site conditions will determine the amount of concrete encasement, you should refer to engineer's instructions for each individual site.

Backfill material must not exceed 100mm to underside of lid when fitted with Gatic type concrete in-fill lid.

When backfilling use sand or soil only. At all times, be careful that rocky or sharp objects are not used. Avoid use of heavy soils that do not consolidate.

Inlet pipes must be vented.

Inlet pipes must be fitted with a tee junction and dropper pipe on the inside of the tank.

All pipe connections to tanks must be flanged and sealed to stop water and dirt ingress.

Minimum inlet height from base of tank to underside of pipe should be 600mm.

Trafficable Lid load ratings

Access covers are designated by classes A, B, and D according to load capacity as set out in the table below.

The design loads as specified below, may be used as a guide but it is critical that you consult a qualified engineer or designer to ensure the correct class is chosen.

The appropriate class for a cover depends upon the place of installation. Some places of installation, relative to class, are outlined below.

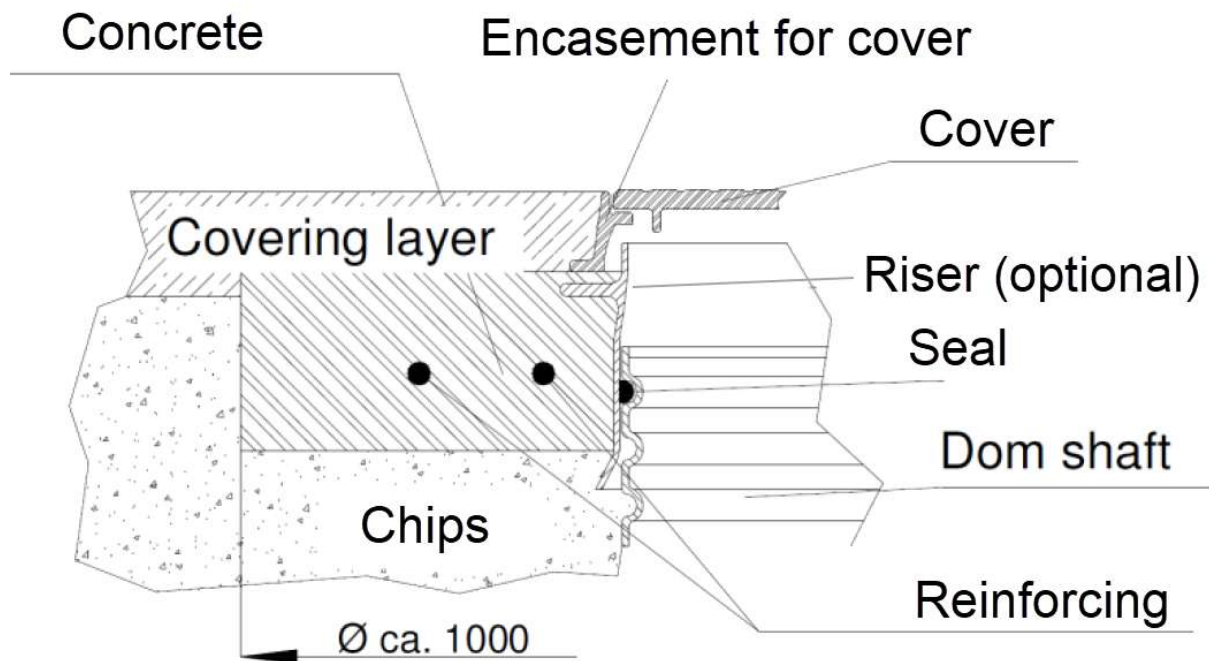
The selection of the appropriate class is the responsibility of the designer and where there is doubt the stronger class shall be selected.

Rating	Class A Extra Light Duty	Class B Light Duty	Class D Heavy Duty
Typical Use	Areas (including footways) accessible only to pedestrians and pedal cyclists, and closed to other traffic	Areas (including footways and light tractor paths) accessible to vehicles (excluding commercial vehicles) or livestock	Carriageways of roads and areas open to commercial vehicles
Nominal Wheel loading	330 kg	2670 kg	8000 kg
Serviceability Design Load)	6.7 kN	53 kN	140 kN
Ultimate Limit State Design Load	10 kN	80 kN	210 kN

Trafficable Lid Installation procedure

The BIANCO NXT packaged pump station cover and frame are suitable for installation in trafficable areas to the rating of the lid. Load ratings beyond Class D are not available.

When the tank is installed in areas traversed by traffic, the upper section must be embedded and supported by reinforced concrete (with suitable load classification). The concrete encasement must be uninterrupted, 300 mm wide and approximately 200 mm deep. Subsequently, the frame is encased in concrete as shown and the cast iron cover supplied with the product is fitted on the frame.



Optional tank risers are available on request 150mm PN 809772 300mm PN 809773

Post Tank Installation

Ensure that the tank is protected from accidental contact by motor vehicles, construction or farm equipment, or wandering livestock.

Where there is danger of stock being able to walk on the lid, the tank must be fenced off to prevent the risk of the lid being holed, or injury to livestock. Alternatively, a specially constructed lid able to withstand the required traffic can be supplied.

It is preferable for this to be specified prior to purchase.

Installation procedures may vary from site to site and with for different model tanks and pumps. Please read installation instructions carefully.









If in doubt, contact your supplier or the site engineer for advice

8. Pump Installation

A variety of different pump types and models can be fitted to a BIANCO NXT Packaged Pump Station.

- Ensure that the pump supplied is suitable for the type of wastewater being pumped
- Check that the pump performance specifications are correct for the application

For detailed, specific information about the pump, consult the pump data sheet and/or user manual

	Read the manual(s) carefully before starting and retain for future reference.
	Only qualified and competent trades' people should attempt installation or other work on the submersible pump and its associated equipment.
	All necessary care should be taken to avoid electric shock. Do not work on or touch your electric submersible pump, or anything in electrical contact (e.g. water in pit), unless the system has first been electrically isolated.
	Do not enter the pit without all necessary safety equipment for confined spaces.
	Do not leave open pit unattended or barricaded.
	Incorrect operation or application of the submersible pump could cause personal injury or damage to the pump.
 	Prior to starting installation or any maintenance the pump must be disconnected from the power supply and pressure relieved from the system including pump and associated pipework.

Taking delivery of the pump

Please ensure all parts ordered/requested have been delivered and that delivery paperwork and instruction manuals are complete.

Inspect pumps and equipment for any signs of damage, especially the float and cable gland.

Take notice of any warning stickers/labels.

Pump Storage

Avoid long-term storage of the pumps in the pit during construction period prior to commissioning.

Do not allow electrical leads to become immersed in water.

Pump Types

The pump(s) fitted to your BiANCO NXT Packaged Pump Station will fall into one of four categories.

Pump categories are determined by the impeller design and the ability of the pump handle contaminated water or slurry.

It is critical to ensure that the pump type selected is

- a. Suitable to handling the expected amount and type of wastewater contamination
- b. Has the necessary hydraulic performance

Type: Grinder Pump

A grinder pump has a mechanism which reduces soft solids into a slurry of water and small particles. The internal clearance of the pump provides good hydraulic efficiency and performance relative to its motor size.

A pump controller which protects against the risk of jamming is recommended

Type: Vortex Pump

Vortex pumps have generous internal clearances which enables them to pass larger soft solids.

Because their hydraulic efficiency is lower, vortex pumps are better suited to lower pressure / higher flow applications

Type: Drainage (De-watering) Pump

Drainage pumps can handle some smaller particles but they are best suited for use pumping clear, discoloured and lightly contaminated waters.

Type: High-Head Drainage Pump

High-head Drainage pumps have much closer internal clearances which results in the ability to produce more head relative to motor size than a Vortex or Drainage type. A High-head Drainage type is best suited to pumping clear and discoloured waters only with minimal particles or solids.

Hard solids or stringy materials in wastewater can damage pumps.

Running dry or for long periods with the motor exposed is harmful to the pump

Pump Installation



Only qualified and competent trades' people should attempt installation or other work on the submersible pump and its associated equipment.

In general, the pit should be dimensioned according to the relation between the water flow into the pit and the pump capacity.

Tanks sizing should also take into consideration the pump performance to avoid excessive pump start/stop cycles. Excessive pump starts lead to overheating which can shorten the pump life expectancy in addition to wasting energy.

Consideration should be made of the physical dimensions of the pump and enough room allowed for any control gear, float switches etc. to operate freely when determining both the pit depth and area.

The pit walls, floor and ceiling must be constructed of a suitably solid material or designed to prevent silt, mud, rock or other foreign objects from entering the pit.

Pit lids and grates must also be designed to prevent entry of silt, mud, rocks or other foreign objects.

Be sure to provide adequate access to the pumps and their associated valves etc.

A dedicated vent pipe direct to the tank must adequately vent pits with sealed or gas-tight lids.

Pump Positioning

The pump should be mounted on a firm solid surface away from inlet pipes etc. and if possible, elevated by 100mm from the base of the pit.

Do not hang pump from discharge pipe work, lifting chain or electrical cable.

Secure the pump with a lifting chain or other suitable means to the top of the pit at the manhole to prevent the pump from tipping over or 'walking' on the pit floor.

The pump should **NEVER** be lifted by the power cable!

Allow enough free cable in the pit to enable the pump to be lifted out of the manhole without electrical disconnection. This free cable should be coiled neatly and attached to the lifting chain at the top of the pit.

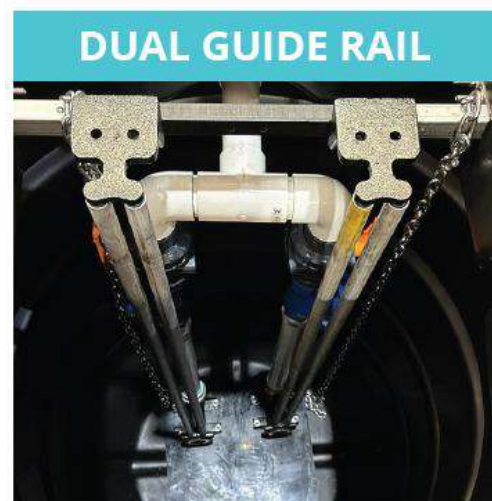
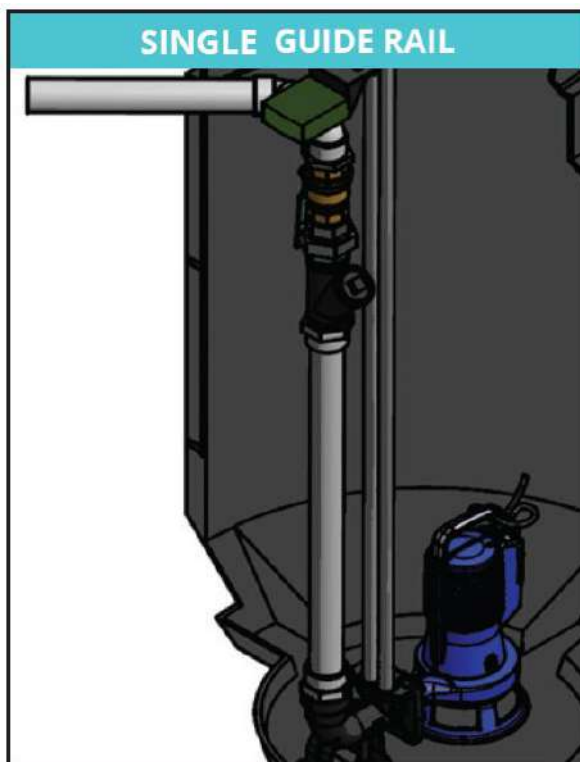
The pit should be cleaned totally of silt, mud and other foreign objects prior to pump installation and be kept clean following this.



Pump Configurations

Packaged pump stations can be configured as single pump or dual pump, Free Standing (Vertical outlet only) or on a Guide Rail system (Horizontal outlet)

250 litre pump station only available as single pump, free standing.



All in-tank fittings incorporated in the packaged pump stations as follows:

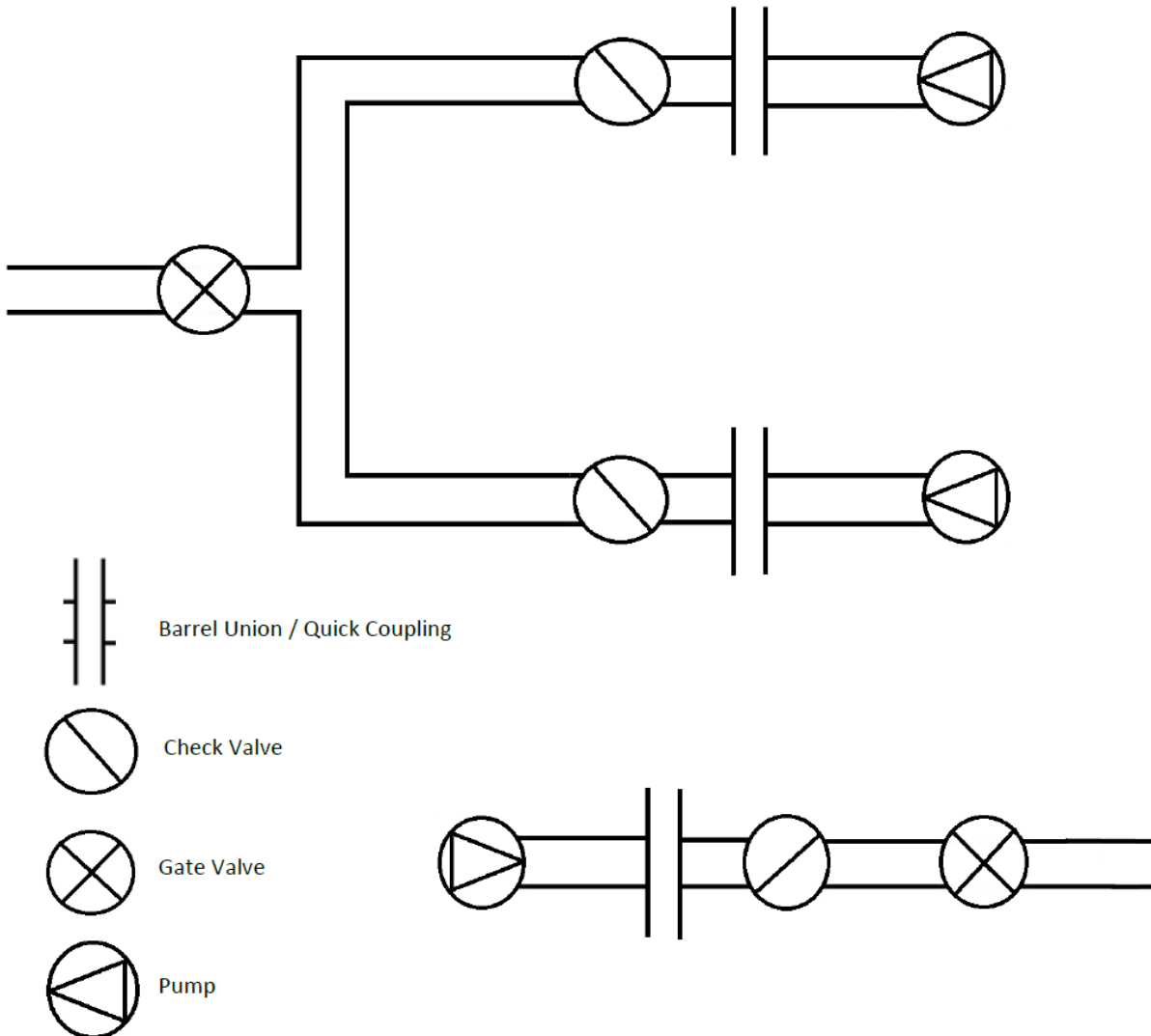
- Ball and non-return valves, barrel unions.
- PVC interconnecting pipework

9. Pipe Work

Rigid PVC pipe work (minimum Class 9 pressure pipe) should be used in preference to flexible hose.

Non- pressure rated pipe or hose should not be used.

An isolating valve and barrel union/quick coupling should be provided on each pump discharge line before connection to the common discharge line



Note: Ball type non return valves should be used in sewage applications.



The valves and unions must be located as close as practical to the top of the pit at the manhole.

Pipe size should generally be calculated by the system flow rate and length of run employing accepted methods and principles; however, pipe work should be at least the same size as the pump discharge connection.

10. Pump Controllers

White international offer a number of pump control options. For a full explanation of each model and to access the User Manual, follow the QR code



Where the pump is controlled by a float attached to the pump, a high level alarm such as the NXT ALARM is recommended to provide audible and visual alarm warnings.



NXT SPC provide control and protection for a single pump and incorporates audible and visual alarm warning functions.

Anti seize and Pump overload protection are included.



NXT DPC provides control and protection for dual pumps and incorporates audible and visual alarm warning function.

Anti seize and Pump overload protection are included.



Note that NXT SPC and DPC pump controllers support the use of 4-20mA level transducer level control.

Connection to control panels must be made as per instruction sheets and wiring diagrams supplied. Generally, float switch cables, if supplied in a conduit as a set are marked by tags on the end of the cable.

All unused wires are to be terminated in insulated connectors.

Mount control panels in a vibration free position as close as practical to the pit. Allow at least 1m x 1m clear standing space in front of the control panel and position well away from possible damage by vehicles/machinery etc.

Thermal overloads fitted should be adjusted to full load amps noted on pump nameplate.

For three phase pumps, check direction of rotation. Correct rotation is clockwise looking down from on top of the pump or anti-clockwise looking at the impeller from the bottom. Swap any two of the pump supply power supply phases to change rotation.

To visually inspect the direction of the impeller rotation, it may be necessary to remove the suction strainer. Keep clear of the unprotected impeller.

11. Pump Control – Float inputs

Care should be taken to ensure that the adjustments of the float level controls are correct. Cycling (excessive starting and stopping) and dry running void will warranty.

Differential Type Float Switches

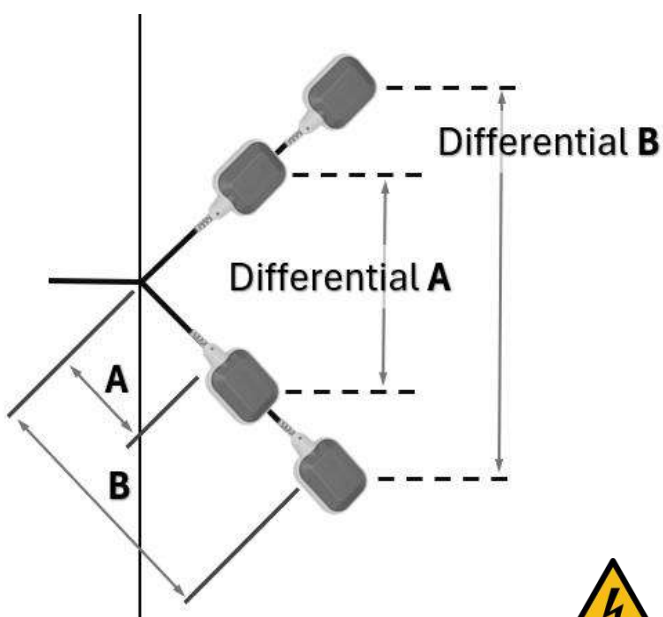
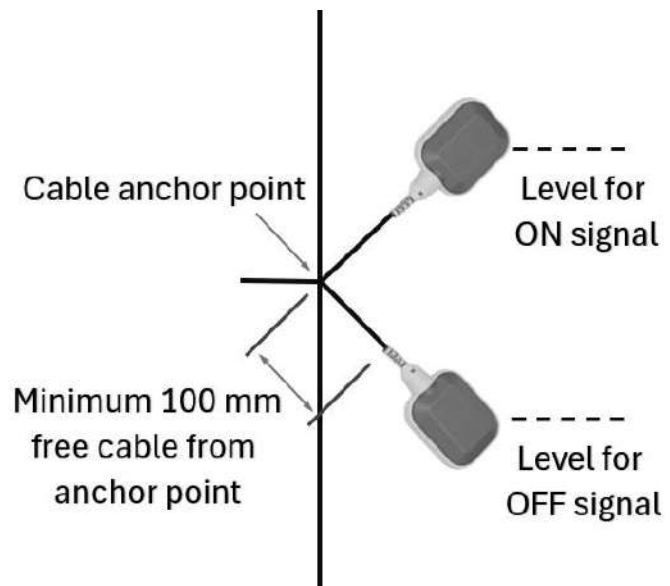
Differential float switches operate when tilted at approximately 45° up or down.

They can be used as direct on-line controls for single phase pumps up to 10 amps, or as signal controls.

For use as signal controls, differential floats should be anchored approximately 100mm from the float head as shown below.

Ensure that the float will not tangle on any other equipment in the pit.

Be careful to position the float switch according to whether it is to provide an “On” signal or an “Off” signal. For use as direct on line or differential control, the length from the head to the anchor point determines the depth of the differential.



Floats can be supplied as ‘2 wire’ or ‘3 wire’ (allowing either UP or DOWN to be an active switch function). Care should be taken when wiring ‘3 wire’ floats that the switching is correct



Ensure that all unused active conductors are terminated safely.

Horizontal Type Float Switches

Horizontal type float switches are only used as signal controls. They work on a differential of only a few degrees and therefore should be anchored at the position of the required signal.



Single Pump - Integrated Float Switch

Ensure that the float switch cable is attached to the pump by the clip/bracket provided.

The float switch should be adjusted as per the manufacturer's specifications; however, a standard arrangement is shown as a guide.

Shortening the float cable excessively may prevent the float from achieving sufficient angle to operate

Ensure the water level is never less than 50mm above the pump inlet to prevent air being drawn into the pump through vortices

Minimum cable free length 100 mm
Maximum cable free length 350 mm



Water level minimum 50 mm above the pump inlet

Single Pump - Separate Float Switch

It is assumed that the float switch is connected to a pump controller.

The float switch should be free to move as for integrated float switch and adjusted similarly with the addition that,

Where a mounting clip/bracket is not provided, the float switch cable should be anchored securely by cable tie or similar at the pivot point to the discharge pipework, the body of the pump or other similar anchor point.

Consideration should be made for the ease of removal of the float switch from the pit for inspection in the case of the pit flooding.

Excess cable should be coiled neatly and attached to a suitable point at the manhole.

Dual Pump Kits

It is the installers responsibility to ensure the control gear is suitably set up to protect the pumps from cycling and dry running.

When the float switches are supplied mounted in a conduit or bracket (float tree) This float set should be checked for accuracy of dimensions and float switch adjustment and adjusted as necessary.

Mount the float tree on a hook or similar bracket at the manhole ensuring that it is held securely but is easily removable from the pit as a complete unit for maintenance.

Be careful to position the float set away from obstructions to allow free movement of the float switches.

Allow enough loose cable in the pit for the float set to be completely removed from the pit manhole. Coil this neatly and attach at the manhole.



Warning: do not allow the liquid level to drop below the suction inlet of the pump. Dry running will void the warranty.

12. Electrical Connection

- All electrical work must be performed by an authorized electrician, in compliance with Au/NZ Wiring Regulations. Never allow an unauthorized person to perform electrical work.
- Improper wiring can lead to current leakage, electrocution, fire or pump failure.
- Provide a dedicated earth leakage circuit breaker and a thermal overload relay suitable for the pump. Failure to follow this warning can cause electrical shock or explosion.

Supply

Ensure available power supply complies with electrical data on pump and control panel nameplates.

Power must be supplied via a mains isolating switch. If the pump is not installed close to the switch, it must be a lockable type.

Three phase pumps must be connected through a hand resettable thermal overload.

All internally fitted thermal overloads and thermistors must be connected as per the manufacturer's instructions.

A clearly marked dedicated circuit of an adequate capacity must be used. Pay careful attention to potential voltage drop.

Control Panels

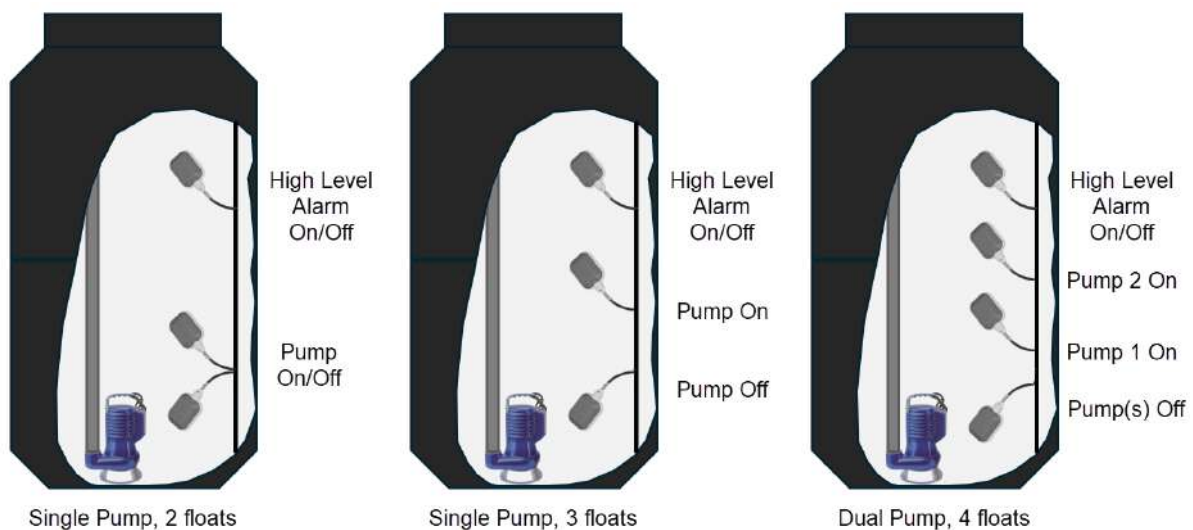
Connection to control panels must be made as per instruction sheets and wiring diagrams supplied. Refer to page 15 for links to electronic manuals

Conduits

All wiring from control panel to pit must be in approved conduit or trunking.

Conduits from pit to control panel must be adequately sized with a minimum amount of bends to allow easy insertion and withdrawal of cables. Minimum 2 x 32mm or 1 x 50mm conduit with long radius bends is standard procedure for dual systems up to 1.5kW

All conduits entering control panel must be sealed internally with silicon or similar to prevent ingress of moisture from the pit.



Minimum cable length from attachment pivot point to float head = 100mm

Minimum water level above the pump inlet = 50mm

Cables

NEVER ALLOW CABLE ENDS TO BE SUBMERSED

An approved submersible splice must make joints in cables.

Only extend cables with cable of equal or greater submersion rating and current carrying capacity.

Leave enough slack cable in the pit to allow easy and complete removal of equipment from the pit.

Ensure that this loose cable is secured at the pit manhole to prevent float switch fouling or entry into pump impeller.

Pumps must **NEVER** be lifted by the power cord

13. Commissioning

General Commissioning Procedure

Double check all aspects and details covered by this document.

Check all electrical connections are complete and correct.

Check adequacy of power supply. Switch on all isolating switches.

Ensure pit is clear of silt, mud, building debris and other foreign objects.

Double check pump rotation.

Double check thermal overload setting.

Run through complete system operation ensuring that pumps switch off before running dry or sucking air.

Check amperage draw of motor(s) is within 75 – 110% of the nameplate rating.

Return system settings to auto operation.

Operation

In general, a system set up correctly should operate automatically without intervention.

Where fitted, SPC and DPC controllers provide fault codes and a fault log to identify issues.

Consult the appropriate controller manual for information. See Section 10, (Page 15)

Section 15 (Page 21) of this manual provides information to help diagnose system issues

14. Service Guidelines – General

Always follow and respect confined spaces guidelines.

To reduce the risk of electrical shock, always disconnect the pump from the power source before handling or servicing. Lock out electrical power and tag.

Do not wear loose clothing that may become entangled in the impeller or other moving parts.

Keep clear of suction and discharge openings. **NEVER** insert fingers in the pump whilst power is connected.

Always wear appropriate safety gear such as safety glasses when working on the pump or piping.



Service Guidelines con't

Cables should be protected at all times to avoid punctures, cuts bruises and abrasions. **INSPECT FREQUENTLY.**

Never handle connected power leads with wet hands.

To reduce the risk of electrical shock, all wiring and junction connections should be made in accordance with local codes and regulations.

Installation conditions will determine regularity of maintenance intervals. However, all installations should be serviced once every six months.

More regular servicing is required for applications where there are abrasive particles in the water, excessive silt or debris entering the pit, or where the pumps re subject to heavy usage.

It is a good idea to keep a close eye on your newly installed system until the time of the first maintenance service, to determine if more regular servicing is required.

Particular care should be taken to keep the pit clean while construction works are in progress.

- Check external condition of pumps and control gear
- Check pumps for wear
- Check condition of electrical equipment
- Check pit for sludge build up and presence of foreign objects and remove if necessary.
- Check that pump cables are securely tied up and that float switch movement is not obstructed.
- Check system operation.

15. Trouble Shooting Guide

Fault	Possible causes, Recommended checks
Pump does not start	No mains supply, Blown fuse or tripped breaker, Impeller jammed, Thermal overload has been activated, Float switch is in the down/off position, Insufficient water level, Float switch movement obstructed
Motor won't start but 'hums' during attempt	Faulty pump capacitor (Single Phase pumps only)
Motor trips circuit breakers or thermal overload after short time of operation	Impeller jammed or partly jammed by foreign objects Phase failure Voltage too low – power cable undersized Impeller corroded to cover plate from lack of use or moisture entry during storage Temperature of pumped liquid is too high (over 40 degC)
Pumps runs but no water discharged	Gate valve closed, Suction strainer or discharge pipe blocked, Pump underspec'd for application (head requirement excessive for pump), Incorrect direction of rotation (3 Ph) Pump air-locked: check that pump does not suck air before switching off, Vent discharge pipe below check valve.
Pump performance poor	Pump underspec'd for application (head requirement excessive for pump), Incorrect direction of rotation (3 Phase) Impeller worn due to abrasive particals
Pump doesn't switch off after emptying tank	Incorrect wiring, Off float adjusted too low, Float switch faulty Off float switch movement obstructed.

16. Technical Specifications: 250 litre tank

Suitable for Raw sewage, Trade-waste, Effluent and Stormwater

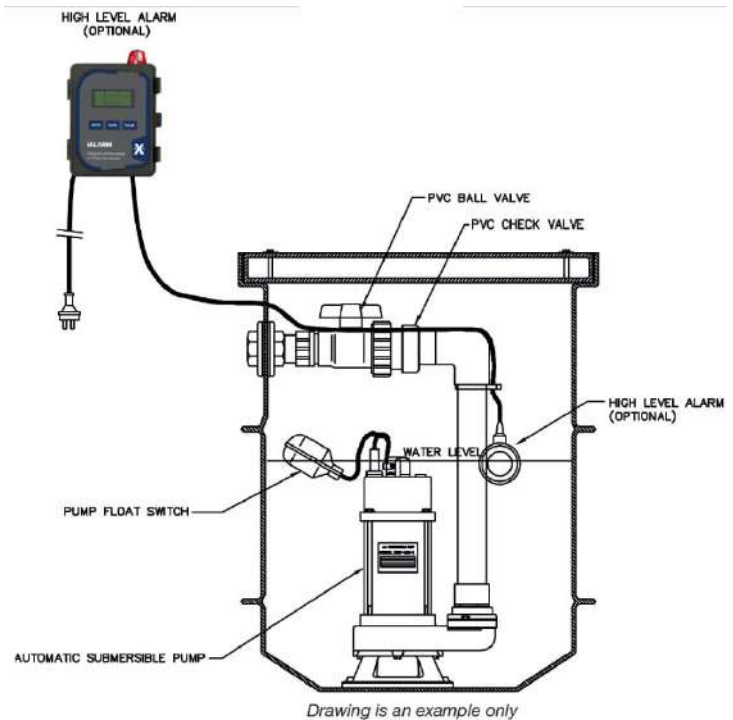
Single Pump only

Grinder or Vortex Pump

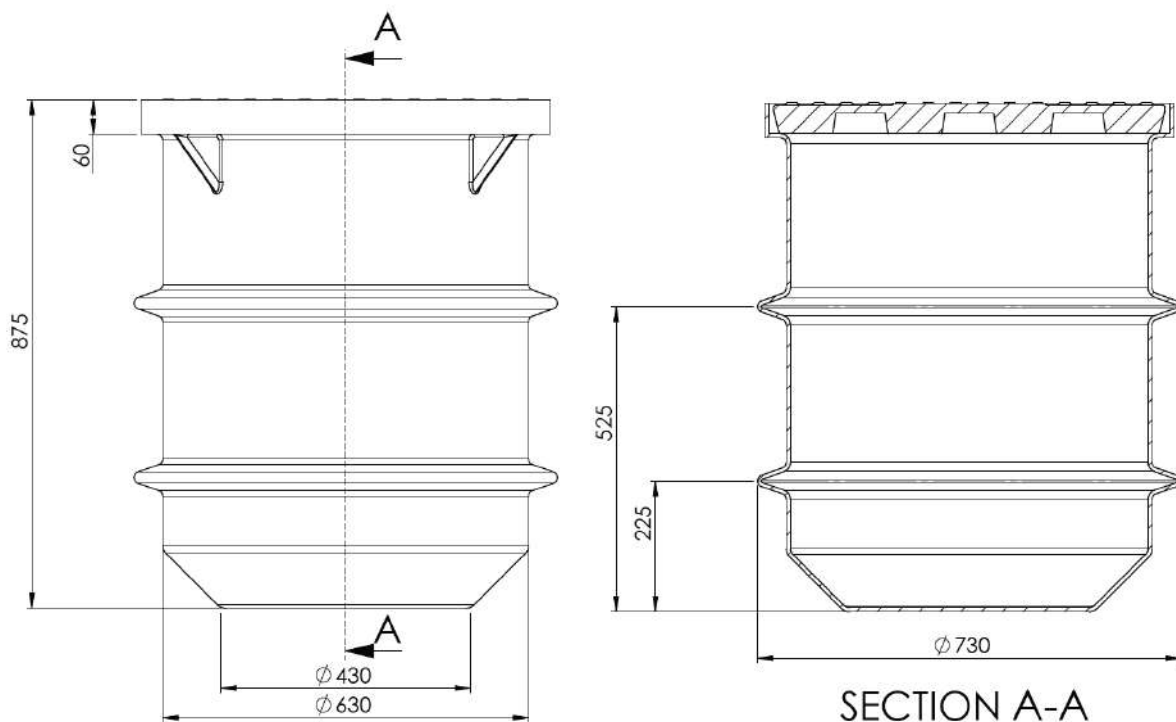
Freestanding Configuration

3 x lid options

High level alarm or controller options available

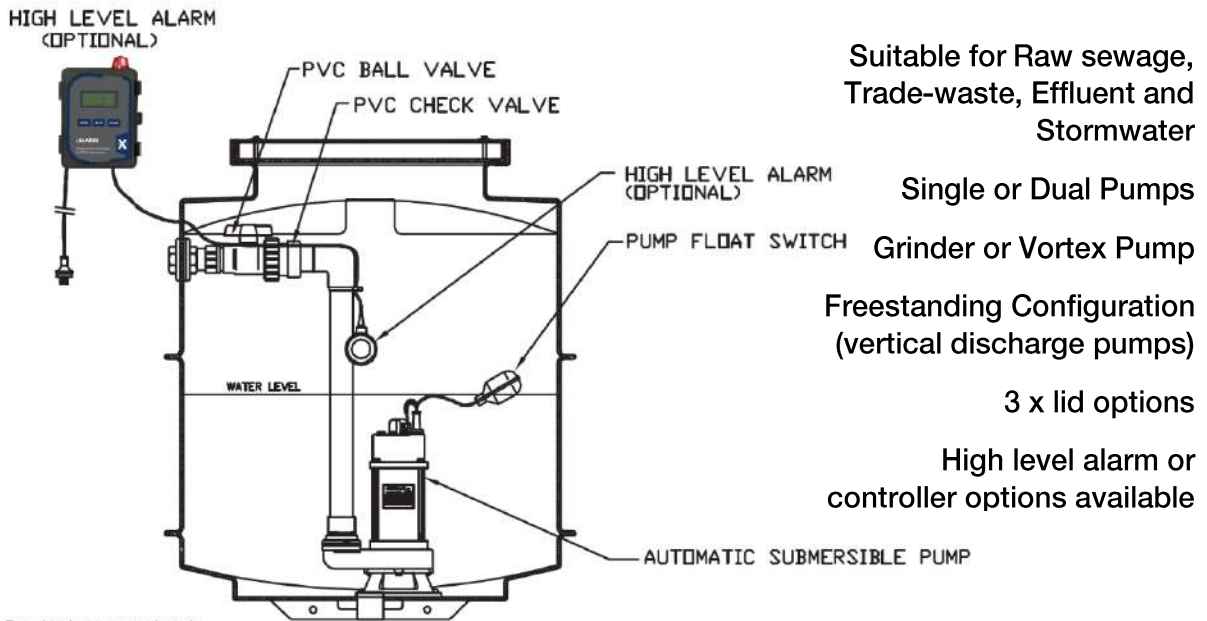


Dimensions



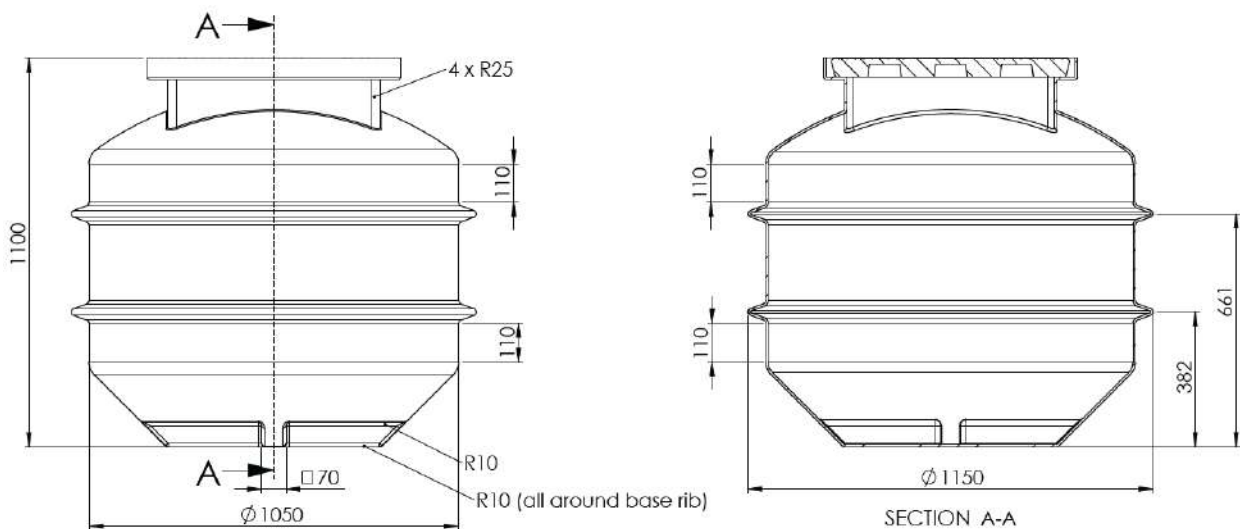
Accredited as sewage management
facilities by the NSW Ministry of Health

17. Technical Specifications: 700 litre tank



Drawing is an example only

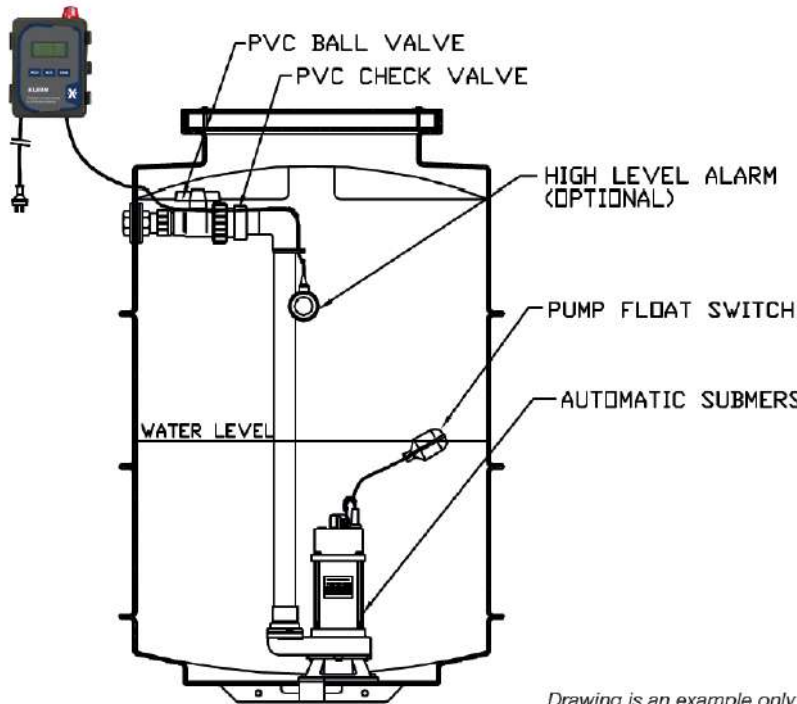
Dimensions



Accredited as sewage management
facilities by the NSW Ministry of Health

18. Technical Specifications: 1200 litre tank

HIGH LEVEL ALARM
(OPTIONAL)



Drawing is an example only

Suitable for Raw sewage,
Trade-waste, Effluent and
Stormwater

Single or Dual Pumps

Grinder or Vortex Pump

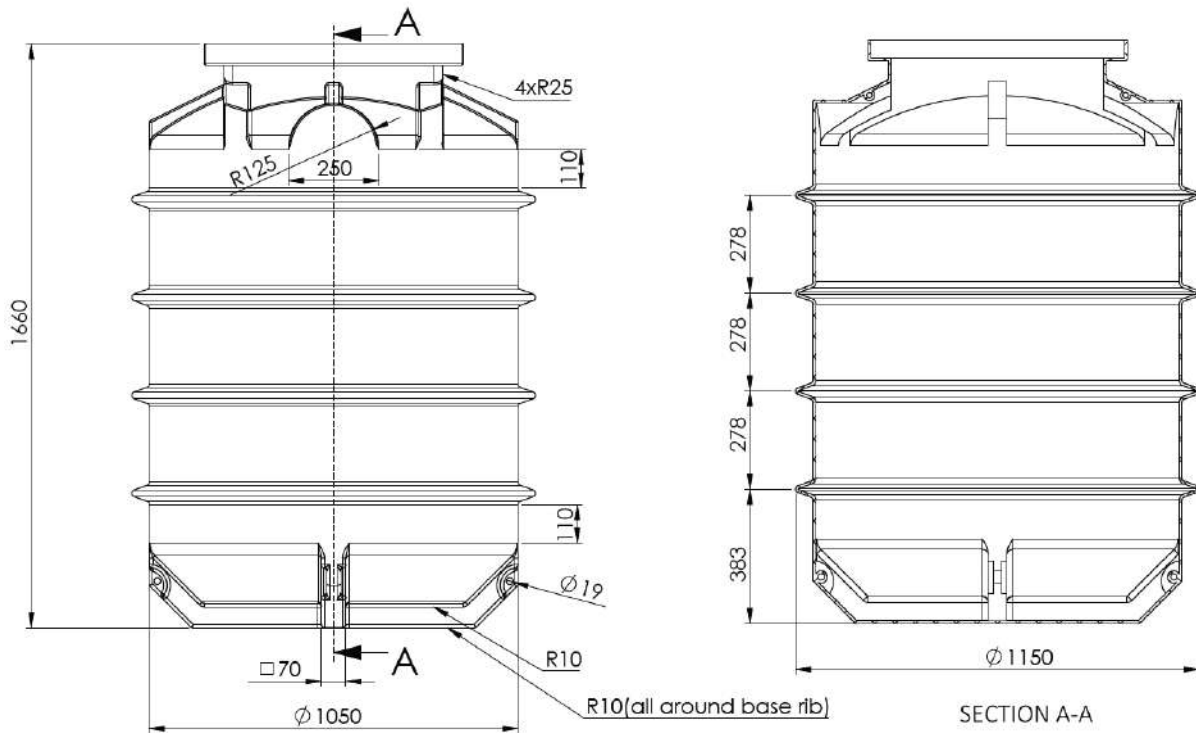
Freestanding Configuration
(vertical discharge pumps)

Guide Rail Configuration
(horizontal discharge pumps)

3 x lid options

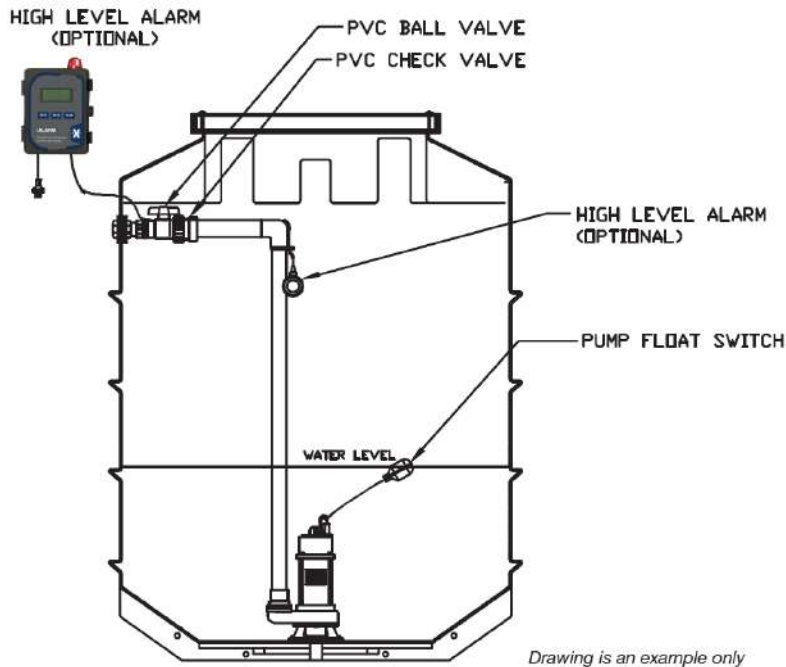
High level alarm or other
controller options available

Dimensions



Accredited as sewage management
facilities by the NSW Ministry of Health

19. Technical Specifications: 2000 litre tank



Drawing is an example only

Suitable for Raw sewage,
Trade-waste, Effluent and
Stormwater

Single or Dual Pumps

Grinder or Vortex Pump

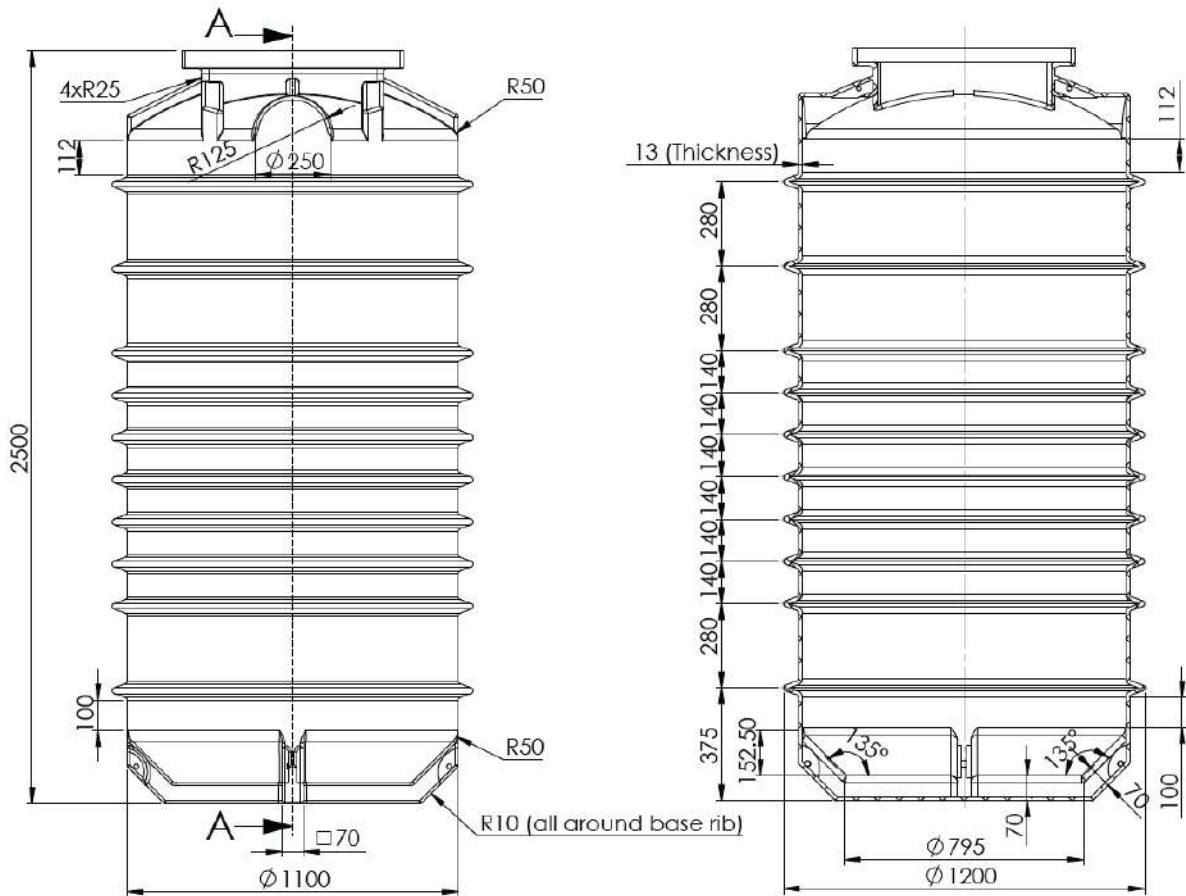
Freestanding Configuration
(vertical discharge pumps)

Guide Rail Configuration
(horizontal discharge pumps)

3 x lid options

High level alarm or other
controller options available

Dimensions



Accredited as sewage management
facilities by the NSW Ministry of Health

Installers Notes / Site details

Service Agent Contact Details

20. 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**



www.whiteint.com.au

www.whiteint.co.nz

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

Disclaimer: Every effort has been made to publish the correct information in this manual. No responsibility will be taken for errors, omissions or changes in product specifications.

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