



Pump Well / Station

Installation Guide

Company Profile

ABOUT POLYMASTER

Polymaster manufactures an extensive range of quality products for industrial, residential and agricultural applications. Over the last two decades, Polymaster has been at the forefront of industry endorsed, product certified designs that have advanced the life-span and functional capabilities of process vessels, bulk storage, rainwater tanks and animal care products. As an Australian owned, quality assured company.

Polymaster delivers every product to specification with confidence through our growing network of distributors.

PRODUCT DEVELOPMENT

We continue to extend our manufacturing operations to achieve market diversification and operational longevity. Our Design & Mould team offers custom design solutions and continual scope for new product development, product improvements and modifications. Coupled with our ability to customize colours to specification and apply brand identities on request, Polymaster delivers on quality and quantity, on time and within budget.

LOGISTICS CAPABILITIES

Polymaster's distribution fleets are experienced in over dimensional loads, general freight and site handling, providing the flexibility and capability to deliver every Polymaster product. Our manufacturing locations in Victoria and Queensland supported by warehouses in Melbourne, Adelaide and New South Wales supply direct freight lines to Melbourne, Adelaide and Sydney. To service deliveries nationwide. Over time we have established quality relations with proven logistics channels. Bulk storage capacity and warehouse pick-up capabilities are available from Metropolitan Melbourne and Adelaide.

QUALITY ASSURANCE

As a quality certified company, Polymaster's quality assurance regimen is internationally recognised and certified to ISO9001 standards. Our exclusive use of UV stabilized premium resins to AS/NZS 4766 standards, combined with FEA testing and engineering of our mould design assures quality in the manufacture of every Polymaster product. Every tank is independently certified to BSI Benchmark AS/NZS 4766:2006 & AS/NZS1546.1:2008 standard and labelled to display manufacturing details and serial number for complete traceability.



**Quality
Certified
Company
ISO 9001**



BSI Certified Product

AS/NZS 1546.1:2008
BMP 650823
BMP 657673

Australian/New Zealand
Standards

Products in this Installation Guide have been manufactured to comply with the above standards.

Installation

1.CONSTRUCTION SITE PRE-CHECK

The following points should be clarified before installation commences:

- The structural suitability of the ground (geotechnical report recommended)*
- Maximum groundwater levels which occur and drainage capability of the subsoil
- Types of load expected, for example: traffic loads
- Location of all underground services

* A geotechnical report conducted by civil testing engineers is strongly recommended to determine the physical characteristics of the subsoil before installation/ excavation commences. For setback distance from neighboring boundary and any buildings, please contact local council.

1.1 SAFETY

Substantial consideration and attention has gone into the design of this product. All precautions have been taken into account to ensure the purchaser's health and safety; however final health and safety responsibility resides with the persons installing the Underground tank. Occupational Health and Safety legislation varies in each state, it is necessary to refer to the relevant regulations in your state at all times during Installation, servicing and repair.

*** Never leave tank unattended with lid removed or unsecured/fastened**

1.2 INSTALLATION

The system must be installed by a qualified plumber/installer. Installation by a non-licensed person may void warranty. All wiring must be performed by a licensed electrician.

1.3 LIFTING OF TANKS

When lifting the tank into place use the appropriate lifting lugs provided on the tank and lower evenly into the excavation.

1.4 IDENTIFICATION OF WATER PIPES/ OUTLETS

All service water pipes and outlets leading from the Polymaster Pump Well / Station should be identified in accordance with AS/NZS 3500.1: 2003 – section 9 and other relevant local plumbing regulations to avoid erroneous connection.

To avoid the wrong connection with drinking water and rainwater all non-drinking tank outlets and rainwater pipework have to be marked clearly with "Rainwater" in accordance with local standards.

1.5 MAINTENANCE

In the event of work needing to be carried out inside the tank refer to applicable confined space state legislation. Never leave tamper – resistant lid off a tank.

1.6 SITE

Refer to excavation and trenching legislation in your state about general excavation, Shoring, battering and depth-specific regulations. Ensure a safe site is maintained with appropriate safety signage and barriers to protect damage from third parties, during and after installation.

Note: It is the responsibility of the purchaser to ensure proper installation and maintenance of the underground tank. Polymaster will not be held responsible for any loss, injury or death resulting from a failure to observe all safety installation requirements and safe working procedures.

Installation (cont.)

2. LOAD RATINGS FOR TANKS

2.1 PEDESTRIAN ACCESS

This tank has a load rated cover to 500kg. This makes it ideal for use in pedestrian traffic areas.

2.2 VEHICLES

This product is not suitable for use with vehicle traffic. If product is to be used in a vehicle traffic area, seek consult with a qualified civil engineer.

3. GROUND WATER

3.1 Careful consideration must be given in ascertaining the height of groundwater. As pump wells operate at potentially low liquid levels, they are particularly susceptible to the effects of buoyancy. If high ground water levels are present in the intended installation site, which would potentially be above the base of the pump well once installed, consultation with a qualified civil engineer should be sought to provide advice around appropriate anchorage.

STEP 1. TRENCH EXCAVATION

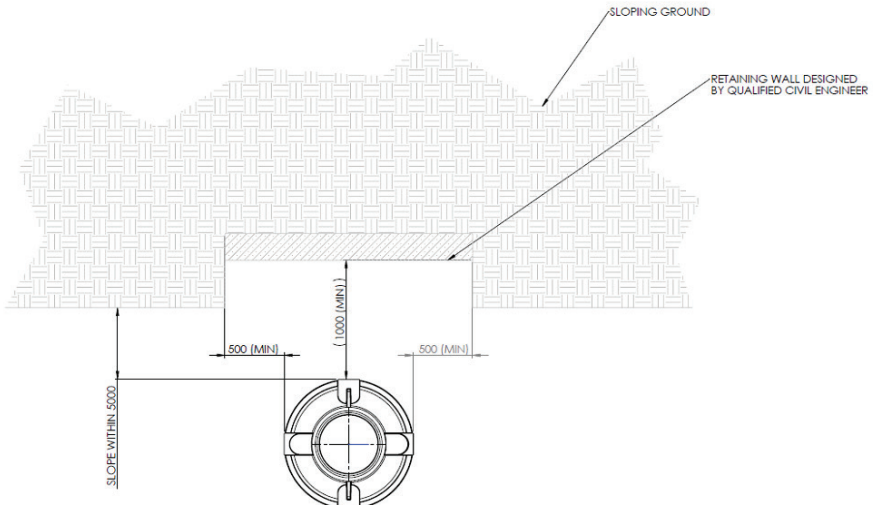
Excavate hole according to dimensions of tank and in accordance with engineer report. Ensure sufficient space, (not less than 300mm) is available for working around the tank during installation. Excavated soil must be kept well clear of the hole to prevent cave in.

Excavation slopes should be a minimum of 45 degrees.

The distance from solid constructions must comply with local regulations; refer to the current Building Code of Australia (BCA) – “angle of repose “. The trench embankment must be designed so that slippage or collapse of the embankment wall will not occur.

Remove all loose soil from base of hole and ensure base is firm, flat and level.

A level layer of mechanically compacted Type B crushed rock (depth approx.100mm - 150mm) is applied as the foundation of the excavation. The depth of the trench must be calculated so that the maximum earth coverage above the tank is not exceeded.



Installation (cont.)

STEP 1.1 INSTALLATION NEAR TO SURFACES SUBJECT TO HEAVY VEHICLE TRAFFIC

If the underground tanks are installed adjacent to surfaces which are used by vehicles heavier than passenger cars, the minimum distance away from these surfaces is at least the depth of the trench.

STEP 1.2 SLOPE, EMBANKMENT, ETC.

On installation of the tank in the immediate vicinity (<5 m) of a slope, a statically calculated (by an engineer) supporting wall must be erected to absorb the soil pressure. The wall must exceed the dimensions of the tank by at least 500 mm in all directions, and must be located at least 1m away from the tank.

STEP 1.3 MULTI TANK CONNECTION

A 25 mm irrigation pipe also needs to link tanks at the top to relieve air pressure whilst tanks are filling.

If installing multiple tanks together check inter connection joints for damage and ensure they are installed correctly and all pipes are inserted before backfilling occurs.

STEP 2. PLACEMENT OF TANK

- Using the lifting points provided for stability, lift tank into place by use of a backhoe, excavator or crane
- Ensure the tank does not sink into loose soil of hole, chock if necessary
- Using manhole for guide, level tank in both directions

The tank must be lowered impact free into the prepared trench excavation using suitable lifting equipment.

STEP 3. BACKFILLING

Before commencing backfill, fill the tank with water up to the half way mark or above the highest penetration point to ensure all fittings / connections are leak tight.

The surrounding area of the excavation is filled in layers (maximum 200mm steps) of appropriate crushed rock(Porous) or crusher dust with approximately 20% moisture content. Compact to 92-95%.

The individual layers must be well tamped/ compacted by hand operated vibrating plate machine. Damage to the tank must be avoided during tampering/compacting of backfill.

Note:

- Under no circumstances backfill the trench directly from the tip truck
- Ensure all tank opening are sealed before backfilling.

Backfill around the tank to pipe inlet depth

STEP 4. PLUMBING OF FEED AND OVERFLOW PIPES

All feed and overflow drain pipes must be laid on a grade of at least 1% in the direction of flow. Subsequent settling is possible and must be considered.

If the tank overflow is connected to stormwater, it must be protected against reflux by using a suitable and accessible non-return valve and be in accordance with local regulations.

The tank has a number of flat surfaces at both ends for feed and outlet pipes. Use hole saw to drill in the appropriate position.

Installation (cont.)

STEP 5. INSPECTION AND SERVICING

The entire system must be inspected for leaks, at the completion of the work. Settling of soil might occur and consideration needs to be given to allow for such.

Depending on local conditions the system may need to be serviced at regular intervals (every 12 months). In this case, all parts of the system should be cleaned thoroughly and their function checked. Servicing should be carried out as follows:

- Isolate water and power connections
- Drain the tank
- Clean surfaces and internal parts with clean water
- Remove any dirt/debris from the tank
- Check that all internal parts are properly positioned and firmly seated

In the event of work carried out inside the tank, as Occupational Health and Safety legislation differs from each state and territory, reference needs to be made to Occupational Health and Safety legislation pertaining to confined spaces.

Note: Please refer to safety notes and General safety instructions at the front of this installation manual

STEP 6. LANDSCAPING AND COMMISSIONING

Your tank is now ready to be fully covered in and paved or landscaped over. The Tank lid should not be covered. Apply 20mm silicone bead around the groove in the top of the access hole and fasten lid down with the stainless steel (grade 316) tamper-proof screws.

Warranty Card

Please send this back to Polymaster Pty Ltd within 30 days of installation to confirm acceptance of terms in the warranty and we will formally register your warranty for you. This does not affect your statutory rights.

Failure to do this will make all warranty's invalid.

Postal address: Locked bag 4001, Swan Hill VIC 3585

Email: aftersales@polymaster.com.au

Serial number of tank : _____
(located around lid area or rib)

Tank Capacity (Ltr) : _____

My use is: Industrial Commercial Agricultural
(please tick appropriate)

Name: _____

Address: _____

Postcode: _____ Telephone: _____

Email Address: _____

Customer Signature: _____

Date of Purchase: _____

(Please ensure all fields are completed to ensure validity. Once we receive this information, we will process and send you confirmation of activation)

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Polymaster

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hold the future.

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