

Self-Bunded Diesel Tanks

Installation, Operation &
Maintenance Manual



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Polymaster

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ABOUT THIS PRODUCT

Polymaster Self Bunded Diesel Tanks provide a complete, engineered “tank-in-a-tank” fuel storage and dispensing system, combining a 110% capacity secondary containment bund with the primary storage tank in a single unit – removing the need for separate civil bunding works. Built from inert, UV-stabilised diesel-grade polyethylene with a flame-retardant outer tank, the range eliminates the rust and contamination risk of steel tanks while keeping fuel storage compliant on site. Available across three tiers – Essential, Ranger and Quantum – in 5,000L and 10,000L capacities, each model is supplied as a complete plug-and-play refuelling station with an integrated pump, lockable security cabinet, and safety monitoring appropriate to the tier. Tanks are Australian made and manufactured to AS/NZS 4766:2006.

By following the installation requirements in this manual, this product will give you many years of trouble-free service.

KEY FEATURES:

- Engineered “tank-in-a-tank” design provides 110% secondary containment bund capacity
- Flame-retardant outer tank for additional fire safety
- Rust-free, inert polyethylene construction guarantees clean, uncontaminated diesel
- Lockable security cabinet deters fuel theft
- Three tiers to suit the application:
- Essential – Piusi 70 LPM pump, mechanical meter, bund alarm
- Ranger – adds digital meter, high/low level alarms and a Power Control Box (emergency stop, 10-minute timeout); available in 12V for off-grid sites, with an optional solar panel
- Quantum – adds a 10m retractable hose reel, digital monitoring and auto-timeout
- Available in 5,000L and 10,000L capacities
- Manufactured to AS/NZS 4766:2006

MATERIALS USED IN CONSTRUCTION:

- PE – Polyethylene, UV-stabilised diesel-grade resin, with a flame-retardant outer tank
- Made from premium polyethylene resin that meets the material requirements of AS/NZS 4766
- Tanks are designed using engineering methods including finite element analysis (FEA) to ensure structural integrity

AUSTRALIAN STANDARDS

- Polymaster is certified to ISO 9001:2015 International Standards and undertakes regular audits from third-party auditors.
- Polymaster Self Bunded Diesel Tanks are manufactured to AS/NZS 4766:2006 – BSI Benchmark certified (Licence BMP 657671).
- Every tank is labelled with full manufacturing details, including a serial number, for complete traceability.



PRODUCT CERTIFICATION



BSI Certified Product
AS/NZS 4766:2006 Lic:BMP No 657671
Australian/New Zealand Standards

GENERAL HEALTH & SAFETY

IMPORTANT: READ OPERATION MANUAL IN DETAIL BEFORE USE & COMPLY WITH ALL INSTRUCTIONS HEREIN. OPERATION MANUAL SHOULD BE KEPT WITH THE EQUIPMENT AT ALL TIMES.

- This manual contains important information concerning the safe installation and use of this product. Read the manual carefully before installation and use. Pay attention to all safety warnings.
- Installation and use of this product should only be carried out by properly trained and approved personnel.
- Users of this product are responsible for the safe and correct use of this product.
- Any changes to this product, which have been done without consulting the manufacturer, will invalidate all warranties and guarantees.
- The components must not be altered or tampered with, due to potential risks to personnel.
- The manufacturer will not be responsible for any accidents or damages caused by incorrect installation or use of this product.
- This product is only suitable for storage and dispensing of Diesel Fuel.
- The control board contains electrical devices which are not suited for use in areas where there may be risks of explosion.
- The Diesel Fuel must be kept away from skin, eyes and never taken internally. Refer to Poisons Information for assistance.

Important Note: Correct tank installation is the sole responsibility of the purchaser. Any vehicle/machinery affected negatively or positively is not covered by the Self-Bunded Diesel Tank warranty.

TRANSPORT & STORAGE

DO NOT TRANSPORT WITH LIQUID INSIDE

- The Self-Bunded Diesel Tank must be protected against mechanical damage during transport and storage.
- Loading and off-loading must be carried out using only professional equipment, e.g. a forklift with extended forks. The covers, sockets or other protruding elements, which are not designed for lifting or moving the station must not be used to lift or move the station.
- The Self-Bunded Diesel Tank must never be pushed, pulled, dragged or rolled.
- During transport and storage, the door must be tightly closed and secured. The dispensing nozzle must be placed in its holster and the control box shut.
- Loading and transport areas must be smooth and free of sharp edges. During transportation, the tank must be secured to prevent the tank from moving.
- The station must not be filled at a rate greater than 550 Litres Per Minute (LPM).

INSTALLATION & HANDLING

DO NOT TRANSPORT WITH LIQUID INSIDE

GENERAL REQUIREMENTS

These instructions should be read in their entirety before commencing installation of the Self-Bunded Diesel Tank.

For all tank installation and maintenance, please take into consideration Health & Safety, Local Building Regulations and local fuel distributors policies.

BASE & FOUNDATION REQUIREMENTS

A solid minimum 75-100mm thick base or Plinth extending 300mm on all sides must be made from Concrete or bitumen. This plinth is to be engineered by the user.

If this is not possible, the station must be installed directly on a level, secure and non-combustible base. Base material is to be maximum 5mm particle size, e.g. "Crusher Dust". Where a non-concrete/bitumen base is used, engineering of the restraint or tethering for local conditions is by the customer.

SECURING THE STATION

Determine if station needs to be secured in place in exposed conditions. Do not drill holes in the tank.

Restraint for site specific, latent or environmental conditions is by others.

FUEL DE-ACTIVATOR

Determine if a fuel de-activator should be used depending on storage conditions and duration. Refer to the fuel supplier for further information.

EQUIPMENT SPECIFICATIONS

Self-Bunded Diesel tanks are supplied with an electronic contents gauge and alarm as standard.

PRE-INSTALLATION INSPECTION

Prior to installing, inspect for damage. If damaged, do not install.

TANK SERIAL NUMBER & WARRANTY

The tank serial number must be recorded to validate warranty. This number is usually located on the outside tank by the access hole.

ANTI-STATIC EARTH WIRE

- Self-Bunded Diesel Tanks are supplied with an anti-static earth wire & probe. Ensure the probe is driven at least 600mm into ground & securely attached before initial fill.
- 240V Self-Bunded Diesel Tank systems are earthed via the 3-pin power supply and earth probe. Electrical connection or works are to be completed by a qualified electrician.

POST-INSTALLATION

After installation, please ensure that this instruction booklet is left with the end user for future reference.

For further advice, contact Polymaster on 1800 062 064.

FILLING & DISPENSING

FILLING PROCEDURE

- During the first fill of the tank the level indicator may show less volume than that filled. The level indicator minimum read point is placed at the base of the tank. The maximum level must NOT be exceeded.
- Filling should be performed only under constant supervision of an authorized person as required by law.
- This tank can only be filled by a tanker equipped with a female camlock coupling.
- Ensure dispensing nozzle is in the holster.
- Fit delivery hose to cam-lock coupling.
- Fill tank in normal manner.
- Stop filling when the desired amount has been dispensed into tank or when high-level alarm (90%) sounds.
- Disconnect delivery hose from the coupling.

DISPENSING FROM ESSENTIAL STATIONS

- Lift dispensing nozzle from holster. Ensure the nozzle is clean.
- Place the nozzle into the receiving tank fill point.
- Turn the pump on and open the pump suction gate valve.
- Pull the trigger on the nozzle handle to start fill delivery to the receiving tank.
- Dispense Diesel Fuel into appropriate tank.
- When vehicle or receiving tank is full, release the nozzle trigger.
- Turn off pump immediately and close the suction gate valve.
- Ensure the nozzle is clean and place it back in the holster.

DISPENSING FROM QUANTUM & RANGER STATIONS

- Turn on the OCIO system via switch or fob system. Refer to OCIO Specific manual.
- Lift dispensing nozzle from holster. Ensure the nozzle is clean and there is no foreign material in the filter.
- Turn the pump on. Pull the trigger to start pumping immediately.
- Dispense Diesel Fuel into appropriate tank.
- When vehicle is full, turn off pump immediately. Ensure the dispensing nozzle is clean before placing back in holster.
- When you have finished dispensing, ensure the isolation valve is closed.
- Powering Your Pump
- The recommended way to power any 240V pump present in a Polymaster product is via mains power to ensure trouble-free operation.
- The use of generators is not recommended; however a minimum size of 5kVA should be used due to pump start-up requirements.

SERVICE & MAINTENANCE

- Keep all tank equipment in good working condition.
- Self-Bunded Diesel Tank should only be serviced by Polymaster approved qualified personnel. Please contact Polymaster for further details.
- Spare parts must comply with the requirements of the manufacturer.
- A daily check should be carried out of the visual condition of the tank, devices and power supply.
- Any faults or alarms should be reported to the tank supplier immediately.
- Protect against unauthorized access using the provided door lock.
- Self-Bunded Diesel Tank should be serviced by qualified personnel every 12 months or every 50,000 litres dispensed, depending on which occurs first.
- Transport and store the tank so as not to damage the tank walls.
- Bunded Tank Monitoring: Determine if any fluid is present in the bund. Urgently determine the cause and rectify. Remove fluid as soon as possible and dispose of according to the required legislation.
- Do a check flow run and ensure devices are within tolerances.
- Ensure no foreign material is entering the Self-Bunded Diesel Tank.
- If the station has not been used for an extended period, run contents through the dispenser for at least 10 seconds and dispose of appropriately.
- Earth Cable & connections must be inspected at regular intervals to ensure their electrical continuity.
- For further information, please contact Polymaster on 1800 062 064 or refer to additional equipment manuals.

TROUBLESHOOTING

Please refer to the comprehensive troubleshooting guide below for common issues and solutions. For issues not listed or if problems persist, contact Polymaster on 1800 062 064.

COMMON ISSUES

- **Bund Alarm Activated:** Check for overfilling or leaking internal tank. Review both cabinet and tank to determine location of any leak. Check parameters on OCIO controller (Quantum & Ranger) or check connections in OCIO (Essential).
- **High Level Alarm:** Overfill detected. Dispense diesel until below alarm level. Check if alarm or parameters are faulty.
- **Low Level Alarm:** Check tank levels for sufficient diesel. Check alarm parameters on OCIO controller.
- **Water Ingress:** Check the manhole cover is fitted correctly and sealed. Replace water filter cartridge (Part Code DCF-100-CART). Review age of diesel fuel.
- **Little or No Diesel Dispensing:** Clean nozzle if dirty. Check pump valve is open. Remove and clean filter strainer if pump blocked. Check tank level. Check 2-way tank breather. Inspect pipework for leaks.
- **Pump Not Running:** Check power supply to station. Check pump switch is on. Check for electrical faults.
- **Static Electricity:** Check that all earth connections comply to installation guidelines.
- **Cabinet Door Not Shutting:** Re-level base so cabinet door will shut. Confirm not damaged and handle/latch is operable.
- For detailed troubleshooting steps and additional issues, contact Polymaster on 1800 062 064.

COMPONENTS & MODELS

Three models are available: Essential, Ranger, and Quantum. Each model includes a self-bunded tank with 110% secondary containment capacity, secured lockable cabinet, electronic contents gauge and alarm, automatic shut-off nozzle, and built-in breather to vent fumes.

Feature	Essential	Ranger	Quantum
Power Supply	240V	240V / 12V	240V / 12V
Pump	70LPM Piusi	70LPM Piusi	70LPM Piusi
Hose	6mtr with auto-shutoff	10mtr reel with auto-shutoff	10mtr reel with auto-shutoff
Flow Meter	Mechanical	Digital	Digital (Pulse)
Controls	Manual	OCIO	OCIO + MC Box
User Management	N/A	Basic	Up to 120 users
Self-Bunded Design	110% capacity	110% capacity	110% capacity

RECOMMENDED CARE INSTRUCTIONS

ITEM/AREA OF INTEREST	ACTION RECOMMENDED	FREQUENCY
Visual Inspection	Visually inspect the entire unit for any changes in condition.	3 Months
Cleaning	Clean inside the cabinet regularly with soapy water and rags to remove any build-up of dust/dirt/diesel.	3 Months
Nozzle	Check the action of the nozzle to ensure correct operation. Keep unit clean and free of dust/dirt.	As Used / 3 Months
Pump	Visual/Aural check to ensure correct operation. Keep unit clean and free of dust/dirt.	As Used / 3 Months
Filter	Must be replaced every 12 months or every 50,000L dispensed. Whichever comes first.	12 Months
Hoses	Check the condition of the hoses to ensure there are no kinks or deterioration of the material. Keep clean and free of dust/dirt.	As Used / 3 Months
Valves	Check the condition of the fill line ball valve when filling unit. Check suction line ball valve at regular intervals.	As Used / 3 Months
Foundation/Base	Check the condition of the tank foundation for any erosion, cracking or subsidence. Repair as required.	3 Months
Moving	ONLY MOVE UNIT WHEN COMPLETELY EMPTY	As Needed

WARRANTY

Polymaster Self-Bunded Diesel Tanks are guaranteed against material or manufacturing defect.

Item	Warranty
Tank	5 years
Piusi User System (MCBox)	2 years
Pulse Meter, OCIO & Pump	12 months
Sensors, Nozzle and Hose	3 months

WARRANTY CONDITIONS

- This warranty applies provided that the following criteria are adhered to (applicable to all models):
- The tank is installed and commissioned in accordance with the instructions outlined in the Installation and User Manual
- The tank is installed and commissioned by a suitably qualified engineer
- The tank has not been subject to misuse, careless handling or faulty installation. Any repairs have not been attempted or carried out other than by authorised, competent service staff
- The tank has been purchased by the end user and is not for hire purposes
- The tank has not been filled at a rate exceeding 550 litres per minute
- The tank is installed above ground
- The tank is inspected & serviced every 12 months or every 50,000 litres dispensed, depending on which occurs first, by a suitably qualified service Engineer or Technician
- Immediately upon discovery of any defect in the tank, steps are taken to mitigate loss by contacting the fuel supplier and if necessary, arrange for tank to be drained pending the supply of a new tank
- Immediately upon discovery of any defect you contact Polymaster and allow a representative to inspect the tank and its surroundings and where necessary carry out any repairs (before any attempts are made to move the tank)

WARRANTY EXCLUSIONS

- Mechanical damage caused by the user, dealer or improper maintenance
- Faults, damage or premature wear caused by improper use
- Damage caused by third parties
- Repairs carried out by unauthorized service personnel

To make a warranty claim, you will need your serial number, proof of purchase, and a photo of the product clearly showing the issue.

Submit a claim at
polymaster.com.au/warranty.



Questions? Contact Polymaster

1800 062 064
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