



Self Bunded Bulk Diesel

Installation Manual

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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 New South Wales supported by warehouses in Melbourne and Adelaide 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 SAI Global's AS/NZS 4766:2006 standard and labelled to display manufacturing details and serial number for complete traceability.



**Quality
Certified
Company
ISO 9001**



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

Introduction

Congratulations for investing in a Polymaster Dieselmaster Station. Please ensure this product is correctly installed, operated and regularly maintained. By following the guidelines in this manual, your Dieselmaster will provide you with trouble free service for years to come.

CORRECT TANK INSTALLATION IS THE SOLE RESPONSIBILITY OF THE PURCHASER.

The following content is a guide only. Any vehicle/machinery affected negatively or positively is not covered by the Dieselmaster Tank warranty.

Dieselmaster® Brief

This Dieselmaster Station is only to be used for the static storage and dispensing of Diesel Fuel. The range is designed and engineered to suit the needs of a vast coverage of industrial, commercial and public requirements from nationwide fleets to local users.

The station enables safe Diesel Fuel storage outdoors, at a safe distance from building and hazard zoned areas in line with applicable codes or standards requirements. High resistance against mechanical impact and protection against frost and heat due to the bunding system (tank in tank) construction to suit most Australian temperature conditions. The high standard that your Dieselmaster Station has been made to ensure optimum safety and functionality.

Safety Guide

READ OPERATION MANUAL IN DETAIL BEFORE USE & COMPLY WITH ALL INSTRUCTIONS HEREIN.

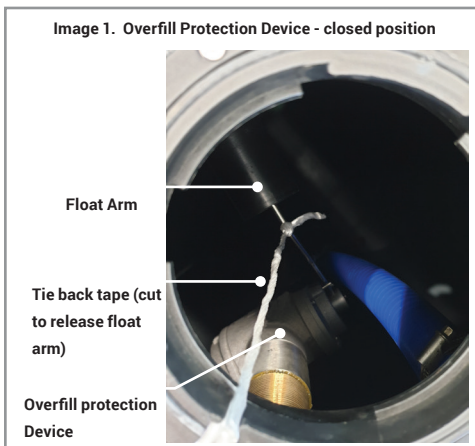
OPERATION MANUAL SHOULD BE KEPT WITH THE EQUIPMENT AT ALL TIMES.

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

Transport & Storage

- A. **DO NOT TRANSPORT WITH LIQUID INSIDE**
- B. The Dieselmaster Station must be protected against mechanical damage during transport and storage.
- C. 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.
- D. The Dieselmaster Station must never be pushed, pulled, dragged or rolled.
- E. 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.
- F. 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.
- G. The station must not be filled at a rate greater than 250 Litres Per Minute (LPM).

Image 1. Overfill Protection Device - closed position



Installation & Handling

These instructions should be read in their entirety before commencing installation of the Dieselmaster Station.

ATTENTION: The Overfill Protection Device float arm packing/shipping tape **MUST** be removed prior to first fill.

Note; the Overfill Protection Device is shipped in the **CLOSED** position (Image 1). See instructions below:

Removal Instructions - Bunded System:

1. Use safe working platform to suit local and business safety rules and codes to access the top of the tank.
2. Remove Bunded Station access lid.
3. Remove 150mm access lid on Internal Bund tank.
4. Cut packing tape/shipping tape used to tie-back float arm for transportation.
5. Check float arm moves down and swings/moves easily. Replace access lids.

- > For all tank installation and maintenance, please take into consideration Health & Safety/Local Building Regulations and local fuel distributors policies.
- > A solid minimum 45mm thick base or Plinth extending 300mm on all sides made from Concrete/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.
- > 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.

Installation & Handling (cont.)

- > Determine if a fuel de-activator should be used depending on storage conditions and duration. Refer to the fuel supplier for further information.
- > Dieselmaster tanks are supplied with an electronic contents gauge and alarm as standard.
- > Prior to installing inspect for damage, if damaged do not install.
- > The warranty card in this booklet should be returned to the supplier at Locked Bag 4001, Swan Hill Vic. 3585 or aftersales@polymaster.com.au
- > The tank serial number must be recorded on the warranty card to validate warranty. This number is usually located on outside tank by the access hole.
- > Dieselmaster stations 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 Dieselmaster systems are earthed via the 3-pin power supply and earth probe. Electrical connection or works are to be completed by a qualified electrician.
- > For further advice, contact the Dieselmaster helpline on 1800 062 064

AFTER INSTALLATION, PLEASE ENSURE THAT THIS INSTRUCTION BOOKLET IS LEFT WITH THE END USER FOR FUTURE REFERENCE.

Custom design kits are available upon request.

This Dieselmaster Station tank is warranted for 5 years from the date of purchase against faulty materials or manufacture of the tanks.

Equipment and accessories are warranted as follows (where fitted):

- Piusi User System (MCBox) – 2yrs
- Pulse Meter, OCIO & Pump – 12mths
- Sensors, Nozzle and Hose – 3mths

All are from date of purchase.

Provided that the following criteria is adhered to (applicable to all models):

- > The enclosed warranty card is returned to Polymaster with evidence of the purchase date.
- > 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 authorized, 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 250 litres per minute.
- > The tank is installed above ground.
- > The tank is inspected every 6mths 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).
- > This warranty excludes ancillary fittings such as contents measuring gauges or mechanical pumps. Further warranty information on ancillary fittings and pumps is provided within the manual.

FILLING DIESELMASTER STATION

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.

- A. Filling should be performed only under constant supervision of an authorized person as required by law.
- B. This tank can only be filled by a tanker equipped with a female camlock coupling.
- C. Ensure dispensing nozzle is in the holster.
- D. Fit delivery hose to cam-lock coupling.
- E. Fill tank in normal manner.
- F. Stop filling when the desired amount has been dispensed into tank or when over-fill alarm (90%) sounds.
- G. Disconnect delivery hose from the coupling.

DISPENSING FROM DIESELMASTER ESSENTIAL STATIONS

- A. Lift dispensing nozzle from holster. Ensure the nozzle is clean. Place the nozzle into the receiving tank fill point.
- B. Turn the pump on and open the pump suction gate valve.
- C. Pull the trigger on the nozzle handle to start fill delivery to the receiving tank.
- D. Dispense Diesel Fuel into appropriate tank.
- E. 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 DIESELMASTER QUANTUM & RANGER STATIONS

- A. Turn on the OCIO system via switch or fob system. Refer to OCIO Specific manual.
- B. Lift dispensing nozzle from holster. Ensure the nozzle is clean and there is no foreign material in the filter.
- C. Turn the pump on. Pull the trigger to start pumping immediately.
- D. Dispense Diesel Fuel into appropriate tank.
- E. When vehicle is full, turn off pump immediately. Ensure the dispensing nozzle is clean before placing back in holster.

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

- A. Keep all tank equipment in good working condition.
- B. Dieselmaster Station should only be serviced by Polymaster approved qualified personnel. Please contact Polymaster for further details.
- C. Spare parts must comply with the requirements of the manufacturer.
- D. A daily check should be carried out in the visual condition of the tank, devices and power supply.
- E. Any faults or alarms should be reported to the tank supplier immediately.
- F. Protect against unauthorized access using the provided door lock.
- G. Dieselmaster Station should be serviced by qualified personnel every 6 months or every 50,000 litres dispensed, depending on which occurs first. Refer to the Care & Trouble-Shooting Guide for specific service intervals.
- H. Transport and store the tank so as not to damage the tank walls.
- I. The bunded tank: 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.
- J. Do a check flow run and ensure devices are within tolerances.
- K. Ensure no foreign material is entering the Dieselmaster Station.
- L. 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.
- M. 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

Components

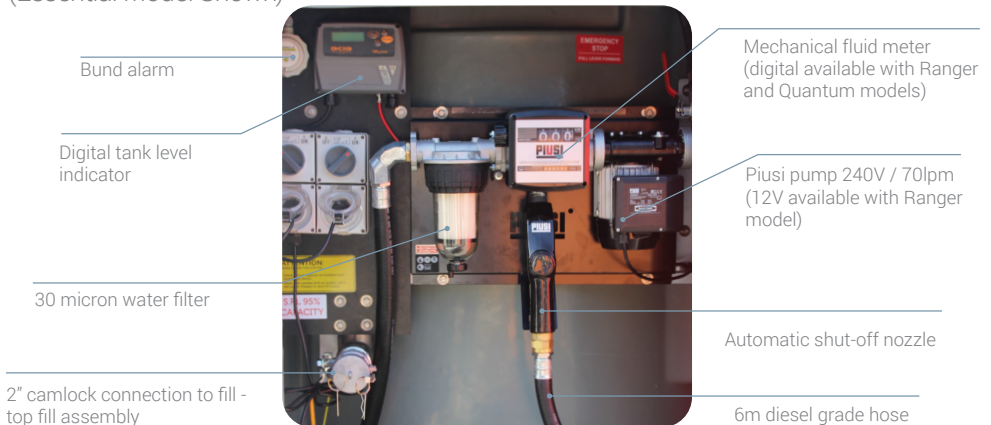


Quantum & Ranger available in 5 tanks sizes: 2,300, 5,000, 7,000 & 10,000 ltr
 Essential available in 10,000 ltr only



Cabinet Details

(Essential Model Shown)



(Image for illustrative purposes only)

Compare the Difference

FEATURES	ESSENTIAL	RANGER	QUANTUM
Power supply - 240V	✓	✓	✓
Power supply - 12V	✗	✓	✗
70LPM Piusi pump	✓	✓	✓
6mtr dispensing hose with auto-shut off trigger nozzle	✓	✓	✗
10mtr hose reel with auto-shutoff trigger nozzle	✗	✗	✓
Auto-shutoff nozzle holster	✗	✓	✓
30 micron clear water capture filter - to 150LPM	✓	✓	✓
2" camlock connection to fill - top fill assembly	✓	✓	✓
Anti-splash/anti-static top fill assembly	✓	✓	✓
Mechanical overfill protection	✓	✓	✓
High/Low level electronic audible alarm	✗	✓	✓
Bund alarm	✓	✓	✓
110% secondary containment bund capacity	✓	✓	✓
Flame retardant outer tank material	✓	✓	✓
Digital level indicator	✓	✓	✓
Secured lockable cabinet to protect equipment	✓	✓	✓
Mechanical fluid meter to measure vehicle usage	✓	✗	✗
Digital fluid meter to measure vehicle usage	✗	✓	✓
Power control box with auto time out (10mins) & emergency stop	✗	✓	✓
Fuel management system for up to 120 users	✗	✗	✓

Recommended Care Instructions



POLYMASTER DIESELMASTER SELF BUNDED STATIONS – MARCH 2020

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. Part Code: ATN90	As Used / 3 Months
Pump	Visual / Aural check to ensure correct operation. Keep unit clean and free of dust/dirt. Part Code: ST Panther 72.	As Used / 3 Months
Sensors	Monitor sensors for large variations and unexpected alarms. Quantum & Ranger Part Code: BMDMLI & BMDMBPR Essential Part Code: BMLI.	As Used
Filter	Recommended replacing every 12 months or as necessary. Part Code: DCF25CL.	12 Months
Screw Lids	Check that the screw lids (internal and external) are still tightly secured Part Code: SL8-NV (ext.) & BCRF140L + BCRF140R (int.)	3 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. Essential & Ranger Part Code: DH25ES. Quantum Part Code: DHR10M25 Hose Reel.	As Used / 3 Months
MC-Box (Quantum Range Only)	Monitor sensors for large variations and unexpected alarms. Keep unit clean and free of dust/dirt. Java script on your PC need to be regularly updated. Java script is Windows and not part of the MC box. Quantum Part Code: BMCB-D.	As used / 3 Months
OCIO Settings (Quantum & Ranger)	Monitor sensors for large variations and unexpected alarms. Keep unit clean and free of dust/dirt. Quantum & Ranger Part Code: PB240V-BS	As used / 3 Months

Recommended Care Instructions (cont.)

POLYMASTER DIESELMASTER SELF BUNDED STATIONS – MARCH 2020

ITEM/AREA OF INTEREST	ACTION RECOMMENDED	FREQUENCY
OCIO Instrument (Essential)	Monitor sensors for large variations and unexpected alarms. Keep unit clean and free of dust/dirt. Essential Part Code: BMLI	As Used / 3 Months
Flow Meter	Check the operation of the meter to ensure that the correct litre-age is being dispensed. Replace battery on LCD unit as required. Quantum Part Code : DPM (Pulse Meter) Ranger Part Code: DMDT Essential Part Code: K33 Type.	As Used / 3 Months
Hose Reel (Quantum Range Only)	Check the operation of the reel regularly and the condition of the attached hose. Quantum Part Code: DHR10M25 Hose Reel.	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. Part Code: BV2 (fill) & BV1MF (suction)	As Used / 3 Months
Moving	ONLY MOVE UNIT WHEN COMPLETELY EMPTY	
Foundation/Base	Check the condition of the tank foundation for any erosion, cracking or subsidence. Repair as required. Ensure any repair materials meet the Installation Guide requirements.	3 Months
12Volt Range – Earth Rod	Ensure the earth rod is installed as per the Installation Guide. Ensure that the ground around the earth rod is moist. Contact Polymaster if further information is required.	3 Months
12Volt Range – Power	Ensure that the Solar Panel is oriented as in a manner to maximise energy production based on the site-specific environment and conditions.	3 Months

Troubleshooting



TOPIC	POSSIBLE CAUSE	ACTION	CONTACT
Bund alarm activated	Over filling	Check high level alarm. Shut off filling pump before high level reached.	Contact Polymaster
	Leaking internal tank	Review both Cabinet (is supplied) and tank to determine location of any leak.	Contact Supplier/ Polymaster
	Faulting bund alarm or alarm parameters	Check parameters on OCIO controller (Quantum & Ranger).	Contact Polymaster
	Faulting bund alarm	Check connections in OCIO (Essential). Check bund sensor is located at low level in bund.	Contact Polymaster
	Water ingress	Check manhole cover is fitted correctly and sealed. Check for damage to any vents or connected pipework.	Contact Polymaster
	Hoses or fill line issue	Check all hoses (fill lines) are connected and haven't come off.	Contact Polymaster
High level alarm	Overfill	Dispense diesel until below alarm level.	
	Faulty alarm or parameters	Check parameters on OCIO controller (Quantum & Ranger), if correct contact supplier.	Contact Polymaster
	Faulting bund alarm or Parameters	Check connections in OCIO (Essential). Check bund sensor is located at low level in bund.	Contact Polymaster
	Tank overfilled	Check mechanical overfill protection device is operating as intended. Must open access hatch and visually inspect.	Contact Polymaster for direction
Low level alarm	Faulty alarm parameters / low diesel level	Check tank levels if enough diesel is in the tank. Check alarm parameters on OCIO controller.	

Troubleshooting (cont.)

TOPIC	POSSIBLE CAUSE	ACTION	CONTACT
Tank Level Indicator reading not accurate	Settings in OCIO have been changed	Contact Polymaster to get factory settings	Contact Polymaster
	No digital display of tank volume - Sensor has malfunctioned	Replacement sensors are available from Polymaster. Please replace.	Contact Polymaster
Little or no diesel being dispensed while pump is running	Build-up of dirt in nozzle	Clean nozzle, use a clean damp cloth. Use a pipe cleaner for hose internal if required. In This case, safely dispose of contaminated fuel in line with environmental requirements.	
	Pump valve turned off	Turn pump valve on to fully open.	
	Pump blocked	Turn off Pump. Remove filter strainer, thoroughly clean & replace.	
	Insufficient tank level	Refill tank to desired level	
	Foot valve blocked	Check & clean foot valve (where installed)	
	Excessive tank vacuum	Check 2-way tank breather and clean if required.	Contact Polymaster for replacement
	Delivery hose too long	Confirm hose is Polymaster supplied part. If changed or extended, replace with correct Polymaster part.	Polymaster for replacement part.
	Pipe/Vacuum leak	Inspect all pipework/fittings and replace any that are damaged.	Contact Polymaster
	By-base valve	Release nozzle rapidly, re-start pump, inspect if required	

Troubleshooting (cont.)

TOPIC	POSSIBLE CAUSE	ACTION	CONTACT
Little or no diesel being dispensed while pump is running	Water filter blocked	Replace water filter cartridge, part code DCF25F.	Contact Polymaster
	Water Capture blocked	Replace the water capture filter and ensure there is no blockage.	
Pump not running or working.	No power supply	Check there is power to station.	
	Power to pump not on	Check that the switch on the physical pump is turned on. Check power supply to complete unit is correctly connected.	
	Electrical fault	Check power to pump, if no power contact supplier.	Power Supplier
	Dispensing locked out by MC box if fitted	Check MC box settings, if settings lost re-calibrate.	
Incorrect dispensing volume. Or, Diesel is not dispensing at the desired flow rate.	Faulty flow meter or flow meter calibration incorrect	Check flow meter operation and/or re-calibrate. Refer to OCIO manual.	
Amount recorded while dispensing is different on User Manager System (MCBOX)	Dispensing calibration out of specification.	Refer to "Quick Reference Guide" and follow Dispensing Calibration steps.	
Pump making squealing/scratching or grinding sound.	Dirt or debris may have entered the pump	Cease use of the system. Inspect tank level and quality of fuel.	Contact Polymaster
Cabinet door not shutting	Tank not level on base	Re-level base so cabinet door will shut. Confirm not damaged and handle/latch is operable.	

Troubleshooting (cont.)

TOPIC	POSSIBLE CAUSE	ACTION	CONTACT
Water present in diesel when dispensed	Water ingress to internal tank	Check the man hole cover is fitted correctly and sealed, replace water filter cartridge. Product Code DCF25CL. Check condition of all connected pipework.	Contact Polymaster
Water present in diesel when dispensed	Water ingress to internal tank	Review age of diesel fuel. Perform flush operation into approved container to remove any water contaminated fuel. Dispose of fuel in line with environmental requirements.	Contact Polymaster
Static shock felt when pumping diesel	Static electricity build-up in the hose	Check that all earth connections comply to installation guidelines.	If static electricity remains contact Polymaster
12 Volt (Solar) Specific	Low Power	Check for any damage to the Solar system. Review solar Panel Orientation relative to the site-specific environment and conditions. E.g. Shading, ambient temperature, Orientation, cleanliness of the panel.	Contact Polymaster
	No Power	Check for any damage to the Solar system. Review solar Panel Orientation relative to the site-specific environment and conditions. E.g. Shading, ambient temperature, Orientation, cleanliness of the panel.	Contact Polymaster
	No Power	Carefully and Safely visually inspect the condition of all cabinet internal electrical wiring for any signs of heat, damage or lack of connection. Any Electrical work must be performed by a suitable qualified Electrician.	Contact Polymaster
	Earth Rod Function	Ensure that the Earth Rod is installed in line with the Installation Guide. Ensure that the earth/soil around the Earth Rod is moist to aid conduction.	Contact Polymaster

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 Dieselmaster tank : _____
(located around lid area or rib)

Dieselmaster 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)

We value your feedback - please share your experiences with us at feedback@polymaster.com.au



Together we
hold the future.

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→ polymaster.com.au

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