

OPERATION MANUAL



MODELS

ACP-DF-180/32G

ACP-DF-460/32G

ACP-DF-679/66G

TRANSPORTABLE DUAL-FLUID TANKS

Revision #0 (08/17/26)

To find the latest revision of this publication or
associated parts manual, visit our website at:

www.mqpower.com



THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

PROPOSITION 65 WARNING



ACP-DF-180/32G
ACP-DF-460/32G
ACP-DF-679/66G
Transportable
Dual-Fluid Tanks

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DISCLAIMER:

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PRODUCT DETAILS

Product Details	
Manufacturer	Supplier/Distributor
DyMac Global Limited +353 1 442 0516 Brownstown Road, Commons, Newcastle Co. Dublin, Ireland, D22 Y2F2 E-mail: sales@dymacglobal.com	MQ Power (310) 537- 3700 6141 Katella Avenue Suite 200 Cypress, CA 90630 E-mail: mq@multiquip.com
Model No: Purchase Order No:	Purchase Order No:
Serial No:	Job No:
Date of Supply:	Tank Capacity:
Tank Capacity:	Issue Date:
Color: RAL: Warranty No:	Warranty No:
Notes:	

ALL WARRANTY AGREEMENTS ARE BETWEEN THE CUSTOMER AND DYMAC GLOBAL LTD.

The warranty is subject to the conditions below, your product is supplied with the warranty against material defect in workmanship or materials from the date of supply for the following warranty period. The warranty is based on fair wear and tear basis. Defective parts will be replaced or rectified at the manufacturer's discretion and subject to being returned for full examination at client's cost. For export sales, it is expected that labor would be carried out locally and under the review of DyMac Global. No warranty either explicit or implied is offered for any bought-out items other than those offered by the manufacturer.

ACECUBE – VERSATILE DEF BUNDED TANKS – STEEL STRUCTURE: 3 YEARS

INNER POLY PLASTIC TANK: 1 YEAR

PAINT WORK: 1 YEAR

ACCESSORIES:

DISPENSING PUMPS, DELIVERY NOZZLES,

SUCTION/DELIVERY HOSES: 90 DAYS

ALL OTHER ACCESSORIES: 1 YEAR

The warranty is subject to following conditions:

To qualify for the guarantee this product must be installed by a registered competent person in accordance with prevailing statutory requirements. The period of the warranty will commence from the date of invoice. The warranty is provided to the original purchaser, only proof of the purchase and evidence of annual inspection by a registered competent person will be required in the event of a claim.

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During the warranty period, any component of your product which is proved to contain any material defect in workmanship or materials will be exchanged or repaired, at our sole discretion by us free of charge for material or labor. In respect of your product, the warranty does not cover (and we will not accept responsibility for) any consumable items, any component which has not been manufactured by us (please refer to the manufacturer's warranty supplied with the relevant component), fair wear and tear, or any fault:

- In respect of any component not forming part of your product; or
- Arising from any cost other than defect in original workmanship or materials; or
- Caused improper installation, maintenance, neglect, misuse or willful or accidental damage; or
- Caused by alteration or repair by you or by a third party who is not one of our authorized repairers; or
- Caused by non-observance of either any applicable statutory requirement or any of the instructions contained in the installations and operating instructions appropriate to your product and in this respect.

Your product has been used only for the purpose for which it is designed, and that any terms and conditions held with your installer have also been adhered to.

To the maximum extent permitted by UK law:

- The warranty is given in lieu of all other warranties, expressed or implied by statute or common law, including implied warranties or conditions of satisfactory quality and fitness for a particular purpose, provided that this warranty is in addition to your legal rights in relation to goods that are faulty or not as described; and
- We shall not in any circumstances be liable to you or any other party, whether in contract or (including for negligence and breach or statutory duty howsoever arising), misrepresentation (whether innocent or negligent), restitution or otherwise, for any special, indirect or consequential loss or damage.

INTRODUCTION

Thank you for the purchase of AceCube. This accompanying manual will help you safely operate and maintain your new tank. The following information in this manual will ensure years of safe, reliable service and production. Please ensure that all owners, operators or any other persons working near or on the AceCube read and understand this manual. Following the procedures and maintenance schedules as outlined in this manual will help to:

- Avoid dangers
- Reduce costly repairs, cleanups, and downtime
- Increase the reliability of the AceCube

The AceCube is designed and built to the highest standards using quality materials and components. DyMac Global has taken the greatest care to ensure that you have received a safe and reliable product that will provide you with years of service. The AceCube is designed with the highest regard for safety. Nonetheless, misuse of this product may result in serious injury, death, or damage to the tank, as well as void the manufacturer's warranty.

DESIGNATED USE

The AceCube Professional Dual-Fluid ACP-DF-180/32G, ACP-DF-460/32G, ACP-DF-679/66G is a transportable fuel tank designed to be moved when full via its built-in forklift pockets or lifting eyes. It is stackable both in shipping containers and on truck beds, 2 high when full or 3 high when empty. Its outer bund tank is 110% the capacity of the inner tank, ensuring the upmost level of security and environmental protection in the event of a leak. DyMac Global cannot be liable for any damages resulting from misuse.

Contacting DyMac Global: if you have any questions regarding your product, please contact us at the following number:

Ireland office: +353 1 442 0516

By calling this number you can reach any of the following departments: service, sales, production, accounting or engineering.

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SAFETY INFORMATION

DO NOT operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.

SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: **DANGER**, **WARNING**, **CAUTION** or **NOTICE**.

DANGER

Indicates a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**.

WARNING

Indicates a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.

CAUTION

Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE INJURY**.

NOTICE

Addresses practices not related to personal injury.

SAFETY DECALS

This tank is fitted with a number of safety warning decals to highlight potential risks. These warnings must be obeyed at all times. If one of the decals become detached or damaged it must be replaced. The safety decals use pictograms to indicate the relevant risk in line with ISO requirements and pictograms with text in line with ANSI requirements, and will be equipped with same dependent on your region.

It is imperative that you check the local requirements for labeling before loading the tank with dangerous goods. The appropriate decals should be applied to the tank in line with local authority requirements.

PERSONAL SAFETY

WARNING

- Fill through the 2" fill only.
- When filling through the 2" fill cap with non-return valve, please open the 3" fusible fill cap for venting purposes and close the 2" fill cap and 3" fusible fill cap when tank has been filled.

NOTICE

- Ascertain from the appropriate authority and observe all statutory and any other regulations that may apply to the planned location before operating the product. Operators must be trained in the correct and safe use of all equipment.
- Before operation the operator(s) must:
 - Have received specific and adequate training in the task to be carried out.
 - Have read and understood the operations manual and the safety signs in this manual and around the product(s).
 - Know the location and function of controls and safety features.
 - Be aware of all moving parts of the equipment.
- Any work on and/or with the product must be executed by trained, reliable and authorized personnel only.
- Statutory minimum age limit must be observed.
- Work on the hydraulic system must be carried out only by personnel with special knowledge and experience of hydraulic equipment.
- It is the responsibility of the persons using this tank to ensure that the correct placards are fitted before transporting the tank. Please refer to the appropriate legislation in your region.

SAFETY INFORMATION

WORK AREA SAFETY

DANGER

- **DO NOT** smoke or allow smoking near flammable fuels or solvents. Use non-flammable solvents for cleaning parts and equipment. Know where fire extinguishers and other fire suppression equipment are located and learn how to use them.



- Avoid electrical and static sparks and any open flame while handling, storing, moving or pouring fuels, electrolytes for batteries, hydraulic fluids or coolants.

NOTICE

- Operators must have received specific training in all operating and service tasks as required for the safe operation and service of the tank. Operators must know the location and correct operation of all controls and safety features.
- Only authorized and trained personnel involved in tank operation or maintenance should be in the vicinity of tank while it is being used or serviced. All other personnel should be kept at a safe distance.
- Keep the work area as neat and as clean as practical. Keep your equipment clean and free of dirt and grease so it can be checked for loose, cracked or broken parts. Replace defective parts as soon as they are discovered.
- **ALWAYS** use proper hoisting equipment for heavy loads. Regularly check hooks, cables, shackles and chains for stretch and wear. Never overload hoists, cranes or other lifting devices.

OPERATIONAL SAFETY

DANGER

- **NEVER** store fuel tanks within:
 - 26 feet (8 meters) of any ignition source.
 - 16 feet (5 meters) from overhead wires.
 - 10 feet (3 meters) of combustible vegetation.
 - 50 feet (15 meters) from property boundaries.
 - 50 feet (15 meters) from any dwelling, workshop, or stockpile of combustible materials.

- Ensure fuel tanks are stored clear from areas with heavy vehicle traffic.
- When storing multiple fuel tanks, ensure that adjacent tanks remain more than 2 feet (600 mm) apart.
- Never store fuel in outer bund reservoir.

NOTICE

- Safety warnings are required to be displayed in the area of the fuel dispensing equipment which must include the message "DANGER — NO SMOKING, NO NAKED FLAMES".
- All personnel involved in the handling and storage of the fuels must have, or be supervised by those who have, adequate knowledge, experience, and training in the handling of fuels and in accident prevention and response.
- Read and keep the maintenance instruction supplied with all the equipment you will be using with tank.
- Dispenser hoses must be approved anti-static hoses in good condition.
- All fittings, pumps, valves and hoses must be monitored for leaks regularly.
- Ensure that safety instructions and warnings attached to the equipment are always complete and perfectly legible.
- Keep warnings and instruction labels clean and up to date.
- Only use approved fuel pumps with the tank, and ensure that the pumps are installed near the supply tank.
- Ensure a cleared working space is allowed around the fuel pumps.

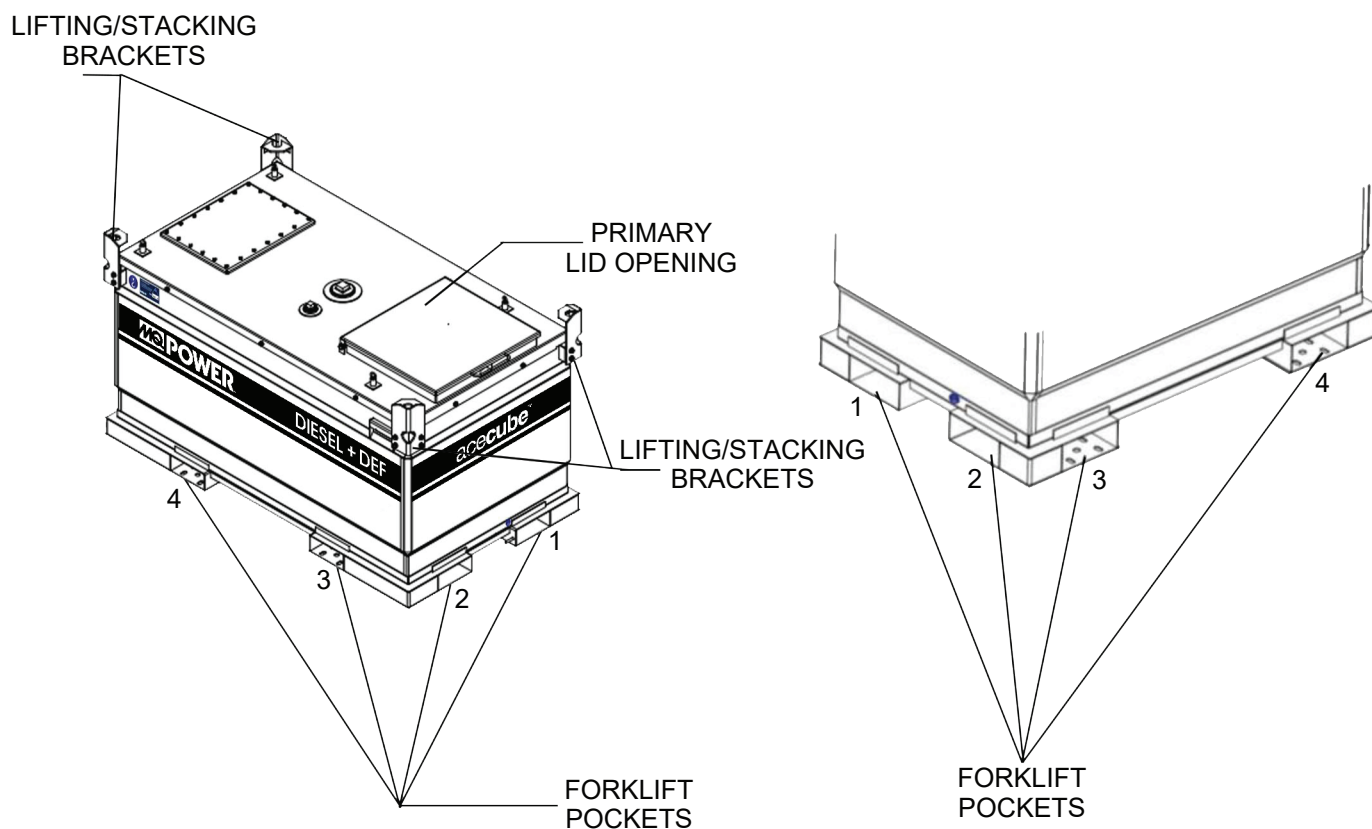
TRANSPORTATION AND HANDLING

FORKLIFT GUIDELINES

The ACP-DF-180/32G to ACP-DF-679/66G may be transported using a forklift of 3-ton capacity or higher. Using forklift pockets 3 and 4 (Figure 1), the tank may be transported both full and empty. The tank may be transported *empty only* using forklift pockets 1 and 2. The tank may be transported full on the highway.

WARNING

Only properly trained and licensed forklift operators who have knowledge of hazardous material handling should transport AceCube. Failure to adhere to this could result in serious injury or death.



NOTE: IMAGE MAY NOT REPRESENT YOUR EXACT TANK MODEL.

Figure 1. Forklift Pockets

TRANSPORTATION AND HANDLING

TOP LIFT BY CRANE

This tank has been tested in accordance with the testing criteria of UN31A/Y for safe lifting by crane from its top lifting points when the tank is full of liquid. Please check the MPMG stated on the tank's data plate to ensure the correct lifting slings/chains and crane are used for this top-lift process. Ensure that the tank is free from any obstructions and follow local safe lift precautions.



WARNING

Only properly trained and licensed crane operators who have knowledge of hazardous material handling should transport AceCube. Never allow anyone to place any part of their body beneath a lifted load. Only use approved lifting cranes and hardware whose maximum weight limit exceeds 3 tons.

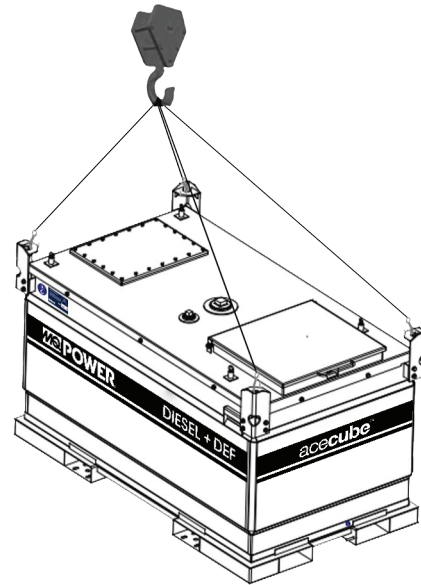
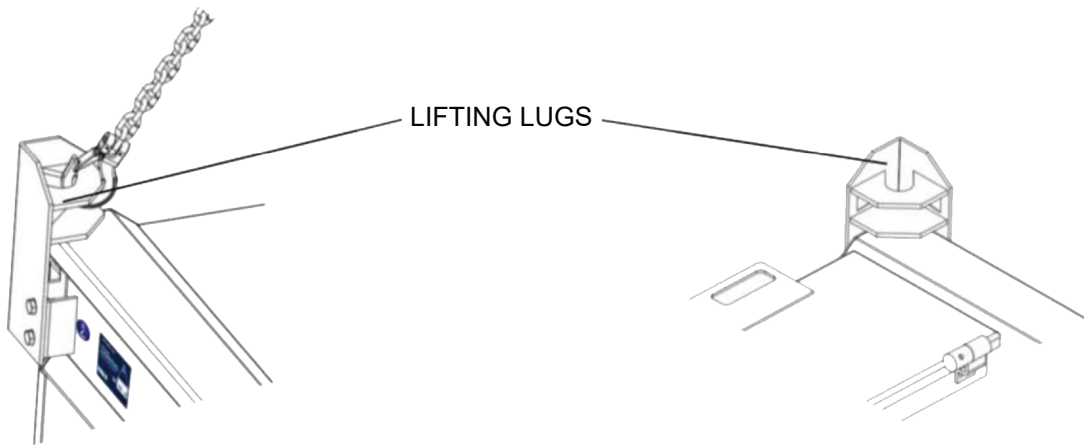


Figure 2. Top Lift By Crane



NOTE: IMAGE MAY NOT REPRESENT YOUR EXACT TANK MODEL.

Figure 3. Lifting Lugs

Table 1. Specifications

Plastic DEF Tank Size	32 gal. (120 L)	66 gal. (250 L)
Capacity	31 gal. (118 L)	66 gal. (250 L)
Length	21 in. (544 mm)	35 in. (887 mm)
Width	15 in. (384 mm)	22 in. (548 mm)
Height	35 in. (887 mm)	41 in. (1,041 mm)
Wall Thickness	3/8 in. (10 mm)	3/8 in. (10 mm)
Safe Fill Level	30 gal. (112 L)	63 gal. (237 L)

Table 2. Dimensions

Model	ACP-DF-180/32G (680/120L)	ACP-DF-460/32G (1750/120L)	ACP-DF-679/66G (2570/250L)
Height in. (mm)	51 (1,295)	51 (1,295)	51 (1,295)
Width in. (mm)	45 (1,150)	52 (1,325)	74 (1,885)
Length in. (mm)	58 (1,485)	90 (2,300)	90 (2,300)

COMPONENTS AND FUNCTIONS

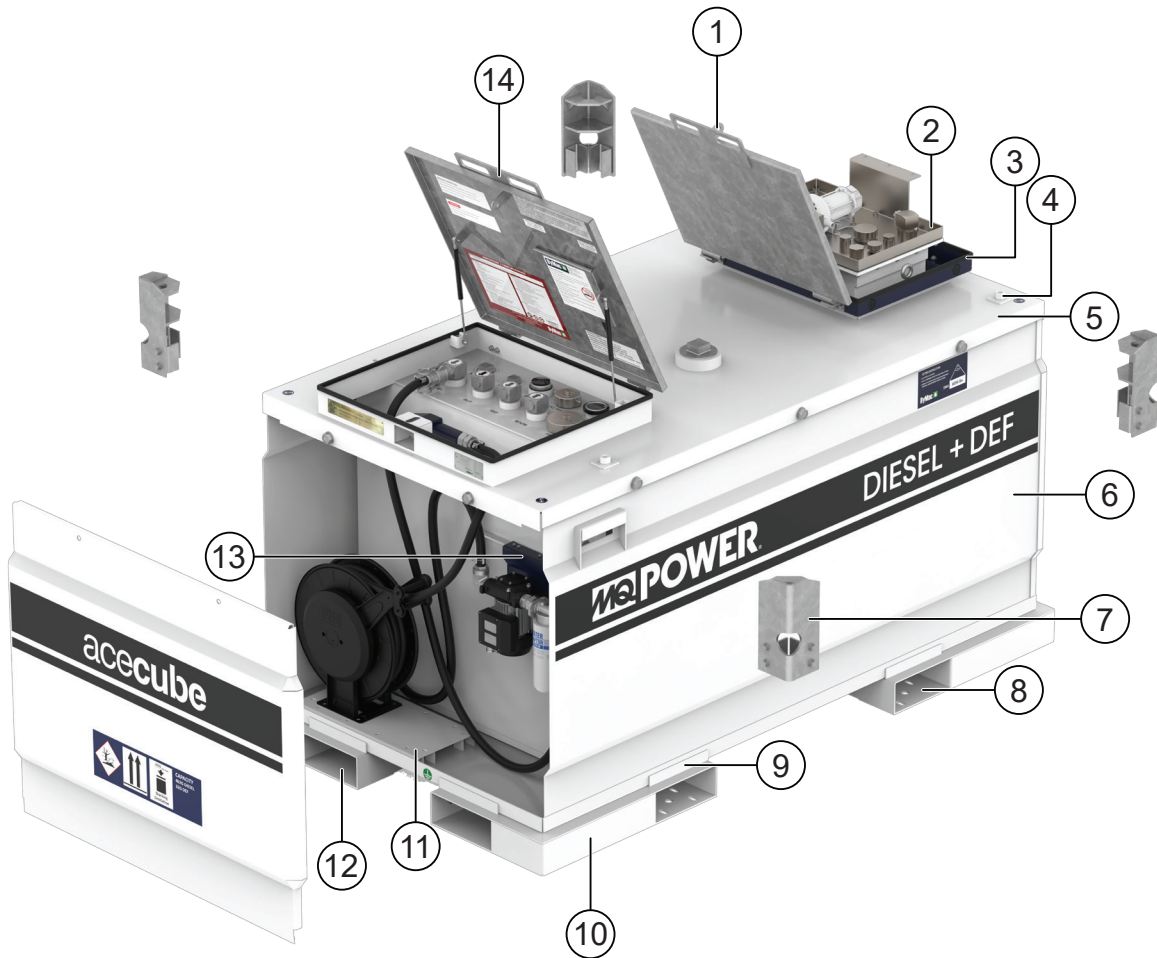


Figure 4. Assembly Components

Table 3. Assembly Components	
Item No.	Description
1	Secondary Hatch Lid
2	Poly Plastic HDPE Insert Tank
3	Secondary Hatch Fitting
4	Lifting Ports for Inner Tank
5	Top Cover Plate
6	External Bund
7	Stacking Corner with Lifting Point
8	Bi-Directional Forklift Pocket
9	Integrated Base Frame Bi-Directional Forklift
10	Road Trailer Connection
11	Hose Reel Mounting Points
12	Forklift Pocket
13	Removal Universal Bracket Plate
14	Primary Hatch Lid

COMPONENTS AND FUNCTIONS

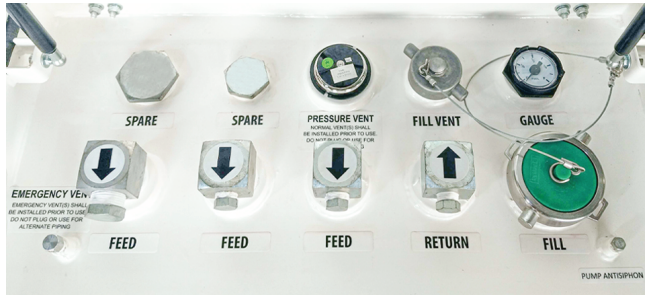
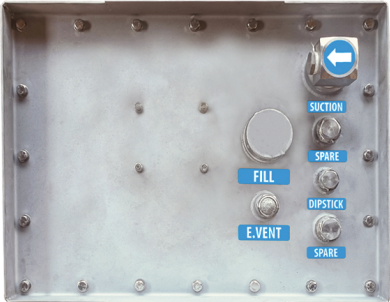
PRIMARY FITTING PLATE			LEVEL GAUGE OPTIONS		
			 Alternative Type Eg Rochester		
DEF FITTING PLATE			Standard Float Type Dial Gauge		
			 Standard Float Type Dial Gauge		
 Fuel Return	 Pressure Vent	 3" Fill/ Fusible Cap	 2" Fill Cap	 Fuel Feed/ Suction	 Emergency Vent

Figure 5. Hatch Plates Parts

COMPONENTS AND FUNCTIONS

PARTS DESCRIPTION

NOTICE

Overfill provision can be provided as per client request.

Inner Tank — A primary storage tank having all fuel transfer accessories and externally encased within an outer bund tank.

Outer Tank — Outer bund is designed to contain 110% of the inner tank volume it surrounds. Wraps the main inner tank unit and has the interstitial space between inner and outer tanks. Therefore any potential leak that may occur will be captured in this sealed space, preventing release to the environment.

Top Lid — The top plate used to cover the inner tank.

Fuel Fill — Fuel fill inlet is used to fill the inner fuel tank in a secure way, without sparks or spillages. Automatic or manual nozzles can be used for filling.

Fuel Suction — Tank access point for removal of fuel from the inner tank to either a transfer pump for manual dispensing or feed to a genset or other engine-driven unit.

Fuel Return — Return inlet for the excess fuel withdrawn from the tank.

Normal Vent — Relieves vacuum and pressure of fuel as it expands and contracts.

Emergency Vent — Emergency vents are installed on above-ground storage tanks as a code requirement. Emergency vents provide high-capacity pressure relief if the tank is exposed to fire.

Dipstick — Indicates the level of fuel contained in the tank to measure or evaluate the remaining *quality* of the fuel in the tank.

Fuel Level Gauge — Indicates the level of fuel contained in the tank to measure or evaluate the remaining *quantity* of fuel in the tank.

Dispensing Pump — Sends the fuel from the inner tank through the pump suction port to a dispensing hose and nozzle with automatic shutoff.

FILLING GUIDELINES

This tank is designed for the storage of diesel fuel, petrol, kerosene, oils, water and certain biofuels.

- Ensure tank is on level ground before filling.
- Fill only with trigger nozzle.
- **DO NOT** smoke when refueling; keep sparks, flame, and hot material away from the tank.
- **DO NOT** overfill, 95% capacity is the maximum fill limit.
- Replace filler cap and store all hoses and nozzles inside the cabinet.
- Check bund area and empty regularly, refer to maintenance schedule for full maintenance procedures.
- Follow the regulations for transport of all dangerous goods.
- Thread type BSP except for tanks built for US/Canada NPT.

MAINTENANCE

Table 4. Inspection/Maintenance	Daily	Monthly	Every 2½ Years	Every 5 Years
Check the general condition of the ACP and all warning signage.	X			
Check all pipe work and connections for security and leakage.	X			
Inspect the bund area for collected fuel.	X			
Clean and lubricate the access hatch hinges and gas struts as necessary.		X		
Inspect condition of the ground that the ACP is placed upon paying attention to possible ground subsidence.		X		
Perform visual inspection of all markings and IBC labels.			X	
Inspect and service lids, gaskets, gauges and plugs.			X	
Check for cracks, warping, corrosion, dents, or other damage which may make the ACP unsafe for transport.			X	
Perform leakproof air pressure test at 0.2 bar (2.9 psi) with all seams, fittings and joints coated with leak detection fluid. Must maintain pressure and show no signs of leakage for 10 minutes.			X	
Ensure the ACP has not been modified and is still to the original design type.			X	
At least every five years, and no later than five years after manufacture, each metal ACP is to be internally inspected and thickness tested: • They are tested or inspected internally for minimum wall thickness. • This internal inspection will require removing hatches or lids, which makes it the ideal time to clean the tank.				X
Replace or repair any missing or difficult-to-read markings.				X
Ensure all internal baffles are secure (if fitted).				X

INNER TANK REMOVAL AND CLEANING

Inner Tank Removal

Before carrying out this procedure, make sure that you have the correct tools for the task, a set of four M12 lifting eyes and a set of lifting chains.

NOTICE

When the lift is performed, the tank must remain level.

NOTICE

It is recommended to remove any pipework or pump systems that may get in the way when raising or replacing the tank within the bund.

1. Using a pump, fully drain the tank, ensuring that the fuel being removed is transferred into a suitable container.
2. Fit the four M12 lifting eyes to the four captive sockets on the top of the tank.
3. Once the tank is completely emptied, mark each corner bracket and each side tank clasp so that they can be replaced in exactly the same position.
4. Loosen and remove the four (or eight depending upon which model you have) M12 corner bracket retaining bolts (Figure 6). Make sure you have a firm hold of the bracket as you remove the last bolt to prevent it from dropping to the ground.



Figure 6. Corner Bracket Retaining Bolts

5. Repeat step 4 with the remaining three corner brackets and place the brackets and bolts in a safe place.
6. Remove all bolts securing the top panel to the outer tank (Figure 7).

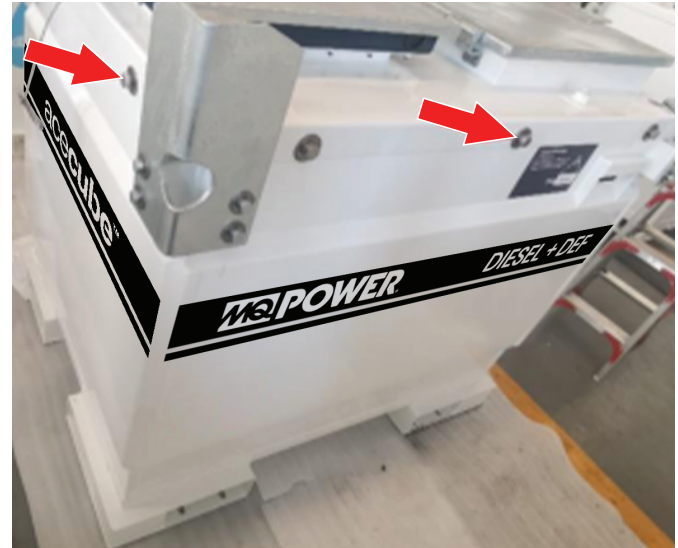


Figure 7. Top Panel Bolts

7. Attach suitable chain sling to the four lifting eyes, adjusting as necessary to keep the tank level.

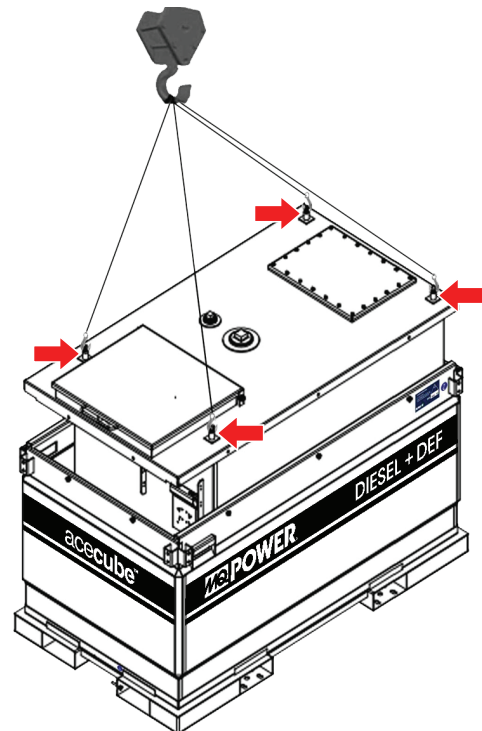


Figure 8. Lifting Eyes

8. Lower the tank onto suitable supports, such as timber, to protect the base from damage.

WARNING

Only remove inner tank when the tank is empty.

Inner Tank Cleaning

1. Remove lid from the inner tank.
2. Empty fuel from inner tank into an approved receptacle.
3. Clean the inside of the outer tank (bund tank). Remove all debris and liquids.
4. Remove fittings/access plate from the inner tank.
5. Clean out any residue from inside the inner tank.
6. Pressure wash both inner and outer tanks, drain and dry.
7. If it is necessary to enter the tank, for maintenance or inspection, a safe working procedure should be approved and work carried out by a qualified engineer.
8. It is recommended that after the tank has been cleaned, a leak inspection is performed:
 - Replace pressure/vacuum relief valve with a plug.
 - Reassemble the tank and install a new gasket around the access cover.
 - Secure all bolts to ensure that there is no leakage.
 - Carry out a leak test.
 - Reinstall the pressure/vacuum relief valve after the leak test.
 - Keep all records for testing with the unit at all times.

INNER TANK PRESSURE TESTING

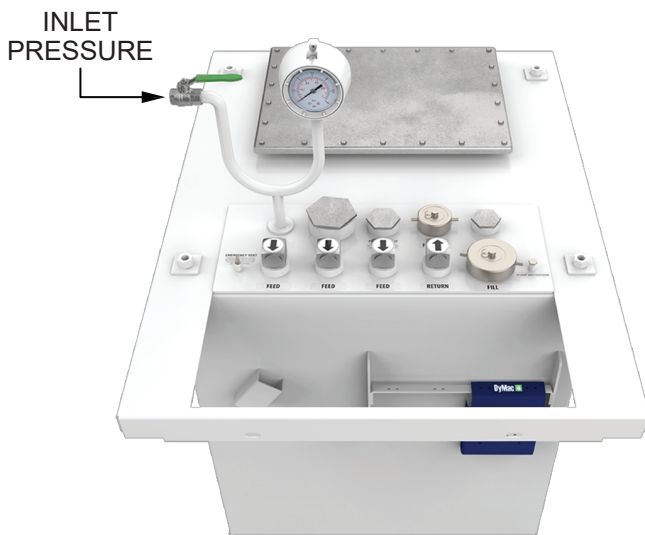


Figure 9. Inner Tank Pressure Testing

- The pressure test must only be performed under the supervision of a competent person.
- Barricade the area to restrict movement and display caution signs to alert people.
- Use calibrated pressure gauge during pressure testing.
- Pressure gauge should have lower limit and upper limit between 1.5 and 4 of the pressure test value.
- Gauges need to be placed at high points of the tank in a position where it is possible to purge air pockets while the tank is filling.
- It is important that the gauge needs to be connected directly to the tank without any valves.
- Apply internal air pressure not less than 3 psi (21 kPa) and not more than 5 psi (35 kPa) for ACP inner tank and 2 psi (13.8 kPa) to HDPE tank.
- Hold for 10 minutes. Observe the gauge for any pressure drop. Apply soapy water around the fitting assembly and all welding areas of the tank and check for leakages. Mark the locations of any leaks.
- Leakage locations must be repaired and retested.
- Capture video and photos of testing for record.
- Record the test date details on the **Statutory Inspection and Maintenance Record** log sheet (page 23).
- Clean the tank by applying hot air.
- Carefully lower the tank back into the bund, making sure you keep everything correctly aligned.
- Allow the lifting equipment to take the weight of the tank until each corner bracket and each side tank clasp has been replaced and secured with their respective bolts.
- All securing bolts should be fully tightened.
- Remove the M12 lifting eyes to safeguard anyone mistaking them for the main lifting points.
- Reinstall the pressure/vacuum relief valve after the leak test.
- Keep all records for testing with the unit at all times.

RECOMMENDED MATERIALS

To avoid contamination of DEF and to resist corrosion of the devices used (tanks, feed pipes, valves, fittings, gaskets, hoses, etc.), all materials in direct contact with DEF during handling, transportation, and storage, including sampling, shall be compatible with DEF.

All DEF tanks supplied by DyMac, together with all wetted components, are manufactured from DEF-resistant materials, compliant with ISO 22241.

It is the responsibility of the user of the tanks to ensure that the correct materials are used while using tanks for storage of DEF.

Examples of materials recommended for use with DEF as per ISO 22241-3 are found below in Table 5. Users can select materials for pumps, hoses and fittings based on Table 5.

Table 5. Recommended Materials	
Sr. No.	Material
1	Austenitic Cr-Ni, Cr-Ni-Mo, and Cr-Ni-Mo-Ti stainless steels
2	Titanium
3	Ni-Mo-Cr-W superalloys
4	Polyethylene (PE)
5	Polypropylene (PP)
6	Polyisobutylene (PIB)
7	Perfluoro alkoxy alkane (PFA)
8	Polyfluoroethylene (PFE)
9	Polyvinylidene fluoride (PVDF)
10	Polytetrafluoroethylene (PTFE)

SHELF LIFE

Throughout the entire distribution chain, DEF is expected to remain within the specifications given in ISO 22241-1 for at least the time periods specified in Table 6 as a function of the constant ambient temperature at which the DEF is stored.

Table 6. DEF Shelf Life	
Constant ambient storage temperature °F (°C)	Minimum shelf-life months
≤50 (≤10)	36
≤77 (≤25)	18
≤86 (≤30)	12
≤95 (≤35)	6
>95 (>35)	Significant loss of shelf life: check every batch before use

DEF HANDLING TIPS

Temperature

DEF starts to freeze at 12°F (−11°C) and can expand up to 7% when frozen. In cold weather, tanks that may freeze should be kept at less than full to allow for expansion. While freezing does not change DEF effectiveness, you should ideally store DEF between 15°F and 77°F (−9°C and 25°C). Also, urea will decompose if exposed to long periods of direct sunlight.

- If your DEF does freeze, **DO NOT** put additives in the tank. This will throw off the concentration of the fluid and can damage your SCR system. DEF tanks can be supplied with a heating element that can thaw the fluid. Otherwise, wait until thawed.

Storage and Dispensing

- On-spec DEF should be stored in dedicated tanks. Avoid switching DEF products in bulk tanks without a thorough cleaning and rinse with distilled or deionized water.
- Prevent dirt or debris contamination during transfer from a drum or bulk tank by using a closed-loop system designed specifically for DEF versus open systems. This can also help prevent crystallization due to exposure to air.
- Use dedicated equipment and containers when putting DEF into a tank. Avoid cross contamination from funnels, hoses, or other containers used for other fluids.
- Since DEF has corrosive properties, **DO NOT** use with brass or copper containers or hardware. Plastic or stainless steel are always best for handling DEF. Pump fittings, hoses and components containing zinc, chrome, brass, nickel, or aluminum can corrode and contaminate your DEF.
- Follow stringent housekeeping by cleaning any equipment used to dispense DEF with distilled or deionized water (not tap water) and followed by a DEF rinse.

SPILLAGE OF DEF

Although classified as non-hazardous, DEF liquid, when spilled, will form crystals and creep. If left unattended, this will create a slippery surface. All spillages of DEF liquid must be reported immediately.

- If DEF is leaked into the drainage system, flush liberally with plenty of water.
- Use a soft cloth and water to remove small DEF spillages on the dispenser/vehicle.

When DEF freezes (typically occurring at temperatures below 14°F/-10°C), the solution can turn into a solid mass, causing it to clog up.

Crystallization in DEF can happen for various reasons, but it's commonly due to either temperature changes or poor storage conditions.

MAINTENANCE OF DEF TANKS

In order for DEF to work correctly and not crystallize, you need to maintain its pump and hoses; this means cleaning these areas once the supply has been turned off. Proper emptying of the hose connection is the primary way to prevent any problems from occurring, including crystallization.

We suggest getting in the habit of cleaning the tanks and hose connection as often as needed. This will help you get the best use out of DEF product since there will be far less wastage.

Store DEF in a warm place. This is the best way to keep the solution efficacious and in optimum condition. However, where this isn't possible, you can wrap the tank in an insulating material which will help to retain heat.

It's important to remove DEF crystals regularly.

REMOVAL OF DEF CRYSTALS

DEF crystal buildup can occur over time and lead to significant damage if left unchecked. Keep your tank in top condition by following the steps below. Remember to perform this maintenance regularly.

- To start, you will need several materials, including gloves, safety glasses, DEF removal solution, a funnel, and a container.
- Make sure to wear gloves and safety glasses when working with DEF and DEF removal solution.
- Once you have gathered your materials, begin by locating the DEF system components, which include the DEF tank, pump, hoses, feed pipes and filter.
- The next step is to empty the DEF tank completely. Use the funnel and container to catch the fluid and make sure to dispose of the DEF properly, as it can be harmful to the environment.
- After that, use the DEF removal solution to flush the tank and tank components. You may need to use a spray bottle or pump to apply the solution to the tank and tank components.
- Once you have flushed the tank, refill the DEF tank with fresh DEF solution.
- Make sure to use the appropriate amount of fluid, as recommended by the manufacturer.

- It's also important to use a correct DEF removal solution, as using improper products may cause more harm than good.

HDPE TANK INSPECTION AND MAINTENANCE

HDPE tanks need to have routine and careful visual inspections. Inspecting the tank annually will help to ensure the safety of personnel and increase the life span of DEF tanks.

All DEF tank inspections must be performed against the approved drawings, specifications, and standards, and according to any applicable legislation.

1. Empty the storage tank. Wash the tank with approved DEF removal solution. Thoroughly clean the exterior and interior of the tank. A dirty tank cannot be properly inspected.
2. Visually examine the exterior and interior of the tank for signs of cracking, crazing, or brittle appearance.
3. Check the areas around fittings and where different portions of the tank converge into one another. Pay special attention to corners.
4. Inspect the interior of the storage tank. Use a bright light source to inspect the tank interior from the manway opening. An interior inspection is essential because stress cracks can often show up on the inside of a tank before appearing on the outside.
5. Perform a leak test as specified below to find any leaks around tank joints and surface.
 - Assemble fitting plates to tank and close all the ports by blind plugs.
 - Tighten all inlet/outlet ports to avoid leakages.
 - Ensure proper sealant or gaskets are placed wherever applicable.
 - Use properly sized bolts with spring washers or plain washers as per manufacturer drawing.
 - Tighten the bolts with a torque wrench.
 - After complete assembly, pressurize the tank to 2 psi using an air line connection.
 - Hold pressure in the tank for 15 minutes. If there is any pressure drop, apply soapy water around the fitting plate and all tank welding joints and check for leakages.
- If leakages are found, then retighten the bolts and check threading and repeat the test until there are zero leakages. If leakages are found in weld joint of tank surface, then spots need to be identified and repair needs to be done.
- Clean the tank by applying hot air or with clean rags after the test.
6. Check fittings, hoses, gaskets, and all connections for any signs of general corrosion or deterioration and leaks. Replace where necessary.
7. Check the vents and feed piping and make sure they are functioning properly.
8. Confirm that filling the tank from tanker trucks does not cause over-pressurization and does not end with a line purge that "balloons" the tank.
9. Ensure the bund area of the tank is in good condition.

HDPE TANK PRESSURE TESTING

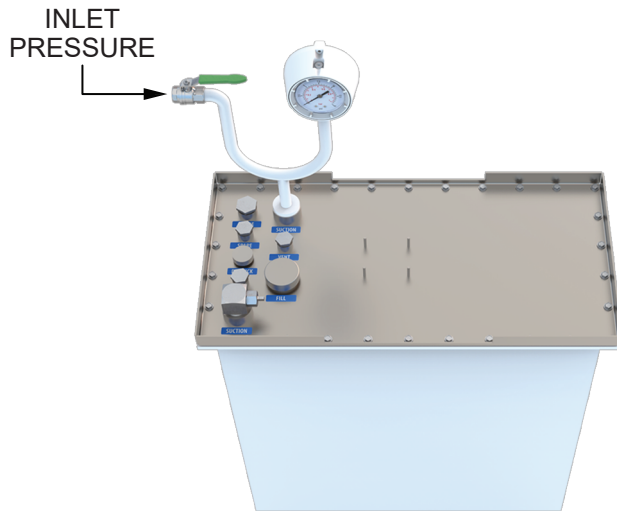


Figure 10. HDPE Tank Pressure Testing

- Carefully lower the tank back into the bund, making sure you keep everything correctly aligned.
 - Allow the lifting equipment to take the weight of the tank until each corner bracket and each side tank clasp has been replaced and secured with their respective bolts.
 - All securing bolts should be fully tightened.
-
- The hydrostatic test must only be performed under the supervision of a competent person.
 - Barricade the area to restrict movement and display caution signs to alert people.
 - Use calibrated pressure gauge during pressure testing.
 - Pressure gauge should have lower limit and upper limit between 1.5 and 4 of the pressure test value.
 - Gauges need to be placed at high points of the tank in a position where it is possible to purge air pockets while the tank is filling.
 - It is important that the gauge needs to be connected directly to the tank without any valves.
 - Apply internal air pressure of 2 psi (13.8 kPa).
 - Hold for 10 minutes. Observe the gauge for any pressure drop. Apply soapy water around the fitting assembly and all welding areas of the tank and check for leakages. Mark the locations of any leaks.
 - Leakage locations must be repaired and retested.
 - Capture video and photos of testing for record.
 - Record the test date details on the **Statutory Inspection and Maintenance Record** log sheet (page 23).
 - Clean the tank by applying hot air.

STATUTORY INSPECTION AND MAINTENANCE RECORD

It is a legal requirement that the user of the ACP-DF tank ensures that periodic inspections are carried out at the statutory intervals of 2½ and 5 years by an approved authority. The Periodic Inspection Report will then be issued and the plate duly stamped.

Record details of your unit below:

OWNER DETAILS		MODEL NO.	
		DYMAC SERIAL NO.	
		DATE OF MANUFACTURE	
		OWNERS REF	
DATE OF NEXT INSPECTION	DATE CARRIED OUT	INSPECTION BODY	LOCATION OF INSPECTOR / TEST

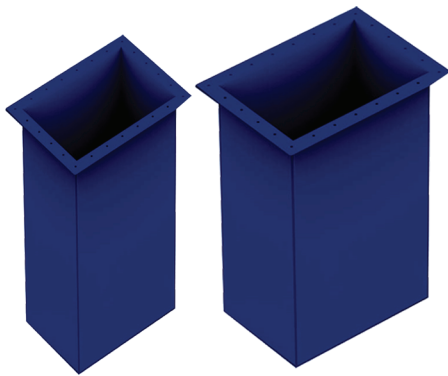
It is a legal requirement that the owner of the ACP-DF carries out regular inspections and ensures that a record of each inspection is kept. Where fault is found, the unit must be removed from service until the fault is rectified and the unit is retested successfully.

ACECUBE PROFESSIONAL DUAL-FLUID TANK CONVERSION KIT



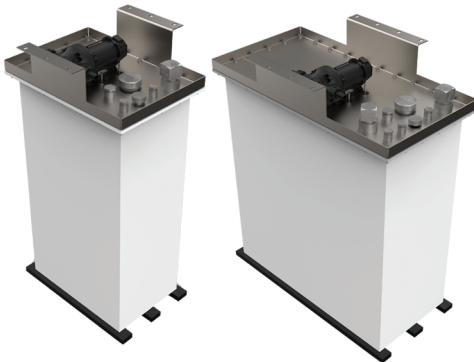
AceCube Professional Dual Fluid Tank

The tank is a 110% bunded fuel IBC Bulk Containment tank. It is a UN31AY, UL 142, ULCS601 certified tank product and adheres to ADR regulations.



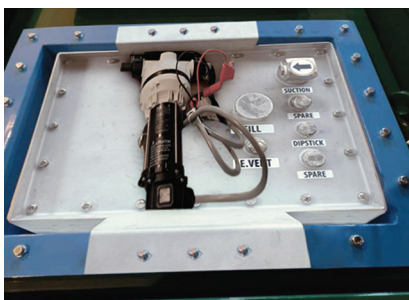
232L/61G and 437L/115G Carbon Steel Sump Tank

Manufactured with 4 mm S235 steel and powder coat painted the sump tank comes with a steel flanged rim and is secured to the inner tank with 14 × M14 nuts and bolts.



120L/32G and 250L/66G DEF HDPE Plastic Poly Insert Tank

Tank is lowered into the (CA-ST-140L) carbon steel sump tank. Comes complete with 1/4" vent, 3/4" return, 3/4" suction. 2" fill cap, mounting position for 12V pump, 1/2 level gauge.



12V DEF Dispensing Pump with Delivery Nozzle and Hose

DECLARATION OF CONFORMITY

We declare that the products listed are named as follows:

- **AceCube Professional Dual Fluid**

Comply in whole or in part with the following standards:

- CAN/CGSB-43.146-2016-IBC type UN 31A/Y (ACP-DF-180/32G to ACP-DF-679/66G)
- UL 142 & ULC S-601 (ACP-DF-180/32G to ACP-DF-679/66G)
- Adhering to ADR regulations (ACP-DF-180/32G to ACP-DF-679/66G)
- TSSA ON Canada (Optional).
- PPG26.
- PPG2 Oil Prevention Regulations 2001 (England & Wales).
- EC Directive 2007/46/EC as amended.

Product Description: Bulk Fuel Storage Tank Design

Issue Date : 05/09/2024

Checked Date : 06/09/2024

Approved Date: 10/09/2024

Director, Signed



Quality Manager, Signed



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OPERATION MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

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This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

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