

# Customer:

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**Date:**

**otation Reference Number:**

**duction Reference Number: 30762**

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## GENERAL

**Type: "GULLYWHALE" MVC PUSHER PLATE**

**Purpose:** This vehicle is a highly developed multi role unit. The design incorporates Gully Emptying operation including clearance and cleansing of Gully connections. The larger flow high pressure water jetting pump performance enables the unit to also be used for clearing blockages and desilting work in sewer systems up to 18"/450mm in diameter. Additionally the unit may be used for the emptying and cleaning of domestic septic tanks and cesspools.

**Contents:** The tank is constructed to hold clean water for cleaning & Jetting purposes in the front compartment. The rear compartment is to be used for the dirty contents of gullys, sewers or cesspools. For the purposes of design the specific gravity of these contents is assumed to be 1.0 (same as water) It should be remembered if loads with higher specific gravities are carried then there is a risk of overloading the vehicle.

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## TANK

**Nominal Capacity:** 8185 litres total capacity

**Fall over length:** Parallel to chassis

**Mountings:** Flexible mounting at front, tipping hinge at rear, including full length subframe. In accordance with chassis manufacturers recommendations.

**Discharge** Single internally-mounted hydraulic ram connected to full diameter pusher plate with cleaning position, controls on nearside, including 18" manhole in clean compartment (no access - workshop access only)

**Height indicator:** Visual warning in cab to alert driver if overhead equipment or tipping body not stowed correctly. To comply with regulations Construction & Use 1986 Amendment SI 1997 No 530

**Front End:** Torispherical dish and flanged head with dimensions in accordance with BS.5500

**Rear End:** Fully opening door formed from torispherical dish and flanged head with dimensions in accordance with BS.5500 retained by hydraulic clamps. Clamp design to prevent incorrect operation.

: Door opening using hydraulic rams with control located at nearside workstation to ensure operator is in safe location during use.

**Vents:** Tank-top Whale patented Pressure Relief Valve, vent piped to ground complete with remote cable-pull to enable testing from ground level therefore no access is provided to the PRV.

: In-line Whale PRV, PTFE components locked, sealed & set - vent piped to ground

**Gauges:** Combined vacuum pressure gauges calibrated in working pressure and vacuum mounted on gully arm in a position clearly visible to the operator and in the rear control arm.

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## VALVES

**Combined Inlet/Outlet valve:** 4" lever operated Saunders ball valve mounted as low as possible in the rear door.

**Valve connection:** 4" URT with blank cap

**Draw Off valve:** 4" valve mounted on nearside forward of pusher plate to allow draw off of excess liquids from the load

**Draw off connection:** 4" URT with blank cap. Facing down to allow drainage to gully.

**Division:** One. Compartment ratio: 4000 litres for clean water and 4185 litres for the dirty contents.

**Contents Indicator:** Acrylic sight tube (2") in each compartment. Dirty Compartment - to show top 1/3 of compartment with cleaning access. Clean Compartment - full length in water compartment with no access.

**Interconnection:** Kerbside operated 2" ball valve linking clean and dirty compartments at mid tank height to enable partial filling of rear compartment.

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## PAINTING

**Tank Internal Finish:** Self-Colour

**Tank External Finish:** Shotblast, primed & finish

**Chassis Finish:** Black

**Cab Finish:** Finish painted

**Signwriting:** Signwriting extra at cost

**Wheel finish:** Factory Finish

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## GULLY ARM

- Gully arm type:** 5" full bore with radiused elbows, 300 degree rotation to enable work to be carried out at each side and the rear of the vehicle and counterbalanced with pneumatic lift assistance. Sludge breaker fitted to bottom of downpipe to assist with breaking hard deposits in gully traps.
- Parking:** Permanent on nearside of vehicle with main and secondary latches, temporary on offside of vehicle for use only during transit between gulleys.
- Valve:** Full bore valve at the base of the boom pneumatically controlled from nearside work station.
- Resealing:** 50mm diameter resealing valves on each side at the front of the tank to provide clean water for resealing of gully traps. Resealing may also be accomplished using dirty water blow back down the gully pipe

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## CLEAN WATER SYSTEM

- Water Intake:** Approved no back syphon hydrant filler in accordance with Water Research Council standards. 2.1/2" quick release coupling on 5 metres of layflat hose stored in basket at front of tank.
- Jetting pump:** ORCA 125 high pressure water pump producing water flows of up to 125 litres per minute at a maximum pressure of 125 bar.
- Drive:** Gearbox mounted power take off pneumatically controlled. Drive shaft with fully enclosing propshaft guards. Engagement of the power take off includes automatic engine speed setting. Automatic power take off disengagement linked to handbrake to prevent gearbox damage by driving the vehicle with the power take off engaged.
- Control location:** In rear control panel and at workstation
- Main hose reel:** Self aligning hydraulically operated reel mounted on reverse dish rear door and with 100m x 3/4" 19mm Trelleborg sewer jetting hose
- Secondary Hose reel:** Manual rewind reel on nearside complete with 30m x 1/2" / 13mm diam high pressure hose.
- Equipment:** Handlance with 'deadman' trigger complete with fan and needle nozzles.
- : Pipe vice at rear
  - : Supplied with face guard for use when jetting
- Nozzles:** Cleaning and blockage clearance nozzles supplied for main hose reel and secondary hose reel for domestic and smaller diameter drains
- Pump Protection:** Automatic audible low water warning and Auto-Dump circuit

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## VACUUM SYSTEM

- Exhauster:** Mistral 400 series rotary vane exhauster/compressor. Free air output: 400 cubic metres per hour. Pipe work linking tank and pump 63mm internal diameter.
- Drive:** Gearbox mounted power take off of 'hot shift' type pneumatically controlled. Drive shaft (1310 series) with fully enclosing propshaft guards. Engagement of the power take off includes automatic engine speed setting.

Automatic power take off disengagement linked to handbrake to prevent gearbox damage by driving the vehicle with the power take off engaged.

**Control location:** In rear control panel, Gully arm and at nearside workstation

**Pipework System:** Primary cut out within tank barrel fitted with HDPE ball float. Secondary overspill canister of 60 litres capacity with additional cut out. Fitted with a manual 40mm drain valve.

**Pump Protection:** Grit strainer with cleanable gauze element fitted to the suction side of the pump. A check valve is fitted to the pump to prevent the pump rotating in reverse in the event of power take off disengagement with vacuum or pressure in the tank.

: The system is fitted with an oil separator to recover excess lubricating oil.

**Vacuum Pressure Control:** A reverse flow valve is fitted in the pipework system so that the pump may be used to evacuate or pressurise the tank. This valve is pneumatically controlled from a switch on the gully downpipe enabling dirty water blowback. A control is also located in the rear control panel for pressure discharge

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## STORAGE

**Hose storage:** Hose box on offside 3.2 metres long with lockable lid. EXTRA DEEP

**Hose quantity:** 3 off 3 metre lengths 4" diameter plastic hose fitted with male/female URT couplings

**Other storage:** Stick box on nearside for storage of debris. Stick box tips with tank discharging contents at tip site. Separate tool rack on nearside runs under stick box and continues forward to enable storage of tools.

: Storage for hydrant standpipe and key.

: Standpipe including double check valve and key supplied

: Storage for road signs as required by code of practice chapter 8

: Cone spike suitable for the storage of up to 6 off 400mm road cones

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## SAFETY/LEGAL REQUIREMENTS

**Emergency Stop:** Emergency engine stop on rear control panel

**Mudguards:** 2mm steel mudwings with reflective safety mudflaps

**Regulations:** Motor vehicle Construction and Use regulations as amended at time of manufacture. The tank is subject to the requirements of Statutory Instrument 2169 of 1996.

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**Insurance:**

**Quality Assurance:**

**Testing:** Each tank is hydraulically tested to 1.5 bar (1.5 times operating pressure) and to full vacuum. On completion of test the pressure relief valves are set to the operating pressure of 1 bar. The tank is certified to be suitable for operation at maximum vacuum. The complete vehicle is subject to full functional testing verifying that all features operate correctly. The tank is also certified as being leak free.

**Commissioning:**

**Weight ticket:**

**Labels:**

**Handwash:** Teal stainless steel electric handwash unit provided on nearside of vehicle to comply with the requirements of Health and Safety legislation

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## LIGHTING

- : Light bar mounted to cab roof
- : Amber flashing beacon mounted to rear offside of tank with control switch in cab
- : Worklight mounted on top of Gully Arm to provide illumination of gully emptying operation and additional worklight at rear for jetting operation
- : End outline marker lights, side marker lights and reflectors to comply with the motor vehicles lighting regulations.
- : Traffic directing arrow to rear 750 mm diameter with brackets to enable use to left or right.

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## OPTIONS

**SAFETY:** Chassis mounted air operated grid lifter to be mounted at nearside workstation.

**STORAGE:** Additional locker suitable for the storage of wet weather clothing or tools

## SPECIAL OPTIONS

**STORAGE:** Locker on offside behind cab, 1100mm high x 600mm wide x 300mm deep. Fitted with Mikuni heater unit for drying wet gear, with hanging hooks.

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## CHASSIS CHOICE

**Chassis:** Left hand drive/Right hand drive Volvo FLE18 4000mm wheelbase. Fitted with T700A gearbox with 2 PTO apertures. Engine all speed governor BFJ-P1 Short Rear Springs, CLC-PK Bodybuilders Plugs & BBOX-R Battery box on RHS of chassis.

**Overall Height:** 3.65 metres

**Overall Width:** 2.5 metres

**Overall Length:**

**Unladen Weight:**

**Vehicle Exhaust:** Overhead discharge using EminoX Stainless Steel system fitted by  
CHASSIS DEALER.

**Accessories:** First aid box in cab  
: Fire extinguisher in cab

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