

SPECIFICATION RT57-03-03-07

6,000 LITER VACUUM SEWERAGE TANKER BODY

An approximately 6,000-liter Vacuum Sewerage elliptic tanker body of robust construction, fitted with a PTO driven hydrostatic system, complying to the following is required:

TANK

For construction purposes the tank shell should be constructed of not less than 4.5mm thick 3CR12 steel with reinforcing ribs and must withstand maximum working vacuum and mass of the liquid conveyed.

1. DIMENSIONS:

Tenderers must offer the best body length to suit their chassis without chassis alterations, taking correct mass distribution, appearance and additional equipment at the rear into account.

Supply actual dimensions of body (LxWxH) _____mm x _____mm x _____mm

Particulars of offer: _____

2. ENDS:

Tank shell must have dished ends, constructed of 3CR12 and not less than 6mm thick.

Particulars of offer: _____

3. BAFFLES:

The baffles shall not restrict the free flow of sludge and settle able solids which normally collect at the bottom of the tank.

Longitudinal:

One longitudinal vertical baffle running the full length of tank shall be fitted.

Edges shall be stiffened by being flanged or by means of extra stiffening members.

Transverse:

Three or more evenly spaced transverse, vertical baffles shall be fitted.

Edges shall be stiffened by being flanged or by means of extra stiffening members.

Openings must be available in order for inspection to be carried out inside the tank.

NB. No bolt-on baffles will be accepted.

Particulars of offer: _____

4. MANHOLE:

Two manholes, complete with watertight cover and capable of sealing off full working vacuum, shall be provided on top of tank, positioned between the internal baffles.

Size of manhole, minimum of 500mm, shall allow for internal inspection of the tank.

Mechanism used to hold cover down shall preferably be an adjustable over-centre cam / spring action type fitting. Manhole must be easily accessible.

Particulars of offer: _____

5. OUTLETS AND INLETS:

The tank must be drained through a 150mm drain valve fitted to the bottom of the tank.

For the inlet, an 100mm pipe with a butterfly valve must be fitted at the bottom rear end of the tank.

A drain outlet must be fitted at the bottom of the tank for the draining and/or cleaning of the tank.

Particulars of offer: _____

6. MOUNTING OF TANK:

Tank shall be mounted with a 75mm decline towards the rear end of the truck.
Mountings shall be used to prevent the transfer of stresses from chassis to the tank shell.
Tank mountings shall be suitable and allow for the removing and / or remounting of the tank.
Tank to be positively located at front and rear to prevent tank from moving in relation to chassis.
Method of location shall however still allow the tank to be flexibly mounted on chassis.
Details of mountings (must be supplied).

Particulars of offer: _____

7. TREATMENT OF TANK SURFACES:

All inside and outside surfaces of tank and baffles shall be thoroughly cleaned.
The interior of the tank including the baffles shall be treated with one coat of SIGMA 720 2pack or equal.
Fixtures welded to tank shall be seal welded all round to obviate any crevices.
Tank and accessories shall be free from:

- welding slag and cavities in weld
- burrs caused by screwing, tapping, punching, drilling and machining

Particulars of offer: _____

8. PLATFORM:

A working platform of chequer plate/mesh grid at the rear approximately 1,000mm long x 2,000mm wide complete with a **bolt-on** tubular handrail 900mm high fitted at the back and off-side of the platform is required.
A non-slip access step is to be fitted on the kerb side.
Robust access ladders shall be securely fixed to the tank for easy access to the manholes.
Full length trays (side platforms) with fasteners, shall be fitted along both sides of the tank for the storing of hoses.

Particulars of offer: _____

9. LEVEL INDICATOR:

A fluid level indicator which must indicate in 2,000 liter markers shall be fitted.

Particulars of offer: _____

10. MUDGUARDS:

Sturdy, firmly braced steel mudguards, full size, must be fitted over the rear wheels with mud flaps behind the wheels.

Particulars of offer: _____

11. FINISH:

All metal shall be thoroughly cleaned and primed and painted with two coats of prime and good quality automotive enamel to match the departments colour spec.
The underside of the tank, side platform etc. shall be treated with ant-corrosive material.

Particulars of offer: _____

12. PARTICULARS OF OFFER:

A detailed sketch or full drawing of the body offered, showing all leading dimensions, must be submitted with tender.

Particulars of offer: _____

13. SUB-FRAME:

The sub-frame cross bearers must be fabricated of not less than 100mm x 50mm rolled steel channels, at 300mm centres. The longitudinal runners must be not less than 152mm x 76mm rolled steel channels.

Particulars of offer: _____

PUMP & PLUMBING

All pipes and equipment must not protrude on the side of vehicle.

The plumbing shall allow for easy removal of valves and components for servicing or replacement.

Allowance must be made for the mass of the pumping equipment in the vehicle mass distribution calculations.

1. VACUUM EXHAUSTER

A hydraulically (hydrostatic) driven vacuum exhauster delivering at least 35 litres per second, Broom B35 or similar, must be mounted on platform behind the tank.

The vacuum exhauster shall be mounted in such a position as to be easily accessible both for operation and maintenance.

1.1 The vacuum exhauster must be connected to a hydraulic pump and must be driven off the gearbox power take-off of the truck and be pneumatically controlled from inside the cab.

1.2 A large red warning light must be fitted to the dash panel, in clear view of the driver, to indicate engagement of the power take-off.

Particulars of offer: _____

2. Piping

A 100 mm inlet pipe with a quick-acting valve and male Perrot type coupling shall be fitted at the bottom rear end of the tank.

2.1 Filling the tank

An external port must have a Perrot type coupling facing towards the left-hand side of the truck, to connect the 100mm anti-static vacuum hoses.

2.2. Pipes

Three 3,0m lengths of 100mm anti-static vacuum hose, complete with male and female "perrot" coupling for a total flexible hose of 9,0m must be supplied.

2.3 The plumbing must allow for easy removal of valves and components for servicing or replacement.

2.4 Clear instructions for the operation of the system, by means of colour coding the different valves, be displayed in a convenient position near the pump.

Particulars of offer: _____

3. VALVES

A conveniently located valve of adequate size shall be fitted to act as an air release, to permit air to enter the tank when emptying.

A snifter valve shall be fitted at a convenient position on top of the tank.

A vacuum control valve is also to be supplied and fitted.

A solids-liquid trap (automatic interceptor) shall be provided in the suction pipe of the exhauster to ensure that solids cannot enter and damage the exhauster pump should tank be overfilled.

The solids-liquid trap shall be provided with a drain cock.

The exhauster suction pipe shall be provided with a non-return valve between the solid / liquid trap and the exhauster.

The pipework from the solids / liquid trap to the exhauster shall also be fitted with an inlet strainer and an unloader ball valve

Particulars of offer: _____

4. VACUUM GAUGE

The tank shall be fitted with a conveniently located 100 mm vacuum gauge.

Particulars of offer: _____

5. DRAWINGS AND DETAIL

Dimensioned drawings as well as full technical details of the sprayers and system must be submitted with the tender.