

SPECIFICATIONS OF TRAILER MOUNTED SUCTION UNIT
SLURPIT® – 3000 Lts.

GENERAL:

The Vehicle Mounted Suction Unit shall be robust in construction and shall be used to create a vacuum for syphoning out mud and slurry, grit and other material from sanitary, storm and sewerage systems. The unit shall be capable of syphoning out material from a depth of 6 mtr. The unit shall be such that 1 driver assisted by two helpers shall be adequate for all operations of the unit. The unit shall consist of:

- a) Prime Mover – 10 HP Diesel Engine.
- b) Sludge Tank.
- c) Vacuum Pump.
- d) Suction Hose.
- e) Piping.
- f) Control Panel.
- g) Accessories.
- h) Trailer Chassis.
- i) Min. 35/45 HP Tractor with PTO (To be supplied by Client).

a) PRIME MOVER:-

The vacuum pump shall be driven by an auxillary diesel engine of 10 HP capacity.

b) SLUDGE TANK:-

The tank shall be cylindrical in shape and shall be fabricated from mild steel sheets as per IS:2062 and shall be electrically welded with vaulted bottom and suitable reinforcement to prevent from collapse and elongation in vacuum and pressure conditions.

Vacuum and pressure limitation valves shall be suitable provided the system to take care of the excessive vacuum and pressure developed by the system.

The effective volume of the tank shall not be less than 3 cubic meters for sludge Tank shall be fabricated out of mild steel sheets, which in no case shall be less than 5 mm thick.

The tank shall be provided with emptying rear cover at the rear, which shall be opened and closed on hinges, manually. The locking of the rear cover shall be effected by robust hand wheels. The rear cover shall be free from any mounting except,

Suction cum Drain off valve Ø 3" for suction discharge of all the sucked material into the tank. This shall be located at the bottom of the door.



A suitable full-length acrylic sight glass integrated with the tank (not a separate tube) shall be provided to observe the sewage level in the sludge section of the tank. The tank shall be tested for leakage at a pressure of 1 bar.

The tank shall be mounted on auxiliary frame and on two bearings at the rear and a solid seat at the front.

The tank shall be provided with suitable abrasive resistant, tamper-proof, anti-corrosive treatment internally, which shall be suitable for normal sewage.

c) VACUUM PUMP:-

A rotary positive displacement type air cooled vacuum pump (Battioni, Italy or reputed imported equivalent make) having displacement capacity of minimum 2750 lpm at about 1400-1500 r.p.m. and capable of producing 630 mm of Hg. Vacuum and 1.5 bar discharge pressure shall be provided. Basically, the vacuum pump shall be designed to create vacuum, as well as work as air compressor for blow back during discharge. The vacuum pump shall be capable to produce 91% vacuum in the tank.

A hand operated manifold Valve for switching from suction to pressure shall be provided at the discharge of the vacuum pump and the valve shall be suitably located for ease of operation. Corrosion resistant ball float valve shall be provided to prevent over-sucking. A safety pot with lateral cleaning flap and outlet valve with additional suction filter shall be provided.

The Vacuum Pump shall be equipped with overpressure relief valve for protection, cooling and life extension of vacuum pump.

d) SUCTION HOSE:-

1 No. of non-collapsible, flexible suction hoses of 75 mm internal dia and 10 mts in length shall be provided with the unit. Quick-fix "Muller" design coupling (male-female) shall be provide for these hoses.

e) PIPING:-

All piping subjected to high pressure shall be fabricated from extra strong pipes and all fittings shall be forged steel. All pipings shall be laid out such that they can drain by gravity or through suitable plugged openings to drain water, when purged with air.

f) CONTROL PANEL:-

A control panel shall be provided and located conveniently. All gauges, switches, levers, etc. necessary for the operation of the unit shall be grouped in this control panel so that the operator can have complete control of the operation, from one location.

g) ACCESSORIES:-

The following accessories shall be supplied alongwith each unit.

- (i) Mud flaps - 2 nos.
- (ii) Mud guard – 2 Nos.



h) TRAILOR CHASSIS:-

The single axle trailer chassis shall be provided into which equipment shall be mounted. To ensure road stability the trailer shall have a wide wheel base and low center of gravity.

The chassis shall be fabricated by welding M.S. channels. The tow bar shall be provided to the trailer. The chassis will be mounted on 2 nos. of 9.00 x 20 tyres with heavy duty rims.

A trolley stand made of MSA 40 x 6 at the front shall be provided for parking the trolley.

All the weight of the unit shall be equally distributed on the chassis to ensure free movement.

PAINTING:-

The entire unit shall be painted with two coats of superior quality anti-corrosive primer with two coats of approved quality paint. The bidder shall get the paints and shades approved from the Engineer.

TESTING AND INSPECTION:-

- (i) Tests on equipment at manufacturer's premises as required will be carried out in accordance with the Conditions of Contract. All inspection, examination and testing shall be carried out in presence of the Engineer's representative in accordance with the specification.
- (ii) If the Engineer's Representative witnesses a test he shall be given a copy of the test results and certificates, upon request.

