



Ministry of Housing and Urban Affairs
Government of India



SEWER, FAECAL SEPTAGE & DRAIN CLEANING EQUIPMENT MANUFACTURED IN INDIA

Ministry of Housing and Urban Affairs
Nirman Bhavan, New Delhi



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Introduction

From the perspective of human development, it will be correct to state that improved sanitation is one of the principal indicators of civilization and urbanization. Planned management of human excreta has been a hallmark of all great urban societies from as early as the Indus Valley towns and the Roman cities. History is replete with accounts of epidemics and heavy human losses caused by outbreak of Cholera and other water borne diseases directly resulting from poor sanitation where discharged sewage, was somehow allowed to mix with supply of drinking water.

Most Indian towns and cities have developed organically around places of commercial or religious interest. There have been very few 'planned' developments. Household sanitation in these towns have thus ranged from a mixture of open defecation, rudimentary insanitary toilets and right upto the most modern water borne sewerage and treatment.

Swachh Bharat Mission launched in 2014, together with other central and state government schemes, has ensured that excreta being discharged from each urban households now flows into a designated sanitary outlet, viz., into sewers or septic tank systems thereby eliminating the possibility of sewage mixing up with drinking water.

The septic tanks and sewers are engineered conduits designed to make excreta flow. However, sewers are occasionally blocked due to growth of roots in conducive moist environment, dumping of garbage, brickbats and other unwanted material into sewer manholes and also due to design faults in sewers which promotes accumulation of silt at some spots. Septic tanks may be blocked when sludge accumulation exceeds the design capacity or due to any of the above reasons . When this happens, sewers and septic tanks overflow and spill their contents on public spaces. This situation may result in pollution of water supply pipelines and open wells and thus needs to be rectified on priority.

As with any other system, regular and timely preventive maintenance is the most appropriate mechanism to keep the structures functioning and minimize the need for any human entry into sewers or septic tanks which is potentially dangerous, only if undertaken without proper personal protective equipment (PPE) and procedures in place, being a confined space with likely presence of hazardous gases .

While initially, it was common, the world over, to engage manual sanitation workers to rectify the fault, but evolution of mechanical devices has generally kept pace and now equipment of various sizes, capabilities and cost is readily available to prevent any need for human entry except in extreme emergencies. A market scan shows that all

internationally avused equipment, gear and devices for eliminating the need for human entry into sewers and septic tanks are also readily available in India.

The Government e- Marketplace (GeM), a venture of Ministry of Commerce and Industry, has enlisted a large number of such products. In addition, this Ministry had organized a global technology challenge in later half of 2018, which brought to notice certain interesting equipment which are in various stages of development. Further to this, a number of different products are available and variety of manufacturers are selling their products in open market in India. MoHUA has published this consolidated directory to help municipal procurers make an informed decision

It will be endeavored to update this directory on regular basis with more categories and manufacturers to provide more options to the buyers. The directory will will be maintained online on the website of Swachh Bharat Mission

Disclaimer- The directory, though supported by the Ministry for production and dissimulation as an information tool, is not to be understood as specific endorsement of vendors/ manufacturers whose products are showcased in the following pages.

Layout of Vendor Directory

This vendor directory has been subdivided into three broad categories as under-

- a) Septic Tank Cleaning Equipment
- b) Sewer Cleaning Equipment
- c) Special Innovations

Each of the categories has been further split into sub-categories to describe a range of products of different capacities which are suitable for narrow lanes to those for wider, easily accessible spaces. Here, manufacturers names and capabilities of the machine shown has been given.

This is followed by a list of contact details of the manufacturers for convenience of the buyers and a tabulation of relevant equipment which is presently available on the Government e-Marketplace.

A separate section on safety devices and personal protective equipment has been provided towards the end. These are common use equipment used by various government agencies such as for mining, chemicals, oil, defence etc. These too are available on GeM portal under their particular category head.

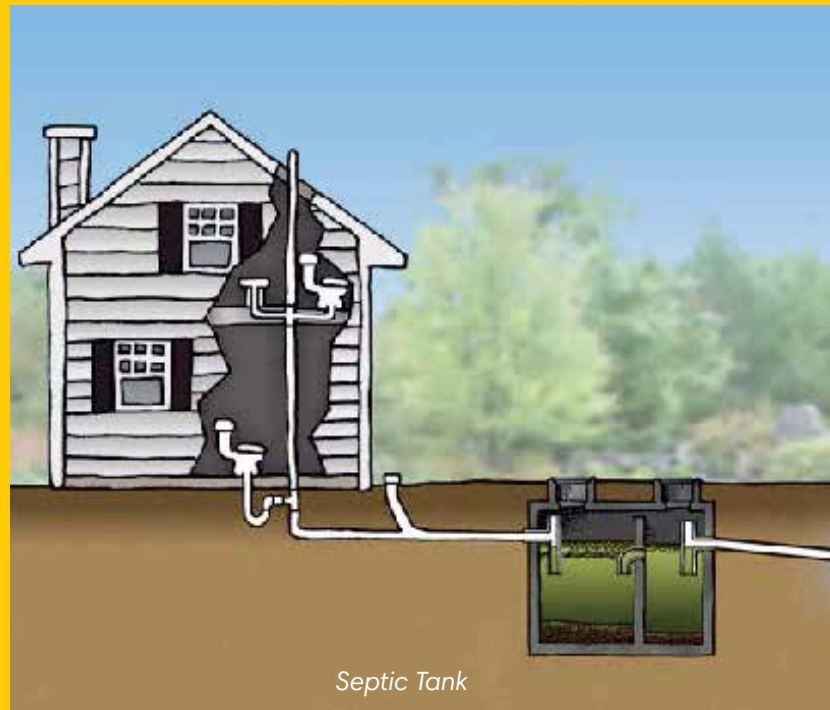
It is expected that the municipal authorities and other stakeholders will find this directory useful to ensure that no sanitation worker is made to undertake any unnecessary entry into a hazardous confined space of sewers or septic tanks and any unessential risk to human life is avoided, where a suitable mechanical alternative is available.



I. Septic Tank Cleaning Equipment

In Septic Tank system, the wastewater generated from residential and commercial establishments is collected in the septic tank from the household or establishment through underground piping.

Based on the above methods of collection and transportation of wastewater or sullage, below are the some of the methods of cleaning which is required for ensuring maintenance of the infrastructure involved:



I.1 DESLUDGING OF SEPTIC TANKS

Septic tanks are required to be periodically desludged using vacuum loaders with a blow back arrangement so as to ensure complete evacuation of the sillage as well as solids that tend to sediment at the bottom of such tanks.

Price Range : Rs. 25 Thousand to 45 Lakhs



Suction Machine mounted on LCV, MCV, HCV, Trailer

DESLUDGING OF SEPTIC TANKS



Product Name : KAMVAC

Description :

- KAMVAC is a truck chassis mounted vacuum loader, gully pit/cesspool emptier available in multiple volumetric capacities of sludge collection tanks and free air displacement ratings of vacuum pumps.
- Siphoning the liquid and solid effluents into the equipment's sludge collection tank under high vacuum, from surcharged manhole chambers, sewer and storm water drain lines, septic/sump tanks and gully pits and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- Vacuum Loader is available in varying capacities ranging from 1000 to 12000 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESLUDGING OF SEPTIC TANKS



Product Name : GULLYMAN

Description :

- MANIAR Suction machine on Trailer: A high flow suction cum blow back system is used for effective cleaning of Cesspool, Cesspit and manhole chambers. The machine can suck particles upto 50 mm from a distance of 200 feet and depth of 25 feet. It is tractor drawn and is used by small nagar panchayats who have one tractor. There is no investment of the trucks.

Manufacturer :

MANIAR & CO.

DESLUDGING OF SEPTIC TANKS



Product Name : DESILT MAN

Description :

- D'silting machine (Grab Bucket) is developed in the year of 2006. It is underground manhole chamber cleaning machine with silt carrying capacity of 0.5 cum. The grabbing capacity of the bucket is upto 50 kgs and there is no limitations in depth. The silt collected in the hopper can be directly emptied into other container without re-handling of waste.

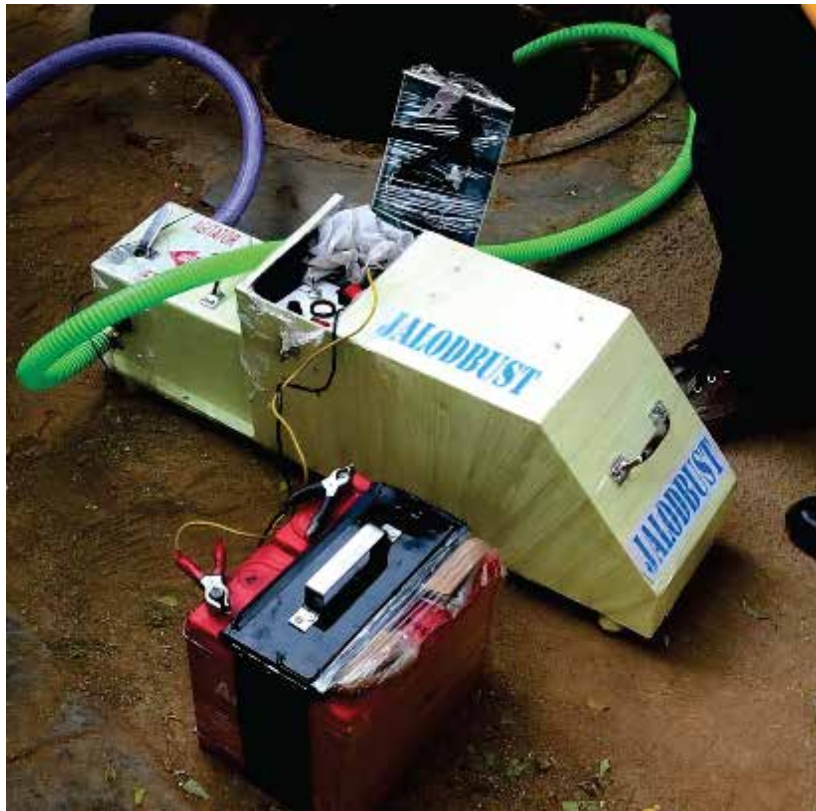
Specifications :

- The machine is self propelled and has no issue of transportation.
- Easily can ply in narrow lanes, by lanes. nSilt collection capacity of 500 kgs, nCompact Vehicle, User Friendly Operations, Cost Effective.

Manufacturer :

MANIAR & CO.

DESLUDGING OF SEPTIC TANKS



Product Name : JALODBUST

Description :

- The equipment is a portable, Battery operated, sanitary sludge handling machine with agitator
- Product specifications as under :
 - 500-800 liters per hour
 - 2,500 litres handling per battery charge
 - 50 mtrs horizontal distance/ 10 mtrs vertical lift
 - 30 Kgs weight of machine
 - 24 volt 40 AH Battery
 - 200-500 watt motor
 - Works on piston pump principle
 - Agitator based on shock wave principle nOur Process is as follows :
 - Displacement is done by movement of piston
 - Gland for water seal
 - Lever for creating shock waves for agitator
 - Can be used to produce upto 400 psi water jet
 - Liquifies sludge by removing limiting viscosity

Manufacturer :

JALODBUST

DESLUDGING OF SEPTIC TANKS



**Product Name : SEWER LINE/CESSPIT CLEANING
(SEWER SUCTION) MACHINES**

Description :

- The equipment is a Truck Mounted Mobile Unit suitable for suctioning the Sludge / slurry from sewer manholes, gully pits, septic tanks etc. by Vacuum Suction System and discharging the collected sludge by Hydraulic Tipping of the Tank, alternatively through Blow-back Arrangement.

Manufacturer :

TPS INFRASTRUCTURE

DESLUDGING OF SEPTIC TANKS



Product Name : TRAILER MOUNTED SUCTION MACHINE

Description :

- These are Vacuum Machines Driven by an Auxiliary Engine and mounted on 2 Wheel Trailer. These machines are basically used for Cleaning of Septic Tanks and Manholes.

Specification :

- 5/10 HP Diesel Engine and Vacuum Pump having FAD : 6500-9000 LPM and Vacuum Pressure : 8000 mm WC. Tank Capacity 3000 Ltrs

Manufacturer :

JETBROOM WASTE SOLUTIONS PVT. LTD.

II. Wastewater transported through Underground Sewerage Network

Underground Sewerage Networks are designed and constructed to carry waste water and some amount of solids from its point of generation to its point of collection.

Due to irregular flow of wastewater, the prescribed self-cleansing velocity of the wastewater is often not achieved. The solids separate from the liquids and tend to accumulate within the pipeline thereby reducing its hydraulic load carrying capacity. This sedimentation is called siltation.

Extensive siltation not only affects the flow of sullage but also is the main reason for the choking of the sewerage lines. If a planned preventive maintenance schedule (PPMS) is put in place siltation can be minimized thereby reducing the frequency of chokes. Dechoking is a breakdown maintenance activity representing a deteriorating sewerage network.

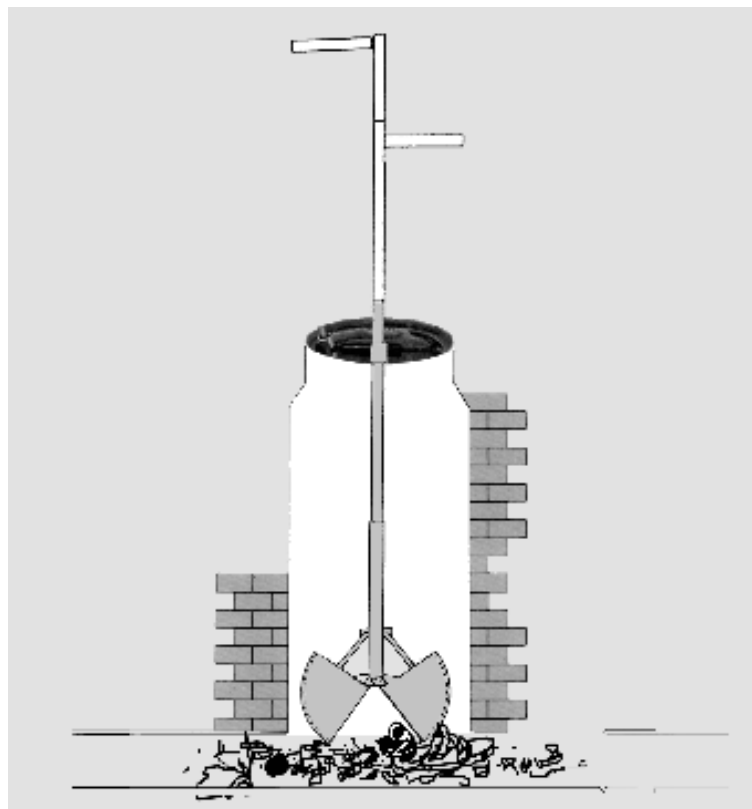
To overcome the inherent issues faced in sewerage networks the below 3 processes of cleaning and maintenance are recommended.



II.1 Desilting of Manholes

Silt that flows through the network, often accumulates in the manhole and is required to be removed. The process of removal of silt from manholes can be carried out mechanically or through pneumatic conveyance.

Price Range : Rs. 20 Thousand to 35 Lakhs



Mechanical Silt removal equipment

DESILTING OF MANHOLES



Product Name : KAMGRAB

Description :

- The KAM GRAB is ideal to collect “SEDIMENTAL MATERIAL” at a depth up to 3 meters from the ground.
- Machine is able to scrape and collect around 6 litres of solids into its Collection Bucket.
- Can be used to manually collect silt & other solids from manholes & open nallah’s.
- Kamgrab is available in varying capacities of 3 ltr. & 6 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF MANHOLES



Product Name : KAMGRAB 25

Description :

- With a 25 ltr bucket capacity, our Kamgrab can be mounted on a CNG or Diesel Small Commercial Vehicle. the machine can be operated via Remote Control, with an electro-hydraulically operated system, vide a vehicle's engine driven hydraulic pump and direction control valves.
- The Grab bucket can lift from up to 40 ft from ground level & the boom rotation ensures 90o on either side (L and R). The Hopper can collect up to 0.35 cu.m of silt in one trip.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF MANHOLES



Product Name : KAMVAC

Description :

- KAMVAC is a truck chassis mounted vacuum loader, gully pit/cesspool emptier available in multiple volumetric capacities of sludge collection tanks and free air displacement ratings of vacuum pumps.
- Siphoning the liquid and solid effluents into the equipment's sludge collection tank under high vacuum, from surcharged manhole chambers, sewer and storm water drain lines, septic/sump tanks and gully pits and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- Kamvac is available in varying capacities ranging from 1000 to 12000 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF MANHOLES



Product Name : JALODBUST

Description :

- The equipment is a portable, Battery operated, sanitary sludge handling machine with agitator
- Product specifications as under :
 - 500-800 liters per hour
 - 2,500 litres handling per battery charge
 - 50 mtrs horizontal distance/ 10 mtrs vertical lift
 - 30 Kgs weight of machine
 - 24 volt 40 AH Battery
 - 200-500 watt motor
 - Works on piston pump principle
 - Agitator based on shock wave principle
- The Process is as follows :
 - Displacement is done by movement of piston
 - Gland for water seal
 - Lever for creating shock waves for agitator
 - Can be used to produce upto 400 psi water jet
 - Liquifies sludge by removing limiting viscosity

Manufacturer :
JALODBUST

DESILTING OF MANHOLES



Product Name : DESILT MAN WITH RODDING

Description :

- A combination of Desilting Grab Bucket and rodding machine is a unique of its kind developed by MANIAR.
- It is underground manhole chamber cleaning machine with silt carrying capacity of 0.5 cum.
- The grabbing capacity of the bucket is upto 50 kgs and there is no limitations in depth.
- The silt collected in the hopper can be directly emptied into other container without re-handling of waste with facility to clean choked underground lines wherever necessary with rodding

Specifications :

- The machine is self propelled and has no issue of transportation.
- Easily can ply in narrow lanes, by lanes.
- Silt collection capacity of 500 kgs,
- Compact Vehicle, User Friendly Operations, Cost Effective.

Manufacturer :

MANIAR & CO.

DESILTING OF MANHOLES



Product Name : TROMBIMAN

Description :

- It is a combination of High Pressure Jetting Machine with Suction and Rodding machine.

Specifications :

- Compact
- Can ply in narrow lanes
- All operations can be done at the same time.
- Cost effective, User friendly operations.

Manufacturer :

MANIAR & CO.

II.2 Desilting of Sewer Lines

Silt that is accumulated within the sewerage network is to be removed to ensure optimum performance and minimizing chokes. The method adopted for desilting will also depend on the sewer diameter.

For non-man-entry lines, the ideal means is by bucketing or high-pressure jetting, followed by suction. For man-entry lines, pneumatic conveyance with all prescribed safety precautions is recommended to be carried out, with or without jetting.

Price Range : Rs. 39 to 80 Lakhs



Sewer Suction cum Jetting Machine

DESILTING OF SEWER LINES



Product Name : KAMBI

Description :

- KAMBI is a truck chassis mounted suction-cum-jetting combination machine available in multiple volumetric capacities of clean water and sludge collection tank. These equipments are capable of efficiently working in sewer lines of diameters ranging from 200 - 1000 mm.
- Siphoning the liquid and solid effluents into the equipment's sludge collection tank under high vacuum, from surcharged manhole chambers, sewer and storm water drain lines, septic/sump tanks and gully pits and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- De-choking and de-silting of the sewer and drain water lines and chambers by high pressure jetting through suitably dimensioned jetting hoses and nozzles aspirating the dislodged effluent and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- Kambi is available in varying

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF SEWER LINES



Product Name : KAMBI RECYCLER

Description :

Combination of high vacuum - high flow suction -cum jetting combination recycler machines mounted on high powered high GVW rating (equal to or greater than 25 Tonnes) truck chassis. Machine can be used for:

- The equipment power jets, cleans, flushes the silt and debris in the drain lines and siphons the same into its sludge compartment from where the liquid effluent is extracted, recycled through a simple and easy to maintain filtration system and sent back to the jetting pump for further power cleaning use.
- The KAMBI RECYCLER does not stop its operations for water but continues cleaning until the debris tank is full thus asserting the elimination of the non productive fill cycle time and offers massive productivity gains.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF SEWER LINES



Product Name : KAMBI HI-FLOW SUPER SUCKER WITH DUMP TANK

Description :

A wide range of suitably designed, truck chassis mounted high vacuum suction, jetting and combination machines, capable of effectively working in sewer lines of depth up to 20 mtr and line diameters of up to 2000 mm. Machine can be used for:

- Simultaneously/independently de-silting by power jetting and siphoning the silt and debris under high vacuum flow from deep sewer mains upto 20 meters.
- Transportation of the extracted effluent to any desired disposal site for emptying under gravity/tank tipping.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF SEWER LINES



Product Name : TRUCK MOUNTED COMBINATION MACHINE

Description :

- These are Combination Machines Driven thru Split Shaft PTO taking Power from Vehicle Engine and mounted on a Truck. These machines are basically used for Cleaning of Sewer Lines (De-choking/De-silting) and removing sludge from Septic Tanks and Manholes.

Specifications :

- Vacuum Pump having FAD : 9000 LPM and Vacuum Pressure : 8000 mm WC Jetting Pump : 250 LPM and Pressure : 150 Bar Combined Tank Capacity : 8000 Ltrs (Fresh Water : 4500 Ltrs. and Sludge : 3500 Ltrs)

Manufacturer :

JETBROOM WASTE SOLUTIONS PVT. LTD.

DESILTING OF SEWER LINES



Product Name : GULLYMAN

Description :

- MANIAR Suction machine on Trailer: A high flow suction cum blow back system is used for effective cleaning of Cesspool, Cesspit and manhole chambers. The machine can suck particles upto 50 mm from a distance of 200 feet and depth of 25 feet. It is tractor drawn and is used by small nagar panchayats who have one tractor. There is no investment of the trucks

Manufacturer :

MANIAR & CO.

DESILTING OF SEWER LINES



Product Name : COMBIMAN

Description :

- Machine is a combination machine of High Pressure Jetting and Suction with Blowback system.
- The tank capacity can be of 4500 liters which can be partitioned into fresh water and sludge tank into any ratio as per requirement.
- The machine can effectively clean 4"-24" diameter drainage lines and can suck particles upto 50 mm from a distance of 200 feet and depth of 25 feet. The machine is trailer mounted and can be towed with a tractor.

Manufacturer :

MANIAR & CO.

DESILTING OF SEWER LINES



Product Name : TROMBIMAN

Description :

- It is a combination of High Pressure Jetting Machine with Suction and Rodding machine.

Specifications :

- Compact
- Can ply in narrow lanes
- All operations can be done at the same time.
- Cost effective, User friendly operations.

Manufacturer :

MANIAR & CO.

DESILTING OF SEWER LINES



Product Name : HIGH PRESSURE SUCTION-CUM-JETTING MACHINES

Description :

- The equipment is a Truck Mounted Mobile Unit used for removing blockages from the underground sewer line by High Pressure Water Jetting System and for suctioning the sludge from the manholes and discharging the collected sludge by Hydraulic Tipping of the Tank, alternatively through Blow-back Arrangement.

Manufacturer :

TPS INFRASTRUCTURE LTD.

DESILTING OF SEWER LINES



Product Name : HIGH PRESSURE JETTING AND SUCTION CLEANING VEHICLES WITH WATER RE-CYCLING SYSTEM

Description :

- The equipment is used for flushing and de-silting the sewer pipelines through the manholes / chambers of the sewer lines. Heavily silted sewer lines of various sizes can be cleaned with the help of high pressure water jets produced by the jetting system and the silt accumulated in the manholes shall be sucked simultaneously by the suction system. The unit as a whole shall utilize the recycled filtered water from the sewage + water suctioned from the manholes, for jetting purpose.
- The main advantage of the equipment is that it does not require fresh water for carrying out the jetting operation. The Jetting operation can be carried out without interruption for long durations and is not limited by the capacity of the fresh water tank as is the case in normal suction-cumjetting De-silting machines.

Manufacturer :

TPS INFRASTRUCTURE LTD.

DESILTING OF SEWER LINES



Product Name : SUPER SUCKER UNIT AND DUMP TANK

Description :

- The Machine is a Heavy Duty Vacuum Loader. The machine is self-contained in all aspects and is suitable for suctioning free flowing Sludge and Slurry in conjunction with Truck Mounted Cyclonic Containers.
- The machine is capable of air lifting of dense waste/ sludge like mud, slurry, stones, debris, grit etc. from sewer lines, storm water drains etc. through vacuum mode and capable of jetting civil and industrial sewer lines of diameters ranging from 200 mm to 3000 mm.
- It consists of a water tank having a volumetric capacity of 4000 liters. The equipment is mounted on a suitable 25 Ton GVW Chassis.
- Sewage collect tank (suction dump tank) is mounted on separate vehicles of total volumetric capacity of 10000 liters mounted on a suitable 16 Ton GVW chassis.

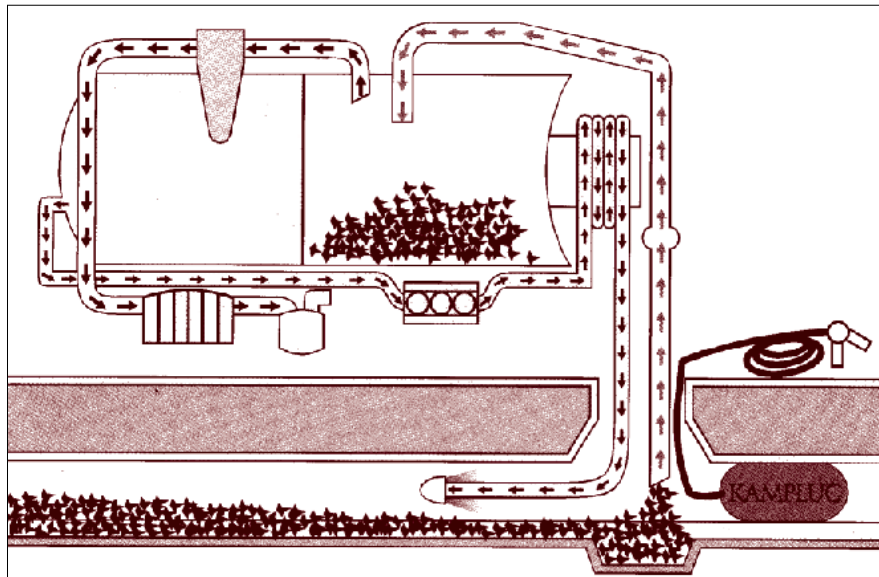
Manufacturer :

TPS INFRASTRUCTURE LTD.

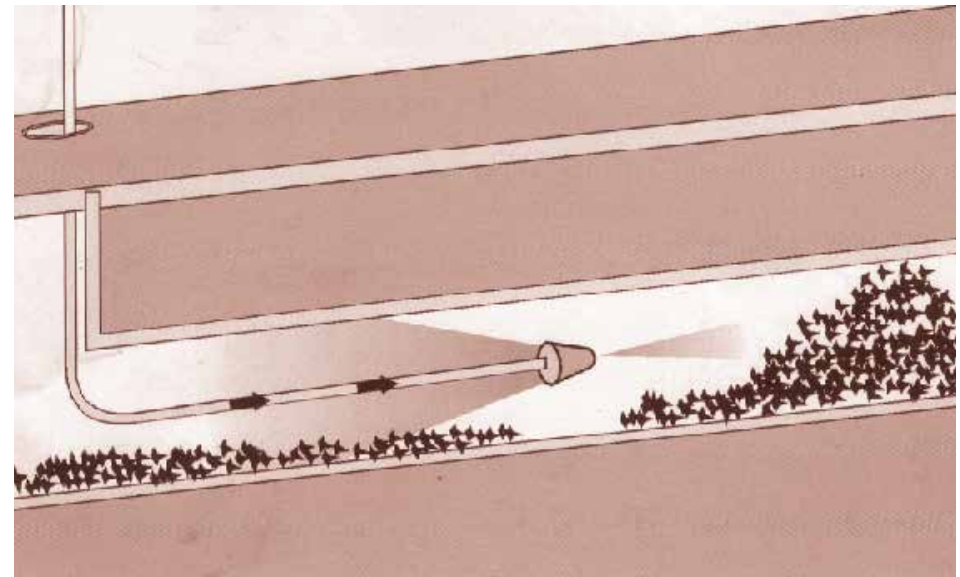
II.3 Dechoking of Sewer Lines

Obstructions within the sewer line that do not allow the wastewater to flow are called chokes. These chokes are to be broken in order to resume the normal flow of wastewater. The method adopted for dechoking a blockage is either by manual rodding, power rodding or high-pressure jetting.

Price Range : Rs. 6 to 61 Lakhs



High Pressure Water Jetting in Progress



High Pressure Water Jetting in Progress

Manual Rodding, Power Rodding & High Power Jetting Machine

DECHOKING OF SEWER LINES



Product Name : KAMROD

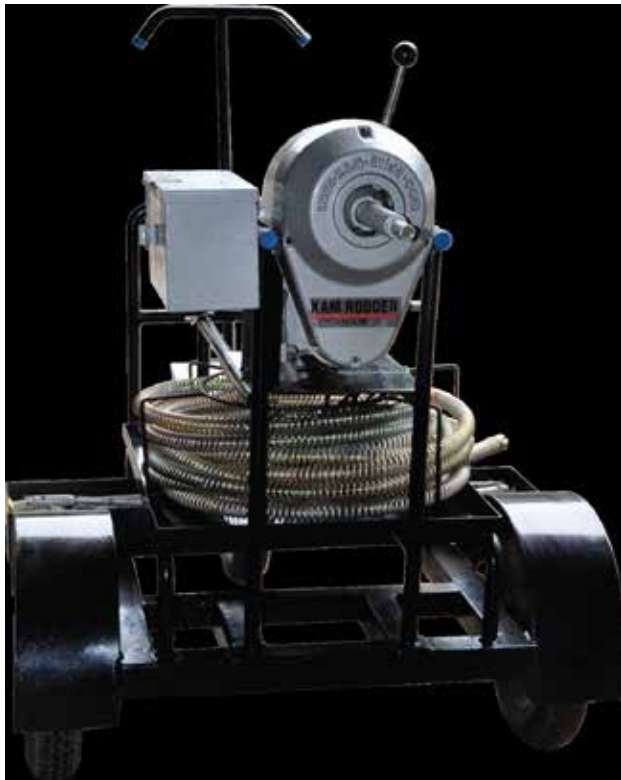
Description :

- The KAMROD is suitable for manual outdoor drain cleaner for 4" to 12" Lines.
- KAMROD is made is zinc plated with chrome vanadium steel and complies with the IS 8051/8052 standards.
- The tools and accessories with the KAMROD can be chosen based on application required. Some of the tools are Sand Driller, Double Cork screw, Flat Auger, Fishing Tool, Push Pull Tool.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : KAMBORE TMR-GD

Description :

Motorised Cabling - Cum - Rodding Machine

- Powered by a 0.5 HP, 220 volts, 50 Hz, single phase reversible induction motor, the trolley mounted cabling cum rodding machine drives the flexible rigid coiled cables and alloy steel rods through a compact, 2 speed, planetary, reduction gear box and a timing belt and pulley drive configuration.
- The equipment is effective in removal of light and heavy, stubborn pipe and drain line blockages in pipe diameters ranging from 4 inches to 24 inches depending on which mode of cleaning the sewer man chooses to use.
- The flexible cables or sections of the 7 mm x 1 m long alloy steel sewer cleaning rods make the machine versatile and suitable for both external, internal, light and heavy duty applications.
- The concept of low speed-high torque drilling is most effective.
- The standard accessories included are Sand Driller, Flat Auger and Double Cork Screw. A selfpowered generator can be optionally attached.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : KAMRODDER

Description :

- The entire unit of the KAM-RODDER is imported from M/s Sewer Equipment Company, USA - world leaders in the design and manufacture of truck mounted, power rodding equipment.
- The Kam-Rodder 8-1000-300 is a truck mounted sewer rodding machine capable of pushing and pulling 8mm x 1000mm sectional steel rods with various tools attached to clean and remove hard chokes, roots of trees and other stubborn obstructions in storm water and/or sanitary sewer lines at a maximum distance of approximate 300metre. The complete system is easy to maintain and uses a simple set of instrumentation and controls.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : KAMJET

Description :

- KAMJET is a truck chassis mounted jetting machine available in multiple volumetric capacities of clean water tank. These equipments are capable of efficiently working in sewer lines of diameters ranging from 200-1000 mm.
- De-choking and de-silting of the sewer and drainwater lines and chambers by high pressure jetting through suitably dimensioned jetting hoses and nozzles aspirating the dislodged effluent and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- Kamjet is available in varying capacities ranging from 1000 to 12000 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : KAMJET GR

Description :

- Hydraulically driven, electro mechanically operated sewer cleaning and maintenance machine, modelled the KAMJET GR is designed for:

1. De-choking of sewer lines through Power Rodding.
2. Flushing and de-silting of sewer lines through High Pressure Water Jetting.
3. Removal of silt and debris from manholes through Mechanical Grabbing.

All the above, without any physical contact with sullage/ waste water and man-entry.

- A suitable truck chassis (Diesel or CNG) of minimum 60 HP and 4.8 Tons Gross Vehicle Weight is selected to provide the minimum required horsepower and payload for the configuration of the machine.
- The KAMJET GR is under copyright and industrial design certification 10376/2018-CO/L
- The KAMJET GR is the 2nd Runner Up of the Ministry of Urban Development, India (MOUD) technology challenge – AMRUT Tech Challenge 2018.
- Kamjet GR is available in tank capacities 1500 & 2000 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : KAMBI

Description :

- KAMBI is a truck chassis mounted suctioncum- jetting combination machine available in multiple volumetric capacities of clean water and sludge collection tank. These equipments are capable of efficiently working is sewer lines of diameters ranging from 200 -1000 mm.
- Siphoning the liquid and solid effluents into the equipment's sludge collection tank under high vacuum, from surcharged manhole chambers, sewer and storm water drain lines, septic/ sump tanks and gully pits and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- De-choking and de-silting of the sewer and drain water lines and chambers by high pressure jetting through suitably dimensioned jetting hoses and nozzles aspirating the dislodged effluent and transporting the same to any desired disposal site for emptying under gravity/positive pressure/tipping of sludge tank.
- Kambi is available in varying capacities ranging from 2000 to 12000 ltr.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : TRUCK MOUNTED COMBINATION MACHINE

Description :

- These are Combination Machines Driven thru Split Shaft PTO taking Power from Vehicle Engine and mounted on a Truck. These machines are basically used for Cleaning of Sewer Lines (De-choking/De-silting) and removing sludge from Septic Tanks and Manholes.

Specifications :

- Vacuum Pump having FAD : 9000 LPM and Vacuum Pressure : 8000 mm WC Jetting Pump : 250 LPM and Pressure : 150 Bar Combined Tank Capacity : 8000 Ltrs (Fresh Water : 4500 Ltrs. and Sludge : 3500 Ltrs)

Manufacturer :

JETBROOM WASTE SOLUTIONS PVT. LTD.

DECHOKING OF SEWER LINES



Product Name : COMBIMAN

Description :

- Machine is a combination machine of High Pressure Jetting and Suction with Blowback system.
- The tank capacity can be of 4500 liters which can be partitioned into fresh water and sludge tank into any ratio as per requirement.
- The machine can effectively clean 4"-24" diameter drainage lines and can suck particles upto 50 mm from a distance of 200 feet and depth of 25 feet. The machine is trailer mounted and can be towed with a tractor.

Manufacturer :

MANIAR & CO.

DECHOKING OF SEWER LINES



Product Name : JETTING MACHINE ON TRAILER

Description :

- A high pressure jetting machine with tank capacity upto 4000 liters suitable for effective and efficient cleaning of underground drainage and sewer lines.
- The machine can effectively clean 4"-24" diameter drainage lines.
- The machine can be towed by a tractor and no additional investment of truck is required.

Manufacturer :

MANIAR & CO.

DECHOKING OF SEWER LINES



Product Name : MULJET

Description :

- A high pressure jetting machine with 500 liter tank capacity suitable for effective and efficient cleaning of underground drainage and sewer lines.
- The machine can effectively clean 3"-6" lines with 200 bar pressure and flow as little as 13LPM

Manufacturer :

MANIAR & CO.

DECHOKING OF SEWER LINES



Product Name : TROMBIMAN JSR

Description :

- A unique product developed by MANIAR looking to the necessity and demand of the urban bodies.
- It is a combination of High Pressure Jetting Machine with Suction and D'silting Grabber machine.

Specifications :

- Compact
- Can ply in narrow lanes
- All operations can be done at same time.
- Cost effective, User friendly operations

Manufacturer :

MANIAR & CO.

DECHOKING OF SEWER LINES



Product Name : HIGH PRESSURE SUCTION - CUM-JETTING MACHINES

Description :

- The equipment is a Truck Mounted Mobile Unit used for removing blockages from the underground sewer line by High Pressure Water Jetting System and for suctioning the sludge from the manholes and discharging the collected sludge by Hydraulic Tipping of the Tank, alternatively through Blow-back Arrangement.

Manufacturer :

TPS INFRASTRUCTURE LTD.

DECHOKING OF SEWER LINES



**Product Name : MULTIPURPOSE SEWER LINE
CLEANING MACHINE**

Description :

- The machine is a multipurpose sewerline cleaning equipment suitable for cleaning small sewer line upto 450 mm dia. with the help of high pressure jetting. The machine is provided with a hydraulically operated Grab Bucket for cleaning sewer manhole. The equipment is also provided with a Rodding machine capable of removing obstructions in the sewerline. The machine is mounted on Truck Chassis

Manufacturer :

TPS INFRASTRUCTURE LTD.

III. Drain Cleaning Equipment

In the urban areas, both natural (nallahs) and man made drains are in parallel existence. These are vital to carry and dispose the storm water runoff safely. But these drains are prone to continuous siltation due to various reasons. Therefore, periodic cleaning or desilting is necessary for these drains for maintaining the carrying capacity. Some of the drain cleaning equipment that are available in the Country are discussed in the subsequent pages.



III.1 Desilting of Open Nallahs

Periodic desilting of Open Nallahs or Culverts which may be covered by slabs is done using mechanical grabs powered by tractors or jeeps or by using a high-powered vacuum technology.

Price Range : Rs. 15 to 30 Lakhs



Mechanical Grabs mounted on Tractor, Jeep, Chassis

DESILTING OF OPEN NALLAHS



Product Name : KAMSCOOP On LCV, Tractor

Description :

- The KAMSCOOP is a tractor towed, compact, mobile, drain de-silting equipment, ideally suited for operating on both main roads and narrow restricted lanes of large/ medium sized cities and smaller towns.
- Machine is able to de-silt open drains and strong water canals of a maximum width of 1.5 meters and depth 1.2 meters, using a hydraulically operated bucket and boom arrangement.
- The scooped out silt and debris can be off loaded into an open skip, a waiting dumper truck or it's self contained dumper trailer itself.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF OPEN NALLAHS



Product Name : KAMSCOOP on Jeep

Description :

- The KAMSCOOP can be fitted behind any four wheel drive vehicle / jeep. The machine after being parked parallelly to the open nallahs / drains can excavate silt and other floating bodies from open nallahs / drains. The excavated silt can be unloaded at the rear end thus keeping the front side free.
- The Kamscoop with a bucket with a capacity of 50 kg. & an arm radius of 3.65 meter.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF OPEN NALLAHS



Product Name : KAMSCOOP TBCT

Description :

- KAMSCOOP TBCT is ideally suited for operating in cities and towns having a drainage network of medium and large sized open drains.
- Capable of removing silt and solid materials from open, dry or flowing open drains the KAMSCOOP TBCT is available in 3 variants of outreach, thereby allowing operations on open drains and canals of width and depth of 6 meters. Removal of silt and debris is done by a folding type loading crane unit mounted between the truck's cabin and tipper load body, using a hydraulically operated and extended boom arrangement.

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

DESILTING OF OPEN NALLAHS



Product Name : NALHAMAN

Description :

- MANIAR Roadside Open Drain Ditch Cleaning Machine:
This machine is very useful equipment and is used to clean Road side open Nalah / Ditch.
- The back-hoe can be extended and the operator is sitting directly on Nalah. The operator has complete vision of the blockage for effective cleaning.
- It can collect silt, mud, debris etc. from a depth of 5 feet and can accumulate the same in the trailer.
- Apart from Trailer mounted, the equipment is also available on Bolero, Xenon, Isuzu.

Manufacturer :

MANIAR & CO.

III.2 Desilting of Large Open Drains

Large nallas play a major role in the transportation of the excess storm water to the nearby water bodies. Thus helps in minimizing the inundation duration of the surrounding areas.

These large nallahs are prone to extensive siltation therefore reducing its hydraulic load carrying capacity. Timely maintenance by mechanically grabbing is required to be carried out in these open nallahs.

After making the aforesaid inclusions and corrections you are requested to forward the printable copy to Shri Jayal, DS (SBM-II) with a request to print with a copy to JS(SBM), Adviser (CPHEEO), Shri Rohit Kakkar and the undersigned.

Price Range : Rs. 2.5 Crores



Mobile All Terrain Excavator

DESILTING OF LARGE OPEN DRAINS



Product Name : KAM-MATE

Description :

- M/s Menzi Muck, Switzerland - world renowned manufacturers of Mobile All Terrain Excavators together with Kam-Avida, bring to you the Kam-Mate in models of varying capacities and attachments. We are delighted to present to you an engineering marvel that will start work where a conventional excavator, back hoe loader will fail to even reach.

- Kam-Mate may be used for the below applications :

- De-silting of inaccessible Open drains
- Dredging of Canals & Shallow Water Bodies
- River Bank Reinforcement
- Stream and Canal Restoration

Sold by:

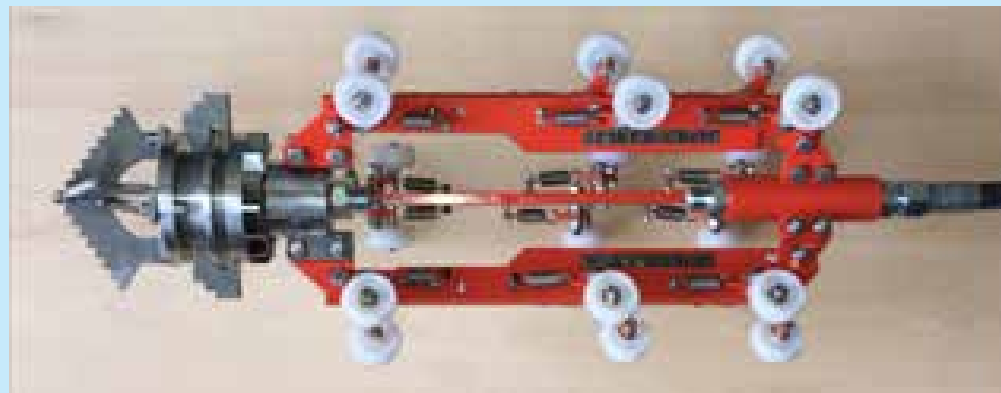
KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

Manufacturer :

Menzi Muck, Switzerland

IV SPECIAL INNOVATIONS

Presenting a range of new age cutting edge products



SPECIAL INNOVATIONS



Product Name : ANNAM–MOBILE SEPTAGE TREATMENT UNIT (MTU)

Description :

- The on-site mobile treatment unit works with the concept of solid-liquid separation, sludge thickening and effluent treatment process. While the liquid is separated from the solid, the effluent passes through the treatment process and disposes the treated effluent.
- The sludge thickening process helps further in reducing the moisture content in the sludge. The solid sludge is collected in centrifuge and it later goes for secondary treatment

Specifications :

- The Mobile Treatment Unit (MTU) is an onsite faecal sludge treatment technology.
- It is a treatment system installed on the bed of a small truck, which is able to treat the contents of septic tanks.
- 3000 to 6000 lits/hr.

Manufacturer :

WASH INSTITUTE

SPECIAL INNOVATIONS



Product Name : BANDICOOT ROBOT 2.0

Description :

- The Robotic scavenger developed with a vision to eliminate manual scavenging.
- Combination of pneumatic and electric actuators make possible the safe cleaning of manholes.
- Infrared cameras helping in live internal inspection. The clogs and wastes can be monitored in the screen fixed on the external stand helps to control the robot in the right manner.
- The operator doesn't need to get into the manhole hence the operation can be remotely controlled using simple user interface.

Specifications :

- Image processing & High resolution camera with night vision
- Water Resistant & Dust Proof
- Lighter & Stronger than steel
- Simple to Use with auto clean option.
- Detection and alert for harmful and toxic gases
- Artificial Intelligence for the processing of data.
- Bandicoot 2.0 could manure holes up to 15 meters depth

Manufacturer :

GENROBOTIC INNOVATIONS PVT. LTD.

SPECIAL INNOVATIONS



Product Name : SEWER CROC

Description :

- To Clean Under Ground Sewer Pipeline of 150 to 400 pipe diameter

Specifications :

- Operating Pressure: Max. 200 Bar, Standard operating pressure: 100 to 175 bar
- Flow Rate: 145 LPM to 250 LPM
- Nozzle: Imported Ceramic Nozzles of required sizes
- Dimensions:
 - Ref. Dia 200-400
 - Flexibility 30 mm
 - Length 500- 650 mm
- Weight: 12 kg -18 Kg
- Material:
 - Turbine, Body frame: Stainless Steel,
 - Cutting Blades: Low Carbon Steels
 - Wheels: PTFE/Nylonc
- Turbine RPM: 500 to 1500 rpm

Manufacturer :

SANITOR (Ajantha Techno Solutions Pvt. Ltd.)

SPECIAL INNOVATIONS



Product Name : DYNASTORM

Description :

- To Clean Underground (UGD) Trunk Sewer Pipeline of 450-1200 mm pipe diameter.

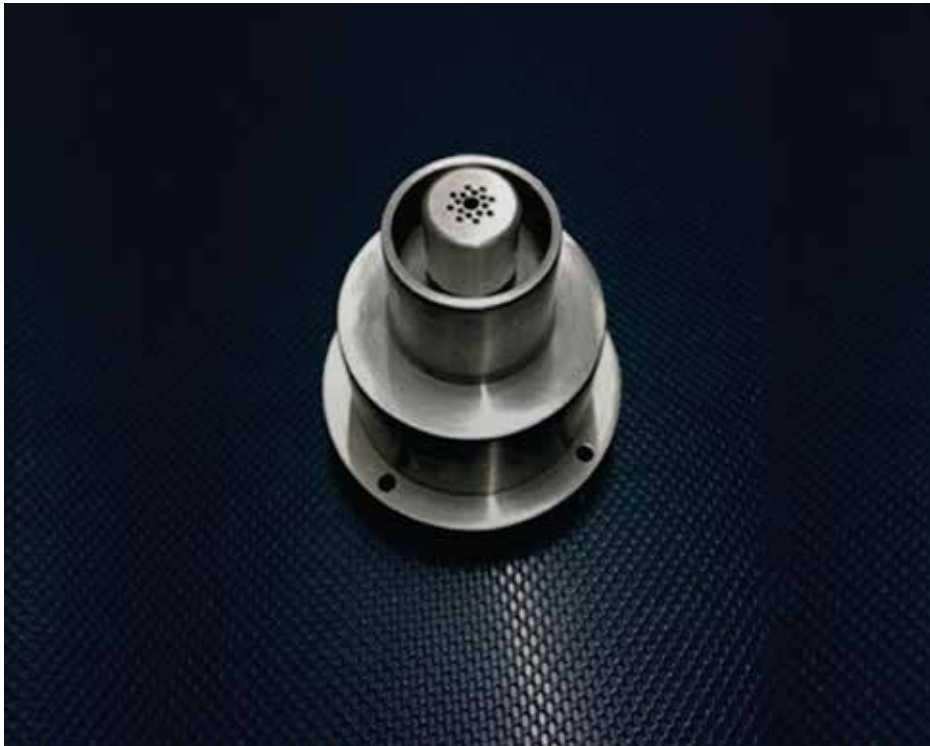
Specifications :

- Operating Pressure: Max. 200 Bar, Standard operating pressure: 100 to 175 bar
- Flow Rate: 75 LPM to 100LPM
- Nozzle: Imported Ceramic Nozzles of required sizes
- Dimensions:
 - Ref. Dia 450 -1200mm
 - Length 650 mm
- Weight: 35KG
- Material:
 - Turbine, Body frame: Stainless Steel,
 - Cutting Blades: Low Carbon Steels
 - Wheels: PTFE/Nylon
- Turbine RPM: 500 to 1500 rpm

Manufacturer :

SANITOR (Ajantha Techno Solutions Pvt. Ltd.)

SPECIAL INNOVATIONS



Product Name : GAS DETECTOR AND ANALYZER DEVICE

Description :

- To safely measure the poisonous gases in the Manhole before opening the manhole lid.

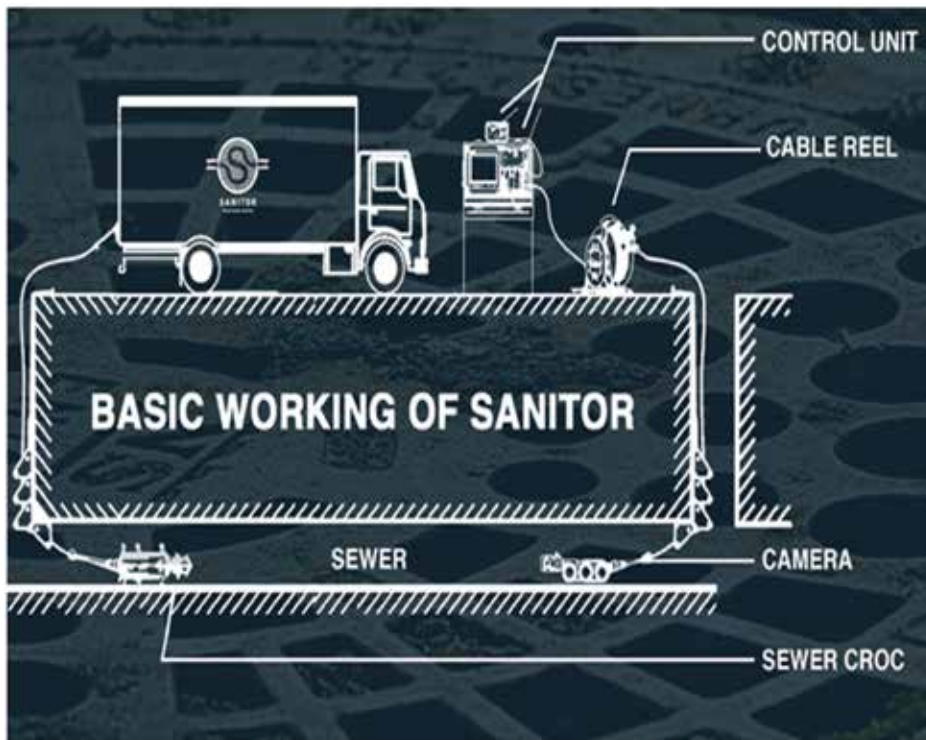
Specifications :

- Consists of gas detector device with water proofing filters, installed on the manhole lid and an external gas analyzer that will have sensors and display system.
- Carbon Monoxide, Methane, Oxygen and Sulfur dioxide will be detected.
- Beep alert will ring if it exceeds the safe limits and shows the values.

Manufacturer :

SANITOR (Ajantha Techno Solutions Pvt. Ltd.)

SPECIAL INNOVATIONS



Product Name : ROBOTIC SEWER INSPECTION CAMERA MOUNTED ON THE VEHICLE

Description :

- Robotic CCTV camera with very high resolution and very bright LED lighting, Water proof to 40 meters below the water level complies to Ip68 with camera reel and monitor. AI mounted in a MU vehicle.

Manufacturer :

SANITOR (Ajantha Techno Solutions Pvt. Ltd.)

SPECIAL INNOVATIONS



Product Name : KAM CCTV INSPECTION

Description :

- Spartan Tool 2.0 Traveller is a selfcontained surveillance system that takes finding and seeing the clog in your pipes and sewerage network to the next level.
- The CCTV features a removable push rod reel allowing you to quickly & easily swap reels in the field.

Specifications :

- Sapphire glass lens with Freeze-frame snapshot capability at any time. Camera centering guide included
- Tab® communicates via WiFi router connection, allowing you to move anywhere on the job site
- Lithium-ion battery technology ensuring up to six hours of battery life on a single charge
- Weight 15.5 Kg complete with Apple® iPad.
- Size 22.5"W x 26"H x 12"D
- Camera Resolution 640 x 480- Cutting Blades: Low Carbon Steels
- Wheels: PTFE/Nylonc
- Turbine RPM: 500 to 1500 rpm

Manufacturer :

KAM-AVIDA ENVIRO ENGINEERS PVT. LTD.

Contacts

Name : **KAM-AVIDA ENVIRO ENGINEERS PT. LTD.**

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cleancity@gmail.com

Website : www.maniar.com

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Email : mkt.eqpt@tpsmfg.com

Website : www.tpsmfg.com

Name : **JALODBUST**

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Bengaluru - 560102

Contact : Rakesh Kasba

Mobile : 9480094320 / 8778860671

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rakeshkasba@gmail.com

Name : **JETBROOM WASTE SOLUTIONS PVT. LTD.**

Address : C-120, Dayalbagh, Faridabad - 121003 (Haryana)

Contact : Saloman Masih

Mobile : 099537 81681

E-mail : jetbroomwspl@gmail.com

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Contact : Dr. Balakrishna K

Mobile : 9845180131

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Website : www.sanitor.in



GeM
Government
e Marketplace

Listing of Sewer & Faecal Septage Cleaning Equipment Manufactured in India under “Swachh Bharat Mission” Category Head on GeM

<https://gem.gov.in/swachh-bharat-mission>

Summary of Equipment on GeM

Sr. No	Name of Product	No of Models listed
1	Tractor Trailer Mounted Suction Machine	27
2	Tractor Trailer Mounted Suction Cum Jetting Machine	109
3	Truck Mounted Suction Machine (Small)	104
4	Truck Mounted Suction Machine (Medium)	13
5	Truck Mounted Suction Machine (Heavy)	8

1



2



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4



5



Summary of Equipment on GeM

Sr. No	Name of Product	No of Models listed
6	Truck Chassis Mounted Suction Cum Jetting Machine (Small)	30
7	Truck Chassis Mounted Suction Cum Jetting Machine (Medium)	40
8	Truck Chassis Mounted Suction Cum Jetting Machine-(Heavy)	73
9	Super Sucker Machine	28
10	Super Sucker With Auxiliary Engine	2

6



7



8



9



10



Summary of Equipment on GeM

Sr. No	Name of Product	No of Models listed
11	Truck Chassis Mounted Jetting Machine	37
12	Combined- Suction, Jetting, Rodding and Grabbing	2
13	Precast Manhole Covers	12
14	Sewage Pumps	2

11



12



13



14



PERSONAL PROTECTIVE EQUIPMENT AS PRESCRIBED IN THE PROHIBITION OF MANUAL SCAVENGING & THEIR REHABILITATION ACT 2013

ALL THE BELOW PRODUCTS ARE AVAILABLE ON THE GEM PORTAL

1. Safety Devices for Entering in to the manhole to avoid the Hazards of Gases:



Air Compressor Blower



Airline Breathing Apparatus



*Airline Respirator With Manually
Operated Air Blower*



Air Purifier Gas Mask



Breathing Apparatus



Breathing Mask



*Emergency Medical
Oxygen Resuscitator Kit*



Gas Monitor- 4 Gases



Chlorine Mask

2. Safety Devices for Protection from Skin Diseases, Cuts And Wounds



Barrier Cream



Face Mask



Hand Gloves



Safety Goggles



Safety Gumboots



Safety Helmet



Head Lamp



Normal Face Mask



Safety Body Clothing



Rain Coat



Fishing Wader Suit
with Boots



First Aid Box

3. Equipment for Safety from Slips, Trips, Road Accidents and accidents inside drains



Nylon Rope Ladder - 5 m



Reflecting Jackets



Nylon Safety Belt



Safety Harness



Caution Tape



Caution Cone



Caution Board



Lead Acetate test paper



Safety Tripod set



Search Light



Safety Torch



Portable Oxygen

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Ministry of Housing and Urban Affairs
Government of India