

# SPECIFICATION DATASHEET FOR ROAD SWEEPER





# SPECIFICATIONS OF 6M3 VACUUM STREET SWEEPER

# WITH A GARBAGE CANNISTER

Vacuum street sweeper machine is designed to clean the streets. It should be manufactured through assembly of the following required components unto a truck body:

- Sweeper control panel,
- Brushes,
- Sweeper parts
- Garbage and water tanks, and
- Additional equipment
- Camera









# **1. GARBAGE/WASTE TANK**

The capacity of the garbage tank will be 6m3.

Floor of the garbage tank will be built with Stainless Steel sheets (304) and the joints will be properly and evenly welded.

The garbage canister will be lifted up and down with the aid of a hydraulic cylinder.

The garbage canister will be designed to tilt with an angle of 30 degrees during unloading.

The rear lid will feature a thick sealing to ensure leak tightness.

Connection of the fan and the hydro motor will feature bedding on the motor compartment surface with the vacuum fan.

Vacuum fan will be equalized at 3,000 RPM

Front portion of the garbage canister will be the engine department.

This section, called the engine department, will be constructed with sound insulation features.

Engine department will be independent of the garbage tank.

# 2. WATER TANK

Water storage tank will be independent of the garbage. This water tank will be built with Stainless Steel sheets (304) and have at least 1,200 liters of volume. Its inner walls will be polyester coated to prevent rusting.

Under the water tank a suction filter will be put allowing the operator to remove and install it back easily.

Inside the water tank an emptying or filling valve will be installed. A filter will be installed at the filler opening.

The water tank will feature a level indicator.





Spray nozzles installed at the upper section of the side brushes and in the vacuum channel will be made of rust-free materials.

# 3. AUXILIARY EQUIPMENT ENGINE

BRAND: FPT or HYUNDAI or PERKINS The auxiliary engine will be not less than 100HP water cooled TURBO diesel one.

The auxiliary engine will be equipped with automatic gas and controlled from the cabin.

The engine will have the required oil, diesel fuel, and air filters.

The engine will be equipped with an operating and time clock.

Required engine gauges (oil, fuel, air, battery, and charge level) will be installed on the control panel in the cabin.

#### 4. VACUUM SUCTION FAN

The fan will make its suction through the suction channel located at the upper surface of the garbage hopper

The fan will be of closed type and with helix wings.

Auxiliary motor to couple of the fan will be moved with redactor or torque convertor.

The fan suction hose will be of spring type The vacuum fan will be controlled from the cabin.

# **5. HYDRAULIC PUMP & TANK**

The hydraulic pump will never switch to pressurizing other than the time sweeping is being done

The tank will be of at least 60 liters.

The pressure gauge, oil and heat level indicators will be installed on the tank for the system pressure.

A filter system will exist on the liquid suction and return lines.

# 6. MIDDLE CIRCULAR BRUSH

A steel wire brush in circular shape will be installed behind the both front right and left wheels of the vehicle. The hydro motor will be of at least 250 cm3 volume. The angles of these brushes will be adjustable.

Circular brush will have a pressing/clearance adjusting system.

The pressing force will be adjusted based on the conditions of any given garbage mass.

The Circular brush will be of 400 mm diameter. All motions of the brush will be controlled from the cabin panel. There will be spray nozzles around the brush.

The operating brush either the right one or the left will be lighted through a projector for night time operation.





The circular brush will be of free oscillation which will allow it to run at a position depending on the slope and roughness of any given street. The circular brushes will be offered optionally with steel alloy and plastic.

Lowering and lifting speed of the circular brushes will be adjustable.

# 7. MIDDLE SECTION HORIZONTAL CYLINDRICAL BRUSH

A cylindrical brush of at least 300 mm diameter and 1,300 mm length will be installed between the two frames. The cylindrical brush will be driven by the hydro motor.

The cylindrical brush will be made of polypropylene

- The cylindrical brush will have free oscillation and operate synchronously with the circular brush.

# 8. CONTROL PANEL & THE GAUGES

- Control arms and switches will be available at the driver cabin of the vehicle to switch on an off the auxiliary engine, circular brushes, cylindrical main brush, hydraulic pumps.
- Required lighting and warning buttons will be available on the control panel.
- All the cords used in the control panel will have socket connectors and identifying labels.



- Function of each switch on the control panel will be clearly identified with a legible label.

# 9. WATER SYSTEM

-There will be a water pump independent of the auxiliary engine.

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-Through a distribution valve, the water pump will canalize the water to the brushes as well as the suction cup and the garbage canister.

-Spray nozzles will be switching on and off through an electric operated valve.

#### **10. PORTABLE HOSE**

A portable hose of 4 m length will be available at the rear door of the vehicle.

The portable hose installed on the rear door of the vehicle will feature a pipe for easy portability.

# 11. HYDRAULIC CYLINDERS:

Hydraulic cylinders will be made of honed steel pipe and chromium shaft.

Hydraulic cylinders will be controlled through an electro-hydraulic valve.

# 12. VACUUM SUCTION SYSTEM:

The vacuum suction system will be over the 2 wheels featuring a suction line and a pressure line.

The Vacuum suction system will be moving up and down pneumatically and will become free upon touching the ground.



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There will be a bucket with Wheel, during suction this bucket will be opening and closing automatically.

There will be a lid on the vacuum suction system on the suction line

The vacuum suction system will be equipped with spray nozzles

#### 13. SAFETY SYSTEMS:

The equipment will be manufactured for use on the motor ways and all the available safety systems will be applied.

Running and operating manuals on the safety systems will be supplied together with the vehicle.

All the moving parts of the vehicle will be safe and conforming to the safety norms of the motor ways.

Safety labels on the vehicle will have distinguishing colors.

All of the safety systems of the vehicle will be properly marked to enable the operator notice them easily.

#### 14. ENGINE COMPARTMENT AND THE LIDS:

The engine compartment will have total sound insulation.

Engine radiator shroud will be in contact with the hood and it will be placed in a way that it would suck air from outside at only one spot.

#### **15. PAINTING**

All the equipment will be painted in two coats of the desired color over the primer. Interior walls of the garbage tank will be painted in two coats of antirust.

#### **16. WARNING SIGNS**

360 degrees rotating beacons will be installed in the front or rear parts of the vehicle.

A warning system of a flashing arrow sign will be installed in the rear section of the vehicle.

A projector will be installed to light up the circular brush and the area to be swept off.

#### 18. DOCUMENTS:

Operating, maintenance, repairing, spare parts and servicing manuals will be supplied with the vehicle.

Operating manual will illustrate and explain all the functions.

Spare parts manual will list all the spare parts with their corresponding code numbers and relevant explanations.





Maintenance and repairing booklet will illustrate mechanical failure reasons and explain how to fix them.

Service manual will contain a periodical maintenance schedule during the warranty period.

# **19. GENERAL SPECIFICATIONS:**

Vehicle sweeping width	: 2200 -2750 mm
Sweeping performance	: 25.000-30.000 m2/h
Sweeping speed	: 05 / 30 km/h
Garbage canister	: 6 m3
Water canister	: 1,200 lt.
Water pump (Brush watering system)	Minimum 3 Bar
Circular brush	: 400 mm
Cylindrical brush	: 1,300 mm
Vacuum fan	: 3,000 rpm
Engine brand	FPT/HYUNDAI/PERKINS
Equipment engine	: Not less than 100Hp
Hydraulic oil tank	Not less than 60 liter





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