

Whirlwind®

SINGLE-ENGINE 4 WHEEL VACUUM SWEEPER

Searching for a solution that eliminates maintaining and servicing an auxiliary engine on a vacuum sweeper? Elgin® Sweeper Company has the answer. The Whirlwind1® eliminates all things associated with a diesel auxiliary engine, providing value to customers that extends beyond having one less engine. Elgin Sweeper single-engine technology has undergone years of customer focused testing and validation; ensuring a design that exceeds expectations!

ELIMINATES:

- Maintaining two engines
- Complex aftertreatment system, and maintenance
- Untimely auxiliary engine regenerations
- Cost exposure resulting from “missed” auxiliary engine regenerations
- Cumbersome belt tensioning systems
- Auxiliary engine noise and vibration

CUSTOMER FEEDBACK:

- Increases productivity
- Easy to use and learn; single push-button on-the-fly operation
- Quiet operation
- Reduces daily checks

EXHAUSTIVELY PROVEN OVER:

Years of testing and validation, with thousands of miles and hours in operation, and customers market driven feedback to ensure a design that exceeds expectations.



ELGIN
Subsidiary of Federal Signal Corporation

SWEEP SYSTEM - SINGLE-ENGINE

Variable Speed Device (VSD)

Replaces auxiliary engine; installed between the chassis engine and the Allison transmission

"Road Mode" VSD produces 1:1 speed ratio between chassis and transmission

"Work Mode" VSD allows chassis accelerator pedal to control input to transmission and engine speed remains constant - fan speed is adjustable

- Singular in-cab push button control
- No parking brake requirement
- No complex EPA off-highway aftertreatment system

Single-Engine System

Make Variable Speed Device

Type Planetary Gearbox Design

Horsepower 240 (179 kW) approved input rating

Torque 560 ft-lb approved input rating

Air Cleaner Dual safety element dry type

Alarm For low hyd. oil / high hyd. temp

Chassis Engine*

Make Cummins ISB 6.7 or equivalent

Type in-Line 6 cylinder, turbocharged diesel

Displacement 409 cu. in. (6.7 L)

Horsepower 200 (150 kW) @ 2400 RPM

Torque 520 ft-lbs (708 Nm) @ 1600 RPM

Fuel Tank Capacity 50 gal (189 L)

Electrical System

Chassis Battery Rating 12 volt

Sweeper Battery Rating 1000CCA

Chassis Engine Alternator 160 amperes

Lights Side broom, rear clearance, rear identification

Reversing Safety Electric back-up alarm, sweep components raise automatically

Wiring Harnesses Color coded, function stamped and labeled every 4 in (100 mm)

Instrumentation / Controls

Rocker switches in central console gauges:

Blower tachometer, hour meter, fuel, voltmeter, coolant temperature, spray water level gauge, hopper up, hopper rear door open, full load indicator

Memory Sweep Sweep resume feature

VSD Mounted Oil Level Sight Gauge

SWEEP SYSTEM – COMPONENTS

General Specifications

SWEEPING PATH (with 36 in side broom):

Suction nozzle only

32 in (813 mm)

Suction nozzle & one side broom

52 in (1320 mm)

Suction nozzle & extension broom

78 in (1981 mm)

Suction nozzle, extension, & one side broom

95 in (2413 mm)

Dual suction nozzles, side brooms

& extension broom 144 in (3658 mm)

Blower

Drive Direct Jaw-type coupling with hydraulic 2.87 cu-in (47 cc) displacement bent axis motor

Blower Construction Hardox brand steel

Blower Housing 10 gauge (3.4 mm) steel, rubber-lined for extended wear

Vacuum Nozzle and Hoses

Nozzle Width 32 in (813 mm)

Pickup Area 174 in² (1119 cm²)

Construction Abrasion resistant steel components

Hose Connection Quick disconnect type at lower area near vacuum nozzle

Hose Construction Flexible rubber, steel reinforced

Hose 11 in (280 mm) inside diameter

Side Broom

Diameter

28 in (711 mm) WB Chassis Specific

36 in (914 mm) WB Chassis Specific

Construction Steel plate

Speed Constant

Drive Hydraulic motor, protected by relief valve

Mounting Free floating trailing arm

Motion Pneumatically inward/outward, raised/lowered

Tilt Adjustment Inward/outward, forward/backward

Digging Pressure/Wear Control
Pneumatic in cab

Type Segment set disposable

Material Tempered steel wire

Extension Broom

Diameter 16 in (406 mm)

Length 60 in (1524 mm)

Speed Constant

Drive Hydraulic motor, protected by relief valve

Digging Pressure/Wear Control Pneumatic outside cab

Lift Control Pneumatic from control panel

Type Polypropylene prefab, disposable

Location Center of sweeper

Debris Hopper

Volumetric Capacity 8.0 yd³ (6.0 m³)

Floor Angle 10 degrees

Dump Angle 50 degrees

Construction 10 gauge (3.4 mm) steel sides and top, 1/4" gauge (6.4 mm) steel floor

Lifting Double acting hydraulic cylinder

Hopper Dump Door Hydraulic open/close and lock/unlock

Full Load Indicator Weight actuated with in-cab warning light

Hopper Screens Hinged, quick release, steel

Safety Prop Steel bar under body and outside rear door

Hopper Dumping Controls Push button on right side of unit

In-Cab Dumping Controls Standard

Hydraulic System

Purpose Powers hydraulic motors on side brooms, blower fan, and activates hopper dump cycle

Hydraulic Blower Pump variable - piston type - with 4.2 cu-in (68.8 cc) /rev rating

Hydraulic Sweeper Pump gear driven with capacity of 32.2 GPM (121.9 LPM) @ 3400 RPM; sweeper brooms, and hopper dump functions

Reservoir Capacity 23 gal (87 L)

Filter Sweeper Functions System 10 micron spin-on type filter, twin suction strainers 100 mesh. Cooler hydraulic system accessible without raising hopper.

Filter Blower System 6 micron canister type

Filter Reservoir Vent 10 micron spin-on type breather

Spray Water System

Water Tank Construction Dual polyethylene, removable

Water System Capacity 335 gal (1268 L) standard

Pump Type Twin diaphragm with run-dry capability with HI and LO selectable pump speeds.

System Flow 8 GPM (30 LPM) (2 - 4 GPM Pumps)

System Pressure 40 PSI (2.8 bar)

Spray Nozzles (Quick Disconnect Type)

- 7 inside each suction nozzle

- 4 at extension broom

- 3 at each side broom (36" broom)

Controls On/off at control panel

Filter 100 mesh, cleanable

Anti-Siphon Fill Standard

Hydrant Fill Hose 16 ft 8 in (5080 mm) with coupling

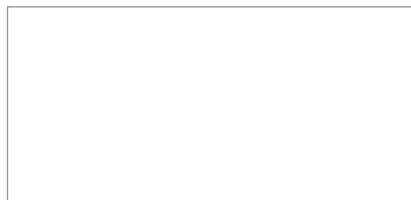
AVAILABLE ENHANCEMENTS

- Front spray bar
- Aux. lighting packages
- In-cab side broom tilt
- Variable broom speed
- Auxiliary hydraulic system
- Wandering hose
8 in (203 mm) diameter
- Auto lubrication system
- LifeLiner® Hopper System
- Stainless steel hopper
- Hopper inspection door(s)
- Hopper drain
- Hopper deluge washout system
- Auto-shutter
- High/low pressure washdown
- Auxiliary water tank capacities
- PM-10 water system
- Quiet Pak™ acoustical insulation on front cowling and access doors
- Extended warranty

PAINT

Powder Coated,
Standard Elgin white
and gray

YOUR ELGIN DEALER IS:



CHASSIS

Available on commercial
cab-over and conventional,
consult factory

WARRANTY

Sweeper
1 year parts and labor
VSD
3 year parts and labor

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Effective 8/19
P/N 0705433