



500x[®]
AIR SWEEPER

GENERAL SPECIFICATIONS



MODEL 500x[®] REGENERATIVE AIR SWEEPER[®]
CNG AUXILIARY ENGINE/CNG CHASSIS

SWEEPER AUXILIARY ENGINE

Engine KEM/GM Vortec 5700 CNG
Displacement 350 in³ (5.7 L)
Power 136 HP (101 kW) @ 2650 RPM
Net torque 284 lb-ft (385 Nm) @ 2100 RPM
Air cleaner Heavy duty, w/pre-cleaner
Oil filter Remote mount, spin on, full flow
Auxiliary engine fuel rack shared with chassis
CNG fuel rack capacity 60 DGE (227 DLE)
Auxiliary engine shutdown system
Remote engine oil cooler

BLOWER, RUBBER LINED

Aluminum alloy, high volume, open face turbine
Purpose Creates blast and suction
Bearings ... (2) sealed lifetime lube, anti-friction
Housing Isolation mounted with abrasion resistant, replaceable liner
Housing seal Heavy rubber section, non-wiping, spring actuated Tilt-N-Seal[®] design
Drive Fixed displacement, heavy duty, hydraulic motor

DUST SEPARATOR

Type Cyclonic, multipass, centrifugal separation
Size 28 x 48 in (711 x 1219 mm)
Location Inside hopper
Particulate removal achieved through dual skimmer slots into hopper
Housing ... Abrasion resistant, replaceable liner
Self-opening, self-emptying when hopper tilts

HOPPER, STAINLESS STEEL

Volumetric capacity 5.7 yd³ (4.3 m³)
Useable capacity 4.0 yd³ (3.06 m³)
Construction Welded non-magnetic stainless steel plate w/integral stiffeners
Floor dump angle 50°
Dump door opening 68 x 57 in (1727 x 1448 mm)
Dump door Self-locking
Chute 72 x 48 in (183 x 122 cm) stainless steel lined
Chute reach 22 in (56 cm) w/o side shift
Dumping direction Right side
Lifting method Two stage scissor lift, dual hydraulic cylinders w/integral holding valves
Lift capacity 10,000 lbs (4536 kg)
Dump height Variable
Minimum 24 in (610 mm) from bottom of chute to ground
Maximum 132 in (11 ft) (3353 mm) from bottom of chute to ground
Overall 262 in (21 ft 8 in) (6655 mm)
Dump tilt slope 50°
Hopper screen 2 piece stainless steel screen w/access for cleaning top side
Hopper drain system

BROOM ASSIST PICK-UP HEAD (BAH[®])

Type Dual chamber with broom assist
Function Delivers air blast and suction
Width 87 in (2210 mm)
Pick-up head area 3567 in² (2.3 m²)
Broom 12 x 79 in (305 x 2007 mm) enclosed in rear of pick-up head
Suspension 4 springs 2 drag links
Suction hose 12 in diameter (305 mm)
Pressure hose 14 in diameter (356 mm)
Skids DUO SKID[®], long-life carbide

Pressure bleeder Integral for leaf/light material pick-up.
Reverse pick-up head system

GUTTER BROOMS, TWIN, Patented

Standard equipment, includes floodlights and parabolic mirrors
Drive Variable speed non-reversible hydraulic motor
Adjustment Adjustable for down pressure, pattern and wear
Down pressure Automatically adjusts to requirement
Flexibility All directions, integral anti-damage "swing away" relief valve
Brooms 43 in dia. (1.1 m) steel wire, vertical diggers
Hydraulic tilt Twin gutter brooms adjust for curb depth

HYDRAULIC SYSTEM

Drive Direct drive
Blower pump Heavy duty variable displacement piston pump, hydrostatically drives blower
Sweeper pump Variable displacement piston pump, operates gutter brooms, pick-up head, stabilizers, hopper lift, hopper dump, and hopper door.
Blower pump flow 26 GPM (100 LPM)
Sweeper pump flow 11 GPM (42 LPM)
BAH pump Gear pump, operates Broom Assist Head broom motor
BAH pump flow 8 GPM (30 LPM)
Reservoir 34 gal (129 L)
Return filter 3 micron, spin-on, in-line return
Charge loop filter 10 micron
Vent filter 10 micron spin-on
Cooler Air to oil
Hydraulic level/temperature shutdown system
Hydraulic oil filter restriction indicator - in cab
Hydraulic oil sight/temperature gauge
Auxiliary hydraulic system

DUST CONTROL SYSTEM

Water spray nozzles for dust suppression
Pump Electric diaphragm
Reservoirs ... Polyethylene, 250 gallons (946 L)
Filter 80 mesh stainless steel, in-line
Low water shut-off Safety shut-off with low water warning light in cab
Spray nozzles:
Pick-up head 4
Gutter brooms (each) 2
Hopper 1
Hydrant fill hose w/storage area 20 ft (6 m)

CONTROL SYSTEM

BlueLogic[®] Control System
Multiplexed electrical system includes hardware and TYMCO designed software that integrates the in-cab controls to the auxiliary engine and all sweeper functions; as well as provides intelligent safety features and on-board diagnostics (OBD) for the auxiliary engine and sweeper through the BlueLogic display.

BlueLogic Display

Pedestal mounted touchscreen display provides sweeper and auxiliary engine data to the operator and includes hour meters (trip and total) for the auxiliary engine, gutter brooms, pick-up head, blower, water pump, and BAH broom if applicable; dump cycle counter, sweeper odometer (records curb miles swept and sweeping hours), service reminders, custom reminders, overspeed warning, low water audible alarm, and OBD.

Interior Components

Leaf pressure bleeder control, BlueLogic display, auxiliary fuse panel, illuminated control switches: pick-up head, gutter brooms, blower RPM, dump cycle, variable speed gutter brooms, dust control water system nozzles, safety lights.

Exterior Components

BlueLogic multiplex modules

STORAGE COMPARTMENT

Location Rear left, beneath auxiliary engine
Dimensions 18 x 18 x 30 in (457 x 457 x 762 mm)

SAFETY/WARNING DEVICES

BlueLogic Control System utilizes solid-state proximity switches to help provide several safety systems: Right and left stabilizers automatically deploy before raising the hopper and retract after lowering the hopper, stabilizers down warning system, transmission interlock when stabilizers are down, blower actuation interlock, and minimum dump interlock. Other devices include alternating LED rear flashers, front mounted SAE Class 1/California Title 13 amber beacon light (LED) w/ limb guard, back-up alarm, scissor lift safety props, and shop prop.

OPTIONAL EQUIPMENT

AOD water pump w/washdown hose/spray gun
Abrasion protection package
Air purge, water system
Auto Sweep Interrupt (ASI)
Auxiliary hand hose, 8 in (203 mm) diameter
Camera/monitor system
Engine block heater
Gutter broom, drop down
High output water system
Hopper load indicator alarms
Hopper vibrator - electric
Linear actuator - pressure bleeder w/gauge
Low emissions package (required for South Coast AQMD Rule 1186)
Magnet, light, standard, or heavy duty
Pick-up head front curtain lifter
Sweeper deluge system, includes hopper and pick-up head deluge w/6 in (152 mm) cleanout port
Screen vibrator - pneumatic
Paint color (other than TYMCO standard white)

Special options are available for your individual requirements. Contact your local dealer or TYMCO

CHASSIS AVAILABLE

Freightliner M2-112