TYMCO®
REGENERATIVE AIR SWEEPERS

500x® AIR SWEEPER CNG

GENERAL SPECIFICATIONS

MODEL 500x® HIGH DUMP REGENERATIVE® AIR STREET SWEEPER

CNG AUXILIARY ENGINE / CNG CONVENTIONAL CAB 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, and in-cab air restriction indicator w/gauge.
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 COATED

Aluminum alloy, high volume, open face turbine
Bearings ... (2) sealed lifetime lube, anti-friction
Housing .....Patented, isolation mounted, steel 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, RUBBER LINED

Type ..... Cyclonic, multipass, centrifugal separation
Size.....28 x 48 in (71 x 122 cm)
Location ..... Inside hopper
Particulate removal achieved through dual 48 in (122 cm) 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
Dump door opening ..... 68 x 57 in (173 x 145 cm)
Dump door.....Hydraulically self-locking
Chute ..... 72 x 48 in (183 x 122 cm) stainless steel lined
Chute reach ..... 22 in (56 cm) w/o side shift
Dump direction .....Right side
Lifting method ..... Two stage scissor lift, dual hydraulic cylinders w/integral holding valves
Lift capacity..... 10,000 lbs (4536 kg)
Floor dump angle..... 50°
Dump height .....Variable
Minimum .....24 in (61 cm) from bottom of chute to ground
Maximum .....132 in (11 ft) (335 cm) from bottom of chute to ground
Overall .....262 in (21 ft 8 in) (665.5 cm)
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
Width .....87 in (221 cm)
Pick-up head area ..... 3567 in² (2.3 m²)
Broom ..... 12 x 79 in (30.5 x 200.5 cm) enclosed in rear of pick-up head
Suspension..... (4) springs, (2) drag links
Suction hose..... 12 in diameter (30.5 cm)
Pressure hose ..... 14 in diameter (35.5 cm)
Skids..... DUO SKID®, long-life carbide
Pressure bleeder ..... Cable operated
Reverse pick-up head system

GUTTER BROOMS, TWIN, Patented

Drive ..... Variable speed non-reversible hydraulic motor
Adjustment..... Adjustable for down pressure, pattern and wear
Down pressure ..... Automatic
Flexibility.....Integral anti-damage "swing away" relief valve
Brooms .....43 in dia. (109 cm) steel wire, vertical diggers
Hydraulic tilt.....Adjust for curb depth
Floodlights ..... (2) LED
Parabolic mirrors .....(2) 10.5 in (26.67 cm) dia.

HYDRAULIC SYSTEM

Drive ..... Direct drive
Blower pump.....Heavy duty variable displacement piston pump, hydrostatically drives blower
Blower pump flow rate ..... 26 GPM (100 LPM)
Sweeper pump ..... Variable displacement piston pump, operates gutter brooms, pick-up head, stabilizers, hopper lift, hopper dump, and hopper door.
Sweeper pump flow rate.....11 GPM (42 LPM)
BAH pump ..... Gear pump
BAH pump flow rate..... 8 GPM (30 LPM)
Reservoir ..... 34 gal (129 L)
Return filter ..... 6 µm, spin-on, in-line return
Charge loop filter ..... 10 µm
Vent filter..... 10 µm spin-on
Hydraulic oil ..... Extended life 10W ISO 46
Cooler..... Air to oil
Hydraulic level/temperature shutdown system w/ temperature gauge in cab
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 audible and visual indicator 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 and includes hour meters (trip and total) for the auxiliary engine, gutter brooms, pick-up head, blower, water pump, and BAH broom; dump cycle counter, sweeper odometer (records curb miles swept and sweeping hours), service reminders, custom reminders, overspeed warning, low water audible alarm, dust control system winterization guide, and OBD.

Interior Components
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, GPS sweeping status kit.

Exterior Components
BlueLogic Control Modules (BCMs)

STORAGE COMPARTMENT

Location ..... Rear left, beneath auxiliary engine
Dimensions.....18 x 18 x 30 in (46 x 46 x 76 cm)

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 inclinometer, alternating LED rear flashers, front mounted SAE Class 1/ California Title 13 amber beacon light (LED) w/ limb guard, rear view camera system, back-up alarm, scissor lift safety props, dump door/tilt cylinder safety props, and shop prop.

OPTIONAL EQUIPMENT

AOD water pump w/washdown hose/spray gun
Abrasion protection package
Auto Sweep Assist (ASA)
Auxiliary hand hose, 8 in (20 cm) diameter
Camera/monitor systems:
Additional camera views:
Pick-up head view
Gutter broom view - left and/or right
CurbView camera system:
Dump view (Additional to CurbView)
Gutter broom, drop down
High output water system
Hopper load indicator alarms w/gauge
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
Shop air purge, dust control system
Sweeper deluge system, includes hopper and pick-up head deluge w/6 in (15 cm) cleanout port
Screen vibrator - pneumatic
Paint color (other than TYMCO standard white)

Special options are available. Contact your local dealer or TYMCO

CHASSIS AVAILABLE

Freightliner M2-112 CNG

South Coast AQMD Rule 1186 PM_{10} and Rule 1186.1 Alternative Fuel Certified
1-800-258-9626
www.tymco.com

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