

SPECIFICATIONS FOR A SELF-PROPELLED, WALK-BEHIND, BATTERY-POWERED SCRUBBERS WITH 26 in, 28 in, 32 in, & 34 in SCRUB PATHS IN DISC AND CYLINDRICAL BRUSH CONFIGURATIONS

INTENT: The intent of these specifications are to describe a range of self-propelled, battery-powered, walk-behind machines capable of scrubbing surfaces such as concrete, asphalt, tile, marble, or terrazzo flooring.

In order to reduce labor costs, the capacities of this machine are critical.

All exceptions to the Specifications must be clearly identified and submitted, in writing, on a separate sheet of paper marked “Exceptions”. Bidders who fail to submit their exceptions will not be considered.

POWER SOURCES: Machine shall have Qty. (4) 6 Volt batteries in a 24 Volt system. Rated battery capacities are 242 Ah or 310 Ah (wet acid) or 312 Ah AGM. A 24 Volt, 20 Amp free standing charger or 25 Amp onboard charger for rapid charge cycles and battery protection is required.

Unit must be equipped with a low voltage shutdown system to protect batteries. Brushes to automatically shut off required at 80% discharge.

SCRUBBING SYSTEM: Utilizes a dual cylindrical style or disc brush design in configurations per the table below. Minimum of two 0.74 hp (550 Watt) brush drive motors used to drive brushes.

Scrub Path	26 in (66 cm)	28 in (71 cm)	28 in (71 cm)	32 in (81 cm)	34 in (86 cm)
Scrub Head Type	Disc	Disc	Cylindrical	Cylindrical	Disc
Brush Pad/Driver Assembly	Qty. (2) 13 in (33 cm)	Qty. (2) 14 in (35.5 cm)	Qty. (2) 27 in (68.6 cm)	Qty. (2) 31 in (78.7 cm)	Qty. (2) 17 in (43 cm)
Brush Speed	270 rpm	270 rpm	840 rpm	840 rpm	270 rpm
Scrub Pressure	80 lb (36.3 kg) 170 lb (77.1 kg)	80 lb (36.3 kg) 170 lb (77.1 kg)	80 lb (36.3 kg)	80 lb (36.3 kg)	80 lb (36.3 kg) 170 lb (77.1 kg)

Whenever scrub function is activated, brush rotation shall begin automatically whenever the machine is propelled in either forward or reverse direction. Solution flow and detergent dispensing (EcoFlex configurations) is automatically initiated only when propelling forward. Machine must provide protection to the floor by ceasing brush rotation whenever the machine is stationary as well as stop all solution flow to preventing puddle and minimize water/detergent waste.

VACUUM SYSTEM: To be equipped with a minimum 0.66 hp (490 Watt) 3 stage vacuum motor, ball float and full recovery tank vacuum fan shutoff. Vacuum fan shall continue to operate for 10 seconds after the squeegee is lifted from the floor to clear the vacuum hose of excess dirty water so it does not drip back down on the floor.

SQUEEGEE DESIGN: Shall have a maximum width of as noted in table below with four-sided wiping blades, quick-release mechanism, and “break-away” design. Shall be constructed using corrosion resistant material and require no tools for adjustment.

Scrubber Model	SC750	SC800
Squeegee Width	35.5 in (90 cm)	41.5 in (105 cm)

SOLUTION / RECOVERY TANKS: Two configurations with minimum capacity as noted in table below. Capable of handling solution up to 150° Fahrenheit, constructed consisting of roto molded polyethylene or equivalent requested. Recovery tank shall be refillable from the rear of the machine. Shall require no tools to lift off recovery tank for service access to batteries and squeegee assembly.

Scrubber Model	SC750	SC800
Solution Tank	21 gal (80 L)	25 gal (95 L)
Recovery Tank	21 gal (80 L)	25 gal (95 L)

DRIVE SYSTEM: Shall have a 0.74 hp (552 Watt) variable speed forward and reverse transaxle drive system. Max speed and gradeability as noted below.

Propel Speed - Transport: 3.6 mph (5.8 km/h)
 Scrubbing: 3.4 mph (5.5 km/h)

Gradeability - Scrubbing and Transport (Full): 8.5°/14.9%
 Trailer ramp (Empty): 10.0°/17.6%

SOUND LEVEL: Shall be maximum 61 dB A at operator position per IEC 60704-1.

DIMENSIONS: For optimal maneuverability the overall maximum machine dimensions for each given capacity, scrubber shall not exceed the following:

Scrubber Model	SC750	SC800
Length		
Standard	N/A	63.3 in (161 cm)
ST	58.1 in (148 cm)	61.5 in (156 cm)
Width		
Without Squeegee	30.8 in (78 cm)	36.8 in (93 cm)
Squeegee	35.5 in (90 cm)	41.5 in (105 cm)
Height		
Standard	N/A	45.1 in (115 cm)
ST	44.5 in (113 cm)	44.5 in (113 cm)

TIRES: Shall have foam-filled, high traction, non-marking polyurethane tires to protect floor surface. Minimum 10.5 inch (26.7 cm) tire diameter for traversing rough or uneven surfaces.

WHEEL PSI: Shall not exceed maximum wheel loading when fully loaded as noted.

Scrubber Model	SC750	SC800
Static Wheel Load		
Front (per wheel)	348 lb (158 kg)	375 lb (170 kg)
Rear (per wheel)	240 lb (109 kg)	254 lb (115 kg)
Static Wheel Load		
Front (per wheel)	60 psi (0.41 N/mm ²)	71 psi (0.49 N/mm ²)
Rear (per wheel)	288 psi (1.98 N/mm ²)	288 psi (1.98 N/mm ²)

MINIMUM AISLE U-TURN: Shall have minimum aisle u-turn left or right.

Scrubber Model	SC750	SC800
Maximum Aisle U-Turn	65 in (1.65 m)	66 in (1.68 m)

INTERCHANGABLE SCRUB DECKS: Disc and Cylindrical decks shall be completely interchangeable with no-tools.

OPERATING SYSTEM: Machine shall have integrated solution flow and scrub pressure into one-touch pre-calibrated scrub settings. After selecting a scrub setting (“Regular” or “Extreme”) the machine will adjust solution flow and scrub pressure accordingly.

CONTROLS:

ST Models: Push button controls (left and right sides of handle) with rotary control to limit maximum travel speed plus isolated single push button control for reverse operation. Push button controls shall be oriented on handle in such a manner to protect from damage if handle of machine should strike a vertical surface such as a wall. Simple rocker switches for other key machine functions to simplify serviceability.

Standard Models: Machine shall have a paddle-style control interface allowing multiple hand/wrist locations during operation. Control shall provide proportional speed control based on hand pressure. Rotary control required to limit maximum travel speed. Simple membrane touch pad interface for all other key machine functions.

Other controls required are:

- Master Key Switch
- Full Recovery Tank Indicator
- Empty Solution Tank Indicator
- Hour Meter
- Battery Level Indicator
- Onboard Diagnostics
- Solution On/Off Switch
- Vacuum Delay Shut Off
- Vacuum On/Off Switch
- Pre-Wetting Brush Switch

BRUSH REMOVAL SYSTEM: Disc machines shall be capable of removing or installing brushes from their mount without operator contact with the brush or the need to reach under the scrub deck. No tools shall be required to remove and/or install brushes on all machines.

APPROVALS: Shall have certification from ETL and CE and clearly displayed labels showing as such.

WARRANTY: The warranty must provide the following minimum coverage:
2 years labor, 6 months travel, 3 years parts, 8 years roto molded components.

ECOFLEX MODELS

ONBOARD DETERGENT SYSTEM: Machine shall be capable of dispensing detergent into the clean water solution flow using any suitable manufacturers' liquid detergent placed into a refillable reservoir having a minimum capacity of 1.25 gallons (4.75 L). The machine shall be able to operate at three preprogrammed flow rates ranging from 0.26 – 0.65 GPM (1.0 – 2.5 L/min). The default detergent dilution ratio shall be programmable (1:32, 1:50, 1:64, 1:100, 1:128, 1:150, 1:200, 1:256, 1:300, 1:400). A single button shall be provided to allow a momentary 60 second increase in solution flow rate, brush pressure (disc models), including pre-programmed lower detergent dilution ratio to provide enhanced cleaning performance with minimal increases in water and detergent usage.

System must be capable of purging all detergent from the supply line. Rapid interchange of multiple detergent reservoirs for varied cleaning applications without the need for tools. Shall incorporate separate detergent pump for dispensing solution to the scrub brushes. Detergent system must allow for a refillable bottle and shall be able to accommodate and be compatible with various liquid detergents from multiple manufacturers.