

**SPECIFICATION
FOR
SCRUBBER AND BUFFER, BATTERY POWERED, AUTOMATIC**

This specification is released for procurement purposes until revised or rescinded.)

SCOPE

This specification covers requirements for Automatic Battery Operated Scrubbing and Buffing Floor Machines with Squeegees.

I. CLASSIFICATION

Type I - Brush Drive
Type II - Traction Drive

**Table 1
MINIMUM REQUIREMENTS**

Machine Type	Machine Size	Brush Spread Width (inches)		Squeegee Spread Width (inches)	Solution Tank Capacity (gallons)	Recovery Tank Capacity (gallons)	Battery Rating (Amp/Hr)	Vacuum Motor HP	Brush Motor HP
		Min	Max	Min	Min	Min	Min	Min	Min
I.	1	20"	23"	Width of cleaning path plus 4"	9	8	130	.75	.75
II.	1	20"	23"		9	8	130	.75	.75*
II.	2	24"	29"		15	15	180	.75	2 ea. .5 HP
II.	3	30"	38"		20	20	195	.75	2 ea. .5 HP **

Machines with, two brushes, must have 1" overlap minimum.

* Brush motor plus traction motor totaling .75 HP or more acceptable.

** One 2.25 HP system supply motor in lieu of two .5 HP brush motors acceptable.

II. APPLICABLE STANDARDS

Applicable performance portions of the following publications, latest revision, shall be part of this specification:

Battery Technical Manual
Battery Council International
401 North Michigan Avenue, 24th Floor
Chicago, Illinois 60611-4267

Underwriters Laboratories, UL 561, Standard for Floor Finishing Machines
and UL 583, Standard for Electric-Battery-Powered Industrial Trucks as applicable.
Underwriters Laboratories, Inc.
333 Pfingsten Road, Northbrook, IL 60062-2096

III. REQUIREMENTS

A. BRUSHES AND SQUEEGEE:

Machines shall be equipped, as a minimum, with bristle scrub brush(es) and dual squeegee blades, each blade 1/8-inch minimum thickness. Brush and squeegee combinations shall conform to the applicable spread width as specified in TABLE I.

B. MOTORS:

Motors shall be continuous duty and of the horsepower specified. Multiple motors are acceptable. Type II machine motors shall accommodate traction wheel drive or other mechanism that assures unit drive locomotion by wheel (not brush) power.

C. BATTERIES:

Batteries shall be either six (6) volt or twelve (12) volt as applicable and shall have ampere - hour rating as specified in TABLE I. Multiple batteries shall be of the same voltage. Batteries and battery charger shall be included with the equipment. Batteries shall be certified or otherwise documented as being in compliance with applicable requirements of the Battery Council International Specifications.

D. TANKS:

Metal tanks shall be protected with baked enamel or coated epoxy. Non-metal tanks shall be constructed from corrosion-resistant plastic. Tank drain mechanism shall permit solution drainage without removal of tanks from the machine. A tank drain hose shall be provided.

Tank capacity shall be as specified in TABLE I.

E. SWITCH:

Machines shall be equipped with non-conducting safety switch(es) which maybe controlled with either hand.

F. TECHNICAL DOCUMENTATION:

Technical Documentation should be provided to demonstrate compliance with the following requirements: Brushes and squeegee (Section III.A), motors (Section III.B), batteries (Section III.C), tanks (Section III.D), switches (Section III.E) and properties listed in MINIMUM REQUIREMENTS TABLE I. Manufacturer's specification sheet(s) or technical publication(s) are acceptable. Products bid must meet or exceed all specifications. Individual specifications and requirements must be addressed. A general statement such as "complies with all requirements" is not acceptable.

G. ENGLISH REQUIREMENT:

All written documentation including safety placards, manuals, labels, and other such written communication on or about this equipment shall be supplied in English.

H. SAFETY:

Complete equipment shall have a safety listing marking or label compliant to the North Carolina General Statute Chapter 66, Article 4, which shall indicate equipment has been evaluated by an independent third party laboratory acceptable by the North Carolina Building Codes Council as referenced on the current NC Department of Insurance website. The referenced webpage list indicates laboratories acceptable for listing evaluation of specific product categories and includes but is not limited to Underwriters Laboratories, Intertek (ETL) and CSA. The safety listing requirement applies to the entire unit, not just a component thereof, like a switch, motor, control panel or power supply cord.

Ref:

<http://www.ncdoi.com/osfm/engineering/bcc/documents/electricalmechanicalequipmentlabeling.pdf>

IV. WARRANTY

Machines furnished under this specification shall be new and guaranteed against defects in materials, workmanship, and performance in accordance with the manufacturer's standard warranty, except that in no event shall such coverage be for less than five (5) years for tanks, two (2) years for brush and drive motors, eighteen (18) months prorated for batteries, and one (1) year for entire machine. Parts shall be free of any charge to the owner or his representative during the warranty periods. Labor and transportation shall be free of any charge to the owner or his representative for one (1) year. Warranty coverage to begin on date machine is placed in service.

Any portion of manufacturer's standard warranty that exceeds the above warranty requirements shall be in effect on the contract, unless the State or owner (using agency) elects otherwise.

V. SERVICE, PARTS AND MANUALS

Maintenance locations and service offered may be consideration in the contract award. If requested by the State, or a particular using agency, the contractor shall make site visits and offer advice on specified floor maintenance situations related to this contract.

The ability to provide spare parts on a prompt and continual basis and the cost of spare parts may be considerations in awarding a bid. The bidder may be required to state in the Invitation for Bids, his sources of spare parts supply.

VI. ACCEPTANCE EVALUATION AND QUALITY ASSURANCE

A. OPERATIONAL TEST

The machine shall be equipped with a standard brush and operated for two hours on a flat mild steel plate. The machine shall be operated at full rated power. During and after the two hour operation, the machine shall be observed and examined for the following:

1. Quietness of operation and freedom from vibration
2. No overheating of motor/s
3. Lubrication and leakage of lubricant
4. Replacement of brush without special tools
5. Provision for feeding water to the scrubbing brush
6. Provision for draining recovery tank

Each machine will be inspected by the purchaser for any visual deficiencies or damage.

If a sample (or samples) is required, it shall be in compliance with instructions in the Invitation for Bids.

VII. DELIVERY AND PAYMENT

Delivery of and payment for equipment under this specification shall be in accordance with the terms and conditions of the Invitation for Bids. The contractor shall be responsible for any packing, packaging or protection required to ensure delivery in an undamaged condition.

VIII. ORDERING DATA

Purchaser should exercise any desired option offered herein and should specify the following in the Invitation for Bids:

1. Title, number and date of this specification.
2. Type and size machine desired as defined in this specification.
3. Optional accessories desired which are normally available with this type of equipment.