
* METRIC *

A-A-50478B
January 21, 1994
SUPERSEDING
A-A-50478A
October 25, 1989

COMMERCIAL ITEM DESCRIPTION

POLISHER, FLOOR, ELECTRIC, CONCENTRATED
WEIGHT SINGLE BRUSH
(COMMERCIAL TYPE)

This Commercial Item Description (CID) is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

Abstract. This CID covers commercial type electric floor polishers that are used for heavy-duty wet or dry scrubbing, for polishing and buffing wood and tile or linoleum covered floors, and for rug shampooing.

Salient characteristics.

1. Description. The polisher shall include all components necessary to ensure a fully functional product. The main component shall consist of a frame, operating handle, wheels, scrubbing and polishing brushes, pads, bumper, and motor. The weight of the polisher shall rest directly on the brush during operation. The brush speed shall not exceed 250 revolutions per minute (rpm) while operating without a load.

2. Design and construction. The dimensions for the polisher shall be as specified in table I. All dimensions are given in metric units; tolerances shall be +/-3 percent. The weight of the polisher in table I shall include one brush.

*Beneficial comments (recommendations, additions, deletions) and any *
*pertinent data which may be of use in improving this document should be *
*addressed to: Commanding Officer (Code 156), Naval Construction Battalion *
*Center, 1000 23rd Avenue, Port Hueneme, CA 93043-4301. *

FSC 7910

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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3. Duty style. Style 1 or 2 shall be furnished as specified.

Style 1. Commercial duty. Sizes shall be as specified in table I.

Style 2. Hospital duty. Sizes shall be as specified in table I, plus special motor which shall be fully enclosed and cooled by convection. No air currents which could possibly contain contaminated material shall be utilized in cooling internal inaccessible mechanisms of motor or other components.

TABLE I. Styles 1 and 2 machines, polishing and scrubbing electric, concentrated weight, single-brush.

	Overall diameter of brush fiber (min)	Area of polishing brush fiber (min)	Continuous rating of motor (min)	Weight of machine (min)	Wheel diameter (min)
	mm	mm ²	watt	kg	mm
1	260	45 000	190	18	62
2	310	65 000	250	23	62
3	360	90 000	375	27	90
4	430	130 000	560	34	90
5	480	155 000	750	46	115
6	530	195 000	750	48	125
7	550	210 000	750	56	125

4. Frame. The frame enclosing the operating mechanism shall be durably constructed and reinforced to withstand rigorous heavy-duty service. The polisher structure shall include a brush cover made of metal or durable plastic. The cover shall extend outward and down in a form of an apron covering the entire back of the brush.

5. Operating handle. The operating handle shall include a metal handle tube and a metal handle bar with nonmetallic handgrips. The power switch shall be incorporated into the handle in such a manner that it shall be grasped by at least one hand for operation. Means shall be provided for locking the handle in the upright position to facilitate storage of the polisher. The design of the handle shall provide for the positioning and locking of the handle in different working positions between 45 and 60 degree angles as measured from the floor plane.

6. Brushes. Each polisher shall be furnished with three polishing brushes and two scrubbing brushes. Brushes shall be sectional and may be laminated or solid. The diameter of the brushes shall conform to table I. The machine shall be so constructed that brushes may be replaced without the use of special tools.

7. Polishing brushes. The sectional polishing brushes shall have a suitable reusable metal or plastic plate securely attached to it. The tufts shall have a free length of not less than 38 mm when measured at right angles to the

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surface of the brush block. The polishing brush fibers shall be made of 60 percent, +/-5 percent tampico and 40 percent +/-5 percent palmyra; or 100 percent crimped polyethylene filaments of 40 mm minimum diameter.

8. Scrubbing brushes. Scrubbing brushes shall have a heavy reusable metal or plastic back and shall have filler composed of 100 percent palmetto or 100 percent bassine fiber. The filler shall plate when measured at right angles to the face.

9. Bumper. A replaceable rubber or vinyl bumper of not less than 20 mm in vertical direction shall be securely attached around the portion of the motor housing and the brush housing. The bumper shall not dent or mark objects with which it comes in contact.

10. Wheels and mounting. Unless otherwise specified, each machine shall have two wheels of the minimum diameter specified by table I. The wheels shall be so mounted that they either move off of the floor so that the machine can be used, or shall be so positioned that when the machine is in its operating position the wheels do not contact the floor. The wheels shall be composed of a running surface of non-marking resilient material.

11. Electrical characteristics. Unless otherwise specified, the polisher shall be designed to operate on 120 volts, alternating current, 60 Hertz, single phase. All wiring, cord, plug, and grounding shall be in accordance with UL 561. A 3-conductor cord of not less than 15 meters shall be provided. Polisher shall have a quick break switch for starting and stopping the motor. The switch shall automatically open the motor circuit the moment the operator releases the handle of the machine. The grounding conductor in the cable assembly shall form a continuous conductor path from the point of attachment on the motor housing to the wall receptacle when the machine is connected and ready for operation. The grounding path shall not incorporate any movable joints. The resistance in ohms from the motor frame to the ground connection on the plug end of the 15-meter cord shall be less than 1 ohm.

12. Manual. The contractor shall furnish its standard manual of operation with each machine. This manual shall as a minimum provide detailed instructions for the proper operation and maintenance of the machine and a list of service parts available for the polisher.

13. Standards compliance. The polishers shall conform to the floor-finishing machine requirements of UL 561. The data plate or listing with re-examination of the Underwriter Laboratories, Inc. may be accepted as evidence that the polishers conform to this requirement. In lieu of the label or listing, the contractor may submit independent proof, satisfactory to the contracting agency, that the polisher conforms to the applicable requirements of the published standard, including methods of tests of UL 561.

14. Workmanship. The polisher shall be completely assembled and finished in accordance with manufacturer's standard practices. The polisher shall be free from fractures, splits, punctures, tears, dents, creases, bows, miscasts, malformation or deterioration. The finish applied shall be continuous, smooth, adherent and free from imbedded foreign matter. Painted surfaces and parts shall contain no sags, runs, drips, creeds, laps, bubbles or streaks. All parts, components, and surfaces shall be clean with no trace of grease, flux, or

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other contaminants. The polisher shall operate quietly and be free from vibrations, overheating of the motor and any leakage of lubricants. Replacement of the brushes and pads shall be made without the use of special tools. The polisher shall polish or scrub an area uniformly in size and continuity with good proximity of brush contact up to a vertical surface.

Quality assurance provisions.

1. Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government.
2. Responsibility for compliance. The inspection requirements specified herein are classified as first article inspection and quality conformance inspection.
3. First article inspection. The first article inspection shall be performed on one polisher when a first article is specified in the contract or order. The inspection shall include examination and operational tests as specified herein.
4. Quality conformance inspection. The quality conformance inspection shall be performed on the sample polisher selected in accordance with the inspection lot and sampling requirements. This inspection shall include examination and operational tests as specified herein.
5. Inspection lot. All units of the same style and size offered to the Government at one time shall be considered a lot for purposes of inspection.
6. Sampling. A random sample of polisher(s) shall be selected from each lot in accordance with MIL-STD-105. The sample unit shall be one complete polisher.
7. Examination. Each sample selected in accordance with the inspection lot, sampling requirements, and also the first article shall be examined for compliance with the salient characteristics requirements specified herein. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirement or presence of one or more defects listed below, shall constitute cause for rejection.

Defects

- No evidence of compliance with UL 561 standard.
- Unit style and size not as specified.
- Unit not in conformance with specified electrical requirements.
- Unit weight not as specified.
- Unit frame, handle, wheels, bumper not as specified.
- Brushes not as specified.
- Dimensions not as specified.
- Unit motor power rating not as specified.
- Name/data plate missing, not permanently attached or contains wrong, incomplete, or illegible data not in compliance with UL 561.
- Parts and accessories not as specified.
- Unit workmanship not conforming to the requirements of the CID.

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8. Operational test. The polisher shall be equipped with a polishing brush or brushes specified herein, and shall be operated for 2 hours on a waxed linoleum floor or a steel plate. The machine shall be operated at full rated voltage. Unless otherwise specified, only one polisher per contract need be tested for the full 2 hours, all other polishers require an operational test for 15 minutes. During and after the 2-hour or 15-minute operation, the polisher shall be observed and examined for the following:

- a. Quietness of operation and freedom from vibration.
- b. Overheating of motor.
- c. Lubrication and leakage of lubricant.
- d. Replacement of brush without the use of special tools.
- e. Uniformity, continuity, size of polishing area and proximity of brush contact up to a vertical surface.
- f. Resistance in ohms from the motor frame to ground connection on the plug end of the 15 meter cord is less than 1 ohm.

Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

Inch-pound products. Products manufactured to inch-pound dimensions will be considered on an equal basis with those manufactured using metric units, provided they fall within +/-3 percent of the conversion tables contained in the latest revision of ASTM E380, and all other requirements of this CID are met.

If a product is manufactured to inch-pound dimensions and those dimensions exceed the tolerances specified in the metric units, a request should be made to the contracting officer to determine if the product is acceptable. The contracting officer has the option of accepting or rejecting the product.

Regulatory requirements. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

Preservation, packing, and marking. Unless otherwise specified in the contract or order, the preservation, packing, and marking shall be in accordance with ASTM D3951.

Notes. Acquisition activity should specify or initiate the following:

1. The title, number, and date of this commercial item description.
2. The style and size desired.
3. The electrical characteristics required if other than as specified.
4. The wheel size required if other than specified.
5. When the operational test is not as specified.
6. When a first article test and inspection is required.
7. When the contractor is not responsible for inspection and testing.
8. When preservation, packing, and marking is other than as specified.

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Part numbering. CID based part identification numbers. The following part identification numbering (PIN) procedure is for Government purposes and does not constitute a requirement for the contractor.

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*   *   * *----- Size designator code 1 = Size 1
*   *   *           Size designator code 2 = Size 2
*   *   *           Size designator code 3 = Size 3
*   *   *           Size designator code 4 = Size 4
*   *   *           Size designator code 5 = Size 5
*   *   *           Size designator code 6 = Size 6
*   *   *           Size designator code 7 = Size 7
*   *   *
*   *   *----- Style designator code A = Style 1
*   *           Style designator code B = Style 2
*   *
*   *----- CID Number
*
*----- Designates a commercial item description

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The style of polisher is identified by a single alpha code character (see table II).

Table II. Style of polisher.

Style	Style Designator Code
1	A
2	B

The size of polisher is identified by a single numerical code character (see table III).

Table III. Size of polisher.

Size	Size Designator Code
1	1
2	2
3	3
4	4
5	5
6	6
7	7

The following national stock numbers will use this document and are cross referenced to the new PIN codes.

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7910-00-224-7985 AA50478A1
7910-00-628-9585 AA50478B7
7910-00-680-8295 AA50478A2
7910-00-680-8296 AA50478A3
7910-00-680-8297 AA50478A4
7910-00-682-6905 AA50478A3 220 VAC
7910-00-913-3219 AA50478A7
7910-00-935-3965 AA50478B5
7910-00-985-6794 AA50478B2
7910-00-985-6797 AA50478B3
7910-00-985-6798 AA50478B4
7910-01-154-1152 AA50478A4 220 VAC

ASTM Standards are available from the ASTM, 1916 Race Street, Philadelphia, PA 19103.

UL Standards are available from the Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062.

MIL-STD-105 is available from the Defense Printing Service Detachment Office, Bldg. 4D (NPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MILITARY INTERESTS:

CIVIL AGENCY COORDINATING ACTIVITIES:

Custodians

GSA - FSS

Navy - YD1
Air Force - 99

PREPARING ACTIVITY:

Navy - YD1

Review Activities

(Project 7910-0088)

Army - GL
Navy - MC
Air Force - 84