

[INCH-POUND]

A-A-59285

17 March 1999

SUPERSEDES

MIL-S-80274

7 July 1987

COMMERCIAL ITEM DESCRIPTION

SAWS, POWER, HACK

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. SCOPE. This commercial item description (CID) covers manual and automatic bar feed metal-cutting power hacksaws used for rough cutoff operations.
2. CLASSIFICATION. The power hacksaws shall be of the following styles and sizes. Size refers to the maximum bar stock capacity the machine can accommodate. The style and size to be furnished shall be as specified (see 7.2(b)).

Style A - Manual feed

Style B - Automatic feed

Size 1 - 6 x 6 inch

Size 2 - 10 x 10 inch

Size 3 - 12 x 12 inch

Size 4 - 14 x 14 inch

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Supply Center Richmond, ATTN: DSCR-VBD, 8000 Jefferson Davis Highway, Richmond, VA 23297-5610.

AMSC N/A

FSC 3405

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

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3. SALIENT CHARACTERISTICS

3.1 General requirements. The machine shall be new and one of the manufacturer's current models capable of operation in accordance with the requirements herein. All parts subject to wear, breakage, or distortion shall be accessible for adjustment, replacement, and repair. Mechanisms requiring periodic manual lubrication shall be readily accessible for servicing.

3.2 Components. The power hacksaws shall, as a minimum, include the following components:

3.2.1 Base. The power hacksaw base shall support all components of the machine and shall be constructed with the strength and rigidity required to meet the performance specifications shown in table I of section 3.3. The base shall provide a means for leveling and securing the machine to a surface.

3.2.2 Saw head. The saw head shall consist of the hacksaw blade and blade yoke. The saw head shall lift clear of the cutting area on the return stroke. The sawing motion on style B machines shall automatically stop after completion of the cut, and the saw head shall return to a fully retracted idle position.

3.2.3 Blade drive. The blade drive mechanism shall provide the reciprocating cutting motion of the saw blade. The blade speed (strokes per minute) shall be adjustable through an infinitely variable range or a number of discrete setpoints as specified (see 7.2(c)). The blade cutting pressure shall be adjustable by operator control through an infinitely variable range. When specified (see 7.2(d)), the blade drive mechanism shall have an accelerated return stroke operation. The blade drive mechanism shall provide an automatic stop function in the event of blade breakage.

3.2.4 Material handling system. When specified (see 7.2(e)), the power hacksaw shall be provided with an adjustable workpiece support stand(s). The stand(s) shall be roller type and rated for the maximum capacity of the machine. When specified (see 7.2(f)), the material-holding vise shall be a mitering type with a graduated scale from 0 to 45 degrees. When specified (see 7.2(g)), a nesting fixture for multiple-piece cutting shall be provided. The material-holding vise position shall be adjustable forward and backward with respect to the hinge point of the saw head so that the workpiece can be located at any position along the entire cutting portion of the saw blade. Style B machines shall have an automatic material-holding vise, an automatic bar feed mechanism that shall allow the cut length of workpieces to be preset, and loading and discharge tracks rated for the maximum capacity of the machine. When specified (see 7.2(h)), style B machines shall have a cut counter for selecting the number of cuts to be made. The automatic bar feed mechanism shall feed the metal stock to the stop, automatically clamp the stock, and shall begin cutting at the preset stroke speed and force until the selected number of cuts have been achieved. At the end of the cycle, the saw head shall cease reciprocating movement and return to a retracted position.

3.2.5 Operator control panel. The operator control panel on style A and style B machines shall be convenient to the operator and, as a minimum, consist of machine start/stop, blade speed setting, and blade cutting force setting. Style B machines shall provide controls for the automatic bar feed and, as a minimum, shall consist of a cut length setting and cut counter for selecting the number of cuts to be made.

3.2.6 Coolant system. The coolant system shall consist of a sump, power-driven pump, and coolant nozzle(s). The coolant nozzle(s) shall be adjustable to allow coolant to be directed to the cutting area. A means shall be provided to determine and maintain coolant level within the sump. A removable strainer shall be provided to remove metal chips from the coolant.

3.2.7 Hydraulic system. When furnished, the hydraulic system shall provide overpressure protection and a means to determine hydraulic fluid level.

3.2.8 Electrical system. Unless otherwise specified (see 7.2(i)), the electrical system shall conform to the National Fire Protection Association (ANSI/NFPA) 79. The machine shall have dual 230/460-volt, 3-phase, 60-hertz circuit capability and shall be wired for the voltage specified (see 7.2(j)). Unless otherwise specified (see 7.2(k)), the control system power shall be provided by a separate 120-volt, single-phase, 60-hertz circuit from the machine main power supply.

3.2.9 Electric motors. The power hacksaw drive motor(s) shall have sealed and permanently lubricated ball or roller bearings, shall be energy efficient, and shall conform to the National Electrical Manufacturers Association (NEMA) MG-1. Unless otherwise specified (see 7.2(l)), the motors shall have open drip-proof enclosures.

3.2.10 Optional accessories. Optional accessories shall be furnished as specified (see 7.2(m)).

3.3 Performance. Unless otherwise specified (see 7.2(n)), the power hacksaws shall be capable of producing cuts that are perpendicular to the workpiece axis within ± 0.002 inch per inch of diameter. These cuts shall meet the performance requirements shown in table I when tested in accordance with sections 5.3 through 5.3.3 herein.

TABLE I. Performance requirements.

Machine size	Cutting rate (SAE 1045 steel bar), square inches per minute
1	4
2	5
3	7
4	7

3.4 Machine dimensions and weight. If required, the maximum machine dimensions (length, width, and height) and machine weight shall not exceed the restrictions specified (see 7.2(o)).

3.5 Safety and health requirements. The machine shall be designed and manufactured in accordance with ANSI B11.10. The manufacturer shall ensure the machine and all equipment and accessories used on the machine shall be in compliance with Occupational Safety and Health Association (OSHA) 29 CFR Part 1910. In a conflict arises between the OSHA and ANSI standards, the OSHA standards shall apply.

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3.6 System of units. The U.S. Customary System of Units (US) or the International System of Units (SI) shall be used to graduate measuring and indicating devices. When only one system of graduation is acceptable, the particular graduation required shall be as specified (see 7.2(p)). Regardless of the measurement system used, all measuring and indicating devices on the machine shall be graduated in the same system. When specified (see 7.2(q)), measuring and indicating devices shall be graduated in both the US and SI system of measurements.

3.7 Nameplate. A nameplate shall be securely attached to the machine. Unless otherwise specified (see 7.2(r)), the nameplate shall contain the following information:

- a. Nomenclature.
- b. Manufacturer's name.
- c. Serial number.
- d. Machine model designation.
- e. Power input (volts, total amperes, phase, frequency).
- f. Short-circuit/over-current rating.
- g. Contract number or order number.
- h. National stock number.
- i. Date of manufacture.

3.8 Lubrication plate or chart. When specified (see 7.2(s)), a lubrication plate or chart shall be attached to the machine. The information provided on the plate or chart shall include:

- a. Points of lubricant application.
- b. Servicing interval.
- c. Type of lubricant(s) with SAE number or lubricant identifier.

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4.2 Environmental protection. The item shall meet all applicable Environmental Protection Agency (EPA) restrictions in effect on the date of the contract. These regulations apply to the emission of materials hazardous to the environment or the user's health and shall be met during the manufacturing, service, transportation, storage, and operation/use of the item.

5. QUALITY ASSURANCE PROVISIONS

5.1 Product conformance. The products shall meet the salient characteristics of this commercial item description; conform to the producer's own drawings, specifications, standards, and quality assurance practices; and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Inspection. The power hacksaw shall be inspected to determine compliance with all requirements specified in this CID.

5.3 Testing. Unless otherwise specified (see 7.2(t)), the power hacksaw shall be tested in accordance with sections 5.3.1 through 5.3.3.

5.3.1 Test setup and conditions. Unless otherwise specified (see 7.2(u)), the manufacturer shall be responsible for supplying all tooling and materials and shall conduct all tests required by the Government. The manufacturer shall provide test instruments and equipment with calibration traceable to National Institute of Standards and Technology (NIST) and shall provide certification of calibration as specified (see 7.2(v)). Unless otherwise specified (see 7.2(w)), the machine shall be tested under the normal environmental conditions of the manufacturer's facility.

5.3.2 Operational test. The power hacksaw shall be operated in accordance with the manufacturer's standard operating procedures. The machine shall be operated at no load for not less than 30 minutes. Proper operation of all controls and features shall be verified during the trial period.

5.3.3 Performance tests. The machine shall be tested for cutting rate compliance. The test workpiece dimensions shall equal the rated capacity of the saw. Either a round or rectangular workpiece may be used for the test. The choice of saw blade, coolant, blade speed and force shall be the option of the supplier. The test results will be compared to the performance levels shown in table I.

5.4 Acceptance. Unless otherwise specified (see 7.2(x)), preliminary and final acceptance testing shall be conducted at the manufacturer's site. Failure of the machine to meet the criteria specified in section 5 shall be cause for rejection.

6. PACKAGING. Preservation, packing, and marking shall be as specified (see 7.2(y)).

7. NOTES

7.1 Source of documents.

7.1.1 Government documents. Copies of Federal documents may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.1.2 Industry standards. Copies of industry standards referenced in this CID may be obtained from the following addresses:

American National Standards Institute (ANSI)

ANSI B11.10 Safety Requirements for the Construction, Care, and Use of Metal
Sawing Machines

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Applications for copies should be sent to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

National Fire Protection Association (NFPA)

ANSI/NFPA-79 Electrical Standard for Industrial Machinery

Applications for copies should be sent to the National Fire Protection Association, One Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

National Electrical Manufacturers Association (NEMA)

NEMA MG-1 Motors and Generators

Applications for copies should be sent to the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1847, Rosslyn, VA 22209.

Occupational Safety and Health Association (OSHA)

OSHA 1910 Occupational Safety and Health Standards for General Industry
(29 CFR Part 1910)

Applications for copies should be sent to the U.S. Department of Labor, 200 Constitution Avenue, Room 423, NW Washington, DC 20210.

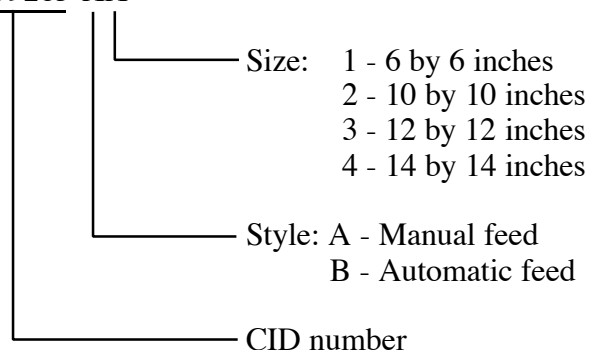
7.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Style and size of power hacksaw required (see 2).
- c. Adjustable blade speed, as specified (see 3.2.3).
- d. Accelerated return stroke operation, if required (see 3.2.3).
- e. Support stands, if required (see 3.2.4).
- f. Mitering capability from 0 to 45 degrees, if required (see 3.2.4).
- g. Nesting fixture, if required (see 3.2.4).
- h. Cut counter, if required (see 3.2.4).
- i. Electrical system industrial standard, if different (see 3.2.8).
- j. Electrical system voltage, as specified (see 3.2.8).
- k. Control system voltage, if different (see 3.2.8).
- l. Motor enclosures, if different (see 3.2.9).
- m. Optional accessories, as specified (see 3.2.10).
- n. Performance, if different (see 3.3).
- o. Machine dimensions and weight, as specified (see 3.4).
- p. System of units required (see 3.6).
- q. Dual system of units, if required (see 3.6).
- r. Nameplate, if different (see 3.7).
- s. Lubrication plate or chart, if required (see 3.8).

- t. Testing, if different (see 5.3).
- u. Test responsibility, if different (see 5.3.1).
- v. Certification of calibration, as specified (see 5.3.1).
- w. Test environmental conditions, if different (see 5.3.1).
- x. Acceptance, if different (see 5.4).
- y. Packaging requirements, as specified (see 6).

7.3 Part identification number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.

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MILITARY INTERESTS:

Custodians

Air Force - 99
Army - AL
Navy - SH

Reviewers.

Air Force - 84
Navy - MC, OS

PREPARING ACTIVITY:

DLA - GS

(Project 3405-0096)