

MIL-B-385G
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SUPERSEDING
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MILITARY SPECIFICATION

BREAKERS, PAVING, PNEUMATIC-POWERED

(7/8-INCH HEXAGON BY 2-3/4-INCH CHUCK

AND 7/8-INCH HEXAGON BY 3-1/4-INCH CHUCK)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1. Scope. This specification covers lightweight, pneumatic-powered, paving breakers.

1.2 Classification. The pneumatic-powered paving breakers shall be of the following types and classes, as specified (see 6.2):

Type I - D-grip

Class A: 7/8-inch hexagon by 2-3/4-inch chuck.

Class B: 7/8-inch hexagon by 3-1/4-inch chuck.

Type II - T-handle

Class A: 7/8-inch hexagon by 2-3/4-inch chuck.

Class B: 7/8-inch hexagon by 3-1/4-inch chuck.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research and Development Center, ATTN: STRBE-TSE, Fort Belvoir, VA 22060-5606 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 3820

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SPECIFICATIONS

FEDERAL

- NN-P-71 - Pallet, Material Handling, Wood, Stringer Construction, 2 Way and 4 Way.
- WW-C-633 - Couplings, Hose (Half), Pneumatic, Universal Type.
- PPP-P-40 - Packaging and Packing of Hand Tools.

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- MIL-T-704 - Treatment and Painting of Materiel.
- MIL-C-11760 - Clamps, Hose, Pneumatic, For Universal Couplings.
- MIL-O-13417 - Oilers, Air Lines, for Pneumatic Tools.
- MIL-C-46168 - Coating, Aliphatic Polyurethane, Chemical Agent Resistant.

STANDARDS

MILITARY

- DOD-STD-100 - Engineering Drawing Practices.
- MIL-STD-129 - Marking of Shipment and Storage.
- MIL-STD-130 - Identification Marking of US Military Property.
- MIL-STD-838 - Lubrication of Military Equipment.
- MIL-STD-889 - Dissimilar Metals.
- MIL-STD-1472 - Human Engineering Design Criteria and Facilities.
- MIL-STD-1474 - Noise Limits for Army Material.
- MS35647 - Padlock, Key Operated.
- MS35793 - Handle, Bail, Chest, Surface Mounting, Plain Holes.
- MS35829 - Hinge, Continuous (Piano), .075 Thickness, .187 and .250 Pin Dia.

(Copies of specifications and standards required by contractor in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

- MIL-HDBK-113 - Guide for the Selection of Lubricants, Fluids, Preservatives and Speciality Products for Use in Ground Equipment Systems.

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

COMPRESSED AIR AND GAS INSTITUTE

Compressed Air and Gas Handbook.

(Application for copies should be addressed to the Compressed Air and Gas Institute, 122 East 42nd Street, New York, NY 10017).

(Nongovernment standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, (except for associated detail specifications, specifications sheets or MS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. Each type of pneumatic paving breaker (hereinafter referred to as "breaker") shall consist essentially of a backhead equipped with a handle and trigger throttle, and a cylinder with chuck and fronthead. The breaker shall be equipped with all components necessary to enable the breaker to function reliably and efficiently in a sustained operation. The breaker shall conform to all federal laws and regulations governing safety, noise levels, and pollution which are in effect on date of bid.

3.2 First article. Unless otherwise specified (see 6.2), a sample shall be subjected to first article inspection (see 4.3 and 6.3). Any changes or deviations of the breaker from the approved first article during production will be subject to the approval of the contracting officer. Approval of the first article will not relieve the contractor of his obligation to furnish the breaker conforming to this specification.

3.3 Length.

3.3.1 Type I (D-grip). The length, less attachment, shall be not more than 21 inches (53.34 cm).

3.3.2 Type II (T-handle). The length, less attachment, shall be not more than 31 inches (78.74 cm).

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3.4 Weight. The dry weight of the breaker without tools attached shall be not more than 34 pounds (15.42 kilograms).

3.5 Air consumption. At 90 psig (621 kPa) the total air consumption of the breaker shall not exceed 46 cfm (1.30 m³/min).

3.6 Performance. The force of blow of the breaker shall be not less than 9 foot-pounds (12.20 newton meters) per blow under vertical operating conditions with no extra force applied on top of the breaker. The piston speed at no load shall be not less than 1800 blows per minute. The breaker shall break a 2-inch or thicker slab of portland cement concrete. The breaker using the spade in cohesive soil shall operate in all positions from the vertical to the horizontal. The breaker shall accomplish the tasks without evidence of mechanical failure, malfunction, permanent deformation, breakage of any part or component, evidence of wearing of the piston diameter or cylinder diameter of more than 0.001 inch (0.0254 mm), absence of oil vapor in the exhaust air and failure to break the slab of portland cement concrete.

3.7 Interchangeability. All parts having the same manufacturer's part number shall be functionally and dimensionally interchangeable. The drawing number requirements of DOD-STD-100 shall govern changes in the manufacturer's part number.

3.8 Material. Material shall be as specified herein. Material not specified shall be selected by the contractor and shall be subject to all provisions of this specification (see 6.2).

3.8.1 Material deterioration and control. The spreader shall be fabricated from compatible materials that are inherently corrosion resistant or treated in order to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable operation or storage environment to which the item may be exposed.

3.8.2 Dissimilar metals. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion. Dissimilar metals and methods of protection are defined and detailed in MIL-STD-889.

3.8.3 Identification of materials and finishes. The contractor shall identify the specific material, material finish or treatment for use with components and sub-components, and shall make information available, upon request, to the contracting officer or designated representative (see 6.2).

3.8.4 Recovered materials. For the purpose of this requirement, recovered materials are those materials which have been collected from solid waste and reprocessed to become a source of raw materials, as distinguished from virgin raw materials. The components, pieces and parts incorporated in the breaker may be newly fabricated from recovered materials to the maximum extent practicable, provided the breaker produced meets all other requirements of this specification. Used, rebuilt or remanufactured components, pieces and parts shall not be incorporated in the breaker.

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3.9 Operating temperature requirements. The breakers shall operate as specified herein in any ambient temperature from +120° F to -25° F.

3.10 Noise limits. The noise produced by the breaker shall conform with MIL-STD-1474 requirements when tested in accordance with 4.5.2.7. The provisions of MIL-STD-1474, 4.3 and 4.4 shall be provided if and only if MIL-STD-1474, 5.1.1.2 procedures have been pursued and documented to the satisfaction of the procuring activity and written permission to exceed the 85 dB(A) limit is obtained from the procuring activity. Hazard signs shall conform with MIL-STD-1474, 4.3.

3.11 Ease of maintenance. All major assemblies shall be accessible for maintenance, repair, and replacement. Each maintenance, assembly, or disassembly operation performed as a result of testing in accordance with 4.5.2 shall be accomplished by one person using common tools and tools furnished with the breaker.

3.12 Retainer. Each paving breaker shall be provided with a latch type retainer which will prevent any accessory specified in 3.19 from becoming accidentally disengaged from the paving breaker.

3.13 Backhead assembly. The backhead assembly shall include a housing, handle, throttle, and throttle valve.

3.13.1 Handle. The handle for type I shall be D-grip and for type II shall be extension T-handle.

3.13.2 Throttle. The throttle for type I shall be positioned inside the D-grip. A lever-type throttle shall be furnished. The throttle shall be located for operating from either side of the breaker by the operator.

3.13.3 Throttle valve. The throttle valve shall be self-closing.

3.14 Cylinder assembly. The cylinder assembly shall include a cylinder, valve mechanism, piston, and chuck.

3.14.1 Valve mechanism. The valve mechanism shall control the direction of the air to the piston.

3.14.2 Piston. The piston shall be a combination piston-hammer.

3.14.3 Chuck.

3.14.3.1 Class A. The chuck shall be dimensioned to receive standard accessories having collared hexagon shanks 7/8 inch across the flats by 2-3/4 inches. The hexagonal opening for receiving the accessory shall be not less than 0.870 inch nor more than 0.885 inch between flats (see figure 1).

3.14.3.2 Class B. The chuck shall be dimensioned to receive standard accessories having collared hexagon shanks 7/8 inch across the flats by 3-1/4

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inches. The hexagonal opening for receiving the accessory shall be not less than 0.870 inch nor more than 0.885 inch between flats (see figure 2).

3.14.4 Chuck bushing. The chuck bushing shall be replaceable.

3.15 Air inlet connection. The air inlet connection thread shall be 1/2-inch internal American National pipe thread. The air inlet connection shall be a swivel type connection to allow the operator to position the hose without any tangling or pinching.

3.16 Exhaust port. The exhaust port shall be located to direct exhaust air away from the operator.

3.17 Air cushion. The cylinder shall have an air cushion of not less than 0.003 inch at both ends of the piston stroke.

3.18 Leader hose. Unless otherwise specified (see 6.2), a 10-foot-long, 1/2-inch-inside-diameter hose shall be furnished with an external 1/2 inch NPT connector with double bolt clamp on one end and a universal type I, 1/2-inch hose coupling conforming to WW-C-633 with a size 1, pneumatic hose clamp conforming to MIL-C-11760 on the other end.

3.19 Accessories. When specified (see 6.2), such accessories as are listed below shall be furnished with the breaker:

<u>Accessory</u>	<u>Length under collar (inches)</u>	<u>Tool end</u>
Chisel	13.5 to 14.5	2.75 to 3.25 inches wide
Moil point	13.5 to 14.5	Point
Pick	16 to 19	3 to 3.25 inches wide
Spade	16 to 19	5 to 6 inches wide

3.20 Lubrication. All surfaces requiring lubrication shall be provided with a means for lubricating by an air-line oiler conforming to MIL-O-13417. The air-line oiler shall not be furnished under this specification.

3.20.1 Lubricants. The procedure for the selection of lubricants shall be in accordance with section 5 of MIL-STD-838. Lubricants selected shall be in accordance with chapter 2 of MIL-HDBK-113. When the specification of the lubricant selected includes a requirement for a qualified products list (QPL) the lubricant supplied shall be from a source that is listed on the applicable QPL.

3.21 Identification marking. The breaker shall be identified in accordance with MIL-STD-130. The required marking shall be applied directly to the housing surface by metal stamp or forging.

3.22 Treatment and painting. The portions of the breaker and its components and parts normally painted shall be cleaned, treated, and painted in accordance

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with MIL-T-704, type F or G, as applicable. Unless otherwise specified (see 6.2), top coat color shall be camouflage green 383 conforming to MIL-C-46168.

3.23 Chest. When specified (see 6.2), a chest made of steel not less than 0.071 inch in thickness shall be provided. The chest shall be of a size to hold the maintenance tools, leader hose, breaker, and repair parts specified herein. The chest lid shall be secured to one edge of a side by a continuous hinge extending the full length of the chest edge. The hinge shall conform to MS35829-TC. The lid shall be held in the closed position by not less than two hook type tension latches with strikers bolted or riveted to the chest and to the lid. A hasp shall be provided to secure the lid to the chest and accommodate a lock conforming to MS35647. Two lifting handles conforming to MS35793 shall be provided, one located at each end of the chest. The lid shall remain in the fully open position by the weight of the lid or by holding devices.

3.24 Surfaces. All parts, components, and assemblies of the breaker including castings, forgings, molded parts, stampings, bearings, seals, and machined surfaces shall be clean and sound and free from sand, dirt, fins, pits, sprues, scale, and other harmful or extraneous materials. All edges shall be rounded or chamfered. All external surfaces shall be free from burrs, sharp edges and corners except where sharp edges or sharp corners are required and are not detrimental to safety.

3.25 Human factors engineering. The breaker and associated equipment shall conform to accepted human factors engineering design criteria as described in MIL-STD-1472. Special design emphasis shall be given, but not limited to, 4 (General Requirements), 5.4 (Controls), 5.5 (Labeling), 5.9 (Design for Maintainability), 5.13 (Hazards and Safety) of MIL-STD-1472, as applicable.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facility suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

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4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).
- c. Inspection of packaging (see 4.6).

4.3 First article inspection.

4.3.1 Examination. The breaker shall be examined for the defects as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. The first article breaker shall be tested as specified in 4.5.2. Failure of any test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Examination. Each breaker shall be examined for the defects specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.4.2 Quality conformance test. Each breaker shall be serviced as required and shall be run-in in accordance with the manufacturer's normal procedures for a period of not less than 15 minutes.

4.4.2.1 Failure criteria. One or more functional defects shall constitute failure and shall be cause for rejection.

4.5 Inspection procedure.

4.5.1 Examination. The breaker shall be examined for the following defects:

101. Length not as specified for type I (D-grip).	3.3.1
102. Length not as specified for type II (T-handle).	3.3.2
103. Interchangeability not as specified.	3.7
104. Material not as specified.	3.8
105. Materials are not resistant to corrosion or deterioration or treated to be made resistant to corrosion or deterioration for the applicable storage and operating environment.	3.8.1
106. Dissimilar metals as defined in MIL-STD-889 are not effectively insulated from each other.	3.8.2
107. Contractor does not have documentation available for identification of material, material finishes or treatment.	3.8.3
108. Used, rebuilt or remanufactured components, pieces and parts incorporated in the breaker.	3.8.4
109. Ease of maintenance not as specified.	3.11
110. Retainer not furnished.	3.12
111. Backhead assembly not as specified.	3.13

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112. Handle not as specified.	3.13.1
113. Throttle not as specified.	3.13.2
114. Throttle valve not as specified.	3.13.3
115. Cylinder assembly not as specified.	3.14
116. Valve mechanism not as specified.	3.14.1
117. Piston not as specified.	3.14.2
118. Chuck not as specified.	3.14.3
119. Chuck bushing not as specified.	3.14.4
120. Air inlet connection not as specified.	3.15
121. Exhaust port not as specified.	3.16
122. Air cushion at both ends of the piston stroke not as specified.	3.17
123. Leader hose not as specified.	3.18
124. Accessories not as specified.	3.19
125. Lubricants not as specified.	3.20.1
126. Identification not as specified.	3.21
127. Treatment and painting not as specified.	3.22
128. Color not as specified.	3.22
129. Chest not as specified.	3.23
130. Workmanship not as specified.	3.24
131. Breaker and associated equipment not conforming to accepted human factors engineering design criteria.	3.25

4.5.2 Tests.

4.5.2.1 Weight. The breaker shall be weighed prior to being tested.

4.5.2.1.1 Failure criteria. Nonconformance to 3.4 shall constitute failure of this test.

4.5.2.2 Test conditions. Prior to being tested, the breaker shall be lubricated with military oils. Oils shall be those designated for use in the ambient temperatures at which the test is being performed. An air-line oiler conforming to MIL-O-13417 furnished by the contractor shall be used to supply oil for lubrication to the breaker being tested. Operate the breaker in accordance with the manufacturer's recommended run-in procedure.

4.5.2.3 Breaker performance. Following the manufacturer's run-in period, break a 2-inch or thicker slab of portland cement concrete for 30 minutes. Operate the breaker using a spade accessory for 15 hours at each compressed air pressure at the tool of 70, 90, 100 psig in cohesive soil. At 5-hour intervals during the test, examine the exhaust for presence of oil in the exhausted air. At the completion of the 45 hours operation, take the following action:

- a. Examine all external parts of the breaker.
- b. Disassemble the breaker and examine the parts for damage, wearing, or scoring.

4.5.2.3.1 Failure criteria. Nonconformance to 3.6 shall constitute failure of this test.

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4.5.2.4 Force of blow. Attach a steel ball with a Brinell hardness of not less than 200 and a 0.499 to 0.500-inch spherical diameter to the end of a fabricated accessory bar. Make 20 impressions with the steel ball in a 1/4-inch-thick strip of 1020 steel which has a Brinell hardness between 163 and 179. Measure in millimeters the mean diameter of the impressions. Take an average of the impressions and convert to foot-pounds using table I.

TABLE I. Force of blow conversion table.

Impression diameter	Force of blow - ft/lb.									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
mm.	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
4.5	8.75	8.80	8.86	8.91	8.97	9.02	9.08	9.13	9.19	9.24
4.6	9.30	9.38	9.46	9.54	9.62	9.70	9.78	9.86	9.94	10.02
4.7	10.10	10.17	10.24	10.31	10.38	10.45	10.52	10.59	10.66	10.73
4.8	10.80	10.87	10.94	11.01	11.08	11.15	11.22	11.29	11.36	11.43
4.9	11.50	11.57	11.65	11.72	11.80	11.87	11.95	12.02	12.10	12.17

4.5.2.4.1 Failure criteria. Force of blow averaging less than 9 foot-pounds per blow and failure to meet the criteria in 4.5.2.4 shall constitute failure of this test.

4.5.2.5 Air-consumption. Measure the total air consumption (cubic feet per minute of free air) at 90 psig with the throttle valve fully open. A water displacement meter or airflow meter shall be used in accordance with procedures outlined in the Compressed Air and Gas Handbook to determine air consumption. Air consumption exceeding that specified in table I shall constitute failure of this test.

4.5.2.5.1 Failure criteria. Air consumption exceeding 46 cubic-feet per minute and failure to meet the criteria in 4.5.2.5 shall constitute failure of this test.

4.5.2.6 Piston speed. Determine the piston speed (blows per minute at no load). Piston speed less than that specified in table I at no load shall constitute failure of this test.

4.5.2.6.1 Failure criteria. Piston speed less than 1,800 blows per minute at no load shall constitute failure of this test.

4.5.2.7 Noise level test. Noise levels shall be measured in accordance with MIL-STD-1474 requirements and reported in the format indicated by MIL-STD-1474, figure 7. As a minimum: noise levels shall be measured when equipment is operating under full load, MIL-STD-1474, 5.1.2.1.4. Contours shall be taken at not fewer than 12 equal (horizontal) arc increments, one increment shall include data from the noisiest position. Additionally, the noise level at the typical operating position shall be provided as dB(A) level.

4.5.2.7.1 Failure criteria. Failure to comply with MIL-STD-1474 provisions shall constitute failure of this test.

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4.5.2.8 Temperature.

4.5.2.8.1 Low temperature. Subject the breaker to a temperature of -25° F (-32° C) for a period of not less than 24 hours. Operate the breaker for 30 minutes while in an ambient temperature not warmer than -25° F (-32° C).

4.5.2.8.1.1 Failure criteria. Inability of the breaker to operate shall constitute failure of this test.

4.5.2.8.2 High temperature. Subject the breaker to a temperature of not less than 120° F (49° C) for a period of not less than 24 hours. Operate the breaker for 30 minutes while in an ambient temperature not cooler than 120° F (49° C).

4.5.2.8.2.1 Failure criteria. Inability of the breaker to operate shall constitute failure of this test.

4.6 Inspection of packaging. The preservation, packing, and marking shall be examined in accordance with the applicable requirements of the quality assurance provisions of PPP-P-40. The following additional defects shall also apply:

- 132. Fiberboard shipping containers used for breakers not in chests for level A.
- 133. Chests not secured with steel strapping for commercial packing.
- 134. Pallets, when used, for levels A and B not as specified.

5. PACKAGING

5.1 Preservation and packaging. Preservation and packing of each breaker and its components shall be level A, B, or commercial, as specified (see 6.2), in accordance with PPP-P-40 with the following exceptions.

5.2 Preservation.

5.2.1 Level A. Paving breakers without chests shall be individually unit packed in wood boxes specified in PPP-P-40; fiberboard boxes shall not be permitted. Paving breakers with chests, with all components placed in the chest, shall be individually contained in weather resistant fiberboard containers as specified in PPP-P-40 to prevent marring and scratching of the chest.

5.2.2 Commercial. Paving breakers shall be preserved in accordance with ASTM D 3951 and individually placed in containers suitable for the weight and size of the breaker. Breakers with chests need not be overpacked; chests shall be secured shut with steel strapping to deter pilferage of contents.

5.3 Packing. Breakers individually unit packed as specified for level A or B need not be overpacked for shipments under those respective logistic conditions. Breakers without chests which are unit packed for level B, must be upgraded to level A for shipment under those conditions. Breakers unit packed in accordance with commercial requirements shall be limited to shipment within the continental United States (CONUS).

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5.4 Palletization. When quantities of paving breakers, preserved and packed as specified, are being shipped to the same destination they may be palletized to expedite handling and storage. Pallets for level A and B conditions shall comply with NN-P-71, size and type as appropriate. Pallets for CONUS shipments shall be of a commercial type suitable for the size and weight of the load.

5.5 Marking.

5.5.1 Levels A and B. Marking shall be in accordance with MIL-STD-129.

5.5.2 Commercial. Marking shall be in accordance with ASTM D 3951. In addition, weight and cube data shall be marked on each shipping container.

6. NOTES

6.1 Intended use. The breakers with specified accessories covered by this specification are intended for use in breaking up concrete, brick, macadam pavement, loosening compacted gravel and stiff clay.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type and class required (see 1.2).
- c. Date of issue of DoDISS applicable and exceptions thereto (see 2.1.1).
- d. When first article is required (see 3.2).
- e. When the identification of materials and finishes are required (see 3.8).
- f. When a leader hose is not to be furnished (see 3.18).
- g. Accessories required (see 3.19).
- h. Color required when other than as specified (see 3.22).
- i. When a chest is required (see 3.23).
- j. Degree of preservation and degree of packing required (see 5.1 and 5.3).

6.3 First article. When a first article inspection is required, the items should be a preproduction model. The first article should consist of one breaker. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, tests and approval of the first article test results and disposition of the document's first article.

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6.4 Lubricants. MIL-STD-838, Lubrication of Military Equipment, prescribes the policy for using specification-type products wherever possible and provides specific requirements for potential use of non-standard proprietary products. MIL-STD-838 is implemented by MIL-HDBK-113, Guide for the Selection of Lubricants, Fluids, Preservatives and Specialty Products for Use in Ground Equipment Systems. The contracting officer should note that unless otherwise authorized by the US Army Belvoir Research & Development Center (ATTN: STRBE-VF), lubricants, fluids, and greases for ground equipment systems must be restricted to those listed under chapter 2 of MIL-HDBK-113.

Custodians:

Army - ME
Air Force - 99

Preparing activity:

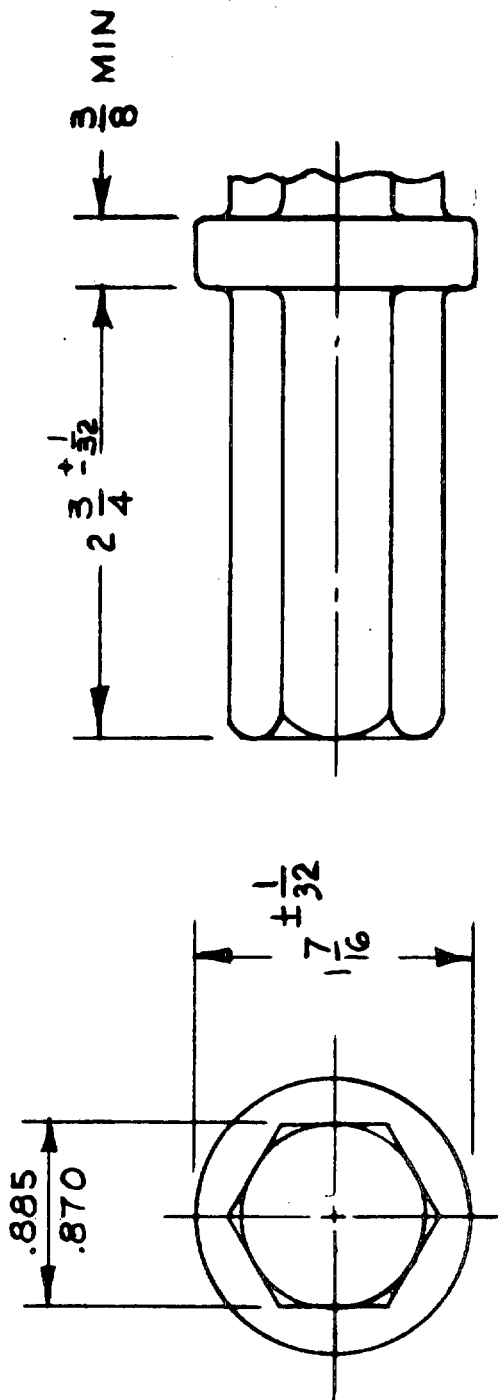
Army - ME

Project 3820-0178

Review interest:

Air Force - 84
DLA - CS

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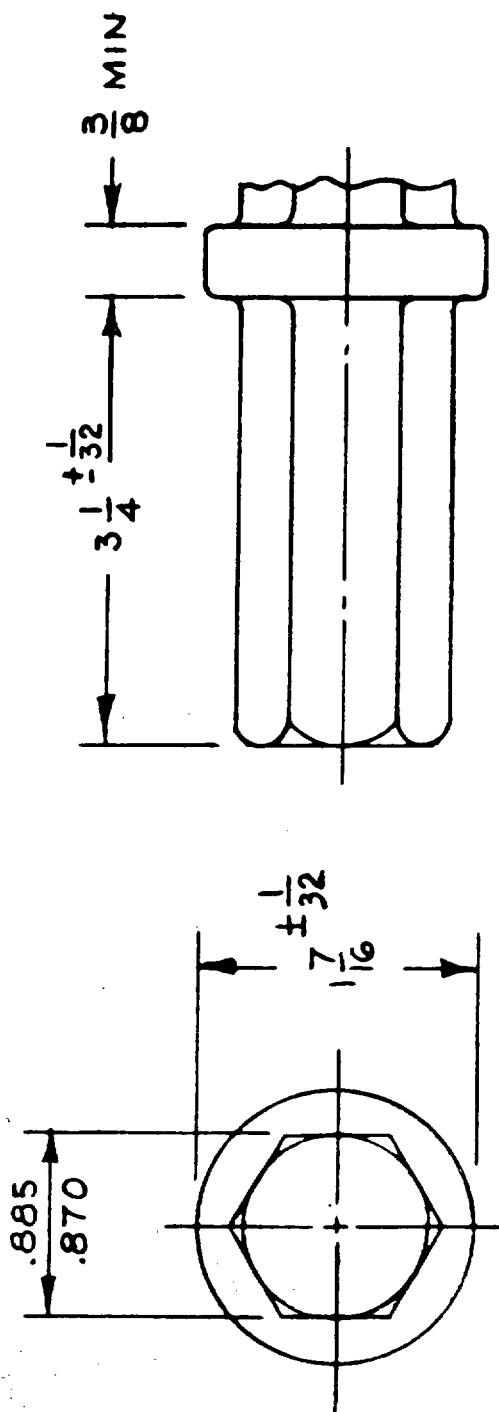


NOTE :
DIMENSIONS ARE IN INCHES.

FIGURE 1. Shank dimensions.
class a.

X-1133C

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NOTE :
DIMENSIONS ARE IN INCHES.

FIGURE 2. Shank dimensions.
class b.

X-4434

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-B-385G	2. DOCUMENT TITLE Breakers, Paving, Pneumatic-Powered (7/8-Inch by 2-3/4-Inch Chuck and 7/8-Inch Hexagon by 3-1/4-Inch Chuck)
3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION (Mark one) <input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify): _____
b. ADDRESS (Street, City, State, ZIP Code)	
5. PROBLEM AREAS a. Paragraph Number and Wording: b. Recommended Wording: c. Reason/Rationale for Recommendation:	
6. REMARKS	
7a. NAME OF SUBMITTER (Last, First, MI) - Optional	b. WORK TELEPHONE NUMBER (Include Area Code) - Optional
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional	8. DATE OF SUBMISSION (YYMMDD)