

MIL-R-17729C
28 November 1972
SUPERSEDING
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MILITARY SPECIFICATION

RESPIRATOR OUTFIT, SUPPLIED-AIR TWO-MAN

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

1. SCOPE.

1.1 This specification covers a portable respirator outfit designed to supply uncontaminated air to two men working in a confined area that has a low oxygen potential or a high concentration of dust, gas, or fumes.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal form a part of this specification to the extent specified herein.

SPECIFICATIONS

Federal

- T-T-616 - Treatment, Mildew Resistant for Rope and Cord.
- NNN-P-40 - Paper, Lens.
- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-640 - Boxes, Fiberboard, Corrugated, Triple Wall.
- PPP-B-1055 - Barrier, Material, Waterproofed, Flexible.

Military

- MIL-P-116 - Preservation, Methods of.
- MIL-E-16298 - Electric Machine Having Rotating Parts and Associated Repair Parts; Packaging of.
- MIL-T-22085 - Tape, Pressure-Sensitive Adhesive, Preservation and Sealing.

STANDARDS

Military

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-130 - Identification Marking of U.S. Military Property.

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(Copies of specifications and standards required by suppliers 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 documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

Laws and Regulations

CFR Title 30, Part 11 - Respiratory Protective Devices Tests for Permissibility Fees.

(Copies of Code of Federal Regulations may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.)

National Motor Freight Traffic Association, Inc. Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Association, Inc. Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 S. Riverside Plaza, Chicago, Illinois 60606.)

Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.

3. REQUIREMENTS

3.1 Design. The two-man respirator outfit shall be the manufacturer's commercial product. The respirator outfit shall be approved in accordance with the CFR Title 30, Part 11 requirements for type A respirators, and labeled with approval number.

3.2 Component parts. The respirator outfit shall consist essentially of a manually- or motor-operated blower, manifold, two air hoses, two facepiece assemblies, two safety harness assemblies, two safety lines, and a chest.

3.2.1 Blower. The blower shall be designed and constructed to deliver an adequate amount of air to the wearer with either direction of rotation, unless constructed to permit rotation in one direction only. The blower shall permit the free entrance of air to the hose when the blower is not operated.

3.2.1.1 Manually operated. The crank for manual operation of the blower shall be removable. The blower shall be securely mounted in the chest, and operable from outside the chest. The blower shall be capable of being removed from and operated outside the chest. Bearings and moving parts normally lubricated shall be provided with a convenient means of lubrication, or shall be the sealed lifetime-lubricated type.

3.2.1.2 Motor operated. The blower shall be securely mounted in the chest, and operable from outside the chest. The blower shall be capable of being removed from the chest and operated outside the chest. The blower shall be connected by a flexible coupling to an explosion-proof, 110 volt, 60 hertz, single phase motor. On interruption of the current, the blower shall be operable by hand.

3.2.2 Air hose. Each air hose shall consist of four 25-foot hose sections fitted with couplings for connection to a facepiece assembly, blower, and other hose sections. When specified (see 6.2), up to ten extra air hose sections may be provided. The air hose shall be of the nonkinking type.

3.2.3 Facepiece assembly. The facepiece assembly shall consist of a full face mask, one or two breathing tubes, and an air hose connection fitting. Double breathing tubes shall be connected by means of Y-fittings to an air hose connection located on the wearer's back, midway between the shoulder blades. When a single breathing tube is provided, the air hose connection shall be fastened to the lower strap of the safety harness of the center.

3.2.4 Safety belt harness assembly. The harness may be made of leather, fabric webbing, or neoprene-impregnated nylon. Shoulder straps shall separately withstand a pull of 250 pounds without failure. The belt, ring, and attachments for lifelines must withstand a pull of 300 pounds without failure. When attached to the harness, the hose must withstand a pull of 250 pounds minimum without separating. The assembly shall be adjustable over a large range of sizes and be wearable over heavy outside clothing.

3.2.5 Safety line. Each safety line shall be fabricated from manila rope, 3/4-inch nominal diameter, treated in accordance with T-T-616. Unless otherwise specified (see 6.2), the rope shall be 75 feet in length. When four extra air hose sections are specified, the safety line shall be a minimum of 125 feet in length. A safety type snaphook shall be attached to one end of the line and shall sustain a minimum load of 400 pounds without pulling out. When specified (see 6.2), nylon rope having a breaking strength of not less than 600 pounds shall be used.

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3.2.6 Instructions and parts list. A complete list of repair parts and instructions for operation and maintenance shall be prepared (see 6.2.2).

3.2.7 Chest. The chest shall be a trunk type that has a hinged lid and is suitably reinforced to protect the component contained herein. The parts contained in the chest shall be positioned for quick unpacking and convenient repacking. All hardware shall be corrosion-resistant.

3.3 Performance. The respirator outfit shall afford two people the protection specified in CFR Title 30, Part 11 for type A supplied-air respirators.

3.4 Identification marking. The respirator outfit shall be marked for identification in accordance with MIL-STD-130, and in accordance with CFR Title 30, Part 11.

3.5 Workmanship. The quality of workmanship shall be such as to produce respirator outfits that are in accordance with the requirements of this specification and are so constructed as to ensure proper functioning of all parts of the unit. The respirator outfits shall be free of sharp edges or surfaces that could cause injury to the user or his equipment.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities 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.

4.2 Sampling.

4.2.1 Lot. A lot shall consist of all respirator outfits offered for delivery at one time. The sample unit shall be one complete respirator outfit.

4.2.2 Visual and dimensional examination. Sampling for this examination shall be in accordance with level S-3 in MIL-STD-105, with an accepted quality level (AQL) of 6.5 for critical and major defects.

4.2.3 Sampling for tests. Sampling for tests shall be in accordance with level S-2 in MIL-STD-105, with an AQL of 4.0.

4.3 Examination. Samples selected in accordance with 4.2.2 shall be examined to verify compliance with this specification. Examination shall be conducted as specified in table I.

TABLE I. Classification of defects

Categories	Defects	Acceptance standards
Critical:		
1	CFR Title 30, Part 11.	Visual
2	Component assembly missing.	Visual
Major:		
101	Blower not securely mounted in chest.	
102	Not operable from outside the chest.	
103	Not removable and operable outside the chest.	
104	Crank not removable (manually operated blower, only).	
105	Bearings or means of lubrication not as specified.	
106	Identification marking missing, illegible, or incomplete.	
107	Motor not as specified.	

4.4 Tests. The respirator outfit shall be tested in accordance with CFR Title 30, Part 11 test requirements for type A supplied-air respirators for resistance to airflow, protection against gases, protection against particular matter, operation of breathing tubes, air supply lines, and the harness including attachments thereto. The safety line shall be tested by lifting a weight insuspension on the safety hook of 400 pounds.

4.5 Inspection of preparation for delivery. The preservation, packaging, packing and marking of the respirator outfits shall be inspected to determine conformance with the applicable requirements of section 5 of this specification.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Blower.

5.1.1.1.1 Manually operated. The crank shall be removed from the blower and secured in a protected location near the blower. Openings into interior of the blower shall be sealed with tape conforming to MIL-T-22085.

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5.1.1.1.2 Motor operated. The crank shall be removed from the blower and secured in a protected location near the blower. The motor shall be preserved and packaged in accordance with the applicable level A requirements of MIL-E-16298.

5.1.1.2 Safety harness assembly. Each harness and line shall be wrapped together with waterproofed paper conforming to PPP-B-1055, class C-1 or C-2, and sealed with tape conforming to MIL-T-22085.

5.1.1.3 Air hoses. Each length of air hose shall be coiled to the minimum safe diameter and the coil shall be tied in at least three places with flat cotton tape.

5.1.1.4 Face mask assemblies. The lenses shall be cushioned with tissue paper conforming to NNN-P-40, secured in place with tape. Each face mask assembly shall then be preserved in accordance with MIL-P-116, method IA-8.

5.1.1.5 Repair parts and maintenance tools. Repair parts shall be preserved and packaged in accordance with MIL-P-116. Unprotected metal surfaces of tools shall be coated with type P-1 preservative.

5.1.1.6 Consolidated packaging. The complete respirator outfit shall be secured within the chest provided, with the components cushioned and blocked to prevent movement within the chest. The chest lid shall be closed and secured with the fasteners provided. The joints around the lid shall be sealed with tape conforming to MIL-T-22085.

5.1.2 Level C. The complete respirator outfits shall be preserved in accordance with the supplier's standard practice and packaged in the chests provided.

5.2 Packing. The packing shall be level A, B, or C, as specified (see 6.2).

5.2.1 Level A. The respirator outfits shall be packed in close-fitting boxes conforming to PPP-B-640, class 2 or PPP-B-601, overseas type. The chest hinges, handles, and catches shall be cushioned to prevent movement or damage to the chest. Metal strapping shall be flat steel, type I, class B.

5.2.2 Level B The respirator outfits shall be packed in close-fitting boxes conforming to PPP-B-640, class 1 or PPP-B-601, domestic type. The chest hinges, handles, and catches shall be cushioned to prevent movement or damage to the chest.

5.2.3 Level C. The respirator outfits shall be packed in a manner that will insure arrival at destination in satisfactory condition and be acceptable to the carrier at lowest rates. Containers and packing shall comply with Uniform Freight Classification rules or National Motor Freight Classification rules.

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5.3 Marking. In addition to any special marking required by the contract or order, the interior packages and the shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. The respirator outfit is intended for routine servicing of pits, tanks, and contaminated areas, except for those affected by chemical or biological agents or radioactive material. The respirator outfit is also intended for rescue operations at sites of fire or explosions, where two men must work together for efficiency and mutual protection.

6.2 Ordering data. Procurement document should specify the following:

6.2.1 Procurement requirements:

- (a) Title, number, and date of this specification.
- (b) Whether manual or motor operated blower is required (see 3.2).
- (c) When extra air hose lengths are required (see 3.2.2).
- (d) Length of safety line required if different (see 3.2.5).
- (e) When safety line shall be nylon rope (see 3.2.5).
- (f) Level of preservation and packaging, and level of packing required (see 5.1 and 5.2).

6.2.2 Contract data requirements. Deliverable data required by this specification is cited in the following paragraph:

<u>Applicable DID</u>	<u>Data Requirements</u> (Short Title)	<u>Paragraph</u>
DI-M-4022A	Commercial Manual	3.2.6

Data Item Description (DID/DD Form 166-1) for the above data requirements is documented in the DOD Authorized Data List. Such data will be delivered as identified on the applicable DID, when specified on DD Forms 1423 (Contract Data Requirements lists), and incorporated into applicable contracts.

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Custodians

Army - MU
Navy - YD
Air Force - 84

Preparing activity:

Navy - YD

(Project No. 4240-0310)

Review activities:

Army - MD
Navy - SH

User activity:

Navy - CG

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