

INCH-POUND

A-A-50047A
December 15, 1992
SUPERSEDING
A-A-50047
March 28, 1983

COMMERCIAL ITEM DESCRIPTION

DRY CLEANING UNIT ASSEMBLY, DRY TO DRY, PERCHLOROETHYLENE SOLVENT

The General Services Administration has authorized the use of this Commercial Item Description in preference to MIL-D-43164.

1. CLASSIFICATION

1.1 Classification. This commercial item description covers dry to dry, synthetic dry cleaning units in the following sizes, controls, and filtration systems, as specified (see 5.2):

Sizes: (dry weight capacity, minimum)

25 pounds	60 pounds
30 pounds	65 pounds
35 pounds	70 pounds
40 pounds	75 pounds
45 pounds	80 pounds
50 pounds	100 pounds
55 pounds	

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Commander, U.S. Army Natick Research, Development, and Engineering Center, ATTN: SATNC-UXT, Natick, MA 01760-5017.
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AMSC N/A

FSC 3510

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

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Controls:

C - Card reader
M - Microprocessor

Filtration system:

C - Cartridge filter
S - Spin Disc, non-powdered

1.2 CID based part identification number (PIN). A document based PIN to identify sizes, controls, and filtration systems is included in section 5. This identification numbering procedure is for Government purposes and does not constitute a requirement for the contractor.

2. SALIENT CHARACTERISTICS

2.1 Design and construction. The dry cleaning unit shall use perchloroethylene (PERC) as the cleaning solvent. The unit shall consist of a loading door, basket/drum, solvent tanks, still, filtration system, refrigeration system, water separator, button trap, condenser, lint trap/filter, control panel, operation/maintenance manual(s), and an in-line solvent cooling system. Perchloroethylene emissions of the dry cleaning unit shall be no more than 25 parts per million as established by the International Fabricare Institute (IFI) and meet or exceed all Environmental Protection Agency (EPA) and Occupational Safety & Health Administration (OSHA) requirements. The dry cleaning unit shall be Factory Mutual approved. All metal components of the loading door, basket/drum, solvent tanks, still, filtration system, water separator, button trap, condenser, lint filter/trap, and in-line solvent cooling system shall be made of AISI type 304, 316, or 316L stainless steel.

2.1.1 Loading door. The loading door shall be equipped with a handle and glass port. The door shall be not less than 16 inches in diameter. The glass port shall be not less than 6 inches in diameter.

2.1.2 Basket/drum. For sizes 25 through 35, the basket shall rotate a minimum of 38 rpm during the wash cycle and rotate a minimum of 380 rpm during the extract cycle. For sizes 40 through 55, the basket shall rotate a minimum of 32 rpm during the wash cycle and rotate no less than an average of 335 rpm during the extract cycle. For sizes 60 through 100, the basket shall rotate a minimum of 32 rpm during the wash cycle and rotate a minimum 170 rpm during the low speed extract cycle and rotate a minimum 340 rpm during the high speed extract cycle. The dry cleaning unit shall have automatic reversing action during the wash cycle. The basket/drum volume and cylinder diameter shall have the following minimum characteristics:

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TABLE I. Basket/drum volume and cylinder dimensions

Size	Volume	Cylinder diameter	Size	Volume	Cylinder diameter
25	6.5 cu. ft.	29 inches	60	16.0 cu. ft.	39 inches
30	8.0 cu. ft.	31 inches	65	18.0 cu. ft.	40 inches
35	9.0 cu. ft.	33 inches	70	20.0 cu. ft.	41 inches
40	10.5 cu. ft.	33 inches	75	22.0 cu. ft.	42 inches
45	12.0 cu. ft.	36 inches	80	24.0 cu. ft.	43 inches
50	13.5 cu. ft.	37 inches	100	30.0 cu. ft.	47 inches
55	14.5 cu. ft.	37 inches			

2.1.3 Solvent tanks. Dry cleaning unit sizes 25 through 40 shall have a minimum of two solvent tanks (wash and rinse tank). Unit sizes 45 through 100 shall have a minimum of three solvent tanks (wash, rinse, and reverse). Each tank shall be equipped with its own illuminated leveling gauge or illuminated sight glass. The solvent tanks shall have an internal cooling coil. The solvent tanks shall have the following minimum capacities.

TABLE II. Solvent tank minimum capacities

Size	Wash tank	Rinse tank	Reverse Tank
25	25 gallons	20 gallons	N/A
30	30 gallons	23 gallons	N/A
35	36 gallons	26 gallons	N/A
40	42 gallons	30 gallons	N/A
45	49 gallons	35 gallons	30 gallons
50	56 gallons	40 gallons	33 gallons
55	62 gallons	46 gallons	37 gallons
60	70 gallons	52 gallons	41 gallons
65	80 gallons	59 gallons	45 gallons
70	90 gallons	70 gallons	50 gallons
75	100 gallons	80 gallons	55 gallons
80	110 gallons	90 gallons	61 gallons
100	150 gallons	110 gallons	90 gallons

2.1.4 Still. The still shall have a window and its interior shall be illuminated. The still shall have a float or leveling switch to prevent over filling and a clean-out door. The still shall be steam heated and have a minimum distillation rate and working capacity in accordance with the following:

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TABLE III. Still distillation rate and working capacity

Size	Distillation rate (gallons/hour)	Capacity (gallons)	Size	Distillation rate (gallons/hour)	Capacity (gallons)
25	27	20	60	66	48
30	33	24	65	71	52
35	38	28	70	77	56
40	44	32	75	82	60
45	49	36	80	88	64
50	55	40	100	110	80
55	60	44			

2.1.5 Filtration system. The filtration system shall be either the filtration cartridge type (c), or the spin filter type(s) (see 1.1 and 5.2). Filtration systems shall use carbon for the removal of dyes. For filtration system C (cartridge filter), the total volume capacity of the filters shall be as follows:

TABLE IV. Volume capacity of cartridge filters

Size	Total volume, minimum (gallons)	Size	Total volume, minimum (gallons)
25	7.0	60	29.0
30	10.0	65	32.5
35	13.0	70	35.0
40	16.0	75	38.0
45	19.0	80	42.0
50	22.0	100	55.0
55	25.5		

2.1.6 Refrigeration system. The dry cleaning unit shall have a refrigeration system that has an Ozone Depletion Potential (ODP) no greater than HCFC-22.

2.1.7 Control panel. Each dry cleaning unit control panel shall be equipped with both manual and automatic controls for all machine functions. Automatic controls can be either card reader (C), or microprocessor (M) controls as specified (see 1.1 and 5.2). The unit shall have an adjustable dry sensor. The unit shall have fault alarms for "Still" overflow and a high solvent vapor temperature that indicates the solvent vapor leaving the condenser exceeds a preset temperature. For type C automatic controls, a complete set of cards for all operations shall be supplied with the unit. For type M automatic controls, the microprocessor shall be preprogrammed for all operations of the unit.

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2.1.8 Operation/maintenance manual(s). The dry cleaning unit shall be supplied with a complete set of manuals or a complete manual. The manual(s) shall contain installation instructions including bolting to the floor and all necessary connections or hook-ups, including any required exhaust ventilation, eye lavage, or other engineering control. The manual(s) shall contain complete operational instructions or all machine operations, complete maintenance instructions and schedules, a trouble shooting guide for the unit, a description of the formulas/operations of the dry cleaning units, a wiring diagram of the dry cleaning unit, and figures and parts lists for the unit and major components. The parts lists shall have part numbers for the ordering of spare/replacement parts. All operation/maintenance manuals shall contain all required safety and health warnings, including manufacturer's recommendations for wearing of any personal protective equipment (PPE) and any product-unique health hazards.

2.2 Electrical requirements. The dry cleaning unit shall be designed to operate on 208/240 volts, 60 hertz, 3 phase power, or as specified (see 5.2).

2.3 Water connections. Water connections shall be 1/2, 3/4, or 1 inch NPT.

2.4 Steam connections. Steam connections shall be 3/8, 1/2, 3/4, or 1 inch NPT. The steam pressure required shall be no more than 60 pound-force per square inch gauge (psig).

2.5 Air connections. Air connections shall be 1/4 inch NPT. The air pressure required shall be no more than 85 psig.

2.6 Data name plate (Government unique requirement, see 5.4). The dry cleaning unit shall be furnished with a data name plate in accordance with the applicable requirements of MIL-STD-130 except the requirements for: (a) Methods of applying; (b) Identification tags; (c) Information not required; and (d) Optional marking information shall not apply. The data name plate shall be made of minimum 20 gauge corrosion-resisting metal and attached to the unit by rivets, screws, or welding in such a manner that it is readily visible to the operator during normal operating use and so as to not adversely affect the life and utility of the unit. The plate shall contain the following information which shall be stamped, engraved, or applied by photosensitive means:

- National Stock Number
- Procurement Contract Number
- Specification Data
- Manufacturer's Name, Address, and Telephone Number
- Supplier's Name, Address, and Telephone Number (List only if different from Manufacturer)
- Manufacturer's Model Number
- Government Approved Manual Number (when specified, see 5.2).

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3. QUALITY ASSURANCE

3.1 Certification. The contractor shall certify, and maintain substantiating evidence, that the product offered meets the salient characteristics and requirements of this Commercial Item Description, 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.

3.2 Metric product. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest revision of Federal Standard No. 376, and all other requirements of this CID are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound 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.

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

4. PACKAGING

4.1 Packaging, packing, marking and palletization. Unless otherwise specified in the contract or purchase order, packaging, packing, marking and palletization shall be in accordance with ASTM D 3951, as specified for shipments to the Department of Defense (see 5.2).

5. NOTES

5.1 Intended Use. Commercial dry-to-dry cleaning units are designed to dry clean clothes using perchloroethylene. Dry cleaning units are for use in an enclosed building. Electricity, steam, water, and compressed air will be required for operation.

5.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Size, control, and filtration system required for the dry cleaning unit (see 1.1).
- c. Electrical characteristics, when other than specified (see 2.2).
- d. The Government approved manual number is to be included on the the data name plate when manuals are purchased under the contract (see 2.6).
- e. Type of packaging, packing, marking and palletization requirements required (see 4.1).

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5.3 Sources of documents.

5.3.1 Sources of Government documents. Copies of military and federal documents are available from:

Standardization Documents Order Desk
Building 4D
700 Robbins Avenue
Philadelphia, PA 19111-5094

5.3.2 Sources for non-Government association documents.

ASTM D 3951 - Standard Practice for Commercial Packaging, is available from:

The American Society for Testing and Materials (ASTM)
1916 Race Street
Philadelphia, PA 19103-1187

5.4 Government unique requirements. Whenever "(Government unique requirement)" is included in the title of a paragraph under "salient characteristics", it is meant that the requirement is something that is not normally offered to the commercial marketplace by the manufacturer.

5.5 Part or identifying number (PIN). The PINs to be used for items required by this CID are as follows:

AA 50047 - X - X - XXX (Example: AA50047 - C - C - 030)

Size (use 3 digit number;
e.g., 025 = 25 pounds)

Filtration system (C or S)

Controls (C or M)

CID number

Designates a CID

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MILITARY INTERESTS:

Custodians

Army - GL
Air Force - 99

Review Activities

Army - MD
Air Force - 50, 82
DLA - GS

User Activity

Army - CE

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Army - GL

Project 351G-0319