[INCH POUND]
A-A-1419D
June 18, 1991
SUPERSEDING
A-A-1419C
April 23, 1990

COMMERCIAL ITEM DESCRIPTION

FILTER ELEMENT, AIR CONDITIONING (VISCOUS-IMPINGEMENT AND DRY TYPES, REPLACEABLE)

The General Services Administration has authorized the use of this commercial item description.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This commercial item description covers standard dust-holding capacity, flat panel-type air-conditioning filters designed for arresting particulate matter in heating and ventilation systems in which the face velocity of the air stream is approximately 300 feet per minute (fpm).

1.2 Classification. The filters shall be of the following sizes, as specified (see 6.1).

Size	Length (inches)	Width (inches)	Thickness (inches)
A	14	20	1
B	16	20	1
C	16	25	1
D	20	20	1
E	20	25	1
F	16	20	2
G	16	25	2
H	20	20	2
I	20	25	2
J	10	10	1
K	10	20	1
L	19	27	1
X	Other as specified		

2. APPLICABLE DOCUMENTS

2.1 The documents referenced in this commercial item description shall be the issues in effect on the date of issuance of the invitation for bids or request for proposal unless otherwise specified. These documents form a part of this commercial item description to the extent specified. In the event of a conflict between this commercial item description and a document referenced herein, this commercial item description shall take precedence.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Engineering Group (7FXEE), 819 Taylor St., Fort Worth, TX 76102

Federal Standard:

FED-STD-376 - Preferred Metric Units For General Use By The Federal Government.

Copies of Federal standards are available from the General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.

Military Standard:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

Copies of military standards may be obtained from Standardization Documents Order Desk, Bldg 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

ASTM Standards:

D 92 - Flash and Fire points by Cleveland Open Cup, Test Method for.

E 28 - Standard Test Method for Softening Point by Ring-and-Ball Apparatus.

E 29 - Standard Practice For Using Digits In Test Data To Determine Conformance With Specifications.

Application for copies of ASTM standards should be addressed to ASTM, 1916 Race Street, Philadelphia, PA 19103.

ASHRAE Standard:

52 - Method of Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter.

Application for copies should be addressed to American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc., 1791 Tullie Circle, N.E., Atlanta, GA 30329.

UL Standard:

UL 900 - Test Performance of Air Filter Units.

Application for copies of UL standards should be addressed to Underwriters' Laboratories, Inc., 333 Pfingsten, Northbrook, IL 60062.

3. SALIENT CHARACTERISTICS

3.1 Description. The filter shall be of the flat panel-type designed and fabricated for disposal when, because of accumulated dust loading, the dust-load limit is reached. The filter media shall be dry or adhesive-coated in accordance with the manufacturer's standard practice.

3.2 First article. When specified (see 6.1), at the beginning of each contract period the contractor shall furnish samples in accordance with paragraph 4.3.1. The approval of the first article sample authorizes the commencement of shipment but does not relieve the supplier of continued responsibility for compliance with all applicable provisions of this commercial item description. In the event the source of filter media changes, first article samples must be resubmitted.

3.3 Fire and casualty hazards. Filters shall meet the fire-resistant requirements of UL 900. Filters shall be UL class 2 unless UL class 1 is specified by purchaser (see 6.1). Adhesive coatings used on the filter media shall have a flash point of not less than 325 degrees Fahrenheit when tested in accordance with ASTM D 92.

3.3.1 Certification. Prior to the approval of the sample filter furnished for first article inspection, if specified, or prior to the first shipment, if first article is not required, the contractor shall submit evidence satisfactory to the contracting officer or his authorized representative that the filters to be furnished under this commercial item description meet the UL standard cited in 3.3. Acceptable evidence that filters are in accordance with UL requirements will be the official UL listing mark or a certified test report from a laboratory acceptable to the Government indicating that the filter has been tested and conforms to the requirements for class 1 or class 2 filters (as applicable). Acceptable evidence that the adhesive coating meets the specified requirements will be a certified test report indicating that the adhesive has been tested in accordance with ASTM D 92 and has a flash point not less than the value specified in 3.3.

3.4 Performance. Filter performance shall be in accordance with the requirements of table I applicable to the thickness of filters being furnished. Performance shall be established on the basis of ASHRAE Standard 52.

3.4.1 Initial resistance. The initial resistance for clean filters shall not exceed the applicable values specified in table I when the filter is operated at face velocity of 300 fpm.

3.4.2 Final resistance. Maximum final resistance for filters with 1-inch thickness shall be 0.5-inch water gage (wg); maximum final resistance for filters with 2-inch thickness shall be 0.5-inch wg.

3.4.3 Average arrestance. The average arrestance shall be not less than the applicable values specified in table I, when the filter is operated to the final resistance at 300 fpm face velocity.

3.4.4 Dust holding capacity. The minimum dust holding capacity shall be not less than the applicable values specified in table I. The capacity shall equal the amount of the test dust fed per unit net face area times its average arrestance. The dust holding capacity shall be obtained at 300 fpm face velocity. The results of table I shall be obtained at the maximum final pressure drop specified in 3.4.2.

TABLE I

Filter performance requirements

Thickness	Initial Resistance (inch wg)	Average Arrestance (%)	Dust holding capacity (grams per square foot)
1-inch	0.12	65	25
2-inch	0.15	75	40

3.5 Construction. The air filters shall be of the disposable panel type, viscous impingement or dry filter media type constructed with 90 degree corners. Media pad reinforcement in the form of grilles, retaining grids, fabric netting, or equivalent shall be installed on one or both faces of the filter as specified in the contract or purchase order. The media pad shall be attached to the frame and supported in such a manner that the media pad will not slump or otherwise be permanently displaced under the conditions of maximum air velocity (300 fpm) and filter resistance specified herein.

3.5.1 Frame. The frame shall be fabricated using wood-pulp products and treated to reduce moisture absorption. The frames shall be formed to provide positive support for the media pad and sufficient structural rigidity for normal handling, installation, and removal. The frame edges shall be parallel to within 3/16 inch.

3.5.2 Filter media. The filter media shall be of one continuous piece and composed of inorganic fibers suitable for its intended use. The media shall be fastened around the perimeter of the frame in such a manner as to prevent the media from being dislocated during normal handling and use.

3.5.3 Media attachment. The media and retaining grids shall be fastened completely around the entire front and back perimeter of the frame in such a manner as to prevent the media or grids from being dislocated or unfastened from the frame during normal handling and use at maximum air velocity. The media shall be suitable for continuous use at temperatures up to at least 150 degrees F. If the fastening method of the media to the frame is by use of a temperature sensitive adhesive, the softening point of the adhesive shall be a minimum of 155 degrees F. when tested as specified in ASTM E 28.

3.5.4 Dimensions. The filter dimensions shall be as specified (see 1.2) with the following tolerances:

a. Height : plus 0-inch, minus 1/2-inch
b. Width : plus 0-inch, minus 1/2-inch
c. Thickness: plus 0-inch, minus 1/4-inch

3.6 Marking. Each filter assembly shall be plainly marked with the following:

a. The name or trademark of the manufacturer or vendor.
b. UL listing or other approved laboratory mark and class.
c. The dimensions of the filter.
d. Air flow direction when retainer is on one side only.

3.7 Workmanship. The air filters shall be designed and constructed for normal handling and installation and assembled to meet or exceed all requirements of this commercial item description. There shall be no evidence of media dislocation from the frame or other damage to the filter that may impair function or serviceability.

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

3.9 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch/pound units, provided they fall within the tolerances specified using conversion tables contained in the latest revision of FED-STD-376, and all other requirements of this commercial item description are met.

3.10 Commercial item. The use of the term "commercial item description" in this document does not imply that any item or items offered are not required to conform with all requirements specified herein.

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 order, 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. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Test certification. Unless otherwise specified, a certificate of conformance to the test requirements of this commercial item description may be acceptable in lieu of testing each lot. The contractor shall have available for review evidence that those tests specified herein have been performed, that the product tested conforms with the requirements of this commercial item description, and that the product offered has been manufactured at the same manufacturing facility using the same materials, processes, and manufacturing techniques, and is otherwise identical to the product tested. The tests shall be performed by a laboratory acceptable to the Government. Tests dated more than 1 year old are not acceptable.

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

a. First article inspection (see 4.3.1)
b. Quality conformance inspection (see 4.5.1)

4.3.1 First article inspection. When required (see 3.2 and 6.1), first article visual and dimensional examination shall be performed in accordance with section 4.5 on filters of each size and thickness specified. In addition, first article testing in accordance with section 4.7 shall be performed on one filter unit of each thickness in the size specified by ASHRAE Standard 52.

4.3.2 Sampling. The levels of inspection and acceptable quality level (AQL) shall be in accordance with MIL-STD-105.

4.4 Lot formation. All filters of the same size and thickness from the same manufacturer offered for delivery at one time shall be considered a lot for purposes of inspection and testing.

4.5 Sampling for quality conformance inspection. The inspection level shall be level I, AQL 6.5, expressed in terms of defects per hundred units. The sample unit shall be one filter.

4.5.1 Quality conformance inspection. The sample filters shall be examined for compliance with the requirements specified in section 3 and table II of this commercial item description. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirement shall constitute a defect. Tolerance limits specified are absolute limits as defined in ASTM E 29.

Table II

Defects
a. More than one 3-inch section of media or retaining screen not secured to frame.
b. More than three 1-inch sections of media or retaining screen not secured to frame.
c. More than one corner of media or retaining screen not secured to frame.
d. Any portion of retaining screen or media extending outside of frame channel.
e. More than one corner of frame not secured.
f. Frame corners more than 92 degrees or less than 88 degrees.
g. Frame edges more than 3/16-inch from parallel.
h. Outside corner of frame misaligned more than 1/8-inch.

4.6 Standards compliance. The contractor shall make available to the contracting officer or his authorized representative evidence of compliance with the applicable standards cited in section 3.

4.7 Tests (first article only). The filter unit shall be tested as specified. Failure to pass any test shall be cause for rejection.

4.7.1 Average arrestance. Determination of average arrestance shall be made in accordance with ASHRAE Standard 52 for conformance with 3.4.3.

4.7.2 Initial resistance. The initial resistance of the clean filter shall be established prior to determination of the average arrestance of the sample filter.

4.7.3 Dust holding capacity. The dust holding capacity shall be reported in accordance with ASHRAE Standard 52 for conformance with 3.4.4.

4.7.4 Softening point. The softening point of adhesive used shall be reported in accordance with ASTM E 28.

4.8 Examination for preparation for delivery. A random sample of shipping containers shall be selected from each lot for examination of the unit, intermediate, and shipping containers (as applicable) for conformance with the preservation, packaging, packing, labeling, and marking required in the contract or order. Samples shall be selected in accordance with inspection level S-2, AQL 6.5, expressed in terms of defects per hundred units.

5. PREPARATION FOR DELIVERY

5.1 Packaging, packing, and marking. The packaging, packing, and marking shall be as specified in the contract or order.

6. NOTES

6.1 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents (if applicable).

a. Title, number and date of this commercial item description.
b. Size required and dimensions for special size filters (see 1.2)
c. When first article is required for inspection and approval (see 3.2, 4.3.1, and 6.2).
d. UL 900 class 1 fire-resistant filter, if required.
e. The packaging, packing, and marking desired.

6.2 First article. When a first article is required, it shall be tested and approved under the appropriate provisions of paragraph 52-209.4 of the Federal Acquisition Regulation (FAR). The first article for visual and dimensional examination should be a first production item or it may be a standard production filter unit from the contractor's current inventory. First article testing and filter size required shall be as specified in ASHRAE Standard 52.

6.3 Part numbering. Filters conforming with this commercial item description shall be identified by a part number configuration consisting of identification of a portion of the specification number and size. An example of the part number configuration is shown below. This part numbering system is intended for identification and cross-indexing of the item within the Federal cataloging system. Part numbers are not required to be placed on the product or container.

AA1419-A Examble: (AA-1419-A) --- Size A

AA1419-A
- AA1419 — General commercial item description number.
- A — Size A, B, C, D, E, F, G, H, I, J, K, L, X.

6.4 National Stock Numbers (NSNs): The following is a list of NSN's which reference this CID. The list may not be indicative of all possible NSN's associated with this CID.

NSN	Filter	P/N
4130-00-756-0978	Size - A	P/N AA1419-A
4130-00-870-8796	Size - B	P/N AA1419-B
4130-00-541-3220	Size - C	P/N AA1419-C
4130-00-720-4143	Size - D	P/N AA1419-D
4130-00-203-3318	Size - E	P/N AA1419-E
4130-00-274-7800	Size - F	P/N AA1419-F
4130-00-756-1840	Size - G	P/N AA1419-G
4130-00-249-0966	Size - H	P/N AA1419-H
4130-00-203-3321	Size - I	P/N AA1419-I
4130-00-542-4482	Size - J	P/N AA1419-J
4130-00-959-4734	Size - K	P/N AA1419-K
4130-00-951-1208	Size - L	P/N AA1419-L
Other as specified	Size - X	P/N AA1419-X

PREPARING ACTIVITY:

GSA - FSS

MILITARY INTEREST:

NONE: DoD has determined that no military activity has official interest in this commercial description.