

[INCH-POUND]  
A-A-50560  
JUNE 21, 1996  
SUPERSEDING  
MIL-P-16077D(YD)  
21 June 1991

## COMMERCIAL ITEM DESCRIPTION

### PUMPS, CENTRIFUGAL, WATER CIRCULATING, ELECTRIC-MOTOR-DRIVEN

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 electric-motor-driven, centrifugal, water circulating pumps for use in hot water heating systems and service water distribution systems. The pumps have in-line connections to permit unsupported installation of the units in a straight run of piping. Pumps covered by this document are intended for use as circulators in forced hot water heating systems, and in service water distribution systems, where the water temperature for either application does not exceed 225°F (107°C).

2. **CLASSIFICATION.** Pumps are of the following types, sizes, and intended service, as specified (see 7.3):

Type I - Pump shaft in horizontal plane.

Type II - Pump shaft in vertical plane.

Sizes - 0.75-inch (19 millimeters (mm)), 1.00-inch (25 mm), 1.25 inches (32 mm), 1.50 inches (38 mm), 2.00 inches (51 mm), 2.50 inches (64 mm), 3.00 inches (76 mm).

Service A - Hot water heating systems.

Service B - Service water distribution systems.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commanding Officer (Code 156), Naval Construction Battalion Center, 1000 23rd Avenue, Port Hueneme, CA 93043-4301.
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AMSC N/A

FSC 4320

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

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### 3. SALIENT CHARACTERISTICS.

3.1 Description. The pumps covered by this CID shall be the in-line centrifugal, electric motor-driven type. The motor shall be supported in a mounting bracket attached to the pump casing to form an integrated, self-contained unit. The size of the pump is determined by the diameter, in inches (mm), of the discharge.

3.2 Standard commercial product. The pumps shall, as a minimum, be in accordance with the requirements of this CID and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this CID but which are a part of the manufacturer's standard commercial product, shall be included in the pumps being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market through advertisement or manufacturer's catalogs or brochures, and represents the latest production model.

3.3 Performance. The pump shall be capable of meeting the capacity and total dynamic head requirements specified (see 7.3), based on pumping water at a temperature of 80 degrees Fahrenheit (°F) (27 degrees Celsius (°C)). Pumps shall be capable of continuously delivering its rated capacity at a pump efficiency of not less than 50 percent, or where applicable, NEMA MG1 efficiencies shall apply. The pumps shall be capable of handling water at temperatures up to 225°F (107°C). The pump shall be capable of withstanding a hydrostatic pressure of not less than 1.5 times the maximum rated head of the pump.

3.4 Construction. The pumps shall include a motor, motor mounting bracket, and pump with inlet and outlet connections on opposite sides of the casing on a common centerline. Pumps shall be constructed to permit unsupported installation in a straight run of horizontal or vertical piping. The pump casing, impeller, and shaft shall be in accordance with standard industry practice for the service required.

3.4.1 Connections. Inlet and outlet connections shall be flanged and furnished with threaded companion flanges.

3.4.2 Motor. The motor shall be constructed and rated in accordance with the applicable provisions of NEMA MG 1 and shall prevent overloading at any point on the pump performance curve in accordance with NFPA 70. The size, type, and style of motor shall be in accordance with standard industry practice.

3.5 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 specified tolerances using conversion tables contained in the latest version of FED-STD-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 specification preparing activity for changes to this document.

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## 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).

## 5. QUALITY ASSURANCE PROVISIONS.

5.1 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial marketplace. 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.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

## 7. NOTES.

7.1 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PINs to be used for items acquired to this description are created as follows:

AA50560-XX-X.XX

CID number \_\_\_\_\_

Type and service code (see 7.1.1) \_\_\_\_\_

Size code (see 7.1.2) \_\_\_\_\_

7.1.1 Type and service to code identifier. The type and service of the pump is identified by a two-digit identifier as shown in table I. The first character is a single number identifying the type; the second character is a single letter identifying service.

TABLE I. Type and service to code identifier.

	Service A	Service B
Type I	1A	1B
Type II	2A	2B

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7.1.2 Size code identifier. The size code identifier is a three-digit number, with decimal point, which corresponds to the size indicated in 2.

7.2 Source of documents.

7.2.1 NEMA Standards are available from the National Electrical Manufacturers Association, 2101 L Street, N.W., Suite 300, Washington, DC 20037.

7.2.2 NFPA Standards are available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

7.2.3 The Federal Acquisition Regulation (FAR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.3 Ordering data: Acquisition documents should specify the following:

- a. Type, size, and service required (see 2.)
- b. Capacity and total dynamic head required (see 3.3).

7.4 Subject term (key word) listing.

Circulator pump  
 Service water distribution system  
 Hot water heating system  
 In-line pump

7.5 National Stock Numbers (NSNs). The following is a list of NSNs assigned which correspond to this CID. The list may not be indicative of all possible NSNs associated with the CID.

<u>NSN</u>	<u>Type</u>	<u>Size</u>
4320-00-273-8555	I	2

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MILITARY INTERESTS:

Custodian

Army - AT  
Navy - YD1

Review Activity

DLA - CS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Navy - YD1

(Project 4320-0006)