

[INCH-POUND]
 A-A-59616
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 SUPERSEDING
 WW-P-471C
 29 December 1981

COMMERCIAL ITEM DESCRIPTION

PIPE FITTINGS: BUSHINGS, LOCKNUTS, AND PLUGS;
 IRON, STEEL, AND ALUMINUM; (THREADED); 125 - 150 POUNDS

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. SCOPE. This CID covers the general requirements for iron, steel, or aluminum bushings, locknuts, and plugs that are used with threaded piping at working pressures between 125 and 150 pounds.
2. CLASSIFICATION. This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).

<u>AA59616</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
CID	Type	Class _{1/}	Style _{1/}	Material	Finish	Size
Number				(see 3.2)	(see 3.3)	(see 2.1.1)

1/ Use Q where Class and Style is not applicable.

2.1 Type, class, style and size. Plugs, bushings, and locknuts shall be of the following types, classes, styles and sizes. Materials and finishes shall be as specified (see 3.2 and 3.3).

Type A - Plug

Class A - Square head

Style C - Cored (Size D - M)

Style S - Solid (Size A - M)

Class B - Bar or slotted head (Size N, P, R, T)

Class C - Countersunk or headless

Style A - Hexagon socket (Size A - F)

Style B - Square socket (Size D - N)

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data that may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC-VAI, P.O. Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0538, or facsimile (FAX) (614) 692-6939.

AMSC N/A

FSC 4730

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

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Type B - Bushing

Class D - Outside head

Class E - Inside head

Class F - Face bushing

Type C - Locknut (Material B only)

2.1.1 Sizes.

Size A	-	0.125 inch	Size G	-	1.250 inches	Size M	-	3.500 inches
Size B	-	0.250 inch	Size H	-	1.500 inches	Size N	-	4.000 inches
Size C	-	0.375 inch	Size J	-	2.000 inches	Size P	-	5.000 inches
Size D	-	0.500 inch	Size K	-	2.500 inches	Size R	-	6.000 inches
Size E	-	0.750 inch	Size L	-	3.000 inches	Size T	-	8.000 inches
Size F	-	1.000 inch						

3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Bushings, locknuts, and plugs supplied to this CID shall be as specified herein and in accordance with ASME B16.14. As an option, Class C steel plugs not requiring an electrodeposited cadmium finish may be in accordance with SAE J531 (NPTF only).

3.2 Materials. Materials shall be as specified in Table 1.

Table 1. Materials.

Material Code	Material	Reference Document
A	Aluminum	ASTM B 211, Alloy 1100, 2011, or 2024
B	Iron or Steel	ASME B16.14 (Iron or Steel) ^{1/}

^{1/} Class C steel plugs 1 inch or smaller which do not require cadmium plating may be in accordance with SAE J531 (NPTF only).

3.3 Finishes. Finishes shall be as specified in Table 2.

Table 2. Finishes. ^{1/}

Fitting Material	Finish Code	Finish	Reference Document
Aluminum	A	Anodized	ASTM B 580
	N	Nonanodized	N/A
Iron or Steel	C	Electrodeposited zinc ^{2/}	ASTM B 633
	D	Electrodeposited cadmium ^{2/}	ASTM B 766
	U	Uncoated	N/A

^{1/} When specified in the contract or order (see 7.4).

^{2/} Coating shall be applied prior to all threading. Electrodeposited cadmium finish (finish code D) shall be used only when electrodeposited zinc finish (finish code C) can not meet performance requirements.

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3.4 Threads. Threads shall be in accordance with ANSI/ASME B1.20.1. Pipe plugs manufactured to SAE J531 (NPTF) shall be in accordance with ANSI/ASME B1.20.3. Unless otherwise specified in the contract or order (see 7.4), all threads shall be right hand and shall be smooth, clean, and true to form.

3.4.1 Bushings. When specified in the contract or order (see 7.4), Class D bushings shall have the external threads oversize in accordance with ASME B16.14.

3.4.2 Locknuts. All locknuts shall have internal threads with American National Standard straight pipe threads for locknut connections (NPSL) in accordance with ANSI/ASME B1.20.1.

3.5 Performance. Bushings and plugs shall be capable of withstanding an air pressure of at least 60 pounds per square inch (psi) while under water without leaking at any part of the surface. Bushings and plugs shall also be capable of withstanding a hydrostatic pressure of either 250 psi, for 125-pound fittings, or 300 psi, for 150-pound fittings, for 1 minute without leaking or sweating.

3.6 Workmanship. Bushings, locknuts, and plugs supplied to this CID shall be clean, free of sand and scale, and be sound, smoothly cored, and true to form. There shall be no cold shuts, blowholes, porosity, or any other defects that may affect serviceability.

3.7 Marking. The name, initial, the manufacturer, or other mark by which the manufacturer can be readily identified, shall be legibly and permanently marked on each bushing, locknut, and plug. When required (see 7.4), the marking on small sizes shall be placed on the outside of the box or bag.

4. REGULATORY REQUIREMENTS. 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. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

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

7. NOTES.

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these bushings, locknuts, and plugs to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

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7.3 Source of documents.

Federal Regulations

FEDERAL ACQUISITION REGULATION (FAR)

FAR 23.403 - Federal Acquisition Regulations

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, 732 N. Capital Street, NW #808, Washington, DC 20402-0001.)

Other Publications

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ANSI/ASME B1.20.1 - Pipe Threads, General Purpose (Inch)
ANSI/ASME B1.20.3 - Dryseal Pipe Threads (Inch)
ASME B16.14 - Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads

(Application for copies should be addressed to the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B 211 - Aluminum and Aluminum-Alloy Bar, Rod, and Wire
ASTM B 580 - Anodic Oxide Coatings on Aluminum
ASTM B 633 - Electrodeposited Coatings of Zinc on Iron and Steel
ASTM B 766 - Electrodeposited Coatings of Cadmium

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE J531 - Automotive Pipe, Filler, and Drain Plugs

(Application for copies should be addressed to SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-001)

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

7.4 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. When left-hand threads are required (see 3.4).

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7.4 Continued.

- c. When small item marking is acceptable on the box or bag only (see 3.7).
- d. Packaging requirements.

7.5 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

<u>MFR's CAGE</u>	<u>MFR's Name and Address</u>
12502	General Plug and Manufacturing Corporation 455 Main Street Grafton, OH 44044 800-289-7584
None	Billco Corporation 770 W. Belden Avenue Addison, IL 60101 630-543-4777
80996	Anvil International (Formerly ITT Grinnell Corporation) 110 Corporate Drive, Suite 10 P.O. Box 3180 Portsmouth, NH 03802 603-422-8000 www.anvilintl.com

7.6 Part number (P/N) supersession data. These CID part numbers supersede the following Federal specification part number as shown. This information is being provided to assist in reducing proliferation in the Government inventory system.

Table 3. P/N data.

Dash Number (See section 2) A-A-59616	MFR's CAGE	MFR's P/N ^{1/}
AA59616BDQBC	80996	383BLK3/8X1/4
AA59616BDQBUJH	80996	383BLK2X1-1/2
AA59616AASBD	80996	388BLK2
AA59616AASBOG	45152	2AF27S

^{1/} The manufacturer's P/N shall not be used for procurement to the requirements of this CID. At the time of preparation of this CID, the aforementioned commercial products were reviewed and could be replaced by the CID P/N shown. For actual part marking requirements see 3.7.

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7.7 Government users. Government users. To acquire information on obtaining these bushings, locknuts, and plugs from the Government inventory system, please contact the DSCC call center; Defense Supply Center, Columbus, office code: DSCC-NAB, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-2771, or (614) 692-3191.

MILITARY INTERESTS:

Custodians:

Air Force - 99
Army - AT
Navy - SH
DLA - CC

Review activities:

Army - AR, EA
Navy - MC, SA
Air Force - 71

CIVIL AGENCY COORDINATING ACTIVITY:

GSA/FSS

Preparing activity:

DLA - CC

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