

[INCH-POUND]
A-A-59616A
27 February 2006
SUPERSEDING
A-A-59616
10 July 2002

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 pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds. Pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds. Pipe fittings covered by this CID are intended for commercial/industrial applications.

2. **CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).

Example of a plug PIN with left hand threads.

<u>AA59616</u>	<u>A</u>	<u>B</u>	<u>Q</u>	<u>B</u>	<u>C</u>	<u>P</u>	<u>L</u>
CID	Type	Class (see	Style	Material	Finish	Size	Blank for right
number	(see table I)	table I)	(see table I)				hand thread L
							for left.

Example of a bushing PIN with right hand threads.

<u>AA59616</u>	<u>B</u>	<u>E</u>	<u>Q</u>	<u>B</u>	<u>C</u>	<u>FD</u>	<u> </u>
CID	Type	Class (see	Style	Material	Finish	Size	Blank for right
number	(see table I)	table I)	(see table I)			<u>1/</u>	hand thread L
							for left.

1/ Bushings require two letters used to indicate the OD (outside diameter) and the ID (inside diameter).

2.1 Type, class, style and size. Plugs, bushings, and locknuts shall be of the following types, classes, styles and sizes (see table I).

Beneficial comments, recommendations, deletions, clarifications, etc., and any data which may improve this document should be sent to: Commander, Defense Supply Center Columbus, Attn: VAI, P.O. Box 3990, Columbus, Ohio, 43218-3990 or Email to: Construction@dsc.dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

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TABLE I. Type, class, style designators.

Type	Type designator	Class designator	Class characteristics	Style designator	Style characteristics	Applicable sizes (see 2.1.1)
Plug	A	A	Square head	C	Cored	D through M
				S	Solid	A through M
		B	Bar or slotted head	Q	N/A	N, P, R, and T
		C	Countersunk or headless	A	Hexagon socket	A through F
				B	Square socket	D through N
Bushing	B	D	Outside head	Q	N/A	Requires two letters to indicate the O.D. and the I.D. A through T
		E	Inside head			
		F	Face bushing			
Locknut 1/	C	Q	N/A	Q	N/A	A through T

1/ Material B only see 3.2.

2.1.1 Sizes. For size designators see table II.

TABLE II. Size designators.

Size designator	Fraction inch	Decimal inch	Metric (mm)
A	1/8	.125	3.18
B	1/4	.250	6.35
C	3/8	.375	9.53
D	1/2	.500	12.70
E	3/4	.750	19.05
F	1	1.000	25.40
G	1 1/4	1.250	31.75
H	1 1/2	1.500	38.10
J	2	2.000	50.80
K	2 1/2	2.500	63.50
L	3	3.000	76.20
M	3 1/2	3.500	88.90
N	4	4.000	101.60
P	5	5.000	127.00
R	6	6.000	152.40
T	8	8.000	203.20

2.2 Materials. Materials shall be as specified in 3.2.

2.3 Finishes. Finishes shall be as specified in 3.3.

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3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds supplied to this CID shall be as specified herein.

3.2 Materials. Materials shall be as specified in table III.

TABLE III. Materials.

Material designator	Material	Reference document
A	Aluminum	ASTM B211, 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 IV.

TABLE IV. Finishes.

Fitting Material	Finish designator	Finish	Reference document
Aluminum	A	Anodized	ASTM B580
	N	Non-anodized	N/A
Iron or steel	C	Electrodeposited zinc 1/	ASTM B633
	D	Electrodeposited cadmium 1/	ASTM B766
	U	Uncoated	N/A

1/ 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.

3.4 Threads. Threads shall be in accordance with ASME B1.20.1. Pipe plugs manufactured to SAE J531 (NPTF) shall be in accordance with ASME B1.20.3.

3.4.1 Bushings. 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 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) (4.14 bar) 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 (17.24 bar), for 125-pound (56.70 kg) fittings, or 300 psi (20.68 bar), for 150-pound (68.04 kg) 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.

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3.7 Marking. Pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds supplied to this CID shall be marked with the manufacturers (MFR's) standard commercial PIN. The part number on the unit pack shall be the CID PIN.

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 pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

Federal Regulations

FEDERAL ACQUISITION REGULATION (FAR)

FAR 23.403 - Federal Acquisition Regulations

(Copies of these documents are available online at www.acqnet.gov or from the Superintendent of Documents, U.S. Government Printing Office, 732 N. Capital Street, NW #808, Washington, DC 20402-0001.)

Other Publications

ASME INTERNATIONAL

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

(Copies of these documents are available online at <http://www.asme.org> or from the ASME International, Three Park Avenue, New York, NY 10016-5990.)

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ASTM INTERNATIONAL

ASTM B211	-	Aluminum and Aluminum-Alloy Bar, Rod, and Wire
ASTM B580	-	Anodic Oxide Coatings on Aluminum
ASTM B633	-	Electrodeposited Coatings of Zinc on Iron and Steel
ASTM B766	-	Electrodeposited Coatings of Cadmium

(Copies of these documents are available online at <http://www.astm.org> or from the ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

SAE INTERNATIONAL

SAE J531	-	Automotive Pipe, Filler, and Drain Plugs
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(Copies of these documents are available online at <http://www.sae.org> or from the SAE World Headquarters, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

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

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

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<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 www.billcocorp.com
80996	Anvil International (Formerly ITT Grinnell Corporation) 110 Corporate Drive, Suite 10 P.O. Box 3180 Portsmouth, NH 03802-3180 603-422-8000 www.anvilintl.com

7.6 Part number (P/N) supersession data. These CID PINs supersede the following MFG'S P/N's as shown in table V. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE V. P/N data.

Dash Number (See section 2) A-A-59616	MFR's CAGE	MFR's P/N <u>1/</u>
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.

7.7 Supersession data. A-A-59616 supersedes WW-P-471.

7.8 Government users. To acquire information on obtaining these pipe fittings: bushings, locknuts, and plugs; iron, steel, and aluminum; (threaded); 125 - 150 pounds from the Government inventory system, please contact Defense Supply Center, Columbus, ATTN: DSCC Call Center (DSCC-NAB), P.O. Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-2271 or -3191.

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7.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

MILITARY INTERESTS:

Custodians:

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

Review activities:

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

CIVIL AGENCY COORDINATING ACTIVITY:

GSA/FSS

Preparing activity:

DLA - CC

(Project 4730-2005-024)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organization and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.