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* INCH-POUND *

A-A-50553
June 7, 1995)

SUPERSEDING
W-F-408E
December 20, 1989

COMMERCIAL ITEM DESCRIPTION

FITTING FOR CONDUIT, METAL, RIGID (THICK-WALL AND THIN-WALL (EMT) TYPE)

The General Services Administration has authorized the use of this Commercial Item Description for all federal agencies.

1.0 SCOPE. This commercial item description (CID) covers raintight, concretetight, and miscellaneous fittings for rigid metal conduit and electricalmetallic tubing. This document does not cover fittings designed specifically to meet the requirements of the National Electrical Code for use in hazardous locations or cast metal outlet bodies and floor boxes.

2.0 CLASSIFICATION. Fittings furnished under this specification shall be of the following types, classes, kinds, and styles as specified. Tables I, II and III provide configuration, sizes and material options.

NOTE: Classes, kinds, styles, and materials of the type I and type II fittings are identical except for type II, kind G.

Type I - Raintight

Class 1 - Fittings for thick-wall conduit

Kind A - Coupling, electrical conduit threadless

Kind B - Box connector, electrical, straight, threadless
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind X - Box connector, (hub), electrical, straight, threaded
Style 1 - Uninsulated
Style 2 - With insulated throat

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Beneficial comments (recommendations, additions, deletions) and any pertinent
*data which may be of use in improving this document should be addressed to: *
*Commanding Officer (Code 156), Naval Construction Battalion Center, *
*1000 23rd Avenue, Port Hueneme, CA 93043-4301, by using the Standardization *
*Document Improvement Proposal (DD Form 1426) appearing at the end of this *
*document or by letter. *
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FSC 5975

Kind C - Box connector, electrical, 90 deg, threaded
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind D - Box connector, electrical, 45 deg, threaded
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind E - Box connector, electrical, 90 deg, threadless
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind F - Box connector, electrical, 45 deg, threadless
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind H - Adapter, electrical conduit
Style 3 - Enlarger
Style 4 - Reducer

Kind J - Offset connector, electrical conduit, threaded
Style 5 - External to internal
Style 6 - External to external

Class 2 - Threadless fittings for thin-wall conduit (EMT)

Kind K - Coupling, electrical conduit

Kind L - Box connector, electrical, straight, with single locknut
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind M - Box connector, electrical, 90 deg
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind N - Box connector, electrical, 45 deg
Style 1 - Uninsulated
Style 2 - With insulated throat

Kind Y - Offset connector, electrical conduit

Type II - Concrete tight

Class 1 - Fittings for thick-wall conduit

Kind G - Union, electrical conduit

Type III - Miscellaneous fittings

Class 1 - Fittings for thick-wall conduit

Kind P - Locknut, electrical conduit

Kind Q - Bushing, electrical conduit, metal
Style 1 - Uninsulated
Style 2 - With insulated throat
Style 7 - Capped
Style 8 - Grounding
Style 9 - Grounding, insulated

Kind R - Bushing, electrical conduit, nonmetallic

Kind S - Bushing, electrical conductor, nonmetallic

Kind T - Chase nipple, conduit, metal
Style 1 - Uninsulated
Style 2 - With insulated throat

Class 2 - Threadless fittings for thin-wall conduit (EMT)

Kind U - Bushing, electrical conduit, metal
Style 1 - Uninsulated
Style 2 - With insulated throat

Table I - TYPE, CLASS, KINDS AND STYLE FITTINGS

Kind	Configuration (Note 1)	Threaded	Threadless	Type I Raintight	Type Concrete type	Class I For Thick-Wall Conduit	Class II For Thin-Wall Conduit	Styles (Note 2)
A	Coupling (C)	-	Yes	Yes	Yes	Yes	-	-
B	Straight (B)		Yes	Yes	Yes	Yes	-	1,2
X	Hub (B)	Yes	-	Yes	Yes	Yes	-	1,2
C	90 deg (B)	Yes	-	Yes	Yes	Yes	-	1,2
D	45 deg (B)	Yes	-	Yes	Yes	Yes	-	1,2
E	90 deg (B)	-	Yes	Yes	Yes	Yes	-	1,2
F	45 deg (B)	-	Yes	Yes	Yes	Yes	-	1,2
G	Union (C)	-	Yes	-	Yes	Yes	-	-
H	Adaptor (C)	-	Yes	Yes	Yes	Yes	-	3,4
J	Offset (C)	Yes	-	Yes	Yes	Yes	-	5,6
K	Coupling (C)	-	Yes	Yes	Yes	-	Yes	-
L	Straight (C) (Note 3)	-	Yes	Yes	Yes	-	Yes	1,2
M	90 deg (B)	-	Yes	Yes	Yes	-	Yes	1,2
N	45 deg	-	Yes	Yes	Yes	-	Yes	1,2
Y	Offset (C)	-	Yes	Yes	Yes	-	Yes	-
P	Locknut (C)	Yes	-	-	-	Yes	-	-
Q	Bushing Metal (C)	-	-	-	-	Yes	-	1,2,7,8,9
R	Bushing Non-Metal (C)	-	-	-	-	Yes	-	-
S	Bushing Non -Metal (C)	-	-	-	-	Yes	-	-
T	Chase Nipple (C)	-	-	-	-	Yes	-	1,2
U	Bushing Met (C)	-	-	-	-	-	Yes	1,2

TABLE I NOTES:
1. (B) indicates box connector, (C) indicates conduit connector.
2. Numbers shown are styles as follows: "1"-uninsulated; "2"-insulated; "3"-enlarger; "4"-reducer; "5"-external to internal; "6"-external to external; "7"-capped; "8"-grounding; "9"-grounding, insulated.
3. Kind L has single locknut.

General: "Yes" indicates the option is available.

TABLE II - SIZES

Size Code	Size
01	0.50-1/2 inch
02	0.75-3/4 inch
03	1.00-1 inch
04	1.25-1-1/4 inch
05	1.50-1-1/2 inch
06	2.00-2 inch
07	2.50-2-1/2 inch
08	3.00-3 inch
09	3.50-3-1/2 inch
10	4.00-4 inch

TABLE III - MATERIALS

Material Code	Material
A	Aluminum Alloy
C	Cast Iron
M	Malleable Iron
S	Steel
Z	Zinc Alloy

3.0 SALIENT CHARACTERISTICS.

3.1 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Fittings and component parts of fittings shall be made of steel, malleable iron, cast iron, or non-ferrous metals as specified. Fittings made form die-cast zinc material shall conform to ASTM B 86 insulating material used for fittings and component parts of fittings shall be suitable for use in concrete, and shall conform to the requirements of UL 514B.

3.2 Electrical characteristics. The fittings shall conform to the requirements of UL 467 and UL 514B.

3.3.1 Electrical continuity. A fitting shall join with other parts of the raceway system in such a manner as to provide continuous electrical conductivity when tested for electrical continuity.

3.3.2 Grounding and bonding. Fittings and accessories furnished under this description shall meet all the applicable requirements stated in UL 467.

3.4 Interchangeability. All units of the same classification furnished with similar options under a specific contract shall be identical to the extent necessary to insure interchangeability of component parts, assemblies, accessories, and spare parts.

4.0 REGULATORY REQUIREMENTS.

4.1 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) unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this description are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use.

The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin, raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this description unless otherwise specified.

4.2 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 Federal Standard No. 376, and all other requirements of this Commercial Item Description including form, fit, and function 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.

5.0 QUALITY ASSURANCE PROVISIONS.

5.1 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of the Commercial Item Description, 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. Contractor certifications shall include Underwriter Laboratory certification as follows:

5.1.1 Underwriter Laboratories Inc. certification. Acceptable evidence of meeting the requirements of UL 467 or UL 514B shall be the UL certification symbol or label, listing in the Listing File, or a certified test report from a recognized independent testing laboratory indicating the fittings have been tested and conforms to UL 467 and UL 514B.

6.0 PRESERVATION, PACKAGING, PACKING AND MARKING. Preservation, packaging, packing and marking for shipment shall be in accordance with American Society for Testing and Materials (ASTM) D 3951 or as specified in the contract or order. Each fitting and accessory shall be marked in accordance with UL 467 and UL 514B.

7.0 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 CID are created as follows:

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AA50553 - X - X - X - X - XX - X
   *      *   *   *   *   *    *--- Material (Table III)
   *      *   *   *   *   *
   *      *   *   *   *   *-------- Size (Table II)
   *      *   *   *   *
   *      *   *   *   *------------ Style
   *      *   *   *
   *      *   *   *---------------- Kind
   *      *   *
   *      *   *--------------------- Class
   *      *
   *      *------------------------- Type
   *
   *------------------------------- CID Number
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The following is an example of the PIN for a Type I raintight, class 1 for thick-wall conduit, kind D box connector, electrical 45o, threadless, style 2 with insulated throat, size 1 inch, zinc alloy:

AA50553-I-1-D-2-03-Z

7.2 Source of documents.

7.2.1 ASTM Standards are available from American Society For Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

7.2.2 UL Standards are available from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

7.3 Ordering Data.

a) Title, number, and date of this description.
b) Type, class, kind, style, size and material required.
b) Specify special packaging requirements.
c) Contracting officer may request proof of certification of commercial item and UL certification prior to first contract delivery.

7.4 Definitions.

7.4.1 Raintight fitting. A raintight fitting is one so designed that, when assembled in the intended manner and exposed to a beating rain, it will not permit the entrance of water into the interior of the fitting.

7.4.2 Concrete tight fitting. A concrete tight fitting is one so designed that, when assembled in the intended manner and embedded in freshly mixed concrete, it will not permit the entrance of cement into the interior of the fitting.

7.5 Key word listing.
Adapter
Box connector
Bushing
Coupling
Electrical
Locknut

MILITARY INTEREST:

Custodians
Army - ME
Navy - YD1
Air Force - 85

Review Activities
Air Force - 99
Army - CE
Navy - MC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

Preparing Activity:
Navy - YD1

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