

Fittings, Electrical Metallic Tubing (EMT)



1. Scope

This standard covers the requirements for electrical metallic tubing (EMT) fittings. EMT is also known as thin-wall conduit.

This standard applies to the Seattle City Light (SCL) stock numbers cited in Section 4.

2. Application

Fittings specified in this standard are used to connect EMT to EMT or EMT to metal electrical boxes. See Section 4 for detailed application notes.

Fittings are compatible with both RMC and IMC conduit.

3. Industry Standards

EMT fittings shall meet the applicable requirements of the latest revision of the following industry standards:

NEMA FB 1; "Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable"

UL 514B; "Conduit, Tubing, and Cable Fittings"

4. Requirements

EMT fittings shall be suitable for above-ground use indoors or outdoors exposed to sunlight and weather, and for underground use by direct burial or encasement in concrete as noted below.

Fittings shall not have any features that abrade or otherwise damage cable.

Fittings shall have the attributes listed in Sections 4.1 through 4.10.

4.1 Chase Nipples

Chase nipples are used with a locknut to effectively bush factory or field-punched, cut, or drilled holes in metal boxes and enclosures. They are also used to couple boxes side-by-side or back-to-back.

Nipples shall have the following attributes:

- Non-insulated, hot-dip or mechanical galvanized
- Steel or malleable iron construction

Table 4.1. Chase Nipple Sizes

Stock No.	Trade Size (in)
731260	1/2

Figure 4.1. Chase Nipple



4.2 Union Couplings

Three-piece union couplings couple two lengths of conduit when neither can be turned.

Couplings shall have the following attributes:

- Concrete tight
- Hot-dip or mechanical galvanized malleable iron construction

Table 4.2. Union Coupling Sizes

Stock No.	Trade Size (in)
731076	1/2
731077	3/4
731078	1
731080	1-1/2
731081	2

Figure 4.2. Union Coupling



4.3 Compression Couplings

Compression couplings are used to couple two ends of EMT conduit.

Couplings shall have the following attributes:

- Rain and concrete tight
- Steel and zinc-electroplated construction

Table 4.3. Compression Coupling Sizes

Stock No.	Trade Size (in)
731181	1/2
731182	3/4
731183	1

Figure 4.3. Compression Coupling



4.4 Set Screw Couplings

Set screw couplings are used to couple two ends of EMT conduit.

Couplings shall have the following attributes:

- Concrete tight
- Steel and zinc-electroplated construction

Table 4.4. Set Screw Coupling

Stock No.	Trade Size (in)
012287	1/2
012288	3/4
012289	1

Figure 4.4. Set Screw Coupling



4.5 Set Screw Connectors

Set screw connectors are used to bond EMT conduit to a box or enclosure.

Connectors shall have the following attributes:

- Concrete tight
- Insulated
- Steel and zinc-electroplated construction

Table 4.5. Set Screw Connector

Stock No.	Trade Size (in)
012290	1/2
012291	3/4
012292	1

Figure 4.5. Set Screw Connector



4.6 Hubs

Hubs are used to connect threaded metal conduit to a threadless opening in a box or enclosure.

Hubs shall have the following attributes:

- Watertight
- Equipped with neoprene rubber O-Ring sealing gasket
- Insulated throat
- Zinc or copper-free aluminum construction

Table 4.6. Hub Sizes

Stock No.	Trade Size (in)
012092	1/2
731130	3/4
731131	1

Figure 4.6. Hub



4.7 Compression Connectors, Malleable Iron

Compression connectors are used to secure and terminate rigid metal conduit to enclosures.

Connectors shall have the following attributes:

- Concrete tight
- Electro-galvanized malleable iron construction

Table 4.7. Compression Connector, Malleable Iron Sizes

<u>Stock No.</u>	<u>Trade Size (in)</u>
731115	2

Figure 4.7. Compression Connector, Malleable Iron



4.8 Compression Connectors, Zinc

Compression connectors are used to secure and terminate rigid metal conduit to enclosure.

Connectors shall have the following attributes:

- Rain and concrete tight
- Zinc die cast construction
- Ball burnished or mirror smooth finish

Table 4.8. Compression Connector, Zinc Sizes

<u>Stock No.</u>	<u>Trade Size (in)</u>
731189	1/2
731190	3/4
731191	1

Figure 4.8. Compression Connector, Zinc



4.9 Compression Connectors, 90-Degree, Zinc

90-degree compression connectors are used join EMTs to boxes or enclosures. Connectors shall have the following attributes:

- Concrete tight
- Zinc die cast construction
- Ball burnished or mirror smooth finish

Table. 4.9. Compression Connector, 90-Degree Zinc Sizes

Stock No.	Trade Size (in)
731196	1/2

Figure 4.9. Compression Connector, 90-Degree Zinc



4.10 Reducing Bushings

Reducing bushings are used to reduce the size of internal female threads.

Bushings shall have the following attributes:

- Steel or malleable iron
- Galvanized or zinc electro-plate construction

Table. 4.10. Reducing Bushing Sizes

Stock No.	Trade Size (in)
731301	3/4 x 1/2
731302	1 x 1/2
731310	1 x 3/4
731311	1-1/4 – 3/4
731318	1-1/4 - 1
731312	1-1/2 – 3/4
731319	1-1/2 – 1

Figure 4.10. Reducing Bushing



5. Packaging

Each standard package shall be legibly marked with the following information:

- Manufacturer identification
- Product description
- SCL stock number
- Quantity contained

Each shipping container shall be legibly marked with the following information:

- Manufacturer identification
- Country of origin
- Product description
- SCL purchase order number

6. Issuance

Stock Unit: EA

7. Approved Manufacturers

Stock No.	Description	Eaton - Crouse Hinds	Bridgeport	ABB	American Fittings Corp.
731260	1/2-in steel/malleable chase nipple	50	1102	HA 201	CN-50
731076	1/2-in malleable galv union coupling (Erickson)	190M	1121	–	ER-50
731077	3/4-in malleable galv union coupling (Erickson)	191	1122	–	ER-75
731078	1-in malleable galv union coupling (Erickson)	192	1123	–	ER-100
731080	1-1/2 in malleable galv union coupling Erickson	194	1125	–	ER-150
731081	2-in malleable galv union coupling (Erickson)	195	1126	–	ER-200
731181	1/2-in steel EMTcompression coupling, rain tight	660RT	260-SRT	TK111AN- RT	–
731182	3/4 in steel EMTcompression coupling, rain tight	661RT	261-SRT	TK112AN- RT	–
731183	1-in steel EMT compression coupling, rain tight	662RT	262-SRT	TK113AN- RT	–
012287	1/2-in steel EMT set screw coupling	460	–	TK121A	SS60US
012288	3/4-in steel EMT set screw coupling	461	–	TK122A	SS61US
012289	1 in steel EMT set screw coupling	462	–	TK123A	SS62US
012290	1/2-in steel EMT set screw connector insulated	1450	–	TC721A	SS50BUS
012291	3/4-in steel EMT set screw connector insulated	1451	–	TC722A	SS51BUS
012292	1-in steel EMT set screw connector insulated	1452	–	TC723A-	SS52BUS
012092	1/2-in conduit hub zinc (Myers hub)	ST-1	151-DC	H050-TB	–
731130	3/4-in conduit hub zinc (Myers hub)	ST-2	152-DC	H075-TB	–
731131	1-in conduit hub zinc (Myers hub)	ST-3	153-DC	H100-TB	–
731115	2-in steel EMT compression connector	655	255	TC116A	–
731189	1/2-in die cast EMT compression connector, rain tight	–	250-RT2	–	–
731190	3/4-in die cast EMT compression connector, rain tight	–	251-RT2	–	–
731191	1-in die cast EMT compression connector, rain tight	–	252-RT2	–	–
731196	1/2-in die cast 90-deg EMT compression connector	–	270-DC2	TC911 SC	–
731301	Reducing bushing steel/malleable, 3/4-in x 1/2-in	RE21	1161	RB121	–
731302	Reducing bushing steel/malleable, 1-in x 1/2-in	RE31	1162	RB131	–
731310	Reducing bushing steel/malleable, 1-in x 3/4-in	RE32	1163	RB132	–
731311	Reducing bushing steel/malleable, 1-1/4-in x 3/4-in	RE42	1165	RB142	–
731318	Reducing bushing steel/malleable, 1-1/4-in x 1-in	RE43	1166	RB143	–
731312	Reducing bushing steel/malleable, 1-1/2-in x 3/4-in	RE52	1168	RB152	–
731319	Reducing bushing steel/malleable, 1-1/2-in x 1-in	RE53	1169	RB153	–

SCL Material Control personnel may also identify and approve distributors, and hence manufacturers, of EMT conduit fittings.

8. Sources

Shetab, Muneer; SCL Standards Engineer, originator, and subject matter expert for 7030.09

SCL Material Standard 7030.05; “Steel Electrical Metallic Tubing (EMT)”

SCL Material Standard 7050.19; “Connector, Hub, Watertight With O-Ring Gasket” (canceled)

SCL Stock Catalog Page 73-5, June 20, 2017

SCL Stock Catalog Page 73-9, June 20, 2017

SCL Stock Catalog Page 73-71, November 1, 2013

www.abb.com

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