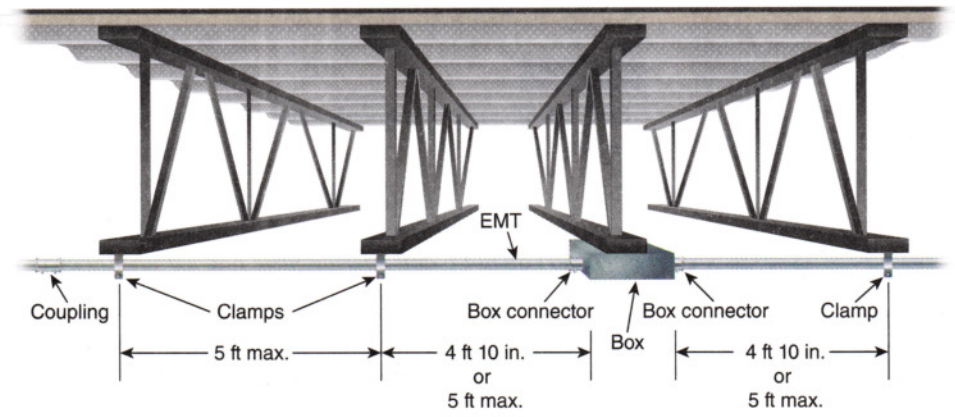

EXHIBIT 358.2 An EMT installation in which the fastening spacing is increased to a maximum of 5 feet.

See also

225.22 and **230.54(A)** for raintight requirements as applied to raceways on exterior surfaces of buildings and to service raceways

Indenter-type fittings, utilized only with metallic-coated EMT, require a special tool supplied by the manufacturer for proper installation. See Exhibit 358.3. Fittings are tested for use only with steel EMT, unless specific marking on the device or carton indicates the fittings are suitable for use with aluminum or other material. Fittings are designed for dry-locations or concrete tight when installed per the manufacturer's installation instructions.

EXHIBIT 358.3 Indenter-type EMT coupling for use with steel EMT (*top*); Indenter forged crimping tool for proper installation of indenter-type couplings and connectors (*bottom*). *(Courtesy of Hubbell/RACO)*

358.56 Splices and Taps. Splices and taps shall be made in accordance with 300.15.

358.60 Grounding. EMT shall be permitted as an equipment grounding conductor.

Part III. Construction Specifications

358.100 Construction. EMT shall be made of one of the following:

(1) Steel with protective coatings
(2) Aluminum
(3) Stainless steel

358.120 Marking. EMT shall be clearly and durably marked at least every 3 m (10 ft) as required in the first sentence of 110.21(A).

ARTICLE 360 Flexible Metallic Tubing (FMT)

Part I. General

360.1 Scope. This article covers the use, installation, and construction specifications for flexible metallic tubing (FMT) and associated fittings.

FMT is a type of raceway used for certain specific applications, particularly under the requirements of 300.22(B) and (C) for wiring in ducts and other air-handling spaces. Initially intended for use in such locations, FMT is an effective barrier to the gases and

products of combustion. It is very flexible and rarely affected by vibration or other movement.

360.6 Listing Requirements. FMT and associated fittings shall be listed.

Part II. Installation

360.10 Uses Permitted. FMT shall be permitted to be used for branch circuits as follows:

(1) In dry locations
(2) Where concealed
(3) In accessible locations
(4) For system voltages of 1000 volts maximum

The 1000-volt limitation prohibits the use of FMT for the secondary circuits of sign ballasts, sign transformers, electronic sign power supplies, or oil burner ignition transformers unless those circuits are less than 1000 volts.

360.12 Uses Not Permitted. FMT shall not be used as follows:

(1) In hoistways
(2) In storage battery rooms
(3) In hazardous (classified) locations unless otherwise permitted under other articles in this *Code*
(4) Underground for direct earth burial, or embedded in poured concrete or aggregate
(5) Where subject to physical damage
(6) In lengths over 1.8 m (6 ft)

360.20 Size.

(A) Minimum. FMT smaller than metric designator 16 (trade size ½) shall not be used.

Exception No. 1: FMT of metric designator 12 (trade size ⅜) shall be permitted to be installed in accordance with 300.22(B) and (C).

Exception No. 2: FMT of metric designator 12 (trade size ⅜) shall be permitted in lengths not in excess of 1.8 m (6 ft) as part of a listed assembly or for luminaires. See 410.117(C).

(B) Maximum. The maximum size of FMT shall be metric designator 21 (trade size ¾).

Informational Note: See 300.1(C) for the metric designators and trade sizes. These are for identification purposes only and do not relate to actual dimensions.

360.22 Number of Conductors.

(A) FMT — Metric Designators 16 and 21 (Trade Sizes ½ and ¾). The number of conductors in metric designators 16 (trade size ½) and 21 (trade size ¾) shall not exceed that permitted by the percentage fill specified in Table 1, Chapter 9.

Cables shall be permitted to be installed where such use is not prohibited by the respective cable articles. The number of cables shall not exceed the allowable percentage fill specified in Table 1, Chapter 9.

Table 4 of Chapter 9 provides the usable area within the selected conduit or tubing, and Table 5 provides the required area for each conductor. Examples using these tables to calculate a conduit or tubing size are provided in the commentary following Chapter 9, Notes to Tables, Note 6.

To select the proper trade size of FMT, see the appropriate sub-table for Article 348, Flexible Metal Conduit (FMC), in Table 4 of Chapter 9. If the conductors are of the same wire size and insulation type, Tables C.3 and C.3(A) for FMC can be used for FMT sizes ½ inch and ¾ inch in Informative Annex C instead of performing the calculations.

(B) FMT — Metric Designator 12 (Trade Size ⅜). The number of conductors in metric designator 12 (trade size ⅜) shall not exceed that permitted in Table 348.22.

360.24 Bends.

(A) Infrequent Flexing Use. When FMT is infrequently flexed in service after installation, the radii of bends measured to the inside of the bend shall not be less than specified in Table 360.24(A).

TABLE 360.24(A) *Minimum Radii for Flexing Use*

Metric Designator	Trade Size	Minimum Radii for Flexing Use	
		mm	in.
12	⅜	254.0	10
16	½	317.5	12½
21	¾	444.5	17½

(B) Fixed Bends. Where FMT is bent for installation purposes and is not flexed or bent as required by use after installation, the radii of bends measured to the inside of the bend shall not be less than specified in Table 360.24(B).

TABLE 360.24(B) *Minimum Radii for Fixed Bends*

Metric Designator	Trade Size	Minimum Radii for Fixed Bends	
		mm	in.
12	⅜	88.9	3½
16	½	101.6	4
21	¾	127.0	5

360.56 Splices and Taps. Splices and taps shall be made in accordance with 300.15.

360.60 Grounding. FMT shall be permitted as an equipment grounding conductor where installed in accordance with 250.118(A)(7).