

Δ (2) **Flexible Connections.** If flexibility is necessary to minimize the transmission of vibration from equipment during operation or to allow for movement after installation during maintenance, one of the following shall be permitted:

- (1) Flexible fittings listed for the location.
- (2) Flexible cord in accordance with 501.140, terminated with cord connectors listed for the location.
- (3) In restricted industrial establishments, for applications limited to 600 volts nominal or less where the cable is not subject to physical damage and is terminated with fittings listed for the location, Type TC-ER-HL cable. The cable shall be listed for use in Class I, Division 1 or Zone 1 locations and shall be installed in accordance with 336.10.

Informational Note No. 1: See ANSI/UL 2225, *Cables and Cable-Fittings for Use in Hazardous (Classified) Locations*, for information on construction, testing, and marking of cables and cable fittings.

- (4) In restricted industrial establishments, listed Type P cable with metal braid armor and an overall jacket where the cable is terminated with fittings listed for the location and installed in accordance with Part II of Article 337.

Informational Note No. 2: See UL 1309A, *Outline of Investigation for Cable for Use in Mobile Installations*, for information on construction, testing, and marking of Type P cable fittings.

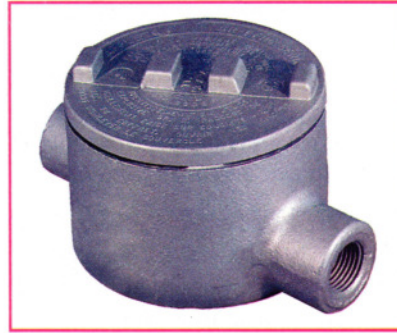
Informational Note No. 3: See ANSI/UL 2225, *Cables and Cable-Fittings for Use in Hazardous (Classified) Locations*, for information on construction, testing, and marking of cable fittings.

This section refers to a connection to equipment that requires flexibility, not to a flexible wiring method. For wiring methods where a flexible connection is no longer necessary, refer to 501.10(A)(1). Four options are presented if a length of flexible connection is necessary. Listed flexible fittings commonly used at motor connections can withstand continuous vibration for long periods and provide maximum protection to enclosed conductors. Limited use of flexible cord is permitted in accordance with 501.140 for specific applications where flexibility is made necessary by the type of equipment being supplied. Type TC-ER-HL or Type P is permitted in industrial establishments where a flexible connection is necessary. The requirement in 501.15(A)(1) to provide a seal within 18 inches of an explosionproof enclosure applies where flexible connections are used.

(3) **Boxes and Fittings.** All boxes and fittings shall be identified for Class I, Division 1.

Informational Note No. 1: See ANSI/UL 2225, *Cables and Cable-Fittings for Use in Hazardous (Classified) Locations*, for information on construction, testing, and marking of cables, explosionproof cable fittings, and explosionproof cord connectors for entry into enclosures required to be explosionproof.

Informational Note No. 2: See ANSI/UL 1203, *Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations*, for information on construction, testing, and marking of explosionproof conduit fittings for entry into enclosures required to be explosionproof.



**EXHIBIT 501.2** An explosionproof junction box with a screw-type cover. (Courtesy of O-Z/Gedney, Emerson Electric Co.)

Exhibit 501.2 shows an explosionproof junction box with two hubs and a threaded opening for the screw-type cover. Unused openings must be effectively closed by inserting threaded metal plugs that engage at least five full threads [4½ permitted in accordance with the exception to 500.8(E)] and afford protection equivalent to that of the box wall.

### (B) Class I, Division 2.

Δ (1) **General.** In Class I, Division 2 locations, all wiring methods in accordance with 501.10(A) and the following wiring methods shall be permitted:

Informational Note No. 1: See Article 100 for the definition of *restricted industrial establishment* [as applied to hazardous (classified) locations].

- (1) Rigid metal conduit (RMC) or intermediate metal conduit (IMC) with listed threaded or threadless fittings, including RMC or IMC conduit systems with supplemental corrosion protection coatings.
- (2) Enclosed gasketed busways and enclosed gasketed wireways.
- (3) Type PLTC cable or Type PLTC-ER cable used for Class 2 and Class 3 circuits, including installation in cable tray systems. The cable shall be terminated with listed fittings. Type PLTC-ER cable shall include an equipment grounding conductor in addition to a drain wire that might be present.
- (4) Type ITC cable or Type ITC-ER cable as permitted in 335.4 and terminated with listed fittings. Type ITC-ER cable shall include an equipment grounding conductor in addition to a drain wire.
- (5) Type MC, Type MV, Type TC, or Type TC-ER cable, including installation in cable tray systems. Type TC-ER cable shall include an equipment grounding conductor in addition to a drain wire that might be present. All cable types shall be terminated with listed fittings.
- (6) Where metal conduit will not provide the corrosion resistance needed for the installation environment, any of the following shall be permitted:

- a. Listed reinforced thermosetting resin conduit (RTRC), factory elbows, and associated fittings, all marked with the suffix -XW