

No splices or reinsulated conductors, such as would be the case with abandoned outlets on loop wiring, shall be allowed in raceways.

Part III. Construction Specifications

374.100 General. Cellular metal floor raceways shall be constructed so that adequate electrical and mechanical continuity of the complete system will be secured. They shall provide a complete enclosure for the conductors. The interior surfaces shall be free from burrs and sharp edges, and surfaces over which conductors are drawn shall be smooth. Suitable bushings or fittings having smooth rounded edges shall be provided where conductors pass.

ARTICLE

376

Metal Wireways

Part I. General

376.1 Scope. This article covers the use, installation, and construction specifications for metal wireways and associated fittings.

Wireways are sheet-metal enclosures equipped with hinged or removable covers and are manufactured in 1-foot to 10-foot lengths and various widths and depths. Couplings, elbows, end plates, and accessories such as T and X fittings are available. Unlike auxiliary gutters, which are not permitted to extend more than 30 feet from the equipment they supplement, wireways may be run throughout an entire area.

Part II. Installation

376.10 Uses Permitted. The use of metal wireways shall be permitted as follows:

- (1) For exposed work.
- (2) In any hazardous (classified) location, as permitted by other articles in this *Code*.
- (3) In wet locations where wireways are listed for the purpose.
- (4) In concealed spaces as an extension that passes transversely through walls, if the length passing through the wall is unbroken. Access to the conductors shall be maintained on both sides of the wall.

376.12 Uses Not Permitted. Metal wireways shall not be used in the following:

- (1) Where subject to severe physical damage
- (2) Where subject to severe corrosive environments

376.20 Conductors Connected in Parallel. Where single conductor cables comprising each phase, neutral, or grounded

conductor of an alternating-current circuit are connected in parallel as permitted in 310.10(G), the conductors shall be installed in groups consisting of not more than one conductor per phase, neutral, or grounded conductor.

Informational Note: The purpose of having all parallel conductor sets within the same group is to prevent current imbalance in the paralleled conductors due to inductive reactance.

376.21 Size of Conductors. No conductor larger than that for which the wireway is designed shall be installed in any wireway.

376.22 Number of Conductors and Ampacity. The number of conductors or cables and their ampacity shall comply with 376.22(A) and (B).

(A) Cross-Sectional Areas of Wireway. The sum of the cross-sectional areas of all contained conductors and cables at any cross section of a wireway shall not exceed 20 percent of the interior cross-sectional area of the wireway.

(B) Adjustment Factors. The adjustment factors in 310.15(C)(1) shall be applied only where the number of current-carrying conductors, including neutral conductors classified as current-carrying under 310.15(E), exceeds 30 at any cross section of the wireway. Conductors for signaling circuits or controller conductors between a motor and its starter and used only for starting duty shall not be considered as current-carrying conductors.

376.23 Insulated Conductors. Insulated conductors installed in a metal wireway shall comply with 376.23(A) and (B).

(A) Deflected Insulated Conductors. Where insulated conductors are deflected within a metal wireway, either at the ends or where conduits, fittings, or other raceways or cables enter or leave the metal wireway, or where the direction of the metal wireway is deflected greater than 30 degrees, dimensions corresponding to one wire per terminal in Table 312.6(A) shall apply.

(B) Metal Wireways Used as Pull Boxes. Where insulated conductors 4 AWG or larger are pulled through a wireway, the distance between raceway and cable entries enclosing the same conductor shall not be less than that required by 314.28(A)(1) for straight pulls and 314.28(A)(2) for angle pulls. When transposing cable size into raceway size, the minimum metric designator (trade size) raceway required for the number and size of conductors in the cable shall be used.

See also

Exhibit 314.10 for an example showing calculations for splices, angle pulls, or U pulls

Exhibit 314.11 for an example showing calculations for raceways enclosing the same conductor

376.30 Securing and Supporting. Metal wireways shall be supported in accordance with 376.30(A) and (B).