



**TECHNICAL SERVICES DEPARTMENT**

# BULLETIN

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## **Flexible Conduits for Use in Plenums**

The National Electrical Code (NEC®) is very specific in identifying wiring products that may and may not be installed in air handling plenums. These requirements are described in Section 300.22 of the NEC<sup>1</sup>.

**Flexible Metal Conduit (FMC)** may be used in Plenums that carry environmental air such as in an air duct or in a suspended ceiling used for air handling purposes. **Liquidtight Flexible Conduits** (metallic and nonmetallic) are not permitted in these areas due to the nonmetallic covering.

A plenum that is used for air handling beneath the raised floors for information technology equipment may use **Flexible Metal Conduits or Liquidtight Flexible Conduits**. These installations are governed by NEC Article 645 where special provisions are made including heating/ventilating/air-conditioning (HVAC) systems that are separated from other areas of occupancy.

Underwriters Laboratories (UL) does not allow for **Flexible Conduits** to be designated as “Plenum Rated” because such marking could cause confusion on how and where the conduits may be used. FMC and LFMC may only be used in plenums where they are specifically permitted by the NEC.

| NEC Code Reference   | Flexible Conduit Type   |
|--|---|
| <u><b>300.22(A)</b></u><br>Ducts for Dust, Loose Stock, or Vapor Removal       | <b>NONE.</b> The NEC does not permit wiring of any type in this area.   |
| <u><b>300.22(B)</b></u><br>Ducts Specifically Fabricated for Environmental Air | <p><b>Flexible Metal Conduit</b> may be used in lengths not exceeding 4 ft (1.2 m).</p> <ul style="list-style-type: none"> <li>• Reduced Wall Flexible Steel Conduit</li> <li>• Reduced Wall Flexible Aluminum Conduit</li> <li>• Standard Wall Flexible Steel or Aluminum Conduit</li> </ul> |

<sup>1</sup> Based on 2020 NEC® requirements

|  |   |
|--|---|
| <p style="text-align: center;"><b><u>300.22(C)</u></b><br/>Other Spaces Used for Environmental Air (Plenums)</p> | <p><b>Flexible Metal Conduit</b> may be used with no length restrictions.</p> <ul style="list-style-type: none"> <li>• Reduced Wall Flexible Steel Conduit</li> <li>• Reduced Wall Flexible Aluminum Conduit</li> <li>• Standard Wall Flexible Steel or Aluminum Conduit</li> </ul>   |
| <p><b><u>300.22(D) → Article 645.5(E)(1)(b)</u></b><br/>Information Technology Equipment</p>                     | <p><b>Flexible Metal Conduit &amp; Liquidtight Flexible Conduit</b> may be used.</p> <ul style="list-style-type: none"> <li>• Reduced Wall Flexible Steel Conduit</li> <li>• Reduced Wall Flexible Aluminum Conduit</li> <li>• Standard Wall Flexible Steel or Aluminum Conduit</li> <li>• Liquidtight Flexible Metal Conduit (LFMC)</li> <li>• Type-A Nonmetallic Conduit (LFNC-A)</li> <li>• Type-B Nonmetallic Conduit (LFNC-B)</li> </ul> |

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