

ENGINEERING BULLETIN

Subject: 2014 NEC Article 300.22 Wiring in Ducts Not Used for Air Handling, Fabricated Ducts for Environmental Air, and Other Spaces for Environmental Air (Plenums)

There has been a lot of confusion regarding the use of Liquid Tight Flexible Metal Conduit, Liquid Tight Flexible Nonmetallic Conduit or Flexible Metal Conduit in a plenum environment. Article 300.22 of the 2014 NEC code lists 4 separate categories which apply to Ducts and Environmental Air.

Section (A) Ducts for Dust, Loose Stock, or Vapor Removal

Per this section “no wiring systems of any type shall be installed in a duct used to transports dust, loose stock, flammable vapors”, or “used for ventilation or vapor removal for commercial type cooking equipment.”

Section (B) Ducts Specifically Fabricated for Environmental Air

Section (B) directly applies to sheet metal ducts and other ducts with the specific purpose of transporting environmental air. *Anamet Electrical Type RWA or Type RWS is permitted for use in lengths no longer than 4 ft.* This method of installation is only acceptable when connecting “physically adjustable equipment” which is “necessary for the direct action upon, or sensing of, the contained air.”

Section (C) Other Spaces Used for Environmental Air (Plenums)

This section applies directly to spaces that are not specifically constructed for “environmental air-handling purposes as a plenum. This section shall not apply to habitable rooms or areas of buildings, the prime purpose of which is not air handling.” The NEC defines “Other Spaces” as the space or cavity between a structural floor or roof and a suspended ceiling. The reason section C is segregated from section B is because these areas are not specifically designed to handle environmental air. Instead many times these areas are used as air returns or plenums. *Installation of Anamet Electrical Type RWA or Type RWS is permitted for areas which apply to Article 300.22 section (C).*

Section (D) Information Technology Equipment

Electrical wiring in air-handling areas beneath raised floors for information technology is permitted in accordance with Article 645.5 (E) (2). *Installation of Anaconda Sealtite Type UA, HTUA, CW, ZHUA, CNP, NMUA, RWA or Type RWS is permitted for areas where the raised floor is constructed to code and the area under the floor is accessible.*