



IS 3419:1988 Specification for Fittings for Rigid non-metallic conduits (*Second Revision*)

Electrical conduits are metal, plastic or fibre pipes designed to protect electrical cables and wires. They are used in almost every residential and commercial establishment, especially for wiring that is either exposed, or fitted outdoors.

Conduit fittings are used in conjunction with conduits for the purposes of uniting, changing direction, drawing-in and obtaining access to the insulated electrical conductors. Conduit fittings are available in different sizes, shapes and materials, and they're normally used for connecting runs of conduit together, and for connecting conduit ends to boxes, enclosures or electrical devices. Apart from the conduit fittings, straps and clamps are also used to provide additional support to conduits and to keep them secured.

To ensure safe and efficient routing of cables in buildings and other structures, customers expect these conduit fittings to be **durable, compatible, easy to install**, with **reliable electrical insulation** to prevent electrical faults and ensure safety in the conduit system, **flame-retardant** and capable of withstanding high temperatures to prevent fire hazards, **resist degradation** due to exposure to UV radiation, moisture, dust, and chemicals, ensuring they function effectively over the long term.

IS 3419:1976 addresses these customer expectations by setting clear guidelines for the **manufacturing, design, and testing of fittings** for rigid non-metallic conduits, ensuring that they meet the high-quality parameters expected by customers.

By adhering to this standard, manufacturers and installers can ensure that the conduits are securely connected and protected from external damage, thus maintaining the safety of the electrical wiring system.

Types of Fittings Covered

Elbows: Used for changing the direction of conduit runs.

Couplers: Used for joining two sections of conduit together.

Tees and Crosses: Used for branching conduit runs.

Bends: Used for making curved or angled conduit sections.

Adaptors: To connect non-metallic conduits with metal conduits or devices.

End Caps and Plugs: To close the ends of conduits and prevent ingress of foreign materials.

Fixing Brackets: For securing conduits to surfaces.