

1.5 CABLE TRAY

1. The whole of the tray work, fittings and supports shall be of mild steel after manufacture. The thickness of the powder coating on any element shall not be less than 80 microns.
2. Cable trays shall be constructed from mild steel of minimum thickness 16 gauge (1.5mm). Height shall be 60mm. Trays in excess of 300mm width shall be of minimum thickness 14 gauge (2.0mm). Flange height shall be 100mm.
3. Insert elements, bolts, screws, pins etc., shall be cadmium plated/stainless steel.
4. Tray work shall have oval perforations. Ladder type trays shall be used as required and/or approved by the Engineer.
5. All trays (straight and fittings) to be heavy duty returned flanged type unless specified otherwise.
6. Tray components are to be accurately rolled or formed to close tolerance and all edges rounded. Flanges are to have full round smooth edges.
7. Ladder racks for widths up to and including 300mm shall be constructed from rolled steel sections of minimum thickness 16 gauge (1.5mm). Height shall be 60mm. Ladders in excess of 300mm width shall be C Section construction with a minimum thickness of 14 gauge (2.0mm). Height shall be 100mm. The rungs shall be spaced at a maximum 300mm.
8. Unless indicated otherwise on drawings, cable trays shall be used in the range and 150mm to 750mm wide, in five preferred standard sizes: 150, 300, 450, 600 and 750mm.
9. Other sizes shall be used where specified or previously agreed with the Engineer.
10. Return flanges shall be a minimum of 10mm deep, unless otherwise specified.
11. Minimum radii at side rails, horizontal, and vertical tees and crosses shall be in accordance with the Manufacturer's standard.

1.6 EXECUTION

INSTALLATION

1. Install all cable trays and ladder racks strictly in accordance with IEE and local authorities requirements.
2. Drilling, machining or cutting shall not be carried out after application of protective coat, unless previously agreed by the Engineer. If cutting or drilling is necessary, edges shall be cleaned up and painted with zinc based paint before erection.
3. Provision shall be made when installing all cables and cable trays for the expansion and settlement of the building.
4. Cables shall be fixed to the trays/ladders by means of PVC cleats and flame retardant cleats for flame/fireproof cables with galvanized bolts, nuts and washers. Use galvanized metal trefoil cleats with rubber pad for single core cables
5. Control cables run and clipped in groups shall not exceed twelve in number and shall be not more than double banked. Power cables shall be laid in a single layer except with the prior approval of the Engineer. Power cables should be spaced 2D between centres of cables throughout the run of cables. Submit calculations for voltage drop for cables and increase the size if necessary.