

TECHNICAL SPECIFICATIONS FOR THE FRP/GRP PERFORATED CABLE TRAY

1	Make	SATYAM
2	Type of cable trays	FRP material, Perforated type
3	Material of cable trays	Material is Ultra-violet resistant, Antistatic, corrosion resistant and fire retardant (class 1, fire rating) FRP, Glass content should be min 55%.
4	Manufacturing Process	Pultrusion Process using automated Pultrusion machines with roving & Matt Glass Reinforcement
5	Glass content in cable trays	≥ 55 %
6	Resin to be used	Ultra violet resistant Isopathalic resin
7	Standard Sizes of the Cable Trays	50 x 50 x 4mm Thick. 100 x 30 x 4mm Thick. 100 x 50 x 4mm Thick. 125 x 30 x 4mm Thick. 150 x 30 x 4mm Thick. 150 x 50 x 4mm Thick. 200 x 50 x 4mm Thick. 250 x 50 x 4mm Thick. 300 x 50 x 4mm Thick. 300 x 75 x 4 mm Thick. 450 x 100 x 4mm Thick. 600 x 100 x 4mm Thick.
8	Support Span	1.5 Meters
9	Loading Capacity (As per NEMA FGI-198x Standard)	50mm Width : 07 Kg/linear meter 100mm Width : 15 Kg/linear meter 150mm Width : 30 Kg/linear meter 300mm Width : 60 Kg/linear meter 450mm Width : 75 Kg/linear meter 600mm Width : 90 Kg/linear meter
10	Permissible deflection under Test	Shall not exceed L/200mms
11	Standard Length of the Tray	3Mtrs
12	Cable Tray Accessories	Cable Tray Accessories shall be of same materials of cable trays & it includes Horizontal

**MANUFACTURERS OF: FRP/GRP CABLE TRAYS, GRATINGS, TREFOIL CLAMPS &
OTHER FRP PULTRUDED SECTIONS**

		& Vertical Bends, Tees, Reducers, and Cross etc. with minimum Bending Radius of 600mm.
13	Coupler Plates	Shall be of same materials of Cable Trays & 4 nos. required for each length of the cable tray with Hardware of SS 304
14	Type Tests of FRP Pultruded Sections	<ol style="list-style-type: none"> 1. Dielectric strength : Axial 30-45 KV/25mm : Radial 10-15KV/mm 2. Arc resistance : > 120 seconds 3. Water Absorption : 0.6% maximum by weight (24 hrs immersion) 4. Flame Spread index shall be ≤ 25 and smoke density index ≤ 450 as per ASTM E84 Class A 5. Very Low flammability (V0) as per UL94 6. Anti-Static with surface resistivity between 10^9 and 10^{12} ohms as per ASTM D257. 7. Oxygen index shall be minimum 30% as per ASTM D-2863. 8. UV resistance as per ASTM G154 (For 1000 hours minimum, with tensile strength test which shall not reduce by more than 7% after UV exposure) 9. Flame Retardant as per ASTM D635
15	Mechanical & Electrical Properties of FRP Pultruded Sections.	<p>Tensile Strength : ASTM D 638-91</p> <p>Flexural Strength : ASTM D 790 -92</p> <p>Compressive Strength : ASTM D 695-91</p> <p>Dielectric Strength : ASTM D 149-97a</p> <p>Izod Impact : ASTM D 256</p> <p>Barcol hardness : Min 45-50</p>
16	Color	Light Grey (RAL7035) or as per customer requirement

TECHNICAL SPECIFICATIONS FOR THE FRP/GRP LADDER CABLE TRAY		
1	Make	SATYAM
2	Type of cable trays	FRP material, Ladder type
3	Material of cable trays	Material is Ultra-violet resistant, Antistatic, corrosion resistant and fire retardant (class 1, fire rating) FRP, Glass content should be min 55%.
4	Manufacturing Process	Pultrusion Process using automated Pultrusion machines with roving & Matt Glass Reinforcement
5	Glass content in cable trays	≥ 55 %
6	Resin to be used	Ultra violet resistant polyester resin
7	Side runner of the cable tray	Pultruded FRP channel of 100mm height with 4mm thickness
8	Support Span	1.5 Meters
9	Spacing of Rungs	300 mm
10	Rung of the Cable Tray	Pultruded FRP Square Pipe Section of Size: 25 x 25 x 4mm
11	Joining Details of Rung with Cable Tray	Rung should be fastened with the cable tray by Glass Filled Nylon Bush & Epoxy Sealing
12	Loading Capacity (As per NEMA FGI-198x Standard)	150mm Width: 30 Kg/linear meter 300mm Width: 60 Kg/linear meter 450mm Width: 75 Kg/linear meter 600mm Width: 90 Kg/linear meter In addition to point load of 80 Kg to be put at Centre of the span.
13	Permissible deflection under Test	Shall not exceed L/200mms
14	Standard Length of the tray	3Mtrs
15	Cable Tray Accessories	Cable Tray Accessories shall be of same materials of cable trays & it includes Horizontal & Vertical Bends, Tees, Reducers, and Cross etc. with minimum Bending Radius of 600mm.
16	Coupler Plates	Shall be of same materials of Cable Trays & 4 nos. required for each length of the cable

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		tray with Hardware of SS 304
18	Rungs connected to the runner	Nylon bush with epoxy resin sealing
19	Type Tests of FRP Pultruded Sections	<p>1. Dielectric strength : Axial 30-45 KV/25mm : Radial 10-15KV/mm</p> <p>2. Arc resistance : > 120 seconds</p> <p>3. Water Absorption : 0.6% maximum by weight (24 hrs immersion)</p> <p>4. Flame Spread index shall be ≤ 25 and smoke density index ≤ 450 as per ASTM E84 Class A</p> <p>5. Very Low flammability (V0) as per UL94</p> <p>6. Anti-Static with surface resistivity between 10^9 and 10^{12} ohms as per ASTM D257.</p> <p>7. Oxygen index shall be minimum 30% as per ASTM D-2863.</p> <p>8. UV resistance as per ASTM G154 (For 1000 hours minimum, with tensile strength test which shall not reduce by more than 7% after UV exposure)</p> <p>9. Flame Retardant as per ASTM D635</p>
20	Mechanical & Electrical Properties of FRP Pultruded Sections.	<p>Tensile Strength : ASTM D 638-91</p> <p>Flexural Strength : ASTM D 790 -92</p> <p>Compressive Strength : ASTM D 695-91</p> <p>Dielectric Strength : ASTM D 149-97a</p> <p>Izod Impact : ASTM D 256</p> <p>Barcol hardness : Min 45-50</p>
	Color	Light Grey (RAL7035) or as per customer requirement