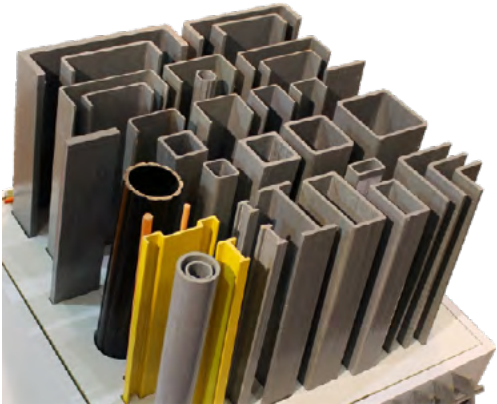


Fiberglass Structural profiles



GRP or FRP Structural pultruded profiles are manufactured by combining a resin matrix with a fibre reinforcement. This is formed and cured in a continuous process creating a product of extraordinary strength and resilience. GRP Structural Pultruded Profiles provide a variety of benefits and mechanical properties matching or exceeding steel equivalents. A wide range of structural profiles are available including U Channel, I - Beam, Tube, Box, Angle, Rod & Hand Rail.

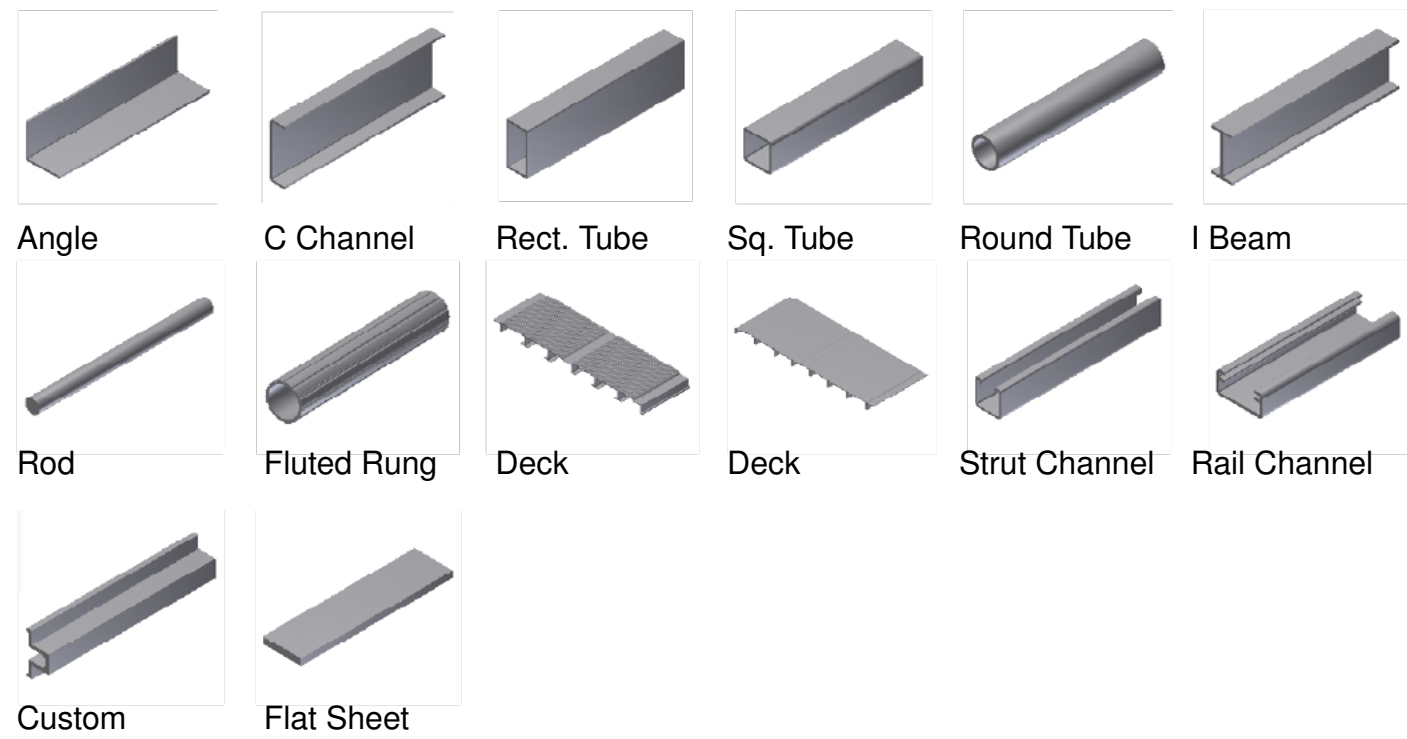
Resin System

As a standard, Isophthalic polyester resins are used for the matrix. To fulfill special requirements the following resin types are applied:

- Isophthalic resin : moderate corrosion resistanceand fire resistance
- Vinyl ester resin : extreme corrosion resistanceand fire resistance

For design parameters ask for design manual from sales team.

Type Of Structural Profiles



Properties of FRP Structural Profiles

Mechanical Properties	Standard Followed	Units	Lengthwise Min. Value	Crosswise Min. Value
Tensile Stress	ASTM D-638	MPa	206.8	48.2
Tensile modulus	ASTM D-638	GPa	17.2	5.5
Compressive Stress	ASTM D-6641	MPa	206.8	103.4
Compressive modulus	ASTM D-6641	GPa	17.2	6.9
Flexural Stress	ASTM D-790	MPa	206.8	68.9
Flexural Modulus	ASTM D-790	GPa	11	5.5
Izod Impact	ASTM D-256	J/mm	1.28	0.22
Ultimate Bearing Stress	ASTM D-953	MPa	206.8	206.8
Modulus of Elasticity	ASTM D-8069	GPa	17.9	-
Shear Modulus	Full Section	GPa	2.9	-
Poison's Ratio	ASTM D-3039	mm/mm	0.33	-
Short Beam Shear	ASTM D-2344	MPa	31	-

Physical Properties	Standard Followed	Units	Min. Value
Barcol Hardness	ASTM D-2583		45
24 Hours Water Absorption	ASTM D-570	%	Max 0.6
Density	ASTM D-792	gm/cc	1.72-1.95
Glass Content	ASTM D-2584	%	min 55%
Limiting Oxygen Index	ASTM D-2863	%	min 28%

Electrical Properties	Standard Followed	Units	Min. Value
Arc Resistance Lengthwise	ASTM D-495	Seconds	120
Dielectric Strength Lengthwise	ASTM D-149	kV/mm	3.5

Flammability Properties	Standard Followed	Units	Min. Value
Surface Burning Characteristics	ASTM E-84	mm	Less than 25 mm
Rate of Burning	ASTM D-635	mm	Less than 25 mm
Vertical Burn Test	UL 94	----	V0