

Fiberglass Structural Shapes & Plate

North American Grating's Fiberglass Structural Shapes are manufactured to the highest quality providing excellent strength and durability. Offered in a variety of colors and sizes, these pultruded FRP shapes are more affordable and will last longer than traditional building materials.

All FIBERSHAPES are manufactured with fire retardant polyester resins that meet ASTM E84 and D635 standards. Most structural shapes are produced in standard lengths of 20' or 24' with a dark gray color, however custom sizes and colors are available upon request.

Fiberglass is the material of choice around the world because of its ability to withstand enormous loads without failure in corrosive environments. North American Grating's structural shapes out perform other competing brands and lead the industry in mechanical strength and durability.



Key Features

- Corrosion Resistant
- High Strength
- Low Maintenance
- Easy to Install
- Lightweight (80% lighter than steel)
- Excellent Durability
- Low Conductivity
- Non-Sparking
- Fire Retardant
- Meets ASTM D635 & E84 Requirements
- Standard 12-mil surface veil



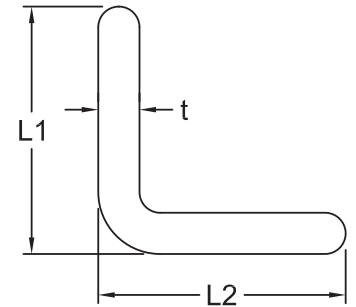
Select Markets

- | | | |
|-----------------------------|-----------------------|---------------------------------------|
| • Cooling Towers | • Hand Rails | • Agriculture |
| • Architecture Solutions | • Stairs & Accessways | • Hand Tools |
| • Highway Signs | • Oil & Gas | • Recreation & Waterparks |
| • Utility Markers | • Chemical | • Electrical |
| • Snow Markers | • Pulp & Paper | • Commercial/Residential Construction |
| • Marine/Offshore | • Mining | • Water & Wastewater |
| • Transportation/Automotive | • Telecommunications | • Custom Applications |



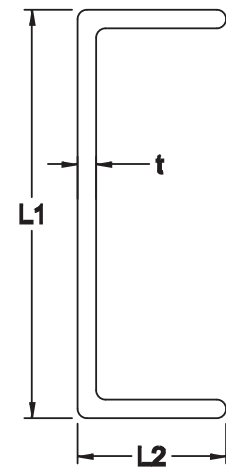
Equal Leg Angle

Part Number	Size (in)	t (in)	L1 (in)	L2 (in)
PS-LA150250	1-1/2 x 1-1/2 x 1/4	0.250	1.5	1.5
PS-LA200250	2 x 2 x 1/4	0.250	2.0	2.0
PS-LA300250	3 x 3 x 1/4	0.250	3.0	3.0
PS-LA300375	3 x 3 x 3/8	0.375	3.0	3.0
PS-LA400250	4 x 4 x 1/4	0.250	4.0	4.0
PS-LA400375	4 x 4 x 3/8	0.375	4.0	4.0
PS-LA600500	6 x 6 x 1/2	0.500	6.0	6.0



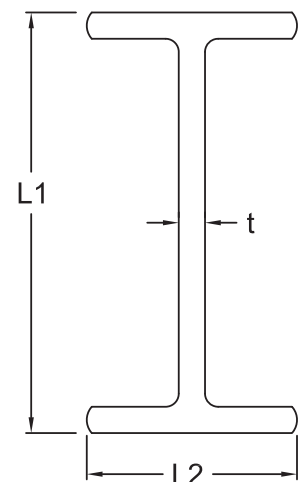
C-Channel

Part Number	Size (in)	t (in)	L1 (in)	L2 (in)
PS-CC275125	2-3/4 x 1 x 1/8	0.125	2.75	1.00
PS-CC350187	3-1/2 x 1-1/2 x 3/16	0.187	3.50	1.50
PS-CC550250	5-1/2 x 1-1/2 x 1/4	0.250	5.50	1.50
PS-CC600375	6 x 1-11/16 x 3/8	0.375	6.00	1.69
PS-CC100050	10 x 2-3/4 x 1/2	0.500	10.00	2.75



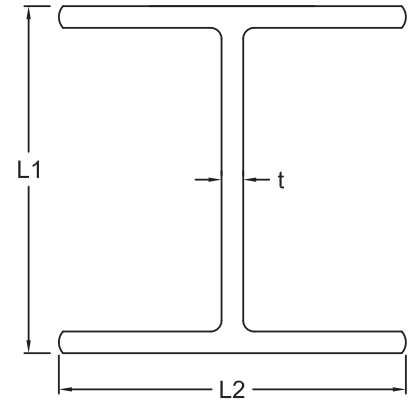
I-Beam

Part Number	Size (in)	t (in)	L1 (in)	L2 (in)
PS-IB350187	3-1/2 x 1-1/2 x 3/16	0.187	3.50	1.50
PS-IB400250	4 x 2 x 1/4	0.250	4.00	2.00
PS-IB550250	5-1/2 x 2-1/2 x 1/4	0.250	5.50	2.50



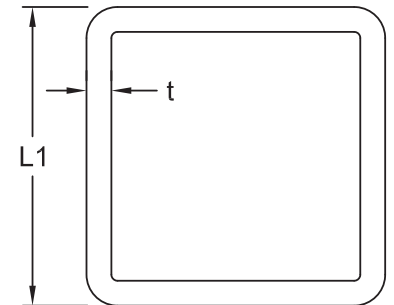
H-Beam

Part Number	Size (in)	t (in)	L1 (in)	L2 (in)
PS-HB300250	3 x 3 x 1/4	0.250	3.0	3.0
PS-HB400250	4 x 4 x 1/4	0.250	4.0	4.0
PS-HB600250	6 x 6 x 1/4	0.250	6.0	6.0
PS-HB600375	6 x 6 x 3/8	0.375	6.0	6.0



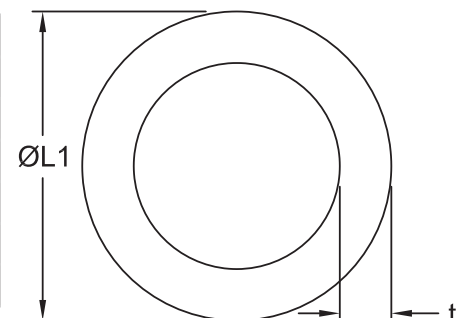
Square Tube

Part Number	Size (in)	t (in)	L1 (in)
PS-ST100125	1 x 1 x 1/8	0.125	1.00
PS-ST100250	1 x 1 x 1/4	0.250	1.00
PS-ST125125	1-1/4 x 1-1/4 x 1/8	0.125	1.25
PS-ST150125	1-1/2 x 1-1/2 x 1/8	0.125	1.50
PS-ST200250	2 x 2 x 1/4	0.250	2.00
PS-ST250250	2-1/2 x 2-1/2 x 1/4	0.250	2.50
PS-ST300250	3 x 3 x 1/4	0.250	3.00
PS-ST350250	3-1/2 x 3-1/2 x 1/4	0.250	3.50
PS-ST400250	4 x 4 x 1/4	0.250	4.00



Round Tube

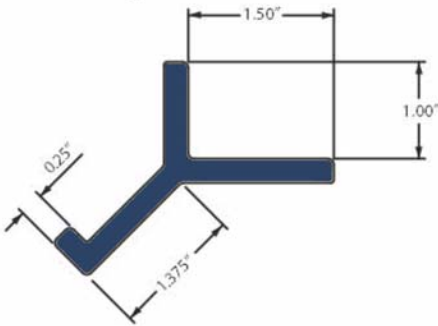
Part Number	Size (in)	t (in)	L1 (in)
PS-RT100125	1 x 1/8	0.125	1.00
PS-RT125125	1-1/4 x 1/8	0.125	1.25
PS-RT150250	1-1/2 x 1/4	0.250	1.50
PS-RT175250	1-3/4 x 1/4	0.250	1.75
PS-RT200250	2 x 1/4	0.250	2.00
PS-RT300250	3 x 1/4	0.250	3.00



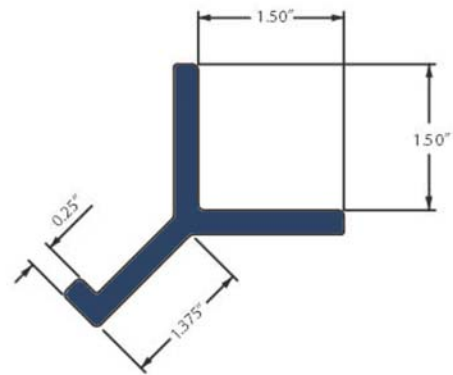


Curb Angle Spec Sheet

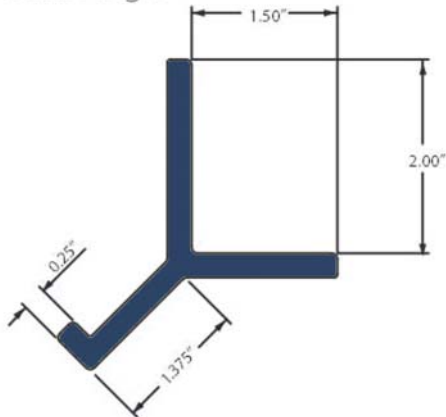
1" Curb Angle



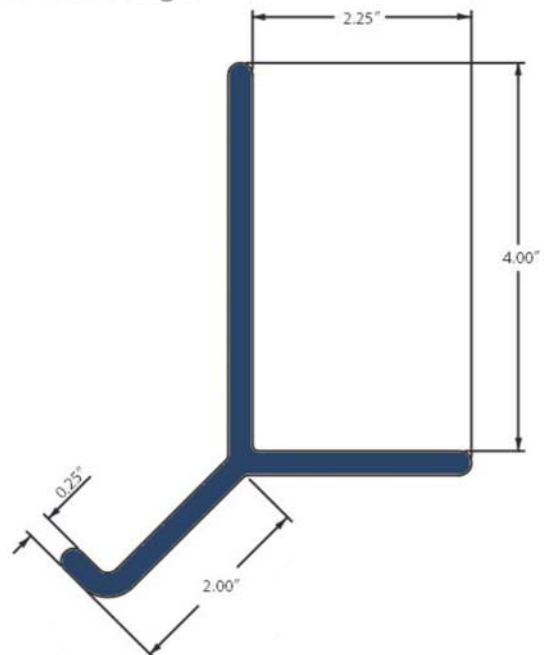
1 1/2" Curb Angle



2" Curb Angle



4" Curb Angle



Material Properties

The test results shown below are for typical coupon properties of FIBERSHAPES structural fiberglass shapes and plate. Properties are derived per the ASTM method shown. Synthetic surfacing veil and ultraviolet inhibitors are standard.

Mechanical Properties	ASTM	Units	Value
Tensile Stress, LW	D-638	psi/MPa	30,000/206.8
Tensile Stress, CW	D-638	psi/MPa	7,000/48.2
Tensile Modulus, LW	D-638	10 ⁶ psi/GPa	2.5/17.2
Tensile Modulus, CW	D-638	10 ⁶ psi/GPa	0.8/5.5
Compressive Stress, LW	D-695	psi/MPa	30,000/206.8
Compressive Stress, CW	D-695	psi/MPa	15,000/103.4
Compressive Modulus, LW	D-695	10 ⁶ psi/GPa	2.5/17.2
Compressive Modulus, CW	D-695	10 ⁶ psi/GPa	1.0/6.9
Flexural Stress, LW	D-790	psi/MPa	30,000/206.8
Flexural Stress, CW	D-790	psi/MPa	10,000/68.9
Flexural Modulus, LW	D-790	10 ⁶ psi/GPa	2.5/17.2
Flexural Modulus, CW	D-790	10 ⁶ psi/GPa	0.8/5.5
Modulus of Elasticity	Full Section	10 ⁶ psi/GPa	2.8/19.3
Shear Modulus	-	10 ⁶ psi/GPa	0.45/3.1
Short Beam Shear	D-2344	psi/MPa	4,500/31
Bearing Stress, LW	D-953	psi/MPa	30,000/206.8
Izod Impact, LW	D-256	ft-lbs/in/J-mm	25/1.33
Izod Impact, CW	D-256	ft-lbs/in/J-mm	4/0.21

Physical Properties	ASTM	Units	Value
Barcol Hardness	D-2583	-	45
24 Hour Water Absorption	D-570	% Max	0.45
Density	D-792	lbs/in ³ /gm/cc	0.0686/2
Coeff. of Thermal Expansion, LW	D-696	10 ⁻⁶ in/in/°C	8
		10 ⁻⁶ mm/mm/°C	8

Electrical Properties	ASTM	Units	Value
Arc Resistance, LW	D-495	sec	120
Dielectric Strength, LW	D-149	kv/in	35
Dielectric Strength, PF	D-149	volts/mil	200
Dielectric Constant, PF	D-150	@60hz	5

Flammability Properties	ASTM	Units	Value
Tunnel Test	E-84	Flame Spread	25 max
Flammability	D-635	-	Non-burning

