



## UTR Angles and Channels

### Electrical Insulating Structural Products

- Grade UTR Pultrusions
- Dimensions are in inches
- All parts are available in standard lengths of 120" except 2261 and 2890

Channel				
Part No.	Width	Leg	Thickness	Inside Radius
2875	2	$\frac{9}{16}$	$\frac{1}{8}$	$\frac{1}{8}$
2617	2	$\frac{13}{16}$	$\frac{1}{8}$	$\frac{5}{32}$
1144	2	1	$\frac{1}{4}$	$\frac{1}{8}$
2261	$2\frac{3}{16}$	$\frac{3}{4}$	$\frac{1}{16}$	$\frac{1}{8}$
2212	$2\frac{5}{16}$	$\frac{3}{4}$	$\frac{1}{8}$	$\frac{1}{8}$
1177	$2\frac{9}{16}$	$1\frac{7}{32}$	$\frac{1}{8}$	$\frac{3}{16}$
1166	3	$\frac{7}{8}$	$\frac{1}{4}$	$\frac{1}{4}$
2888	3	$1\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{4}$
1939	$3\frac{9}{16}$	$2\frac{9}{16}$	$\frac{3}{16}$	$\frac{3}{16}$
1791	$3\frac{19}{32}$	$1\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
1155	4	$1\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$
2242	4	$1\frac{3}{8}$	$\frac{3}{16}$	$\frac{5}{32}$
2872	$4\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{8}$	
2874	$4\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$
1940	$4\frac{9}{16}$	$2\frac{9}{16}$	$\frac{9}{32}$	$\frac{1}{4}$
1788	$4\frac{3}{4}$	$1\frac{5}{8}$	$\frac{3}{16}$	$\frac{3}{16}$
2825	$5\frac{1}{2}$	$1\frac{1}{4}$	$\frac{5}{32}$	$\frac{3}{16}$
2288	$6\frac{3}{8}$	2	$\frac{9}{32}$	$\frac{3}{32}$
1844	$8\frac{1}{2}$	$2\frac{11}{16}$	$\frac{3}{16}$	$\frac{7}{32}$
1936	$9\frac{21}{32}$	$1\frac{5}{8}$	$\frac{1}{8}$	$\frac{3}{32}$
2250	$11\frac{6}{32}$	$1\frac{5}{8}$	$\frac{3}{8}$	$\frac{3}{32}$
2120	$11\frac{1}{2}$	$1\frac{7}{16}$	$\frac{5}{32}$	$\frac{1}{8}$

Hat Shaped Channel				
Part No.	Width	Leg	Thickness	Inside Radius
1161	$4\frac{19}{32}$	$\frac{7}{8}$	$\frac{1}{8}$	$\frac{1}{4}$
2091	5	$1\frac{3}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
1272	$9\frac{9}{16}$	$2\frac{3}{8}$	$\frac{3}{16}$	$\frac{1}{4}$

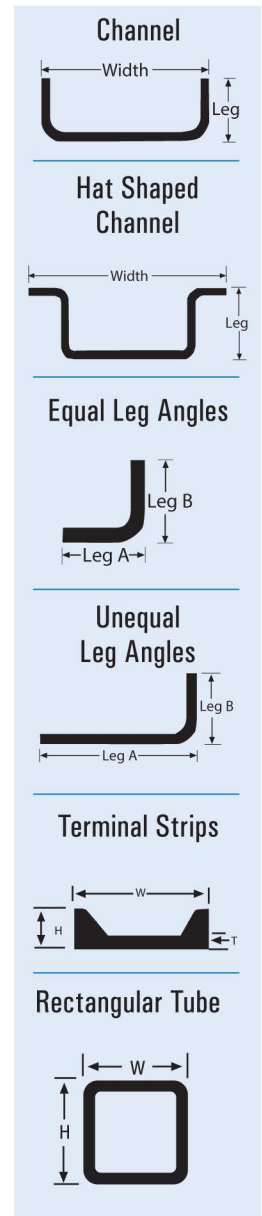
Equal Leg Angles				
Part No.	Leg A	Leg B	Thickness	Inside Radius
2293	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{8}$	$\frac{1}{32}$
2294	1	1	$\frac{1}{4}$	$\frac{1}{32}$
2878	1	1	$\frac{1}{8}$	$\frac{1}{8}$
2889	$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{8}$
2879	$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{3}{16}$	$\frac{1}{4}$
2880	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{8}$
2881	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{4}$
2882	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{8}$
2883	2	2	$\frac{3}{16}$	$\frac{1}{4}$
2884	2	2	$\frac{1}{4}$	$\frac{3}{8}$
2885	3	3	$\frac{1}{4}$	$\frac{3}{8}$
2886	3	3	$\frac{3}{8}$	$\frac{3}{8}$

Unequal Leg Angles				
Part No.	Leg A	Leg B	Thickness	Inside Radius
1134*	$1\frac{3}{4}$	2	$\frac{3}{8}$	$\frac{3}{8}$
2891	$2\frac{1}{4}$	3	$\frac{1}{2}$	$\frac{1}{2}$
2876	$2\frac{1}{4}$	$1\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{8}$
1133	$2\frac{1}{2}$	$1\frac{1}{4}$	$\frac{3}{16}$	$\frac{1}{4}$
2877	$2\frac{3}{4}$	2	$\frac{1}{4}$	$\frac{1}{8}$
2890	6	3	$\frac{1}{2}$	$\frac{1}{2}$
2971	$2\frac{1}{4}$	$1\frac{7}{8}$	$\frac{1}{8}$	
2973	$4\frac{3}{8}$	$1\frac{7}{8}$	$\frac{1}{8}$	

\* Also sold in 7' lengths

Terminal Strips			
Part No.	Leg	Thickness	Width
2700	$\frac{3}{8}$	$\frac{1}{8}$	$1\frac{1}{4}$
2710	$\frac{7}{16}$	$\frac{1}{4}$	$1\frac{1}{2}$
2720	-	$\frac{1}{2}$	2

Square Tube			
Part No.	Width	Height	Thickness
FR22024	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{8}$
FR22432	2	2	$\frac{1}{4}$



## UTR Angles and Channels

	Unit	ASTM/UL Test	Typical Values <sup>1</sup>	
<b>General Information</b>				
Color, Standard	–	–	Red	
NEMA Grade	–	–	GPO-3	
UL Recognition File Number	–	–	E 23525	
<b>Mechanical Properties</b>				
Tensile Strength	Psi	D 638	15,000	
Tensile Modulus	Psi x 10 <sup>6</sup>	D 638	1.7	
Flexural Strength	Psi	D 790	25,000	
Flexural Strength at 130° C	Psi	D 790	13,000	
Flexural Modulus	Psi x 10 <sup>6</sup>	D 790	1.2	
Compressive Strength – flatwise	Psi	D 695	42,000	
Compressive Strength – edgewise	Psi	D 695	20,000	
Shear Strength	Psi	D 732	14,500	
IZOD Impact Strength (notched)	Ft.lb./in.	D 256	9.6	
Water Absorption	% by wt.	D 570	0.3	
Barcol Harness	–	D 2583	50	
Specific Gravity	–	D 792	1.8	
<b>Electrical Properties</b>				
Electric Strength – perpendicular S/T in air <sup>2</sup>	Vpm	D 149	200	
Electric Strength-parallel	kV	D 149	45	
Arc Resistance	Seconds	D 495	185	
Inclined Plane Track Resistance	Minutes	D 2303	500+	
<b>Flame &amp; Smoke Characteristics</b>				
UL Subject 94	–	UL 94	V0	
Specific Optical Density of Smoke		ASTM E662		
			Non-Flaming	Flaming
Ds @ 4.0 min.(Average)			0.3	10.7
Dm(corr) (Average)			3.1	128.4
<b>Thermal Properties</b>				
Coefficient of Thermal Expansion	in/in/°C x 10 <sup>-5</sup>	D 696	2.0	
Thermal Conductivity	BTU/hr/Ft <sup>2</sup> /in/°F	C 177	1.9	
UL Temperature Index				
Electrical	°C	UL746B	130	
Mechanical	°C	UL746B	160	
<b>Dimension Tolerances</b>				
Thickness				
Up to .125 in.	in.	–	±.015	
.125 in. – .250 in.	in.	–	±.020	
over .250 in.	in.	–	±.025	
Angularity of Legs	Degrees	–	±3	
Cut Length	in.	–	+2", -0"	

1 These products are manufactured in a variety of sizes, shapes and thicknesses.  
Data shown is a composite of all products.

2 Value for 1/8 in. thickness. Electric strength in volts per mill decreases as composite thickness increases.

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