

**sapa:**

# ACC-U-BAR™


Precision Extruded Aluminum Bar for High-Speed Machining



**Sapa Industrial Extrusions**


# ACC-U-BAR™

## Lets You Do More, Faster, With Less




Sapa Industrial Extrusions uses an improved 6061 chemistry and thermal processing to create ACC-U-BAR, a precision extruded aluminum product for high-speed machining. Ultra-tight tolerances, improved straightness, reduced twist and elevated minimum mechanical properties give ACC-U-BAR **proven machining superiority for the most demanding jobs:**

- Up to 30% improved finish on machined surfaces\*
- Up to 35% reduced in machining torque (ft./lbs.) and thrust (lbs.)\*



With ACC-U-BAR, users get advanced machining performance with these **lowest total processing cost benefits:**

- Minimum setup time due to dimensional stability and tolerance control
- Reduced machining forces, cutting times and tool wear
- Improved part cleanup due to all plus-side tolerances



A wide selection of standard sizes of square and rectangular ACC-U-BAR is available from Sapa Industrial Extrusions and its selected distribution partners.

### Typical Applications:

- Fluid power
- Hydraulic manifold
- Pneumatic manifold
- Telecommunication electronics
- Machinery and equipment
- Fixturing devices

\*Based on independent laboratory tests of lot-to-lot comparisons of ACC-U-BAR to leading competitive bar products and standard 6061-T6511 bar samples in select machining processes at a 95% confidence level.

## Available Alloys:

- 6061-T6H, -T6511H (meets standard 6061 industry specifications)
- 6082-T6, -T6511

Other alloys may be available upon request.

Certified to ASTM B 221 and ASME SB 221 (alloy 6061) and to applicable Federal, Military and Aluminum Association specifications; producing plants are BS EN ISO 9001; 2000 certified.

## Comparative Mechanical Properties

Property	ACC-U-BAR™	Aluminum Association Standard	
	6061-T6H, -T6511H*	6082-T6, -T6511 <sup>①</sup>	6061-T6, -T6511
Min. Ultimate Tensile (ksi)	42.0	45.0	38.0
Min. Yield Strength (ksi)	38.0	38.0	35.0
Minimum Elongation (%)	10	8	10

## Comparative Tolerances (inches)

Dimension	ACC-U-BAR™		Aluminum Association Standard Extruded Bar	
	Width (")	Tolerance	Width (")	Tolerance
Straightness	.008 in./ft. (0.100" in 12')		.0125 in./ft.	
Angularity	1/2°		1°	
Flatness Maximum Allowable Deviation Per Inch Of Width Or Thickness	0.004 inch per inch		0.004 inch per inch <sup>②</sup>	
Twist Allowable Deviation From Straight	1.500-2.999	1/2°/ft.	1.500-2.999	1/2°/ft.
	3.000-8.000	1/4°/ft.	3.000 and over	1/4°/ft.

\* Sapa Special Temper Designations are unregistered tempers for reference only, not recognized by the Aluminum Association, and are provided for customer use to identify unique processing, material or end use application characteristics.

<sup>①</sup> Thickness range .751" to 6.000"

<sup>②</sup> Thickness and width range 1.000" to 8.500"



# ACC-U-BAR™

Precision Extruded Aluminum Bar for High-Speed Machining

**sapa:**

## Square

Thickness X Width (")	Wt./Ft.	Section #
1.500 (+.014) X 1.500 (+.014)	2.671	550600
1.750 (+.014) X 1.750 (+.014)	3.630	555232
2.000 (+.024) X 2.000 (+.024)	4.761	550601
2.500 (+.024) X 2.500 (+.024)	7.421	550602
3.000 (+.024) X 3.000 (+.024)	10.669	550603
3.500 (+.024) X 3.500 (+.024)	14.546	550604

Thickness X Width (")	Wt./Ft.	Section #
4.000 (+.034) X 4.000 (+.034)	18.976	550605
4.500 (+.034) X 4.500 (+.034)	23.994	550606
5.000 (+.034) X 5.000 (+.034)	29.600	550607
5.500 (+.034) X 5.500 (+.034)	35.794	550608
6.000 (+.044) X 6.000 (+.044)	42.647	550609

## Rectangular

Thickness X Width (")	Wt./Ft.	Section #
1.000 (+.012) X 1.500 (+.014)	1.783	555224
1.000 (+.014) X 2.000 (+.024)	2.383	552853
1.000 (+.014) X 2.500 (+.024)	2.975	552848
1.000 (+.012) X 3.000 (+.024)	3.563	552712
1.000 (+.012) X 3.500 (+.024)	4.155	555225
1.250 (+.014) X 3.750 (+.024)	5.561	552856
1.250 (+.014) X 4.500 (+.034)	6.677	552850
1.000 (+.012) X 5.000 (+.034)	5.935	555226
1.250 (+.012) X 2.500 (+.024)	3.710	555227
1.250 (+.012) X 3.000 (+.024)	4.449	555228
1.250 (+.014) X 5.500 (+.034)	8.155	552852
1.500 (+.014) X 2.000 (+.024)	3.566	550610
1.500 (+.014) X 2.500 (+.024)	4.452	550611
1.500 (+.014) X 3.000 (+.024)	5.338	550613
1.500 (+.014) X 3.500 (+.024)	6.233	550616
1.500 (+.014) X 4.000 (+.034)	7.119	550620

Thickness X Width (")	Wt./Ft.	Section #
1.500 (+.014) X 4.500 (+.034)	8.005	550625
1.500 (+.014) X 5.000 (+.034)	8.891	550631
1.500 (+.014) X 5.500 (+.034)	9.777	550638
1.500 (+.014) X 6.000 (+.044)	10.672	550646
1.500 (+.014) X 6.500 (+.024)	11.558	552711
1.500 (+.014) X 7.000 (+.044)	12.445	555229
1.500 (+.014) X 8.500 (+.054)	14.994	552847
1.750 (+.014) X 2.750 (+.024)	5.707	555230
1.750 (+.014) X 3.750 (+.024)	7.779	552851
1.750 (+.014) X 4.500 (+.034)	9.328	552849
1.750 (+.014) X 5.500 (+.034)	11.393	552854
1.750 (+.014) X 6.500 (+.044)	13.476	555231
2.000 (+.024) X 2.500 (+.024)	5.944	550612
2.000 (+.024) X 3.000 (+.024)	7.127	550614
2.000 (+.024) X 3.500 (+.024)	8.322	550617
2.000 (+.024) X 4.000 (+.034)	9.505	550621

# ACC-U-BAR™

Precision Extruded Aluminum Bar for High-Speed Machining

## Rectangular

Thickness X Width (")	Wt./Ft.	Section #	Thickness X Width (")	Wt./Ft.	Section #
2.000 (+.024) X 4.500 (+.034)	10.688	550626	3.500 (+.024) X 5.000 (+.034)	20.750	550635
2.000 (+.024) X 5.000 (+.034)	11.871	550632	3.500 (+.024) X 5.500 (+.034)	22.818	550642
2.000 (+.024) X 5.500 (+.034)	13.054	550639	3.500 (+.024) X 6.000 (+.044)	24.907	550650
2.000 (+.024) X 6.000 (+.044)	14.249	550647	3.500 (+.024) X 6.750 (+.044)	27.969	555236
2.000 (+.024) X 6.500 (+.044)	15.432	552855	4.000 (+.034) X 4.500 (+.034)	21.338	550630
2.000 (+.024) X 8.500 (+.054)	19.992	552846	4.000 (+.034) X 5.000 (+.034)	23.700	550636
2.250 (+.024) X 8.000 (+.054)	21.353	555233	4.000 (+.034) X 5.500 (+.034)	26.062	550643
2.500 (+.024) X 3.000 (+.024)	8.898	550615	4.000 (+.034) X 6.000 (+.044)	28.448	550651
2.500 (+.024) X 3.250 (+.024)	9.636	555234	4.000 (+.034) X 7.000 (+.044)	44.508	554694
2.500 (+.024) X 3.500 (+.024)	10.390	550618	4.000 (+.034) X 8.000 (+.044)	37.919	553318
2.500 (+.024) X 4.000 (+.034)	11.867	550622	4.500 (+.034) X 5.000 (+.034)	26.650	550637
2.500 (+.024) X 4.500 (+.034)	13.344	550627	4.500 (+.034) X 5.500 (+.034)	29.306	550644
2.500 (+.024) X 5.000 (+.034)	14.821	550633	4.500 (+.034) X 6.000 (+.044)	31.989	550652
2.500 (+.024) X 5.500 (+.034)	16.298	550640	5.000 (+.034) X 5.500 (+.034)	32.550	550645
2.500 (+.024) X 6.000 (+.044)	17.790	550648	5.000 (+.034) X 6.000 (+.044)	35.530	550653
3.000 (+.024) X 3.500 (+.024)	12.458	550619	5.000 (+.034) X 6.500 (+.044)	38.480	550655
3.000 (+.024) X 4.000 (+.034)	14.229	550623	5.000 (+.034) X 7.000 (+.044)	41.430	550657
3.000 (+.024) X 4.500 (+.034)	16.000	550628	5.000 (+.034) X 7.500 (+.044)	44.380	550659
3.000 (+.024) X 5.000 (+.034)	17.771	550634	5.000 (+.034) X 8.000 (+.054)	47.359	550660
3.000 (+.024) X 5.500 (+.034)	19.542	550641	5.500 (+.034) X 6.000 (+.044)	39.071	550654
3.000 (+.024) X 6.000 (+.044)	21.331	550649	5.500 (+.034) X 8.000 (+.054)	52.079	550661
3.250 (+.024) X 4.250 (+.034)	16.369	555235	6.000 (+.044) X 6.500 (+.044)	46.188	550656
3.500 (+.024) X 4.000 (+.034)	16.614	550624	6.000 (+.044) X 7.000 (+.044)	49.729	550658
3.500 (+.024) X 4.500 (+.034)	18.682	550629	7.000 (+.044) X 8.000 (+.054)	66.286	554704

Other sizes may be available upon request.

### Sapa Industrial Extrusions

#### Cressona Sales Office

53 Pottsville Street  
Cressona, PA 17929  
Phone: 800-233-3165  
FAX: 800-252-4646

[www.sapagroup.com/us/industrialextrusions](http://www.sapagroup.com/us/industrialextrusions)

# sapa:

Shaping the future



**Sapa Industrial Extrusions**

**Cressona Sales Office**

53 Pottsville Street  
Cressona, PA 17929  
Phone: 800-233-3165  
FAX: 800-252-4646

[www.sapagroup.com/us/industrialextrusions](http://www.sapagroup.com/us/industrialextrusions)

**sapa:**

**Shaping** the future