

# Acc-u-Hex<sup>®</sup>

Consistency & performance  
in machine grade hex bar



As part of **Hydro's** industry leading **ACC-U-LINE™** extruded aluminum products, **ACC-U-HEX<sup>®</sup>** offers the highest quality and value for high-speed precision machining.

# Acc-u-Hex<sup>®</sup>

## The close tolerance extruded hex products that changed the screw machining industry

As part of Hydro's industry-leading ACC-U-LINE<sup>®</sup> products, ACC-U-HEX is the **highest standard for quality and value in extruded hex machining stock**:

- **Straightness improved** to .00625"/ft., .075" maximum over 12 ft. length... equivalent to 1/2 standard extruded tolerance for all sizes
- **Tighter dimensional tolerances** are 1/2 or better than standard extruded tolerances and exceed Aluminum Association Standard Tolerance and Precision Tolerance for extruded hex bar for all sizes
- **Widest selection of alloys**: 6061, 6082, 6005, and low lead 6042 (RoHS and ELV-compliant) and 6262, with a choice of tempers
- **Broad size range**: ACC-U-HEX thickness from .438" to 3.750"; custom and metric sizes are also available
- **Improved surface appearance**

### It's What's Inside That Counts

ACC-U-HEX in 6061 alloy features a fine grain structure for optimal machinability, smooth machined finish, and uniform anodize appearance.

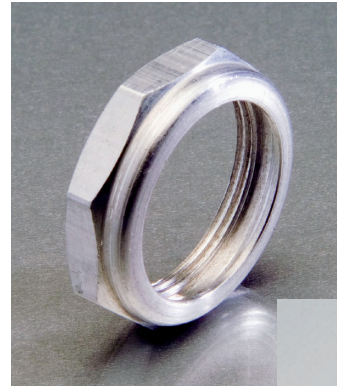
Advanced process controls and unique manufacturing capabilities enable ACC-U-LINE products to deliver consistent machinability that is unsurpassed by competing extruded products.

- Hydro's in-house casting of special alloy compositions to achieve high mechanical properties and hardness for improved machinability
- Indirect extrusion technology for optimal consistency in grain structure and dimensions

A wide selection of standard sizes of ACC-U-HEX are available from Hydro and its selected Premier<sup>®</sup> Distribution Partners.

### Typical applications

- Automotive Parts
- Couplings and Connectors
- Fittings
- Hinge Pins
- Hardware
- Fasteners
- Value Parts



## Comparative Tolerances (inches)

ACC-U-HEX		Aluminum Association Standard Extruded	
Size (in.)	Tolerance +/- (in.)	Size (in.)	Tolerance +/- (in.)
		.250-.499	0.008
.438-0.938	0.005	.500-.749	0.009
0.939-1.449	0.006	.750-.999	0.010
1.500-1.874	0.007	1.000-1.499	0.012
1.875-2.000	0.008	1.500-1.999	0.014
2.001-3.750	0.012	2.000-3.999	0.024
		4.000-5.999	0.034
		6.000-7.999	0.044
		8.000-9.999	0.054
Straightness: .00625"/ft. .075" max./12 ft. length for .438" to 3.750" thickness		Straightness: .0125"/ft. .150" max./12 ft. length	

## Mechanical Properties

Alloy*	Temper	Size Range (in.)	Tensile Strength Ksi (min.)	Yield Strength Ksi (min.)	Elongation % (min.)
6005	-T5,-T5511 <sup>1</sup>	.438" to 3.750"	38.0	35.0	10
6061	-T6, -T6511 <sup>1</sup>	.438" to 3.750"	38.0	35.0	10
	-T6H, -T6511H <sup>2</sup>	.500" to 3.750"	42.0	38.0	10
6262	-T6, -T6511 <sup>1</sup>	.500" to 3.750"	38.0	35.0	10
	-T6H, -T6511H <sup>2</sup>	.500" to 3.750"	42.0	38.0	10
6042	-T5, -T5511 <sup>1</sup>	.438" to .499"	38.0	35.0	10
	-T5, -T5511 <sup>1</sup>	.500" to 3.750"	42.0	35.0	10
	-T5H, -T5511H <sup>2</sup>	.500" to 3.750"	42.0	38.0	10
6082	-T6, -T6511 <sup>1</sup>	.438" to .750"	45.0	38.0	6
		.751" to 3.750"	45.0	38.0	8

\* Alloys 6061, 6262, 6042, 6082, and 6005 are certified to ASTM B 221; alloy 6061 also certified to ASME SB 221.

<sup>1</sup> For stress-relieved tempers, the characteristics and properties other than those specified may differ somewhat from the corresponding characteristics and properties of material in the basic temper.

<sup>2</sup> Hydro 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. T5511H and T6511H are available upon request.

ACC-U-HEX® is a registered trademark of Hydro

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## Standard Sizes (Inches)

Thickness (")	Wt./Ft.	Section #	Thickness (")	Wt./Ft.	Section #
.438 (+/- .005)	0.195	500387	1.438 (+/- .006)	2.106	500381
.500 (+/- .005)	0.255	500380	1.500 (+/- .007)	2.292	500364
.562 (+/- .005)	0.322	500360	1.625 (+/- .007)	2.689	500363
.625 (+/- .005)	0.398	500358	1.688 (+/- .007)	2.902	500370
.688 (+/- .005)	0.482	500355	1.750 (+/- .007)	3.119	500357
.750 (+/- .005)	0.573	500353	1.812 (+/- .007)	3.344	502752
.813 (+/- .005)	0.673	500354	1.875 (+/- .008)	3.580	500366
.866 (+/- .005)	0.764	500375	2.000 (+/- .008)	4.074	500369
.875 (+/- .005)	0.780	500361	2.250 (+/- .012)	5.156	501187
.938 (+/- .005)	0.896	500239	2.375 (+/- .012)	5.745	500367
.945 (+/- .006)	0.909	501190	2.438 (+/- .012)	6.053	500374
1.000 (+/- .006)	1.018	500352	2.500 (+/- .012)	6.365	501188
1.062 (+/- .006)	1.149	500362	2.625 (+/- .012)	7.018	521426
1.063 (+/- .006)	1.140	515556	2.750 (+/- .012)	7.702	500376
1.125 (+/- .006)	1.289	500356	2.875 (+/- .012)	8.418	500385
1.188 (+/- .006)	1.437	500368	3.000 (+/- .012)	9.166	569149
1.250 (+/- .006)	1.591	500371	3.250 (+/- .012)	10.757	500382
1.312 (+/- .006)	1.753	500377	3.500 (+/- .012)	12.476	569335
1.375 (+/- .006)	1.925	500359	3.625 (+/- .012)	13.383	569336
			3.750 (+/- .012)	14.322	569337

Straightness for ACC-U-HEX<sup>®</sup> sizes .438" to 3.750" thickness is 1/2 standard tolerance, .00625" per ft. or .075"/12 ft. length for lengths up to and including 12 ft. For lengths over 12 ft., straightness of .0125" per ft. will apply. Standard twist tolerances apply. Available in 6061, 6262 and 6042 alloys; 6082 and 6005 available upon request. Choice of -T6 temper and stress-relieved -T6511 and -T5511 tempers. Standard 12 ft. lengths.



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