

# Acc-u-Rod<sup>®</sup>

Consistent accuracy  
and performance  
in machine grade rod



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

# Acc-u-Rod<sup>®</sup>

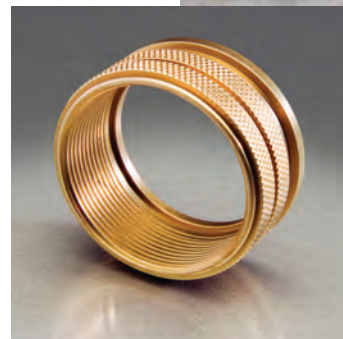
## The Close Tolerance Extruded Rod...

As part of Hydro's industry-leading ACC-U-LINE<sup>®</sup> products, ACC-U-ROD is **the highest standard for quality and value in Extruded Rod machining stock.**

- **Straightness tolerance 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 compared to the Aluminum Association Standard Tolerance
- **Widest selection of alloys:** 6061, 6082 and low lead 6042 (RoHS and ELV-compliant) and 6262, with a choice of tempers
- **Expanded size range:** ACC-U-ROD diameters from .438" to 8.125"; custom and metric sizes are also available. For larger rod sizes, Hydro offers Jumbo Rod in diameters up to and including 12.125"
- **Improved surface appearance**

### Typical Applications

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



that changed the screw machine industry

Acc-u-Rod®

## It's What's Inside That Counts

ACC-U-ROD in 6061 alloy features a fine uniform grain structure and elevated minimum mechanical properties for optimal machinability and anodize appearance. ACC-U-LINE products deliver consistent uniformity that is unsurpassed by a competing extruded product, featuring:

- Hydro's unique capabilities for in-house casting of special alloy chemistries to improve mechanical properties and machinability
- Indirect extrusion technology for optimum consistency in grain structure, tolerances and mechanical properties

A wide selection of standard sizes of ACC-U-ROD is available from Hydro and its selected Distribution Partners.

## Comparative Tolerances (inches)

New & Improved Hydro ACC-U-ROD		Aluminum Association Standard Extruded Rod		Standard Cold Finish Rod	
Size (in.)	Tolerance +/- (in.)	Size (in.)	Tolerance +/- (in.)	Size (in.)	Tolerance +/- (in.)
		.250-.499	0.008	.375-.500	0.0015
.438-1.000	0.003	.500-.749	0.009	.501-1.000	0.002
1.001-1.500	0.004	.750-.999	0.010	1.001-1.500	0.0025
1.501-2.000	0.005	1.000-1.499	0.012	1.501-2.000	0.004
2.001-3.000	0.007	1.500-1.999	0.014	2.001-3.000	0.006
3.001-3.999	0.012	2.000-3.999	0.024	3.001-3.499	0.008
4.000-5.000	0.017	4.000-5.999	0.034	3.500-5.000	0.012
5.001-7.500	0.022	6.000-7.999	0.044	5.001-6.000	0.020
7.501-8.125	0.030	8.000-9.999	0.054	6.001-7.000	0.025
				7.001-8.000	0.030
Straightness: .00625"/ft. .075" max./12 ft. length (See note on standard size table).		Straightness .0125"/ft. .150" max./12 ft. length		Straightness Screw Machine Stock .0125"/ft. .100" max./12 ft. length	

## ACC-U-ROD Mechanical Properties

Alloy*	Temper	Size Range (in.)	Tensile Strength Ksi (min.)	Yield Strength Ksi (min.)	Elongation % (min.)
6061	-T6, -T6511 <sup>1</sup>	.438" to .499"	38.0	35.0	10
	-T6H, -T6511H <sup>2</sup>	.500" to 8.125"	42.0	38.0	10
6262	-T6, -T6511 <sup>1</sup>	.438" to 8.125"	38.0	35.0	10
	-T6H, -T6511H <sup>2</sup>	.500" to 8.125"	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 8.125"	42.0	35.0	10
	-T5H, -T5511H <sup>2</sup>	.500" to 8.125"	42.0	38.0	10
6082	-T6, -T6511 <sup>1</sup>	.438" to 7.500"	45.0	38.0	6
	-T6, -T6511 <sup>1</sup>	.751" to 6.000"	45.0	38.0	8
	-T6, -T6511 <sup>1</sup>	6.001" to 8.125"	41.0	35.0	6

\* Alloys 6061, 6042, 6262 and 6082 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.

Acc-u-Rod<sup>®</sup>

# Consistent accuracy and performance...

## Standard Sizes (inches)

Diameter (")	Wt./Ft.	Section #	Diameter (")	Wt./Ft.	Section #
.438 (+/- .003)*	0.177	555308	1.016 (+/- .004)	0.953	555337
.468 (+/- .003)*	0.202	555309	1.031 (+/- .004)	0.982	555338
.500 (+/- .003)	0.231	555310	1.062 (+/- .004)	1.042	555339
.551 (+/- .003)	0.280	555312	1.125 (+/- .004)	1.169	555340
.562 (+/- .003)	0.292	555313	1.188 (+/- .004)	1.304	555341
.563 (+/- .003)	0.293	555314	1.219 (+/- .004)	1.372	569122
.594 (+/- .003)	0.326	555315	1.250 (+/- .004)	1.443	555343
.625 (+/- .003)	0.361	555316	1.266 (+/- .004)	1.480	555344
.630 (+/- .003)	0.367	555317	1.281 (+/- .004)	1.516	555345
.635 (+/- .003)	0.372	555318	1.312 (+/- .004)	1.590	555346
.656 (+/- .003)	0.397	555320	1.344 (+/- .004)	1.668	555347
.687 (+/- .003)	0.436	555321	1.375 (+/- .004)	1.746	555348
.688 (+/- .003)	0.437	555322	1.438 (+/- .004)	1.910	555349
.703 (+/- .003)	0.456	569120	1.468 (+/- .004)	1.990	555350
.718 (+/- .003)	0.476	555323	1.500 (+/- .004)	2.078	555351
.750 (+/- .003)	0.520	555324	1.563 (+/- .005)	2.256	555352
.766 (+/- .003)	0.542	555325	1.625 (+/- .005)	2.439	555353
.781 (+/- .003)	0.563	555327	1.688 (+/- .005)	2.632	555354
.787 (+/- .003)	0.572	569121	1.750 (+/- .005)	2.829	555355
.812 (+/- .003)	0.609	555328	1.812 (+/- .005)	3.033	555356
.830 (+/- .003)	0.636	581373	1.875 (+/- .005)	3.247	555357
.844 (+/- .003)	0.658	555329	1.938 (+/- .005)	3.469	555358
.875 (+/- .003)	0.707	555330	1.969 (+/- .005)	3.581	569123
.880 (+/- .003)	0.715	555331	2.000 (+/- .005)	3.695	555359
.906 (+/- .003)	0.758	555332	2.031 (+/- .007)	3.810	555360
.938 (+/- .003)	0.813	555333	2.062 (+/- .007)	3.927	555361
.945 (+/- .003)	0.825	556489	2.125 (+/- .007)	4.171	555362
.968 (+/- .003)	0.864	555334	2.150 (+/- .007)	4.269	581544
.985 (+/- .003)	0.896	555335	2.188 (+/- .007)	4.422	555363
1.000 (+/- .003)	0.924	555336	2.250 (+/- .007)	4.676	555364
			2.312 (+/- .007)	4.937	555365
			2.375 (+/- .007)	5.210	555367
			2.438 (+/- .007)	5.490	555368
			2.500 (+/- .007)	5.773	555369
			2.563 (+/- .007)	6.067	555370

# in machine grade rod

# Acc-u-Rod®

## Standard Sizes (inches) *continued*

Diameter (")	Wt./Ft.	Section #	Diameter (")	Wt./Ft.	Section #
2.625 (+/- .007)	6.364	555371	4.724 (+/- .017)	20.612	569137
2.750 (+/- .007)	6.985	555372	4.750 (+/- .017)	20.839	503297
2.756 (+/- .007)	7.015	569124	4.812 (+/- .017)	21.387	569138
2.875 (+/- .007)	7.634	555373	4.875 (+/- .017)	21.951	569139
3.000 (+/- .007)	8.313	555374	5.000 (+/- .017)	23.091	503296
3.062 (+/- .012)	8.660	500337	5.062 (+/- .022)	23.667	569140
3.125 (+/- .012)	9.020	500322	5.125 (+/- .022)	24.260	569141
3.150 (+/- .012)	9.896	569125	5.188 (+/- .022)	24.860	569142
3.250 (+/- .012)	9.756	500171	5.250 (+/- .022)	25.458	515662
3.312 (+/- .012)	10.405	569126	5.375 (+/- .022)	26.684	555305
3.375 (+/- .012)	10.521	511631	5.500 (+/- .022)	27.940	515663
3.500 (+/- .012)	11.314	500328	5.625 (+/- .022)	29.224	555304
3.543 (+/- .012)	11.594	569127	5.750 (+/- .022)	30.537	515664
3.625 (+/- .012)	12.137	516990	5.813 (+/- .022)	31.210	569143
3.750 (+/- .012)	12.989	500338	6.000 (+/- .022)	33.251	515665
3.875 (+/- .012)	13.869	569128	6.125 (+/- .022)	34.650	555376
3.937 (+/- .012)	14.316	569129	6.250 (+/- .022)	36.079	516101
4.000 (+/- .017)	14.778	500330	6.375 (+/- .022)	37.537	569144
4.062 (+/- .017)	15.240	569130	6.500 (+/- .022)	39.023	516102
4.125 (+/- .017)	15.716	555375	6.625 (+/- .022)	40.539	569145
4.250 (+/- .017)	16.683	500428	6.750 (+/- .022)	42.083	555303
4.312 (+/- .017)	17.173	511670	6.800 (+/- .022)	42.407	569146
4.330 (+/- .017)	17.317	569131	7.000 (+/- .022)	45.258	555302
4.331 (+/- .017)	17.325	569132	7.062 (+/- .022)	46.063	569147
4.375 (+/- .017)	17.679	569133	7.125 (+/- .022)	46.889	569148
4.500 (+/- .017)	18.703	501160	7.250 (+/- .022)	48.548	555301
4.528 (+/- .017)	18.937	569134	7.500 (+/- .022)	51.954	555300
4.567 (+/- .017)	19.265	569135	7.750 (+/- .030)	55.475	568739
4.625 (+/- .017)	19.757	569136	8.000 (+/- .030)	59.112	568740
			8.125 (+/- .030)	60.974	584178

Straightness for ACC-U-Rod® in all diameters is 1/2 standard extruded tolerance, .00625" per ft. or .075"/12 ft. for lengths up to and including 12 ft. For lengths over 12 ft. straightness of .0125"/ft will apply.

Available in 6061, 6262 and 6042 alloys; 6082 and 6005 available upon request.

Choice of -T6 and -T5 tempers and stress-relieved -T6511 and -T5511 tempers.

Standard 12 ft. lengths.

\* Signifies standard mechanical properties apply

ACC-U-ROD® is trademark of Hydro



*We are aluminum*

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