EXTRUDED ENGINEERED SHAPES

CARBON & ALLOY STEEL GRADES

1018	1045	4140	8620	A36
1029	1050	4150	8630	A588
1030	1060	4340	8640	A690
1035	1215	6150	9310	Grade 50
1040	4130			Grade 60

SPECIFICATIONS WHERE APPLICABLE			
AMS S6758	ASTM A 36	ASTM A 576	AMS-S-6758A
AMS 6415	ASTM A 105	ASTM A 588	AMS 6382
AMS S5000	ASTM A 322	ASTM A 690	

OUTSIDE DIMENSIONS

Shape cross-section must fit within 6-inch (152 mm) diameter.

STAINLESS STEEL GRADES

303	400 series	13-8 Mo
304 series	418	15-5 PH
310	422	17-4 PH
316 series		17-7

SPECIFICATIONS WHERE APPLICABLE			
AMS 5610	AMS 5629	AMS 5646	ASTM A 276
AMS 5613	AMS 5639	AMS 5648	ASTM A 511
AMS 5616	AMS 5640	AMS 5651	
AMS 5621	AMS 5643	AMS 5659	
AMS 5627	AMS 5645	AMS QQS 763	

OUTSIDE DIMENSIONS

Shape cross-section must fit within 5.5-inch (139 mm) diameter.

NICKEL ALLOY GRADES

ALLOY 400	Bi-Metals
ALLOY 600	
A-286	

SPECIFICATIONS WHERE APPLICABLE		
AMS 5665	ASTM A 164	ASTM B 456
AMS 5732	ASTM B 766	QQ-N-281

OUTSIDE DIMENSIONS

Shape cross-section must fit within 6-inch (152 mm) diameter.

TITANIUM GRADES*

CP Ti
3Al-2.5V
6Al-4V
6Al-6V-2Sn
6Al-2Sn-4Zr-2Mo*

SPECIFICATIONS WHERE APPLICABLE			
AMS 4935	DMS 1650	AMS 4921	AIMS 03-18-011
AMS 4975	AMS-T-81556A	MMS 1202	

OUTSIDE DIMENSIONS

Shape cross-section must fit within 7.75-inch (197 mm) diameter.

*Shape cross-section must fit within 6-inch (152 mm) diameter.

COLD DRAWN SHAPES

Carbon & Alloys	US Grades in Series 1000, 4000, 6000, 8000, 9000
Stainless Steel in Complex Geometries	Series 300 & 400 Stainless Steel
PH Grades: Rounds, Hexes, or Octagons	17-4, 17-7, 15-5, 13-8
Exotic Alloys	Monel 400, Inconel, Hastelloy, etc.
Solid, Round	OD: 0.2500 - 3.750" (6.4 - 95 mm)
Hexagons and Octagons, across flats	0.3125 - 3.625" (7.9 - 92 mm)
Rectangles and Squares	0.625" (16 mm) per side min, 5.00" (127 mm) max
Unique Shapes	Greater than 0.625" (16 mm) Profile must fit within 6.5" (165 mm) Diameter Circle
Dimensional Tolerance, Standard*	+/- 0.005" (0.127 mm)
Fillet and Radii Tolerance, Standard*	Carbon: 0.015" (0.38 mm), Stainless: 0.030" (0.76 mm)
Maximum Ratio of Height vs Width	1 : 1.16
Minimum Cross-Sectional Area	0.125 in² (81 mm²)

Tighter Tolerances may be available

EXTRUDED ENGINEERED SHAPES

A process where a round billet is pre-heated and, after leaving the furnace, is pushed through a forming die into a profile. Extrusions can even be used to make complex profile shapes from metals which are difficult to form.

COLD DRAWN SHAPES

A process by which a bar or tube is reduced in size or changed in shape by pulling it through a series of dies or mandrels.

HOPKINSVILLE CERTIFICATIONS

AS9100:D	ISO 9001	ISO 14001	ITAR	NADCAP – Material Test Lab	PED	REACH