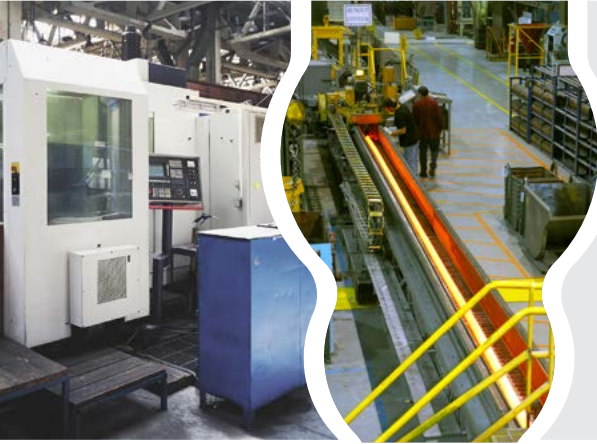


PRECISION COLD DRAWN NET SHAPES

Complexity Encouraged

WHEN STANDARD JUST WON'T DO, CHOOSE OUR SHAPED SOLUTIONS



The Cold Drawn Manufacturing Process

Plymouth Tube strives to achieve tolerances and standards exceeding industry standard. As an extended arm of your Engineering department, Plymouth learns as much as possible about the end application and offers solutions based on your needs. Our proprietary process provides a profile which is “machine ready,” saving valuable production time and eliminating waste. Profiles are available symmetrical and non-symmetrical which means Plymouth’s precision geometric profile combinations and shapes are nearly unlimited!

COLD DRAWN SHAPES

Carbon and Alloys	US Grades in Series 1000, 4000, 6000, 8000, 9000
Stainless Steels in Complex Geometries	Series 300 & 400 Stainless Steel
PH grades in Rounds, Hexes or Octagons	17-4, 17-7, 15-5, 13-8
Exotic Alloys	Monel® 400, Inconel®, Hastelloy®, etc.
Solid, Round	0.250" - 3.750" OD
Hexagons and Octagons, Across Flats	0.3125" - 3.625"
Rectangles and Squares	0.625" per side min, 5.000" max
Unique Shapes	Greater than 0.625"
	Profile must fit within 6.500" Diameter Circle
Dimensional Tolerance, Standard*	+/- 0.005"
Fillet and Radii Tolerance, Standard*	0.015" in Carbon, 0.030" in Stainless
Cross Sectional Area	0.125 SQ IN. (Min)

* Tighter Tolerances may be available depending on geometry, size, and material.

STREAMLINING PRODUCTION & MANUFACTURING SOLUTIONS

Cold Drawn shapes provide advantages not offered by alternative methods such as forging, casting, machining and broaching from bar or plate stock.

Select Plymouth Engineered Shapes to streamline your manufacturing process with these benefits:

- Reduce machining time
- Reduce number of operations
- Increase productivity
- Reduce scrap and material waste
- Minimize cutting tools
- Reduce carbon footprint

Contact us today to discuss your product requirements and specifications.

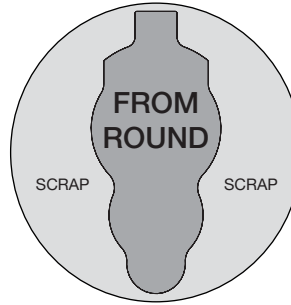
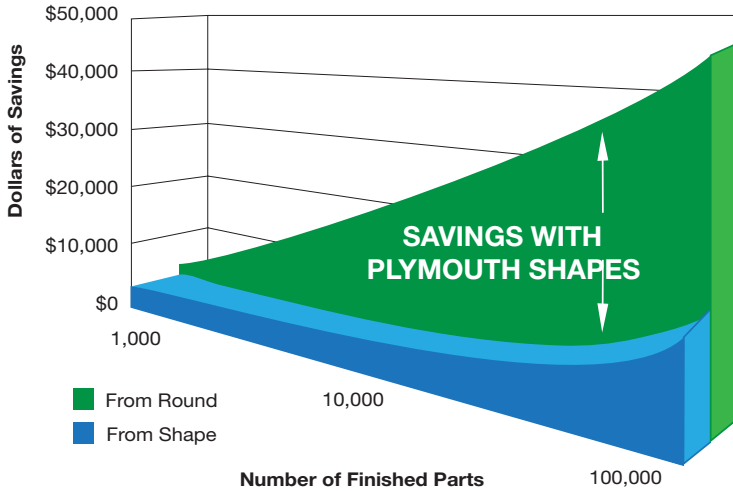


Find out more at www.plymouth.com/colddrawnshapes.

PRECISION COLD DRAWN NET SHAPES

COST-BENEFIT ANALYSIS

Comparison of Total Manufacturing Costs for the Same Part Machined from a Standard Section Bar vs. Plymouth Cold Drawn Shape



FINISHED PART MADE FROM STANDARD COLD DRAWN ROUND

- Bar Stock Round Section Weight 4 lbs
- Finished Machined Part Weight 0.5 lbs
- 3.5 lbs of Chips on the Floor

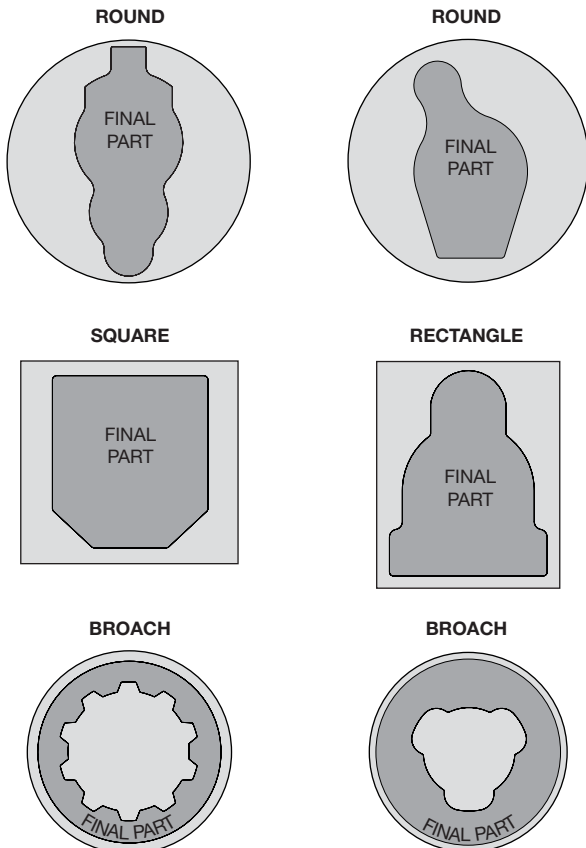


FINISHED PART MADE FROM PLYMOUTH COLD DRAWN SHAPE

- Plymouth Bar Stock Section Weight 1.5 lbs
- Finished Machined Part Weight 0.5 lbs
- 1 lb of Chips on the Floor
- 71% Less Scrap than from Round

Other Savings: Manpower, Tooling Cost, Equipment Cost

A Few Examples of Limitless Shape Possibilities



In addition to cold drawn net shapes, Plymouth also produces near-net carbon and alloy shaped tubing in ODs ranging from 0.125" - 5.000."



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