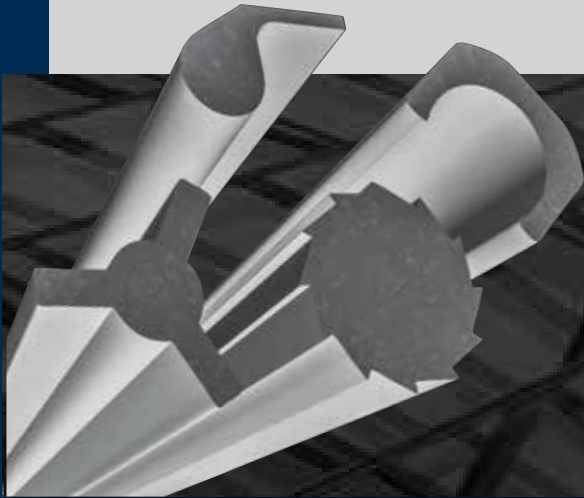


# RATHBONE

PRECISION METALS INC.



Rathbone Precision Metals, Inc. is an ISO 9001 certified company



## THE INDUSTRY LEADER IN PRECISION FORMED PROFILES,

Rathbone produces complex profiles in a variety of alloys through precision cold drawing and cold rolling. We have been helping manufacturers reduce machining and material costs since 1905.

Parts made from Rathbone profiles are used in diverse applications - from medical to pipe gaskets, power generation and transmission, linear motion, firearms, machine and hand tools, sprags and locks.

We make the difference when our customers need an outstanding quality product.

### PROFILE DIMENSIONAL TOLERANCES

Characteristic	Standard Rolling Tolerances	Standard Drawing Tolerances	Optional
Linear	± 0.002" Thickness ± 0.005" Width	± 0.002" All	± 0.0005"
Radial	± 0.010"	± 0.005" Small radii ± 0.010" Large radii	± 0.002"
Corners/Fillets	Dependent on location on profile	0.015"R max on 90° intersection Blend on obtuse angle intersection	0.005" max – 90° Obtuse – Review
Surface Finish	63 Ra	125 Ra	40 Ra max
Size Limitations	Typically less than 1.5"	Typical Size Range 0.032" – 2.0"	Configuration Dependent

### ADDITIONAL CONDITIONS

Characteristic	Standard Tolerances	Optional
Straightness Twist	0.020" / Foot cumulative 0.030" / Foot cumulative – small wire ± 2° per foot	0.005" / Foot
Temper	As Drawn or As Rolled	Stress relieved Annealed Heat treated ( outsourced )
Decarburization	Not checked unless there is a customer requirement	0.005" max total and or partial – Requires surface improved starting raw stock
Lengths	10'-12' from coil material 8'-14' from bar raw material with variation in length to be within ± 1.0"	Dead lengths Abrasive / cold saw pieces ± 0.005" on cut pieces
Mechanical Properties	Rockwell Hardness reported if required by customer	Outside testing available
Surface Coatings	Carbon & Alloy – phosphate & soap Stainless – cleaned dull matte finish Copper & Brass – residual soap	Bright & shiny appearance
Cut Ends	Deformed pinch cut / Shear cut	Shaped shear, saw cut ends
Shipping Containers	Reddi Crate	Wooden boxes, spools, banded bundles
Hardness Range Values	Carbon HRB 75 – HRB 95 Alloy HRB 90 – HRC 28 Stainless HRB 90 – HRC 25 Copper & Brass HRB 60 – HRB 85	May be adjusted by modification of cold work reductions

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PRECISION METALS INC.  
LITHUANIA, U.S.A.



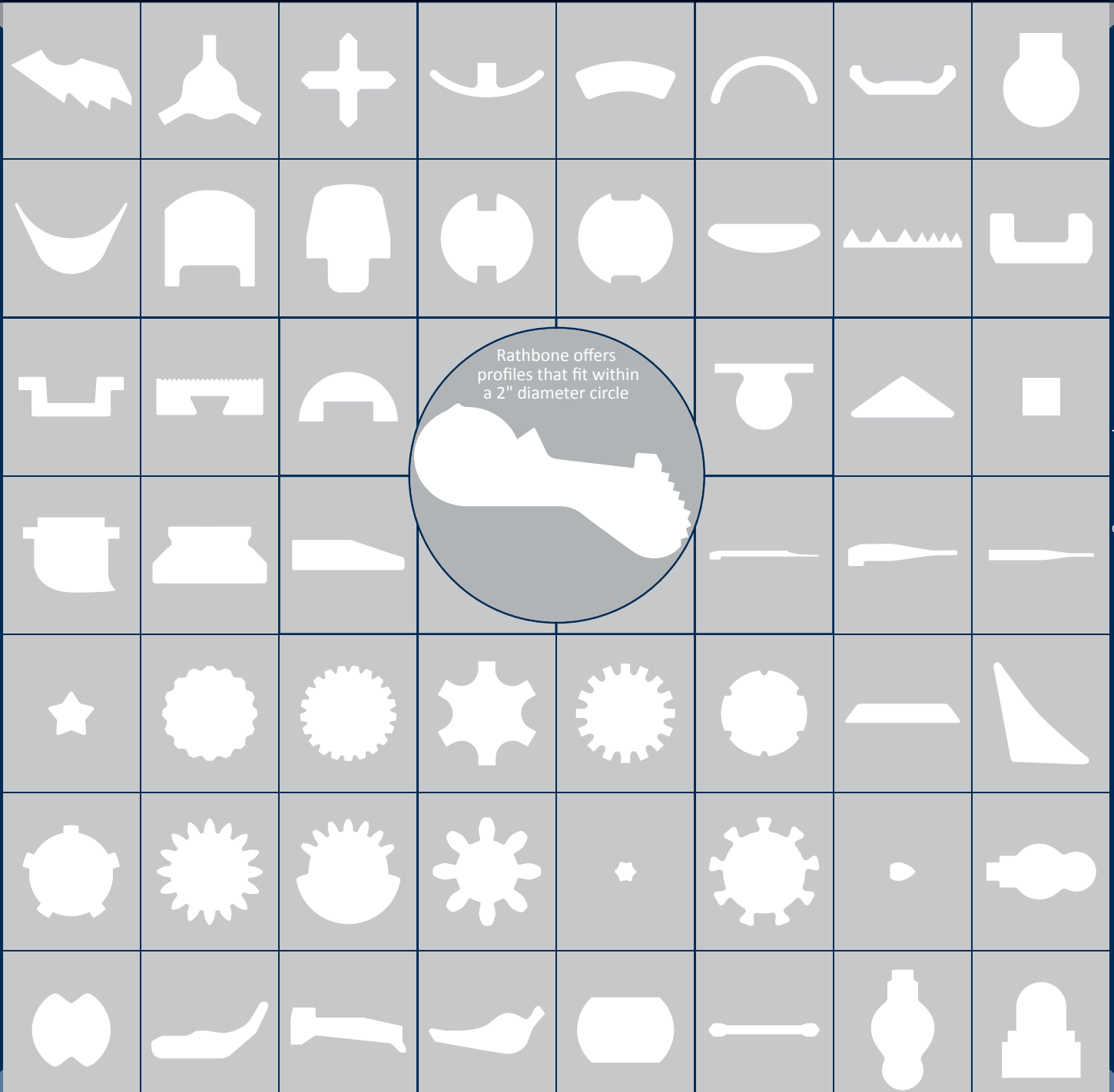
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## WITH OVER A CENTURY OF EXPERIENCE,

combined with computer-aided design and machining, Rathbone is able to meet the most exacting customer profile requirements.

We work with various metals including, Carbon, Free Cutting, and Alloy Steels, 300 and 400 Series Stainless, High Temperature Alloys, Copper, Brass and Bronze, and Nickel-Copper.

Precision cold drawing and cold rolling can offer tougher, more uniform consistent profile dimensions. Other benefits are closer tolerances, better grain structure, as well as cost savings compared to machined parts.



Profiles shown are not to scale. Rathbone's size capabilities range from 0.032" to 2.00".