



# *All Metals & Forge Group*

**OPEN DIE FORGINGS, SEAMLESS AND CONTOURED  
ROLLED RINGS, AND COMPLEX FORGED PARTS**



U.S. 973.276.5000 • CANADA 1 416.363.2244 • SALES@STEELFORGE.COM • STEELFORGE.COM

WELCOME TO

# ALL METALS & FORGE GROUP

Open Die Forgings, Seamless And Contoured Rolled Rings, And Complex Forged Parts

**Your source for superior quality forged parts in a variety of shapes and materials**

All Metals & Forge Group is an ISO 9001, AS9100D, API, and PED manufacturer providing superior quality forged parts for light and heavy industry. AMFG can produce near-net-shape forgings within 2mm of finished dimensions in seamless rolled rings, contoured rolled rings, complex forged parts, large oversized forgings, as well as standard and custom forged shapes. The 250 RMS on all dimensions allows for ASTM A-388 ultrasonic inspection to prove internal soundness, typically provided on every AMFG part.

The company maintains a large inventory of raw material to keep delivery times between 8 to 10 weeks. Forgings can be produced in alloy steels, carbon, aluminum, stainless steels – including PH grades, nickel,

superalloys, special metals, and titanium. Shapes range from discs, blocks, shafts, and gear blanks to flanges, wheels, rings, spindles, cones, and complex forged parts such as fluid ends, cylinder blocks, and turbine components.

AMFG also can provide the physical properties achieved through heat treating and provides actual test results to prove tensile, yield, elongation, and reduction of area, impact, hardness, or metallurgical analysis, whether the part is needed as annealed, quenched and tempered, normalized, austenitized, carburized, or other conditions for specific end-use applications. AMFG can quote within 24 hours from sketches, drawings, and rough machined or finished machined

prints, and can provide price and delivery for either rough machined parts or finished machined with 125 RMS or finer surfaces within 0.001 tolerances.



All orders are rough machined to 250 RMS at no additional cost

**FAST DELIVERY:**

**8-10 WEEKS ON MOST ORDERS**

Contact us today! U.S. 973.276.5000 Canada 1. 416.363.2244

AMFG is dedicated to providing its customers with the quickest quotes, best quality products, most competitive prices and fastest possible deliveries of open die forgings and seamless rolled rings to ASTM, AMS, AISI, ASME and other industry standard specifications.



## PRODUCT SPOTLIGHT: OVERSIZED SEAMLESS ROLLED RINGS

# UP TO 200" MAX O.D.

We manufacture high-quality seamless rolled rings with excellent tensile and yield properties for gear, bearing and heavy machinery applications. We can produce rings up to 200" in steel alloys and up to 80" in other alloys.

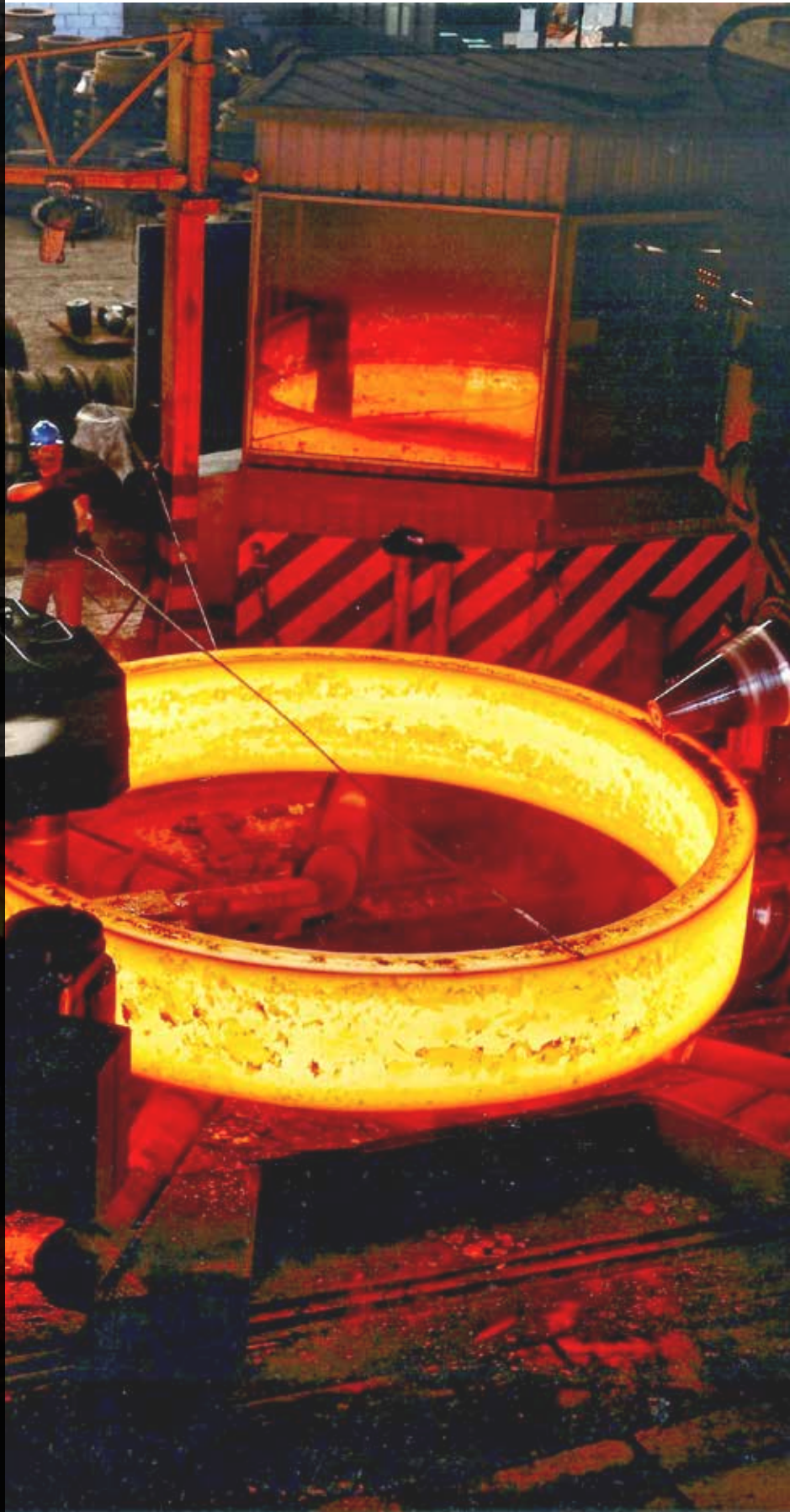
- Seamless rolled rings have circumferential grain flow (radial grain pattern), which increases their structural strength against centrifugal forces.
- Seamless rolled rings are uniform with maximum soundness and minimum internal imperfections proven by ultrasonic testing. They are superior to cast or rolled and welded rings made from plate or bar.
- Ultrasonic Testing is important for any ring that may need to withstand high-stress forces during its lifecycle.
- Seamless rolled rings can be produced as contoured or near-net-shape to reduce machining time, cost, and meet the properties of their unique geometries.
- Rings forged with high-temperature alloys maintain their strength in high-temperature applications.



### Save Time And Money On Your Next Project

Save time and money with All Metals & Forge Group. All orders are rough machined to 250 RMS or finish machined to 125 RMS at no additional charge.

All Metals & Forge Group is proud to be an industry leader in the manufacturing of seamless and contoured rolled rings.



# YOUR PARTS ARE OUR TOP PRIORITY

Our stringent testing, precision manufacturing and expedited service are the pillars of our business and set All Metals & Forge Group apart from the competition.

## SUPERIOR QUALITY



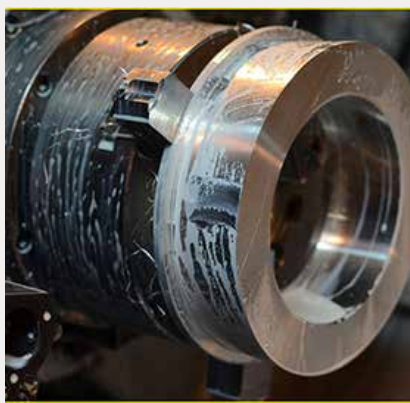
### Proven, Not Assumed

Forgings crafted by AMFG are ultrasonically tested three times and proven to meet rigorous ultrasonic testing standards. Coupons, chemistry, and physical property reports are always provided.



We stand by our products

## UNMATCHED SERVICE



### The Human Touch

AMFG staff members are available from quote to completion of the order to answer any questions, provide a status update, or fix an issue.



Support when you need it

## FAST DELIVERY



### Time is Money

Saving a week or two is important; saving a month or two is critical. The AMFG end-to-end ISO process ensures delivery as expected, when needed.



Fast quotes and delivery

Contact one of our Forging Specialists at [Sales@steelforge.com](mailto:Sales@steelforge.com) today.






**AMFG provides a quote within 24 hours in most cases. Additional care to correctly quote complex inquiries may take 48 hours. Whether the request is for one item, ten items, or 100 parts, quotes are prepared quickly and sent promptly. AMFG can easily update a quote if a quantity change is needed, items are added, or change in drawing dimensions or other information has been received that needs to be addressed.**



**SEND US YOUR RFQ AT [STEELFORGE.COM](http://STEELFORGE.COM)**

One of our forging specialists will get your quote back to you in 48 hours or less.



**OUR LEGACY OF QUALITY:  
OVER 50 YEARS  
IN THE METALS  
INDUSTRY**



# OUR MISSION, VISION AND VALUES

Providing quality and value to our customers is our top priority

Open die forgings, seamless rolled rings, contoured ring geometries, large, oversized, and complex forge parts rely on a handful of factors: end use, price, delivery, quality, industry specification, customer interaction, and end customer satisfaction. All Metals & Forge Group focuses on each of these in every customer relationship.

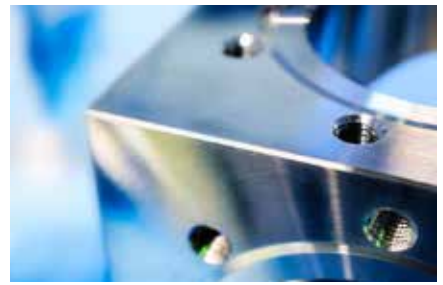
AMFG products are often delivered in a condition designed to save on machining costs, tool wear, and floor chips. Producing rough machined forgings with dimensions within 2mm of finished dimensions is the cornerstone of cost savings. Comparing AMFG forging prices to any competitors can be apples to oranges until the dollar-for-dollar benefits of near-net-shape and surface conditions are applied in the overall part cost.

Everyone knows delivery is critical. As long as delivery times remain disrupted in the supply chain, AMFG can provide its best assurance that orders will be delivered when quoted. For most orders, that means 8 to 10 weeks. Even high-volume orders can be managed to deliver parts just in time for production needs.

Quality is often assumed – it shouldn't be. Quality forgings should be more than 'capable of ASTM A-388' – soundness needs to be proven on every part, especially when those parts will be subject to temperature or stress extremes, or long wear cycles.

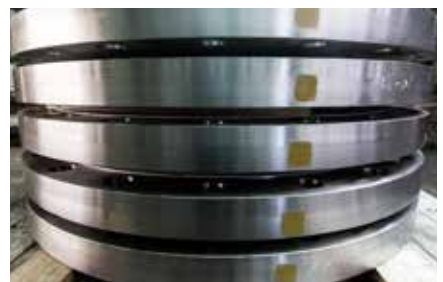
The key is communication. AMFG staff members are dedicated to a motto: visibility is credibility. Customers are not sent to voicemail or left hanging when direct interaction is required or expected.

Repeat business and customer referrals are the result of one thing – customer satisfaction. AMFG wants the highest customer satisfaction in the industry and works hard every day to earn it.



**THERE ARE NO SHORTCUTS ON  
THE ROAD TO SUCCESS**

**OUR 50 YEARS EXPERIENCE  
SHOWS IN EVERY PART WE  
PRODUCE**



# OPEN DIE FORGED PARTS FOR ALL INDUSTRIES

Open die forged shapes produced by All Metals & Forge Group are used in a wide variety of industries including oil and gas exploration, gear manufacturing, aircraft and aerospace, energy and power generation, defense, automotive, heavy industrial, manufacturing, general metalworking, petroleum and chemical, mining, engine and turbine, shipbuilding, construction, fabricated metal, pulp and paper, and food processing. We even produce forgings for other forge shops, both domestically and internationally.



**WE UNDERSTAND THE  
 UNIQUE NEEDS OF YOUR  
 INDUSTRY**

Our experienced team of forging professionals understands that each industry has unique requirements and are standing by to help with your next forging project.



Contact our Forging Specialists at  
[Sales@steelforge.com](mailto:Sales@steelforge.com)





# INDUSTRIES SERVED

## GEAR

Gear blanks from seamless rolled rings, contoured rolled rings, step shafts, or discs for high-temperature or harsh environments, turbines parts, and a wide variety of machinery can be forged from any of the metals and alloys available through AMFG.

## PETROLEUM, OIL & GAS

Crankshafts, fluid ends, manifolds, cylinder blocks, valve bodies, impellers, high-pressure valves, high-pressure flanges, flanged shafts, pony rods, crankshafts, and blowout preventers can be forged by AMFG to meet industry specifications.

## PULP & PAPER

Roll journals, end journals, discs, seamless rolled rings, gear blanks, forged hollow outer shells, solid spindle rolls, flanged rolls, drive and tending end step shafts are regularly produced for end users or machine shops serving this industry sector.

## POWER GENERATION

Includes hydroelectric, nuclear, geothermal, wind, wave, tidal, and subsea applications often requiring special materials for high-temperature, low-temperature, or high-corrosive operating environments involving turbine drive shafts, rotor shafts, wheels, gears, bearing blocks, and seamless rolled rings for gear blanks or retainer rings.

## SHIPBUILDING

AMFG can forged tail shafts, drive shafts, rudder stock, upper vertical shafts, lower vertical shafts, pintle pins, line shafts, intermediate shafts, main shafts, stub shafts, controllable and variable pitch shafts, flanged torque shafts, and input shafts. AMFG supplies forgings that meet ABS requirements and other international shipbuilding bureaus.

## TRANSPORTATION

Whether forgings are needed to move goods across the country by truck, train, high-speed rail, or to move goods by overhead gantry cranes, forged shapes include train wheels, gate wheels, gears, shafts, hubs, discs, blocks, hooks, eye bolts, and rings.

## MINING

Forgings for this industry include gyratory crusher shafts, crusher rolls, walking dragline and shovel shafts, drum/mine hoist shafts, typically in carbon or alloy steels.

## PRESSURE VESSEL

Seamless rolled rings, discs, blocks, flanges, cylinders, and cones with API, ASME B16.5, ASME B16.47 or PED certification is required in this industry, which can be provided by AMFG.

## VALVE AND PUMP

Forgings for this industry include seamless rolled rings, contoured rolled rings, flanges, shafts, as well as finish machined valve and pump bodies, and fluid ends.

## ENGINE AND TURBINE

Forged shafts for drive shafts and rotor shafts, forged tubes for impellers, forged discs for turbine wheel components, forged bearing blocks, forged shapes for blades and vanes, and forged seamless rolled rings for retainer rings are supplied to this industry by AMFG.

## MACHINERY

This industry encompasses almost every shape and metal alloy AMFG can forge. Rough machined forged parts are most often finished machined by machine shops for all the other industries.

## FOOD PROCESSING

AMFG supplies sugar mill rolls, crusher shafts, mixer blocks, mill rolls, flanges, and gear blanks for this industry sector. Stainless steel 304 and 316 are the most commonly used materials in the food processing industry.

## AEROSPACE/AIRCRAFT

The key materials used in aerospace forging include titanium, Inconel®, and stainless steel alloys such as Ti-6AL-4V, CP Grade 5, CP Grade 12, Alloy 718, Hastelloy™, F51, 2205, and maraging steels. Shapes include engine discs, seamless rolled rings, landing shafts, and gears.








SEND US YOUR RFQ AT [STEELFORGE.COM](http://STEELFORGE.COM)

One of our forging specialists will get your quote back to you in 48 hours or less.

# OUR FORGING CAPABILITIES

Materials that we forge include carbon steel, alloy steel, tool steel, special grades, stainless steel (including PH grades), titanium, aluminum, magnesium, copper, nickel, cobalt, high temperature, super alloys and special alloys.

SHAPE	SIZE/ WEIGHT	FERROUS ALLOYS		NICKEL, SPECIAL ALLOYS	NON-FERROUS ALLOYS		
		Carbon, Alloy & Tool	Stainless		Aluminum	Titanium	
 FLAT BAR BLOCKS	MAX. WIDTH	120"	120"	27"	60"	65"	
	MAX. WEIGHT	80,000#	80,000#	20,000#	15,000#	15,000#	
 CYLINDERS/SLEEVES	MAX. O.D.	120"	120"	50"	72"	52"	
	MAX. LENGTH	160"	160"	65"	96"	65"	
 DISCS/HUBS	MAX. DIA.	160"	160"	50"	80"	65"	
	MAX. WEIGHT	80,000#	80,000#	20,000#	15,000#	10,000#	
 RINGS, ROLLED OR HAND FORGED	MAX. O.D	200"	200"	120"	90"	90"	
	MAX. LENGTH	65"	65"	40"	65"	65"	
 ROUNDS/SHAFTS (with steps or flanges)	MAX. LENGTH	420"	420"	180"	264"	180"	
	MAX. WEIGHT	80,000#	80,000#	20,000#	10,000#	10,000#	
<b>ALLOY</b>	4335	9315	D6	<b>Stainless Steel</b>	<b>Nickel, Special Alloys</b>	<b>Aluminum Alloys</b>	<b>Titanium Alloys Commercially Pure</b>
2315	4340	9317	H11	300 Series 420	A-286 • AM-355	1100	4AL-3MO-1V
2340	4615	9430	H12	302 422	Custom 450 <sup>®</sup> ,	2014	4AL-4MN
2515	4620	9840	H13	303 429	Custom 455 <sup>®</sup> ,	2024	5AL-2.5SN
3140	4630	9850	H21	304L 430F	Ferralium <sup>®</sup> 255	2219	6AL-2SN -4ZR-2MO
3145	4640	<b>CARBON</b>	H26	309 431	Hastelloy <sup>®</sup> B2	5083	6AL-2SN -4ZR-6MO
3150	4720	1006	H43	310 440A,C	Hastelloy <sup>®</sup> C276, C,	5086	6AL-4V
3310	5150	1008	M2	314 442	N, S, W, X	6061	6A1-6V-2SN
3312	6120	1010	P20	316L 446	Haynes <sup>®</sup> 188, 230, 25	6063	7AL-4MO
3315	6140	1015	S1	317L 500 Series	Incoloy <sup>®</sup> 800, 825,	7049	8AL-1MO-1V
4015	6145	1018	S5	321 501	832, 890, 901, 925	7050	13.5V -11CR-3AL
4017	6150	1020	S7	322 502	617, 625, 690, 702,	7075	Ti17
4020	*6170	1022	T1	329 Stainless	706, 713, 718, 722,	7079	CP Grade 1
4023	6470	1023	W1	330 Steel PH	725, 738, 750, 751	7175	CP Grade 2
4037	7290	1025	W2	333 Grades	800, 825, *902, 903	7475	CP Grade 3
4085	8140	1026	<b>SPECIAL GRADES</b>	347 13-8MO	Invar <sup>®</sup> 36, 42		CP Grade 4
4110	8150	1029	D6AC	348 15-5PH	Jethete <sup>®</sup> M151, M152		CP Grade 7
4112	8160	1030	HY80	400 Series 15-7MO	Kovar <sup>®</sup> , Rodar <sup>®</sup> ,		CP Grade 11
4115	8615	1035	HY100	403 17-4PH	L605 <sup>®</sup>		CP Grade 12
4120	8617	1040	F-5(CR-1/2MO)	405 17-7PH	Maraging <sup>®</sup> 250, 300,		
4125	8620	1045	F-11(1 1/4 CR-1/2 MO)	409 Greek	350		
4127	8630	1050	F-22(2 1/4 CR-1 MO)	410 Ascoloy	Monel <sup>®</sup> 400, 500 (K)		
4130	8640	1055	F-91	414	Nickel 200, 201		
4135	8642	1060	17-22 A	416	Nitronic <sup>®</sup> 40, 50, 60		
4140	8645	1070	17-22 AS	418	N155		
4142	8720	<b>TOOL</b>	17-22 AV		Multimet <sup>®</sup>		
4145	8735	A2	Nitralloy <sup>®</sup> 135N		Nimonic 75, 80, 90		
4150	8740	A6	52100		Rene <sup>®</sup> 41 - 125		
4155	8750	A10	LF1, LF2, LF3		Udimet <sup>®</sup> 500, 700		
4160	9115	D2			Vascojet <sup>®</sup> 1000		
4215	9260	D3			Waspalloy <sup>®</sup>		
4320	9262	D5			Zirconium 32 <sup>®</sup>		
4330	9310				20 CB		



## PRODUCT SPOTLIGHT: LARGE AND COMPLEX FORGED PARTS

# UP TO 80,000 LBS.

Many heavy industry applications require forged sizes and weights for complex forged parts or basic shapes that only a few forging companies globally can provide. AMFG has the capabilities and experience to manufacture and deliver them.

- Shafts up to 70 feet long and 12 inches in diameter for shipbuilding or oil and gas exploration.
- Seamless rolled rings with outside diameters up to 50 feet for unique applications where strength is a critical factor.
- AMFG can provide rough or finish machined parts for custom shapes with CNC lathes, 3-axis and 5-axis mills, and semi-closed dies to control metal grain flow.
- Large, oversized forgings exceed the capacity of a wooden shipping crate by size and/or weight and may exceed the size of a standard shipping container even when loaded on an angular steel rack. Complex forged shapes include conical, spheroid, and other profiles for specialized end use, including fluid ends or drill heads for heavy industry.



### Save Time And Money On Your Next Project

Save time and money with All Metals & Forge Group. All orders are rough machined to 250 RMS or finish machined to 125 RMS at no additional charge.

We have the equipment and experience to manufacture large and complex forged parts with unmatched quality and precision.





Every part is rough machined to 250 RMS and receives ultrasonic testing. Our reputation and values are reflected in every part we produce for our customers.

**SUPERIOR QUALITY.  
UNMATCHED SERVICE.  
FAST DELIVERY.**

All Metals & Forge Group is your source for open die forgings, seamless and contoured rolled rings and complex forged parts. Contact us today for a fast quote on your next project. One of our Forging Specialists is ready to help.



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