


BENDING AND ROLLING STEEL

Company	Products Offered	Product Descriptions
A-1 Roll Co. www.a1roll.com 586.786.6677	Structural Steel Bending and Rolling	Specializing in putting radii in large and small sections with little tolerance and minimal distortion.
	Tube and HSS Bending	Tube and pipe bending from tight bends to large sweeps. Mild steel, stainless steel, and aluminum bent with multiple radii and multiple bends.
	Plate Rolling	Cylinders and cones rolled to your specifications.
	Aluminum Extrusion Forming	Many patented extrusions bent for fabric ceiling and curtain wall displays and structures for exhibits.
Advanced Fabricating Machinery www.advancedfab.com 603.642.4906	Stierli Bending and Cambering Machines	Quality and reliability for over 60 years. Features include easy controls and no top slot for performance and reliability. Special tooling includes cutting and shearing, step forming, edge bending, and cambering.
	Ineco Tube Benders	Electric rotary draw benders used in shop applications. Excellent for handrail applications and much more. Simple numeric controls and quality components are used throughout.
	Comac Section Benders	Section benders in all sizes for over 25 years. From simple machines to large applications with double initial pinch, there is a solution to your roll bending application.
	Transfluid Tube Benders and End-Formers	From simple pipe benders to fully automated CNC machines for production, Transfluid's German engineering has a solution for your tube bending and end-forming needs.
 Albina Pipe Bending Co., Inc. www.albinapipebending.com 866.252.4628	Pipe Bending, Forming, and Fabrication	Ability to bend architecturally exposed material ranging from 1/8" to 26" O.D. Processes include rotary draw, roll, and increment bending (hot/cold).
	Tube Bending, Forming, and Fabrication	Ability to bend architecturally exposed material from 1/2" up to 20" tubing (easy-way, hard-way, compound, or off-axis).
	Structural Steel Bending, Forming, and Fabrication	Ability to bend architecturally exposed material including angle, flat bar, square bar, wide-flange (I-beam), channel, plate, and split tee, etc. (easy way, hard way, or off axis).
	Spiral Bending	Architectural-exposure quality spiraling of tube steel, channel, plate, and pipe to tight radii and steep pitches. Capacities are always changing.
Bendco www.bendco.com 713.473.1557	Structural Profile Bending and Pipe Bending	Tools for meeting complex and innovative architectural applications. Before constructing your next stadium, ballpark, airport, hotel, etc., contact Bendco for cold or induction bending.
 BendTec, Inc. www.bendtec.com 218.722.0205	Induction Bending	Induction bending of structural steel and pipe sizes ranging from 2" to 66" in diameter.
	Fabrication, Engineering, and Painting and Coating	BendTec is an AISC Certified fabricator for conventional steel building structures and complex steel building structures, simple steel bridges, and major steel bridges with endorsements for sophisticated paint and fracture critical. Fabrication of structural steel and pipe services including welding, machining, heat treating, quality control, painting and coating, and engineering services.
Bertsch www.bertschrolls.com 800.338.5471	Plate Bending Rolls	Rugged, reliable, heavy-duty plate rolls accurately form metal from gauge through 14" thick. Machine lengths from 3' to 40'. Complete lines of initial pinch, double pinch, and four-roll designs.
	Angle Rolls	Unique design offers double-pinch for minimal flats, ease of operator control, and uniform rolling. Vertical or horizontal working position. Hydraulic drive. Models to 50 horsepower; 24" die diameter.
Cal Pipe www.webendpipe.com 800.225.7473	Bending	Commercial and job binding for heavy industrial, architectural construction, OEM, refinery, and chemical industries. Bends pipe, tubing, rectangular tubing, square tubing, angles, beams, channels, plate, spirals, stringers, and coils.
 Chicago Metal Rolled Products www.cmrp.com 800.798.4504	Roll-Curving Structural Steel and Plate	Every size of angle, bar, channel, and tee, as well as beam up to W44x285 the hard way (x-x axis) on the world's largest beam roller. Plate rolling to 1-3/4" x 11-1/2'.
	HSS Bending	Tube and pipe up to 20" O.D., from tight bends (2 x the O.D. of the pipe) to large sweeps. Square tubing up to 16". Rectangular tubing up to 20" x 12". Low-deformation, thin-wall bending to keep members light in weight-sensitive applications.
	Special Rolling	Single-radius bending in one plane. Rolling off-axis and multi-axis bends; multi-radius bends; true, helical coils; and plumb, circular, stair stringers. Hard way, easy way and every way in between! TM
	Roll-Curving of Formed Shapes and Extrusions	Strut and other formed channels, formed angles, hat sections, etc. Aluminum extrusions to create arches and bows on curtain-wall and store-front systems. Two- to three-day service. Ninety-six percent on-time delivery for all products listed above.
Clayton Industries www.claytonind.com 205.715.2000	Rolling, Fabrication, and Machining	Supplies a range of industries with a variety of services. Large equipment capacities allow Clayton to roll beams as large as 44", form plates on a 1,000-ton, 40' press brake, and roll plate as thick as 6" x 14'. Full-line machine shop, with large CNC lathes and mills.

products

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 Comeq, Inc. www.comeq.com 410.933.8500	Angle Bending Rolls	Double-pinch type angle bending rolls. Seven models with two-directional hydraulic guide rolls with capacities to 5" x 5" x 5/8", and 15 models with multi-directional hydraulic guide rolls with capacities to 10" x 10" x 1".
	Plate Bending Rolls	Three-roll and four-roll double-pinch type plate bending rolls. Fully hydraulic with capacities from 16 gauge to 4" thickness and lengths from 2' to 30'. With or without CNC controls.
	Pipe, Tube, and Section Bending Rolls	Angle bending rolls with special rolls and equipment. For rolling angle leg-in and leg-out; stems leg-in, leg-out, and leg-down; flat bars; square bar; round bar; pipe; tube and channels.
	Beam Benders	Fully hydraulic models with section modulus capacity up to 1,000 cubic inches. Capacities to 44" beam and channel, 14" pipe, 16" round bar, 15" square bar, and 24" flat bar.
E.G. Heller's Son, Inc. www.hellerson.com 800.233.0929	Plate Bending Machines	Features the four-roll system: material is captured between the two central rolls, which eliminates slipping during the rolling cycle. The net result is faster rolling and less handling. Ideal for rolling cones.
	Section Benders	Rolls have a hydraulic planetary drive motor attached to their shafts, allowing for maximum torque. Eliminates the chain drive system and reduction gears, greatly reducing maintenance costs. Can be operated either vertically or horizontally.
	Plate Shears	Hydraulic swing beam shears come equipped with FOPBG; shadow light; squaring arm with flip stops; front sheet supports with flip stops; mar-free hold down pads; ball transfers on the table for easy flow of the material into the shear; and interlocking safety guards in front of blades.
	Press Brakes	Conventional down-acting double cylinder rams with internal motorized depth stops, FOPBG, front sheet supports, and tooling as standard features. The die has multiple openings providing maximum flexibility at affordable prices.
Faccin USA, Inc. www.faccin.com 813.664.8884	Plate and Profile Bending Machines	Two-, three-, and four-roll bending machines with thickness capacities from less than 1 mm to over 6" and with lengths exceeding 60'.
	Dished Ends Lines	Rotary shears, dishing presses, and auto manipulators for heads dishing up to 33' diameter and 3" thickness. Auto flangers with capacities from 0.4" to over 1.6".

product case study

Chicago Metal Rolled Products—Rock 'n' Roll McDonald's

CHICAGO METAL ROLLED PRODUCTS CURVED LARGE RECTANGULAR TUBING TO FORM THE PARABOLIC ARCHES FOR THE NEW ROCK 'N' ROLL MCDONALD'S IN DOWNTOWN CHICAGO.

The design has two 60'-tall arches that span a large part of the site and help support the roof of the two-story restaurant. Each large arc is comprised of two 20 x 12 tubes covered by plate on all four sides. The arches are 20" wide and vary in thickness from 36" at the base to 24" at the top.

Two smaller arches made of 14 x 4 x 1/2 tube support the roof above a two-lane drive-through at the south end of the property.

To meet the project's tight schedule, AISC member Chicago Metal Rolled Products completed all the roll-curving within three days from when the customer supplied the material. The metal bending company matched the customer-supplied templates, putting multiple radii into 50'-long tube to minimize costly weld splices and to reduce the time required for fabrication and erection.

Chicago Metal Rolled Products specializes in curving structural steel, sheet, and plate for the construction industry and operates plants in Chicago, Kansas City, and North Carolina.

—By *George Wendt, President, Chicago Metal Rolled Products*





Chicago Metal Rolled Products used multiple radii for 50'-long tubes to minimize weld splicing and reduce fabrication and erection time.

Photos: Chicago Metal Rolled Products.

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 Greiner Industries, Inc. www.greinerindustries.com 717.653.8111	Structural Shape Rolling and Beam Splitting	Roll I-beams up to 40" the easy way and 24" the hard way. Tubing up to 26" by 16" or 20" square and pipe up to 20" diameter. Precision-cut I-beams up to 36" into tees.
	AISC Certified Structural Steel Fabrication	AISC Certified for major steel bridges and complex steel buildings with fracture-critical and sophisticated coatings endorsements. Specializing in the fabrication of large trusses, plate girders, and heavy structural steel columns.
	Machining	Large CNC horizontal boring mill with 12' x 30' machining envelope. CNC gantry-type machining center with 10' x 10' bed. Specializing in heavy base plates and large splice plates.
 Hodgson Custom Rolling, Inc. www.hodgsoncustomrolling.com 800.263.2547	Spiral Stringers	Expertise to form and fabricate customized spiral stringers as per customers' specifications for commercial and industrial applications.
	Plate Rolling	Thick wall pipe, cylinders, and rings rolled to customers' specifications.
	Plate Forming	Cones, knuckles, and multiple variations of heavy plate shapes.
	Bending	Pipe, tube, channel, beams, bars, steel plate, etc. to customers' specifications.
Iwatani Intl. Corp. of America www.iwatani.com 201.585.2442	Kurimoto Plate Bending Machine	A three-roll machine that uses a movable top roll to perform almost 100% complete end bending on the leading and trailing edge. The top roll automatically moves vertically and horizontally to position itself throughout the bending process—the operator just feeds the plate into the machine. Crowning of the top roll, along with backup rolls for the bottom rollers, produces circularity.
 Kottler Metal Products, Inc. www.kottlermetal.com 800.678.0808	Structural Steel Bending	Capacity to form up to 40" channel/I-beam, both easy way and hard way; 20" tube and pipe, with minimal distortion, to the highest architectural standards.
	Pipe Bending	Capacities include mandrel bending of pipe and tube up to 12" and roll bending of pipe and tube up to 20". Round, square, and rectangular with minimal distortion.
	Plate Bending	Capacities with ability to bend up to 1.00" thick in cylinders and conicals.
	Rotoform	Rotoform capacity with ability to bend up to 12" round pipe and tube as small as three times the diameter and with multiple radii.
 Kubes Steel, Inc. www.kubesteel.com 877.327.8357	Structural and Section Rolling	Beams easy way to 40", hard way to 27". HSS to 16" x 16". Channel to 18", both ways. Angle to 8" x 8" x 1-1/4" both ways. Tee to 18", all three ways.
	Plate Rolling and Forming	Plate rolling to 10' width, forming to 14' width. Pyramids, cones, transitions, ellipses, and special sections for section rolling.
	Pipe Rolling and Forming	To 20" diameter. Two-axis, three-axis, helical, and coils.
	Beam Cambering	Roll cambering and straightening to 36" section depth.
Mark IV Metal Products, Inc. www.markivmetal.com 310.217.9700	Tube Bending Service	Mandrel tube bending from 1/2" O.D. to 6" O.D. Round tubing, square tubing, rectangular tubing, and oval tubing. All types of steel, stainless steel, aluminum, chrome molly, etc. Hundreds of tooling die sets in house.
	Welding	Eight welding stations that can weld carbon steel and stainless steel. Mark IV manufactures its own weld fixtures at no cost to customers.
	Complete Manufacturing	A one-stop shop for all tubing product needs. Along with bending and welding, Mark IV also offers drilling, cutting, stamping, threading, notching, swaging, powder coating, laser cutting, plasma cutting, and more.
 Marks Metal Technology, Inc. www.marksmetal.com 800.526.1031	Diamond Curve Technology	Diamond curve technology for hard way beams minimizes distortion and reduces the need for tails. Reverse curves without tangents are easily accomplished.
	Circular Stairs, Stringers, and Components	The experience and geometrical skills to make your stairs right the first time. Components: stringers, handrails, tread, and landings. Complete stairs: tubular steel, structural channel, or plate.
	Plate Rolling and Custom Profile Shaping	Rolls and forms plate and custom profile to exacting requirements of roundness and dimensional accuracy. Tees, beams, angle, pipe, bar, channel, cylinders, cones, cambering, and more.
	Structural Fabrication	Skilled in stainless, aluminum, and mild steel fabrication to AWS, ASME, and AISC standards.
 Max Weiss, Co., Inc. www.maxweiss.com 888.649.3477	Structural Steel Bending	Unique processes allow Max Weiss to bend a wide variety of structural steel sections to tight radii and create custom, irregular shapes with little marking or distortion. High-quality work will save you hours of fit-up time.
	Custom Product Manufacturing and Fabricating	Can meet your needs for OEM repair parts; brackets; eye, U, J, and anchor bolts; tie rods; weldments; and many other custom parts.
	Specialized Processes	Services include trimming, coping, welding, shearing, drilling, saw cutting, straightening, beam cutting, punching, fabricating, machining, tapping, and threading.
	Hot Bending and Forging	Change the shape of steel bar and plate with open die forging process and hydraulic presses. Offers unique custom and CNC bending capabilities.
N.J. McCutchen, Inc. www.njminc.com 209.466.9704	Structural Section Bending	Experienced staff and attention to detail allow N.J. McCutchen to meet the section rolling needs of its clients. Bend up to 156 cu. in. section modulus capacity.

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 Oakley Steel Products Co. www.oakleysteel.com 888.OAKLEY2	Heavy Plates	Rolled cylinders, cones, and more from sheet metal to 6" thick and 12' long. Satisfies almost any forming need, from small structural sections to some of the largest sections produced.
	Spiral Stair Stringers	Stainless, aluminum, or various alloys formed to exact specifications from channels, plates, beams, or tubes. Stair pans also available.
	Curved Roof Trusses	Rolled beams and angles used to create curved roof trusses in convention centers, car dealerships, airports, and more. Beams the easy way up to 36" and the hardway up to 27".
	Earthmoving Equipment Blades	Formed plates that are 3/4" thick and 16' long. Material is certified to A656 Gr. 80 so parts will last longer. Oakley guarantees the quality and workmanship of all products produced.
Shaped Steel, Inc. www.shapedsteel.com 866.781.5717	Structural Steel Rolling	Rolls everything from small structural sections to some of the largest sections produced. Rolling products for stadiums, schools, churches, airports, OEMs, and one-time walk-ins. No job too large or small. Plate rolling up to 12' wide; structural tubing to 20" square; W24" hard way; W36" easy way, spiral stair stringers, and beam splitting.
Tulsa Tube Bending Co., Inc. www.ttb.com 888.882.3637	Cold-Rolled Pipe and Tube Bends	Cold bending of square, rectangular, and round pipe and tube up to 16" outside diameter.
	Heat Induction Bends	Heat induction bends of round, square, and rectangular up to 28" outside diameter, up to 3" wall thickness between 1° to 180°.
	Helical and Spiral Coils	Helical and spiral coils up to 8" international pipe size, produced to ASME code.
 WhiteFab, Inc. www.whitefab.com 205.791.2011	Rolling and Bending Structural Sections	Rolling or bending structural sections through 27" beams the hard way. Patented process reduces distortion on thinner, tighter radius sections.
	Rolling or Bending Square and Rectangular Tubes	Rolling or bending square and rectangular tubes up to 20 x 12, hard way or easy way. Patented process reduces distortion on thinner wall, tighter radii sections.
	Plate Shearing, Bending, and Rolling	Cut to length line; 1,000 ton brake, 1/2 x 20' shear. Can form many complex bends.

product case study

Max Weiss Company—Dolphin Adventure, Indianapolis Zoo

MAX WEISS COMPANY WAS PART OF A UNIQUE PROJECT IN 2005 INVOLVING DOLPHINS, THE CITY OF INDIANAPOLIS, AND MAX WEISS COMPANY'S SPECIALTY: FORMED STEEL. The project? The "Dolphin Adventure" at the Indianapolis Zoo. The exhibit's 30' acrylic dome allows visitors to be immersed in the world of dolphins, without getting soaked.

Max Weiss Company, an AISC member based in Milwaukee, built and helped design several components of the project, including a ring 30' in diameter that supports the acrylic roof of the "Dolphin Dome." Once the plans were drawn up, work began on the complex cross-section formed of 3/4"-thick steel into three separate arcs. The arc-sections were then individually sealed and tested to ensure that all welds were completely watertight. Finally, the sections were welded on site to complete the ring that supports the top of the dome.

Ray Weiss, President of Max Weiss Company, said the project was "one of the most unique projects" that the company had formed components for. The completed structure, sitting 27' beneath the water, is the largest underwater dome in a public exhibit in the world and the first of its kind in the nation.

Max Weiss Company's reputation for quality and precision has earned them the respect of innovative contractors and architects throughout the Midwest.

—By Julie Frey, technical writer, Max Weiss Company



Max Weiss Company built the Dolphin Dome's 30'-diameter HSS ring, which is sealed with water-tight welds.

Photos: Max Weiss Company.