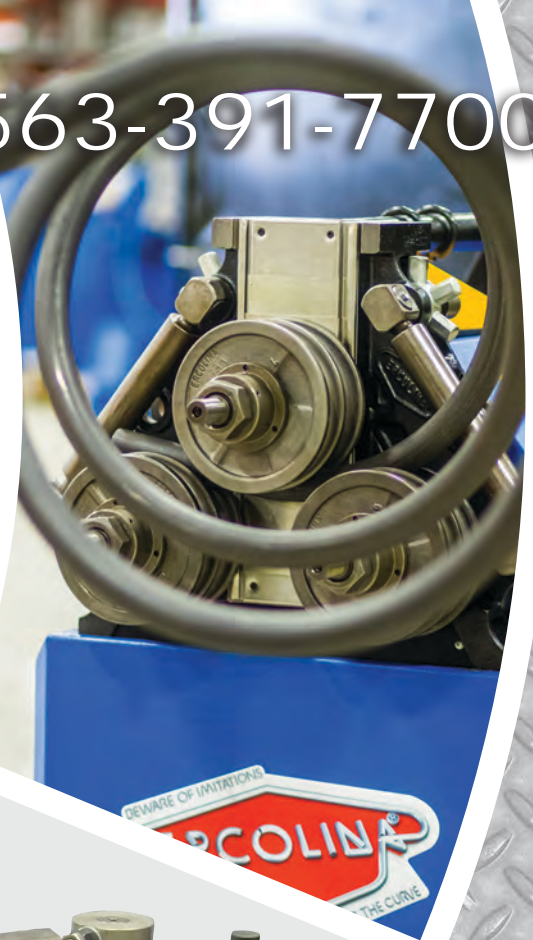
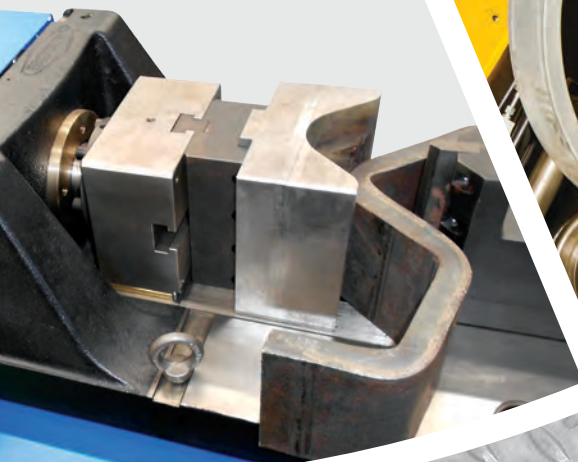


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**PROFESSIONAL  
SERIES**



**TUBE, PIPE AND PROFILE  
BENDING &  
METALWORKING MACHINERY**





*Manufacturer of*  
**Tube, Pipe and Profile**  
*Bending and Metalworking Machinery*

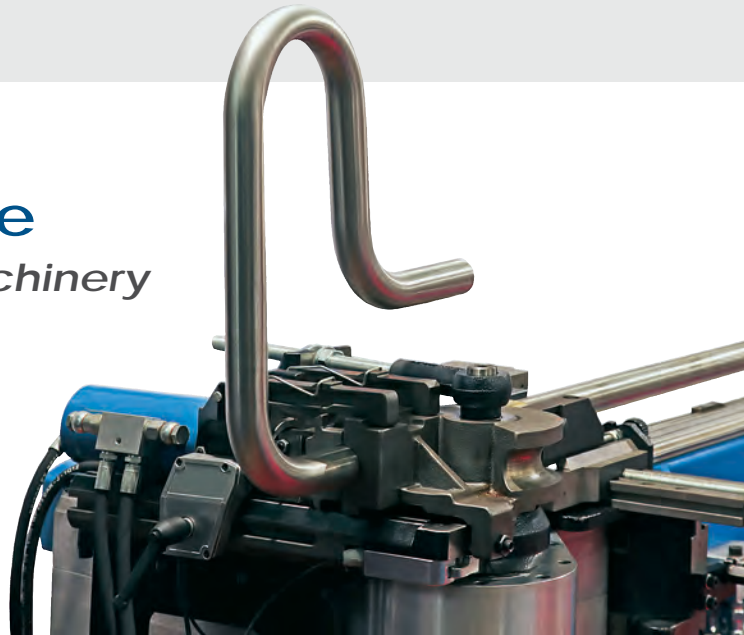
**W**elcome to CML USA, Inc., North American supplier of Ercolina® tube, pipe and profile bending machinery.

We are pleased to offer our customers the highest quality tube and pipe benders and related metal fabrication equipment available today. Ercolina's affordable tubing benders and fabricating machinery are designed to reliably and accurately produce your applications – increasing profit, improving product quality and finish.

Our product line is always expanding to include more manual, automatic and CNC pipe and tube bending machines, mandrel benders, NC swaging equipment and metalforming machinery. Ercolina's experienced sales, service and support staff is always ready to offer positive application solutions for today's fabricator.

**Company Profile:**

CML USA, Inc. consistently leads the industry providing quality metal fabricating equipment to commercial and professional metal fabricators in the United States, Canada, Mexico and South America. Our product line includes rotary draw tube and pipe bending machine equipment, NC and CNC mandrel benders, angle rolls, section benders and tube and pipe notchers, ornamental metalworking machinery and much more. Ercolina is recognized worldwide as one of the largest and most respected manufacturers of tube and pipe benders and metal fabricating machines.



We invite you to tour our website or call our trained and knowledgeable product support representatives today at (563) 391-7700 to discuss your next bending application, speak with your regional Ercolina representative or arrange a demonstration of Ercolina products.



[ercolina-usa.com](http://ercolina-usa.com)



# ROTARY DRAW BENDERS

ROTARY DRAW BENDERS





# SB48 Super Bender®

## Tube & Pipe Bending Machine

### Additional Savings when Purchasing Tooling Kit with Machine

#### SB48 with Pipe Kit Part# SB48P

Pipe Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
½"	1.8	.109	153R046P0500	155P0500
¾"	2.2	.113	153R056P0750	155P0750
1"	2.6	.133	153R067P1000	155P1000
1¼"	3.5	.140	153R090P1250	155P1250
1½"	3.9	.145	153R100P1500	155P1500

Pipe Kit only Part# PIPEKIT2

#### SB48 with "Small Radius" Tube Kit Part# SB48TSR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.2	.065	153R056T0875	154T0875
1"	2.6	.065	153R067T1000	154T1000
1¼"	3.2	.083	153R082T1250	154T1250
1½"	3.9	.083	153R100T1500	154T1500

"Small Radius" Tube Kit only Part# TUBEKIT2SR

#### SB48 with "Large Radius" Tube Kit Part# SB48T

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.6	.035	153R067T0875	154T0875
1"	3.2	.035	153R082T1000	154T1000
1¼"	4.4	.035	153R112T1250	154T1250
1½"	5.9	.049	153R150T1500	154T1500
1¾"	6.7	.065	153R170T1750	154T1750

"Large Radius" Tube Kit only Part# TUBEKIT2



Part# SB48 machine only

## Store Multiple Bend Angles and Programs

### FEATURES

- Ideal for producing consistent quality bends in pipe, tube, squares, solids and other profiles
- Touch screen programming of bend angle with system diagnostics in multiple languages
- Touch screen indicates digital display of bend angle, springback and bend speed for each angle within the program
- Bend any angle to 180° with independent material springback compensation for each bend
- Quick-change tooling system with multiple radii available
- Patented swing away counter bend die vise offers easy loading and unloading of work piece, monitored electronically for greater accuracy
- Automatically stops at desired bend angle to end cycle
- Use control panel or foot pedal to initiate bend and return functions
- Counterbending die position monitored electronically for accuracy and repeatability



## SB48 Capacities & Specifications

Tube (Min.) (Max.)	1/4" 2"
Pipe (Max.)	1 1/2" Sch. 40
Centerline Radius (Min.) (Max.)	2 x Ø 8 7/8"
Degree of Bend	0-210°
Bending Speed	Variable
Programming	Touch screen Program storage Multiple bends per program
Material Positioning Table	Available (see page 30)
Voltage	110V Single Phase
Length, Width, Height	22 1/2" x 16 1/4" x 39 1/2"
Weight	300 lbs.

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

### POPULAR ACCESSORIES



Tube & Pipe Tooling Kits



Spray Lubricant



Two Axis Positioner



Easy Part Layout Software



Square Tooling

Tooling Kits [Pages 15-16](#)

Tooling and  
Accessories [Pages 17-31](#)

Model Comparison  
Guide [Page 36](#)

- No hydraulic components
- Accepts Ercolina's A40-P two axis positioning table for multiple and sequential bends
- Classic Ercolina Super Bender design reduces floor space requirement and stores easily to save shop floor space
- Individual tooling available on pages 15-29

**Product  
Demonstrations  
Available on Website**

**NEED ADDITIONAL HELP?  
CONTACT ERCOLINA:**

**563.391.7700**

[info@ercolina-usa.com](mailto:info@ercolina-usa.com)





## TB60 Top Bender®

### Tube & Pipe Bending Machine

**Additional Savings when Purchasing  
Tooling Kit with Machine**

#### TB60 with Pipe Kit • Part# TB60P

Pipe Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
½"	1.8	.109	153R046P0500	155P0500
¾"	2.2	.113	153R056P0750	155P0750
1"	2.6	.133	153R067P1000	155P1000
1¼"	3.5	.140	153R090P1250	155P1250
1½"	3.9	.145	153R100P1500	155P1500
2"	5.9	.109	153R150P2000	155P2000

**Pipe Kit only** Part# PIPEKIT1

#### TB60 with "Small Radius" Tube Kit Part# TB60TSR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.2	.065	153R056T0875	154T0875
1"	2.6	.065	153R067T1000	154T1000
1¼"	3.2	.083	153R082T1250	154T1250
1½"	3.9	.083	153R100T1500	154T1500
2"	5.9	.095	153R150T2000	154T2000

**"Small Radius" Tube Kit only** Part# TUBEKIT1SR

#### TB60 with "Large Radius" Tube Kit Part# TB60T

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.6	.035	153R067T0875	154T0875
1"	3.2	.035	153R082T1000	154T1000
1¼"	4.4	.035	153R112T1250	154T1250
1½"	5.9	.049	153R150T1500	154T1500
1¾"	6.7	.065	153R170T1750	154T1750
2"	7.5	.065	153R190T2000	154T2000

**"Large Radius" Tube Kit only** Part# TUBEKIT1



Part# TB60  
machine only

## Ercolina's Most Popular Workhorse

### FEATURES

- Ideal for producing consistent quality bends in pipe, tube, squares, solids and other profiles
- Touch screen programming of bend angle with system diagnostics in multiple languages
- Touch screen indicates digital display of bend angle, springback and bend speed for each angle within the program
- Bend any angle to 180° with independent material springback compensation for each bend
- Quick-change tooling system with multiple radii available
- Patented swing away counter bend die vise offers easy loading and unloading of work piece, monitored electronically for greater accuracy
- Automatically stops at desired bend angle to end cycle
- Use control panel or foot pedal to initiate bend and return functions
- Counterbending die position monitored electronically for accuracy and repeatability



# TB60 Capacities & Specifications

Tube (Min.)	1/4"
(Max.)	2 1/2"
Pipe (Max.)	2" Sch. 40
Centerline Radius (Min.)	2 x Ø
(Max.)	15"
Degree of Bend	0-210°
Bending Speed	Variable
Programming	Touch screen Program storage Multiple bends per program
Material Positioning Table	Available (see page 30)
Voltage	220V or 480V 3ph (220V Single Phase available)
Length, Width, Height	27" x 15" x 36"
Weight	430 lbs.

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

## POPULAR ACCESSORIES



Tube & Pipe Tooling Kits



Spray Lubricant



Two Axis Positioner



Easy Part Layout Software



Square Tooling

Tooling Kits [Pages 15-16](#)

Tooling and Accessories [Pages 17-31](#)

Model Comparison Guide [Page 36](#)

- No hydraulic components
- Accepts Ercolina’s A40-P two axis positioning table for multiple and sequential bends
- Classic Ercolina Top Bender design reduces floor space requirement and stores easily to save shop floor space
- Individual tooling available on pages 15-29

Product Demonstrations Available on Website

NEED ADDITIONAL HELP?  
CONTACT ERCOLINA:

563.391.7700

info@ercolina-usa.com





# TB80 Top Bender®

## Tube & Pipe Bending Machine

### Additional Savings when Purchasing Tooling Kit with Machine

**TB80-4 (480V 3ph) with Pipe Kit • Part# TB80-4P**  
**TB80 (220V 3ph) with Pipe Kit • Part# TB80P**

Pipe Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
1"	2.6	.133	153R067P1000	155P1000
1¼"	3.5	.140	153R090P1250	155P1250
1½"	3.9	.145	153R100P1500	155P1500
2"	5.9	.109	153R150P2000	155P2000
2½"	10.2	.203	157R260P2500-80	155P2500

**Pipe Kit only** Part# PIPEKIT6

**TB80-4 (480V 3ph) with "Large Radius" Tube Kit**  
**Part# TB80-4TLR**

**TB80 (220V 3ph) with "Large Radius" Tube Kit**  
**Part# TB80TLR**

Tube Size	CLR	Min. Wall	Center Former Part#	Counterbend Die Part#
1"	3.2	.035	153R082T1000	154T1000
1¼"	4.4	.035	153R112T1250	154T1250
1½"	5.9	.049	153R150T1500	154T1500
1¾"	6.7	.065	153R170T1750	154T1750
2"	7.5	.065	153R190T2000	154T2000

**"Large Radius" Tube Kit only** Part# TUBEKIT5

Part# TB80-4  
machine only

## Auto Load Sensing Improves Torque

### FEATURES

- Ideal for producing consistent quality bends in large pipe, tube, squares, solids and other profiles with auto tune
- Touch screen control icon menu for easy access to auto and manual operating modes, programming (inch or metric), system diagnostics and multiple language capability
- Quick-change tooling system with multiple radii available
- Digital display of bend angle and bend speed
- Bend any angle to 180° with independent material springback and speed compensation for each bend
- Foot pedal control of bend and return functions
- Swing away counterbending die vise for easy material handling
- Counterbending die vise position monitored electronically for accuracy and repeatability
- Heavy-duty steel gear case, right or left bend capable
- No hydraulic components for quiet operation
- Mandrel ready with optional accessory
- Two axis positioning table for multiple and sequential bends available on special request
- On screen machine diagnostics
- Individual tooling available on pages 15-29



# TB80 Capacities & Specifications

Tube (Min.)	1/4"
(Max.)	3" (.120 wall)
Pipe (Max.)	2½" Sch. 40 Grade B A53
Centerline Radius (Min.)	2 x Ø (3" CLR with standard tooling)
(Max.)	16.5"
Degree of Bend	0-210°
Bending Speed	Variable 1.5 to 3 RPM
Programming	Touch screen - 7" Unlimited storage with USB (30) bends per program
Material Positioning Table	Consult factory
Voltage	480V 3ph standard (220V 3ph available)
Length, Width, Height	20" x 34" x 47"
Weight	980 lbs.

All capacities based on A53 grade B 60,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

## POPULAR ACCESSORIES



Tube & Pipe Tooling Kits



Spray Lubricant



Easy Part Layout Software



Large Square Tooling

Tooling Kits [Pages 15-16](#)

Tooling and  
Accessories [Pages 17-31](#)

Model Comparison  
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### ◀ Ercolina Bending Application

**Product  
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## TB100 Top Bender®

### Tube & Pipe Bending Machine

#### Additional Savings when Purchasing Tooling Kit with Machine

##### TB100 with Pipe Kit • Part# TB100P

Pipe Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
1¼"	3.5	.140	153R090P1250	155P1250
1½"	3.9	.145	153R100P1500	155P1500
2"	5.9	.109	153R150P2000	155P2000
2½"	11.8	.203	157R300P2500-80	155P2500
3"	11.8	.216	157R300P3000-80	155P3000

Pipe Kit only Part# PIPEKIT4

##### TB100 with "Small Radius" Tube Kit Part# TB100TSR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.2	.065	153R056T0875	154T0875
1"	2.6	.065	153R067T1000	154T1000
1¼"	3.2	.083	153R082T1250	154T1250
1½"	3.9	.083	153R100T1500	154T1500
2"	5.9	.095	153R150T2000	154T2000

"Small Radius" Tube Kit only Part# TUBEKIT1SR

##### TB100 with "Large Radius" Tube Kit Part# TB100TLR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.6	.035	153R067T0875	154T0875
1"	3.2	.035	153R082T1000	154T1000
1¼"	4.4	.035	153R112T1250	154T1250
1½"	5.9	.049	153R150T1500	154T1500
1¾"	6.7	.065	153R170T1750	154T1750
2"	7.5	.065	153R190T2000	154T2000

"Large Radius" Tube Kit only Part# TUBEKIT1



Part# TB100  
machine only

## Accurately Bend Heavy Profiles

### FEATURES

- Ideal for producing consistent quality bends in large pipe, tube, squares, solids and other profiles
- Touch screen control offers easy access to auto and manual operating modes, programming (inch or metric), system diagnostics and multiple language capability
- Quick-change tooling system with multiple radii available
- Digital display of bend angle
- Bend any angle to 180° with independent material springback compensation for each bend
- Foot pedal control of bend and return functions
- Swing away counterbending die vise for easy material handling
- Counterbending die vise position monitored electronically for accuracy and repeatability
- Two axis positioning table for multiple and sequential bends available on special request
- Heavy-duty steel gear case
- No hydraulic components
- Individual tooling available on pages 15-29

## TB100 Capacities & Specifications

Tube (Min.)	1/4"
(Max.)	4"
Pipe (Max.)	3" Sch. 40
Centerline Radius (Min.)	2 x Ø
(Max.)	17"
Degree of Bend	0-210°
Bending Speed	Variable to 1.3 RPM
Programming	Touch screen Unlimited storage with USB (12) bends per program
Material Positioning Table	Consult factory
Voltage	220V or 480V 3ph
Length, Width, Height	20" x 34" x 47"
Weight	1,030 lbs.

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

### POPULAR ACCESSORIES



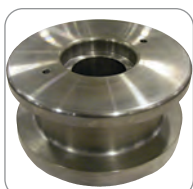
Tube & Pipe Tooling Kits



Spray Lubricant



Easy Part Layout Software



Roller Counterbending Die

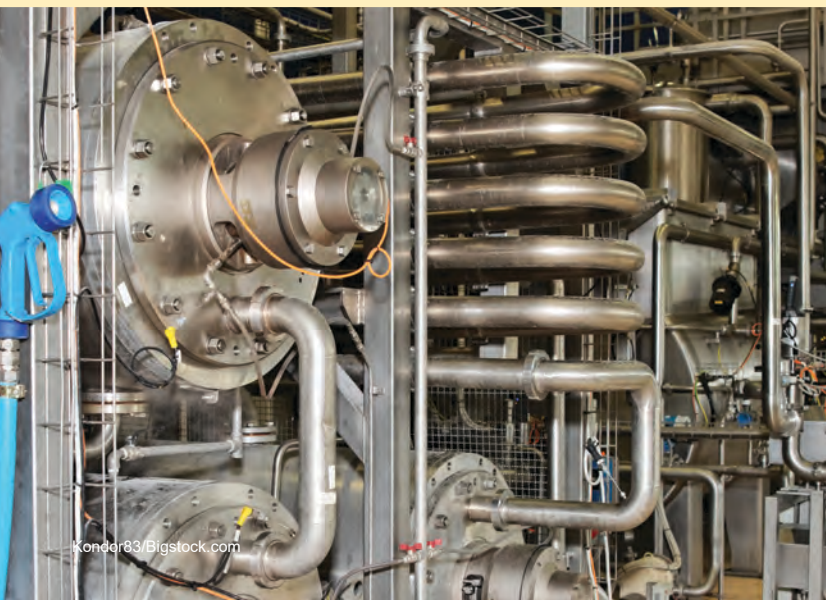


Large Square Tooling

Tooling Kits [Pages 15-16](#)

Tooling and  
Accessories [Pages 17-31](#)

Model Comparison  
Guide [Page 36](#)



#### ◀ Ercolina Bending Application

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## TB130 Top Bender®

### Tube & Pipe Bending Machine

#### Additional Savings when Purchasing Tooling Kit with Machine

##### TB130 with Pipe Kit • Part# TB130P

Pipe Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
1¼"	3.5	.140	153R090P1250	155P1250
1½"	3.9	.145	153R100P1500	155P1500
2"	5.9	.109	153R150P2000	155P2000
2½"	11.8	.203	157R300P2500-80	155P2500
3"	11.8	.216	157R300P3000-80	155P3000

Pipe Kit only Part# PIPEKIT4

##### TB130 with "Small Radius" Tube Kit Part# TB130TSR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.2	.065	153R056T0875	154T0875
1"	2.6	.065	153R067T1000	154T1000
1¼"	3.2	.083	153R082T1250	154T1250
1½"	3.9	.083	153R100T1500	154T1500
2"	5.9	.095	153R150T2000	154T2000

"Small Radius" Tube Kit only Part# TUBEKIT1SR

##### TB130 with "Large Radius" Tube Kit Part# TB130TLR

Tube Size	CLR	Min. Wall	Center Former Part #	Counterbend Die Part #
¾"	2.6	.035	153R067T0750	154T0750
7/8"	2.6	.035	153R067T0875	154T0875
1"	3.2	.035	153R082T1000	154T1000
1¼"	4.4	.035	153R112T1250	154T1250
1½"	5.9	.049	153R150T1500	154T1500
1¾"	6.7	.065	153R170T1750	154T1750
2"	7.5	.065	153R190T2000	154T2000

"Large Radius" Tube Kit only Part# TUBEKIT1



Part# TB130 machine only



## Reliable Repeatable Bends

### FEATURES

- Ideal for producing consistent quality bends in large pipe, tube, squares, solids and other profiles
- Touch screen control offers easy access to auto and manual operating modes, programming (inch or metric), system diagnostics and multiple language capability
- Quick-change tooling system with multiple radii available
- Digital display of bend angle
- Bend any angle to 180° with independent material springback compensation for each bend
- Foot pedal control of bend and return functions
- Swing away counterbending die vise for easy material handling
- Counterbending die vise position monitored electronically for accuracy and repeatability
- Two axis positioning table for multiple and sequential bends available on special request
- Heavy-duty steel gear case
- No hydraulic components
- Individual tooling available on pages 15-29

## TB130 Capacities & Specifications

Tube (Min.)	1/4"
(Max.)	5"
Pipe (Max.)	4" Sch. 40
Centerline Radius (Min.)	2 x Ø
(Max.)	27½"
Degree of Bend	0-210°
Bending Speed	Variable to .75 RPM
Programming	Touch screen Unlimited storage with USB (12) bends per program
Material Positioning Table	Consult factory
Voltage	220V or 480V 3ph
Length, Width, Height	34" x 34" x 47"
Weight	1,330 lbs.

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

### POPULAR ACCESSORIES



Tube & Pipe Tooling Kits



Spray Lubricant



Easy Part Layout Software



Roller Counterbending Die



Large Square Tooling

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## TB180 Top Bender®

### Tube & Pipe Bending Machine



Part# TB180  
machine only



Easy touch screen  
bend angle programming.

## Bending Power For Large Profiles!

### FEATURES

- Ideal for producing consistent quality bends in large pipe, tube, squares, solids and other profiles
- Touch screen control offers easy access to auto and manual operating modes, programming (inch or metric), system diagnostics and multiple language capability
- Quick-change tooling system with
- Digital display of bend angle
- Bend any angle to 180° with independent material springback compensation for each bend
- Hand-held control of bend, return and emergency stop functions
- Hydraulically operated counterbending die vise to control material springback
- Swing away counterbending die vise for easy material handling
- Counterbending die vise position monitored electronically for accuracy and repeatability
- Heavy-duty steel gear case
- Individual tooling available on pages 15-29

## TB180 Capacities & Specifications

Tube (Min.) (Max.)	1½" - 6.7" CLR 6" - .120 wall
Pipe (Min.) (Max.)	1" Sch. 40 - 6.7" CLR 6" Sch. 40
Centerline Radius (Min.) (Max. standard machine) (Max. machine w/case extension)	3 x Ø or 4.5" CLR 23½" 31½"
Degree of Bend	0-210°
Bending Speed	Variable to 1 RPM
Programming	Touch screen Unlimited storage with USB (12) bends per program
Material Positioning Table	Not available
Voltage	480V 3ph
Length, Width, Height	75" x 40" x 59"
Weight	6,000 lbs.

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.  
Consult supplier for material specifications.

### TOOLING

Pipe and Tube Tooling Available in 3D and 5D Centerline Radius  
Quoted on Request

**May Require Additional Mounting Component**

Tooling and Accessories Pages [17-29](#)

Model Comparison Guide [Page 36](#)

### POPULAR ACCESSORIES



Roller Counterbending Die



Spray Lubricant



Easy Part Layout Software



#### ◀ Ercolina Bending Application

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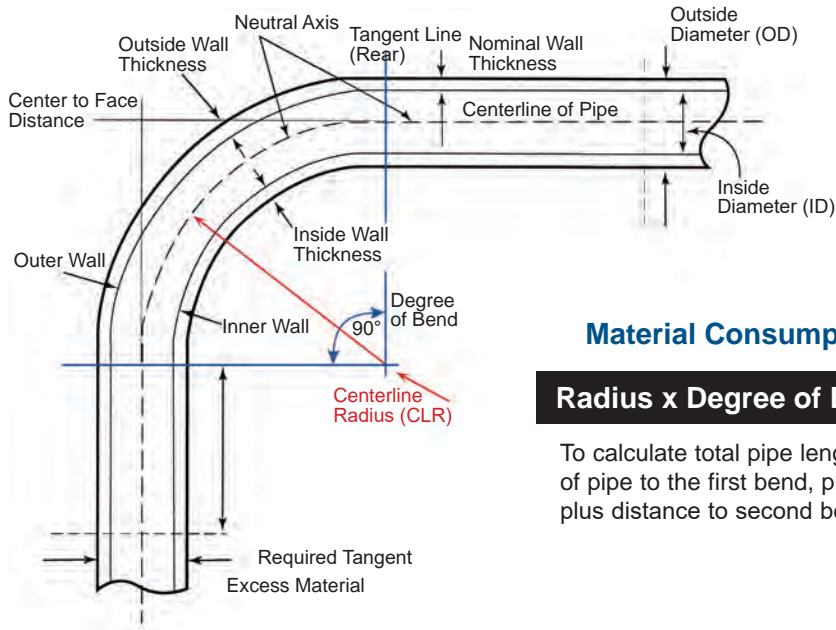
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## Bend Formula & Terminology



### Material Consumption for Bend Angle

$$\text{Radius} \times \text{Degree of Bend} \times .0175 = \text{Length}$$

To calculate total pipe length, add distance from end of pipe to the first bend, plus first bend arc length, plus distance to second bend.

## Rotary Draw Bend Reference Information

The following information should be used as a guideline only, exact material consumption may vary.

**Material Required for  
Rotary Draw Bends in Pipe**

Angle of Bend	Pipe Size and Centerline Radius					
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	1.8	2.2	2.6	3.5	3.9	5.9
Material Consumption Guideline						
15	.47	.58	.68	.92	1.0	1.5
30	.97	1.1	1.3	1.8	2.0	3.1
45	1.4	1.7	2.0	2.7	3.0	4.6
60	1.8	2.3	2.7	3.6	4.0	6.2
75	2.3	2.8	3.4	4.5	5.1	7.7
90	2.8	3.4	4.0	5.5	6.1	9.3
120	3.7	4.6	5.4	7.3	8.1	12.4
140	4.4	5.3	6.3	8.5	9.5	14.5
160	5.0	6.1	7.2	9.7	10.8	16.5
180	5.6	6.9	8.1	11.0	12.2	18.6

**Minimum Distance Between Bends  
for Standard Non-Mandrel Tooling**

Former Radius		Min. Distance Between Bends
Inches	Millimeters	
1.4	36	2.3
1.8	46	3.1
2.2	56	3.7
2.6	67	3.9
3.2	82	3.9
3.5	90	4.3
3.9	100	4.3
4.1	105	4.3
4.4	112	4.3
4.7	120	5.5
5.1	130	5.5
5.9	145	5.9
6.7	170	5.9
7.5	190	5.9
8.9	225	5.9
10.2	260	6.2
11.8	300	6.2

Consult factory for special tooling request.

# Save with Pipe Tooling Kits

(Additional Savings when Purchased with Machine)

Description	Material Size	Centerline Radius - Inches -	Min. Wall	Center Former Part#	Counterbend Die Part#	Available with Ercolina Machines
PIPEKIT1	½"	1.8	.109	153R046P0500	155P0500	TB60, 030 Mega Bender, TB80
	¾"	2.2	.113	153R056P0750	155P0750	
	1"	2.6	.133	153R067P1000	155P1000	
	1¼"	3.5	.140	153R090P1250	155P1250	
	1½"	3.9	.145	153R100P1500	155P1500	
	2"	5.9	.109	153R150P2000	155P2000	
PIPEKIT2	½"	1.8	.109	153R046P0500	155P0500	48Plus, SB48, HB60
	¾"	2.2	.113	153R056P0750	155P0750	
	1"	2.6	.133	153R067P1000	155P1000	
	1¼"	3.5	.140	153R090P1250	155P1250	
	1½"	3.9	.145	153R100P1500	155P1500	
PIPEKIT3	½"	1.8	.109	153R046P0500	155P0500	070 Medi Bender
	¾"	2.2	.113	153R056P0750	155P0750	
	1"	2.6	.133	153R067P1000	155P1000	
Handrail Pipe Kit HRPIPEKIT	1¼"	3.5	.140	153R090P1250	155P1250	48Plus, SB48, TB60, 030 Mega Bender, TB80
	1½"	3.9	.145	153R100P1500	155P1500	
PIPEKIT4	1¼"	3.5	.140	153R090P1250	155P1250	TB100, TB130
	1½"	3.9	.145	153R100P1500	155P1500	
	2"	5.9	.109	153R150P2000	155P2000	
	2½"	11.8	.203	157R300P2500-80	155P2500	
	3"	11.8	.216	157R300P3000-80	155P3000	
PIPEKIT6	1"	2.6	.133	153R067P1000	155P1000	TB80
	1¼"	3.5	.140	153R090P1250	155P1250	
	1½"	3.9	.145	153R100P1500	155P1500	
	2"	5.9	.109	153R150P2000	155P2000	
	2½"	10.2	.203	157R260P2500-80	155P2500	

Refer to machine specifications for individual capacities.

All tooling is manufactured for mild steel general tube and pipe dimensions. Tooling groove is slightly under-size designed to better form tube shape throughout bend.

Tooling can be modified to customer's required dimensions and or polished at additional cost to improve finish. Contact Ercolina customer service for additional information at (563) 391-7700.





# Save with Tube Tooling Kits

(Additional Savings when Purchased with Machine)

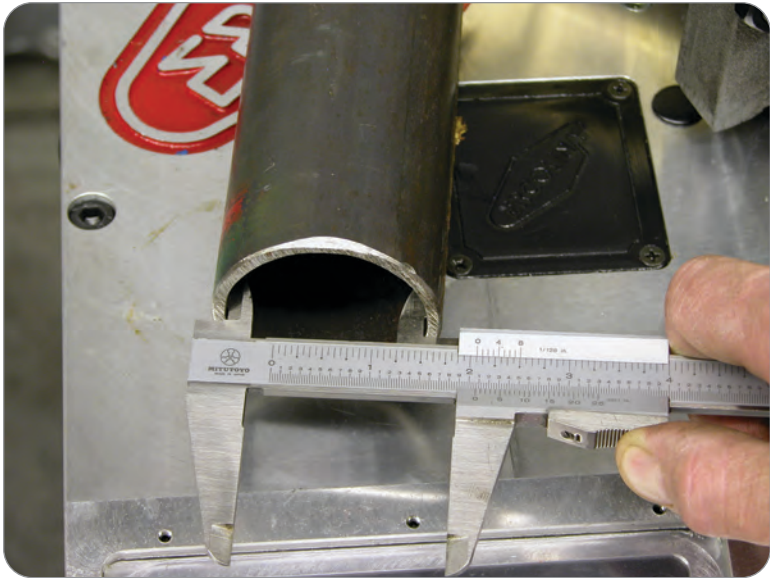
Description	Material Size	Centerline Radius - Inches -	Min. Wall	Center Former Part#	Counterbend Die Part#	Available with Ercolina Machines
Small Radius Tube Kit TUBEKIT1SR	3/4"	2.6	.035	153R067T0750	155T0750	TB60, 030 Mega Bender, TB80, TB100, TB130
	7/8"	2.2	.065	153R056T0875	154T0875	
	1"	2.6	.065	153R067T1000	154T1000	
	1 1/4"	3.2	.083	153R082T1250	154T1250	
	1 1/2"	3.9	.083	153R100T1500	154T1500	
	2"	5.9	.095	153R150T2000	154T2000	
Small Radius Tube Kit TUBEKIT2SR	3/4"	2.6	.035	153R067T0750	154T0750	48Plus, SB48, HB60
	7/8"	2.2	.065	153R056T0875	154T0875	
	1"	2.6	.065	153R067T1000	154T1000	
	1 1/4"	3.2	.083	153R082T1250	154T1250	
	1 1/2"	3.9	.083	153R100T1500	154T1500	
Large Radius Tube Kit TUBEKIT1	3/4"	2.6	.035	153R067T0750	154T0750	TB60, 030 Mega Bender, TB100, TB130
	7/8"	2.6	.035	153R067T0875	154T0875	
	1"	3.2	.035	153R082T1000	154T1000	
	1 1/4"	4.4	.035	153R112T1250	154T1250	
	1 1/2"	5.9	.049	153R150T1500	154T1500	
	1 3/4"	6.7	.065	153R170T1750	154T1750	
	2"	7.5	.065	153R190T2000	154T2000	
Large Radius Tube Kit TUBEKIT2	3/4"	2.6	.035	153R067T0750	154T0750	48Plus, SB48, HB60
	7/8"	2.6	.035	153R067T0875	154T0875	
	1"	3.2	.035	153R082T1000	154T1000	
	1 1/4"	4.4	.035	153R112T1250	154T1250	
	1 1/2"	5.9	.049	153R150T1500	154T1500	
	1 3/4"	6.7	.065	153R170T1750	154T1750	
TUBEKIT3	1/2"	1.4	.035	153R036T0500	154T0500	070 Medi Bender
	3/4"	2.6	.035	153R067T0750	154T0750	
	1"	3.2	.035	153R082T1000	154T1000	
Large Radius Tube Kit TUBEKIT5	1"	3.2	.035	153R082T1000	154T1000	TB80
	1 1/4"	4.4	.035	153R112T1250	154T1250	
	1 1/2"	5.9	.049	153R150T1500	154T1500	
	1 3/4"	6.7	.065	153R170T1750	154T1750	
	2"	7.5	.065	153R190T2000	154T2000	

Refer to machine specifications for individual capacities.

All tooling is manufactured for mild steel general tube and pipe dimensions. Tooling groove is slightly undersize designed to better form tube shape throughout bend.

Tooling can be modified to customer's required dimensions and or polished at additional cost to improve finish. Contact Ercolina customer service for additional information at (563) 391-7700.

Pipe Information



Pipe dimensions are based on I.D. of material  
(2" sch. 40 pipe measures 2.375" O.D.).

Steel & Polymer Pipe Counterbending Dies

STEEL

Pipe Size	Outside Diameter	Counterbend Die Part#
3/8"	.675	155AP0375
1/2"	.840	155AP0500
3/4"	1.050	155AP0750
1"	1.315	155AP1000
1 1/4"	1.660	155AP1250
1 1/2"	1.900	155AP1500
2"	2.375	155AP2000

Steel used for heavy wall or abrasive application.

Consult factory for  
tooling sizes not shown.

STEEL SUPPORT WITH  
REPLACEABLE POLYMER INSERT

Pipe Size	Outside Diameter	Counterbend Die Part#
1"	1.315	155SP1000
1 1/4"	1.660	155SP1250
1 1/2"	1.900	155SP1500
2"	2.375	155SP2000

Polymer recommended for materials with a  
polished finish such as stainless and aluminum.



REPLACEABLE POLYMER INSERTS

1"	1.315	155SP1000INS
1 1/4"	1.660	155SP1250INS
1 1/2"	1.900	155SP1500INS
2"	2.375	155SP2000INS





## Commercial Pipe and Wall Thickness

Nominal Pipe Size	Outside Diameter	Schedule 5	Schedule 10	Schedule 40	Schedule 80	Schedule 160	Schedule XXS
6.35mm 1/4"	13.7mm 0.540"	1.20 0.049	1.72 0.065	2.24 0.088	3.02 0.119		
9.52mm 3/8"	17.1mm 0.675"	1.20 0.049	1.72 0.065	2.31 0.091	3.20 0.126		
12.7mm 1/2"	21.3mm 0.840"	1.72 0.065	2.11 0.083	2.77 0.109	3.73 0.147	4.78 0.187	7.47 0.294
19.1mm 3/4"	26.7mm 1.050"	1.72 0.065	2.11 0.083	2.87 0.113	3.91 0.154	5.54 0.218	7.82 0.308
25.4mm 1"	33.4mm 1.315"	1.72 0.065	2.77 0.109	3.38 0.133	4.55 0.179	6.35 0.250	9.09 0.358
31.8mm 1-1/4"	42.2mm 1.660"	1.72 0.065	2.77 0.109	3.56 0.140	4.85 0.191	6.35 0.250	9.70 0.382
38.1mm 1-1/2"	48.3mm 1.900"	1.72 0.065	2.77 1.109	3.68 0.145	5.08 0.200	7.10 0.281	10.16 0.400
50.8mm 2"	60.3mm 2.375"	1.72 0.065	2.77 0.109	3.91 0.154	5.54 0.218	8.74 0.343	11.07 0.436
63.5mm 2-1/2"	73.0mm 2.875"	2.11 0.083	3.04 0.120	5.16 0.203	7.01 0.276	9.52 0.375	14.02 0.552
76.1mm 3"	88.9mm 3.500"	2.11 0.083	3.04 0.120	5.49 0.216	7.62 0.300	11.13 0.438	15.24 0.600
88.9mm 3-1/2"	101.6mm 4.000"	2.11 0.083	3.04 0.120	5.70 0.226	8.10 0.318		15.91 0.636
101.6mm 4"	114.3mm 4.500"	2.11 0.083	3.04 0.120	6.02 0.237	8.56 0.337	13.49 0.531	17.12 0.674
127.0mm 5"	141.3mm 5.563"	2.77 0.109	3.38 0.134	6.55 0.258	9.52 0.375	15.88 0.625	19.1 0.750
152.4mm 6"	168.3mm 6.625"	2.77 0.109	3.38 0.134	7.11 0.280	10.97 0.432	18.26 0.718	21.95 0.864

## Information required for rotary draw tooling applications

- Size and wall thickness of material
- Material type and grade
- Number of bends on part
- Distance between bends
- Plane of bend relationship to one another
- Production rates
- Part tolerances
- Centerline radius of the bends. **Note:** bends with radius less than 2 times OD require greater attention, high grade bendable materials and heavier machine design.

## Understanding material to be bent

Bending application success is dependent on several factors including and most importantly the proper material. Obtain a print of work to be done, review dimensions and tolerances. Review the mill certification for material from the mill and confirm the material is appropriate for bending. Use caliper to measure material and confirm dimensions are correct for tooling. Tube OD and wall thickness variations are far more common than you may realize. For some tube fabricating applications, this variation is of little concern, but in rotary draw bending, ID dimension variation is a big issue. The tubing must fit the tooling correctly and have the appropriate clearances.

**Note:** different types of material can be bent i.e., steel, aluminum, and stainless however the tooling composition and CLR may change to ensure material compatibility. Pay attention to material ordered and confirm it's received as ordered.

## Terminology

### Bend Specifications

**OD** is tube outside diameter, usually measured in inches or millimeters. Sometimes the tube outside diameter is expressed in nominal, such as IPS for pipe. Only rarely is a tube diameter specified as an inside diameter. This is non-standard, leads to confusion, and should be avoided. Whatever units are used, OD should be expressed in decimal, to three places in the case of inches.

**WT** is wall thickness. Inches and millimeters are common units, and again the precision of a decimal number to three places is warranted if inches are used; at least one place for millimeters. Frequently, the old Birmingham Wire Gage Standard is used to express WT; be sure to use the correct gage (there are several standards) when translating to decimal inches. When the TOD is expressed as an IPS nominal size, then the WT is expressed as a schedule number, which corresponds to a precise value in inches.

**CLR** is centerline radius and is the most common reference for bend radius. Again, inches and millimeters are the common units of measurement. Typically, fractional or two-place decimal inches are sufficiently precise. Sometimes the CLR is expressed as a multiple of the TOD, such as "1-D", "2-D", and so on. Note that if the TOD is expressed as an IPS nominal size and the CLR is expressed as a "D", it is a multiple of the nominal, not the actual tube diameter. Inside radius, abbreviated "ISR", is a common reference for specifying bend radius if the tubing is non-round. Outside radius is seldom used to define the bend radius.

**DOB** is degree of bend, often loosely referred to as the sweep of bend or depth of bend. This defines in decimal degrees (occasionally degrees and minutes) the arc of the bend. This is, of course, different from "plane of bend" or "orientation", a specification for multi-bend parts which defines in degrees where the plane of the current bend is located relative to the plane of the first bend.

In defining multi-bend parts, XYZ rectangular coordinates are used, from which bend data are developed. Bend data consist of tangent length, plane of bend, and degree of bend and defines the motion of the tube during the bending process.





# Tooling for Pipe

Pipe Size	Outside Diameter	Wall Thickness Sch. / Inch	Min. CLR Inch	Drive Diameter	Center Former Part#	Counterbend Die Part#
1/4"	.540	40 - .088	1.4		153R036P0250	155P0250
3/8"	.675	40 - .091	1.4		153R036P0375	155P0375
		10 - .065	2.2		153R056P0375	
1/2"	.840	40 - .109	1.8	40mm	153R046P0500 ●	155P0500
		10 - .083	2.2		153R056P0500	
		5 - .065	2.6		153R067P0500	
		5 - .065	4.4		156R112P0500	
3/4"	1.050	40 - .113	2.2	50mm	153R056P0750 ●	155P0750
		10 - .083	2.6		153R067P0750	
		5 - .065	3.2		153R082P0750	
		5 - .065	5.1		156R130P0750	
1"	1.315	40 - .133	2.6	40mm	153R067P1000 ●	155P1000
		10 - .109	3.2	40mm	153R082P1000	
		10 - .109	3.9	50mm	156R100P1000	
		5 - .065	4.4	40mm	153R112P1000	
		5 - .065	6.7	50mm	156R170P1000	
		5 - .065	6.7	110mm	157R170P1000-110	
1 1/4"	1.660	40 - .140	3.5	50mm	153R090P1250 ●	155P1250
		40 - .140	3.9		153R100P1250	
		10 - .109	5.1		153R130P1250	
		5 - .065	5.9		153R150P1250	
		5 - .065	7.5		153R190P1250	
		5 - .065	8.9		157R225P1250	
		5 - .065	8.9	110mm	157R225P1250-110	
1 1/2"	1.900	40 - .145	3.9	50mm	153R100P1500 ●	155P1500
		40 - .145	5.1		153R130P1500	
		40 - .145	5.9		153R150P1500	
		10 - .109	6.7		153R170P1500	
		5 - .065	7.5		153R190P1500	
		5 - .065	9.8		157R250P1500	
		5 - .065	9.8		157R250P1500-110	
				110mm		

# Tooling for Pipe

- Continued from previous page -

Pipe Size	Outside Diameter	Wall Thickness Sch. / Inch	Min. CLR Inch	Drive Diameter	Center Former Part#	Counterbend Die Part#
2"	2.375	40 - .154	5.1	50mm	153R130P2000	155P2000
		10 - .109	5.9		153R150P2000 ●	
		5 - .065	7.5		153R190P2000	
		5 - .065	8.9		157R225P2000	
		5 - .065	10.2	80mm	157R260P2000	
		5 - .065	10.2		157R260P2000-80	
		5 - .065	11.8		157R300P2000	
		5 - .065	11.8		157R300P2000-80	
		5 - .065	11.8		157R300P2000-110	
2½"	2.875	40 - .203	10.2	80mm	157R260P2500-80	155P2500
		40 - .203	11.8		157R300P2500-80	
		40 - .203	11.8	110mm	157R300P2500-110	
		10 - .120	13.8	80mm	157R350P2500-80	
		10 - .120	13.8	110mm	157R350P2500-110	
3"	3.500	40 - .216	11.8	80mm	157R300P3000-80	155P3000
		40 - .216	11.8	110mm	157R300P3000-110	
		40 - .216	13.8	80mm	157R350P3000-80	
		10 - .120	17.7	110mm	157R450P3000-110	
4"	4.500	40 - .237	13.8	110mm	157R350P400-110	152BP4000
		10 - .120	22.0	110mm	157R560P400-110**	
6"	6.625	40 - .280	23.2	130mm	157R590P6000-130	152BP6000
		10 - .134	31.5	130mm	157R800P6000-130**	

3D Tooling

5D Tooling

Included in standard Pipe Tooling Kits (pg. 15)

80mm drive diameter available for TB80 / TB100 / TB130  
110mm drive diameter available for TB130 / TB180  
130mm drive diameter available for TB180 only

Bending of non-ferrous material may require tooling modification.

\*Select models require counterbending die support 050E when bending radii 225mm and larger.  
Refer to machine manual for CLR capacities and drive.

All standard Ercolina® counterbending dies are provided in bronze.

\*\*Center Former Part# 157R560P400-110 and 157R800P6000-130 require lead time.





## Tooling for Round Tube

Tube Size	Outside Diameter	Wall Thickness	Minimum CLR Inch	Drive Diameter	Center Former Part#	Counterbend Die Part#
1/4"	.250	.035	1.4	40mm	153R036T0250	154T0250
3/8"	.375	.035	1.4		153R036T0375	154T0375
1/2"	.500	.035	1.4		153R036T0500	154T0500
5/8"	.625	.083	1.4		153R036T0625	154T0625
		.035	1.8		153R046T0625	
3/4"	.750	.083	1.8		153R046T0750	154T0750
		.065	2.2		153R056T0750	
		.035	2.6		153R067T0750 ● ●	
7/8"	.875	.083	1.8		153R046T0875	154T0875
		.065	2.2		153R056T0875 ●	
		.035	2.6		153R067T0875 ●	
1"	1.000	.083	2.2		153R056T1000	154T1000
		.065	2.6		153R067T1000 ●	
		.035	3.2		153R082T1000 ●	
1 1/8"	1.125	.095	2.2		156R056T1125	154T1125
		.083	2.6		153R067T1125	
		.035	3.2		153R082T1125	
1 1/4"	1.250	.095	2.6		153R067T1250	154T1250
		.083	3.2		153R082T1250 ●	
		.035	4.4		153R112T1250 ●	
1 3/8"	1.375	.083	3.2		153R082T1375	154T1375
		.035	4.4		153R112T1375	
1 1/2"	1.500	.109	3.5	50mm	153R090T1500	154T1500
		.083	3.9	40mm	153R100T1500 ●	
		.083	4.4		156R112T1500	
1 1/2"	1.500	.065	5.1	50mm	153R130T1500	154T1500
		.049	5.9		153R150T1500 ●	
		.035	6.7		156R170T1500	
		.035	7.5		153R190T1500	
1 5/8"	1.625	.109	3.5	50mm	153R090T1625	154T1625
		.083	3.9		153R100T1625	
		.065	5.1		153R130T1625	
		.049	5.9		153R150T1625	
		.035	6.7		153R170T1625	
		.035	7.5		153R190T1625	
1 3/4"	1.750	.109	3.9	50mm	153R100T1750	154T1750
		.095	5.1		153R130T1750	
		.095	5.9		153R150T1750	
		.065	6.7		153R170T1750 ●	
		.035	7.5		153R190T1750	

# Tooling for Round Tube

- Continued from previous page -

Tube Size	Outside Diameter	Wall Thickness	Minimum CLR Inch	Drive Diameter	Center Former Part#	Counterbend Die Part#
1 7/8"	1.875	.109	3.9	50mm	153R100T1875	154T1875
		.095	5.1		153R130T1875	
		.083	5.9		156R150T1875	
		.065	6.7		153R170T1875	
		.035	7.5		153R190T1875	
2"	2.000	.109	4.7		153R120T2000	154T2000
		.109	5.1		156R130T2000	
		.095	5.9		153R150T2000 ●	
		.083	6.7		156R170T2000	
		.065	7.5		153R190T2000 ●	
2 1/8"	2.125	.134	4.7		153R120T2125	154T2125
		.109	5.1		153R130T2125	
		.083	5.9		153R150T2125	
		.083	6.7		156R170T2125	
		.065	7.5		153R190T2125	
2 1/4"	2.250	.109	5.1		153R130T2250	154T2250
		.095	5.9		153R150T2250	
		.083	6.7		156R170T2250	
		.083	7.5		153R190T2250	
2 3/8"	2.375	.109	5.1		153R130T2375	154T2375
		.095	5.9		153R150T2375	
		.083	6.7		156R170T2375	
		.083	7.5		153R190T2375	
2 1/2"	2.500	.187	8.9		157R225T2500*	154T2500
		.156	9.8		157R250T2500*	
		.120	10.2		157R260T2500*	
		.065	11.8		157R300T2500*	
3"	3.000	.187	9.8		157R250T3000*	154T3000
		.156	10.2		157R260T3000*	
		.120	11.8		157R300T3000*	
3"	3.000	.216	10.2	80mm	157R260T3000-80	154T3000
		.156	11.8		157R300T3000-80	
3 1/4"	3.250	.216	11.8		157R300T3250-80	154BT3250
3 1/2"	3.500	.216	11.8		157R300P3000-80	155P3000
		.216	13.8		157R350P3000-80	
4"	4.000	.216	13.8	110mm	157R350T4000-11	155BT4000



Included in standard small radius  
Tube Tooling Kits (pg. 16)



Included in standard large radius  
Tube Tooling Kits (pg. 16)

80mm drive diameter available for TB80 / TB100 / TB130

110mm drive diameter available for TB130 / TB180 – 130mm drive diameter available for TB180 only  
Bending of non-ferrous material may require tooling modification.

\*Select models require counterbending die support 050E when bending radii 225mm and larger.

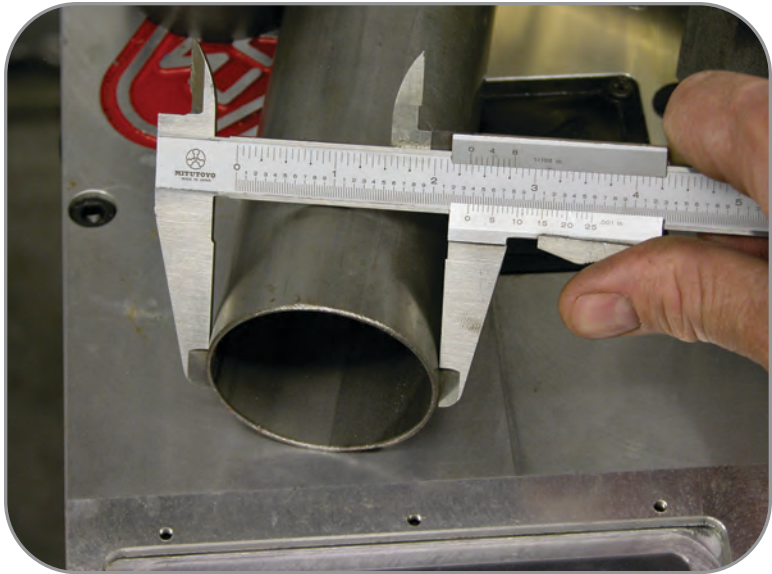
Refer to machine manual for CLR capacities and drive.

All standard Ercolina® counterbending dies are provided in bronze.





# Round Tube Information



Tube dimensions are based on O.D. of material  
(2" tube measures 2.00" O.D.).

## Steel & Polymer Tube Counterbending Dies

### STEEL

Tube Size	Outside Diameter	Counterbend Die Part#
3/4"	.750	154AT0750
7/8"	.875	154AT0875
1"	1.000	154AT1000
1 1/4"	1.250	154AT1250
1 3/8"	1.375	154AT1375
1 1/2"	1.500	154AT1500
1 3/4"	1.750	154AT1750
1 7/8"	1.875	154AT1875
2"	2.000	154AT2000
2 1/4"	2.250	154AT2250
2 1/2"	2.500	154AT2500

Steel used for heavy wall or abrasive application.

**Consult factory for tooling sizes not shown.**

All tooling is manufactured for mild steel general tube and pipe dimensions. Tooling groove is slightly undersize designed to better form tube shape throughout bend.

Tooling can be modified to customer's required dimensions and or polished at additional cost to improve finish. Contact Ercolina customer service for additional information at (563) 391-7700.

### STEEL SUPPORT WITH REPLACEABLE POLYMER INSERT

Tube Size	Outside Diameter	Counterbend Die Part#
1 3/8"	1.375	154ST1375
1 1/2"	1.500	154ST1500
1 3/4"	1.750	154ST1750
1 7/8"	1.875	154ST1875
2"	2.000	154ST2000

Polymer recommended for materials with a polished finish such as stainless and aluminum.



### REPLACEABLE POLYMER INSERT

1 3/8"	1.375	154ST1375INS
1 1/2"	1.500	154ST1500INS
1 3/4"	1.750	154ST1750INS
1 7/8"	1.875	154ST1875INS
2"	2.000	154ST2000INS

All standard Ercolina counterbending dies are provided in bronze.

\* Polished tooling for round tube recommended for materials with a polished finish such as stainless and aluminum.

Optional polymer counterbending dies available on request. Consult factory for more information.

## Minimum Achievable “Centerline Radius” with Standard Tooling

Tube Size	Wall Thickness							
	.035 20 Ga.	.049 18 Ga.	.065 16 Ga.	.083 14 Ga.	.095 13 Ga.	.109 12 Ga.	.120 11 Ga.	.134 10 Ga.
1/4"	1.4	1.4	1.4	1.4	1.4	1.4	.78	.78
3/8"	1.4	1.4	.78	.78	.78	.78	.78	.78
1/2"	1.4	1.4	1	1	1	1	1	1
5/8"	1.8	1.8	1.8	1.4	1.4	1.4	1.4	1.4
3/4"	2.6	2.6	2.6	1.8	1.8	1.8	1.8	1.8
7/8"	2.6	2.6	2.2	1.8	1.8	1.8	1.8	1.8
1"	3.2	3.2	2.6	2.2	2.2	2.2	2.2	2.2
1 1/8"	3.2	3.2	3.2	2.6	2.2	2.2	2.2	2.2
1 1/4"	4.4	4.4	4.4	3.2	2.6	2.6	2.6	2.6
1 3/8"	4.4	4.4	4.4	3.2	3.2	3.2	3.2	3.2
1 1/2"	7.5	5.9	5.1	3.9	3.9	3.5	3.5	3.5
1 5/8"	7.5	5.9	5.1	3.9	3.9	3.5	3.5	3.5
1 3/4"			6.7	6.7	5.1	3.9	3.9	3.9
1 7/8"			7.5	5.9	5.1	3.9	3.9	3.9
2"			7.5	7.5	5.9	4.7	4.7	4.7
2 1/8"			7.5	7.5	5.9	5.1	5.1	4.7
2 1/4"				7.5	5.9	5.1	5.1	5.1
2 3/8"				7.5	5.9	5.1	5.1	5.1
2 1/2"					11.8	10.2	9.8	
3"					11.8	10.2	9.8	





## Rotary Draw Accessories

### Spray Bending Lubricant

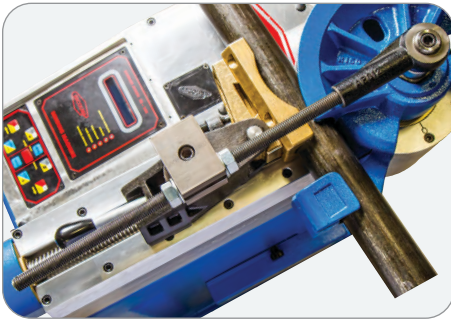


Part# **810**  
One (1) 12 oz. can

Part# **811**  
Case of Nine (9) 12 oz. cans



### Tie Bar Accessory



Part# **030TIEBAR**

For use on 030 Mega Bender, TB60, SB48 and 48 Plus.

Tie bar accessory should always be used when bending heavy wall profiles and solid materials.

### Center Former Reinforcement Kit



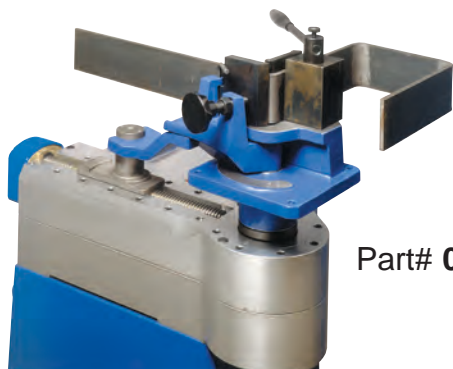
Part# **REINFKIT**

Available and interchangeable for all round tube or pipe center formers up to 7.5" radius (R190).

Increases the rigidity of standard rotary draw tooling. Recommended for use when bending heavy wall material or solid bar stock.

## Rotary Draw Accessories

### Profile Folding - Bending Attachment



Part# 051

Material Capacities	
Material	Maximum
Round solids	5/8"
Rectangular flat solids	3/16" x 4"
Solid square	5/8" x 5/8"
Angle Iron	2" x 5/16"

Bend and shape solid plate, bar stock and rod to tight radii. Adapts to Ercolina rotary draw benders: 030 Mega Bender, TB60, Top Bender Plus, SB48 and Super Bender Plus.

### Roller Counterbending Dies



Part# 050I from 3/8" to 2 3/8"

Part# 050J from 2 1/2" to 3"

**MUST SPECIFY MATERIAL DIAMETER  
WHEN ORDERING**

Available for round and square profiles, roller dies are recommended when bending high tensile materials, solids and heavy wall profiles.

Note: Roller dies must be positioned a minimum of 2 1/2" from face of center former; failure to do so will cause machine damage.  
Not suitable for bends beyond 130°.

### Counterbending Die Adapter Plate



Part# CBDAP

High quality, machined, aluminum bracket used to interchange between cam lock and drop in style counterbending dies.

### Counterbending Die Support

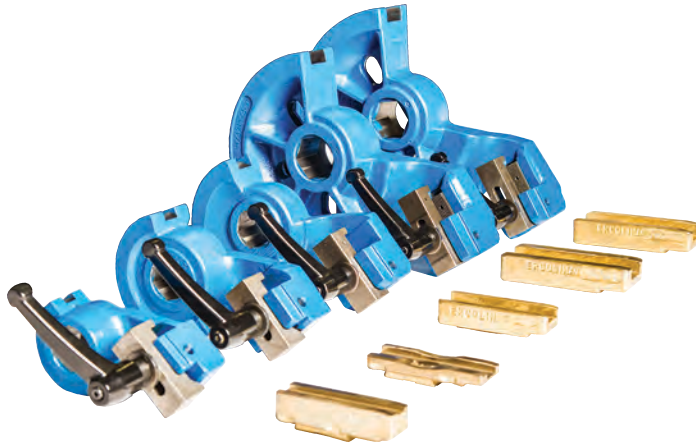


Part# 050E  
(replaces standard vise)

Required when bending radii 225mm and larger.  
(Not required for TB80/TB100/TB130/TB180.)



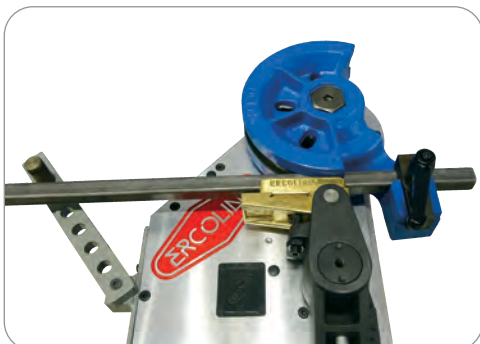
## Tooling for Square Tube



## Square Tube Tooling Kits

Description	Material Size	CLR -Inches-	Min. Wall	Center Former Part#	Counterbend Die Part#	Available with Ercolina Machines
TUBEKITSQ1	1/2"	1.8	.049	1582AR0460500	1591A0500	SB48, TB60 TB80, TB100 TB130
	3/4"	2.6	.065	1583AR0670750	1591A0750	
	1"	3.0	.120	1583AR0761000	1591A1000	
	1 1/4"	5.1	.120	1587AR1301250	1591A1250	
	1 1/2"	5.9	.120	1588AR1501500	1591A1500	
TUBEKITSQ2	1/2"	1.8	.049	1582AR0460500	1591A0500	TB60, TB80 TB100, TB130
	3/4"	2.6	.065	1583AR0670750	1591A0750	
	1"	3.0	.120	1583AR0761000	1591A1000	
	1 1/4"	5.1	.120	1587AR1301250	1591A1250	
	1 1/2"	5.9	.120	1588AR1501500	1591A1500	
	2"	5.9	.120	1588AR1502000	1591A2000	

## Material Extraction Device for Square Tube



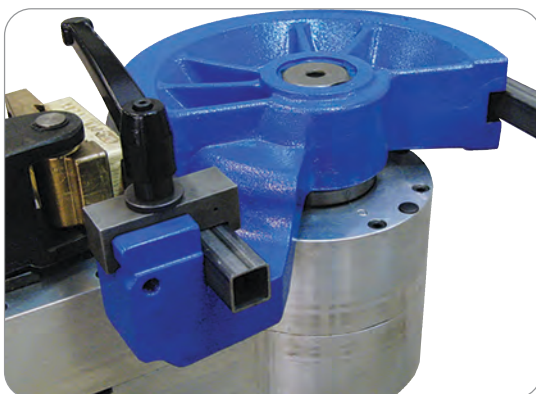
### Part# **FP500P1-A**

Extractor plate assists in square material extraction for profiles, solid and hollow.

For use on 030 Mega Bender, TB60, SB48 and 48 Plus models.



# Tooling for Square Tube

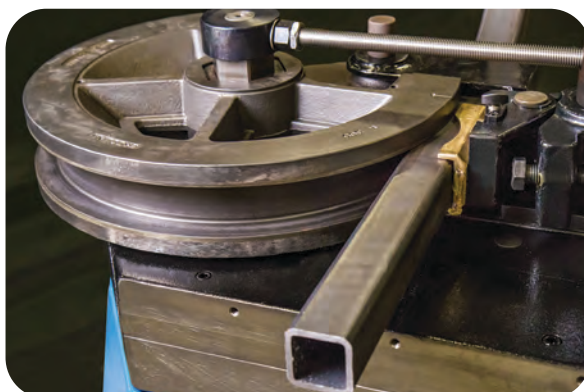


Tube Size	Outside Diameter	Wall Thickness	Minimum CLR Inch	Drive Diameter	Center Former Part#	Counterbend Die Part#
1/2"	.500	.065	1.4	40mm	1582AR0360500	1591A0500
		.049	1.8		1582AR0460500	
3/4"	.750	.120	1.8		1582AR0460750	1591A0750
		.065	2.6		1583AR0670750	
1"	1.000	.120	3.0		1583AR0761000	1591A1000
1"	1.000	.083	3.9	50mm	1585AR1001000	1591A1000
		.065	5.1		1587AR1301000	
		.049	5.9		1588AR1501000	
1 1/4"	1.250	.120	5.1		1587AR1301250	1591A1250
		.095	6.6		1589AR1701250	
1 1/2"	1.500	.120	5.9		1588AR1501500	1591A1500
		.095	7.4		15810AR1901500	
2"	2.000	.120	5.9		1588AR1502000	1591A2000
		.095	7.4		15810AR1902000	
2 1/2"	2.500	.125	11.8	80mm	15813AR30025-80	1591A2500
3"	3.000	.187	13.8		15814AR35030-80	1591A3000

**2-1/2" Square – 80mm drive diameter (15813AR30025-80) available for TB80 / TB100 / TB130**

**3" Square – 80mm drive diameter (15814AR35030-80) available for TB100 / TB130**

**Consult factory for tooling sizes not shown.**





## A40/P Two Axis Positioner

**Ideal for repetitive parts  
and left & right mirror images**

Part# A40/P  
Accommodates parts  
to 10' length



### Capacities & Specifications

Height	43"
Length	110"
Width	32"
Material Capacity Through Spindle (Max.)	1/2" – 2-3/8" 1" O.D.
Chuck Rotation	360°
Weight	180 lbs.

**Consistency  
Repeatability  
Increased Profitability**

#### FEATURES

- Manually controls accurate linear (Y) advancement and rotational (B) plane of bend
- Reduces operating handling and labor costs
- Helps eliminates unnecessary material scrap
- Previous layout and design experience not required
- Adapts to Ercolina 030 Mega Bender, TB60, SB48 and 48 Plus machines
- Pneumatic work holding chuck secures material and rotates 0-360°
- Chuck activation valve conveniently positioned near operator and machine controls
- Includes: four (4) sets of chuck jaws for material 1/2" to 2 3/8", six (6) adjustable linear and rotary stops
- Optional digital readout of linear and rotational bends
- Custom length tables available on request

**Note:** Positioner not intended for solid profiles

# Bending Software

**Quickly layout and produce drawings for bending applications!**

**Ideal for use with A40/P two axis positioner.**

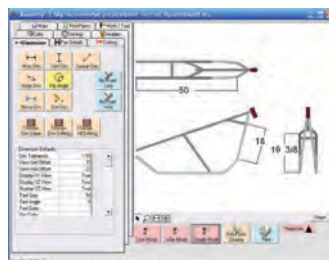


Part# **BENSW-SUPER**

## Reduce layout cost

### FEATURES

- Eliminate unnecessary material scrap
- Previous layout and design experience not required
- Mouse pick points allow dimension placement
- Dimension with decimals or fractions
- Save part program files for later use
- Information material data base included
- CLR or inside radius (adjustable for each bend)
- Create printable dimensioned model, shaded model, flat layout & title block
- Flat layout of cut length & bending locations
- Can be dimensioned from start of bend, end of bend & center of bend, or either direction
- Provides springback bend angle
- Print includes bending data such as bend angles, CLR or inside radius, rotation angle & bend order
- Preferences: color, text size & arrow size are saved in user definable data bases
- Verifies sufficient material is available for bending process
- Extra checking tools provided to verify part validity
- Allows multiple dies to be used on the same part
- Graphical layout interface provided
- Advanced LRA "Length, Rotation & Angle" design interface
- Powerful reverse engineering feature
- Inch to metric conversion
- CD-ROM Windows XP or higher required
- All standard Ercolina tooling included in tooling library
- LRA: transfers any part into XYZ data when entering LRA information into Custom Part interface; XYZ data available
- Railing Templates: includes hand railing template
- Chord measuring tool for large radius bending
- File Import/Export
- Estimating: Helps define project cost



**Assembly Drawing**

**XYZ**







# Handrail Simulation Samples

## Wall Rail

**Material:** 1¼" Schedule 40  
**Tooling:** 1.660 Pipe R90  
**CLR:** 3.5  
**Cal. CLR:** 3.550  
**Cut Off Start End:** 5.25  
**Cut Off Far End:** 5.25

**Shop Instructions:**

**Cut Length:** 132 5/16

A	B	Location	Rotation	Angle	CLR
1	1	4 1/4	0	90	3.5
2	2	17 3/16 Flip	(-90)	32	3.5
4	3	128 1/16	(-90)	90	3.5
3	4	115 1/16	(-90)	32	3.5



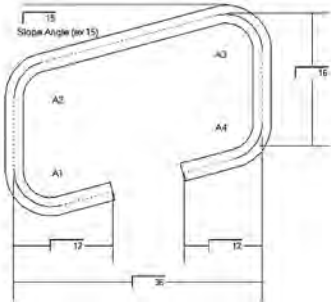
**Design Instructions: Custom Part**

**Cut Length:**

A	Length	Rotation	Angle	Type
1	2.5	0	90	Apex
2	12	-90	32	Apex
3	96	180	32	Apex
4	12	-90	90	Apex
E	2.5			

## Bleacher

**Material:** 1¼" Schedule 40  
**Tooling:** 1.660 Pipe R90  
**CLR:** 3.5  
**Cal. CLR:** 3.550



## Handicap Rail

**Material:** 1¼" Schedule 40  
**Tooling:** 1.660 Pipe R90  
**CLR:** 3.5  
**Cal. CLR:** 3.550



A	B	Location	Rotation	Angle	CLR
5	1	18 1/2	0	90	3.5
4	2	31	0	90	3.5
3	3	55 15/16	180	32	3.5
2	4	91 7/8	180	32	3.5
1	5	137 5/16	0	90	3.5

**Design Instructions: Custom Part**

**Cut Length:**

A	Length	Rotation	Angle	Type
1	42	0	90	Apex
2	48	0	32	Apex
3	36	0	-32	Apex
4	24	0	90	Apex
5	14	0	90	Apex
E	22			

Location      Rotation      Bend

Bend Number: 1 Location: 18 1/2 Rotation: 0 Bend Angle: 90			
Bend Number: 2 Location: 31 Rotation: 0 Bend Angle: 90			
Bend Number: 3 Location: 55 15/16 Rotation: 180 Bend Angle: 32			
Bend Number: 4 Location: 91 7/8 Rotation: 180 Bend Angle: 32			
Bend Number: 5 Location: 137 5/16 Rotation: 0 Bend Angle: 90			

# ROTARY DRAW BENDERS

33



# Non-Mandrel Tooling Order Form

Quote: \_\_\_\_\_

Company Name: \_\_\_\_\_ Contact: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Distributor Name: \_\_\_\_\_ Contact: \_\_\_\_\_

**Material Specifications:**

Round Tube/Pipe Dimensions: \_\_\_\_\_ OD \_\_\_\_\_ ID

Square/Rect. Tube/Pipe Dim.: \_\_\_\_\_ OD \_\_\_\_\_ ID

Wall Thickness: \_\_\_\_\_

Material Type/Grade: \_\_\_\_\_

Weld Seam: \_\_\_\_\_ Yes \_\_\_\_\_ No

No. Parts Per Day: \_\_\_\_\_ No. Bends Per Part: \_\_\_\_\_

Prints Supplied: \_\_\_\_\_ Yes \_\_\_\_\_ No

Are Mill Certs Available \_\_\_\_\_ Yes \_\_\_\_\_ No

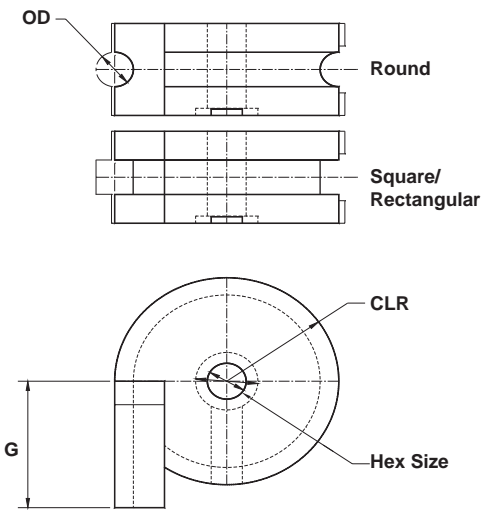
Centerline Radius (CLR): \_\_\_\_\_

Min. Dist. Bet. Bends (G): \_\_\_\_\_

Outside Diameter (OD): \_\_\_\_\_

Maximum Degree of Bend: \_\_\_\_\_

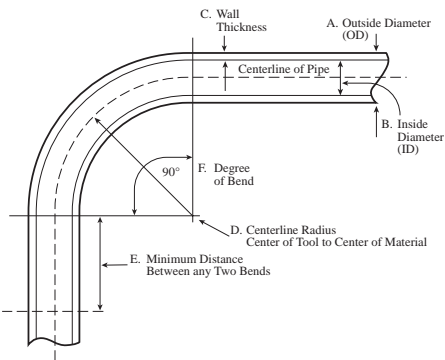
**Center Former**



**Machine and Tooling Recommendations:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Bend Terminology**



I have reviewed the above information for accuracy and confirm it is correct. Any alterations made from original information will result in additional cost and may extend delivery time.

Customer Signature

Date



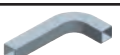

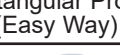
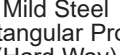








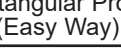
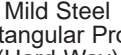


## Model Comparison Guide

### GENERAL PRODUCTION MODELS

Profile Description	SB48	TB60
 Mild Steel Pipe	1½" Sch. 40	2" Sch. 40
 Stainless Steel Pipe	1¼" Sch. 10	1½" Sch. 40
 Mild Steel Square Profile	1½" x 1½" x ⅛"	2" x 2" x ⅛"
 Mild Steel Rectangular Profile (Easy Way)	¾" x 1½" x .120"	1" x 2" x .120"
 Mild Steel Rectangular Profile (Hard Way)	1½" x ¾" x .120"	2" x 1" x .120"
 Mild Steel Solid Rod	1⅛"	1¼"

### HEAVY-DUTY INDUSTRIAL MODELS

Profile Description	TB80	TB100	TB130	TB180
 Mild Steel Pipe	2½" Sch. 40 Grade B	3" Sch. 40	4" Sch. 40	6" Sch. 40
 Stainless Steel Pipe	2½" Sch. 10	2½" Sch. 40	3" Sch. 80	4" Sch. 80
 Mild Steel Square Profile	2½" x 2½" x ⅛"	3½" x 3½" x ⅛"	4" x 4" x ⅛"	4" x 4" x ¼"
 Mild Steel Rectangular Profile (Easy Way)	2" x 3" x .125"	2" x 4" x .187"	2" x 4" x .250"	2" x 4" x .250"
 Mild Steel Rectangular Profile (Hard Way)	3" x 2" x .125"	4" x 2" x .120"	4" x 2" x .187"	4" x 2" x .250"
 Mild Steel Solid Rod	1½"	2"	2½"	3"

All capacities based on A53 grade A 48,000 psi tensile materials; heavy wall and high tensile materials reduce machine capacity.

Consult supplier for material specifications.

# ANGLE ROLLS SECTION BENDERS

ANGLE ROLL - SECTION BENDERS







# Why choose Ercolina Angle Rolls?

## Ercolina Advantages

All Ercolina hydraulic machines have **unlimited** step programming with memory and unlimited passes which is important when rolling parts

Ercolina rolls feature patented simultaneous downfeed and roll movement to minimize part deformation when making roll passes

Ercolina shafts and tooling are forged

*(Forging generally produces a piece that is stronger than a similar cast or machined part. During the forging process, the metal's internal grain deforms to follow the general shape of the part. The resulting grain is continuous throughout the part creating a piece with improved strength characteristics and reliability.)*

Ercolina A-frames are engineered for greater strength and offer a lifetime warranty

Ercolina utilizes heavy lateral guides to control material during bending

Ercolina rolls are three-roll-driven with inline gear reduction for greater torque; power transmission and motor are located close to the A-frame

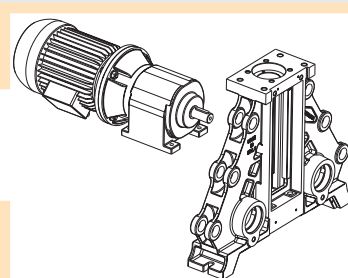
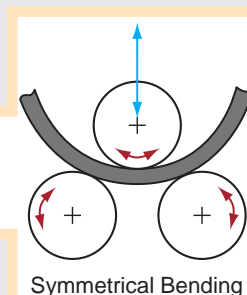
Ercolina hydraulic rolls have locking third hydraulic solenoid to maintain accurate cylinder position

Ercolina capacity ratings are accurate and machines will perform as advertised with standard tooling

Ercolina hydraulic cylinder is located inside the cabinet and cannot interfere with part production

Ercolina rolls include a slip clutch on drive to protect machine components when rolling

Ercolina design and tooling accommodate most standard material



**CE40MR3 (Manual)**  
**CE40H3 (Hydraulic)**  
 2" Sch. 40 pipe capacity  
 2" angle iron capacity  
 220V or 440V 3ph



**CE50H3 (Hydraulic)**  
 2-1/2" Sch. 40 pipe capacity  
 2-1/2" angle iron capacity  
 220V or 440V 3ph



**CE60H3 (Hydraulic)**  
 3" Sch. 10 pipe capacity  
 2-1/2" angle iron capacity  
 220V or 480V 3ph

**Ercolina offers a better machine at a competitive price.**

## Competitors' Machines

Operator is required to manually control step movement which is inefficient and less accurate

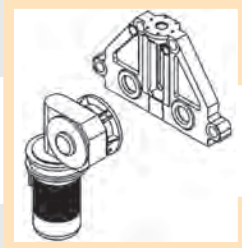
Downward movement of center roll causes deformation when taking roll passes



Shafts and tooling are turned and hardened which are more likely to flex during bending

A-frames use welded steel plate or billet allowing weight to compensate for older design

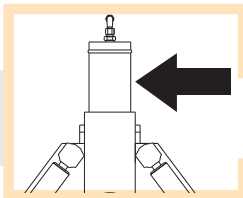
Weaker lateral guides do not offer required support



Motors are further away and the drive train is at 90 degrees which requires a larger motor to overcome the transition

Rely on single solenoid

Competitors often over-state capacity ratings



Hydraulic cylinder located at top of machine can interfere with part production

If vibration occurs during bending process, some competitors suggest removing the key drive from the lower right shaft to make the rolls freewheeling

Stated capacities often require special tooling



**CE70H3 (Hydraulic)**  
3" Sch. 40 pipe capacity  
3" angle iron capacity  
220V or 440V 3ph



**CE100H3-RLI (Hydraulic)**  
4" Sch. 40 pipe capacity  
4" angle iron capacity  
220V or 440V 3ph





## CE40MR3 Angle Roll

Manual Angle Roll • Section Bender



Universal Tooling Set Included for Multiple Profiles



**Two-Speed Gear Box**

- 1 - Torque or fine adjustment
- 2 - Rapid or coarse adjustment



Vertical or Horizontal  
Operating Position



## Manual Center Roll Positioning

### FEATURES

- Universal tooling set forged with smooth surface included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system 3-roll driven
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad control with digital readout of center roll positioning
- Control tower with low voltage controls and foot pedal
- 2-speed gear box with torque multiplier for positioning center roll
- Optional anti-twist correction system required for angle iron "Leg In" applications



## CE40MR3 Capacities & Specifications

Pipe (Max.)	2" Sch. 40
Angle (Max.)	2" x 2" x 1/4"
Tube (Max.)	2 1/2" - .125 wall
Roll Shaft Diameter	40mm
Center Roll Positioning	Manual with patented torque multiplier
Shaft Speed	10 RPM
Universal Tooling (Included)	6 5/8" O.D.
Programming	Not available
Distance between Shafts	10 5/8"
Operating Voltage	220V or 480V 3ph
Length, Width, Height	39" x 26" x 59"

All capacities based on mild grade materials;  
heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Anti-Twist Device



Small Radius Tooling



Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



▶ Ercolina Bending Application

**Product  
Demonstrations  
Available on Website**

**NEED ADDITIONAL HELP?  
CONTACT ERCOLINA:**

**563.391.7700**

[info@ercolina-usa.com](mailto:info@ercolina-usa.com)

[ercolina-usa.com](http://ercolina-usa.com)



## CE40H3 Angle Roll

Hydraulic Angle Roll • Section Bender



Universal Tooling Set Included for Multiple Profiles



Vertical or Horizontal  
Operating Position



## Hydraulic Center Roll Positioning

### FEATURES

- Universal tooling set included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system 3-roll driven
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad controls with digital center roll positioning
- Control tower with low voltage controls and foot pedal
- Machine with memory storage has eight (8) individual programs and unlimited passes
- Patented by Ercolina, simultaneous downfeed and roll movement minimizes deformation
- Optional anti-twist correction system required for angle iron "Leg In" applications



## CE40H3 Capacities & Specifications

Pipe (Max.)	2" Sch. 40
Angle (Max.)	2" x 2" x 1/4"
Tube (Max.)	2 1/2" - .125 wall
Roll Shaft Diameter	40mm
Center Roll Positioning	Hydraulic 10 Tons
Shaft Speed	10 RPM
Universal Tooling (Included)	6 5/8" O.D.
Programming	NC - Touchpad
Distance between Shafts	10 5/8"
Operating Voltage	220V or 480V 3ph
Length, Width, Height	39" x 26" x 59"

All capacities based on mild grade materials;  
heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Anti-Twist Device



Small Radius Tooling



Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



Air display at the Red Rock Canyon Visitor Center

### ◀ Ercolina Bending Application

**Product  
Demonstrations  
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**563.391.7700**

[info@ercolina-usa.com](mailto:info@ercolina-usa.com)

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## CE50H3 Angle Roll

Hydraulic Angle Roll • Section Bender



**2 1/2"**  
Sch. 40  
Pipe Capacity



Vertical or Horizontal  
Operating Position



Universal Tooling Set Included for Multiple Profiles



Shown with optional  
Large Radius Spiral  
Bending Accessory

## Hydraulic Downfeed Improves Productivity

### FEATURES

- Universal tooling set included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system 3-roll driven
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad controls with digital center roll positioning
- Control tower with low voltage controls and foot pedal
- Hydraulic machine with memory storage has eight (8) individual programs and unlimited passes
- Patented by Ercolina, simultaneous downfeed and roll movement minimizes deformation
- Optional anti-twist correction system required for angle iron "Leg In" applications

## CE50H3 Capacities & Specifications

Pipe (Max.)	2½" Sch. 40
Angle (Max.)	2½" x 2½" x ¼"
Tube (Max.)	3" – .095 wall
Roll Shaft Diameter	50mm
Center Roll Positioning	Hydraulic 10 Tons
Shaft Speed	9 RPM
Universal Tooling (Included)	7" O.D.
Programming	NC - Touchpad
Number of Programs	8
Distance between Shafts	11⅞"
Operating Voltage	220V or 480V 3ph
Length, Width, Height	45" x 29" x 52"

All capacities based on mild grade materials; heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Anti-Twist Device



Small Radius Tooling



Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



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## CE60H3 Angle Roll

Hydraulic Angle Roll • Section Bender



Vertical or Horizontal  
Operating Position



Universal Tooling Set Included for Multiple Profiles



## Hydraulic Downfeed Improves Productivity

### FEATURES

- Universal tooling set included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system 3-roll driven
- Uses CE50 tooling
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad controls with digital center roll positioning
- Control tower with low voltage controls and foot pedal
- Hydraulic machine with memory storage has eight (8) individual programs and unlimited passes
- Patented by Ercolina, simultaneous downfeed and roll movement minimizes deformation
- Optional anti-twist correction system required for angle iron "Leg In" applications
- Tie bar supports for each shaft included



## CE60H3 Capacities & Specifications

Pipe (Max.)	3" Sch. 10
Angle (Max.)	2½" x 2½" x ⅜"
Tube (Max.)	3½" – .120 wall
Roll Shaft Diameter	50mm
Center Roll Positioning	Hydraulic 17.6 Tons
Shaft Speed	9 RPM
Universal Tooling (Included)	7" O.D.
Programming	NC - Touchpad
Number of Programs	8
Distance between Shafts	15"
Operating Voltage	220V or 480V 3ph
Length, Width, Height	48" x 29" x 52"

All capacities based on mild grade materials; heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Anti-Twist Device



Large Spiral Accessory



Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



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## CE70H3-RLI Angle Roll

Hydraulic Angle Roll • Section Bender



Universal Tooling Set Included for Multiple Profiles

CE70H3-RLI w/Hydraulic 3 Axis Twist



Vertical or Horizontal  
Operating Position



## Heavy Duty Structure for High Section Modulus Rating

### FEATURES

- Universal tooling set included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system with motor and brake on each shaft
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad controls with digital center roll positioning
- Control tower with low voltage controls and foot pedal
- Memory storage has eight (8) individual programs and unlimited passes
- Three axis hydraulic twist correction system for angle iron "Leg-in" applications



## CE70H3-RLI Capacities & Specifications

Pipe (Max.)	3" Sch. 40
Angle (Max.)	3" x 3" x 3/8"
Tube (Max.)	3 1/2" - .216 wall
Roll Shaft Diameter	70mm
Center Roll Positioning	Hydraulic 22 Tons
Shaft Speed	8 RPM
Universal Tooling (Included)	9 1/2" O.D.
Programming	NC - Touchpad
Number of Programs	8
Distance between Shafts	15"
Section Modulus	35 cm <sup>3</sup>
Operating Voltage	220V or 480V 3ph
Length, Width, Height	54" x 43" x 57"

All capacities based on mild grade materials; heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Modular Tooling Set



Large Spiral Accessory

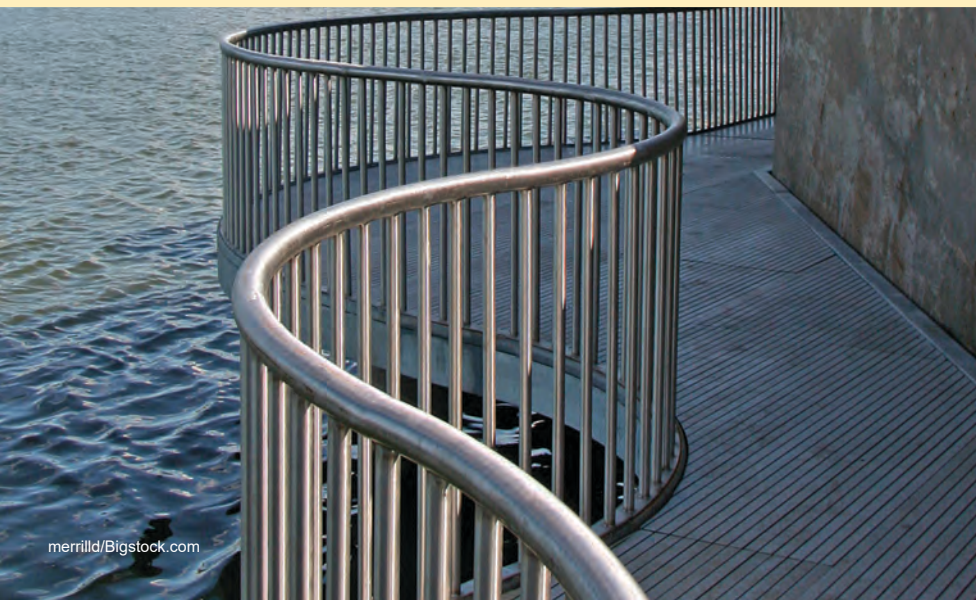


Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



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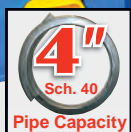


## CE100H3-RLI Angle Roll

Hydraulic Angle Roll • Section Bender



Universal Tooling Set Included for Multiple Profiles



Vertical or Horizontal  
Operating Position



## Maximum Performance and Minimal Deflection

### FEATURES

- Universal tooling set included with each machine
- Forged roll shafts precision ground and fitted for maximum performance and minimal deflection
- Roll shafts supported with conical steel bearings on each side of A Frame
- Heavy duty structure and rigid components for high section modulus ratings
- Reinforced engineered mainframe design proven to outperform competitive models
- In-line direct drive roll shaft system with motor and brake on each shaft
- Threaded roll shafts with micrometric flange adjustment helps eliminate spacer usage
- Touchpad controls with digital center roll positioning
- Control tower with low voltage controls and foot pedal
- Memory storage has eight (8) individual programs and unlimited passes
- Three axis hydraulic twist correction system for angle iron "Leg-in" applications

## CE100H3-RLI Capacities & Specifications

Pipe (Max.)	4" Sch. 40
Angle (Max.)	4" x 4" x ½"
Tube (Max.)	4½" – .237 wall
Roll Shaft Diameter	100mm
Center Roll Positioning	Hydraulic 30 Tons
Shaft Speed	6 RPM
Universal Tooling (Included)	12⅝" O.D.
Programming	NC - Touchpad
Number of Programs	8
Distance between Shafts	19¼"
Section Modulus	90 cm³
Operating Voltage	220V or 480V 3ph
Length, Width, Height	66" x 58" x 83"

All capacities based on mild grade materials;  
heavy wall and high tensile materials reduce machine capacity.

### POPULAR ACCESSORIES



Spray Lubricant



Pipe & Tube Tooling



Modular Tooling Set



Polymer Tooling



Radius & Degree Measuring Kit

Minimum Radius  
Guide [Pages 52-53](#)

Tooling Sets [Pages 54-56](#)

Accessories [Pages 57-60](#)



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## Minimum Radius Guide on Mild Steel Material

Profile Type	CE40			CE50		
	Profile Dimensions	Min. CLR Inches	Wall	Profile Dimensions	Min. CLR Inches	Wall
Pipe	1/2"	6	.109	3/4"	8	.113
	1"	10	.133	2"	14	.154
	2"	18	.154	2 1/2"	18	.203
Tube	1"	6	.120	1"	6	.120
	1 1/2"	12	.120	2 1/2"	18	.120
	2 1/2"	25	.083	3"	24	.120
Square Tube	3/4" x 3/4"	6	.083	3/4" x 3/4"	6	.083
	1 1/2" x 1 1/2"	16	.083	2" x 2"	20	.120
	2" x 2"	24	.120	2 1/2" x 2 1/2"	30	.120
Rectangular Tube Hard way	1/2" x 1 1/4"	10	.083	1/2" x 1"	8	.083
	1" x 1 1/2"	12	.120	1 1/2" x 2 1/2"	18	.120
	1" x 2"	24	.120	1 1/2" x 3"	34	.120
Rectangular Tube Easy way	1 1/4" x 1/2"	10	.083	1 1/4" x 1/2"	10	.083
	2" x 1"	20	.120	2 1/2" x 1 1/2"	24	.120
				3" x 1 1/2"	32	.120
Round Solid	3/4"	4 *	NA	3/4"	4 *	NA
	1 1/4"	12	NA	1 1/2"	14	NA
Square Solid	3/4"	4 *	NA	3/4"	4 *	NA
	1"	8	NA	1 1/4"	10	NA
	1 1/4"	10	NA	1 1/2"	6	NA
Rectangular Solid Hard way	1/2" x 1 1/2"	12	NA	3/8" x 3/4"	6 *	NA
	1/4" x 2"	16	NA	1/2" x 2"	10	NA
	1/2" x 2"	18	NA	1/2" x 2 1/2"	18	NA
Rectangular Solid Easy way	1 1/4" x 3/8"	6 *	NA	2" x 1/2"	8	NA
	2 1/2" x 1/2"	8	NA	4" x 1/2"	12	NA
	3" x 1/2"	16	NA			
Angle "Leg Out"	1" x 1"	8	.120	1" x 1"	8	.120
	1 1/2" x 1 1/2"	12	.120	2" x 2"	16	.187
	2" x 2"	16	.187	2 1/2" x 2 1/2"	20	.187
Angle "Leg In"	1" x 1"	10	.120	1" x 1"	12	.120
	1 1/2" x 1 1/2"	16	.120	2" x 2"	24	.236
	2" x 2"	28	.187	2 1/2" x 2 1/2"	32	.236
C "Leg Out"	1 1/2" x 1/2"	10	.120	1 1/4" x 1/2"	10	.120
	2" x 1 1/4"	14	.187	3" x 1 1/2"	16	.187
C "Leg In"	1 1/2" x 3/4"	10	.187	1 1/2" x 3/4"	10	.187
	2 1/2" x 1 1/4"	14	.187	3" x 1 1/2"	16	.187

1. Capacities based on mild grade material, number of bending passes may vary.

2. Tie Bar accessory required for bending large profiles.

3. Two roll drive machines increase minimum CLR.



## Minimum Radius Guide on Mild Steel Material

CE60			CE70			CE100		
Profile Dimensions	Min. CLR Inches	Wall	Profile Dimensions	Min. CLR Inches	Wall	Profile Dimensions	Min. CLR Inches	Wall
¾"	8	.113	1½"	16	.145	2"	16	.154
2"	14	.154	3"	24	.216	4"	36	.237
3"	30	.120						
1"	6	.120	1½"	16	.120	2"	12	.120
2½"	21	.203	4"	30	.187	4"	32	.187
3½"	30	.187				6"	76	.187
¾" x ¾"	6	.083	1½" x 1½"	12	.120	2" x 2"	14	.120
2" x 2"	20	.120	3" x 3"	48	.187	4" x 4"	72	.187
2½" x 2½"	30	.216						
½" x 1"	6	.083	½" x 1½"	10	.120	1" x 2½"	16	.187
1½" x 2½"	18	.120	2" x 4"	48	.187	2" x 4"	48	.187
1½" x 4"	36	.187						
1¼" x ½"	6	.083	1½" x ½"	10	.120	2½" x 1"	14	.187
2½" x 1½"	24	.120	4" x 2"	72	.187	4" x 2"	72	.187
4" x 1½"	60	.187						
1"	8 *	NA	1¼"	6 *	NA	1½"	8 *	NA
1¾"	16	NA	2"	16	NA	2½"	24	NA
¾"	4 *	NA	1½"	10 *	NA	1½"	14	NA
1¼"	10	NA	2"	16	NA	2"	18	NA
1¾"	20	NA						
⅜" x ¾"	6 *	NA	½" x 1½"	14	NA	½" x 1½"	16	NA
½" x 2"	8	NA	½" x 3"	32	NA	¾" x 4"	42	NA
¾" x 3"	40	NA						
2" x ½"	8	NA	1½" x ½"	12	NA	2" x ½"	14	NA
4" x ¾"	16	NA	4" x 1"	16	NA	6" x 1"	32	NA
1" x 1"	12	.156	1½" x 1½"	14	.187	2" x 2"	16	.187
2" x 2"	20	.236	3" x 3"	28	.375	3" x 3"	28	.375
2½" x 2½"	26	.236				4" x 4"	36	.500
1" x 1"	14	.156	1½" x 1½"	16	.187	2" x 2"	20	.187
2" x 2"	28	.236	3" x 3"	32	.375	3" x 3"	32	.375
2½" x 2½"	36	.236				4" x 4"	40	.500
1½" x ¾"	10	.156	2" x 1"	14	.187	2" x 1"	14	.187
3⅝" x 1"	18	.236	4" x 1½"	24	.187	6" x 2"	60	.375
1½" x ¾"	10	.203	2" x 1"	14	.125	2" x 1"	14	.187
4" x 1½"	18	.236	4" x 1½"	24	.187	6" x 2"	60	.375

\*Special tooling required

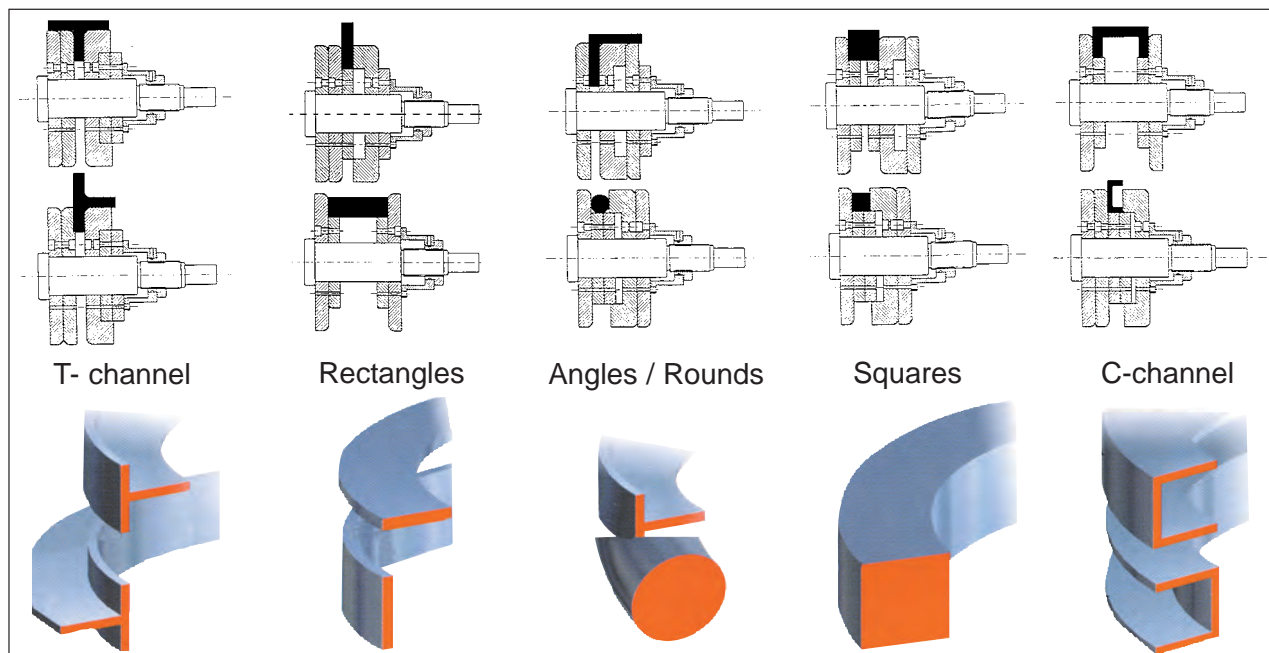
Consult CML USA, Inc. Ercolina® with application questions.

Consult factory for material and radii not shown.



## Universal Tooling Sets

All Ercolina angle roll-section bending machines **include** universal tooling sets.  
Universal tooling adjusts easily to bend the following profiles:



Part#	Description
C4ST	CE35 - CE40 – Universal tooling set
C5ST	CE50 - CE60 – Universal tooling set
C7ST	CE70 – Universal tooling set
C100ST	CE100 – Universal tooling set



Universal tooling set in Polymer available:  
CE35 - CE40 (C4STPOLY)  
and CE50 - CE60 (C5STPOLY)

## Modular Tooling Sets

Modular tooling sets support profiles,  
maintain smooth radius edges and  
reduce sharp knife-like edges.



Part#	Description
C4RC	CE35 - CE40 – 6 flanges and 6 spacers
C4RCPOLY	CE35 - CE40 – Poly modular tooling set
C5RC	CE50 - CE60 – 6 flanges and 9 spacers
C5RCPOLY	CE50 - CE60 – Poly modular tooling set
C70RC	CE70 – 6 flanges and 15 spacers
C100RC	CE100 – 6 flanges and 12 spacers

## Angle Roll-Section Bender Pipe Tooling Sets



Size	O.D.	CE35 - CE40	CE50 - CE60	CE70	CE100
1/4"	.540	C401P0250	C501P0250	NA	NA
3/8"	.675	C401P0375	C501P0375	*	*
1/2"	.840	C4SPD2**	C5SPD2**	*	*
3/4"	1.050	C4SPD1**	C5SPD1**	*	*
1"	1.315	C4SPD1**	C5SPD1**	C70P1000	C100P1000
1 1/4"	1.660	C4SPD2**	C5SPD2**	C70P1250	C100P1250
1 1/2"	1.900	C401P1500	C501P1500	C70P1500	C100P1500
2"	2.375	C401P2000 (CE40 only)	C501P2000	C70P2000	C100P2000
2 1/2"	2.875	NA	C501P2500	C70P2500	C100P2500
3"	3.500	NA	C501P3000†	C70P3000	C100P3000
4"	4.500	NA	NA	NA	C100P4000

\* Special order - consult factory for delivery

\*\* Combination Twin Tool Sets

† Only available for CE60 model

Consult factory for tooling sizes not shown.

## Angle Roll-Section Bender Tube Tooling Sets

Size	O.D.	CE35 - CE40	CE50 - CE60	CE70	CE100
1/4"	.250	C401T0250	C501T0250	NA	NA
3/8"	.375	C401T0375	C501T0375	NA	NA
1/2"	.500	C401T0500	C501T0500	NA	NA
5/8"	.625	C401T0625	C501T0625	NA	NA
3/4"	.750	C401T0750	C501T0750	NA	NA
7/8"	.875	C401T0875	C501T0875	NA	NA
1"	1.000	C401T1000	C501T1000	NS*	NS*
1 1/8"	1.125	C401T1125	C501T1125	NS*	NS*
1 1/4"	1.250	C401T1250	C501T1250	NS*	NS*
1 3/8"	1.375	C401T1375	C501T1375	NS*	NS*
1 1/2"	1.500	C401T1500	C501T1500	NS*	NS*
1 5/8"	1.625	C401T1625	C501T1625	NS*	NS*
1 3/4"	1.750	C401T1750	C501T1750	NS*	NS*
1 7/8"	1.875	C401T1875	C501T1875	NS*	NS*
2"	2.000	C401T2000	C501T2000	C70T2000	C100T2000
2 1/8"	2.125	C401T2125 (CE40 only)	C501T2125	NS*	NS*
2 1/4"	2.250	C401T2250 (CE40 only)	C501T2250	NS*	NS*
2 1/2"	2.500	C401T2500 (CE40 only)	C501T2500	C70T2500	C100T2500
2 3/4"	2.750	NA	C501T2750	NS*	NS*
3"	3.000	NA	C501T3000	C70T3000	C100T3000
4"	4.000	NA	NA	NA	C100T4000

\* Not stocked. Special order - consult factory for delivery.





## Polymer Roll Tooling Sets



Polymer tooling maintains material appearance reducing scratching and blemishes.



### Polymer Pipe Tooling

Size	O.D.	CE35 - CE40	CE50 - CE60
1"	1.315	C401NP1000	C501NP1000
1¼"	1.660	C401NP1250	C501NP1250
1½"	1.900	C401NP1500	C501NP1500
2"	2.375	C401NP2000 (CE40 only)	C501NP2000
2½"	2.875	NA	C501NP2500

### Polymer Tube Tooling

Size	O.D.	CE35 - CE40	CE50 - CE60
1"	1.000	C401NT1000	C501NT1000
1¼"	1.250	C401NT1250	C501NT1250
1½"	1.500	C401NT1500	C501NT1500
1¾"	1.750	C401NT1750	C501NT1750
2"	2.000	C401NT2000	C501NT2000
2½"	2.500	C401NT2500 (CE40 only)	C501NT2500

## Small Radius Tooling

### Small Radius Tooling

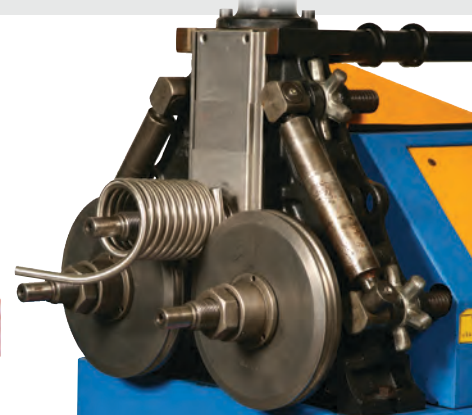
Adjustable tooling set for small radius bending applications.

#### Tooling Material Capacities

Profile	Maximum
Square solids	⅝" x ⅝"
Rectangular solids	¾" x ¼"
Rounds	⅝"
T Stock	¾" x ¾"

Part# **C4RR** fits CE35 - CE40

Part# **C5RR** fits CE50



## Cap Rail & Profile Tooling

Available by special order for angle roll machines.  
Consult CML USA with specific profile and dimensions.



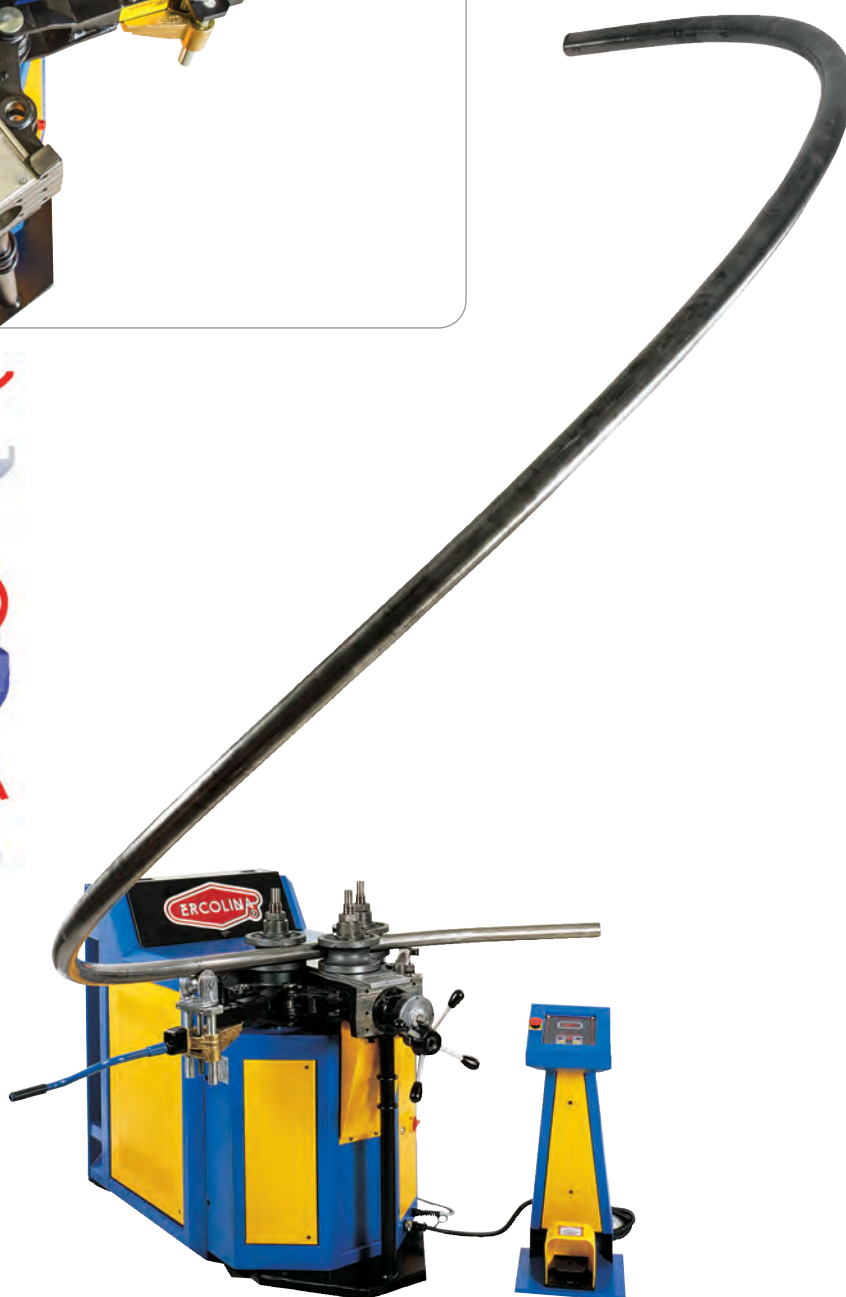
# Angle Roll-Section Bender Accessories

## Large Spiral Bending Accessory

Ideal for large pitch spiral bending applications. Material capacity 2" outside diameter.

Part# **CS5A11** fits CE40 - CE50 - CE60

Part# **CS7A11** fits CE70





## Angle Roll-Section Bender Accessories



### Tie Bar Accessory

Recommended when bending large profiles or heavy wall material. Increases roll shaft rigidity and radii accuracy.

Part# **C5A2** fits CE40 and CE50

Part# **CE70A2** fits CE70

Part# **CE100A2** fits CE100



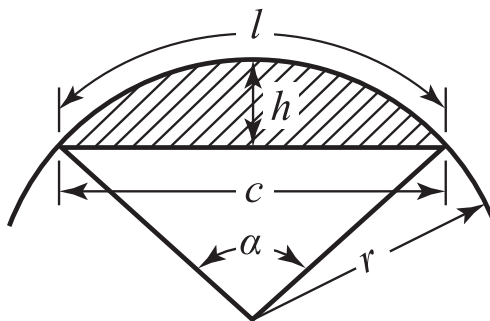
### Anti-Twist Device

Required for Angle iron "Leg In" applications.

Part# **CEA4-ECO40** fits CE35

Part# **C5A4** fits CE40 - CE50 - CE60

### Circular Segment



$l$  = length of arc;  $h$  = height at midpoint of chord;  $c$  = chord length;  
 $\alpha$  = angle, in degrees;  $r$  = radius.

$$r = \frac{c^2 + 4h^2}{8h}$$



### Fabricator's Measuring Set

Radius & Degree Measuring Kit - Part# **KARC**

Part#	Description of Kit Contents
ARC160	Chord Gauge 160 mm
ARC350	Chord Gauge 350 mm
FWOC001	Digital Radius Gauge
FXC025	Digital Angle Degree Protractor



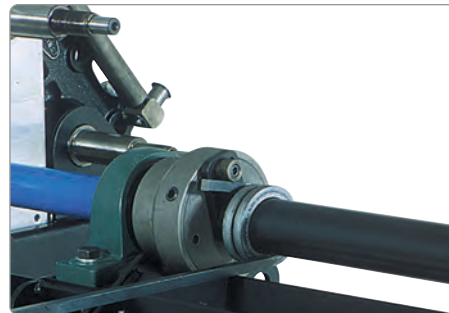


## Bar Twisting Device

Part# CT4/2300 fits CE40

Part# CT5/2300 fits CE50

Tooling included for Bar Twisting  
and  
Bending Small Spiral  
Tight Radius Rings and Hoops



- Quickly adapts to CE40 and CE50 angle rolls to create custom components for ornamental gates, railing and more
- Twists balusters up to 1" square
- Heavy duty construction with over (7') of workable table length
- Electromechanical interface provided to control rotation and repeatability
- Self aligning chuck and quick release tailstock system for easy material changeover



## Ornamental Metalworking Accessories








### Scroll Curling Device

Part# **CR4A8** fits CE40

Part# **CR5A8** fits CE50 and CE60



- Quickly adapts to CE40, CE50 and CE60 ring rolls to produce ornamental scrollwork
- Electromechanical interface provided to control exact rotation and repeatability
- Patented scroll pattern chain with removable links allows operator to select desired scroll pattern

Scroll Chain Radius Chart								
								
	Min	Max	Min	Max	Min	Max	L	Standard No. of Spirals
<b>SMALL</b> Chain Part # CERCP	3/8" x 3/16"	3/4" x 1/4"	3/16" x 3/16"	1/4" x 1/4"	3/16"	1/4"	4-3/8"	2
<b>MEDIUM</b> Chain Part # CERCM	3/8" x 5/16"	1-1/2" x 5/16"	5/16" x 5/16"	3/8" x 3/8"	5/16"	5/16"	4-3/8"	3
<b>LARGE</b> Chain Part # CERCG	3/8" x 1/4"	1-3/16" x 3/8"	1/4" x 1/4"	5/8" x 5/8"	1/4"	5/8"	9-7/8"	2

Ships standard with Medium Scroll Chain



# METALWORKING MACHINERY

METALWORKING MACHINERY





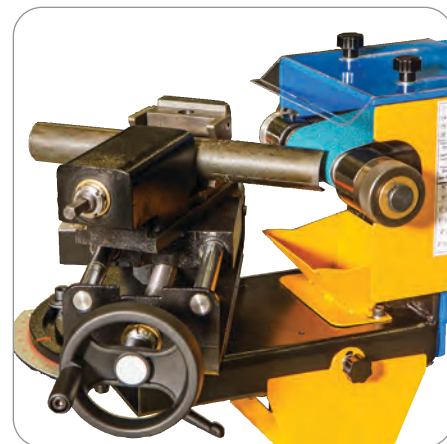


**EN100**

## Universal Pipe & Tube Notcher / Grinder



**Patented quick-change roller system**



**Part# EN100 machine only**



## Precision Notching

### FEATURES

- Quickly create perfect professional notches at any angle to 60°
- One handle moves pipe or tube in and across abrasive belt simultaneously - extending belt life and reducing heat (patented by Ercolina)
- Ideal for hand railing, chassis and roll cages, fences and gates, furniture frames, marine rails and arches, tubing and plumbing for restaurant and dairy
- Replaces outdated notching methods of using hole saws, end mills, grinding wheels and flame cutting
- Uses premium abrasive belts for a wide range of materials including; carbon steel, stainless steel, Inconel, chrome moly, aluminum and titanium
- Graduated vise 0-60° with vertical adjustment for offset angles
- Patented quick-change roller system
- Converts to abrasive belt grinder with optional accessory
- Top mounted deburring surface
- Over 25 notcher rollers available
- Tool free belt changeover

## EN100 Capacities & Specifications

Minimum Diameter	1"
Maximum Diameter	3" *
Angle Range	0-60° at 2 $\frac{3}{8}$ " O.D.
Belt Size	4" x 76 $\frac{3}{4}$ "
Belt Speed	100 FPS
Dust Extraction	Conventional
Voltage Requirement	220V or 480V 3ph
Motor	5 $\frac{1}{2}$ hp 50-60Hz
Motor Speed	3650 RPM
Contact Wheel	NA
Length, Width, Height	52" x 22" x 43"
Shipping Weight	425 lbs.

\* (Consult factory for application information at maximum capacity.)



Notch angles to 60° in pipe or tube up to 3" in seconds, to a gap free fit ready for welding.

### EN100 Grinding Belts

Part#	Description
EN100BLT-76	40 grit – 4" x 76 $\frac{3}{4}$ " Zirconia Alumina fits EN100
EN100BLTCR-76	36 grit – 4" x 76 $\frac{3}{4}$ " Heavy-Duty Ceramic fits EN100

#### For Serial No. 1006046 & Older:

EN100BLT	40 grit – 4" x 79" Zirconia Alumina fits EN100
EN100BLTCR	36 grit – 4" x 79" Heavy-Duty Ceramic fits EN100

Belts also available in boxes of 10

### EN100 Notcher Rollers for Pipe

Pipe Size	Roller Part#
$\frac{3}{4}$ "	EN100RP0750
1"	EN100RP1000
1 $\frac{1}{4}$ "	EN100RP1250
1 $\frac{1}{2}$ "	EN100RP1500
2"	EN100RP2000
2 $\frac{1}{2}$ "	EN100RP2500

### EN100 Notcher Rollers for Tube

Tube Size	Roller Part#
1"	EN100RT1000
1 $\frac{1}{8}$ "	EN100RT1125
1 $\frac{1}{4}$ "	EN100RT1250
1 $\frac{3}{8}$ "	EN100RT1375
1 $\frac{1}{2}$ "	EN100RT1500
1 $\frac{5}{8}$ "	EN100RT1625
1 $\frac{3}{4}$ "	EN100RT1750
2"	EN100RT2000
2 $\frac{1}{4}$ "	EN100RT2250
2 $\frac{1}{2}$ "	EN100RT2500
3"	EN100RT3000



Top Deburring Surface

**Product  
Demonstrations  
Available on Website**

**NEED ADDITIONAL HELP?  
CONTACT ERCOLINA:**

**563.391.7700**

[info@ercolina-usa.com](mailto:info@ercolina-usa.com)



## Era Press

### EP25H2-V2 (25 tons of power)

## Horizontal Hydraulic Press

### STANDARD FEATURES

#### **Quick-change modular tooling**

Tooling available for tube flaring & flanging

Utilizes punch-style swage tooling

**Performs** metalworking press operations

Programmable touchpad control with back-lit LCD display  
(8 program storage)

**Accurate controls** of length of expansion or reduction  
or degree of fold with programmable cylinder stroke

**Expands and reduces** tube and pipe ends

**Heavy-duty** structure and rigid components

Adjustable working speed and hydraulic force

Remote pendant with low voltage controls

Hydraulic material clamping system



Part# EP25H2-V2  
machine only

### EP60 (60 tons of power)

### ADDITIONAL FEATURES ON EP60

Swage square and rectangular tube

Hand-held remote control certified class  
three safety

LCD touch screen control

**Unlimited** program storage with USB

Utilizes punch or finger-style swage tooling

**Energy saving** motor shuts off when not in use

Optional side shift feature reduces tooling  
changeover



Part# EP50H1  
machine only



EP60 Touch Screen Control Panel

## POWERFUL SWAGING AND METALWORKING PRESSES



## ERA PRESS INDUSTRIAL APPLICATIONS

### ERCOLINA HORIZONTAL HYDRAULIC PRESS

Ercolina's **EP25H2-V2** (25 ton hydraulic force) and **EP60** (60 ton hydraulic force) Era Press metalworking machines are programmable tube and pipe swaging machines and metalworking presses. Both models include standard tooling and offer optional tooling to form a wide variety of material.

Ercolina offers high quality equipment for a variety of industries around the globe.

Following is a partial list of industrial applications :

#### Swaging Tube & Pipe Reducing and Expanding

Furniture • Sports Equipment • Banner Displays • Ground-mounted Radio Towers

#### Flaring & Flanging Applications

Refrigeration • Air Conditioning • Hydraulic Hoses • Plumbing

#### Press Brake Applications

Bar Folding • Mounting Brackets • L-Brackets • Tabs

#### Custom Applications

Tube Beading

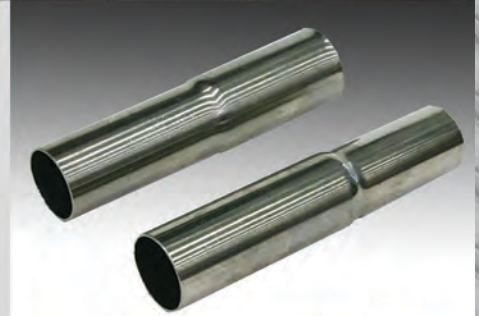
### Capacities & Specifications

	EP25H2-V2	EP60
Tube Diameter:	3½" x .120	3½" - 4½" x .120
Max. Expansion / Reduction	(Tooling Dependent)	
Square Tube	N/A	2½"
Folding Capacity - Steel Flat Bar	5" x ½"	7⅞" x ¾"
Working Speed	½" – 1" sec.	Variable programmable
Programming	Touchpad	LCD touch screen
Hydraulic Force	25 Tons	60 Tons
Horizontal Press	Yes	Yes
Maximum Stroke of Cylinder	6⅝"	11½"
Maximum Swage Depth	6" *	8" **
Voltage Requirement	220V/480V 3ph	480V 3ph
Motor	3½ hp 50-60Hz	8 hp 50-60Hz
Motor Speed	3650 RPM	3650 RPM
Length, Width, Height	41" x 29½" x 48"	48" x 26" x 44"
Shipping Weight	1,675 lbs.	2,300 lbs.

\* Swage depth greater than 4½" requires special tooling – must be specified at time of order.

\*\* Swage depth dependent on finger-style tools or standard reduction style – must be specified at time of order.

Contact CML USA for complete technical specifications. All capacities based on mild grade materials; heavy wall and high tensile materials reduce machine capacity.



## Era Press EP25H2-V2 Tooling

### Tooling Included With EP25H2-V2



FEP25-0006-00  
Expansion/Reduction  
Holder



FEP25TI  
Tube Expansion Tie Bar



FEP25-0007-00  
Prism Holder



FEP25-0005-00  
Straightening Supports



EPBM  
Adjustable Stop



## Era Press EP60 Tooling

### Tooling Included With EP60



FEP60TI  
Tube Expansion Tie Bar



FEP25-0007-00  
Prism Holder

## Finger-style Reduction Tooling for Tube, Pipe & Square for EP60



A100SPF  
Reduction Cone Holder



Finger-Style Clamp  
(specify size  
when ordering)



Tapered Reduction Cone  
(specify size  
when ordering)

Diameter	Finger-Style Clamp for Tube & Pipe	Reduction Cone for Tube & Pipe
1"	HTR30-24	HTE20
1-1/4"	HTR32-26	HTE24
1-1/2"	HTR38-32	HTE32
1-3/4"	HTR46-40	HTE36
2"	HTR52-46	HTE42
2-1/4"	HTR58-52	HTE48
2-1/2"	HTR64-58	HTE54
2-3/4"	HTR70-64	HTE60
3"	HTR78-72	HTE68
3-1/2"	HTR88.9-82.6	HTE76.2
4"	HTR101.6-95.3	HTE95.3
4-1/2"	HTR114.3-108	HTE108

Diameter	Finger-Style Clamp for Square	Reduction Cone for Square
1"	*	*
1-1/4"	*	*
1-1/2"	*	*
2"	*	*

\* Available on request





## Bar Fold Tooling for EP25 and EP60



FEP2MS4V  
Folding Prism  
5/8" - 7/8" - 1 3/8"  
& 2" Openings  
Maximum Height 8"



FEP2MS85-80  
Folding Prism  
3 3/8" Opening  
Max Capacity:  
8" x 3/8" at 90°



FEP2MS80-140  
Folding Prism  
5 1/2" Opening  
Max Capacity:  
8" x 1/2" at 90°



FEPL60R10  
Radius Folding Insert  
10MM Radius  
(Additional radii  
available)



FEP25-0008-00  
Flat Bar Folding Shaft  
with Radius Insert Holder

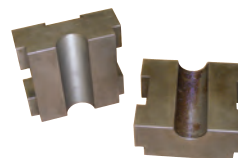
## Expansion / Reduction Tooling for EP25 and EP60



Expansion Punch  
(specify size when ordering)



Reduction Cup  
(specify size when ordering)



Clamp Jaw Set (set of 2)  
(specify size when ordering)

### Tube Sizes

Tube Size	Expansion Punch (EP25 & EP60)	Reduction Cup (EP25 & EP60)	Clamp Jaws (EP25)	Clamp Jaws (EP60)
1"	EP250E1T1000	EP250R1T1000	EP250G1T1000	EP60G1T1000
1-1/4"	EP250E1T1250	EP250R1T1250	EP250G1T1250	EP60G1T1250
1-1/2"	EP250E1T1500	EP250R1T1500	EP250G1T1500	EP60G1T1500
1-3/4"	EP250E1T1750	EP250R2T1750	EP250G1T1750	EP60G1T1750
2"	EP250E2T2000	EP250R2T2000	EP250G2T2000	EP60G2T2000
2-1/4"	EP250E2T2250	EP250R2T2250	EP250G2T2250	EP60G2T2250
2-1/2"	EP250E2T2500	EP250R2T2500	EP250G2T2500	EP60G2T2500
2-3/4"	EP250E2T2750	EP250R2T2750	EP250G2T2750	EP60G2T2750
3"	EP250E2T3000	EP250R2T3000	EP250G2T3000	EP60G2T3000
3-1/2"	EP250E2T3500	EP250R2T3500	EP250G2T3500	EP60G2T3500
EP60 Only				
4"	EP250E2T4000	EP250R2T4000	N/A	EP60G2T4000
4-1/2"	EP250E2T4500	EP250R2T4500	N/A	EP60G2T4500

### Pipe Sizes

Pipe Size	Expansion Punch (EP25 & EP60)	Reduction Cup (EP25 & EP60)	Clamp Jaws (EP25)	Clamp Jaws (EP60)
1"	EP250E1P1000	EP250R1P1000	EP250G1P1000	EP60G1P1000
1-1/4"	EP250E1P1250	EP250R1P1250	EP250G1P1250	EP60G1P1250
1-1/2"	EP250E1P1500	EP250R1P1500	EP250G1P1500	EP60G1P1500
2"	EP250E2P2000	EP250R2P2000	EP250G2P2000	EP60G2P2000
2-1/2"	EP250E2P2500	EP250R2P2500	EP250G2P2500	EP60G2P2500
3"	EP250E2P3000	EP250R2P3000	EP250G2P3000	EP60G2P3000
EP60 Only				
4"	N/A	EP250R2P4000	N/A	EP60G2P4000

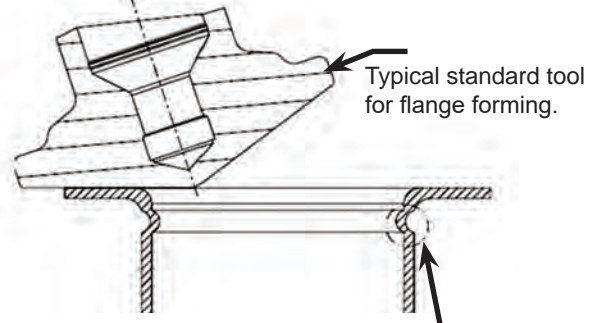




# Erco Flange EFB220

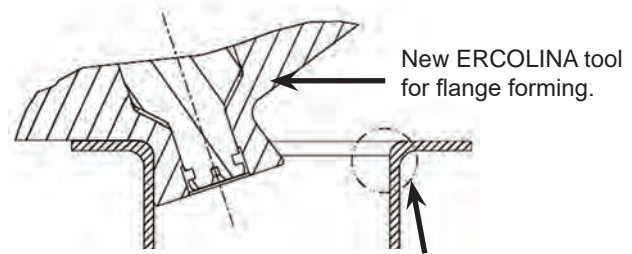
## Flanging Machine

### TRADITIONAL FORMING SYSTEM MOST USED BY COMPETITORS



Main defect: collapsing of material around flange collar. Reduced tube diameter results in flow restriction.

### ERCOLINA INNOVATIVE FORMING SYSTEM



Thickness of material in area of flange radius may be increased. Gain in material at flange radius improves structural integrity.



Part# EFB220 machine only



## Innovative Design Solves Flange Issues

### FEATURES

- 37° and 90° flanges
- 8" gas max capacity
- PLC control, 5.7" touch screen
- Extremely easy setup
- Quick-change tooling
- Efficient: 30% cost reduction
- Heavy duty cast iron structure
- Double conical tools avoid swelling and deformation
- Consistent quality results



Ercolina's EFB uniformly cold forms a variety of materials including stainless, steel, copper and aluminum to 90° flanges in tubes with maximum wall thickness of .1875".

The innovative forming process uses a series of double conical tools to avoid swelling and deforming the flange.

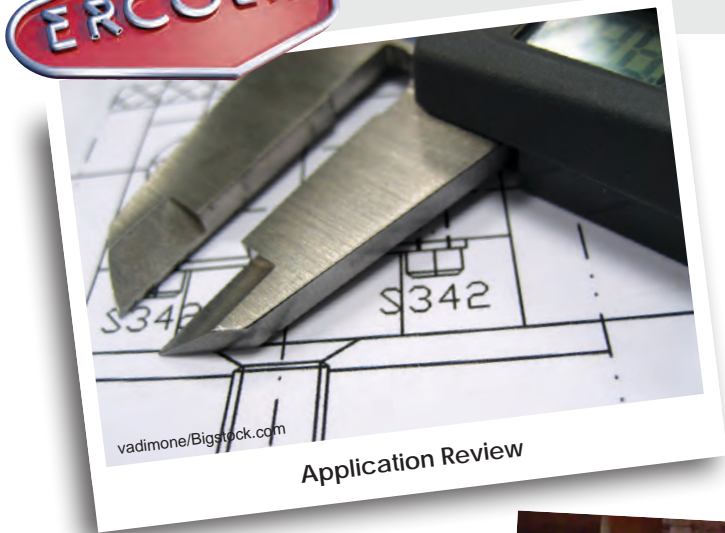
Greater accuracy with minimum deformation results in less post-forming operations and higher productivity.

The EFB is equipped with a PLC control with 5.7" touch screen to easily control settings and machine operation.

Three types of tools for capacity from 3/4" to 8 5/8".



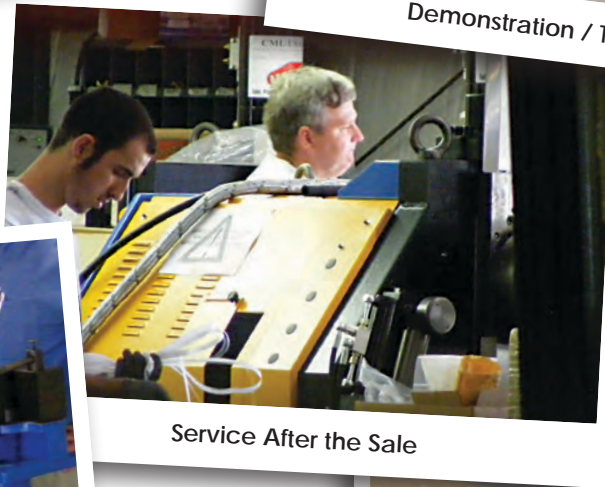
## Taking Care of Bending



Application Review



Demonstration / Training Facility



Service After the Sale



Hands-on Training



Quality Repeatable Bends with Ercolina®



### About This Catalog:

We have tried to make this catalog comprehensive and factual. CML USA, Inc. reserves the right to make changes at any time without notice to price, color, material, equipment, specifications, models, machine operation, tooling requirements and availability. Catalog may have been updated since the time of printing.

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