



# **ERCO BENDER 45/76**

**3 AXIS CNC**

**MANDREL MACHINE**



**INNOVATIVE TUBE & PIPE  
BENDING  
MACHINERY**

**" 40 Years Excellence in Quality, Support and Service "**



Linear and rotary motion control of carriage and mandrel are fully automatic. Powered programmable mandrel carriage greatly reduces thinning effect of tube wall in bending area.

Programmable internal mandrel lubrication.



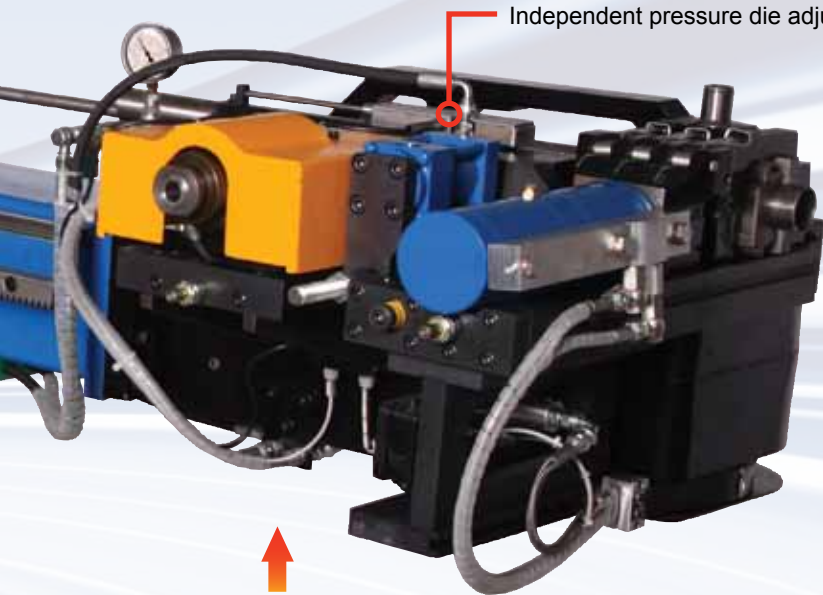
## FEATURES

- Models available up to 3" capacity
- Extended bending head capable of bending complex shapes and profiles
- Automatic or manual bend sequencing
- Independent pressure and clamp die adjustment
- Programmable carriage movement for tight radii
- Standard right hand bending direction
- Interactive PLC touch screen offers easy access to auto and manual operating modes, system diagnostics and multiple language capability
- Programmable material springback settings for each bend angle
- Programmable auto mandrel positioning allows operator to optimize extraction for improved bend quality
- USB for unlimited program memory storage and communication
- Interactive touch screen displays absolute (ABS) or incremental (INC) positioning with inch or metric readout
- Programmable tail stock interference zone monitors position and eliminates workhead collision
- Accepts YBC and XYZ input values
- Hand-held remote bending control, certified class 3 safety and all electrical components UL, CSA and CE approved
- LCD touch screen displays multiple axis position in absolute and incremental formats
- Programmable internal mandrel mist lubrication (3 settings)
- Auxiliary hydraulic oil cooling
- Quick change tooling system
- Standard 13' table, extension available
- Tail stock with through spindle accepts longer material
- One (1) year limited warranty

# ERCO BENDER 45/76

## 3 AXIS CNC

### MANDREL MACHINE



Independent pressure die adjustment.

Micrometric wiper die adjustment.



Space underneath the work head completely free!

#### Dimensions & Specifications

Model	Erco Bender 45	Erco Bender 76
Max. Tube Capacity - Mild Steel	1¾" (.160 wall)	3" (.079 wall)
Stainless	1¾" (.079 wall)	3" (.065 wall)
Square Tube	1½"	2"
Max. Pipe Capacity	1½" Sch. 40	1½" Sch. 40
Max. Bending Radius	11.8"	11.8"
Min. Bending Radius	1.5" x Ø	1.5" x Ø
Max. Shaft Rotation	210°	210°
Max. Bending Angle	180°	180°
Tail Stock Capacity	Ø 1.75"	Ø 3.125"
Length of Bending Head	59"	59"
Minimum Distance Between Bends under Work Head	10"	11.8"
Nominal Hydraulic Pressure	150 bar	150 bar
Max. Bending Speed	15/18 rpm	10/12 rpm
Max. Return Speed	4/8 rpm	4/8 rpm
Max. Material Length – Standard / Optional Table	13' / 21'	13' / 21'
Maximum Carriage Travel	125"	125"
3 Axis Numerical Control bend angle (x), linear feed (y), rotation (z)	x=90°/sec. y=30°/sec. z=80°/sec.	x=60°/sec. y=30°/sec. z=80°/sec.
(y - b - c) Compatible	yes	yes
Number of Programs	Unlimited with USB	Unlimited with USB
Precision of Bend Angle	+/- .5°	+/- .5°
Programmable Carriage Movement	yes	yes
Motor 440V-480V 3 ph at 50/60 Hz	20 kW	20 kW
Dimensions (Length - Width - Height)	205" x 44" x 52"	205" x 44" x 52"
Weight	4,188 lbs.	4,850 lbs.



#### Interactive touch screen

With USB unlimited program storage



#### Class 3 safety hand-held remote

Controls bend, return & emergency stop functions

\* Contact CML USA for complete technical specifications.

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

# Intuitive Touch Screen Control



**MANUAL CYCLE**



**AUTOMATIC CYCLE**



**SERVICES**

Select inch or metric operation. Activate hydraulic system. Displays alarm list with alerts. Choose from multiple language options. Reserved access for diagnostics, machine data I/O fields and parameters.

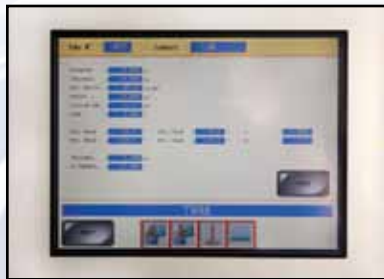


**MAIN SCREEN**



**PROGRAM**

Accepts YBC or XYZ values, automatically converts information to LRA (length, rotation, angle) for easy part layout.



**MATERIAL INFORMATION**

Stores profile information including material type, wall thickness and tensile. Automatically calculates bend elongation, required material length, theoretical wall thinning and machine load requirements.



**TOOLING INFORMATION**

Displays pressure die and clamp die position and settings. Program mandrel retraction and carriage positioning.

**ERCOLINA'S (FST)  
FINGER CLAMPING SYSTEM  
ACCOMMODATES A VARIETY  
OF APPLICATIONS**



**CML USA Inc. Ercolina®**

3100 Research Parkway • Davenport, IA 52806

**"40 Years Excellence in Quality, Support and Service"**

Ph. 563-391-7700 • Fax 563-391-7710 • [info@ercolina-usa.com](mailto:info@ercolina-usa.com) • [www.ercolina-usa.com](http://www.ercolina-usa.com)