

## Tube bending machine

### Euro SERIES 45

The EURO Series 45 is a 1 axis (Y) tube for bending stainless steel, iron, copper or brass tubes or tubes in other special alloys up to 45 mm in diameter. The Euro Series 45 model features automatic bending and manual advancement and rotation.

The following are fitted as standard:

- heat exchanger;
- early mandrel extraction;
- automatic mandrel lubrication.

## SERIE 45



**EURO**



**PROFAST**



**PROVAR 5**



**PROVAR 6**

## DATA SHEET - EURO



FEATURES	U.M.	EURO
Y Max. bending speed	°/1"	150
Y Tolerance	+/- °	0.1
Weight	+/- Kg	3500

BENDING CAPACITIES	U.M.	EURO
Round tube R=42 Kg/mm <sup>2</sup>	mm	45x4
Round stainless steel tube	mm	40x3
Round tube Alum. Brass Copper Alloys	mm	45x5
Square tube R=42 Kg/mm <sup>2</sup>	mm	40x40x2
Rect. tube bent easy way	mm	30x45x2
Rect. tube bent hard way	mm	40x35x2
Round bar R=42 Kg/mm <sup>2</sup>	mm	30
Square solid R=42 Kg/mm <sup>2</sup>	mm	25x25
Min. R.I. with normal axle	mm	≥30
Min R.I. special	mm	≤30
Max. R.M. with rolls	mm	260
Mandrel extraction stroke	mm	60
Max bending angle	°	195
Working length	mm	3450
Machine extensions	mm	1540

Machine features are indicative and not binding. Macri Italia s.r.l. reserves the right to make changes for the purposes of technical improvement.

## Tube bending machine

### Profast SERIES 45

The PROFAST Series 45 is a fully automatic, 3 axis tube bending machine: bending (Y axis), advancement (X axis) and rotation (Z axis). The PROFAST Series 45 can bend tubes up to 45 mm in diameter.

The following are fitted as standard:

- heat exchanger;
- early mandrel extraction;
- automatic mandrel lubrication.

## SERIE 45



EURO



PROFAST



PROVAR 5



PROVAR 6

## DATA SHEET - PROFAST



FEATURES	U.M.	PROFAST
Y Max. bending speed	°/1"	150
Y Tolerance	+/- °	0.1
X Max. traverse speed	mm 1"	1000
X Tolerance	+/- mm	0.1
Z Max. gripper rotation speed	°/1"	450
Z Tolerance	+/- °	0.1
Weight	+/- Kg	3800

BENDING CAPACITIES	U.M.	PROFAST
Round tube R=42 Kg/mm <sup>2</sup>	mm	45x4
Round stainless steel tube	mm	40x3
Round tube Alum. Brass Copper Alloys	mm	45x5
Square tube R=42 Kg/mm <sup>2</sup>	mm	40x40x2
Rect. tube bent easy way	mm	30x45x2
Rect. tube bent hard way	mm	40x35x2
Round bar R=42 Kg/mm <sup>2</sup>	mm	30
Square solid R=42 Kg/mm <sup>2</sup>	mm	25x25
Min. R.I. with normal axle	mm	≥30
Min R.I. special	mm	≤30
Max. R.M. with rolls	mm	260
Mandrel extraction stroke	mm	60
Max bending angle	°	195
Working length	mm	3450
Machine extensions	mm	1540

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## Tube bending machine

### Provar 5 Axis

#### SERIES 45

The PROVAR 5 Axis Series 45 is a fully automatic, 3 axis tube bending machine: bending (Y axis), advancement (X axis) and rotation (Z axis). The PROFAST Series 45 can bend tubes up to 45 mm in diameter and lateral movement of the positioner and the mandrel (axes B1 and B2).

The PROVAR 5 Series 45 can bend tubes up to 45 mm in diameter and has two levels of equipment per fixed and variable radius or two different fixed radii.

The following are fitted as standard:

- heat exchanger;
- early mandrel extraction;
- automatic mandrel lubrication.

## SERIE 45



EURO



PROFAST



PROVAR 5



PROVAR 6

## DATA SHEET - PROVAR 5



FEATURES	U.M.	PROVAR 5
Y Max. bending speed	°/1"	150
Y Tolerance	+/- °	0.1
X Max. traverse speed	mm 1"	1000
X Tolerance	+/- mm	0.1
Z Max. gripper rotation speed	°/1"	450
Z Tolerance	+/- °	0.1
B1 Max. speed	mt/1"	24
B1 Tolerance	+/- mm	0.1
B2 Max. speed	mt/1"	24
B2 Tolerance	+/- mm	0.1
Weight	+/- Kg	4000

BENDING CAPACITIES	U.M.	PROVAR 5
Round tube R=42 Kg/mm <sup>2</sup>	mm	45x4
Variable curve R=42 Kg/mm <sup>2</sup> RM min 10 D	mm	35x2
Round stainless steel tube	mm	40x3
Round tube Alum. Brass Copper Alloys	mm	45x5
Square tube R=42 Kg/mm <sup>2</sup>	mm	40x40x2
Rect. tube bent easy way	mm	30x45x2
Rect. tube bent hard way	mm	40x35x2
Round bar R=42 Kg/mm <sup>2</sup>	mm	30
Square solid R=42 Kg/mm <sup>2</sup>	mm	25x25
Min. R.I. with normal axle	mm	≥30
Min R.I. special	mm	≤30
Max. R.M. with rolls	mm	260
Mandrel extraction stroke	mm	60
Max bending angle	°	195
Working length	mm	3450
Machine extensions	mm	1540

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## Tube bending machine

### Provar 6 Axis

#### SERIES 45

The PROVAR 6 Axis Series 45 is a fully automatic, 3 axis tube bending machine: bending (Y axis), advancement (X axis) and rotation (Z axis). The PROFAST Series 45 can bend tubes up to 45 mm in diameter and lateral movement of the positioner and of the mandrel (axes B1 and B2) and up-down movement of the head (axis A).

The PROVAR 6 Series 45 can bend tubes up to 45 mm in diameter and has two levels of equipment per fixed and variable radius or two different fixed radii.

The following are fitted as standard:

- heat exchanger;
- early mandrel extraction;
- automatic mandrel lubrication.

## SERIE 45



EURO



PROFAST



PROVAR 5



PROVAR 6

## DATA SHEET - PROVAR 6



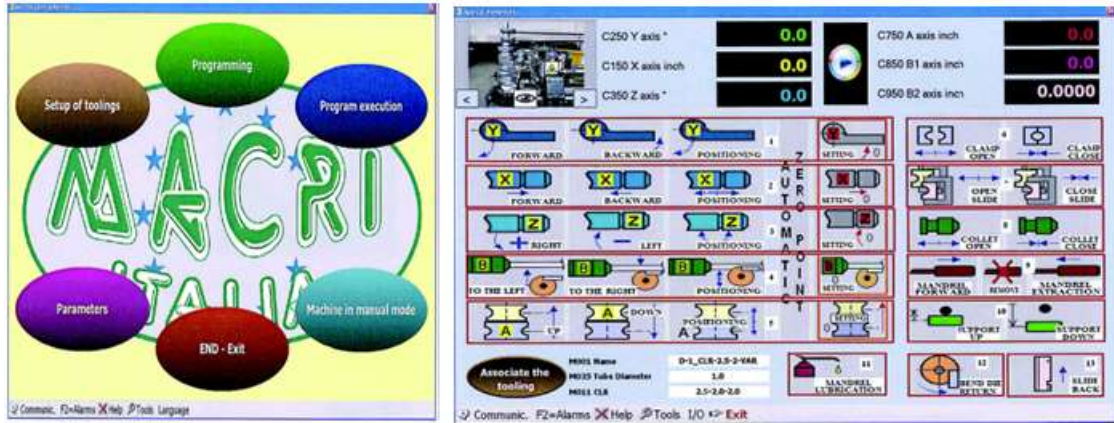
FEATURES	U.M.	PROVAR 6
Y Max. bending speed	°/1"	150
Y Tolerance	+/- °	0.1
X Max. traverse speed	mm 1"	1000
X Tolerance	+/- mm	0.1
Z Max. gripper rotation speed	°/1"	450
Z Tolerance	+/- °	0.1
B1 Max. speed	mt/1"	24
B1 Tolerance	+/- mm	0.1
B2 Max. speed	mt/1"	24
B2 Tolerance	+/- mm	0.1
A Max. speed	mt/1"	3
A Tolerance	+/- mm	0.1
Weight	+/- Kg	4500

BENDING CAPACITIES	U.M.	PROVAR 6
Round tube R=42 Kg/mm <sup>2</sup>	mm	45x4
Variable curve R=42 Kg/mm <sup>2</sup> RM min 10 D	mm	35x2
Round stainless steel tube	mm	40x3
Round tube Alum. Brass Copper Alloys	mm	45x5
Square tube R=42 Kg/mm <sup>2</sup>	mm	40x40x2
Rect. tube bent easy way	mm	30x45x2
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# TUBE BENDING MACHINES SOFTWARE

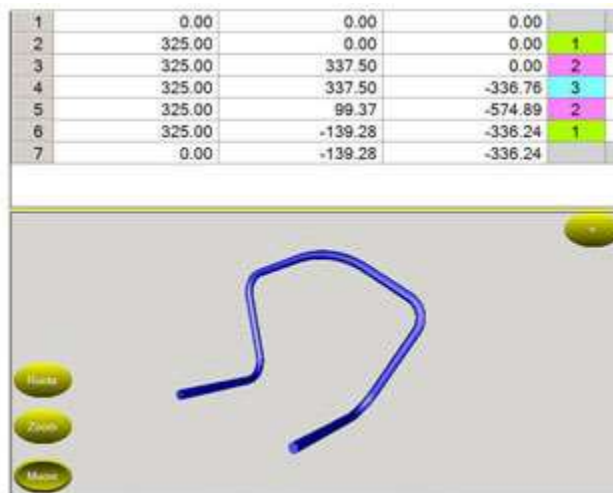


Exclusive software for the management of tube bender machines with an extremely easy and user-friendly graphic, three-dimensional interface.

A state-of-art solution for **great precision and maximum response speed** so as to reduce tolerances to a minimum

Through the **three-dimensional graphic interface and language assistance**, each operator can in fact:

- design and develop the tube design in machine, Cartesian and CAD coordinates;
- program the speed of each axis for each bend and the thrust;
- view the tube processing cycle in real time;
- calculate processing feasibility and, in the event of collision, make the necessary corrections automatically without deforming the item;
- quickly change and set up equipment and bend die;
- archive all programs created by code, name and graphic image.



# TUBE BENDER CONTROL CABINET

All Macri Italia tube benders are operated by an **electric information system** that can be managed by means of a control cabinet located next to each machine.

The *touch-screen monitor* and exclusive software make this technologically avant-garde and easy to manage solution the unique selling point of the Macri Italia offering.

## 3/5/6 Axis Control Cabinet Features

- Ergonomic control cabinet with front panel and 19" touch-screen monitor
- Compact industrial computer
- 80 Gb hard disk
- Integrated Ethernet network
- 3 serial ports
- 3 USB ports - 1 at the front
- Multilingual last-generation operating system
- Keyboard and mouse.



## 1 Axis Control Cabinet Features

- Air-conditioned control cabinet
- Small back-lit display
- 200-program memory capacity

