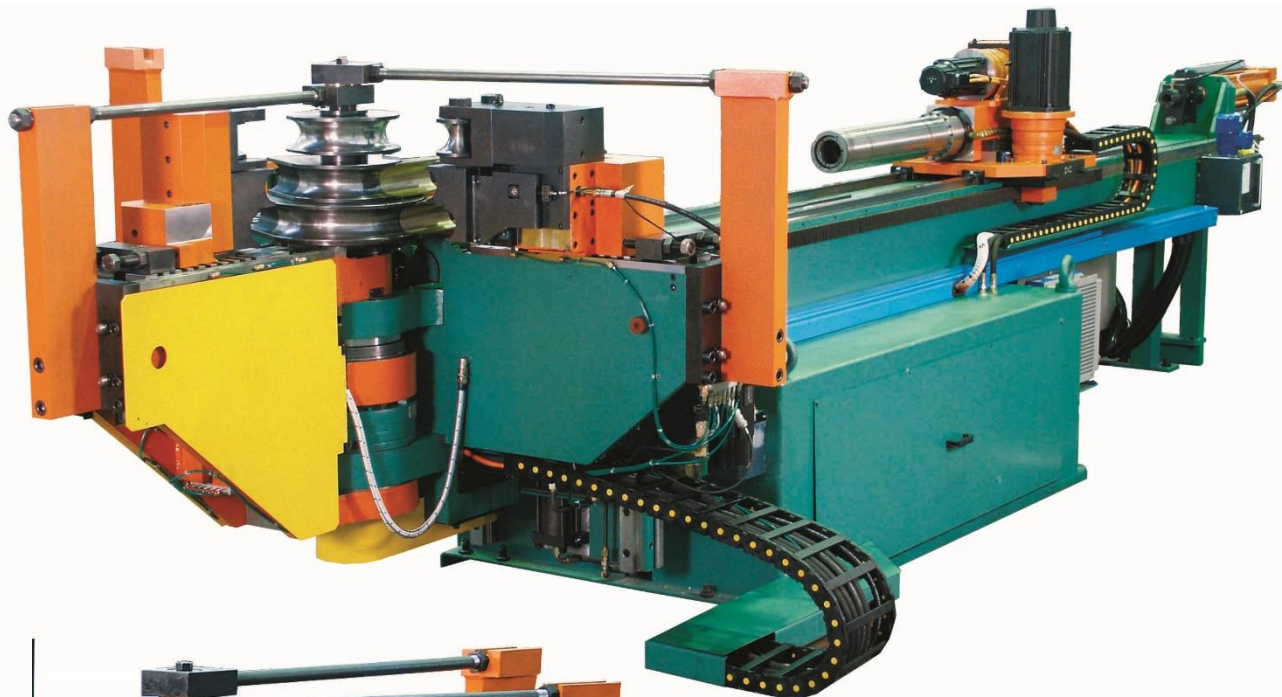




PEDRAZZOLI

BEND MASTER 75 MRV IMS
MULTI STACK BENDER

BEND MASTER 75 IMS MULTI-RADIUS & VARIABLE RADIUS





MULTIRADIUS AND VARIABLE RADIUS TUBE BENDING MACHINE WITH IMS CONTROL

1) BM75MRV IMS - BEND MASTER 75 IMS MULTI-RADIUS & VARIABLE RADIUS TUBE BENDING MACHINE WITH IMS CONTROL

BEND MASTER 75 MRV IMS is a highly productive multi-radius machine that can make both fixed radius bends and variable radius bends, can make mandrel bends and also compression bends.

Machine is specifically designed for fast tooling changeover and reduces to an absolute minimum time lapse between one production batch and the following.

Main features:

- Synchronised control of electric axis
- Programmable thrust during both fixed bending and variable bending phase, this allows one to have very short gripping segments, improves the quality of bends in evident manner and makes necessary tool sets a lot simpler.
- Controls the anticipated mandrel extraction and also position of mandrel to make tool change faster and make discharge of bent piece easier.

- Programmable multi-stack tool sets
- Automatic change of tool level
- Bend radius automatic change
- Bends with different radii in same work cycle.
- Bends with fixed radius and variable radius on same work cycle
- Mobile slide with controlled axes with programmable thrust.

The 6 axis controlled by the BM75 MRV IMS are:

Movement of positioning carriage (electric)

Bend angle (electric)

Plane of bend rotation (electric)

Horizontal movement of bend head (electric)

Vertical movement of bend head

Clamping (hydraulic)

Also included the controlled axis for hydraulic slide support

Mechanical Specifications

The sturdy structure is made of high grade steel. Working of various components are carried out to extremely exacting standards in terms of precision and dimensions checks are obtained with certified measuring systems. Part movements on linear guides with re-circulating ball spheres, brushless motors and rigid mechanical structure ensure machine is sturdy yet flexible in use.

Machine is mechanically and electrically designed to offer high productivity, excellent quality and long work life.

IMS Control

The IMS (Intelligent Motion System) control system based on Windows® OS is totally developed in house by Pedrazzoli. It is installed with Windows® Embedded on industrial PC complete with CD-ROM drive, floppy disk drive, hard disk, high-resolution graphic colour monitor and Touch-screen.

The intuitive and user-friendly software is adapted to customer's requirements and upgrades are down-loaded into machine by simply touching an icon on screen.

Main features:

- Graphic management of all machine functions
- Rapid set up of bending programme and verification by simulation
- Creates and manages a flexible database of work programmes, tooling sets, elastic spring-back and material stretching
- Programming can be carried out:
- Off-line while machine is working
- Database can be shared with other Pedrazzoli machines*
- IMS can interface with:
- Pedrazzoli Measuring Centre
- Customer's Ethernet network*
- Online connection between machine and Pedrazzoli head-office for real time checks and remote management of all control's functions.*
- Production Report Management for an efficient analysis and organisation of daily, weekly and monthly production schedules.
- In-built Hardware and Software safety settings safeguard against operator mistakes.
- Self-diagnostics with Multilanguage messages visualisation
- Axes self-referencing, simultaneous and synchronised movement of the various electric axes.

Technical Specifications: Electric specifications

- Number of electric controlled axes **6**
- Power of electric drives **26 kW**
- Total installed power **42 kW**
- Inline filter for electromagnetic compatibility
- High resolution graphic monitor with Touch Sensitive screen
- Pushbutton and Pedal controls for START / PAUSE CYCLE plus EMERGENCY STOPS with mushroom shaped push-button
- Electric panel IP55

Mechanical and hydraulic specifications

- Bending direction: **clockwise**
- Bending capacity with material's resistance = 40 Kg/mm² **ø75x2 mm**
- MAXIMUM length of tube
- to end of collet **4000 mm**
- to rear of carriage **5400 mm**
- Minimum inside bending radius with standard spindle: **45 mm**
- MAXIMUM development of bend with mobile slide (see options): **400 mm**
- MAXIMUM bend angle of head: **180°+10°** (o 190°)
- Accuracy in positioning of Linear axes: **±0.1mm**
- Accuracy in positioning of rotating axes: **±0.1°**
- Automatic centralised lubrication of moving parts in bending arm and head
- Hydraulic circuit's (used for jaws and vices) tank capacity **100 litres**
- Machine weight **6300 kg**
- *Items above marked with * are not included in basic machine price*
Tooling is quoted separately
Machine is supplied without hydraulic oil

Available Tooling:

- 1-1/2" O.D X 4" CLR Fixed
- 1-1/2" O.D X 2.5" CLR Fixed
- 1-1/2" O.D Variable radius
- 1-3/4" O.D X 3" CLR Fixed
- 1-3/4" O.D X 3" CLR Fixed
- 1-3/4" O.D X 3.5" CLR Fixed
- 1-3/4" O.D X 4" CLR Fixed
- 1-3/4" O.D X 5" CLR Fixed
- 1-7/8" O.D X 2.5" CLR Fixed
- 2" O.D X 3" CLR Fixed
- 2" O.D X 4" CLR Fixed
- 2-1/4" O.D X 3" CLR Fixed
- 2-1/4" O.D X 4" CLR Fixed
- 2-1/4" O.D Variable radius
- 3" O.D X 6" CLR Fixed
- 3" O.D Variable radius

