



3 AXIS SERVO CONTROL HYDRAULIC PIPE BENDING MACHINE

(PL45 - 3 AXIS)

To achieve quality & productivity



More than 200 machines working successfully



























Introduction

Rapid Flow has designed and manufactured the highest quality machines for tube industry since 1979. Rapid machines have earned a good reputation worldwide. Rapid Tube bending machines can be used for economical, small batch to high volume mass production. The range includes automatic PLC Servo Tube Bending Machines. The machine has all production related features. We also supply tooling for the simple to most complex tube bending applications.

Machine Features

- Die Clamping with Toggle mechanism & Pressure die with direct acting hydraulic cylinder.
- All slides guided on linear motion guideways.
- Bend axis powered by hydraulic cylinder.
- PLC system with touch screen HMI.
- Increased push and bend speeds with optimized parallel axis motions for high productivity.
- Spring back compensation facility.

Technical Specifications (Model: PL45 - 3 Axis)

Model	PL45 (3 Axis)	
Max. Tube Capacity (D x T)	45mm x 3mm	
	(Ferrous tubes UTS 45 Kg/mm²)	
Min. Tube Capacity (D)	12mm	
Max. Bend Radius (CLR)	150mm	
Min. Bend Radius (CLR)	25mm	
Min. Bend Radius (in terms of D)	1.5D	
Length over mandrel	2 Metres	
Carriage travel	1.5 Metres	
Bend Angle Range	5 to 180 degrees	
Bending Direction	Clockwise	
Max. Bend Speed (accuracy)	30 degrees (<u>+</u> 0.2)	
Axis drives	Push & Turn – Electric AC Servo	
	Bend – Hydraulically	
Axis (Programmable)	Max. Speed	Accuracy
Push (DBB) – Y Axis	600 mm / sec	<u>+</u> 0.1 mm
Turn (POB) – B Axis	200 deg / sec	<u>+</u> 0.1 deg
Bend (DOB) – C Axis	90 deg /sec	<u>+</u> 0.2 deg
PLC & Servo System	PLC, HMI & Servo Systems of	
	Mitsubishi make	
Memory Capacity	12 bends per program, 50 programs	
Connected Load	5 KW for Hydraulics & 2 KW for Servo Motor	
Power Supply	3 phase AC, 415V, 50 Hz	
Oil Tank capacity	150 Litres (built in)	
Machine Lubrication	Manual Centralized Lubrication System	

- D = Tube Outside Diameter T = Wall Thickness CLR = Centre Line Radius

- DOB = Degree of bend
- POB = Plane of Bend DBB = Distance Between Bend

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