



THE GLOBAL LEADER IN TUBE AND PIPE BENDING

Pines specializes in custom Tube and Pipe bending machinery. Pines provides tooling, process technology, and tube bending solutions across a wide variety of industries.

All New Heavy Duty CNC Pipe Bending Machines

So what's new?

To meet the demand of the modern pipe bender, Pines has designed a new range of CNC HD pipe benders. Pines is the leader in rugged and reliable machinery. The new designs continue these vital benchmarks such as power, precision, speed and improved the performance to provide users with enhanced capabilities to match the demands of the 21st century. Now, Pines has extended the choice specifications and options while improving precision and reliability.



CNC 250 HD with base extension, Mandrel extractor, pipe loader and PDA Booster

More Rigid Bending Head

The bending head distance between the upper and lower bearings is increased by 33%. The change provides greater stability of the bend die when bending heavy wall pipe or exotic material used in aerospace.



Larger Central Spindle

The bearings that support the spindle within the bend head are 16% larger in diameter.

The spindle has a 35% larger cross section to provide for the spindle bearings and increased accuracy of the bending function.



Heavy Duty Bending Arms

Both the swing arm and stationary arms are built from one piece vertical members which are 200% thicker. This reduces the tendency of the arms to bend under heavy clamping pressure providing a stable platform for high clamping forces.



Wider Arms

The stationary arm is 50% wider to provide a stable platform for pressure die boosting.



Rigid Tool Mount

Reduced the distance from the upper bearing to the center line of the tube by 33%. The change provides additional stability of the bend die when bending heavy wall pipe or exotic material used in aerospace.

Increased Bending Speeds

Multiple pumps and motors provide faster bend arm and PDA speeds. Programmable flow and pressure controls provide unlimited options for various materials and wall thicknesses.

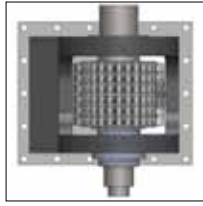
Pines Technology, 30505 Clemens Road, Westlake, Ohio 44145, USA

1-800-207-8211 • 440-835-5553 • fax: 440-835-5556 • www.pinestech.com • email: info@pinestech.com

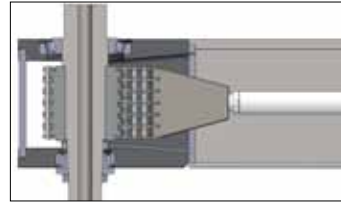
Pines CNC HD Machines



Die Force Measurement
Clamping and pressure die pressure settings monitored to reduce tool set up times.



CNC 115 HD 6 strand Chain



CNC 115 HD Larger Spindle and Bearings



The new TS 2000 control console

BOLT-ON UPGRADES



Modular construction to allow for customer products, preferences and cost. Bolt on elements to accommodate special requirements like; Pipe loaders, feeders, extra-long Pipes minimum wall thinning, short end limbs, push bending wall thinning etc.

- PRESSURE DIE ASSIST
- PRESSURE DIE BOOSTER CLAMP
- CLOCKWISE (R.H.) ROTATION
- PIPE LOADER
- MANDREL EXTRACTOR
- LARGER BEND RADII

All new TS 2000 CNC Control System

The new system increases response time and improves functionality and repeatability.

1. The use of Ethernet connection from PC to I/O system
2. Improved diagnostic reporting from the I/O system
3. Improved reliability

The New system has multi-language capability, expandability, and provides the user with traditional Pines' user friendly setup and programmability. Designed by people who know how to bend tube and pipe.

Pipe Machine Capacity

Specifications subject to change without notice

| MODEL | | CNC060HD | CNC090HD | CNC115HD | CNC170HD | CNC250HD |
|--|-------------|----------|----------|----------|----------|----------|
| Steel Pipe, Schedule 80 | Inches | 2 | 3 | 4 | 6 | 10 |
| | Millimeters | 60.235 | 88.9 | 114.3 | 168.3 | 273 |
| Standard bend radius to center line | Inches | 12 | 14 | 18 | 24 | 32 |
| | Millimeters | 300 | 350 | 450 | 600 | 815 |
| Standard Max. tube length over mandrel | Inches | 120" | 136 | 172" | 200 | 250 |
| | Meters | 3 | 3.5 | 4.375 | 5.08 | 6.35 |
| Standard Carriage Travel | Inches | 72" | 72 | 108" | 150 | 200 |
| | Meters | 1.85 | 1.85 | 2.75 | 3.8 | 5 |

BEND ANGLE REPEATABILITY

| | | | | | | |
|------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| Carriage Travel (Y Motion) | Inches | ± .005" | ± .005" | ± .005" | ± .005" | ± .005" |
| | Millimeters | ± .125 | ± .125 | ± .125 | ± .125 | ± .125 |
| Collet Rotation (B Motion) | | ±.10 deg. | ±.10 deg. | ±.10 deg. | ±.10 deg. | ±.10 deg. |
| Bend Arm Rotation (C Motion) | | ±.10 deg. | ±.10 deg. | ±.10 deg. | ±.10 deg. | ±.10 deg. |

STANDARD MACHINE SPECIFICATION

| | | | | | | |
|--------------------|-----------|-------|-------|--------|--------|--------|
| Bend Arm Rotation | Degrees | 195° | 195° | 195° | 195° | 195° |
| Collet Rotation | Degrees | 360° | 360° | 360° | 360° | 360° |
| Bending Arm Speed | RPM | 16 | 6 | 4.7 | 1.6 | 1.2 |
| Motor | HP | 40 | 40 | 40 | 50 | 100 |
| | Kw | 30 | 30 | 30 | 37 | 75 |
| Operating Pressure | PSI | 3000 | 3000 | 3000 | 3000 | 3000 |
| | Bar | 314 | 314 | 314 | 314 | 314 |
| Reservoir Capacity | Gallons | 55 | 100 | 122 | 125 | 250 |
| | Liters | 242 | 440 | 537 | 550 | 1,000 |
| Weight | Pounds | 4,400 | 8,000 | 22,500 | 40,000 | 60,000 |
| | Kilograms | 1,996 | 1,764 | 5,130 | 9,120 | 13,680 |