tube bending machines
ABOUT US
AMOB S.A. provides one of the biggest ranges of specialised equipment for the tube and pipe bending industry worldwide.

Founded in 1960 by António Martins Oliveira Barros (AMOB) and followed by his two sons Luis and Manuel, we have progressively become the world’s leading manufacturer of metalworking technologies.

We serve the global market with exceptional machinery and tooling for tube and pipe bending, section bending and swaging purposes – ranging from simple, manual appliances to complex, fully electric CNC powered systems.

AMOB designs, develops, retails and services a variety of products for a range of leading industrial industries including automobile and shipping, aeronautics and construction amongst others.

MANUFACTURING
AMOB has a proud history of manufacturing in Portugal, employing over 140 staff members at our main plant in Porto. Our recently-renewed headquarters covers 18000m², and is equipped with the highest technological production equipment including CNC machining centres, lathes and milling machines, as well as sheet metal cutting and bending machinery for guaranteed high fabrication standards. Elsewhere, AMOB has commercial facilities in Russia, Brazil, Spain, Benelux, France and a worldwide network of over 70 agencies and technical centers – providing customer support wherever you are!

TECHNICAL
Our products are designed in our technical department by a team of highly-skilled engineers - we offer competitive solutions without compromising on quality.

Over the years, AMOB has grown with our customers’ requirements and the market demand. We’re just as passionate about growing and developing our products as we are about our client relationships.

We thank you for choosing AMOB!

eMOB
Fully electric CNC tube bending machines

Ce
Electric CNC tube bending machines

CH-L
NC & CNC tube benders

CH-HD
NC & CNC pipe benders

MDH
Electric NC tube bending machines

PT
Tube benders

Software
Tube bending software

We thank you for choosing AMOB!
eMOB

Fully electric CNC tube bending machines

The AMOB all-electric CNC eMOB series features state-of-the-art bending technology. Processing tube from 10mm up to 150mm OD, these machines have multi-stack capability. They can bend fixed and variable radiusses within the same cycle and allow bending with no straight between them. A carriage booster allows bends with radiusses as tight as 1D and eliminates clamping marks. Welding detection, punching/cutting mechanisms and integrated loading/unloading systems are also available.

eMOB series machines are all equipped with the newly updated user-friendly AMOB 3D SOFTWARE. Amongst other features it allows automatic spring-back compensation as well as correction “in cycle”, stores tooling configuration and positions, runs anti-collision and interpolates all 9 axis. This shortens setting up and cycle times, eliminating waste and testing periods during the tooling changeover process. Ideal for those working with premium materials, where any error is critical.

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**Technical specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum capacity</th>
<th>Controlled Axes</th>
<th>X axis accuracy</th>
<th>Y axis accuracy</th>
<th>Z axis accuracy</th>
<th>Max. Bending Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>eMOB-42</td>
<td>Ø42x2 mm</td>
<td>9</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>240 mm</td>
</tr>
<tr>
<td>eMOB-52</td>
<td>Ø52x2 mm</td>
<td>9</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>230 mm</td>
</tr>
<tr>
<td>eMOB-63</td>
<td>Ø63x2 mm</td>
<td>9</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>350 mm</td>
</tr>
<tr>
<td>eMOB-80</td>
<td>Ø80x2 mm</td>
<td>10</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td>eMOB-100</td>
<td>Ø100x2 mm</td>
<td>10</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td>eMOB-130</td>
<td>Ø130x2 mm</td>
<td>10</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td>eMOB-150</td>
<td>Ø150x3 mm</td>
<td>10</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>400 mm</td>
</tr>
</tbody>
</table>

*All data of the machinery is not binding and may be subject to change without notice. Pictures are for demonstrative purposes only.*
AMOB electric CNC tube bending machines Ce CNC R series are the ultimate in efficiency and green technology. This innovative range of products was born out of a growing concern with rising energy prices and production costs, and a need to reduce energy consumption intelligently. Processing tube from 10mm up to 90mm OD, these machines are ideal for medium to large jobs. Available in single stack, double stack or multi-stack capabilities as well as fixed and variable radiuses in the same cycle, they also allow bends with no straight between them when equipped with more than one stack feature. There is also the option to add welding detection, punching/cutting mechanisms and integrated loading or unloading systems, and all Ce CNC R series machines are equipped with the latest AMOB 3D bending software. If you’re looking for something in between the CH and e-MOB series, these hybrids are a great compromise.

Ce42CNC-R
Spring-back compensation calibration storage
CNC hydraulic pressure die assist
Programmable variable radius

AMOB 3D software
Ce CNC R series are equipped with latest up to date user-friendly AMOB 3D software.

Fixed and variable radius
All Ce CNC R models have multi-stack, fix and variable radius capability.

Online diagnosis
AMOB CNC models permit online safe access for online diagnosis.

Ce60CNC-R
CNC hydraulic pressure die assist
Programmable variable radius
Fixed and variable radius options
Multi-stack capability
AMOB 3d software

Ce42CNC-R

Ce-35CNC R       Ce-42CNC R       Ce-60CNC R       Ce-90CNC R

Maximum capacity   Ø 35 x 2 mm       Ø 42 x 2 mm             Ø 60 x 3 mm       Ø 90 x 2 mm
Controlled Axes     3 - 5        3 - 5              3 - 5        3 - 5
X axis accuracy    ± 0,05 mm       ± 0,05 mm            ± 0,05 mm       ± 0,05 mm
Y axis accuracy    ± 0,05 °        ± 0,05 °            ± 0,05 °        ± 0,05 °
Z axis accuracy    ± 0,05 °        ± 0,05 °            ± 0,05 °        ± 0,05 °
Maximum Bending Radius  90 mm        90 mm            180 mm                     230 mm
Machine Usefull Length   4000 mm       4000 mm            4000 mm                     4000 mm

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CH-L
NC & CNC tube benders

Our CH-L series is the backbone of our tube and profile bending machines. Their rigidity, stability and untouchable precision in exceptional conditions such as humidity or harsh temperatures is what makes them stand out from the crowd.

Ranging from 10mm up to 120mm OD these machines are suited for use in a wide range of pipe manufacturing sectors and industries. Available in different versions, there’s NC1, NC2 and fully CNC, where all three axis are automatic in a single stack machine. There’s also the option to add welding detection, punching/cutting mechanisms and integrated loading and unloading systems if necessary.

The CH-L series comes equipped with the AMOB NC touchscreen easy-to-operate controls, or in the CNC version, with the latest user-friendly AMOB 3D bending software. This stores tooling configuration, allows spring-back compensation and boasts anti-collision technology, amongst other features. These multi-faceted models are easy to operate and suitable for almost all types of applications and industries.

### Technical specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>CH-35</th>
<th>CH-42</th>
<th>CH-60</th>
<th>CH-80</th>
<th>CH-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum capacity (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ø</td>
<td>35 x 2</td>
<td>42 x 2</td>
<td>60 x 3</td>
<td>80 x 3.5</td>
<td>114.3 x 8.6</td>
</tr>
<tr>
<td>X axis accuracy (CNC)</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
</tr>
<tr>
<td>Y axis accuracy</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
</tr>
<tr>
<td>Z axis accuracy (CNC)</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
<td>± 0.1°</td>
</tr>
<tr>
<td>Maximum Bending Radius (mm)</td>
<td>125</td>
<td>125</td>
<td>220</td>
<td>260</td>
<td>340</td>
</tr>
<tr>
<td>Machine Usefull Length (mm)</td>
<td>3000</td>
<td>3000</td>
<td>3000</td>
<td>3000</td>
<td>4000</td>
</tr>
</tbody>
</table>

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### Tooling options

- Direct acting clamp die cylinder
- Tooling withdrawal system
- Mandrel rod storage
- Single stack
- 3D imaging devices connection
- Allows easy CAD comparison, dimensional analysis and reverse engineering
- Online diagnosis
- AMOB CNC models permit online safe access for online diagnosis
- Special propose tooling
- On request CH-L series may be equipped with punching unit
- CH120CNC-B
  - Tube back feeding sensor
  - Booster bending
  - Compound tooling

- Booster bending
  - The pressure die assist/booster cylinder is integrated into the pressure die carrier head
- Serpentine tooling
  - Designed to exact centerline radii specifications requiring continuous 180 degree plane change
- Compound Tooling
  - Machined tube groove matching the contour of the previous bend
**CH-HD**

**NC & CNC pipe benders**

The AMOB NC & CNC tube bending machines **CH-HD series** are a heavy-duty version of the CH-L cold tube and profile bending machines. Like the CH-L range, they are robust and reliable in extreme conditions such as high humidity or harsh temperatures. Covering ODs from **120mm** up to **420mm**, these monster machines are suited for use in a wide range of pipe manufacturing sectors and industries. Available in different versions, there’s NC1, NC2 and fully CNC, where all three axes are automatic in a single stack machine. Welding detection, punching/cutting mechanisms and integrated loading and unloading systems can also be added.

This series also comes equipped with the AMOB NC touchscreen easy-to-operate controls, or again in the CNC version, with the latest AMOB 3D software. These user-friendly systems are suitable for almost all types of applications and heavy industries.

<table>
<thead>
<tr>
<th>CH220CNC</th>
<th>Motorised tool adjustment</th>
<th>Quick tool changing</th>
<th>Wiper die automatic lubrication</th>
</tr>
</thead>
</table>

| CH220CNC-B | Motorised tool adjustment | Quick tool changing | Booster bending |

**Technical specifications**

<table>
<thead>
<tr>
<th>CH-170</th>
<th>CH-220</th>
<th>CH-270</th>
<th>CH-320</th>
<th>CH-350</th>
<th>CH-420</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum capacity</td>
<td>Ø168,3x11 mm</td>
<td>Ø219,1x12,7 mm</td>
<td>Ø273x15,1 mm</td>
<td>Ø323,9x17,5 mm</td>
<td>Ø355x19,1 mm</td>
</tr>
<tr>
<td>X axis accuracy (CNC)</td>
<td>± 0,1 mm</td>
<td>± 0,1 mm</td>
<td>± 0,1 mm</td>
<td>± 0,1 mm</td>
<td>± 0,1 mm</td>
</tr>
<tr>
<td>Y axis accuracy</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
</tr>
<tr>
<td>Z axis accuracy (CNC)</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
<td>± 0,1 °</td>
</tr>
<tr>
<td>Max. Bending Radius</td>
<td>600 mm</td>
<td>1000 mm</td>
<td>1000 mm</td>
<td>1050 mm</td>
<td>1050 mm</td>
</tr>
<tr>
<td>Usefull Length</td>
<td>4000 mm</td>
<td>4000 mm</td>
<td>6000 mm</td>
<td>6000 mm</td>
<td>6000 mm</td>
</tr>
</tbody>
</table>

All data of the machines are for demonstration purpose only.
The AMOB MDH series (NC electric tube benders) is our standard-issue range – simplicity, strength and accuracy are the key features of this extremely cost-effective line. Ideal for prototyping or small to medium projects, MDH are easily adapted to each different industrial and non-industrial situation. Covering a range from 10mm up to 90mm OD, these versatile machines are an easy and obvious choice for those starting up a tube bending business, or to complement heavy production or prototyping divisions. As standard, these machines come with a hydraulic mandrel extractor, hydraulic clamp and pressure die which guarantees a good-quality bend finish. Available in two versions - NC1 and NC2 axis - these machines allow for bending complex tube geometries within seconds of programming. Machines from this range are all equipped with AMOB NC touchscreen easy to operate controls.

**Electric NC tube bending machines**

**MDH90CN2**

- User-friendly touchscreen controller
- Hydraulic mandrel extractor
- 2 axis NC control

**MDH90CN1**

- User-friendly touchscreen controller
- Hydraulic mandrel extractor
- 1 axis NC control

- **Hydraulic POB clamp**
  - NC plane of bend positioner equipped with hydraulic clamp.

- **Special propose tooling**
  - On request, MDH series may be equipped with special tooling.

- **Magnetic flip stops**
  - Easy-to-setup sequentially adjustable magnetic flip stops for X axis.

**Technical specifications**

<table>
<thead>
<tr>
<th></th>
<th>MDH-35</th>
<th>MDH-60</th>
<th>MDH-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum capacity</td>
<td>Ø 35 x 3 mm</td>
<td>Ø 60 x 3 mm</td>
<td>Ø 90 x 4 mm</td>
</tr>
<tr>
<td>Y axis accuracy</td>
<td>± 0.1 mm</td>
<td>± 0.1 mm</td>
<td>± 0.1 mm</td>
</tr>
<tr>
<td>Z axis accuracy</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
<td>± 0.05 mm</td>
</tr>
<tr>
<td>Maximum Bending Radius</td>
<td>110 mm</td>
<td>195 mm</td>
<td>305 mm</td>
</tr>
<tr>
<td>Machine Usefull Length</td>
<td>3000 mm</td>
<td>3000 mm</td>
<td>3000 mm</td>
</tr>
<tr>
<td>Installed Power CN1 - CN2</td>
<td>4.75 KW - 5 KW</td>
<td>6.2 KW - 6.4 KW</td>
<td>8 KW - 8.25 KW</td>
</tr>
</tbody>
</table>

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PT Tube benders

AMOB’s mandrel-less tube & pipe bending machines are made to cover the needs of those bending large radiiuses and thick walls in very small batches. Portability and simplicity combined with quick tool changes allow these machines to be used by any operator, even on a first-time basis.

PT76
- Wheel base
- Universal tooling bed
- Quick toll change

PT127
- Universal tooling bed
- Quick toll change
- Tightening bar

User-friendly controller
PT series machines are equipped with easy-to-operate digital readout controls.

Permutable shaft
The PT series is equipped with permutable shaft for tight radius.

Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>PT-42</th>
<th>PT-76</th>
<th>PT-127</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum capacity</strong></td>
<td>Ø 42 x 3 mm</td>
<td>Ø 76 x 4 mm</td>
<td>Ø 127 x 3 mm</td>
</tr>
<tr>
<td><strong>Y axis accuracy</strong></td>
<td>± 0.5°</td>
<td>± 0.5°</td>
<td>± 0.5°</td>
</tr>
<tr>
<td><strong>Maximum Bending Radius</strong></td>
<td>260 mm</td>
<td>300 mm</td>
<td>450 mm</td>
</tr>
<tr>
<td><strong>Installed Power</strong></td>
<td>0.750 KW</td>
<td>1.5 KW</td>
<td>5.5 KW</td>
</tr>
</tbody>
</table>

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Software Tube bending software

AMOB 3D BENDING SOFTWARE is at the cutting-edge of tube bending applications. Extremely easy to operate, it allows direct programming using coordinates or LRA, as well as importing CAD files. Amongst other features it boasts automatic spring-back compensation, stores tooling configuration and geometry, and features anti-collision properties for component feasibility, without prototyping or wasting material. Thanks to its intuitive software design, which utilises a stepping program, it’s very easy to use - an ideal choice for both junior or senior operators.

AMOBAPP
AMOBAPP is the ultimate aid for AMOB machines users in day-to-day operations. By simply entering tube OD, wall thickness, material and CLR, you will receive a visual representation of what's required to perform the perfect bend. The tool archive allows management of pre-existing tooling and adjustment details.

Main features: tool setup and archive, tool notes and adjustments, coordinate converter (XYZ - LRA), bending guide, metric and imperial settings.

AMOB Software is compatible with a wide variety of CAD softwares (AutoCAD, Inventor, SolidWorks, Nupas Cadmatic, Tribon, etc) and is able to automatically download most used extensions such as .Step, .Def and .Bkt files.

AMOB Software
- 3D display of tube development
- Simultaneous axis movements (reduced cycle time)
- Tube length computing
- Continuous machine monitoring
- Anti-collision tests software as standard feature
- Detailed tool display
- Clear machine display
- Data insert (XYZ and LRA)

AMOB Software is compatible with a wide variety of CAD softwares (AutoCAD, Inventor, SolidWorks, Nupas Cadmatic, Tribon, etc) and is able to automatically download most used extensions such as .Step, .Def and .Bkt files.

User-friendly controller
PT series machines are equipped with easy-to-operate digital readout controls.

Permutable shaft
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<td>5.5 KW</td>
</tr>
</tbody>
</table>

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