

**OUR
EXPERTISE**

BENDING



SERTO's Infrastructure



Controlled drawer system

Technical data:
24 drawers
1.3 tons per drawer
32 tons loading capacity



Fully automated saw

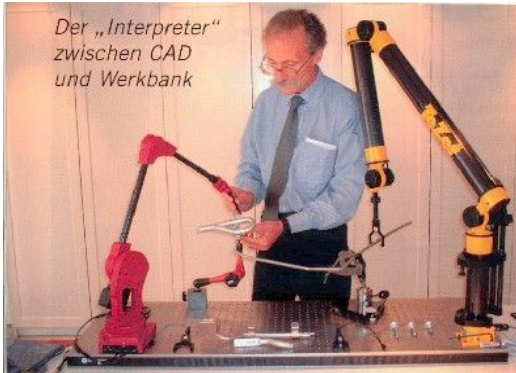
Technical data:
6 – 90 mm diameter range
High cutting performance



Automatic deburrer

Technical data:
Diameter range from 6 – 90 mm
Tube length from 60 – 2,000 mm
Capacity approx. 2,000 pieces / hr

The "Interpreter" between CAD and workbench.



Measurement system

Technical data:
Three-dimensional measuring of bent tubing
Consistent data transfer directly to automatic
bending machine



Bending machine

Technical data:
Diameter range from 2 – 10 mm
Tube length from 60 – 4,000 mm
Bending and coiling



Bending machine

Technical data:
Diameter range from 10 – 25 mm
Tube length from 100 – 4,000 mm
Bending and coiling

Examples of bending applications



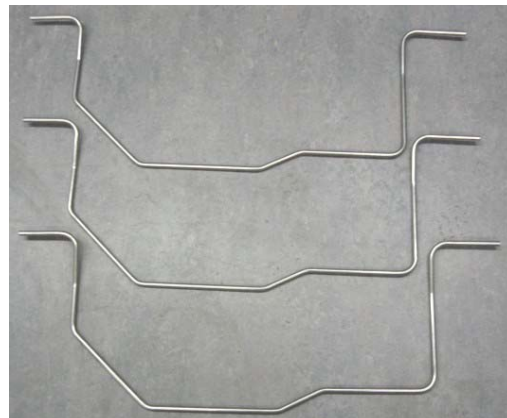
Stainless steel coil with 6 mm tube diameter



Custom-made copper tubing, 12 mm diameter



Copper coiled tubing with 6 mm tube diameter



Stainless steel tubes with 15 mm diameter



Stainless steel coil with 6 mm tube diameter



Tubing with coil, tube diameter 4 mm

Tube bending performance range

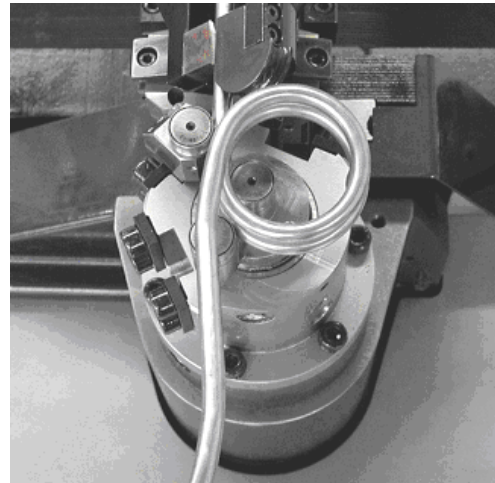
The table below contains the performance data for our various bending machines.

Tube bender	Tube outer diameter	Max. wall thickness for max. Ø
Bending machine 1		
Solid material	2 mm to 8 mm	
Steel / stainless steel	2 mm to 10 mm	1.5 mm
Copper / aluminium	2 mm to 10 mm	2.0 mm
Bending machine 2		
Solid material	2 mm to 13 mm	
Steel / stainless steel	10 mm to 25 mm	2.0 mm
Copper / aluminium	10 mm to 25 mm	3.0 mm
Brass	10 mm to 25 mm	2.5 mm
Semi-automatic bending 1		
Steel / stainless steel	6 mm to 8 mm	1.0 mm
Copper / aluminium	6 mm to 8 mm	2.0 mm
Manual bender and special bender		
Steel / stainless steel	6 mm to 18 mm	1.5 mm
Copper / aluminium	6 mm to 18 mm	1.5 mm
Brass	6 mm to 18 mm	1.5 mm

Bending tools list

The table below contains a list of the available bending tools

Tube Ø mm	Bending machine 1 Radius	Bending machine 2 Radius	Manual and special bender Radius
1.59	5		
2.0	12		
2.5	12		
3.0	12		
4.0	10 16		
5.0	10 15		
6.0	10 12 13 13.5 15 16 18 20		10 16
6.35			10 16
6.5			10
8.0	12 13 14 16 18 20 24		12 20
9.52			15 25



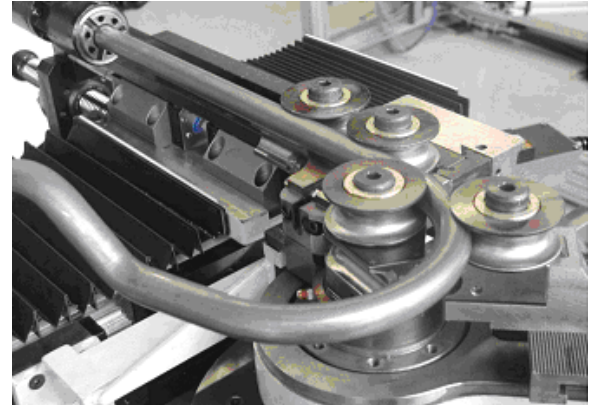
Three-roller bending tool



Bending tool with bending segment,
bending with tongs

The figures in the columns represent the dimensions from the bending centre to the neutral phase of the tube, all measurements are in mm.

Tube Ø mm	Bending machine 1 Radius	Bending machine 2 Radius	Manual and special bender Radius
10	20	15 20 25 30 32.5 40 47.5	15 25 30
12		18 24 30 36 48 60	17 24 30 32.5
12.7			18 24 30
13.5		40	
14			21 35
15		22.5 30 45	22.5 37.5 40
16			24 40
17			25.5 40
17.2		60	
18		27 36 54 80	27 40
21.3		45	



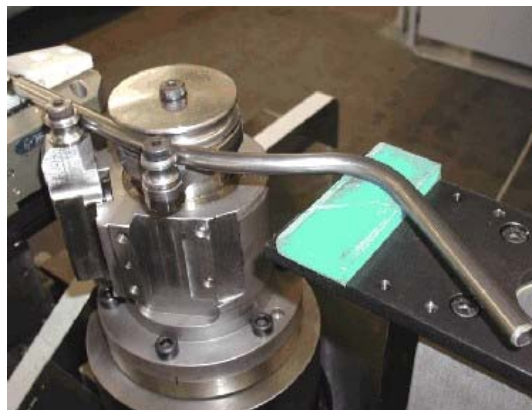
Open-die bending with three-roller bending tool



Two-stage bending tool for left and right bending

The figures in the columns represent the dimensions from the bending centre to the neutral phase of the tube, all measurements are in mm.

Tube Ø mm	Bending machine 1 Radius	Bending machine 2 Radius	Manual and special bender Radius
22		33 35 44 66	
25		37.5 50 75	



Three-roller bending with support plate for long tubes

The figures in the columns represent the dimensions from the bending centre to the neutral phase of the tube, all measurements are in mm.