

Pipe measuring systems

Also in case of unknown material characteristics and unknown pipe behaviour RASI instruments improve the repeatability rate and minimise test bends.

RASI-Measuring systems

Integrated measuring systems for in-process measuring during bending

- › MINIMESS (patented)
for rebound compensation, awarded the Federal Innovation Award
- › Digital radius measuring (DBGM)
to measure and verify the bending radius
- › RW 2002 (patent pending)
Digital actual bending angle and bending radius measure to measure and compensate the rebound and readjust the bend radius

Intelligent measuring systems to automatically create pipe databases with material characteristics during mandril bending and free form bending.

Separate measuring systems with online connection with bending machine

- › ZETMESS, or other brands
- › RASI EM (first German pipe measuring machine)

Software

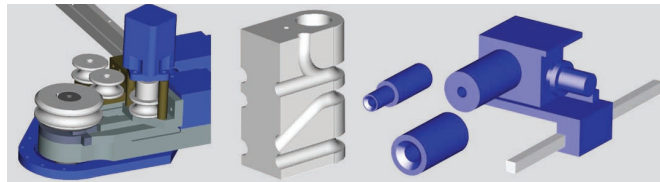
- › IGES-conversion (CAD/CAM)
- › Windows-Software
- › collision program
- › graphics supported input



Modular design and service

The modular design enables additional extensions, i.e. ring bending application for fully automated three-rolling/bending.

Individual purchasing and expansion depending on bending demands and requirements. The left-right changer can be added at a later point, for example.



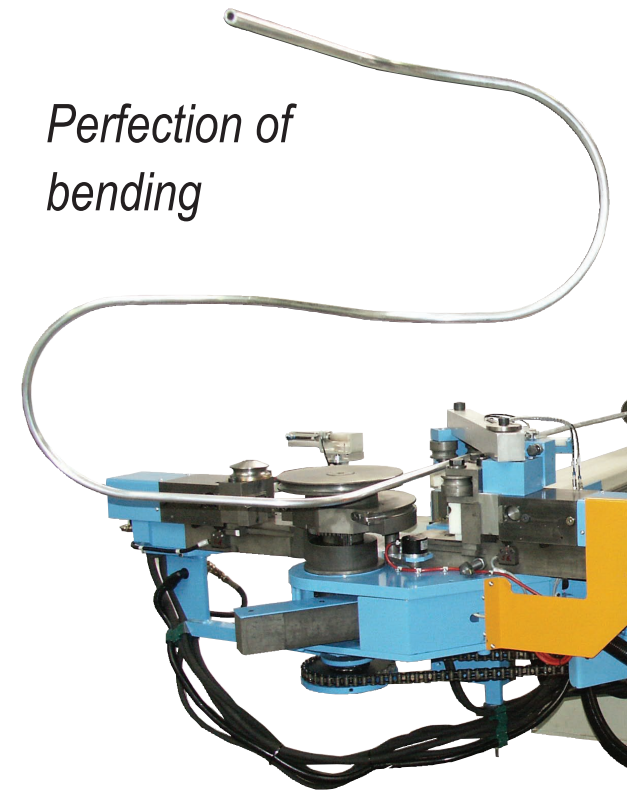
RASI offers competent service

- › **Machine training**
When buying a RASI bending machine you will receive intensive and thorough training.
- › **Customer service and repair service**
We offer inspections by our experienced technicians. Our trained staff and a well-stocked spare parts warehouse guarantee a quick and reliable repair service.
- › **Refresher training**
To freshen up skills or in case of new operators we conduct on-site trainings at your machine based on an actual bending task.
- › **Telephone support** by our trained technicians
- › You can get a better impression during **demonstrations** in our customer service centre.



Product catalog

Perfection of bending



www.rasi.de

Company profile

Modern pipe bending technology shaped by innovation and continuity made in Germany

RASI offer 45 years of experience in design and manufacturing of pipe bending machines and pipe measuring systems. Today we develop highly modern pipe bending systems, fulfilling the highest quality requirements of our customers.



Custom machine solutions

RASI manufactures pipe-bending machines for industrial and commercial application in Illingen near Stuttgart since 1960. Today the brothers Rapp manage the company, the product range contains almost 30 different pipe bending machines. Customer requirements are almost our number one priority. RASI offers solutions for bending tasks with tool dependant and tool independent radii. Each pipe-bending machine is custom configured with accessories and control from modules. There are no limits to combinations of mandril, ring, spiral, press and multiple radii bending machines. Sectional modular expansion of the machines is possible at any time; offer universal application and saves investment costs.

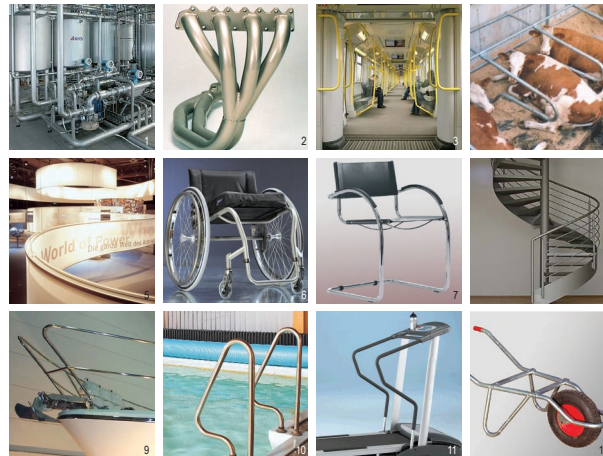


Sample applications

What do you need to bend?

Every bending product and its respective manufacturing process has different demands to the machine, which also depend on customer requirements:

- › The bending part itself (shape, material characteristics, pipe diameter, bending radius, profile section and wall thickness) and
- › the degree of automation of the machine (semi or fully automated bending).



- | | |
|--|---|
| 1) Chemical and beverage industry, system construction | 7) Furniture industry |
| 2) Automobile and engine manufacturing | 8) Stairs and banister industry |
| 3) Wagon and truck manufacturing | 9) Boat and ship building |
| 4) Stable equipment manufacturing | 10) Swimming pool equipment |
| 5) Display and trade show manufacturing | 11) Sports and play equipment manufacturing |
| 6) Reha and health technology | 12) Transport equipment manufacturing |

Custom tool manufacturing: fast – high performance - competent

Our own tool shop enables us to offer standard and custom tools to our customers.

Mandril bending machine

For narrow bending radii

RASI machine types

Fully automatic controlled tube bending machine with modern CNC control, to 12 axis upgradeable PC-control with proportional-hydraulic (Bosch Rexroth)

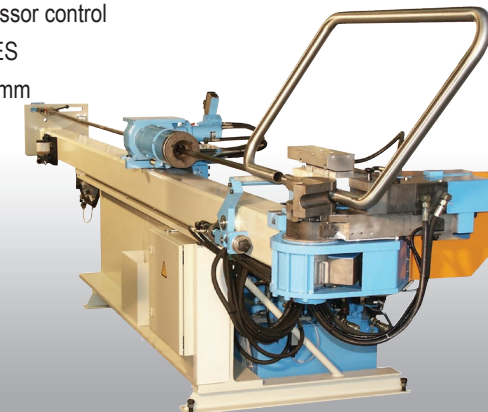
- › SE 48.3 for tubes to D 48,3 x 3,0
- › SE 80.3 for tubes to D 82,0 x 2,6
- › SE 120.3 for tubes to D 114,3 x 4,0
- › E 120.4 for tubes to D 127 x 5,0

Fully- and semi-automatically controlled tube bending machine with 1 to 3 axis CNC control

- › S 48.2 for tubes to D 48,3 x 2,6
- › S 80.2 for tubes to D 82,0 x 2,6
- › S 120.2 for tubes to D 114,3 x 4,0

Basic data

- › Large bending freedom
- › Tool quick-release system
- › Hydraulic tool return, pluggable bending shaft
- › Automatic measurement and compensation of the material spring-back
- › CNC-microprocessor control
- › CAD port via IGES
- › Collosion programm



Freeform- and mandril bending machine

Different large and small bending radii also within a bending part

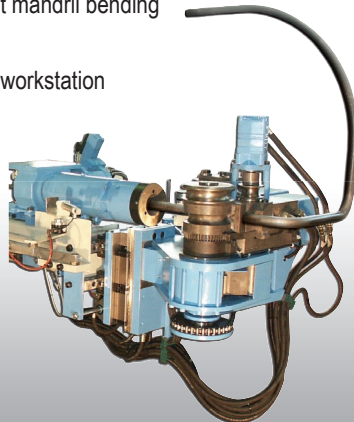
RASI machine types

Fully automatic change from mandril to freeform bending, also within a bending part

- › Multi-radius bending machine S 60.5
for tubes to D 60.3 x 3.6 (mandril less)
for tubes to D 48.3 x 2.6 (mandril bending)
for tubes to D 42.4 x 2.6 (roller bending)
- › Multi-radius bending machine SE 60.5; SE 80.5 and SE 120.5
Mandril bending, ring bending, curve bending, 3D bending and coiling with a single bending head and in a single clamping.

Basic data

- › Bending parts, which require the total bending radius area from $1 \times D$ to ∞ , can be bent fully automatic and in a single clamping.
- › Multi-grooved mandril bending tools
- › 4 roller-, curve- and ring bending drive with one or two hydraulic motors directly at the bending head enabling very close bending radii even at rolling
- › Automatic measuring and compensation of the material spring-back as well at mandril bending as at curve bending.
- › linking the machine to a CAD workstation via a modern IGES converter.



Multi-radius bending machine Left-right

Different large and small bending radii, change of bending direction from right to left within a bending part

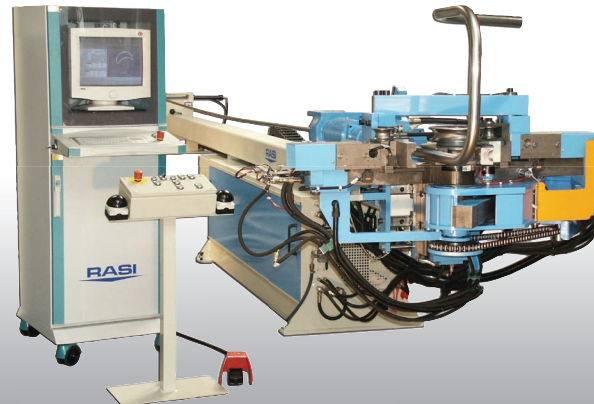
RASI machine types

Fully automatic change from mandril bending to curve bending and fully automatic change from right bending to left bending also within a bending part in a single clamping

- › S 60.6 and SE 60.6
for tubes up to D 42.4 x 2.5 (mandril- and curve bending)
for tubes up to D 48.3 x 2.5 (fully automatic mandril bending with mandril) for tubes up to D 60.3 x 2.4 (fully automatic mandril bending without mandril)

Basic data

- › More bending freedom by changing the bending direction
- › Change of bending direction during the bending process and in a single clamping
- › Construction with CAD-System and IGES connection
- › Optimisation of a bending program bedstop conversion and change of bending direction with "step back" (reset) possibility
- › Equipment for bending direction change can be refit by exist RASI machines



Fax request



Would you like a quote or do you have questions about our products? Contact us!

Mail or fax this form to our fax number + 49 70 42/10 29 89 600 or email us at info@rasi.de.

firm

sector

contact

Street | Nr.

post code | town

telephone | fax

e-mail

I'm interested in following bending machines:

- | | |
|---|---|
| <input type="checkbox"/> Mandril bending | <input type="checkbox"/> Freeform and mandril bending |
| <input type="checkbox"/> Multi-radius bending | <input type="checkbox"/> 3-roller bending machine |
| <input type="checkbox"/> Measuring systems | <input type="checkbox"/> Modular design |
| <input type="checkbox"/> | |

pipe diameter | wall thickness

bending radius | material

degree of automation

Bending centre

Mandril bending machine, ring bending machine and bending press use the same CNC control and hydraulics

Semi-automatic change from mandril- to three-roller bending

- › Bending centre BZ 80.2
- › Bending centre BZ 80S.2
for tubes up to D 82.0 x 2.6 (mandril bending)
for tubes up to D 104 (roller bending)

Fully automatic change from mandril- to tree-roller bending

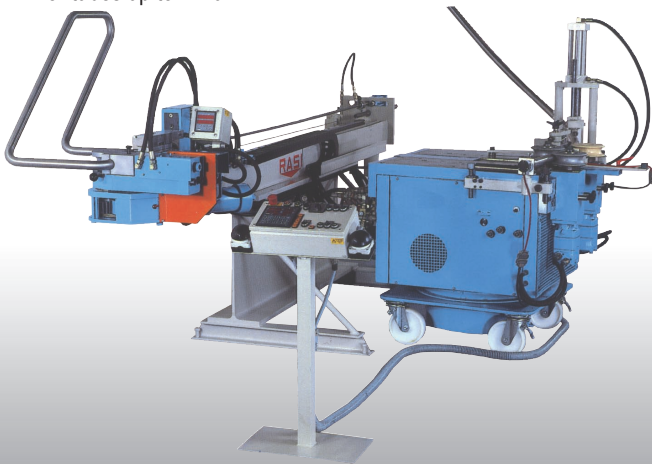
- › Bending centre BZ 80.4 (patented)
for tubes up to D 82.0 x 2.6 (mandril bending)
for tubes up to D 104 (roller bending; federal innovation award)

Mandril bending with extension to ring/ press bending

- › S 48.2-U and 48.3-U for tubes up to D 48.3 x 3.0
- › S 80.2-U and 80.3-U for tubes up to D 82.0 x 2.6
- › S 120.2-U and 120.3-U for tubes up to D 114.3 x 4.0

Ring bending with extension to mandril bending

- › UNI 80 S.2-D and UNI S.3-D
for tubes up to D 104



Tree-roller bending machine

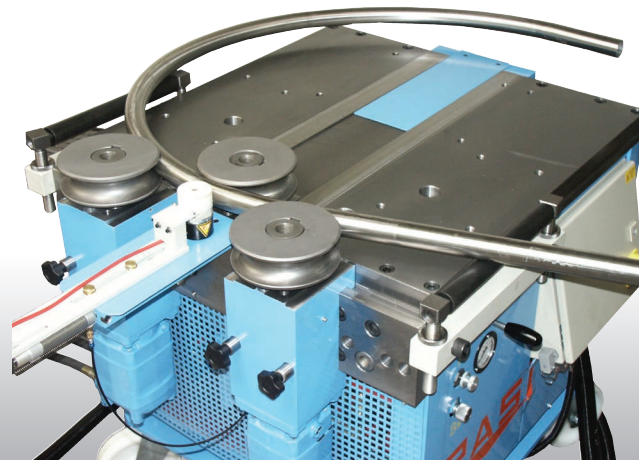
Ring bending machines and bending press for large and optional bending radii and curves

RASI machine types

- › UNI 80.2 for tubes up to D 104 / 80 x 80 x 5.6
- › UNI 80S.2 for tubes up to D 104 / 80 x 80 x 5.6
- › UNI 80S.3 path-controlled
for tubes up to D 104 / 80 x 80 x 5.6
- › UNI 80.2 for tubes up to 88.9 x 4.9, for flat steel up to 160 x 20
- › UNI 2E for tubes from 3/8" to 2"

Basic data (depending on type of control)

- › Multi-axis PC-control for fully automatic path-controlled ring and curve bending
- › Automatic radius and bending angle control
- › Multiple in-feed for thin-walled tubes
- › Expandable to the bending centre



Contact

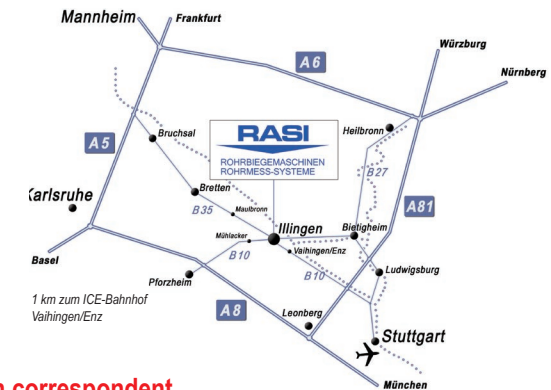
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Map



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