

4-ROLL BENDING MACHINE

AUTONOMOUS BENDING *ON SYSTEM LEVEL*

4-ROLL BENDING MACHINE

PLATE BENDING – DETACHED FREE FROM SPECIFIC KNOW-HOW AND MATERIAL QUALITY FLUCTUATIONS

With **autonomous bending**, HAEUSLER AG is setting new standards in the sheet metal bending industry. Even without specific specialist knowledge or in the event of material quality fluctuations, HAEUSLER sheet metal bending machines can bend autonomously. The **intelligent BENDtronic control** system makes it possible!

The innovative “autonomous bending” technology has one clear feature compared to conventional production methods: **Accuracy**. The new process from Haeusler AG can bend with 100% accuracy without operator intervention. Conventionally operated machines do not achieve more than 80%. This makes possible the **fully automated** and **autonomous production** of large containers, silos and wind towers.



AUTONOMOUS BENDING

The integrated artificial intelligence in the BENDtronic® control system enables an autonomous bending process.



INTEGRATED OPERATOR

The intelligent BENDtronic control system acts as an integrated operator. The operators can concentrate on other tasks.



UPPER SUPPORT

Upper supports simplify the bending of large diameters, as the plate to be bent can be held and supported at the 12 o'clock position during the bending process.



LATERAL SUPPORT

Lateral supports can be fitted on both sides of the machine and support the operator when bending large diameters.

NEW FEATURES

Extended scope!

With our 4-roll machines, it is now also possible to bend large diameters **with coordinated movement of the lateral and upper supports**. Thanks to the supports, deformation due to the sheets own weight is avoided and bringing perfect bending results.



BENDTRONIC

AUTONOMOUS BENDING

PRECISE AND FAST

The integrated artificial intelligence in the BENDtronic® control makes a fully automatic bending process possible. With the help of information feedback, a closed loop is created in the bending process. This eliminates rework. In addition to this increase in production efficiency, this innovative technology also enables enormous independence in the choice of suppliers, as material fluctuations are compensated for by the intelligent system. The precision is shown below with the control through the template. As you can see...

«One result equals the other with 100% accuracy!»



FULLY AUTOMATIC BENDING PROCESS

The fully automatic control makes the bending process operator-independent and independent of material variability.



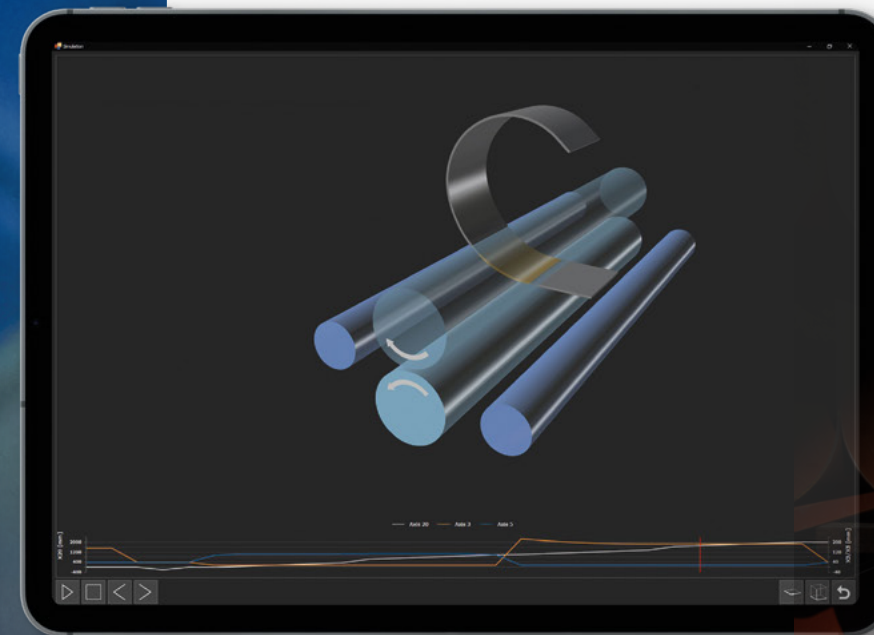
NO MORE SCRAP

Thanks to the intelligent CNC control, you always get perfect results without scrap.



HIGHEST EFFICIENCY

With the intelligent, fully automatic BENDtronic® control, you increase your efficiency in bending immensely through reduced overall production time.

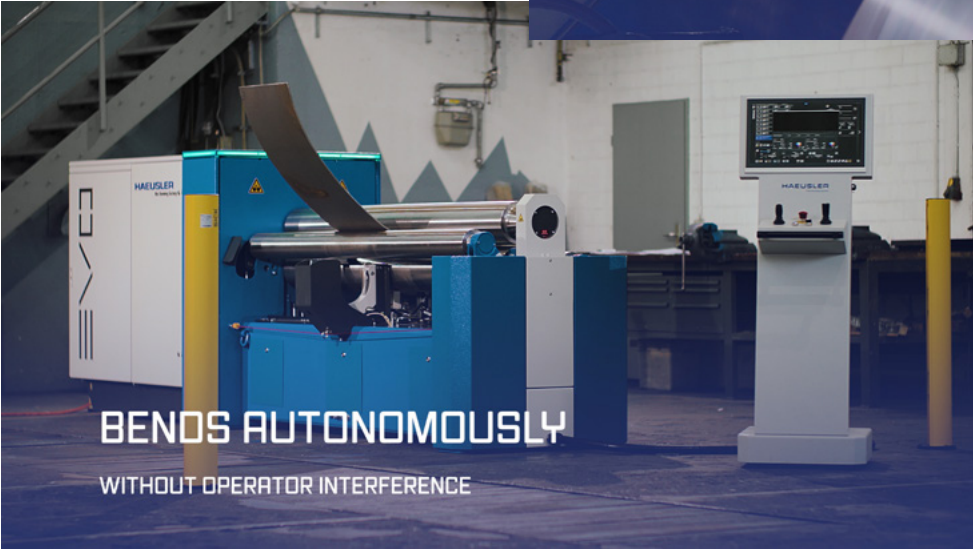


for more informations



AUTONOMOUS BENDING

THE PROCESS OF AUTONOMOUS BENDING
FAST, PRECISE AND INTELLIGENT BENDING



to the Video

BENDTRONIC

BENDTRONIC®

PERFECTS YOUR PRODUCTION WITH SMART CONTROL

The HAEUSLER BENDtronic® control system with artificial intelligence makes it possible to control not only the movements of the machine, but also the bending result itself.

In order to be able to bend the desired product shapes and optimally support the operator, the BENDtronic® contains various tools:

CAPACITY CALCULATOR

Feasibility check of the tasks. In addition, the machine utilisation, the remaining straight ends and the expected springback are calculated.

→ Optimal preparation

SINGLE RADIUS MULTIPASS

Automatically generates a CNC programme, also applicable for bending in several passes.

→ Time saving

AUTONOMOUS BENDING

With the help of the system's intelligent information feedback, a fully autonomous bending process is possible from the first sheet with no scrap.

→ No rejects, personnel efficiency

APPLE CALCULATOR

Calculates the different possibilities to achieve the usually desired "apple shape" of a cylindrical part when rolling it.

→ Options and time saving

MULTI RADII

Automatically generates a CNC programme for complex geometries, also applicable for bending in several passes.

→ Complex geometries possible

CALIBRATION CALCULATOR

Calculates in seconds the best recommended machine settings for calibration.

→ No unnecessary bending tests

BEND CALCULATOR

Calculates the required positions of the rollers to achieve the desired radius.

→ Simply round

CONE CALCULATOR

Supports the operator actively when bending cones. The software calculates if and how an individual cone can be bent on the machine. Furthermore, the required inclination of the rolls and the required pinch pressures are calculated.

→ Time saving, no unnecessary bending tests



INDUSTRIES

«SUITABLE FOR ALL INDUSTRIES»

WORLDWIDE FOR EVERY APPLICATION

Container

Large containers on trains or trucks for the transportation of raw materials.



Silo construction

Silos in cylindrical design for the storage of various media.



Boiler

This machine is ideal for boilers and water tanks.



Wind towers

Towers for wind turbines can be manufactured with it.



Excavator shovel

Excavator buckets can be produced with the utmost precision.



Offshore

This system is ideal for the production of support pillars.



SERVICES

WORLDWIDE SUPPORT

To ensure your productivity, HAEUSLER offers a wide range of support solutions – in other words: "You are in good hands worldwide!"

→ [HAEUSLER.COM/GLOBAL-SERVICE](https://haeusler.com/global-service)

GLOBAL SERVICES



WORKSHOPS & TRAININGS

We train your operators and maintenance personnel at our premises or on your machines.



REPAIR & MAINTENANCE

As part of regular maintenance, we replace wearing parts or carry out a revision of the machine.



RETROFIT & MODERNISATION

Business management aspects often speak in favour of modernisation instead of purchasing a new machine.



SPARE PART ORDER

If a component is defective, HAEUSLER Global Service delivers almost every spare part worldwide.



KNOW-HOW & PERFORMANCE

Our knowledge in bending technology has been built up for over 85 years and passed on to subsequent generations.



CUSTOMISED SERVICE PACKAGES

You will receive premium service packages individually tailored to your needs.



WESTEUROPA

Daimler, DE
EADS, DE
Liebherr, DE
Dillinger Hütte GTS, DE
Viessmann Werke, DE
for more inquiries...

NORDAMERIKA

General Electric, US
Trinity Industries, US
McDermott, US
Berg Steel Pipe, US
Caterpillar, US
for more inquiries...

OSTEUROPA / CIS

TMK (Volzhsky Pipe Plant), RU
Uralmash, RU
KAMAZ, RU
Energomash, RU
for more inquiries...

FAR EAST

Hokkai Steel Works, JP
Hyundai Heavy Industries, KR
Seah, KR
Samsung, KR
for more inquiries...

MITTLERER OSTEN

Ahvaz Pipe Mills, IR
Safa Rolling And Pipe Mills, IR
McDermott Middle East, AE
NPCC – National Petroleum Construction Com, AE
for more inquiries...

AUSTRALIEN/SEA

Godrei & Boyce, IN
Mazagon Dock, IN
Canadoil Group, TH
Vietsovpetro, VN
Rolco, AU
for more inquiries...

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In order to keep you up to date on current topics,
we are also present for you on the social web – follow
us on our social media channels and get information
about our company, products, career opportunities
and trade fair events.



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