

HAEUSLER BENDING MACHINES

PRODUCT *OVERVIEW*

WE FROM **HAEUSLER...**

...plan, develop, design and much more - In short: "We have the solution for your problem!"

For 85 years now, we have been striving to inspire our customers worldwide with our products and services. We succeed in this on the one hand with our many years of experience, and on the other hand with the pioneering spirit that we have retained from our founding days. This makes it possible for us to continuously push back the boundaries of what is feasible and thus to technology leader in the field of forming technology.

Mechanical engineering is our profession - our vocation is working in partnership with our customers.



| Jürgen Freund, CEO of HAEUSLER



PRODUCT RANGE

OVERVIEW



SERVICES

Global Services	4
Remote Services	5



PLATE BENDING

BENDtronic® CNC control	8
EVO 4-roll plate bending machine	12
VRM 4-roll plate bending machine	14
HDR 3-roll plate bending machine	16
FKB Wing-edge plate bending machine	18
RMS Large pipe plate bending machine	19
SPBM Ship's plate sheet bending machine	19



PRODUCTION LINES

LSAW Pipe Mill Large Pipe production line RB(E)	22
LSAW Pipe Mill Large Pipe production line JCO	24
Wind Mill production line	26



PROFILE BENDING

PRV 4-roll profile bending machine	30
VPR 4-roll profile bending machine	30
BB 3-roll profile bending machine	30
RBA 3-roll profile bending machine	31



INSTALLATION EQUIPMENT

Crocodile: Universal clamping & welding device	34
CRWM: Longitudinal seam tack welding machine	35



SPECIAL FORMING

RI Straightening machine	38
NABM Post bending machine	39
CMR Fullbody Expander	40
CM Calibration machine	41

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/EN/GLOBAL-SERVICE](https://www.haeusler.com/en/global-service)

GLOBAL SERVICES



TRAINING & INSTRUCTIONS

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 an overhaul of the machine.



RETROFIT & UPGRADE

Economical aspects often favor modernization over the purchase of a new machine.



SPARE PART ORDER

If a component is defective, HAEUSLER Global Service supplies almost any spare part worldwide.



KNOW-HOW & PERFORMANCE

HAEUSLER Global Service stands for forming technology. Since over 85 years knowledge is built up and continuously passed on.



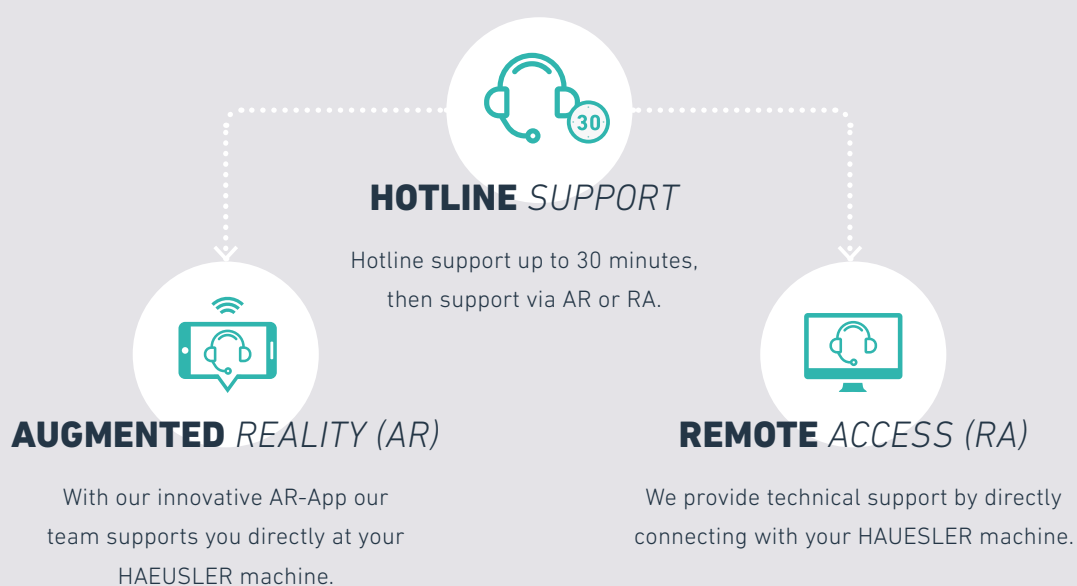
CUSTOMIZED SERVICE CONTRACTS

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

REMOTE SUPPORT SERVICES

The HAEUSLER support packages provide fast and uncomplicated help in the case of technical issues or malfunctions to minimize your downtimes.

REMOTE SERVICES



SERVICE PACKAGE

The combined service package includes telephone hotline, augmented reality and remote access support.



CUSTOMIZED PACKAGE

HAEUSLER offers tailor-made support services, which is designed to meet your individual requirements.

HAEUSLER

PLATE BENDING MACHINES



PERFORMANCE MEETS QUALITY

HAEUSLER has been involved in the development of round bending machines since 1947. Many of the features of bending machines that are established as standard today can be traced back to developments by HAEUSLER. This inventive spirit, our uncompromising approach to quality and the close cooperation with our customers are the basis of our market leadership in the world of bending machines.



HAEUSLER

| SPBM
→ PAGE 19

INDUSTRIES & AREAS OF APPLICATION

HAEUSLER bending machines are used worldwide in a variety of sectors and industries. Here you will find an overview of the most common areas of application.

- | WIND TURBINES
- | ON & OFFSHORE INDUSTRY
- | POWER STATION CONSTRUCTION
- | CONTAINER CONSTRUCTION
- | SHIPBUILDING
- | AUTOMOTIVE INDUSTRY
- | AEROSPACE



| HDR
→ PAGE 16



| VRM
→ PAGE 14



| BENDtronic®
→ PAGE 8



INTELLIGENT CNC CONTROL

BENDtronic®

PERFECT CONTROL

The HAEUSLER BENDtronic® is a CNC control with artificial intelligence. It allows anyone 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.

| APPLE CALCULATOR

Calculation of different ways to achieve the desired apple shape of a cylindrical part when bending.

| BEND CALCULATOR

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

| SINGLE RADIUS MULTI PASS

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

| MULTI RADII

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

| CONE CALCULATOR

Actively supports the operator when bending cones. The software calculates whether and how an individual cone can be bent on the machine. Furthermore, the required inclination of the rollers and the required pressure are calculated.

INTELLIGENT CNC CONTROL

INTUITIVE USER INTERFACE

The intuitive user interface of the BENDtronic® guides the operator through the highly complex bending processes with ease. Even with unknown materials, users can reliably achieve the best bending results.

PRODUCTFORM	CYLINDER	CASE FORM
	KONUS	OVAL
	S-FORM	COMPLEX GEOMETRIES





→ **LEARN MORE:**
haeusler.com/en/bendtronic



MAXIMISATION OF THE PLATE BENDING RANGE

With VSA technology, an increase in performance of up to 85% can be realised.



REDUCED MAINTENANCE COSTS

Maintenance costs reduced by up to 50% thanks to HAEUSLER Hybrid Drive System HHDS.



PERFECT CONTROL

Equipped with the patented BENDtronic® control system.



4-ROLL PLATE BENDING MACHINE

EVO

BENDING BECOMES CHILD'S PLAY

The EVO 4-roll bending machine is the latest addition to the HAEUSLER range. It impresses not only with its modern and highly functional design, but also with its versatility and various technical innovations that the HAEUSLER developers have integrated into the compact machine housing. These would be among others: VSA technology (extension of the bending geometry) and a hybrid drive system that increases productivity with low energy consumption.

PLATE WIDTH

up to 4,000 mm

PLATE THICKNESS

up to 100 mm



→ **LEARN MORE:**
haeusler.com/en/evo



PERFECT BENDING RESULTS

Optimised bending geometry enables bending of the narrowest diameters with the smallest bending ends.



VERY HIGH ACCURACY

Doubled guideways thanks to patented arrangement of the side roller cylinders.



HIGHEST TORQUES

Increased productivity through the use of rotary drives with very high torques.

4-ROLL PLATE BENDING MACHINE

VRM

FOR THE HEAVIEST OPERATION

The VRM 4-roll bending machine is designed for the heaviest operation. It is extremely versatile and absolutely reliable. There are hardly any limits due to the highest torques. The linearly adjustable side rollers enable a narrow bending geometry. This leads to higher bending accuracy, especially when forming materials with high yield strength.

PLATE WIDTH

up to 8,000 mm

PLATE THICKNESS

up to 320 mm (cold)



→ **MEHR ERFAHREN:**
haeusler.com/en/vrm



PERFECT BENDING RESULTS

Optimised bending geometry enables bending of the narrowest diameters with the smallest bending ends.



SIMPLE MAINTENANCE

All main cylinders of the machine can be reached in a few easy steps and guarantee easy maintenance.

3-ROLL PLATE BENDING MACHINE

HDR | *THE UNIVERSAL PLATE BENDING GENIUS*

The HDR 3-roll bending machine is characterised by extremely variable adjustment possibilities of the bending geometry. This minimises bending lengths and maximises bending quality and workpiece handling.

PLATE WIDTH

up to 6,000 mm

PLATE THICKNESS

up to 320 mm (cold)



→ **LEARN MORE:**
haeusler.com/en/hdr

WING EDGE PLATE BENDING MACHINE

FKB | DEVELOPED FOR THE AEROSPACE INDUSTRY

The FKB 3-roll bending machine was developed for the aerospace industry. From this, further applications were derived. For example, for wide metal segments that have to be formed homogeneously and with the highest precision.

PLATE WIDTH
up to 18,000 mm

PLATE THICKNESS
up to 25 mm



**NARROW RADII
& WIDE PLATES**



**HIGHEST
PRECISION**



→ **LEARN MORE:**
haeusler.com/en/fkb



LARGE PIPE PLATE BENDING MACHINE

RMS | *THE HEART OF PIPE PRODUCTION*

With the RMS 3-roll bending machine, the need for tube production with high output was satisfied. In addition, the RMS impresses with its flexibility and bending quality.

| **PLATE WIDTH**
up to 13,000 mm

| **PLATE THICKNESS**
up to 50 mm

 **HIGH OUTPUT**

 **FLEXIBLE PRODUCTION**



SHIP'S PLATE BENDING MACHINE


SPBM | *THE REFERENCE IN SHIPBUILDING*

The HAEUSLER SPBM 3-roll bending machine is the absolute reference in shipbuilding. The lower rollers can be set in an inclined position. This means that conical sheets and skewing parts can be produced without any problems.

| **PLATE WIDTH**
up to 25,000 mm

| **PLATE THICKNESS**
up to 70 mm

 **WITHOUT ANY EXTRA TOOLS**

 **BENDING CONICAL PARTS**



HAEUSLER

PRODUCTION LINES

INDUSTRIES

& AREAS OF APPLICATION

| ON & OFFSHORE INDUSTRY



| LSAW PIPE MILL RB(E)
PRODUCTION
→ PAGE 22



| LSAW PIPE MILL (JCO)
PRODUCTION
→ PAGE 24



| LSAW PIPE MILL RB(E)
PRODUCTION
→ PAGE 22

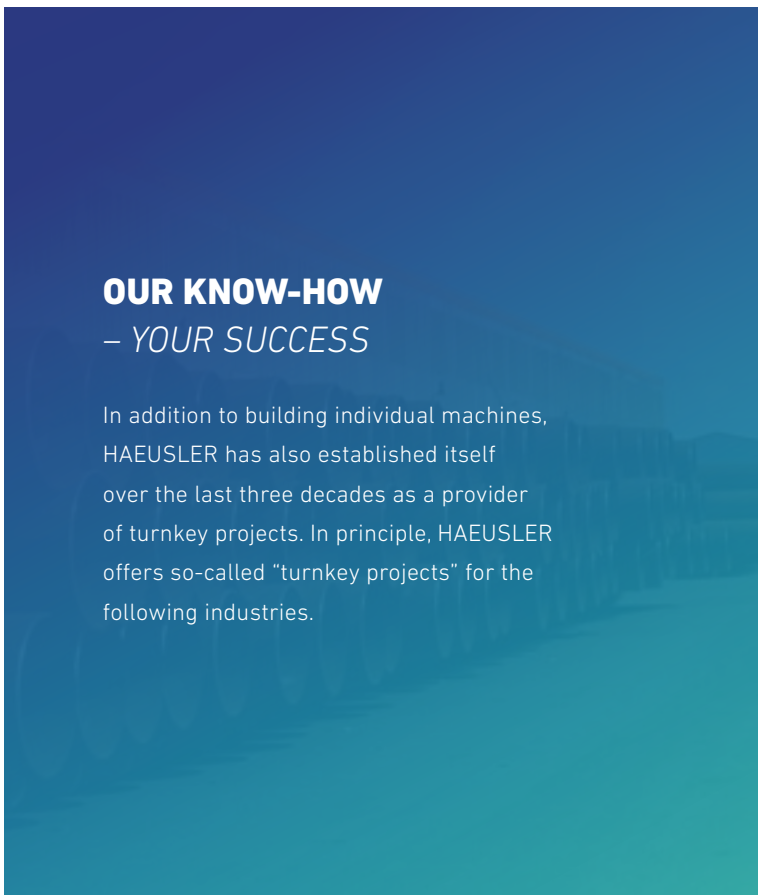


| WIND MILL PRODUCTION
→ PAGE 26



INDUSTRIES
& AREAS OF APPLICATION

| WIND TURBINES



OUR KNOW-HOW
– YOUR SUCCESS

In addition to building individual machines, HAEUSLER has also established itself over the last three decades as a provider of turnkey projects. In principle, HAEUSLER offers so-called “turnkey projects” for the following industries.



| WIND MILL PRODUCTION
→ PAGE 26



LARGE PIPE PRODUCTION LINE

LSAW PIPE MILL |

RB(E)-PROCESS

As a general contractor for turnkey pipe mill solutions, HAEUSLER offers all important machines as in-house products. Therefore, all relevant sections of the HAEUSLER pipe mill process are manufactured from one source - from the sheet metal to the desired segment.

| DIAMETER

406 mm (16") to
1,626 mm (64")

| PIPE LENGTH

up to 13,000 mm
18,000 mm (*on request*)

| PLATE THICKNESS

up to 50 mm

| PRODUCTIVITY

up to 20 pipes / hour



→ **LEARN MORE:**

haeuster.com/en/lsaw-pipe-mill





LARGE PIPE PRODUCTION LINE

LSAW PIPE MILL |

JCO PROCESS

In close cooperation with our customers, we develop customised solutions for their individual requirements. Here, the degree of automation, the production output and the quality standard to be achieved are the key factors that determine the final structure and workflow of the individual production steps.

| DIAMETER

up to 1,625 mm (64")

| PIPE LENGTH

up to 18,500 mm

| PLATE THICKNESS

up to 70 mm

| PRODUCTIVITY

up to 8 pipes / hour



→ **LEARN MORE:**

haeuster.com/en/lsaw-pipe-mill



PRODUCTION LINE

WIND MILL | MADE BY HAEUSLER

As a general contractor for the production of wind towers, HAEUSLER offers all important machines and integrates them into an intelligent and functional system.

| PLATE THICKNESS / WALL THICKNESS

up to 300 mm

| PLATE WIDTH

up to 6 m

| TOTAL LENGTH OF THE TOWER SECTION

up to 60,000 mm

| CYCLE TIME FOR A TOWER SEGMENT WITH MAXIMUM DIMENSION

< 1 hour / tower segment

| DIAMETER TOWER SECTION

up to 15.5 m



→ **LEARN MORE:**
haeusler.com/en/wind-mill

HAEUSLER

PROFILE BENDING



| PRV
→ PAGE 30



| VPR
→ PAGE 30

INDUSTRIES & AREAS OF APPLICATION

- | STEEL CONSTRUCTION
- | AEROSPACE
- | POWER STATION CONSTRUCTION



RELIABILITY, DURABILITY & EASIEST OPERATION

The HAEUSLER profile bending machines in their current design are the result of over 60 years of experience, which is characterised by cooperation with our customers and and the constant striving to improve our products.



| RBM



| BB
→ PAGE 30



| RBA
→ PAGE 31



4-ROLL PROFILE BENDING MACHINE

PRV | 3-D PROFILE BENDING
IN PERFECTION

The PRV 4-roller profile bending machine is equipped with a variable roller geometry. This allows special profiles, U-, I-, T-, angle, flat, round profiles and tubes to be formed with ideal force application. This minimises unwanted deformations.

MOMENT OF RESISTANCE

up to 150 cm³



4-ROLL PROFILE BENDING MACHINE

VPR | PROFILING AND BENDING
IN ONE PASS

The VPR 4-roller profile bending machine is designed for special requirements in the field of profiling. The VPR enables profiling and bending in one pass. This makes it predestined for series production, among other things.

MOMENT OF RESISTANCE

up to 200 cm³



BEAM AND TUBE BENDING MACHINE

BB | FOR THE BIGGER STUFF

The BB 3-roller profile bending machine is designed for bending U-, I-. Flat, round profiles and tubes. This type of machine is usually used for bending the largest commercial steel beams, via the x-x or y-y axis, and for tubes up to 610 mm in diameter.

MOMENT OF RESISTANCE

2,500 cm³ – 14,000 cm³

PIPE BENDING MACHINE

RBA | *FULL AUTOMATION,
HIGHEST QUALITY*

Almost any type of pipe can be processed into various types of pipe coils with HAEUSLER pipe bending machines, such as pipes with multi-start, conical or with changing pitches. The RBA 3-roller profile bending machine with and without automatic infeed roller table is designed on the one hand for bending thin-walled square tubes with automatic bending mandrel insertion and on the other hand for bending tubes with different pitches.

**HIGH
OUTPUT****BENDING OF PIPE COILS
WITH DIFFERENT PITCHES****COST-EFFECTIVE
MAINTENANCE**

→ **LEARN MORE:**
haeusler.com/en/rba

HAEUSLER

INSTALLATION EQUIPMENT

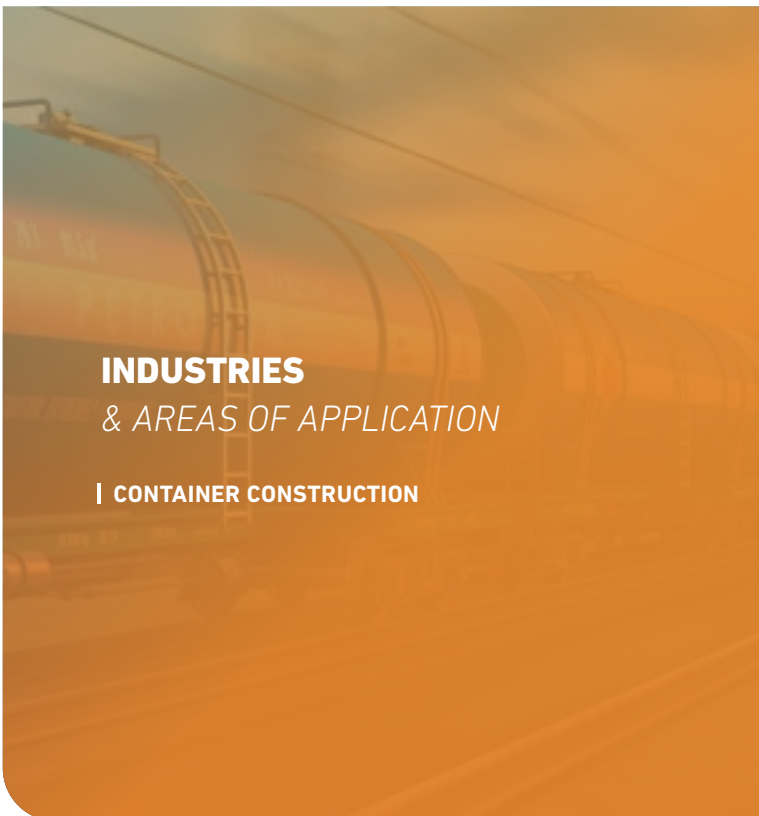


| CROCODILE
→ PAGE 34



INDUSTRIES
& AREAS OF APPLICATION

| ON & OFFSHORE INDUSTRY



INDUSTRIES
& AREAS OF APPLICATION

| CONTAINER CONSTRUCTION



| CRWM
→ PAGE 35



| CROCODILE
→ PAGE 34



| CRWM
→ PAGE 35

INDUSTRIES & AREAS OF APPLICATION

| WIND POWER

RELIABLE & FLEXIBLY APPLICABLE

HAEUSLER installation equipment has been developed to provide our customers with maximum flexibility, reliability and increased efficiency in the production of their products. The HAEUSLER Crocodile and the HAEUSLER CRWM are the result of over 60 years of experience, shaped by close cooperation with our customers.

UNIVERSAL CLAMPING AND WELDING DEVICE

CROCODILE | *EFFECTIVE, MOBILE WORK CENTRE*

The Crocodile is suitable for individual and series production. The device enables the alignment-matching-tacking-internal circumferential welding of weft-to-shot or bottom-to-shot of cylinders. Thanks to the machine support, a time saving of up to 85 percent can be achieved compared to the manual alignment and welding process. Automatic submerged-arc internal welding is available as an option.

| **PLATE THICKNESS**
up to 150 mm

| **TOTAL LENGTH OF THE
TOWER SECTION**
up to 60,000 mm



**SINGLE PERSON
OPERATION**



**BEST
RESULTS**



→ **LEARN MORE:**

haeusler.com/en/croco

LONGITUDINAL SEAM TACK WELDING MACHINE

CRWM | *PERFECT
WELDED PIPES*

The CRWM is designed for individual and series production. The latest generation of HAEUSLER tack welding machines ensures the high quality level of the pipes through active pipe manipulation. This eliminates any possible edge misalignment. The CNC-controlled laser tracking with digital welding equipment offers absolute flexibility and assured, stable production.

| DIAMETER

254 mm (10")
up to 2,540 mm (100")

| PLATE THICKNESS

up to 70 mm

| PRODUCTIVITY

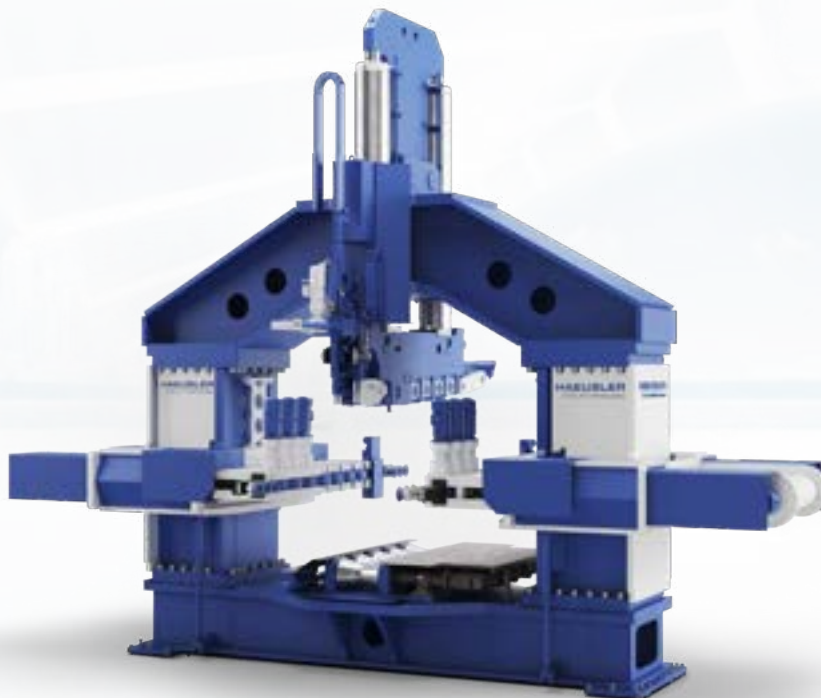
up to 25 pipes / hour
(with pipe length of 12,200 mm)



**WELD SEAM FROM THE START
TO THE END OF THE PIPE**



**BEST WELDING
QUALITY**



→ **LEARN MORE:**
haeusler.com/en/crwm

HAEUSLER

SPECIAL FORMING



| CM
→ PAGE 41

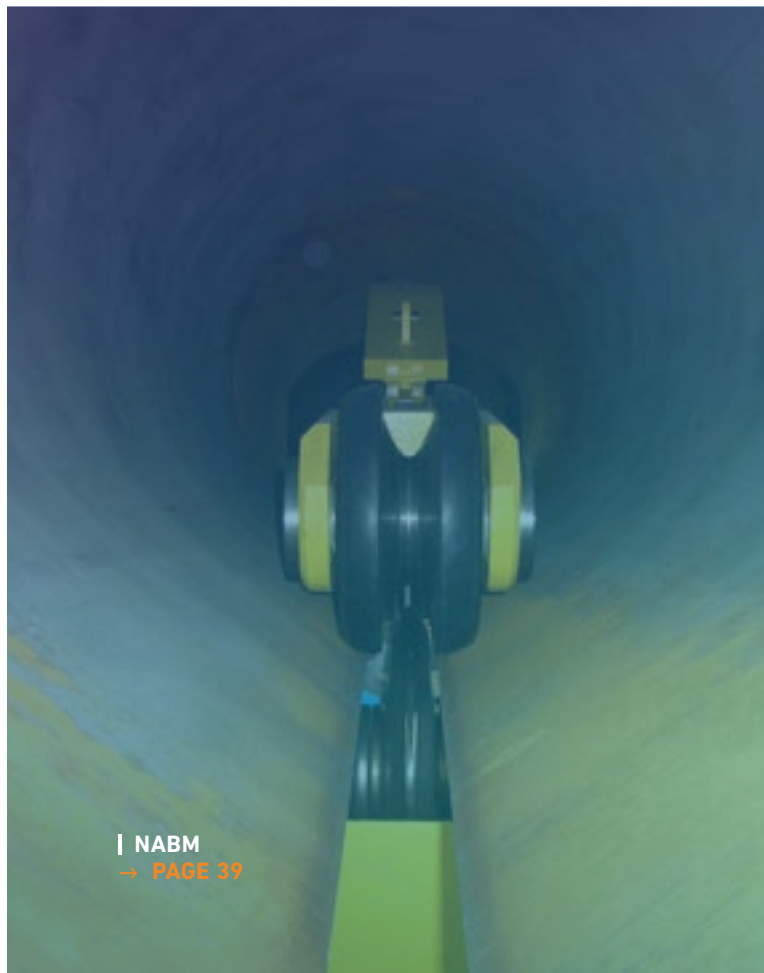


INDUSTRIES
& AREAS OF APPLICATION

| CONTAINER CONSTRUCTION

RELIABILITY
DURABILITY
& EASIEST OPERATION

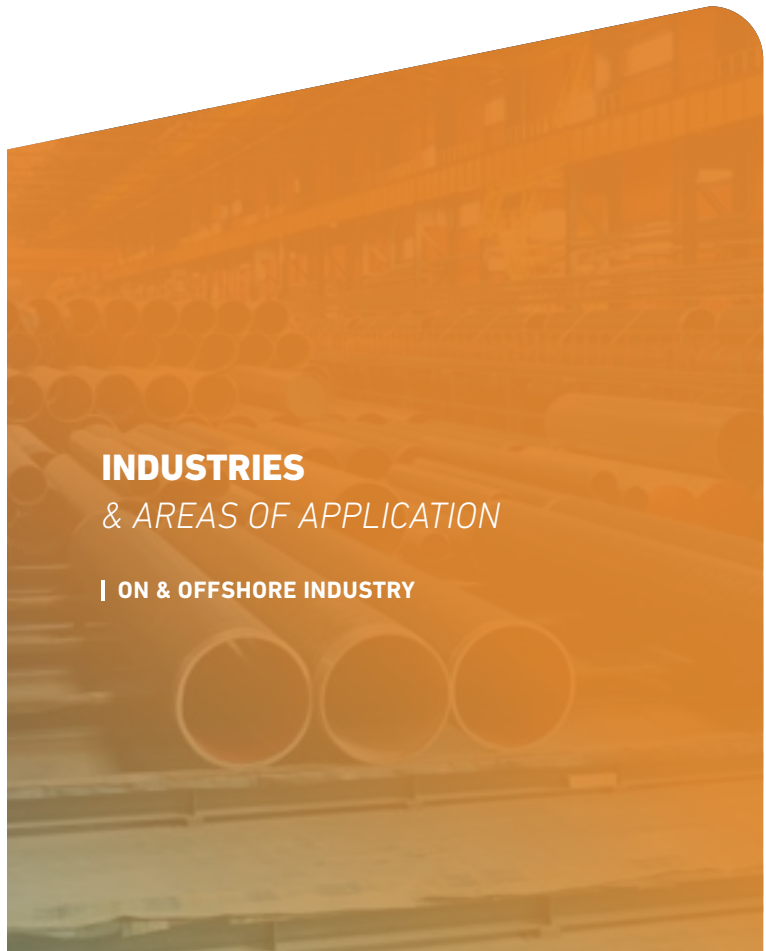
Whether for calibrating workpieces that have already been bent, for straightening sheet metal or for rebending pre-bent cylinders, HAEUSLER special forming machines are based on many years of experience and impress with their reliability, accuracy and user-friendliness.



| NABM
→ PAGE 39



| RI
→ PAGE 38



INDUSTRIES & AREAS OF APPLICATION

| ON & OFFSHORE INDUSTRY



INDUSTRIES & AREAS OF APPLICATION

| AEROSPACE



| CMR
→ PAGE 40

STRAIGHTENING MACHINE

RI | PERFECT PLATES – ALWAYS

The RI straightening machine is designed for the straightening of plates of various dimensions and material specifications. Depending on the technical specification, the machines are equipped with 5, 7, 9 or 11 rolls. Through smaller first and last straightening rolls, extra short, non-straightened ends are possible.

PLATE WIDTH
up to 5,000 mm

PLATE THICKNESS
up to 120 mm



**BEST RESULTS FOR
THIN & THICK PLATES**



**HIGHEST
DURABILITY**



→ **LEARN MORE:**
haeusler.com/en/ri

POST BENDING MACHINE

NABM | *SMOOTH ON THE PLATE AND FAST*

The capacity of the NABM post bending machine with the new and patented forming process has been significantly increased. With a single bending process, all the needs of tube and pipe of tube mill manufacturers can be covered.

PIPE LENGTH
up to 13,000 mm

PLATE THICKNESS
up to 50 mm



**BASIS FOR A
PERFECT WELD SEAM**



**LOW
ACT TIME**



→ **LEARN MORE:**
haeusler.com/en/nabm

FULLBODY EXPANDER

CMR | HIGHTECH FOR YOUR PIPE MILL

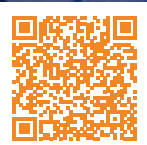
The CMR Fullbody Pipe Expander combines practical experience in the field of pipe production. The variable process control developed by HAEUSLER allows the tightest tolerances to be achieved. This special software allows all settings to be made and monitored centrally.

| DIAMETER
from 16" to 66"

| PLATE THICKNESS
up to 60 mm

 **MINIMAL
WEAR**

 **HIGH
OUTPUT**



→ **LEARN MORE:**
haeusler.com/en/cmr

CALIBRATION MACHINE

CM | *REPEATABILITY
AND SPEED*

The CM Calibration Machine & SM Upsetting Machine create accurate and complex workpiece shapes. The basic shape of the workpiece is achieved, for example, by bending, profiling and casting. In a further step, the expansion or upsetting serves the final shaping with the tightest tolerances. The various tool sets are extremely durable and inexpensive to purchase and maintain.

| **EXPANDING FORCE**
up to 200,000 kN

| **DIAMETER**
up to 7,500 mm



**HIGHEST TOLERANCE
ACCURACY**



**MAXIMUM
FLEXIBILITY**



→ **LEARN MORE:**
haeusler.com/en/cm

REFERENCES

HAEUSLER PRODUCTS IN USE WORLDWIDE

HAEUSLER sees itself as an export-oriented company. Our machines are in use on all continents and in more than 100 countries.



| NORTH AMERICA

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



| SOUTH AMERICA

IMPSA, AR
TenarisSiat, AR
Voith Paper, BR
Atlas Schindler, BR
Alstom, BR
ask for more...



| WESTERN EUROPE

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



| AFRICA

Steinmüller, ZA
Petrojet, EG
Helwan Engineering
Industries, EG
Westcom Technologies & Energy, NG
ask for more...

A world map with a blue-to-teal gradient background. Four regions are highlighted with red boxes: Eastern Europe/CIS, Far East, Middle East, and Australia/SEA. Each region has a corresponding list of companies and a link to 'ask for more...'.

| EASTERN EUROPE / CIS

TMK (Volzhsky Pipe Plant), RU
Uralmash, RU
KAMAZ, RU
Energomash, RU
[ask for more...](#)

| FAR EAST

Hokkai Steel Works, JP
Hyundai Heavy
Industries, KR
Seah, KR
Samsung, KR
[ask for more...](#)

| MIDDLE EAST

Ahvaz Pipe Mills, IR
Safa Rolling And Pipe Mills, IR
McDermott Middle East, AE
NPCC – National Petroleum
Construction Com, AE
[ask for more...](#)

| AUSTRALIA/SEA

Godrei & Boyce, IN
Mazagon Dock, IN
Canadoil Group, TH
Vietsovetro, VN
Rolco, AU
[ask for more...](#)

FOLLOW US!

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.



HAEUSLER.COM
| the forming factory

HAEUSLER AG Duggingen | Baselstrasse 21 | 4202 Duggingen | Switzerland
T +41 61 755 22-22 | F +41 61 755 22-00 | info@haeusler.com | www.haeusler.com