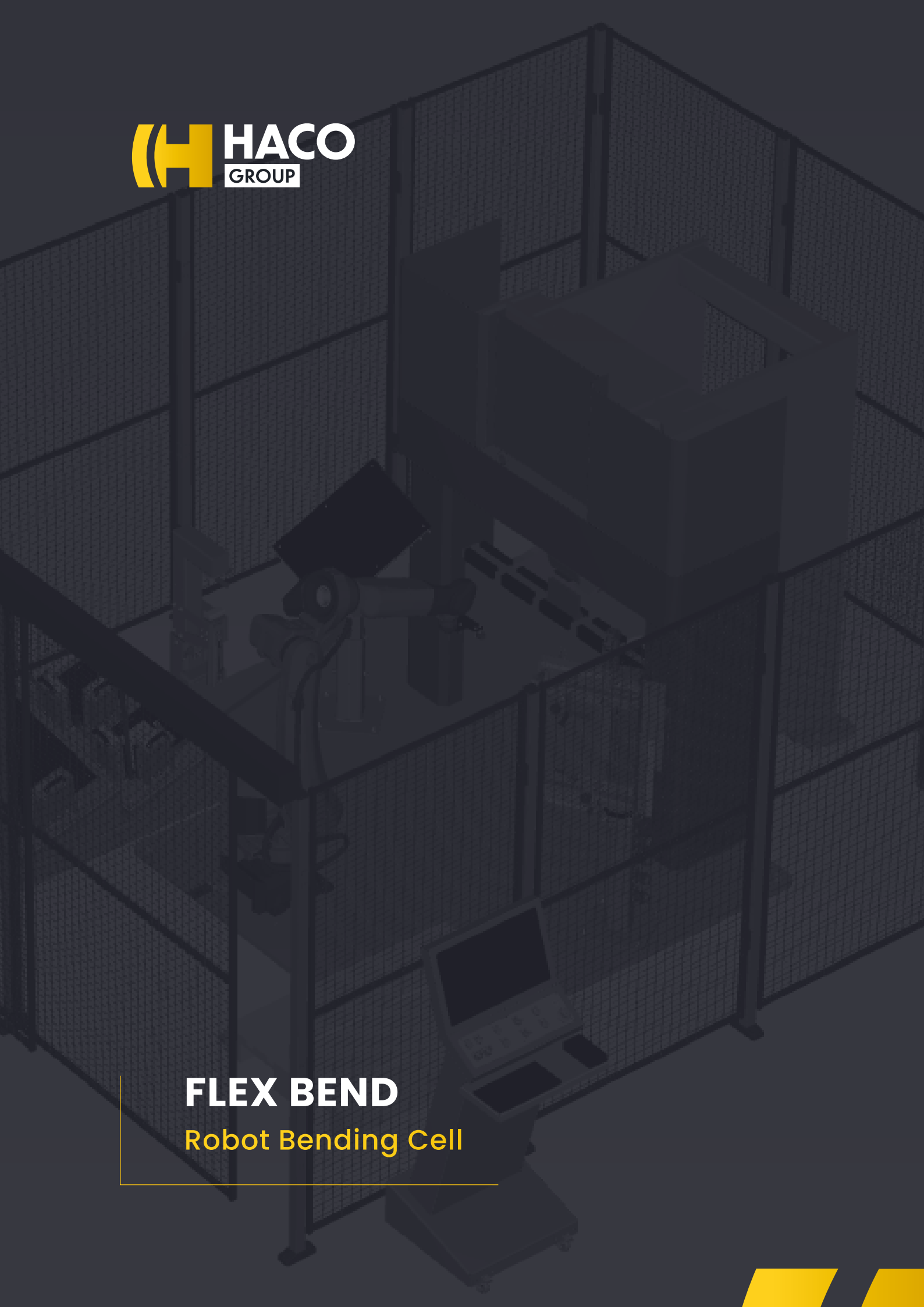


# **FLEX BEND**

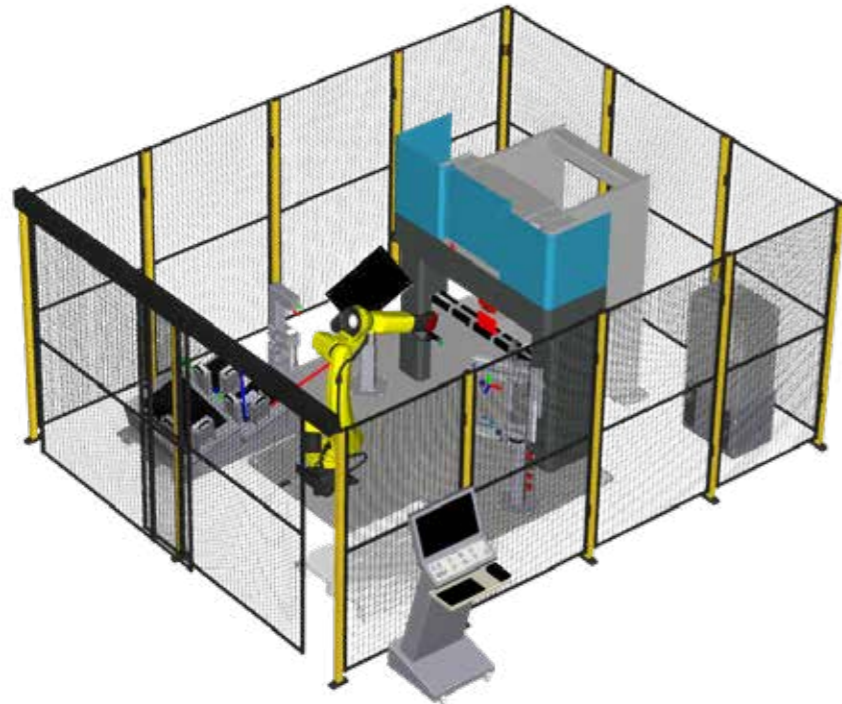
Robot Bending Cell



# HACO FLEX BEND

Challenges for increased productivity, quality and finding skilled operators lead to an increasing demand for automated bending systems or robot bending systems. For several years, HACO provided customers with tailor made solutions in the domain of automated bending. Today HACO is proud to offer a standardized bending cell meeting customer's most demanding requirements.

**FLEX BEND** is a compact robot bending cell which automates the bending of small to medium sized parts in a fast and cost-efficient manner with top precision. Programming is handled completely offline and requires no robot teaching at the machine.



## Main Features

- Fast automatic programming of the press brake and robot
- Space saving design, only 4 x 5 mm of floor space
- Part sizes from 35 x 100 mm up to 300 x 500 mm
- Product weight max 5 kg

## Advantages

- High cost effectiveness even for smaller series
- User friendly software
- Constant quality

# Product specifications

## PRESS BRAKE

### Electrical pressbrake EMaster 13040



- Tonnage 40 tons - Machine length 1.3 meter
- 4-axis backgauge with finger detection: X, R, Z1 & Z2
- Controller FASTBEND 3D MT
- Clamping European Standard
- Daylight opening 375 mm - stroke 150 mm
- Fast approach speed: 150mm/s
- Bending speed : 20 mm/s - Fast return speed: 150 mm/s

## ROBOT

### FANUC robot M-20iD/35 with 30iB controller

- 6 axis robotic arm
- Armlength: 1831 mm
- Payload: 35 kg



# Peripherals

## Picking station

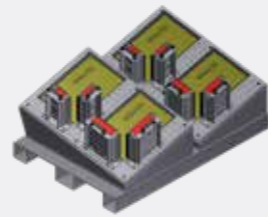
The picking station features magnetic sheet separation and brushes to facilitate efficient selection, ensuring the vacuum/magnetic gripper grasps only a single sheet by utilizing magnetic repulsion to separate the top sheets.



- 3 sheet picking pattern
- 600 x 400mm (1x)
- 425 x 275mm (2x)
- stackheight: 200 mm
- thickness from 1 to 4 mm



- 2 sheet picking pattern
- 600 x 400 mm
- stackheight: 200 mm
- thickness from 1 to 4 mm



- 4 sheet picking pattern
- 425 x 275 mm
- stackheight: 200 mm
- thickness from 1 to 4 mm

## Double sheet detection

Assures the robot has only picked up a single base plate.



- Sheet thickness from 1 to 6 mm
- Material independent (ferro and non-ferro metal)

## Reference station

Reference station, where the base products can be referenced so that each base product is in an identical position for the robot to pick up.



- The reference table is a static, angled surface
- The dimensions of the reference table are 500 x 300 mm

## Retake station

This universal retake station contains manually adjustable arms and is equipped with suction cups as well as with magnets.



- For sheets of 300 x 500 mm
- Movable arms manually adjustable in height and width
- Standard version with 4 suction cups diameter 50 mm
- 4 pneumatic magnets (47 N)

## Robot gripper

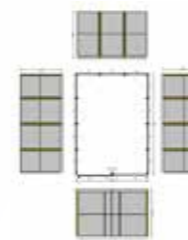
The robot is standard equipped with a universal mechanical robot gripper.



- Parallel gripper with course 8 mm
- Adjustable suction cups
- 90° rotation element

## Safety equipment

The robot bending cell is equipped with various safety features to protect operators from potential hazards during the operation of the robot.



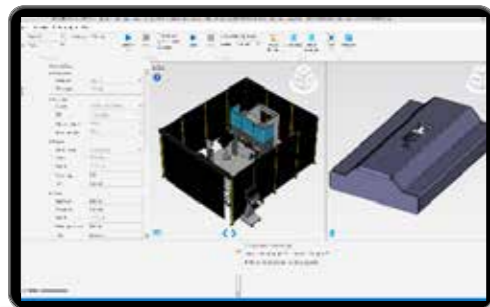
- Safety perimeter, with dimensions 4 m by 5 m
- Fences (colour: RAL 9011 and 1018) with 2300 mm height
- Two sliding doors with 1900 mm wide opening
- Mesh size: 50 x 30 mm
- Equipped Euchner MGB locks with panic handle

# Software

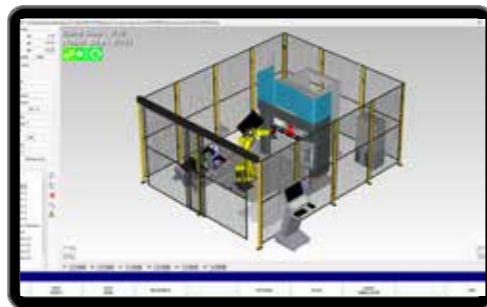
## Offline bending software

The software is used for calculating, simulating and adjusting the bending sequence of the products, and also for calculating, simulating and adjusting the robot programs. All bending- and robot programs can be simulated in detail.

**HACOBEND Pro**



**Robotbender**



# Product Range

With decades of experience and leading technologies, we are known for our high-quality customized solutions for sheet metal fabrication and machining. Whether laser cutting, bending or rolling, at HACO we offer precision, quality and innovation.

- Press brakes
- Fiber lasers
- Plasma cutters
- Shears
- Bending machines



# Optional equipment

### PRESS BRAKE

- Hydraulic press brake
- Hydraulic clamping
- 5 axes

### ROBOT GRIPPER

- Automatic robot gripper
- Gripper change system
- Chute to slide pieces into a box



## ADVANCED TECHNOLOGIES, SINCE 1965



Bending



Robotics



Cutting



Shearing

With decades of experience and leading technologies, we are known for our high-quality customized solutions for sheet metal fabrication and machining. Whether laser cutting, bending or shearing, at HACO we offer precision, quality and innovation.



Customized solutions



Made in EU



Global reach



Local focus

Find out how we can take your automation projects to the next level and view our extensive portfolio of success stories.



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