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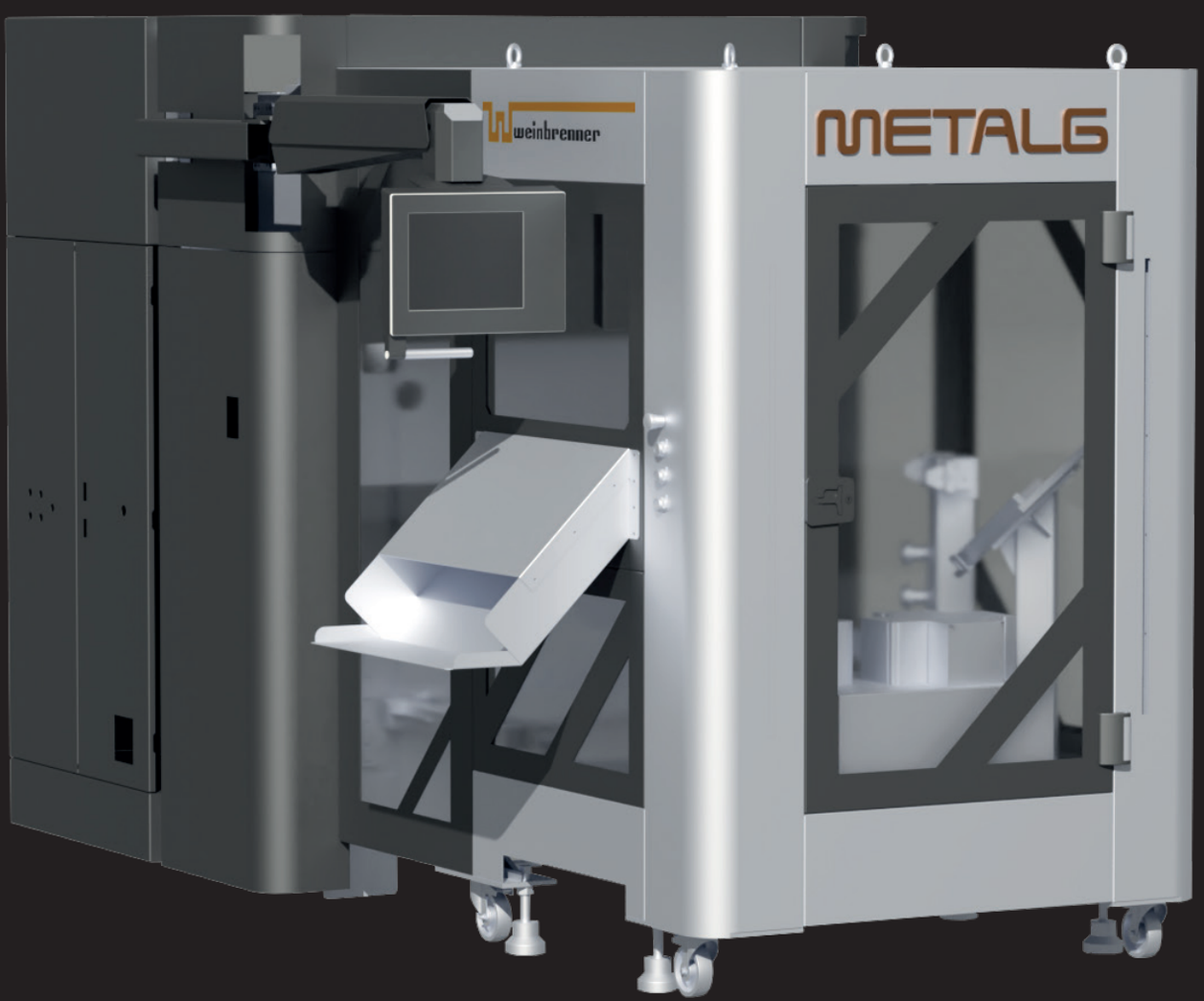
MG-BENDCELL



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Meet the Future of Production Technology with MG-BendCell

A Revolution in Press Brakes

The MG-PlugIN software transforms your Baykal and Weinbrenner hybrid or electrical press brakes into a bending cell when used with the Cybelec VisiTouch. MG-BendCell offers manual and automatic operation options, providing on-demand automation even in the tightest spaces. Whether in small workshops or large factories, MG-BendCell, with its MiniG, MiddleG, and BigG product ranges, can be easily used in any production environment.

Better Performance and Increased Production

MG-BendCell enhances efficiency and production with its user-friendly design. Operators determine the part to be bent using the VisiTouch control unit or import it in DXF, IGES, STEP formats with the VisiTouch-MXIMP then prepare the bending program. The MG-PlugIN software integrated into the VisiTouch control unit automatically generates the robot program, considering the pre-determined cell and gripper setup. The robot program for all sub-processes, from picking up the sheet from the stack, performing the necessary bends, to placing the finished part back onto the stack, is automatically created. This allows for the quick start of automatic bending of a new part and the rapid production of the desired quantity.

Compact and Portable

MG-BendCell's MiniG, MiddleG, and BigG products stand out with their compact robot cell designs, usable even in the tightest spaces. All our robot cell designs ensure bending automation in various production areas thanks to their compact and portable structures.

Simple and Effective Programming

The MG-PlugIN software simplifies programming processes, offering easy-to-use features in both manual and automatic modes. It allows operators to quickly activate different grippers, die-station setups, and sheet or finished part stack arrangements suitable for the part. Additionally, operators can manually move the robot, record the current positions, and create teaching points for the program.

Training and Support

MetalG offers comprehensive training and support services to ensure that MG-BendCell users can utilize the MG-PlugIN software most effectively. Our training programs enable your operators to quickly adapt to the MG-PlugIN software. Moreover, our technical support team provides quick and effective solutions for any issues you may encounter with MG-BendCell.

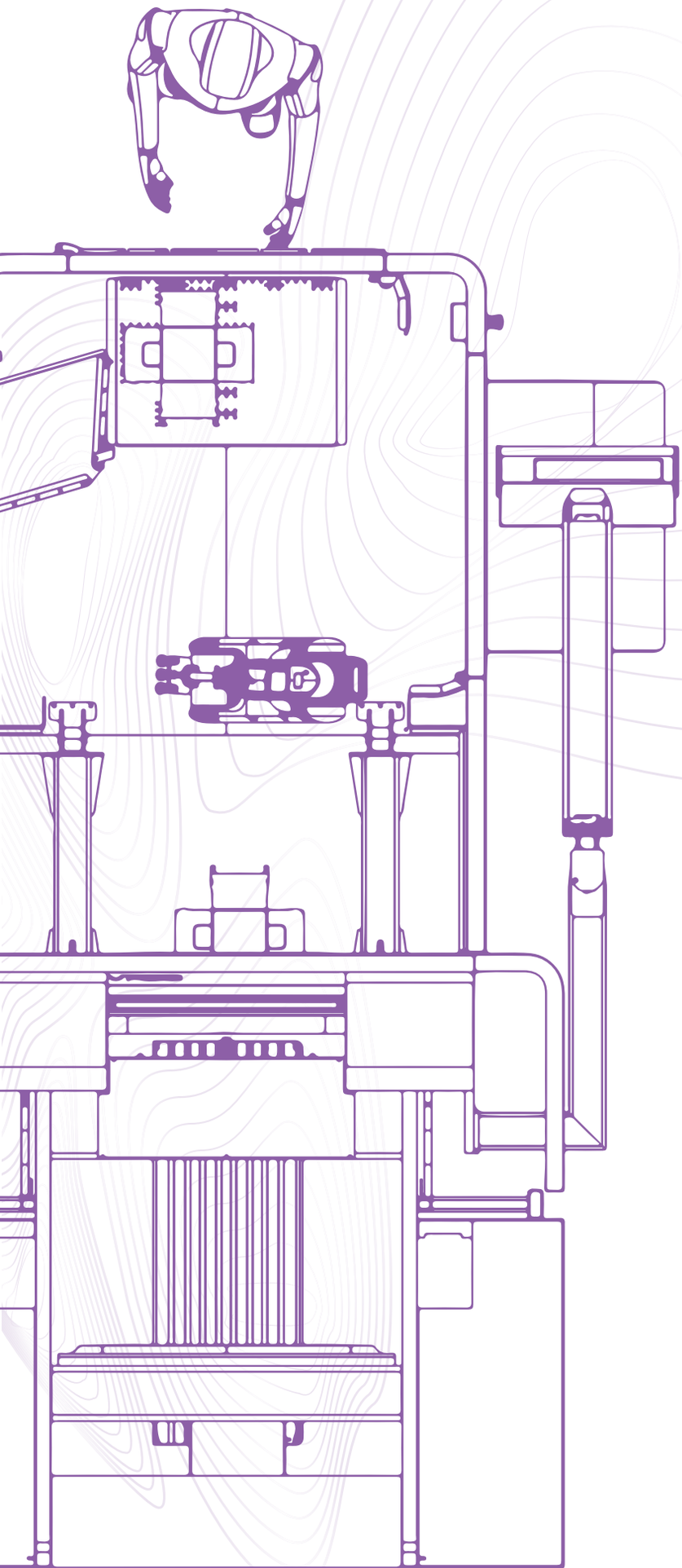
Innovation and Future Vision

MetalG's future vision for all software and technologies is focused on continuous innovation and development. In the future, we aim to further optimize your production and maintenance processes with broader AI-based integration and automation features. MetalG continuously pushes the boundaries of technology, always taking production standards one step further.

Workflows and Use Cases

The MG-PlugIN software can be flexibly and effectively used in various production scenarios. For instance, you can set up a fast MG-BendCell MiniG in a small workshop for high-volume production. In large factories, you can easily manage automated bending processes with MG-BendCell BigG models, increasing your production efficiency.

Frequently Asked Questions (FAQ)



What is the installation process for MG-PlugIN software?

The MG-PlugIN software works integrated with VisiTouch CNC control units. It can be quickly installed. Our training and support services ensure a smooth installation process.

How is MG-BendCell integrated with my existing machine?

MG-BendCell solutions are designed to be compatible with various press brakes. If your machines have VisiTouch CNC control units, integration is straightforward. Otherwise, your machine can be upgraded by replacing its control unit with a VisiTouch CNC. In both cases, the necessary robot peripheral devices and gripper components are determined based on the variety of parts to be produced. This process is guided step-by-step by our technical support team, providing a turnkey solution tailored to your needs. The integration process is carried out with minimal disruption.

How is the connection between the robot and Visitouch made?

The connection between the robot and VisiTouch CNC consists of only one Ethernet communication cable and four digital input and output signals. MG-Bend-Cell's main robot partner is YASKAWA. On demand MC-Bend-Cell robot interface can be adapted to other robots.

Technical Specifications

"Different tool designs and cabin configurations can result in variations in the bendable part dimensions."

Project Technical Data	**MINI-G**
Press Brake Type	Weinbrenner WPB 13036 *The machine can be changed optionally
Maximum Bending Force (kN)	360
Bending Length	1000
Minimum Part Dimension (mm)	100x100
Maximum Thickness (mm)	3
Maximum Part Dimension (mm)	950x950
Approx Weight (kg)	3000
Max Part Weight (kg)	7
Number of Axes	6 X+R+Z1+Z2 Motorized
Max Payload With Gripper	10
Robot	Yaskawa GP7
Machine Type	Hydraulic, Electrical or Hybrid Type Press Typical Baykal / Weinbrenner

Technical Specifications

"Different tool designs and cabin configurations can result in variations in the bendable part dimensions."

Project Technical Data	**MIDDLE-G**
Press Brake Type	Weinbrenner WPB 13036 *The machine can be changed optionally
Maximum Bending Force (kN)	400
Bending Length	1500
Minimum Part Dimension (mm)	350X350
Maximum Thickness (mm)	4
Maximum Part Dimension (mm)	1150X1150
Approx Weight (kg)	3500
Max Part Weight (kg)	10
Number of Axes	6 X+R+Z1+Z2 Motorized
Max Payload With Gripper	13
Robot	Yaskawa GP20HL
Machine Type	Hydraulic, Electrical or Hybrid Type Press Typical Baykal / Weinbrenner

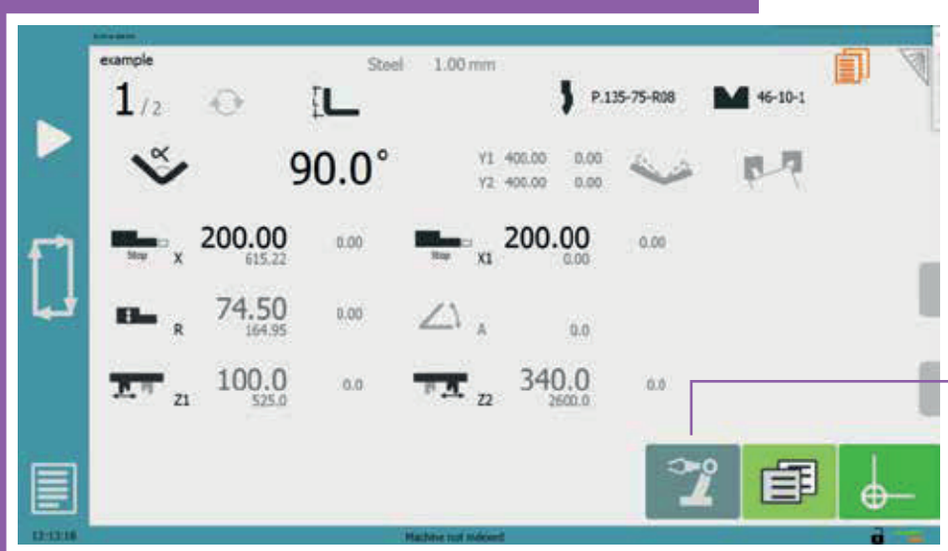
Technical Specifications

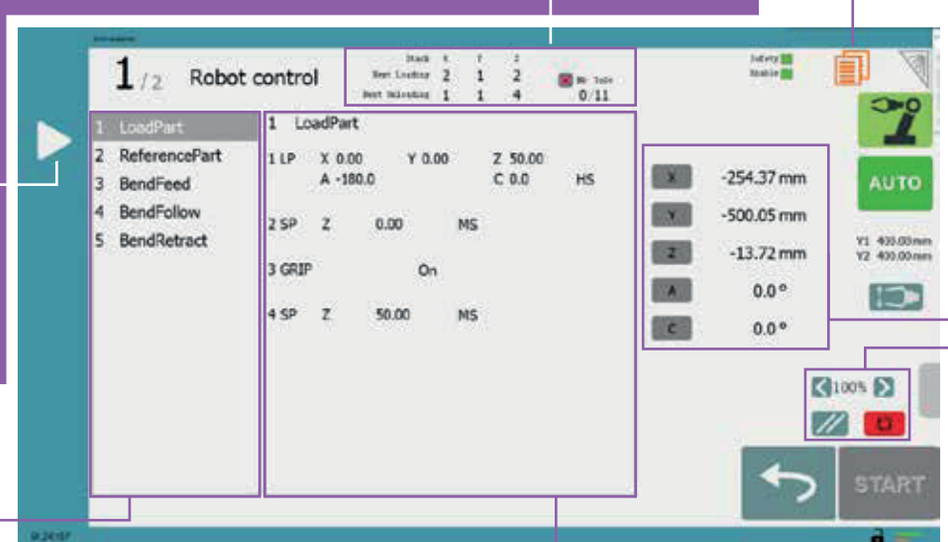
"Different tool designs and cabin configurations can result in variations in the bendable part dimensions."

Project Technical Data	**BIG-G**
Press Brake Type	Weinbrenner WPB 13036 *The machine can be changed optionally
Maximum Bending Force (kN)	450
Bending Length	1700
Minimum Part Dimension (mm)	400x400
Maximum Thickness (mm)	5
Maximum Part Dimension (mm)	1500x1500
Approx Weight (kg)	4000
Max Part Weight (kg)	17
Number of Axes	6 X+R+Z1+Z2 Motorized
Max Payload With Gripper	20
Robot	Yaskawa GP25-12
Machine Type	Hydraulic, Electrical or Hybrid Type Press Typical Baykal / Weinbrenner

MG-PlugIN Software (Cybelec VisiTouch CNC)

The robot control button allows access to the VisiTouch robot control page (as shown below). On the robot control page, when the Robot Control On/Off button is pressed, the icon will look like this; when turned off, the icon will look like this.





Next Step

Move to the next step to see the program steps. Robot sequences correspond to bending sequences.

Operation Program Area

In this area, basic operations are programmed for each robot step. Robot operations include basic functions such as 'Load Part,' 'Take Reference Part,' 'Go to Bending,' 'Follow Bending,' and 'Retreat.'

Suboperation Program Area

In this area, sub-operations are rogrammed for each step. Point coordinates can be entered, and the gripper can perform part grip/release, etc.

Sheet Stack & Count

This area allows the operator to determine the starting point of the stack where we begin the part loading and unloading operations. While the program is running, it also shows the position of the next loading (unloading) stack. Additionally, part counting (processed part count and parts to be processed) is available in this area.

Robot Configuration

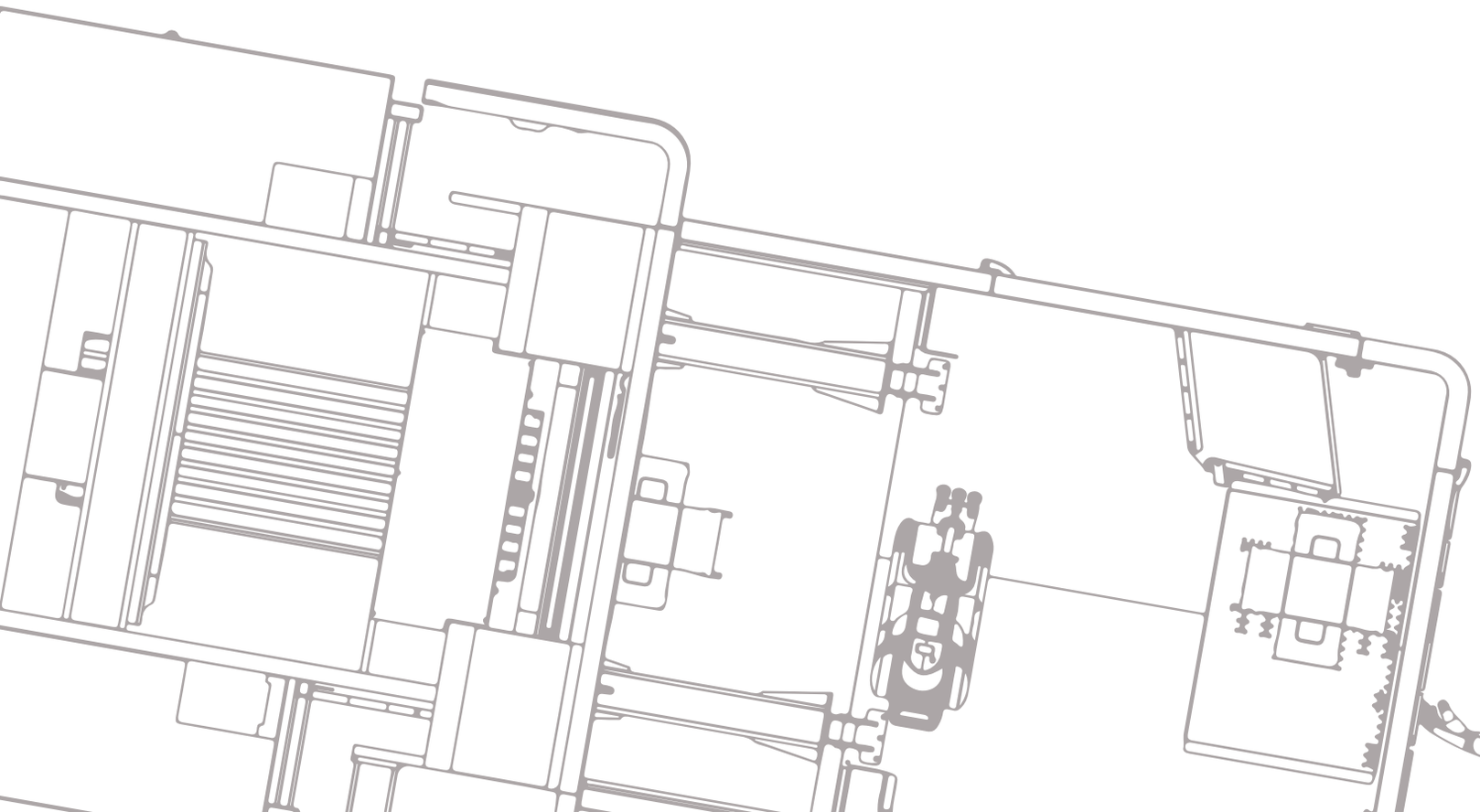
Provides access to the robot configuration pages.

Robot Manual Operate

This area allows the operator to move the robot manually or perform operations step by step (run the program step by step). By manually moving the robot, the operator can record the current robot position for program use (teaching point).

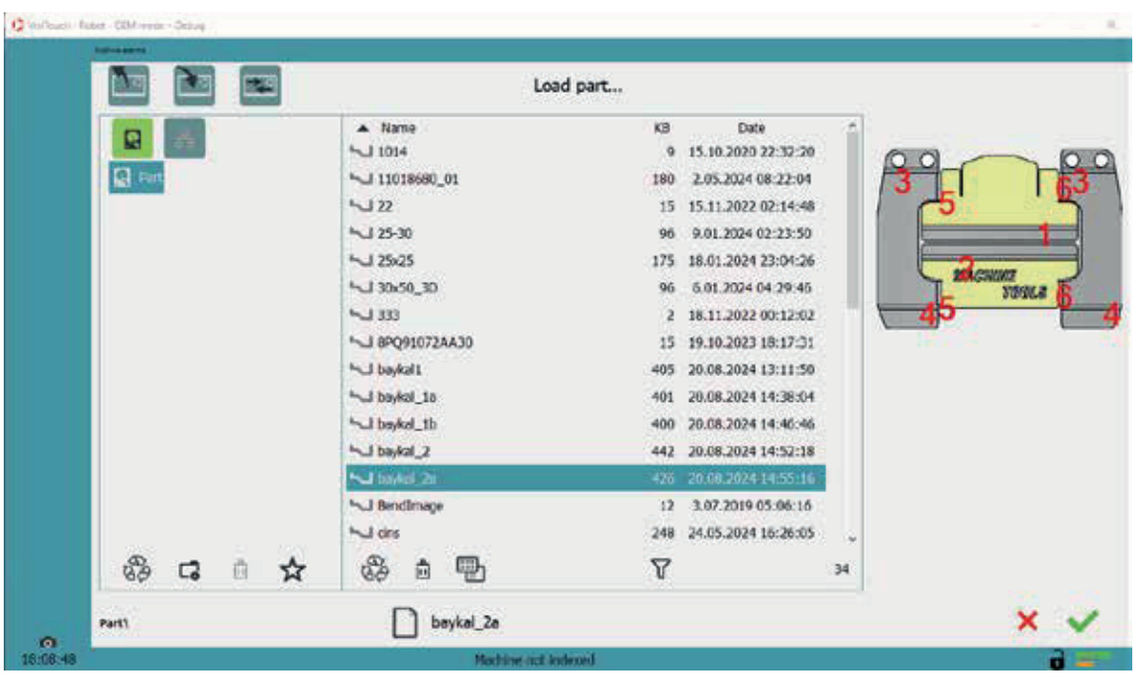
Program Control

Here, the operator can adjust the program's speed percentage, restart the program, and enable the program to run cyclically.

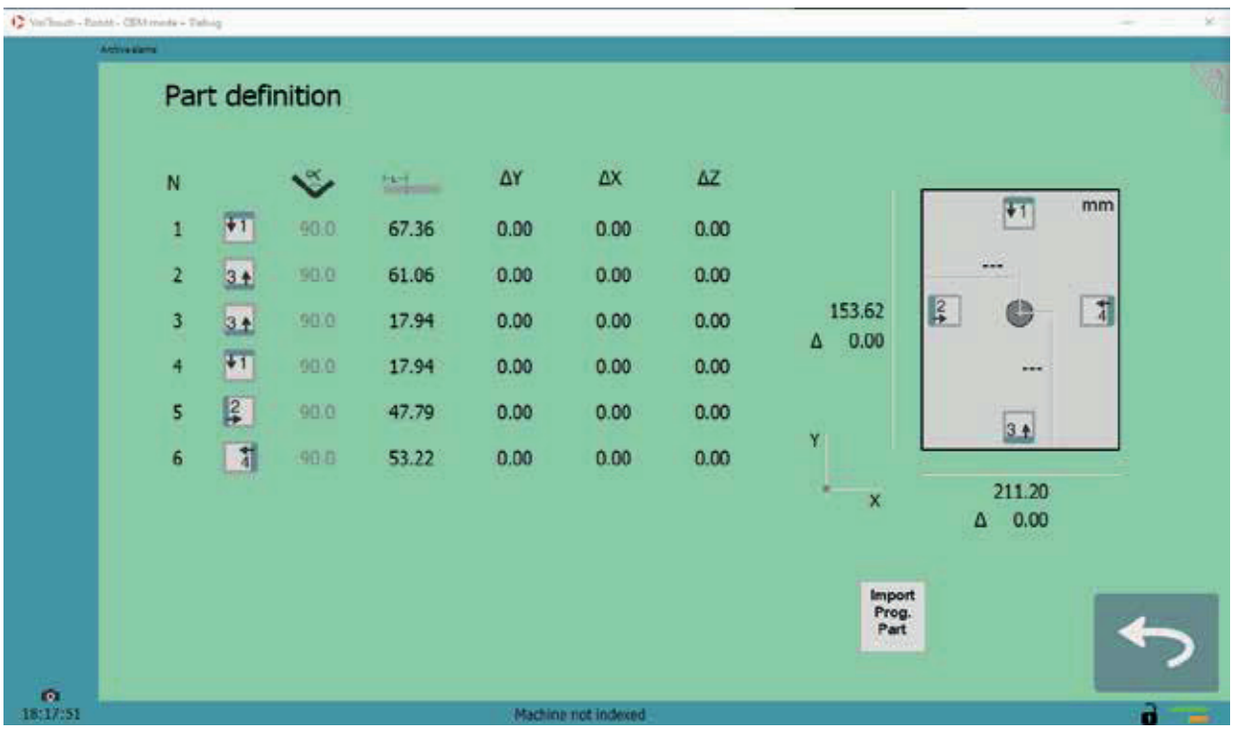


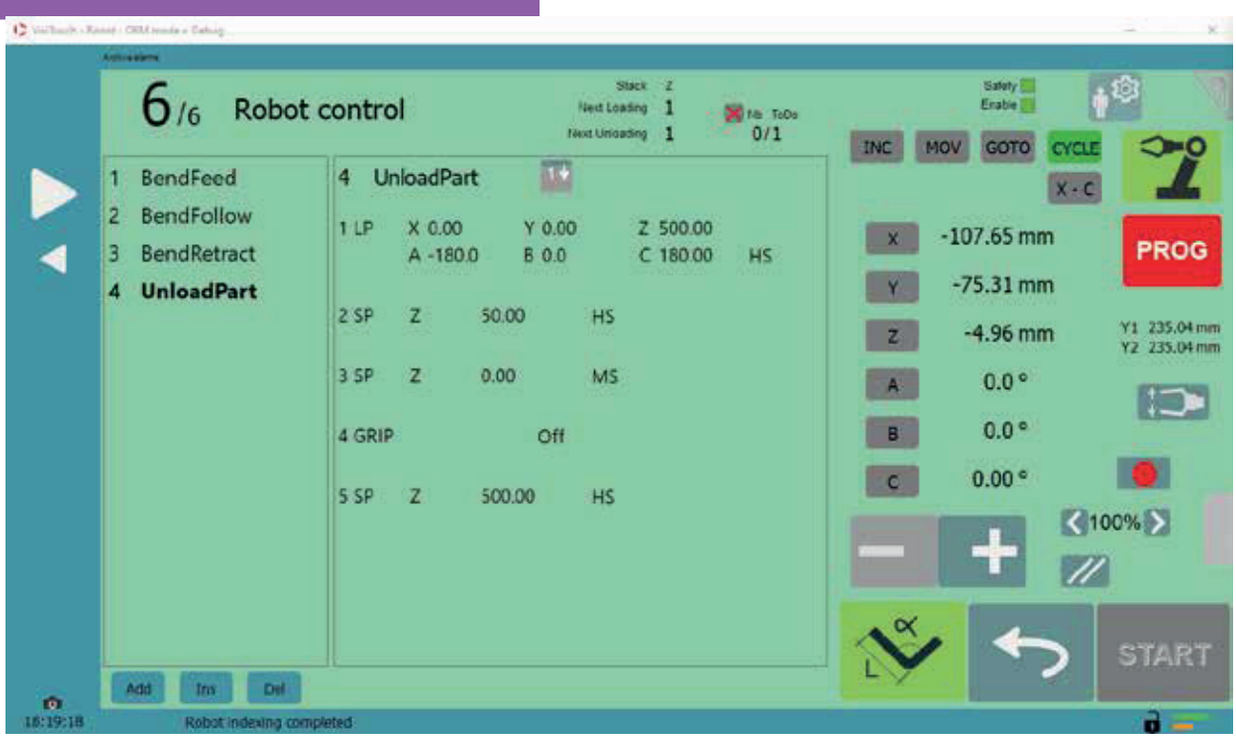
Transfer of Parts Programmed with MBend to MG-PlugIN Software

Programs of parts tooled and sequenced with the MBend program can be transferred to MG-PlugIN and used without needing to reprogram them.

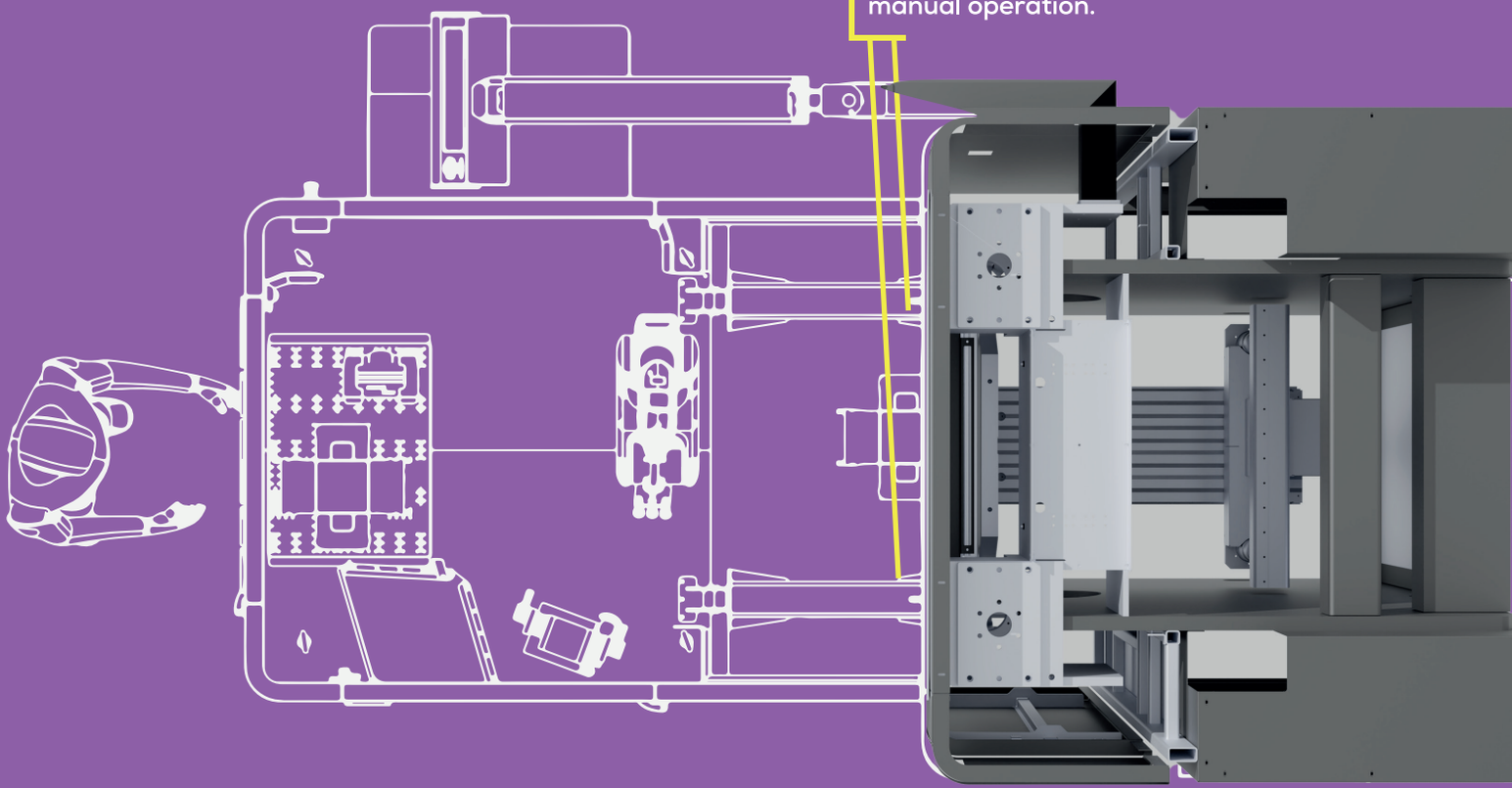


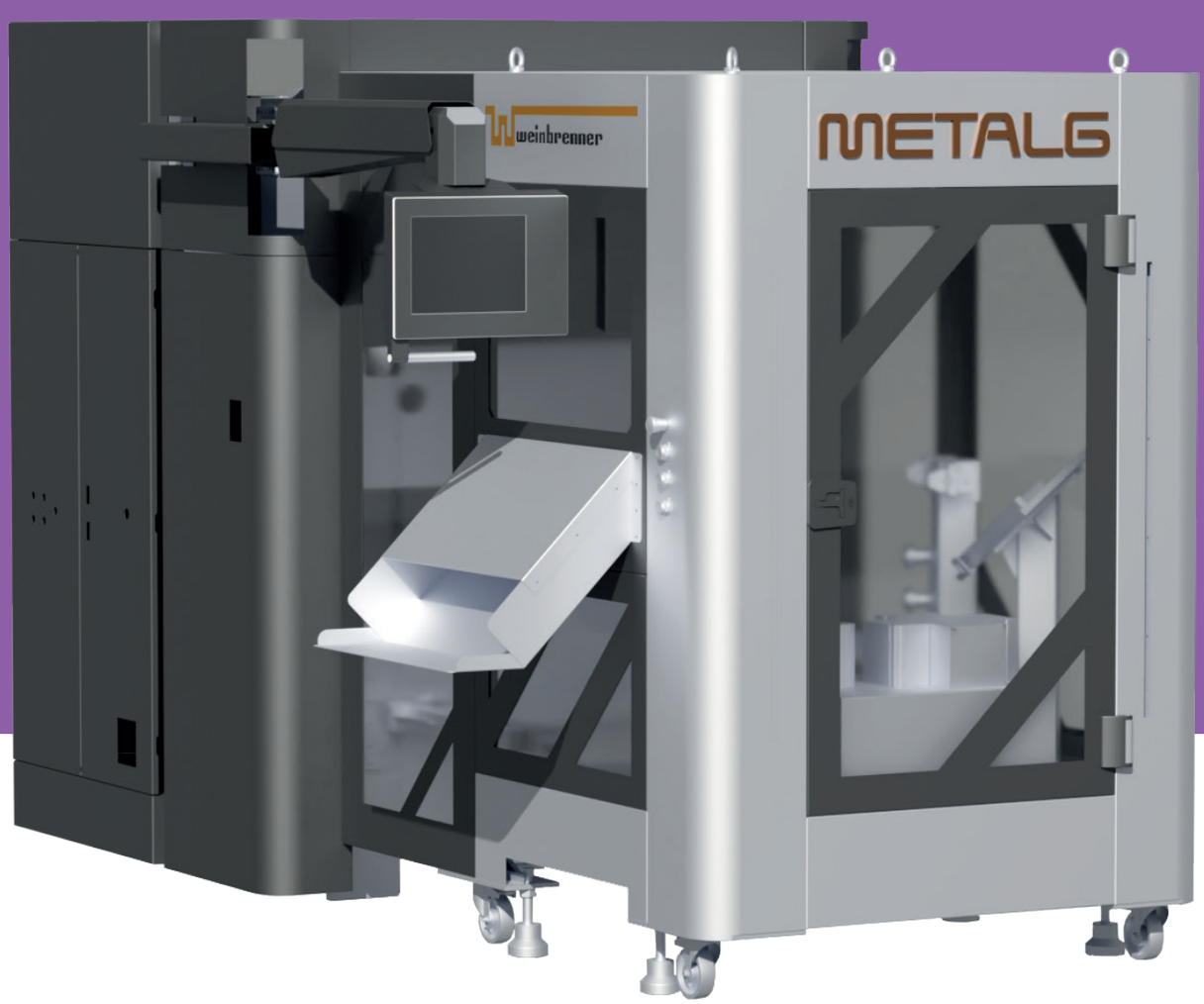
First, the programmed part is selected with Visitouch "Part Management." The transition is made to the robot control page, and the Part Identification interface is opened. On this page, press the “Import Prog. Part” button, and the selected part is transferred to MG-PlugIN. The bending sequences, directions, and distances of the part are automatically filled in, making the part ready for bending with the robot. Alternatively, the bending sequences can also be manually defined for robotic bending.

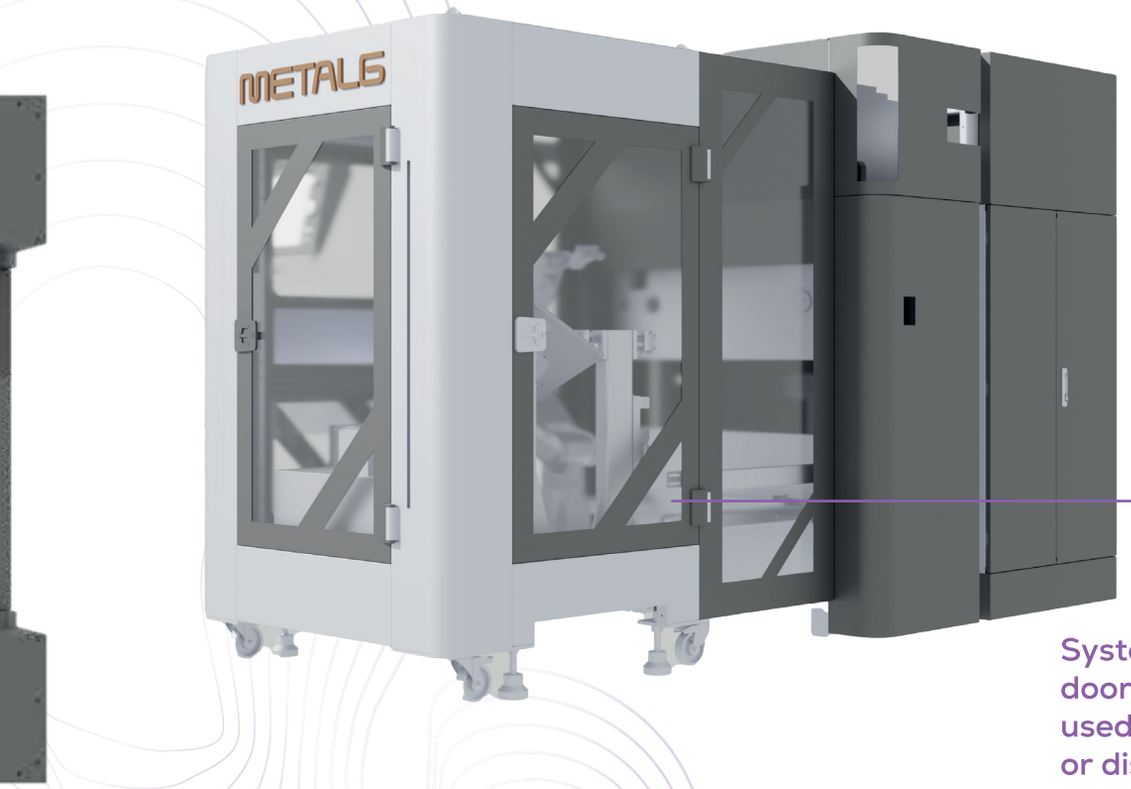

Part definition
N
ΔY
ΔX
ΔZ
1 90.0 67.36 0.00 0.00 0.00
2 90.0 61.06 0.00 0.00 0.00
3 90.0 17.94 0.00 0.00 0.00
4 90.0 17.94 0.00 0.00 0.00
5 90.0 47.79 0.00 0.00 0.00
6 90.0 53.22 0.00 0.00 0.00
mm
153.62
Δ 0.00
211.20
Δ 0.00
Y
X
Import Prog. Part
18:17:51
Machine not indexed


6/6 Robot control
Stack Z
Next Loading 1
Next Unloading 1
Nb ToDo 0/1
Safety
Enable
INC
MOV
GOTO
CYCLE
X - C
1 BendFeed
2 BendFollow
3 BendRetract
4 UnloadPart
4 UnloadPart
1 LP X 0.00 Y 0.00 Z 500.00
A -180.0 B 0.0 C 180.00 HS
2 SP Z 50.00 HS
3 SP Z 0.00 MS
4 GRIP Off
5 SP Z 500.00 HS
X -107.65 mm
Y -75.31 mm
Z -4.96 mm
A 0.0 °
B 0.0 °
C 0.00 °
PROG
Y1 235.04 mm
Y2 235.04 mm
100%
Add
Ins
Del
START
18:19:18
Robot indexing completed

It can be connected to or disconnected from the press brake cell with simple connections, making it suitable for manual operation.







System has a service door, which can be used for any maintenance or disassembly operations

Sheet Loading Door

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