KLD Machinery Panel Bender

Intelligent Bending. Configured for Your Production.



Two Platforms, One Flexible Bending Portfolio

Complementary architectures for material capability, tooling flexibility and future automation.



PA SERIES

Dedicated tooling structure with pneumatic upper pressing tooling.

1,400–2,500 mm bending width · **15 axes**
Up to 2.0 mm stainless · 3.0 mm mild steel



A SERIES

Automatic tool changing with positive-bending assistance tooling.

2,000–2,500 mm bending width · **21 axes**
Up to 1.5 mm stainless · 2.0 mm mild steel

Shared platform strengths: 170 mm standard bending height · 0.35 mm minimum sheet thickness · configurable digital engineering, forming, handling, automation and safety

PA Series: Built for Thicker Panels

Dedicated tooling architecture for demanding panel-bending applications.

PA SERIES



Thicker-sheet capability with controlled upper pressing

A dedicated tooling structure and pneumatic upper pressing tooling support stable forming across the PA platform.

1.4–2.5 m
Bending width

170 mm
Bending height

2.0 mm
304 stainless steel

3.0 mm
Mild steel

0.35 mm
Minimum sheet

15
Controlled axes

Maximum thickness depends on model and material grade; verify the complete part family before selection.

Three PA Models Cover 1.4 to 2.5 Metres

Choose the working width first, then validate material thickness, blank size and forming geometry.

KLD Machinery

KLD-1400PA

1,400 mm MAX. WIDTH

KLD-2000PA

2,000 mm MAX. WIDTH

KLD-2500PA

2,500 mm MAX. WIDTH

Model	Width	Max. Sheet Size	304 SS	Mild Steel	Avg. Power
KLD-1400PA	1,400 mm	1,400 × 1,400 mm	2.0 mm	3.0 mm	1.9 kW
KLD-2000PA	2,000 mm	2,000 × 1,500 mm	2.0 mm	3.0 mm	2.5 kW
KLD-2500PA	2,500 mm	2,500 × 1,500 mm	1.5 mm	2.0 mm	2.9 kW



SELECTION LOGIC

Match the model to the largest required blank, then verify material grade, thickness, handling space and the complete bending sequence.

PA Series Technical Specifications

Complete specifications for KLD-1400PA, KLD-2000PA and KLD-2500PA.

Technical Parameter	KLD-1400PA	KLD-2000PA	KLD-2500PA
Max. bending width	1,400 mm	2,000 mm	2,500 mm
Max. bending height	170 mm	170 mm	170 mm
304 stainless steel, UTS 515 N/mm²	2.0 mm	2.0 mm	1.5 mm
Mild steel, UTS 410 N/mm²	3.0 mm	3.0 mm	2.0 mm
Min. sheet thickness	0.35 mm	0.35 mm	0.35 mm
Max. sheet size	1,400 × 1,400 mm	2,000 × 1,500 mm	2,500 × 1,500 mm
Rated voltage	380 V	380 V	380 V
Total motor power	40 kW	72 kW	72 kW
Average power	1.9 kW	2.5 kW	2.9 kW
Machine dimensions, L × W × H	446 × 190 × 290 cm	524 × 264 × 340 cm	574 × 303 × 324 cm
Machine weight	13 t	22 t	25 t
Formed inner size	140 × 190 mm	140 × 190 mm	140 × 190 mm
Number of axes	15	15	15

Specifications are based on the supplied KLD product document and may vary with final configuration.

A Series: Flexible Bending with Automatic Tooling

Automatic tool changing and positive-bending assistance for varied part families.

Automatic tooling for flexible production

The A Series combines automatic tool changing with standard positive-bending assistance tooling across a 21-axis platform.

2.0–2.5 m
Bending width

170 mm
Bending height

1.5 mm
304 stainless steel

2.0 mm
Mild steel

0.35 mm
Minimum sheet

21
Controlled axes

Final machine selection should reflect the complete part family, tooling strategy and automation plan.



Two A Models Scale with Part Size

A common automatic-tooling architecture with 2.0 m and 2.5 m working-width choices.

KLD-2000A

2,000 mm

22 t machine weight
2.9 kW average power

KLD-2500A

2,500 mm

25 t machine weight
3.0 kW average power

Model	Width	Max. Sheet Size	304 SS	Mild Steel	Avg. Power
KLD-2000A	2,000 mm	2,000 × 1,500 mm	1.5 mm	2.0 mm	2.9 kW
KLD-2500A	2,500 mm	2,500 × 1,500 mm	1.5 mm	2.0 mm	3.0 kW

SHARED A-SERIES ARCHITECTURE

170 mm
Bending height

0.35 mm
Minimum sheet

82 kW
Total motor power

21 axes
Coordinated architecture

A Series Technical Specifications

Complete specifications for KLD-2000A and KLD-2500A.

Technical Parameter	KLD-2000A	KLD-2500A
Max. bending width	2,000 mm	2,500 mm
Max. bending height	170 mm	170 mm
304 stainless steel, UTS 515 N/mm²	1.5 mm	1.5 mm
Mild steel, UTS 410 N/mm²	2.0 mm	2.0 mm
Min. sheet thickness	0.35 mm	0.35 mm
Max. sheet size	2,000 × 1,500 mm	2,500 × 1,500 mm
Rated voltage	380 V	380 V
Total motor power	82 kW	82 kW
Average power	2.9 kW	3.0 kW
Machine dimensions, L × W × H	515 × 330 × 345 cm	549 × 427 × 344 cm
Machine weight	22 t	25 t
Formed inner size	140 × 190 mm	140 × 190 mm
Number of axes	21	21

Specifications are based on the supplied KLD product document and may vary with final configuration.

Select the Platform Around the Application

PA and A are complementary architectures—not a simple good / better hierarchy.

Decision Factor	PA SERIES	A SERIES
Primary advantage	Thicker-panel capability	Flexible automatic tooling
Tooling concept	Dedicated tooling with pneumatic upper pressing	Automatic tool changing with positive-bending assistance
Material capability	Up to 2.0 mm 304 SS / 3.0 mm mild steel	Up to 1.5 mm 304 SS / 2.0 mm mild steel
Available widths	1,400 / 2,000 / 2,500 mm	2,000 / 2,500 mm
Axis count	15	21
Best fit	Applications prioritizing sheet thickness	High-mix applications prioritizing tooling flexibility



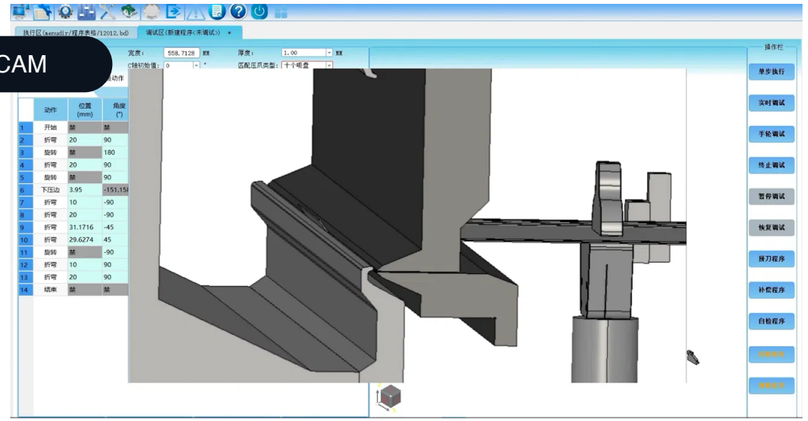
CONFIGURATION PRINCIPLE

Validate the full part family, material grade, largest blank, bend sequence, required inner geometry and planned automation level.

Program Parts from 3D Data

Connect 3D part preparation, bend recognition and machine programming in a digital workflow.

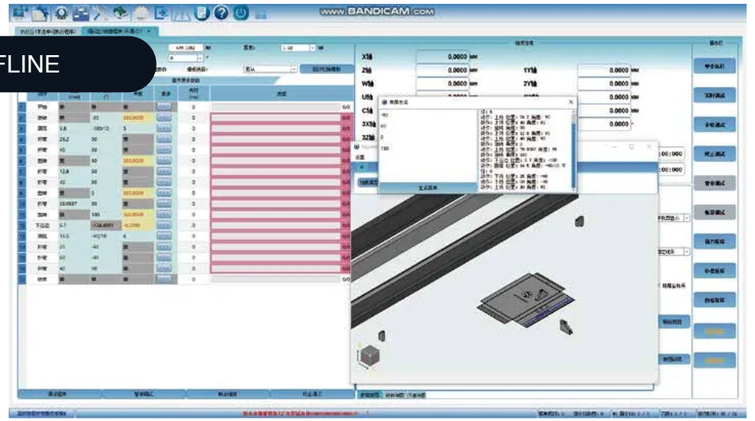
3D CAM



Integrated 3D CAM

- Imports STEP files for part preparation.
- Recognizes bends and unfolds the component.
- Supports 3D programming in the machine software.

OFFLINE



Offline Programming

- Installs on an office computer with online registration.
- Prepares programs away from the machine.
- Uses STP files for 3D machine-program preparation.

STEP / STP Data → Bend Recognition → Program Preparation → **Machine Program**

Extend the Forming Envelope

Configure added height and specialized tooling for demanding geometries.

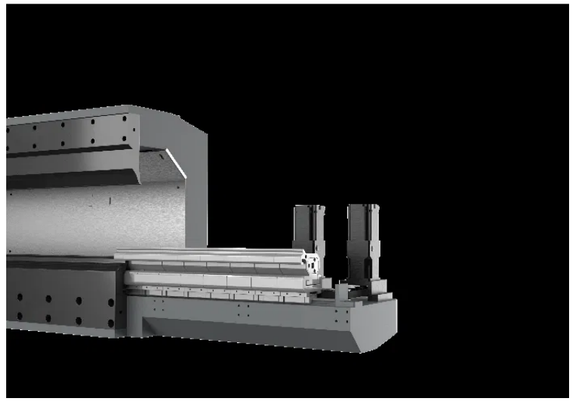


300 mm

CONFIGURED BENDING HEIGHT

Enlarged Throat and Tooling Height

Supports a bending height up to 300 mm, including power-hinge tooling.



PARTIAL NARROW

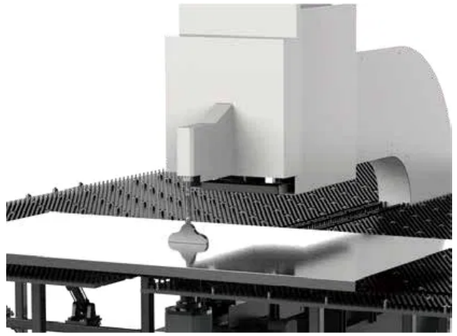
Assistant Tooling

Supports partial bends and special bending blades for narrow-profile applications.

STANDARD PLATFORM · 170 mm bending height → **CONFIGURED CAPABILITY** · Up to 300 mm + specialized tooling

Handle Negative Bends and Narrow Parts

Add targeted handling functions for part geometries that challenge standard manipulation.



01 Lifting Rotator C-Axis

Challenge: the final bend is negative.
Response: lift and rotate to support easier workpiece discharge.



02 Magnetic Rotator

Challenge: part width is below 140 mm.
Response: magnets in the upper clamp retain the narrow workpiece.

→ Expand the processable geometry range with controlled support for discharge and narrow-part retention.

Automate Material Flow

Connect blank handling, bending and finished-part transfer in one coordinated cell.



Loading / Unloading Robot

A configurable pathway from manual transfer toward automated sheet-metal production.

01

Pick the Blank

Collect material from the loading table.

02

Transfer to Machine

Position the workpiece for the bending cycle.

03

Complete Bending

Run the programmed forming sequence.

04

Stack Finished Parts

Transfer output to the stacking area.

Reduce manual transfers and create an automation pathway around the panel bender.

Integrate Safety Around the Cell

Configure the safeguarded area around the machine, access points and material flow.

Safety Fence / Rail

Defines the protected operating area and coordinates access around the machine or automated cell.

Light Beam

Detects entry into the safeguarded zone and supports protected access management.



The final safety concept must be validated for the destination market, machine configuration and site-specific risk assessment.

Configure the Machine Around Your Process

Eight options combine into a solution matched to parts, programming, handling and automation.

Digital Engineering

Integrated 3D CAM
Offline programming

Forming Capability

300 mm bending height
Assistant tooling

Part Handling

Lifting rotator C-axis
Magnetic rotator

Automation & Safety

Loading / unloading robot
Safety fence and light beam

Four Questions Define the Right Configuration

01

What materials, thicknesses and maximum blank sizes must be processed?

02

Which geometries require extended height, partial bends or special handling?

03

How much programming should be completed offline?

04

Is the production plan manual, semi-automatic or fully automated?

Thank You

KLD Machinery Panel Bender