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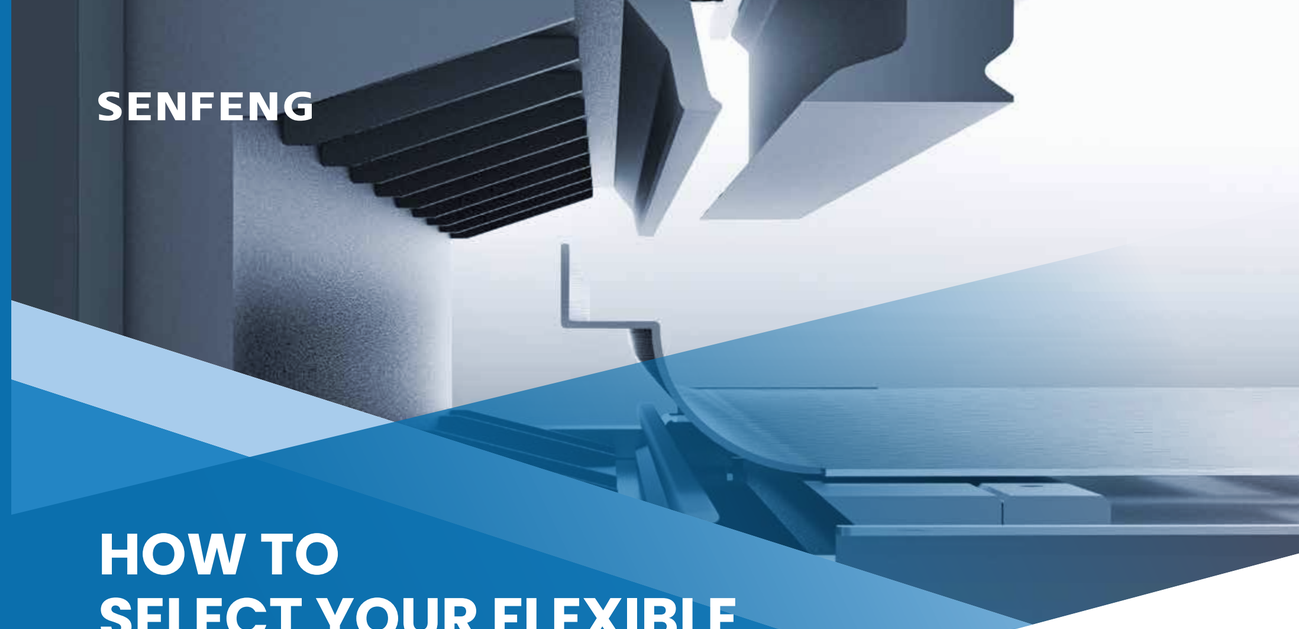
Note: The pictures and parameters in the album are for reference only, and the actual product shall prevail. Printed in May 2025

SENFENG



HOW TO SELECT YOUR FLEXIBLE PANEL BENDERS

www.senfenglaser.com

Provide Global Customers with Metal
Forming Automation Solutions

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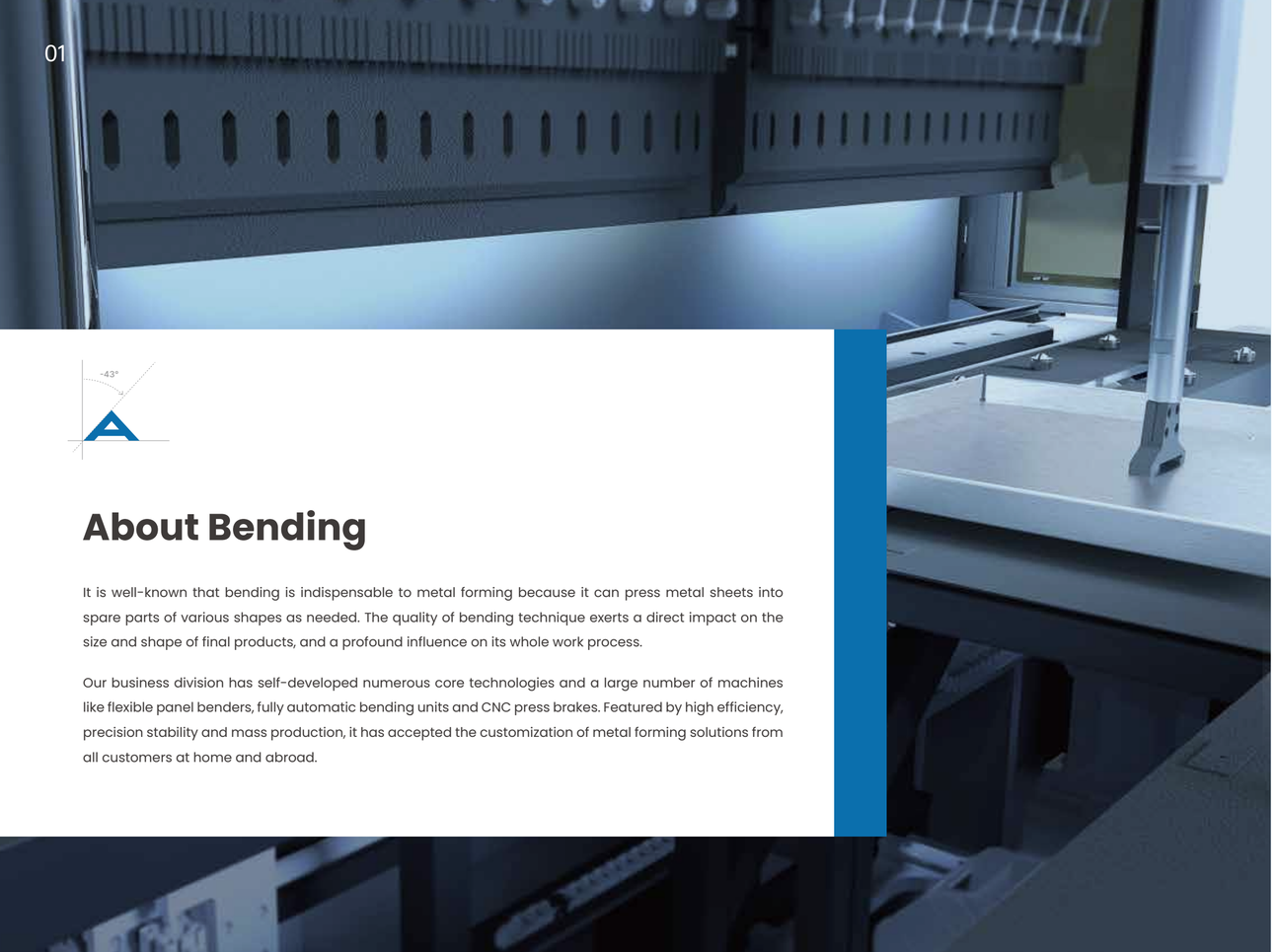


About Bending

It is well-known that bending is indispensable to metal forming because it can press metal sheets into spare parts of various shapes as needed. The quality of bending technique exerts a direct impact on the size and shape of final products, and a profound influence on its whole work process.

Our business division has self-developed numerous core technologies and a large number of machines like flexible panel benders, fully automatic bending units and CNC press brakes. Featured by high efficiency, precision stability and mass production, it has accepted the customization of metal forming solutions from all customers at home and abroad.

Flexible Panel Benders

In order to figure out how to bend complex-shaped metal sheets during metal forming, we hereby offer suction-cup and push-down panel benders.

Our products are generally designed and produced according to high-precision machine tool standards. With multi-axis concurrent linkage, they make bending fully automatic and bend workpiece's four sides in one time, so as to reduce traditional dependence on bending die and labor force, get efficiency gains and lower costs of production.

Flexible Panel Benders

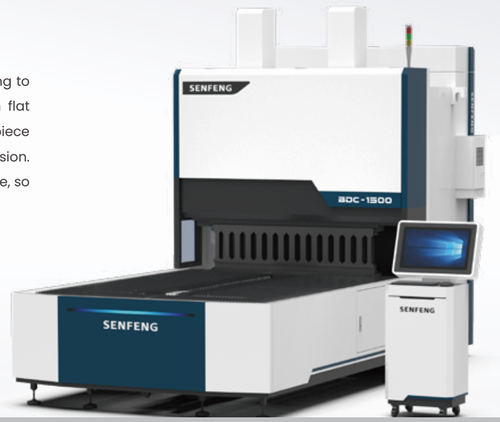
BDC Suction-cup Series

Fed by suction cups, these panel benders are usually designed and produced according to high-precision machine tool standards, therefore, which fit to bend workpieces with flat surface, no punching hole but suitable for suction cups. With upper blank holders, workpiece will be tightly clamped only by clicking a button. C axis usually rotates fast at high precision. After technical upgrades time after time, our panel benders can work stably for long time, so that your production efficiency is about to be improved greatly.

Suction-cup feeding

Change workpiece position automatically

One-key clamping



Technical Parameters

Hot-selling model	BDC1200	BDC1500
Feeding mode	Suction cups	
Positioning mode	Positioned by double guiding rules on D axis	
Suitable materials	Stainless steel/AL sheet/cold plate and other metals	
Sheet requirements	① Flat surface ② No punching hole ③ Can be absorbed by suction cups	
Functional features	① Change workpiece position automatically ② One-key clamping by upper blank holders	

* Machine appearance, function description and technical parameters on this page are derived from SENFENG's Technical R&D Center based on our self-developed machines. For reference only, in kind prevail!

BDC

Suction-cup Series

Technical Parameters	BDC1200	BDC1500
Max bending speed	0.2S/bend	0.2S/bend
Max bending width	1200mm	1500mm
Bending height	170mm	170mm
Max bending thickness	UTS 660N/mm² 0.8mm stainless steel 304 UTS 410N/mm² 1mm cold plate UTS 265N/mm² 1.3mm AL sheet	UTS 660N/mm² 0.8mm stainless steel 304 UTS 410N/mm² 1mm cold plate UTS 265N/mm² 1.3mm AL sheet
Min bending thickness	0.35mm	0.35mm
Min inside dimension while bending four sides	200*200mm	200*200mm
Min inside dimension while bending two sides	200mm	200mm
Max bending size	1200*1200mm	1500*1250mm
Number of axes	10-axis concurrent linkage	10-axis concurrent linkage
Rated voltage	380V	380V
Total motor power	30kW	39kW
Overall dimensions	3700*1800*2450mm	4000*2000*2550mm
Total mass	Roughly 9T	Roughly 12T

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Flexible Panel Benders

BDC Push-down Series

They are fed by using push-down arm and generally designed & produced according to high-precision machine tool standards. Both planar (like meshed, corrugated, hollowed-out) and special-shaped workpieces are bent well. With upper blank holders, workpiece will be tightly clamped only by clicking a button. C axis usually rotates fast at high precision

Fed by push-down arm

Change workpiece position automatically

One-key clamping

Technical Parameters

Hot-selling model	BDC1500	BDC2000	BDC2500
Feeding mode	Push-down arm		
Positioning mode	3-axis automatic positioning		
Suitable materials	Stainless steel/AL sheet/cold plate and other metals		
Sheet requirements	Planar (like meshed, corrugated, hollowed-out) and special-shaped workpieces		
Functional features	① Change workpiece position automatically ② One-key clamping by upper blank holders		

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BDC

Push-down Series

Technical Parameters	BDC1500	BDC2000	BDC2500
Max bending speed	0.2S/bend	0.2S/bend	0.2S/bend
Max bending width	1500mm	2000mm	2500mm
Bending height	200mm, 175mm with hinge knife (optional: 300mm, 275mm with hinge knife)	200mm, 175mm with hinge knife (optional: 300mm, 275mm with hinge knife)	200mm, 175mm with hinge knife (optional: 300mm, 275mm with hinge knife)
Max bending thickness	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet
Min bending thickness	0.35mm	0.35mm	0.35mm
Min inside dimension while bending four sides	200*200mm	200*200mm	200*200mm
Min inside dimension while bending two sides	200mm	200mm	200mm
Max bending size	1500*1250mm	2000*1250mm	2500*1250mm
Number of axes	13-axis concurrent linkage	13-axis concurrent linkage	13-axis concurrent linkage
Rated voltage	380V	380V	380V
Noise	Roughly 60dB	Roughly 60dB	Roughly 60dB
Overall dimensions	4400*2000*2750mm	5000*2700*2950mm	5700*3200*3050mm
Total mass	Roughly 13T	Roughly 17T	Roughly 20T

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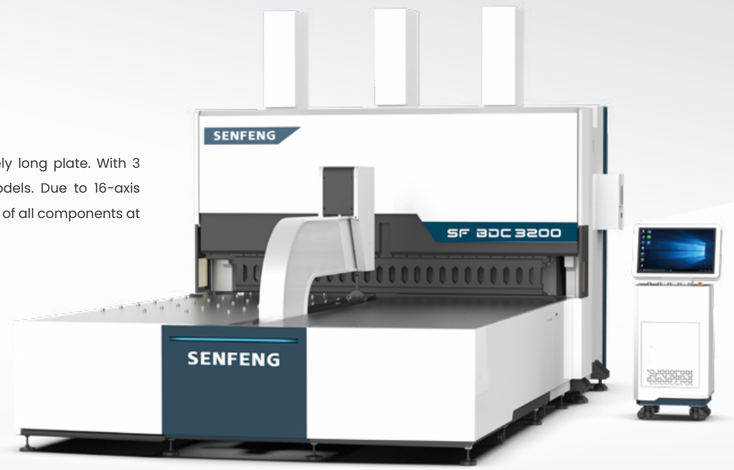
Flexible Panel Benders

BDC Push-down Series

This panel bender can bend large sheet, in particular relatively long plate. With 3 electric motors, it has greater bending ability than other models. Due to 16-axis concurrent linkage, its control system can take accurate control of all components at the same time and work at faster speed and higher precision.



Fed by push-down arm

Only need a set of universal bending tools

Enable mass production

Technical Parameters

Hot-selling model	BDC3200	BDC4200
Feeding mode	Push-down arm	
Positioning mode	3-axis automatic positioning	
Suitable materials	Stainless steel/AL sheet/cold plate and other metals	
Sheet requirements	Planar (like meshed, corrugated, hollowed-out) and special-shaped workpieces	
Functional features	① Change workpiece position automatically ② One-key clamping by upper blank holders	

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BDC

Push-down Series

Technical Parameters	BDC3200	BDC4200
Max bending speed	0.2S/bend	0.2S/bend
Max bending width	3200mm	4200mm
Bending height	200, 175mm with hinge knife (optional: 300mm, 275mm with hinge knife)	200, 175mm with hinge knife (optional: 325mm, 275mm with hinge knife)
Max bending thickness	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet
Min bending thickness	0.35mm	0.35mm
Min inside dimension while bending four sides	210*210mm	210*210mm
Min inside dimension while bending two sides	210mm	210mm
Max bending size	3200*1500mm	4200*1500mm
Number of axes	16-axis concurrent linkage	16-axis concurrent linkage
Rated voltage	380V	380V
Noise	Roughly 60dB	Roughly 60dB
Overall dimensions	6600*4000*3280mm	7500*5000*3500mm
Total mass	Roughly 28T	Roughly 35T

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BDC2000 Panel Bender
With Auxiliary Bending Dies

BDC

- Easy to bend complex-shaped workpieces
  Partial bending available
- Move fast and precisely
  Improve bending ability
- Work flexibly at high efficiency
  Expand bending scope

Technical Parameters	BDC2000
Max bending speed	0.2S/bend
Max bending length	2000mm
Bending height	200mm, 175mm with hinge knife (optional: 300mm, 275mm with hinge knife)
Max bending thickness	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet
Min bending thickness	0.35mm
Min inside dimension while bending four sides	200*200mm
Min inside dimension while bending two sides	200mm
Length of auxiliary bending die	500mm (custom-made)
Max bending size	2000*1250mm
Number of axes	17-axis concurrent linkage
Rated voltage	380V
Total motor power	37.3kW
Running power	Roughly 33.2kW
Noise	Roughly 60dB
Overall dimensions	5200*2930*3300mm
Total mass	17T

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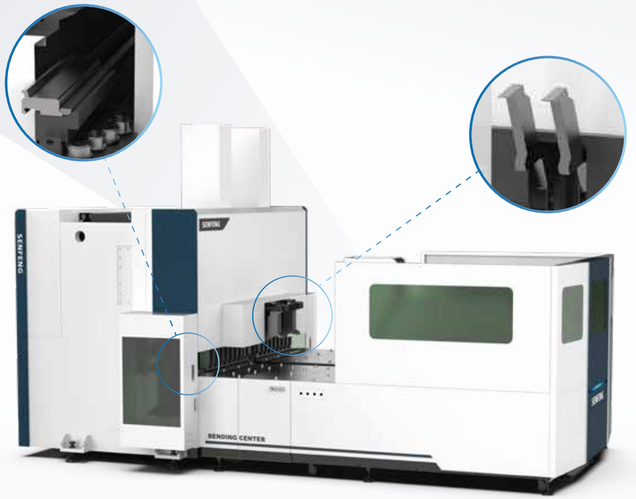
BDC2000 Panel Bender
Automatic Change of Auxiliary Bending Dies

BDC



- No need for workers to change bending dies
  Save change-over time
- Reduce labor intensity
  Get efficiency gains
- Easy to bend complex-shaped workpieces
  Partial bending available

Technical Parameters	BDC2000
Max bending speed	0.2S/bend
Max bending length	2000mm
Bending height	200mm
Max bending thickness	UTS 660N/mm² 1.5mm stainless steel 304 UTS 410N/mm² 2mm cold plate UTS 265N/mm² 2.5mm AL sheet
Min bending thickness	0.35mm
Min inside dimension while bending four sides	350*200mm
Min inside dimension while bending two sides	200mm
Length of auxiliary bending die	500mm (custom-made)
Max bending size	2000*1250mm
Number of axes	22-axis concurrent linkage
Rated voltage	380V
Noise	Roughly 60dB
Die matching mode	Automatic
Overall dimensions	5500*3300*2060mm
Total mass	18.5T

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Fully Automatic Bending Unit

This fully automatic unibody device carries out bending, loading & unloading with the aid of robots and smart control system. Besides multiplying work efficiency, it can also enable flexible production in batch and dock with other automatic production lines or machines like laser cutting machine, automatic panel bender and laser welding machine.

- Fully automatic with much less labor force
- Minimize safety risks
- Flexible production in batch
- High consistency among workpieces

Technical Parameters

Model	Fully automatic bending unit	
Parameter	Unit	Numerical value
Robot load	kg	25 (containing suction-cup gripper)
Robot armspan	mm	1800
Max size of workpiece	mm	1500*1250 (optional)
Match with	BDC1500 BDC2000 BDC2500	

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Fully Automatic Truss Loading & Unloading Device

This device usually receives operating instructions from smart control system and uses truss manipulator to load and unload sheets. Therefore, it features high efficiency, easy maintenance, high value for money and flexible production in batch, or docks with other automatic production lines or machines like laser cutting machine, automatic panel bender and laser welding machine.

Technical Parameters

Model	BDC2000 BDC2500	BDC3200
Left-and-right moving speed	80m/min	80m/min
Up-and-down moving speed	50m/min	50m/min
Positioning accuracy	±0.2mm	±0.2mm
Max load	50kg	100kg

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Main Configurations

Class	Brand	Description
Operating system	SENFENG	Based on LINUX, compatible with EtherCAT high-speed bus, 64-axis concurrent linkage at most, just for more automatic options.
Machine tool bed	SENFENG	Self-developed by SENFENG and welded by using high-strength steel, so as to keep itself stable under high-tonnage impact.
Servo motor	Custom-made from others	High rotating speed+high torque
Bending tools	SENFENG	Made of high-strength alloy/die steel, more resistant to abrasion with long service life after going through quenching and tempering.
Speed reducer	Custom-made from others	High-precision planetary reducer with the higher carrying capacity.
Electrical apparatus elements	Custom-made from others	French brand
Drive parts	Custom-made from others	Abrasion-resistant lead screw with heavy duty and high precision, P-grade track for the higher precision.
Pneumatic elements	Custom-made from others	Japanese/Taiwan (China) brand
Bearing	Custom-made from others	Original Japanese bearing with high carrying capacity

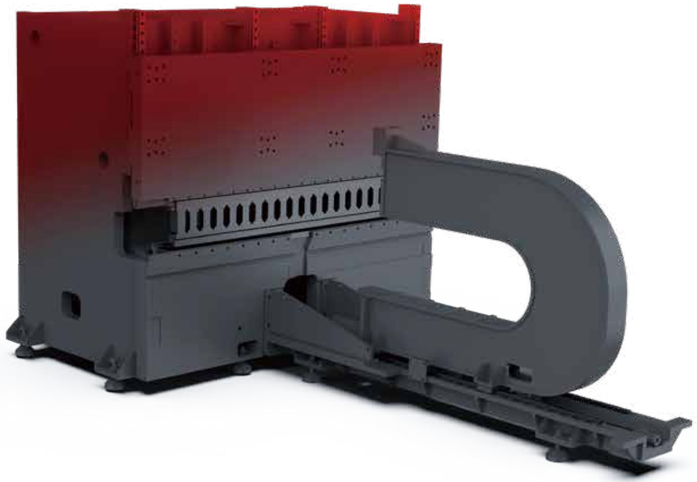
Functional Richness

Function	
Multi-axis concurrent linkage	Leveling function
Hi-end hinge cutter	Equipped with handwheel
Arcing order	Automatic expansion interface
Automatic lubrication	Robot/truss expansion interface for loading & unloading
Graphic visual programming	Cloud operation & maintenance interface

Core Components

High-strength Machine Tool

This structure has gone through exact finite element force analysis and adopted triangular interconnection. Because of key components made of 80mm steel plate, the machine tool will keep stable even under high-tonnage impact.



Servo clamping for stable feeding

600°C annealing treatment to relieve internal stress

30 Years

Make finished workpiece hard to deform for 30 years

Use large precision planomiller to machine it into shape one time only

Firm and non-deformable machine tool bed

Keep all mounting parts horizontal and vertical enough

Shot blasting to improve fatigue strength

Core Components

All-purpose Hemming Cutter

SENFENG special cutters, made of high-strength alloy/die steel, have undergone dozens of machining crafts like solid forging, tempering and quenching and become more durable and resistant to abrasion. During its service life, it can bend for millions of time.

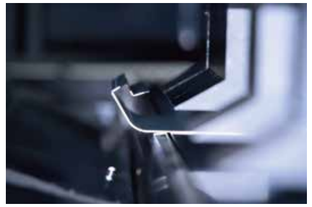
Intelligent CNC System

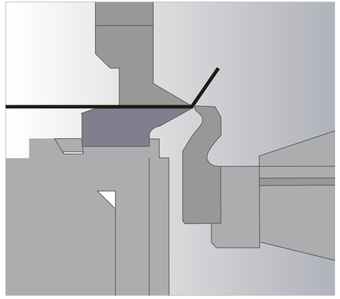
SENFENG intelligent CNC system, based on EtherCAT bus protocol, can support 64-axis concurrent linkage at most.

To bend flexibly, it not only lays emphasis on its operating safety and reliability, but also takes into account of self-diagnosis ability.

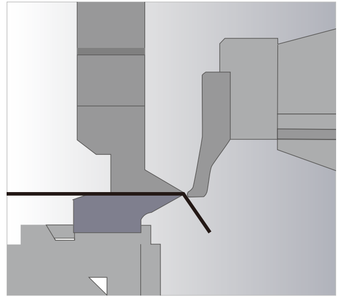
Bending Crafts

1 set of universal bending tools is enough. With that, you can bend up, bend down, make dead-edge bending and bend into arc. No need to apply for other custom-made bending tools.

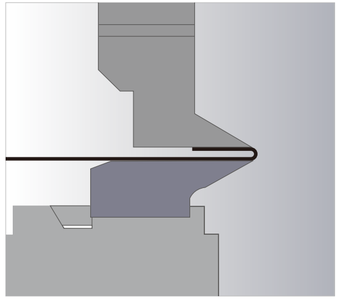




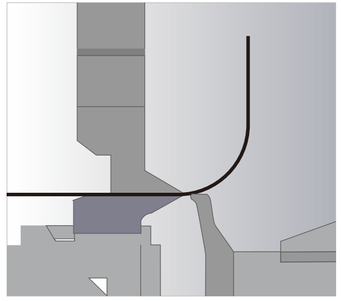
Bend up



Bend down



Dead-edge bending



Bend into arc

Applicable Industry

Decorative curtain wall

Kitchenware and sanitary ware

Chassis cabinet

AL product fabrication

Anti-theft security door

Medical instrument

Ventilating device

Automobile parts

After-sales Service

Quick-response Service

High Efficiency

Answer your repair calls for 24*7*365 days

Technical engineers can diagnose your machine within 10min, make repair plans within 1h and dispatch to your location within 1 workday after receiving your request for repair.

Craftsmanship Spirit

Provide custom-made solutions and make well-targeted plans as the case may be

Engineer certifications: Our all engineers take appointment with certificate after strict training

Train how to fix your FAQ: Collect FAQ and ask the certified engineers to train relevant customers

Online one-to-one guidance: Senior engineers guide customers to get problems solved through phone, video or other online means.

One time is enough: Commission the machine and settle similar matters only once

For Your Peace of Mind

Pre-arrival service: Train in technical theory, actual operation and troubleshooting at great length

Regular service: Reminder of maintenance, door-to-door and sales promotion service

Value-added service: Software & hardware upgrade, finance leasing and further extension of warranty period