

# V GROOVING MACHINE

ADHK / ADRK



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# CONTACT US



# COMPANY PROFILE

Established in 2002, ADH Company is situated in Ma'anshan City, Anhui Province, just 30 kilometers from Nanjing Lukou Airport. Our expansive 2,000,000 square meter facility specializes in manufacturing press brakes, hydraulic shearing machines, laser cutting machines (including automatic production units), CNC turret punches, intelligent flexible bending centers, and sheet metal automation equipment. As a leading high-tech manufacturer prioritizing R&D and innovation, we hold numerous patents and industry certifications.

<b>2002</b>	<b>6000 +</b>	<b>120 +</b>	<b>100 +</b>
Founded	Annual Production	R&D Personnel	Exported Countries



## Mission

We are committed to research and development, improving product and service quality, in order to establish a globally renowned sheet metal manufacturing machinery center.



## Vision

Our goal is to become a highly respected sheet metal support service provider, earning the trust of customers and the pride of employees.



## Values

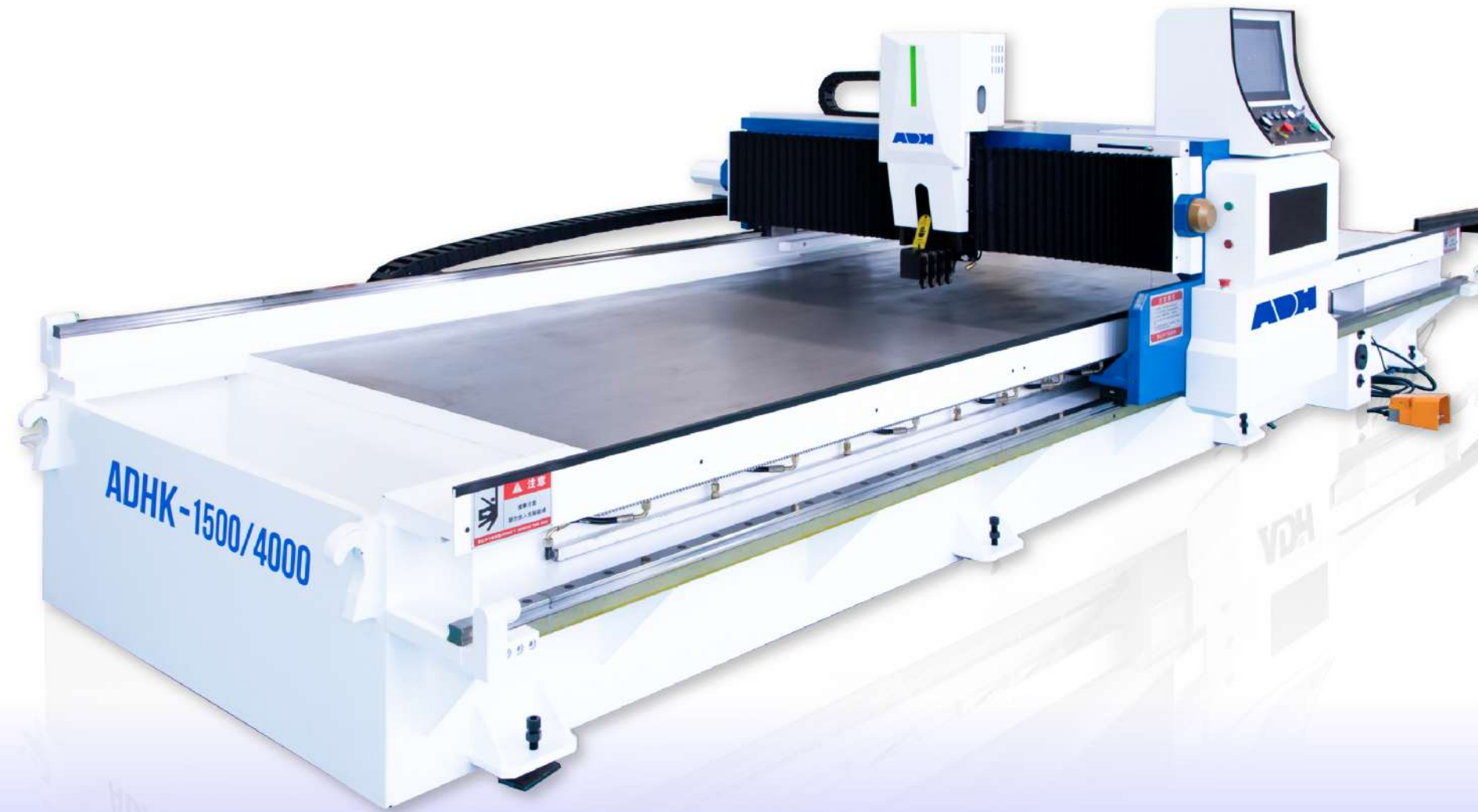
Innovation, Lean Manufacturing, Integrity, Win-Win.



# V GROOVING MACHINE

Horizontal

ADHK Series

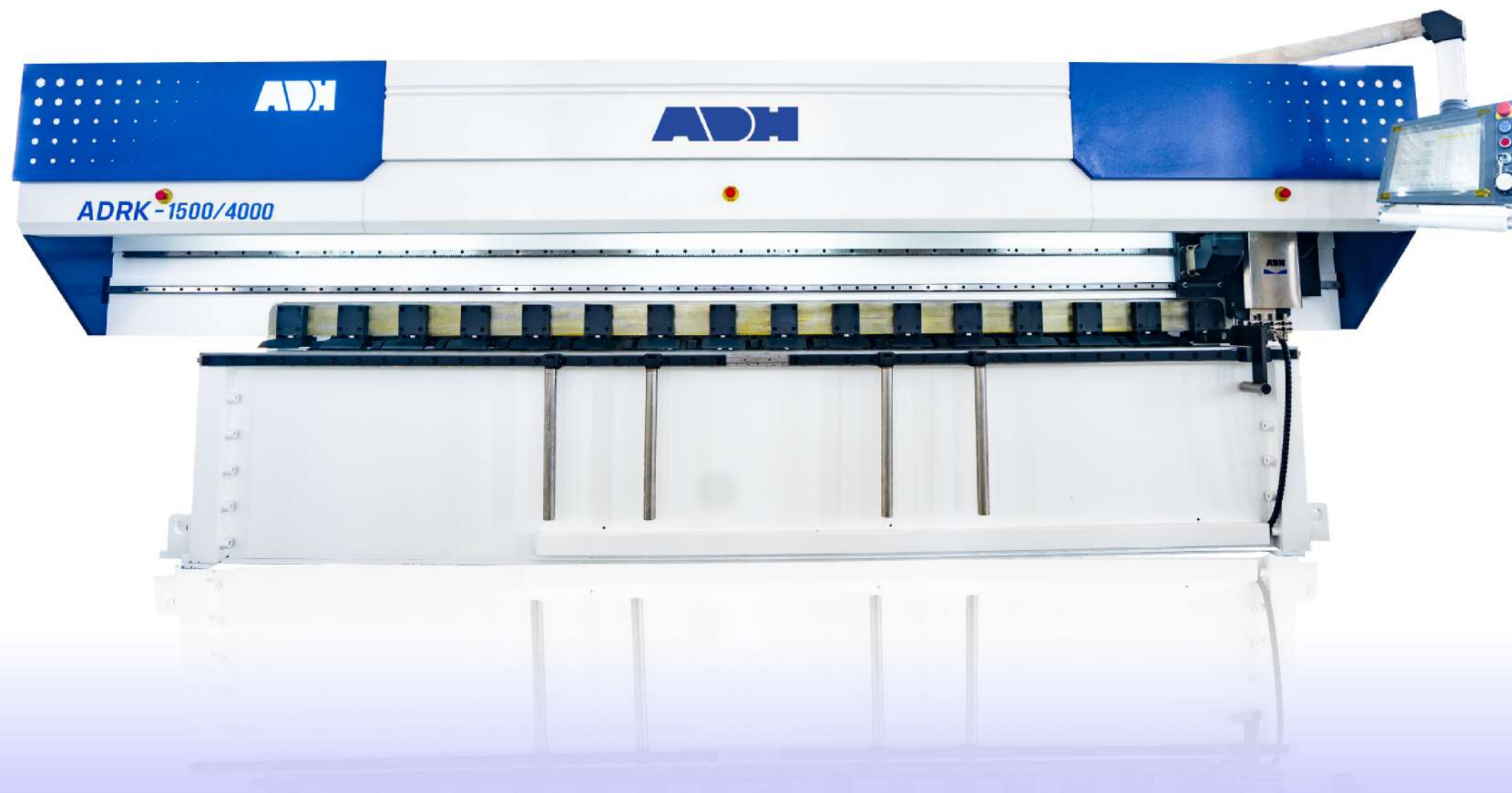


- Achieve precise V-grooves on various metals with helical gears and servo motors for consistent results.
- 60mm low-alloy steel and Q345 frame ensure durability and rigidity.
- Four-axis CNC system and Taiwan Easycat servo motor enable automation, enhancing productivity.
- Air-cooled design reduces environmental impact, while high-speed cutting optimizes workflow.
- Alloy blades and self-planer bed extend machine lifespan with minimal maintenance.

# V GROOVING MACHINE

Vertical

ADRK Series



- Achieves  $\pm 0.01\text{mm}$  positioning accuracy for precise and consistent grooving.
- Employs Taiwan Easycat servo motor and CNC system for efficient operations.
- Compact design saves space with stable performance.
- Utilizes alloy blades with four-cutter technology for durable results.
- Intelligent touch screen enables easy control and quick setup.
- Double nozzle system clears debris for improved efficiency.



## BODY



### ADHK Structure & Frame

- Engineered with a robust frame structure, the machine base and beam utilize 60mm low-alloy high-strength steel and Q345 plate. This design ensures exceptional rigidity, sturdiness, and long-lasting durability for consistent, high-precision performance.



### ADRK Backgauge

- Rear feeding structure and fixed beams eliminate bed deformation, ensuring  $\pm 0.03\text{mm}$  flatness for precise grooving.
- Features a rear feeding structure with a replaceable worktable, solving bed surface deformation for accurate depth precision.



# CONTROL SYSTEM

## ADHK Control System

- The CNC system, with a Taiwan Easycat touchscreen, simplifies tasks, reduces training time, and boosts efficiency.
- This CNC system ensures high accuracy and repeatability for quality parts and grooving.
- Automating processes and advanced functions optimize workflows, reduce setup time, and increase productivity.



## ADRK Control System

- Taiwan Easycat CNC system ensures precise grooving, stability, and high-quality results with minimal errors.

Intelligent touch screen simplifies operation and setup, boosting efficiency.

Advanced functions enhance processing speed and quality, ensuring consistent output.

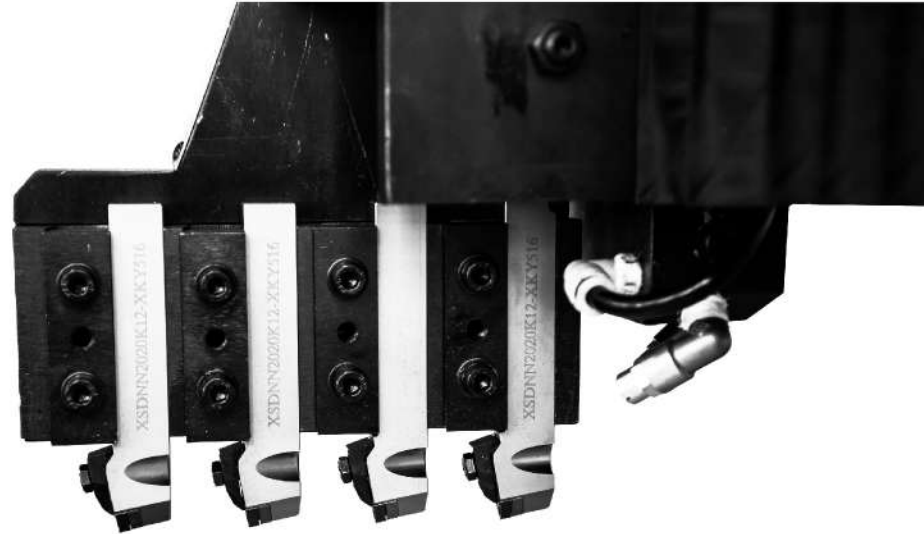






## Hydraulic System

- Featuring a Japan Yuken hydraulic system, it ensures exceptional performance, ongoing durability, and robust powertrain for consistent operation.



## Tool Carrier Transfer Device

- Incorporates high-precision SFSR static and QR ball screws for accurate tool positioning, ensuring consistent grooving results with minimal deviation.



## Servo Motor

- Authentic Taiwan Easycat servo motor delivers precise, reliable performance and high stability, crucial for consistent, top-quality grooving results in demanding applications.
- Engineered for endurance, the servo motor ensures long-term reliability and consistent operation, making it ideal for continuous, high-demand industrial manufacturing environments.

## Alloy Blade

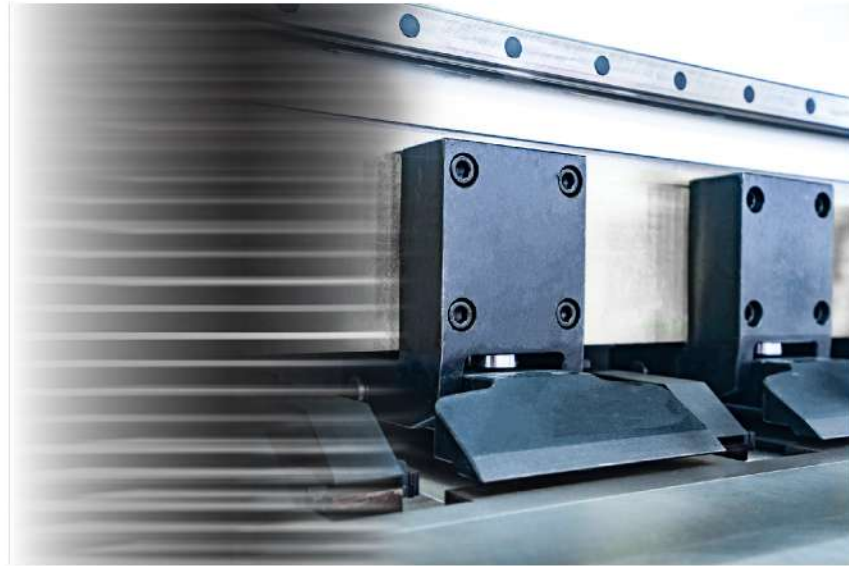
- Experience unmatched cutting performance with our superior alloy blades that endure, engineered for exceptional durability and razor-sharp precision across all materials.
- Advanced four-cutter technology delivers precision that endures while maximizing productivity, ensuring consistently clean and accurate results with minimal downtime.

## Synchronous Drive

- High-quality rack and pinion and ball screw transmission & servo motor drive, achieving high speed and high torque.







## Pressing Device

- The blank holder device adopts a hydraulic design, providing fast and stable pressing speeds, allowing deformed plates to adhere tightly to the table surface. While providing sufficient clamping force, it will not leave any indentations on the plate surface.

## Shaft Coupling (High-quality)

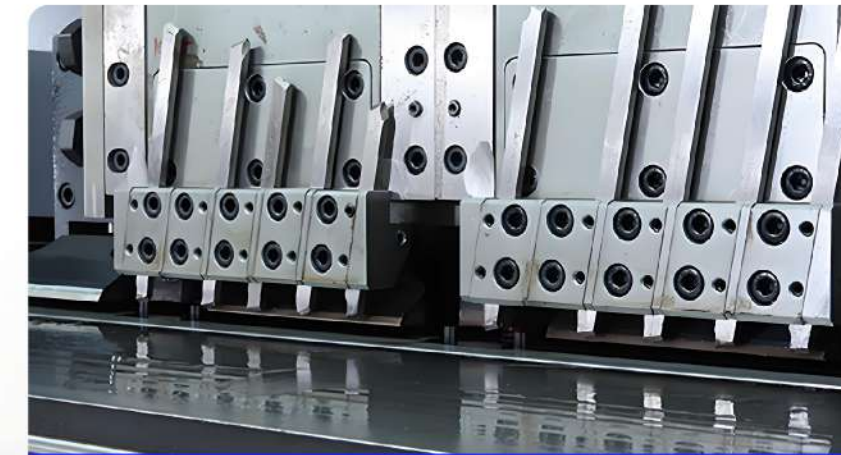
- Micro cooling system will extend blade life and reduce production cost.



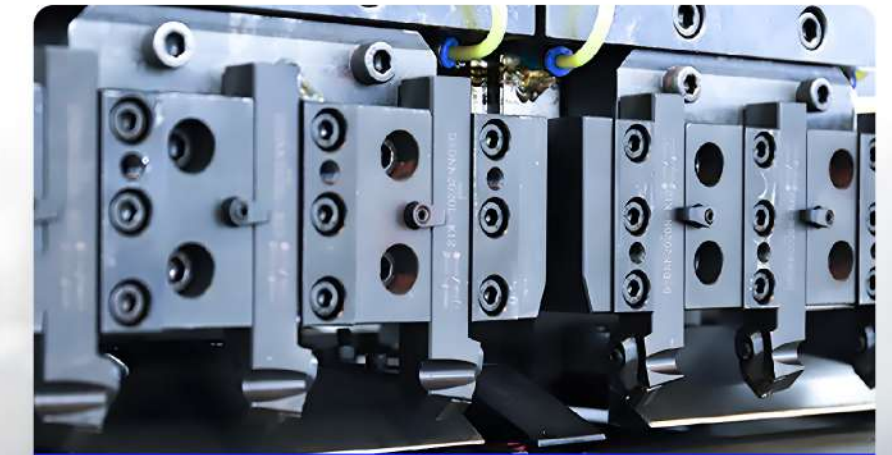
## High-Speed Steel Tool Holde and Alloy Tool Holder Have Complementary Advantages

High-speed steel tools can be sharpened into any shape and angle, with an initial cutting depth of up to 9mm. They perform well when cutting softer materials.

Alloy steel cutting tools require no sharpening, are simple to operate, and save time and effort. The tools are heat-resistant, and the cutting speed is more than twice that of high-speed steel tools, especially for materials with very high hardness.



High-Speed Steel Tool Holder



Alloy Tool Holder

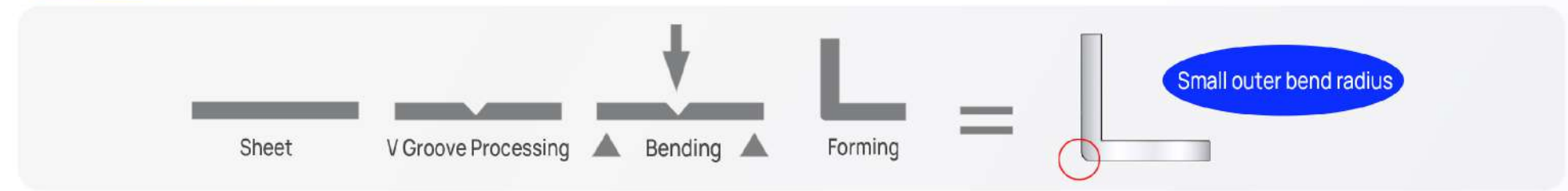


# Advantages and disadvantages of grooved and ungrooved sheet metal

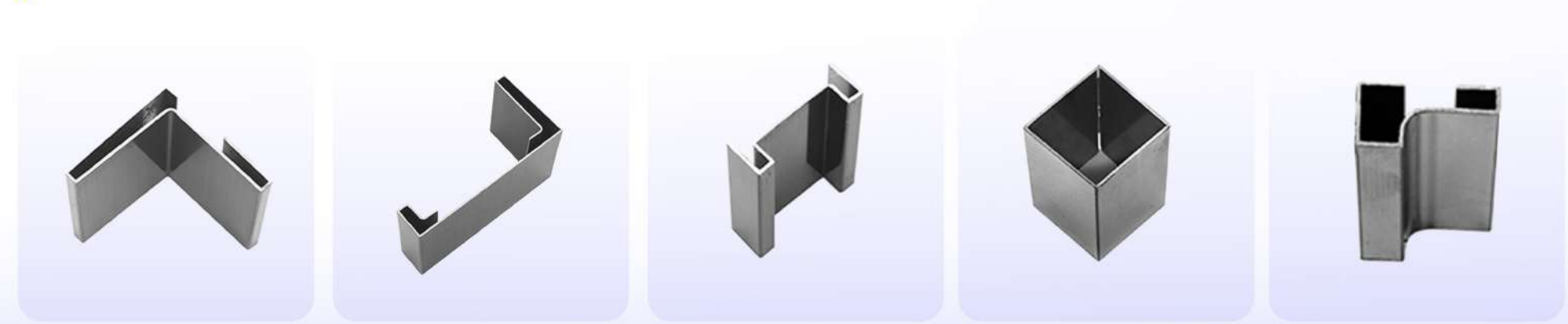
## Ungrooved



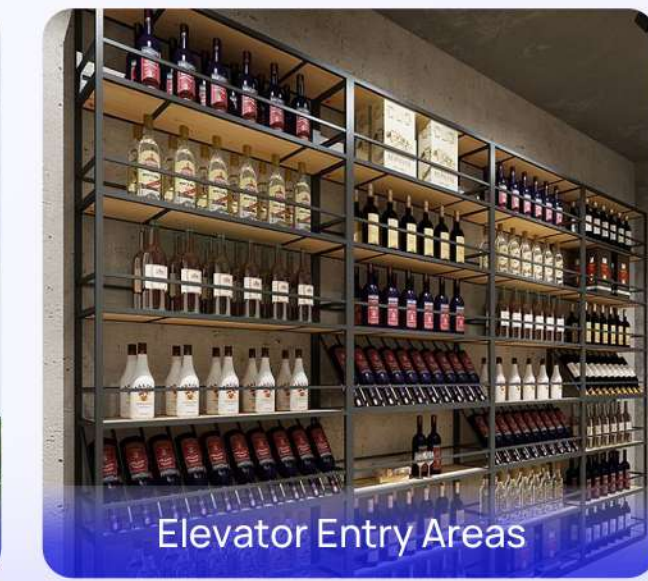
## Grooved



## Workpiece Display



# Workpiece Display





Specifications

ADHK Series

SPECIFICATIONS							
Model	3200*1250	4000*1250	4000*1500	5000*1250	5000*1500	6000*1250	6000*1500
Max grooving width (mm)	1250	1250	1500	1250	1500	1250	1500
Max grooving length (mm)	3200	4000	4000	5000	5000	6000	6000
Max grooving hight (The flatness of stainless steel sheet is less than 3mm) (mm)	4	4	4	4	4	4	4
Min grooving thickness (mm)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Min distance between V-groove and edge (mm)	8	8	8	8	8	8	8
Max cutting speed m/min	0-90	0-90	0-90	0-90	0-90	0-90	0-90
Return speed	0-120	0-120	0-120	0-120	0-120	0-120	0-120
Left and right movement resolution of tool rest (mm)	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Positioning accuracy (mm)	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01
Up and down movement resolution of tool rest (mm)	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Positioning accuracy (mm)	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01
Power of main servo motor (kw)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Hydraulic system working pressure (Mpa)	7-9	7-9	7-9	7-9	7-9	7-9	7-9
Machine size (L*W*H)	5000*2300*1700	5800*2300*1700	5800*2300*1700	6800*2300*1700	6800*2600*1700	7800*2300*1700	7800*2600*1800

Specifications

ADRK Series

SPECIFICATIONS				
Model	3200/1250	3200/1500	4000/1250	4000/1500
Max grooving width (mm)	1250	1500	1250	1500
Max grooving length (mm)	3200	3200	4000	4000
Max grooving hight (The flatness of stainless steel sheet is less than 3mm) (mm)	6	6	6	6
Min grooving thickness (mm)	0.4	0.4	0.4	0.4
Min distance between V-groove and edge (mm)	8	8	8	8
Max cutting speed m/min	0-90	0-90	0-90	0-90
Return speed	0-120	0-120	0-120	0-120
Left and right movement resolution of tool rest (mm)	0.001	0.001	0.001	0.001
Positioning accuracy (mm)	±0.01	±0.01	±0.01	±0.01
Up and down movement resolution of tool rest (mm)	0.001	0.001	0.001	0.001
Positioning accuracy (mm)	±0.01	±0.01	±0.01	±0.01
Power of main servo motor (kw)	4.5	4.5	4.5	4.5
Hydraulic system working pressure (Mpa)	6-8	6-8	6-8	6-8
Machine size (L*W*H)	4800*2650*2100	4800*2850*2100	5850*2650*2100	5850*2850*2100