



KENVO

肯夫

ROBOTIC WELDING CELL ROLLING DOOR

Original design

Tailor-made for robotic welding cell

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Double door room



Conveyor system



Single door room



Single door room



A door in B door out



Mini size door



Double door room



Single door room



Ground rail system



PLC linkage control



Conveyor system



With wind bar

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KENVO DOOR
20 YEARS FOCUS

A PROFESSIONAL SUPPLIER OF SAFE
GUARD DOOR FOR ROBOTIC WELDING CELLS



Robotic welding rooms are widely used in automobile manufacturing, new energy, machinery manufacturing, sheet metal processing and other fields. Welding robots can improve welding efficiency and ensure the quality of welded products. During the robotic welding process, electric welding arcs or lasers will be generated, which will cause harm to the eyes of nearby workers, and welding smoke will be generated, causing air pollution. In order to improve the working environment of workers and protect their health, a closed enclosure structure, namely a robotic welding room, can be established around the welding robot. The welding smoke can be removed through the smoke exhaust system. At the same time, the fully automatic robotic welding room high speed rolling door can be used to realize the automation of material entry and exit, and protect the eyes of workers from damage by welding light. KENVO has delved into the field of robotic welding protection and has developed several deeply customized robotic welding cell protective rolling doors, which are perfectly matched with various robotic welding rooms.



Multiple advantages of KENVO robotic welding cell rolling doors

Fast opening and closing, high material-transfer efficiency

The opening speed of the KENVO rolling door robotic welding room can reach 1.5m/s, and it can be opened and closed in just a few seconds, which is convenient for the rapid transfer of welding raw materials and finished products.

Capability of high running frequency

KENVO robotic welding cell rolling doors can operate up to 2,000 times a day without overheating of motor or affecting its service life, which can meet the needs of long-term and high-frequency operations in the robotic welding room.

Rich automatic linkage signals

The control box of robotic welding cell rolling doors has multiple input and output signal terminals, which can be directly connected to the PLC of the welding robot master controller to form a full-process closed-loop control of automatic door opening and closing, material feeding and unloading, and welding.

Save workstation space

The high speed rolling door of the robotic welding workstation is a straight-up rolling structure. When the door is opened, the door curtain is completely retracted into the door head, and does not occupy the space outside and inside the welding room. Most robot welding workstations are located inside the workshop, and the external and internal space is often cramped.

Flexible frame structure design

The guide rails on both sides and the upper door head are CNC-formed, and their size and shape can be flexibly customized, which is convenient for installation and fixation with the metal structure of the welding room.

KENVO robotic welding cell rolling door achieve multiple protection



Safety protection

- A. Use thickened multi-layer fabric door curtains to effectively isolate welding arcs and protect human eyes.
- B. The protective rolling door works in conjunction with the robot. When the door is closed, a signal is sent to the welding robot PLC, and the robot starts welding, thus avoiding mechanical damage that may be caused to personnel nearby.



Environmental protection

The protective rolling door of the robotic welding cell has good sealing performance. When the door is closed, it can effectively prevent welding smoke and dust getting out from the welding room, to protect the surrounding air.



Fire protection

The door curtain of the protective rolling door in the welding room is made of B1-grade flame-retardant PVC cloth or A-grade fire-resistant glass fiber cloth. The door curtain can withstand high temperatures and welding splashes, which can avoid fires and get fire isolation.

Standard robotic welding cell rolling door RRD-weld01

Made from PVC fabric curtain, aesthetics, low-cost, most popular choice for robotic welding rooms.



Specifications

Data

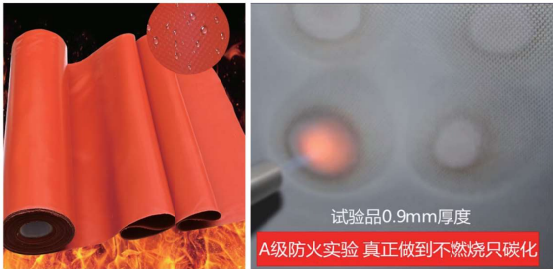
Max Size	W5000mm * H5000mm												
Running Speed	Open 1.5m/s, Close 0.8m/s （adjustable）												
Curtain	PVC fabric curtain, double-face treatment, self-cleaning, anti-static, dust-proof Thickness: 1.2mm（up to 1.5mm/2.0mm）Fire retardant grade: B1 Optional color: <table><tr><td>Blue-RAL5002</td><td></td><td>Yellow RAL1003</td><td></td><td>Red-RAL2004</td><td></td></tr><tr><td>Grey-RAL7042</td><td></td><td>White RAL9003</td><td></td><td></td><td></td></tr></table>	Blue-RAL5002		Yellow RAL1003		Red-RAL2004		Grey-RAL7042		White RAL9003			
Blue-RAL5002		Yellow RAL1003		Red-RAL2004									
Grey-RAL7042		White RAL9003											
Window Curtain	Semi-transparent arc-light proof PVC curtain, with UV resistant enhancer, can filter welding arc light effectively. Realizes semi-transparent operation with double-sided visibility. Thickness: 2mm Available Colors: <table><tr><td>Red</td><td></td><td>Brown</td><td></td><td>Dark green</td><td></td><td>Yellow</td><td></td></tr></table>	Red		Brown		Dark green		Yellow					
Red		Brown		Dark green		Yellow							
Guide rail and Cover	Material: 1.2-1.5mm galvanized steel sheet Surface treatment: powder coating Available color: RAL9003 white, RAL7035 light grey, or customized												
Motor	Advanced servo technology motor, accurate running Power supply: 1-phase 220 ± 10V, 50/60HZ; Power: 750W/1500W												
Control Panel	Servo control system, closed-loop control, control the door body to start and stop flexibly. Multiple parameters are adjustable, including speed, automatic closing delay, manual and automatic mode, etc. It has functions such as interlocking, PLC linkage control, and position-reached feedback.												
Operation	Standard: wall-mounted control buttons at both sides Optional: Motion radar sensor, Loop vehicle detector, Pull-cord switch, Remote control												
Safety Sensor	1.Safety photo sensor 2.Safety edge sensor												

A-grade fireproof robotic welding cell rolling door RRD-weld02

Special A-grade silicon titanium fireproof cloth is used as the door curtain. This cloth curtain has passed the A-grade fireproof test of the National Fire Protection Center, and can withstand instantaneous high temperatures of 850°C.



The fireproof cloth is a unique multi-layer composite structure with glass fiber filaments inside. It meets the national standard GB8624 A-grade fireproof, bearing welding high temperature and welding slag splash. In regular robotic welding cell rolling door, its PVC fabric is flammable material, not fireproof. KENVO A-grade fireproof rolling door meets fire protection requirements, and reduces fire hazards.



Specifications

Data

Max Size

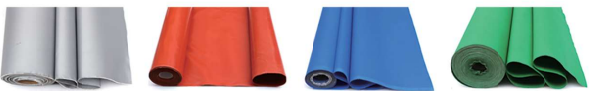
W4000mm * H4000mm

Running Speed

Open 1.5m/s, Close 0.8m/s (adjustable)

Curtain

Multi-layer silicon titanium fireproof cloth, filled with glass fiber interlayer
Thickness: 0.9mm Fireproof grade: Class A
Available colors: gray, red, blue, green



Guide rail and Cover

Material: 1.2-1.5mm galvanized steel sheet
Surface treatment: powder coating
Available color: RAL9003 white, RAL7035 light grey, or customized

Motor

Advanced servo technology motor, accurate running
Power supply: 1-phase 220 ± 10V, 50/60HZ; Power: 750W/1500W

Control Panel

Servo control system, closed-loop control, control the door body to start and stop flexibly. Multiple parameters are adjustable, including speed, automatic closing delay, manual and automatic mode, etc. It has functions such as interlocking, PLC linkage control, and position-reached feedback.

Operation

Standard: wall-mounted control buttons at both sides
Optional: Motion radar sensor, Loop vehicle detector, Pull-cord switch, Remote control

Safety Sensor

- 1.Safety photo sensor
- 2.Safety edge sensor

Fireproof and heat-insulating robotic welding cell rolling door RRD-weld03

Its curtains are double-layer sandwich structures. Surface is fireproof and high-temperature resistant glass fiber cloth, and the middle filled with fireproof blanket of aluminum silicate wool, which are resistant to high temperatures of 1200° C. It can effectively prevent the spread of fire and isolate the high heat of fire.



Because the door curtain has a multi-layer sandwich structure with a total thickness of 10mm, it can prevent fire and also provide heat isolation and insulation.

Specifications	Data
Max Size	W4000mm * H4000mm
Running Speed	Open 1.2m/s, Close 0.7m/s (adjustable)
Curtain	Double-layer thickened heat-insulating fiberglass cloth, with aluminum silicate wool fire blanket in the middle Thickness: 10mm Color: blue on the front + white on the back
Guide rail and Cover	Material: 1.2-1.5mm galvanized steel sheet Surface treatment: powder coating Available color: RAL9003 white, RAL7035 light grey, or customized
Motor	Advanced servo technology motor, accurate running Power supply: 1-phase 220 ± 10V, 50/60HZ; Power: 750W/1500W
Control Panel	Servo control system, closed-loop control, control the door body to start and stop flexibly. Multiple parameters are adjustable, including speed, automatic closing delay, manual and automatic mode, etc. It has functions such as interlocking, PLC linkage control, and position-reached feedback.
Operation	Standard: wall-mounted control buttons at both sides Optional: Motion radar sensor, Loop vehicle detector, Pull-cord switch, Remote control
Safety Sensor	1.Safety photo sensor 2.Safety edge sensor



Aluminum robotic welding cell rolling door RRD-weld04

KEF innovatively develops aluminum alloy robotic welding room rolling door, which not only has the advantages of high speed and high frequency of ordinary PVC fast rolling door, but also has the advantages of fire prevention, high temperature resistance, heat insulation and noise isolation, making it a premium choice for robotic welding room rolling door.



Specifications

Data

Max Size	W3500mm * H3500mm
Running Speed	Open 0.5m/s, Close 0.4m/s (adjustable)
Curtain	Double-layer aluminum insulated sandwich slat: filled with insulation polyurethane foam inside, good thermal insulation and noise isolation effect. Total thickness: 18mm. 1. Material: high-quality aluminum alloy; 2. Aluminum thickness: 1.0mm (0.5mm+0.5mm double layer); 3. Color: white RAL9003, other colors to be customized 
Guide rail and Cover	Material: 1.2-1.5mm galvanized steel sheet Surface treatment: powder coating Available color: RAL9003 white, RAL7035 light grey, or customized
Motor	Advanced servo technology motor, accurate running Power supply: 1-phase 220 ± 10V, 50/60HZ; Power: 750W/1500W
Control Panel	Servo control system, closed-loop control, control the door body to start and stop flexibly. Multiple parameters are adjustable, including speed, automatic closing delay, manual and automatic mode, etc. It has functions such as interlocking, PLC linkage control, and position-reached feedback.
Operation	Standard: wall-mounted control buttons at both sides Optional: Motion radar sensor, Loop vehicle detector, Pull-cord switch, Remote control
Safety Sensor	1.Safety photo sensor 2.Safety edge sensor