

Innovation Driving the Future



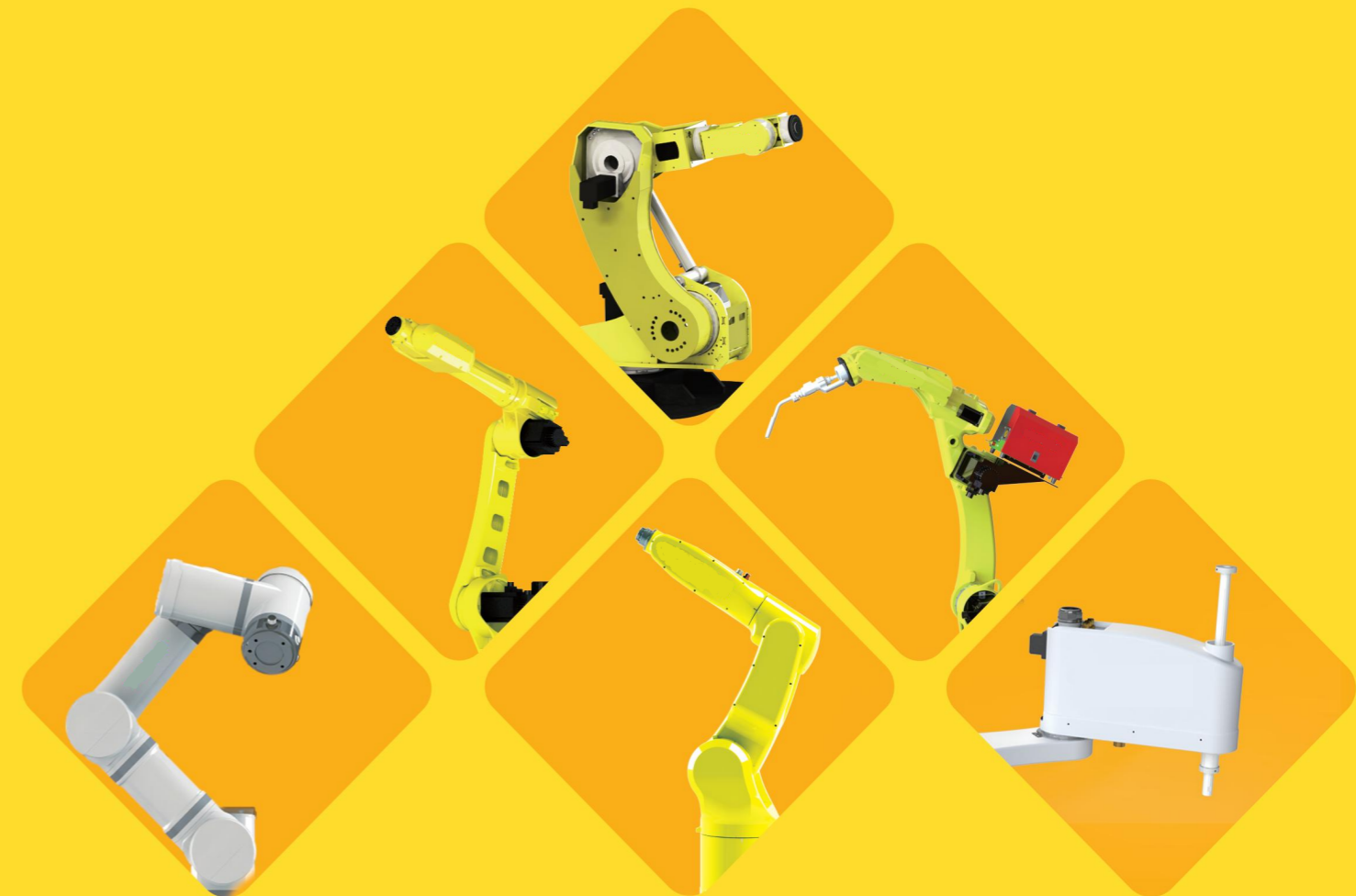
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COLLABORATIVE ROBOT BROCHURE

Product Strengths

Leading Intelligent
Automation Solution Provider

45 Years

Professional team engaged in robot R&D and application.
The world's most comprehensive product variety in the industry.

28,000 Units

China's Top3 Industrial Robot Producers by Sales

- 1.History: leverages 45 years of robot technology evolution
- 2.Strength: offers exceptional efficiency, the fastest cycle times, and competitive costs.
- 3.Sales: has sold more than 28,000 units and is widely used in 2,200 production sites for large-scale industrial applications, making it the best choice for mass industrial use.
- 4.Certifications: is a nationally recognized enterprise, ranked among China's top 50 intelligent manufacturing companies, with CR and CE certifications and a registered capital of 156.27 million yuan.

Quick Selection Table

					
Model		TCR030	TCR050	TCR100	TCR200
Payload		3kg (6.61lbs)	5kg (11.02lbs)	10kg (22.05lbs)	20kg (44.09lbs)
Maximum Working Range		585mm (23.03in)	900mm (35.43in)	1310mm (51.57in)	1650mm (64.96in)
Body Weight		16kg (35.27lbs)	26kg (57.32lbs)	43kg (94.81lbs)	68kg (149.91lbs)
Rated Power		0.9kw	2.55kw	3.5kw	3.9kw
Max Speed	J1	180° /s		120° /s	100° /s
	J2	180° /s		120° /s	100° /s
	J3	180° /s		120° /s	150° /s
	J4	180° /s		180° /s	180° /s
	J5	180° /s		180° /s	180° /s
	J6	100° /s		180° /s	180° /s
Max Operation Area	J1	±175°			
	J2	±175°			
	J3	-240° - +60°	-245° - +65°		
	J4	±175°			
	J5	±175°			
	J6	±360°			
Protection Rating		IP54/IP67			IP54
Position Repeatability		±0.03mm (0.001in)		±0.05mm (0.002in)	±0.1mm (0.003in)
Working Temperature		0-45°C			

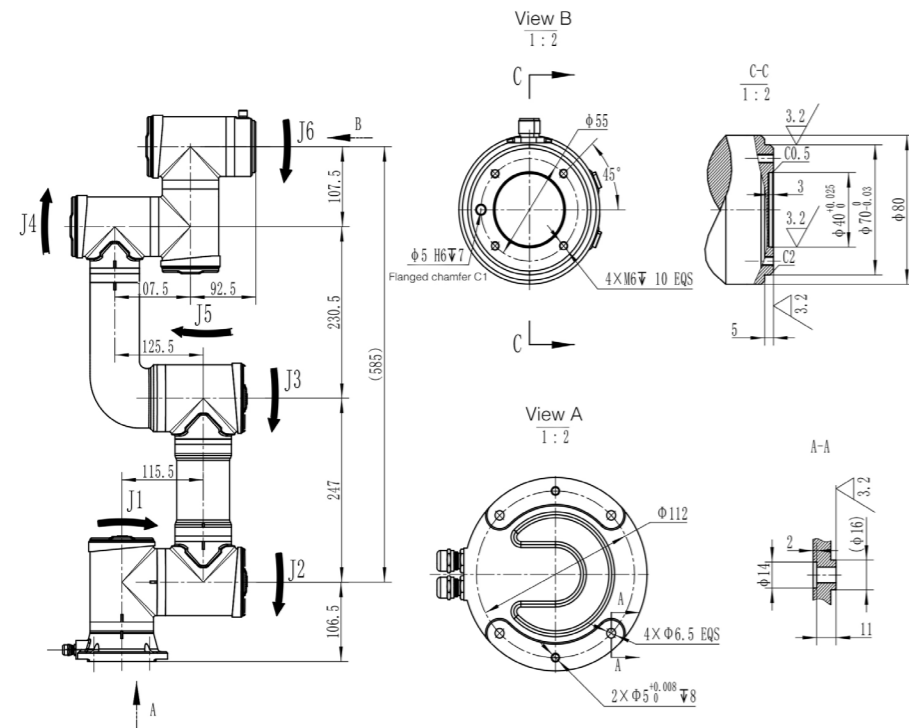
TCR030

Payload: 3kg
Arm Reach: 585mm

Model	TCR030	
Payload	3kg	
Maximum Working Range	585mm	
Body Weight	16kg	
Rated Power	0.9kw	
Max Speed	J1	180°/s
	J2	180°/s
	J3	180°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-240°~+60°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54/IP67	
Position Repeatability ※	±0.03mm	
Working Temperature	0~45°C	

※This precision applies to the Intelligence series.

Working Range



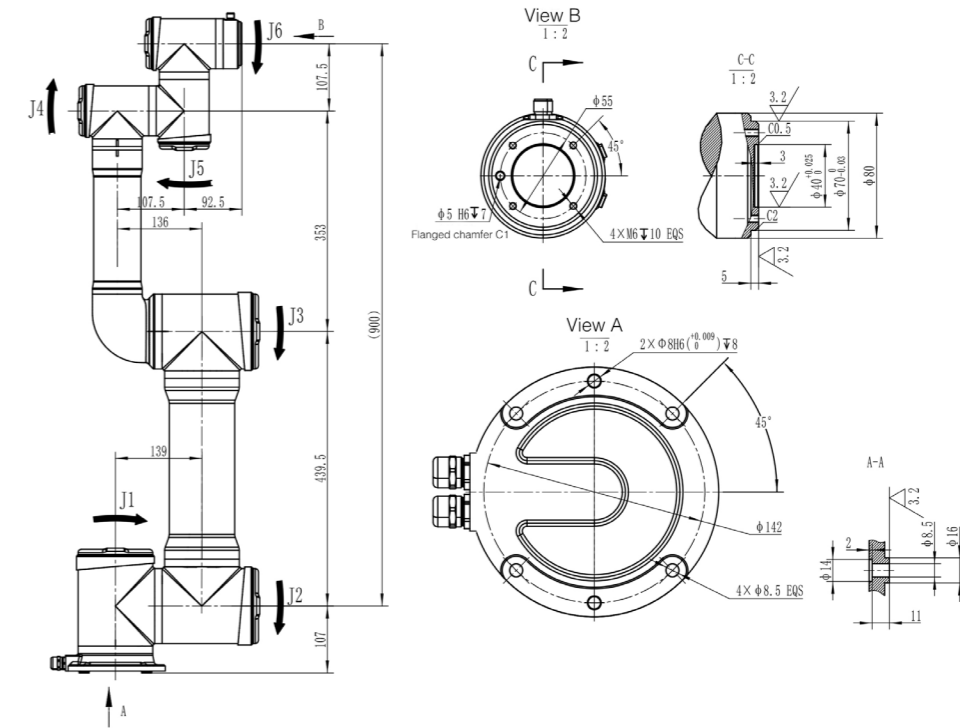
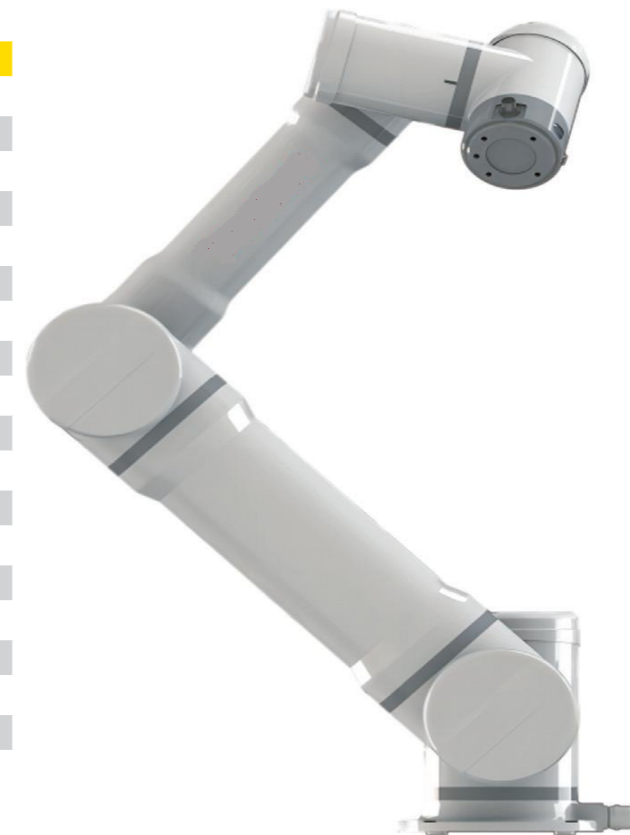
TCR050

Payload: 5kg
Arm Reach: 900mm

Model	TCR050	
Payload	5kg	
Maximum Working Range	900mm	
Body Weight	26kg	
Rated Power	2.55kw	
Max Speed	J1	180°/s
	J2	180°/s
	J3	180°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54/IP67	
Position Repeatability ※	±0.03mm	
Working Temperature	0~45°C	

※This precision applies to the Intelligence series.

Working Range



TCR100

Payload: 10kg
Arm Reach: 1310mm

Model	TCR100	
Payload	10kg	
Maximum Working Range	1310mm	
Body Weight	43kg	
Rated Power	3.5kw	
Max Speed	J1	120°/s
	J2	120°/s
	J3	120°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54/IP67	
Position Repeatability ※	±0.05mm	
Working Temperature	0~45°C	

※This precision applies to the Intelligence series.

Working Range



TCR200

Payload: 20kg
Arm Reach: 1650mm

Model	TCR200	
Payload	20kg	
Maximum Working Range	1650mm	
Body Weight	68kg	
Rated Power	3.9kw	
Max Speed	J1	100°/s
	J2	100°/s
	J3	150°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54	
Position Repeatability ※	±0.1mm	
Working Temperature	0~45°C	

※This precision applies to the Intelligence series.

Working Range



TRC5 CONTROLLER

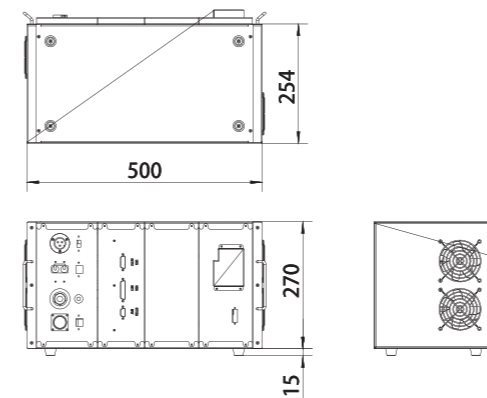
TRC5, the fifth-generation robot controller is an EtherCAT based high-performance industrial robot controller developed by combining 45 years of experience in industrial robot R&D of Italy and practical experience at home. In addition to such advantages of the previous generation as motion control, flexibility, universality, safety and reliability, TRC5 controller has made breakthroughs in distribution, modularization, user interface, bus communication, multi robot collaboration, offline simulation software and other aspects.



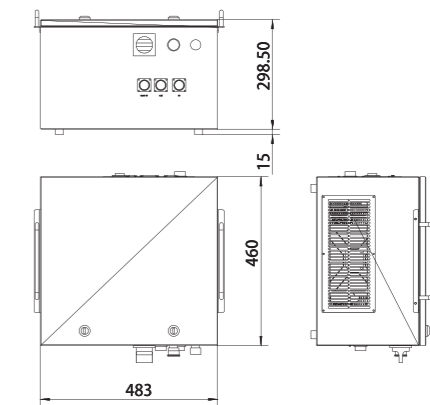
Item	Configuration
Processor	Intel J 3160
Memory	4G DDR 3
User storage space	MSATA solid state drive 60GB
Teach pendant	8" TFT-LCD (resolution: 1024*768), tempered touch screen, physical keys, safe enable switch, emergency stop button, manual/auto switch key
Controller switch buttons	Power switch, emergency stop button (optional manual/auto selector switch, start button and stop button)
Controller indicator	Power indicator (optional running indicator and status indicator)
Control axes	6 axes; another 3 external axes may be added for ganged and collaborative movement. (single rotating axis, X/Y rotating axis and walking axis)
IO ports	DI (digital input) reserved for welding: 8 DO (digital output): 10 AO (analog output): 2 Optional DI (digital input): 18 DO (digital output): 10 Standard DI (digital input): 10 DO (digital output): 14
External communication & interface	RJ45 Ethernet interface (TCP/IP; Modbus TCP); VGA; USB; CAN open; incremental encoder acquisition
Security module	Emergency stop linkage for rapid stop of the robot in the event of an emergency.
Operating modes	Teach, playback, remote control
Programming	Teach playback, offline introduction, process programming
Process packages	Welding, stacking, dispensing, stamping, remote/appointment, visual sensing
Motion functions	Point to point, linear, arc, positioner linkage, collaboration, belt conveyor follow-up
Instruction system	Motion, logic, process, calculation
Coordinate system	Joint coordinate, world coordinate, tool coordinate, workpiece coordinate
Anomaly detection	Abnormal emergency stop, servo fault, safe maintenance, arcing error, user coordinate error, tool coordinate error, etc.
Applications	Stacking, loading/unloading, gas shielded welding, argon arc welding, plasma cutting, spraying, adhesive coating, polishing, stamping
Origin functions	Absolute: battery memory; zero calibration
Cooling	Heat exchanger
Power supply	220 VAC
IP rating	IP65

CONTROLLER OUTLINE DRAWINGS

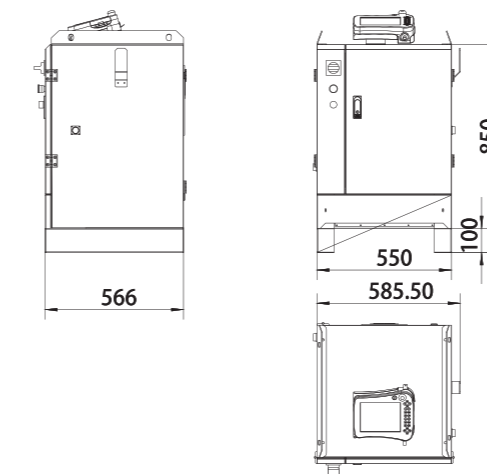
TRC3-A04



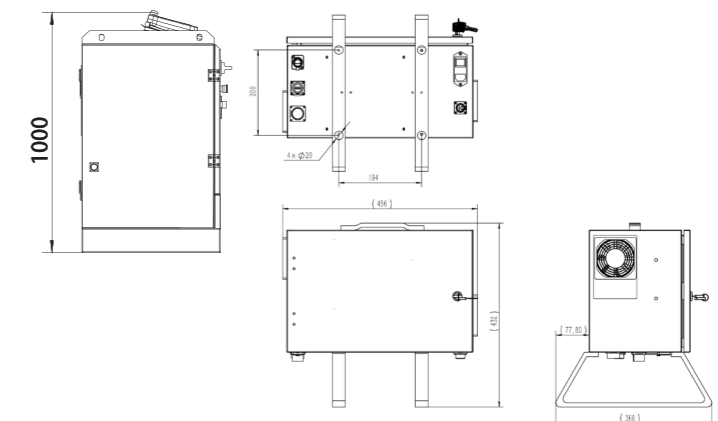
TRC3-A06



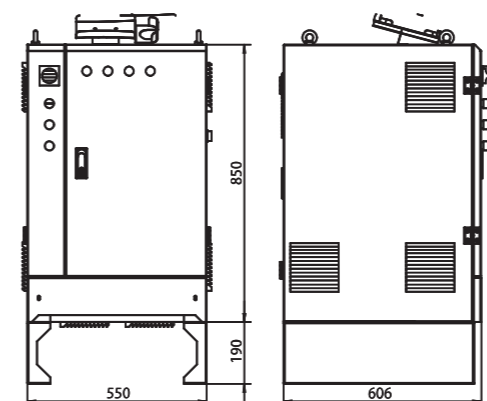
TRC5-B06



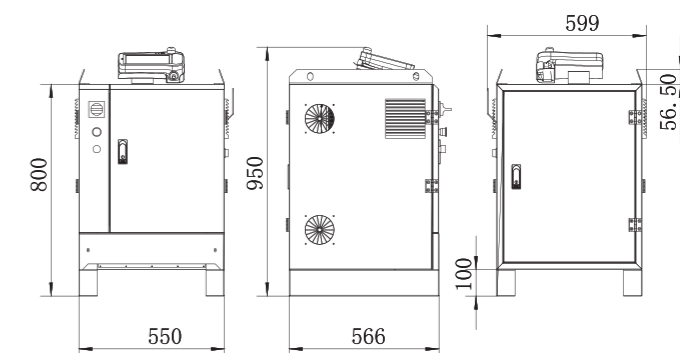
TRC4-G06(Collaborative robot)



TRC3-C06



TRC3-B06



TRP4 Teach Pendant

Collaborative Application Scenarios

Model	TRP04-DS	TRP04-QT
Main Chipset	REALTEK	ARM
Memory	/	512MBDDR
Storage Capacity	/	4G Flash
Operating System	/	LINUX
Touch Screen	Resistive	
IDE	/	QT5.15
USB	/	USB2.0HOST
Screen Resolution	8 Inch TFT Resolution 1024*768	
Keys	12 Log Keys, 4 Program Control Keys, 4 Custom Function Keys	
Switches	Emergency Stop Switch, Enable Switch, Mode Switch	
Protection Level	IP54	
Communication	LVDS	Ethernet
Cable Length	5m	10/15/20/30m
Operating Temperature	Temperature: -30° ~80°	
Dimensions	290*240*53	

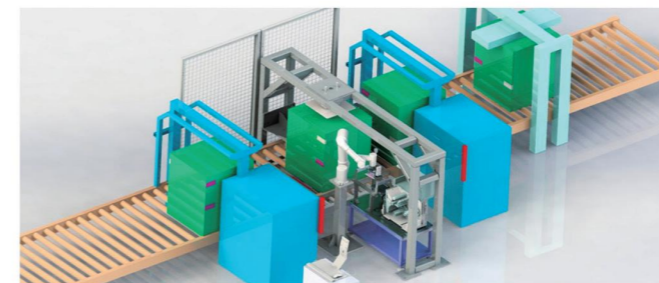


- Ergonomic design and tempered touch screen for comfortable and easy operation.
- User-friendly interface that even amateurs can quickly learn after basic training.
- Double safety switch and dual enable button ensure the personal safety of operators.
- Equipped with USB interface for program import/export and offline programming.

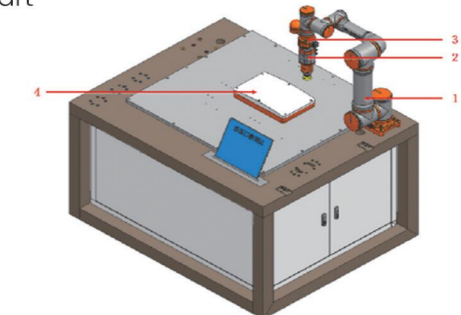
Collaborative robots, designed to work alongside humans in the same environment, have a wide range of applications. Our company specializes in the research, development, application, and promotion of human-robot collaborative robots, striving to provide the best welding automation solutions for manufacturing industry upgrading and transformation. Our team of highly skilled engineers can provide customers with a full range of technical solutions, quickly offering industry 4.0 automation solutions that are both operational and practical.



Automatic coffee art



Automatic labeling machines



Curved surface polishing



Light bulb grabbing



Household appliances screw tightening

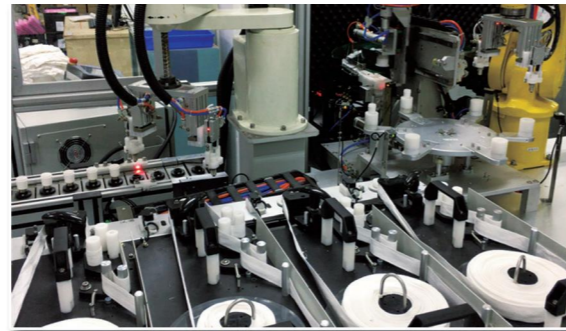


Collaborative AGV

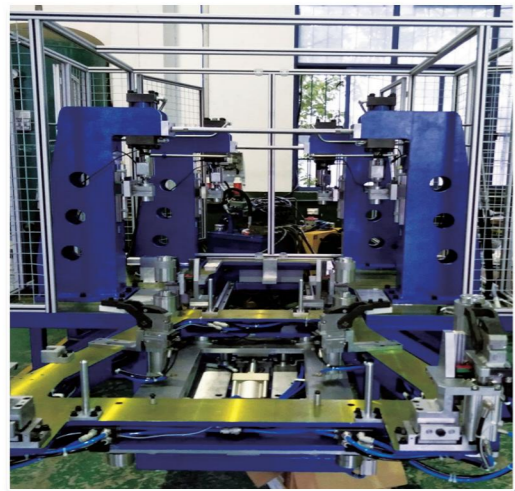
Other Application Scenarios



Emergency response in 3C industry smart data center



LED assembly in lighting industry



Production line for automotive front beam pressing equipment



Laser cutting



Fully-automated factory of a Fortune Global 500 environmental company



Educational demonstration workstation

Partners

