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FANUC robotic welding cells

We are the official partner and agent for Shanghai-FANUC robotic cells, we have deep cooperation and rich engineering experience for robotic cells used in welding, carrying and stacking.

Part A: Introduction of FANUC Smart ARC robotic welding cell

FANUC newest and best performance robot: light and compact design model R-0iB and Built-in & high rigidity model M-10iA, equipped high performance controller R-30iB which uses newest servo technology. With the newest digital and smart "Smart Power" series welding power; With high quality, high rigidity welding gun; with newest robotic software.

It can give customer high quality welding.

Part B: Robotic cells composition

Robot integrated with welding power.

Robot controller can communicate with welding machine through bus or analog quantity

Wire feeding device installed on J3 axle.

Cables concentrated, easy & convenient.



Part C: Part description

a. Welding gun



External air cooled welding gun system

- Gun neck replacable, with high rated value and high utilization factor
- Smart joint can quickly maintain and repeat locating function, reduce stop time.
- Best temperature character ensures longer service life for easy-broken parts
- High quality cable assy ensures longer service life for system.
- Solid and durable welding gun structure ensures high collision stability.
- Gun neck angel: 30° / 50°

Internal welding gun system

- Cable placed inside of robot arm, suitable for narrow space welding, it is flexible.
- With longer gun neck, better welding suitability
- Welding gun body made by high precise digital machining, with long life span consumable material.
- Big current loading, high purity copper cable.
- Gun neck angel: 22° / 45°

b. Full digital Smart Power series welding power

- Full digital welding technology, precise arc controlling, extraordinary welding technology.
- Most advance 64KHZ high frequency IGBT inverter technology, high power density, high efficiency and energy saving.
- Unified expert program, digital welding parameter saving & selecting function, easy operation and easy understanding
- Smart trouble code warning, accurately locate trouble point, can resolve problem quickly.
- Communicate with robot by bus, smart dynamic supervision and real-time calibration of welding parameter
- Strong digital software controlling platform, it can meet customer's special request.
- High reliable working under cruel industry enviroment.

c. Richful positioner series



Hollow-type
300/500kg
1 axle positioner



Hollow-type
1000/1500kg
1 axle positioner



Compact-type
1000/1500kg
1 axle positioner



Hollow-type
1500kg
2 axes positioner



Hollow-type 500kg
Non hollow-type 1000kg
L-type 2 axes positioner

- Precise controlling servo technology, ensures stable welding quality
- Hollow-type can be selected, easy for pipe and cables setting, 2 axes positioner integrated welding

cable terminals.

- Positioner can installed on ground, up-side down, or any angle.

Part D: Robot technical specifications

Model No.	R-0iB		M-10iA/12	
Strcuture	Multi-joint			
Controlling axle	6 axles (J1, J2,J3,J4,J5,J6)			
Reachable radius	1437mm		1420mm	
Installing	On ground, up-side down, inclined			
Movement range	J1	240° (360°/S) (225°/S)	J1	340° /360° (230°/S)
	J2	250° (215°/S)	J2	250° (225°/S)
	J3	455° (255°/S)	J3	445° (230°/S)
	J4	380° (425°/S)	J4	380° (430°/S)
	J5	280° (425°/S)	J5	380° (430°/S)
	J6	720° (625°/S)	J6	720° (630°/S)
Wrist max loading	3kgs		12kgs	
J3 arm max loading	7kgs		12kgs	
Wrist accpetable loading torque	J4	8.9Nm	J4	22Nm
	J5	8.9Nm	J5	22Nm
	J6	3.0Nm	J6	9.8Nm
Wrist acceptable loading inertia	J4	0.28kgm ²	J4	0.65kgm ²
	J5	0.28kgm ²	J5	0.65kgm ²
	J6	0.035kgm ²	J6	0.17kgm ²
Resetting accuracy	±0.08mm			
Weight	99 kgs		130kgs	
Installation enviroment	0~45 °C; ≤75%RH no condensation; Vibration acceleration speed:< 4.9 m/S ² (0.5G)			

- If use inclined installation,movement range of J1 & J2 axle will be limited
- In short distance movement, may not reach max rated speed of each axle.
- Weight no including controller

Welding Power specifications

Model	SFP-C350iA	SFP-C500iA	SFP-P400iA	SFP-C350iA
Input voltage	AC380V±25% 3 phase			
Input frequency	30~80Hz			
Input capacity	13.5KVA	22.3KVA	24KVA	24KVA
Rated output current	30~400A	30~500A	30~400A	30~500A
Rated output voltage	12~38V	12~45V		
Rated utilization factor	350A@100%	500A@100%	400A@100%	500A@60%
Welding mode	CV	CV	CV/pulse/double pulse	
Protection grade	IP23S			
Size	300x480x620mm			
Weight	48kgs	52kgs		

Wire feeder specifications:

Model	SFP-SN100iA	SFP-SW100iA
For robot	M-10iA/12	R-0iB
Wire feeder	Four wheels driving	
Weight	6.5kgs	
Dimension	300x170x200mm	
Wire diameter	0.8/1.0/1.2/1.6mm	

Part E: Robotic welder picture

