Robotics

| No.	Item
1	Robot body
2	Robot controller
3	Power source
4	Robot welding torch
5	Anti-collision sensor
6	Torch cleaning station (optional)
7	Wire feeder
8	Button station
9	Platform (customization or provide for themselves)
10	Safety bench (optional)
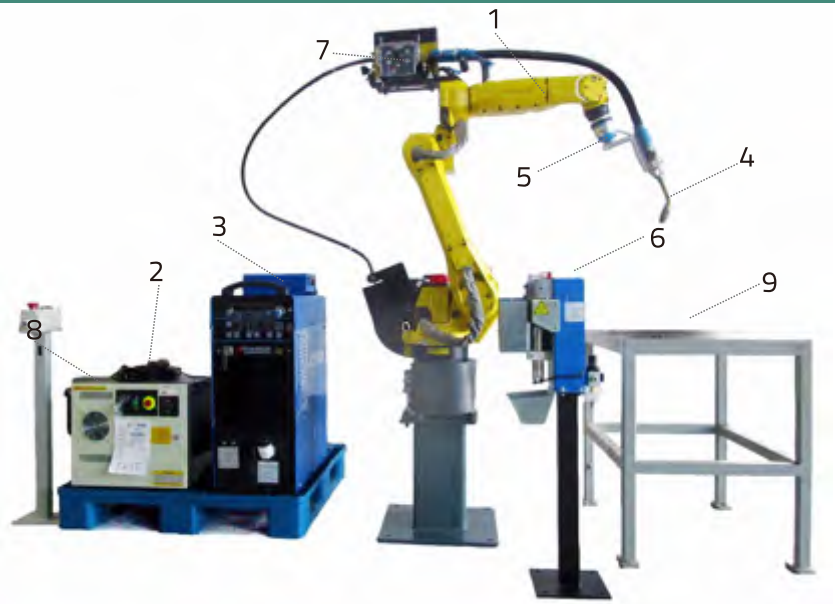
Anti-collision Sensor: When torch is colliding with other bodies, the anti-collision sensor will automatically send out collision-protection signal to robot, so as to protect robot and welding torch.

Technical Specification

Model	KS-2
Structure	Full mechanism, spring-supported
Positional accuracy	±0.3mm
Weight	0.85kg

Torch-cleaning Station： Clean spatters stuck in torch periodically, can greatly improve productivity and welding quality. Before seam-positioning, it will also cut the wire to guarantee arc ignition rate.

Before   After
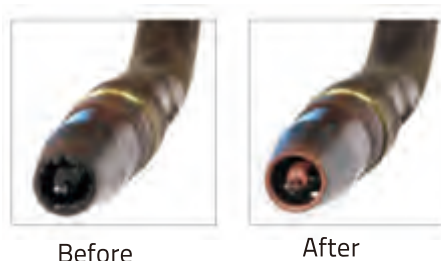
Technical Specification

Model	ATVCS-A-I
Gas source	6~7bar compressed air
Air consumption	Around 10 L/s
Cleaning time	Around 5s
Anti-spatter agent volume	500ml
Wire cutting capacity	≤ 1.6mm

90

AMIG350-RPL

AMIG-RPL is fully digital MIG series with new Low Spatter technology. Due to high end DSP + FPGA and waveform control technology. It provides outstanding control of arc and weld pool and bring spatter free welding quality and high efficient productivity.

Features and Benefits

- Low spatter, pulse, and CV modes can be freely switched according to needs.
- DeViceNet, CAN, CANOPEN, 485, EthernetIP communication interfaces, can communicate v all arc welding robots via digital/analog interfaces.
- Welding expert database, automatic intelligent parameter combination.
- Digital interface can directly call welding parameters, transmits them to robot in real time, completes arc tracking together with robot. Storage capacity is up to 100 sets.
- Contact sensing function completes position seeking operation together with robot.
- Full digital control system, accurate welding process control, stable arc length.
- Powerful digital error reporting function with error code display.
- Fine control of droplet transfer, no spatter in pulse welding.
- Optimized arc starting, crater filling, and ball removing functions.

Construction project

Base metal: Carbon steel, Plate thickness: 2.0-3.0mm
Welding consumables: Carbon steel 1.2, Protection gas: mixed gas
Welding specification: Current:130A, Voltage: Automatic matching, Speed: 8mm/s

Technical Specification

	AMIG-350RPL
Rated input voltage/frequency	3 phase 380V±10%/50Hz
Rated input capacity (KVA)	14
Rated input current (A)	21
Duty cycle (40℃)	60%
Output current range (A)	25~350
Output voltage range (V)	10~50
OCV (V)	101/79
Wire size (mm)	0.8, 1.0, 1.2, 1.6
Weight (kg)	50
Dimension L×W×H (mm)	660×320×560
Gas flow (L/min)	15～20
Insulation class	H
Protection class	IP23S

ATIG-PACIII-R series is fully digital models with high end DSP technology, suitable for both automatic application and manual welding. Compared with ATIG-PAC series, it offers advanced wave control technology which brings more flexibility for thinner /thicker material during critical alumumium welding. Smart parameters adjuestment brings cleanest, deepest penetration and perfect welding result for high welding quality demanding.

Features and Benefits

- Full digital inverter power source. Current increasing speed during arc starting is greatly improved, which make beautiful aluminum welding
- More output wave forms: standard square, Sine wave, Triangle wave, suitable for various workpiece thickness
- Synchronous mutual arc feature
- All parameters can be precisely pre-setted
- Can store and load 30 sets of welding parameters
- Remote control function, can adjust welding current and peak current
- Can display current and voltage at the same time
- MMA: adjustable arc current, arc force current, easy arc starting

Technical Specification

			ATIG315PAC III-R
Rated input voltage /frequency (Hz)			3 phase, 380V±10%, 50 /60Hz
Rated input capacity (KVA)			13.6
Rated input current (A)			20.7
Duty cycle (40°C)			60%@315A
OCV (V) (MMA /TIG)			45/79
TIG	DC TIG	Output current range (A)	5-315A
	Pulse TIG	Pulse frequency (Hz) (AC /DC)	0.2-250 /0.2-999
		Peak current (A)	5-315
		Base current (A)	5-315
		Pulse duty cycle	15%-85%
	AC TIG	Wave form	Square,sine, mixture
		AC frequency (Hz)	40-250
		AC balance	-50%±40%
		Mixture Frequency (Hz)	0.5-10
		Mixture Duty cycle	15%-85%
	Pre-gas /post gas (s)		OFF-10 /OFF-60
	Initial /final current (A)		5-315 /5-315
	Up-slope /down-slope (s)		OFF-10 /OFF-15
	Trigger mode		2/4T, Repeat, Spot
	Arc ignition method		HF /contact
Job channels			30
Interface			Analog communication /Devicenet, CAN, 485, digital communication
Dimension (mm)			655*324*546
Weight (kg /lb)			53 /117

AMIG-P-350 /500-R

AMIG-P-350 /500-R series is especially designed for automatic welding system.
It has the characteristic of CV and can realize the CO_2 gas shielded welding of carbon steel. And the AMIG-P-350 /500-R series have the characteristics of Pulse function and constant voltage. During the Pulse function, it can realize the welding of carbon steel, stainless steel, aluminum & alloy, copper & alloy etc. non-ferrous metal.

Features and Benefits

Professional solutions for arc welding robot
- International standard DeviceNet digital communication interface -- seamless lintegrationof digital control technology combines inverter welding power source and robotic interface
- Integrated analogue communication interface

Excellent welding performance
- Full digital control system, make droplet transfer more precise and stable
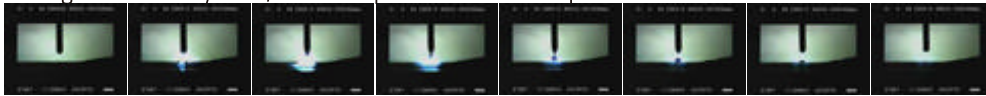
- Double pulse technology can produce weld seam with beautiful ripple patter, avoid weld porosity defect, refine grain, and reduce crack sensitivity
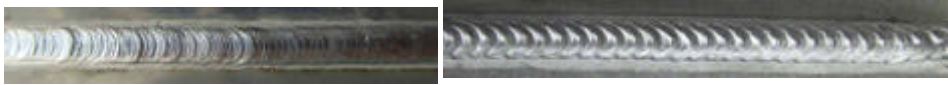
- Embedded welding expert database, which provides intelligent welding parameters
  Single side weld with double-side formation technology
- With precise control to welding torch by robot, and welding machine CPU+ DSP full digital high precision waveform control technology, it solves formation defect problem when gap is uneven on butt joint vertical position welding, so as to form beautiful weld seam, produce almost no spatter during welding, and reduce cleaning cost

Front Side Formation   Backside Formation   Plate Thickness 2.8mm   Weld Seam Microstructure   Plate Thickness 6.5mm   Fusion Zone Microstructure   8mm High-strength Steel: No Groove Single Side Weld Doubel-side Formation

Technical Specification

	AMIG350P-R	AMIG500P-R
Rated input voltage /frequency (Hz)	3 phase, 380V±10%, 50 /60Hz	
Rated input capacity (KVA)	12.7	23.4
Rated input current (A)	19.4	36.1
Duty cycle(40°C)	60%@350A	60%@500A
OCV (V)	101	106
Output current range (A)	60-350	60-500
Output voltage range (V)	14-40	14-50
Trigger mode	2 /4T, Spot, Repeat	
Wire size (mm)	0.8, 1.0, 1.2, 1.6	
Double pulse frequency (Hz)	0.5-5	
Job channels	100	
Protection class	IP23S	
Interface	Analog communication /Devicenet, CAN, 485, digital communication	
Dimension (mm)	655*324*546	655*324*546
Weight (kg /lb)	45 /99	53 /116.3

Defense Door Welding Robot Workstation
- Efficiency: 20min/piece (2.08m×1.4m work piece)
- Dual-robot symmetry welding, reduce work piece deformation
- Robot can auto-seek welding seam position, perform normal welding when work piece assembly error is more than 5mm

Pipe-pipe and Pipe-flange Intersecting Line Welding Robot Workstation
- 7-axis linkage, ensure best welding position, realize continuous welding, improve welding quality

Intersecting Line Cutting Robot Workstation
- Low frequency arc start, reduce interference to equipment
- 360° all posture cutting
- Suitable for plate with lower than 20mm thickness

Water Treatment Rabble Blade Cutting Robot Workstation
- Robot welding: 30min/piece, manual welding: 60min/piece
- 3D translation and rotation welding seam positioning, perform normal welding when workpiece assembly error is more than 5mm
- Travelling guide rail can suit for work piece with 1m-7m

B1: 1-axis gantry
Effective travel: X axis 4/8/12m

B2: 3-axis gantry
Effective travel: X axis 3/4/6m, Y axis 2m, Z axis 1.5m

B3: Lifting and rotation C type frame
(normal installation)
Lifting travel: 3m/customize
Rotation angle: ±360°

B4: Travelling C type frame
Effective travel: 2/3/5/10/15/20m

B5: Rotation and travelling C type frame
Effective travel: 2/3/5/10/15/20m
Rotation angle: ±360°

B3: Lifting and rotation C type frame
(hang upside down)
Lifting travel: 3m/customize
Rotation angle: ±360°

B7: Travelling ground rail
Effective travel: 2/3/5/10/15/20m

B8: Lifting and travelling ground rail
Effective travel: X axis 2/3/5/10/15/20m
Y axis 2m/fixed

B9: Hang upside down and travelling type
ground rail
Effective travel: X axis 2/3/5/10/15/20m
Y axis 2m/ fixed

B10: Travelling cross
Effective travel: X axis 2/3/5/7m
Y axis 3/5m

B11: Travelling gantry
Effective travel: X axis 2/3/5m
Y axis 2/3/5/10m

B12: Dual robot travelling ground rail
Effective travel: X axis 2/3/5/10/15/20m

F1: Standard 6-axis robot workstation
Configuration: robot body + wire feeder +
welding machine + welding torch

F2: Single station L shape 8-axis
robot workstation
Effective bear load: 1/2.5/5t

F3: Dual station head-tail type 8-axis
robot workstation
Effective bear load: 0.5/1/2.5/5t

F4: Dual station head-tail type 14-axis
robot workstation
Effective bear load: 0.5/1/2.5/5t

F5: Dual station travelling head-tail type
9-axis robot workstation
Effective bear load: 0.5/1/2.5/5t

F6: Dual station rotation and lifting
12-axis hang upside down type robot
workstation
Effective bear load: 1/2.5/5t

F7: Travelling head-tail 8-axis hang upside
down type robot workstation
Effective bear load: 1/2.5/5t

F8: Lifting and travelling L shape 10-axis
robot workstation
Effective bear load: 1/2.5/5t

F9: Gantry L shape 11-axis robot workstation
Effective bear load: 1/2.5/5t

F10: Gantry head-tail 10-axis robot
workstation
Effective bear load: 2.5/5/10t

F11: Gantry H shape 11-axis robot
workstation
Effective bear load: 2.5/5/10t

F12: Dual-station travelling head-tail type
10-axis hang upside down robot
workstation
Effective bear load: 1/2.5/5t