



SINGLE SOURCE ADVANTAGE

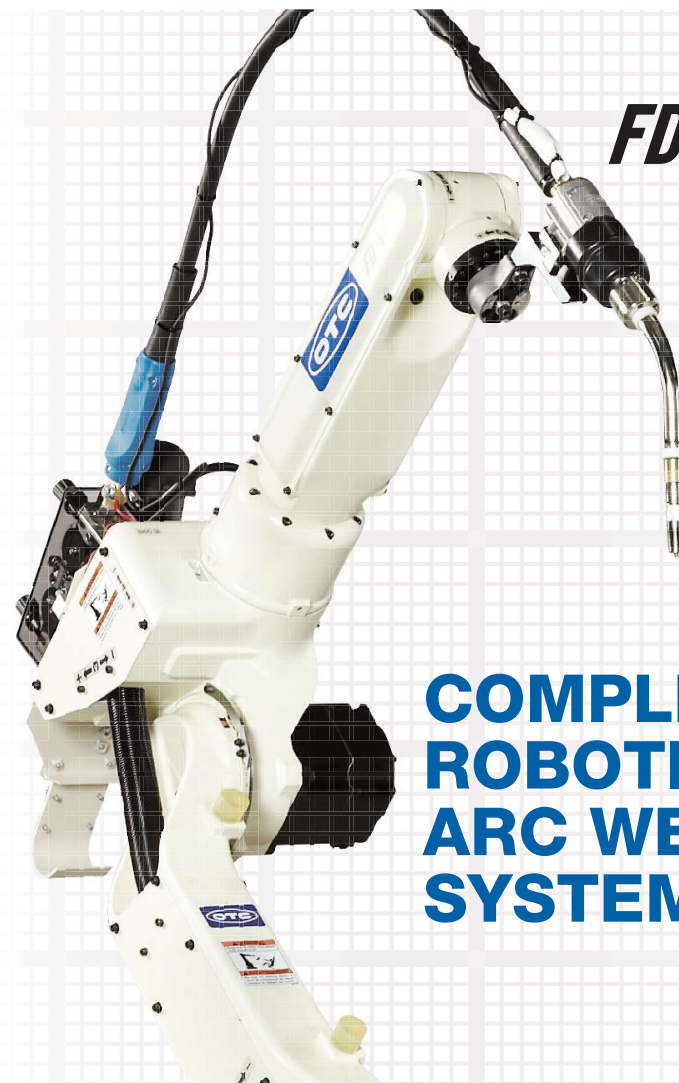
Our single source approach is simple: we provide all the equipment needed for robotic or manual arc welding. One call solves it all!

- Seamless digital integration for maximum control
- Reduced maintenance time for greater uptime and productivity
- Expert service from experienced support staff

ROBOT, WELDING POWER SOURCE,
WIRE FEEDER, TORCH—WE PROVIDE IT ALL.

SEAMLESS SOLUTIONS

Our cells can provide arc welding solutions for a range of parts from small to large size, with minimal operator movement required and little to no part positioning. The compact designs reduce required manufacturing floor space. All cells include an arc welding robot, a robot controller, a teach pendant and a positioner.



FD *Friendly series*

COMPLETE ROBOTIC ARC WELDING SYSTEMS

888-OTC-ROBO

www.daihen-usa.com

FD-B6

FD-B6L

FD-V8

FD-V8L

FD-V25

FD-H5

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OTC-5 REV 1/19

DAIHEN

Member of DAIHEN Group

DAIHEN INC.

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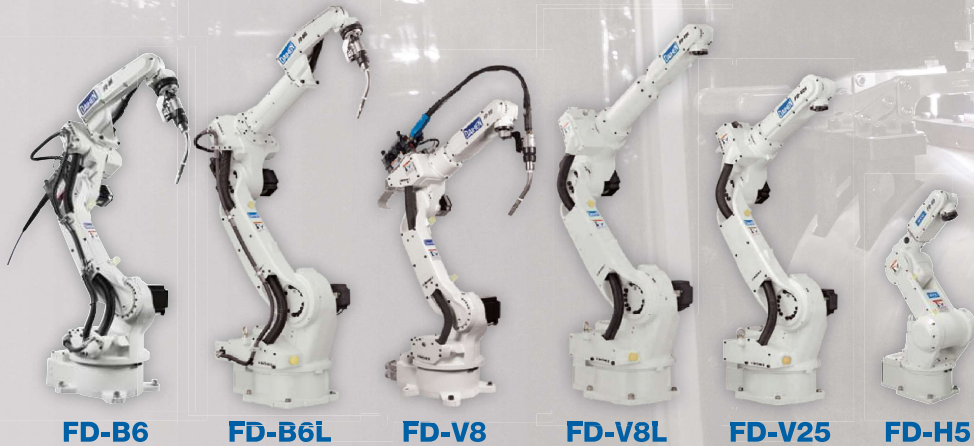


FD *Friendly series*

CHANGING THE FUTURE OF MANUFACTURING

OPTIMUM TEACHING

Easy teaching, even for a two-electrode torch.



Our arc welding robots are ideal for many welding and air plasma cutting applications. They can be used for mild steel, stainless steel, aluminum, titanium and other exotic metals. While some models feature a compact design, robots can handle a variety of jobs ranging from small to large in size. All arc welding robots include an FD11 robot controller and a teach pendant.

THE IDEAL SOLUTION FOR AUTOMATION OF WELDING



Intuitive Operation
Touch panel and jog dial ensure easy operation.



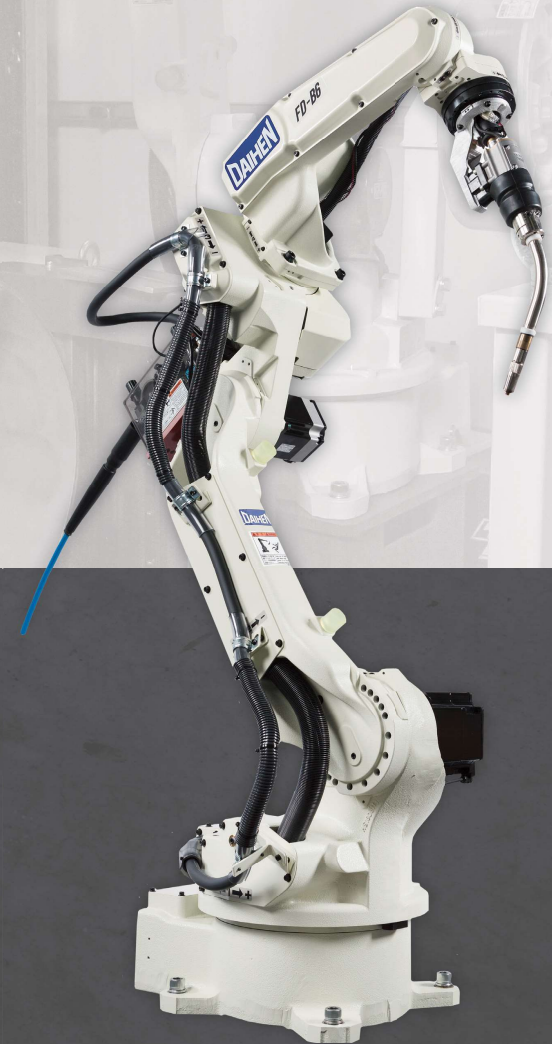
Quality Control Functions
Easy quantitative management of welding procedures.



Compact and Eco-Friendly
Space-saving design with reduced standby power consumption.

FD-B6

The FD-B6 arc welding robot represents our newest in robotic innovations. Sporting a unique design with a through-arm co-axial cable, this robot is highly versatile at welding in confined spaces and complicated fixtures. The coaxial cable of the FD-B6 also helps improve overall weld quality.



Specifications: Manipulator

			FD-B6	FD-B6L	FD-V8	FD-V8L	FD-H5	FD-V25
Model			NB6	NB6L	NV8	NV8L	NH5	NV25
Number of axes			6	6	6	6	6	6
Maximum capacity			13.2 lbs (6kg)	13.2 lbs (6kg)	17.6 lbs (8kg)	17.6 lbs (8kg)	11 lbs (5kg)	55 lbs (25kg)
Positional repeatability			±0.003" (±0.08mm) ⁽¹⁾	±0.003" (±0.08mm) ⁽¹⁾	±0.003" (±0.08mm) ⁽¹⁾	±0.003" (±0.08mm) ⁽¹⁾	±0.002" (±0.05mm) ⁽¹⁾	±0.003" (±0.08mm) ⁽¹⁾
Horizontal Reach			56.88" (1445mm)	79.05" (2008mm)	56.57" (1437mm)	78.98" (2006mm)	34.09" (866mm)	67.32" (1710mm)
Vertical Reach			84.80" (2154mm)	140.71" (3574mm)	98.27" (2496mm)	140.55" (3570mm)	54.1" (1374mm)	117.28" (2979mm)
Driving capacity			3132 W	4832 W	3016 W	5000 W	1440 W	5600 W
Working Range	Arm	J1 (Rotation)	±170° (±50°) ⁽²⁾	±170° (±50°) ⁽²⁾	±170° (±50°) ⁽²⁾	±170° (±50°) ⁽²⁾	±170° (±50°) ⁽²⁾	±170° (±50°) ⁽²⁾
		J2 (Lower arm)	-155° to +90°	-155° to +100° ⁽³⁾	-155° to +90°	-155° to +100° ⁽³⁾	-125° to +90°	-155° to +100°
		J3 (Upper arm)	-170° to +245°	-170° to +190°	-170° to +190°	-170° to +260° ⁽⁴⁾	-140° to +245°	-170° to +260° ⁽⁴⁾
	Wrist	J4 (Swing)	±155°	±155°	±180°	±180°	±190°	±180°
		J5 (Bending)	-45° to +225° ⁽⁵⁾	-45° to +225° ⁽⁵⁾	-50° to +230°	-50° to +230°	-30° to +210°	-50° to +230°
		J6 (Twist)	±205° ⁽⁵⁾	±205° ⁽⁵⁾	±360°	±360°	±360°	±360°
Motion speed	Arm	J1 (Rotation)	4.19 rad/s (240°/s) 3.32 rad/s (190°/s) ⁽²⁾	3.40 rad/s (195°/s) 3.05 rad/s (175°/s) ⁽²⁾	4.19 rad/s (240°/s) 3.32 rad/s (190°/s) ⁽²⁾	3.40 rad/s (195°/s) 3.05 rad/s (175°/s) ⁽²⁾	3.49 rad/s (200°/s) 2.79 rad/s (160°/s) ⁽²⁾	3.40 rad/s (195°/s) 3.05 rad/s (175°/s) ⁽²⁾
		J2 (Lower arm)	4.19 rad/s (240°/s)	3.49 rad/s (200°/s)	4.19 rad/s (240°/s)	3.49 rad/s (200°/s)	3.49 rad/s (200°/s)	3.32 rad/s (200°/s)
		J3 (Upper arm)	4.01 rad/s (230°/s)	3.49 rad/s (200°/s)	4.01 rad/s (230°/s)	3.49 rad/s (200°/s)	4.54 rad/s (260°/s)	3.14 rad/s (200°/s)
	Wrist	J4 (Swing)	7.50 rad/s (430°/s)	7.50 rad/s (430°/s)	7.50 rad/s (430°/s)	7.50 rad/s (420°/s)	6.63 rad/s (380°/s)	6.98 rad/s (430°/s)
		J5 (Bending)	7.50 rad/s (430°/s)	7.50 rad/s (430°/s)	7.50 rad/s (430°/s)	7.50 rad/s (420°/s)	6.63 rad/s (380°/s)	6.98 rad/s (430°/s)
		J6 (Twist)	11.00 rad/s (630°/s)	11.00 rad/s (630°/s)	11.00 rad/s (630°/s)	10.99 rad/s (630°/s)	8.95 rad/s (510°/s)	10.47 rad/s (630°/s)
Wrist allowable load	Allowable moment	J4 (Swing)	10.5 N•m	10.5 N•m	17.6 N•m	17.6 N•m	11.9 N•m	52.6 N•m
		J5 (Bending)	10.5 N•m	10.5 N•m	17.6 N•m	17.6 N•m	11.9 N•m	52.6 N•m
		J6 (Twist)	5.9 N•m	5.9 N•m	7.8 N•m	7.8 N•m	5.21 N•m	24.5 N•m
	Allowable moment of inertia	J4 (Swing)	0.28kg•m²	0.28kg•m²	0.43kg•m²	0.43kg•m²	0.303kg•m²	1.24kg•m²
		J5 (Bending)	0.28kg•m²	0.28kg•m²	0.43kg•m²	0.43kg•m²	0.303kg•m²	1.24kg•m²
		J6 (Twist)	0.06kg•m²	0.06kg•m²	0.09kg•m²	0.09kg•m²	0.061kg•m²	0.33kg•m²
Arm cross-sectional area			3.59 m² x 340°	6.37 m² x 340°	3.14 m² x 340°	7.48 m² x 340°	1.22 m² x 340°	5.27 m² x 340°
Environmental conditions			32 to 113° F (0 to 45° C), 20 to 80% RH (no condensation)					
Mass / weight			319 lbs (145kg)	612 lbs (287kg)	308 lbs (140kg)	601 lbs (273kg)	128 lbs (58kg)	612 lbs (278kg)
Maximum load of upper arm			22 lbs (10kg) ⁽⁶⁾	44 lbs (20kg) ⁽⁶⁾	22 lbs (10kg) ⁽⁶⁾	44 lbs (20kg) ⁽⁶⁾	2.2 lbs (1kg) ⁽⁶⁾	22 lbs (10kg) ⁽⁶⁾
Installation method			Floor/Ceiling/Wall					
Paint color			White (Munsell notation 10GY 9/1)					

- Through-arm cable design improves torch reach & wire feeding
- Offers a wide working range with an independently articulated arm
- Seamless digital connection with all OTC DAIHEN brand welding power supplies
- Improved vibration restraining control provides smooth robot movement
- Built-in mechanical shock sensor
- Single source technology – all components are manufactured by OTC DAIHEN
- Highly versatile design supports most welding applications

NOTES:
(1) The value of the positional repeatability is at the tool center point (TCP) in compliance with ISO 9283.
(2) The value in parentheses indicates wall mounted.
(3) Working range of J2 axis may be restricted when wall mounted.
(4) The operation range of the J3 axis is restricted to -170° to +205° when floor based welding is applied.
(5) Working range of the J6 axis may be restricted by the position of the J5 axis.
(6) When loading, the maximum payload as the end effector.
(7) This value changes according to placement and load conditions of the wrist.

These specifications are subject to change without prior notice.