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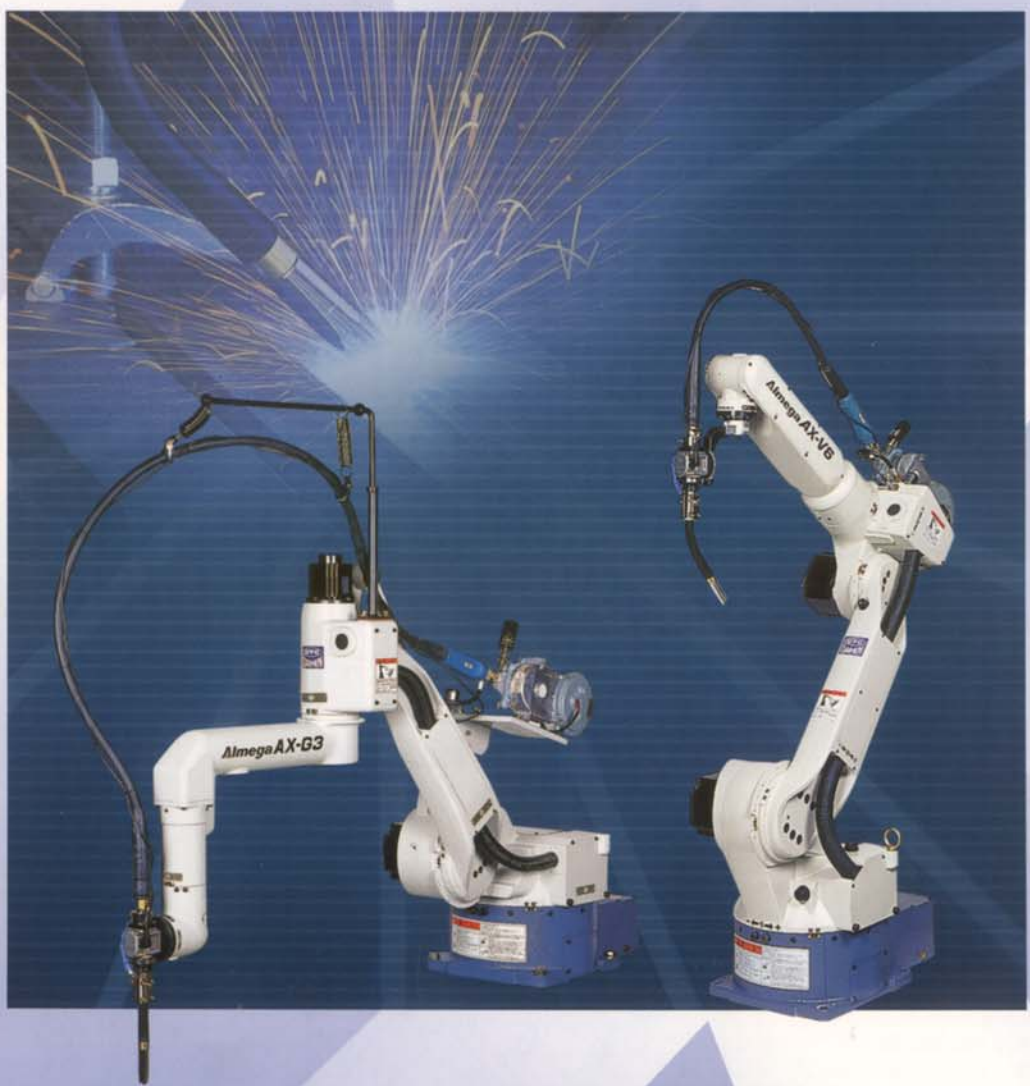
OTC
DAIHEN Corporation

CAT. NO. R20214A

Almega AX-V6(L)・V16・G3

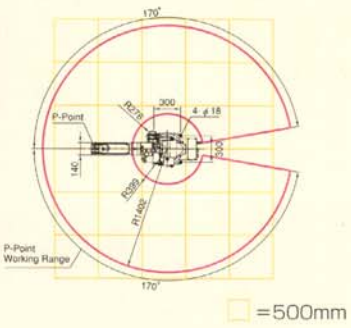
■Almega AX Series Manipulator

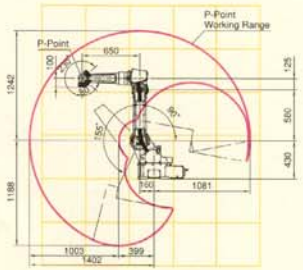


DAIHEN Corporation

Remarkable Enhancements

AX-MV6 (Almega AX-V6 Manipulator)





Our Best Selling Arc Welding Robot.

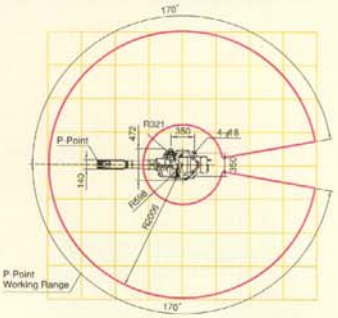
Offers a wide working range and a large stroke with an independently articulated arm.

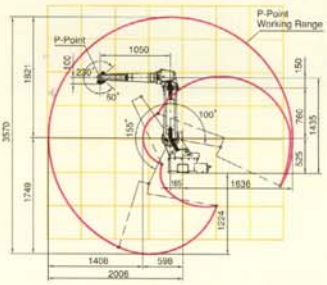
■AX-MV6 Basic Specifications

Item			Specifications
Name			AX-MV6
Structure			Vertical articulated type
Number of axes			6
Max. payload capacity			6kg
Positional repeatability			±0.08mm (Note 1)
Drive system			AC Servo motor
Drive capacity			2750W
Position feedback			Absolute encoder
Working Range	Arm	J1 (Revolving)	340°(±170°)【100°(±50°)】(Note 2)
		J2 (Lower arm)	245°(−155°~+90°)
		J3 (Upper arm)	360°(−170°~+190°)
	Wrist	J4 (Swing)	360°(±180°)
		J5 (Bending)	280°(−50°~+230°)
		J6 (Twist)	720°(±360°)
Max. Velocity	Arm	J1 (Revolving)	2.62rad/s(150°/s)
		J2 (Lower arm)	2.79rad/s(160°/s)
		J3 (Upper arm)	2.97rad/s(170°/s)
	Wrist	J4 (Swing)	5.93rad/s(340°/s)
		J5 (Bending)	5.93rad/s(340°/s)
		J6 (Twist)	9.08rad/s(520°/s)
Wrist load	Allowable Moment	J4 (Swing)	11.8N·m
		J5 (Bending)	9.8N·m
		J6 (Twist)	5.9N·m
	Allowable Moment of inertia	J4 (Swing)	0.30kg·m²
		J5 (Bending)	0.25kg·m²
		J6 (Twist)	0.06kg·m²
Arm operation cross-sectional area			3.14m²×340°
Ambient temperature and humidity			0~45℃, 20~80%RH (No condensation)
Mass(Weight)			155kg
Upper arm payload capacity			10kg (Note 3)
Installation type			Floor, ceiling or wall hanging type
Origin return			Not necessary (Note 5)
Paint Color			Arm : white, Base : blue

(Note) 1. The positional repeatability is a measured value obtained when the manipulator operating conditions are stabilized after times of the automatic operation.
2. The value in the bracket【 】indicates the wall-hung condition.
3. When Max. payload capacity at wrist tip is 6kg, Wrist transportable payload capacity + Upper arm paload capacity = 10kg
4. A holding brake is provided for all axes.
5. Store battery inside the manipulator for positional data protection.The battery backup period with the primary power OFF is approx. 3 years. Exceeding this period will require the battery replacement and the absolute offset adjustments.
6. The battery backup period may be shorter depending on the environmental conditions, the use conditions and so on.
7. The above specifications are subject to change without notice.

AX-MV6L (Almega AX-V6L Manipulator)





Long Arm Arc Welding Robot.

With reach up to 2006mm this arm is highly efficient for welding large workpieces.

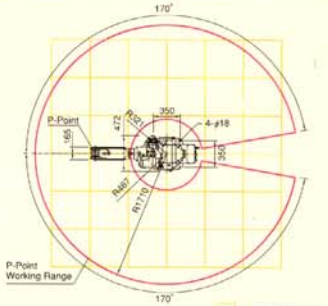
■AX-MV6L Basic Specifications

Item			Specifications
Name			AX-MV6L
Structure			Vertical articulated type
Number of axes			6
Max. payload capacity			6kg
Positional repeatability			±0.1mm (Note 1)
Drive system			AC Servo motor
Drive capacity			5200W
Position feedback			Absolute encoder
Working Range	Arm	J1 (Revolving)	340°(±170°)【100°(±50°)】(Note 2)
		J2 (Lower arm)	255°(−155°~+100°)
		J3 (Upper arm)	375°(−170°~+205°)
	Wrist	J4 (Swing)	360°(±180°)
		J5 (Bending)	280°(−50°~+230°)
		J6 (Twist)	720°(±360°)
Max. Velocity	Arm	J1 (Revolving)	2.88rad/s(165°/s)【2.62rad/s(150°/s)】(Note 2)
		J2 (Lower arm)	2.88rad/s(165°/s)
		J3 (Upper arm)	3.05rad/s(175°/s)
	Wrist	J4 (Swing)	6.11rad/s(350°/s)
		J5 (Bending)	5.93rad/s(340°/s)
		J6 (Twist)	9.08rad/s(520°/s)
Wrist load	Allowable Moment	J4 (Swing)	11.8N·m
		J5 (Bending)	9.8N·m
		J6 (Twist)	5.9N·m
	Allowable Moment of inertia	J4 (Swing)	0.30kg·m²
		J5 (Bending)	0.25kg·m²
		J6 (Twist)	0.06kg·m²
Arm operation cross-sectional area			6.43m²×340°
Ambient temperature and humidity			0~45℃, 20~80%RH (No condensation)
Mass(Weight)			260kg
Upper arm payload capacity			12kg (Note 3)
Installation type			Floor, ceiling or wall hanging type
Origin return			Not necessary (Note 5)
Paint Color			Arm : white, Base : blue

(Note) 1. The positional repeatability is a measured value obtained when the manipulator operating conditions are stabilized after times of the automatic operation.
2. The value in the bracket【 】indicates the wall-hung condition.
3. When Max. payload capacity at wrist tip is 6kg, Wrist transportable payload capacity + Upper arm paload capacity = 18kg
4. A holding brake is provided for all axes.
5. Store battery inside the manipulator for positional data protection.The battery backup period with the primary power OFF is approx. 3 years. Exceeding this period will require the battery replacement and the absolute offset adjustments.
6. The battery backup period may be shorter depending on the environmental conditions, the use conditions and so on.
7. The above specifications are subject to change without notice.

in Motion Performance

AX-MV16 (Almega AX-V16 Manipulator)



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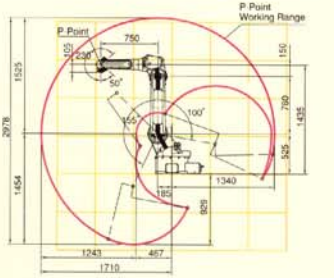


Material Handling Robot.

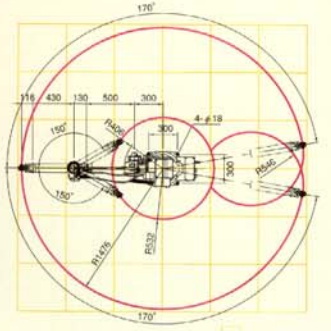
High performance, smooth handling of workpieces up to 16 kg(35 lbs).

■AX-MV16 Basic Specifications

Item			Specifications
Name			AX-MV16
Structure			Vertical articulated type
Number of axes			6
Max. payload capacity			16kg
Positional repeatability			±0.1mm (Note 1)
Drive system			AC Servo motor
Drive capacity			5600W
Position feedback			Absolute encoder
Working Range	Arm	J1 (Revolving)	340°(±170°)【100°(±50°)】(Note 2)
		J2 (Lower arm)	255°(−155°~+100°)
		J3 (Upper arm)	375°(−170°~+205°)
	Wrist	J4 (Swing)	360°(±180°)
		J5 (Bending)	280°(−50°~+230°)
		J6 (Twist)	720°(±360°)
Max. Velocity		J1 (Revolving)	2.88rad/s(165°/s)【2.62rad/s(150°/s)】(Note 2)
	Arm	J2 (Lower arm)	2.88rad/s(165°/s)
		J3 (Upper arm)	3.05rad/s(175°/s)
	Wrist	J4 (Swing)	6.11rad/s(350°/s)
		J5 (Bending)	5.85rad/s(335°/s)
		J6 (Twist)	9.08rad/s(520°/s)
Wrist load	Allowable Moment	J4 (Swing)	36.3N·m
		J5 (Bending)	31.4N·m
		J6 (Twist)	15.7N·m
	Allowable Moment of inertia	J4 (Swing)	0.90kg·m²
		J5 (Bending)	0.70kg·m²
		J6 (Twist)	0.20kg·m²
Arm operation cross-sectional area			4.15m²×340°
Ambient temperature and humidity			0~45℃, 20~80%RH (No condensation)
Mass(Weight)			260kg
Upper arm payload capacity			12kg (Note 3)
Installation type			Floor, ceiling or wall hanging type
Origin return			Not necessary (Note 5)
Paint Color			Arm : white, Base : blue

Note 1. The positional repeatability is a measured value obtained when the manipulator operating conditions are stabilized after times of the automatic operation.
2. The value in the bracket【 】indicates the wall-hung condition.
3. When Max. payload capacity at wrist tip is 16kg, Wrist transportable payload capacity + Upper arm payload capacity = 28kg
4. A holding brake is provided for all axes.
5. Store battery inside the manipulator for positional data protection.The battery backup period with the primary power OFF is approx. 3 years. Exceeding this period will require the battery replacement and the absolute offset adjustments.
6. The battery backup period may be shorter depending on the environmental conditions, the use conditions and so on.
7. The above specifications are subject to change without notice.

AX-MG3 (Almega AX-G3 Manipulator)



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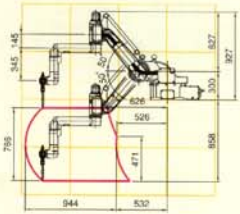


Dedicated design for arc welding process.

Unique arm structure offers easy operation never experienced before.

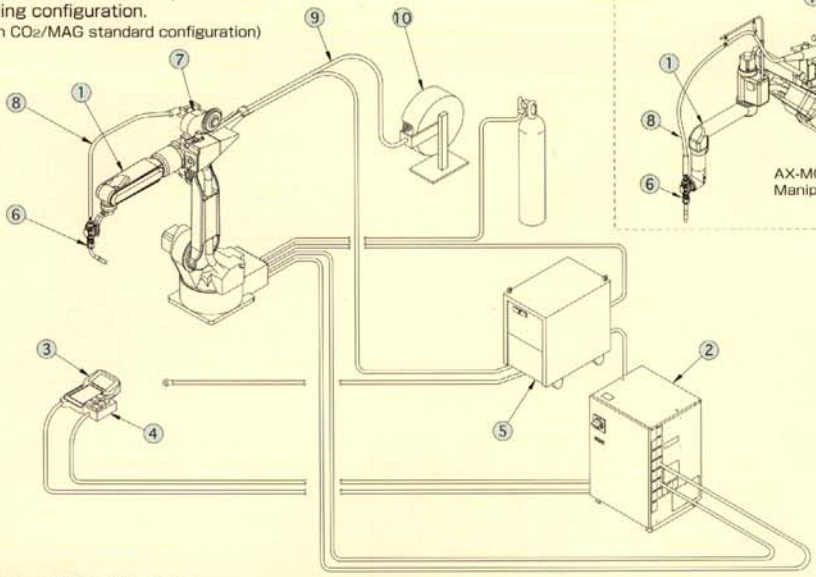
■AX-MG3 Basic Specifications

Item			Specifications
Name			AX-MG3
Structure			Horizontal articulated type
Number of axes			5
Max. payload capacity			3kg
Positional repeatability			±0.08mm
Drive system			AC Servo motor
Drive capacity			1400W
Position feedback			Absolute encoder
Working Range	Arm	J1 (Revolving 1)	340°(±170°)
		J2 (Upper and Lower)	100°(±50°)
		J3 (Revolving 2)	300°(±150°)
	Wrist	J4 (Revolving)	420°(±210°)
		J5 (Bending)	260°(±130°)
Max. Velocity	Arm	J1 (Revolving 1)	2.09rad/s(120°/s)
		J2 (Upper and Lower)	2.79rad/s(160°/s)
		J3 (Revolving 2)	4.19rad/s(240°/s)
	Wrist	J4 (Revolving)	9.42rad/s(540°/s)
		J5 (Bending)	9.42rad/s(540°/s)
Wrist load	Allowable Moment	J4 (Revolving)	
		J5 (Bending)	2.5N·m
	Allowable Moment of inertia	J4 (Revolving)	0.074kg·m²
		J5 (Bending)	0.037kg·m²
Arm operation cross-sectional area			0.69m²×340°
Ambient temperature and humidity			0~45℃, 20~80%RH (No condensation)
Mass(Weight)			140kg
Revolving frame payload capacity			40kg
Installation type			Floor type
Origin return			Not necessary (Note 3)
Paint Color			Arm : white, Base : blue

Note 1. The positional repeatability is a measured value obtained when the manipulator operating conditions are stabilized after times of the automatic operation.
2. A holding brake is provided in each of Axis J1, J2 motors.
Other Axis cannot be providedwith the holding brake
3. Store battery inside the manipulator for positional data protection.The battery backup period with the primary power OFF is approx. 3 years. Exceeding this period will require the battery replacement and the absolute offset adjustments.
4. The battery backup period may be shorter depending on the environmental conditions, the use conditions and so on.
5. The above specifications are subject to change without notice.

Almega AX series Arc Welding Application Standard Configuration

This Figure shows main components of arc welding configuration.
(Based on CO_2/MAG standard configuration)



■Standard Specification

		CO_2/MAG	Pulsed MAG	Pulsed MIG	Pulsed AC MIG	TIG
①	Manipulator	AX-MV6, AX-MV6L, AX-MV16, AX-MG3				
②	Controller	AX-C				
③	Teach Pendant	AXTPDSON-EC08				
④	Operation Box	AXOP-0005				
⑤	Welding Power Source	DM-350	DP-350 CPDPAS-501 (Using Pulsed MAG mode)	DP-350 CPDPAS-501 (Using Pulsed MIG mode)	CPDACA-201	ADPA-301
⑥	Welding Torch	MTXC-3531 (350A, Air cooled) MTXCW-5031 (500A, Water cooled)	MTXC-3531 (350A, Air cooled) MTXCW-5031 (500A, Water cooled)	MTXCA-2531 (250A, Air cooled) MTXCAW-5031 (500A, Water cooled)	MTXCA-2531 (250A, Air cooled)	MWX(C)-2001 (200A, Air cooled) MWX(C)-3501 (350A, Water cooled)
⑦	Wire Feeder	●	●	●	●	● (TIG Filler Application)
⑧	Coaxial Power Cable	●	●	●	●	
	Conduit for Filler-Wire					● (TIG Filler Application)
⑨	Conduit	●	●	●	●	● (TIG Filler Application)
⑩	Wire Reel Stand	●	●	●	●	● (TIG Filler Application)

●: Required

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Distributed by :

11.2003.3BD
PRINTED IN JAPAN