

Panasonic
ideas for life

Bangkok Welding
(Thailand)

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6 axis articulated arc welding robot

TA/TB Series

All new GIII controller !

Digital interface with "Full Digital" welding machine
achieving advanced weld performance.



TA-1400GIII



TB-1400GIII

Panasonic pursues *Only one* in welding

TA/TB Series GIII

New hardware and software realizing advanced performance

All new controller with advanced performance !

- Faster and powerful CPU achieving half a minute quick boot up.
(50 % time saving compared with former model)
- Optimum kinematic calculation realizing faster acceleration and deceleration.
(Roughly 10 % air cut time reduction compared with former model)

NEW

GIII



All new teach pendant with easier operation !

Operating function key



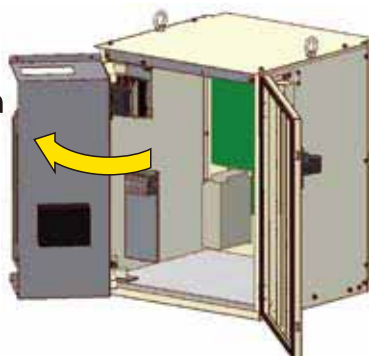
User function key

Same basic operation procedure with former model
Windows based operation realizing easy use

- Light weight design under 1 kg (0.99 kg) giving you less stress during teaching
- Liquid crystal LED back light improving impact resistance
- USB and SD memory interface realizing great expandability
- Increased number of function keys (four to eight), enabling same action with less key strokes during teaching

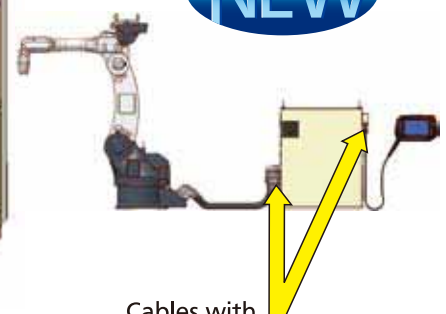
Better and easier maintenance !

- Swivel rack mechanism realizing easy maintenance and space saving at the same time.
- Cables with connectors on both ends contributing to easier and shorter robot set-up or cable exchange.



swivel rack mechanism

NEW



Cables with connector on both ends

TA/TB Series GIII

Digital interfacing with Panasonic "Full Digital" welding machine achieving stable and advanced quality welding results

"High performance manipulator" optimized for the arc welding !



TA-1400



TA-1000



TA-1600



TA-1800



TA-1900

TA-GIII

1000
1400
1600
1800
1900

TB-GIII

1400
1800



TB-1400

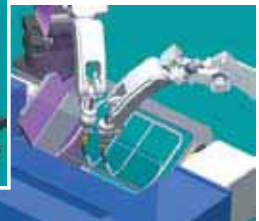
TB-1800

Torch cable
integrated type

Integrated torch cable
creates less interference
and improves accessibility!

Improved accessibility

Less interference with
work piece or jig.



Less interference with
multiple robot system

Robust arm with compact wrist design

Collision detection and flex-servo control !

Preventing torch miss-alignment due to collision

Manipulator detects
unexpected force
(collision) applied to
the arm at a high
sensitivity.

Manipulator then
changes its motion
to flex-servo mode releasing
the force preventing damage to the torch.



Detects collision at
a high sensitivity

Manipulator quickly
switches to flex-servo mode

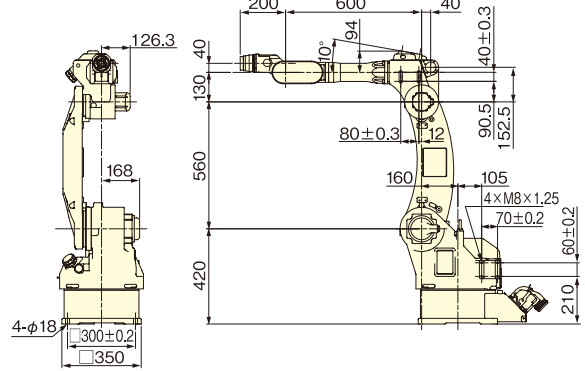
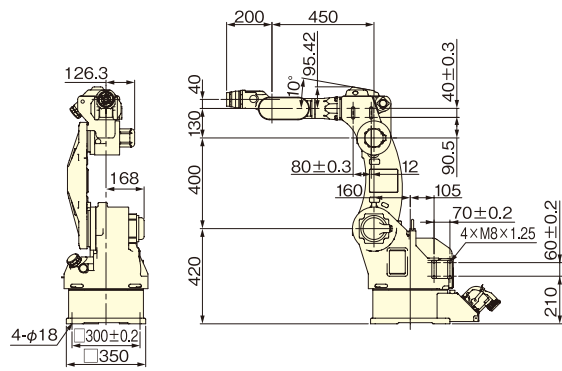


Manipulator can be easily moved
away from collision scene.
Quick recovery gives you more
production

■ Dimensions of Manipulators (mm)

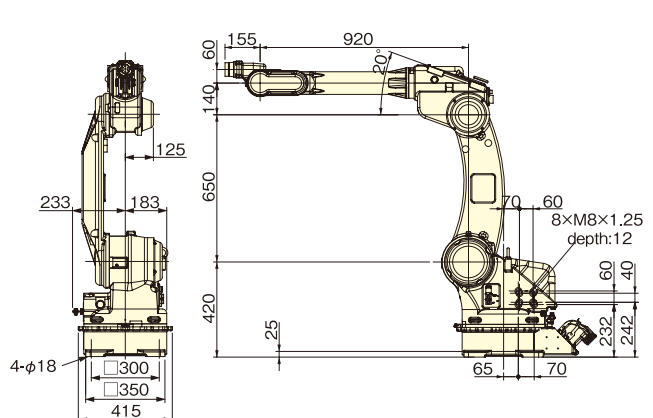
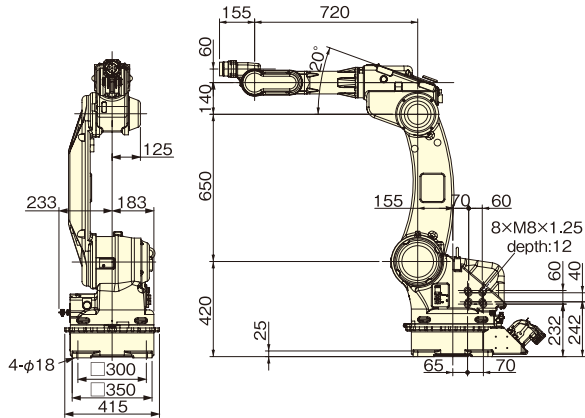
Short arm type **TA-1000** Max. Reach:1068 mm **GIII**

Standard arm type	TA-1400	Max. Reach:1374 mm	GIII
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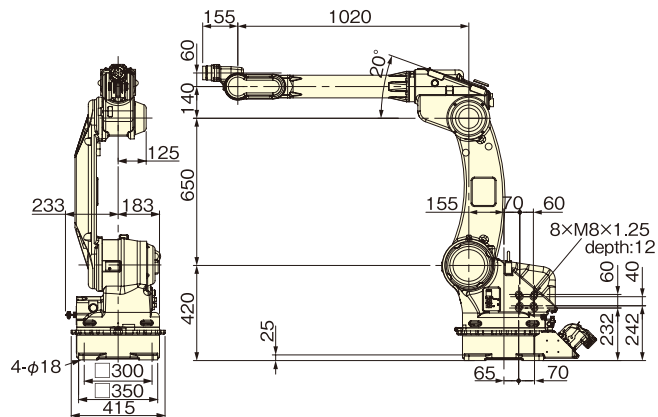


Middle arm type	TA-1600	Max. Reach:1598 mm	GIII
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Long arm type **TA-1800** Max. Reach:1796 mm **GIII**



Long arm type **TA-1900** Max. Reach:1895 mm **GIII**



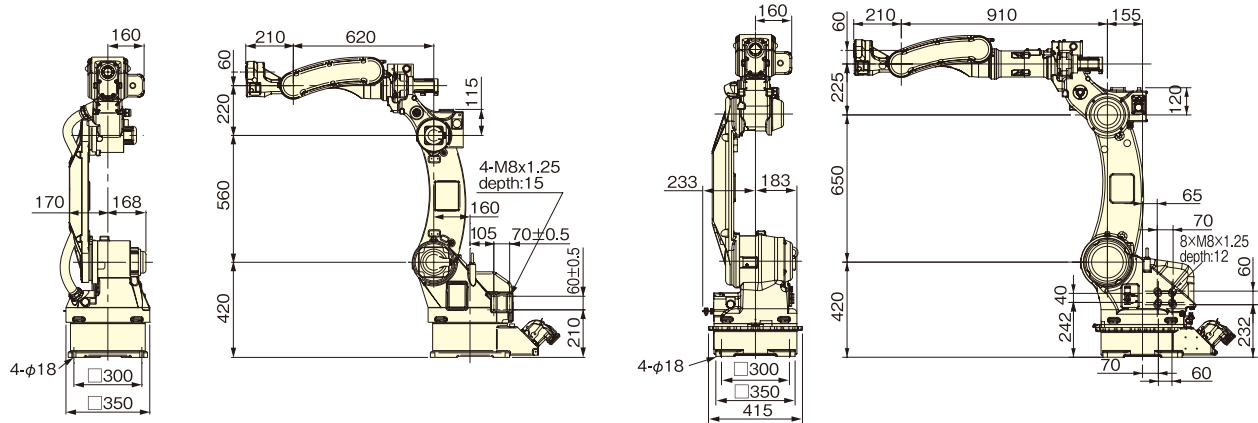
■ Standard specifications <Manipulators>

Model			TA-1000	TA-1400	TA-1600	TA-1800	TA-1900	TB-1400	TB-1800
Type			Short arm	Standard arm	Middle arm	Long arm		Torch cable integrated	
Structure			Independent articulated						
Degree of freedom			6						
Maximum payload			6 kg		8 kg		6 kg	4 kg	
Robot working area	Maximum accessible distance		1068 mm	1374 mm	1598 mm	1796 mm	1895mm	1437 mm	1802 mm
	Minimum accessible distance		362 mm	352 mm	360 mm	472 mm	551mm	376 mm	480 mm
Momentary maximum speed	Arm	Rotation(RT)	2.97 rad/s (170° /s)					2.97 rad/s (170° /s)	
		Upper arm(UA)	3.32 rad/s (190° /s)			2.97 rad/s (170° /s)		2.97 rad/s (170° /s)	
		Front arm(FA)	3.32 rad/s (190° /s)			3.05 rad/s (175° /s)		3.32 rad/s (190° /s)	3.05 rad/s (175° /s)
	Wrist	Rotating(RW)	6.46 rad/s (370° /s)			6.28 rad/s (360° /s)		5.93 rad/s (340° /s)	
		Bending(BW)	6.54 rad/s (375° /s)			6.11 rad/s (350° /s)		6.54 rad/s (375° /s)	
		Twisting(TW)	10.5 rad/s (600° /s)			9.42 rad/s (540° /s)		10.5 rad/s (600° /s)	
Positioning repetition precision			±0.1 mm or less			±0.15 mm or less		±0.1 mm or less	
Brake			All axis are provided with brakes						
Installation position			Floor, Ceiling (factory option)						
Weight of manipulator			About 145 kg	About 161 kg	About 203 kg	About 204 kg		About 171 kg	About 214 kg

■Dimensions of Manipulators (mm)

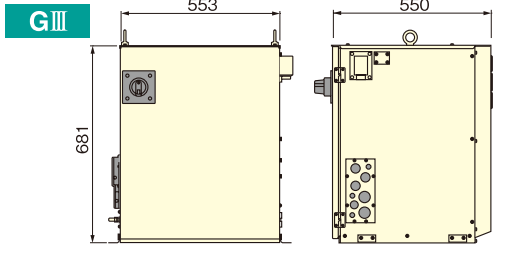
Torch cable integrated type **TB-1400** Max. Reach:1437 mm **GIII**

Torch cable integrated type **TB-1800** Max. Reach:1802 mm **GIII**



■Specifications <Controller> (mm)

■Controller

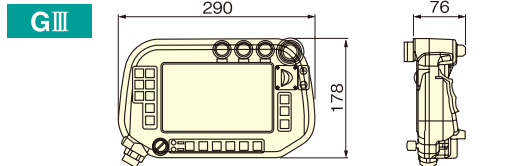


Model	GIII
Dimensions (mm)※1	(W) 553×(D) 550×(H) 681
Weight (kg)※2	60
Memory capacity	40 000 points
Position control method	Software servo control
External memory	Teach Pendant : SD memory card slot and USB2.0(Hi-speed not supported)2 ports
The number of control axes	6 axes simultaneously (Max.27 axes)
Input and output	Input:40 points (Option : expandable to 2048 points) Output:40 points (Option : expandable to 2048 points)
Input power source	3-phase,200-220 VAC±20 V,3 kVA,50/60 Hz

※1 : Protruding portions not included

※2 : Excluding the Teach Pendant and connecting cable

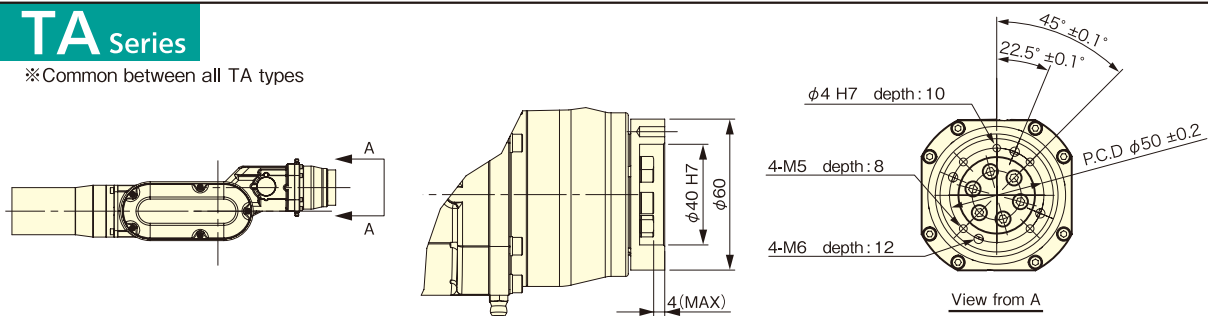
■Teach pendant



■Dimensions of the wrist flange (mm)

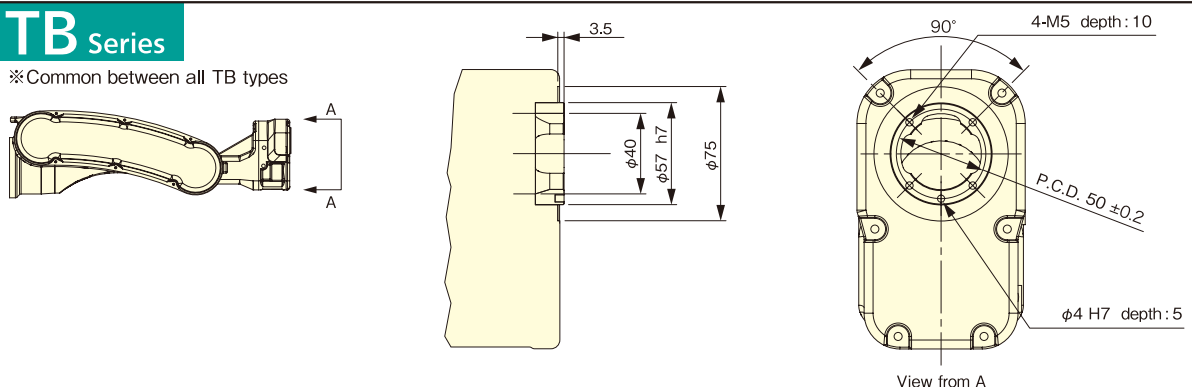
TA Series

※Common between all TA types



TB Series

※Common between all TB types



Tilt-Rotate Positioners High-Speed Type **R Series**



Two types available: 300 kg and 500 kg payload

- 1.8 times faster maximum speed compared with the conventional models.
- Smallest-in-class footprint of 780 × 500 mm. (300 kg payload model)
- Easier installation with three selectable cable outlet positions.

Specifications

Name		Positioner unit	
Model		YA-1RJC62	YA-1RJC72
Applicable Robot		Panasonic robots TM/TL series with GIII/WGIII controller	
Payload		300 kg	500 kg
Max. Speed	Rotation	190.0°/s (31 r/min)	165.0°/s (27 r/min)
	Tilt	125.5°/s (20 r/min)	90.0°/s (15 r/min)
Operating Range	Rotation	-36 000 ° to +36 000 ° (with multi-rotation data reset function)	
	Tilt	-135 ° to +135 °	
Allowable Moment	Rotation	323 N·m	392 N·m
	Tilt	882 N·m	1 274 N·m
Position Repeatability		±0.05 mm (R=250 mm)	
Hollow Shaft Diameter		55 mm	
Allowable Welding Current		500 A @ 60 % duty cycle	
Weight		285 kg	
Applicable Welding Process		CO ₂ /MAG/MIG/TIG	
External Axis Controller Type		Internal/External	

Single-axis positioners

Payload: 250/500 kg

Payload: 1000 kg



RJB 12/22

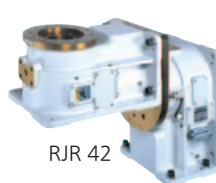


RJB 32

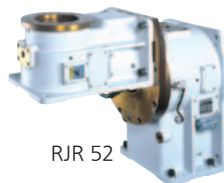
Specifications

Name	Positioner unit		
Model	YA-1RJB12	YA-1RJB22	YA-1RJB32
Applicable Robot	Panasonic robots TM/TL series with GⅢ/WGⅢ controller		
Payload	250 kg	500 kg	1 000 kg
Max. Rotational Speed	190°/s (31.6 r/min)	120°/s (20 r/min)	120°/s (20 r/min)
Operating Range	-36 000 ° to +36 000 ° (with multi-rotation data reset function)		
Allowable Torque	196 N・m	490 N・m	1 470 N・m
Allowable Moment	1 470 N・m	1 470 N・m	6 125 N・m
Position Repeatability	±0.05 mm (R=250)		
Hollow Shaft Diameter	55 mm	55 mm	75 mm
Brakes	Provided		
Allowable Welding Current	500 A @ 60 % duty cycle		
Weight	125 kg		255 kg
Applicable Welding Process	CO ₂ /MAG/MIG/TIG		
External Axis Controller Type	Internal/External		External

Side mount 2-axis positioners



RJR 42



RJR 52



We provide products that are friendly to the environment.

As an earth-friendly company, Panasonic Welding Systems Co., Ltd. discourages the use of hazardous substances in our products. The products of Panasonic Welding Systems Co., Ltd. comply with the European RoHS directive.



Safety precautions

- Before attempting to use any welding product always read the manual to ensure correct use.

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