



Tabletop Robot TTA Series



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TTA Series Lineup

Sei	ries	TTA											
							Gate t	type					
		A2G (2-axis global type with safety category specification)			A3G (3-axis global type with safety category specification)			A4G (4-axis global type with ZR rotary axis and safety category specification)					
Ty (*	rpe 1)												
Stro X/Y- (mi	axis	200x200 (Single pillar travel) (*2)	300x300 (Double pillar travel)	400x400 (Double pillar travel)	500x500 (Double pillar travel)	200x200 (Single pillar travel) (*2)	300x300 (Double pillar travel)	400x400 (Double pillar travel)	500x500 (Double pillar travel)	200x200 (Single pillar travel) (*2)	300x300 (Double pillar travel)	400x400 (Double pillar travel)	500x500 (Double pillar travel)
Stro Z-a (mi	xis		_	_			100/	150			100/	150	
	X-axis		80	00			80	00			80	00	
Max.	Y-axis		80	00			80	00			80	00	
speed (mm/s)	Z-axis		_	_			40	00			40	00	
, ,	R-axis		_	_			_	_			1000	deg./s	
Load	X-axis		2	0		20			20				
capa-	Y-axis	10			_			_					
city	Z-axis	_				(6			(6		
(kg)	R-axis		_	_			_	_		6			
Refe	rence ge	P. 8	P. 9	P. 10	P. 11	P. 16	P. 17	P. 18	P. 19		P.	24	
							Cantilev	er type					
		C2G (2-axis global type with safety category specification)			C3G (3-axis global type with safety category specification)			C4G (4-axis global type with ZR rotary axis and safety category specification)					
Type (*1)													
	oke -axis m)	200x150 (Single pillar travel) (*2)	300x250 (Double pillar travel)	400x350 (Double pillar travel)	500x450 (Double pillar travel)	200x150 (Single pillar travel) (*2)	300x250 (Double pillar travel)	400x350 (Double pillar travel)	500x450 (Double pillar travel)	200x150 (Single pillar travel) (*2)	300x250 (Double pillar travel)	400x350 (Double pillar travel)	500x450 (Double pillar travel)
Stro Z-a (m	xis	_			100/150			100/150					
	X-axis	600	700	80	00	600	700	80	00	600	700	80	0
Max. speed	Y-axis	540	640	80	00	540	640	80	00	540	640	80	0
(mm/s)	Z-axis		_	_			40	00			40	00	
	R-axis	_						1000 deg./s					
Load	X-axis	_			_								
capa-	Y-axis		1	0			_	-		_			
city (kg)	Z-axis						6	3			6		
	R-axis		_	_			_				6	}	
Reference page		P. 12	P. 13	P. 14	P. 15	P. 20	P. 21	P. 22	P. 23		P.	26	

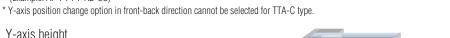
 $^{(*1) \} All \ product \ types \ include \ power \ plug \ and \ power \ supply \ cable. \qquad (*2) \ Refer \ to \ Pg. \ 6 \ for \ additional \ pillar \ as \ option.$

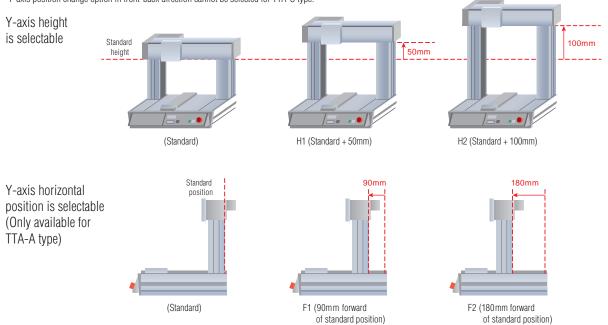
Additional Options Let You Change the Y-axis Height and Horizontal Position.

	Standard	Standard + 50mm up	Standard + 100mm up
Y-axis height is selectable	-	H1	H2

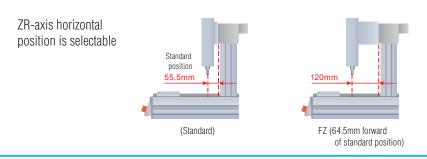
	Standard	Standard + 90mm forward	Standard + 180mm forward
Y-axis horizontal position is selectable	_	F1	F2

^{*} To change both the Y-axis height and Y-axis horizontal position, specify the type codes in alphabetical order together with other option codes. (Example: AP-F1-FT-H2-OS)

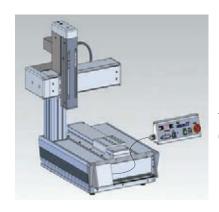




	Standard	Standard + 64.5mm forward
ZR-axis horizontal position is selectable	-	FZ

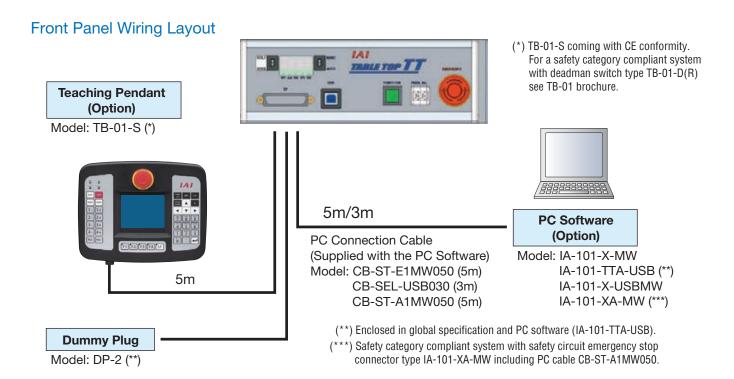


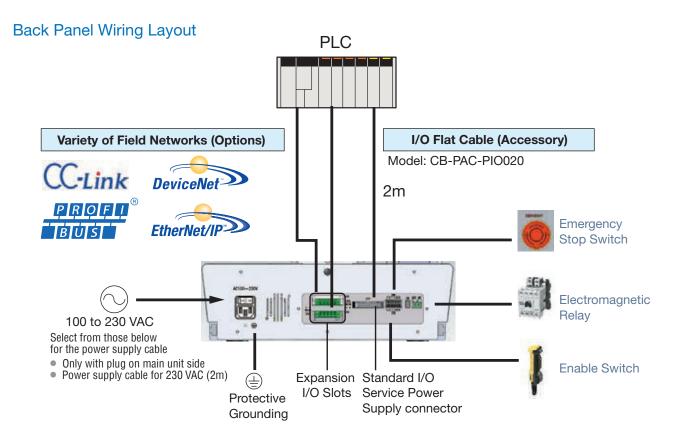
Optional Detachable Operation Console



The operation console can be separated from the product for handy operation. (Cable length: 900mm)

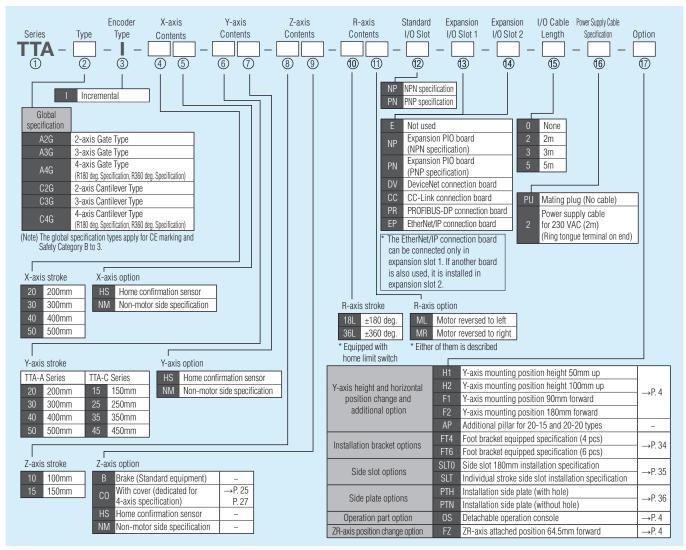
System Configuration





* Emergency stop switch, enable switch, electromagnetic relay, and other external devices may be connected and wired if necessary. If no devices are connected or wired, the robot will still operate properly. Connectors with jumper wires are supplied.

Explanation of Model Name



[Supplemental Explanation for Options]

AP Additional pillar for 20-15 and 20-20 types

This option can make 20-15 and 20-20 type, which are cantilever types in standard, a gate type.

FT4 Foot bracket equipped specification (4 pcs)

for X-axis stroke 20/30

FT6 Foot bracket equipped specification (6 pcs)

for X-axis stroke 40/50

SLTO Side slot 180mm installation specification

It is to be selected when changing to slot specification in selection of FT4 or FT6. 20/30 type of X-axis stroke is equipped with 2 places of 180mm side slot and 40/50 type with 4 places.

SLT Individual stroke side slot installation specification

It is to be selected when changing to the slot specification considering the size of the main unit.

*It is not available to select for FT4 and FT6.

PTH Installation side plate (with hole)

Y-axis installation position: Suitable size will be selected for each of standard, F1 and F2 * Only available for TTA-A type

PTN Installation side plate (without hole)

Y-axis installation position: Suitable size will be selected for each of standard, F1 and F2 * Only available for TTA-A type

<Notes>

- · The global specification types are enclosed with dummy plug [DP-2].
- F1 and F2 options cannot be selected for TTA-C type.

Option List

Name	Option code	
Home confirmation sensor	HS	
Non-motor side specification	NM	
Y-axis mounting position height 50mm up	H1	
Y-axis mounting position height 100mm up	H2	
Y-axis mounting position 90mm forward	F1	
Y-axis mounting position 180mm forward	F2	
Additional pillar for 20-15 and 20-20 types	AP	
Foot bracket equipped specification (4 pcs)	FT4	
Foot bracket equipped specification (6 pcs)	FT6	
Side slot 180mm installation specification	SLT0	
Individual stroke side slot installation specification	SLT	
Installation side plate (with hole)	PTH	
Installation side plate (without hole)	PTN	
Detachable operation console	OS	
With Z-axis cover	CO	

Notes

Notes on Catalog Specifications

Speed

"Speed" refers to the set speed when the actuator is in motion.

The slider accelerates from a stationary state. Once the set speed is reached, the slider will move at that speed until immediately before the target position (specified position), where the slider will decelerate to a stop.

Acceleration/Deceleration

"Acceleration" refers to the rate of change of speed from a stationary state until the set speed is reached.

"Deceleration" refers to the rate of change of speed from the set speed until the slider stops.

Acceleration and deceleration are set in "G" (0.3G = 2940mm/sec², Rotary axis is 0.3G = 2940deg./sec²).

Duty cycle

The tabletop robot can be operated at a duty cycle of 100%.

Duty cycle (%) =
$$\frac{\text{Operating time}}{\text{Operating time} + \text{Stopped time}}$$
 x 100

Positioning repeatability

"Positioning repeatability" refers to the positioning accuracy when the actuator is repeatedly moved to a prestored position. It is different from "absolute positioning accuracy".

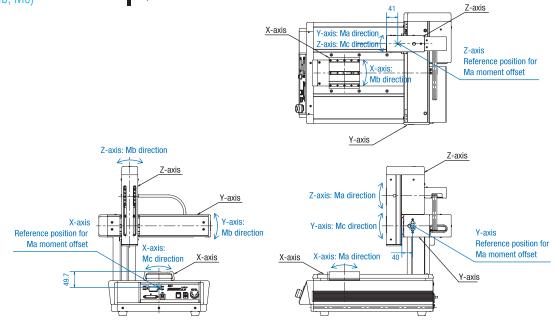
Home

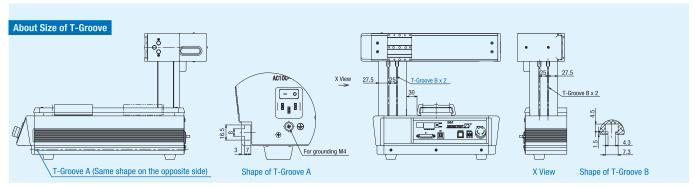
The home is located on the motor side on the actuator for standard specification, or on the front side of the actuator in the non-motor side specification.

During home return the slider moves until it contacts the mechanical end, and then it reversed its direction. Be careful to prevent contact with surrounding parts.

Dynamic allowable moment (Ma, Mb, Mc)

The load moment is calculated by assuming a travel life of 5000km. Note that if the specified moment value is exceeded, the service life of the guide will be reduced. The direction of each moment and applicable reference point are shown below:





TA-A2G-20-20

Tabletop Robot Gate Type 2-axis Specification XY-axis: 200mm

TTA -Specification Series Items

ICATION Series Type Encoder X-axis
A2G: 2-axis global specification (Gate type) Specification Specification Specification

Y-axis stroke 20: 200mm

Standard I/O slot NP: NPN specification PN: PNP specification

* If the expansion I/O slot is not used,

I/O cable length O: None PU: Mating plug (No cable) 2: 2m 2: Power supply cable for 230 VAC (2m) Refer to P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-A2G-I-20 ①-20 ②-③- ①-⑤-⑥-②-⑧	X-axis	Ingramantal	Pulse motor	24 or equiv.	200	1 ~800	20
11A-A2G-1-20 [G-20 [G-16]- [G-16]- [G-16]	Y-axis Incremental	Fulse Illotol	24 or equiv.	200	1 ~800	10	

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the standard I/O slot, 🔞 and 💿 indicate the expansion I/O slots, 📵 indicates the I/O cable length, 🔘 indicates the power supply cable specification, and 🔞 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table*	20kg					
Actuator weight	24kg					

^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

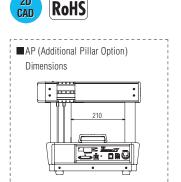
Dimensions

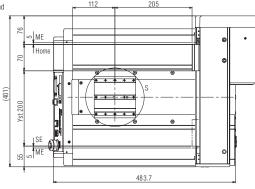
You can download CAD drawings

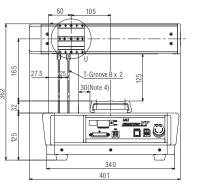


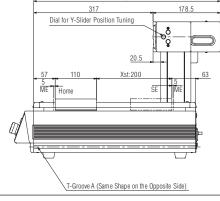
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SE: Stroke end

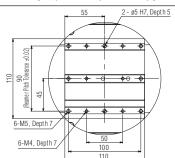
ME: Mechanical end



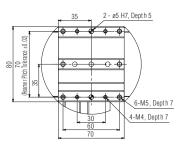








Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Y-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A2G-30-3

Tabletop Robot Gate Type 2-axis Specification XY-axis: 300mm

TTA -Cation Series Type Encoder type

A2G: 2-axis global specification (Gate type) I: Incremental specification Specification Series Items

X-axis stroke 30: 300mm

Y-axis stroke 30: 300mm

Standard I/O slot NP: NPN specification PN: PNP specification

* If the expansion I/O slot is not used,

I/O cable length O: None PU: Mating plug (No cable) 2: 2m 2: Power supply cable for 230 VAC (2m) Refer to P. 6

Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-A2G-I-30 [0]-30 [2]-[0]-[0]-[0]-[0]-[0]-	X-axis	Ingramantal	Pulse motor	24 or equiv.	300	1 ~800	20
11A-A2G-1-30 @-50 @-@-@-@-@-@-	Y-axis Incr	Incremental	ruise motor	24 or equiv.	300	1 ~800	10

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the standard I/O slot, 🔞 and 🔕 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🙋 indicates the power supply cable specification, and 🕲 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table* 30kg						
Actuator weight	31kg					

^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

Dimensions

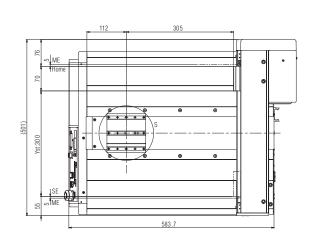
You can download CAD drawings

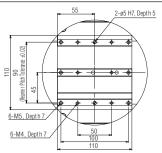




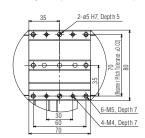
- * Refer to P. 7 for dimensions of T-groove. * During home return, the slider moves to
- the ME, so be careful to prevent contact with surrounding parts.

SE: Stroke end ME: Mechanical end

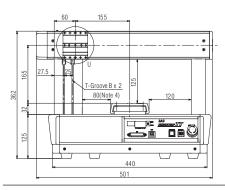


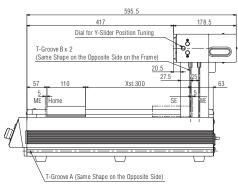


Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Y-axis Slider)





Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A2G-40-40

Tabletop Robot Gate Type 2-axis Specification XY-axis: 400mm

TTA ication Series Type Encoder type

A2G: 2-axis global specification (Gate type) !: Incremental specification Specification Series Items

X-axis stroke 40: 400mm

Y-axis stroke 40: 400mm

Standard I/O slot NP: NPN specification PN: PNP specification

* If the expansion I/O slot is not used,

I/O cable length O: None PU: Mating plug (No cable) 2: 2m 2: Power supply cable for 230 VAC (2m) Refer to P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-A2G-I-40 ①-40 ②-③- ①-⑤-⑥-②-⑥	X-axis	Incremental	Pulse motor	24 or equiv.	400	1 ~800	20
11A-A2G-1-40 (G-40 (G-6)- (G-6)- (G-6)	Y-axis	IIICI EI II EI II II	ruise motor	24 or equiv.	400	1 ~800	10

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the standard I/O slot, 🔞 and 💿 indicate the expansion I/O slots, 📵 indicates the I/O cable length, 🔘 indicates the power supply cable specification, and 🔞 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt			
Positioning repeatability	±0.02mm (Note 2)			
Lost motion	0.1mm or less			
Guide	Ball-circulation type linear guide			
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm			
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)			
Loadable weight on table*	40kg			
Actuator weight	37kg			

^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

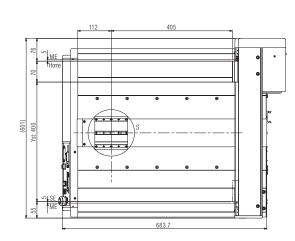
Dimensions

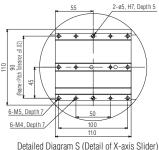
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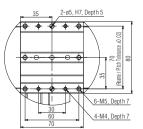


- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end
- ME: Mechanical end

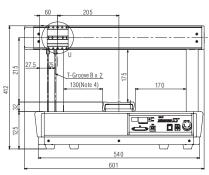


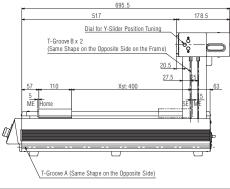


Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Y-axis Slider)





Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A2G-50-5

Tabletop Robot Gate Type 2-axis Specification XY-axis: 500mm

TTA -Specification Series Type Encoder type
Items A2G: 2-axis global specification (Gate type) I: Incremental specification

X-axis stroke 50: 500mm

50 Y-axis stroke 50: 500mm

Standard Expansion Expansion (V0 slot 1, V0 slot 1, V0 slot 1, V0 slot 2, V0 slot 1, V0 slot 2, V0 slot 2, V0 slot 2, V0 slot 3, V0 slot 3, V0 slot 2, V0 slot 2, V0 slot 2, V0 slot 2, V0 slot 3, V0 slot 3, V0 slot 3, V0 slot 4, V0 slot 4, V0 slot 4, V0 slot 4, V0 slot 5, V0 slot 5, V0 slot 6, V0 slot 7, V0 slot 8, V0

I/O cable length Ocable Power supply cable specification
0: None PU: Mating plug (No cable)
2: 2m 2: Power supply cable for 230 VAC (2m) Refer to P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-A2G-I-50 ①-50 ②-③-①-⑤-①-⑥	X-axis Incremental	Incremental	Pulse motor	24 or equiv.	500	1 ~800	20
11A-A2G-1-30 [G-50 [G-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6		Fulse Illutul	24 or equiv.	500	1 ~800	10	

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 💿 indicates the standard I/O slot, 🔞 and 💿 indicate the expansion I/O slots, 💿 indicates the I/O cable length, 🔘 indicates the power supply cable specification, and 🔞 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt				
Positioning repeatability	±0.02mm (Note 2)				
Lost motion	0.1mm or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table*	50kg				
Actuator weight	44kg				

^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

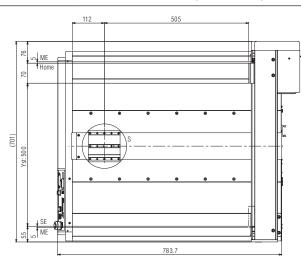
Dimensions You can download CAD drawings

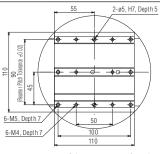




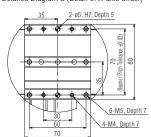
- * Refer to P. 7 for dimensions of T-groove. * During home return, the slider moves to
- the ME, so be careful to prevent contact with surrounding parts.

SE: Stroke end ME: Mechanical end

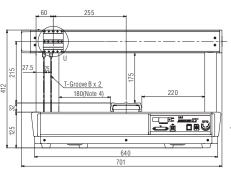


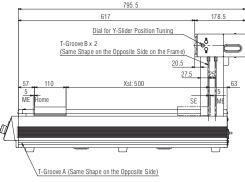


Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Y-axis Slider)





Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-C2G-20-1

Tabletop Robot Cantilever Type 2-axis Specification X-axis: 200mm, Y-axis: 150mm

ICATION Series Type Encoder Vazis
C2G: 2-axis global specification (Cantilever type) Specification Specification Cantilever type) Specification Specification Series Items

15 Y-axis stroke 15: 150mm

Standard I/O slot

O cable Power supply cable length specification
0: None PU: Mating plug (No cable)
2: 2m 2: Power supply cable for 230 VAC (2m) I/O cable length Refer to P. 6

* If the expansion I/O slot is not used,



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-C2G-I-20 ①-15 ②-③- ①-⑤-⑥-②-⑧	X-axis	Incremental	Pulse motor	24 or equiv.	200	1 ~600	-
TIA-020-1-20 Q-13 Q-10-10-10-10-10-10-10-10-10-10-10-10-10-	Y-axis	IIICI EI II EI II II	ruise motor	24 or equiv.	150	1 ~540	10

* In the above model number, 🕜 and 😰 indicates the XY-axis options, 🛐 indicates the standard I/O slot, 👰 and 🛐 indicates the expansion I/O slots, 🔞 indicates the I/O cable length, 🕡 indicates the power supply cable specification, and 🔞 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt			
Positioning repeatability	±0.02mm (Note 2)			
Lost motion	0.1mm or less			
Guide	Ball-circulation type linear guide			
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm			
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)			
Loadable weight on table	40kg			
Actuator weight	25kg			

Dimensions

You can download CAD drawings

* Refer to P. 7 for dimensions of T-groove.

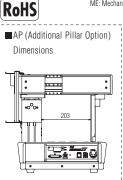
SE: Stroke end

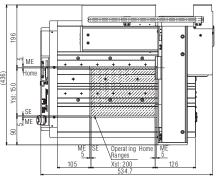
ME: Mechanical end

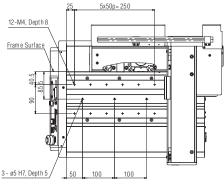
* During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.

(4.5)

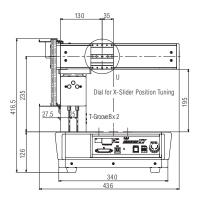


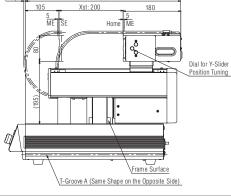




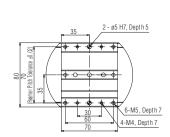


View for Top Base Hole Allocation





485



Detailed Diagram U (Detail of Y-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-C2G-30-25

Tabletop Robot Cantilever Type 2-axis Specification X-axis: 300mm, Y-axis: 250mm

Cation Series Type Encoder type
C2G: 2-axis global specification (Cantilever type) I: Incremental specification Specification Series Items

30: 300mm

25

Standard I/O slot NP: NPN specification PN: PNP specification

Ocable Power supply cable specification
0: None PU: Mating plug (No cable)
2: 2m 2: Power supply cable for 230 VAC (2m) I/O cable length Refer to P. 6





Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-C2G-I-30 🔘-25 ② - 🔘 - 🔘 - 🔘 - 🔘 - 🔘	X-axis	Ingramantal	Pulse motor	24 or equiv.	300	1 ~700	-
11A-020-1-30 Ø-23 Ø- Ø- Ø- Ø- Ø-	Y-axis	Incremental	ruise motor	24 or equiv.	250	1 ~640	10

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 👩 indicates the standard I/O slot, 🔞 and 🚱 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🙋 indicates the power supply cable specification, and 🕲 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt				
Positioning repeatability	±0.02mm (Note 2)				
Lost motion	0.1mm or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table	60kg				
Actuator weight	33kq				

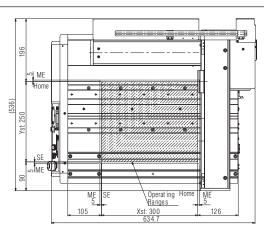
Dimensions

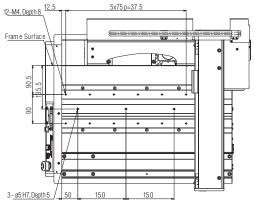
You can download CAD drawings



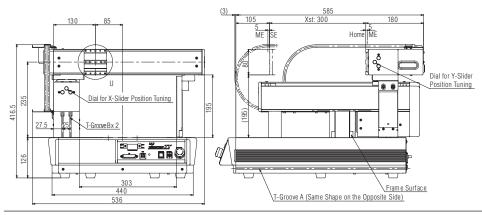
RoHS

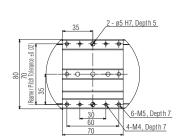
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end
- ME: Mechanical end





View for Top Base Hole Allocation





Detailed Diagram U (Detail of Y-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-C2G-40-35

Tabletop Robot Cantilever Type 2-axis Specification X-axis: 400mm, Y-axis: 350mm

Cation Series Type Encoder type
C2G: 2-axis global specification (Cantilever type) I: Incremental specification Specification Series Items

X-axis stroke 40: 400mm

35 Y-axis stroke 35: 350mm

Standard I/O slot NP: NPN specification PN: PNP specification

* If the expansion I/O slot is not used,

Ocable Power supply cable specification
0: None PU: Mating plug (No cable)
2: 2m 2: Power supply cable for 230 VAC (2m) I/O cable length Refer to P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-C2G-I-40 ①-35 ②-③- ①-⑤-⑥-②-⑥	X-axis Incremental	Pulse motor	24 or equiv.	400	1 ~800	-	
11A-C2G-1-40 (M-53 (M-6M-6M-6M-6M-6M-6M-6M-6M-6M-6M-6M-6M-6M		incrementai	ruise motor	24 or equiv.	350	1 ~800	10

* In the above model number, and and an indicates the XY-axis options, and indicates the standard I/O slot, and and indicates the expansion I/O slots, and indicates the I/O cable length, and indicates the power supply cable specification, and indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt
Positioning repeatability	±0.02mm (Note 2)
Lost motion	0.1mm or less
Guide	Ball-circulation type linear guide
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)
Loadable weight on table	80kg
Actuator weight	40kg

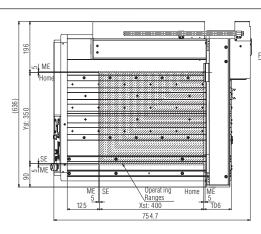
Dimensions

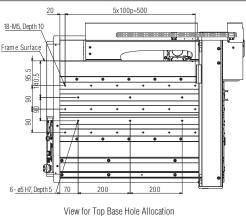
You can download CAD drawings

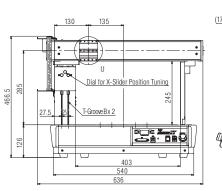


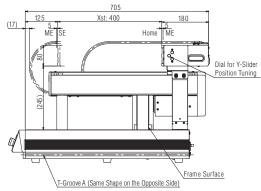
RoHS

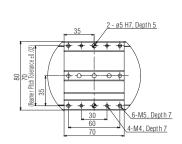
- * Refer to P. 7 for dimensions of T-groove. * During home return, the slider moves to
- the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end
- ME: Mechanical end











Detailed Diagram U (Detail of Y-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-C2G-50-45

Tabletop Robot Cantilever Type 2-axis Specification X-axis: 500mm, Y-axis: 450mm

Specification Series Items

Cation Series Type Encoder type
C2G: 2-axis global specification (Cantilever type) I: Incremental specification X-axis stroke 50: 500mm

45 Y-axis stroke 45: 450mm

Standard I/O slot NP: NPN specification PN: PNP specification

O cable Power supply cable length specification
0: None PU: Mating plug (No cable)
2: 2m 2: Power supply cable for 230 VAC (2m) I/O cable length

* If the expansion I/O slot is not used,





Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
TTA-C2G-I-50 (\)-45 (\)2-(\)3-(\)0-(\)3-(\)0-(\)	X-axisY-axisIncremental	Incremental	Pulse motor	24 or equiv.	500	1 ~800	-
11A-020-1-30 (J-43 (Z-		IIICIEIIIEIIIai	Pulse motor	24 or equiv.	450	1 ~800	10

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the standard I/O slot, 🔞 and 🗔 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🕝 indicates the power supply cable specification, and 🔞 indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	Ballscrew (ø12mm, rolled C10) Speed increased at 1.5:1 using a timing belt				
Positioning repeatability	±0.02mm (Note 2)				
Lost motion	0.1mm or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Y-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table	100kg				
Actuator weight	47kg				

Dimensions

You can download CAD drawings

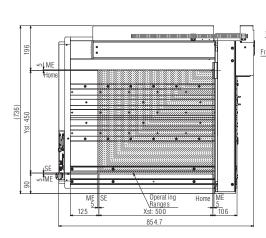


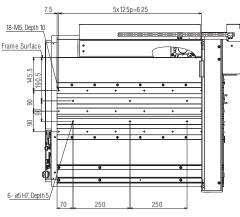


- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.

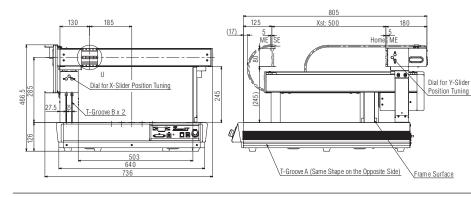
SF: Stroke end

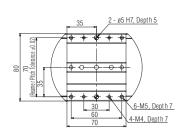
ME: Mechanical end





View for Top Base Hole Allocation





Detailed Diagram U (Detail of Y-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	2 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-A3G-20-20

Tabletop Robot Gate Type 3-axis Specification XY-axis: 200mm, Z-axis: 100mm/150mm

Specification Series Items A3G: 3-axis global specification I: Incremental

type 20: 200mm specification

20 Y-axis option 20: 200mm HS: Home confirmation sensor NM: Non-motor side specification

Standard Expansion Expansion I/O slot I/O slot I/O slot 2 stroke option ruratur
10: 100mm NP: NPN specification
15: 150mm PN: PNP specification
16: 150rake (Standard)
HS: Hone continuation sensor
Uth than-matter sink specification
11 the expansion US sis not used, etter Eoption

П-Г

VO cable Power supp., length specification
0: None Put-Maling plug (No cable) Refer to 2: 2: Power supply cable for 230 VAC (2m) P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	200	1~800	20
TTA-A3G-I-20 ①-20 ②-③B④-⑤-⑥-⑦-⑨-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	200	1~800	-
	Z-axis			12	100/150	1~400	6

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the Z-axis stroke, 🔞 indicates the Z-axis option(s), 🔊 indicates the best and and Vio Solt, 🔞 and 🕡 indicate the expansion I/O Slots, 🔞 indicates the I/O cable length, 🔞 indicates the power supply cable specification, and [10] indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table*	20kg					
Actuator weight	27kg					

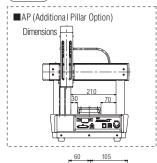
^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

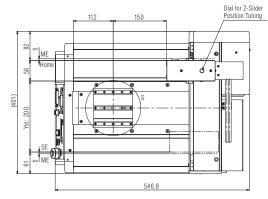
Dimensions

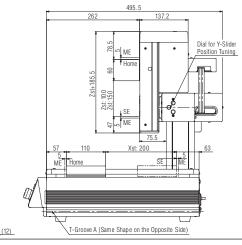
You can download CAD drawings

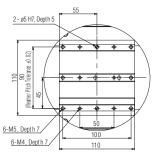


RoHS

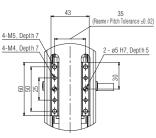








Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Z-axis Slider)

- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SE: Stroke end
- MF: Mechanical end

Applicable Controller Specifications

150.270

Zst= 100:535.5 Zst= 150:585.5 Zst=1

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28

401



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A3G-30-30

Tabletop Robot Gate Type 3-axis Specification XY-axis: 300mm, Z-axis: 100mm/150mm

Specification Series Items

type A3G: 3-axis global specification 1: Incremental 30: 300mm specification

30 Y-axis option 30: 300mm

Z-axis Standard Expansion Expansion stroke option (70 stot 10 stot 10

Actuator weight

137.2

Dial for Y-Sli

| VO cable | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | Power suppry Cable for 230 VAC (2m)



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	300	1~800	20
TTA-A3G-I-30 ①-30 ②-③B ④-⑤-⑥-⑦-⑧-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	300	1~800	-
	Z-axis			12	100/150	1~400	6

* In the above model number, 🔘 and 🧭 indicate the XY-axis options, 🕲 indicates the Z-axis stroke, 🕲 indicates the Z-axis option(s), 🕲 indicates the standard I/O slot, 🔞 and 🙋 indicate the expansion I/O slot, 🔞 indicates the I/O cable length, 🗐 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) Drive system X-axis and Y-axis speeds increased at 1.5:1 using a timing belt . 0. 00mm (Mata 0)

34kg

1 ositioning repeatability	±0.0211111 (NOTE 2)				
Lost motion	0.1mm or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table*	30kg				

Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

4-M5, Depth 7

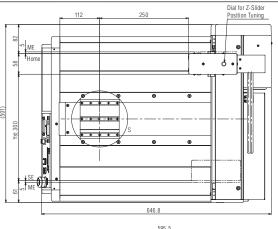
Dimensions

can download CAD drawings



RoHS

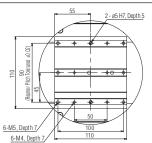
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end ME: Mechanical end



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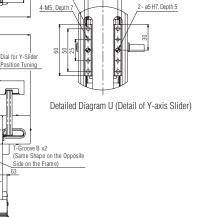
Zst 185.5

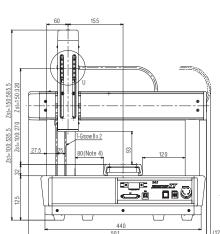
T-Groove A (Same Shape on the Opposite Side)



Detailed Diagram S (Detail of X-axis Slider)

Reame r Pitch Tolerance ±0.02)





Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A3G-40-40

Tabletop Robot Gate Type 3-axis Specification XY-axis: 400mm, Z-axis: 100mm/150mm

Specification Series Items

type A3G: 3-axis global specification 1: Incremental 40: 400mm (Gate type) specification

40 Y-axis option 40: 400mm

Standard Expansion Expansion I/O slot I/O slot I/O slot 2 stroke option tv stur
10: 100mm NP: NPP specification
16: 150mm PN: PNP specification
16: Bisrake (Standard)
HS: Home continuation sensor
With Man-mother sittle specification
10: stot table below. option

| VO cable | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | P. 6 | Power suppry Cable for 230 VAC (2m) | Powe



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	400	1~800	20
TTA-A3G-I-40 ①-40 ②-③B④-⑤-⑥-⑦-⑨-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	400	1~800	-
	Z-axis			12	100/150	1~400	6

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the Z-axis stroke, 🔞 indicates the Z-axis option(s), 🔊 indicates the best and and Vio Solt, 🔞 and 🕡 indicate the expansion I/O Slots, 🔞 indicates the I/O cable length, 🔞 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table*	40kg					
Actuator weight	40kg					

* Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

Dimensions

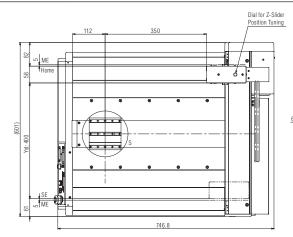
You can download CAD drawings

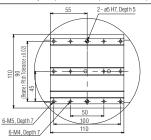


RoHS

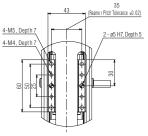
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.

SE: Stroke end ME: Mechanical end

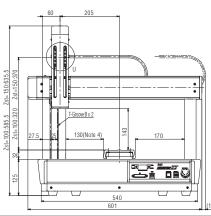


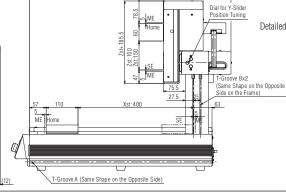


Detailed Diagram S (Detail of X-axis Slider)



Detailed Diagram U (Detail of Z-axis Slider)





695.5

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

Refer to P. 6 for the details of model specification items.

TA-A3G-50-5(

Tabletop Robot Gate Type 3-axis Specification XY-axis: 500mm, Z-axis: 100mm/150mm

Specification Series Items

type A3G: 3-axis global specification | 1: Incremental 50: 500mm specification

50 Y-axis option 50: 500mm HS: Home confirmation sensor NM: Non-motor side specification

Z-axis Standard Expansion Expansion stroke option (70 stot 10 stot 10

V/O cable Power supply cable Option length specification

0: None PU: Mating plug (No cable) Refer to 2: 2m 2: Power supply cable for 230 VAC (2m) P. 6



Refer to P. 6 for the details of model specification items.

(Gate type)

Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)	
	X-axis			24 or equiv.	500	1~800	20	
TTA-A3G-I-50 ①-50 ②-③B④-⑤-⑥-⑦-⑧-⑨-⑩	Y-axis	Incremental	Incremental	Pulse motor	24 or equiv.	500	1~800	-
	Z-axis			12	100/150	1~400	6	

In the above model number, 🕥 and 🙋 indicate the XY-axis options, 🔞 indicates the Z-axis stroke, 🔞 indicates the Z-axis option(s), 🔊 indicates the standard I/O slot, 🔞 and 🕡 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🧐 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt				
Positioning repeatability	±0.02mm (Note 2)				
Lost motion	0.1mm or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table	50kg				
Actuator weight	47kg				

* Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.

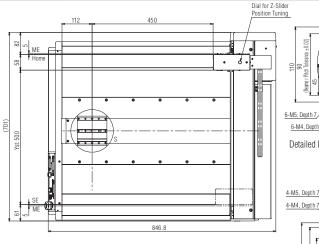
Dimensions

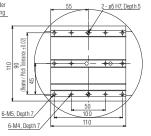
You can download CAD drawings



RoHS

- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end
- ME: Mechanical end

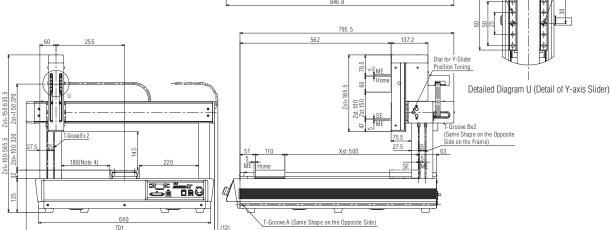




Detailed Diagram S (Detail of X-axis Slider)

35 (Reame r Pitch Tolerance ±0.02)

2 - ø5 H7, Depth 5



Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)
- (Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

TA-C3G-20-

Tabletop Robot Cantilever Type 3-axis Specification X-axis: 200mm, Y-axis: 150mm, Z-axis: 100mm/150mm

7-[

Specification Series Items

type C3G: 3-axis global specification I: Incremental 20: 200mm (Cantilever type) specification

15 Y-axis option Y-axis stroke 15: 150mm HS: Home confirmation sensor NM: Non-motor side specification

Standard Expansion Expansion I/O slot I/O slot I/O slot 2 stroke option rus suu
10: 100mm NP: NPN specification
15: 150mm NP: NPN specification
15: 150mm NP: NPN specification
16: 150mm NPN specification option

I/O cable length 0: None PU: Mating plug (No cable) Refer to 2: 2m 2: Power supply cable for 230 VAC (2m) P. 6

Power supply cab specification



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	200	1~600	-
TTA-C3G-I-20 ①-15 ②-③B ④-⑤-⑥-⑦-⑧-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	150	1~540	
	Z-axis			12	100/150	1~400	6

• In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the Z-axis stroke, 🔞 indicates the Z-axis option(s), 🔘 indicates the standard I/O slot, 🔞 and 🙋 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🔞 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) Drive system X-axis and Y-axis speeds increased at 1.5:1 using a timing belt Positioning repeatability ±0.02mm (Note 2) 0.1mm or less Lost motion Ball-circulation type linear guide Guide Dynamic allowable moment X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm 0 to 40°C, 85% RH max. (non-condensing) Ambient temperature/humidity Loadable weight on table 40kg Actuator weight 29kg

Dimensions

You can download CAD drawings

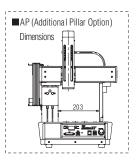
* Refer to P. 7 for dimensions of T-groove.

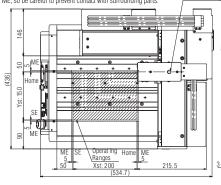
* During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts. SE: Stroke end ME: Mechanical end

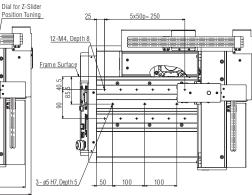
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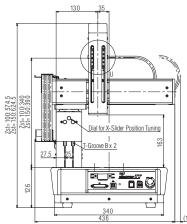


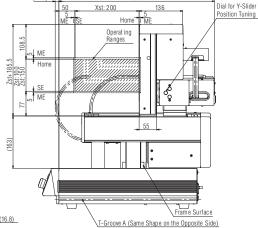


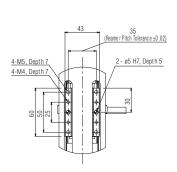




View for Top Base Hole Allocation







Detailed Diagram U (Detail of Z-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-C3G-30-25

Tabletop Robot Cantilever Type 3-axis Specification X-axis: 300mm, Y-axis: 250mm, Z-axis: 100mm/150mm

Specification Series Items

type C3G: 3-axis global specification I: Incremental 30: 300mm (Cantilever type) specification



Standard Expansion Expansion I/O slot I/O slot I/O slot 2 stroke option rursium volume.

10: 100mm NP: NPN specification

15: 150mm PN: PNP specification

16: 150rake (Standard)

HS: Hone continuation sensor

11th ± Nan-marter side specification

11th ± Nan-marter side specification option

I/O cable length Power supply cab specification

0: None PU: Mating plug (No cable) Refer to 2: 2m 2: Power supply cable for 230 VAC (2m) P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	300	1~700	
TTA-C3G-I-30 ①-25 ②-③B ④-⑤-⑥-⑦-⑧-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	250	1~640	
	Z-axis			12	100/150	1~400	6

* In the above model number, 🔘 and 🙋 indicate the XY-axis options, 🔞 indicates the Z-axis stroke, 🔞 indicates the Z-axis option(s), 🐧 indicates the standard I/O slot, 🔞 and 🙋 indicate the expansion I/O slot, 🔞 indicates the I/O cable length, 🔞 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table	60kg					
Actuator weight	37kg					

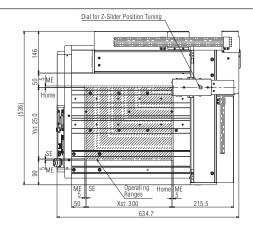
Dimensions

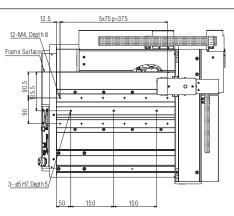
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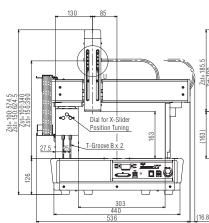
RoHS

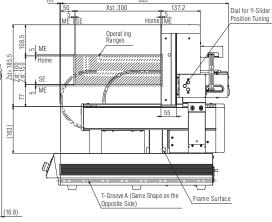
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end ME: Mechanical end

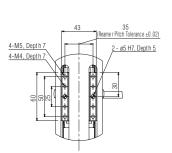




View for Top Base Hole Allocation







Detailed Diagram U (Detail of Z-axis Slider)

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TA-C3G-40-

Tabletop Robot Cantilever Type 3-axis Specification X-axis: 400mm, Y-axis: 350mm, Z-axis: 100mm/150mm

Specification Series Items

C3G: 3-axis global specification I: Incremental (Cantilever type)

type 40: 400mm specification

35 Y-axis option Y-axis stroke 35: 350mm HS: Home confirmation sensor NM: Non-motor side specification

Standard Expansion Expansion I/O slot I/O slot I/O slot 2 stroke option vu suu
10: 100mm NP: NPN specification
15: 150mm PN: PNP specification
15: 150mm PN: PNP specification
16: Grake (Standard)
16: Home confirmation sensor (I/O stot table below
16: Home confirmation option

| V/O cable | Power suppry Cable for 230 VAC (2m) | P. 6



Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	400	1~800	-
TTA-C3G-I-40 ①-35 ②-③B ④-⑤-⑥-⑦-⑧-⑨-①	Y-axis	Incremental	Pulse motor	24 or equiv.	350	1~800	-
	Z-axis			12	100/150	1~400	6

* In the above model number, 🔘 and 🙋 indicate the YY-axis options, 🕲 indicates the Z-axis stroke, 🕲 indicates the Z-axis option(s), 🕲 indicates the standard (/O slot, 🔞 and 🕡 indicate the expansion I/O slots, 🔞 indicates the I/O cable length, 🕲 indicates the power supply cable specification, and [10] indicates the selected option(s). Common Specifications

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt					
Positioning repeatability	±0.02mm (Note 2)					
Lost motion	0.1mm or less					
Guide	Ball-circulation type linear guide					
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm					
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)					
Loadable weight on table	80kg					
Actuator weight	44kg					

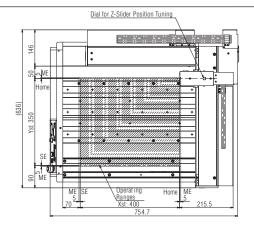
Dimensions

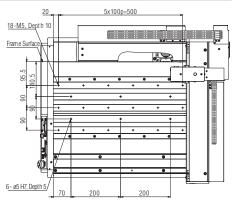
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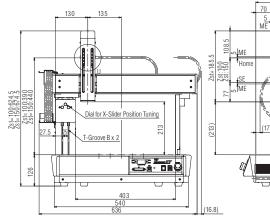
RoHS

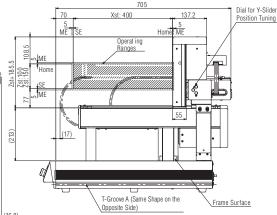
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SF: Stroke end ME: Mechanical end

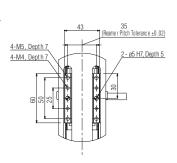




View for Top Base Hole Allocation







Detailed Diagram U (Detail of Z-axis Slider)

Applicable controller	number of Encoder type		Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Refer to P. 6 for the details of model specification items.

TTA-C3G-50-45

Tabletop Robot Cantilever Type 3-axis Specification X-axis: 500mm, Y-axis: 450mm, Z-axis: 100mm/150mm

X-axis Y-axis option stroke option 45: 450mm HS: Home confirmation sensor NM: Non-motor side specification

Z-axis Z-axis Standard Expansion Expansion
stroke option I/O slot I/O slot

nsion (/O cable Power supply cable Option lot 2 length specification | Other State S



* Refer to P. 6 for the details of model specification items.

Model/Specifications

Model number	Axis configuration	Encoder type	Motor type	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)
	X-axis			24 or equiv.	500	1~800	-
TTA-C3G-I-50 ①-45 ②-③B ④-⑤-⑥-⑦-⑧-⑨-⑩	Y-axis	Incremental	Pulse motor	24 or equiv.	450	1~800	
	Z-axis			12	100/150	1~400	6

* In the above model number, ① and ② indicate the XY-axis options, ③ indicates the Z-axis stroke, ④ indicates the Z-axis option(s), ⑤ indicates the standard I/O slot, ⑥ and ② indicate the expansion I/O slots, ⑧ indicates the I/O cable length, ⑤ indicates the power supply cable specification, and ⑩ indicates the selected option(s).

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt						
Positioning repeatability	±0.02mm (Note 2)						
Lost motion	0.1mm or less						
Guide	Ball-circulation type linear guide						
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm						
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)						
Loadable weight on table	100kg						
Actuator weight	51kg						

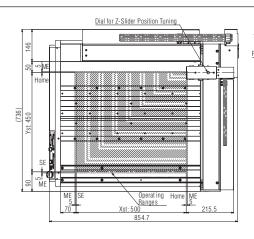
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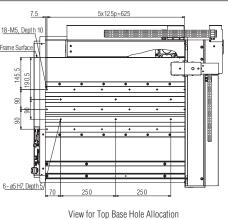
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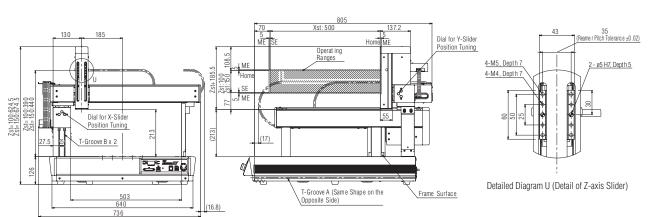


RoHS

- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SE: Stroke end ME: Mechanical end







Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	3 axes	Incremental	Program	230 VAC	→ P. 28



- (Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/ deceleration varies depending on the payload. (Refer to P. 37.)
- (Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.
- (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

Vertical Axis + Rotation ZR Specification TTA-A4G

ZR Type with 4 axes is now added to the lineup of TTA Series (Gate Type).

It is equipped with rotary axis (R-axis) on the end of the vertical axis (Z-axis).



■Model Specifica	ation It	ems														
TTA	- -	-		-		-] -			- 🔲 -	- 🔲 -	-	- [_	
Series Type	Encoder type	X-axis stroke	X-axis option	Y-axis stroke	Y-axis option	Z-axis stroke	Z-axis option		R-axis option	Standard I/O slot	Expansion I/O slot 1	Expansion I/O slot 2	I/O cable length	Powers cable spec		Option
	ncremental specification	20:200mm 30:300mm 40:400mm 50:500mm		20:200mm 30:300mm 40:400mm 50:500mm		10:100mm 15:150mm		18L:±180deg. 36L:±360deg. (Equipped with home limit swit		NP: NPN specification PN: PNP specification			0: None 2: 2m 3: 3m 5: 5m		R	Refer to P. 6
			S NM: N	ome confirma ensor lon-motor side pecification		B: Brake (Sta CO: With cove HS: Home cor NM: Non-moto specificat	er ofirmatio or side		(Standard	versed to Left I) versed to Right	I/O slot ta * If the ex	I ne expansion ble below. pansion I/O sl sed, enter "E".	ot 2:	J: Mating pl Power su 230 VAC	oply cable t	

^{*} Refer to P. 6 for the details of model specification items.

Model/Specifications

Model number	Axis configuration	Lead (mm)	Stroke (mm)	Speed (mm/sec)	Payload (kg) (Note 1)	Max. Load Moment of Inertia (kg·m²)
	X-axis	24 or equiv.	200	1~800	20	-
	Y-axis	24 or equiv.	200	1~800	-	-
TTA-A4G-I-20 🔲 -20 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L: ±180deg. 36L: ±360deg.	1000deg./s	6	0.01
	X-axis	24 or equiv.	300	1~800	20	-
. – –	Y-axis	24 or equiv.	300	1~800	-	-
TTA-A4G-I-30 🔲 -30 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L:±180deg. 36L:±360deg.	1000deg./s	6	0.01
	X-axis	24 or equiv.	400	1~800	20	-
	Y-axis	24 or equiv.	400	1~800	-	-
TTA-A4G-I-40 🔲 -40 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L: ±180deg. 36L: ±360deg.	1000deg./s	6	0.01
	X-axis	24 or equiv.	500	1~800	20	-
	Y-axis	24 or equiv.	500	1~800	-	-
TTA-A4G-I-50 🔲 -50 🔲	Z-axis	12	100/150	1~400		-
	R-axis	_	18L: ±180deg. 36L: ±360deg.	1000deg./s	6	0.01

Expansion I/O Slot

Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Applicable Controller Specifications

	Maximum number of controlled axes	Encoder type Method of operation		Power-supply voltage	Page
Built-in	4 axes	Incremental	Program	230 VAC	→ P.28

Common Specifications

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt				
Positioning repeatability	X/Y/Z-axis: ±0.02mm R-axis: ±0.015deg. (Note 2)				
Lost motion	X/Y/Z-axis: 0.1mm or less R-axis: 0.06deg. or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 15.9Nm Mb: 15.9Nm Mc: 32.0Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm				
Overhang load length	Z-axis: Ma: 75mm or less Mb: 180mm or less Mc: 180mm or less R-axis: Radius 100mm or less				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table*	20-20: 20kg				
Actuator weight	20-20: 28kg				

^{*} Table part is defined as the top surface on the main body except for the slider part. It is not the payload of X-axis.



(Note 1) The maximum speed cannot be achieved based on the maximum payload setting. The payload decreases when the speed is increased. Also note that the maximum acceleration/deceleration varies depending on the payload. (Refer to P. 37)

Note that the rotary axis may not be able to perform the maximum velocity depending on the value of the load moment of inertia. (Refer to P. 38)

(Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy.

(Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)

(Note 4) Secure 2mm or more to the main body frames when mounting a work piece on X slider.

ΓA-A4G -

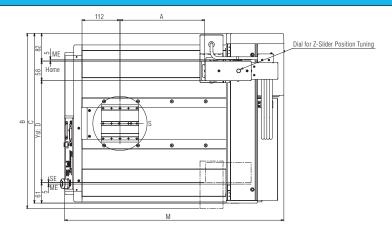
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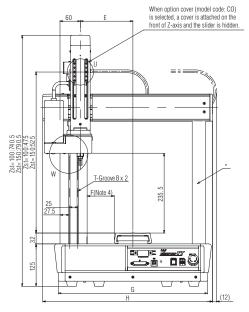
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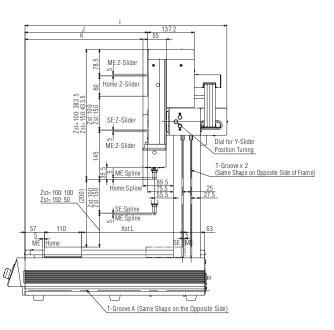




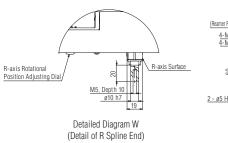
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SE: Stroke end ME: Mechanical end

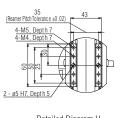




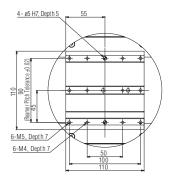


* Does not apply to 2020 type





Detailed Diagram U (Detail of Z-axis Slider)



Detailed Diagram S (Detail of X-axis Slider)

Stroke type	2020	3030	4040	5050
A	150	250	350	450
В	417	517	617	717
С	401	501	601	701
D	200	300	400	500
E	105	155	205	255
F	30	80	130	180
G	340	440	540	640
Н	401	501	601	701
T I	495.5	595.5	695.5	795.5
J	262	362	462	562
K	248	348	448	548
L	200	300	400	500
M	546.8	646.8	746.8	846.8

Vertical Axis + Rotation ZR Specification TTA-C4G

ZR Type with 4 axes is now added to the lineup of TTA Series (Cantilever Type). It is equipped with rotary axis (R-axis) on the end of the vertical axis (Z-axis).



lModel Specification I	tems			
TTA	-]-	
Series Type Encoder type	X-axis stroke	X-axis Y-axis Y-axis option stroke option		Expansion Expansion I/O cable Powersupply Option I/O slot 1 I/O slot 2 length cable specification
C4G:4-axis ZR I:Incremental type specification global specification	20:200mm 30:300mm 40:400mm 50:500mm	15:150mm 25:250mm 35:350mm 45:450mm	10:100mm 15:150mm 18L:±180deg. NP: NPN 36L:±360deg. (Equipped with home limit switch) NP: NP specification	0: None Refer to P. 6 2: 2 m 3: 3 m 5: 5 m
		HS: Home confirmation sensor NM: Non-motor side specification	B: Brake (Standard) MR: Motor Reversed to Right CO: With cover (Standard) HS: Home confirmation sensor NM: Non-motor side specification	Refer to the expansion PU: Mating plug (No cable) I/O slot table below. 2: Power supply cable for If the expansion I/O slot 230 VAC (2m) is not used, enter "E".

^{*} Refer to P. 6 for the details of model specification items.

Model/Specifications

Model number	Axis configuration	Lead (mm)			Payload (kg) (Note 1)	Max. Load Moment of Inertia (kg·m²)
	X-axis	24 or equiv.	200	1~600	-	-
	Y-axis	24 or equiv.	150	1~540	-	-
TTA-C4G-I-20 🔲 -15 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L:±180deg. 36L:±360deg.	1000deg./s	6	0.01
	X-axis	24 or equiv.	300	1~700	-	-
	Y-axis	24 or equiv.	250	1~640	-	-
TTA-C4G-I-30 🔲 -25 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L:±180deg. 36L:±360deg.	1000deg./s 6		0.01
	X-axis	24 or equiv.	400	1~800	-	-
	Y-axis	24 or equiv.	350	1~800	-	-
TTA-C4G-I-40 🔲 -35 🔲	Z-axis	12	100/150	1~400		-
	R-axis	-	18L:±180deg. 36L:±360deg.	1000deg./s	6	0.01
	X-axis	24 or equiv.	500	1~800	-	-
	Y-axis	24 or equiv.	450	1~800	-	-
TTA-C4G-I-50	Z-axis	12	100/150	1~400		-
	R-axis	-	18L:±180deg. 36L:±360deg.	1000deg./s	6	0.01

Expansion I/O Slot

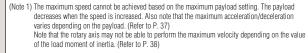
Name	Model	
Not used	E	
Expansion PIO board (NPN specification)	NP	
Expansion PIO board (PNP specification)	PN	
DeviceNet connection board	DV	
CC-Link connection board	CC	
PROFIBUS-DP connection board	PR	
EtherNet/IP connection board	EP	

Common Specifications

Drive system	X/Y/Z-axis ballscrew (X/Y-axis: ø12mm, Z-axis: ø10mm, rolled C10) X-axis and Y-axis speeds increased at 1.5:1 using a timing belt				
Positioning repeatability	X/Y/Z-axis: ±0.02mm R-axis: ±0.015deg. (Note 2)				
Lost motion	X/Y/Z-axis: 0.1mm or less R-axis: 0.06deg. or less				
Guide	Ball-circulation type linear guide				
Dynamic allowable moment (Note 3)	X-axis: Ma: 12.6Nm Mb: 12.6Nm Mc: 37.4Nm Z-axis: Ma: 9.7Nm Mb: 9.7Nm Mc: 20.5Nm				
Overhang load length	Z-axis: Ma: 75mm or less Mb: 180mm or less Mc: 180mm or less R-axis: Radius 100mm or less				
Ambient temperature/humidity	0 to 40°C, 85% RH max. (non-condensing)				
Loadable weight on table	20-15: 40kg				
Actuator weight	20-15: 36kg 30-25: 41kg 40-35: 48kg 50-45: 56kg				

Applicable Controller Specifications

Applicable controller	Maximum number of controlled axes	Encoder type	Method of operation	Power-supply voltage	Page
Built-in	4 axes	Incremental	Program	230 VAC	→ P.28



(Note 2) It is limited to when the actuator temperature is constant. It does not guarantee the absolute accuracy. (Note 3) The dynamic allowable moment is a value of each axis assuming a traveling life of 5000km. (Refer to P. 7 for the dynamic allowable moment.)



「A-C4G -

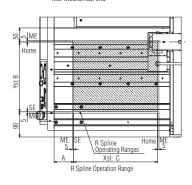
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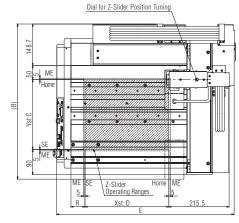
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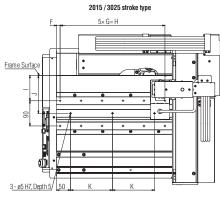




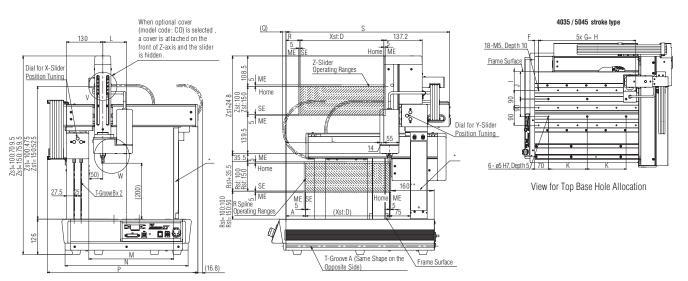
- * Refer to P. 7 for dimensions of T-groove.
- * During home return, the slider moves to the ME, so be careful to prevent contact with surrounding parts.
- SE: Stroke end ME: Mechanical end





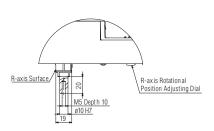


View for Top Base Hole Allocation

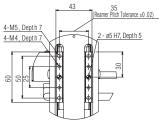


* Does not apply to 2015 type

* Does not apply to 2015 type ** When 2015 type is selected



Detailed Diagram W (Detail of R Spline End)



Detailed Diagram V (Detail of Z-axis Slider)

Stroke type	2015	3025	4035	5045
A	70	70	90	90
В	454.8	554.8	654.8	754.8
С	150	250	350	450
D	200	300	400	500
E	534.8	634.8	754.8	854.8
F	25	12.5	20	7.5
G	50	75	100	125
Н	250	375	500	625
I	40.5	90.5	95.5	145.5 190.5
J	85.5	135.5	140.5	
K	100	150	200	250
L	35	85	135	185
M	-	303	403	503
N	340	440	540	640
Р	438.7	538.7	638.7	738.7
Q	11.5	11.5	-17	-17
R	50	50	70	70
S	485	585	705	805
T	236	336	456	556

Tabletop Robot Series Controller Specifications

Controller Specifications

	Item				
Motor type			Pulse motor (Servo control)		
Applicable encoder			Incremental encoder		
Data-storage device			Flash ROM/FRAM		
Number of program steps			9999		
Number of positions			30000		
Number of programs			255		
Number of multi-tasking programs			16		
3 1 1 1 1 1 1 1 1 1	Serial communication	 on	0		
Operation mode	Program		0		
	Positioner		-		
	Pulse train		_		
	Communication me	thod	RS232		
010 : 4 . f	Baud rate		9.6, 19.2, 38.4, 57.6, 76.8, 115.2kbps		
SIO interface	Live wire	TP port	-		
	insertion/removal	USB	0		
		Number of input	16 points		
		Input voltage	DC24V ±10%		
	Input specification	Input current	7mA per circuit		
		ON voltage	Min. DC16V		
		OFF voltage	Max. DC5V		
Chandard I/O		Leak current	Allowable leak current: 1mA max.		
Standard I/O Interface		Isolation method	Photocoupler isolation		
IIIIGHACG		Number of output	16 points		
		Load voltage	DC24V ±10%		
	Output	Maximum current	100mA per point, 400mA per 8 points (Note 1)		
	specification	Saturated voltage	Max.3V		
		Leak current	Max 0.1mA		
		Isolation method	Photocoupler isolation		
			Expansion PIO NPN specification (16IN/16OUT)		
			Expansion PIO PNP specification (16IN/16OUT)		
Conforming expansion I/O			CC-Link (remote device)		
interface			DeviceNet		
			PROFIBUS-DP		
			EtherNet/IP		
Brake output voltage			DC24V ±10%		
Connectable brake power			Max.5W		
Calendar/clock function	Retention time		Approx. 10 days		
	Charge time		Approx. 100 hours		
Protective functions			Monitoring of overcurrent, fan speed drop, etc.		
Power supply capacity			230V: 1.2A		

(Note 1) The total load current for every 8 points from Standard I/O No. 316 is 400mA. (The maximum value per point is 100mA.)

Tabletop Robot Series P10 Signal Tables

PIO Signal Table

Standard PIO Connector Pin Layout

Pin No.	Classification	Assignment	Pin No.	Classification	Assignment
1A	24V *	P24	1B		OUT0
2A	24V *	P24	2B		OUT1
3A	-	-	3B		OUT2
4A	-	-	4B		OUT3
5A		IN0	5B		OUT4
6A		IN1	6B		OUT5
7A		IN2	7B		OUT6
A8		IN3	8B	Output	OUT7
9A		IN4	9B	Output	OUT8
10A		IN5	10B		OUT9
11A		IN6	11B		OUT10
12A	Input	IN7	12B		OUT11
13A	IIIput	IN8	13B		OUT12
14A		IN9	14B		OUT13
15A		IN10	15B		OUT14
16A		IN11	16B		OUT15
17A		IN12	17B	-	-
18A		IN13	18B		-
19A		IN14	19B	0V *	N
20A		IN15	20B	0V *	N

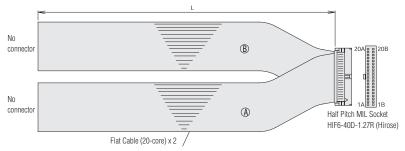
^{* [24}V]/[0V] indicates the 24V power input when the service power output is OFF, or 24V power output when the service power output is ON.

Expansion PIO Connector Pin Layout

Pin No.	Classification	Assignment	Pin No.	Classification	Assignment	
1A	24V *	* P24 1B				
2A	24V *	P24	2B		OUT1	
3A	-	-	3B		OUT2	
4A	-	-	4B		OUT3	
5A		IN0	5B		OUT4	
6A		IN1	6B		OUT5	
7A		IN2	7B		OUT6	
8A		IN3	8B	Output	OUT7	
9A		IN4	9B	Output	OUT8	
10A		IN5	10B		OUT9	
11A		IN6	11B		OUT10	
12A	Input	IN7	12B		0UT11	
13A	IIIput	IN8	13B		0UT12	
14A	1	IN9	14B]	0UT13	
15A		IN10	15B		OUT14	
16A		IN11	16B		OUT15	
17A		IN12	17B	-	-	
18A		IN13	18B	-	-	
19A		IN14	19B	0V *	N	
20A		IN15	20B	0V *	N	

^{* [24}V]/[0V] (not connected to the service power) must be supplied with power even when the service power output is ON.

$I/O\ \ cable\ \ (CB-PAC-PIO\ \ \square\ \ \square\ \)\ \ ^*Enter the cable length (L) in \ \ \square\ \ \square\ . Lengths up to 10 m are supported. Example) 080 = 8 m$



HIF6-40D-1.27R

	No	Signal Name	Cable Color	Wiring		No	Signal Name	Cable Color	Wiring	
	1A	24V	Brown-1			1	1B	OUT0	Brown-3	
ĺ	2A	24V	Red-1			ĺ	2B	OUT1	Red-3	
	3A	-	Orange-1		l	3B	OUT2	Orange-3		
	4A	-	Yellow-1		l	4B	OUT3	Yellow-3		
ĺ	5A	IN0	Green-1		ĺ	5B	OUT4	Green-3		
ĺ	6A	IN1	Blue-1		l	6B	OUT5	Blue-3		
[7A	IN2	Purple-1		l	7B	OUT6	Purple-3		
ſ	8A	IN3	Gray-1		l	8B	OUT7	Gray-3		
ĺ	9A	IN4	White-1		l	9B	OUT8	White-3	Flat Cable (B)	
	10A	IN5	Black-1	Flat Cable (A)		10B	OUT9	Black-3	(Crimped)	
[11A	IN6	Brown-2	(Crimped)	l	11B	OUT10	Brown-4	AWG28	
ſ	12A	IN7	Red-2		l	12B	0UT11	Red-4		
	13A	IN8	Orange-2		l	13B	0UT12	Orange-4		
[14A	IN9	Yellow-2		l	14B	0UT13	Yellow-4		
ſ	15A	IN10	Green-2		l	15B	OUT14	Green-4		
	16A	IN11	Blue-2		l	16B	0UT15	Blue-4		
[17A	IN12	Purple-2		l	17B	-	Purple-4		
ſ	18A	IN13	Gray-2		l	18B	-	Gray-4		
	19A	IN14	White-2			19B	0V	White-4		
[20A	IN15	Black-2		L	20B	0V	Black-4		

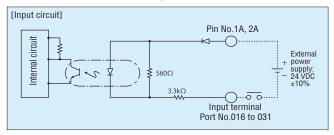
^{* [24}V]/[0V] must not be connected to an external power supply when the service power output is ON.

I/O Wiring Diagrams (Standard PIO)

■ Input Part: External input specification (NPN specification)

•	
Item	Specification
Input voltage	24 VDC + 10%
Input current	7 mA/circuit
ON/OFF voltages	ON voltage16.0 VDC min., OFF voltage5.0 VDC max.
Isolation method	Photocoupler isolation

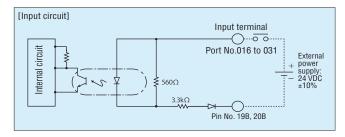
- *The circuit diagram below assumes that the power is input externally (the service power output is OFF)
- * In the circuit diagram below, the port numbers conform to the standard factory settings.
- *The allowable leak current is 1 mA when the input is OFF.



■ Input Part: External input specification (PNP specification)

Item	Specification
Input voltage	24 VDC + 10%
Input current	7 mA/circuit
ON/OFF voltages	ON voltage8.0 VDC max., OFF voltage19.0 VDC min.
Isolation method	Photocoupler isolation

- *The circuit diagram below assumes that the power is input externally (the service power output is OFF)
- * In the circuit diagram below, the port numbers conform to the standard factory settings.
- *The allowable leak current is 1 mA when the input is OFF.

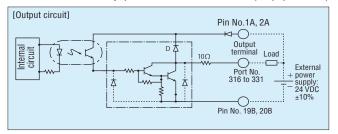


■ Output Part: External output specification (NPN specification)

Item	Specification	
Load voltage	24 VDC	TD62084
Maximum load current	100 mA/point, 400 mA/8 ports Note)	(or equivalent)
Leak current	0.1 mA/point max.	(or equivalent)
Isolation method	Photocoupler isolation	

- *The circuit diagram assumes that the power is input externally (the service power output is OFF).
- * In the circuit diagram below, the port numbers conform to the standard factory settings.

 Note: The total load current for every 8 points from Standard I/O No. 316 is 400 mA. (Max. per point: 100 mA.)

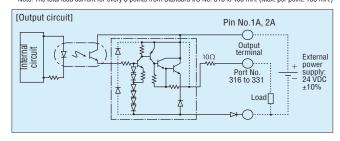


■ Output Part: External output specification (PNP specification)

Item	Specification	
Load voltage	24 VDC	TD00700
Maximum load current	100 mA/point, 400 mA/8 ports Note)	TD62783 (or equivalent)
Leak current	0.1 mA/point max.	
Isolation method	Photocoupler isolation	

- *The circuit diagram assumes that the power is input externally (the service power output is OFF).
- * In the circuit diagram below, the port numbers conform to the standard factory settings.

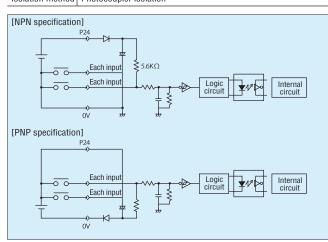
 Note: The total load current for every 8 points from Standard I/O No. 316 is 400 mA. (Max. per point: 100 mA.)



I/O Wiring Diagrams (Expansion PIO)

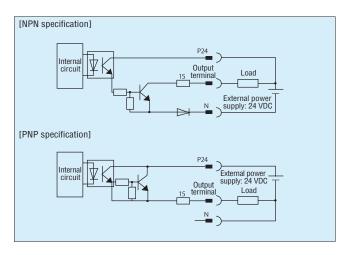
■ Input Part: External input specification

1	The second second
Item	Specification
Number of input	16 points
Input voltage	24 VDC + 10%
Input current	4 mA/circuit
ON/OFF voltages	ON voltage18.0 VDC min. (3.5 mA), OFF voltage6.0 VDC max. (1 mA)
Isolation method	Photocounier isolation



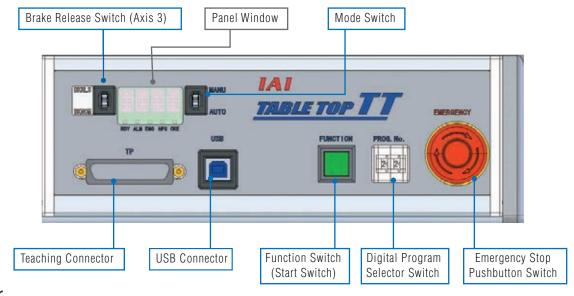
Output Part: External output specification

Item	Specification
Number of output	16 points
Rated load voltage	24 VDC
Maximum current	50 mA/circuit
Isolation method	Photocoupler isolation

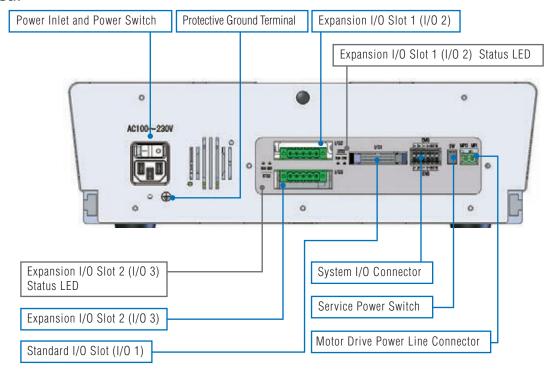


Tabletop Robot Series Name of Each Part

Front



Rear



I/O Interface

Standard I/O slot	Standard PIO (Input 16 points/output 16 points)
Expansion I/O slot 1 [Option]	Expansion PIO (Input 16 points/output 16 points), or Field Network (*1)
Expansion I/O slot 2 [Option]	Expansion PIO (Input 16 points/output 16 points), or Field Network (*1)
System I/O slot	Emergency stop input 2 contacts, enable input 2 contacts
Motor power I/O connector	For cutting off external drive power

^{*1:} For field network (CC-Link, DeviceNet, PROFIBUS-DP or EtherNet/IP) connection, the maximum number of input points is 240 and maximum number of output points is 240. EtherNet/IP (slot 1) + EtherNet/IP (slot 2) is not supported.

If you use a vision system, connect it to EtherNet/IP.

TTA Tabletop Series Catalogue No. 0415-E

The information contained in this catalog is subject to change without notice for the purpose of product inprovement





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