

# CLEAN Type

Product Lineup

## CLEAN ROBOTS

Suitable for electronics component, food, and medical unit related work in clean room.

High sealing structure, dust generation prevention, and improvement of suction efficiency are achieved.

Both the high cleanliness degree and high performance are established.

Clean robots contribute to automation and labor saving of production systems in clean rooms.



# Both high cleanliness degree and high performance were achieved. Clean single-axis, Cartesian, and SCARA robots were added to the product lineup.

## Clean SCARA robots

### YK-XGC/XC type

The Z-axis spline is covered with bellows made of materials with low dust generation and other sliding parts are sealed completely. Harnesses are also incorporated completely and the inside of the robot is sucked from the rear of the base to prevent dust generation.

- Arm length: 180 mm to 1000 mm
- Suction amount: 30 to 60 Nℓ/min.
- Cleanliness degree: CLASS ISO3 (ISO14644-1)  
CLASS10 (FED-STD-209D)
- Maximum payload: 20 kg



### POINT 1

#### Vertical bellows structure improves the reliability of the clean performance.

As a beltless structure is used, no dust generation caused by the belt occurs. Furthermore, as the YK-XGC type was renewed to a structure, in which the bellows are installed on the Z-axis vertically, the reliability of the clean performance was further improved.

Note. Except for YK500XC to YK1000XC



### POINT 2

#### High durability

As a beltless structure is used, the robot can be operated without worry about belt elongation and secular change <sup>Note</sup>. Additionally, the bellows installed on the Z-axis use material with high durability to ensure the durability performance.

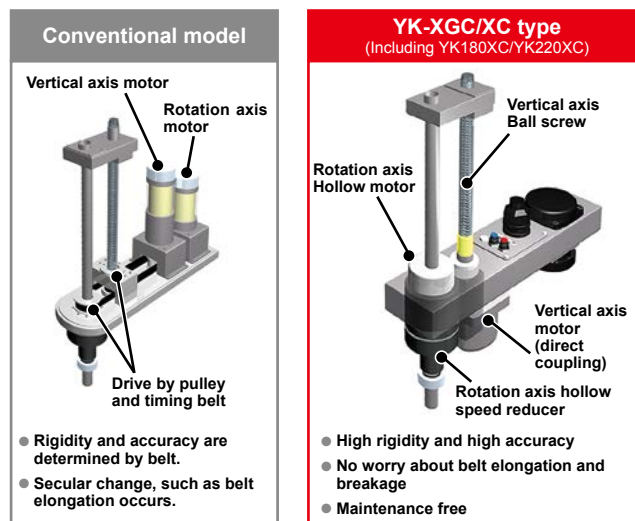
Note. Except for YK500XC to YK1000XC

### POINT 3

#### Completely beltless structure improves the rigidity.

A completely beltless structure was achieved using a ZR-axis direct coupling structure. As a speed reducer is coupled to the tip rotation axis, the R-axis tolerable moment of inertia is very high and the high-speed movement is possible even with a heavy workpiece or largely offset workpiece.

Note. Except for YK500XC to YK1000XC



Type	Model	Arm length (mm)	Maximum payload (kg)	Standard cycle time (sec.)	Beltless structure	Page
Micro-mini type	YK180XC	180	1	0.42	○	P.464
	YK220XC	220	1	0.45	○	P.465
Small type	YK250XGC	250	4	0.57	○	P.466
	YK350XGC	350	4	0.57	○	P.468
	YK400XGC	400	4	0.57	○	P.470
Medium type	YK500XC	500	10	0.53	-	P.474
	YK500XGLC	500	4	0.74	○	P.472
	YK600XC	600	10	0.56	-	P.477
	YK600XGLC	600	4	0.74	○	P.475
Large type	YK700XC	700	20	0.57	-	P.478
	YK800XC	800	20	0.57	-	P.479
	YK1000XC	1000	20	0.60	-	P.480

## Clean single-axis robots

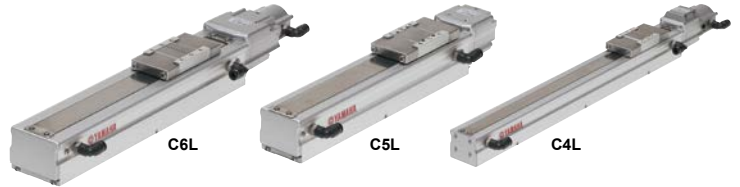
### FLIP-XC type

P.444

The FLIP-XC type robots are single-axis robots "FLIP-X series" with clean room specifications. According to the applications, an optimal robot can be selected from 14 models from a lightweight and compact model to a large model with a maximum payload of 120 kg. As an air joint for suction is provided as standard equipment, grease with low dust generative characteristics is used, and stainless sheets with an excellent durability are used for the slide table surface, high cleanliness degree is achieved.

- Stroke: 50 to 2050 mm
- Suction amount: 15 to 90 Nℓ/min.
- Cleanliness degree: CLASS10<sup>Note</sup>
- Maximum payload: 120 kg (When installed horizontally)

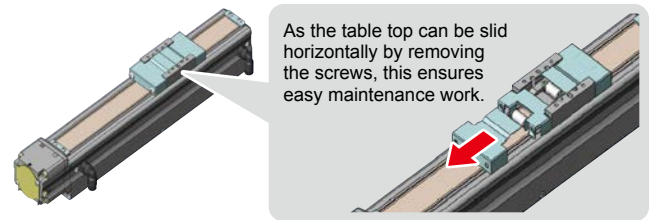
Note. C4L/C4LH, C5L/C5LH, and C6L are CLASS ISO3 (ISO14644-1).



### POINT

#### Excellent maintenance ability

For C4L to C6L models, removing the screws from the side panel of the slider will allow replacement of the inner roller without detaching the tool. For C8 to C20 models, even when the direct coupling structure is used, the motor or ball screw can be replaced individually.



Model	Size (mm) <sup>Note</sup>	Lead (mm)	Maximum payload (kg)		Maximum speed (mm/sec.)	Stroke (mm)	Page
			Horizontal	Vertical			
C4L C4LH	W45 × H55	12	4.5	1.2	720	50 to 400	C4L : P.444 C4LH : P.445
		6	6	2.4	360		
		2	6	7.2	120		
C5L C5LH	W55 × H65	20	3	-	1000	50 to 800	C5L : P.446 C5LH : P.447
		12	5	1.2	800		
		6	9	2.4	400		
C6L	W65 × H65	20	10	-	1000	50 to 800	P.448
		12	12	4	800		
		6	30	8	400		
C8	W80 × H75	20	12	-	1000	150 to 800	P.449
		12	20	4	720		
		6	40	8	360		
C8L	W80 × H75	20	20	4	1000	150 to 1050	P.450
		10	40	8	600		
		5	50	16	300		
C8LH	W80 × H75	20	30	-	1000	150 to 1050	P.451
		10	60	-	600		
		5	80	-	300		
C10	W104 × H85	20	20	4	1000	150 to 1050	P.452
		10	40	10	500		
		5	60	20	250		
C14	W136 × H96	20	30	4	1000	150 to 1050	P.453
		10	55	10	500		
		5	80	20	250		
C14H	W136 × H96	20	40	8	1000	150 to 1050	P.454
		10	80	20	500		
		5	100	30	250		
C17	W168 × H114	20	80	15	1000	250 to 1250	P.455
		10	120	35	600		
C17L	W168 × H114	50	50	10	1000	1150 to 2050	P.456
C20	W202 × H117	20	120	25	1000	250 to 1250	P.457
		10	-	45	500		

Note 1. The size shows approximate maximum cross sectional size.

## Clean single-axis robots

### SSC type (TRANSERVO)

P.441

The SSC type robots are stepping motor single-axis robots "TRANSERVO series" with clean room specifications. Use of a newly developed vector control method achieves the function and performance equivalent to the servomotor at a low cost even using the stepping motor. As an air joint for suction is provided as standard equipment, grease with low dust generative characteristics is used and stainless sheets with an excellent durability are used for the slide table surface, the high cleanliness degree is achieved.

- Stroke: 50 to 800 mm
- Suction amount: 15 to 80 Nℓ/min.
- Cleanliness degree: CLASS10
- Maximum payload: 12 kg (When installed horizontally)



Model	Size (mm) <sup>Note 1</sup>	Lead (mm)	Maximum payload (kg)		Maximum speed (mm/sec.)	Stroke (mm)	Page
			Horizontal	Vertical			
SSC04	W49 × H59	12	2	1	600	50 to 400	P.441
		6	4	2	300		
		2	6	4	100		
SSC05	W55 × H56	20	4	-	1000	50 to 800	P.442
		12	6	1	600		
		6	10	2	300		
SSC05H	W55 × H56	20	6	-	1000	50 to 800	P.443
		12	8	2	600 (horizontal) / 500 (vertical)		
		6	12	4	300 (horizontal) / 250 (vertical)		

Note 1. The size shows approximate maximum cross sectional size.

## Clean Cartesian robots

### XY-XC type

P.458

This Cartesian robot XY-XC type is applicable to clean rooms. As stainless sheets with excellent durability are used, the opening can be designed to be its minimum level and the robots area applicable to CLASS10 with less suction amount. Furthermore, as the ZR-axis of the SXYxC uses a super high speed unit of the SCARA robot, this achieves great reduction of the cycle time.

- Suction amount: 60 to 90 Nℓ/min.
- Cleanliness degree: CLASS10 <sup>Note</sup>
- Maximum payload: 20 kg
- Maximum speed: 1000 mm/sec.

Note. User wiring: D-Sub 25-pin connector (Numbers 1 to 24 are already wired and number 25 is frame ground.)  
Note. User tubing: φ 6-air tube, 3 pcs.



Type	Model	Axis	Movement range	Maximum speed (mm/sec.)	Maximum payload (kg)	Page
2 axes	SXYxC	X	150 to 1050 mm	1000	20	P.458
		Y	150 to 650 mm	1000		
3 axes	SXYxC (ZSC12)	X	150 to 1050 mm	1000	3	P.460
		Y	150 to 650 mm	1000		
		Z	150 mm	1000		
3 axes	SXYxC (ZSC6)	X	150 to 1050 mm	1000	5	P.461
		Y	150 to 650 mm	1000		
		Z	150 mm	500		
4 axes	SXYxC (ZRSC12)	X	150 to 1050 mm	1000	3	P.462
		Y	150 to 650 mm	1000		
		Z	150 mm	1000		
		R	360 °	1020 °/sec		
4 axes	SXYxC (ZRSC6)	X	150 to 1050 mm	1000	5	P.463
		Y	150 to 650 mm	1000		
		Z	150 mm	500		
		R	360 °	1020 °/sec		



# CLEAN ROBOTS

# CLEAN

# TYPE

Articulated robots	YA
Linear conveyor modules	LCM100
Compact single-axis robots	TRANSERVO
Single-axis robots	FLIP-X
Linear motor single-axis robots	PHASER
Cartesian robots	XY-X
SCARA robots	YK-X
Pick & place robots	YP-X
<b>CLEAN</b>	
CONTROLLER	
INFORMATION	
Single-axis	
Cartesian	
SCARA	

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#### SINGLE-AXIS

##### ● TRANSERVO

SSC04	441
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SSC05H	443

##### ● FLIP-XC

C4L	444
C4LH	445
C5L	446
C5LH	447
C6L	448
C8	449
C8L	450
C8LH	451
C10	452
C14	453
C14H	454
C17	455
C17L	456
C20	457

#### CARTESIAN XY-XC

##### ● 2 axes

SXYxC	458
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##### ● 3 axes / ZSC

SXYxC	460
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##### ● 4 axes / ZRSC

SXYxC	462
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#### SCARA YK-XC

YK180XC	464
YK220XC	465
YK250XGC	466
YK350XGC	468
YK400XGC	470
YK500XGLC	472
YK500XC	474
YK600XGLC	475
YK600XC	477
YK700XC	478
YK800XC	479
YK1000XC	480



																					Detailed info page				
	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050			
																								C4L : <b>P.444</b> C4LH : <b>P.445</b>	
																									C5L : <b>P.446</b> C5LH : <b>P.447</b>
																									<b>P.448</b>
																									<b>P.449</b>
	550	500																							<b>P.450</b>
	270	240																							<b>P.451</b>
	135	120																							<b>P.452</b>
	500	450																							<b>P.453</b>
	240	210																							<b>P.454</b>
	120	105																							<b>P.455</b>
	600	500																							<b>P.456</b>
	300	250																							<b>P.457</b>
	150	125																							
	600	500																							
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	600	500																							
	300	250																							
	150	125																							
	800	700	600	500																					
	400	350	300	250																					
			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	900	800	800	800	800	800	800		
	800	700	600	500																					
	400	350	300	250																					

Clean cartesian robots

● XY-XC

- Degree of cleanliness CLASS 10
- Intake air 60 to 90Nℓ/min
- Aperture designed to minimal dimensions by use of stainless steel sheet
- Installed clean robot dedicated cable duct



**Arm variations**

Special model for clean rooms with moving Y-axis carriage installed upward.

Type	Model	Axis	Moving range	Maximum speed (mm/sec)	Maximum payload (kg)	Detailed info page
2 axes	SXYXC	X	150 to 1050mm	1000	20	P.458
		Y	150 to 650mm	1000		
3 axes	SXYXC (ZSC12)	X	150 to 1050mm	1000	3	P.460
		Y	150 to 650mm	1000		
		Z	150mm	1000		
	SXYXC (ZSC6)	X	150 to 1050mm	1000	5	P.460
		Y	150 to 650mm	1000		
		Z	150mm	500		
4 axes	SXYXC (ZRSC12)	X	150 to 1050mm	1000	3	P.462
		Y	150 to 650mm	1000		
		Z	150mm	1000		
		R	360°	1020°/sec		
	SXYXC (ZRSC6)	X	150 to 1050mm	1000	5	P.462
		Y	150 to 650mm	1000		
		Z	150mm	500		
		R	360°	1020°/sec		

Clean SCARA robots

● YK-XC/YK-XGC/YK-XGLC

- Degree of cleanliness YK-XC ..... CLASS 10  
YK-XGC/YK-XGLC... ISO CLASS 3 (ISO14644-1) <sup>Note</sup>  
Note. Class 10 (0.1μm) equivalent to FED-STD-209D

- Intake air 30 to 60Nℓ/min
- Harness placed completely on inside

- Bellows cover fitted in axial tip



Passed 20 million stroke durability test

Type	Model	Arm length (mm) and XY axis combined maximum speed (m/s)													Standard cycle time (sec)	Maximum payload (kg)	R axis tolerable moment of inertia (kgm <sup>2</sup> )	Detailed info page		
		120	150	180	220	250	300	350	400	500	600	700	800	900					1000	1200
Tiny type	YK180XC	3.3m/s															0.42	1	0.01	P.464
	YK220XC	3.4m/s															0.45	1	0.01	P.465
Small type	YK250XGC	4.5m/s															0.57	4	0.05	P.466
	YK350XGC	5.6m/s															0.57	4	0.05	P.468
	YK400XGC	6.1m/s															0.57	4	0.05	P.470
Medium type	YK500XGLC	5.1m/s															0.74	4	0.05	P.472
	YK500XC	4.9m/s															0.53	10	0.12	P.474
	YK600XGLC	4.9m/s														0.74	4	0.05	P.475	
	YK600XC	5.6m/s														0.56	10	0.12	P.477	
Large type	YK700XC	6.7m/s														0.57	20	0.32	P.478	
	YK800XC	7.3m/s														0.57	20	0.32	P.479	
	YK1000XC	8.0m/s													0.60	20	0.32	P.480		



# SSC04

- CE compliance
- Origin on the non-motor side is selectable



## Ordering method

<b>SSC04</b>		<b>S</b>					
<b>Model</b>	<b>Lead</b>	<b>Type</b>	<b>Brake</b>	<b>Direction of air coupler installation</b>	<b>Origin position</b>	<b>Stroke</b>	<b>Cable length</b> <sup>Note 2</sup>
	12: 12mm 6: 6mm 2: 2mm	S: Straight	N: With no brake B: With brake	RJ: Right (Standard) LJ: Left	N: Standard <sup>Note 1</sup> Z: Non-motor side	50 to 400 (50mm pitch)	1L: 1m 3L: 3m 5L: 5m 10L: 10m

<b>S2</b>	<b>S2</b>	<b>I/O</b>
Robot positioner	S2: TS-S2 <sup>Note 3</sup>	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 4</sup>
<b>SH</b>	<b>SH</b>	<b>Battery</b>
Robot positioner	SH: TS-SH	B: With battery (Absolute) N: None (Incremental)
<b>SD</b>	<b>SD</b>	<b>1</b>
Robot driver	SD: TS-SD	I/O cable 1: 1m

Note 1. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.  
 Note 2. The robot cable is flexible and resists bending.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

<b>Motor</b>	42 □ Step motor
<b>Repeatability</b> <sup>Note 1</sup> (mm)	+/-0.02
<b>Deceleration mechanism</b>	Ball screw φ8 (Class C10)
<b>Maximum motor torque (N·m)</b>	0.27
<b>Ball screw lead (mm)</b>	12    6    2
<b>Maximum speed (mm/sec)</b>	600    300    100
<b>Maximum payload (kg)</b>	Horizontal: 2, 4, 6 Vertical: 1, 2, 4
<b>Max. pressing force (N)</b>	45    90    150
<b>Stroke (mm)</b>	50 to 400 (50mm pitch)
<b>Overall length (mm)</b>	Horizontal: Stroke+216 Vertical: Stroke+261
<b>Maximum outside dimension of body cross-section (mm)</b>	W49 × H59
<b>Cable length (m)</b>	Standard: 1 / Option: 3, 5, 10
<b>Degree of cleanliness</b>	CLASS 10 <sup>Note 2</sup>
<b>Intake air (Nl/min)</b>	Lead 12: 50    Lead 6: 30    Lead 2: 15

Note 1. Positioning repeatability in one direction.  
 Note 2. Per 1cf (0.1µm base), when suction blower is used.

## Allowable overhang

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)					
	A	B	C		A	B	C		A	C		A	C
Lead 12	1kg	807	218	292	Lead 12	1kg	274	204	776	Lead 12	0.5kg	407	408
	2kg	667	107	152		2kg	133	93	611		1kg	204	204
Lead 6	2kg	687	116	169	Lead 6	2kg	149	102	656	Lead 6	1kg	223	223
	3kg	556	76	112		3kg	92	62	516		2kg	107	107
	4kg	567	56	84		4kg	63	43	507		2kg	118	118
Lead 2	4kg	869	61	92	Lead 2	4kg	72	48	829	Lead 2	4kg	53	53
	6kg	863	40	60		6kg	39	29	789				

Note. Distance from center of slider upper surface to conveyor center-of-gravity at a guide service life of 10,000 km (Service life is calculated for 400mm stroke models).

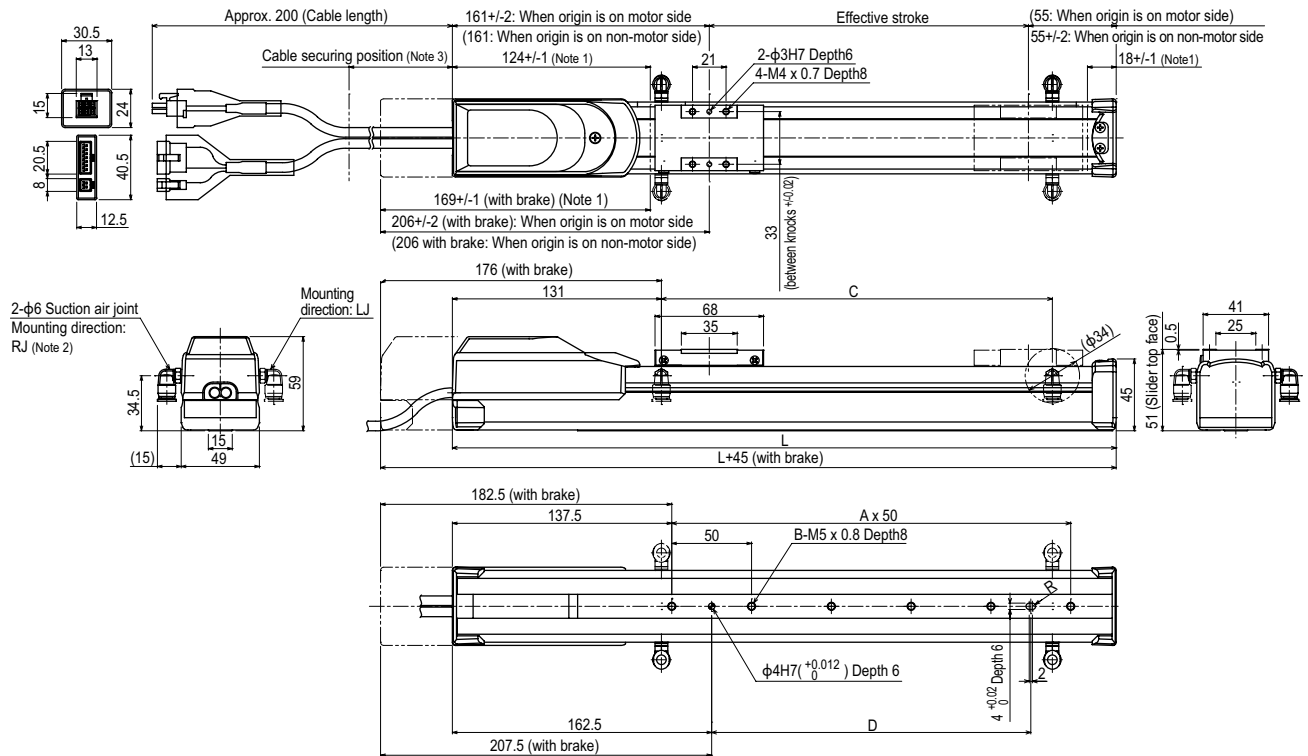
## Static loading moment

(Unit: N·m)		
MY	MP	MR
16	19	17

## Controller

Controller	Operation method
TS-S2	I/O point trace / Remote command
TS-SH	Remote command
TS-SD	Pulse train control

## SSC04



Effective stroke	50	100	150	200	250	300	350	400
<b>L</b>	266	316	366	416	466	516	566	616
<b>A</b>	2	3	4	5	6	7	8	9
<b>B</b>	3	4	5	6	7	8	9	10
<b>C</b>	50	100	150	200	250	300	350	400
<b>Weight (kg)</b> <sup>Note 5</sup>	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.3

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Either right or left can be selected for the suction air joint mounting direction. This drawing shows the RJ (standard) direction.  
 Note 3. Secure the cable with a tie-band 100mm or less from unit's end face to prevent the cable from being subjected to excessive loads.  
 Note 4. The cable's minimum bend radius is R30.  
 Note 5. These are the weights without a brake. The weights are 0.2kg heavier when equipped with a brake.

Articulated robots  
YA

Linear conveyor modules  
LCM100

Compact single-axis robots  
TRANSEVO

Single-axis robots  
FLIP-X

Linear motor single-axis robots  
PHASER

Cartesian robots  
XY-X

SCARA robots  
YK-X

Pick & place robots  
YP-X

CLEAN

CONTROLLER INFORMATION

Single-axis  
Cartesian  
SCARA

# SSC05

- High lead: Lead 20
- CE compliance
- Origin on the non-motor side is selectable

## Ordering method

<b>SSC05</b>	<b>S</b>						
Model	Lead	Type	Brake <sup>Note 1</sup>	Direction of air coupler installation	Origin position	Stroke	Cable length <sup>Note 3</sup>
	20: 20mm 12: 12mm 6: 6mm	S: Straight	N: With no brake B: With brake	RJ: Right (Standard) LJ: Left	N: Standard <sup>Note 2</sup> Z: Non-motor side	50 to 800 (50mm pitch)	1L: 1m 3L: 3m 5L: 5m 10L: 10m

<b>S2</b>		
Robot positioner	I/O	
S2: TS-S2 <sup>Note 4</sup>	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 5</sup>	
<b>SH</b>		
Robot positioner	I/O	Battery
SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 5</sup>	B: With battery (Absolute) N: None (Incremental)
<b>SD</b>	<b>1</b>	
Robot driver	I/O cable	
SD: TS-SD	t: 1m	

Note 1. Only the model with a lead of 12mm or 6mm can select specifications with brake.  
 Note 2. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.  
 Note 3. The robot cable is flexible and resists bending.  
 Note 4. See P.500 for DIN rail mounting bracket.  
 Note 5. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

<b>Motor</b>	42 □ Step motor
<b>Repeatability <sup>Note 1</sup> (mm)</b>	+/-0.02
<b>Deceleration mechanism</b>	Ball screw φ12 (Class C10)
<b>Maximum motor torque (N·m)</b>	0.27
<b>Ball screw lead (mm)</b>	20    12    6
<b>Maximum speed (mm/sec) <sup>Note 2</sup></b>	1000    600    300
<b>Maximum payload (kg)</b>	<b>Horizontal</b> 4    6    10 <b>Vertical</b> -    1    2
<b>Max. pressing force (N)</b>	27    45    90
<b>Stroke (mm)</b>	50 to 800 (50mm pitch)
<b>Overall length (mm)</b>	<b>Horizontal</b> Stroke+230 <b>Vertical</b> Stroke+270
<b>Maximum outside dimension of body cross-section (mm)</b>	W55 × H56
<b>Cable length (m)</b>	Standard: 1 / Option: 3, 5, 10
<b>Degree of cleanliness</b>	CLASS 10 <sup>Note 3</sup>
<b>Intake air (Nl/min)</b>	Lead 20    Lead 12    Lead 6 80    50    30

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 650mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1µm base), when suction blower is used.

## Allowable overhang <sup>Note</sup>

Horizontal installation (Unit: mm)	A    B    C		
	2kg	4kg	6kg
Lead 20	413	139	218
Lead 12	334	67	120
Lead 6	347	72	139
Lead 20	335	47	95
Lead 12	503	78	165
Lead 6	332	37	79
Lead 20	344	29	62

## Static loading moment

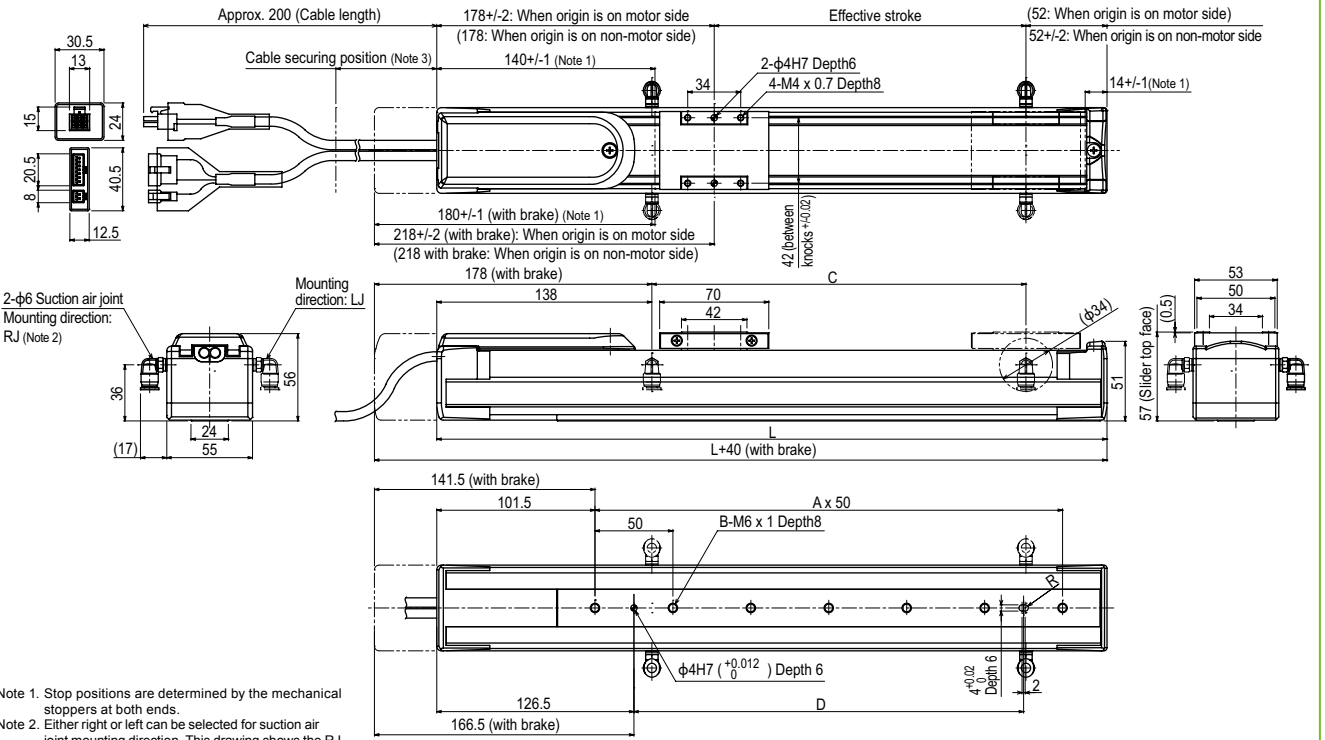
Static loading moment (Unit: N·m)		
MY	MP	MR
25	33	30

## Controller

Controller	Operation method
TS-S2	I/O point trace / Remote command
TS-SH	Remote command
TS-SD	Pulse train control

Note. Distance from center of slider upper surface to conveyor center-of-gravity at a guide service life of 10,000 km (Service life is calculated for 600mm stroke models).

## SSC05



Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Either right or left can be selected for suction air joint mounting direction. This drawing shows the RJ (standard) direction.  
 Note 3. Secure the cable with a tie-band 100mm or less from unit's end face to prevent the cable from being subjected to excessive loads.  
 Note 4. The cable's minimum bend radius is R30.  
 Note 5. These are the weights without a brake. The weights are 0.2kg heavier when equipped with a brake.  
 Note 6. When the stroke is longer than 650mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030
A	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
B	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
C	100	150	200	250	300	350	400	450	500	500	500	500	500	500	500	500
Weight (kg) <sup>Note 5</sup>	2.1	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0
Maximum speed for each stroke (mm/sec) <sup>Note 6</sup>	1000															
Lead 20	933															
Lead 12	560															
Lead 6	280															







# C5L

- High lead: Lead 20
- Origin on the non-motor side is selectable



## Ordering method

<b>C5L</b>							<b>ERCD</b>	
<b>Model</b>	<b>Lead designation</b> 20: 20mm 12: 12mm 6: 6mm	<b>Brake</b> <sup>Note 1</sup> No entry: With no brake BK: With brake	<b>Direction of air coupler installation</b> L: Left (Standard) R: Right	<b>Origin position change</b> None: Standard Z: Non-motor side	<b>Stroke</b> 50 to 800 (50mm pitch)	<b>Cable length</b> <sup>Note 2</sup> 1L: 1m 3L: 3.5m 5L: 5m 10L: 10m 1K/3K/5K/10K (Flexible cable)	<b>Controller</b>	<b>I/O connector specification</b> CN1: I/O flat cable 1m (Standard) CN2: Twisted-pair cable 2m (pulse train function)

Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
 Note 2. The robot cable is standard cable (1L/3L/5L/10L), but can be changed to flexible cable.  
 See P.596 for details on robot cable.

## Basic specifications

<b>AC servo motor output (W)</b>	30
<b>Repeatability</b> <sup>Note 1</sup> (mm)	+/- 0.02
<b>Deceleration mechanism</b>	Ball screw $\phi$ 12 (Class C10)
<b>Ball screw lead (mm)</b>	20 12 6
<b>Maximum speed (mm/sec)</b>	1000 800 400
<b>Maximum payload (kg)</b>	<b>Horizontal</b> 3 5 9 <b>Vertical</b> - 1.2 2.4
<b>Rated thrust (N)</b>	19 32 64
<b>Stroke (mm)</b>	50 to 800 (50mm pitch)
<b>Overall length (mm)</b>	<b>Horizontal</b> Stroke+201.5 <b>Vertical</b> Stroke+236.5
<b>Maximum outside dimension of body cross-section (mm)</b>	W55×H65
<b>Cable length (m)</b>	Standard: 3.5 / Option: 1.5, 10
<b>Degree of cleanliness</b>	ISO CLASS 3 (ISO14644-1) <sup>Note 2</sup>
<b>Intake air (N<math>\ell</math>/min)</b> <sup>Note 3</sup>	80 50 30

Note 1. Positioning repeatability in one direction.  
 Note 2. CLASS 10 (0.1 $\mu$ m) FED-STD-209D or equivalent when a suction blower is used.  
 Note 3. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)	
	A	B	C	A	B	C	A	C
Lead 20	1584	324	745	679	303	1505	1.2kg	245
Lead 12	699	104	251	215	87	605	2.4kg	110
Lead 6	1166	159	406	364	126	1073		
Lead 6	551	59	155	123	28	438		
Lead 6	1194	104	294	3kg	259	72	354	
Lead 6	624	31	89	9kg	50	0	154	

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.  
 Note. Service life is calculated for 600mm stroke models.

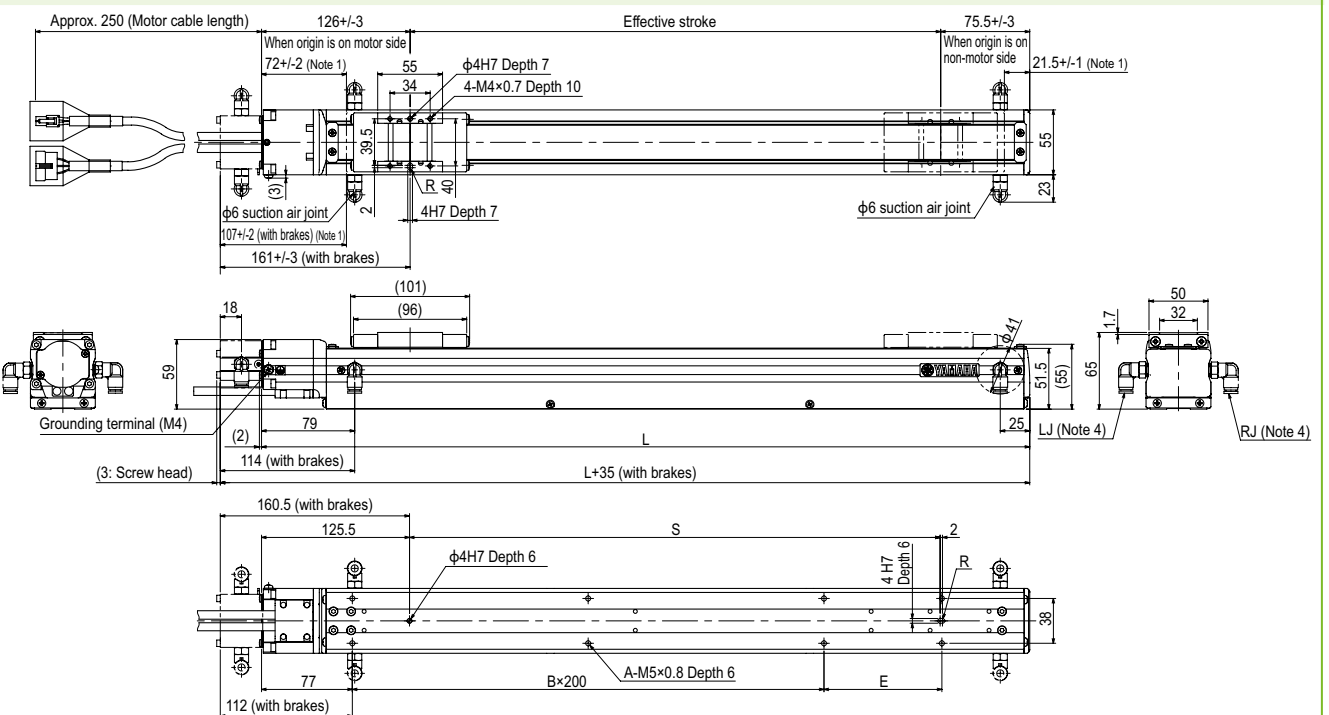
## Static loading moment

(Unit: N·m)		
MY	MP	MR
30	34	40

## Controller

Controller	Operation method
ERCD	Pulse train control / Programming / I/O point trace / Remote command / Operation using RS-232C communication

## C5L



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	251.5	301.5	351.5	401.5	451.5	501.5	551.5	601.5	651.5	701.5	751.5	801.5	851.5	901.5	951.5	1001.5
A	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
E	100	200	200	100	100	200	200	100	100	200	200	100	100	200	200	100
S	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg) <sup>Note 3</sup>	1.7	2.0	2.2	2.5	2.7	3.0	3.2	3.4	3.7	3.9	4.2	4.4	4.7	4.9	5.1	5.4
Maximum speed for each stroke <sup>Note 5</sup> (mm/sec)	1000															
Speed setting	-															
Lead 20	90%															
Lead 12	80%															
Lead 6	80%															
Speed setting	-															

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R30.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.  
 Note 4. Either right or left can be selected for the installation direction for the  $\phi$ 6 intake air joint. (The left side is the standard.)  
 Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.  
 Note 6. External view of C5LH is identical to C5L.

# C5LH

- High lead: Lead 20
- Origin on the non-motor side is selectable



## Ordering method

<b>C5LH</b>	<b>Model</b>	<b>Lead designation</b> 20: 20mm 12: 12mm 6: 6mm	<b>Brake</b> Note 1 No entry: With no brake BK: With brake	<b>Direction of air coupler installation</b> L: Left (Standard) R: Right	<b>Origin position change</b> None: Standard Z: Non-motor side	<b>Stroke</b> 50 to 800 (50mm pitch)	<b>Cable length</b> Note 2 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>TSX</b>	<b>Positioner</b> Note 3 TS-X	<b>Driver: Power supply voltage / Power capacity</b> 105: 100V/100W or less 205: 200V/100W or less	<b>LCD monitor</b> No entry: None L: With LCD	<b>I/O selection</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 4	<b>Battery</b> No entry: None N: None (Incremental)
	<b>SR1-X</b>	<b>05</b>						<b>Controller</b>	<b>Driver: Power capacity</b> 05: 100W or less	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	
	<b>RDV-X</b>	<b>2</b>						<b>Driver</b>	<b>Power supply voltage</b> 2: AC200V		<b>05</b>	<b>Driver: Power capacity</b> 05: 100W or less	

Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	30
Repeatability Note 1 (mm)	+/-0.02
Deceleration mechanism	Ball screw $\phi 12$ (Class C10)
Ball screw lead (mm)	20 12 6
Maximum speed (mm/sec)	1000 800 400
Maximum payload (kg)	Horizontal 3 5 9 Vertical - 1.2 2.4
Rated thrust (N)	19 32 64
Stroke (mm)	50 to 800 (50mm pitch)
Overall length (mm)	Horizontal Stroke+201.5 Vertical Stroke+236.5
Maximum outside dimension of body cross-section (mm)	W55×H65
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	ISO CLASS 3 (ISO14644-1) Note 2
Intake air (Nl/min) Note 3	80 50 30

Note 1. Positioning repeatability in one direction.  
 Note 2. CLASS 10 (0.1 $\mu$ m) FED-STD-209D or equivalent when a suction blower is used.  
 Note 3. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang Note

	<b>Horizontal installation (Unit: mm)</b>	<b>Wall installation (Unit: mm)</b>	<b>Vertical installation (Unit: mm)</b>
<b>Lead 20</b>	A B C	A B C	A C
1kg	1099 324 645	602 303 950	1.2kg 240 239
3kg	488 104 241	197 87 432	2.4kg 109 110
2kg	916 159 398	347 141 800	
5kg	436 60 152	119 44 355	
3kg	1194 105 294	3kg 259 87 950	
9kg	624 31 89	9kg 50 15 385	

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.  
 Note. Service life is calculated for 600mm stroke models.

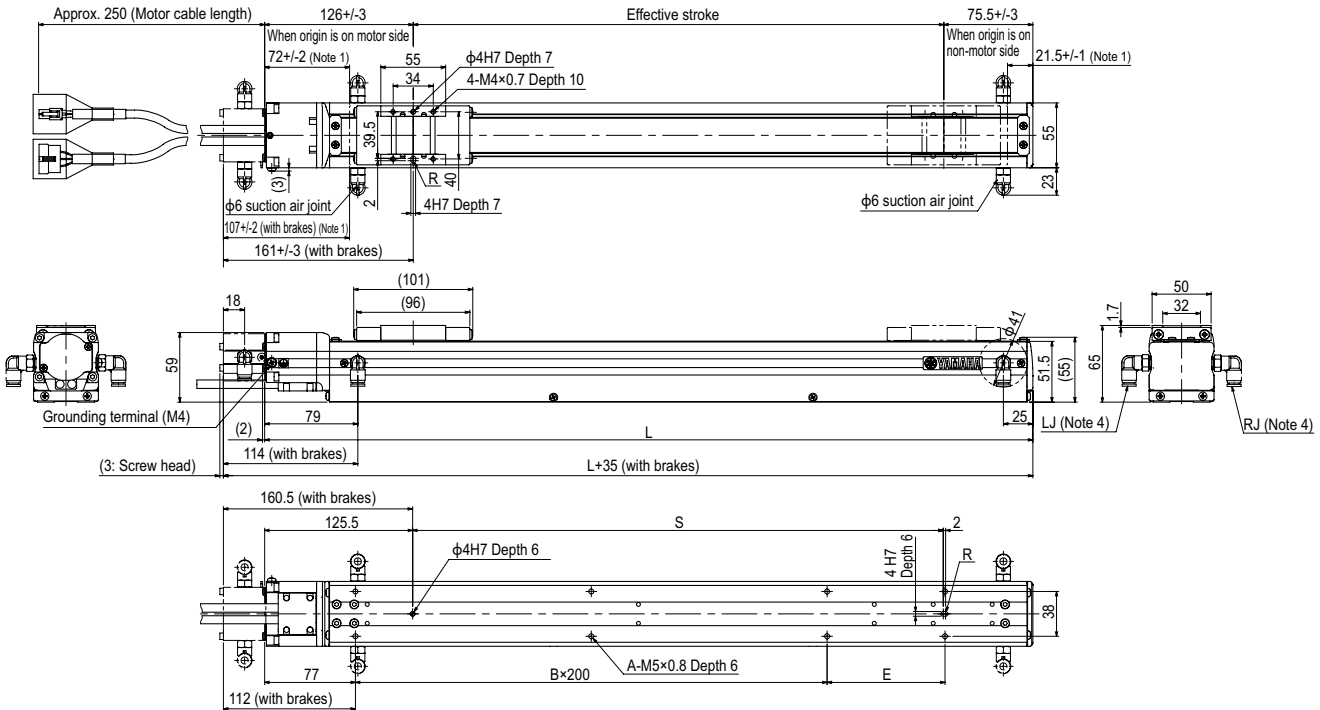
## Static loading moment

	(Unit: N·m)
MY	MP MR
30	34 40

## Controller

Controller	Operation method
SR1-X05 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	
RDV-X205	Pulse train control

## C5LH

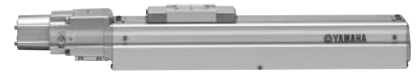


Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	251.5	301.5	351.5	401.5	451.5	501.5	551.5	601.5	651.5	701.5	751.5	801.5	851.5	901.5	951.5	1001.5
A	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
E	100	200	200	100	100	200	200	100	100	200	200	100	100	200	200	100
S	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg) Note 3	1.7	2.0	2.2	2.5	2.7	3.0	3.2	3.4	3.7	3.9	4.2	4.4	4.7	4.9	5.1	5.4
Maximum speed for each stroke Note 5 (mm/sec)	1000															
Lead 20 Speed setting	900 800 700															
Lead 12 Speed setting	90% 80% 70%															
Lead 6 Speed setting	800 400															
	640 560 480 440															
	320 280 240 220															
	80% 70% 60% 55%															

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R30.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.  
 Note 4. Either right or left can be selected for the installation direction for the  $\phi 6$  intake air joint. (The left side is the standard.)  
 Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.  
 Note 6. External view of C5LH is identical to C5L.

# C6L

- High lead: Lead 20
- Origin on the non-motor side is selectable



## Ordering method

**C6L**

<b>Model</b>	<b>Lead designation</b> 20: 20mm 12: 12mm 6: 6mm	<b>Brake</b> Note 1 No entry: With no brake BK: With brake	<b>Direction of air coupler installation</b> L: Left (Standard) R: Right	<b>Origin position change</b> None: Standard Z: Non-motor side	<b>Stroke</b> 50 to 800 (50mm pitch)	<b>Cable length</b> Note 2 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)
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**TSX**

<b>Positioner</b> Note 3 TS-X	<b>Driver: Power supply voltage / Power capacity</b> 105: 100V/100W or less 205: 200V/100W or less	<b>LCD monitor</b> No entry: None L: With LCD	<b>I/O selection</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 4	<b>Battery</b> 3: With battery (Absolute) N: None (Incremental)
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**SR1-X**

<b>Controller</b> 05	<b>Driver: Power capacity</b> 05: 100W or less	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>Battery</b> 3: With battery (Absolute) N: None (Incremental)
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**RDV-X**

<b>Driver</b> 2	<b>Power supply voltage</b> 2: AC200V	<b>Driver: Power capacity</b> 05: 100W or less	<b>Regenerative unit</b> RBR1
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- Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

<b>AC servo motor output (W)</b>	60
<b>Repeatability</b> Note 1 (mm)	+/-0.02
<b>Deceleration mechanism</b>	Ball screw $\phi 12$ (Class C10)
<b>Ball screw lead (mm)</b>	20 12 6
<b>Maximum speed (mm/sec)</b>	1000 800 400
<b>Maximum payload (kg)</b>	<b>Horizontal</b> 10 12 30 <b>Vertical</b> - 4 8
<b>Rated thrust (N)</b>	51 85 170
<b>Stroke (mm)</b>	50 to 800 (50mm pitch)
<b>Overall length (mm)</b>	<b>Horizontal</b> Stroke+247.5 <b>Vertical</b> Stroke+282.5
<b>Maximum outside dimension of body cross-section (mm)</b>	W65×H65
<b>Cable length (m)</b>	Standard: 3.5 / Option: 5, 10
<b>Degree of cleanliness</b>	ISO CLASS 3 (ISO14644-1) Note 2
<b>Intake air (Nl/min)</b> Note 3	80 50 30

- Note 1. Positioning repeatability in one direction.  
 Note 2. CLASS 10 (0.1 $\mu$ m) FED-STD-209D or equivalent when a suction blower is used.  
 Note 3. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
20	2kg 433	192	295	2kg 300	174	365	1kg 353	351	
6	6kg 145	59	104	6kg 83	44	105	2kg 163	164	
	10kg 110	33	75	10kg 43	18	71	4kg 68	70	
12	3kg 622	125	336	3kg 291	96	317	2kg 169	170	
	8kg 271	41	121	8kg 87	13	110	4kg 71	73	
6	12kg 214	24	76	12kg 41	0	126	8kg 21	24	
	5kg 692	73	236	5kg 202	45	237			
10	10kg 372	33	109	10kg 70	5	97			
	30kg 157	0	25	30kg 0	0	0			

- Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.  
 Note. Service life is calculated for 600mm stroke models.

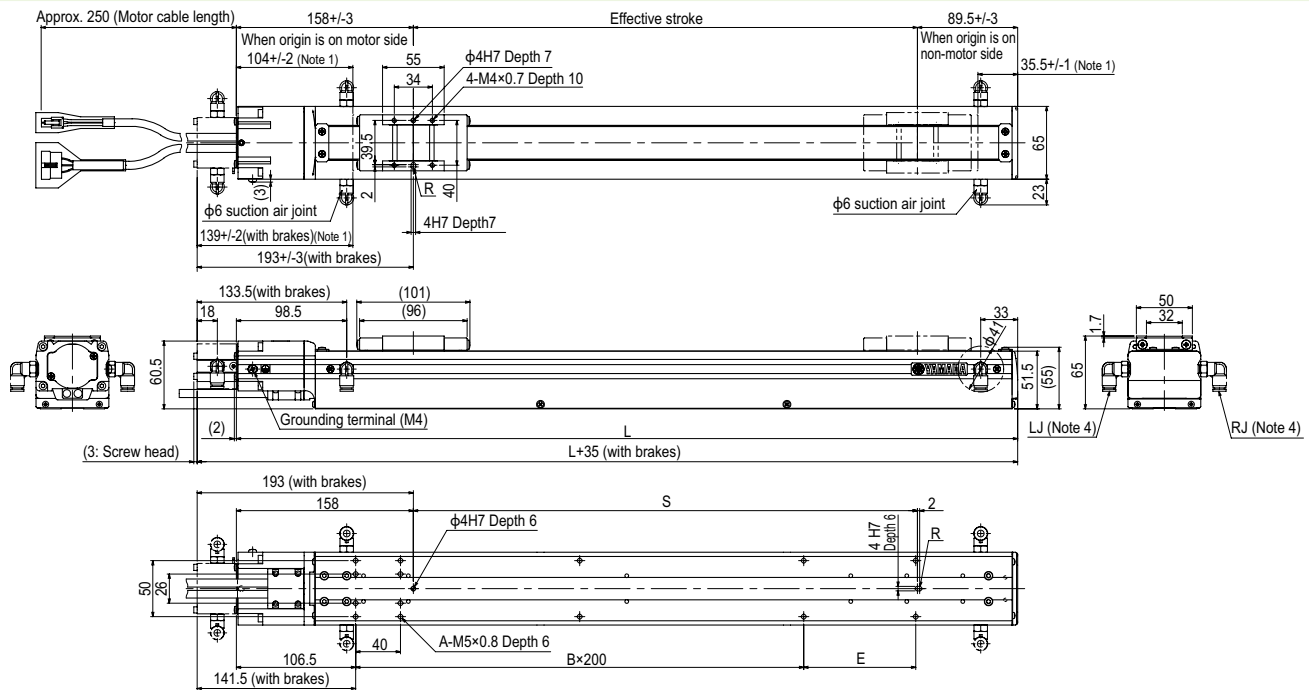
## Static loading moment

(Unit: N·m)		
MY	MP	MR
35	40	50

## Controller

Controller	Operation method
SR1-X05 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	I/O point trace / Remote command
RDV-X05-RBR1	Pulse train control

## C6L



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	297.5	347.5	397.5	447.5	497.5	547.5	597.5	647.5	697.5	747.5	797.5	847.5	897.5	947.5	997.5	1047.5
A	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
B	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
E	150	200	200	100	100	200	200	100	100	200	200	100	100	200	200	100
S	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg) Note 3	2.6	2.9	3.1	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.4	5.7	6.0	6.3	6.6	6.8
Maximum speed for each stroke Note 5 (mm/sec)	Lead 20	1000														
	Speed setting	-														
	Lead 12	800														
	Speed setting	-														
Lead 6	Lead 6	400														
	Speed setting	-														
	Lead 6	340														
	Speed setting	-														

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R30.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.  
 Note 4. Either right or left can be selected for the installation direction for the  $\phi 6$  intake air joint. (The left side is the standard.)  
 Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.



# C8

- High lead: Lead 20
- Origin on the non-motor side is selectable



## Ordering method

**C8**

Model	Lead	Brake <sup>Note 1</sup>	Option	Stroke	Cable length <sup>Note 2</sup>
	20: 20mm 12: 12mm 6: 6mm	No entry: With no brake BK: With brake	Origin position None: Standard Z: Non-motor side	150 to 800 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

**TSX**

Positioner <sup>Note 3</sup>	Driver: Power-supply voltage / Power capacity	LCD monitor	I/O selection	Battery
TS-X	105: 100V/100W or less 205: 200V/100W or less	No entry: None L: With LCD	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 4</sup>	B: With battery (Absolute) N: None (Incremental)

**SR1-X**

Controller	Driver: Power capacity	Usable for CE	I/O selection	Battery
05	05: 100W or less	No entry: Standard E: CE marking	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	B: With battery (Absolute) N: None (Incremental)

**RDV-X**

Driver	Power-supply voltage	Driver: Power capacity	Regenerative unit
2	2: AC200V	05: 100W or less	RBR1

Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	100
Repeatability <sup>Note 1</sup> (mm)	+/-0.02
Deceleration mechanism	Ball screw (Class C10)
Ball screw lead (mm)	20 12 6
Maximum speed (mm/sec)	1000 720 360
Maximum payload (kg)	Horizontal 12 20 40 Vertical - 4 8
Rated thrust (N)	84 141 283
Stroke (mm)	150 to 800 (50mm pitch)
Overall length (mm)	Horizontal Stroke+320 Vertical Stroke+355
Maximum outside dimension of body cross-section (mm)	W80 x H75
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10 <sup>Note 3</sup>
Intake air (Nl/min)	30 to 90 <sup>Note 4</sup>

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang <sup>Note</sup>

Lead	Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	Weight	A	B	C	Weight	A	B	C	Lead	A	C	
Lead 20	5kg	245	85	146	5kg	121	71	211	Lead 12	1kg	440	442
	10kg	131	39	69	10kg	42	24	88		2kg	207	209
	12kg	115	31	57	12kg	29	16	66		3kg	130	132
Lead 12	5kg	364	92	192	5kg	164	78	328	Lead 6	4kg	91	92
	10kg	207	43	92	10kg	62	29	158		2kg	237	238
	15kg	144	26	41	15kg	26	12	83		4kg	106	96
Lead 6	20kg	112	18	40	20kg	7	4	32	Lead 6	6kg	62	62
	10kg	406	47	124	10kg	87	33	353		4kg	106	96
	20kg	225	20	54	20kg	18	6	127		6kg	62	62
Lead 6	30kg	162	11	31	30kg	0	0	0	Lead 6	8kg	34	40
	40kg	168	7	20	40kg	0	0	0				

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

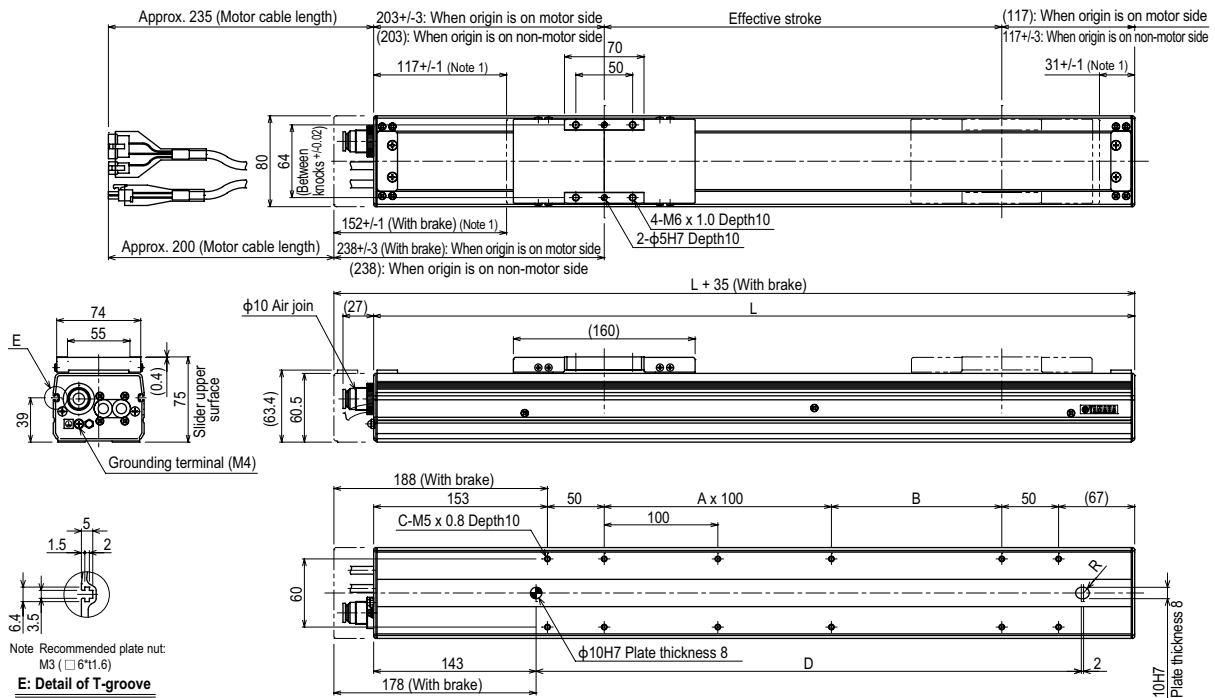
## Static loading moment

			(Unit: N·m)		
	MY	MP		MR	
	70	95		110	

## Controller

Controller	Operation method
SR1-X05 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	Remote command
RDV-X205-RBR1	Pulse train control

## C8



Note. Recommended plate nut: M3 (□6\*1.6)

E: Detail of T-groove

Effective stroke	Lead 20														
	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
L	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7	
B	150	100	150	100	150	100	150	100	150	100	150	100	150	100	
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	
D	280	330	380	430	480	530	580	630	680	730	780	830	880	930	
Weight (kg) <sup>Note 3</sup>	3.6	3.9	4.1	4.4	4.7	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3	
Maximum speed <sup>Note 4</sup> (mm/sec)	Lead 20	1000													
	Speed setting	-													
	Lead 12	720													
	Lead 6	360													
Speed setting	-														
												95%	80%	70%	65%
												648	540	468	360
												324	270	234	180
												90%	75%	65%	50%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.3 kg heavier than the models with no brake shown in the table.  
 Note 4. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

# C8L

Origin on the non-motor side is selectable

## Ordering method

<b>C8L</b>	<b>Model</b>	<b>Lead</b> 20: 20mm 10: 10mm 5: 5mm	<b>Brake</b> No entry: With no brake BK: With brake	<b>Option</b> Origin position change None: Standard Z: Non-motor side	<b>Stroke</b> 150 to 1050 (50mm pitch)	<b>Cable length</b> <sup>Note 1</sup> 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>TSX</b>	<b>Positioner</b> <sup>Note 2</sup> TS-X	<b>Driver: Power-supply voltage / Power capacity</b> 105: 100V/100W or less 205: 200V/100W or less	<b>LCD monitor</b> No entry: None L: With LCD	<b>I/O selection</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 3</sup>	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)
	<b>SR1-X</b>	<b>Controller</b>	<b>05</b>	<b>Driver: Power capacity</b> 05: 100W or less	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)					
	<b>RDV-X</b>	<b>Driver</b>	<b>2</b>	<b>Power-supply voltage</b> 2: AC200V	<b>05</b>	<b>Driver: Power capacity</b> 05: 100W or less	<b>RBR1</b>	<b>Regenerative unit</b>				

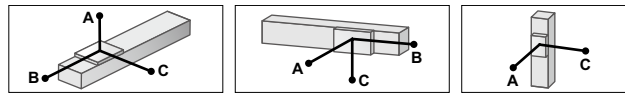
Note 1. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 2. See P.500 for DIN rail mounting bracket.  
 Note 3. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	100
Repeatability <sup>Note 1</sup> (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10 5
Maximum speed <sup>Note 2</sup> (mm/sec)	1000 600 300
Maximum payload (kg)	Horizontal 20 40 50 Vertical 4 8 16
Rated thrust (N)	84 169 339
Stroke (mm)	150 to 1050 (50mm pitch)
Overall length (mm)	Horizontal Stroke+325 Vertical Stroke+360
Maximum outside dimension of body cross-section (mm)	W80 x H75
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10 <sup>Note 3</sup>
Intake air (Nl/min)	30 to 90 <sup>Note 4</sup>

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

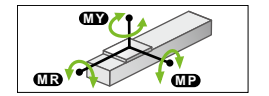
## Allowable overhang



Horizontal installation (Unit: mm)	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)					
	A	B	C	A	B	C	A	C				
Lead 20	5kg	259	122	179	5kg	147	100	220	Lead 20	2kg	255	260
	10kg	149	55	89	10kg	53	32	97		4kg	111	115
	15kg	100	33	56	15kg	17	10	39		2kg	300	302
Lead 10	20kg	95	22	41	20kg	0	0	0	Lead 10	4kg	131	133
	10kg	251	61	130	10kg	87	41	197		6kg	75	77
	20kg	127	25	55	20kg	10	4	37		8kg	47	49
Lead 5	30kg	90	14	31	30kg	0	0	0	Lead 5	5kg	113	114
	40kg	69	8	18	40kg	0	0	0		10kg	37	38
	20kg	256	29	76	20kg	24	9	152		15kg	12	12
Lead 20	30kg	188	16	43	30kg	0	0	0	Lead 20	16kg	9	9
	40kg	96	10	28	40kg	0	0	0				
	50kg	33	6	18	50kg	0	0	0				

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

## Static loading moment

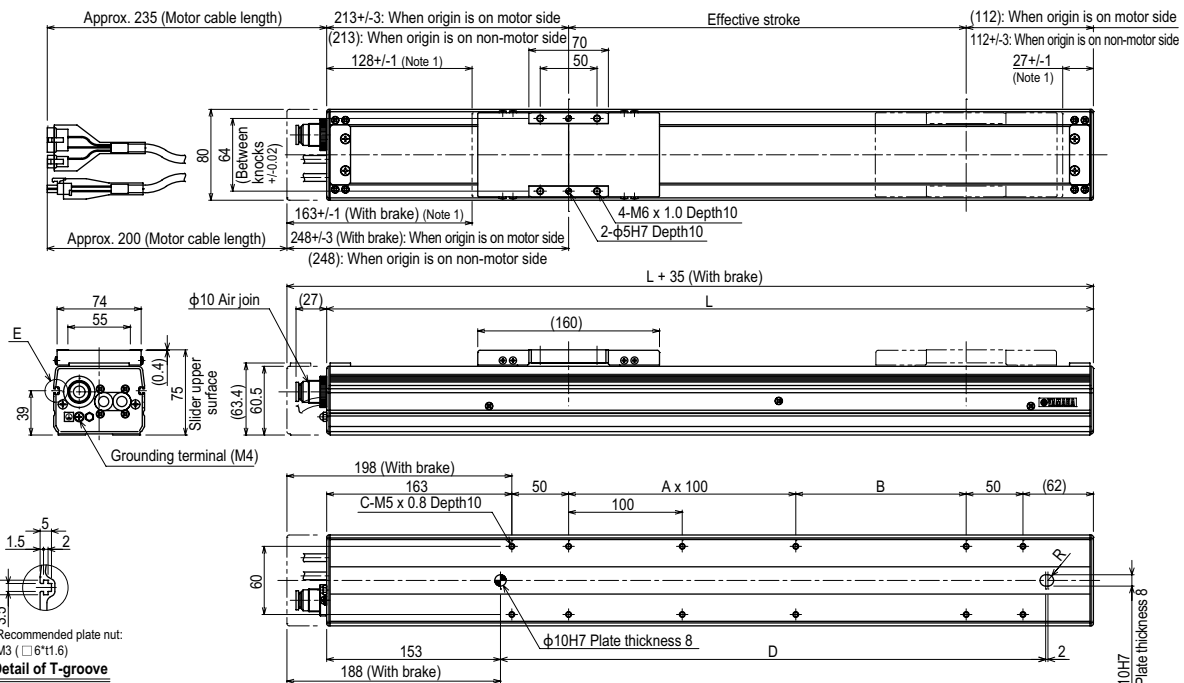


(Unit: N·m)		
MY	MP	MR
70	95	110

## Controller

Controller	Operation method
SR1-X05 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	Remote command
RDV-X205-RBR1	Pulse train control

## C8L



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	
B	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	
D	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	
Weight (kg) <sup>Note 3</sup>	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.0	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.2	9.5	
Maximum speed <sup>Note 4</sup> (mm/sec)	Lead 20	1000																		
	Speed setting	-																		
	Lead 10	600																		
	Lead 5	300																		
Speed setting	Lead 20	90%	80%	70%	65%	60%	55%	50%												
	Lead 5	85%	75%	65%	60%	55%	50%	45%	40%											

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.3 kg heavier than the models with no brake shown in the table.  
 Note 4. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.



# C10

Origin on the non-motor side is selectable: Lead 20 • 10



## Ordering method

<b>C10</b>	<b>Model</b>	<b>Lead</b>	<b>Brake</b>	<b>Option</b>	<b>Stroke</b>	<b>Cable length</b> <sup>Note 2</sup>	<b>TSX</b>	<b>SR1-X</b>	<b>RDV-X</b>	<b>Battery</b>
		20: 20mm 10: 10mm 5: 5mm	No entry: With no brake BK: With brake	Origin position change None: Standard Z: Non-motor side <sup>Note 1</sup>	150 to 1050 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>Positioner</b> <sup>Note 3</sup> TS-X Driver: Power-supply voltage / Power capacity 105: 100V/100W or less 205: 200V/100W or less Regenerative unit No entry: None R: With RGT LCD monitor No entry: None L: With LCD <b>I/O selection</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 4</sup> <b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Controller</b> 05 Driver: Power capacity 05: 100W or less Usable for CE No entry: Standard E: CE marking Regenerative unit No entry: None R: With RGT <b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS <b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Driver</b> 2 Power-supply voltage 2: AC200V <b>05</b> Driver: Power capacity 05: 100W or less <b>RBR1</b> Regenerative unit	

- Note 1. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	100
Repeatability <sup>Note 1</sup> (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10 5
Maximum speed (mm/sec)	1000 500 250
Maximum payload (kg)	Horizontal 20 40 60 Vertical 4 10 20
Rated thrust (N)	84 169 339
Stroke (mm)	150 to 1050 (50mm pitch)
Overall length (mm)	Horizontal Stroke+283 Vertical Stroke+313
Maximum outside dimension of body cross-section (mm)	W104 x H85
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10 <sup>Note 3</sup>
Intake air (Nl/min)	30 to 90 <sup>Note 4</sup>

- Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 750mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

Installation	Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)	
		A	B	C	A	B	C	A	C
Horizontal	Lead 20	5kg	1875	530	510	5kg	496	451	1826
		10kg	1079	247	242	10kg	218	168	1002
		20kg	628	106	107	20kg	78	27	497
	Lead 10	15kg	765	156	164	10kg	230	170	1036
		30kg	425	62	66	20kg	80	29	506
Wall	Lead 10	10kg	350	38	42	10kg	30	0	311
	Lead 5	30kg	960	63	68	10kg	234	170	2716
		50kg	565	25	28	20kg	82	29	1206
		60kg	470	16	17	30kg	31	0	711
	Lead 5	30kg	31	0	711				
Vertical	Lead 20	1kg	2461	2492	2kg	1213	1244	4kg	585 617
	Lead 10	4kg	627	658	8kg	280	312	10kg	210 242
	Lead 5	10kg	213	244	15kg	119	151	20kg	72 104

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

## Static loading moment

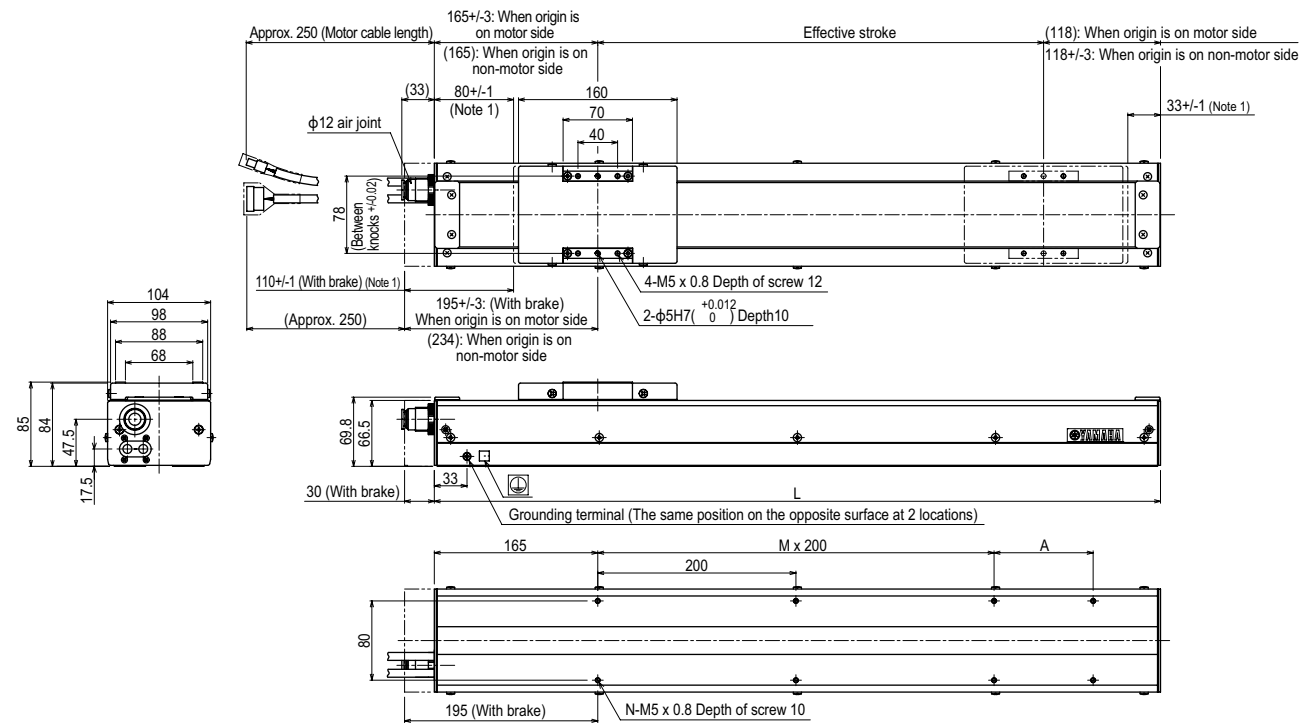
(Unit: N·m)		
MY	MP	MR
119	119	105

## Controller

Controller	Operation method
SR1-X05 <sup>Note</sup>	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105 <sup>Note</sup>	I/O point trace / Remote command
RDV-X205-RBR1	Pulse train control

Note. Regenerative unit is required when the models used vertically and with 700mm or larger stroke.

## C10



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233	1283	1333	
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	
Weight (kg) <sup>Note 3</sup>	4.4	5.0	5.5	6.1	6.7	7.3	7.8	8.4	9.0	9.6	10.1	10.7	11.3	11.9	12.4	13.0	13.6	14.2	14.7	
Maximum speed (mm/sec) <sup>Note 4</sup>	Lead 20	1000																		
	Lead 10	500																		
	Lead 5	250																		
Speed setting	95% 95% 75% 75% 60% 60% 50%																			

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.4 kg heavier than the models with no brake shown in the table.

Note 4. When the stroke is longer than 750mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.



# C14H

● Origin on the non-motor side is selectable: Lead 20 • 10



## Ordering method

**C14H**

Model	Lead	Brake	Option	Stroke	Cable length
	20: 20mm 10: 10mm 5: 5mm	No entry: With no brake BK: With brake	Origin position change None: Standard Z: Non-motor side	150 to 1050 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

**TSX**

Positioner	Driver: Power-supply voltage / Power capacity	Regenerative unit	LCD monitor	I/O selection	Battery
TS-X	110: 100V/200W 210: 200V/200W	No entry: None R: With RGT	No entry: None L: With LCD	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	B: With battery (Absolute) N: None (Incremental)

**SR1-X** **10**

Controller	Driver: Power capacity	Usable for CE	Regenerative unit	I/O selection	Battery
	10: 200W	No entry: Standard E: CE marking	No entry: None R: With RG1	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	B: With battery (Absolute) N: None (Incremental)

**RDV-X** **2** **10** **RBR1**

Driver	Power-supply voltage	Driver: Power capacity	Regenerative unit
	2: AC200V	10: 200W or less	

- Note 1. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	200
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10 5
Maximum speed (mm/sec)	1000 500 250
Maximum payload (kg)	Horizontal 40 80 100 Vertical 8 20 30
Rated thrust (N)	170 341 683
Stroke (mm)	150 to 1050 (50mm pitch)
Overall length (mm)	Horizontal Stroke+349 Vertical Stroke+379
Maximum outside dimension of body cross-section (mm)	W136 x H96
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10
Intake air (Nl/min)	30 to 90

- Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 750mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
Lead 20	10kg	2247	1675	987	1210	1678	4kg	2400	2008
	20kg	1397	855	528	497	548	6kg	1687	1358
	40kg	1037	445	318	247	217	8kg	1287	1033
Lead 10	30kg	1937	583	478	402	328	10kg	1347	1088
	50kg	1637	364	323	227	152	15kg	887	718
	80kg	1717	242	235	119	74	20kg	657	538
Lead 5	60kg	2443	311	313	197	108	20kg	747	608
	80kg	2193	242	250	127	53	25kg	663	484
	100kg	2000	202	213	85	20	30kg	491	396

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

## Static loading moment

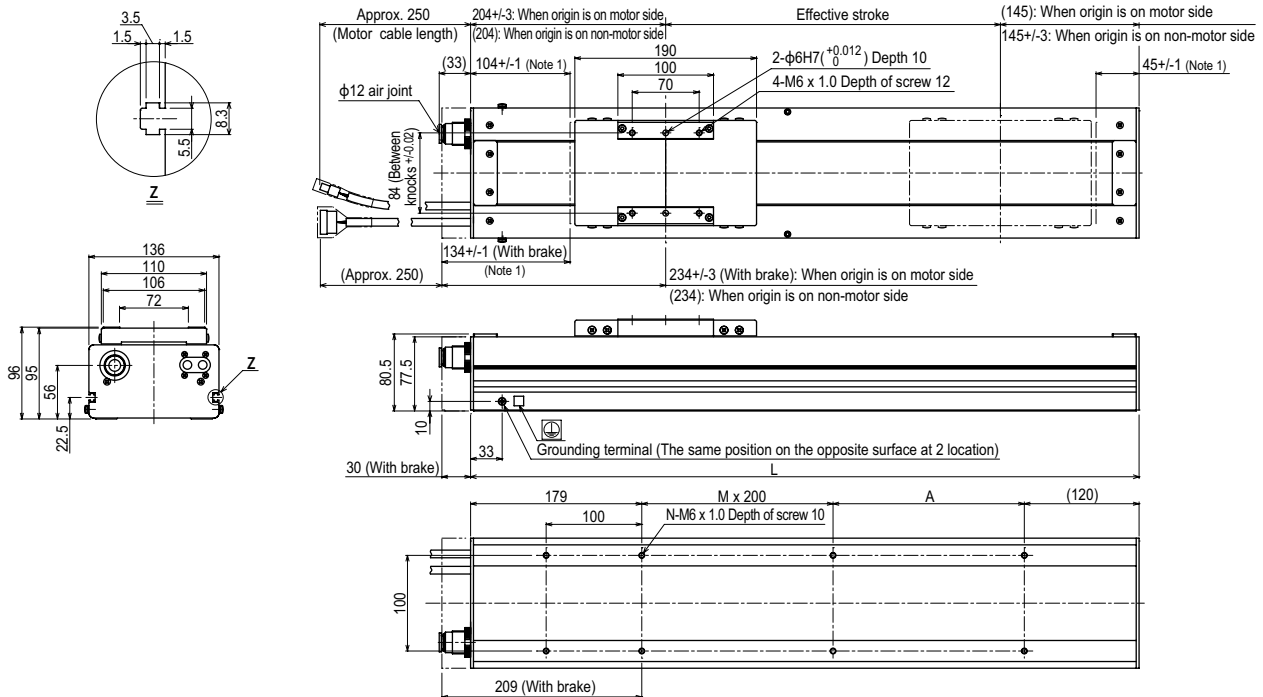
(Unit: N·m)		
MY	MP	MR
293	294	258

## Controller

Controller	Operation method
SR1-X10	Programming / I/O point trace / Remote command
RCX221/222	Operation using RS-232C communication
RCX240/340	I/O point trace / Remote command
TS-X110	Pulse train control
TS-X210	
RDV-X210-RBR1	

Note. Regenerative unit is required when used vertically.

## C14H



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
	L	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249	1299	1349
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16
Weight (kg)	10.7	11.4	12.0	12.7	13.2	13.9	14.5	15.2	15.8	16.5	17.0	17.7	18.3	19.0	19.6	20.3	20.8	21.5	22.1
Maximum speed (mm/sec)	Lead 20	1000																	
	Lead 10	500																	
	Lead 5	250																	
	Speed setting	95% 95% 75% 75% 60% 60% 50%																	

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 0.4 kg heavier than the models with no brake shown in the table.

Note 4. When the stroke is longer than 750mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

# C17

Origin on the non-motor side is selectable



## Ordering method

<b>C17</b>	<b>Model</b>	<b>Lead</b>	<b>Brake</b>	<b>Option</b>	<b>Stroke</b>	<b>Cable length</b>	<b>TSX</b>	<b>220</b>	<b>SR1-X</b>	<b>20</b>	<b>RDV-X</b>	<b>2</b>	<b>20</b>
		20: 20mm 10: 10mm	No entry: With no brake BK: With brake	Origin position change None: Standard Z: Non-motor side	200 to 1250 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>Positioner</b> TS-X	<b>Driver: Power-supply voltage / Power capacity</b> 220: 200V/400 to 600W	<b>Controller</b> SR1-X	<b>Driver: Power capacity</b> 20: 400 to 600W	<b>Driver</b> RDV-X	<b>Power-supply voltage</b> 2: AC200V	<b>Driver: Power capacity</b> 20: 400W or less
							<b>Regenerative unit</b> No entry: None R: With RGT	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>Regenerative unit</b> No entry: None R: With RG1	<b>Regenerative unit</b> No entry: None R: With RG1	<b>Regenerative unit</b> No entry: None R: With RG1	<b>Regenerative unit</b> No entry: None R: With RG1	<b>Regenerative unit</b> No entry: None R: With RG1
							<b>LCD monitor</b> No entry: None L: With LCD	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>Regenerative unit</b> RBR1 (Horizontal) RBR2 (Vertical)	<b>Regenerative unit</b> RBR1 (Horizontal) RBR2 (Vertical)	<b>Regenerative unit</b> RBR1 (Horizontal) RBR2 (Vertical)
									<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)

Note 1. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 2. See P.500 for DIN rail mounting bracket.  
 Note 3. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	400
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10
Maximum speed (mm/sec)	1000 600
Maximum payload (kg)	Horizontal 80 120 Vertical 15 35
Rated thrust (N)	339 678
Stroke (mm)	200 to 1250 (50mm pitch)
Overall length (mm)	Horizontal Stroke+395 Vertical Stroke+425
Maximum outside dimension of body cross-section (mm)	W168 x H114
Cable length (m)	Standard: 3.5 / OP: 5, 10
Degree of cleanliness	CLASS 10
Intake air (Nl/min)	30 to 90

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 950mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

	Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)		
	A	B	C	Lead	A	B	C	Lead	A	C	
Lead 20	30kg 2660	871	1040	30kg 1017	789	2576	5kg 3000	3000	10kg 2443	2443	
Lead 10	50kg 1911	508	615	50kg 583	426	1808	15kg 1633	1633	15kg 1728	1728	
Lead 20	80kg 1541	303	377	80kg 338	221	1380	25kg 1013	1013	25kg 1013	1013	
Lead 10	60kg 2443	418	580	60kg 525	336	2443	35kg 707	707	35kg 707	707	
Lead 10	100kg 2000	237	330	100kg 271	155	2000					
Lead 10	120kg 1841	192	268	120kg 207	109	1841					

Note. Distance from center of slider to center of gravity of object being carried at a guide service life of 10,000 km.

## Static loading moment

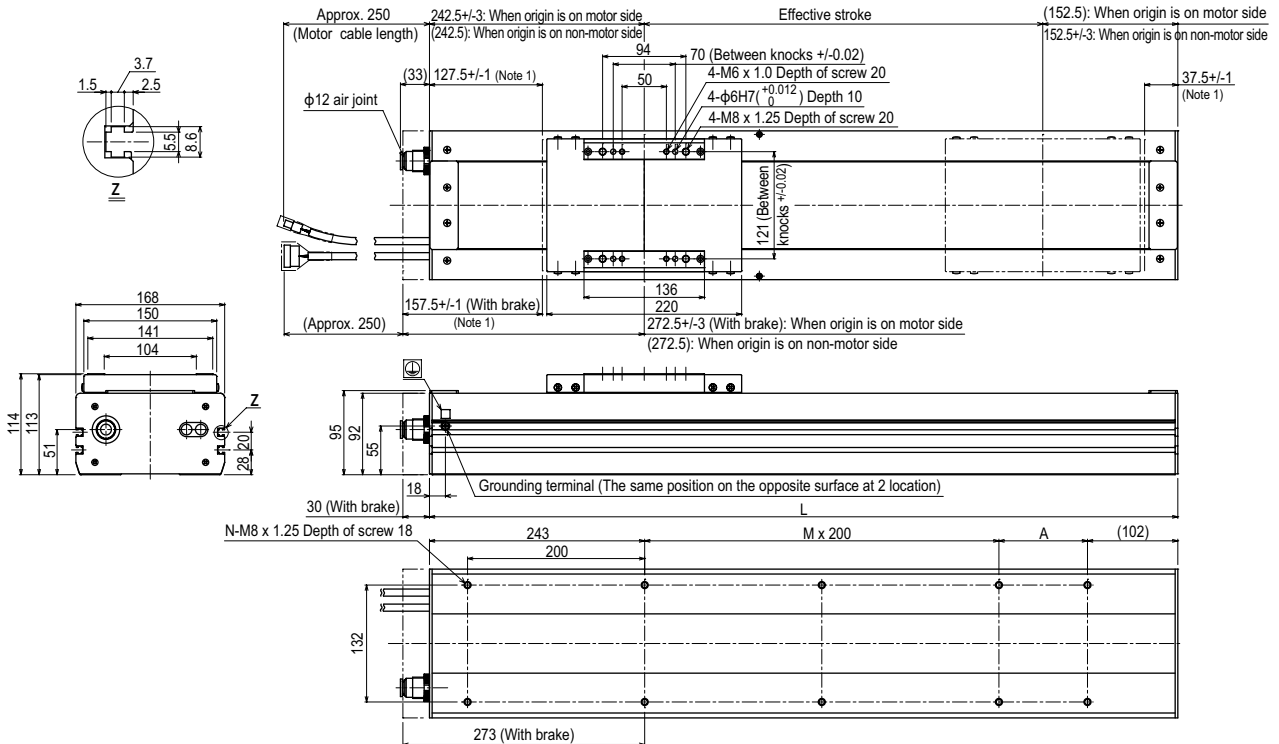
(Unit: N·m)		
MY	MP	MR
1032	1034	908

## Controller

Controller	Operation method
SR1-X20	Programming / I/O point trace / Remote command / RCX221/222, RCX240/340
TS-X220	Operation using RS-232C communication / I/O point trace / Remote command
RDV-X220-RBR1 (Horizontal)	Pulse train control
RDV-X220-RBR2 (Vertical)	

Note. [The following arrangements require a regeneration unit]  
 • Using in the upright position.  
 • To move at a speed exceeding 1,000 mm/sec horizontally.  
 • High lead (40) used horizontally.

## C17



Effective stroke	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
L	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595	1645		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100		
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6		
N	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18		
Weight (kg)	15.0	16.0	17.0	17.9	18.9	19.8	20.8	21.7	22.7	23.6	24.6	25.5	26.5	27.4	28.4	29.3	30.3	31.2	32.2	33.1	34.1	35.0		
Maximum speed (mm/sec)	1000												800	800	700	700	600	600	500					
Lead 20	500												400	400	350	350	300	300	250					
Lead 10	-												80%	80%	70%	70%	60%	60%	50%					

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 1.5 kg heavier than the models with no brake shown in the table.  
 Note 4. When the stroke is longer than 950mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

Controller

**SR1-X ▶ 518 TS-X ▶ 492 RDV-X ▶ 506**

# C17L

Origin on the non-motor side is selectable

Note. Built-to-order product. Contact us for the delivery period.

## Ordering method

**C17L - 50**

Model	Lead	Brake	Option	Stroke	Cable length
		No entry: With no brake BK: With brake	Origin position change None: Standard Z: Non-motor side	1150 to 2050 (100mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

Positioner	220	R	LCD monitor	I/O selection	Battery
TS-X	Driver: Power-supply voltage / Power capacity 220: 200V/400 to 600W	Regenerative unit R: With RGT	No entry: None L: With LCD	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	B: With battery (Absolute) N: None (Incremental)

Controller	20	R	I/O selection	Battery
SR1-X	Driver: Power capacity 20: 400 to 600W	Usable for CE No entry: Standard E: CE marking	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	B: With battery (Absolute) N: None (Incremental)

Driver	2	20	Regenerative unit
RDV-X	Power-supply voltage 2: AC200V	Driver: Power capacity 20: 400W or less	RBR1 (Horizontal) RBR2 (Vertical)

Note 1. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 2. See P.500 for DIN rail mounting bracket.  
 Note 3. Acceleration / deceleration is different depending the Positioner or Controller or Driver.  
 Note 4. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	600
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw (Class C10)
Ball screw lead (mm)	50
Maximum speed (mm/sec)	1000
Maximum payload (kg)	Horizontal: 50 Vertical: 10
Rated thrust (N)	204
Stroke (mm)	1150 to 2050 (100 pitch)
Overall length (mm)	Horizontal: Stroke+485 Vertical: Stroke+515
Maximum outside dimension of body cross-section (mm)	W168 x H114
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10
Intake air (Nl/min)	30 to 90

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 1850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang

Lead 50	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	C		
10kg	4000	2687	3327	10kg	3436	2605	4000	2kg	1200	1200
30kg	3045	872	929	30kg	1169	790	3045	5kg	3000	3000
50kg	2602	509	714	50kg	666	427	2602	10kg	2579	2579

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

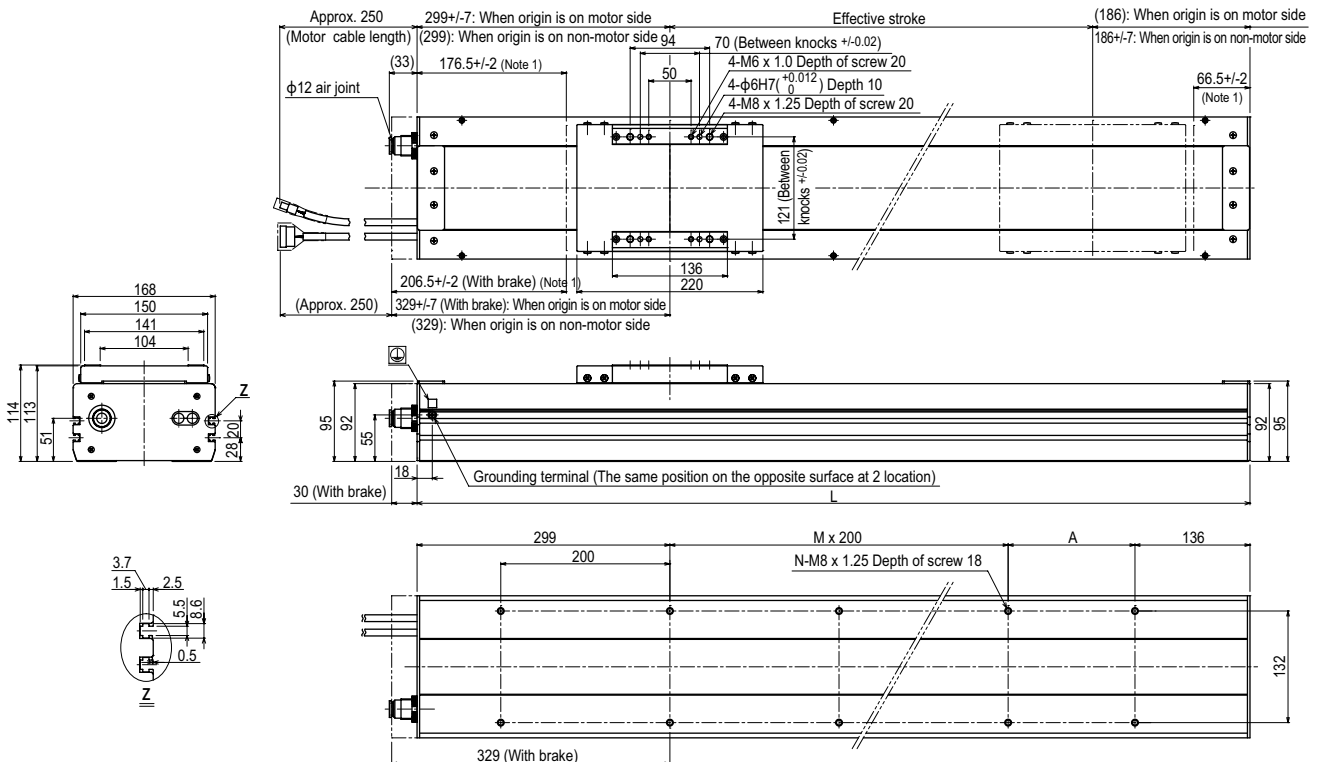
## Static loading moment

(Unit: N·m)		
MY	MP	MR
1032	1034	908

## Controller

Controller	Operation method
SR1-X20-R RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X220-R	I/O point trace / Remote command
RDV-X220-RBR1 (Horizontal) RDV-X220-RBR2 (Vertical)	Pulse train control

## C17L



Effective stroke	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050
L	1635	1735	1835	1935	2035	2135	2235	2335	2435	2535
A	200	100	200	100	200	100	200	100	200	100
M	5	6	6	7	7	8	8	9	9	10
N	16	18	18	20	20	22	22	24	24	26
Weight (kg) Note 3	39.1	41.2	43.2	45.2	47.3	49.3	51.3	53.4	55.4	57.4
Maximum speed (mm/sec) Note 4	Lead 50					Speed setting				
	1000					-				
						90%				
						80%				

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 1.5 kg heavier than the models with no brake shown in the table.  
 Note 4. When the stroke is longer than 1850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.



# C20

Origin on the non-motor side is selectable



## Ordering method

**C20**

<b>Model</b>	<b>Lead</b> Note 1	<b>Brake</b>	<b>Option</b>	<b>Stroke</b>	<b>Cable length</b> Note 2	<b>TSX</b>	<b>220</b>	<b>SR1-X</b>	<b>20</b>	<b>RDV-X</b>	<b>2</b>	<b>20</b>
	20: 20mm 10: 10mm	No entry: With no brake BK: With brake	Origin position change None: Standard Z: Non-motor side	200 to 1250 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>Positioner</b> Note 3 TS-X	<b>Driver: Power supply voltage / Power capacity</b> Note 4 220: 200V/400 to 600W	<b>Controller</b>	<b>Driver: Power capacity</b> Note 4 20: 400 to 600W	<b>Driver</b>	<b>Power supply voltage</b> 2: AC200V	<b>Driver: Power capacity</b> Note 4 20: 400W or less
							<b>Regenerative unit</b> No entry: None R: With RGT	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>Regenerative unit</b> No entry: None R: With RG1	<b>Regenerative unit</b> RBR1 (Horizontal) RBR2 (Vertical)		
							<b>LCD monitor</b> No entry: None L: With LCD		<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 5			
									<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS			
												<b>Battery</b> B: With battery (Absolute) N: None (Incremental)

Note 1. Only the model with specifications with brake (vertical specifications) can select a lead of 10mm.  
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.596 for details on robot cable.  
 Note 3. See P.500 for DIN rail mounting bracket.  
 Note 4. Acceleration / deceleration is different depending the Positioner or Controller or Driver.  
 Note 5. Select this selection when using the gateway function. For details, see P.62.

## Basic specifications

AC servo motor output (W)	600
Repeatability Note 1 (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10
Maximum speed (mm/sec)	1000 500
Maximum payload (kg)	Horizontal 120 Vertical 25 45
Rated thrust (N)	510 1020
Stroke (mm)	200 to 1250 (50mm pitch)
Overall length (mm)	Horizontal Stroke+441 Vertical Stroke+471
Maximum outside dimension of body cross-section (mm)	W202 x H117
Cable length (m)	Standard: 3.5 / Option: 5, 10
Degree of cleanliness	CLASS 10 Note 3
Intake air (Nl/min)	30 to 90 Note 4

Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 950mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Per 1cf (0.1um base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang Note

Lead	A	B	C
20	50kg 2602	869	1145
	80kg 2193	528	720
	120kg 1841	339	505

Lead	A	B	C
20	50kg 1144	798	2602
	80kg 717	456	2193
	120kg 466	267	1841

Lead	A	C
20	15kg 2711	2711
	20kg 2045	2045
	25kg 1647	1647
	20kg 2182	2182
	30kg 1437	1437
	45kg 939	939

MY	MP	MR
1101	1103	968

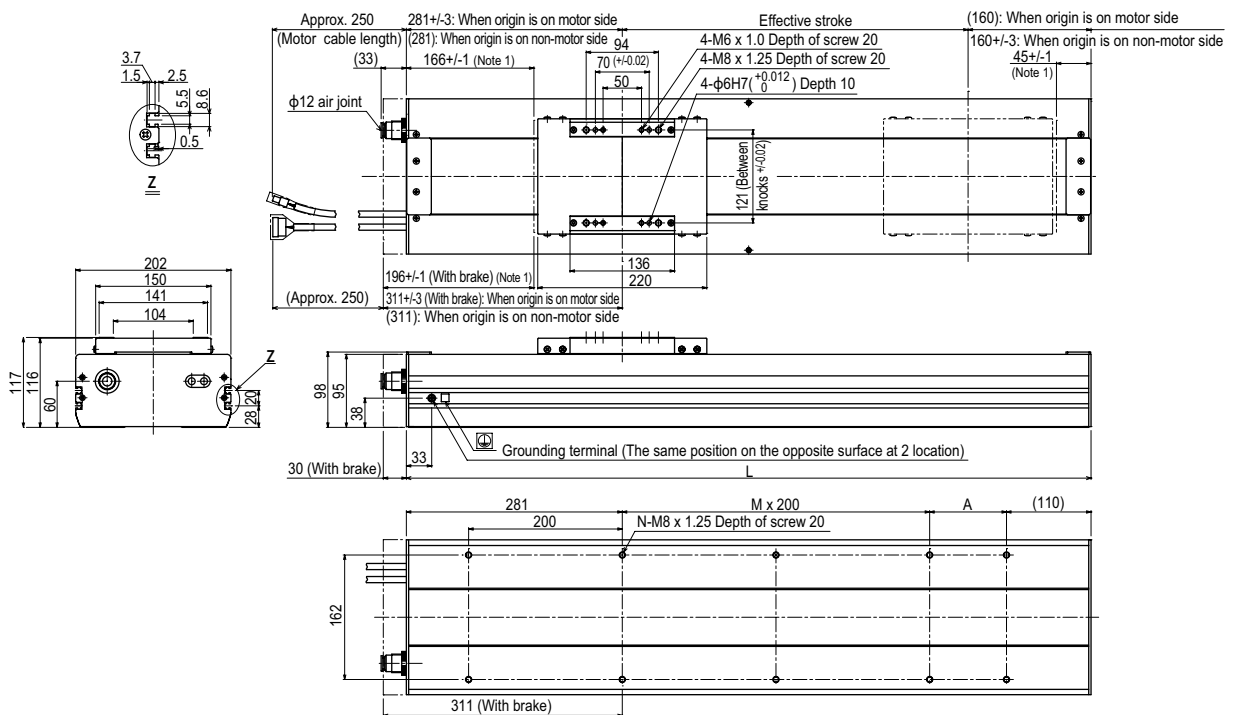
Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

## Controller

Controller	Operation method
SR1-X20 Note 6	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX221/222, RCX240/340	I/O point trace / Remote command
TS-X220 Note 6	Pulse train control
RDV-X220-RBR1 (Horizontal)	
RDV-X220-RBR2 (Vertical)	

Note. [The following arrangements require a regeneration unit.]  
 • Using in the upright position.  
 • To move at a speed exceeding 1,000 mm/sec horizontally.  
 • High lead (40) used horizontally.

## C20



Effective stroke	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
L	641	691	741	791	841	891	941	991	1041	1091	1141	1191	1241	1291	1341	1391	1441	1491	1541	1591	1641	1691	
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	
N	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	
Weight (kg) Note 3	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	46.0	
Maximum speed Note 4												800	800	700	700	600	600	500					
(mm/sec)												400	400	350	350	300	300	250					
Speed setting												80%	80%	70%	70%	60%	60%	50%					

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Minimum bend radius of motor cable is R50.  
 Note 3. Weight of models with no brake. The weight of brake-attached models is 2.0 kg heavier than the models with no brake shown in the table.  
 Note 4. When the stroke is longer than 950mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

Controller

SR1-X ▶ 518

TS-X ▶ 492

RDV-X ▶ 506

# SXYxC 2 axes

● Clean type ● Cable duct



## Ordering method

<b>SXYxC</b>	<b>D</b>					<b>RCX222</b>			
Model	Cable	Combination	X axis stroke	Y axis stroke	Cable length	Controller	Usable for CE	Input/Output selection 1	Input/Output selection 2
	D: Cable duct	T1 T2 T3	15 to 105cm	15 to 65cm	3L: 3.5m 5L: 5m 10L: 10m	RCX222	No entry: Standard E: CE marking	N: NPN Note 1 P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS EN: Ethernet YC: YC-Link Note 2	No entry: None N: OP.DIO24/16 (NPN) Note 2 P: OP.DIO24/17 (PNP) EN: Ethernet Note 3

Note 1. NPN cannot be selected if using CE marking.  
 Note 2. Available only for the master. See P.68 for details on YC-Link system.  
 Note 3. Only when CC or DN or PB was selected for I/O select 1 above, EN can be selected in I/O select 2.

## Basic specifications

	X axis	Y axis
<b>Axis construction</b> Note 1	C14H	C14
<b>AC servo motor output (W)</b>	200	100
<b>Repeatability</b> Note 2 (mm)	+/-0.01	+/-0.01
<b>Drive system</b>	Ball screw (Class C7)	Ball screw (Class C7)
<b>Ball screw lead</b> Note 3 (Deceleration ratio) (mm)	20	20
<b>Maximum speed</b> Note 4 (mm/sec)	1000	1000
<b>Moving range (mm)</b>	150 to 1050	150 to 650
<b>Robot cable length (m)</b>	Standard: 3.5 Option: 5, 10	
<b>Degree of cleanliness</b>	CLASS 10 Note 5	
<b>Intake air (Nℓ/min)</b>	60 Note 6	

Note 1. Use caution that the frame machining (installation holes, tap holes) differs from single-axis robots.  
 Note 2. Positioning repeatability in one direction.  
 Note 3. Leads not listed in the catalog are also available. Contact us for details.  
 Note 4. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 5. Per 1cf (0.1µm base), when suction blower is used.  
 Note 6. The necessary intake amount varies depending on the use conditions and environment.

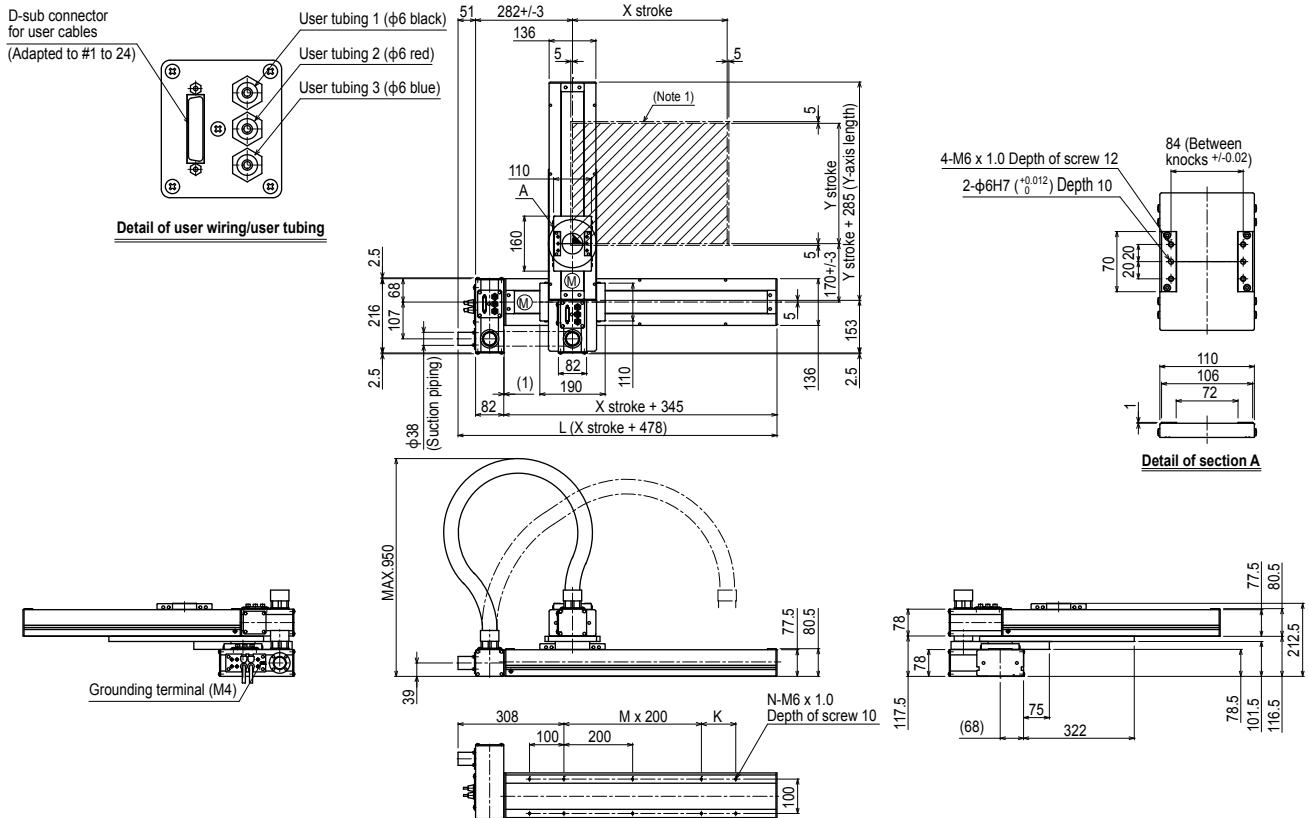
## Maximum payload (kg)

Y stroke (mm)	XY 2 axes
150	20
250	17
350	15
450	13
550	11
650	9

## Controller

Controller	Operation method
RCX222	Programming / I/O point trace / Remote command / Operation using RS-232C communication

## SXYxC 2 axes T1

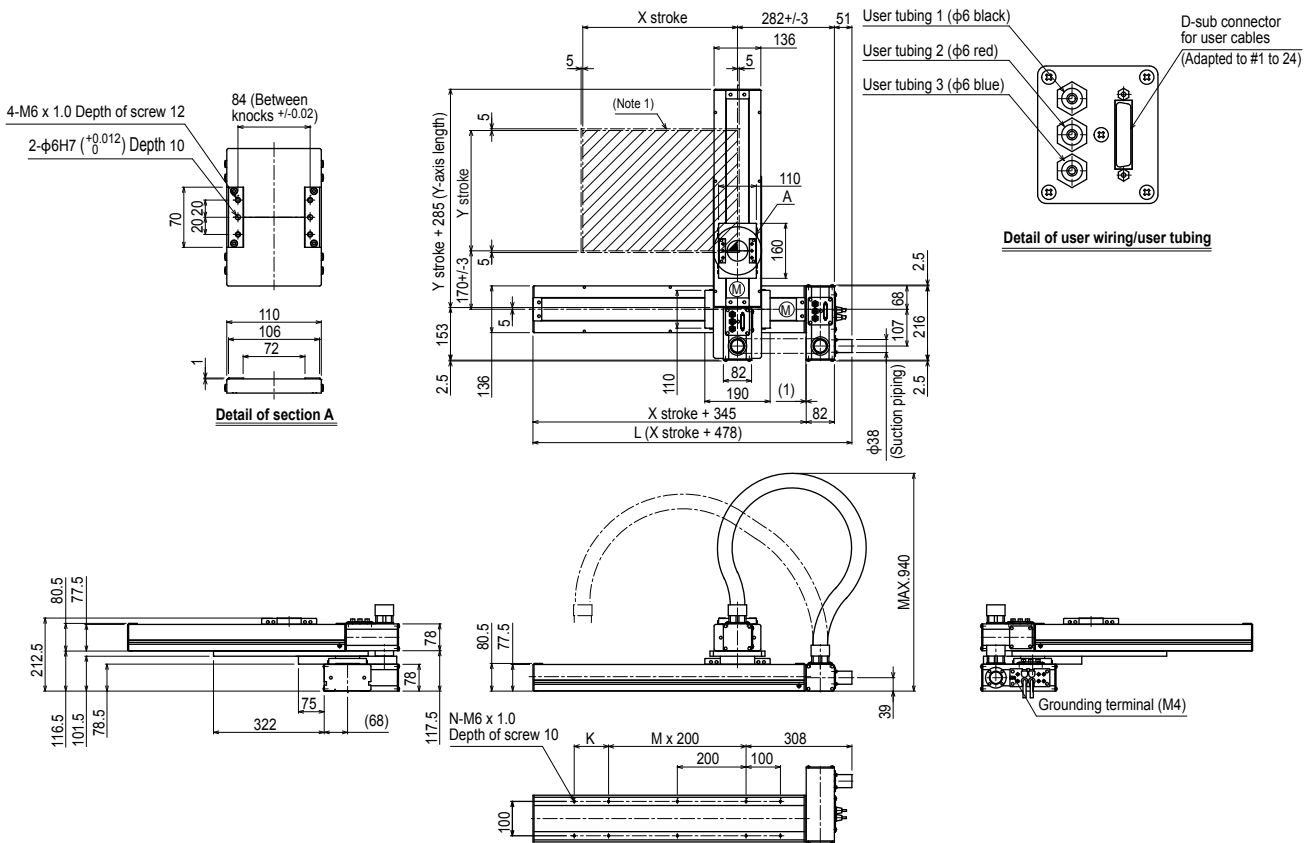


X stroke	150	250	350	450	550	650	750	850	950	1050	
	L	628	728	828	928	1028	1128	1228	1328	1428	1528
K	200	100	200	100	200	100	200	100	200	100	
M	0	1	1	2	2	3	3	4	4	5	
N	6	8	8	10	10	12	12	14	14	16	
Y stroke	150	250	350	450	550	650					
<b>Maximum speed for each stroke (mm/sec)</b> Note 2	1000						800	650	550		
<b>Speed setting</b>	-						80%	65%	55%		

Note 1. The moving range when returning to origin and the stop position when stopping by mechanical stopper.

Note 2. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

SXYxC 2 axes T3



X stroke	150	250	350	450	550	650	750	850	950	1050
L	628	728	828	928	1028	1128	1228	1328	1428	1528
K	200	100	200	100	200	100	200	100	200	100
M	0	1	1	2	2	3	3	4	4	5
N	6	8	8	10	10	12	12	14	14	16
Y stroke	150	250	350	450	550	650				
Maximum speed for each stroke (mm/sec) <sup>Note 2</sup>	X axis			1000			800	650	550	
Speed setting				-			80%	65%	55%	

Note 1. The moving range when returning to origin and the stop position when stopping by mechanical stopper.

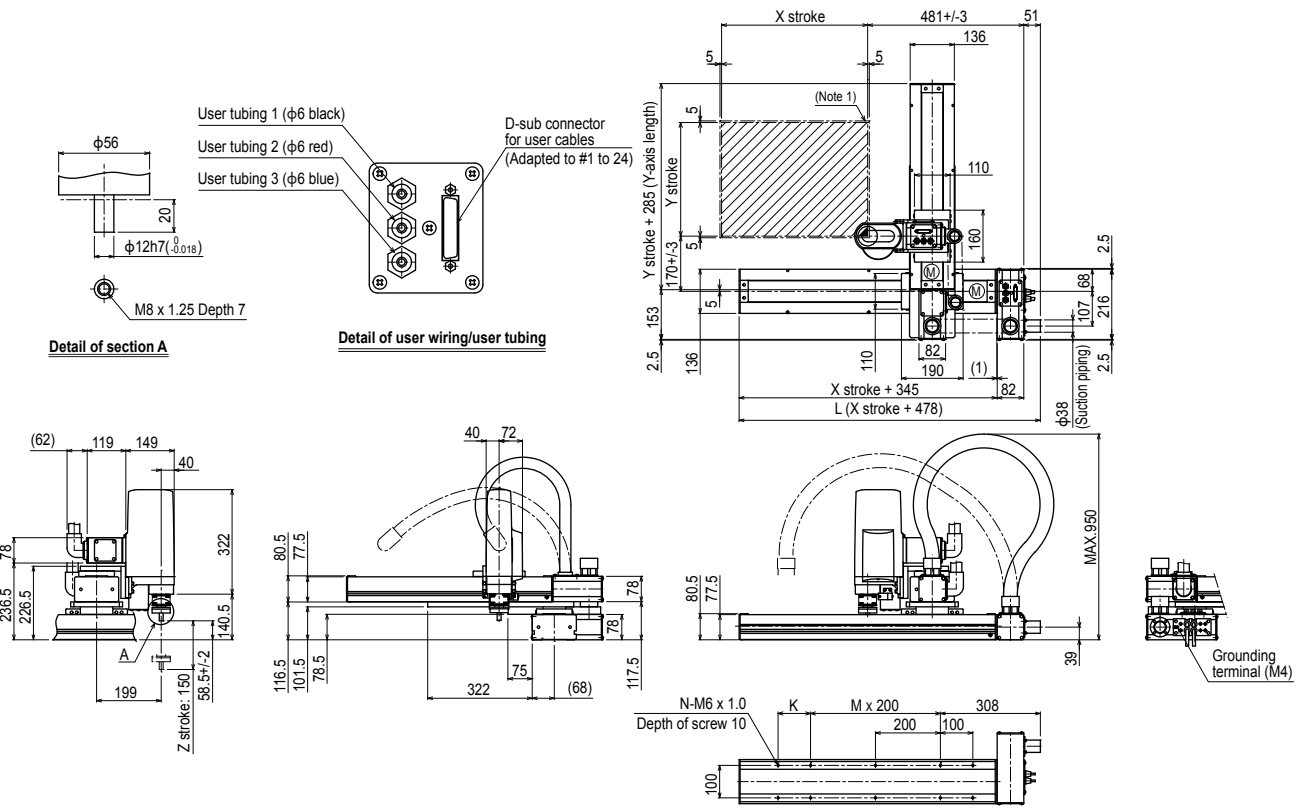
Note 2. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.







SXYxC 4 axes / ZRSC T3



X stroke	150	250	350	450	550	650	750	850	950	1050	
L	628	728	828	928	1028	1128	1228	1328	1428	1528	
K	200	100	200	100	200	100	200	100	200	100	
M	0	1	1	2	2	3	3	4	4	5	
N	6	8	8	10	10	12	12	14	14	16	
Y stroke	150	250	350	450	550	650					
Z stroke	150										
Maximum speed for each stroke (mm/sec)	1000					800		650	550		
Speed setting	-					80%		65%	55%		

Note 1. The moving range when returning to origin and the stop position when stopping by mechanical stopper.

Note 2. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.







# YK250XGC

● Arm length 250mm ● Maximum payload 4kg



## Ordering method

**YK250XGC - 150** **S** **RCX340-4**

Model	Z axis stroke	Tool flange	Hollow shaft	Cable length	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
	150, 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.544**

**RCX240S**

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

	X axis	Y axis	Z axis	R axis
<b>Axis specifications</b>				
Arm length (mm)	100	150	150	-
Rotation angle (°)	+/-129	+/-134	-	+/-360
<b>AC servo motor output (W)</b>	200	150	50	100
<b>Repeatability</b> <sup>Note 1</sup> (XYZ: mm) (R: °)	+/-0.01		+/-0.01	+/-0.004
<b>Maximum speed (XYZ: m/sec) (R: °/sec)</b>	4.5		1.1	1020
<b>Maximum payload (kg)</b>	4			
<b>Standard cycle time: with 2kg payload (sec)</b> <sup>Note 2</sup>	0.57			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup> (kgm <sup>2</sup> )	0.05			
<b>User wiring (sq x wires)</b>	0.2x10			
<b>User tubing (Outer diameter)</b>	φ4x4			
<b>Travel limit</b>	1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
<b>Robot cable length (m)</b>	Standard: 3.5 Option: 5, 10			
<b>Weight (kg)</b>	21.5			
<b>Degree of cleanliness</b>	ISO CLASS 3 (ISO 14644-1) <sup>Note 4+ESD</sup> <sup>Note 5</sup>			
<b>Intake air (Nℓ/min)</b>	30 <sup>Note 6</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).  
 Note 3. There are limits to acceleration coefficient settings. See P.609.  
 Note 4. Class 10 (0.1μm) equivalent to FED-STD-209D  
 Note 5. ESD (ElectroStatic Discharge) prevention is an option. Please contact our distributor.  
 Note 6. The necessary intake amount varies depending on the use conditions and environment.

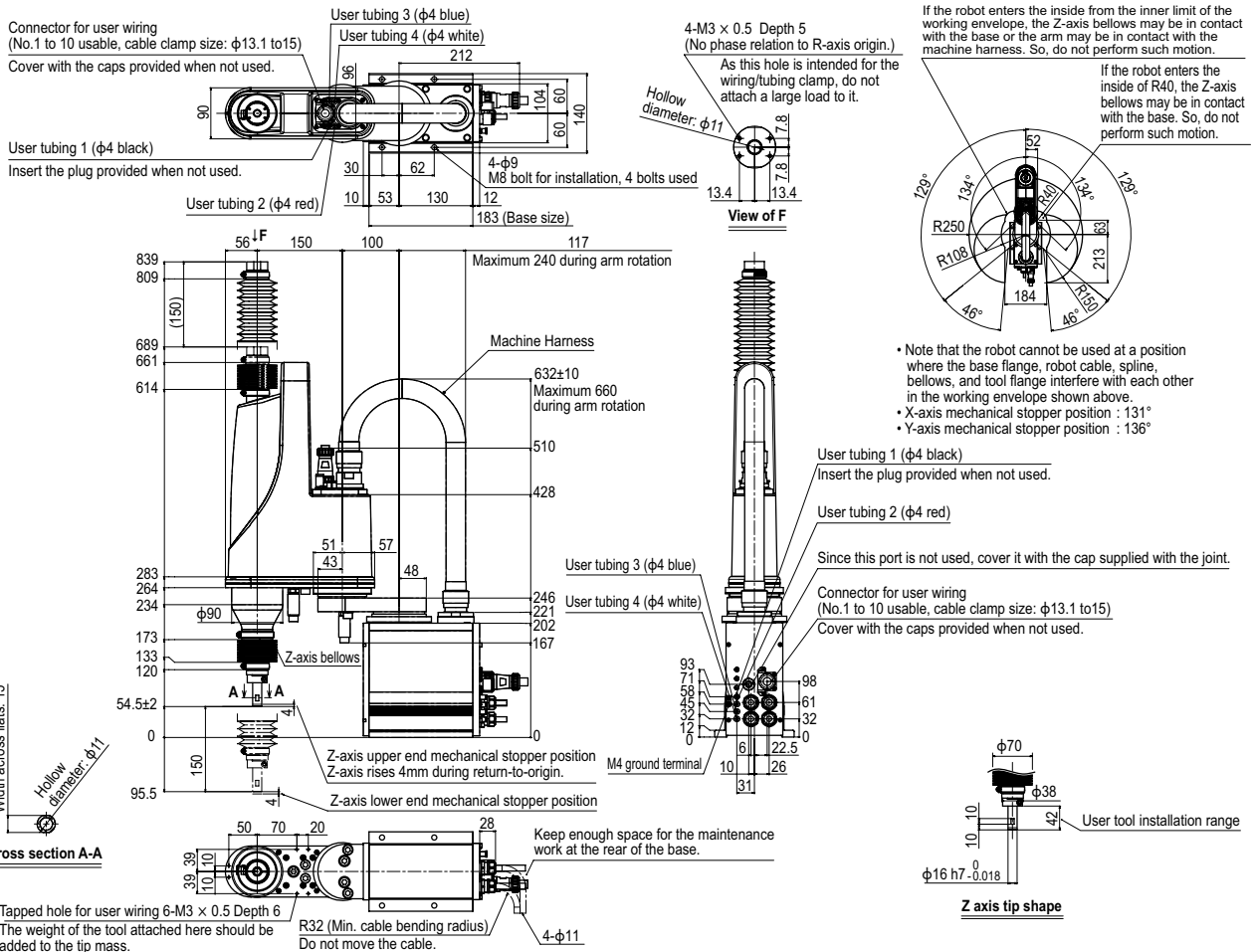
## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

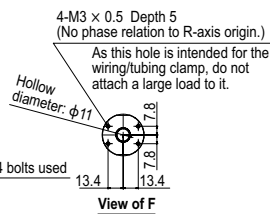
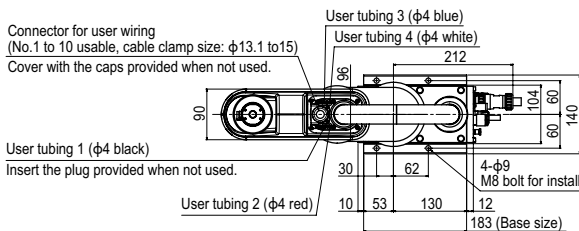
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.  
 Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.  
 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<http://global.yamaha-motor.com/business/robot/>

## YK250XGC

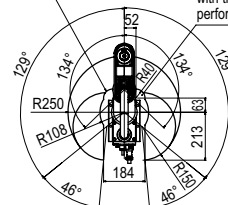


YK250XGC Tool flange mount type

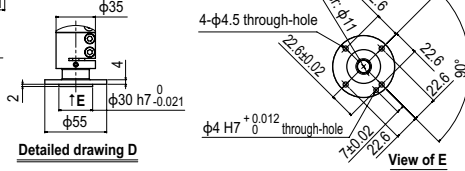
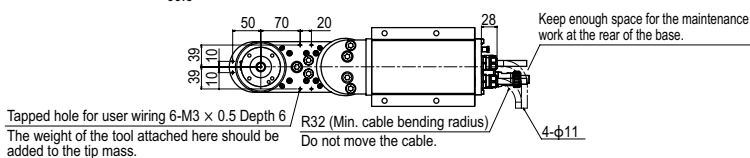
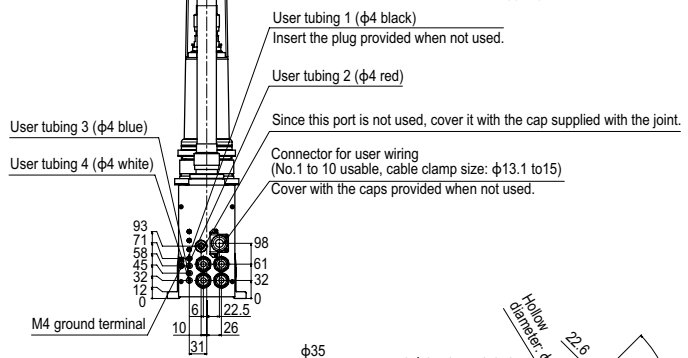
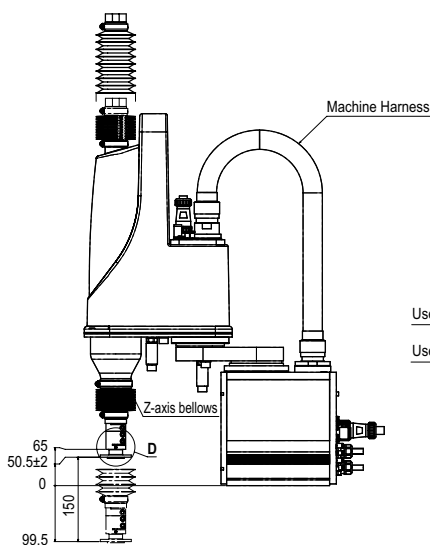


If the robot enters the inside from the inner limit of the working envelope, the Z-axis bellows may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

If the robot enters the inside of R40, the Z-axis bellows may be in contact with the base. So, do not perform such motion.



- Note that the robot cannot be used at a position where the base flange, robot cable, spline, bellows, and tool flange interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 131°
- Y-axis mechanical stopper position : 136°



# YK350XGC

● Arm length 350mm ● Maximum payload 4kg

## Ordering method

**YK350XGC - 150**

<b>Model</b>	<b>Z axis stroke</b> 150: 150mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Hollow shaft</b> S: With hollow shaft	<b>Cable length</b> 3L: 3.5m 5L: 5m 10L: 10m
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**S**

**RCX340-4**

<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A (OP.A)</b>	<b>Option B (OP.B)</b>	<b>Option C (OP.C)</b>	<b>Option D (OP.D)</b>	<b>Option E (OP.E)</b>	<b>Absolute battery</b>
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Specify various controller setting items. RCX340 ▶ **P.544**

**RCX240S**

<b>Controller</b>	<b>CE Marking</b>	<b>Expansion I/O</b>	<b>Network option</b>	<b>iVY System</b>	<b>Gripper</b>	<b>Battery</b>
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

	X axis	Y axis	Z axis	R axis
<b>Axis specifications</b>				
<b>Arm length (mm)</b>	200	150	150	-
<b>Rotation angle (°)</b>	+/-129	+/-134	-	+/-360
<b>AC servo motor output (W)</b>	200	150	50	100
<b>Repeatability</b> <sup>Note 1</sup> (XYZ: mm) (R: °)	+/-0.01		+/-0.01	+/-0.004
<b>Maximum speed (XYZ: m/sec) (R: °/sec)</b>	5.6		1.1	1020
<b>Maximum payload (kg)</b>	4			
<b>Standard cycle time: with 2kg payload (sec)</b> <sup>Note 2</sup>	0.57			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup> (kgm <sup>2</sup> )	0.05			
<b>User wiring (sq x wires)</b>	0.2x10			
<b>User tubing (Outer diameter)</b>	φ4x4			
<b>Travel limit</b>	1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
<b>Robot cable length (m)</b>	Standard: 3.5 Option: 5, 10			
<b>Weight (kg)</b>	22			
<b>Degree of cleanliness</b>	ISO CLASS 3 (ISO 14644-1) <sup>Note 4+ESD</sup> <sup>Note 5</sup>			
<b>Intake air (Nl/min)</b>	30 <sup>Note 6</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).  
 Note 3. There are limits to acceleration coefficient settings. See P.609.  
 Note 4. Class 10 (0.1µm) equivalent to FED-STD-209D  
 Note 5. ESD (ElectroStatic Discharge) prevention is an option. Please contact our distributor.  
 Note 6. The necessary intake amount varies depending on the use conditions and environment.

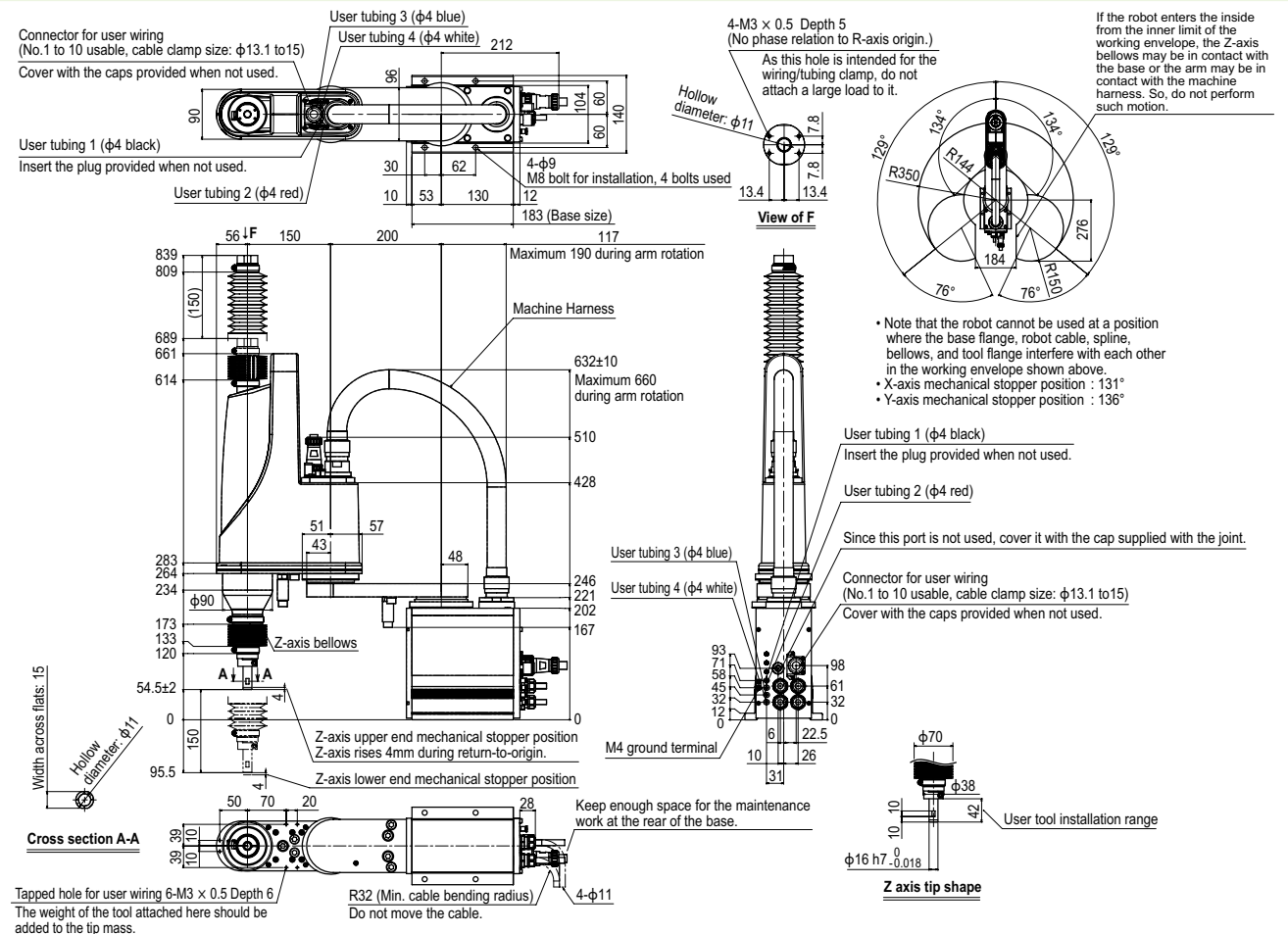
## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.  
 Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.  
 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<http://global.yamaha-motor.com/business/robot/>

## YK350XGC





# YK400XGC

● Arm length 400mm ● Maximum payload 4kg



## Ordering method

**YK400XGC - 150** **S** **RCX340-4**

Model: Z axis stroke 150: 150mm; Tool flange: No entry: None, F: With tool flange; Hollow shaft: S: With hollow shaft; Cable length: 3L: 3.5m, 5L: 5m, 10L: 10m

Controller / Number of controllable axes: RCX340-4; Safety standard; Option A (OP.A); Option B (OP.B); Option C (OP.C); Option D (OP.D); Option E (OP.E); Absolute battery

Specify various controller setting items. RCX340 ▶ **P544**

**RCX240S**

Controller; CE Marking; Expansion I/O; Network option; IVY System; Gripper; Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P534**

## Basic specifications

	X axis	Y axis	Z axis	R axis
<b>Axis specifications</b>				
Arm length (mm)	250	150	150	-
Rotation angle (°)	+/-129	+/-144	-	+/-360
<b>AC servo motor output (W)</b>	200	150	50	100
<b>Repeatability</b> <sup>Note 1</sup> (XYZ: mm) (R: °)	+/-0.01		+/-0.01	+/-0.004
<b>Maximum speed</b> (XYZ: m/sec) (R: °/sec)	6.1		1.1	1020
<b>Maximum payload (kg)</b>	4			
<b>Standard cycle time: with 2kg payload (sec)</b> <sup>Note 2</sup>	0.57			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup> (kgm <sup>2</sup> )	0.05			
<b>User wiring</b> (sq x wires)	0.2x10			
<b>User tubing</b> (Outer diameter)	φ4x4			
<b>Travel limit</b>	1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
<b>Robot cable length (m)</b>	Standard: 3.5 Option: 5, 10			
<b>Weight (kg)</b>	22.5			
<b>Degree of cleanliness</b>	ISO CLASS 3 (ISO 14644-1) <sup>Note 4+ESD</sup> <sup>Note 5</sup>			
<b>Intake air (Nl/min)</b>	30 <sup>Note 6</sup>			

## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

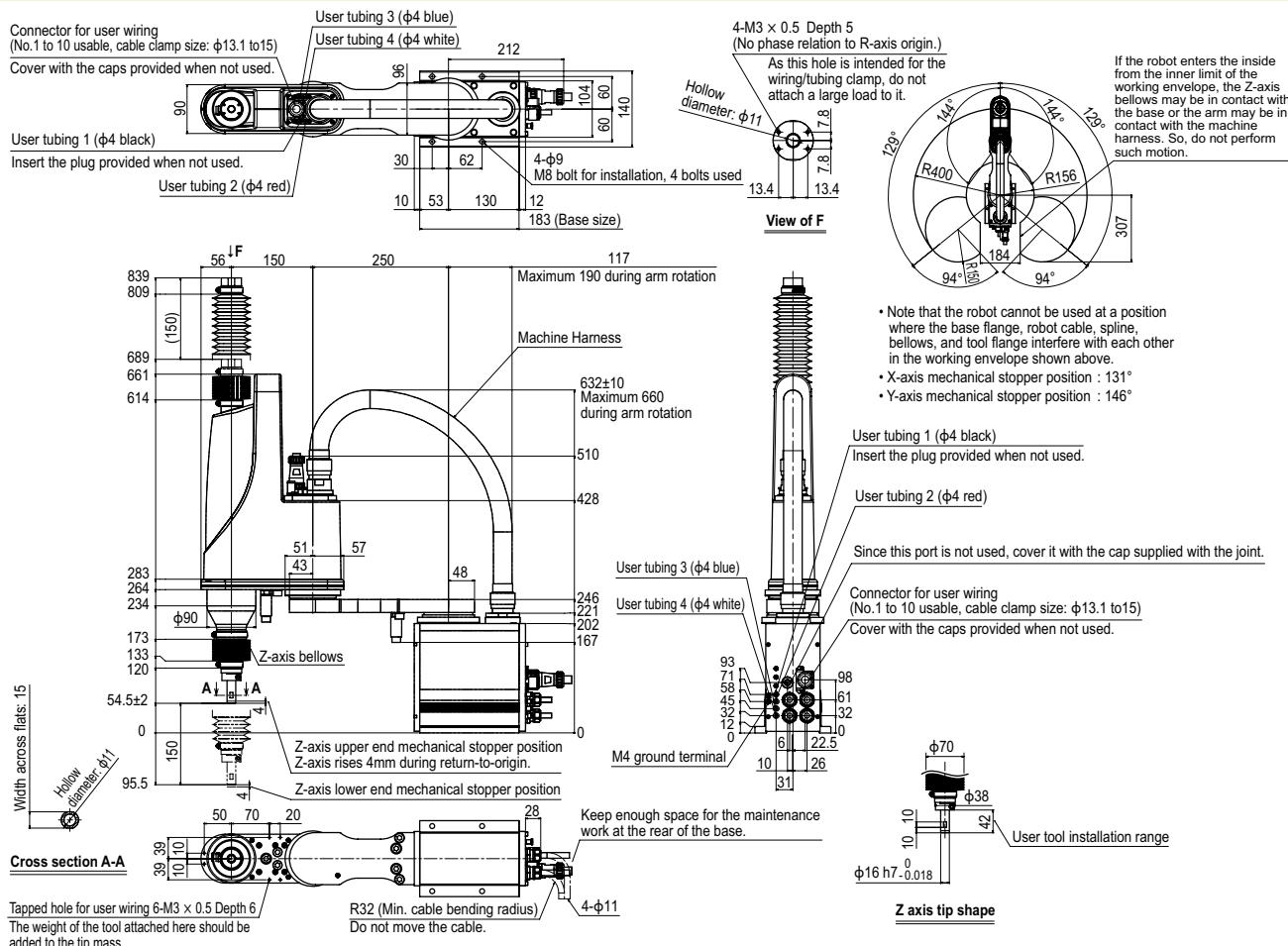
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
See our robot manuals (installation manuals) for detailed information.

Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

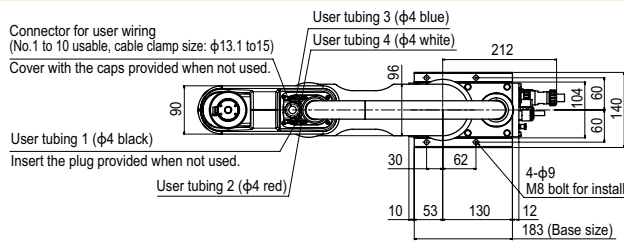
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<http://global.yamaha-motor.com/business/robot/>

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).  
Note 3. There are limits to acceleration coefficient settings. See P.610.  
Note 4. Class 10 (0.1µm) equivalent to FED-STD-209D  
Note 5. ESD (ElectroStatic Discharge) prevention is an option. Please contact our distributor.  
Note 6. The necessary intake amount varies depending on the use conditions and environment.

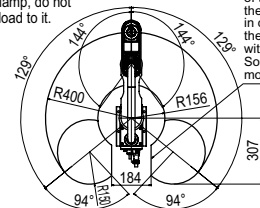
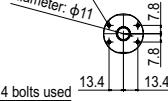
## YK400XGC



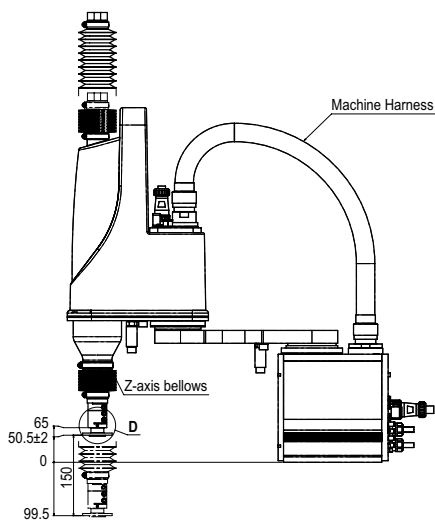
## YK400XGC Tool flange mount type



4-M3  $\times$  0.5 Depth 5  
(No phase relation to R-axis origin.)  
As this hole is intended for the wiring/tubing clamp, do not attach a large load to it.

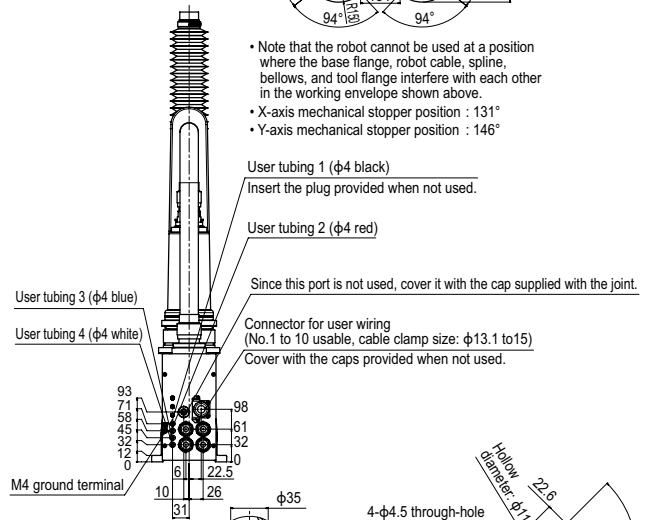


If the robot enters the inside from the inner limit of the working envelope, the Z-axis bellows may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.



Tapped hole for user wiring 6-M3  $\times$  0.5 Depth 6  
The weight of the tool attached here should be added to the tip mass.

R32 (Min. cable bending radius)  
Do not move the cable.



- Note that the robot cannot be used at a position where the base flange, robot cable, spline, bellows, and tool flange interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position :  $131^\circ$
- Y-axis mechanical stopper position :  $146^\circ$

User tubing 1 ( $\phi 4$  black)  
Insert the plug provided when not used.

User tubing 2 ( $\phi 4$  red)

Since this port is not used, cover it with the cap supplied with the joint.

Connector for user wiring (No.1 to 10 usable, cable clamp size:  $\phi 13.1$  to  $15$ )  
Cover with the caps provided when not used.

Detailed drawing D

# YK500XGLC

● Arm length 500mm ● Maximum payload 4kg

## Ordering method

**YK500XGLC - 150** **S** **RCX340-4**

Model Z axis stroke (150: 150mm) Tool flange (No entry: None, F: With tool flange) Hollow shaft (S: With hollow shaft) Cable length (3L: 3.5m, 5L: 5m, 10L: 10m)

Controller / Number of controllable axes Safety standard Option A (OP.A) Option B (OP.B) Option C (OP.C) Option D (OP.D) Option E (OP.E) Absolute battery

**RCX240S**

Controller CE Marking Expansion I/O Network option IVY System Gripper Battery

Specify various controller setting items. RCX340 ▶ **P.544**

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
	Rotation angle (°)	+/-129	+/-144	-	+/-360
<b>AC servo motor output (W)</b>		200	150	50	100
<b>Repeatability<sup>Note 1</sup> (XYZ: mm) (R: °)</b>		+/-0.01		+/-0.01	+/-0.004
<b>Maximum speed (XYZ: m/sec) (R: °/sec)</b>		5.1		1.1	1020
<b>Maximum payload (kg)</b>		4			
<b>Standard cycle time: with 2kg payload (sec)<sup>Note 2</sup></b>		0.74			
<b>R-axis tolerable moment of inertia<sup>Note 3</sup> (kgm<sup>2</sup>)</b>		0.05			
<b>User wiring (sq x wires)</b>		0.2x10			
<b>User tubing (Outer diameter)</b>		φ4x4			
<b>Travel limit</b>		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
<b>Robot cable length (m)</b>		Standard: 3.5 Option: 5, 10			
<b>Weight (kg)</b>		25			
<b>Degree of cleanliness</b>		ISO CLASS 3 (ISO 14644-1) <sup>Note 4</sup> +ESD <sup>Note 5</sup>			
<b>Intake air (Nl/min)</b>		30 <sup>Note 6</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).  
 Note 3. There are limits to acceleration coefficient settings. See P.610.  
 Note 4. Class 10 (0.1µm) equivalent to FED-STD-209D  
 Note 5. ESD (ElectroStatic Discharge) prevention is an option. Please contact our distributor.  
 Note 6. The necessary intake amount varies depending on the use conditions and environment.

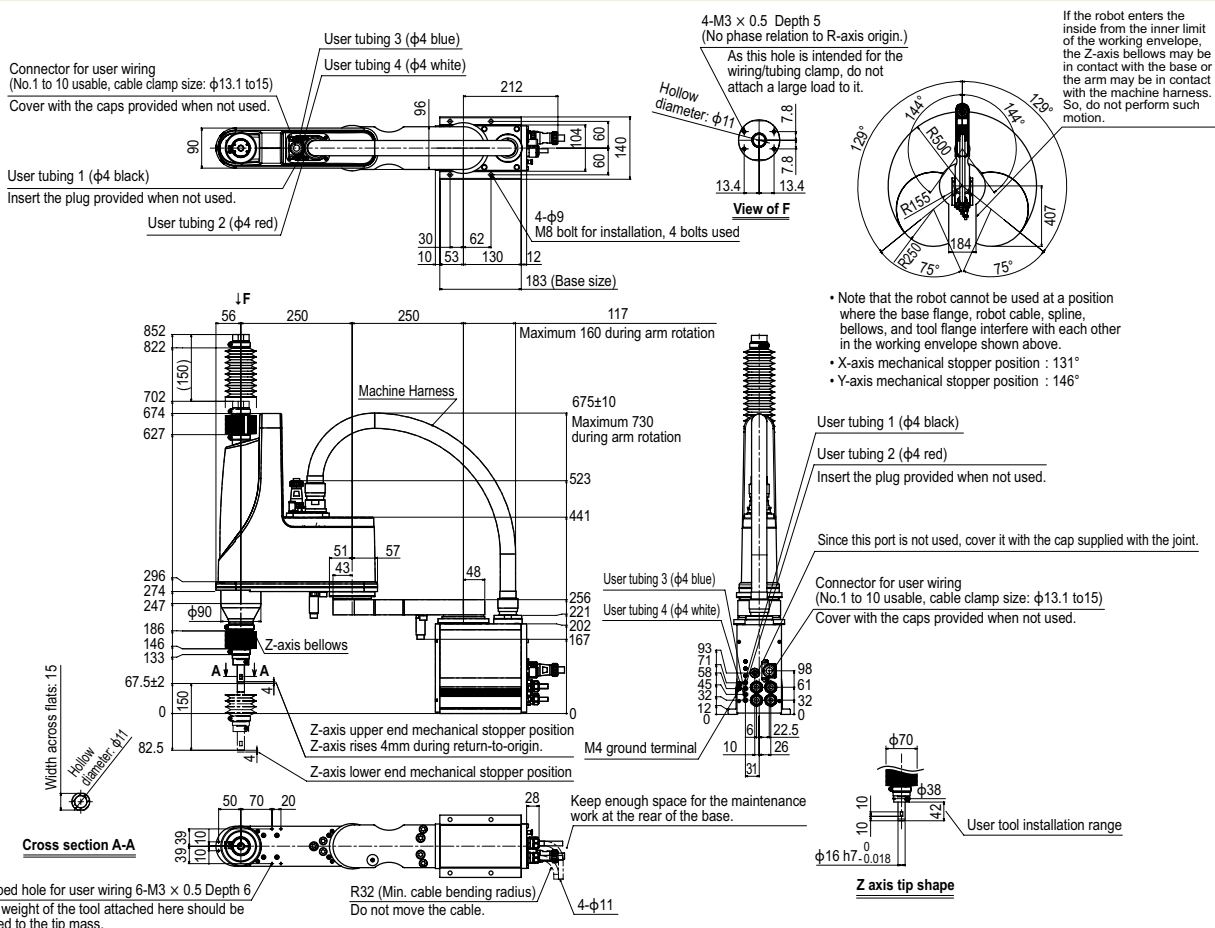
## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.  
 Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.  
 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
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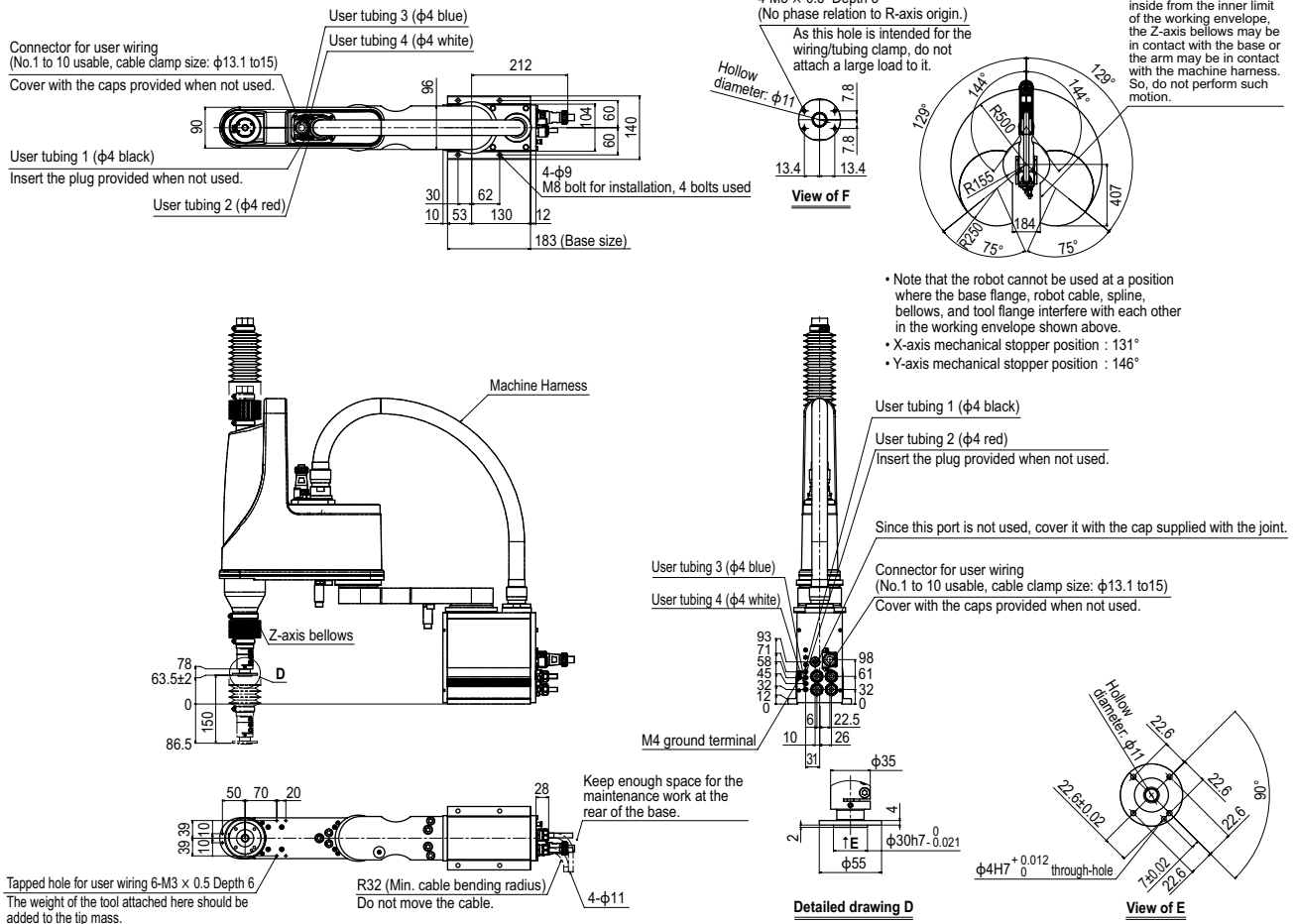
## YK500XGLC



- Note that the robot cannot be used at a position where the base flange, robot cable, spline, bellows, and tool flange interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 131°
- Y-axis mechanical stopper position : 146°



YK500XGLC Tool flange mount type



# YK500XC

● Arm length 500mm ● Maximum payload 10kg



## Ordering method

**YK500XC**   **RCX340-4**

**Model** **Z axis stroke** **Cable length** **Controller / Number of controllable axes** **Safety standard** **Option A (OP.A)** **Option B (OP.B)** **Option C (OP.C)** **Option D (OP.D)** **Option E (OP.E)** **Absolute battery**

**Specify various controller setting items. RCX340 ▶ P.544**

**RCX240**   **R**

**Controller** **CE Marking** **Regenerative unit** **Expansion I/O** **Network option** **IVY System** **Gripper** **Battery**

**Specify various controller setting items. RCX240/RCX240S ▶ P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
Rotation angle (°)		+/-120	+/-142	-	+/-180
AC servo motor output (W)		400	200	200	100
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.02		+/-0.01	+/-0.005
Maximum speed (XYZ: m/sec) (R: °/sec)		4.9		1.7	876
Maximum payload (kg)		10			
Standard cycle time: with 2kg payload (sec)		0.53			
R-axis tolerable moment of inertia <sup>Note 2</sup> (kgm <sup>2</sup> )		0.12			
User wiring (sq x wires)		0.2 x 20			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
Robot cable length (m)		Standard: 3.5 Option: 5, 10			
Weight (kg)		31			
Degree of cleanliness		CLASS 10 <sup>Note 3</sup>			
Intake air (Nl/min)		60 <sup>Note 4</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. There are limits to acceleration coefficient settings.  
 Note 3. Per 1cf (0.1μm base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Controller

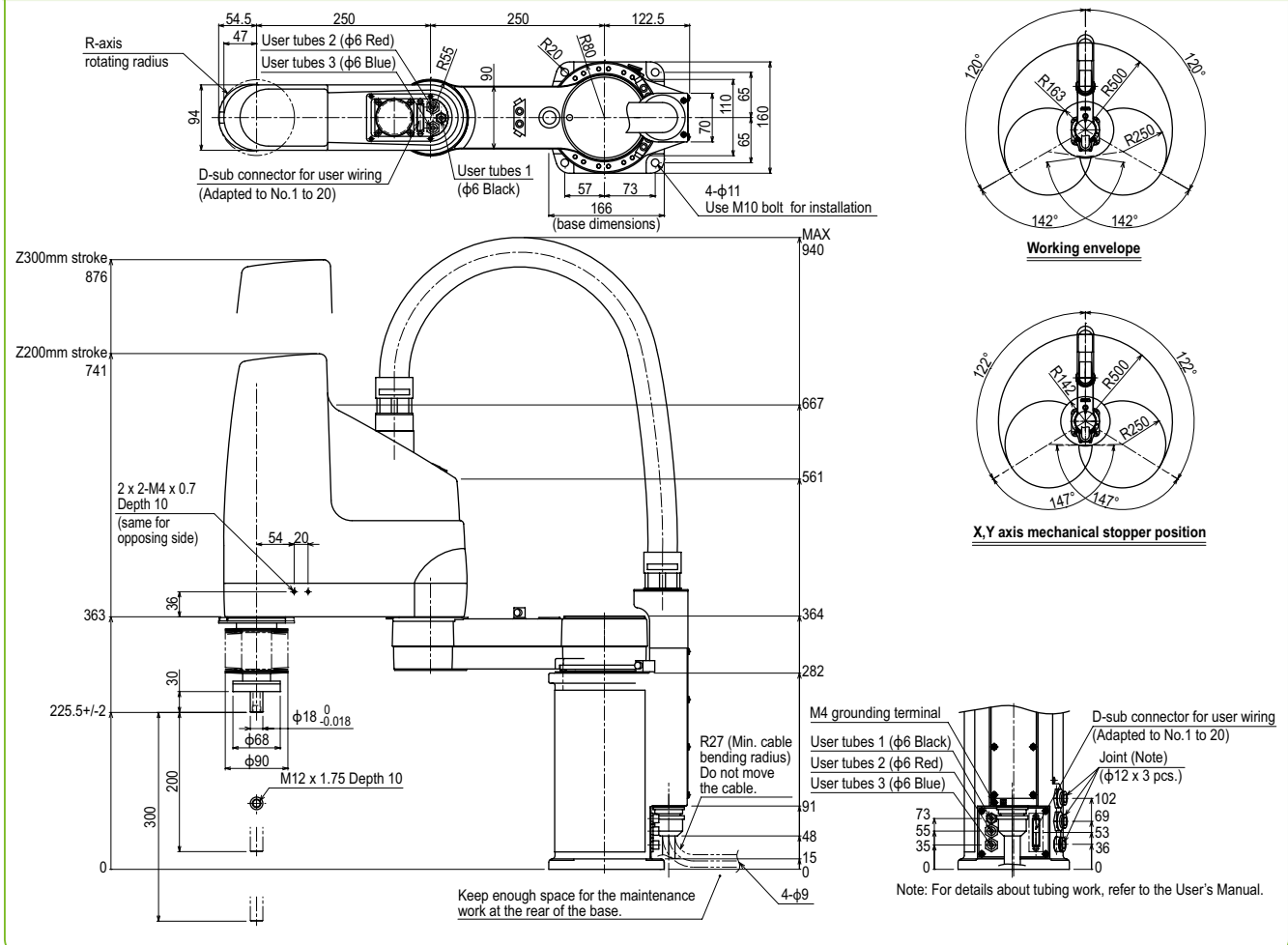
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R	1500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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## YK500XC



# YK600XGLC

● Arm length 600mm ● Maximum payload 4kg

## Ordering method

**YK600XGLC - 150** **S**

<b>Model</b>	Z axis stroke 150: 150mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Hollow shaft</b> S: With hollow shaft	<b>Cable length</b> 3L: 3.5m 5L: 5m 10L: 10m
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**RCX340-4** **RCX240S**

<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A (OP.A)</b>	<b>Option B (OP.B)</b>	<b>Option C (OP.C)</b>	<b>Option D (OP.D)</b>	<b>Option E (OP.E)</b>	<b>Absolute battery</b>
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Specify various controller setting items. RCX340 ▶ **P.544**

<b>Controller</b>	<b>CE Marking</b>	<b>Expansion I/O</b>	<b>Network option</b>	<b>IVY System</b>	<b>Gripper</b>	<b>Battery</b>
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
	350	350	250	150	-
	Rotation angle (°)	+/-129	+/-144	-	+/-360
<b>AC servo motor output (W)</b>		200	150	50	100
<b>Repeatability<sup>Note 1</sup> (XYZ: mm) (R: °)</b>		+/-0.01		+/-0.01	+/-0.004
<b>Maximum speed (XYZ: m/sec) (R: °/sec)</b>		4.9		1.1	1020
<b>Maximum payload (kg)</b>		4			
<b>Standard cycle time: with 2kg payload (sec)<sup>Note 2</sup></b>		0.74			
<b>R-axis tolerable moment of inertia<sup>Note 3</sup> (kgm<sup>2</sup>)</b>		0.05			
<b>User wiring (sq x wires)</b>		0.2x10			
<b>User tubing (Outer diameter)</b>		φ4x4			
<b>Travel limit</b>		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
<b>Robot cable length (m)</b>		Standard: 3.5 Option: 5, 10			
<b>Weight (kg)</b>		26			
<b>Degree of cleanliness</b>		ISO CLASS 3 (ISO 14644-1) <sup>Note 4</sup> +ESD <sup>Note 5</sup>			
<b>Intake air (Nl/min)</b>		30 <sup>Note 6</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).  
 Note 3. There are limits to acceleration coefficient settings. See P.610.  
 Note 4. Class 10 (0.1µm) equivalent to FED-STD-209D  
 Note 5. ESD (ElectroStatic Discharge) prevention is an option. Please contact our distributor.  
 Note 6. The necessary intake amount varies depending on the use conditions and environment.

## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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## YK600XGLC

**Connector for user wiring** (No.1 to 10 usable, cable clamp size: φ13.1 to15)  
 Cover with the caps provided when not used.

**User tubing 1 (φ4 black)**  
 Insert the plug provided when not used.

**User tubing 2 (φ4 red)**

**User tubing 3 (φ4 blue)**

**User tubing 4 (φ4 white)**

**4-M3 x 0.5 Depth 5** (No phase relation to R-axis origin.)  
 As this hole is intended for the wiring/tubing clamp, do not attach a large load to it.

**Hollow diameter: φ11**

**View of F**

**Machine Harness**

**Z-axis bellows**

**Z-axis upper end mechanical stopper position**  
 Z-axis rises 4mm during return-to-origin.

**Z-axis lower end mechanical stopper position**

**Cross section A-A**

**Tapped hole for user wiring 6-M3 x 0.5 Depth 6**  
 The weight of the tool attached here should be added to the tip mass.

**R32** (Min. cable bending radius)  
 Do not move the cable.

**4-φ11**

**M4 ground terminal**

**Keep enough space for the maintenance work at the rear of the base.**

**Z axis tip shape**

**φ16 h7-0.018**

**φ70**

**φ38**

**User tool installation range**

The arm may be in contact with the machine harness in an area inside from the inner limit of this working envelope. So, do not operate the arm in this area.

- Note that the robot cannot be used at a position where the base flange, robot cable, spine, bellows, and tool flange interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 131°
- Y-axis mechanical stopper position : 146°

Articulated robots  
YA

Linear conveyor modules  
LCM100

Compact single-axis robots  
TRANSERVO

Single-axis robots  
FLIP-X

Linear motor single-axis robots  
PHASER

Cartesian robots  
XX-X

SCARA robots  
YK-X

Pick & place robots  
YP-X

CLEAN

CONTROLLER INFORMATION

Single-axis  
Cartesian

SCARA



# YK600XC

● Arm length 600mm ● Maximum payload 10kg



## Ordering method

**YK600XC** [ ] [ ] **RCX340-4** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Model Z axis stroke Cable length Controller / Number of controllable axes Safety standard Option A (OP.A) Option B (OP.B) Option C (OP.C) Option D (OP.D) Option E (OP.E) Absolute battery

Z axis stroke: 200: 200mm, 300: 300mm  
Cable length: 3L: 3.5m, 5L: 5m, 10L: 10m

**Specify various controller setting items. RCX340 ▶ P.544**

**RCX240** [ ] **R** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Controller CE Marking Regenerative unit Expansion I/O Network option iVY System Gripper Battery

**Specify various controller setting items. RCX240/RCX240S ▶ P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
Rotation angle (°)		+/-120	+/-145	-	+/-180
AC servo motor output (W)		400	200	200	100
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.02		+/-0.01	+/-0.005
Maximum speed (XYZ: m/sec) (R: °/sec)		5.6		1.7	876
Maximum payload (kg)		10			
Standard cycle time: with 2kg payload (sec)		0.56			
R-axis tolerable moment of inertia <sup>Note 2</sup> (kgm <sup>2</sup> )		0.12			
User wiring (sq x wires)		0.2 x 20			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
Robot cable length (m)		Standard: 3.5 Option: 5, 10			
Weight (kg)		33			
Degree of cleanliness		CLASS 10 <sup>Note 3</sup>			
Intake air (Nl/min)		60 <sup>Note 4</sup>			

Note 1. This is the value at a constant ambient temperature. (X, Y axes)  
 Note 2. There are limits to acceleration coefficient settings.  
 Note 3. Per 1cf (0.1μm base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

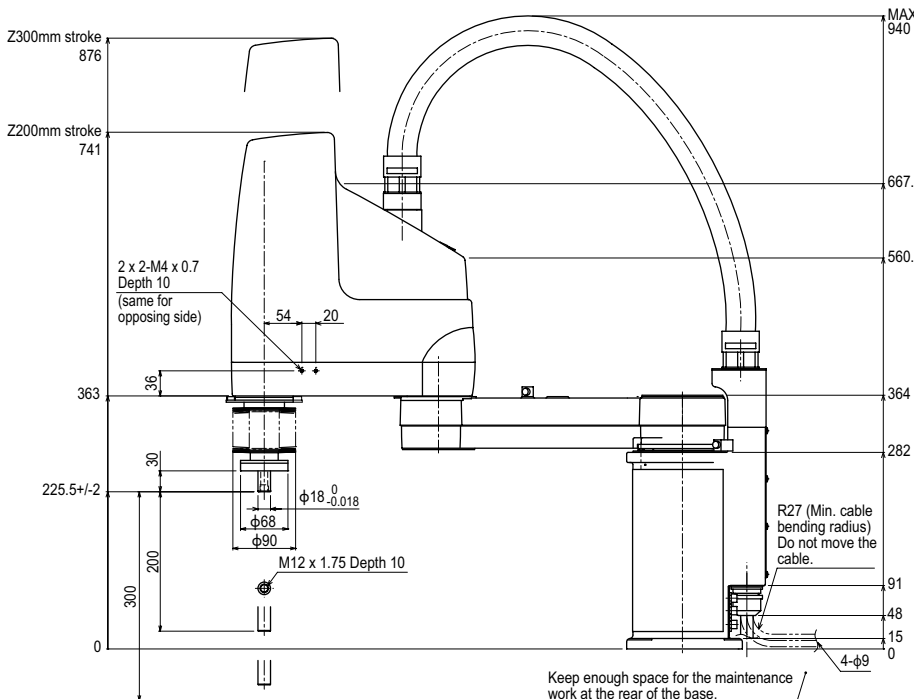
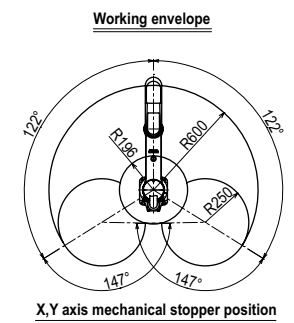
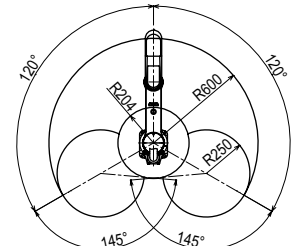
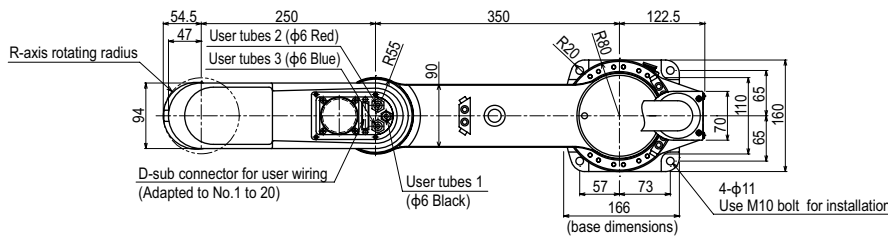
## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R	1500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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## YK600XC



Articulated robots  
YA

Linear conveyor modules  
LCM100

Compact single-axis robots  
TRANSEVO

Single-axis robots  
FLIP-X

Linear motor single-axis robots  
PHASER

Cartesian robots  
XX-X

SCARA robots  
YK-X

Pick & place robots  
YP-X

CLEAN

CONTROLLER INFORMATION

Single-axis  
Cartesian

SCARA

# YK700XC

● Arm length 700mm ● Maximum payload 20kg



## Ordering method

**YK700XC** [ ] [ ] **RCX340-4** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Model      Z axis stroke      Cable length      Controller / Number of controllable axes      Safety standard      Option A (OP.A)      Option B (OP.B)      Option C (OP.C)      Option D (OP.D)      Option E (OP.E)      Absolute battery

Z axis stroke: 200: 200mm, 400: 400mm  
Cable length: 3L: 3.5m, 5L: 5m, 10L: 10m

Specify various controller setting items. RCX340 ▶ **P.544**

**RCX240** [ ] **R** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Controller      CE Marking      Regenerative unit      Expansion I/O      Network option      iVY System      Gripper      Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
Rotation angle (°)		+/-120	+/-145	-	+/-180
AC servo motor output (W)		800	400	400	200
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.02		+/-0.01	+/-0.005
Maximum speed (XYZ: m/sec) (R: °/sec)		6.7		1.7	600
Maximum payload (kg)		20			
Standard cycle time: with 2kg payload (sec)		0.57			
R-axis tolerable moment of inertia <sup>Note 2</sup> (kgm <sup>2</sup> )		0.32			
User wiring (sq x wires)		0.2 x 20			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
Robot cable length (m)		Standard: 3.5 Option: 5, 10			
Weight (kg)		57			
Degree of cleanliness		CLASS 10 <sup>Note 3</sup>			
Intake air (Nl/min)		60 <sup>Note 4</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. There are limits to acceleration coefficient settings.  
 Note 3. Per 1cf (0.1μm base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

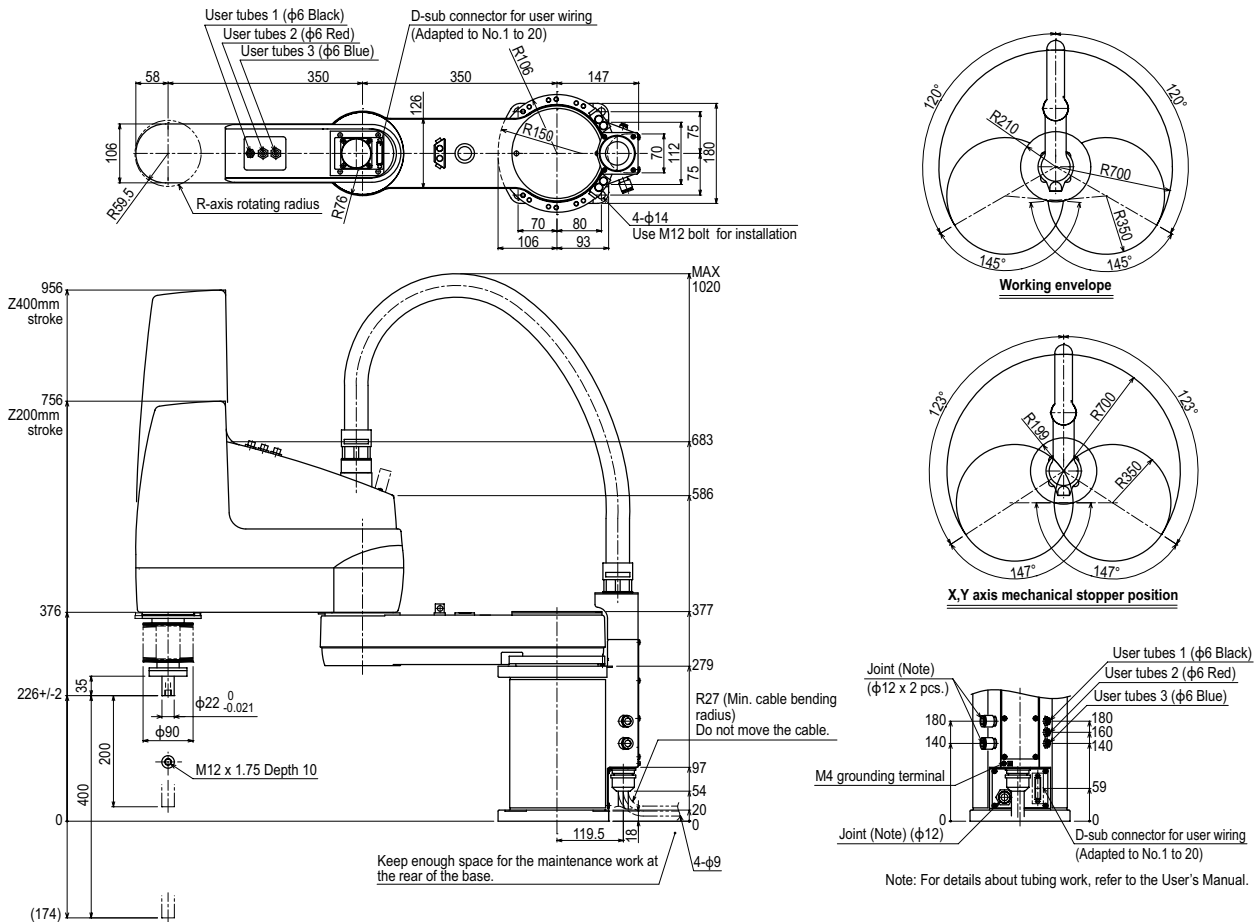
## Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R	2000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.  
 Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.

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## YK700XC



# YK800XC

● Arm length 800mm ● Maximum payload 20kg



## Ordering method

**YK800XC**

Model	Z axis stroke 200: 200mm 400: 400mm	Cable length 3L: 3.5m 5L: 5m 10L: 10m	<b>RCX340-4</b>							
			Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery

Specify various controller setting items. RCX340 ▶ **P.544**

<b>RCX240</b>	<b>R</b>									
Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery			

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
Rotation angle (°)		+/-120	+/-145	-	+/-180
AC servo motor output (W)		800	400	400	200
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.02		+/-0.01	+/-0.005
Maximum speed (XYZ: m/sec) (R: °/sec)		7.3		1.7	600
Maximum payload (kg)		20			
Standard cycle time: with 2kg payload (sec)		0.57			
R-axis tolerable moment of inertia <sup>Note 2</sup> (kgm <sup>2</sup> )		0.32			
User wiring (sq x wires)		0.2 x 20			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
Robot cable length (m)		Standard: 3.5 Option: 5, 10			
Weight (kg)		58			
Degree of cleanliness		CLASS 10 <sup>Note 3</sup>			
Intake air (Nl/min)		60 <sup>Note 4</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. There are limits to acceleration coefficient settings.  
 Note 3. Per 1cf (0.1μm base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

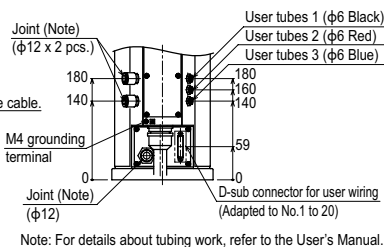
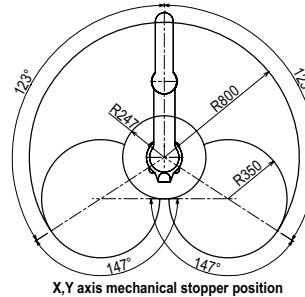
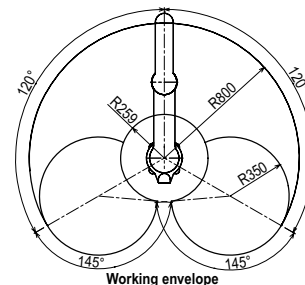
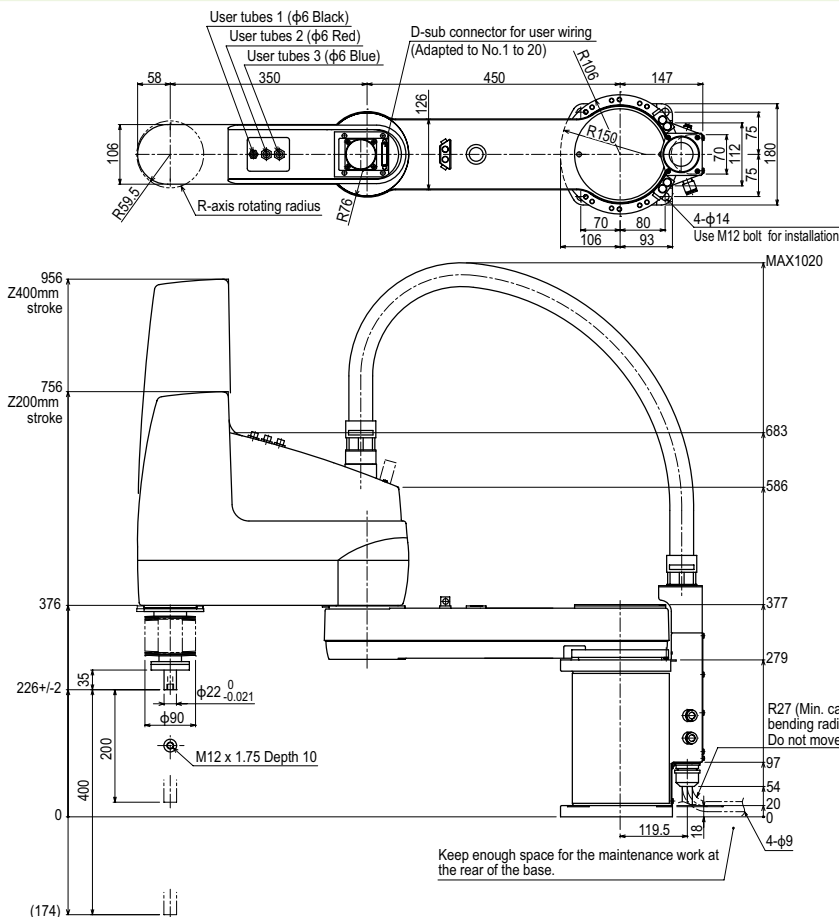
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## YK800XC



Articulated robots  
YA

Linear conveyor modules  
LCM100

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CLEAN

CONTROLLER INFORMATION

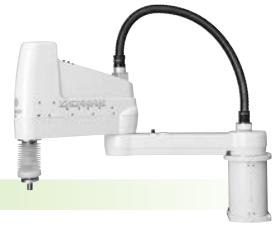
Single-axis

Cartesian

SCARA

# YK1000XC

- Arm length 1000mm
- Maximum payload 20kg



## Ordering method

**YK1000XC**

Model	Z axis stroke	Cable length	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
	200: 200mm 400: 400mm	3L: 3.5m 5L: 5m 10L: 10m	<b>RCX340-4</b>							

Specify various controller setting items. RCX340 ▶ **P.544**

**RCX240**

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery
		<b>R</b>					

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

## Basic specifications

Axis specifications	Arm length (mm)	X axis	Y axis	Z axis	R axis
Rotation angle (°)		+/-120	+/-145	-	+/-180
AC servo motor output (W)		800	400	400	200
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.02		+/-0.01	+/-0.005
Maximum speed (XYZ: m/sec) (R: °/sec)		8.0		1.7	600
Maximum payload (kg)		20			
Standard cycle time: with 2kg payload (sec)		0.60			
R-axis tolerable moment of inertia <sup>Note 2</sup> (kgm <sup>2</sup> )		0.32			
User wiring (sq x wires)		0.2 x 20			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit, 2.Mechanical stopper (X, Y, Z axes)			
Robot cable length (m)		Standard: 3.5 Option: 5, 10			
Weight (kg)		59			
Degree of cleanliness		CLASS 10 <sup>Note 3</sup>			
Intake air (Nl/min)		60 <sup>Note 4</sup>			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. There are limits to acceleration coefficient settings.  
 Note 3. Per 1cf (0.1μm base), when suction blower is used.  
 Note 4. The necessary intake amount varies depending on the use conditions and environment.

## Controller

Controller	Power capacity (VA)	Operation method
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## YK1000XC

