

G10/G20

For high-speed, high-precision, multi-hand batch handling and packing of heavier loads

- Handles payloads of up to 10/20kg
- Choice of 650mm, 850mm, and 1000mm arm
- Internal cabling and ducting minimizes interference worries
- IP54/65 dust and water-resistant cleanroom models available
- Tabletop, ceiling, and wall mounting models available



Model Number **G10 - 85 4 S - UL**

Payload
 10 : 10kg
 20 : 20kg

Arm length
 65 : 650mm (G10 series only)
 85 : 850mm
 A0 : 1000mm (G20 series only)

Joint #3 stroke
 1 : 180mm
 150mm: (C, D w/ bellows, P)
 4 : 420mm
 390mm: (C, D w/ bellows, P)

Environment
 S : Standard
 C : Cleanroom & ESD
 D : Protected:IP54 (with bellows option)
 P : Protected:IP65

UL specification
 : Non UL compliant
 -UL : UL compliant

Mounting type
 : Table Top Mounting
 W : Wall Mounting
 R : Ceiling Mounting

Specifications

Model name		G10/20																																					
Model number		G10-65□□			G10/20-85□□□			G20-A0□□□																															
Arm length	Arm #1, #2	650 mm			850 mm			1000 mm																															
	Rated	5 kg			G10=5 kg /G20=10kg			10 kg																															
Payload	Maximum	10 kg			G10=10 kg /G20=20kg			20 kg																															
	Repeatability	<table border="1"> <tr> <td>Joints #1, #2</td> <td colspan="9">±0.025 mm</td> </tr> <tr> <td>Joint #3</td> <td colspan="9">±0.01 mm</td> </tr> <tr> <td>Joint #4</td> <td colspan="9">±0.005 deg</td> </tr> </table>									Joints #1, #2	±0.025 mm									Joint #3	±0.01 mm									Joint #4	±0.005 deg							
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Joint #3	±0.01 mm																																						
Joint #4	±0.005 deg																																						
Standard cycle time ¹		0.34 sec			0.37 sec			0.42 sec																															
Max. operating speed	Joints #1, #2	8800 mm/sec			11000 mm/sec			11500 mm/sec																															
	Joint #3	10/20-□□1□□=1100 mm/sec /G10/20-□□4□□=2350 mm/sec																																					
	Joint #4	G10=2400 deg/sec / G20=1700 deg/sec																																					
Joint #4 allowable moment of inertia ²	Rated	0.02 kg·m ²			G10=0.02 kg·m ² /G20=0.05 kg·m ²			0.05 kg·m ²																															
	Maximum	0.25 kg·m ²			G10=0.25 kg·m ² /G20=0.45 kg·m ²			0.45 kg·m ²																															
Joint #3 down force		250 N																																					
Installation environment		Standard/Cleanroom ³ & ESD /Protection ⁴																																					
Mounting type		Table top	Ceiling	Wall	Table top	Ceiling	Wall	Table top	Ceiling	Wall																													
Weight (cables not included)		46 kg			48 kg			50 kg																															
Applicable Controller		RC700-A																																					
Installed wire for customer use		15 Pin D-Sub, 9 Pin D-Sub																																					
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 2 : 0.59 MPa (6 kgf/cm ²)																																					
Power		AC200-240 V Single phase																																					
Power Consumption ⁵		2.4 kVA																																					
Cable length		3 m/5 m/10 m/15 m/20 m																																					
Safety standard		CE, KC, UL																																					

*1: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 2kg payload (path coordinates optimized for maximum speed).

*2: When payload center of gravity is aligned with Joint #4; if not aligned with Joint #4, set parameters using INERTIA command.

*3: Complies with ISO Class 3 (ISO14644-1) and older Class 1 (less than 10 0.1 m particles per 28,317cm³:1cft) cleanroom standards.

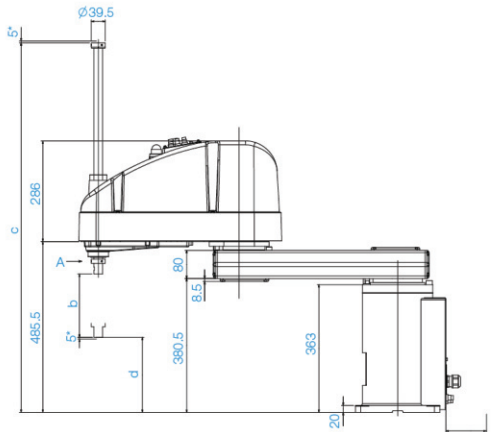
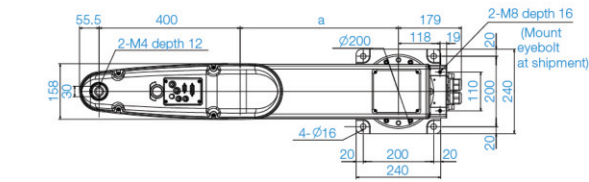
*4: G10/20-□□□□□ with optional bellows complies with IP54; G10/20-□□□□□P complies with IP65.

*5: Varies according to operating environment and program.

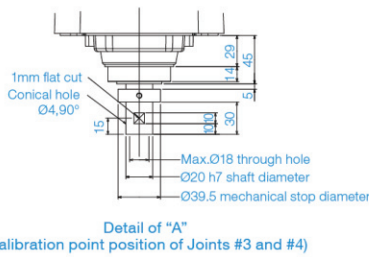
Outer Dimensions (Table Top Mounting)

[Unit: mm]

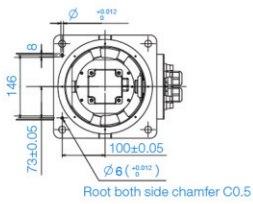
Standard-model



*indicates the stroke margin by mechanical stop. 90 or more Space for Cables



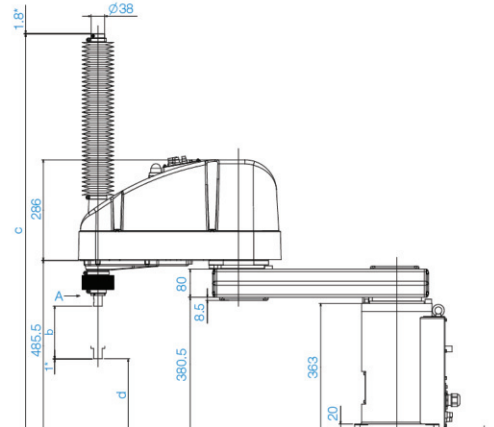
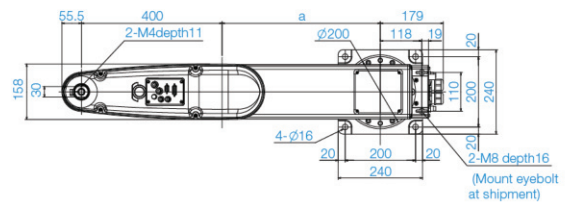
Detail of "A" (Calibration point position of Joints #3 and #4)



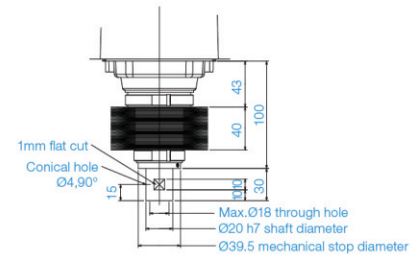
Reference through hole (View from the bottom of the base)

	G10-65□S	G10/G20-65□S	G20-A0□S
a	250	450	600
b	180	420	
c	813.5	1053.5	
d	213.5	-26.5	

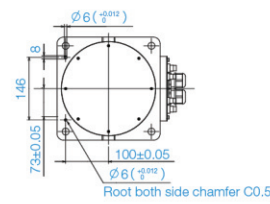
Cleanroom-model



*indicates the stroke margin by mechanical stop. 90 or more Space for Cables



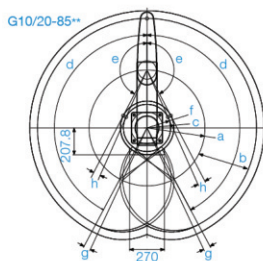
Detail of "A" (Calibration point position of Joints #3 and #4)



Reference through hole (View from the bottom of the base)

	G10-65□C	G10/G20-65□C	G20-A0□C
a	250	450	600
b	150	390	
c	870.5	1129.5	
d	205.5	-34.5	

Motion Range (Table Top Mounting)

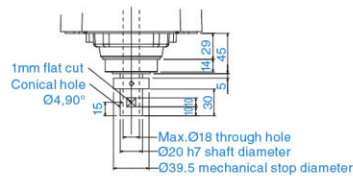
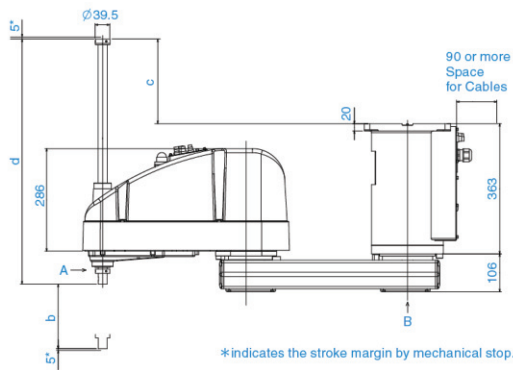
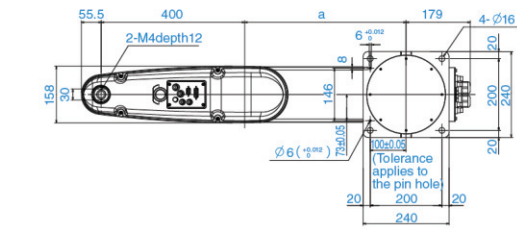


Model	Table Top Mounting				
	G10-65□□	G10/20-85□□		G20-A0	
		S/D	C/P/D bellows		
a Length of Arm #1 (mm)	250	450		600	
b Length of Arm #2 (mm)	400	400		400	
c Motion range	212.4	207.8	Z:0~360 Z:-360~390	207.8 218.3	307
d Motion range of Joint #1 (°)	152	152		152	
e Motion range of Joint #2 (°)	152.5	152.5	Z:0~360 Z:-360~390	152.5 151	152.5
f Mechanical stop area	199.4	183.3		285.4	
g Joint #1 angle to hit mechanical stop (°)	3	3		3	
h Joint #1 angle to hit mechanical stop (°)	3.5	3.5	Z:0~360 Z:-360~390	3.5 5	3.5

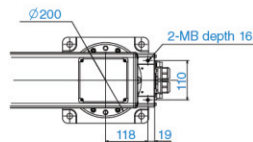
Outer Dimensions (Ceiling Mounting)

[Unit: mm]

Standard-model



Detail of "A"
(Calibration point position of Joints #3 and #4)

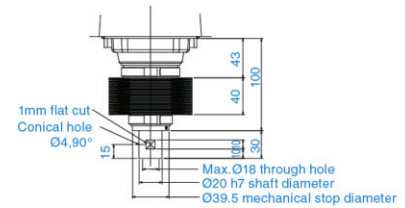
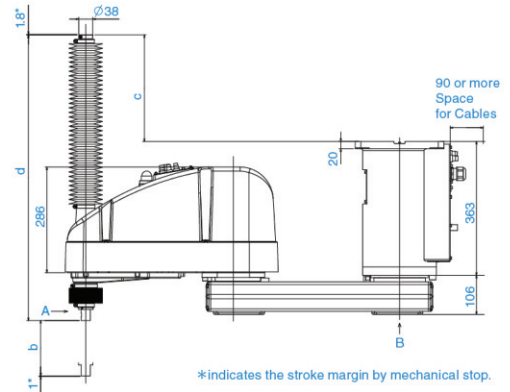
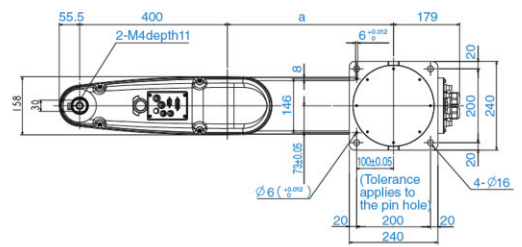


Detail of "B"

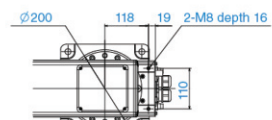
	G10-65□SR	G10/G20-85□SR	G20-A0□SR
a	250	450	600

	G10/G20-□□SR	G10/G20-□□SR
b	180	420
c	-27.5	212.5
d	420	660

Cleanroom-model



Detail of "A"
(Calibration point position of Joints #3 and #4)

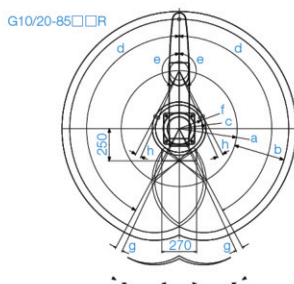


Detail of "B"

	G10-65□CR	G10/G20-85□CR	G20-A0□CR
a	250	450	600

	G10/G20-□□CR	G10/G20-□□CR
b	150	390
c	29.5	288.5
d	515	774

Motion Range (Ceiling Mounting)

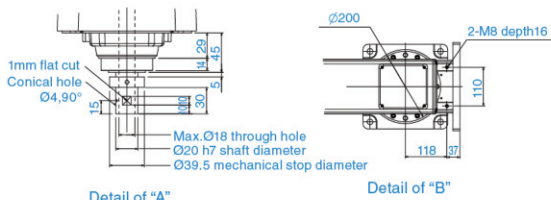
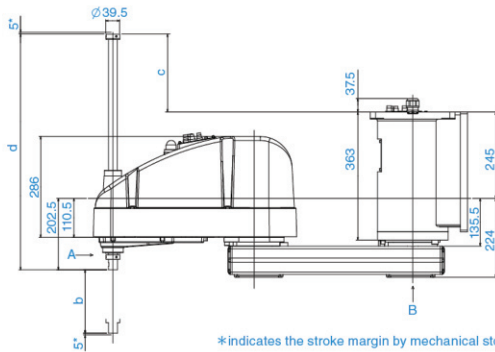
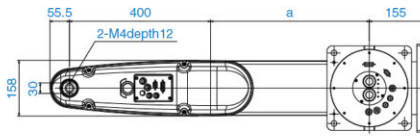


Model	Ceiling Mounting			
	G10-65□□R	G10/20-85□		G20-A0□□W
		SR/DR	CR/PR/DR bellows	
a Length of Arm #1 (mm)	250	450		600
b Length of Arm #2 (mm)	400	400		400
c Motion range	306.5	207.8	218.3	307
d Motion range of Joint #1 (°)	107	152		152
e Motion range of Joint #2 (°)	130	152.5	151	152.5
f Mechanical stop area	291.2	183.3		285.4
g Joint #1 angle to hit mechanical stop (°)	3	3		3
h Joint #2 angle to hit mechanical stop (°)	3.5	3.5		3.5

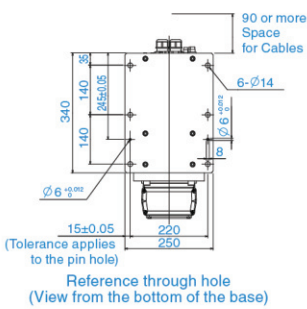
Outer Dimensions (Wall Mounting)

[Unit: mm]

Standard-model

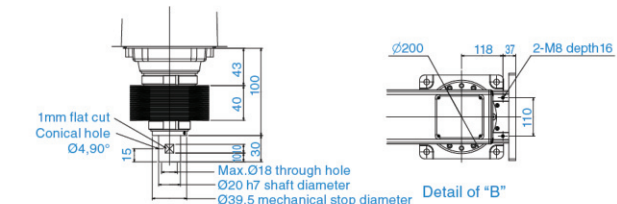
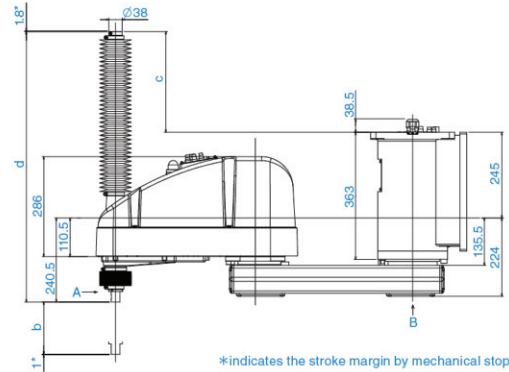
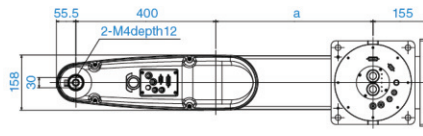


Detail of "A"
(Calibration point position of Joints #3 and #4)

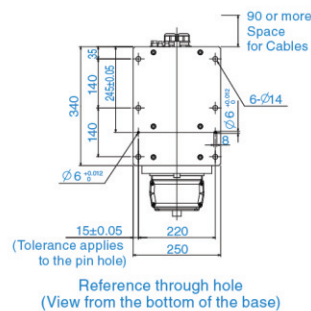


	G10-65□SW	G10/G20-65□SW	G20-A0□SW
a	250	450	600
b	180	420	
c	-27.5	212.5	
d	420	660	

Cleanroom-model

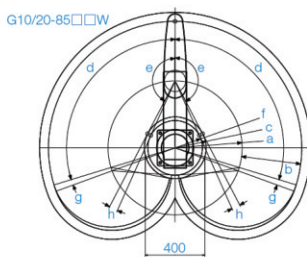


Detail of "A"
(Calibration point position of Joints #3 and #4)



	G10-65□CW	G10/G20-65□CW	G20-A0□CW
a	250	450	600
b	150	390	
c	29.5	288.5	
d	515	774	

Motion Range (Wall Mounting)



Model	Wall Mounting		
	G10-65□□W	G10/20-85□□	
		SW/DW	CW/PW/DW bellows
a Length of Arm #1 (mm)	250	450	600
b Length of Arm #2 (mm)	400	400	400
c Motion range	306.5	207.8	218.3
d Motion range of Joint #1 (°)	107	107	107
e Motion range of Joint #2 (°)	130	152.5	151
f Mechanical stop area	291.2	183.3	285.4
g Joint #1 angle to hit mechanical stop (°)	3	3	3
h Joint #2 angle to hit mechanical stop (°)	3.5		3.5