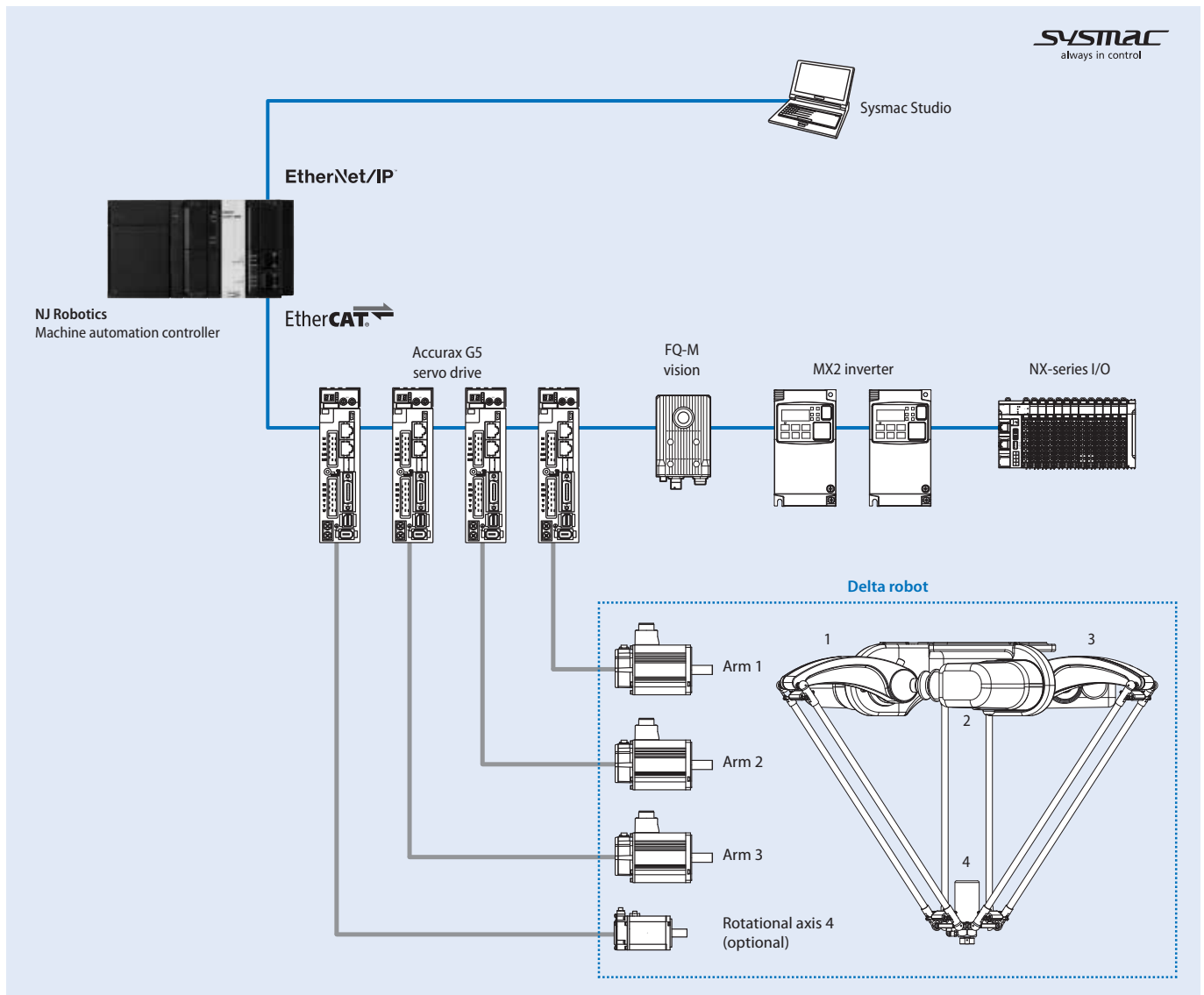




The fastest picking system integrated in the Sysmac Platform

- Robot control integrated in the NJ robotics controller
- Control of up to 8 robots by one controller
- Degrees of freedom: 3 + 1 (rotational axis optional)
- Up to 200 cycle per minute
- Models from 500 to 1,600 working range
- Payload range: 1 to 8 kg
- Different types of Delta robot arms
- IP class range: IP65, IP67, IP69K
- Anti-collision detection option

System configuration



Note: Servo motors included in the Delta robot.

Specifications

Washdown Delta robot IP69K

Model		CR_UGD4_R_HD□	CR_UGD4_NR_HD□	
Working volume	X, Y axis (stroke)	Ø 1,100 mm		
	Z axis (stroke) ^{*1}	250 mm (maximum Ø 1,100 mm) / 400 mm (center Ø 670 mm)		
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)	-	
Servo motor	Arm 1, 2, 3	Model	R88M-K1K030T-BS2-V2	
		Capacity	1,000 W	
	Rotational axis 4	Model	R88M-K75030T-BS2	-
		Capacity	750 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.2 mm		
	θ axis	±0.3 deg		
Maximum payload	2 kg			
Maximum through-put ^{*3}	150 CPM ^{*4}			
θ axis maximum torque	According to the servo motor		-	
Travel limit	1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)			
Noise level	< 68 dB (A)			
Ambient temperature	Operating: 5°C to 45°C Storage: -25°C to 60°C			
Relative humidity	Max. 90%			
Protection class	IP69K			
Weight	100 kg			

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

Washdown Delta robot IP67

Model		R6Y31110H03067NJ5	R6Y31110L03067NJ5	R6Y30110S03067NJ5	
Working volume	X, Y axis (stroke)	Ø 1,100 mm			
	Z axis (stroke) ^{*1}	300 mm (maximum Ø 1,100 mm) / 450 mm (center Ø 580 mm)			
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)		-	
Servo motor	Arm 1, 2, 3	Model	R88M-K1K030T-BS2		
		Capacity	1,000 W		
	Rotational axis 4	Model	R88M-K10030T-S2	R88M-K05030T-S2	-
		Capacity	100 W	50 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.2 mm			
	θ axis	±0.1 deg			
Maximum payload	3 kg				
Maximum through-put ^{*3}	150 CPM ^{*4}				
θ axis tolerable moment of inertia ^{*5}	0.035 kgm ²		0.01 kgm ²	-	
User tubing (outer diameter)	Ø 6				
Travel limit	1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)				
Noise level	< 73.7 dB (A)				
Ambient temperature	0°C to 45°C				
Relative humidity	Max. 85%				
Protection class	IP67				
Weight	75 kg				

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} There are limits to acceleration coefficient settings.

Washdown Mini Delta robot IP67

Model		R6Y31065H02067NJ5	R6Y31065L02067NJ5	R6Y30065S02067NJ5	
Working volume	X, Y axis (stroke)	Ø 650 mm			
	Z axis (stroke) ^{*1}	150 mm (maximum Ø 650 mm) / 250 mm (center Ø 480 mm)			
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)			
Servo motor	Arm 1, 2, 3	Model	R88M-K40030T-B52		
		Capacity	400 W		
	Rotational axis 4	Model	R88M-K10030T-S2	R88M-K05030T-S2	-
		Capacity	100 W	50 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.1 mm			
	θ axis	±0.1 deg			
Maximum payload		2 kg			
Maximum through-put ^{*3}		200 CPM ^{*4}			
θ axis tolerable moment of inertia ^{*5}		0.035 kgm ²	0.01 kgm ²	-	
User tubing (outer diameter)		Ø 6			
Travel limit		1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)			
Noise level		< 64.5 dB (A)			
Ambient temperature		0°C to 45°C			
Relative humidity		Max. 85%			
Protection class		IP67			
Weight		32 kg			

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} There are limits to acceleration coefficient settings.

Washdown Mini Delta robot IP65

Model		CR_UGD4MINI_R_TS	CR_UGD4MINI_NR_TS	
Working volume	X, Y axis (stroke)	Ø 500 mm		
	Z axis (stroke) ^{*1}	135 mm (maximum Ø 450 mm)	155 mm (maximum Ø 500 mm)	
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)		
Servo motor	Arm 1, 2, 3	Model	R88M-K40030T-B52	
		Capacity	400 W	
	Rotational axis 4	Model	R88M-K40030T-B52	-
		Capacity	400 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.2 mm		
	θ axis	±0.3 deg		
Maximum payload		1 kg		
Maximum through-put ^{*3}		200 CPM ^{*4}		
θ axis maximum torque		According to the servo motor		
User tubing (outer diameter)		Ø 8 ^{*5}		
Travel limit		1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)		
Noise level		< 68 dB (A)		
Ambient temperature		5°C to 45°C		
Relative humidity		Max. 90%		
Protection class		IP65 (Stainless steel + Titanium)		
Weight		25 kg		

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} Only for the air suctioning. The air injection is not allowed.

Delta robot XXL

Model		CR_UGD4_XXLH_R	CR_UGD4_XXLH_NR	CR_UGD4_XXL1300H_R	CR_UGD4_XXL1300H_NR	
Working volume	X, Y axis (stroke)	Ø 1,600 mm		Ø 1,300 mm		
	Z axis (stroke) ^{*1}	350 mm (maximum Ø 1,600 mm) / 550 mm (center Ø 815 mm)		300 mm (maximum Ø 1,300 mm) / 450 mm (center Ø 780 mm)		
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)	-	±180 deg (default setting, it can be changed)	-	
Servo motor	Arm 1, 2, 3	Model	R88M-K3K030C-BS2			
		Capacity	3,000 W			
	Rotational axis 4	Model	R88M-K1K030C-BS2	-	R88M-K1K030C-BS2	-
		Capacity	1,000 W	-	1,000 W	-
Repeatability ^{*2}	X, Y, Z axis	±1 mm				
	θ axis	±0.3 deg	-	±0.3 deg	-	
Maximum payload	8 kg					
Maximum through-put ^{*3}	80 CPM ^{*4}			90 CPM ^{*4}		
θ axis maximum torque	According to the servo motor		-	According to the servo motor		
User tubing (outer diameter)	Ø 8 ^{*5}					
Travel limit	1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)					
Noise level	< 70 dB (A)			< 68 dB (A)		
Ambient temperature	5°C to 45°C					
Relative humidity	Max. 90%					
Protection class	IP65					
Weight	115 kg			90 kg		

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} Only for the air suctioning. The air injection is not allowed.

Delta robot XL

Model		CR_UGD4_XL_R	CR_UGD4_XL_NR	
Working volume	X, Y axis (stroke)	Ø 1,300 mm		
	Z axis (stroke) ^{*1}	250 mm (maximum Ø 1,300 mm) / 400 mm (center Ø 875 mm)		
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)	-	
Servo motor	Arm 1, 2, 3	Model	R88M-K1K030T-BS2	
		Capacity	1,000 W	
	Rotational axis 4	Model	R88M-K1K030T-BS2	-
		Capacity	1,000 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.2 mm		
	θ axis	±0.3 deg	-	
Maximum payload	2 kg			
Maximum through-put ^{*3}	120 CPM ^{*4}			
θ axis maximum torque	According to the servo motor		-	
User tubing (outer diameter)	Ø 8 ^{*5}			
Travel limit	1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)			
Noise level	< 68 dB (A)			
Ambient temperature	5°C to 45°C			
Relative humidity	Max. 90%			
Protection class	IP65			
Weight	65 kg			

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} Only for the air suctioning. The air injection is not allowed.

Delta robot

Model		CR_UGD4_R	CR_UGD4_NR	
Working volume	X, Y axis (stroke)	Ø 1,100 mm		
	Z axis (stroke) ^{*1}	250 mm (maximum Ø 1,100 mm) / 400 mm (center Ø 580 mm)		
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)	-	
Servo motor	Arm 1, 2, 3	Model	R88M-K1K030T-B52	
		Capacity	1,000 W	
	Rotational axis 4	Model	R88M-K1K030T-B52	-
		Capacity	1,000 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.3 mm		
	θ axis	±0.4 deg	-	
Maximum payload		2 kg		
Maximum through-put ^{*3}		150 CPM ^{*4}		
θ axis maximum torque		According to the servo motor	-	
User tubing (outer diameter)		Ø 8 ^{*5}		
Travel limit		1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)		
Noise level		< 68 dB (A)		
Ambient temperature		5°C to 45°C		
Relative humidity		Max. 90%		
Protection class		IP65		
Weight		65 kg		

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} Only for the air suctioning. The air injection is not allowed.

Mini Delta robot

Model		CR_UGD4MINI_R	CR_UGD4MINI_NR	
Working volume	X, Y axis (stroke)	Ø 500 mm		
	Z axis (stroke) ^{*1}	135 mm (maximum Ø 450 mm)	155 mm (maximum Ø 500 mm)	
	θ axis (rotation angle)	±180 deg (default setting, it can be changed)	-	
Servo motor	Arm 1, 2, 3	Model	R88M-K40030T-B52	
		Capacity	400 W	
	Rotational axis 4	Model	R88M-K40030T-B52	-
		Capacity	400 W	-
Repeatability ^{*2}	X, Y, Z axis	±0.2 mm		
	θ axis	±0.3 deg	-	
Maximum payload		1 kg		
Maximum through-put ^{*3}		200 CPM ^{*4}		
θ axis maximum torque		According to the servo motor	-	
User tubing (outer diameter)		Ø 8 ^{*5}		
Travel limit		1. Soft limit, 2. Mechanical stopper (X, Y, Z axis)		
Noise level		< 68 dB (A)		
Ambient temperature		5°C to 45°C		
Relative humidity		Max. 90%		
Protection class		IP65		
Weight		25 kg		

^{*1} For further details please check the dimensional drawing in the next section.

^{*2} This is the value at a constant ambient temperature.

^{*3} With 0.1 kg payload. When reciprocating 305 mm in horizontal and 25 mm in vertical directions.

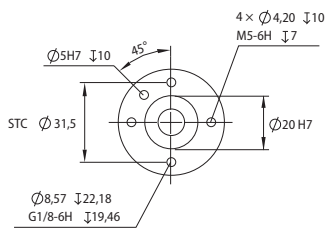
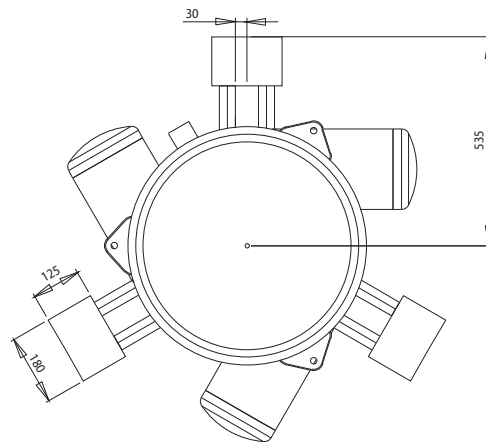
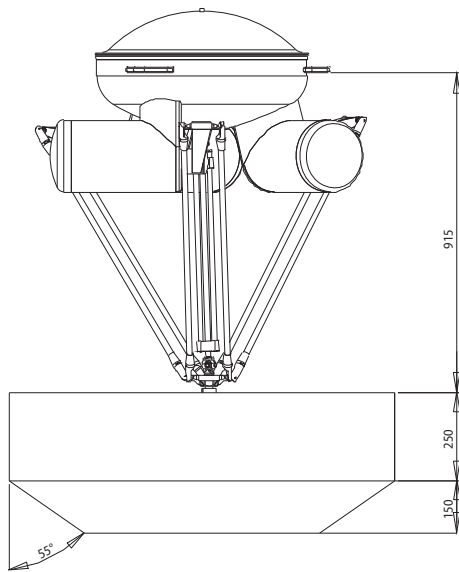
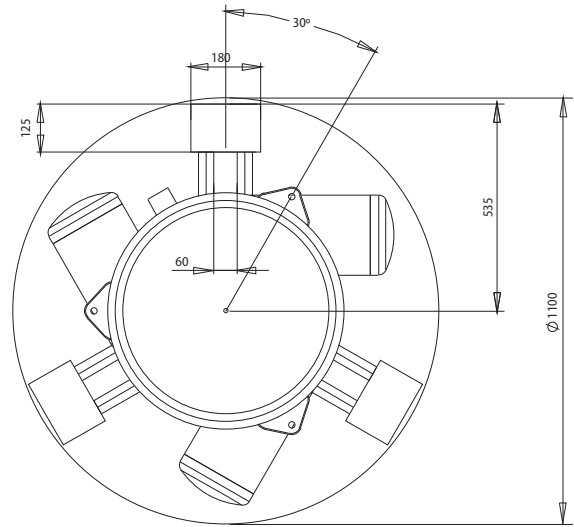
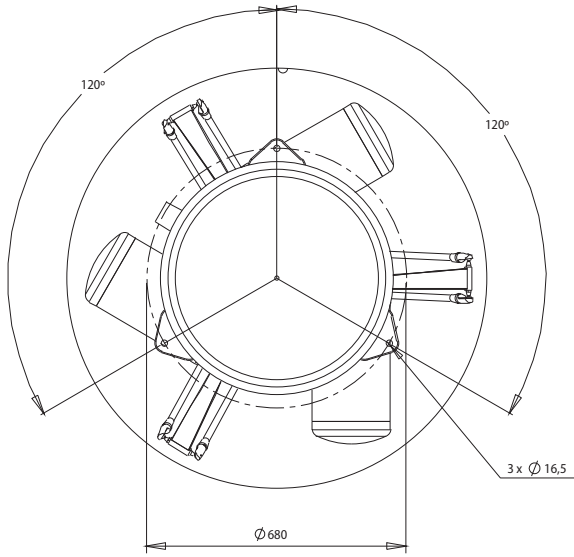
^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

^{*5} Only for the air suctioning. The air injection is not allowed.

Dimensions

Washdown Delta robot IP69K

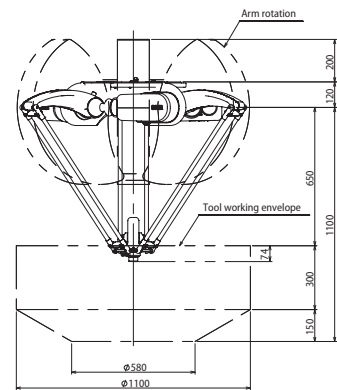
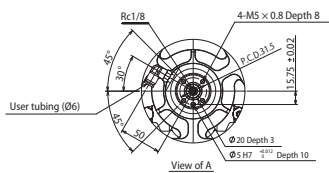
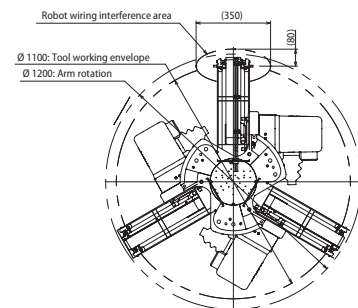
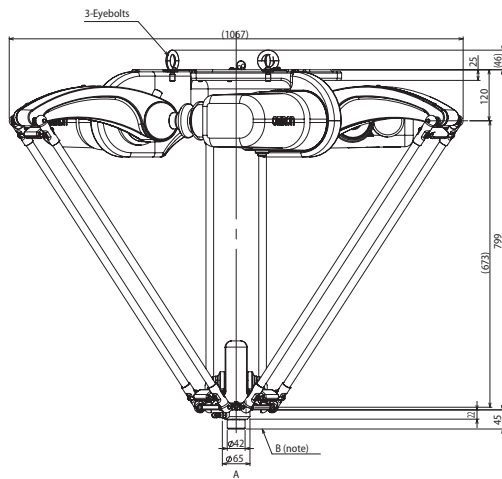
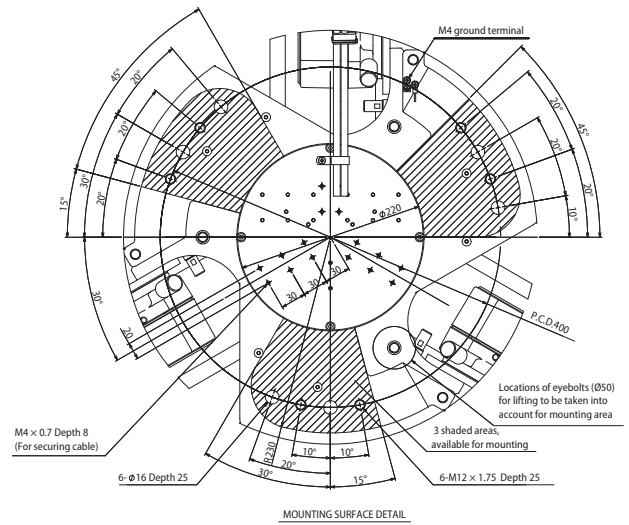
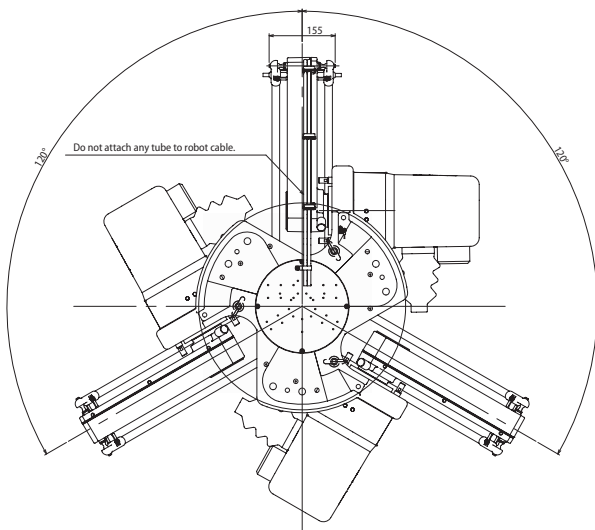
CR_UGD4_□R_HD□



Gripper dimensions

Washdown Delta robot IP67

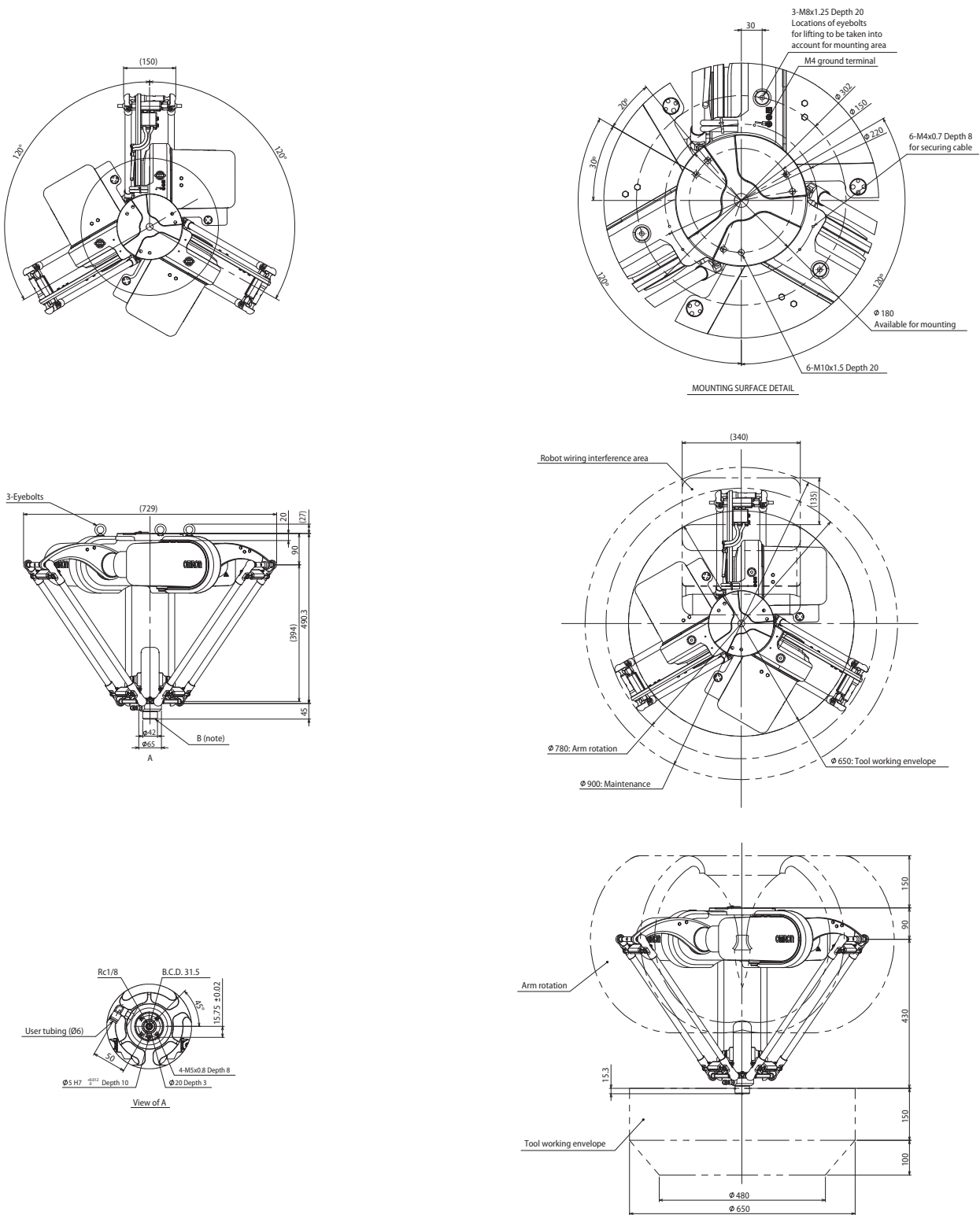
R6Y3□110□03067NJ5



Note: The three areas of the robot base are available for mounting. Leave other area unoccupied for other needs (e.g. wiring). Also note the locations of the eyebolts when designing a mounting frame. Any part of end-effector should not stick out above the surface of B.

Washdown Mini Delta robot IP67

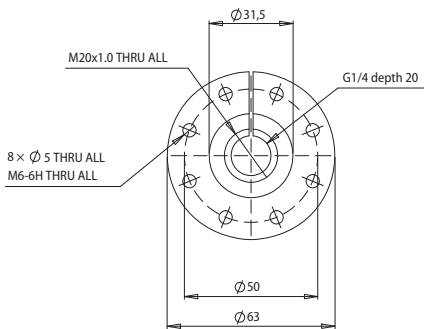
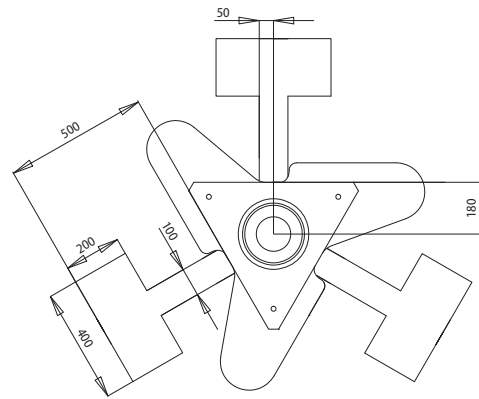
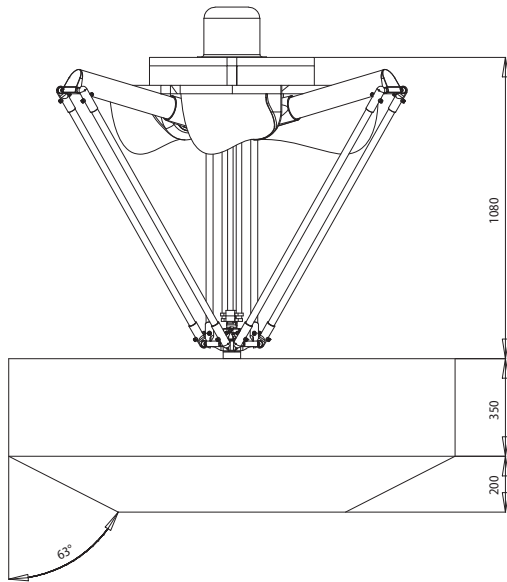
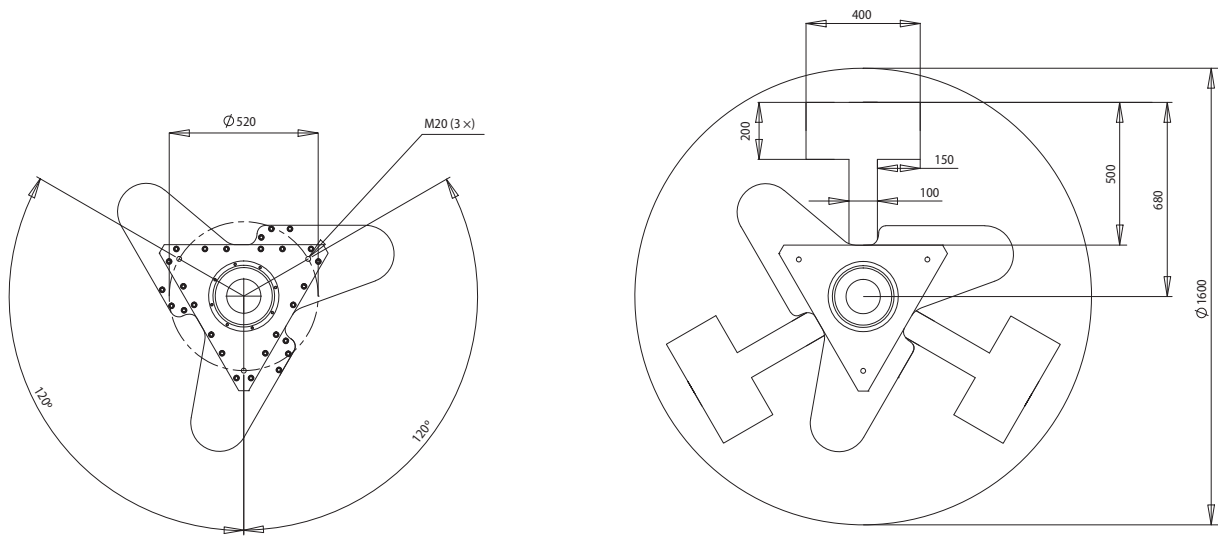
R6Y3□065□02067NJ5



Note: Mounting area should be smaller than 180 mm diameter to avoid collision with robot cable. Frame of base should not be in the arm moving area. Any part of end-effector should not stick out above the surface of B.

Delta robot XXL (1,600)

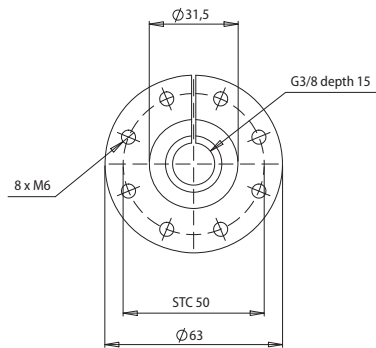
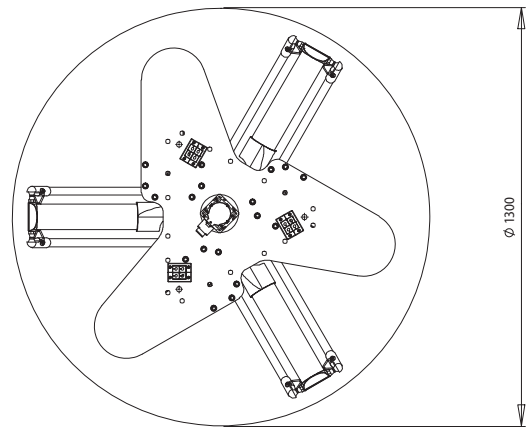
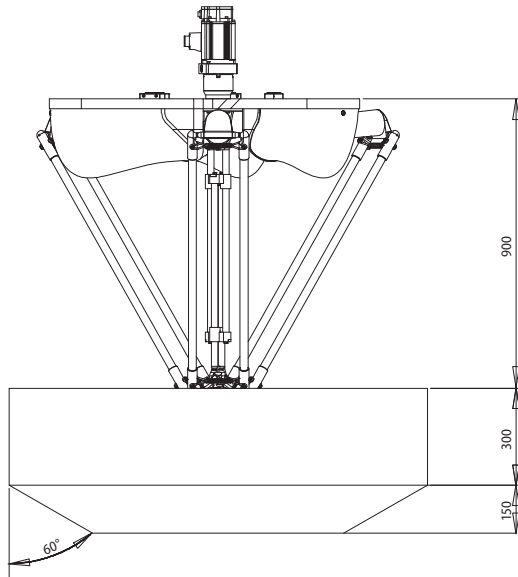
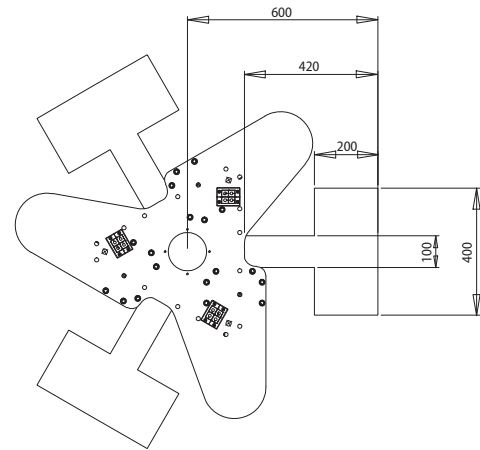
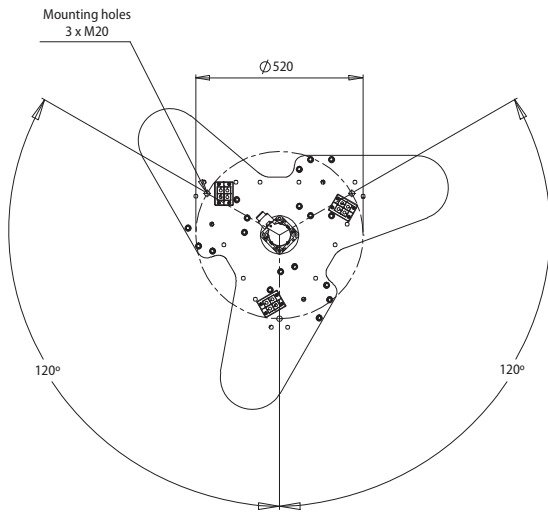
CR_UGD4_XXLH_□R



Gripper dimensions

Delta robot XXL (1,300)

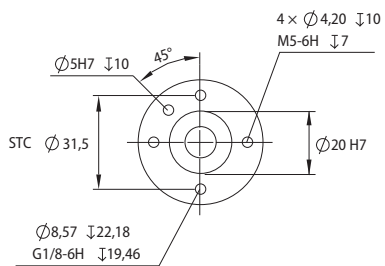
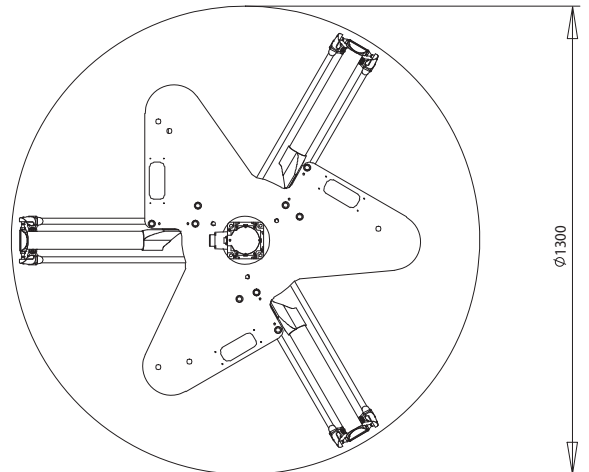
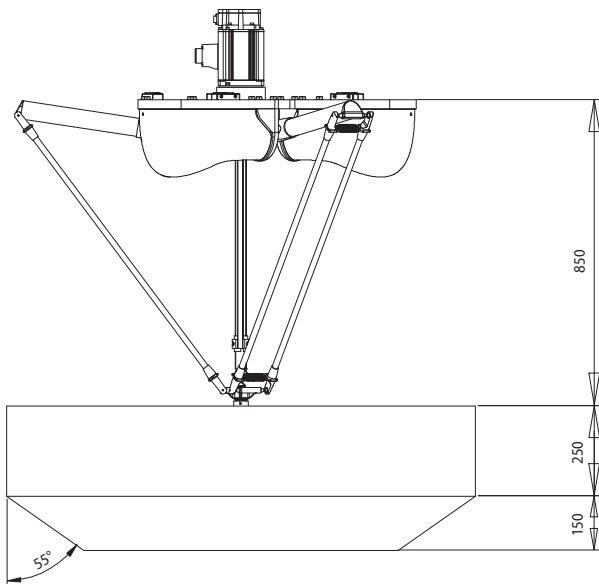
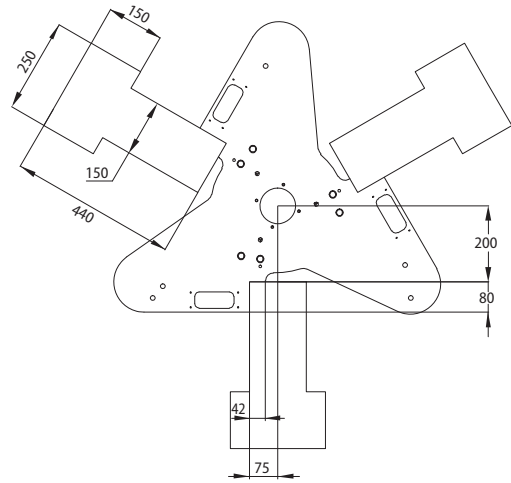
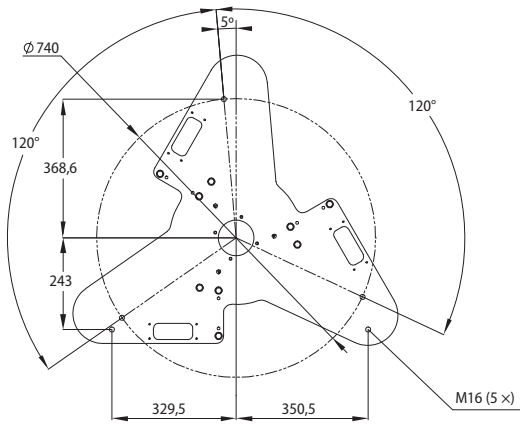
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Gripper dimensions

Delta robot XL

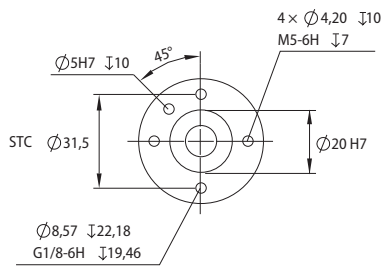
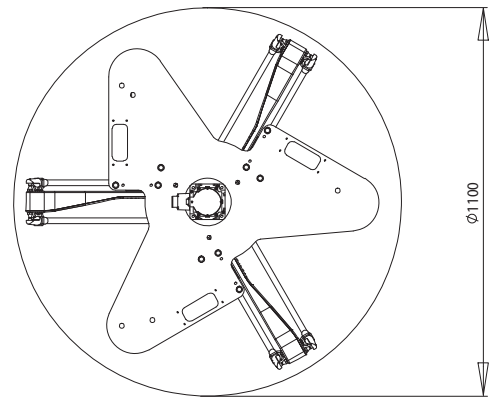
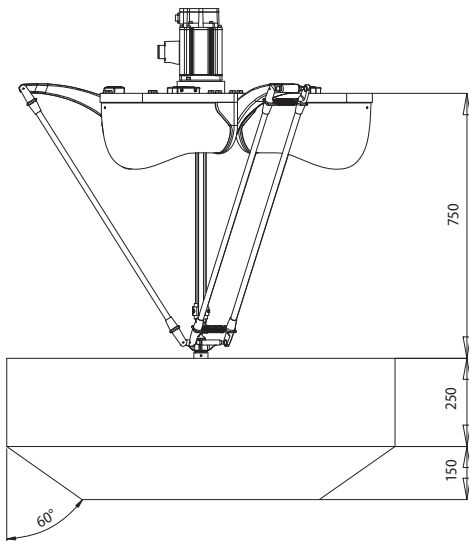
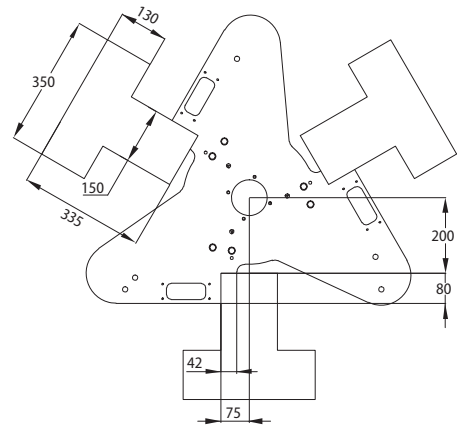
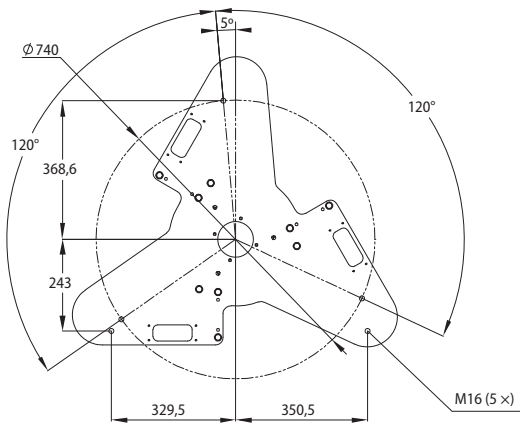
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Gripper dimensions

Robot

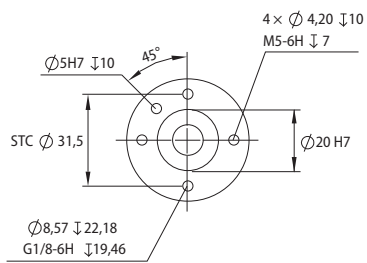
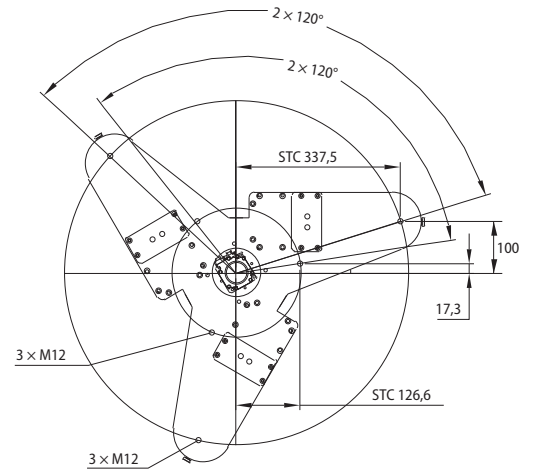
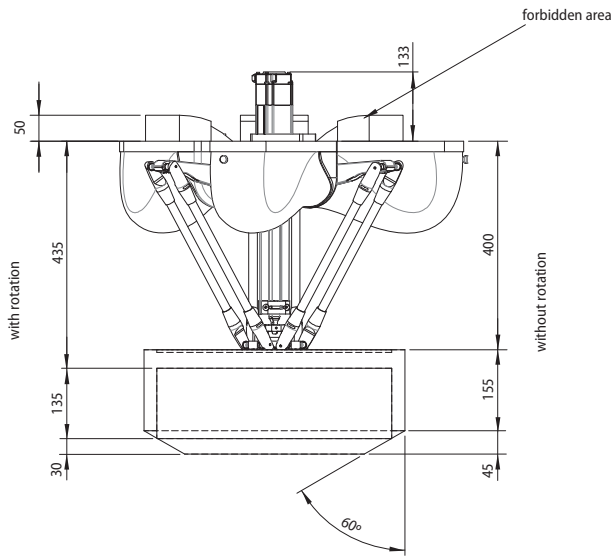
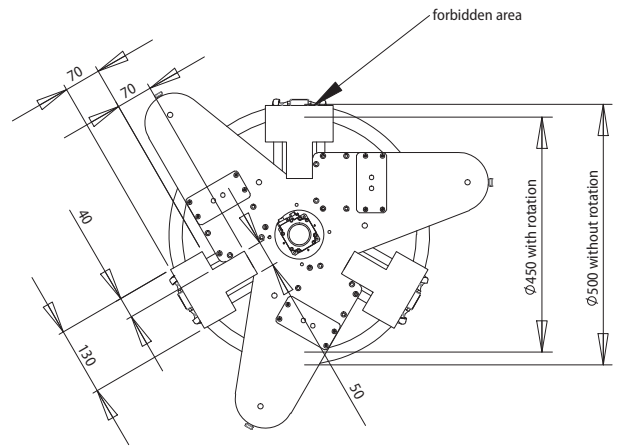
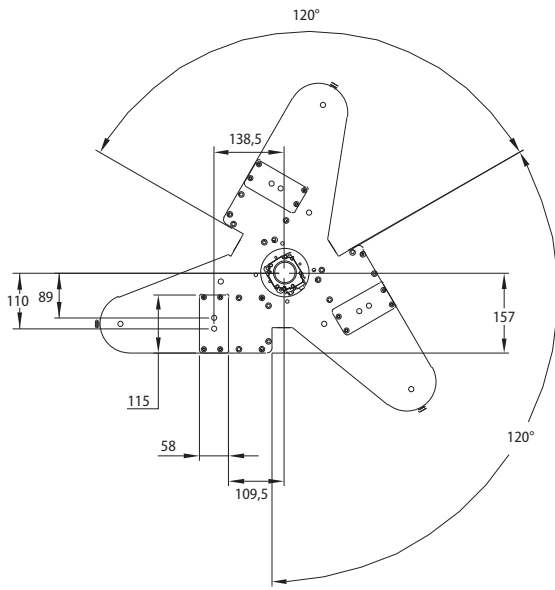
Delta robot
CR_UGD4_□R



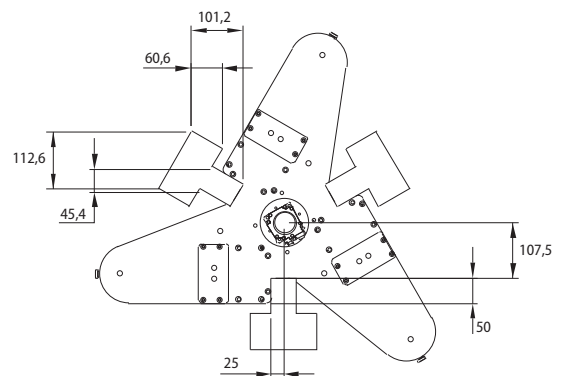
Gripper dimensions

Washdown Mini Delta robot IP65 / Mini Delta robot

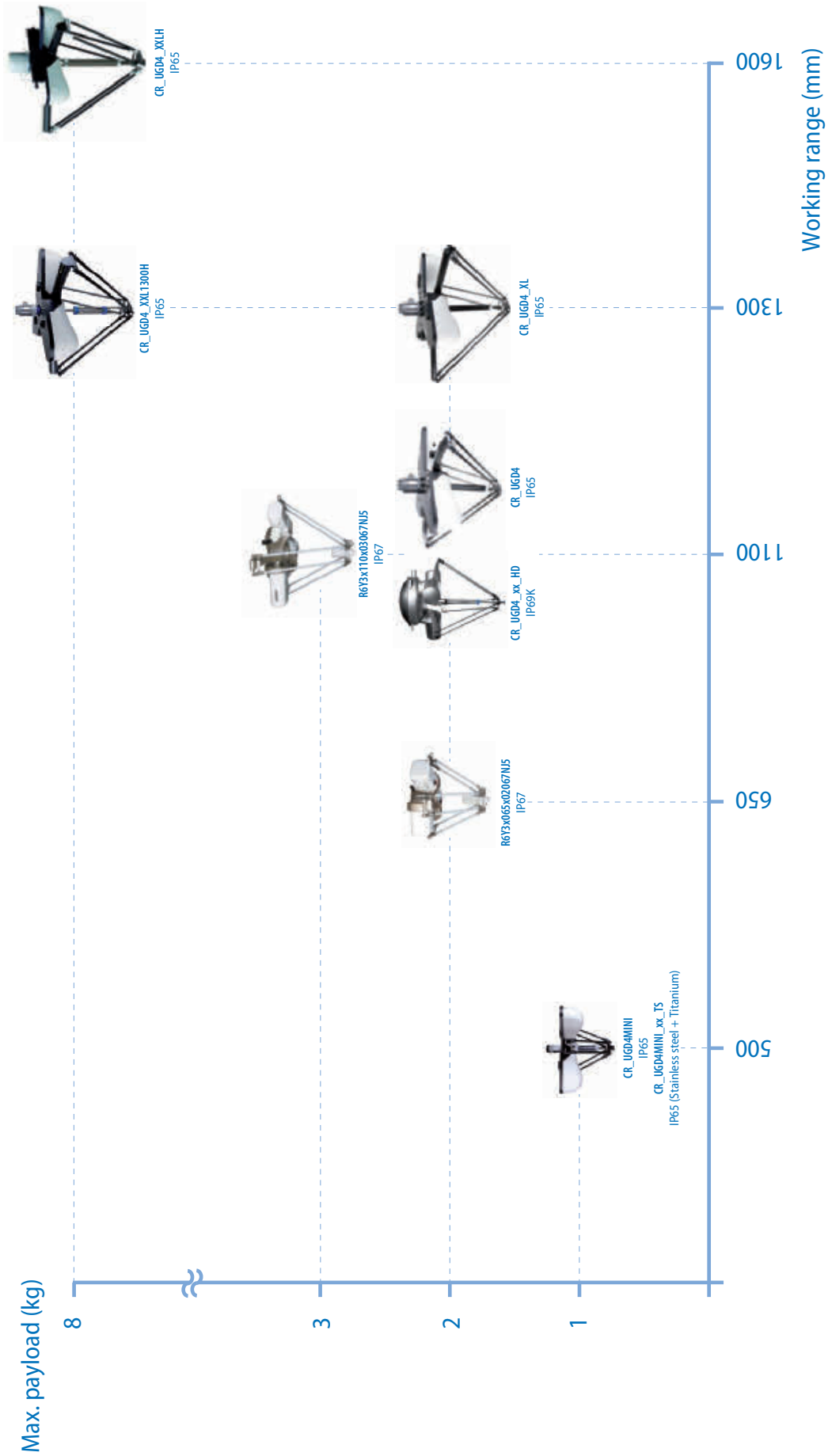
CR_UGD4MINI_□R□



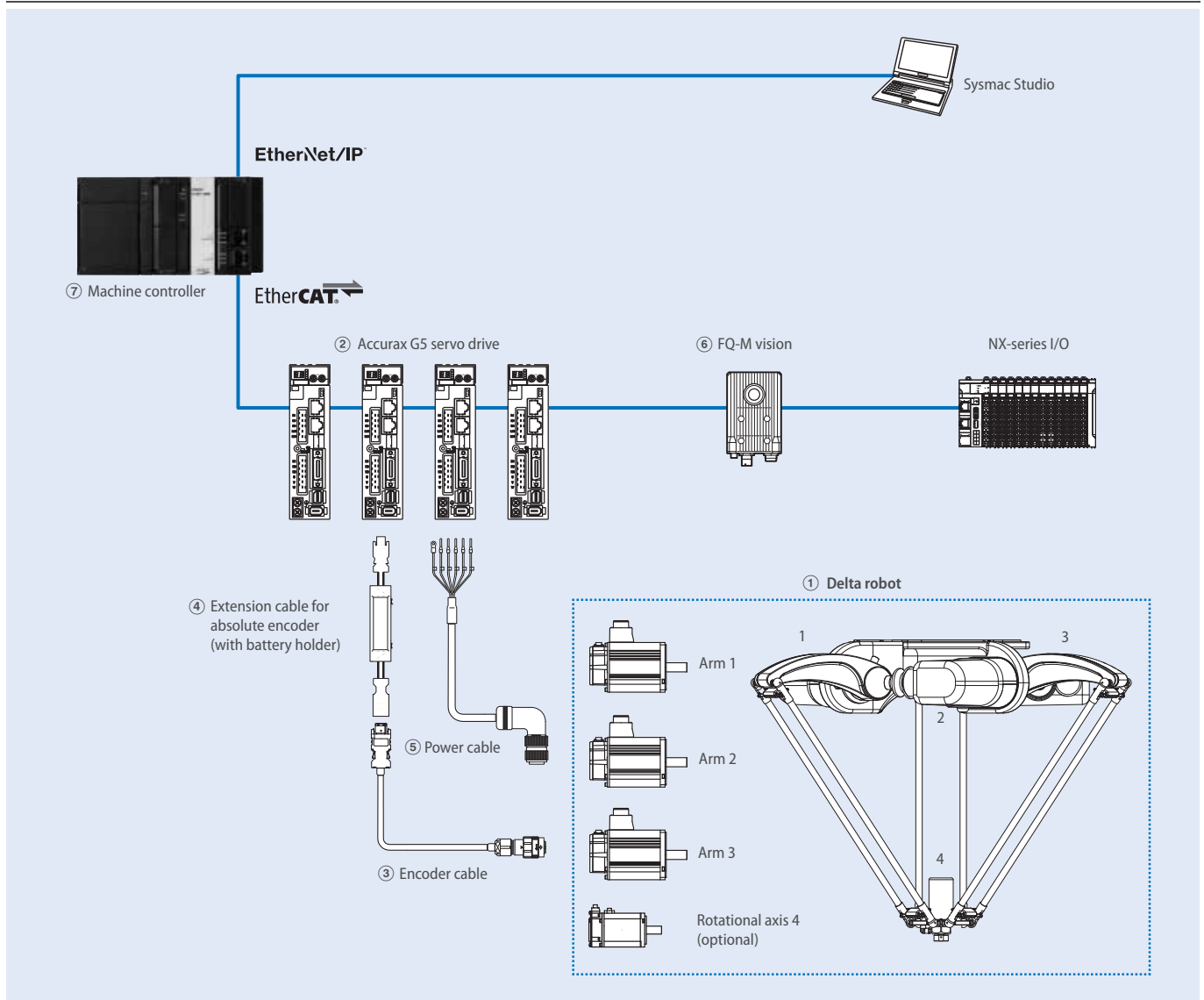
Gripper dimensions



Selection table

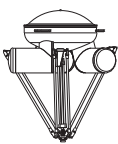
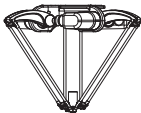


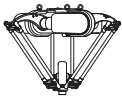
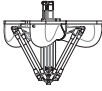
Ordering information



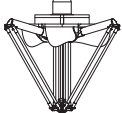
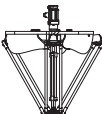
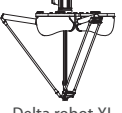


Note: Servo motors included in the Delta robot.

Washdown Delta robot series



Symbol	Model	Cable length	Max. payload	Working range	Description	Axis	② Applicable servo drive	
 <p>Delta robot IP69K</p>	CR_UGD4_R_HD3	3 m	2 kg	Ø 1,100 x 250 mm (Max. 400)	3 + 1 axes Hygienic Design (only this robot includes the cables)	Arm 1	R88D-KN15H-ECT	
	CR_UGD4_R_HD5	5 m				Arm 2	R88D-KN15H-ECT	
	CR_UGD4_R_HD10	10 m				Arm 3	R88D-KN15H-ECT	
	CR_UGD4_R_HD15	15 m				Rotational 4	R88D-KN08H-ECT	
	CR_UGD4_R_HD20	20 m						
 <p>Delta robot IP67</p>	R6Y31110H03067NJ5	3 m	3 kg	Ø 1,100 x 300 mm (Max. 450)	3 + 1 axes (high inertia rotational axis)	Arm 1	R88D-KN15H-ECT	
	R6Y31110L03067NJ5					5 m	Arm 2	R88D-KN15H-ECT
						10 m	Arm 3	R88D-KN15H-ECT
		15 m				Rotational 4	R88D-KN01H-ECT	
	R6Y30110S03067NJ5	5 m			3 + 1 axes (low inertia rotational axis)	Arm 1	R88D-KN15H-ECT	
		10 m				Arm 2	R88D-KN15H-ECT	
		15 m				Arm 3	R88D-KN15H-ECT	
		20 m				Rotational 4	R88D-KN01H-ECT	
						3 axes	Arm 1	R88D-KN15H-ECT
		Arm 2	R88D-KN15H-ECT					
		Arm 3	R88D-KN15H-ECT					

Symbol	Model	Cable length	Max. payload	Working range	Description	Axis	② Applicable servo drive
①  Mini Delta robot IP67	R6Y31065H02067NJ5		2 kg	∅ 650 x 150 mm (Max. 250)	3 + 1 axes (high inertia rotational axis)	Arm 1	R88D-KN04H-ECT
	R6Y31065L02067NJ5					Arm 2	R88D-KN04H-ECT
					R6Y30065S02067NJ5	3 + 1 axes (low inertia rotational axis)	Arm 3
①  Mini Delta robot IP65	CR_UGD4MINI_R_TS		1 kg	∅ 450 x 135 mm	3 + 1 axes	Rotational 4	R88D-KN01H-ECT
	CR_UGD4MINI_NR_TS					Arm 1	R88D-KN04H-ECT
						3 axes	Arm 2
						Arm 3	R88D-KN04H-ECT

Delta robot series

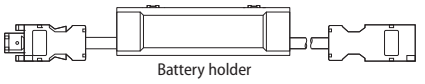
Symbol	Model	Cable length	Max. payload	Working range	Description	Axis	② Applicable servo drive
①  Delta robot XXL (1,600)	CR_UGD4_XXLH_R		8 kg	∅ 1,600 x 350 mm (Max. 550)	3 + 1 axes	Arm 1	R88D-KN30F-ECT
	CR_UGD4_XXLH_NR					Arm 2	R88D-KN30F-ECT
①  Delta robot XXL (1,300)	CR_UGD4_XXL1300H_R		8 kg	∅ 1,300 x 300 mm (Max. 450)	3 + 1 axes	Arm 3	R88D-KN30F-ECT
	CR_UGD4_XXL1300H_NR					Rotational 4	R88D-KN15F-ECT
①  Delta robot XL	CR_UGD4_XL_R		2 kg	∅ 1,300 x 250 mm (Max. 400)	3 + 1 axes	Arm 1	R88D-KN15H-ECT
	CR_UGD4_XL_NR					Arm 2	R88D-KN15H-ECT
①  Delta robot	CR_UGD4_R		2 kg	∅ 1,100 x 250 mm (Max. 400)	3 + 1 axes	Arm 3	R88D-KN15H-ECT
	CR_UGD4_NR					Rotational 4	R88D-KN15H-ECT
①  Mini Delta robot	CR_UGD4MINI_R		1 kg	∅ 450 x 135 mm	3 + 1 axes	Arm 1	R88D-KN04H-ECT
	CR_UGD4MINI_NR					Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
				∅ 500 x 155 mm	3 axes	Rotational 4	R88D-KN04H-ECT
						Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT

Encoder cables

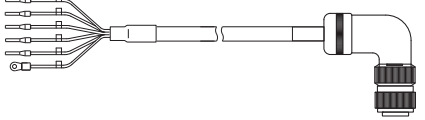
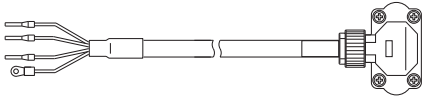

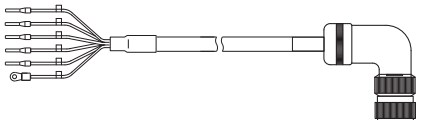
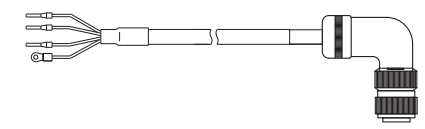
Symbol	Applicable Delta robots	Model	Appearance	
③	CR_UGD4_□_HD□ (Arm 1, 2, 3) ^{*1} R6Y3□110□03067NJ5 CR_UGD4_XXLH CR_UGD4_XXL1300H CR_UGD4_XL CR_UGD4	1.5 m	R88A-CRKC001-5NR-E	
		3 m	R88A-CRKC003NR-E	
		5 m	R88A-CRKC005NR-E	
		10 m	R88A-CRKC010NR-E	
		15 m	R88A-CRKC015NR-E	
		20 m	R88A-CRKC020NR-E	
	CR_UGD4_□_HD□ (Rotational axis 4) ^{*1} R6Y3□065□02067NJ5 CR_UGD4MINI_□_TS CR_UGD4MINI	1.5 m	R88A-CRKA001-5CR-E	
		3 m	R88A-CRKA003CR-E	
		5 m	R88A-CRKA005CR-E	
		10 m	R88A-CRKA010CR-E	
		15 m	R88A-CRKA015CR-E	
		20 m	R88A-CRKA020CR-E	

*1 The CR_UGD4_□_HD□ models include the encoder cables.

Absolute encoder battery cable (encoder extension cable only)

Symbol	Specifications	Model	Appearance		
④	Absolute encoder battery cable	Battery not included	0.3 m	R88A-CRGD0R3C-E	
		Battery included	0.3 m	R88A-CRGD0R3C-BS-E	
	Absolute encoder backup battery	2,000 mA, 3.6 V	-	R88A-BAT01G	

Power and brake cables

Symbol	Applicable Delta robots	Model	Appearance			
⑤	CR_UGD4_□_HD□ ^{*1}	Arm 1, 2, 3	Power cable with brake	1.5 m	R88A-CAGB001-5BR-E	
				3 m	R88A-CAGB003BR-E	
				5 m	R88A-CAGB005BR-E	
				10 m	R88A-CAGB010BR-E	
				15 m	R88A-CAGB015BR-E	
				20 m	R88A-CAGB020BR-E	
		Rotational axis 4	Power cable without brake	1.5 m	R88A-CAKA001-5SR-E	
				3 m	R88A-CAKA003SR-E	
				5 m	R88A-CAKA005SR-E	
				10 m	R88A-CAKA010SR-E	
				15 m	R88A-CAKA015SR-E	
				20 m	R88A-CAKA020SR-E	
	Rotational axis 4	Brake cable	1.5 m	R88A-CAKA001-5BR-E		
			3 m	R88A-CAKA003BR-E		
			5 m	R88A-CAKA005BR-E		
			10 m	R88A-CAKA010BR-E		
			15 m	R88A-CAKA015BR-E		
			20 m	R88A-CAKA020BR-E		
	R6Y3□110□03067NJ5	Arm 1, 2, 3	Power cable with brake	1.5 m	R88A-CAGB001-5BR-E	
				3 m	R88A-CAGB003BR-E	
				5 m	R88A-CAGB005BR-E	
				10 m	R88A-CAGB010BR-E	
				15 m	R88A-CAGB015BR-E	
				20 m	R88A-CAGB020BR-E	
Rotational axis 4		Power cable without brake	1.5 m	R88A-CAGB001-5SR-E		
			3 m	R88A-CAGB003SR-E		
			5 m	R88A-CAGB005SR-E		
			10 m	R88A-CAGB010SR-E		
			15 m	R88A-CAGB015SR-E		
			20 m	R88A-CAGB020SR-E		

Symbol	Applicable Delta robots		Model	Appearance			
⑤	CR_UGD4_XXLH CR_UGD4_XXL1300H	Arm 1, 2, 3	Power cable with brake	1.5 m R88A-CAGD001-5BR-E			
			3 m R88A-CAGD003BR-E				
			5 m R88A-CAGD005BR-E				
			10 m R88A-CAGD010BR-E				
			15 m R88A-CAGD015BR-E				
		20 m R88A-CAGD020BR-E					
		Rotational axis 4	Power cable with brake	1.5 m R88A-CAKF001-5BR-E			
			3 m R88A-CAKF003BR-E				
			5 m R88A-CAKF005BR-E				
			10 m R88A-CAKF010BR-E				
15 m R88A-CAKF015BR-E							
20 m R88A-CAKF020BR-E							
CR_UGD4_XL CR_UGD4	Arm 1, 2, 3 and rotational axis 4	Power cable with brake	1.5 m R88A-CAGB001-5BR-E				
			3 m R88A-CAGB003BR-E				
			5 m R88A-CAGB005BR-E				
			10 m R88A-CAGB010BR-E				
			15 m R88A-CAGB015BR-E				
20 m R88A-CAGB020BR-E							
R6Y3□065□02067NJ5	Arm 1, 2, 3	Power cable without brake	1.5 m R88A-CAKA001-5SR-E				
			3 m R88A-CAKA003SR-E				
			5 m R88A-CAKA005SR-E				
			10 m R88A-CAKA010SR-E				
			15 m R88A-CAKA015SR-E				
		20 m R88A-CAKA020SR-E					
		Brake cable	1.5 m R88A-CAKA001-5BR-E				
			3 m R88A-CAKA003BR-E				
			5 m R88A-CAKA005BR-E				
			10 m R88A-CAKA010BR-E				
15 m R88A-CAKA015BR-E							
20 m R88A-CAKA020BR-E							
Rotational axis 4	Power cable without brake	1.5 m R88A-CAGB001-5SR-E					
		3 m R88A-CAGB003SR-E					
		5 m R88A-CAGB005SR-E					
		10 m R88A-CAGB010SR-E					
		15 m R88A-CAGB015SR-E					
		20 m R88A-CAGB020SR-E					
		CR_UGD4MINI_□_TS CR_UGD4MINI		Arm 1, 2, 3 and rotational axis 4	Power cable without brake	1.5 m R88A-CAKA001-5SR-E	
						3 m R88A-CAKA003SR-E	
						5 m R88A-CAKA005SR-E	
						10 m R88A-CAKA010SR-E	
15 m R88A-CAKA015SR-E							
20 m R88A-CAKA020SR-E							
Brake cable	1.5 m R88A-CAKA001-5BR-E						
	3 m R88A-CAKA003BR-E						
	5 m R88A-CAKA005BR-E						
	10 m R88A-CAKA010BR-E						
	15 m R88A-CAKA015BR-E						
20 m R88A-CAKA020BR-E							

*1 The CR_UGD4_□_HD□ models include the power and brake cables.

Vision

Name	Type	Model
⑥ FQ-M series	Color	NPN FQ-MS120-ECT
		PNP FQ-MS125-ECT
	Monochrome	NPN FQ-MS120-M-ECT
		PNP FQ-MS125-M-ECT

Machine controller

Name	Functions	Delta robot control	Axes	Model	
⑦ NJ Robotics	CPU unit	Logic sequence, motion, robotics and database connection	Control of up to 8 Delta robot depending on the number of axes supported by the CPU	16	NJ501-4320
				64	NJ501-4500
				32	NJ501-4400
				16	NJ501-4300
				16	NJ501-4310
	Power supply unit		Control of one Delta robot	16	NJ-PA3001 (220 VAC) NJ-PD3001 (24 VDC)

Accessories

Name	Applicable Delta robots	Specifications	Model
Anti-collision detection option	R6Y3□110□03067NJ5	Connectors mounted between the TCP flange and the arms	R6YACAD01

Computer software

Specifications	Model
Sysmac Studio version 1.03 or higher	SYSMAC-SE2□□□

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.