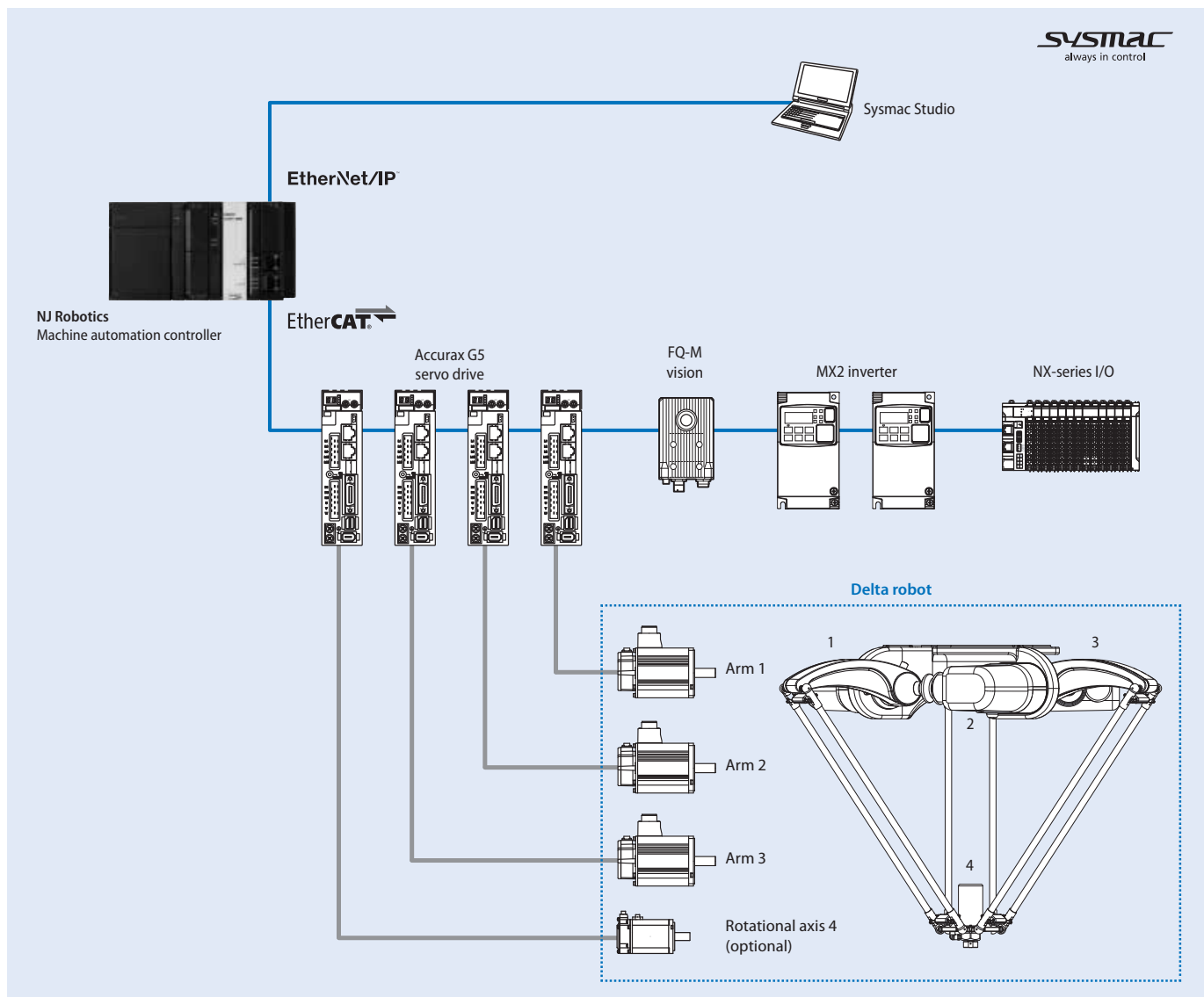




The fastest picking system integrated in the Sysmac Platform

- 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}	130 mm (maximum Ø 500 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}	130 mm (maximum Ø 500 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.

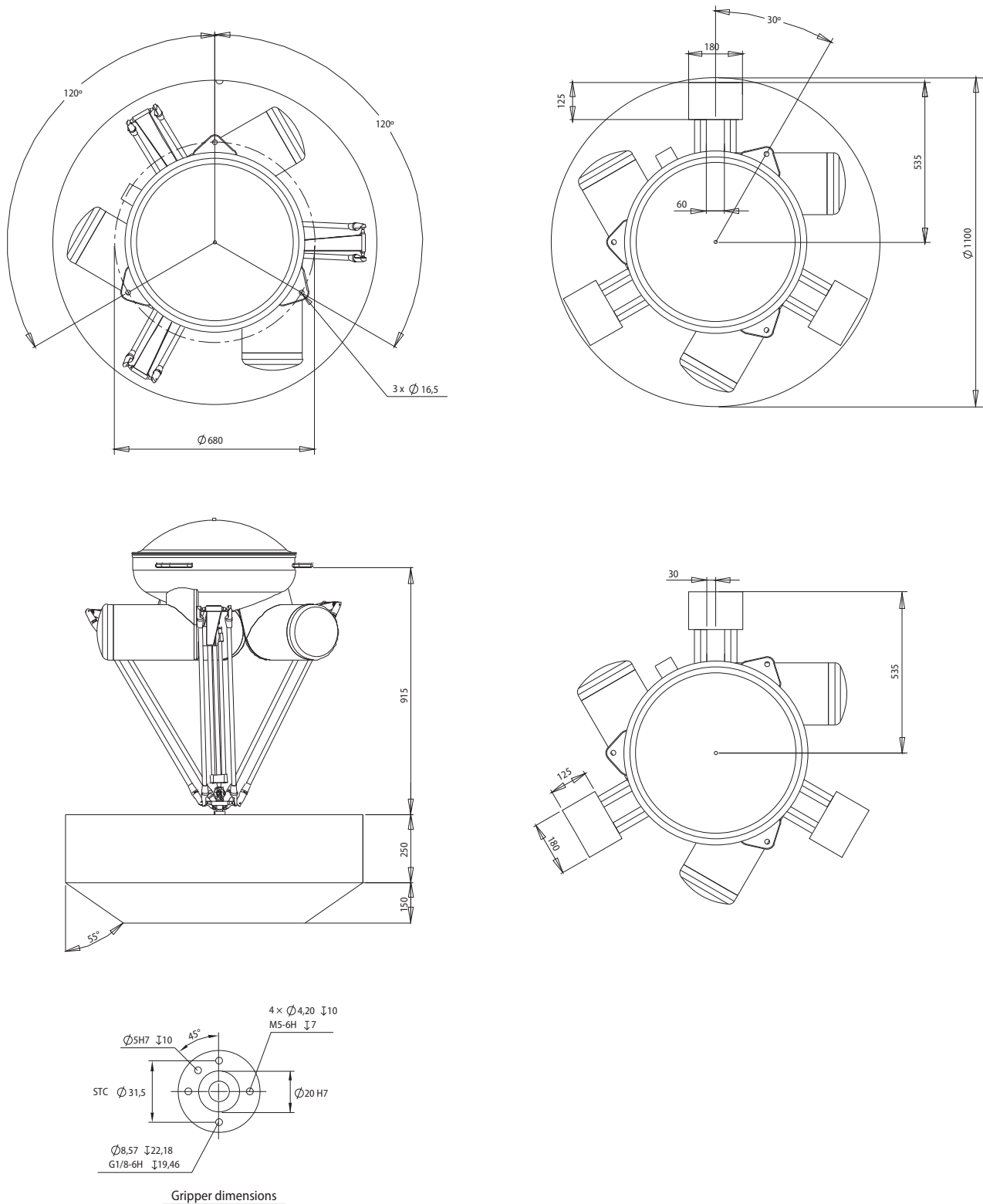
^{*4} CPM: Cycle per minutes. Check the note 3 for the cycle definition.

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

Dimensions

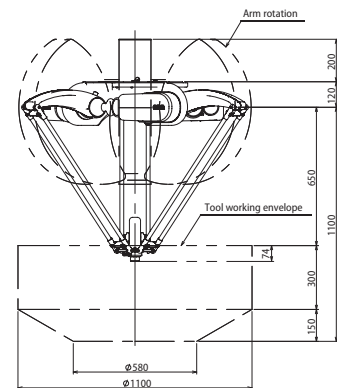
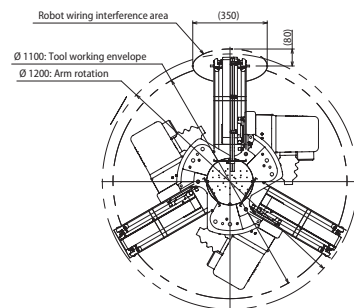
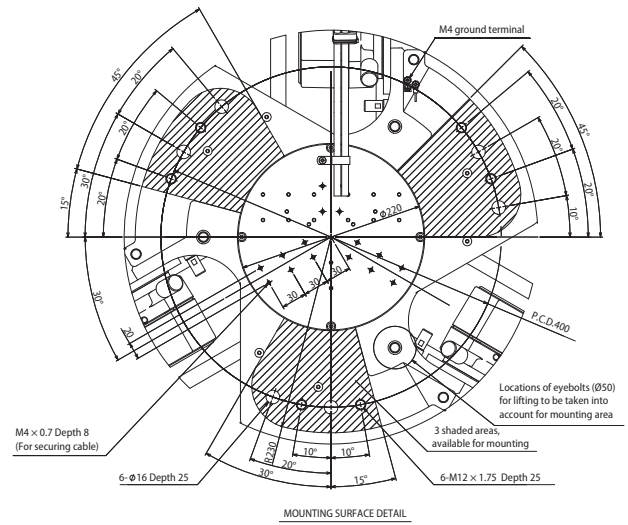
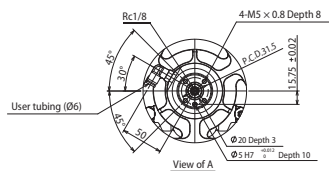
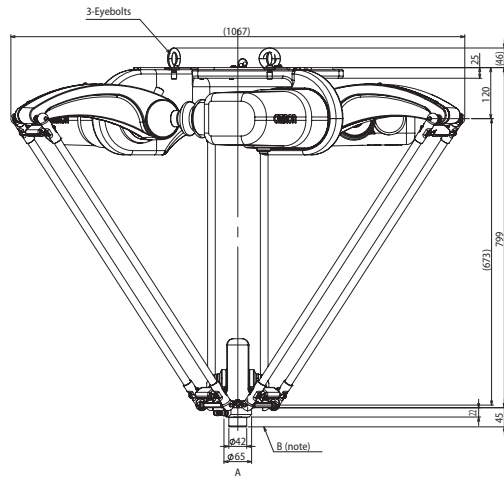
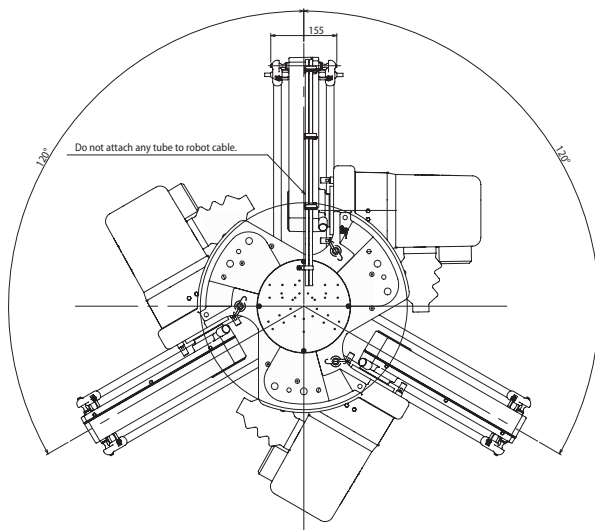
Washdown Delta robot IP69K

CR_UGD4_ R_HD



Washdown Delta robot IP67

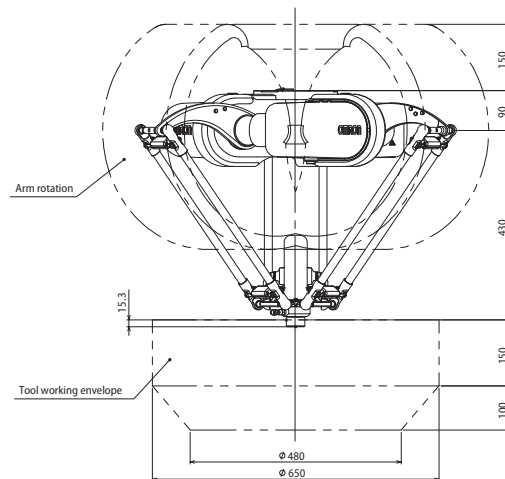
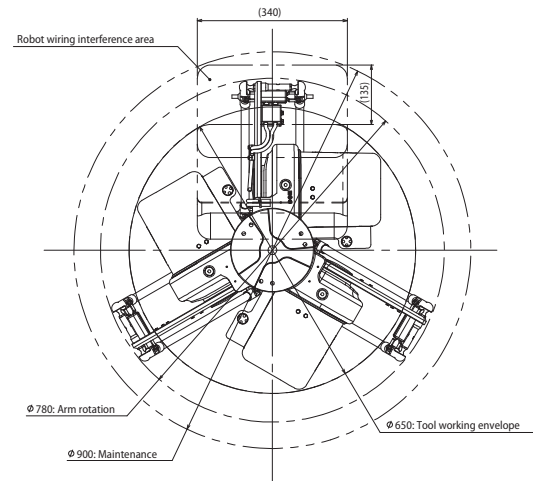
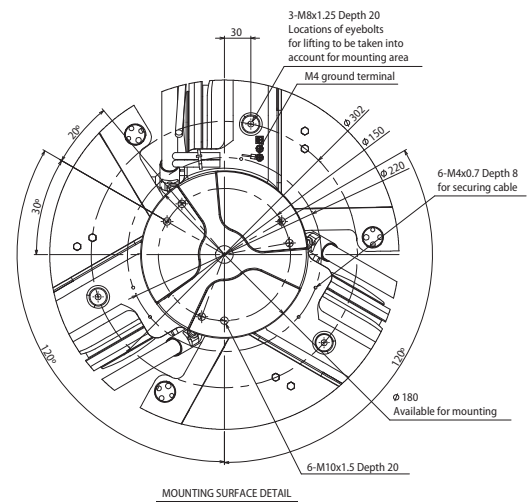
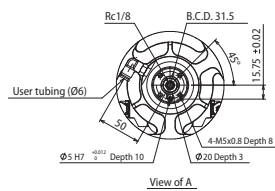
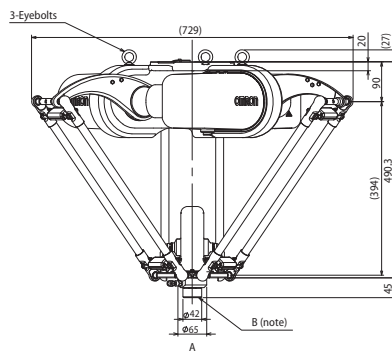
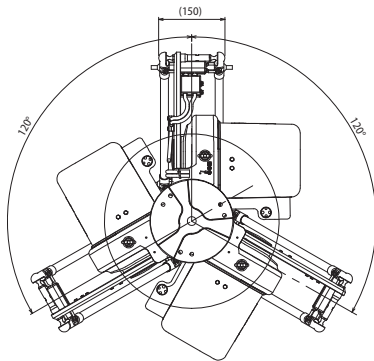
R6Y3□110□03067NJ5



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.

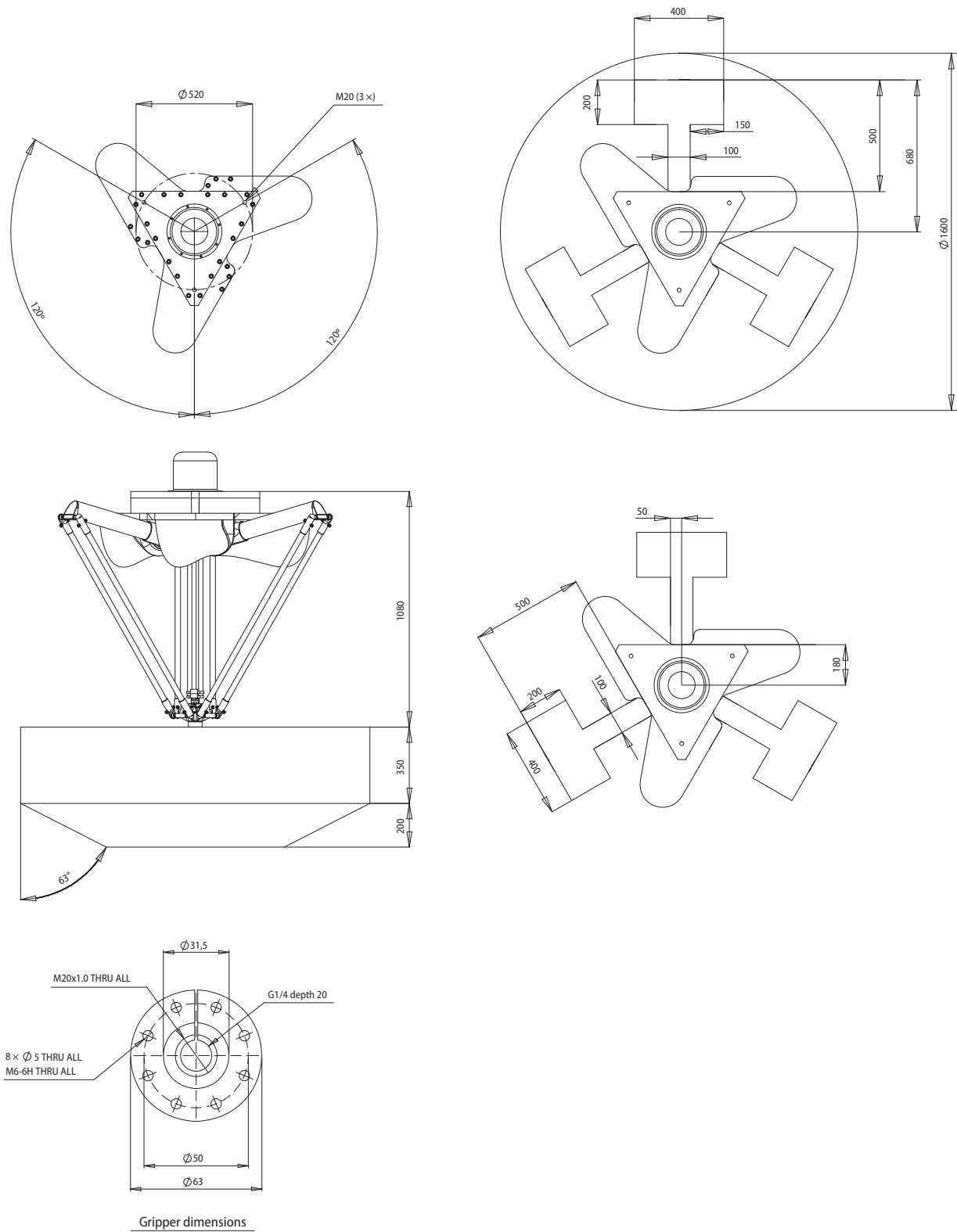
Washdown Mini Delta robot IP67

R6Y306502067NJ5

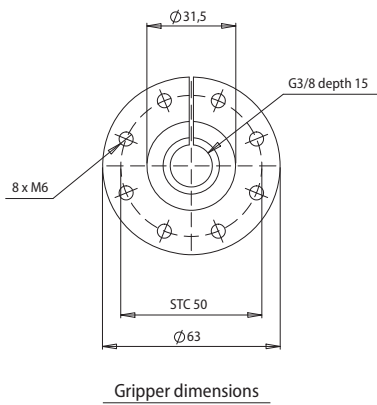
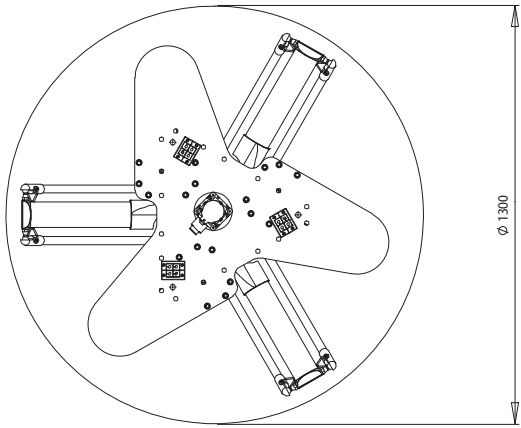
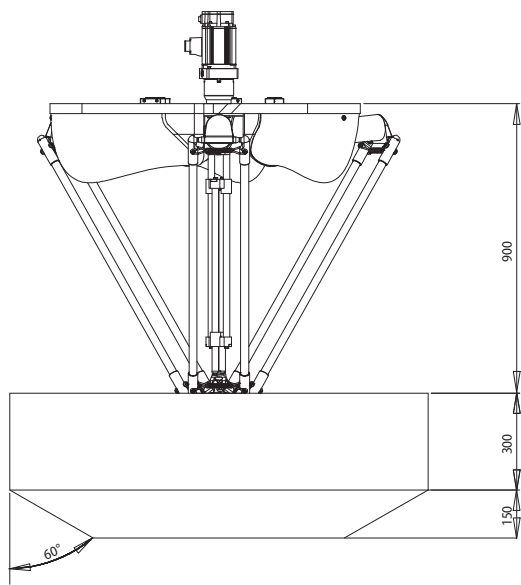
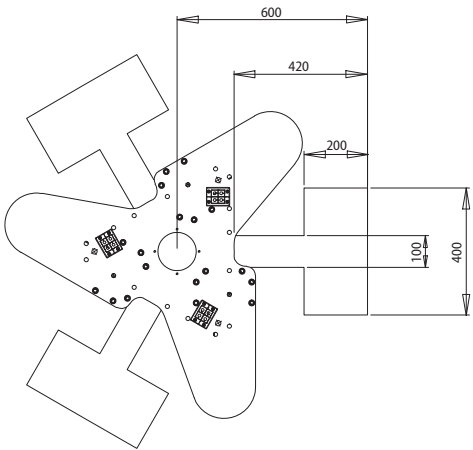
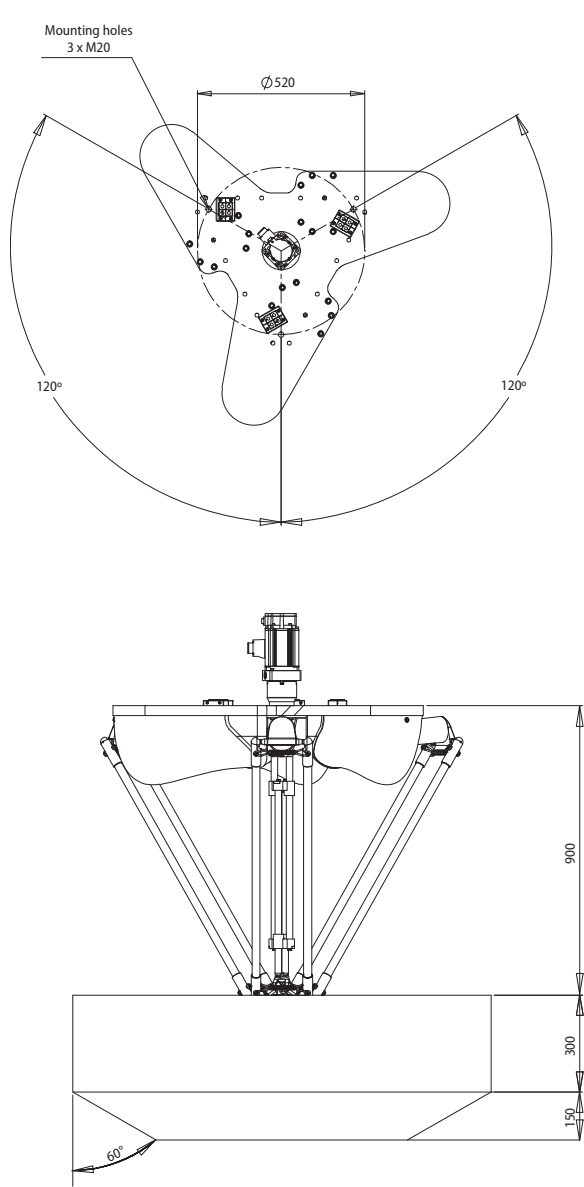


Note: Mounting area should be smaller than 180 mm diameter to avoid collision with robot cable. Frame of base should not be in the arm moving area. Any part of end-effector should not stick out above the surface of B.

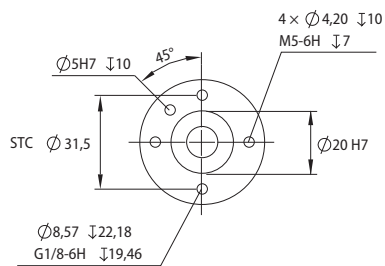
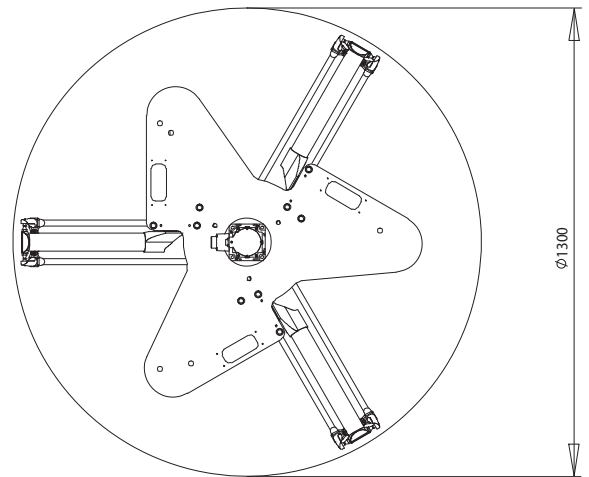
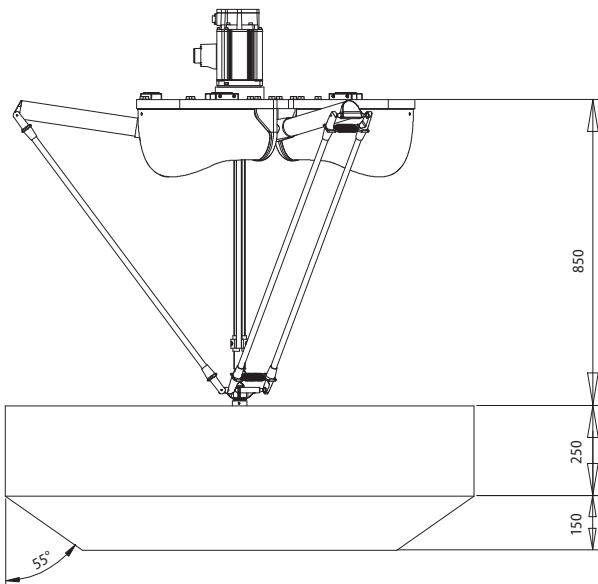
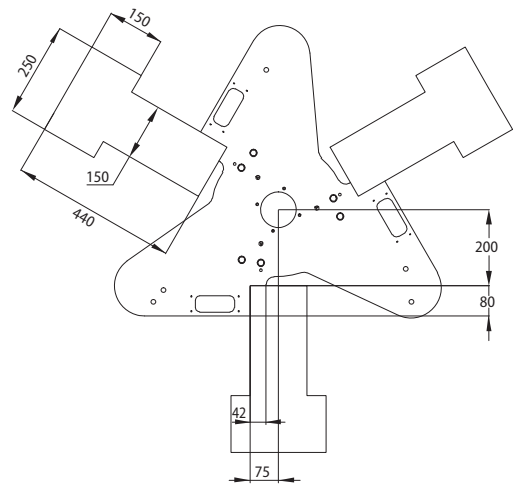
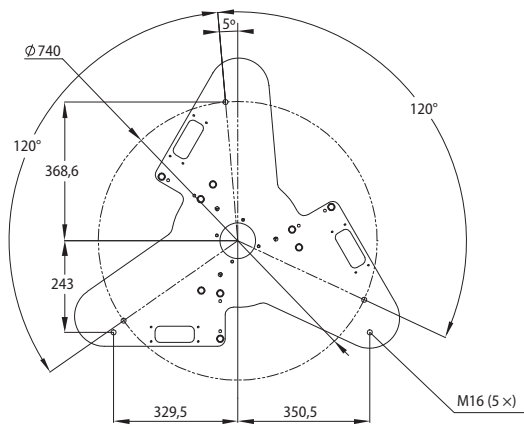
Delta robot XXL (1,600)
CR_UGD4_XXLH_□R



Delta robot XXL (1,300)
CR_UGD4_XXL1300H_□R

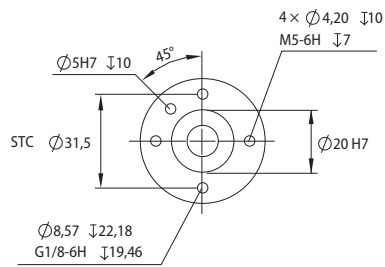
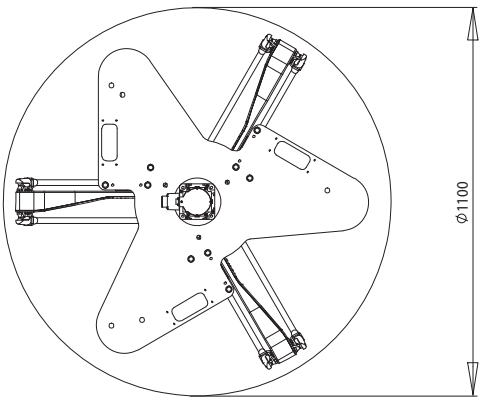
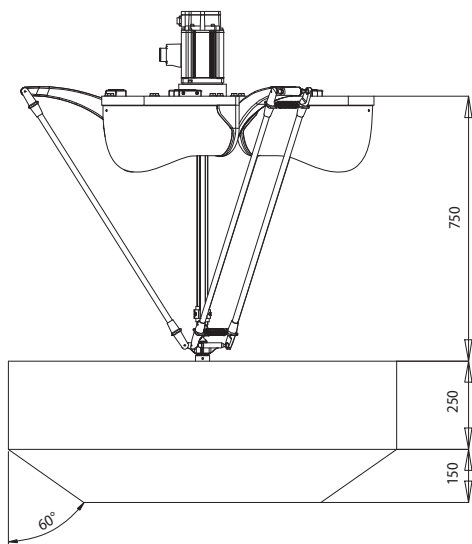
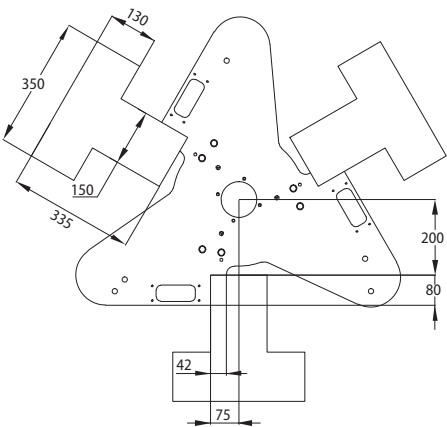
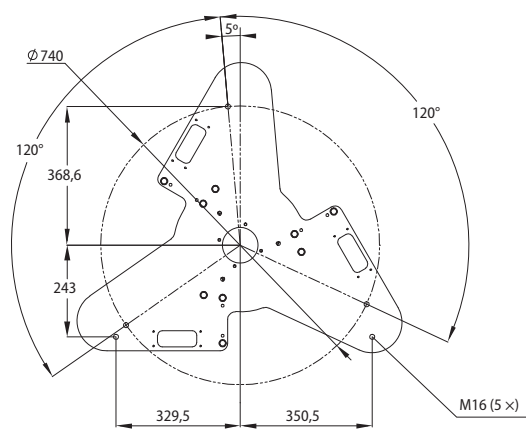


Delta robot XL
CR_UGD4_XL_□R



Gripper dimensions

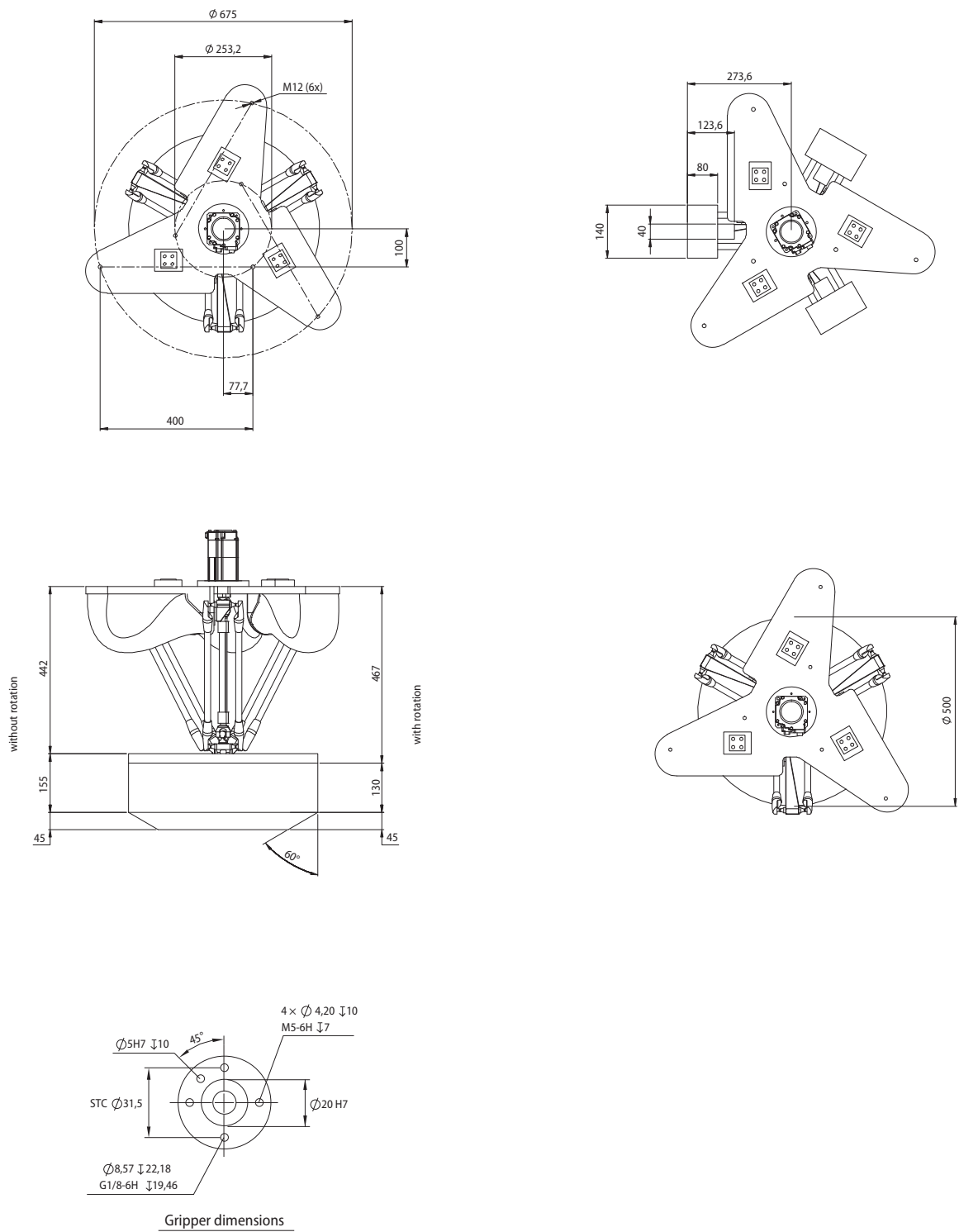
Delta robot
CR_UGD4_□R



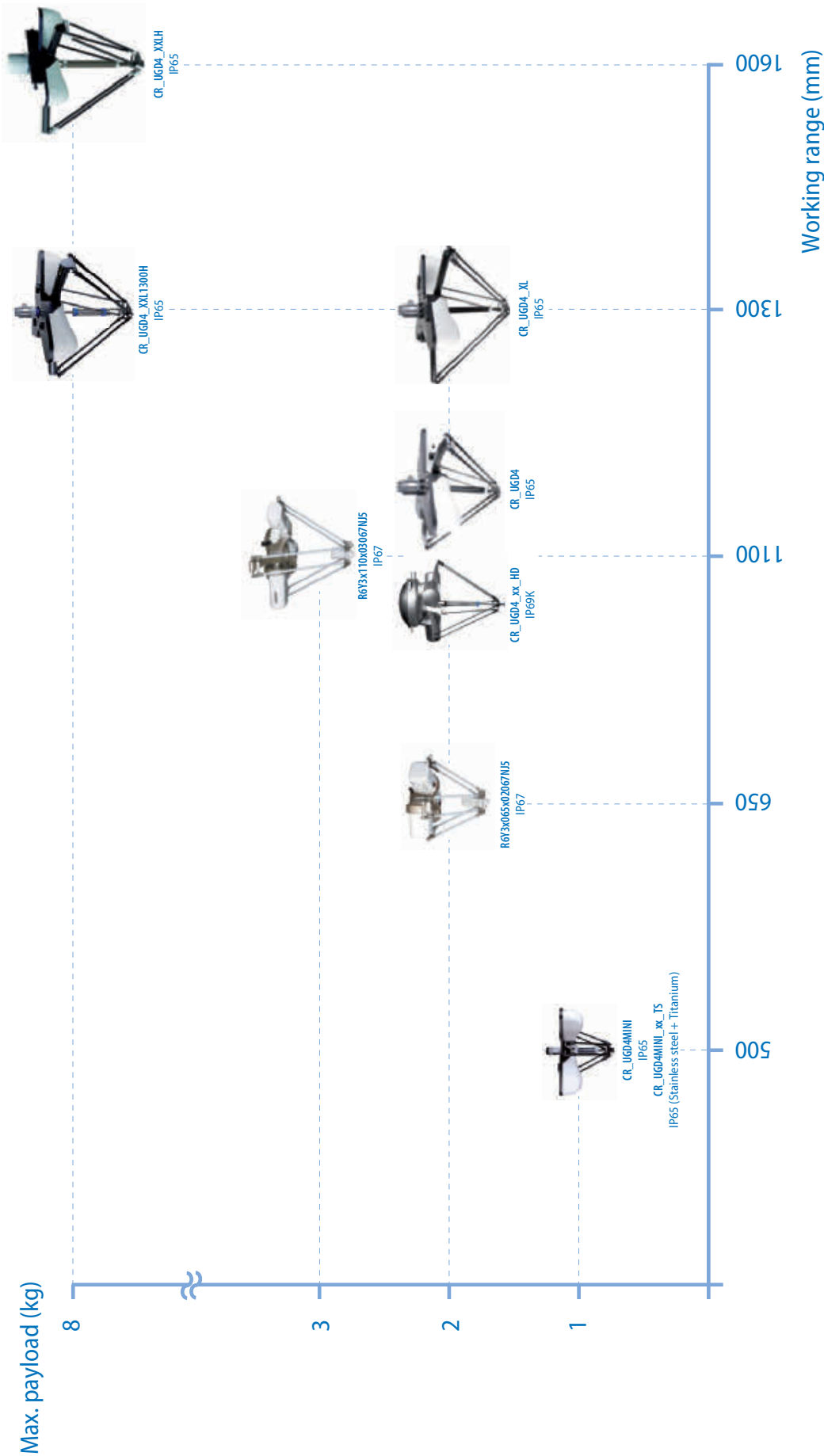
Gripper dimensions

Washdown Mini Delta robot IP65 / Mini Delta robot

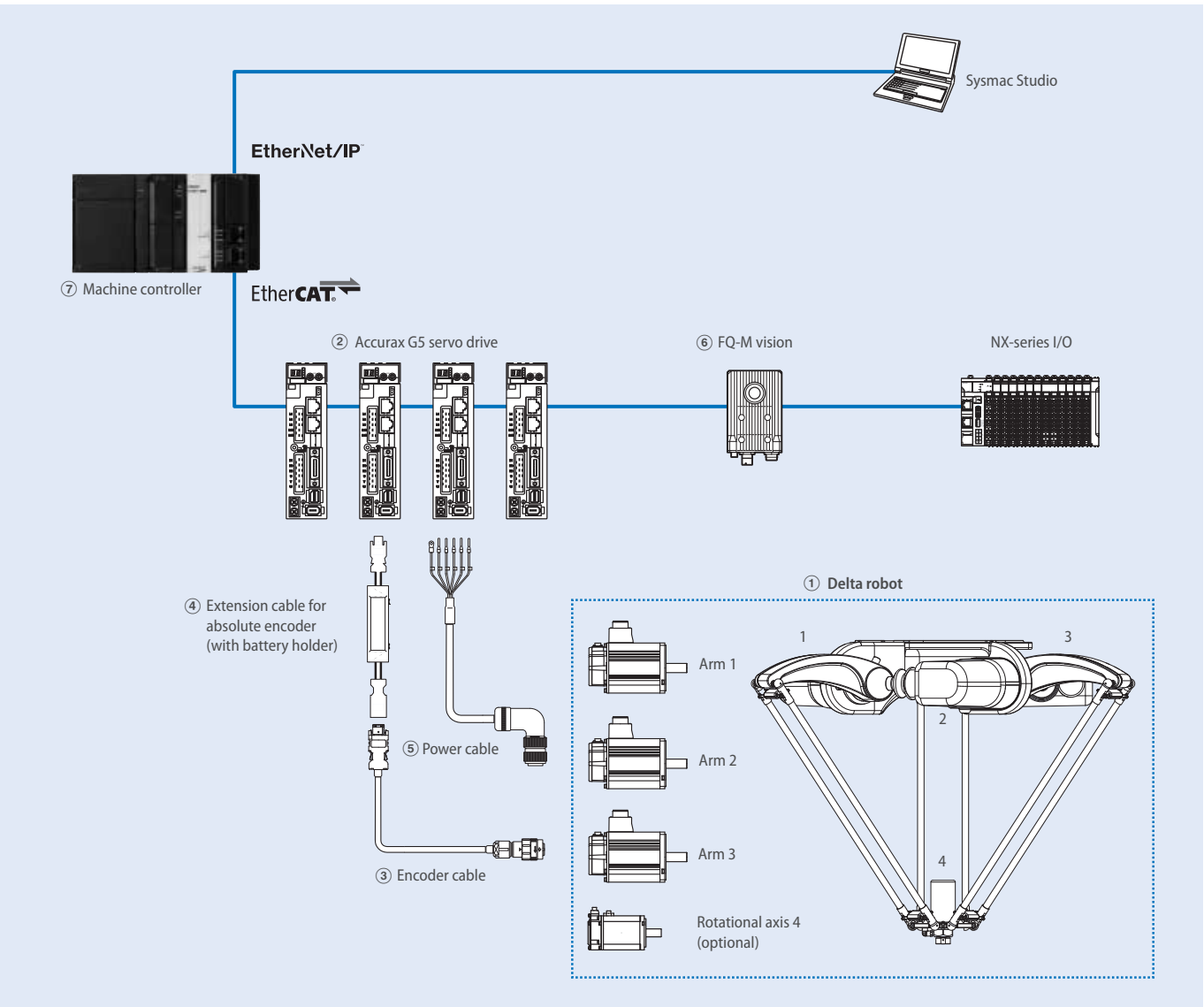
CR_UGD4MINI_□R□



Selection table

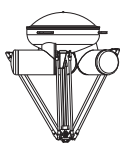
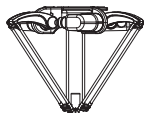


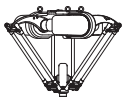
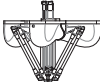
Ordering information



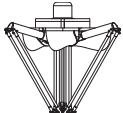



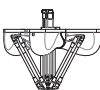
Note: Servo motors included in the Delta robot.

Washdown Delta robot series

Symbol	Model	Cable length	Max. payload	Working range	Description	Axis	② Applicable servo drive		
<div>①</div> <div></div> <div>Delta robot IP69K</div>	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			3 axes Hygienic Design (only this robot includes the cables)	Arm 1	R88D-KN15H-ECT		
	CR_UGD4_NR_HD3	3 m				Arm 2	R88D-KN15H-ECT		
	CR_UGD4_NR_HD5	5 m				Arm 3	R88D-KN15H-ECT		
	CR_UGD4_NR_HD10	10 m							
	CR_UGD4_NR_HD15	15 m							
	CR_UGD4_NR_HD20	20 m							
<div>①</div> <div></div> <div>Delta robot IP67</div>	R6Y31110H03067NJ5	3 kg		Ø 1,100 x 300 mm (Max. 450)	3 + 1 axes (high inertia rotational axis)	Arm 1	R88D-KN15H-ECT		
						Arm 2	R88D-KN15H-ECT		
						Arm 3	R88D-KN15H-ECT		
						Rotational 4	R88D-KN01H-ECT		
					3 + 1 axes (low inertia rotational axis)	Arm 1	R88D-KN15H-ECT		
	Arm 2					R88D-KN15H-ECT			
	Arm 3					R88D-KN15H-ECT			
	Rotational 4					R88D-KN01H-ECT			
	R6Y30110S03067NJ5						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	Ø 650 x 150 mm (Max. 250)	3 + 1 axes (high inertia rotational axis)	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN01H-ECT
	R6Y31065L02067NJ5				3 + 1 axes (low inertia rotational axis)	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN01H-ECT
	R6Y30065S02067NJ5				3 axes	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN01H-ECT
①  Mini Delta robot IP65	CR_UGD4MINI_R_TS		1 kg	Ø 500 x 130 mm (Max. 175)	3 + 1 axes	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN04H-ECT
	CR_UGD4MINI_NR_TS			Ø 500 x 155 mm (Max. 200)	3 axes	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN04H-ECT
						Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						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	Ø 1,600 x 350 mm (Max. 550)	3 + 1 axes	Arm 1	R88D-KN30F-ECT
						Arm 2	R88D-KN30F-ECT
						Arm 3	R88D-KN30F-ECT
						Rotational 4	R88D-KN15F-ECT
	CR_UGD4_XXLH_NR				3 axes	Arm 1	R88D-KN30F-ECT
						Arm 2	R88D-KN30F-ECT
①  Delta robot XXL (1,300)	CR_UGD4_XXL1300H_R		8 kg	Ø 1,300 x 300 mm (Max. 450)	3 + 1 axes	Arm 1	R88D-KN30F-ECT
						Arm 2	R88D-KN30F-ECT
						Arm 3	R88D-KN30F-ECT
						Rotational 4	R88D-KN15F-ECT
	CR_UGD4_XXL1300H_NR				3 axes	Arm 1	R88D-KN30F-ECT
						Arm 2	R88D-KN30F-ECT
①  Delta robot XL	CR_UGD4_XL_R		2 kg	Ø 1,300 x 250 mm (Max. 400)	3 + 1 axes	Arm 1	R88D-KN15H-ECT
						Arm 2	R88D-KN15H-ECT
						Arm 3	R88D-KN15H-ECT
						Rotational 4	R88D-KN15H-ECT
	CR_UGD4_XL_NR				3 axes	Arm 1	R88D-KN15H-ECT
						Arm 2	R88D-KN15H-ECT
①  Delta robot	CR_UGD4_R		2 kg	Ø 1,100 x 250 mm (Max. 400)	3 + 1 axes	Arm 1	R88D-KN15H-ECT
						Arm 2	R88D-KN15H-ECT
						Arm 3	R88D-KN15H-ECT
						Rotational 4	R88D-KN15H-ECT
	CR_UGD4_NR				3 axes	Arm 1	R88D-KN15H-ECT
						Arm 2	R88D-KN15H-ECT
①  Mini Delta robot	CR_UGD4MINI_R		1 kg	Ø 500 x 130 mm (Max. 175)	3 + 1 axes	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT
						Arm 3	R88D-KN04H-ECT
						Rotational 4	R88D-KN04H-ECT
	CR_UGD4MINI_NR			Ø 500 x 155 mm (Max. 200)	3 axes	Arm 1	R88D-KN04H-ECT
						Arm 2	R88D-KN04H-ECT

Encoder cables

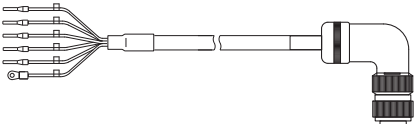
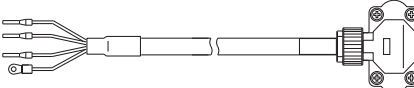

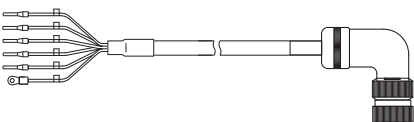
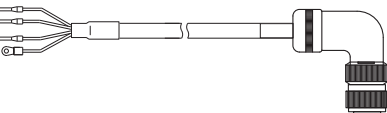
Symbol	Applicable Delta robots		Model	Appearance
③	CR_UGD4_□_HD□ (Arm 1, 2, 3)* ¹ R6Y3□110□03067NJ5 CR_UGD4_XXLH CR_UGD4_XXL1300H CR_UGD4_XL CR_UGD4	1.5 m	R88A-CRKC001-5NR-E	
		3 m	R88A-CRKC003NR-E	
		5 m	R88A-CRKC005NR-E	
		10 m	R88A-CRKC010NR-E	
		15 m	R88A-CRKC015NR-E	
		20 m	R88A-CRKC020NR-E	
	CR_UGD4_□_HD□ (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	
		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
		Logic sequence, motion and robotics		64	NJ501-4500
				32	NJ501-4400
			16	NJ501-4300	
			Control of one Delta robot	16	NJ501-4310
	Power supply unit				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□□□

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

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