

EN

Robotics

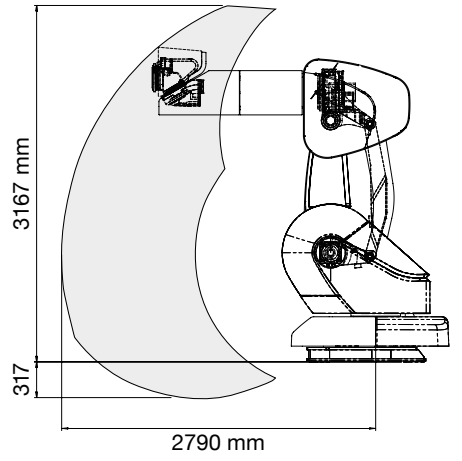
Compact Catalogue

COMAU

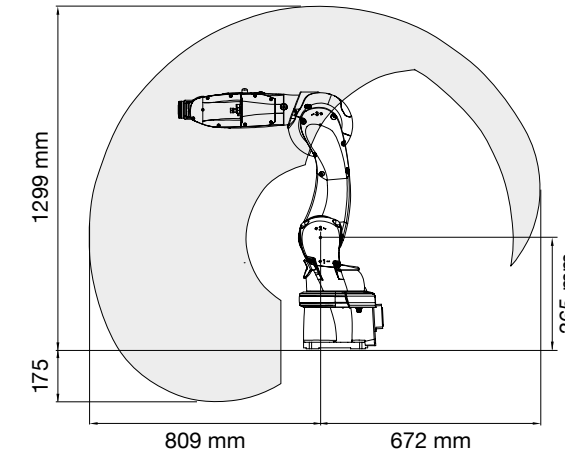


THE CULTURE OF HUMANufacturing

Automation is no longer confined within barriers, but it collaborates and supports operators: this is what we like to call Comau HUMANufacturing, the environment of human-exoskeletons and collaborative robotics.



Model	AURA-170-2.8
Structure / No. of axes	Anthropomorphic / 6 axes
Maximum wrist payload	170 kg
Maximum horizontal reach	2790 mm
Torque on axis 4	1010 Nm
Torque on axis 5	804 Nm
Torque on axis 6	412 Nm
Stroke (Max Speed)	Axis 1 +/- 180° (100 °/s)
	Axis 2 +85° / -20° (85 °/s)
	Axis 3 -50° / -220° (100 °/s)
	Axis 4 +/- 180° (130 °/s)
	Axis 5 +/- 180° (140 °/s)
	Axis 6 +/- 180° (190 °/s)
Repeatability	+/-0,1 mm
Tool coupling flange ISO	9409 - 1 - A 125
	9409 - 1 - A 160
Robot weight	1615 kg
Motors	AC brushless
Position measurement system	encoders
Total power installed	8 kVA
Working temperature	0 / +45°C
Storage temperature	-25°C / +55°C
Robot color	blue and gray
Mounting position	Floor
Maximum linear speed	up to 2000 mm/s*
Maximum collaborative linear speed	up to 500 mm/s



Model	Racer-5-0.80 COBOT
Structure / No. of axes	Anthropomorphic / 6 axes
Maximum wrist payload	5 kg (11.0 lb)
Nominal wrist load	1 kg (2.2 lb)
Maximum horizontal reach	809 mm
Torque on axis 4	8,83 Nm
Torque on axis 5	8,83 Nm
Torque on axis 6	4,91 Nm
Admissible inertia on axis 4*	0,42 kg x m²
Admissible inertia on axis 5*	0,42 kg x m²
Admissible inertia on axis 6*	0,18 kg x m²
Stroke (Max Speed)	Axis 1 +/- 170° (360 °/s) **
	Axis 2 -64° / +114° (300 °/s) **
	Axis 3 -150° / +60° (330 °/s) **
	Axis 4 +/- 200° (500 °/s) **
	Axis 5 - 105°/ +100° (500 °/s) **
	Axis 6 +/- 2700° (800 °/s) **
Repeatability	+/-0,03 mm
Robot weight	34 kg
Features of the tool coupling Robot wrist	ISO 9409 - 1 - A 25
Motors	AC Brushless
Position measurement system	Encoder
Protection degree	IP54
Mounting position	Floor / ***
Working temperature	5°C / +40°C
Storage temperature	-10°C / 55°C
Maximum temperature gradient	1,5°C/min

* Not allowed with maximum load

** Maximum speed

*** Base vertical cable output available (option)

MATE-XT

The exoskeloton for shoulder and arm assistance during repetitive operations and daily tasks



New shoulder length regulation design

Ergonomically designed cuffs

High-tech, lightweight carbon-fiber structure

Breathable fabrics

Intuitive lock/unlock mechanism for easy donning/doffing

Slim active box design

Intuitive labels for regulations and adjustments

PRODUCTS MADE FOR SYSTEMS INTEGRATION



Designing advanced automation solutions means thinking about the industry in a new way, developing new scenarios, designing innovative products and creating ways to streamline production processes.

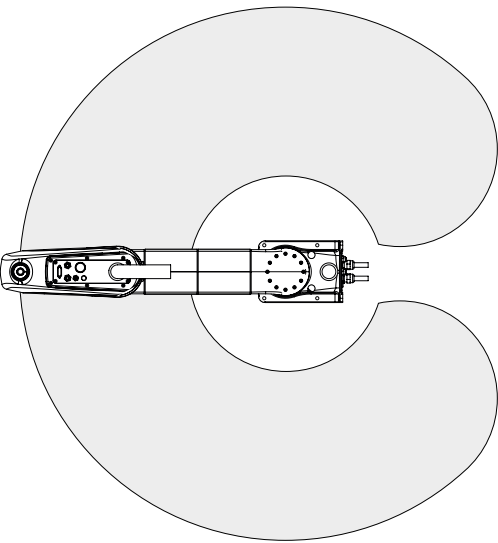
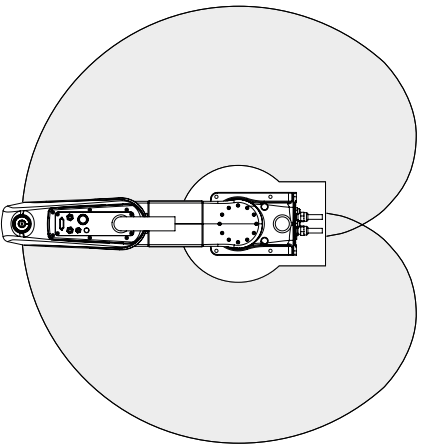
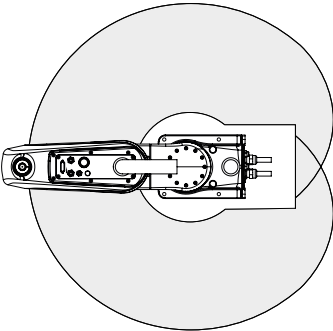
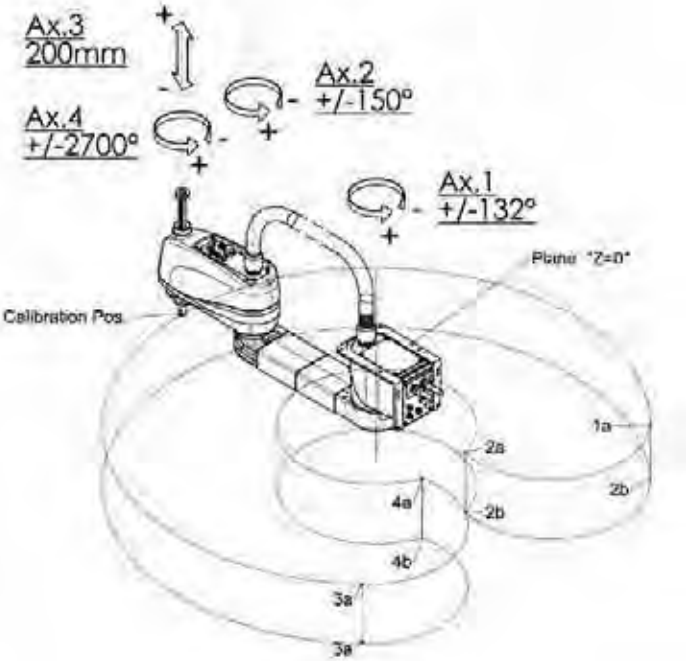
It requires more than technical competence; it requires a team of professionals whose vision is rooted in a culture of excellence. It also requires a combination of talent, passion and experience that unite to define new trends in automation.

Here at Comau, our passion for our work reflects who we are.

SCARA robots

Model	Rebel-S6-0.45	Rebel-S6-0.60	Rebel-S6-0.60c	Rebel-S6-0.75	Rebel-S6-0.75c
Robot type	SCARA	SCARA	SCARA	SCARA	SCARA
Payload	6 kg	6 kg	6 kg	6 kg	6 kg
Horizontal reach (radius)	450 mm	600 mm	600 mm	750 mm	750 mm
Vertical reach (Z-stroke)	200 mm	200 mm	200 mm	200 mm	200 mm
Repeatability (X-Y)	0,02 mm	0,02 mm	0,02 mm	0,03 mm	0,03 mm
Internal user wiring / piping	Electrical Pneumatical IP class	25 pin-to-pin 1 x 4 mm & 2 x 6 mm IP10 (IP54 Option)	25 pin-to-pin 1 x 4 mm & 2 x 6 mm IP10 (IP54 Option)	25 pin-to-pin 1 x 4 mm & 2 x 6 mm IP10 (IP54 Option)	25 pin-to-pin 1 x 4 mm & 2 x 6 mm IP10 (IP54 Option)
Available protection classes	IP10 (IP54 Option)	IP10 (IP54 Option)	IP10 (IP54 Option)	IP10 (IP54 Option)	IP10 (IP54 Option)
Outer diameter of ball screw/spline	20 mm	20 mm	20 mm	20 mm	20 mm
Inner diameter of ball screw/spline	14 mm	14 mm	14 mm	14 mm	14 mm
Z axis down force (long-time)	160 N	160 N	160 N	160 N	160 N
Robot weight	20 kg	20 kg	20 kg	20 kg	20 kg
Environmental conditions	Temperature Relative humidity	+5° - +45° C 5 - 95%*	+5° - +45° C 5 - 95%*	+5° - +45° C 5 - 95%*	+5° - +45° C 5 - 95%*
Applicable controller	R1C-4	R1C-4	R1C-4	R1C-4	R1C-4
Mounting position	Floor	Floor	-	Floor	-
	Wall	Wall	Wall	Wall	Wall
	-	-	Ceiling	-	Ceiling

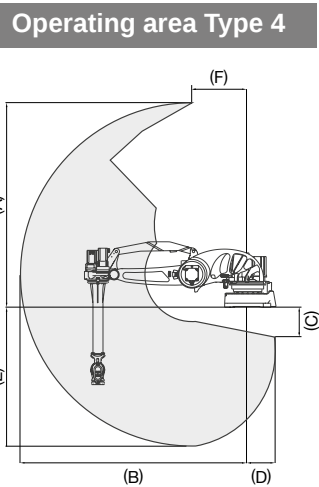
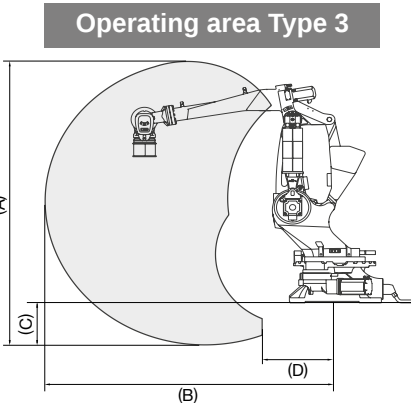
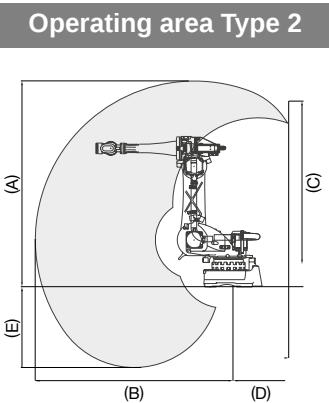
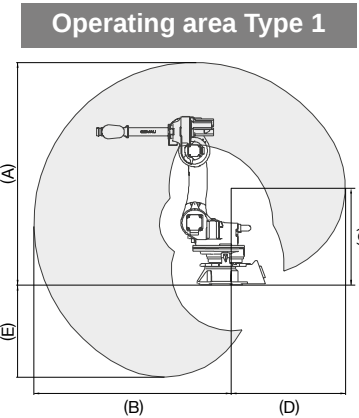
*without condensation



Robots

Robots		Small							Medium			Special										
Model		RACER-3-0.63	RACER-5-0.63	RACER-5-0.80	RACER-7-1.0	RACER-7-1.4	ARC4-5-1.95	NS-12-1.85	NS-16-1.65	NJ-16-3.1	NJ-40-2.5	NJ-60-2.2	PAL-180-3.1	PAL-260-3.1	PAL-470-3.1	NJ-100-3.2 PRESS	NJ-130-3.7 SH PRESS					
Number of axes		6	6	6	6	6	6	6	6	6	6	6	4	4	5	6	6					
Maximum wrist payload		3 kg	5 kg*	5 kg	7 kg*	7 kg	5 kg	12 kg	16 kg	16 kg	40 kg	60 kg	180 kg	260 kg	470 kg	100 kg	130 kg					
Additional load on forearm		-	-	-	10 kg	10 kg	10 kg	10 kg	10 kg	12 kg	35 kg	20 kg	25 kg	50 kg	25 kg	50 kg	15 kg					
Maximum horizontal reach		630 mm	630 mm	809 mm	999 mm	1436 mm	1951 mm	1850 mm	1650 mm	3108 mm	2503 mm	2258 mm	3100 mm	3100 mm	3100 mm	3209 mm	3741 mm					
Torque on axis 4		7.36 Nm	8.83 Nm	8.83 Nm	13 Nm	13 Nm	14 Nm	39 Nm	41 Nm	43 Nm	167 Nm	221 Nm	-	-	-	638 Nm	1225 Nm					
Torque on axis 5		7.36 Nm	8.83 Nm	8.83 Nm	13 Nm	13 Nm	14 Nm	39 Nm	41 Nm	43 Nm	167 Nm	221 Nm	-	-	-	638 Nm	1225 Nm					
Torque on axis 6		4.41 Nm	4.91 Nm	4.91 Nm	7.5 Nm	7.5 Nm	4.9 Nm	20 Nm	23 Nm	23 Nm	98 Nm	118 Nm	-	-	-	280 Nm	648 Nm					
Stroke (max speed)	Axis 1	+/- 170° (430 °/s)	+/- 170° (400 °/s)	+/- 170° (360 °/s)	+/- 165° (250 °/s)	+/- 165° (220 °/s)	+/- 180° (170 °/s)	+/- 180° (155 °/s)	+/- 180° (155 °/s)	+/- 180° (170 °/s)	+/-180° (170 °/s)	+/- 180° (170 °/s)	+/- 180° (120 °/s)	+/- 180° (120 °/s)	+/- 180° (85 °/s)	+/- 180° (120 °/s)	+/- 180° (120 °/s)					
	Axis 2	-95° / +135° (450 °/s)	-95° / +135° (360 °/s)	-95° / +135° (300 °/s)	-65° / +150° (250 °/s)	-85° / +155° (250 °/s)	-60° / +155° (175 °/s)	-60° / +155° (155 °/s)	-60° / +155° (155 °/s)	-60° / +125° (150 °/s)	-60° / + 125° (150 °/s)	-60° / +125° (150 °/s)	-49° / +95° (100 °/s)	-49° / + 95° (90 °/s)	-60° / +75° (85 °/s)	-49° / +95° (108 °/s)	-60° / +170° (90 °/s)					
	Axis 3	-155° / +90° (500 °/s)	-155° / +90° (400 °/s)	-155° / +90° (330 °/s)	-37° / -165° (300 °/s)	0° / -168° (300 °/s)	-170° / +110° (185 °/s)	-170° / +110° (170 °/s)	-170° / +110° (170 °/s)	0° / -170° (165 °/s)	0° / -165° (165 °/s)	0° / -165° (165 °/s)	-68° / -208° (110 °/s)	-68° / -208° (110 °/s)	-45° / -205° (85 °/s)	-222° / -68° (120 °/s)	-292° / -21° (112 °/s)					
	Axis 4	+/- 200° (600 °/s)	+/- 200° (500 °/s)	+/- 200° (500 °/s)	+/- 210° (550 °/s)	+/- 210° (600 °/s)	+/- 185° (360 °/s)	+/- 2700° (360 °/s)	+/- 2700° (360 °/s)	+/- 2700° (265 °/s)	+/- 2700° (265 °/s)	+/- 2700° (265 °/s)	-	-	-	+/- 200° (190 °/s)	+/- 2700° (180 °/s)					
	Axis 5	+/- 125° (600 °/s)	+/- 125° (500 °/s)	+/- 125° (500 °/s)	+/- 137° (550 °/s)	+/- 135° (600 °/s)	+/- 123° (375 °/s)	+/- 120° (350 °/s)	+/- 120° (350 °/s)	+/- 120° (250 °/s)	+/- 123° (250 °/s)	+/- 123° (250 °/s)	-	-	Axis bound to balance	+/- 120° (190 °/s)	+/- 125° (175 °/s)					
	Axis 6	+/- 2700° (900 °/s)	+/- 2700° (800 °/s)	+/- 2700° (800 °/s)	+/- 2700° (600 °/s)	+/- 2700° (650 °/s)	+/- 270° (550 °/s)	+/- 2700° (550 °/s)	+/- 2700° (550 °/s)	+/- 2700° (340 °/s)	+/- 2700° (550 °/s)	+/- 2700° (340 °/s)	+/- 2700° (340 °/s)	+/- 2700° (280 °/s)	+/- 2700° (260 °/s)	+/- 2700° (180 °/s)	+/- 200° (250-275 °/s)	+/- 2700° (250 °/s)				
Repeatability		0.02 mm	0.03 mm	0.03 mm	0.02 mm	0.03 mm	0.05 mm	0.05 mm	0.05 mm	0.10 mm	0.06 mm	0.06 mm	0.10 mm	0.10 mm	0.15 mm	0.17 mm	0.20 mm					
Tool coupling flange ISO		9409 - 1 - A 25	9409 - 1 - A 25	9409 - 1 - A 25	9409 - 1- A 40	9409 - 1- A 40	9409-1-63-4-M6	9409 - 1 - A63	9409 - 1 - A63	9409 - 1 - A63	9409 - 1 - A100	9409 - 1 - A100	9409-2-200-6-M12	9409-2-200-6-M12	9409 - 1 - A 200	9409 - 1 - A 125	9409 - 1 - A 160					
Robot weight		30 kg	30 kg	32 kg	173 kg	180 kg	375 kg	335 kg	333 kg	680 kg	655 kg	645 kg	1213 kg	1213 kg	2310 kg	1250 kg	1520 kg					
Protection class		IP54	IP54	IP54	IP54	IP54	IP65	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65	IP65	IP65	IP44 / IP65 Wrist	IP44 / IP65 Wrist					
Mounting position	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	-					
	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	-	-	-	-	-					
	Wall	Wall**	Wall**	Wall**	Wall	-	-	-	-	-	-	-	-	-	-	-	-					
	-	-	-	-	Sloped	Sloped (45° max)	Sloped (45° max)	Sloped (45° max)	Sloped (45° max)	Sloped (45° max)	Sloped (45° max)	Sloped (45° max)	-	-	-	-	-					
Operating area type		Type 1	Type 1	Type 1	Type 2	Type 2	Type 2	Type 1	Type 1	Type 2	Type 2	Type 2	Type 3	Type 3	Type 3	Type 3	Type 4					
Operating areas	A	1081 mm	1081 mm	1124 mm	1279 mm	1716 mm	2251 mm	2150 mm	1951 mm	3258 mm	2653 mm	2408 mm	3147 mm	3147 mm	3522 mm	2780 mm	3391 mm					
	B	630 mm	630 mm	809 mm	999 mm	1436 mm	1951 mm	1850 mm	1651 mm	3108 mm	2503 mm	2258 mm	3099 mm	3099 mm	3050 mm	3209 mm	3741 mm					
	C	37 mm	37 mm	8 mm	904 mm	412 mm	49 mm	950 mm	950 mm	2576 mm	2165 mm	1918 mm	952 mm	952 mm	480 mm	1035 mm	692 mm					
	D	530 mm	530 mm	708 mm	554 mm	1130 mm	1257 mm	1157 mm	957 mm	1088 mm	720 mm	686 mm	1182 mm	1182 mm	793 mm	642 mm	712 mm					
	E	136 mm	136 mm	286 mm	385 mm	801 mm	986 mm	885 mm	685 mm	1625 mm	1187 mm	941 mm	-	-	-	-	2386 mm					
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	850 mm					
Base vertical cable output available					*For Pick&Place 10 kg with a limited stroke of the 5° axis					ARC version available					Off-set wrist version available							
		*For Pick&Place 6 kg with a limited stroke of the 5° axis																				
		** Allowable with payload limitations																				

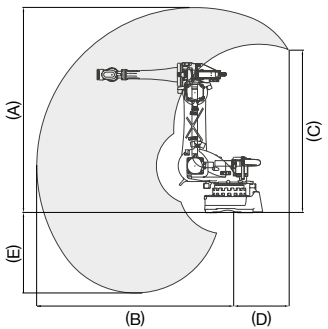
ARC welding package available



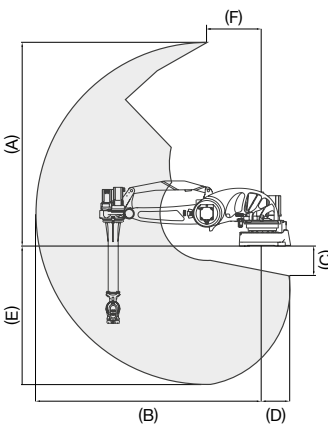
Robots

High payload														
Model	NJ-110-3.0	NJ-130-2.0	NJ-130-2.6	NJ-165-3.0	NJ-165-3.4 SH	NJ-210-3.1 SH	NJ-220-2.7	NJ-290-3.0	NJ-370-2.7	NJ-370-3.0	NJ-420-3.0	NJ-450-2.7	NJ-500-2.7	NJ-650-2.7
Number of axes	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Maximum wrist payload	110 kg	130 kg	130 kg	165 kg	165 kg	210 kg	220 kg	290 kg	370 kg	370 kg	420 kg	450 kg	500 kg	650 kg
Additional load on forearm	50 kg	50 kg	50 kg	50 kg	25 kg	25 kg	50 kg	50 kg	50 kg	50 kg	50 kg	50 kg	50 kg	50 kg
Maximum horizontal reach	2980 mm	2050 mm	2616 mm	3000 mm	3450 mm	3151 mm	2701 mm	2997 mm	2703 mm	2997 mm	2997 mm	2703 mm	2703 mm	2703 mm
Torque on axis 4	638 Nm	638 Nm	638 Nm	1230 Nm	1089 Nm	1177 Nm	1230 Nm	1668 Nm	2109 Nm	2109 Nm	2550 Nm	2550 Nm	2550 Nm	3060 Nm
Torque on axis 5	638 Nm	638 Nm	638 Nm	1230 Nm	804 Nm	1177 Nm	1230 Nm	1668 Nm	2109 Nm	2109 Nm	2550 Nm	2550 Nm	2550 Nm	3060 Nm
Torque on axis 6	291 Nm	314 Nm	314 Nm	712 Nm	411 Nm	677 Nm	712 Nm	1177 Nm	1177 Nm	1569 Nm	1569 Nm	1569 Nm	1569 Nm	1766 Nm
Stroke (max speed)	Axis 1	+/- 180° (110 °/s)	+/- 180° (155 °/s)	+/- 180° (110 °/s)	+/- 180° (85 °/s)	+/- 180° (100 °/s)	+/- 180° (90 °/s)	+/- 180° (85 °/s)	+/- 180° (85 °/s)	+/- 180° (85 °/s)	+/- 180° (85 °/s)	+/- 180° (85 °/s)	+/- 180° (85 °/s)	+/- 180° (75 °/s)
	Axis 2	+95° / -75° (110 °/s)	-60° / +125° (105 °/s)	+95° / -75° (110 °/s)	-95° / +180° (90 °/s)	-50° / +170° (90 °/s)	-95° / +75° (90 °/s)	+/- 75° (90 °/s)	+75° / -60° (85 °/s)	+75° / -60° (85 °/s)	+75° / -60° (85 °/s)	+75° / -60° (85 °/s)	+75° / -60° (85 °/s)	+75° / -60° (75 °/s)
	Axis 3	-10° / -256° (110 °/s)	0° / -165° (150 °/s)	-10° / -256° (110 °/s)	-10° / -256° (110 °/s)	-18,8° / -288° (110 °/s)	-21,3° / -288° (110 °/s)	-10° / -256° (90 °/s)	-10° / -231° (85 °/s)	-10° / -231° (85 °/s)	-10° / -231° (85 °/s)	-10° / -231° (85 °/s)	-10° / -231° (85 °/s)	-10° / -231° (75 °/s)
	Axis 4	+/- 280° (190 °/s)	+/- 200° (200 °/s)	+/- 280° (190 °/s)	+/- 2700° (130 °/s)	+/- 2700° (130 °/s)	+/- 2700° (130 °/s)	+/- 2700° (105 °/s)	+/- 2700° (90 °/s)	+/- 2700° (90 °/s)	+/- 2700° (90 °/s)	+/- 2700° (90 °/s)	+/- 2700° (90 °/s)	+/- 2700° (90 °/s)
	Axis 5	+/- 120° (190 °/s)	+/- 120° (130 °/s)	+/- 120° (190 °/s)	+/- 125° (130 °/s)	+/- 125° (130 °/s)	+/- 125° (130 °/s)	+/- 125° (105 °/s)	+/- 125° (90 °/s)	+/- 125° (90 °/s)	+/- 125° (90 °/s)	+/- 125° (90 °/s)	+/- 125° (90 °/s)	+/- 125° (90 °/s)
	Axis 6	+/- 2700° (230 °/s)	+/- 2700° (230 °/s)	+/- 2700° (230 °/s)	+/- 2700° (195 °/s)	+/- 2700° (195 °/s)	+/- 2700° (195 °/s)	+/- 2700° (160 °/s)	+/- 2700° (120 °/s)	+/- 2700° (120 °/s)	+/- 2700° (120 °/s)	+/- 2700° (120 °/s)	+/- 2700° (120 °/s)	+/- 2700° (120 °/s)
Repeatability	0.07 mm	0.07 mm	0.07 mm	0.09 mm	0.10 mm	0.10 mm	0.08 mm	0.15 mm	0.15 mm	0.15 mm	0.15 mm	0.15 mm	0.15 mm	0.15 mm
Tool coupling flange ISO	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 160	9409 - 1 - A 160/200	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12	9409 - 1 - 200 - 6 - M12
Robot weight	1070 kg	740 kg	1050 kg	1240 kg	1430 kg	1415 kg	1220 kg	2150 kg	2100 kg	2450 kg	2450 kg	2400 kg	2400 kg	2450 kg
Protection class	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP65/67 (Foundry)	IP44 / IP65 Wrist
Mounting position	Floor	Floor	Floor	Floor	-	-	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor
	Ceiling	Ceiling	Ceiling	Ceiling	-	-	Ceiling	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	Sloped	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	Shelf	Shelf	-	-	-	-	-	-	-	-
Operating area type	Type 2	Type 2	Type 2	Type 2	Type 4	Type 4	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2
Operating areas	A	3460 mm	2200 mm	3097 mm	3430 mm	3100 mm	3131 mm	3680 mm	3392 mm	3680 mm	3680 mm	3392 mm	3392 mm	3392 mm
	B	2980 mm	2050 mm	2616 mm	3000 mm	3450 mm	2701 mm	2997 mm	2703 mm	2997 mm	2997 mm	2703 mm	2703 mm	2703 mm
	C	757 mm	1690 mm	2261 mm	2600 mm	449 mm	547 mm	2286 mm	2617 mm	3195 mm	3195 mm	2895 mm	2895 mm	2895 mm
	D	783 mm	720 mm	824 mm	730 mm	397 mm	93 mm	786 mm	804 mm	433 mm	433 mm	486 mm	486 mm	486 mm
	E	-	mm	mm	738 mm	2100 mm	1800 mm	425 mm	-181 mm	119 mm	119 mm	-181 mm	-181 mm	-181 mm
	F	-	-	-	-	850 mm	850 mm	-	-	-	-	-	-	-

Operating area Type 2

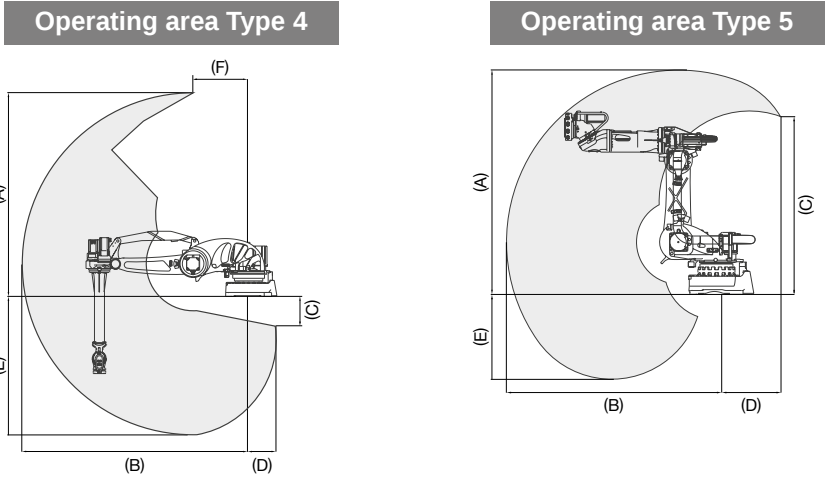


Operating area Type 4



Robots

Robots		Hollow Wrist										
Model	NJ4-90-2.2	NJ4-110-2.2	NJ4-170-2.5	NJ4-170-2.9	NJ4-175-2.2	NJ4-220-2.4	NJ4-220-2.7	NJ4-220-3.0	NJ4-270-2.7	NJ4-165-3.4 SH	NJ4-210-3.1 SH	
Number of axes		6	6	6	6	6	6	6	6	6	6	
Maximum wrist payload		90 kg	110 kg	170 kg	170 kg	175 kg	220 kg	220 kg	220 kg	270 kg	165 kg	210 kg
Additional load on forearm		10 kg	10 kg	50 kg	25 kg	50 kg	25 kg	25 kg	25 kg	25 kg	25 kg	
Maximum horizontal reach		2210 mm	2210 mm	2500 mm	2918 mm	2204 mm	2417 mm	2738 mm	3002 mm	2703 mm	3377 mm	3188 mm
Torque on axis 4		577 Nm	796 Nm	1010 Nm	1010 Nm	1010 Nm	1320 Nm	1320 Nm	1320 Nm	1960 Nm	1089 Nm	1315 Nm
Torque on axis 5		432 Nm	609 Nm	804 Nm	804 Nm	804 Nm	950 Nm	950 Nm	950 Nm	1457 Nm	804 Nm	952 Nm
Torque on axis 6		206 Nm	284 Nm	412 Nm	412 Nm	412 Nm	690 Nm	690 Nm	690 Nm	834 Nm	411 Nm	687 Nm
Stroke (max speed)	Axis 1	+/- 180° (170 °/s)	+/- 180° (170 °/s)	+/-180° (110 °/s)	+/-180° (100 °/s)	+/-180° (110 °/s)	+/-180° (100 °/s)	+/-180° (110 °/s)	+/-180° (90 °/s)	+/-180° (90 °/s)	+/-180° (85 °/s)	+/-180° (85 °/s)
	Axis 2	-60° / +125° (125 °/s)	-60° / +155° (125 °/s)	-75° / +95° (110 °/s)	-75° / +95° (90 °/s)	-75° / +95° (110 °/s)	-75° / +95° (90 °/s)	-75° / +95° (90 °/s)	-75° / +75° (90 °/s)	-75° / +75° (90 °/s)	-50° / +170° (90 °/s)	+95° / - 75° (110 °/s)
	Axis 3	0° / -165° (165 °/s)	0° / -165° (165 °/s)	-10° / -230° (110 °/s)	-10° / -230° (110 °/s)	-10° / -230° (110 °/s)	-10° / -256° (110° /s)	-10° / -256° (110 °/s)	-231° / 0° (90 °/s)	-231° / 0° (90 °/s)	-19.4° / -288° (110 °/s)	-21° / -288° (110 °/s)
	Axis 4	+/- 200° (200 °/s)	+/- 200° (200 °/s)	+/- 200° (180 °/s)	+/- 200° (130 °/s)	+/- 200° (180 °/s)	+/- 200° (130 °/s)	+/- 200° (130 °/s)	+/- 200° (115 °/s)	+/- 200° (115 °/s)	+/- 200° (130 °/s)	+/- 200° (130 °/s)
	Axis 5	+/- 200° (200 °/s)	+/- 200° (165 °/s)	+/- 200° (140 °/s)	+/- 200° (125 °/s)	+/- 200° (140 °/s)	+/- 200° (125 °/s)	+/- 200° (125 °/s)	+/- 200° (125 °/s)	+/- 200° (125 °/s)	+/- 200° (140 °/s)	+/- 200° (125 °/s)
	Axis 6	+/- 200° (265 °/s)	+/- 200° (265 °/s)	+/- 200° (190 °/s)	+/- 200° (170 °/s)	+/- 200° (190 °/s)	+/- 200° (170 °/s)	+/- 200° (170 °/s)	+/- 200° (170 °/s)	+/- 200° (170 °/s)	+/- 200° (170 °/s)	+/- 200° (190 °/s)
Repeatability		0.07 mm	0.07 mm	0.10 mm	0.10 mm	0.10 mm	0.15 mm	0.15 mm	0.15 mm	0.15 mm	0.10 mm	0.10 mm
Tool coupling flange ISO		9409-1-125-6-M10	9409-1-125-6-M10	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 125	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 160
		9409-1-160-6-M10	9409-1-160-6-M10	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 160	9409 - 1 - A 200	9409 - 1 - A 200	9409 - 1 - A 200	9409 - 1 - A 200
Robot weight		685 kg	685 kg	1100 kg	1240 kg	1080 kg	1260 kg	1290 kg	2005 kg	1975 kg	1430 kg	1460 kg
Protection class		IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Mounting position		Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	Floor	-	-
		Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	Ceiling	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	Shelf	Shelf
Operating area type		Type 5	Type 5	Type 5	Type 5	Type 5	Type 5	Type 5	Type 5	Type 5	Type 4	Type 4
Operating areas	A	2360 mm	2360 mm	2981 mm	3357 mm	2685 mm	2847 mm	3168 mm	3685 mm	3392 mm	3027 mm	2837 mm
	B	2210 mm	2210 mm	2501 mm	2927 mm	2204 mm	2417 mm	2738 mm	3002 mm	2703 mm	3377 mm	3187 mm
	C	1856 mm	1856 mm	2226 mm	2524 mm	2080 mm	2241 mm	2324 mm	2927 mm	2617 mm	472 mm	535 mm
	D	712 mm	712 mm	720 mm	744 mm	959 mm	465 mm	779 mm	804 mm	804 mm	323 mm	131 mm
	E	893 mm	893 mm	387 mm	436 mm	360 mm	436 mm	464 mm	123 mm	-181 mm ^(***)	2027 mm	1837 mm
	F	-	-	-	-	-	-	-	-	-	850 mm	850 mm



(***) Negative quote means that working area is entirely above the floor level

