

NJ4

**Best-in-class Hollow Wrist
for high payload applications**

NJ4 110 - 2.2

NJ4 170 - 2.5

NJ4 170 - 2.9

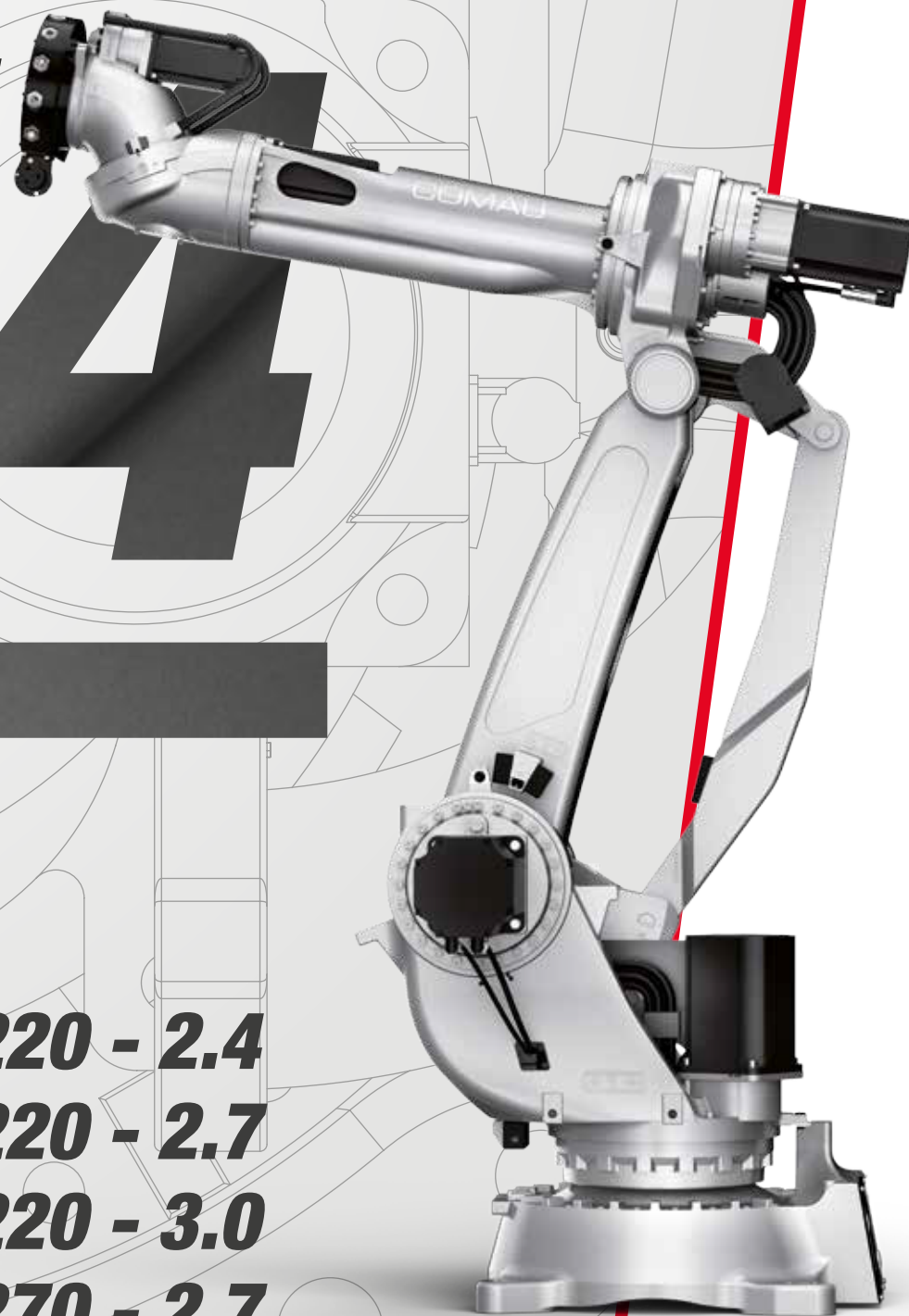
NJ4 175 - 2.2

NJ4 220 - 2.4

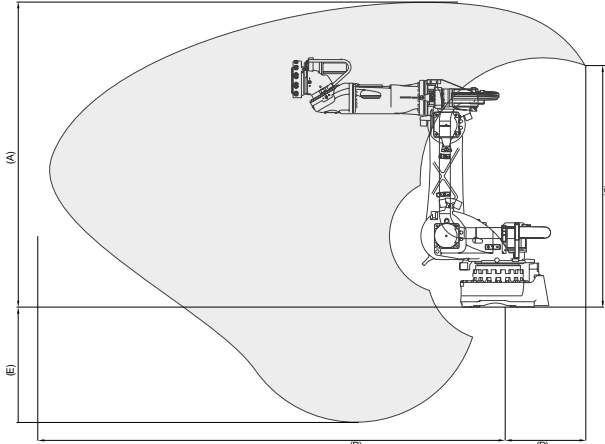
NJ4 220 - 2.7

NJ4 220 - 3.0

NJ4 270 - 2.7

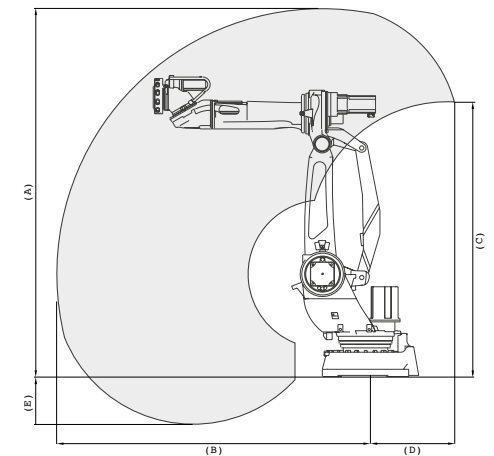


TECHNICAL SPECIFICATIONS

Model		NJ4 110 - 2.2		Suggested applications	
Number of axes		6		• Assembly • Handling / Packaging • Machine Tending • Measuring / Testing • Spot Welding	
Maximum wrist payload		110 kg			
Additional load on forearm		10 kg			
Maximum horizontal reach		2210 mm			
Torque on axis 4		796 Nm			
Torque on axis 5		609 Nm			
Torque on axis 6		284 Nm			
Stroke (Speed)	Axis 1	+/- 180°	(170°/s)		
	Axis 2	-60°/+125°	(125°/s)		
	Axis 3	0° / -165°	(165°/s)		
	Axis 4	+/- 200°	(200°/s)		
	Axis 5	+/- 200°	(165°/s)		
	Axis 6	+/- 200°	(265°/s)		
Repeatability		0.07 mm			
Tool coupling flange		ISO 9409 - 1 - 125 - 6 - M10 ISO 9409 - 1 - 160 - 6 - M10			
Robot weight		685 kg			
Protection class		IP65			
Mounting position		Floor / Ceiling			
Operating Areas	A	2360 mm			
	B	2210 mm			
	C	1856 mm			
	D	712 mm			
	E	893 mm			

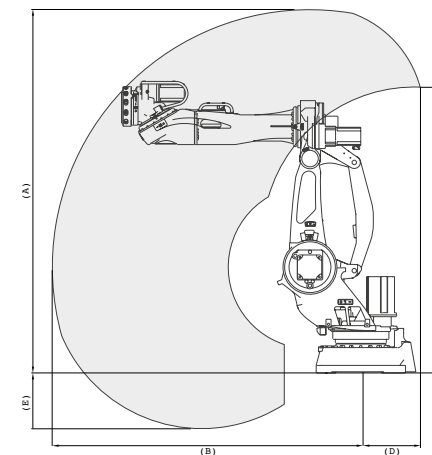
TECHNICAL SPECIFICATIONS

Model		NJ4 170 - 2.5	NJ4 170 - 2.9	NJ4 175 - 2.2	Suggested applications
Number of axes		6	6	6	• Assembly • Handling / Packaging • Machine Tending • Measuring / Testing • Spot Welding
Maximum wrist payload		170 kg	170 kg	175 kg	
Additional load on forearm		50 kg	25 kg	50 kg	
Maximum horizontal reach		2500 mm	2918 mm	2204 mm	
Torque on axis 4		1010 Nm	1010 Nm	1010 Nm	
Torque on axis 5		804 Nm	804 Nm	804 Nm	
Torque on axis 6		412 Nm	412 Nm	412 Nm	
Stroke (Speed)	Axis 1	+/- 180° (110°/s)	+/- 180° (100°/s)	+/- 180° (110°/s)	
	Axis 2	-75° / +95° (110°/s)	-75° / +95° (90°/s)	-75° / +95° (110°/s)	
	Axis 3	-10° / -230° (110°/s)	-10° / -230° (110°/s)	-10° / -230° (110°/s)	
	Axis 4	+/- 200° (180°/s)	+/- 200° (130°/s)	+/- 200° (180°/s)	
	Axis 5	+/- 200° (140°/s)	+/- 200° (125°/s)	+/- 200° (140°/s)	
	Axis 6	+/- 200° (190°/s)	+/- 200° (170°/s)	+/- 200° (190°/s)	
Repeatability		0.10 mm	0.10 mm	0.10 mm	
Tool coupling flange		ISO 9409 - 1 - A 125	ISO 9409 - 1 - A 125	ISO 9409 - 1 - A 125	
		ISO 9409 - 1 - A 160	ISO 9409 - 1 - A 160	ISO 9409 - 1 - A 160	
Robot weight		1100 kg	1240 kg	1080 kg	
Protection class		IP65	IP65	IP65	
Mounting position		Floor / Ceiling	Floor / Ceiling	Floor / Ceiling	
Operating Areas	A	2981 mm	3357 mm	2685 mm	
	B	2501 mm	2927 mm	2204 mm	
	C	2226 mm	2524 mm	2080 mm	
	D	720 mm	744 mm	959 mm	
	E	387 mm	436 mm	360 mm	



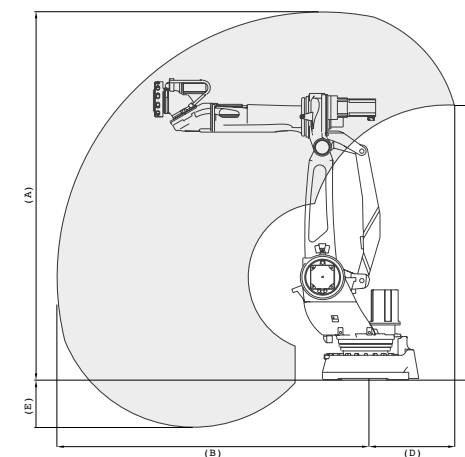
TECHNICAL SPECIFICATIONS

Model		NJ4 220 - 2.4	NJ4 220 - 2.7	Suggested applications
Number of axes		6	6	• Assembly • Handling / Packaging • Machine Tending • Measuring / Testing • Spot Welding
Maximum wrist payload		220 kg	220 kg	
Additional load on forearm		25 kg	25 kg	
Maximum horizontal reach		2417 mm	2738 mm	
Torque on axis 4		1320 Nm	1320 Nm	
Torque on axis 5		950 Nm	950 Nm	
Torque on axis 6		690 Nm	690 Nm	
Stroke (Speed)	Axis 1	+/- 180° (100°/s)	+/- 180° (100°/s)	
	Axis 2	-75° / +95° (90°/s)	-75° / +95° (90°/s)	
	Axis 3	-10° / -256° (110°/s)	-10° / -256° (110°/s)	
	Axis 4	+/- 200° (130°/s)	+/- 200° (130°/s)	
	Axis 5	+/- 200° (125°/s)	+/- 200° (125°/s)	
	Axis 6	+/- 200° (170°/s)	+/- 200° (170°/s)	
Repeatability		0.15 mm	0.15 mm	
Tool coupling flange		ISO 9409 - 1 - A 125	ISO 9409 - 1 - A 125	
		ISO 9409 - 1 - A 160	ISO 9409 - 1 - A 160	
Robot weight		1260 kg	1290 kg	
Protection class		IP65	IP65	
Mounting position		Floor / Ceiling	Floor / Ceiling	
Operating Areas	A	2847 mm	3168 mm	
	B	2417 mm	2738 mm	
	C	2241 mm	2324 mm	
	D	465 mm	779 mm	
	E	436 mm	464 mm	



TECHNICAL SPECIFICATIONS

Model		NJ4 220 - 3.0	NJ4 270 - 2.7	Suggested applications
Number of axes		6	6	• Assembly • Handling / Packaging • Machine Tending • Measuring / Testing • Spot Welding
Maximum wrist payload		220 kg	270 kg	
Additional load on forearm		25 kg	25 kg	
Maximum horizontal reach		3002 mm	2703 mm	
Torque on axis 4		1320 Nm	1960 Nm	
Torque on axis 5		950 Nm	1457 Nm	
Torque on axis 6		690 Nm	834 Nm	
Stroke (Speed)	Axis 1	+/- 180° (90°/s)	+/- 180° (90°/s)	
	Axis 2	-75° / +75° (90°/s)	-75° / +75° (90°/s)	
	Axis 3	-231° / 0° (90°/s)	-231° / 0° (90°/s)	
	Axis 4	+/- 200° (115°/s)	+/- 200° (115°/s)	
	Axis 5	+/- 200° (125°/s)	+/- 200° (125°/s)	
	Axis 6	+/- 200° (170°/s)	+/- 200° (170°/s)	
Repeatability		0.15 mm	0.15 mm	
Tool coupling flange		ISO 9409 - 1 - A 160	ISO 9409 - 1 - A 160	
		ISO 9409 - 1 - A 200	ISO 9409 - 1 - A 200	
Robot weight		2005 kg	1975 kg	
Protection class		IP65	IP65	
Mounting position		Floor	Floor	
Operating Areas	A	3685 mm	3392 mm	
	B	3002 mm	2703 mm	
	C	2927 mm	2617 mm	
	D	804 mm	804 mm	
	E	123 mm	-181 mm ^(*)	



(*) This dimension is negative because the wrist center can not reach positions below the floor level.