Specifications: 4-axis (JIG 700, JIG 1200)

		JIG 700	JIG 1200
Linear axes			
Travel X × Y × Z	mm	700 × 700 × 700	1,200 × 1,100 × 1,100
Distance from pallet surface to spindle Y-axis center (Min./Max.)	mm	20 - 720	40 - 1,140
Distance from table center to spindle Z-axis gauge plane (Min./Max.)	mm	150 - 850	230 - 1,330
Feedrate	mm/min	0 to 20,000	0 to 10,000
Rapid traverse rate	mm/min	40,000	20,000
Thrust force	daN	700	1,500
Max. acceleration	m/s^2	1.7 - 3.5	0.6 - 1.3
Bidirectional positioning accuracy B, according to ISO 230-2	nm	990	990
Repeatability of positioning R, according to ISO 230-2	nm	900	900
Measuring resolution	nm	50	50
Least command increment	nm	100	100
Rotary axes			
Min. table indexing angle	° x nb	0.0001 × 3,600,000	0.0001 × 3,600,000
Feedrate	min^{-1}	0 - 20	0 - 5
Rapid traverse rate	min^{-1}	50	10
Acceleration	rad/s^2	13	1.5
Max. torque (cont./rating)	N · m	775 / 1,085	1,040 / 1,540
Max. clamping force	N · m	4,500	6,750
Bidirectional positioning accuracy A, according to ISO 230-2	arc/sec	3	3
Repeatability of positioning R, according to ISO 230-2	arc/sec	1	1
Measuring resolution	arc/sec	0.02	0.02
Spindle			
Spindle drive motor	kW	24/25	34/39
Max. spindle speed	min^{-1}	12,000	12,000
Type of spindle taper hole		SK 40 Big Plus [HSKA 63]	SK 50 Big Plus [HSKA 100]
Sensor and continuous axial compensation system		Standard	Standard
Vibration control device		Standard	Standard
Table			
Table working surface	mm	500 × 630 [500 × 500]	1,250 × 1,000 [1,000 × 1,000]
Number of pallets		1	1
Table surface configuration		T slots [Tapped holes]	T slots [Tapped holes]
Reference slots	mm	14-H7	22-H8
Central reference hole Ø	mm	50-H6	50-H6
Table loading capacity	kg	800	2,500
Max. workpiece swing diameter	mm	800	1,400
Max. workpiece height	mm	800	1,400
Automatic Tool Changer (ATC)			
Number of pockets		108 [60] [218]*1	99 [60] [114 to 264]*2
Max. tool diameter (with adjacent tools)	mm	95 / 100 / 95	125 / 135 / 125
Max. tool diameter (without adjacent tools)	mm	190 / 140 / 190	350 / 190 / 350
Max. tool length	mm	350 / 300 / 350	400 and 630 / 400 / 150 - 630
Max. tool mass	kg	10 / 8 / 10	25 / 20 / 25
Tool changing time	s	5 - 8*3	6 - 13*3
Machine size			
Total floor space (width × depth)	mm	5,600 × 5,700	7,000 × 10,000
Total height	mm	3,100	4,100
Machine mass	kg	15,200	25,000
Numerical control unit		GE FANUC	GE FANUC

[ ] Option

*1 Standard 108 tools and Option 218-tool magazine: Rack type / Option 60-tool magazine: Chain type

*2 Standard 99 tools and Option 114 to 264-tool magazine: Rack type / Option 60-tool magazine: Chain type

■ Rack type magazine variations for JIG 1200

Number of Tool Pots		99	[114]		[129]	[204]	[234]		[264]
Max. Length Tools	150 mm	—	—	30 pots	30 pots	—	—	60 pots	60 pots
	200 mm	—	60 pots	—	60 pots	—	120 pots	—	120 pots
	400 mm	60 pots	15 pots	60 pots	15 pots	120 pots	30 pots	120 pots	30 pots
	630 mm	39 pots	39 pots	24 pots	24 pots	84 pots	84 pots	54 pots	54 pots

*3 These values can change depending upon the ATC.

● All specifications are subject to change without notice.

Standard and optional features: 4-axis (JIG 700, JIG 1200)

		JIG 700	JIG 1200
Through-spindle coolant			
Manual pressure adjustment	MPa	0 - 7	0 - 7
Flow at 70 bars	L/min	20	20
Options: - 50 Hz or 60 Hz			
- with exchangeable cartridge filters	µm	40	40
- with self-cleaning filter (option)	µm	40	40
Coolant cooling unit			
Power heat exchanger	W	4,500	4,500
Options: - 50Hz or 60Hz			
Coolant system			
Options: - 50Hz or 60Hz			
Max. ambient temperature	℃	32	32
Temperature provided by the unit	℃	12 ±1	12 ±1
Refrigerator motor	kW	16.5	20.3
Flow	L/min	60	80
Pressure	MPa	0.25	0.2
Air extraction and filtering system (option)			
Double centrifuge, flow	m^3/h	2,000	3,000
Oil separator (oil skimmer)			
Only when using emulsion			
Oil-mist collector (option)			
Additional unit when using oil-based coolant			
Electrostatic filter, flow	m^3/h	2,000	3,000
Rotoclear (option)			
Absolute diameter	mm	300	300
See-through surface	cm^2	230	230
Rotation speed	min^{-1}	2,300	2,300
3D probe to determine the workpiece zero point (option)			
Repeatability	µm	±1	±1
Tool breakage detection function (option)			
Visible red-light laser, class 2 according to IEC825	type	670 nm / < 1 mW	670 nm / < 1 mW
Dynamic tool measuring system with tool breakage detection function (option)			

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Specifications: 5-axis (JIG 700, JIG 1200)

		JIG 700	JIG 1200
Linear axes			
Travel X × Y × Z	mm	700 × 700 × 700	1,200 × 1,100 × 1,150
Distance from pallet surface to spindle Y-axis center (Min./Max.)	mm	-250 to +450	-310 to +790
Distance from table center to spindle Z-axis gauge plane (Min./Max.)	mm	150 - 850	175 - 1,325
Feedrate	mm/min	0 - 20,000	0 - 10,000
Rapid traverse rate	mm/min	40,000	20,000
Thrust force	daN	700	1,500
Max. acceleration	m/s^2	1.7 - 3.5	0.6 - 1.3
Bidirectional positioning accuracy B, according to ISO 230-2	nm	990	990
Repeatability of positioning R, according to ISO 230-2	nm	900	900
Measuring resolution	nm	50	50
Least command increment	nm	100	100
Rotary axes			
Min. table indexing angle	° x nb	0.0001 × 3,600,000	0.0001 × 3,600,000
Feedrate	min^{-1}	0 - 20	0 - 15
Rapid traverse rate	min^{-1}	50	30
Acceleration	rad/s^2	13	7.5
Max. torque (cont./rating)	N · m	775 / 1,085	1,180 / 1,760
Max. clamping force	N · m	900	1,300
Bidirectional positioning accuracy A, according to ISO 230-2	arc/sec	3	3
Repeatability of positioning R, according to ISO 230-2	arc/sec	1	1
Measuring resolution	arc/sec	0.02	0.02
Tilting table A-axis			
Table indexing angle	°	180 (+45 to -135)	180 (+45 to -135)
Min. table indexing angle	° x nb	0.0001 × 1,800,000	0.0001 × 1,800,000
Max. clamping force	Nm	5,000	5,000
Pallet working surface	mm	500 × 500	630 × 630
Horizontal loading capacity (A = 0°)	kg	500	800
Vertical loading capacity (A = -90°)	Nm	2,500	4,000
Feedrate	min^{-1}	0 - 5	0 - 5
Rapid traverse rate	min^{-1}	10	7
Acceleration	rad/s^2	2.6	1.75
Max. torque	N · m	700 - 2,500	1,200 - 4,000
Bidirectional positioning accuracy A, according to ISO 230-2	arc/sec	3	3
Repeatability of positioning R, according to ISO 230-2	arc/sec	1.5	1.5
Measuring resolution	arc/sec	0.02	0.02
Max. workpiece swing diameter	mm	650	900 / 1,030
Spindle			
Spindle drive motor	kW	24/25	34/39
Max. spindle speed	min^{-1}	12,000	12,000
Type of spindle taper hole		SK 40 Big Plus [HSKA 63]	SK 50 Big Plus [HSKA 100]
Sensor and continuous axial compensation system		Standard	Standard
Vibration control device		Standard	Standard
Table			
Table working surface	mm	500 × 500	630 × 630
Number of pallets		1	1
Table surface configuration		T slots [Tapped holes]	T slots [Tapped holes]
Reference slots	mm	14-H7	18-H8
Central reference hole Ø	mm	50-H6	50-H6
Table loading capacity	kg	500	850
Max. workpiece swing diameter	mm	650	900/1,030
Max. workpiece height	mm	500	850
Automatic Tool Changer (ATC)			
Number of pockets		108 [60] [218]*1	99 [60] [114 - 264]*2
Max. tool diameter (with adjacent tools)	mm	95 / 100 / 95	125 / 135 / 125
Max. tool diameter (without adjacent tools)	mm	190 / 140 / 190	350 / 190 / 350
Max. tool length	mm	350 / 300 / 350	400 and 630 / 400 / 150 - 630
Max. tool mass	kg	10 / 8 / 10	25 / 20 / 25
Tool changing time	s	5 - 8*3	6 - 13*3
Machine size			
Total floor space (width × depth)	mm	6,100 × 6,150	7,000 × 10,000
Total height	mm	3,100	4,100
Machine mass	kg	15,200	25,000
Numerical control unit		GE FANUC	GE FANUC

[ ] Option

*1 Standard 108 tools and Option 218-tool magazine: Rack type / Option 60-tool magazine: Chain type

*2 Standard 99 tools and Option 114 to 264-tool magazine: Rack type / Option 60-tool magazine: Chain type

■ Rack type magazine variations for JIG 1200

Number of Tool Pots		99	[114]		[129]	[204]	[234]		[264]
Max. Length Tools	150 mm	—	—	30 pots	30 pots	—	—	60 pots	60 pots
	200 mm	—	60 pots	—	60 pots	—	120 pots	—	120 pots
	400 mm	60 pots	15 pots	60 pots	15 pots	120 pots	30 pots	120 pots	30 pots
	630 mm	39 pots	39 pots	24 pots	24 pots	84 pots	84 pots	54 pots	54 pots

*3 These values can change depending upon the ATC.

● All specifications are subject to change without notice.

Standard and optional features: 5-axis (JIG 700, JIG 1200)

		JIG 700	JIG 1200
Through-spindle coolant			
Manual pressure adjustment	MPa	0 - 7	0 - 7
Flow at 70 bars	L/min	20	20
Options: - 50 Hz or 60 Hz			
- with exchangeable cartridge filters	µm	40	40
- with self-cleaning filter (option)	µm	40	40
Coolant cooling unit			
Power heat exchanger	W	4,500	4,500
Options: - 50Hz or 60Hz			
Coolant system			
Options: - 50Hz or 60Hz			
Max. ambient temperature	℃	32	32
Temperature provided by the unit	℃	12 ±1	12 ±1
Refrigerator motor	kW	16.5	20.3
Flow	L/min	60	80
Pressure	MPa	0.25	0.2
Air extraction and filtering system (option)			
Double centrifuge, flow	m^3/h	2,000	3,000
Oil separator (oil skimmer)			
Only when using emulsion			
Oil-mist collector (option)			
Additional unit when using oil-based coolant			
Electrostatic filter, flow	m^3/h	2,000	3,000
Rotoclear (option)			
Absolute diameter	mm	300	300
See-through surface	cm^2	230	230
Rotation speed	min^{-1}	2,300	2,300
3D probe to determine the workpiece zero point (option)			
Repeatability	µm	±1	±1
Tool breakage detection function (option)			
Visible red-light laser, class 2 according to IEC825	type	670 nm / < 1 mW	670 nm / < 1 mW
Dynamic tool measuring system with tool breakage detection function (option)			

● All specifications are subject to change without notice.