

# FJV series Standard Machine Specifications

		FJV-35/60	FJV-35/80	FJV-35/120	FJV-60/80	FJV-60/120	FJV-60/160	FJV-100/120	FJV-100/160
Stroke	X-axis (table left / right)	1500 mm (59.06")	2000 mm (78.74")	3000 mm (118.11")	2000 mm (78.74")	3200 mm (125.98")	4200 mm (165.35")	3200 mm (125.98")	4200 mm (165.35")
	Y-axis (spindle head back / forth)	800 mm (31.5")			1400 mm (55.12")			2450 mm (96.46")	
	Z-axis (spindle head up / down)	660 mm (25.98")			660 mm (25.98")			660 mm (25.98")	
Table	Distance from table top to spindle nose	160 mm ~ 820 mm (6.3" ~ 32.3")			160 mm ~ 820 mm (6.3" ~ 32.28")			160 mm ~ 820 mm (6.3" ~ 32.28")	
	Effective width between columns	860 mm (33.9")			1500 mm (59.06")			2500 mm (98.43")	
	Table size	1740 mm × 750 mm (68.5" × 29.53")	2240 mm × 750 mm (88.19" × 29.53")	3240 mm × 750 mm (127.56" × 29.53")	2240 mm × 1250 mm (88.19" × 49.21")	3000 mm × 1250 mm (118.11" × 49.21")	4000 mm × 1250 mm (157.48" × 49.21")	3000 mm × 2000 mm (118.11" × 78.74")	4000 mm × 2000 mm (157.48" × 78.74")
	Table load capacity (evenly distributed)	2500 kg (5512 lbs)	3000 kg (6614 lbs)		4000 kg (8818 lbs)	5000 kg (11023 lbs)		5000 kg (11023 lbs)	10000 kg (22046 lbs)
	Table top surface	18 mm (0.71") T-slot × 5, 150 mm (5.91") pitch			22 mm (0.87") T-slot × 9, 140 mm (5.51") pitch			22 mm (0.87") T-slot × 9, 200 mm (7.87") pitch	
Spindle	Spindle speed	35 ~ 10000 rpm			35 ~ 10000 rpm			35 ~ 10000 rpm	
	Gear ranges	2-step (electric)			2-step (electric)			2-step (electric)	
	Spindle taper	No. 50			No. 50			No. 50	
	Spindle bearing ID	Φ100 mm (Φ3.94")			Φ100 mm (Φ3.94")			Φ100 mm (Φ3.94")	
	Spindle acceleration time to top speed	3.0 s (0 → 10000 rpm)			3.0 s (0 → 10000 rpm)			3.0 s (0 → 10000 rpm)	
Feedrate	Rapid traverse rate (X-axis)	40000 mm/min (1575 IPM)		32000 mm/min (1260 IPM)	40000 mm/min (1575 IPM)		32000 mm/min (1260 IPM)	22000 mm/min (866 IPM)	
	Rapid traverse rate (Y-, Z-axis)	40000 mm/min / 30000 mm/min (1575 / 1181 IPM)			40000 mm/min / 30000 mm/min (1575 / 1181 IPM)			40000 mm/min / 30000 mm/min (1575 / 1181 IPM)	
	Cutting feedrate (X-, Y-, Z-axis)	1 ~ 30000 mm/min (0.03 ~ 1181 IPM)		1 ~ 20000 mm/min (0.03 ~ 787 IPM)	1 ~ 30000 mm/min (0.03 ~ 1181 IPM)		1 ~ 19000 mm/min (0.03 ~ 748 IPM)	1 ~ 11000 mm/min (0.03 ~ 433 IPM)	
Automatic tool changer	Tool shank	No. 50			No. 50			No. 50	
	Tool storage capacity	30			30			60	
	Max. tool diameter / length (from gauge line) / weight	Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)			Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)			Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)	
	Max. tool diameter with adjacent pockets empty	Φ210 mm (Φ8.27")			Φ210 mm (Φ8.27")			Φ210 mm (Φ8.27")	
	Tool selection method	Random selection, shortest path			Random selection, shortest path			Random selection, shortest path	
	Tool change time (chip-to-chip)	5.0 s			6.2 s			8.5 s	
Motors	Spindle motor (40 % ED (30 min. rating) / cont. rating)	AC37 kW (50 HP) / 30 kW (40 HP)			AC 37 kW (50 HP) / 30 kW (40 HP)			AC37 kW (50 HP) / 30 kW (40 HP)	
	Flood coolant pump motor (50 Hz / 60 Hz)	730 W / 1210 W			730 W / 1210 W			730 W / 1210 W	
Power requirement	Required power capacity (30 min. / cont. rating)	75.59 kVA / 65.84 kVA		76.29 kVA / 66.54 kVA	75.65 kVA / 65.90 kVA		76.21 kVA / 66.46 kVA	79.72 kVA / 69.80 kVA	73.73 kVA / 63.99 kVA
	Air source	More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)			More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)			More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)	
Machine size	Machine height	3500 mm (137.8")			3500 mm (137.8")			3600 mm (141.73")	
	Floor space requirement	3595 mm × 5637 mm (141.54" × 221.93")	3595 mm × 6863 mm (141.54" × 270.20")	3595 mm × 9315 mm (141.54" × 366.73")	4085 mm × 6895 mm (160.83" × 271.46")	4085 mm × 9030 mm (160.83" × 355.51")	4085 mm × 11451 mm (160.83" × 450.83")	5217.35 mm × 9372 mm (205.41" × 368.98")	5217.35 mm × 12044 mm (205.41" × 474.17")
	Machine weight	17600 kg (38800 lbs)	19100 kg (42110 lbs)	23100 kg (50926 lbs)	26000 kg (57320 lbs)	31000 kg (68340 lbs)	35000 kg (77160 lbs)	44600 kg (98325 lbs)	45900 kg (101190 lbs)

### FJV 5 Face series Standard Machine Specifications

		FJV 5 Face-35/60	FJV 5 Face-35/80	FJV 5 Face-35/120	FJV 5 Face-60/80	FJV 5 Face-60/120	FJV 5 Face-60/160	FJV 5 Face-100/120	FJV 5 Face-100/160
Stroke	X-axis (table left / right)	1500 mm (59.06")	2000 mm (78.74")	3000 mm (118.11")	2000 mm (78.74")	3200 mm (125.98")	4200 mm (165.35")	3200 mm (125.98")	4200 mm (165.35")
	Y-axis (spindle head back / forth)	800 mm (31.5")			1400 mm (55.12")			2450 mm (96.46")	
	Z-axis (spindle head up / down)	660 mm (25.98")			660 mm (25.98")			660 mm (25.98")	
Table	Distance from table top to spindle nose	160 mm ~ 820 mm (6.3" ~ 32.3")			160 mm ~ 820 mm (6.3" ~ 32.28")			160 mm ~ 820 mm (6.3" ~ 32.28")	
	Effective width between columns	860 mm (33.9")			1500 mm (59.06")			2500 mm (98.43")	
	Table size	1740 mm × 750 mm (68.5" × 29.53")	2240 mm × 750 mm (88.19" × 29.53")	3240 mm × 750 mm (127.56" × 29.53")	2240 mm × 1250 mm (88.19" × 49.21")	3000 mm × 1250 mm (118.11" × 49.21")	4000 mm × 1250 mm (157.48" × 49.21")	3000 mm × 2000 mm (118.11" × 78.74")	4000 mm × 2000 mm (157.48" × 78.74")
	Table load capacity (evenly distributed)	2500 kg (5512 lbs)	3000 kg (6614 lbs)		4000 kg (8818 lbs)	5000 kg (11023 lbs)		5000 kg (11023 lbs)	10000 kg (22046 lbs)
	Table top surface	18 mm (0.71") T-slot × 5, 150 mm (5.91") pitch			22 mm (0.87") T-slot × 9, 140 mm (5.51") pitch			22 mm (0.87") T-slot × 9, 200 mm (7.87") pitch	
Spindle	Spindle speed	35 ~ 10000 rpm			35 ~ 10000 rpm			35 ~ 10000 rpm	
	Gear ranges	2-step (electric)			2-step (electric)			2-step (electric)	
	Spindle taper	No. 50			No. 50			No. 50	
	Spindle bearing ID	Φ100 mm (Φ3.94")			Φ100 mm (Φ3.94")			Φ100 mm (Φ3.94")	
	Spindle acceleration time to top speed	3.0 s (0 → 10000 rpm)			3.0 s (0 → 10000 rpm)			3.0 s (0 → 10000 rpm)	
Feedrate	Rapid traverse rate (X-axis)	40000 mm/min (1575 IPM)	32000 mm/min (1260 IPM)		40000 mm/min (1575 IPM)	32000 mm/min (1260 IPM)	22000 mm/min (866 IPM)	30000 mm/min (1181 IPM)	
	Rapid traverse rate (Y-, Z-axis)	40000 mm/min / 30000 mm/min (1575 / 1181 IPM)			40000 mm/min / 30000 mm/min (1575 / 1181 IPM)			40000 mm/min / 30000 mm/min (1575 / 1181 IPM)	
	Cutting feedrate (X-, Y-, Z-axis)	1 ~ 30000 mm/min (0.03 ~ 1181 IPM)	1 ~ 20000 mm/min (0.03 ~ 787 IPM)		1 ~ 30000 mm/min (0.03 ~ 1181 IPM)	1 ~ 19000 mm/min (0.03 ~ 748 IPM)	1 ~ 11000 mm/min (0.03 ~ 433 IPM)	1 ~ 19000 mm/min (0.03 ~ 748 IPM)	
Automatic tool changer	Tool shank	No. 50			No. 50			No. 50	
	Tool storage capacity	30			30			60	
	Max. tool diameter / length (from gauge line) / weight	Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)			Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)			Φ125 mm / 380 mm / 20 kg (Φ4.92" / 14.96" / 44 lbs)	
	Max. tool diameter with adjacent pockets empty	Φ210 mm (Φ8.27")			Φ210 mm (Φ8.27")			Φ210 mm (Φ8.27")	
	Tool selection method	Random selection, shortest path			Random selection, shortest path			Random selection, shortest path	
	Tool change time (chip-to-chip)	5.0 s			6.2 s			8.5 s	
Automatic tool changer for 5 Face Angle Tool	Tool shank	HSK-A63			HSK-A63			HSK-A63	
	Tool storage capacity	8			8			8	
	Max. tool diameter / length (from gauge line) / weight	Φ125 mm / 207 mm* / 8 kg (Φ4.92" / 8.15" / 17.6 lbs)			Φ125 mm / 207 mm* / 8 kg (Φ4.92" / 8.15" / 17.6 lbs)			Φ125 mm / 207 mm* / 8 kg (Φ4.92" / 8.15" / 17.6 lbs)	
	Tool selection method	Random selection, shortest path			Random selection, shortest path			Random selection, shortest path	
	Tool change time	32 s			32 s			32 s	
	Magazine capacity Tool change time (V-tool to 5 Face Angle Head)	27 s			27 s			27 s	
Motors	Spindle motor (40 % ED (30 min. rating) / cont. rating)	AC37 kW (50 HP) / 30 kW (40 HP)			AC 37 kW (50 HP) / 30 kW (40 HP)			AC37 kW (50 HP) / 30 kW (40 HP)	
	Flood coolant pump motor (50 Hz / 60 Hz)	730 W / 1210 W			730 W / 1210 W			730 W / 1210 W	
Power requirement	Required power capacity (30 min. / cont. rating)	75.59 kVA / 65.84 kVA	76.29 kVA / 66.54 kVA		75.65 kVA / 65.90 kVA	76.21 kVA / 66.46 kVA		79.72 kVA / 69.80 kVA	73.73 kVA / 63.99 kVA
	Air source	More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)			More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)			More than 0.5 MPa (73 PSI) / 650 NL/min (22.95 ft <sup>3</sup> /min)	
Machine size	Machine height	3500 mm (137.8")			3500 mm (137.8")			3600 mm (141.73")	
	Floor space requirement	3931 mm × 5742 mm (154.76" × 226.06")	3931 mm × 6863 mm (154.76" × 270.20")	3931 mm × 9315 mm (154.76" × 366.73")	4532 mm × 6895 mm (178.43" × 271.46")	4532 mm × 9030 mm (178.43" × 355.51")	4532 mm × 11451 mm (178.43" × 450.83")	5738 mm × 9372 mm (225.91" × 368.98")	5738 mm × 12044 mm (225.91" × 474.17")
	Machine weight	18700 kg (41226 lbs)	20200 kg (44533 lbs)	24200 kg (53351 lbs)	27100 kg (59744 lbs)	32100 kg (70767 lbs)	36100 kg (79586 lbs)	45700 kg (100750 lbs)	47000 kg (103616 lbs)

\*Depends on the tool diameter