

Technical Data	Concept MILL 55	Concept MILL 105	Concept MILL 155	Concept MILL 300
Working area				
Traverse paths X/Y/Z	190/140/260 mm (7.48/5.51/10.24")	200/150/250 mm (7.87/5.91/9.84")	300/200/300 mm (11.81/7.87/11.81")	420/330/400 mm (16.54/12.99/15.75")
Effective Z-stroke	120 mm (4.72")	150 mm (5.91")	200 mm (7.87")	240 mm (9.45")
Milling spindle				
Bearing, front bearing	taper roller bearing Ø 35 mm (Ø 1.38")	spindle bearing Ø 40 mm (Ø 1.57")	spindle bearing Ø 40 mm (Ø 1.57")	spindle bearing Ø 60 mm (Ø 2.36")
Milling table				
Clamping surface (L x W)	420 x 125 mm (16.54 x 4.92")	420 x 125 mm (16.54 x 4.92")	520 x 180 mm (20.47 x 7.09")	850 x 325 mm (33.46 x 12.80")
Max. table load	10 kg	10 kg	20 kg	150 kg
T-stations: number/width/distance	2/11 mm/90 mm (2/0.43"/3.54")	2/11 mm/90 mm (2/0.43"/3.54")	3/12 mm/45 mm (3/0.47"/1.77")	3/14 mm/100 mm (3/0.55"/3.94")
Main drive				
Asynchronous AC motor, power	0.75 kW (1.01 hp)	1.1 kW (1.48 hp)	2.5 or 4 kW (3.35 or 5.36 hp)	11 kW (14.75 hp)
Speed range	150–3500 rpm (14 000 rpm)	150–5 000 rpm	150–5 000 or 10 000 rpm	0-5 000 or 8 000 rpm
Feed drives				
	step motor	step motor	step motor	AC-motor
Positioning variation acc. to VDI 3441 (X axis)	0.006 mm (0.00024")	0.003 mm (0.00012")	0.003 mm (0.00012")	0.004 mm (0.00016")
Positioning variation acc. to VDI 3441 (Y axis)	0.006 mm (0.00024")	0.003 mm (0.00012")	0.003 mm (0.00012")	0.004 mm (0.00016")
Positioning variation acc. to VDI 3441 (Z axis)	0.008 mm (0.00031")	0.004 mm (0.00016")	0.004 mm (0.00016")	0.004 mm (0.00016")
Rapid traverse in X/Y/Z	2 m/min (78.74 ipm)	5 m/min (196.85 ipm)	7.5 m/min (295.28 ipm)	12 m/min (472.44 ipm)
Max. feed force in X/Y/Z	800/800/1 000 N (179.84/179.84/224.8 lbs)	2 000/2 000/2 400 N (449.6/449.6/539.52 lbs)	2 500 N (562 lbs)	6 000/6 000/8 800 N (1 348.8/1 348.8/1 978.24 lbs)
Tool system				
	Pickup-system/manual	drum turret with directional logic	drum turret with directional logic	drum turret with directional logic
Number of tool holding fixtures	8/0	10	10	12
Tool holding fixture	similar DIN 2079, SK 30	similar DIN 2079, SK 30	similar DIN 2079, SK 30	SK 40
Tool tensioning	automatic/manual	automatic	automatic	automatic
Max. tool weight	1 kg	0.7 kg	0.8 kg	5 kg
Max. tool diameter	40/60 mm (1.57/2.36")	55 mm (2.17")	70 mm (2.76")	100 mm (3.94")
Max. tool length	75/100 mm (2.95/3.94")	50 mm (1.97")	200 mm (7.87")	220 mm (8.66")
C axis/NC dividing attachment				
Resolution	0,03°	0,03°	0.01°	0.01°
Max. speed	8 rpm	8 rpm	44 rpm	27 rpm
Max. feed torque	42 Nm (30.9 ft/lbs)	42 Nm (30.9 ft/lbs)	20 Nm (14.74 ft/lbs)	80 Nm (58.96 ft/lbs)
Lubrication device				
Guideways	oil lubrication	central oil lubrication	central oil lubrication	central oil lubrication
Main spindle	lifetime grease lubrication	lifetime grease lubrication	lifetime grease lubrication	lifetime grease lubrication
Electrical connection				
Power supply	115/230 V, 50/60 Hz	230 V, 50 /60 Hz	400 V, 50/60 Hz	400 V, 50/60 Hz
Connection load of the machine	0.85 kVA	1.4 kVA	5 kVA	15 kVA
Max. pre-fuse of the machine	12 A	16 A	20 A	50 A
Safety devices				
Fully enclosed working area, axis overtravel				
Limit switches, door limit switch,				
Emergency-off switch	CE-complaint	CE-complaint	CE-complaint	CE-complaint
Dimensions				
Machine dimensions (L x D x H)	960 x 1000 x 980 mm (37.8 x 39.37 x 38.58")	1 135 x 1 100 x 1 100 mm (44.69 x 43.31 x 43.31")	1 502 x 1 284 x 1 925 mm (59.13 x 50.55 x 75.79")	2 300 x 2 400 x 2 450 mm (90.55 x 94.49 x 96.46")
Weight	app. 20 kg	400 kg	700 kg	2 900 kg

PC minimum configuration:

IBM-compatible : Celeron 700 MHz; Hard disk: 4 GB; Drives: 3 1/2" floppy, CD-ROM; Operating system: min. Windows 98; Main memory: 128 MB;

Graphics card: 8 MB VGA ;color monitor: 14"; Network interface card: TCP/IP-compliant; Bus (free slot): 1 free ISA slot (for installation of the interface card)

Technical Data	Concept TURN 55	Concept TURN 105	Concept TURN 155	Concept TURN 345
Working area				
Distance between centers	335 mm (13.19")	236 mm (9.29")	405 mm (15.94")	700 mm (27.56")
Swing over bed	130 mm (5.12")	180 mm (7.09")	250 mm (9.84")	430 mm (16.93")
Traverse paths X/Z	48/236 mm (1.89/9.29")	55/172 mm (2.17/6.77")	100/300 mm (3.94/11.81")	160/310 mm (6.30/12.20")
Max. work-piece size for chuck parts with tailstock	Ø 52 mm (Ø 2.05")	Ø 75 mm (Ø 2.95")	Ø 85 mm (Ø 3.35")	Ø 220 mm (Ø 8.66")
Max. turning length for chuck parts with tailstock	215 mm (8.46")	121 mm (4.76")	245 mm (9.65")	510 mm (20.08")
Main spindle				
Spindle bore	Ø 16 mm (Ø 0.63")	Ø 20.5 mm (Ø 0.81")	Ø 20.5 mm (Ø 0.81")	Ø 45.5 mm (Ø 1.79")
Bearing diameter	grooved ball bearing Ø 30 mm (Ø 1.18")	taper roller bearing Ø 45 mm (Ø 1.77")	taper roller bearing Ø 45 mm (Ø 1.77")	spindle bearing Ø 80 mm (Ø 3.15")
Main drive				
Asynchronous AC motor, power	0.75 kW (1.01 hp)	1.9 kW (2.55 hp)	2.8 kW (3.75 hp)	13 kW (17.43 hp)
Speed range	120–4 000 rpm	150–4 000 rpm	150–4 000 rpm	0–6 300 rpm
Feed drives	step motor	step motor	step motor	AC-motor
Positioning variation acc. to VDI 3441 (X axis)	0.006 mm (0.00024")	0.003 mm (0.00012")	0.003 mm (0.00012")	0.003 mm (0.00012")
Positioning variation acc. to VDI 3441 (Z axis)	0.008 mm (0.00031")	0.004 mm (0.00016")	0.004 mm (0.00016")	0.005 mm (0.0002")
Rapid traverse in X/Y/Z	2 m/min (78.74 ipm)	5 m/min (196.85 ipm)	7.5 m/min (295.28 ipm)	20/24 m/min (787.4/944.88 ipm)
Max. feed force in X/Z	1 000 N (224.8 lbs)	2 000 N (449.6 lbs)	2 500 N (562 lbs)	4 000/6 000 N (899.2/1348.8 lbs)
Tool system	programmable tool turret	programmable tool turret	programmable tool turret with directional logic	programmable tool turret with directional logic
Number of tool holding fixtures	8	8	8 or 12	12
Tool holding fixture	works standard	works standard	VDI 16 (with 12-stat. disk-type turret)	VDI 30
Shaft height and width for external tools	12 x 12 mm (0.47 x 0.47")	12 x 12 mm (0.47 x 0.47")	12 x 12 mm (0.47 x 0.47")	20 x 20 mm (0.79 x 0.79")
Support bore for internal tools	Ø 10 mm (Ø 0.39")	Ø 16 mm (Ø 0.63")	Ø 16 mm (Ø 0.63")	Ø 32 mm (Ø 1.26")
Driven tools			with 12-station disk-type turret	
Number of tool holding fixtures			0 resp. 6	0 resp. 6
Power			1.2 kW (1.61 hp)	6.7 kW (8.98 hp)
Max. torque			4 Nm (2.95 ft/lbs)	16 Nm (11.79 ft/lbs)
Speed range			200–6 000 rpm	0–5 000 rpm
C axis				
Resolution			0.01°	0.01°
Rapid speed			100 rpm	100 rpm
Max. torque			25 Nm (18.43 ft/lbs)	78 Nm (57.49 ft/lbs)
Tailstock				
Sleeve stroke	35 mm (1.38")	120 mm (4.72")	120 mm (4.72")	120 mm (4.72")
Quill diameter	22 mm (0.87")	35 mm (1.38")	35 mm (1.38")	60 mm (2.36")
Lubrication device				
Guideways	oil lubrication	central oil lubrication	central oil lubrication	central oil lubrication
Main spindle	lifetime grease lubrication	lifetime grease lubrication	lifetime grease lubrication	lifetime grease lubrication
Electrical connection				
Power supply	115/230 V, 50/60 Hz	230 V, 50/60 Hz	400 V, 50/60 Hz	400 V, 50/60 Hz
Connection load of the machine	0.85 kVA	2.3 kVA	5 kVA	17 kVA
Max. pre-fuse of the machine	12 A	16 A	20 A	50 A
Safety devices				
Fully enclosed working area, axis overtravel				
Limit switches, door limit switch,				
Emergency-off switch	CE-complaint	CE-complaint	CE-complaint	CE-complaint
Dimensions				
Center height above floor	320 mm (12.6")	267 mm (10.51")	1 120 mm (44.09")	1 160 mm (45.67")
Machine dimensions (L x D x H)	840 x 695 x 400 mm (33.07 x 27.36 x 15.75")	1 135 x 1 100 x 1 030 mm (44.69 x 43.31 x 40.55")	1 628 x 1 174 x 1 750 mm (64.09 x 46.22 x 68.90")	2 250 x 1 980 x 1 940 mm (88.58 x 77.95 x 76.38")
Weight	85 kg	350 kg	700 kg	2 600 kg

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