

Machine Specifications (Elevating Crossrail)

Item	Unit	MCR-BIII20E			MCR-BIII25E				MCR-BIII30E					MCR-BIII35E				
		20 x 30	20 x 40	20 x 50	25 x 40	25 x 50	25 x 65	25 x 80	30 x 50	30 x 65	30 x 80	30 x 100	30 x 120	35 x 50	35 x 65	35 x 80	35 x 100	35 x 120
● Travel																		
X-axis (table front / back)	mm (in.)	3,000 (118.11)	4,000 (157.48)	5,000 (196.85)	4,000 (157.48)	5,000 (196.85)	6,500 (255.91)	8,000 (314.96)	5,000 (196.85)	6,500 (255.91)	8,000 (314.96)	10,000 (393.70)	12,000 (472.44)	5,000 (196.85)	6,500 (255.91)	8,000 (314.96)	10,000 (393.70)	12,000 (472.44)
Y-axis (spindlehead horizontal)	mm (in.)	2,700 (106.3)			3,200 (125.98)				3,700 (145.67)					4,200 (165.35)				
Z-axis (ram vertical)	mm (in.)	800 (31.50)																
W-axis (crossrail vertical)	mm (in.)	700 (27.56)			1,000 (39.37)				1,300 (51.18)					1,300 (51.18)				
Effective width between columns	mm (in.)	2,050 (80.71)			2,550 (100.39)				3,050 (120.08)					3,550 (139.76)				
Table to spindle nose (*1)	mm (in.)	0 to 1,350 [0 to 1,250] (0 to 53.15) [0 to 49.21]			0 to 1,650 [0 to 1,550] (0 to 64.96) [0 to 61.02]				0 to 1,850 [0 to 1,750] (0 to 72.83) [0 to 68.90]					0 to 1,800 [0 to 1,700] (0 to 70.87) [0 to 66.93]				
● Table																		
Working surface	mm	1,500 x 2,800	1,500 x 3,800	1,500 x 4,800	2,000 x 3,800	2,000 x 4,800	2,000 x 6,300	2,000 x 7,800	2,500 x 4,800	2,500 x 6,300	2,500 x 7,800	2,500 x 9,800	2,500 x 11,800	3,000 x 4,800	3,000 x 6,300	3,000 x 7,800	3,000 x 9,800	3,000 x 11,800
Maximum load	kg (lb)	12,000 (26,400)	16,000 (35,200)	20,000 (44,000)	22,000 (48,400)	27,000 (59,400)	34,000 (74,800)	42,000 (92,400)	33,000 (72,600)	43,000 (94,600)	52,000 (114,400)	66,000 (145,200)	72,600 (159,720)	29,500 (64,900)	37,000 (81,400)	47,000 (103,400)	61,000 (134,200)	65,000 (143,000)
T-slots Width x No. <center pitch>	mm (in.)	24H7 x 9 <center 200 both ends 70>			24H7 x 11 <center 200 both ends 70>				24H7 x 13 <center 200 both ends 70>					24H7 x 15 <center 200 both ends 100>				
Height from machine bottom	mm (in.)	800 (31.50)			850 (33.46)				900 (35.43)					950 (37.4)				
● Spindle																		
Speed range	min ⁻¹	10 to 4,000 [10 to 3,600, 10 to 6,000, 30 to 8,000, 30 to 10,000] *2																
Number of speed ranges	Steps	2																
Taper bore		7/24 taper No. 50																
Bearing diameter (*2)	mm (in.)	ø100 (3.94) [Optional: ø85 (3.35)]																
● Feederates																		
Rapid traverse	m/min (ipm)	X: 15, Y: 20 *3, Z: 15 (X: 0.59, Y: 0.79, Z: 0.59)																
Feedrate	mm/min (ipm)	1 to 10,000 (0.04 to 394)																
Crossrail traverse	m/min	3 (0.12)																
● Automatic Tool Changer																		
Tool shank		MAS BT50 (CAT)																
Pull stud		MAS P50T-2 (CAT)																
Tool magazine capacity	tools	32 *4 [50, 72, 100, 120, 180]																
Max tool diameter	mm (in.)	w/ adjacent tools: ø135 (5.31); w/o adjacent tools: ø230 (9.06)																
Max tool length	mm (in.)	400 (15.75)																
Max tool weight	kg (lb)	25 (55)																
Tool selection		Fixed adress																
● Motors																		
Spindle drive (*2)	kW (hp)	VAC 30/22 (40/30) (30 min/cont) [Optimal: 45/37 (60/50) (30 min/cont), 22 (30) (cont), 26/22 (35/30) (30 min/cont)] *																
Axis feed drives	kW (hp)	X: 9.4 (12.5), Y: 7.3 (9.7), Z: 4.6 x 2 (6.1 x 2) *5					X: 9.4 (12.5), Y: 9.4 (12.5), Z: 4.6 x 2 (6.1 x 2) *5											
Crossrail traverse drive	kW (hp)	W: 4.6 x 2 (6.1 x 2)					W: 5.2 x 2 (6.9 x 2)											
● Power Sources																		
Electrical power supply	kVA	60 (200V ± 10%, 50/60 Hz) *6																
Compressed air supply	L/min (ANR)	650 (0.5 MPa or more) *6																
● Machine Size																		
Height	mm (in.)	6,250 (246)			6,600 (260)				6,850 (270)					6,850 (270)				
Floor space (machine only)*6	mm	6,950x8,200	6,950x10,200	6,950x12,200	7,450x10,200	7,450x12,200	7,450x15,800	7,450x18,800	7,970x12,200	7,970x15,800	7,970x18,800	7,970x23,400	7,970x27,400	8,700x12,200	8,700x15,800	8,700x18,800	8,700x23,400	8,700x27,400
Weight (machine only)	kg (lb)	36,000 (79,200)	39,000 (85,800)	42,000 (92,400)	46,000 (101,200)	49,000 (107,800)	54,000 (118,800)	60,000 (132,000)	56,000 (123,200)	61,000 (134,200)	66,000 (145,200)	73,000 (160,600)	79,800 (175,560)	72,300 (159,060)	84,000 (184,800)	95,800 (210,760)	106,500 (234,300)	120,900 (265,980)

*1. [] Numbers when extension head length is 250 mm.

*2. [] for 6,000/8,000/10,000 min⁻¹

*3. Deceleration in range of Y axis travel tip 250 mm with 35-tool type

*4. 32-tool ATCs have limitations on 25 or larger machines

*5. X axis motor is 14 kW with 30 x 120, 35 x 120.

*6. Standard specs

ANR: Atmosphere Normale de Reference

Machine Specifications (Fixed Crossrail)

Item	Unit	MCR-BIII16F		MCR-BIII20F			MCR-BIII25F			MCR-BIII30F		
		16 x 20	16 x 30	20 x 30	20 x 40	20 x 50	25 x 40	25 x 50	25 x 65	30 x 50	30 x 65	30 x 80
● Travel												
X-axis (table front / back)	mm (in.)	2,000 (78.74)	3,000 (118.11)	3,000 (118.11)	4,000 (157.48)	5,000 (196.85)	4,000 (157.48)	5,000 (196.85)	6,500 (255.91)	5,000 (196.85)	6,500 (255.91)	8,000 (314.96)
Y-axis (spindlehead horizontal)	mm (in.)	2,300 (90.55)		2,700 (106.30)			3,200 (125.98)			3,700 (145.67)		
Z-axis (ram vertical)	mm (in.)	800 (31.50)										
Effective width between columns	mm (in.)	1,700 (66.93)		2,100 (82.68)			2,600 (102.05)			3,100 (122.05)		
Table to spindle nose (*1)	mm (in.)	230 to 1,030 [130 to 930], 20F only 180 to 980 [80 to 880] (9.06 to 40.56) [5.12 to 36.61], (7.09 to 38.58) [3.15 to 34.65]										
● Table												
Working surface	mm	1,200 x 1,800	1,200 x 2,800	1,500 x 2,800	1,500 x 3,800	1,500 x 4,800	2,000 x 3,800	2,000 x 4,800	2,000 x 6,300	2,500 x 4,800	2,500 x 6,300	2,500 x 7,300
Maximum load	kg (lb)	6,000 (13,200)	8,000 (17,600)	10,000 (22,000)	12,000 (26,400)	20,000 (44,000)	22,000 (48,400)	27,000 (59,400)	34,000 (74,800)	33,000 (72,600)	43,000 (94,600)	52,000 (114,400)
T-slots Width x No. <center pitch>	mm (in.)	24H7 x 7 <200>		24H7 x 9 <200>			24H7 x 11 <200>			24H7 x 13 <200>		
Height from machine bottom	mm (in.)	700 (27.56)		800 (31.50)			850 (33.46)			900 (35.43)		
● Spindle												
Speed range	min ⁻¹	10 to 4,000 [10 to 3,600, 10 to 6,000, 30 to 8,000, 30 to 10,000]										
Number of speed ranges	Step	2										
Taper bore		7/24 taper No. 50										
Bearing diameter (*2)	mm (in.)	ø100 (3.94) [Optional: ø85 (3.35)]										
● Feederates												
Rapid traverse X-axis	m/min (ipm)	20 (0.79)			15 (0.59)							
Y-axis	m/min (ipm)	20 (0.79)										
Z-axis	m/min (ipm)	15 (0.59)										
Feedrate X, Y, Z axes	mm/min (ipm)	1 to 10,000 (1 to 394)										
● Automatic Tool Changer												
Tool shank		MAS BT50 (CAT)										
Pull stud		MAS P50T-2 (CAT)										
Tool magazine capacity	tools	32 [50, 72, 100, 120, 180]										
Max tool diameter	mm (in.)	w/ adjacent tools: ø135 (5.31); w/o adjacent tools: ø230 (9.06)										
Max tool length	mm (in.)	400 (15.75)										
Max tool weight	kg (lb)	25 (55)										
Tool selection		Fixed adress										
● Motors												
Spindle drive	kW (hp)	VAC 30/22 (40/30) (30 min/cont) [Optimal: 45/37 (60/50) (30 min/cont), 22 (30) (cont), 26/22 (35/30) (30 min/cont)]										
Axis feed drives	kW (hp)	4.6 to 9.4 (Varies per machine size and spindle.)										
● Power Sources												
Electrical power supply	kVA	60 (200V ± 10%, 50/60 Hz) *3										
Compressed air supply	L/min (ANR)	650 (0.5 MPa or more) *3										
● Machine Size												
Height	mm (in.)	5,050 (198.82)		5,100 (200.79)			5,200 (204.72)			5,250 (206.69)		
Floor space (machine only)	mm	6,455x6,100	6,455x8,100	6,855x8,100	6,855x10,100	6,855x12,100	7,505x10,100	7,505x12,100	7,505x15,700	8,005x12,100	8,005x15,700	8,005x18,700
Weight (machine only)	kg (lb)	23,000 (50,600)	26,000 (57,200)	35,000 (77,000)	38,000 (83,600)	41,000 (102,000)	42,000 (92,400)	45,000 (99,000)	50,000 (110,000)	52,000 (114,400)	57,000 (125,400)	62,000 (136,400)

*1. [] Numbers when extension head length is 250 mm.

*2. [] for 6,000/8,000/10,000 min⁻¹ specs.

*3. Standard specs