



**INIRAM**

**PRECISION MACHINERY, LLC**

**INIRAM  
Boston Headquarters**

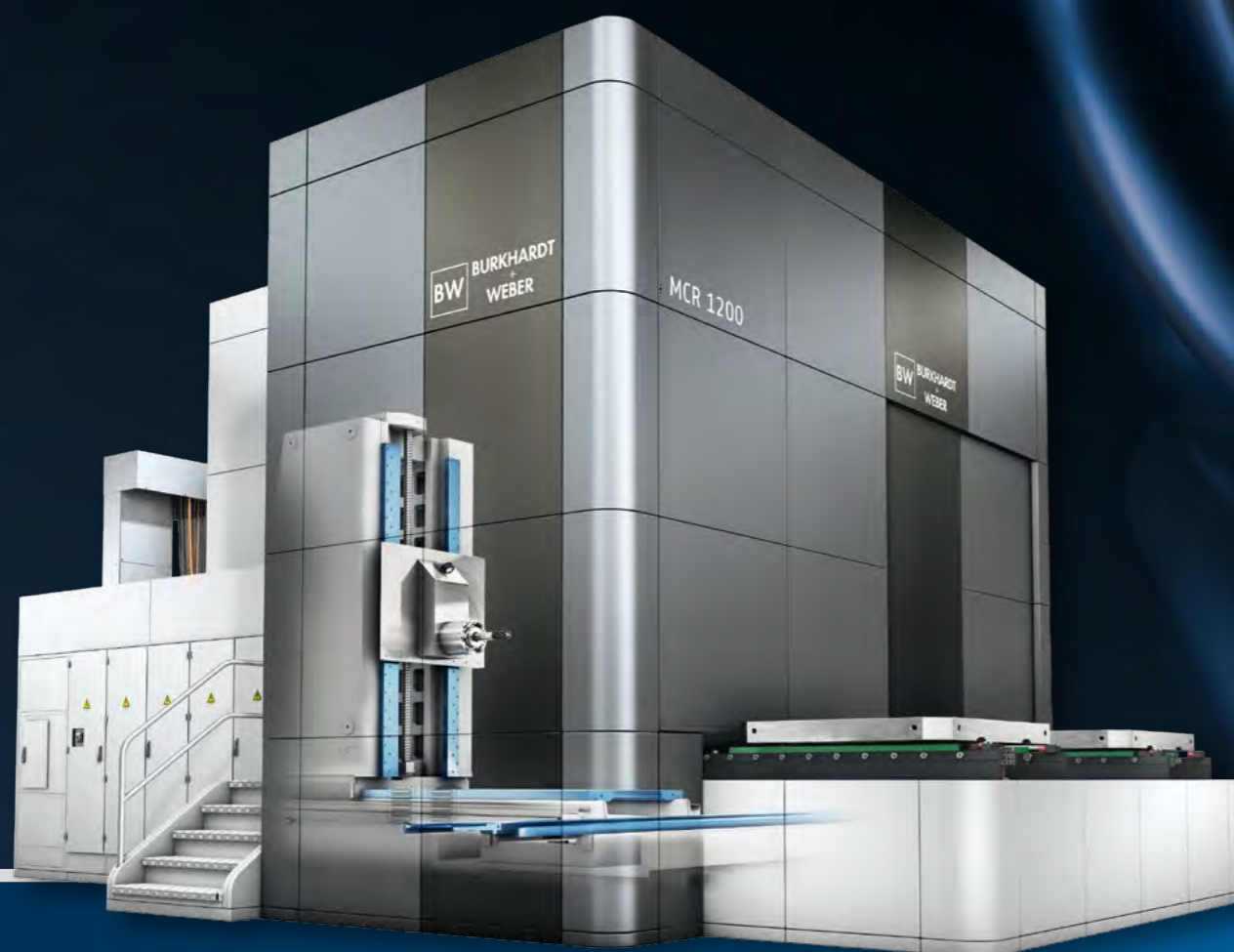
**333 NORTH MAIN STREET MIDDLETON, MA 01949**

978-854-3037  
info@iniram.com

# MCR.

## SLIDE-GUIDED MACHINING CENTRES.

The perfect solution for all applications calling for heavy-duty cutting with optimum damping characteristics, coupled with high-precision fine machining. BW offers eight different types with 1,400 to 4,800 mm work-piece swing diameter and 1,500 to 20,000 kg payload.



## MCR – THE ULTRA-HEAVY SERIES.



## PURE POWER FOR DIFFICULT MACHINING TASKS.

MCR machining centres are very robustly dimensioned and feature high-performance spindle units. In addition to the cast-iron gantry column, extra-wide laser-hardened sliding guides guarantee optimum damping characteristics during machining of difficult materials as well as very high long-term precision due to extremely low surface pressures.



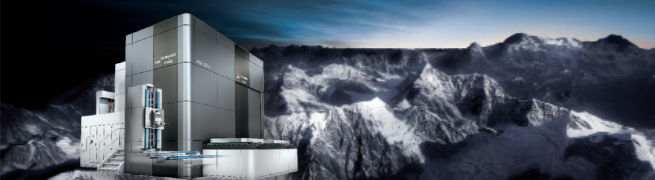








The extra-wide sliding guides are hand-scraped by experienced specialists and designed all-round as sliding guides.



The particularly large guide length and width of the thermally inert cast-iron gantry column guarantee high stability, even when machining in high spindle positions.

# MCR – THE ULTRA-HEAVY SERIES.

## TECHNICAL DATA.

MCR (Imperial System)	Unit	750	800	900		1000	1100	1200	1400	1600
										
Working range X Y Z (standard)	in	43.31 31.50 43.31	49.21 35.43 49.21	63.00 49.21 49.21		86.61 49.21 49.21	63.00 49.21 49.21	94.49 70.87 70.87	126.00 70.87 70.87	137.80 86.61 82.68
Working range X Y Z (optional)	in	43.31 31.50 49.21	49.21 35.43 63.00	63.00 59.10 63.00		94.49 59.10 63.00	63.00 59.10 63.00	110.24 86.61 82.68	137.80 86.61 82.68	161.42 86.61 82.68
Workpiece swing diameter Ø x h	in	55.12x51.18	59.10x51.18	66.93x68.90		86.61x74.80	66.93x68.90	110.24x82.68	126.00x90.55	137.80x102.36
Pallet size (standard)	in	24.80x24.80	31.50x31.50	31.50x39.37		39.37x49.21	31.50x39.37	39.37x49.21	63.00x63.00	78.74x78.74
Pallet size up to	in	24.80x31.50	39.37x49.21	39.37x49.21		39.37x63.00	39.37x49.21	55.12x63.00	63.00x78.74	78.74x98.43
Pallet load	lbs	3,307	5,512	7,716		11,023	8,818	15,432	26,455	44,092
Feed force X Y Z	lb	3,822 3,822 3,822	3,822 3,822 3,822	4,496 4,496 4,496		6,744 4,496 4,496	5,620 5,620 5,620	6,744 6,744 6,744	6,744 6,744 6,744	30 30 30
Rapid traverse X Y Z (standard axis travel)	in/min	1,181 1,181 1,181	1,181 1,181 1,181	1,181 1,181 1,181		787 1,181 1,181	1,181 1,181 1,181	787 787 787	1,181 787 787	1,181 787 787
Pa <sup>1</sup> X Y Z	in	0.000197	0.000197	0.000197		0.000276	0.000197	0.000276	0.000276	0.000276
B-axis	degrees	360,000x0.001	360,000x0.001	360,000x0.001		360,000x0.001	360,000x0.001	360,000x0.001	360,000x0.001	360,000x0.001
Table speed	rpm	25	25	20		10	20	10	8	6
Tilting torque	lb/in	230,120	230,120	354,030		531,045	354,030	531,045	885,075	885,075
Tangential torque	lb/in	141,612	141,612	221,270		354,030	221,270	354,030	531,045	531,045
Spindle power 100% duty rating (optional) <sup>3</sup>	HP	55	55	55		55	70	55 (80)	55 (80)	55 (80)
Torque 100% duty rating (optional) <sup>3</sup>	lb/in	10,798	10,798	10,798		10,798	15,223	10,798 (30,978)	10,798 (30,978)	10,798 (30,978)
Speed range 2 gear steps (optional)	rpm	20 – 5,500 (10,000)	20 – 5,500 (10,000)	20 – 5,500 (10,000)		20 – 5,500 (10,000)	20 – 5,500	20 – 5,500 (10,000)	20 – 5,500 (10,000)	20 – 5,500 (10,000)
Speed range 4 gear steps (optional)	rpm							20 – 4,000 (5,000)	20 – 4,000 (5,000)	20 – 4,000 (5,000)
Speed range optional swivel spindle	rpm	8,000	8,000	8,000		8,000		8,000	8,000	8,000
Gear steps (optional)		2	2	2		2	2	2 (4)	2 (4)	2 (4)
Bearing diameter main spindle (optional) <sup>3</sup>	in	4.7244	4.7244	4.7244		4.7244	4.7244	4.7244 (5.1181)	4.7244 (5.1181)	4.7244 (5.1181)
Tool adapter (standard)		HSK-A 100	HSK-A 100	HSK-A 100		HSK-A 100	HSK-A 100	HSK-A 100	HSK-A 100	HSK-A 100
Tool adapter (optional)		ISO 50	ISO 50	ISO 50		ISO 50	ISO 50	ISO 50	ISO 50	ISO 50
Number of tool pockets		128 – 608	128 – 608	128 – 608		128 – 608	128 – 608	128 – 608	128 – 608	128 – 608
Tool diameter	in	4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>		4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>	4.92/13.78 (16.54/35.43) <sup>2</sup>
Tool length (optional)	in	23.62 (35.43)	23.62 (35.43)	23.62 (35.43/47.24)		23.62 (35.43/47.24)	23.62 (35.43/47.24)	23.62 (35.43/47.24)	23.62 (35.43/47.24)	23.62 (35.43/47.24)
Tool weight (optional)	lbs	132.3 (165.3)	132.3 (165.3)	132.3 (165.3)		132.3 (165.3)	132.3 (165.3)	132.3 (165.3)	132.3 (165.3)	132.3 (165.3)
Machine control, Siemens Sinumerik		SIN 840D sl	SIN 840D sl	SIN 840D sl		SIN 840D sl	SIN 840D sl	SIN 840D sl	SIN 840D sl	SIN 840D sl
Floor space required, l x w x h approx.	in	339x240x185	339x240x185	386x256x201		402x284x209	398x295x209	417x307x213	457x339x213	579x429x236
Weight approx.	lbs	55,120	66,140	77,160		99,200	88,180	110,230	154,320	198,420

<sup>1</sup> according to VDI/DGQ 3441

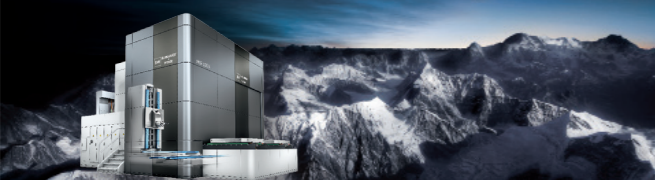








<sup>2</sup> bar tool

<sup>3</sup> 4 gear steps

Technical specifications are subject to change without prior notice.

# MCR – THE ULTRA-HEAVY SERIES.

## TECHNICAL DATA.

MCR (Metric System)	Unit	750	800	900		1000	1100	1200	1400	1600
										
Working range X Y Z (standard)	mm	1,100 800 1,100	1,250 900 1,250	1,600 1,250 1,250		2,200 1,250 1,250	1,600 1,250 1,250	2,400 1,800 1,800	3,200 1,800 1,800	3,500 2,200 2,100
Working range X Y Z (optional)	mm	1,100 800 1,250	1,250 900 1,600	1,600 1,500 1,600		2,400 1,500 1,600	1,600 1,500 1,600	2,800 2,200 2,100	3,500 2,200 2,100	4,100 2,200 2,100
Workpiece swing diameter Ø x h	mm	1,400x1,300	1,500x1,300	1,700x1,750		2,200x1,900	1,700x1,750	2,800x2,100	3,200x2,300	3,500x2,600
Pallet size (standard)	mm	630x630	800x800	800x1,000		1,000x1,250	800x1,000	1,000x1,250	1,600x1,600	2,000x2,000
Pallet size up to	mm	630x800	1,000x1,250	1,000x1,250		1,000x1,600	1,000x1,250	1,400x1,600	1,600x2,000	2,000x2,500
Pallet load (optional)	kg	1,500	2,500	3,500		5,000	4,000	7,000	12,000 (14,000)	18,000 (20,000)
Feed force X Y Z	kN	17 17 17	17 17 17	20 20 20		30 20 20	25 25 25	30 30 30	30 30 30	30 30 30
Rapid traverse X Y Z (standard axis travel)	m/min	30 30 30	30 30 30	30 30 30		20 30 30	30 30 30	20 20 20	30 20 20	30 20 20
Pa <sup>1</sup> X Y Z	mm	0.005	0.005	0.005		0.007	0.005	0.007	0.007	0.007
B-axis	degrees	360,000x0.001	360,000x0.001	360,000x0.001		360,000x0.001	360,000x0.001	360,000x0.001	360,000x0.001	360,000x0.001
Table speed	rpm	25	25	20		10	20	10	8	6
Tilting torque	Nm	26,000	26,000	40,000		60,000	40,000	60,000	100,000	100,000
Tangential torque	Nm	16,000	16,000	25,000		40,000	25,000	40,000	60,000	60,000
Spindle power 100% duty rating (optional) <sup>3</sup>	kW	41	41	41		41	52	41 (60)	41 (60)	41 (60)
Torque 100% duty rating (optional) <sup>3</sup>	Nm	1,220	1,220	1,220		1,220	1,720	1,220 (3,500)	1,220 (3,500)	1,220 (3,500)
Speed range 2 gear steps (optional)	rpm	20 – 5,500 (7,000)	20 – 5,500 (7,000)	20 – 5,500 (7,000)		20 – 5,500 (7,000)	20 – 5,500	20 – 5,500 (7,000)	20 – 5,500 (7,000)	20 – 5,500 (7,000)
Speed range 4 gear steps (optional)	rpm							20 – 4,000 (5,000)	20 – 4,000 (5,000)	20 – 4,000 (5,000)
Speed range optional swivel spindle	rpm	8,000	8,000	8,000		8,000		8,000	8,000	8,000
Gear steps (optional)		2	2	2		2	2	2 (4)	2 (4)	2 (4)
Bearing diameter main spindle (optional) <sup>3</sup>	mm	120	120	120		120	120	120 (130)	120 (130)	120 (130)
Tool adapter (standard)		HSK-A 100	HSK-A 100	HSK-A 100		HSK-A 100	HSK-A 100	HSK-A 100	HSK-A 100	HSK-A 100
Tool adapter (optional)		ISO 50	ISO 50	ISO 50		ISO 50	ISO 50	ISO 50	ISO 50	ISO 50
Number of tool pockets		128 – 608	128 – 608	128 – 608		128 – 608	128 – 608	128 – 608	128 – 608	128 – 608
Tool diameter	mm	125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>		125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>	125/350 (420/900) <sup>2</sup>
Tool length (optional)	mm	600 (900)	600 (900)	600 (900/1,200)		600 (900/1,200)	600 (900/1,200)	600 (900/1,200)	600 (900/1,200)	600 (900/1,200)
Tool weight (optional)	kg	60 (75)	60 (75)	60 (75)		60 (75)	60 (75)	60 (75)	60 (75)	60 (75)
Machine control, Siemens Sinumerik		SIN 840D sl	SIN 840D sl	SIN 840D sl		SIN 840D sl	SIN 840D sl	SIN 840D sl	SIN 840D sl	SIN 840D sl
Floor space required, l x w x h approx.	mm	8,600 x 6,100 x 4,700	8,600 x 6,100 x 4,700	9,800 x 6,500 x 5,100		10,200 x 7,200 x 5,300	10,100 x 7,500 x 5,300	10,600 x 7,800 x 5,400	11,600 x 8,600 x 5,400	14,700 x 10,900 x 6,000
Weight approx.	kg	25,000	30,000	35,000		45,000	40,000	50,000	70,000	90,000

<sup>1</sup> according to VDI/DGQ 3441

<sup>2</sup> bar tool

<sup>3</sup> 4 gear steps

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