



The Morgan Rushworth HSR-3 range of hydraulic section bending machines are designed to roll various material sections and are available with shaft diameters from 40mm up to 120mm. All models are equipped with twin hydraulic rams powering both of the lower rolls, providing pre-bending capability and the convenience of performing the bending operation with the material in the horizontal position. All of the HSR-3 machines can be operated in either vertical or horizontal plane. The standard rolls supplied with the machine are hardened and have been designed to bend most sections, with the exception of round tube which are available as an option. Lateral guide rolls ensure straight and true bending, or if required can be adjusted in order to spiral the material.

Machine Features

- Double pinch hydraulic lower rolls adjustment
- Two digital read outs to indicate lower roll positions
- All three rolls driven
- Hydraulically powered rotation - HSR-3 100/315 & 120/390
- Hardened rolls
- Standard modular rolls able to bend a wide range of profiles
- Smooth rolls ensure minimal material marking
- Manually adjusted lateral guide rolls (not HSR-3 120/390)
- Hydraulically adjusted lateral guide rolls - HSR-3 120/390
- Horizontal or vertical working position
- Mobile control panel

Optional Equipment

- Tube rolls and other special rolls
- NC control system
- Hydraulically adjusted lateral guide rolls
- Infinitely variable rolling speed - HSR-3 100/315 & 120/390
- Spiral bending device

Technical specifications see pages 112-113



HSR-3 40/140



HSR-3 60/180
 PICTURED WITH
 OPTIONAL NC
 CONTROL



The optional Morgan Rushworth NC controller provides automation, greater control and increased production to section bending. The controller can be used in manual, semi-automatic and automatic modes. Roll positions are indicated on the control panel and in manual mode can be used similar to a conventional digital read out system. The controller can also be used in teach mode where the bending is carried out manually with all rolling and pre-bending functions recorded and then locked in the memory. If necessary the program can then be edited to fine tune as required. Alternatively a program can be entered line by line into the controller, carry out a test bend and again be edited if required. The NC unit has 500 programs storage each with up to 200 lines per program. Program storage may be further increased with the use of USB flash memory.

STANDARD CONTROL PANEL



HSR-3 80/245
PICTURED WITH
OPTIONAL NC
CONTROL








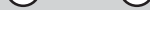










NC CONTROL PANEL SCREEN



MAIN CONTROLS

CAPACITIES

MODEL	PSR 35/140		PSR 50/155		HSR 50/160		HSR 60/215		HSR 80/245		HSR 100/315		HSR-3 40/140	
	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø
1. 	50x10	600	60x10	800	60x10	600	80x20	1200	80x15	800	100x20	1000	35x8	300
2. 	80x15	700	120x15	750	100x15	600	120x25	600	125x25	600	200x30	1000	50x12	400
3. 	30x30	700	35x35	900	35x35	600	50x50	800	45x45	500	60x60	800	18x18	250
4. 	30	700	35	800	35	600	50	800	50	600	70	800	22	200
5. 	60x2	1200	70x2	1200	70x2	1200	100x2	1600	100x2.5	1200	125x2.5	1400	40x1.5	500
6. 	48.3x2.9	900	60.3x2.9	1000	60.3x2.9	1000	88.9x3.2	1600	88.9x5.5	800	114.3x6	1000	33.7x2.3	200
7. 	50x30x3	1200	50x40x3	1200	70x30x3	1500	80x40x3	1400	80x25x3	800	100x40x4	1300.00	30x15x2.5	500
8. 	40x40x3	1200	50x50x3	1700	50x50x3	1600	70x70x3	1600	70x70x3	1400	80x80x5	1500	25x25x2	450
9. 	40x40x5	400	50x50x5	850	50x50x6	600	70x70x7	1000	80x80x8	800	100x100x12	1000	35x35x5	400
10. 	40x40x5	500	50x50x5	1200	50x50x6	900	70x70x7	1200	80x80x8	1000	100x100x10	1000	30x30x4	550
11. 	50x50x6	800	60x60x7	700	60x60x7	800	80x80x9	1000	80x80x9	800	100x100x10	1000	30x30x5	300
12. 	50x50x6	850	60x60x7	700	50x50x6	800	80x80x9	1200	80x80x9	1200	100x100x10	1500	35x35x5	350
13. 	50x50x5	800	60x60x7	700	60x60x7	800	80x80x9	1000	80x80x9	800	100x100x10	1000	35x35x5	300
14. 	UPN 50	400	UPN 60	550	UPN 80	800	UPN 120	800	UPN 120	800	UPN 160	1000	40X20X5	350
15. 	UPN 50	500	UPN 60	700	UPN 80	1200	UPN 120	1200	UPN 120	800	UPN 160	1000	35X18X5	500
16. 									IPN 120	800	IPN 160	1000		

TECHNICAL SPECIFICATIONS

MODEL STOCK CODE	PSR 35/140 M6012	PSR 50/155 M6014	HSR 50/160 M6000	HSR 60/215 M6001	HSR 80/245 M6002	HSR 100/315 M6003	HSR-3 40/140 M6027
Shaft diameter	mm	35	50	50	60	80	35
Roll diameter	mm	137	155	162	215	245	137
Rolling speed	m/min	2.1	4.3	4.5	4	6	7
Power	kW	0.75	1.5	1.1	1.5	4	1.1
Length	mm	670	730	810	1000	1450	1050
Width	mm	530	830	950	1400	1000	500
Height	mm	1350	1350	1500	1650	1400	1250
Weight	kg	195	400	500	950	1700	350

CAPACITIES

HSR-3 60/180		HSR-3 80/245		HSR-3 100/315		HSR-3 120/390		Tooling	
Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø	Max Size	Min Ø		
60x10	500	100x20	2000	100x20	800	125x25	1200		STANDARD
20x5	250	30x10	300	30x10	400	30x10	500		
80x20	500	125x25	600	200x30	1200	200x50	1000		STANDARD
50x5	250	60x5	300	80x5	400	100x50	500		
32x32	400	45x45	500	60x60	750	65x65	750		STANDARD
12x12	250	15x15	380	15x15	400	20x20	500		
35	350	50	500	75	800	80	850		SPECIAL
10	250	15	380	15	450	20	500		
60x2	600	100x2.5	1200	125x2.5	1400	160x4	2800		SPECIAL
15x1.5	200	15x1	380	15x1	450	50x2	500		
60.3x3.9	400	88.9x5.5	800	114.3x6	1000	141.3x6.5	1500		STANDARD/SPECIAL
21.3x2.7	200	21.3x2.7	380	21.3x2.7	450	26.9x2.8	500		
50x25x3	450	80x25x3	800	100x40x4	1300	120x40x4	1800		STANDARD/SPECIAL
20x15x2	250	25x15x2	350	25x15x2	450	30x20x3	500		
45x45x3	600	70x70x3	1300	80x80x5	1500	90x90x5	1800		STANDARD
20x20x2	300	25x25x2	350	25x25x2	450	30x30x3	500		
60x60x6	650	80x80x8	800	100x100x12	1000	120x120x12	1200		STANDARD
30x30x4	350	30x30x3	400	40x40x4	700	40x40x4	600		
50x50x5	550	70x70x7	700	100x100x10	1000	100x100x10	1200		STANDARD
30x30x4	350	30x30x3	450	40x40x4	550	40x40x4	600		
60x60x7	550	80x80x9	800	100x100x11	1000	100x100x11	800		STANDARD
20x20x3	250	25x25x3.3	450	30x30x4	400	30x30x4	500		
50x50x6	500	70x70x8	800	90x90x10	1000	100x100x11	1000		STANDARD
20x20x3	250	25x25x3.5	280	30x30x4	400	30x30x4	500		
60x60x7	500	80x80x9	800	100x100x11	1000	100x100x11	800		STANDARD
20x20x3	250	30x30x4	280	30x30x4	400	30x30x4	500		
UPN 80	600	UPN 140	1600	UPN 180	900	UPN 220	1000		STANDARD
UPN 30	250	UPN 100	800	UPN 30	400	UPN 40	500		
UPN 65	600	UPN 140	1600	UPN 180	1000	UPN 220	1200		STANDARD
UPN 30	250	UPN 100	800	UPN 30	400	UPN 40	600		
IPN 80	600	IPN 120	600	IPN 180	1000	IPN 220	1000		SPECIAL
		IPN 80	400	IPN 80	400	IPN 80	500		

TECHNICAL SPECIFICATIONS

MODEL STOCK CODE	HSR-3 60/180 M6016	HSR-3 80/245 M6017	HSR-3 100/315 M6018	HSR-3 120/390 M6019
Shaft diameter	mm 60	80	100	120
Roll diameter	mm 180	245	315	390
Rolling speed	m/min 5	6	7	2 - 7.5
Power	kW 3	4	7.5	15
Length	mm 1200	1450	2000	2000
Width	mm 850	1000	1450	1650
Height	mm 1200	1400	1700	1900
Weight	kg 1000	1700	3650	4770