



### HSR-3 Hydraulic Ring Rolling Machine 415v

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 to position 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 the 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 for which tools 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.



**HSR-3 120/390  
with NC Controller**

#### 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 specialist tooling
- NC control system
- Hydraulically adjusted lateral guide rolls
- Infinitely variable rolling speed - HSR-3 100/315 & 120/390
- Spiral bending device



**STANDARD CONTROL PANEL**

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.



**NC CONTROL PANEL SCREEN**







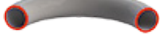
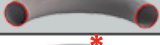














**NC CONTROLLER**

## TECHNICAL SPECIFICATIONS

MODEL		PSR 35/140	PSR 50/155	HSR 50/160	HSR 60/215	HSR-3 80/245	HSR-3 100/315	HSR-3 120/390
STOCK CODE		M6012	M6014	M6000	M6001	M6017	M6018	M6019
Shaft Diameter	mm	35	50	50	60	80	100	120
Roll Diameter	mm	137	155	162	215	245	315	390
Rolling Speed	m/min	2.1	4.3	4.5	4	6	7	7.5
Power	kW	0.75	1.5	1.1	1.5	4	7.5	15
Length	mm	670	730	810	1000	1450	2000	2000
Width	mm	530	830	950	1400	1000	1450	1650
Height	mm	1350	1350	1500	1650	1400	1700	1900
Weight	kg	195	400	500	950	1700	3650	4450

See overleaf for full capacity chart

# CAPACITIES

MODEL	PSR 35/140		PSR 50/155		HSR 50/160		HSR 60/215		HSR-3 80/245		HSR-3 100/315		HSR-3 120/390		
PROFILE	Size	Min. Dia.	Size	Min. Dia.	Size	Min. Dia.	Size	Min. Dia.	Size	Min. Dia.	Size	Min. Dia.	Size	Min. Dia.	
1.		50 x 10 20 x 6	800 300	60 x 10 40 x 10	500 400	60 x 10 20 x 10	600 300	80 x 20 40 x 10	1200 400	100 x 20* 80 x 20 30 x 10	2000 800 300	100 x 20 30 x 10	800 400	125 x 25 30 x 10	1200 500
2.		80 x 15 30 x 6	700 400	100 x 15 60 x 10	450 350	100 x 15 50 x 10	600 300	120 x 25 50 x 10	600 400	125 x 25 60 x 5	600 300	200 x 30 160 x 35 80 x 5	1200 800 400	200 x 50 100 x 10	1000 500
3.		30 x 30 10 x 10	900 200	35 x 35 20 x 20	900 300	35 x 35 15 x 15	600 300	50 x 50 20 x 20	800 400	45 x 45 15 x 15	500 380	60 x 60 15 x 15	750 400	65 x 65 20 x 20	750 500
4.		∅ 30 ∅ 10	900 200	∅ 35 ∅ 30	600 400	∅ 35 ∅ 20	600 300	∅ 50 ∅ 20	800 400	∅ 50 ∅ 15	500 380	∅ 75 ∅ 15	800 450	∅ 80 ∅ 20	850 500
5.		∅ 60 x 1.5 ∅ 25 x 1.5	1000 600	∅ 70 x 2 ∅ 30 x 2	1000 500	∅ 70 x 2 ∅ 25 x 1.5	1200 400	∅ 100 x 2 ∅ 60 x 2	1600 500	∅ 100 x 2.5 ∅ 15 x 1	1200 380	∅ 125 x 2.5 ∅ 15 x 1	1400 450	∅ 160 x 4 ∅ 140 x 3 ∅ 50 x 2	2800 1500 500
6.		48.3 x 2.9	600	60.3 x 2.9 33.7 x 2.3	1000 350	60.3 x 2.9 21.3 x 2.3	1000 300	88.9 x 3.2 33.7 x 2.6	1600 500	88.9 x 5.48 21.3 x 2.77	800 380	114.3 x 4.5 21.3 x 2.77	1000 500	139.7 x 6.35 26.9 x 2.87	1500 500
7.		50 x 30 x 3 40 x 20 x 3	1200 800	70 x 30 x 2 50 x 40 x 3	1200 1200	70 x 30 x 3 30 x 15 x 2	1500 400	80 x 40 x 3 40 x 20 x 2	1400 500	80 x 25 x 3 25 x 15 x 2	800 350	100 x 40 x 4 25 x 15 x 2	1300 450	120 x 40 x 4 30 x 20 x 3	1800 500
8.		40 x 3 30 x 2	1200 800	50 x 3 40 x 3	1700 600	50 x 3 20 x 2	1600 400	70 x 3 40 x 2	1600 500	70 x 3 25 x 2	1300 350	80 x 5 25 x 2	1500 450	90 x 5 30 x 3	1800 500
9.		40 x 40 x 5 30 x 30 x 4	600 300	50 x 50 x 5 40 x 40 x 5	800 600	50 x 50 x 6 30 x 30 x 3	600 400	70 x 70 x 7 40 x 40 x 5	1000 500	80 x 80 x 8 30 x 30 x 3	800 400	100 x 100 x 12 40 x 40 x 4	1000 700	120 x 120 x 12 40 x 40 x 4	1200 600
10.		35 x 35 x 5 30 x 30 x 4	600 400	50 x 50 x 6 30 x 30 x 3	1000 500	50 x 50 x 6 30 x 30 x 3	600 400	70 x 70 x 7 40 x 40 x 5	1200 600	70 x 70 x 7 30 x 30 x 3	700 450	100 x 100 x 10 40 x 40 x 4	1500 550	100 x 100 x 10 40 x 40 x 4	1200 600
11.		50 x 6 20 x 3	600 400	60 x 7 30 x 4	700 400	60 x 7 30 x 4	600 400	80 x 9 40 x 5	1000 400	80 x 9 30 x 4	800 450	100 x 11 30 x 4	1000 400	100 x 11 30 x 4	800 500
12.		50 x 6 20 x 3	600 400	60 x 7 30 x 4	800 500	60 x 7 30 x 4	700 400	80 x 9 40 x 5	1200 400	70 x 8 25 x 3.5	800 280	90 x 10 30 x 4	1000 400	100 x 11 30 x 4	1000 500
13.		50 x 6 20 x 3	600 400	60 x 7 30 x 4	700 500	60 x 7 30 x 4	700 400	80 x 9 40 x 5	1000 400	80 x 9 30 x 4	800 280	100 x 11 30 x 4	1000 400	100 x 11 30 x 4	800 500
14.		N/A		UPN 80 UPN 30	1000 500	UPN 80 UPN 30	800 400	UPN 100 UPN 60	800 500	UPN 140 UPN 120 UPN 100	1600 900 800	UPN 180 UPN 30	1000 400	UPN 220 UPN 180 UPN 40	1000 800 500
15.		N/A		UPN 80 UPN 30	1200 800	UPN 80 UPN 30	1200 600	UPN 100 UPN 60	1200 600	UPN 140 UPN 120 UPN 100	1600 1000 800	UPN 180 UPN 30	1000 400	UPN 220 UPN 180 UPN 40	1200 900 600
16.		N/A		N/A		N/A		N/A		IPN 120 IPN 80	600 400	IPN 180 IPN 80	1000 400	IPN 220 IPN 80	1000 500
17.		N/A		N/A		N/A		N/A		N/A		HEA 120 HEB 100	1000 1200	HEB 120 HEA 140	1200 1200
18.		N/A		N/A		N/A		N/A		N/A		N/A		UPN 120 UPN 50	10000 1000
19.		N/A		N/A		N/A		N/A		N/A		N/A		IPN 160 IPN 140 IPN 80	5000 4000 1200
20.		N/A		N/A		N/A		N/A		N/A		N/A		HEA 120 HEB 100	4500 1600



OPTIONAL NYLON ROLLS FOR STAINLESS STEEL ETC