

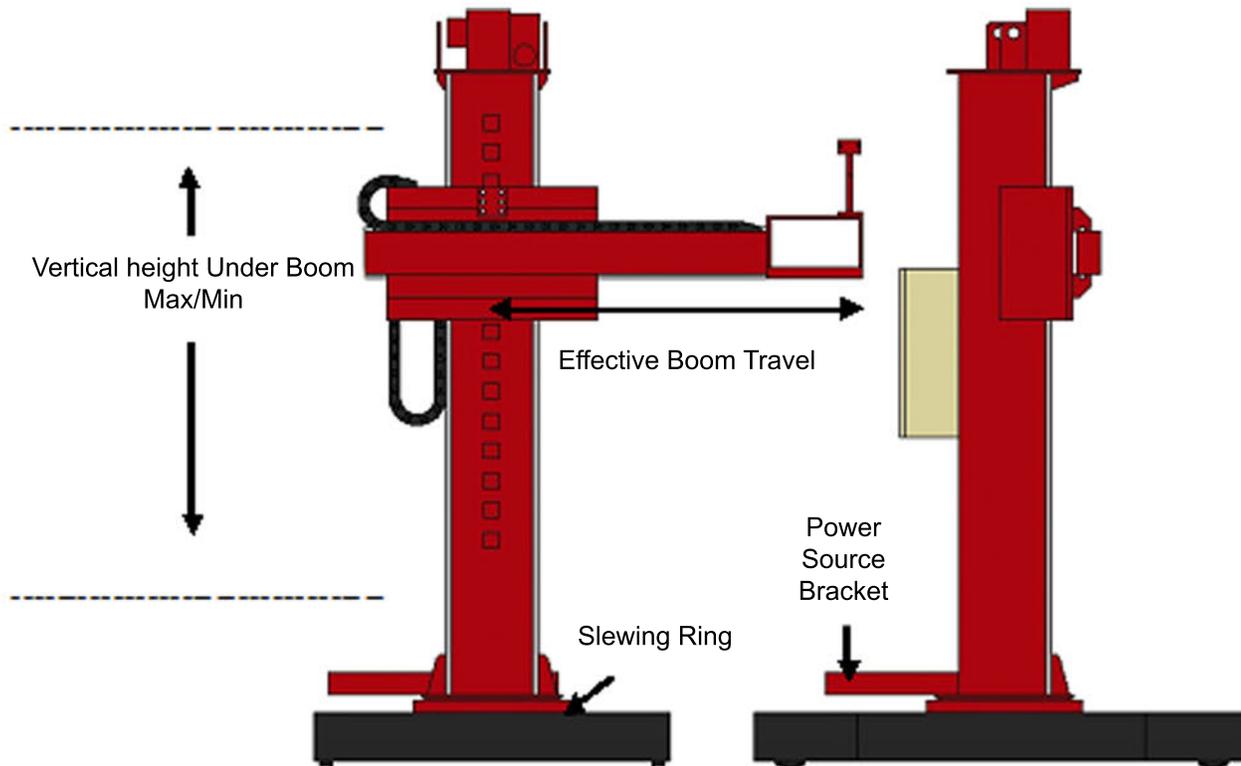
MM4040

The **Harbach Positioning** medium duty series of Column & Boom Manipulators are specifically designed and built to withstand the harsh and rugged environments expected in the welding industry. It includes the following features:

- A slewing ring for column mounting, thereby providing a smooth 360° lockable rotation.
- All vertical and horizontal rails are precisely machined in single runs giving unsurpassed smooth and steady travel.
- Latest Inverter drives fitted for variable speed of horizontal boom arm travel and rail travel car (optional).
- Worm gearbox for vertical travel via AC motor complete with brake for added safety.
- High tensile roller chain used for vertical travel with the addition of a counter balance system provides smooth effortless vertical travel.
- IP 55 control box and low voltage pendant control station.
- Standard safety feature includes anti-fall device and limit switches for all functions.
- Internally trunked cabling.

Inclusive:

- Power source mounting bracket of your choice



Medium Duty Harbach Positioning Series

MM4040

Optional Features Includes

- Travel car, manual or motorized variable speed operated via the same pendant station via selector switch.
- X-Y slide, manual or motorized, operated via the same pendant station.
- Compressed air operated flux recovery unit
- Welding power source & wire feeder controller system

All Column & Boom Manipulators are grit blasted to SA2.5 and two coats of zinc phosphate paint followed by one coat of polyurethane paintwork will ensure that your investment provides you with many years of uninterrupted service.

Specification

Input Voltage: 3-Phase Voltage (Specify 3 –phase voltage requirement before ordering)			
Electrical Box: IP55 code			
Vertical Travel Speed: 750mm/min			
Boom Travel Speed: 200 to 2070 mm/min			
Carriage Travel Speed: 450 to 4500 mm/min (optional)			
Model	Effective Travel (Horizontal) mm	Height under Boom (Vertical) mm	Overall Height mm
MM2525	2500	2500	3500
MM3030	3000	3000	4000
MM3535	3500	3500	4500
MM4040	4000	4000	5000

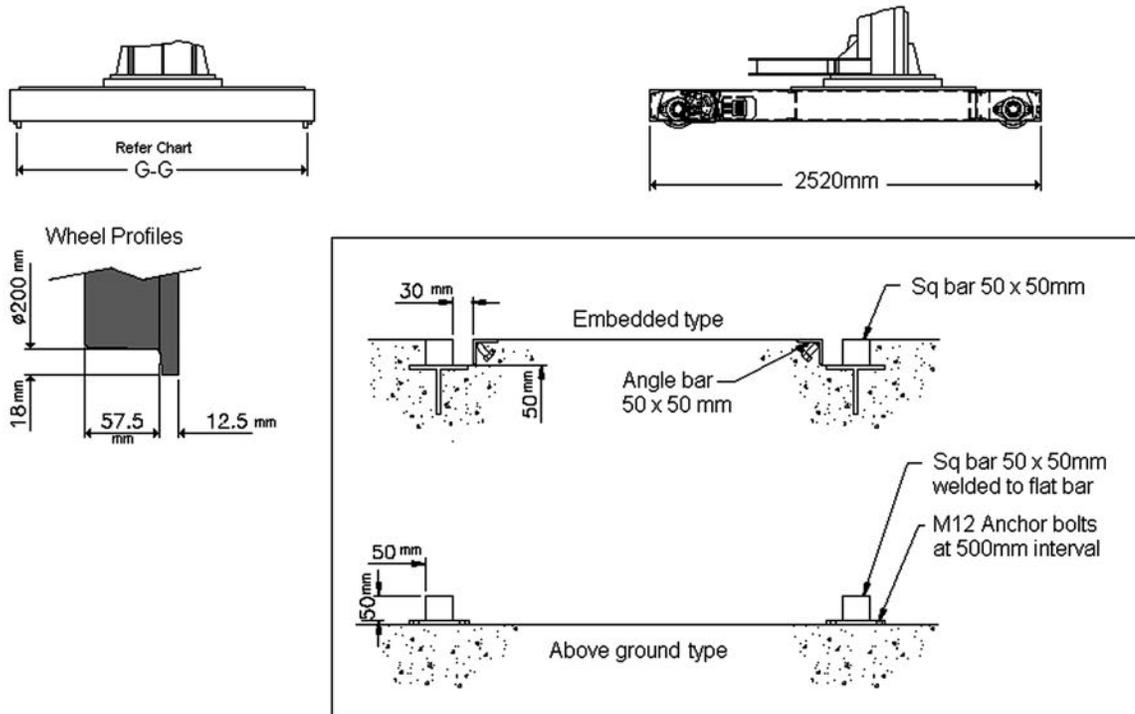
All dimensions are subject to change without prior notice.

All speed base on 50Hz.

Please advise welding power source/welding head to be use.

Medium Duty Harbach Positioning Series

MM4040



Manipulator Rail Gauge Table

Medium Duty Type Travelcar Rails G-G in mm (250kg Payload)

MM series

Boom Height	2	2.5	3	3.5	4
2	GG1650	GG2000	GG2000	GG2000	GG2500
2.5					
3	GG1650	GG2000	GG2000	GG2000	GG2500
3.5	GG1650	GG2000	GG2000	GG2000	GG2500
4	GG1650	GG2000	GG2000	GG2000	GG2500

Notes:

V denotes Max.Under Boom Height (Vertical), in hundreds of mm. i.e. 20 = 2000mm
H denotes Effective Boom Travel (Horizontal), in hundreds of mm. i.e. 20 = 2000mm

Medium Duty Harbach Positioning Series

MM4040

Ordering Information Checklist

Equipment	Part Number	Description	
Column & Boom Manipulator	MM25/25 MM30/30 MM35/35 MM40/40	2.5 x 2.5-meter Column & Boom 3.0 x 3.0-meter Column & Boom 3.5 x 3.5-meter Column & Boom 4.0 x 4.0-meter Column & Boom (Comes with standard fixed base unless specified)	
Base	Options	Fixed base (standard) for floor mounting Travel car Manual for rail mounting Travel car Motorized for rail mounting	Standard Optional Optional
Electrical Control	Options	Panel & 3-phase AC motor Panel, step-over & 3-phase AC motor	Standard Optional

Welding System Accessories

Option One

- Lincoln NA3s Controller
- K208A weld head
- Drive roll kit
- Wire reel
- 600 amps nozzle
- Cable kit Assemble
- 10 Meter ground Cable with clamp
- DC 1000 power source

Optional:

Rotary Clamp 1000 amp

Option Two

- Lincoln NA5 Controller
- K346A weld head
- Drive roll kit
- Wire reel
- 600 amps nozzle
- Cable kit Assemble
- 10 Meter ground Cable with clamp
- DC 1000 power source

Optional:

Rotary Clamp 1000 amp

Option Three

- Miller HDC 1500 Controller
- RAD weld head
- Flux hopper
- Drive roll kit (specify wire size)
- Wire straightener
- 600 amps Nozzle
- Wire reel
- Cable kit assembly
- 10 Meter ground Cable with clamp
- Dimension 1000 power source

Optional:

Rotary Clamp 1000 amp

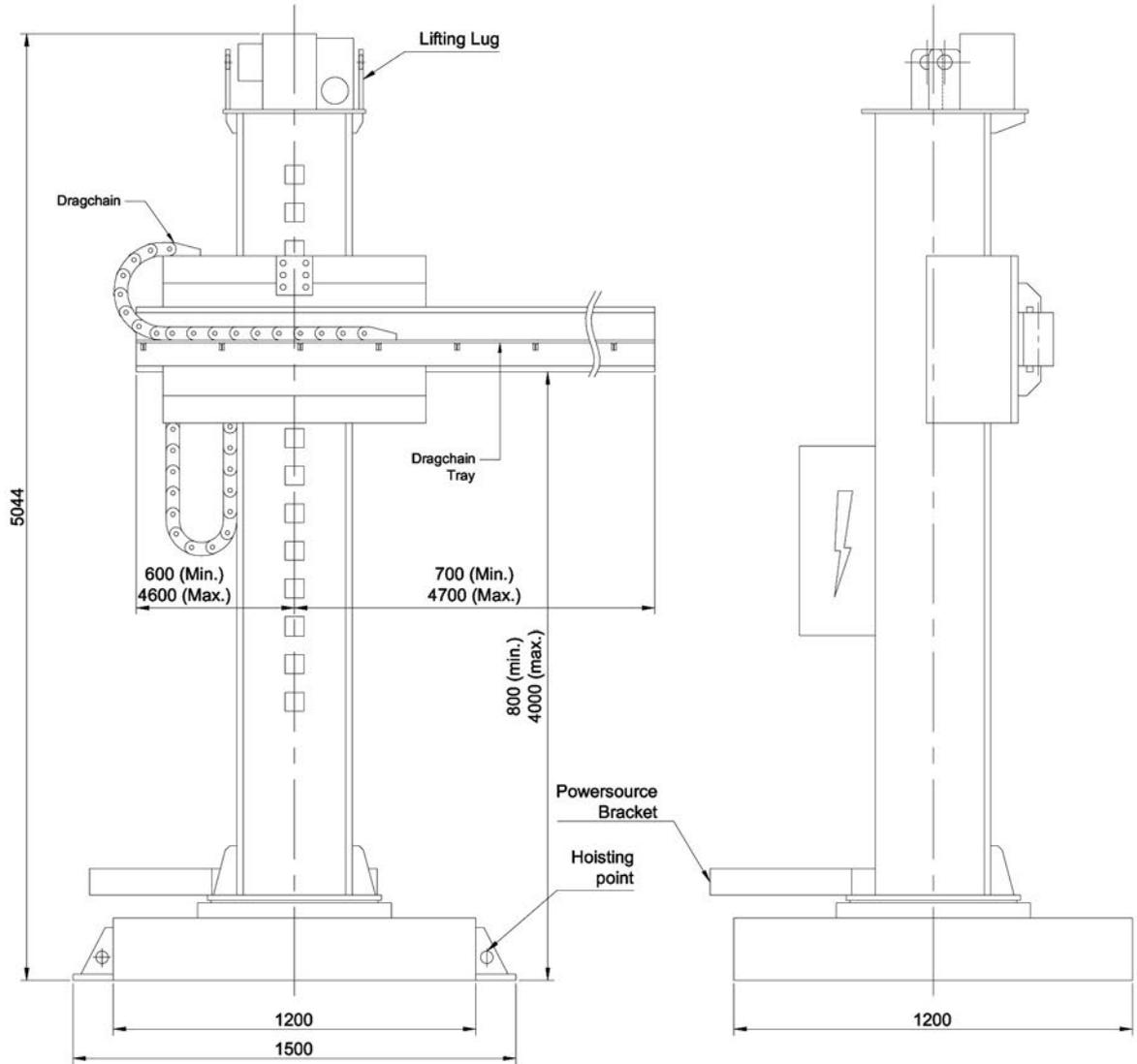
Medium Duty Harbach Positioning Series

Specifications for Manipulator

1	Model	MM4040-FM-WE-DC
2	Max. Under Boom Height	4000mm
3	Effective Boom Travel	4000mm
4	Vertical Speed	750mm/min running at 50Hz
5	Boom Speed	240~2400mm/min running at 5~50Hz
6	Travel Speed	N.A.
7	Vertical Drive	0.75KW AC Motor c/w Brake
8	Boom Drive	0.55KW AC Motor c/w Force Cooling
9	Travel Car Drive	N.A.
10	Drive Control	N.A.
11	Welding Controller/Feeder	N.A.
12	Welding Controller Bracket	N.A.
13	Welding Power Source/Brand	N.A.
14	Welding Power Source Skid	Yes
15	Electrical Panel	Yes
16	Base Type	Floor Mount Fixed Base
17	Travel Car Rail G-G	N.A.
18	Slewing Feature	Manual, ±180°
19	Slewing Drive	N.A.
20	Dragchain	Yes, column, boom and travelcar only
21	X-Y Slides	N.A.
22	Seam Tracking	N.A.
23	Operator Chair	N.A.
24	Flux Recovery	N.A.
25	Earthing	N.A.
26	Incoming Supply	380/400/415V-3P-50Hz or 440/460/480V-3P-60Hz ¹
27	Control Voltage	24Vac
28	Control Means	Via Push Button Pendant c/w 9m Cable
29	Payload	200kg
30	Surface Preparation	Gritblast to SA2.5
31	Painting	Lead free, 2 Coats Zinc Phosphate, 1 Coat Polyurethane
32	Colour	RAL3003 Red & RAL9005 Black for Travelcar only
33	Qty	1 Unit
34	Weight	~2600kg

Note:

- Input terminals are wired for 400V by default.
- This drawing is accurate at the time of preparation and maybe subject to final design change.



All dimensions in mm unless otherwise specified.

REV	DATE	DESCRIPTION	EDIT BY	REMARKS
		CUSTOMER:		
		DRAWING NAME: Medium Duty Manipulator		SCALE: N.T.S.
		DRAWING NO.: MM4040-FM-WE-DC		REVISION: 0
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				SHEET: 1 OF 1



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CHECKED BY:

DRAWN BY: IC

14-07-2011

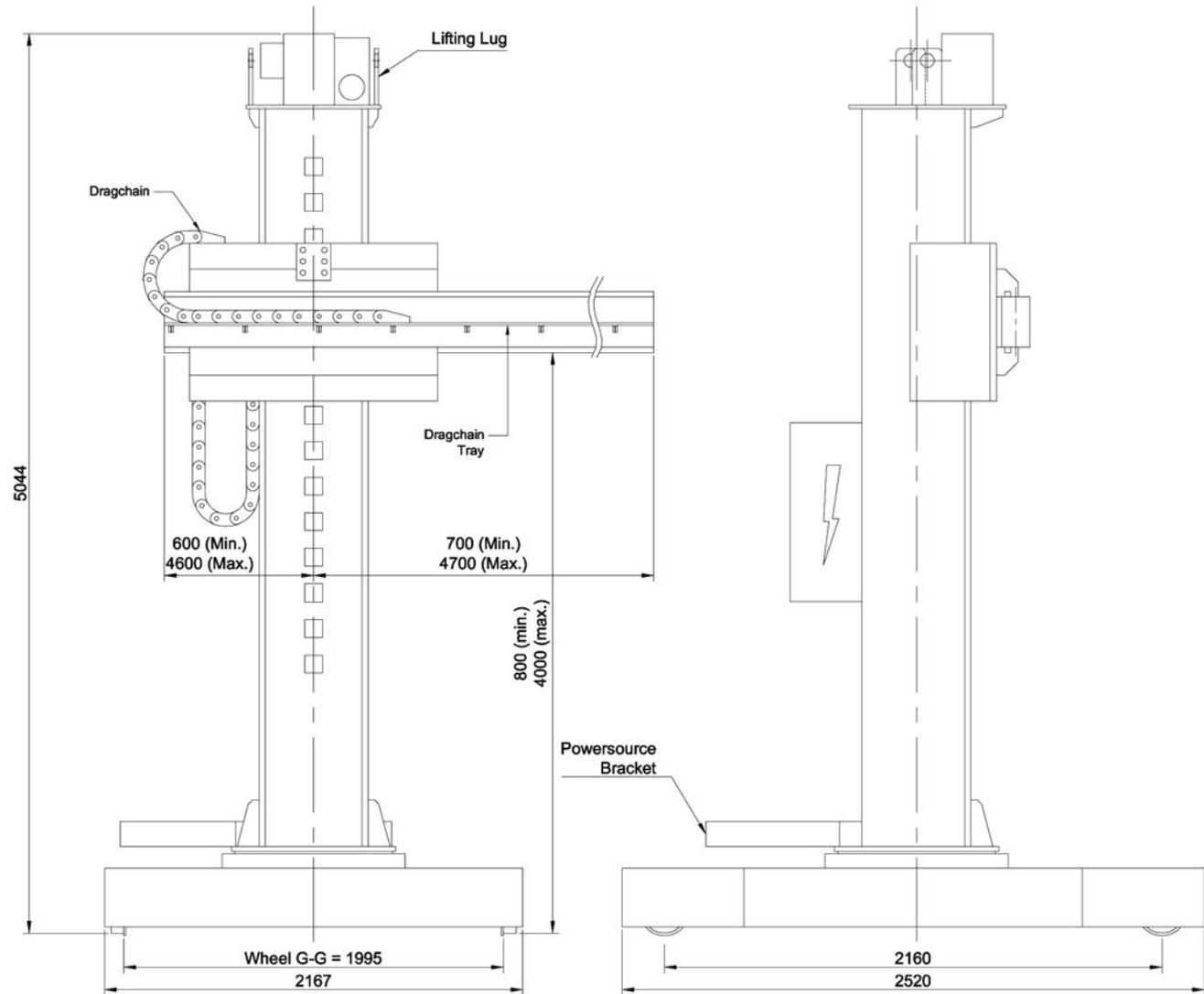
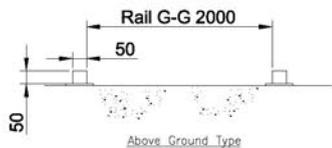
Specifications for Manipulator

1	Model	MM4040-PT2000-WE-DC
2	Max. Under Boom Height	4000mm
3	Effective Boom Travel	4000mm
4	Vertical Speed	750mm/min running at 50Hz
5	Boom Speed	240~2400mm/min running at 5~50Hz
6	Travel Speed	450~4500mm/min running at 5~50Hz
7	Vertical Drive	0.75KW AC Motor c/w Brake
8	Boom Drive	0.55KW AC Motor c/w Force Cooling
9	Travel Car Drive	0.75KW AC Motor c/w Brake
10	Drive Control	Inverter (Toggle between Boom & Travelcar)
11	Welding Controller/Feeder	N.A.
12	Welding Controller Bracket	N.A.
13	Welding Power Source/Brand	N.A.
14	Welding Power Source Skid	Yes
15	Electrical Panel	Yes
16	Base Type	Travel Car Motorized
17	Travel Car Rail G-G	2000mm
18	Slewing Feature	Manual, ±180°
19	Slewing Drive	N.A.
20	Dragchain	Yes, column, boom and travelcar only
21	X-Y Slides	N.A.
22	Seam Tracking	N.A.
23	Operator Chair	N.A.
24	Flux Recovery	N.A.
25	Earthing	N.A.
26	Incoming Supply	380/400/415V-3P-50Hz or 440/460/480V-3P-60Hz ¹
27	Control Voltage	24Vac
28	Control Means	Via Push Button Pendant c/w 9m Cable
29	Payload	200kg
30	Surface Preparation	Gritblast to SA2.5
31	Painting	Lead free, 2 Coats Zinc Phosphate, 1 Coat Polyurethane
32	Colour	RAL3003 Red & RAL9005 Black for Travelcar only
33	Qty	1 Unit
34	Weight	~3150kg

Note:

1. Input terminals are wired for 415V by default.
2. This drawing is accurate at the time of preparation and maybe subject to final design change.
3. Ground dragchain tray supplied by client.

Rail Profile (By Client)



All dimensions in mm unless otherwise specified.

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DRAWING NO.: MM4040-PT2000-WE-DC				
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				SCALE: N.T.S.
				REVISION: 0
				SHEET: 1 OF 1



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