

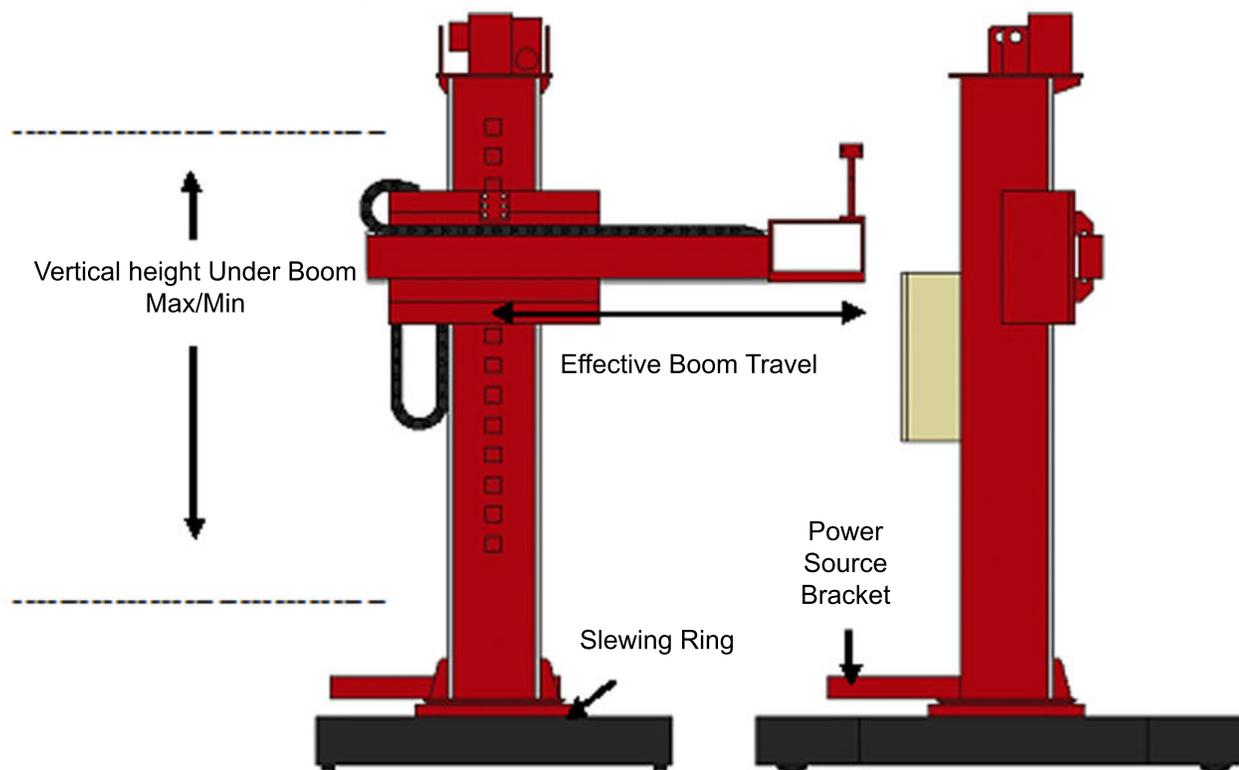
MM3020

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

MM3020

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

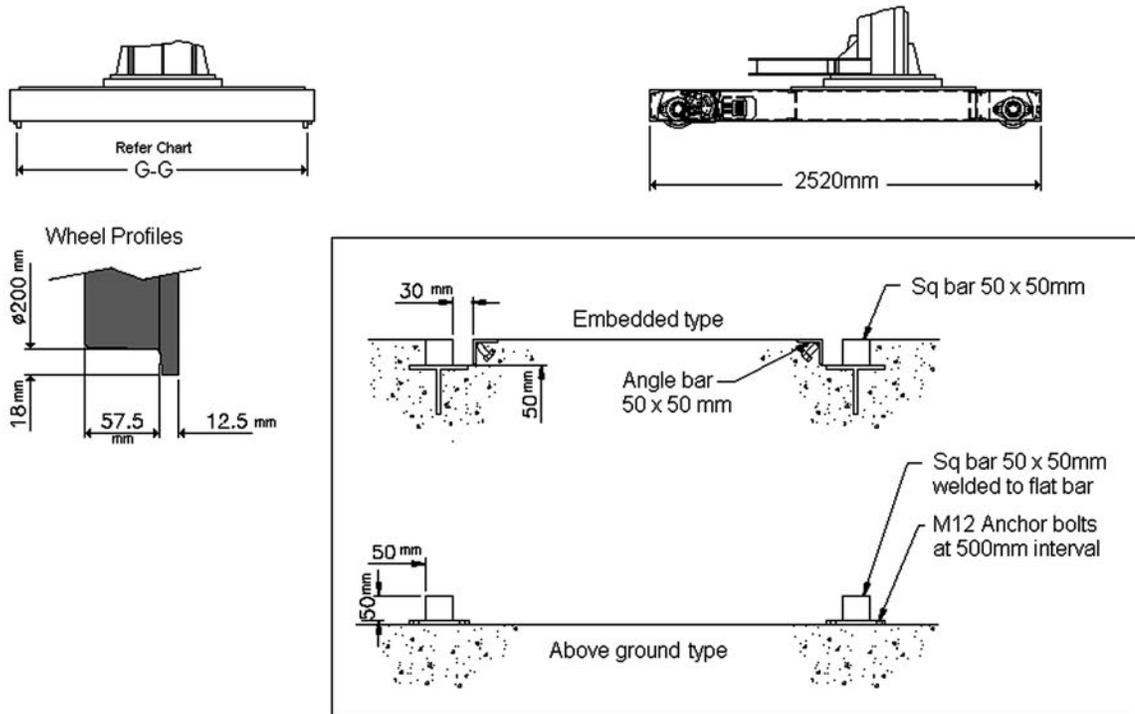
All dimensions are subject to change without prior notice.

All speed base on 50Hz.

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

Medium Duty Harbach Positioning Series

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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

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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

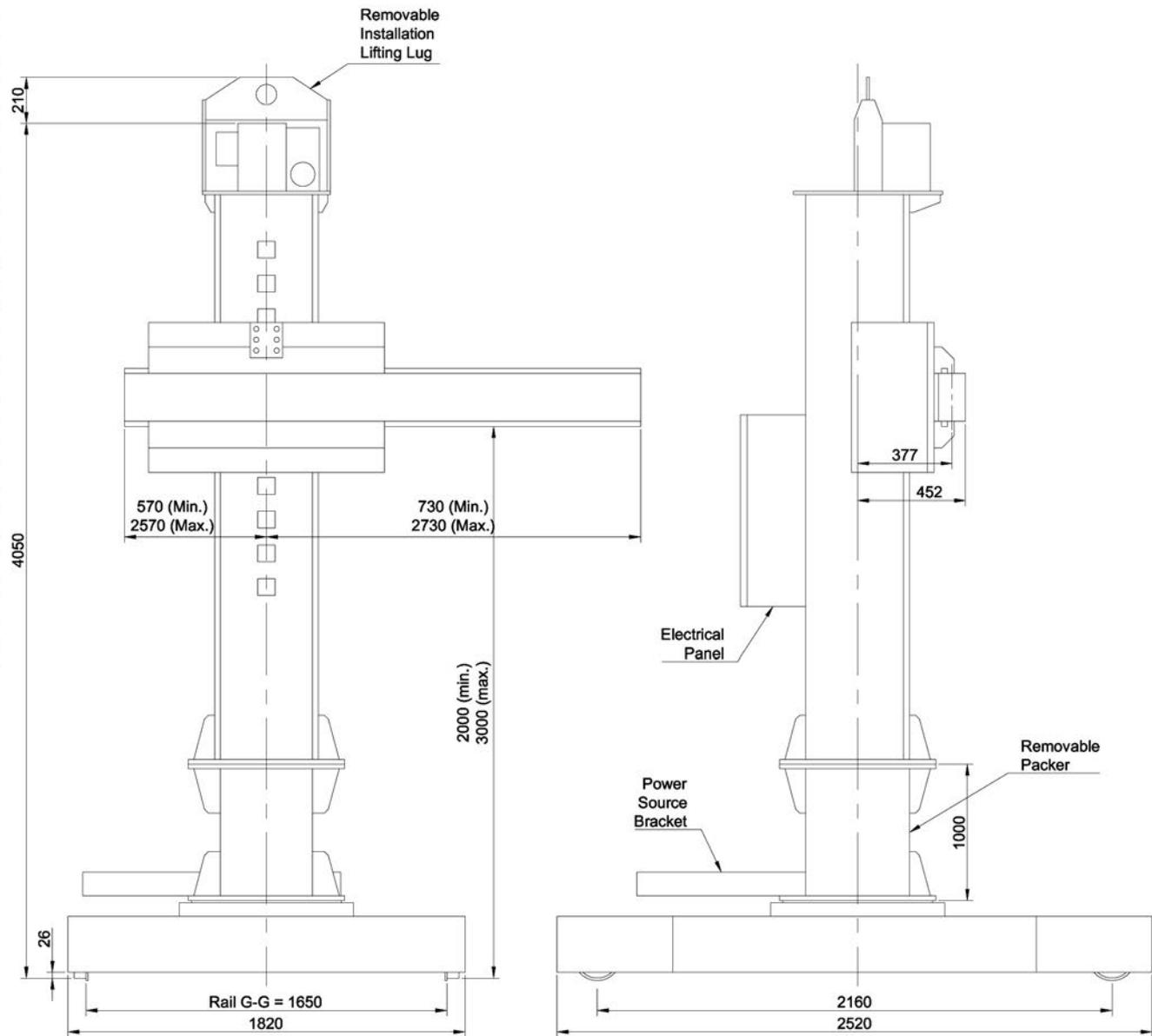
Medium Duty Harbach Positioning Series

Specifications for Manipulator

1	Model	MM3020-PT1650-WE
2	Max. Under Boom Height	3000mm
3	Effective Boom Travel	2000mm
4	Vertical Speed	754mm/min running at 50Hz
5	Boom Speed	207~2070mm/min running at 5~50Hz
6	Travel Speed	449~4490mm/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	AC Inverter 0.75kW (Toggle between Boom & Travel Car)
11	Welding Controller/Feeder	T.B.A. (by Others)
12	Welding Power Source/Brand	T.B.A. (by Others)
13	Electrical Panel	Yes
14	Base Type	Travel Car Motorized
15	Travel Car Rail G-G	1650mm
16	Slewing Feature	Manual, ±180°
17	Slewing Drive	N.A.
18	X-Y Slides	No
19	Operator Chair	No
20	Flux Recovery	No
21	Incoming Supply	380/400/415V-3P-50Hz or 440/460/480V-3P-60Hz ¹
22	Control Voltage	24Vac
23	Control Means	Via Push Button Pendant c/w 7m Cable
24	Payload	200kg
25	Surface Preparation	Gritblast to SA2.5
26	Painting	Lead Free, 2 Coats Zinc Phosphate, 1 Coat Polyurethane
27	Colour	RAL3003 Red
28	Qty	4 Units
29	Weight	~2330kg

Note:

1. Input terminals are wired for 400V by default.



All dimensions in mm unless otherwise specified.

	CUSTOMER APPROVAL	CHECKED BY:	DRAWN BY: SF
			30-08-2010

1	13-12-10	As Built	IC	
REV	DATE	DESCRIPTION	EDIT BY	REMARKS
CUSTOMER:				
DRAWING NAME: Medium Heavy Duty Manipulator				SCALE: N.T.S.
DRAWING NO.: PD-000012-GA01				REVISION: 1
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