

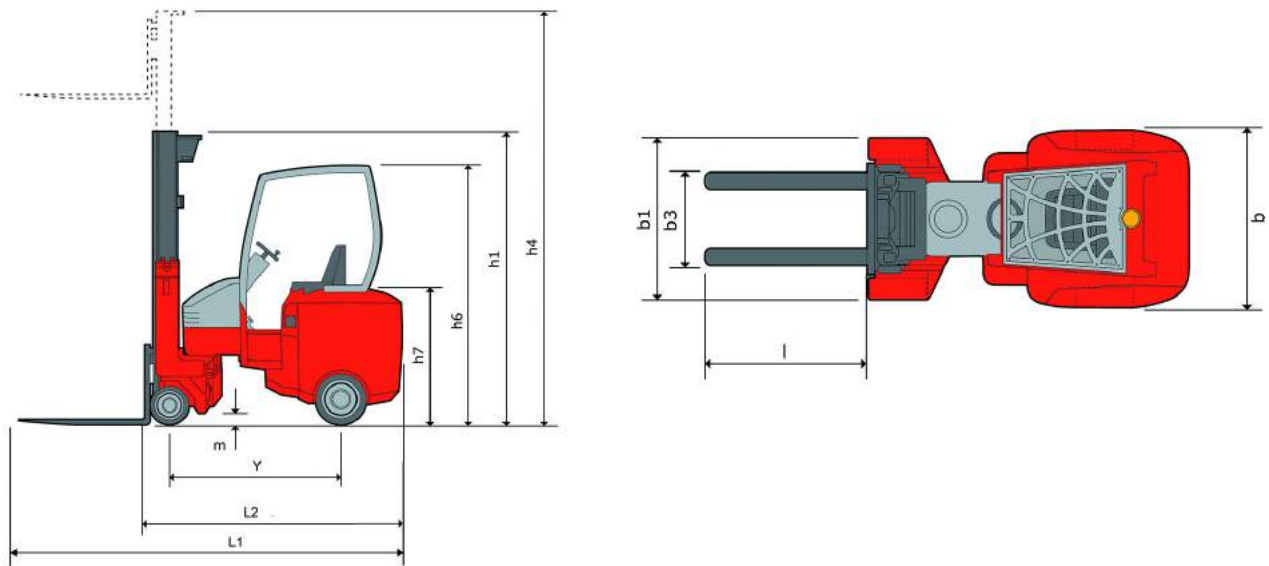
Technical sheet

EMA II 20

Warehousing Equipment



	Technical characteristics	Metric
1.1	Manufacturer	Manitou
1.2	Model	EMA II 20
1.3	Type of traction	Electric
1.4	Type of operation	Seated
1.5	Q - Rated capacity	2000 kg
1.6	c - Center of gravity of load	500 mm
1.9	y - Wheelbase	1745 mm
	Weight	
2.1	Weight of truck in working order	6600 kg
2.2	Laden weight on front/rear axle	4800 kg / 3800 kg
2.3	Unladen weight on front/rear axle	2200 kg / 4400 kg
	Wheels	
3.1	Tyre equipment: bandage (V), PPS (SE), inflatable tyre (L)	Cellular solid cushion
3.5	Number of front wheels (x)	2x / 2
	Dimensions	
4.1	α / β - Front/Rear mast angle	1.50 ° / 3.50 °
4.2	h1 - Height (mast lowered)	2750 mm
4.4	h3 - Lift height (Duplex mast)	5550 mm
4.19	l1 - Total length	3710 mm
4.20	l2 - Length to fork heel	2560 mm
4.21	b1 - Overall width - Single/twinned wheels	1200 mm / -
4.22	e / s / l - Fork dimensions	1150 x 125 x 40
4.24	b3 - Width of fork clamp	860 mm
4.31	m1 - Ground clearance under mast	50 mm
4.33	Ast - Aisle width for 1000 x 1200 pallet widthwise	1900 mm
4.34	Ast - Aisle width for 800 x 1200 pallet lengthwise	2100 mm
	Performances	
5.1	Speed of travel laden / unladen	9 km/h / 9.50 km/h
5.2	Lifting speed laden / unladen	0.35 m/s / 0.45 m/s
5.3	Lowering speed laden / unladen	0.40 m/s / 0.34 m/s
5.7	Maximum ramp laden / unladen	8 % / 10.50 %
	Engine	
6.4	Battery voltage/capacity	48 V / 775 Ah
7.2	Useful power	10 kW
	Miscellaneous	
8.2	Working hydraulic pressure for attachments	200 bar
8.3	Oil flow rate for attachments	25 l/min
8.4	Measured/guaranteed mean noise level at the ear of the operator	73 dB(A)



Characteristics of masts and residual capacities

Triplex Free Lift		4200	4530	5010	5550	6000	6600	7200	7620	8010	8610
Lift height	mm	4200	4530	5010	5550	6000	6600	7200	7620	8010	8610
Height (mast lowered)	mm	2300	2410	2570	2750	2900	3150	3400	3590	3720	4020
Free lift	mm	1480	1590	1750	1930	2080	2330	2580	2770	2900	3200
Height of extended mast	mm	5030	5360	5840	6380	6830	7430	8030	8450	8840	9440



Siège Social
430 rue de l'Aubinière - 44150 Ancenis Cedex - France
Tel: +33(0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97
www.manitou.com



This brochure describes versions and configuration options for Manitou products which may be fitted with different equipment. The equipment described in this brochure may be standard, optional or not available depending on version. Manitou reserves the right to change the specifications shown and described at any time and without prior warning. The manufacturer is not liable for the specifications given. For more information, contact your Manitou dealer. Non-contractual document. Product descriptions may differ from actual products. List of specifications is not comprehensive. The logos and visual identity of the company are the property of Manitou and may not be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are provided for information only.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,547,824 euros - 857 802 508 RCS Nantes

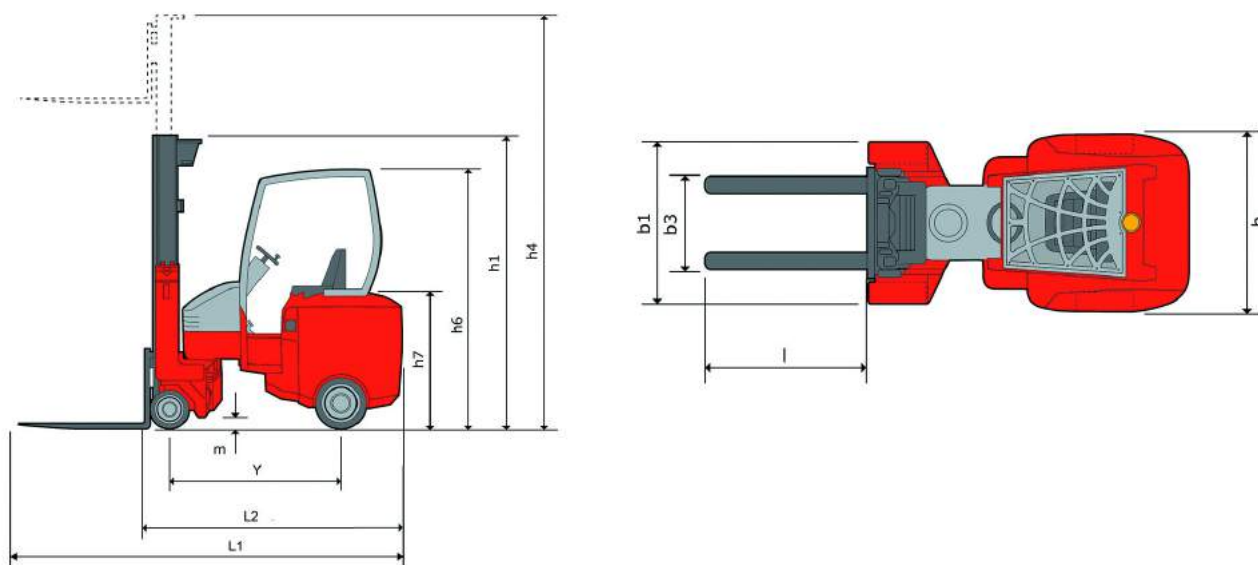
Technical sheet

EMA II 20 HD-1

Warehousing Equipment



	Technical characteristics	Metric
1.1	Manufacturer	Manitou
1.2	Model	EMA II 20 HD-1
1.3	Type of traction	Electric
1.4	Type of operation	Seated
1.5	Q - Rated capacity	2000 kg
1.6	c - Center of gravity of load	500 mm
1.9	y - Wheelbase	1745 mm
	Weight	
2.1	Weight of truck in working order	6900 kg
2.2	Laden weight on front/rear axle	4200 kg / 4500 kg
2.3	Unladen weight on front/rear axle	2200 kg / 4700 kg
	Wheels	
3.1	Tyre equipment: bandage (V), PPS (SE), inflatable tyre (L)	Cellular solid cushion
3.5	Number of front wheels (x)	2x / 2
	Dimensions	
4.1	α / β - Front/Rear mast angle	1.50 ° / 3.50 °
4.2	h1 - Height (mast lowered)	2750 mm
4.4	h3 - Lift height (Duplex mast)	5550 mm
4.5	h4 - Height of extended mast	6380 mm
4.19	l1 - Total length	3710 mm
4.20	l2 - Length to fork heel	2560 mm
4.21	b1 - Overall width - Single/twinned wheels	1250 mm / -
4.22	e / s / l - Fork dimensions	1150 x 125 x 40
4.24	b3 - Width of fork clamp	860 mm
4.33	Ast - Aisle width for 1000 x 1200 pallet widthwise	1950 mm
4.34	Ast - Aisle width for 800 x 1200 pallet lengthwise	2150 mm
	Performances	
5.1	Speed of travel laden / unladen	9 km/h / 9.50 km/h
5.2	Lifting speed laden / unladen	0.35 m/s / 0.45 m/s
5.3	Lowering speed laden / unladen	0.40 m/s / 0.36 m/s
5.7	Maximum ramp laden / unladen	8 % / 10.50 %
	Engine	
6.4	Battery voltage/capacity	48 V / 775 Ah
7.2	Useful power	10 kW
	Miscellaneous	
8.2	Working hydraulic pressure for attachments	200 bar
8.3	Oil flow rate for attachments	25 l/min
8.4	Measured/guaranteed mean noise level at the ear of the operator	73 dB(A)



Characteristics of masts and residual capacities

Triplex Free Lift		5550	6000	6600	7020	7620	8010	8610	9000	9500	10200	10560
Lift height	mm	5550	6000	6600	7020	7620	8010	8610	9000	9500	10200	10560
Height (mast lowered)	mm	2750	2900	3150	3290	3590	3720	4020	4150	4500	4690	4820
Free lift	mm	1930	2080	2330	2470	2770	2900	3200	3330	3650	3870	4000
Height of extended mast	mm	6380	6830	7430	7850	8450	8840	9440	9830	10475	11175	11535



Siège Social
430 rue de l'Aubinière - 44150 Ancenis Cedex - France
Tel: +33(0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97
www.manitou.com



This brochure describes versions and configuration options for Manitou products which may be fitted with different equipment. The equipment described in this brochure may be standard, optional or not available depending on version. Manitou reserves the right to change the specifications shown and described at any time and without prior warning. The manufacturer is not liable for the specifications given. For more information, contact your Manitou dealer. Non-contractual document. Product descriptions may differ from actual products. List of specifications is not comprehensive. The logos and visual identity of the company are the property of Manitou and may not be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are provided for information only.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,547,824 euros - 857 802 508 RCS Nantes

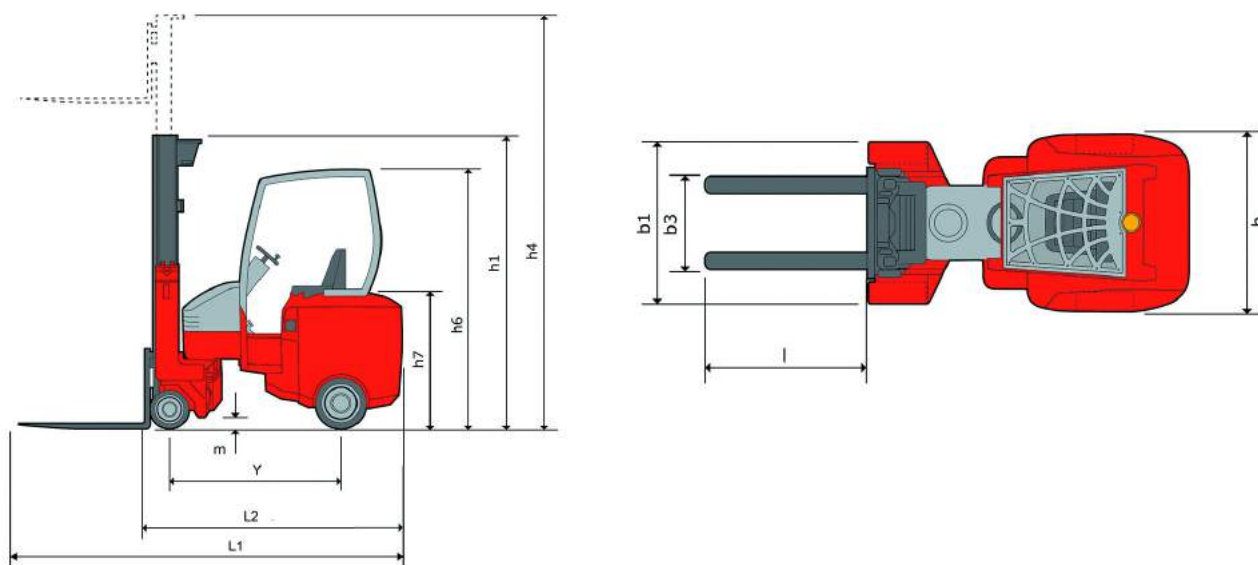
Technical sheet

EMA II 20 HD-2

Warehousing Equipment



	Technical characteristics	Metric
1.1	Manufacturer	Manitou
1.2	Model	EMA II 20 HD-2
1.3	Type of traction	Electric
1.4	Type of operation	Seated
1.5	Q - Rated capacity	2000 kg
1.6	c - Center of gravity of load	500 mm
1.9	y - Wheelbase	1740 mm
	Weight	
2.1	Weight of truck in working order	8700 kg
2.2	Laden weight on front/rear axle	6330 kg / 4080 kg
2.3	Unladen weight on front/rear axle	3480 kg / 5220 kg
	Wheels	
3.1	Tyre equipment: bandage (V), PPS (SE), inflatable tyre (L)	Cellular solid cushion
3.5	Number of front wheels (x)	2x / 2
	Dimensions	
4.1	α / β - Front/Rear mast angle	1.50 ° / 3.50 °
4.2	h1 - Height (mast lowered)	2750 mm
4.4	h3 - Lift height (Duplex mast)	5550 mm
4.5	h4 - Height of extended mast	6380 mm
4.19	l1 - Total length	3710 mm
4.20	l2 - Length to fork heel	2560 mm
4.21	b1 - Overall width - Single/twinned wheels	1370 mm / -
4.22	e / s / l - Fork dimensions	1150 x 125 x 40
4.24	b3 - Width of fork clamp	860 mm
4.33	Ast - Aisle width for 1000 x 1200 pallet widthwise	2000 mm
4.34	Ast - Aisle width for 800 x 1200 pallet lengthwise	2200 mm
	Performances	
5.1	Speed of travel laden / unladen	8.50 km/h / 9 km/h
5.2	Lifting speed laden / unladen	0.35 m/s / 0.45 m/s
5.3	Lowering speed laden / unladen	0.40 m/s / 0.36 m/s
5.7	Maximum ramp laden / unladen	6 % / 8 %
	Engine	
6.4	Battery voltage/capacity	48 V / 930 Ah
7.2	Useful power	10 kW
	Miscellaneous	
8.2	Working hydraulic pressure for attachments	200 bar
8.3	Oil flow rate for attachments	25 l/min
8.4	Measured/guaranteed mean noise level at the ear of the operator	73 dB(A)



Characteristics of masts and residual capacities

Triplex Free Lift		5500	6000	6600	7620	8010	8610	9000	10020	10560
Lift height	mm	5500	6000	6600	7620	8010	8610	9000	10020	10560
Height (mast lowered)	mm	2750	2900	3150	3590	3720	4020	4150	4590	4820
Free lift	mm	1930	2080	2330	2770	2900	3200	3330	3770	4000
Height of extended mast	mm	6380	6830	7430	8450	8840	9440	9830	11000	11540



Siège Social
430 rue de l'Aubinière - 44150 Ancenis Cedex - France
Tel: +33(0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97
www.manitou.com



This brochure describes versions and configuration options for Manitou products which may be fitted with different equipment. The equipment described in this brochure may be standard, optional or not available depending on version. Manitou reserves the right to change the specifications shown and described at any time and without prior warning. The manufacturer is not liable for the specifications given. For more information, contact your Manitou dealer. Non-contractual document. Product descriptions may differ from actual products. List of specifications is not comprehensive. The logos and visual identity of the company are the property of Manitou and may not be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are provided for information only.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,547,824 euros - 857 802 508 RCS Nantes