Technical sheet:

## **EMA II 20 HD-2**





Technical characteristics  Manufacturer  Model Name  Power source  Operator type  Max. capacity  Load center of gravity  Load distance, centre of drive axle to fork  Wheelbase  Weight  Service weight  Weight on front axle (laden) / rear axle (laden)  Wheels  Tires type  Dimensions of front wheels  Dimensions of rear wheels  Number of front wheels / rear wheels	Q c x y	Metric Manitou EMA II 20 HD-2 Electrical Seated 2000 kg 500 mm 278 mm 1745 mm  8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg  Solid tires 412 x 178
Model Name Power source Operator type Max. capacity Load center of gravity Load distance, centre of drive axle to fork Wheelbase Weight Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Wheels Tires type Dimensions of front wheels Dimensions of rear wheels	C X	EMA II 20 HD-2 Electrical Seated 2000 kg 500 mm 278 mm 1745 mm  8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg  Solid tires 412 x 178
Power source Operator type  Max. capacity Load center of gravity Load distance, centre of drive axle to fork  Wheelbase  Weight Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Wheels Tires type Dimensions of front wheels Dimensions of rear wheels	C X	Electrical Seated 2000 kg 500 mm 278 mm 1745 mm  8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg  Solid tires 412 x 178
4 Operator type 5 Max. capacity 6 Load center of gravity 8 Load distance, centre of drive axle to fork 9 Wheelbase Weight 1 Service weight 2 Weight on front axle (laden) / rear axle (laden) 3 Weight on front axle (Unladen) / rear axle (Unladen) Wheels 1 Tires type 2 Dimensions of front wheels 3 Dimensions of rear wheels	C X	Seated 2000 kg 500 mm 278 mm 1745 mm  8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg  Solid tires 412 x 178
Max. capacity Load center of gravity Load distance, centre of drive axle to fork Wheelbase Weight Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Tires type Dimensions of front wheels Dimensions of rear wheels	C X	2000 kg 500 mm 278 mm 1745 mm 8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Load center of gravity Load distance, centre of drive axle to fork Wheelbase Weight Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Tires type Dimensions of front wheels Dimensions of rear wheels	C X	500 mm 278 mm 1745 mm 8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Load distance, centre of drive axle to fork  Wheelbase  Weight  Service weight  Weight on front axle (laden) / rear axle (laden)  Weight on front axle (Unladen) / rear axle (Unladen)  Wheels  Tires type  Dimensions of front wheels  Dimensions of rear wheels	X	278 mm 1745 mm 8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Wheelbase Weight Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Wheels Tires type Dimensions of front wheels Dimensions of rear wheels		1745 mm 8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Wheelbase Weight  Service weight  Weight on front axle (laden) / rear axle (laden)  Weight on front axle (Unladen) / rear axle (Unladen)  Wheels  Tires type Dimensions of front wheels  Dimensions of rear wheels	у	8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Weight  Service weight  Weight on front axle (laden) / rear axle (laden)  Weight on front axle (Unladen) / rear axle (Unladen)  Wheels  Tires type  Dimensions of front wheels  Dimensions of rear wheels		8700 kg 6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Service weight Weight on front axle (laden) / rear axle (laden) Weight on front axle (Unladen) / rear axle (Unladen) Wheels Tires type Dimensions of front wheels Dimensions of rear wheels		6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
2 Weight on front axle (laden) / rear axle (laden) 3 Weight on front axle (Unladen) / rear axle (Unladen) Wheels 1 Tires type 2 Dimensions of front wheels 3 Dimensions of rear wheels		6330 kg / 4080 kg 3480 kg / 5220 kg Solid tires 412 x 178
Weight on front axle (Unladen) / rear axle (Unladen)  Wheels  Tires type  Dimensions of front wheels  Dimensions of rear wheels		3480 kg / 5220 kg Solid tires 412 x 178
Wheels  Tires type  Dimensions of front wheels  Dimensions of rear wheels		Solid tires 412 x 178
Tires type Dimensions of front wheels Dimensions of rear wheels		412 x 178
Dimensions of front wheels Dimensions of rear wheels		412 x 178
3 Dimensions of rear wheels		
		43/ X 1/0
J Number of Hoff wheels / lear wheels		2 / 2
5.2 Number of drive wheels		2
	b10	1110 mm
3 3		
3 3	b11	1370 mm
Dimensions	1.6	0060
7 Height of overhead guard (cabin)	h6	2260 mm
8 Seat height/stand height	h7	1200 mm
Overall length	I1	3710 mm
20 Length to face of forks	12	2560 mm
Overall width	b1	1350 mm
Porks section / width / length	s / e / l	40 mm x 125 mm x 1150 mm
Fork carriage ISO 2328 (class/form) A/B		2
24 Fork carriage width	b3	860 mm
Ground clearance below mast	m1	50 mm
Ground clearance at centre of wheelbase	m2	130 mm
Aisle Width for pallets 1000 x 1200 crossways	Ast	2000 mm
Aisle width for 800 x 1200 pallet lengthways	Ast	2200 mm
Performances		
1 Travel speed (laden / unladen)		8.50 km/h-9 km/h
2 Lifting speed (laden / unladen)		0.35 m/s-0.45 m/s
3 Lowering speed (laden / unladen)		0.40 m/s-0.36 m/s
7 Gradeability (laden / unladen)		6 % / 8 %
Service brake		Hydraulic
Engine		
1 Drive motor rating S2 60 min		10 kW
2 Lift motor rating at \$3 15%		9 kW
Battery according to DIN 43531/35/36 A, B, C		DIN 43595
4 Battery voltage / capacity		48 V / 930 Ah
5 Battery weight (+/- 5%)		1300 kg
Miscellaneous		
1 Type of drive control		Mosfet AC speed controller
2 Working hydraulic pressure for attachments		200 bar
3 Oil flow rate for attachments		25 l/min
4 Measured/guaranteed mean noise level at the ear of the operator		< 73 dB
4 Sound level at the driver's ear according to DIN 12 053		73 dB

## EMA II 20 HD-2 - Dimensional drawing



## Characteristics of masts and residual capacities

Free Lift Triplex (FLT)		FLT 55	FLT 60	FLT 66	FLT 76	FLT 80	FLT 86	FLT 90	FLT 100	FLT 106
Mast/fork carriage tilt, forward	۰	1	1	1	1	1	1	1	1	1
Mast/fork carriage tilt, backward	۰	3	3	3	3	3	3	3	3	3
h1 - Mast lowered height	mm	2750	2900	3150	3590	3720	4020	4150	4590	4820
h2 - Mast free lift	mm	1930	2080	2330	2770	2900	3200	3330	3770	4000
h3 - Mast lifting height	mm	5500	6000	6600	7620	8010	8610	9000	10020	10560
h4 - Mast extended height	mm	3680	6830	7430	8450	8840	9440	9830	11000	11540
Residual capacity with integrated side shift at max heigth	kg	1500	1500	1450	1400	1350	1300	1250	1000	850





## **Head Office**

B.P. 249 - 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 publication provides a description of the configuration versions and options for Manitou products, which may differ for equipment. The equipment presented in this brochure may be part of a series, as an option, or it may not be available, depending on the versions. Manitou reserves the right, at any time and without notice, to amend the specifications described and represented. The specifications provided do not bind the manufacturer. For more details, please contact your Manitou agent. This is not a contractually binding document. The presentation of the products is not contractually binding. List of specifications non-exhaustive. The logos as well as the visual identity of the company are owned by Manitou and cannot be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are only provided for consultation and information purposes.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,668,399 euros - 857 802 508 RCS Nantes