Technical sheet:

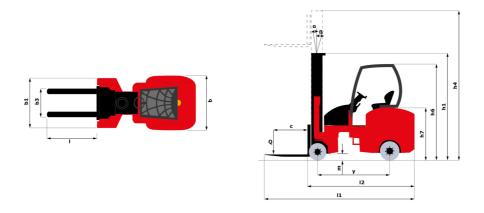
EMA II 18 HL-2





Model Name			EMAII 18 HE-2 Olcai	led on April 29, 2024 at 9.23.23 i ivi
Model Name		Technical characteristics		Metric
Power source Seated	1.1	Manufacturer		Manitou
	1.2	Model Name		EMA II 18 HL-2
1.5	1.3	Power source		Electrical
1.6 Load center of gravity	1.4	Operator type		Seated
1.8 Load distance, centre of drive axle to fork	1.5	Max. capacity	Q	1750 kg
1.9 Weelbase y 1745 mm	1.6	Load center of gravity	c	500 mm
1.9 Wheelbase y 1745 mm	1.8		X	
Weight Service weight 8700 kg 6330 kg / 4800 kg 22 Weight on front axile (laden) / rear axile (laden) 83400 kg / 4800 kg 3480 kg / 5220 kg Wheels Solid tites 3412 x 178 Solid tites 32 Dimensions of front wheels 412 x 178 32 Dimensions of front wheels 412 x 178 32 Dimensions of front wheels 427 x 178 33 Dimensions of front wheels 2 / 2 2 2 2 2 2 2 2 2	1.9		v	1745 mm
Service weight Service weight S700 kg		Weight		
Weight on front axle (laden) / rear axle (laden) 6330 kg / 4080 kg	2.1	<u> </u>		8700 ka
Weight on front axle (Unladen) / rear axle (Unladen) 3480 kg / 5220 kg	2.2	•		
Wheels Solid tires Solid		. , , , ,		• •
Tires type	2.0	- , , , ,		0 100 kg / 0220 kg
12 12 13 13 14 15 15 15 15 15 15 15	3.1			Solid tires
3.3 Dimensions of rear wheels 457 x 178 3.5 Number of front wheels / rear wheels 2 / 2 3.6 Front wheel gauge b10 1110 mm 3.7 Rear wheel gauge b11 1350 mm 4.7 Height of overhead guard (cabin) h6 2260 mm 4.8 Seat height/stand height h7 1200 mm 4.9 Overall length l1 3740 mm 4.19 Overall width h1 3740 mm 4.20 Length to face of forks 12 2590 mm 4.21 Overall width b1 1350 mm 4.22 Fork section / width / length s / e / l 40 mm x 125 mm x 1150 mm 4.22 Fork carriage width b3 860 mm 4.31 Ground clearance below mast m1 50 mm 4.32 Ground clearance at centre of wheelbase m2 130 mm 4.33 Akise Width for pallets 1000 x 1200 crossways Ast 2000 mm 4.33 Akise Width for pallets 1000 x 1200 crossways Ast 2000 mm 5.3 Lumerin speed (lader / unlader) 0.35 m/s 0.45 m				
3.5 Number of front wheels / rear wheels 2 / 2 5.5.2 Number of drive wheels 2 3.6 Front wheel gauge b10 1110 mm 3.7 Rear wheel gauge b11 1356 mm Umensions 4.7 Height of overhead guard (cabin) h6 2260 mm 4.8 Seat height/stand height h7 1200 mm 4.19 Overall length i1 3740 mm 4.20 Length to face of forks i2 2590 mm 4.21 Overall width b1 1350 mm 4.22 Forks section / width / length s / e / l 40 mm x 125 mm x 1150 mm 4.23 Fork cariage ISO 2328 (class/form) A/B 2 2 4.24 For cariage width b3 860 mm 4.32 Ground clearance below mast m1 50 mm 4.33 Aisle Width for pallets 100 x 1200 crossways Ast 2000 mm 4.34 Aisle width for pallets 100 x 1200 crossways Ast 2000 mm 5.1 Travel speed (laden / unladen) 9 km/h-9.50 km/h 5.2 Lift front speed				
Number of drive wheels 2 2 3.6 Front wheel gauge bil 1110 mm 3.7 Rear wheel gauge bil 1350 mm 1350 mm 1350 mm 1350 mm 14.7 Height of overhead guard (cabin) h6 2260 mm 4.8 Seat height/stand height h7 1200 mm 11 3740 mm 120 12				
3.6 Front wheel gauge b10 1110 mm 3.7 Rear wheel gauge b11 1350 mm 4.7 Height of owerhead guard (cabin) h6 2260 mm 4.8 Seat height/stand height h7 1200 mm 4.19 Overall length h7 1200 mm 4.20 Length to face of forks i2 2590 mm 4.21 Overall width b1 1350 mm 4.21 Overall width / length s / e / I 40 mm x 125 mm x 1150 mm 4.22 Fork section / width / length s / e / I 40 mm x 125 mm x 1150 mm 4.23 Fork carriage Stotage width b3 860 mm 4.24 Fork carriage width b3 860 mm 4.31 Ground clearance below mast m1 50 mm 4.32 Ground clearance at centre of wheelbase m2 130 mm 4.33 Aisle Width for p30x 1200 pallet lengthways Ast 2000 mm 4.34 Aisle width for 800x 1200 pallet lengthways Ast 2200 mm 5.2 Lifting speed (laden / unladen) 0.35 m/s-0.45 m/s 5.2 Lifting				
Rear wheel gauge			h10	
Dimensions Height of overhead guard (cabin) h6 2260 mm				
Height of overhead guard (cabin)	3./		DII	1350 111111
4.8 Seat height/stand height h7 1200 mm 4.19 Overall length I1 3740 mm 4.20 Length to face of forks I2 2590 mm 4.21 Overall width b1 1350 mm 4.22 Forks section / width / length s / e / I 40 mm x 125 mm x 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2 4.24 Fork carriage width b3 860 mm 4.31 Ground clearance below mast m1 50 mm 4.32 Ground clearance at centre of wheelbase m2 130 mm 4.33 Aisle Width for pallets 1000 x 1200 crossways Ast 2000 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2200 mm 5.1 Travel speed (laden / unladen) 9 km/h-9.50 km/h 5.2 Lifting speed (laden / unladen) 9 km/h-9.50 km/h 5.7 Gradeability (laden / unladen) 0.40 m/s-0.36 m/s 5.7 Gradeability (laden / unladen) 8 % / 10.50 % 5.1 Drive motor rating \$2.60 min 10 kW 6.1 Drive motor rating at \$3.15% 9 kW 6.2 Lift motor rating at \$3.15% 9 kW 6.3 Battery according to DIN 43551/35/36 A, B, C 48 V/930 Ah <td>4.7</td> <td></td> <td>16</td> <td>2000</td>	4.7		16	2000
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4.20 Length to Face of forks 12 2590 mm 4.21 Overall width b1 1350 mm 4.22 Forks section / width / length \$ / e / I 40 mm x 125 mm x 1150 mm 4.23 Fork carriage ISO 2328 (class/form) A/B 2 2 4.24 Fork carriage width b3 860 mm 4.31 Ground clearance below mast m1 50 mm 4.32 Ground clearance at centre of wheelbase m2 130 mm 4.33 Aisle Width for pallets 1000 x 1200 crossways Ast 2000 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2000 mm 5.1 Travel speed (laden / unladen) 9 km/h-9.50 km/h 5.2 Lifting speed (laden / unladen) 9 km/h-9.50 km/s 5.3 Lowering speed (laden / unladen) 0.40 m/s-0.36 m/s 5.7 Gradeability (laden / unladen) 8 % / 10.50 % 5.7 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 10 kW 6.1 Drive motor rating st S3 15% 9 kW 6.2 Lif				
1.21 Overall width length		•		
Forks section / width / length				
Fork carriage ISO 2328 (class/form) A/B 2				
Fork carriage width			s / e / l	
A.31 Ground clearance below mast m1 50 mm A.32 Ground clearance at centre of wheelbase m2 130 mm A.33 Aisle Width for pallets 1000 x 1200 crossways Ast 2000 mm A.34 Aisle width for 800 x 1200 pallet lengthways Ast 2200 mm Performances		, ,		
130 mm 1		J		
4.33 Aisle Width for pallets 1000 x 1200 crossways Ast 2000 mm 4.34 Aisle width for 800 x 1200 pallet lengthways Ast 2200 mm Performances 5.1 Travel speed (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 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 6.1 Drive motor rating \$2 60 min 10 kW 6.2 Lift motor rating at \$3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg				
Asle width for 800 x 1200 pallet lengthways Performances 5.1 Travel speed (laden / unladen) 5.2 Lifting speed (laden / unladen) 5.3 Lowering speed (laden / unladen) 5.7 Gradeability (laden / unladen) 5.8 **/ 10.50 ** 5.10 Service brake Engine 6.1 Drive motor rating \$2 60 min 6.2 Lift motor rating at \$3 15* 6.3 Battery according to DIN 43531/35/36 A, B, C 6.4 Battery voltage / capacity 6.5 Battery weight (+/- 5*) Ast 2200 mm 9 km/h-9.50 km/h 0.35 m/s-0.45 m/s 9 km/h-9.50 km/h 0.40 m/s-0.36 m/s 8 **/ 10.50 ** Hydraulic 10 kW 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery weight (+/- 5*)			m2	
Performances 5.1 Travel speed (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 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 6.1 Drive motor rating \$2 60 min 10 kW 6.2 Lift motor rating at \$3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2000 mm
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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 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 6.1 Drive motor rating \$2.60 min 10 kW 6.2 Lift motor rating at \$3.15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg				
5.3 Lowering speed (laden / unladen) 0.40 m/s-0.36 m/s 5.7 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 6.1 Drive motor rating S2 60 min 10 kW 6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	5.1	Travel speed (laden / unladen)		9 km/h-9.50 km/h
5.7 Gradeability (laden / unladen) 8 % / 10.50 % 5.10 Service brake Hydraulic Engine 6.1 Drive motor rating S2 60 min 10 kW 6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	5.2	Lifting speed (laden / unladen)		0.35 m/s-0.45 m/s
5.10 Service brake Hydraulic Engine Companies 6.1 Drive motor rating S2 60 min 10 kW 6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	5.3	Lowering speed (laden / unladen)		0.40 m/s-0.36 m/s
Engine Company 6.1 Drive motor rating S2 60 min 10 kW 6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	5.7	Gradeability (laden / unladen)		8 % / 10.50 %
6.1 Drive motor rating S2 60 min 10 kW 6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	5.10	Service brake		Hydraulic
6.2 Lift motor rating at S3 15% 9 kW 6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg		Engine		
6.3 Battery according to DIN 43531/35/36 A, B, C DIN 43595 6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	6.1	Drive motor rating S2 60 min		10 kW
6.4 Battery voltage / capacity 48 V / 930 Ah 6.5 Battery weight (+/- 5%) 1300 kg	6.2	Lift motor rating at S3 15%		9 kW
6.5 Battery weight (+/- 5%) 1300 kg	6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43595
	6.4	Battery voltage / capacity		48 V / 930 Ah
10 0	6.5	Battery weight (+/- 5%)		1300 kg
Miscellaneous		Miscellaneous		
	8.1			Mosfet AC speed controller
·	8.2	**		·
• , ,	8.3			
	8.4			
·	8.4	•		

EMA II 18 HL-2 - Dimensional drawing



Characteristics of masts and residual capacities

Free Lift Triplex (FLT)		FLT 80	FLT 84	FLT 90	FLT 95	FLT 100	FLT 102	FLT 110	FLT 120	FLT 125	FLT 127
Mast/fork carriage tilt, forward	۰	1	1	1	1	1	1	1	1	1	1
Mast/fork carriage tilt, backward	٠	4	4	4	4	4	4	4	4	4	4
h1 - Mast lowered height	mm	3720	3900	4150	4270	4590	4690	5000	5340	5550	5570
h2 - Mast free lift	mm	2900	3080	3330	3650	3770	3870	4180	4520	4680	4750
h3 - Mast lifting height	mm	8010	8400	9000	9500	10020	10200	11010	12000	12510	12720
h4 - Mast extended height	mm	8840	9230	9830	10350	10850	11175	11985	13005	13485	13695
Residual capacity with integrated side shift at max heigth	kg	1250	1250	1250	1100	1100	1000	850	750	700	500





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