Technical sheet:

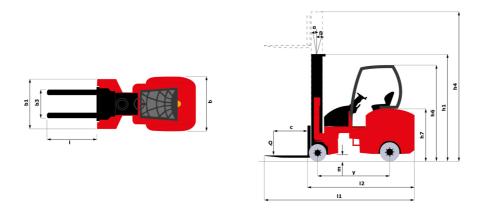
## **EMA II 18 HL-2**





BALA   18 HL-2   Electrical			EMAII IS HL-2 GICE	ited off May 3, 2024 at 10.32.33 AM
BALA   18 HL-2   Electrical		Technical characteristics		Metric
Power source	1.1	Manufacturer		Manitou
1.4   Operator type	1.2	Model Name		EMA II 18 HL-2
Max. capacity	1.3	Power source		Electrical
Lead distance, cente of drive axie to fork	1.4	Operator type		Seated
Load distance, centre of drive axie to fork   x   7145 mm   Wheelbase   y   7145 mm   Wheelbase   y   7145 mm   Wheelbase   Service weight	1.5	Max. capacity	Q	1750 kg
Weelpase	1.6	Load center of gravity	С	500 mm
1.9   Wheelbase   y   1745 mm	1.8	• •	X	
	1.9		V	1745 mm
Service weight   Serv		Weight		
Weight on front axie (Unfaden) / rear axie ( Unfaden)	2.1	•		8700 ka
Weight on front axie (Uniaden) / rear axie (Uniaden)   3480 kg / 5220 kg	2.2	-		*
Wheels		. , , , ,		
Tires type	2.0	- , , , ,		0 100 kg / 0220 kg
	3 1			Solid tires
3.3   Dimensions of rear wheels   2 / 2				
Number of front wheels / rear wheels   2 / 2				
Number of drive wheels   2   2   3.6   From wheel gauge   bil				
Sear Wheel gauge				
Bear wheel gauge			h10	
Height of overhead guard (cabin)   h6   2260 mm	3.7		DII	1350 11111
Assignment   Ass	4.7		16	2262
1.19   Overall length   11   3740 mm   1.20   Length to face of forks   12   2.599 mm   1.20   Overall width   1.350 mm   1.350 mm   1.20   Forks section / width / length   1.350 mm   1.20   Forks section / width / length   1.350 mm   1.20   1.20   Fork carriage ISO 2328 (class/form) A/B   2   2.20   Tork carriage width   2.20   To				
Length to face of forks   12   2590 mm     La21   Overall width   Overall width   bil   1350 mm     La22   Fork section / width / length   s / e / l   40 mm x 125 mm x 1150 mm     La23   Fork carriage ISO 2328 (class/form) A/B   2   2     La24   Fork carriage width   bil   bil   3   860 mm     La31   Ground clearance below mast   m1   50 mm     La32   Ground clearance at centre of wheelbase   m2   130 mm     La33   Aisle Width for pallets 1000 x 1200 crossways   Ast   2000 mm     La34   Aisle Width for 800 x 1200 pallet lengthways   Ast   2200 mm     Performances   Performances   Performances     Lifting speed (laden / unladen)   9 km/h-9.50 km/h     Los weing speed (laden / unladen)   9 km/h-9.50 km/h     Lowering speed (laden / unladen)   9 km/h-9.50 km/h     Lowering speed (laden / unladen)   8 % 10.50 %     Gradeability (laden / unladen)   9 km/s-0.56 m/s     Lowering speed (laden / unladen)   9 km/s-0.56 m/s     Lowering spee				
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 carriage lSQ 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 gallets 1000 x 1200 crossways       Ast       2200 mm         5.1       Travel speed (laden / unladen)       9 km/h-9.50 km/h         5.1       Travel speed (laden / unladen)       9 km/h-9.50 km/h         5.2       Liffung speed (laden / unladen)       9 km/h-9.03 6m/s         5.7       Gradeability (laden / unladen)       8 % / 10.50 %         5.7       Gradeability (laden / unladen)       8 % / 10.50 %         5.10       Service brake       Hydraulic         6.1       Drive motor rating 32 60 min       10 kW         6.2       Liff motor rating at S3 15%       9 kW         6.3       Battery weight (+/- 5%)       1300 kg         Battery weight (+/-		•		
Forks section / width / length				
Fork carriage ISO 2328 (class/form) A/B   2				
Fork carriage width			s / e / l	
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         Performances         *** 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         5.7       Gradeability (laden / unladen)       8 % / 10.50 %         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 43537/35/36 A, B, C       DIN 43595         6.4       Battery voltage / capacity       48 V / 930 Ah         6.5       Battery weight (+/- 5%)       1300 kg         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar		, ,		
130 mm   130 mm   130 mm   130 mm   130 mm   133 mm   133 mm   133 mm   134 mile Width for pallets 1000 x 1200 crossways   Ast   2000 mm   134 mile Width for 800 x 1200 pallet lengthways   Ast   2200 mm   130		3		
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)       8 % / 10.50 %         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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar				
Asile 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 Service brake  Engine  6.1 Drive motor rating \$2 60 min 6.2 Lift motor rating \$3 15% 6.3 Battery according to DIN 43531/35/36 A, B, C 6.4 Battery voltage / capacity 6.5 Battery weight (+/- 5%) 6.6 Battery weight (+/- 5%) 6.7 Working hydraulic pressure for attachments  Mosfet AC speed controller 8.2 Working hydraulic pressure for attachments  Ast 2200 mm  9 km/h-9.50 km/h 6.9 Sm/h-9.50 km/h 6.1 Sm/h-9.50 km/h 6.2 Sm/h-9.50 km/h 6.1 Sm/h-9.50 km/h 6.2 Sm/h-9.50 km/h 6.2 Sm/h-9.50 km/h 6.1 Sm/h-9.50 km/h 6.2 Sm/h-9.50 km/h 6.1 Sm/h-9.50 km/h 6.1 Sm/h-9.50 km/h 6.			m2	
Ferformances           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)         8 % / 10.50 %           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           Miscellaneous           8.1         Type of drive control         Mosfet AC speed controller           8.2         Working hydraulic pressure for attachments         200 bar	4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2000 mm
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)       8 % / 10.50 %         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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2200 mm
5.2       Lifting speed (laden / unladen)       0.35 m/s-0.45 m/s         5.3       Lowering speed (laden / unladen)       8 % / 10.50 %         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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar		Performances		
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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	5.2	Lifting speed (laden / unladen)		0.35 m/s-0.45 m/s
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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	5.3	Lowering speed (laden / unladen)		0.40 m/s-0.36 m/s
Engine         Composition           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           Miscellaneous           8.1         Type of drive control         Mosfet AC speed controller           8.2         Working hydraulic pressure for attachments         200 bar	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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar		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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	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         Miscellaneous         8.1       Type of drive control       Mosfet AC speed controller         8.2       Working hydraulic pressure for attachments       200 bar	6.2	Lift motor rating at S3 15%		9 kW
6.5 Battery weight (+/- 5%)  Miscellaneous  8.1 Type of drive control  8.2 Working hydraulic pressure for attachments  1300 kg  Mosfet AC speed controller 200 bar	6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43595
Miscellaneous  8.1 Type of drive control Mosfet AC speed controller  8.2 Working hydraulic pressure for attachments 200 bar	6.4	Battery voltage / capacity		48 V / 930 Ah
8.1     Type of drive control     Mosfet AC speed controller       8.2     Working hydraulic pressure for attachments     200 bar	6.5	Battery weight (+/- 5%)		1300 kg
8.2 Working hydraulic pressure for attachments 200 bar				
8.2 Working hydraulic pressure for attachments 200 bar	8.1			Mosfet AC speed controller
	8.2	**		
8.3 Oil flow rate for attachments 25 I/min	8.3			25 I/min
	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	۰	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





## **Head Office**

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