Technical sheet:

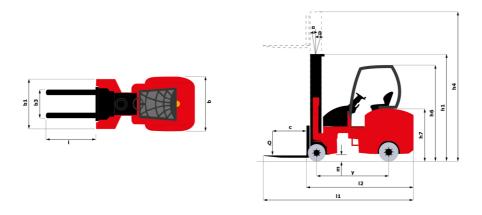
## **EMA II 20 HD-2**





Technical characteristics	.5 at 1.50 Aivi
1.2   Model Name	
1.3   Power source	
1.4         Operator type         Seated           1.5         Max. capacity         0         2000 kg           1.6         Load center of gravity         c         500 mm           1.8         Load distance, centre of drive axle to fork         x         278 mm           1.9         Wheelbase         y         1745 mm           2.1         Senice weight         8700 kg         8700 kg           2.2         Weight on front axle (laden) / rear axle (laden)         6333 kg / 40           2.3         Weight on front axle (Unladen) / rear axle (Unladen)         3480 kg / 52           3.1         Tires type         Solid tire           3.2         Dimensions of front wheels         9         472 x 17           3.3         Dimensions of front wheels         9         2.2           3.5         Number of front wheels / rear wheels         9         2.2           3.5         Number of front wheels / rear wheels         9         2.2           3.6         Front wheel gauge         b10         1110 mm           3.7         Rear wheel gauge         b10         1110 mm           4.7         Height of overhead guard (cabin)         h6         2250 mm           4.8         Seat height/	D-2
1.5         Max. capacity         Q         2000 kg           1.6         Load center of gravity         c         500 mm           1.8         Load distance, cente of drive axle to fork         x         278 mm           1.9         Wheelbase         y         1745 mm           1.0         Service weight         y         63300 kg / 40           2.2         Weight on front axle (Unladen) / rear axle (Unladen)         63300 kg / 40         63300 kg / 52           2.3         Weight on front axle (Unladen) / rear axle (Unladen)         63300 kg / 52         63300 kg / 40           3.1         Tires type         Solid tire         412 x 17           3.2         Dimensions of front wheels         2         850id tire           3.2         Dimensions of front wheels         2         42 / 2           3.5         Number of front wheels / rear wheels         2         2 / 2           3.5         Number of drive wheels         2         2 / 2           3.5         Number of drive wheels         5         6         2 / 2           3.5         Number of drive wheels         6         1         1           4.7         Height of overhead goang (cabin)         h         6         2           4	I
1.6         Load center of gravity         c         500 mm           1.8         Load center of gravity         x         278 mm           1.9         Wheelbase         y         1745 mm           Weight         C         8700 kg           2.1         Service weight         6330 kg / 40           2.2         Weight on front axie (Unladen) / rear axie (Unladen)         3380 kg / 52           Wheels         Tires type         Solid tire           3.1         Tires type         Solid tire           3.2         Dimensions of front wheels         412 x 17           3.2         Dimensions of front wheels         2           3.5         Number of front wheels / rear wheels         2           3.5         Number of front wheels / rear wheels         2           3.6         Front wheel gauge         b10         1110 mm           3.7         Rear wheel gauge         b10         1110 mm           4.7         Height of overhead guard (cabin)         h6         220 mm           4.8         Seat height/stand height         h7         1200 mm           4.1         Height of overhead guard (cabin)         h6         22 5560 mm           4.2         Length of ace of forks         1	
1.8         Load distance, centre of drive axle to fork         x         278 mm           1.9         Wheelbase         y         17.5 mm           2.1         Service weight         8         6330 kg / 40           2.2         Weight on front axle (laden) / rear axle (laden)         6330 kg / 40         6330 kg / 40           2.3         Weight on front axle (Unladen)         6330 kg / 40         6330 kg / 40           3.1         Tires type         8         6         850id tire           3.2         Dimensions of front wheels         4         457 x 17           3.3         Dimensions of rear wheels         2         457 x 17           3.5         Number of front wheels / rear wheels         1         2         2           3.5         Number of drive wheels         1         2         2           3.5         Number of drive wheels         1         3         1         4         2         2         2         2         2         2 <td></td>	
New   New	
Neelbase   Weight   Weight   Sevice weight	
	1
2.1         Service weight         8700 kg           2.2         Weight on front axile (laden) / rear axile (Unladen)         6330 kg / 40           2.3         Weight on front axile (Unladen) / rear axile (Unladen)         3480 kg / 52           Wheels           3.1         Tires type         Solid tire           3.2         Dimensions of front wheels         412 x 17           3.3         Dimensions of rear wheels         2 / 2           3.5.2         Number of front wheels / rear wheels         2 / 2           3.6         Front wheel gauge         b10         1110 mr           3.7         Rear wheel gauge         b11         1370 mr           4.7         Height of overhead guard (cabin)         6         2260 mr           4.7         Height of overhead guard (cabin)         h6         2260 mr           4.8         Seat height/ stand height         h7         1200 mr           4.9         Overall length         11         3710 mr           4.19         Overall length         11         3130 mr           4.20         Length to face of forks         12         2560 mr           4.21         Overall width         b1         1350 mr           4.22         Forks section, widt	
2.2       Weight on front axle (laden) / rear axle (laden)       6330 kg / 40         2.3       Weight on front axle (Unladen)       3480 kg / 52         Wheels         3.1       Tires type       Solid life         3.2       Dimensions of front wheels       412 x 17         3.3       Dimensions of rear wheels       2/2         3.5       Number of front wheels / rear wheels       2 / 2         3.6       Front wheel gauge       b10       1110 mm         3.7       Rear wheel gauge       b10       1110 mm         3.7       Rear wheel gauge       b11       1370 mm         4.7       Height of ownhead guard (cabin)       h6       2260 mm         4.8       Seat height/stand height       h7       1200 mm         4.9       Overall length       11       3710 mm         4.20       Length to face of forks       12       2550 mm         4.21       Overall width       b1       1350 mm         4.22       Fork section / width / length       s / e / 1       40 mm x 125 mm         4.23       Fork carriage ISO 2328 (class/form) A/B       2       2         4.24       Fork carriage width       b3       860 mm         4.31       <	
2.3       Weight on front axle (Unladen) / rear axle (Unladen)       3480 kg / 52         Wheels       3480 kg / 52         3.1       Tires type       Solid tire         3.2       Dimensions of front wheels       412 x 17         3.3       Dimensions of rear wheels       457 x 17         3.5       Number of front wheels / rear wheels       2 / 2         3.5.2       Number of drive wheels       2         3.6       Front wheel gauge       b10       1110 mr         3.7       Rear wheel gauge       b11       1370 mr         Dimensions	
Wheels   Solid tree   Solid t	-
3.1       Tires type       Solid tire         3.2       Dimensions of front wheels       412 x 17         3.3       Dimensions of rear wheels       457 x 17         3.5       Number of frink wheels / rear wheels       2 / 2         3.5       Number of drive wheels       2 / 2         3.6       Front wheel gauge       b10       1110 mm         3.7       Rear wheel gauge       b11       1370 mm         Dimensions         4.7       Height of overhead guard (cabin)       h6       2260 mm         4.8       Seat height/stand height       h7       1200 mm         4.9       Overall length       11       3710 mm         4.20       Length to face of forks       12       2560 mm         4.21       Overall width       b1       1350 mm         4.22       Fork carriage ISO 2328 (class/form) A/B       2       4         4.23       Fork carriage width       b3       860 mm         4.31       Ground clearance below mast       m1       50 mm         4.33       Aisle width for pallets 1000 x 1200 crossways       Ast       2000 mm         4.34       Aisle width for pallets 1000 x 1200 crossways       Ast       2000 mm <t< td=""><td>.o kg</td></t<>	.o kg
3.2   Dimensions of front wheels	
3.3       Dimensions of rear wheels       457 x 17         3.5       Number of front wheels / rear wheels       2 / 2         3.5.2       Number of drive wheels       2         3.6       Front wheel gauge       b10       1110 mm         Dimensions         4.7       Height of overhead guard (cabin)       h6       2260 mm         4.8       Seat height/stand height       h7       1200 mm         4.19       Overall length       11       3710 mm         4.20       Length to face of forks       12       2560 mm         4.21       Overall width       b1       1350 mm         4.22       Forks section / width / length       s / e / l       40 mm x 125 mm         4.23       Fork carriage lSO 2328 (class/form) A/B       s / e / l       40 mm x 125 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 pallets 1000 x 1200 crossways       Ast       2000 mm         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2000 mm         5.1	
2	
Number of drive wheels   2   3.6   Front wheel gauge   b10   1110 mm	,
3.6       Front wheel gauge       b10       1110 mr         3.7       Rear wheel gauge       b11       1370 mr         Dimensions         4.7       Height of overhead guard (cabin)       h6       2260 mr         4.8       Seat height/stand height       h7       1200 mr         4.19       Overall length       l1       3710 mr         4.20       Length to face of forks       l2       2560 mr         4.21       Overall width       b1       1350 mr         4.22       Forks section / width / length       s / e / l       40 mm x 125 mm         4.23       Fork carriage ISO 2328 (class/form) A/B       2       2         4.24       Fork carriage width       b3       860 mr         4.24       Fork carriage width       b3       860 mr         4.31       Ground clearance below mast       m1       50 mm         4.32       Ground clearance at centre of wheelbase       m2       130 mr         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2000 mr         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2000 mr         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2<	
Same	
Dimensions   Height of overhead guard (cabin)   h6   2260 mm	
4.7       Height of overhead guard (cabin)       h6       2260 mr         4.8       Seat height/stand height       h7       1200 mr         4.19       Overall length       I1       3710 mr         4.20       Length to face of forks       I2       2560 mr         4.21       Overall width       b1       1350 mr         4.22       Fork section / width / length       s / e / l       40 mm x 125 mm         4.23       Fork carriage ISO 2328 (class/form) A/B       2         4.24       Fork carriage width       b3       860 mr         4.31       Ground clearance below mast       m1       50 mm         4.32       Ground clearance at centre of wheelbase       m2       130 mr         4.33       Aisle Width for pallets 1000 x 1200 crossways       Ast       2000 mr         4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2200 mr         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	
4.8       Seat height/stand height       h7       1200 mm         4.19       Overall length       l1       3710 mm         4.20       Length to face of forks       l2       2560 mm         4.21       Overall width       b1       1350 mm         4.22       Fork section / width / length       s / e / l       40 mm x 125 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         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	
1.19   Overall length	
Length to face of forks   12   2560 mm     Length to face of forks   12   2560 mm     Length to face of forks   130 mm     Length to face of length   130 mm     Length to face	
1.21   Overall width   b1   1350 mm   1.22   Forks section / width / length   s / e / l   40 mm x 125 mm   1.23   Fork carriage ISO 2328 (class/form) A/B   2   2   2   2   2   2   2   2   2	
# 1.22 Forks section / width / length	
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         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	
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         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	: 1150 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         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	
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4.34       Aisle width for 800 x 1200 pallet lengthways       Ast       2200 mm         Performances         5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	
Performances           5.1         Travel speed (laden / unladen)         8.50 km/h-9           5.2         Lifting speed (laden / unladen)         0.35 m/s-0.4	1
5.1       Travel speed (laden / unladen)       8.50 km/h-9         5.2       Lifting speed (laden / unladen)       0.35 m/s-0.4	1
5.2 Lifting speed (laden / unladen) 0.35 m/s-0.4	
	(m/h
5.0 Laurating annual (Index (unladex)	i m/s
5.3 Lowering speed (laden / unladen) 0.40 m/s-0.3	m/s
5.7 Gradeability (laden / unladen) 6 % / 8 %	ı
5.10 Service brake Hydrauli	;
Engine 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 4359	5
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	
8.3 Oil flow rate for attachments 25 l/mir	
8.4 Measured/quaranteed mean noise level at the ear of the operator <73 dB	
8.4 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
α - Mast/fork carriage tilt, forward	۰	1	1	1	1	1	1	1	1	1
β - 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**

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