Technical sheet :





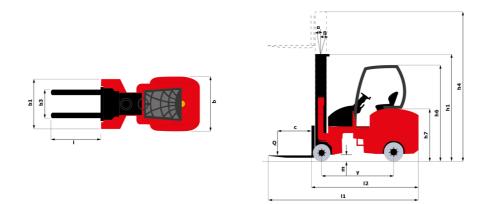


Technical characteristics	
1.1 Manufacturer	
1.2 Model Name	
1.3 Power source	
1.4 Operator type	
1.5 Max. capacity	
1.6 Load center of gravity	
1.8 Load distance, centre of drive axle to fork	
1.9 Wheelbase	
Weight	
2.1 Service weight	
2.2 Weight on front axle (laden) / rear axle (laden)	
2.3 Weight on front axle (Unladen) / rear axle (Unladen)	
Wheels	
3.1 Tires type	
3.2 Dimensions of front wheels	
3.3 Dimensions of rear wheels	
3.5 Number of front wheels / rear wheels	
.5.2 Number of drive wheels	
3.6 Front wheel gauge	
3.7 Rear wheel gauge	
Dimensions	
4.7 Height of overhead guard (cabin)	
4.8 Seat height/stand height	
I.19 Overall length	
1.20 Length to face of forks	
0.21 Overall width	
I.22 Forks section / width / length	s
I.23 Fork carriage ISO 2328 (class/form) A/B	
.24 Fork carriage width	
.31 Ground clearance below mast	
.32 Ground clearance at centre of wheelbase	
Aisle Width for pallets 1000 x 1200 crossways	
Aisle 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)	
5.7 Gradeability (raden / unraden) 5.10 Service brake	
Engine	
6.1 Drive motor rating S2 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%)	
Miscellaneous	
8.1 Type of drive control	
8.2 Working hydraulic pressure for attachments	
8.3 Oil flow rate for attachments	
8.4 Measured/guaranteed mean noise level at the ear of the operator	
8.4 Sound level at the driver's ear according to DIN 12 053	

## EMA II 20 Created on April 9, 2025 at 10:31 PM UTC

1 1200 mm 2 2260 mm 2 1200 mm 3 710 mm 2 550 mm 1 200 mm 1 200 mm 1 200 mm 2 8 8 860 mm 1 2 1 30 mm 2 130 mm 1 900 mm		
EMA II 20       Electrical       Seated       2000 kg       500 mm       278 mm       1745 mm       6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       200 kg / 4500 kg       1200 mm       2100 mm       2     130 kg       9 km/h-9.50 km/h     0.35 m/s       0.40 m/s-0.36 m/s		Metric
Electrical         Seated         2000 kg         500 mm         278 mm         1745 mm         6600 kg         4800 kg / 4400 kg         2200 kg / 4400 kg         2200 kg / 4400 kg         2200 kg / 4400 kg         200 kg / 4400 kg         2200 kg / 4400 kg         200 kg / 4400 kg         2/2         2         1125 mm         1200 mm         2         2         2         3710 mm         2         38         860 mm         1         2         3130 mm         314         30 min         314         9 km/h-9.50 km/h		Manitou
Seated       2000 kg       500 mm       278 mm       1745 mm       6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       200 kg       200 kg       4800 kg / 4400 kg       200 kg       412 x 178       457 x 152       2 / 2       2       2       1       1200 mm       1       200 mm       1200 mm       2       2       2       2       2       2       3710 mm       2       3710 mm       2       3710 mm       2       38       360 mm       1200 mm       310 mm       2       3130 mm       32       360 mm       3130 mm       314       32 mm       34       350 mm       360 mm       310 mm		EMA II 20
2000 kg       500 mm       278 mm       1745 mm       1745 mm       6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       200 kg / 2260 mm       200 kg / 2260 mm       200 kg       200 kg       200 kg / 250 km/h       200 kg / 250 km/h       310 kg       310 kg       310 kg       310 kg       310 kg       310 kg       310 kg / 10.50 %       48 k / 10.50 %       48 k / 10.50 %       48 k / 750 kh       3135 kg <th></th> <th>Electrical</th>		Electrical
500 mm 278 mm 1745 mm 1745 mm 6600 kg 4800 kg / 4400 kg 2200 kg / 4400 kg 2200 kg / 4400 kg 2200 kg / 4400 kg 300 kg / 4400 kg 200 kg / 4400 kg / 4400 kg / 4400 kg 200 kg / 4400 kg / 4400 kg / 4400 kg 200 kg / 4400 kg 200 kg / 4400 kg / 44000 kg / 4400 kg / 440		Seated
278 mm       1745 mm       6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       200 m       2       2       2       2       2       2       2       2       2       2       2       2       2       3       3       4       1       1       1       1       2       2       3       3       4       1       2       3       3       3       4       4       1       2       3       3       3       4       4       10 km		2000 kg
1745 mm       6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       1       Solid tires       412 x 178       457 x 152       2 / 2       0       1125 mm       1200 mm       2       0       1125 mm       1200 mm       2       1200 mm       2       1200 mm       2       3710 mm       2       3710 mm       2       3710 mm       2       38       860 mm       1       2       30 mm       2       130 mm       2       130 mm       2       130 mm       2       130 mm       3       4       9 km/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       4 % V / 750 Ah		500 mm
6600 kg       4800 kg / 4400 kg       2200 kg / 4400 kg       2200 kg / 4400 kg       1       Solid tires       412 x 178       457 x 152       2 / 2       0       1125 mm       1200 mm       2       0       1125 mm       1200 mm       2       1200 mm       2       1200 mm       2       3710 mm       2       3710 mm       2       3710 mm       2       38       860 mm       1       2       30 mm       2       30 mm       2       310 mm       2       32       33       480 mk/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       4 K V / 750 Ah       1135 kg       Mosfet AC speed controller       200 bar       25 l/min       73 dB		278 mm
4800 kg / 4400 kg       2200 kg / 4400 kg       200 kg / 4400 kg       Solid tires       412 x 178       457 x 152       2 / 2       2       1       1200 mm       2       1       2260 mm       7       1200 mm       3710 mm       2       3710 mm       2       3710 mm       2       3710 mm       2       38       800 mm       1200 mm       2       130 mm       38       9 km/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       4 K V / 750 Ah       1135 kg       0.00 bar       250 l/min       370 dB	'	1745 mm
4800 kg / 4400 kg       2200 kg / 4400 kg       200 kg / 4400 kg       Solid tires       412 x 178       457 x 152       2 / 2       2       1       1200 mm       2       1       2260 mm       7       1200 mm       3710 mm       2       3710 mm       2       3710 mm       2       3710 mm       2       38       800 mm       1200 mm       2       130 mm       38       9 km/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       4 K V / 750 Ah       1135 kg       0.00 bar       250 l/min       370 dB		
2200 kg / 4400 kg       Solid tires       412 x 178       457 x 152       2 / 2       2       0       1125 mm       1       1200 mm       2       2       3710 mm       2       2       3710 mm       2       38       860 mm       1       2       130 mm       2       130 mm       2       130 mm       2       130 mm       31       50 mm       2       130 mm       32       9 km/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       Hydraulic       0       10 kW       9 kW <th></th> <th>6600 kg</th>		6600 kg
Solid tires         412 x 178         457 x 152         2 / 2         2         1         1200 mm         2         2         2         2         2         2         2         2         2         3         2         3         40 mm x 125 mm x 1150 mm         2         3         40 mm x 125 mm x 1150 mm         2         3         8         8         8         9 km/h 9.50 km/h         0.35 m/s 0.45 m/s         0.40 m/s 0.36 m/s         8         9 km/h 9.50 km/h         0.35 m/s 0.45 m/s         0.40 m/s 0.36 m/s         8 % / 10.50 %         Hydraulic         0         10 kW         9 kW         10 kW         9 kW         10 kW         135 kg         Mosfet AC speed controller         200 bar         25 l/min		
412 x 178 415 x 152 2 / 2 2 / 2 2 / 2 2 / 2 3 / 1 1 1200 mm 2 2260 mm 1 200 mm 2 260 mm 1 200 mm 2 2560 mm 1 200 mm 2 2560 mm 1 200 mm 2 3 710 mm 2 3 800 mm 1 200 mm 2 3 800 mm 1 200 mm 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 3 50 mm 2 3 800 mm 1 40 mm x 125 mm x 1150 mm 2 4 8 800 mm 1 2 50 mm 2 4 8 800 mm 1 2 50 mm 2 100 mm 3 710 mm 3 710 mm 2 100 mm 3 710 mm 4 8 V / 750 km/h 0.35 m/s 0.45 m/s 0.40 m/s 0.36 m/s 8 % / 10.50 % 1 135 kg 1 135 kg		2200 kg / 4400 kg
412 x 178 415 x 152 2 / 2 2 / 2 2 / 2 2 / 2 3 / 1 1 1200 mm 2 2260 mm 1 200 mm 2 260 mm 1 200 mm 2 2560 mm 1 200 mm 2 2560 mm 1 200 mm 2 3 710 mm 2 3 800 mm 1 200 mm 2 3 800 mm 1 200 mm 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 2 3 800 mm 1 3 50 mm 2 3 800 mm 1 40 mm x 125 mm x 1150 mm 2 4 8 800 mm 1 2 50 mm 2 4 8 800 mm 1 2 50 mm 2 100 mm 3 710 mm 3 710 mm 2 100 mm 3 710 mm 4 8 V / 750 km/h 0.35 m/s 0.45 m/s 0.40 m/s 0.36 m/s 8 % / 10.50 % 1 135 kg 1 135 kg		
457 x 152       2 / 2       2       0       1125 mm       1       1200 mm       2       2       2       3710 mm       2       38       860 mm       1       2       38       860 mm       1       2       30 mm       2       310 mm       32       330 mm       34       9 km/h-9.50 km/h       0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s       8 % / 10.50 %       Hydraulic       0       10 kW       9 kW       10 kW       9 kW       10 kW       9 kW       1135 kg		
2 / 2 2 2 0 1125 mm 1 200 mm 2 2 2 2 2 2 2 2 2 2 2 2 2		
2 0 1125 mm 1 200 mm 2 260 mm 7 1200 mm 3710 mm 2 2560 mm 1 200 mm 2 2560 mm 1 200 mm 2 3710 mm 2 3710 mm 2 38 8 60 mm 1 2 30 mm 2 130 mm 2 130 mm 3 10 50 mm 2 130 mm 3 10 50 mm 2 130 mm 3 10 50 mm 2 100 mm 3 10 50 mm 2 100 mm 3 10 50 mm 2 100 mm 3 10 50 mm 3 10 50 mm 2 100 mm 3 10 50 mm 3 10 50 mm 3 10 50 mm 4 0 0.35 m/s-0.45 m/s 0.40 m/s-0.36 m/s 8 % / 10.50 % Hydraulic 1 0 kW 9 kW 1 0 KW 9 kW 1 135 kg 1 135		
0 1125 mm 1 200 mm 2 2260 mm 7 1200 mm 3 710 mm 2 2560 mm 1 200 mm 2 2560 mm 1 200 mm 2 2560 mm 1 200 mm 2 2 3 860 mm 1 2 3 860 mm 1 2 3 860 mm 1 30 mm 2 3 130 mm 2 3 130 mm 3 4 3 9 km/h 9.50 km/h 0.35 m/s 0.45 m/s 3 4 3 % / 10.50 % 1 0 kW 9 k		
1     1200 mm       5     2260 mm       7     1200 mm       2     3710 mm       2     2560 mm       1     1200 mm       2     2560 mm       2     2560 mm       2     200 mm       2     380 mm       1     50 mm       2     130 mm       2     130 mm       3     9 km/h-9.50 km/h       3     0.35 m/s-0.45 m/s       3     0.40 m/s-0.36 m/s       4     9 km/h       9 km/h-9.50 km/h     0.35 m/s       3     0.40 m/s-0.36 m/s       4     10 kW       9 kW     9 kW       10 kW     9 kW       9 kW     101 kW       9 kW     101 kW       9 kW     9 kW       10 kM     9 kW       10 kM <th></th> <th></th>		
5       2260 mm         7       1200 mm         2       3710 mm         2       2560 mm         1       1200 mm         2       2560 mm         2       2560 mm         2       200 mm         2       360 mm         1       50 mm         2       130 mm         2       130 mm         3       2100 mm         3       9 km/h-9.50 km/h         0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s         3       8 % / 10.50 %         4       40 mx -9.50 km/h         0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s         3       9 km/h-9.50 km/h         0.35 m/s-0.45 m/s       0.40 m/s-0.36 m/s         4       9 kW         9 kW       9 kW         9 kW       9 kW         9 kW       9 kW         9 kW       9 kW         9 kMosfet AC speed controller         200 bar       25 l/min         3       73 dB	0	
7     1200 mm       3710 mm     3710 mm       2     2560 mm       1     1200 mm       2     1200 mm       2     38       8     860 mm       1     50 mm       2     130 mm       2     130 mm       3     9 km/h-9.50 km/h       3     0.40 m/s-0.36 m/s       4     9 km/h-9.50 km/h       0.35 m/s-0.45 m/s     0.40 m/s-0.36 m/s       4     0.35 m/s-0.45 m/s       5     0.40 m/s-0.36 m/s       4     9 kW       9 kW     9 kW       10 kW     9 kW       9 kW     9 kW       9 kW     9 kW       9 kW     9 kW       9 km     9 kW       9 km     9 km	1	1200 mm
7     1200 mm       3710 mm     3710 mm       2     2560 mm       1     1200 mm       2     1200 mm       2     38       8     860 mm       1     50 mm       2     130 mm       2     130 mm       3     9 km/h-9.50 km/h       3     0.40 m/s-0.36 m/s       4     9 km/h-9.50 km/h       0.35 m/s-0.45 m/s     0.40 m/s-0.36 m/s       4     0.35 m/s-0.45 m/s       5     0.40 m/s-0.36 m/s       4     9 kW       9 kW     9 kW       10 kW     9 kW       9 kW     9 kW       9 kW     9 kW       9 kW     9 kW       9 km     9 kW       9 km     9 km		
3710 mm       2       1200 mm       2       3       60 mm       2       3       3       3       3       40 mm x 125 mm x 1150 mm       2       3      <	6	
2560 mm     1   1200 mm     1   40 mm x 125 mm x 1150 mm     2   2     3   860 mm     1   50 mm     2   130 mm     2   130 mm     2   130 mm     2   130 mm     3   9 km/h-9.50 km/h     0.35 m/s-0.45 m/s   0.40 m/s-0.36 m/s     3   8 % / 10.50 %     4   9 kW     10 kW   9 kW     10 kW   9 kW     10 kW   9 kW     200 bar   200 bar     200 bar   73 dB	7	
1     1200 mm       1     40 mm x 125 mm x 1150 mm       2     2       3     860 mm       1     50 mm       2     130 mm       2     130 mm       2     130 mm       3     9 km/h-9.50 km/h       0.35 m/s-0.45 m/s     0.40 m/s-0.36 m/s       3     8 % / 10.50 %       4     9 kW       9 kW     9 kW       9 kW     9 kW       10 kW     9 kW       10 kW     9 kW       10 kW     9 kW       2     1135 kg       3     48 V / 750 Ah       4     1135 kg       3     25 l/min       4     73 dB	1	
40 mm x 125 mm x 1150 mm     2     3     60 mm     1     50 mm     2     130 mm     30 mm     310 mm     32 mm     33 mm     30 mm     31 mm     32 mm     32 mm     33 mm     34 mm     35 mm     36 mm     30 mm     31 mm     30 mm     31 mm     32 mm     30 mm     30 mm     30 mm <	2	
2 3 860 mm 1 50 mm 2 130 mm 2 130 mm 2 130 mm 3 0 mm 4 00 mm 4 00 mm 4 00 mm 4 00 mm 4 00 mm 4 00 mm 5 0 km/h 0.35 m/s-0.45 m/s 0.40 m/s-0.36 m/s 8 % / 10.50 % 4 0 V rs0 A 10 kW 9 kW 10 kW 9 kW 10 kW 10 kW 10 kW 1135 kg 1135 kg	1	
8     860 mm       11     50 mm       12     130 mm       130 mm     1900 mm       14     900 mm       15     2100 mm       16     9 km/h-9.50 km/h       17     0.35 m/s-0.45 m/s       18     0.40 m/s-0.36 m/s       19     8% / 10.50 %       10 kW     9 kW       1135 kg     1135 kg       12     10 km       135 kg     1135 kg       1135 kg     1135 kg       1135 kg     1135 kg	e / I	
1     50 mm       2     130 mm       2     130 mm       30 mm     1900 mm       2100 mm     2100 mm       9 km/h-9.50 km/h     0.35 m/s 0.45 m/s       0.35 m/s-0.45 m/s     0.40 m/s-0.36 m/s       8 % / 10.50 %     48 % / 10.50 %       Hydraulic     10 kW       9 kW     DIN 43595       48 V / 750 Ah     1135 kg       Mosfet AC speed controller     200 bar       25 l/min     73 dB		
2 130 mm 5t 1900 mm 5t 2100 mm 9 km/h-9.50 km/h 0.35 m/s-0.45 m/s 0.40 m/s-0.36 m/s 8 % / 10.50 % Hydraulic 0 0 0 0 0 0 0 0 0 0 0 0 0	3	
1900 mm     1900 mm     2100 mm     9 km/h-9.50 km/h     0.35 m/s-0.45 m/s     0.35 m/s-0.45 m/s     0.40 m/s-0.36 m/s     8 % / 10.50 %     Hydraulic     10 kW     9 kW     10 kW     1135 kg     10 kW     10 kW     10 kW     10 kW     1135 kg     10 kW     10 kW <t< th=""><th></th><th></th></t<>		
2100 mm         9 km/h-9.50 km/h         0.35 m/s-0.45 m/s         0.35 m/s-0.45 m/s         0.40 m/s-0.36 m/s         8 % / 10.50 %         48 % / 10.50 %         10 kW         9 kW         DIN 43595         48 % / 750 Ah         1135 kg         000 bar         200 bar         25 l/min         47 3 dB		
9 km/h-9.50 km/h 0.35 m/s-0.45 m/s 0.40 m/s-0.36 m/s 8 % / 10.50 % Hydraulic 10 kW 9 kW 0 NN 43595 48 V / 750 Ah 1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB	st	
0.35 m/s·0.45 m/s 0.40 m/s·0.36 m/s 8 % / 10.50 % Hydraulic 10 kW 9 kW DIN 43595 48 V / 750 Ah 1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB	st	2100 mm
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9 kW DIN 43595 48 V / 750 Ah 1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB		10 kW
48 V / 750 Ah 1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB		
48 V / 750 Ah 1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB		
1135 kg Mosfet AC speed controller 200 bar 25 l/min < 73 dB		
Mosfet AC speed controller 200 bar 25 I/min < 73 dB		
200 bar 25 l/min < 73 dB		
200 bar 25 l/min < 73 dB		Mosfet AC speed controller
25 l/min < 73 dB		
< 73 dB		

## EMA II 20 - Dimensional drawing



## Characteristics of masts and residual capacities

Free Lift Triplex (FLT)		FLT 42	FLT 45	FLT 50	FLT 56	FLT 60	FLT 66	FLT 72	FLT 76	FLT 80	FLT 86	FLT 90	FLT 95	FLT 102
α - Mast/fork carriage tilt, forward	۰	1	1	1	1	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	3	3	3	3
h1 - Mast lowered height	mm	2300	2410	2570	2750	2900	3150	3400	3590	3720	4020	4150	4500	4690
h2 - Mast free lift	mm	1480	1590	1750	1930	2080	2330	2580	2770	2900	3200	3330	3650	3870
h3 - Mast lifting height	mm	4200	4530	5010	5550	6000	6600	7200	7620	8010	8610	9000	9500	10200
h4 - Mast extended height	mm	5030	5360	5840	6380	6830	7430	8030	8450	8840	9440	9830	10475	11175
Residual capacity with integrated side shift at max heigth	kg	1800	1700	1600	1500	1400	1300	1200	1150	1080	1000	1000	900	750



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