Technical sheet:

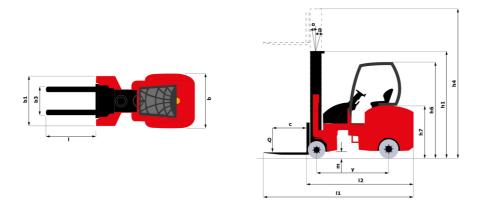
## EMA II 20





|       |   | <b>EMA II 20</b> UI | <b>EMA II 20</b> Created on May 3, 2024 at 1.53.59 PM UTC |  |  |  |  |  |
|-------|---|---------------------|---|--|--|--|--|--|
|       | Technical characteristics                                       |                     | Metric  |  |  |  |  |  |
| 1.1   | Manufacturer  |                     | Manitou   |  |  |  |  |  |
| 1.2   | Model Name  |                     | EMA II 20   |  |  |  |  |  |
| 1.3   | Power source  |                     | Electrical  |  |  |  |  |  |
| 1.4   | Operator type   |                     | Seated  |  |  |  |  |  |
| 1.5   | Max. capacity   | Q                   | 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   | у                   | 1745 mm   |  |  |  |  |  |
|       | Weight  |                     |   |  |  |  |  |  |
| 2.1   | Service weight  |                     | 6600 kg   |  |  |  |  |  |
| 2.2   | Weight on front axle (laden) / rear axle (laden)                |                     | 4800 kg / 4400 kg   |  |  |  |  |  |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)            |                     | 2200 kg / 4400 kg   |  |  |  |  |  |
| 2.0   | Wheels  |                     | 2200 kg / 1100 kg   |  |  |  |  |  |
| 3.1   | Tires type  |                     | Solid tires   |  |  |  |  |  |
| 3.1   | Dimensions of front wheels                                      |                     | 412 x 178   |  |  |  |  |  |
| 3.3   | Dimensions of rear wheels                                       |                     | 457 x 152   |  |  |  |  |  |
| 3.5   | Number of front wheels / rear wheels                            |                     | 2 / 2   |  |  |  |  |  |
| 3.5.2 | Number of drive wheels  |                     | 2   |  |  |  |  |  |
| 3.6   |   | b10                 | 1125 mm   |  |  |  |  |  |
| 3.7   | Front wheel gauge   | b10                 | 1125 mm   |  |  |  |  |  |
| 3./   | Rear wheel gauge  | DII                 | 1200 mm   |  |  |  |  |  |
| 4.7   | Dimensions  | 16                  | 2000  |  |  |  |  |  |
| 4.7   | Height of overhead guard (cabin)                                | h6                  | 2260 mm   |  |  |  |  |  |
| 4.8   | Seat height/stand height  | h7                  | 1200 mm   |  |  |  |  |  |
| 4.19  | Overall length  | l1                  | 3710 mm   |  |  |  |  |  |
| 4.20  | Length to face of forks   | 12                  | 2560 mm   |  |  |  |  |  |
| 4.21  | Overall width   | b1                  | 1200 mm   |  |  |  |  |  |
| 4.22  | Forks section / width / length                                  | s / e / l           | 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                 | 1900 mm   |  |  |  |  |  |
| 4.34  | Aisle width for 800 x 1200 pallet lengthways                    | Ast                 | 2100 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 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 / 750 Ah   |  |  |  |  |  |
| 6.5   | Battery weight (+/- 5%)   |                     | 1135 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 I/min  |  |  |  |  |  |
| 8.4   | Measured/guaranteed 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 - Dimensional drawing



## Characteristics of masts and residual capacities

| Free Lift Triplex<br>(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 |
|---|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Mast/fork<br>carriage tilt,<br>forward                              | ۰  | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1       |
| Mast/fork<br>carriage tilt,<br>backward                             | ٠  | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3      | 3       |
| h1 - Mast lowered<br>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<br>height   | mm | 4200   | 4530   | 5010   | 5550   | 6000   | 6600   | 7200   | 7620   | 8010   | 8610   | 9000   | 9500   | 10200   |
| h4 - Mast<br>extended height  | mm | 5030   | 5360   | 5840   | 6380   | 6830   | 7430   | 8030   | 8450   | 8840   | 9440   | 9830   | 10475  | 11175   |
| Residual capacity<br>with integrated<br>side shift at max<br>heigth | kg | 1800   | 1700   | 1600   | 1500   | 1400   | 1300   | 1200   | 1150   | 1080   | 1000   | 1000   | 900    | 750     |





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