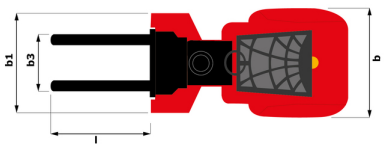
Technical sheet :

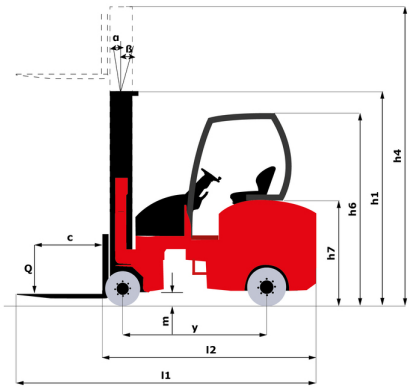
# EMA II 20 HD-1

MANITOU
HANDLING YOUR WORLD

| | Technical characteristics | | Metric |
|---|---|---|---|
| 1.1 | Manufacturer | | Manitou |
| 1.2 | Model Name | | EMA II 20 HD-1 |
| 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 | y | 1745 mm |
| | **Weight** | | |
| 2.1 | Service weight | | 6900 kg |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 4200 kg / 4500 kg |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) | | 2200 kg / 4700 kg |
| | **Wheels** | | |
| 3.1 | Tires type | | Solid tires |
| 3.2 | Dimensions of front wheels | | 412 x 178 |
| 3.3 | Dimensions of rear wheels | | 457 x 178 |
| 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 |
| 3.7 | Rear wheel gauge | b11 | 1250 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 | l1 | 3710 mm |
| 4.20 | Length to face of forks | l2 | 2560 mm |
| 4.21 | Overall width | b1 | 1250 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 | 1950 mm |
| 4.34 | Aisle width for 800 x 1200 pallet lengthways | Ast | 2150 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 / 775 Ah |
| 6.5 | Battery weight (+/- 5%) | | 1435 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/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 HD-1 - Dimensional drawing



# Characteristics of masts and residual capacities

| Free Lift Triplex (FLT) | | FLT 56 | FLT 60 | FLT 66 | FLT 70 | FLT 76 | FLT 80 | FLT 86 | FLT 90 | FLT 95 | FLT 102 | FLT 106 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| α - Mast/fork carriage tilt, forward | ° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| β - Mast/fork carriage tilt, backward | ° | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| h1 - Mast lowered height | mm | 2750 | 2900 | 3150 | 3290 | 3590 | 3720 | 4020 | 4150 | 4500 | 4690 | 4820 |
| h2 - Mast free lift | mm | 1930 | 2080 | 2330 | 2470 | 2770 | 2900 | 3200 | 3330 | 3650 | 3870 | 4000 |
| h3 - Mast lifting height | mm | 5550 | 6000 | 6600 | 7020 | 7620 | 8010 | 8610 | 9000 | 9500 | 10200 | 10560 |
| h4 - Mast extended height | mm | 6380 | 6830 | 7430 | 7850 | 8450 | 8840 | 9440 | 9830 | 10475 | 11175 | 11535 |
| Residual capacity with integrated side shift at max heigth | kg | 1600 | 1450 | 1450 | 1300 | 1300 | 1200 | 1100 | 1000 | 900 | 750 | 650 |

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