

Technical sheet :

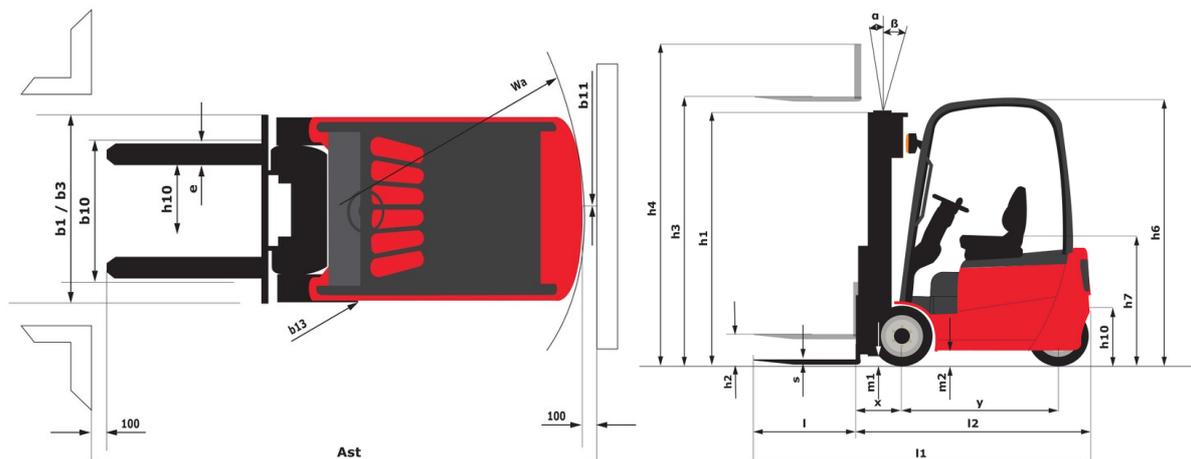
# ME 450



 **MANITOU**  
HANDLING YOUR WORLD

| Technical characteristics |   | Metric    |                          |
|---------------------------|---|-----------|--------------------------|
| 1.1                       | Manufacturer  |           | Manitou                  |
| 1.2                       | Model Name  |           | ME 450                   |
| 1.3                       | Power source  |           | Electrical - Lead        |
| 1.4                       | Operator type   |           | Seated                   |
| 1.5                       | Max. capacity   | Q         | 5000 kg                  |
| 1.6                       | Load center of gravity  | c         | 500 mm                   |
| 1.8                       | Load distance, centre of drive axle to fork                     | x         | 500 mm                   |
| 1.9                       | Wheelbase   | y         | 2000 mm                  |
| Weight                    |   |           |                          |
| 2.1                       | Service weight  |           | 7100 kg                  |
| 2.2                       | Weight on front axle (laden) / rear axle (laden)                |           | 10635 kg / 1465 kg       |
| 2.3                       | Weight on front axle (Unladen) / rear axle (Unladen)            |           | 3625 kg / 3475 kg        |
| Wheels                    |   |           |                          |
| 3.1                       | Tires type  |           | Solid tires              |
| 3.2                       | Dimensions of front wheels                                      |           | 250/15                   |
| 3.3                       | Dimensions of rear wheels                                       |           | 7.00-12                  |
| 3.5                       | Number of front wheels / rear wheels                            |           | 2 / 2                    |
| 3.5.2                     | Number of drive wheels  |           | 2                        |
| 3.6                       | Front wheel gauge   | b10       | 1130 mm                  |
| 3.7                       | Rear wheel gauge  | b11       | 1100 mm                  |
| Dimensions                |   |           |                          |
| 4.8                       | Seat height/stand height  | h7        | 1235 mm                  |
| 4.7                       | Height of overhead guard (cabin)                                | h6        | 2300 mm                  |
| 4.12                      | Height of towing bar (coupling height)                          | h10       | 460 mm                   |
| 4.19                      | Overall length  | l1        | 4165 mm                  |
| 4.20                      | Length to face of forks   | l2        | 3015 mm                  |
| 4.21                      | Overall width   | b1        | 1380 mm                  |
| 4.22                      | Forks section / width / length                                  | s / e / l | 150 mm x 1150 mm x 50 mm |
| 4.23                      | Fork carriage ISO 2328 (class/form) A/B                         |           | 3A                       |
| 4.24                      | Fork carriage width   | b3        | 1100 mm                  |
| 4.31                      | Ground clearance below mast                                     | m1        | 110 mm                   |
| 4.32                      | Ground clearance at centre of wheelbase                         | m2        | 219 mm                   |
| 4.33                      | Aisle Width for pallets 1000 x 1200 crossways                   | Ast       | 4475 mm                  |
| 4.34                      | Aisle width for 800 x 1200 pallet lengthways                    | Ast       | 4675 mm                  |
| 4.35                      | Turning radius  | Wa        | 2720 mm                  |
| 4.36                      | Internal turning radius (over tyres)                            | b13       | 805 mm                   |
| Performances              |   |           |                          |
| 5.1                       | Travel speed (laden / unladen)                                  |           | 13 km/h-13.50 km/h       |
| 5.2                       | Lifting speed (laden / unladen)                                 |           | 0.26 m/s-0.40 m/s        |
| 5.3                       | Lowering speed (laden / unladen)                                |           | 0.50 m/s-0.30 m/s        |
| 5.5                       | Drawbar pull (Laden)  |           | 2700 daN                 |
| 5.7                       | Gradeability (laden / unladen)                                  |           | 15 % / 16 %              |
| 5.10                      | Service brake   |           | Hydraulic                |
| Engine                    |   |           |                          |
| 6.1                       | Drive motor rating S2 60 min                                    |           | 16.60 kW                 |
| 6.2                       | Lift motor rating at S3 15%                                     |           | 25.40 kW                 |
| 6.3                       | Battery according to DIN 43531/35/36 A, B, C                    |           | DIN43536 A               |
| 6.4                       | Battery voltage / capacity                                      |           | 80 V / 700 Ah            |
| 6.6                       | Energy consumption according to VDI cycle (kWh/h)               |           | 15.30 kWh/h              |
| Miscellaneous             |   |           |                          |
| 8.1                       | Type of drive control   |           | Electronic               |
| 8.2                       | Working hydraulic pressure for attachments                      |           | 210 bar                  |
| 8.3                       | Oil flow rate for attachments                                   |           | 65 l/min                 |
| 8.4                       | Measured/guaranteed mean noise level at the ear of the operator |           | < 78 dB                  |

## ME 450 - Dimensional drawing



## Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD)                               |    | FVD 30 | FVD 33 | FVD 35 | FVD 40 | FVD 43 | FVD 45 | FVD 48 | FVD 50 |
|--|----|--------|--------|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      |
| β - Mast/fork carriage tilt, backward                      | °  | 12     | 12     | 12     | 12     | 6      | 6      | 6      | 6      |
| h1 - Mast lowered height                                   | mm | 2185   | 2335   | 2435   | 2735   | 2900   | 3010   | 3175   | 3285   |
| h2 - Mast free lift  | mm | 150    | 150    | 150    | 150    | 150    | 150    | 150    | 150    |
| h3 - Mast lifting height                                   | mm | 3000   | 3300   | 3500   | 4000   | 4300   | 4500   | 4800   | 5000   |
| h4 - Mast extended height                                  | mm | 3770   | 4070   | 4270   | 4770   | 5070   | 5270   | 5570   | 5770   |
| Residual capacity at max height                            | kg | 5000   | 5000   | 5000   | 5000   | 4950   | 4900   | 4800   | 4700   |
| Residual capacity with integrated side shift at max height | kg | 5000   | 5000   | 5000   | 5000   | 4900   | 4850   | 4750   | 4650   |
| Residual capacity with hooked-on side shift at max height  | kg | 4800   | 4800   | 4800   | 4800   | 4700   | 4600   | 4500   | 4400   |
| Height at max capacity                                     | mm | 3000   | 3300   | 3500   | 4000   | 4000   | 4000   | 4000   | 4000   |
| Height at max capacity with integrated sideshift           | mm | 3000   | 3300   | 3500   | 4000   | 4000   | 4000   | 4000   | 4000   |

| Free Lift Duplex (FLD)                                     |    | FLD 30 | FLD 33 | FLD 40 |
|--|----|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 6      | 6      | 6      |
| β - Mast/fork carriage tilt, backward                      | °  | 12     | 12     | 12     |
| h1 - Mast lowered height                                   | mm | 2166   | 2316   | 2666   |
| h2 - Mast free lift  | mm | 1365   | 1515   | 1865   |
| h3 - Mast lifting height                                   | mm | 3000   | 3300   | 4000   |
| h4 - Mast extended height                                  | mm | 3805   | 4105   | 4805   |
| Residual capacity at max height                            | kg | 5000   | 5000   | 5000   |
| Residual capacity with integrated side shift at max height | kg | 5000   | 5000   | 5000   |
| Residual capacity with hooked-on side shift at max height  | kg | 4800   | 4800   | 4800   |
| Height at max capacity                                     | mm | 3000   | 3300   | 4000   |
| Height at max capacity with integrated sideshift           | mm | 3000   | 3300   | 4000   |

| Free Lift Triplex (FLT)                                    |    | FLT 43 | FLT 48 | FLT 50 | FLT 55 | FLT 60 |
|--|----|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 6      | 6      | 6      | 3      | 3      |
| β - Mast/fork carriage tilt, backward                      | °  | 6      | 6      | 6      | 6      | 6      |
| h1 - Mast lowered height                                   | mm | 2120   | 2280   | 2350   | 2515   | 2730   |
| h2 - Mast free lift  | mm | 1318   | 1478   | 1548   | 1710   | 1928   |
| h3 - Mast lifting height                                   | mm | 4300   | 4800   | 5000   | 5500   | 6000   |
| h4 - Mast extended height                                  | mm | 5105   | 5605   | 5805   | 6305   | 6805   |
| Residual capacity at max height                            | kg | 4800   | 4650   | 4450   | 4250   | 4100   |
| Residual capacity with integrated side shift at max height | kg | 4700   | 4600   | 4400   | 4200   | 4050   |
| Residual capacity with hooked-on side shift at max height  | kg | 4500   | 4350   | 4150   | 3950   | 3800   |
| Height at max capacity                                     | mm | 2500   | 2500   | 2500   | 2500   | 2500   |



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