

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               |
| 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                  |
|       | <b>Weight</b>                                                   |           |                          |
| 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        |
|       | <b>Wheels</b>                                                   |           |                          |
| 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                  |
|       | <b>Dimensions</b>                                               |           |                          |
| 4.7   | Height of overhead guard (cabin)                                | h6        | 2300 mm                  |
| 4.8   | Seat height/stand height                                        | h7        | 1235 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                   |
|       | <b>Performances</b>                                             |           |                          |
| 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                |
|       | <b>Engine</b>                                                   |           |                          |
| 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                                              |           | 15.30 kWh                |
|       | <b>Miscellaneous</b>                                            |           |                          |
| 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 |
|-----------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                          | °  | 6      | 6      | 6      | 6      | 6      | 6      | 6      | 6      |
| 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 heigh | kg | 5000   | 5000   | 5000   | 5000   | 4900   | 4850   | 4750   | 4650   |
| Residual capacity with hooked-on side shift at max heigh  | 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 |
|-----------------------------------------------------------|----|--------|--------|--------|
| Mast/fork carriage tilt, forward                          | °  | 6      | 6      | 6      |
| 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 heigh | kg | 5000   | 5000   | 5000   |
| Residual capacity with hooked-on side shift at max heigh  | 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 |
|-----------------------------------------------------------|----|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                          | °  | 6      | 6      | 6      | 3      | 3      |
| 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 heigh | kg | 4700   | 4600   | 4400   | 4200   | 4050   |
| Residual capacity with hooked-on side shift at max heigh  | kg | 4500   | 4350   | 4150   | 3950   | 3800   |
| Height at max capacity                                    | mm | 2500   | 2500   | 2500   | 2500   | 2500   |



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