

Technical sheet :

# MI 45 D

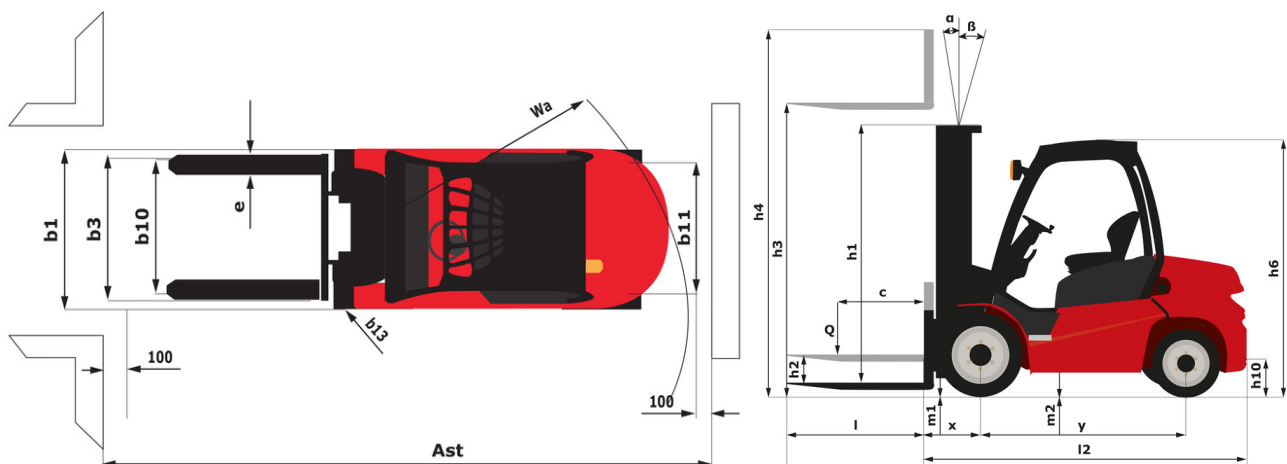
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 **MANITOU**  
HANDLING YOUR WORLD

|       | Technical characteristics                                       |           | Metric                   | Imperial            |
|-------|-----------------------------------------------------------------|-----------|--------------------------|---------------------|
| 1.1   | Manufacturer                                                    |           | Manitou                  | Manitou             |
| 1.2   | Model Name                                                      |           | MI 45 D                  | MI 45 D             |
| 1.3   | Power source                                                    |           | Diesel                   | Diesel              |
| 1.4   | Operator type                                                   |           | Seated                   | Seated              |
| 1.5   | Max. capacity                                                   | Q         | 4500 kg                  | 9921 lb             |
| 1.6   | Load center of gravity                                          | c         | 500 mm                   | 20 in               |
| 1.8   | Load distance, centre of drive axle to fork                     | x         | 550 mm                   | 22 in               |
| 1.9   | Wheelbase                                                       | y         | 2000 mm                  | 79 in               |
|       | Standard mast reference of the machine                          |           | FVD 30                   | FVD 30              |
|       | <b>Weight</b>                                                   |           |                          |                     |
| 2.1   | Service weight                                                  |           | 6500 kg                  | 14330 lb            |
| 2.2   | Weight on front axle (laden) / rear axle (laden)                |           | 9625 kg / 1375 kg        | 21219 lb / 3031 lb  |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)            |           | 2820 kg / 3680 kg        | 6217 lb / 8113 lb   |
|       | <b>Wheels</b>                                                   |           |                          |                     |
| 3.1   | Tires type                                                      |           | Pneumatic                | Pneumatic           |
| 3.2   | Dimensions of front wheels                                      |           | 300-15-18PR              | 300-15-18PR         |
| 3.3   | Dimensions of rear wheels                                       |           | 7.00-12-12PR             | 7.00-12-12PR        |
| 3.5   | Number of front wheels / rear wheels                            |           | 2 / 2                    | 2 / 2               |
| 3.5.2 | Number of drive wheels                                          |           | 2                        | 2                   |
| 3.6   | Front wheel gauge                                               | b10       | 1190 mm                  | 47 in               |
| 3.7   | Rear wheel gauge                                                | b11       | 1130 mm                  | 44 in               |
|       | <b>Dimensions</b>                                               |           |                          |                     |
| 4.7   | Height of overhead guard (cabin)                                | h6        | 2390 mm                  | 94 in               |
| 4.8   | Seat height/stand height                                        | h7        | 1370 mm                  | 54 in               |
| 4.12  | Height of towing bar (coupling height)                          | h10       | 445 mm                   | 18 in               |
| 4.19  | Overall length                                                  | l1        | 4330 mm                  | 170 in              |
| 4.20  | Length to face of forks                                         | l2        | 3110 mm                  | 122 in              |
| 4.21  | Overall width                                                   | b1        | 1490 mm                  | 59 in               |
| 4.21  | Overall width - Single wheels                                   | b1        | 1490 mm                  | 59 in               |
| 4.22  | Forks section / width / length                                  | s / e / l | 50 mm x 150 mm x 1220 mm | 2 in x 6 in x 48 in |
| 4.23  | Fork carriage ISO 2328 (class/form) A/B                         |           | 3A                       | 3A                  |
| 4.24  | Fork carriage width                                             | b3        | 1250 mm                  | 49 in               |
| 4.31  | Ground clearance below mast                                     | m1        | 170 mm                   | 7 in                |
| 4.32  | Ground clearance at centre of wheelbase                         | m2        | 230 mm                   | 9 in                |
| 4.33  | Aisle Width for pallets 1000 x 1200 crossways                   | Ast       | 4662 mm                  | 184 in              |
| 4.34  | Aisle width for 800 x 1200 pallet lengthways                    | Ast       | 4795 mm                  | 189 in              |
| 4.35  | Turning radius                                                  | Wa        | 2800 mm                  | 110 in              |
| 4.36  | Internal turning radius (over tyres)                            | b13       | 100 mm                   | 4 in                |
|       | <b>Performances</b>                                             |           |                          |                     |
| 5.1   | Travel speed (laden / unladen)                                  |           | 22 km/h-24 km/h          | 14 mph-15 mph       |
| 5.2   | Lifting speed (laden / unladen)                                 |           | 0.46 m/s-0.48 m/s        | 2 ft/s-2 ft/s       |
| 5.3   | Lowering speed (laden / unladen)                                |           | 0.50 m/s-0.50 m/s        | 2 ft/s-2 ft/s       |
| 5.5   | Drawbar pull (Laden / Unladen)                                  |           | 4000 daN / 2000 daN      | 4000 daN / 2000 daN |
| 5.7   | Gradeability (laden / unladen)                                  |           | 30 % / 36 %              | 30 % / 36 %         |
| 5.10  | Service brake                                                   |           | Hydraulic                | Hydraulic           |
|       | Transmission type                                               |           | Torque converter         | Torque converter    |
|       | <b>Engine</b>                                                   |           |                          |                     |
| 7.1   | Engine brand / model                                            |           | Cummins / QSF2.8T4F      | Cummins / QSF2.8T4F |
| 7.2   | I.C. Engine power rating                                        |           | 55 kW                    | 55 kW               |
| 7.3   | Rated speed                                                     |           | 2600 rpm                 | 2600 rpm            |
| 7.4   | Number of cylinders / Capacity of cylinders                     |           | 4 - 2800 cm³             | 4 - 171 in³         |
|       | <b>Miscellaneous</b>                                            |           |                          |                     |
| 8.2   | Working hydraulic pressure for attachments                      |           | 160 bar                  | 2321 PSI            |
| 8.3   | Oil flow rate for attachments                                   |           | 90 l/min                 | 24 US gpm           |
| 8.4   | Measured/guaranteed mean noise level at the ear of the operator |           | < 84 dB                  | < 84 dB             |
| 8.4   | Sound level at the driver's ear according to DIN 12 053         |           | 84 dB                    | 84 dB               |

## MI 45 D - Dimensional drawing



| Full Visibility Duplex (FVD)                               |         | FVD 30       | FVD 33       | FVD 35       | FVD 37       | FVD 40       | FVD 45       | FVD 50       |
|------------------------------------------------------------|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| α - Mast/fork carriage tilt, forward                       | °       | 6            | 6            | 6            | 6            | 6            | 6            | 6            |
| β - Mast/fork carriage tilt, backward                      | °       | 12           | 12           | 12           | 12           | 12           | 12           | 12           |
| h1 - Mast lowered height                                   | in (mm) | 88.4 (2245)  | 94.3 (2395)  | 98.2 (2495)  | 102.2 (2595) | 110 (2795)   | 120.9 (3070) | 131.7 (3345) |
| h2 - Mast free lift                                        | in (mm) | 6.3 (160)    | 6.3 (160)    | 6.3 (160)    | 6.3 (160)    | 6.3 (160)    | 6.3 (160)    | 6.3 (160)    |
| h3 - Mast lifting height                                   | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) | 157.5 (4000) | 177.2 (4500) | 196.9 (5000) |
| h4 - Mast extended height                                  | in (mm) | 164.2 (4170) | 176 (4470)   | 183.9 (4670) | 191.7 (4870) | 203.5 (5170) | 223.2 (5670) | 242.9 (6170) |
| Residual capacity at max height                            | lb (kg) | 3307 (1500)  | 3307 (1500)  | 3307 (1500)  | 3307 (1500)  | 3307 (1500)  | 9039 (4100)  | 8157 (3700)  |
| Residual capacity with integrated side shift at max height | lb (kg) | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  | 8818 (4000)  | 7937 (3600)  |
| Height at max capacity                                     | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) | 157.5 (4000) | 157.5 (4000) | 157.5 (4000) |
| Height at max capacity with integrated sideshift           | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) | 157.5 (4000) | 157.5 (4000) | 157.5 (4000) |

| Free Lift Duplex (FLD)                                     |         | FLD 30       | FLD 33       | FLD 35       | FLD 37       |
|------------------------------------------------------------|---------|--------------|--------------|--------------|--------------|
| α - Mast/fork carriage tilt, forward                       | °       | 6            | 6            | 6            | 6            |
| β - Mast/fork carriage tilt, backward                      | °       | 12           | 12           | 12           | 12           |
| h1 - Mast lowered height                                   | in (mm) | 87.6 (2226)  | 93.5 (2376)  | 97.5 (2476)  | 101.4 (2576) |
| h2 - Mast free lift                                        | in (mm) | 53.7 (1364)  | 59.6 (1514)  | 63.5 (1614)  | 67.5 (1714)  |
| h3 - Mast lifting height                                   | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) |
| h4 - Mast extended height                                  | in (mm) | 164.2 (4170) | 176 (4470)   | 183.9 (4670) | 191.7 (4870) |
| Residual capacity at max height                            | lb (kg) | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  |
| Residual capacity with integrated side shift at max height | lb (kg) | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  | 9921 (4500)  |
| Height at max capacity                                     | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) |
| Height at max capacity with integrated sideshift           | in (mm) | 118.1 (3000) | 129.9 (3300) | 137.8 (3500) | 145.7 (3700) |

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