

Technical sheet :

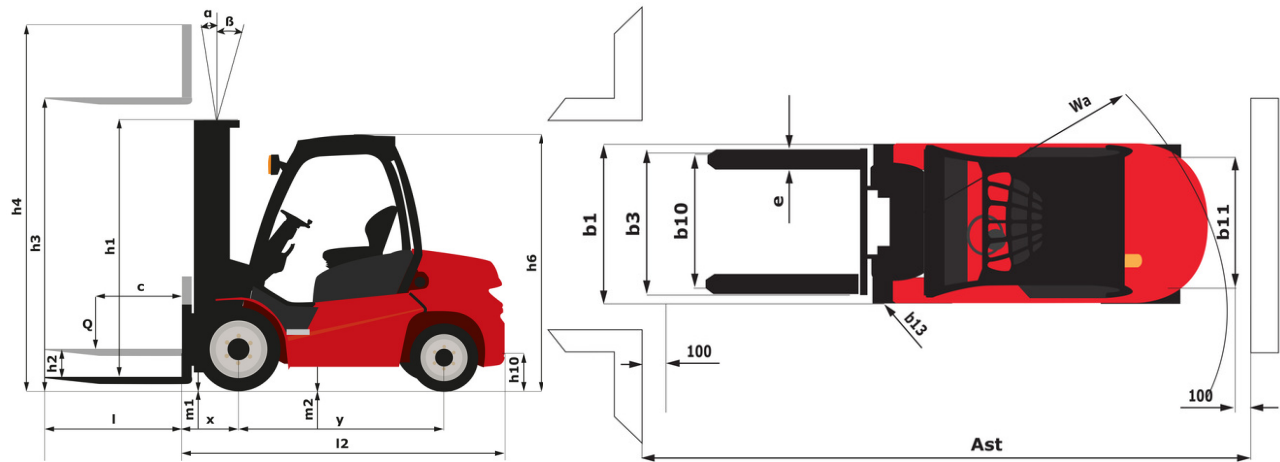
# **MI 45 D ST5**

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|       | Technical characteristics                                       |                  | Metric                     |
|-------|---|------------------|----------------------------|
| 1.1   | Manufacturer  |                  | MANITOU                    |
| 1.2   | Model Name  |                  | MI 45 D ST5                |
| 1.3   | Power source  |                  | Diesel                     |
| 1.4   | Operator type   |                  | Seated                     |
| 1.5   | Max. capacity   | Q                | 4500 kg                    |
| 1.6   | Load centre of gravity  | c                | 500 mm                     |
| 1.8   | Load distance, centre of drive axle to fork                     | x                | 550 mm                     |
| 1.9   | Wheelbase   | y                | 2000 mm                    |
|       | <b>Weight</b>   |                  |                            |
| 2.1   | Service weight  |                  | 6630 kg                    |
| 2.2   | Weight on front axle (laden) / rear axle (laden)                |                  | 9850 kg / 1280 kg          |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)            |                  | 3000 kg / 3630 kg          |
|       | <b>Wheels</b>   |                  |                            |
| 3.1   | Tyres type  |                  | Super Elastic              |
| 3.2   | Dimensions of front wheels                                      |                  | 300-15 18PR                |
| 3.3   | Dimensions of rear wheels                                       |                  | 7.00-12 12PR               |
| 3.5   | Number of front wheels / rear wheels                            |                  | 2 / 2                      |
| 3.5.2 | Number of drive wheels  |                  | 2                          |
| 3.6   | Front wheel gauge   | b10              | 1190 mm                    |
| 3.7   | Rear wheel gauge  | b11              | 1130 mm                    |
|       | <b>Dimensions</b>   |                  |                            |
| 4.1   | Tilt of Mast Forward (deg) / Backward (deg)                     | $\alpha / \beta$ | 6 / 12                     |
| 4.12  | Height of towing bar (coupling height)                          | h10              | 445 mm                     |
| 4.19  | Overall length  | l1               | 4315 mm                    |
| 4.20  | Length to face of forks   | l2               | 3095 mm                    |
| 4.21  | Overall width - Single wheels                                   | b1               | 1490 mm                    |
| 4.21  | Overall width - Twinned wheels                                  | b1               | 1940 mm                    |
| 4.22  | Forks section / width / length                                  | s / e / l        | 50 mm x 150 mm / 1220 mm   |
| 4.23  | Fork carriage ISO 2328 (class/form) A/B                         |                  | FEM 3A                     |
| 4.24  | Fork carriage width   | b3               | 1250 mm                    |
| 4.31  | Ground clearance below mast                                     | m1               | 170 mm                     |
| 4.32  | Ground clearance at centre of wheelbase                         | m2               | 230 mm                     |
| 4.33  | Aisle Width for pallets 1000 x 1200 crossways                   | Ast              | 4550 mm                    |
| 4.34  | Aisle width for 800 x 1200 pallet lengthways                    | Ast              | 4350 mm                    |
| 4.35  | Turning radius  | Wa               | 2800 mm                    |
| 4.36  | Internal turning radius (over tyres)                            | b13              | 100 mm                     |
| 4.7   | Height of overhead guard (cabin)                                | h6               | 2390 mm                    |
| 4.8   | Seat height/stand height  | h7               | 1370 mm                    |
|       | <b>Performances</b>   |                  |                            |
| 5.1   | Travel speed (laden / unladen)                                  |                  | 13 km/h / 23 km/h          |
| 5.2   | Lifting speed (laden / unladen)                                 |                  | 0.49 m/s / 0.52 m/s        |
| 5.3   | Lowering speed (laden / unladen)                                |                  | 0.50 m/s / 0.50 m/s        |
| 5.5   | Drawbar pull (Laden / Unladen)                                  |                  | 3800 daN / 2000 daN        |
| 5.7   | Gradeability (laden / unladen)                                  |                  | 20 % / 20 %                |
| 5.10  | Service brake   |                  | Hydraulic                  |
|       | <b>Engine</b>   |                  |                            |
| 7.1   | Engine brand / model / norm                                     |                  | Deutz / TCD2.9L4 / Stage V |
| 7.2   | Engine power according to ISO 1585                              |                  | 55.40 kW                   |
| 7.3   | Rated speed   |                  | 2200 rpm                   |
| 7.4   | Number of cylinders / Capacity of cylinders                     |                  | 4 - 2920 cm <sup>3</sup>   |
|       | <b>Miscellaneous</b>  |                  |                            |
| 8.2   | Working hydraulic pressure for attachments                      |                  | 190 Bar                    |
| 8.3   | Oil flow rate for attachments                                   |                  | 90 l/min                   |
| 8.4   | Measured/guaranteed mean noise level at the ear of the operator |                  | < 89 dB                    |

## MI 45 D ST5 - Dimensional drawing

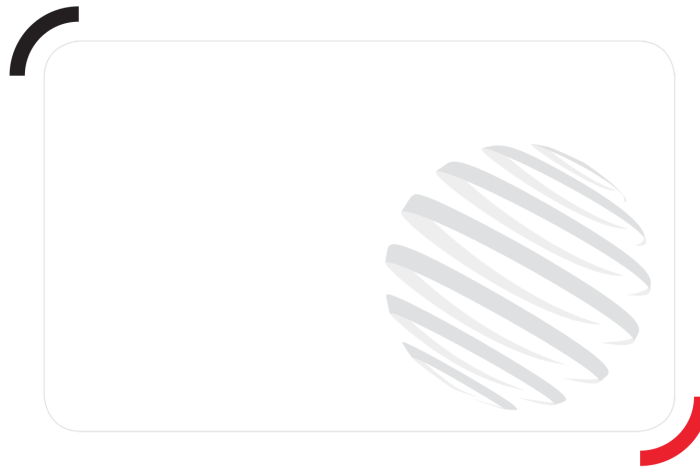


## Characteristics of masts and residual capacities

| Full Visibility Duplex   |    | FVD 30 | FVD 33 | FVD 35 | FVD 37 | FVD 40 | FVD 45 | FVD 50 |
|--|----|--------|--------|--------|--------|--------|--------|--------|
| h2 - Free lift   | mm | 160    | 160    | 160    | 160    | 160    | 160    | 160    |
| h1 - Height mast lowered *   | mm | 2245   | 2395   | 2495   | 2595   | 2795   | 3070   | 3345   |
| h3 - Lifting Height  | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4500   | 5000   |
| h4 - Height mast extended *  | mm | 4170   | 4470   | 4670   | 4870   | 5170   | 5670   | 6170   |
| $\alpha / \beta$ - Mast inclination (front / rear)                   | °  | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 |
| Residual capacity at max height                                      | kg | 4500   | 4500   | 4500   | 4500   | 4500   | 4100   | 3700   |
| Residual capacity with integrated side shift (Industrial load chart) | kg | 4500   | 4500   | 4500   | 4500   | 4500   | 4100   | 3600   |
| Height at max capacity   | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4000   | 4000   |
| Height at max capacity with integrated sideshift                     | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4000   | 4000   |

| Free Lift Duplex   |    | FLD 30 | FLD 33 | FLD 35 | FLD 37 |
|--|----|--------|--------|--------|--------|
| h2 - Free lift   | mm | 1364   | 1514   | 1614   | 1714   |
| h1 - Height mast lowered *   | mm | 2226   | 2376   | 2476   | 2576   |
| h3 - Lifting Height  | mm | 3000   | 3300   | 3500   | 3700   |
| h4 - Height mast extended *  | mm | 4170   | 4470   | 4670   | 4870   |
| $\alpha / \beta$ - Mast inclination (front / rear)                   | °  | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 |
| Residual capacity at max height                                      | kg | 4500   | 4500   | 4500   | 4500   |
| Residual capacity with integrated side shift (Industrial load chart) | kg | 3000   | 4500   | 4500   | 4500   |
| Residual capacity with hooked-on side shift (Industrial load chart)  | kg | 4500   |        |        |        |
| Height at max capacity   | mm | 3000   | 3300   | 3500   | 3700   |
| Height at max capacity with integrated sideshift                     | mm |        | 3300   | 3500   | 3700   |

| Free Lift Triplex  |    | FLT 40 | FLT 43 | FLT 45 | FLT 47 | FLT 50 | FLT 55 | FLT 60 |
|--|----|--------|--------|--------|--------|--------|--------|--------|
| h2 - Free lift   | mm | 1229   | 1329   | 1395   | 1459   | 1559   | 1724   | 1939   |
| h1 - Height mast lowered *   | mm | 2080   | 2180   | 2248   | 2310   | 2410   | 2575   | 2790   |
| h3 - Lifting Height  | mm | 4000   | 4300   | 4500   | 4700   | 5000   | 5500   | 6000   |
| h4 - Height mast extended *  | mm | 5170   | 5470   | 5685   | 5870   | 6170   | 6670   | 7180   |
| $\alpha / \beta$ - Mast inclination (front / rear)                   | °  | 6 / 12 | 6 / 6  | 6 / 6  | 6 / 6  | 6 / 6  | 3 / 6  | 3 / 6  |
| Residual capacity at max height                                      | kg | 4500   | 4300   | 4100   | 3900   | 3600   | 3100   | 2500   |
| Residual capacity with integrated side shift (Industrial load chart) | kg | 4350   | 4200   | 4000   | 3800   | 3500   | 3000   | 2400   |



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