

Technical sheet :

# **MI-X 60 D**

---



 **MANITOU**  
HANDLING YOUR WORLD

| Technical characteristics |   |           | Metric                   |
|---------------------------|---|-----------|--------------------------|
| 1.1                       | Manufacturer  |           | Manitou                  |
| 1.2                       | Model Name  |           | MI-X 60 D                |
| 1.3                       | Power source  |           | Diesel                   |
| 1.4                       | Operator type   |           | Seated                   |
| 1.5                       | Max. capacity   | Q         | 6000 kg                  |
| 1.6                       | Load center of gravity  | c         | 600 mm                   |
| 1.8                       | Load distance, centre of drive axle to fork                     | x         | 598 mm                   |
| 1.9                       | Wheelbase   | y         | 2300 mm                  |
| Weight                    |   |           |                          |
| 2.1                       | Service weight  |           | 8825 kg                  |
| 2.2                       | Weight on front axle (laden) / rear axle (laden)                |           | 13000 kg / 1825 kg       |
| 2.3                       | Weight on front axle (Unladen) / rear axle (Unladen)            |           | 3960 kg / 4865 kg        |
| Wheels                    |   |           |                          |
| 3.1                       | Tires type  |           | Pneumatic                |
| 3.2                       | Dimensions of front wheels                                      |           | 8.25-15-14PR             |
| 3.3                       | Dimensions of rear wheels                                       |           | 8.25-15-14PR             |
| 3.5                       | Number of front wheels / rear wheels                            |           | 4 / 2                    |
| 3.5.2                     | Number of drive wheels  |           | 4                        |
| 3.6                       | Front wheel gauge   | b10       | 1489 mm                  |
| 3.7                       | Rear wheel gauge  | b11       | 1700 mm                  |
| Dimensions                |   |           |                          |
| 4.7                       | Height of overhead guard (cabin)                                | h6        | 2430 mm                  |
| 4.8                       | Seat height/stand height  | h7        | 1350 mm                  |
| 4.12                      | Height of towing bar (coupling height)                          | h10       | 710 mm                   |
| 4.19                      | Overall length  | l1        | 4729 mm                  |
| 4.20                      | Length to face of forks   | l2        | 3509 mm                  |
| 4.21                      | Overall width   | b1        | 1990 mm                  |
| 4.21                      | Overall width - Single wheels                                   | b1        | 1990 mm                  |
| 4.22                      | Forks section / width / length                                  | s / e / l | 60 mm x 150 mm x 1220 mm |
| 4.23                      | Fork carriage ISO 2328 (class/form) A/B                         |           | 4A                       |
| 4.24                      | Fork carriage width   | b3        | 1700 mm                  |
| 4.31                      | Ground clearance below mast                                     | m1        | 190 mm                   |
| 4.32                      | Ground clearance at centre of wheelbase                         | m2        | 270 mm                   |
| 4.33                      | Aisle Width for pallets 1000 x 1200 crossways                   | Ast       | 5167 mm                  |
| 4.34                      | Aisle width for 800 x 1200 pallet lengthways                    | Ast       | 5302 mm                  |
| 4.35                      | Turning radius  | Wa        | 3260 mm                  |
| 4.36                      | Internal turning radius (over tyres)                            | b13       | 1222 mm                  |
| Performances              |   |           |                          |
| 5.1                       | Travel speed (laden / unladen)                                  |           | 27 km/h-29 km/h          |
| 5.2                       | Lifting speed (laden / unladen)                                 |           | 0.46 m/s-0.49 m/s        |
| 5.3                       | Lowering speed (laden / unladen)                                |           | 0.48 m/s-0.42 m/s        |
| 5.5                       | Drawbar pull (Laden / Unladen)                                  |           | 6500 daN / 2672 daN      |
| 5.7                       | Gradeability (laden)  |           | 43 %                     |
| 5.10                      | Service brake   |           | Hydraulic                |
|                           | Transmission type   |           | Torque converter         |
| Engine                    |   |           |                          |
| 7.1                       | Engine brand / model  |           | Cummins / QSB3,3         |
| 7.2                       | I.C. Engine power rating  |           | 74 kW                    |
| 7.3                       | Rated speed   |           | 2200 rpm                 |
| 7.4                       | Number of cylinders / Capacity of cylinders                     |           | 4 - 3300 cm³             |
| Miscellaneous             |   |           |                          |
| 8.2                       | Working hydraulic pressure for attachments                      |           | 195 bar                  |
| 8.3                       | Oil flow rate for attachments                                   |           | 55 l/min                 |
| 8.4                       | Measured/guaranteed mean noise level at the ear of the operator |           | < 88 dB                  |
| 8.4                       | Sound level at the driver's ear according to DIN 12 053         |           | 88 dB                    |

### MI-X 60 D - Dimensional drawing



## Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD)                              | FVD 30 | FVD 33 | FVD 36 | FVD 40 | FVD 45 | FVD 50 |
|---|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                      | °      | 6      | 6      | 6      | 6      | 6      |
| β - Mast/fork carriage tilt, backward                     | °      | 12     | 12     | 12     | 12     | 6      |
| h1 - Mast lowered height                                  | mm     | 2500   | 2650   | 2800   | 3000   | 3300   |
| h2 - Mast free lift                                       | mm     | 1600   | 160    | 160    | 160    | 160    |
| h3 - Mast lifting height                                  | mm     | 3000   | 3300   | 3600   | 4000   | 4500   |
| h4 - Mast extended height                                 | mm     | 3995   | 4295   | 4595   | 4995   | 5500   |
| Residual capacity at max height                           | kg     | 6000   | 6000   | 6000   | 6000   | 6000   |
| Residual capacity with hooked-on side shift at max height | kg     | 5500   | 5500   | 5500   | 5500   | 5500   |
| Height at max capacity                                    | mm     | 3000   | 3300   | 3600   | 4000   | 4500   |
| Height at max capacity with hooked-on sideshift           | mm     | 3000   | 3300   | 3600   | 4000   | 4500   |

| Free Lift Duplex (FLD)                                    | FLD 30 | FLD 33 | FLD 36 | 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     | 2450   | 2600   | 2750   |
| h2 - Mast free lift                                       | mm     | 1495   | 1645   | 1795   |
| h3 - Mast lifting height                                  | mm     | 3000   | 3300   | 3600   |
| h4 - Mast extended height                                 | mm     | 3955   | 4255   | 4555   |
| Residual capacity at max height                           | kg     | 6000   | 6000   | 6000   |
| Residual capacity with hooked-on side shift at max height | kg     | 5500   | 5500   | 5500   |
| Height at max capacity                                    | mm     | 3000   | 3300   | 3600   |
| Height at max capacity with hooked-on sideshift           | mm     | 3000   | 3300   | 3600   |

| Free Lift Triplex (FLT)                                   | FLT 45 | FLT 48 | FLT 50 | FLT 55 | FLT 60 |
|---|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                      | °      | 6      | 6      | 6      | 3      |
| β - Mast/fork carriage tilt, backward                     | °      | 6      | 6      | 6      | 6      |
| h1 - Mast lowered height                                  | mm     | 2725   | 2825   | 2875   | 3075   |
| h2 - Mast free lift                                       | mm     | 1500   | 1600   | 1672   | 1800   |
| h3 - Mast lifting height                                  | mm     | 4500   | 4800   | 5000   | 5500   |
| h4 - Mast extended height                                 | mm     | 5735   | 6035   | 6213   | 6785   |
| Residual capacity at max height                           | kg     | 5500   | 5500   | 5500   | 5200   |
| Residual capacity with hooked-on side shift at max height | kg     | 5000   | 5000   | 5000   | 4700   |
| Height at max capacity                                    | mm     | 4500   | 4800   | 5000   | 5500   |
| Height at max capacity with hooked-on sideshift           | mm     | 4500   | 4800   | 5000   | 5500   |



 **MANITOU**  
**HANDLING YOUR WORLD**

**Head Office**

B.P. 249 - 430 rue de l'Aubinière

44150 Ancenis Cedex - France

Tel: +33 (0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97

[www.manitou.com](http://www.manitou.com)



This publication provides a description of the configuration versions and options for Manitou products, which may differ for equipment. The equipment presented in this brochure may be part of a series, as an option, or it may not be available, depending on the versions. Manitou reserves the right, at any time and without notice, to amend the specifications described and represented. The specifications provided do not bind the manufacturer. For more details, please contact your Manitou agent. This is not a contractually binding document. The presentation of the products is not contractually binding. List of specifications non-exhaustive. The logos as well as the visual identity of the company are owned by Manitou and cannot be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are only provided for consultation and information purposes.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,668,399 euros - 857 802 508 RCS Nantes