

Technical sheet :

# ME 425

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 **MANITOU**  
HANDLING YOUR WORLD

| Technical characteristics |                                                                 |           | Metric                   |
|---------------------------|-----------------------------------------------------------------|-----------|--------------------------|
| 1.1                       | Manufacturer                                                    |           | Manitou                  |
| 1.2                       | Model Name                                                      |           | ME 425                   |
| 1.3                       | Power source                                                    |           | Electrical               |
| 1.4                       | Operator type                                                   |           | Seated                   |
| 1.5                       | Max. capacity                                                   | Q         | 2500 kg                  |
| 1.6                       | Load center of gravity                                          | c         | 500 mm                   |
| 1.8                       | Load distance, centre of drive axle to fork                     | x         | 425 mm                   |
| 1.9                       | Wheelbase                                                       | y         | 1750 mm                  |
| Weight                    |                                                                 |           |                          |
| 2.1                       | Service weight                                                  |           | 5100 kg                  |
| 2.2                       | Weight on front axle (laden) / rear axle (laden)                |           | 6620 kg / 980 kg         |
| 2.3                       | Weight on front axle (Unladen) / rear axle (Unladen)            |           | 2500 kg / 2600 kg        |
| Wheels                    |                                                                 |           |                          |
| 3.1                       | Tires type                                                      |           | Solid tires              |
| 3.2                       | Dimensions of front wheels                                      |           | 23 x 9-10                |
| 3.3                       | Dimensions of rear wheels                                       |           | 18 x 7-8                 |
| 3.5                       | Number of front wheels / rear wheels                            |           | 2 / 2                    |
| 3.5.2                     | Number of drive wheels                                          |           | 2                        |
| 3.6                       | Front wheel gauge                                               | b10       | 1073 mm                  |
| 3.7                       | Rear wheel gauge                                                | b11       | 960 mm                   |
| Dimensions                |                                                                 |           |                          |
| 4.7                       | Height of overhead guard (cabin)                                | h6        | 2240 mm                  |
| 4.8                       | Seat height/stand height                                        | h7        | 1190 mm                  |
| 4.12                      | Height of towing bar (coupling height)                          | h10       | 625 mm                   |
| 4.19                      | Overall length                                                  | l1        | 3640 mm                  |
| 4.20                      | Length to face of forks                                         | l2        | 2490 mm                  |
| 4.21                      | Overall width                                                   | b1        | 1275 mm                  |
| 4.22                      | Forks section / width / length                                  | s / e / l | 122 mm x 1150 mm x 40 mm |
| 4.23                      | Fork carriage ISO 2328 (class/form) A/B                         |           | 2A                       |
| 4.24                      | Fork carriage width                                             | b3        | 1100 mm                  |
| 4.31                      | Ground clearance below mast                                     | m1        | 105 mm                   |
| 4.32                      | Ground clearance at centre of wheelbase                         | m2        | 115 mm                   |
| 4.33                      | Aisle Width for pallets 1000 x 1200 crossways                   | Ast       | 4025 mm                  |
| 4.34                      | Aisle width for 800 x 1200 pallet lengthways                    | Ast       | 4225 mm                  |
| 4.35                      | Turning radius                                                  | Wa        | 2400 mm                  |
| 4.36                      | Internal turning radius (over tyres)                            | b13       | 730 mm                   |
| Performances              |                                                                 |           |                          |
| 5.1                       | Travel speed (laden / unladen)                                  |           | 19 km/h-20 km/h          |
| 5.2                       | Lifting speed (laden / unladen)                                 |           | 0.46 m/s-0.62 m/s        |
| 5.3                       | Lowering speed (laden / unladen)                                |           | 0.47 m/s-0.42 m/s        |
| 5.5                       | Drawbar pull (Laden / Unladen)                                  |           | 1740 daN / 1640 daN      |
| 5.7                       | Gradeability (laden / unladen)                                  |           | 16 % / 21 %              |
| 5.10                      | Service brake                                                   |           | Oil bath                 |
| Engine                    |                                                                 |           |                          |
| 6.1                       | Drive motor rating S2 60 min                                    |           | 18.50 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)               |           | 10.50 kWh                |
| 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 |           | < 71 dB                  |
| 8.4                       | Sound level at the driver's ear according to DIN 12 053         |           | 71 dB                    |

### ME 425 - Dimensional drawing



## Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD)                               |    | FVD 30 | FVD 33 | FVD 35 | FVD 37 | FVD 40 | FVD 43 | FVD 45 | FVD 48 | FVD 50 |
|------------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      |
| β - Mast/fork carriage tilt, backward                      | °  | 8      | 8      | 8      | 8      | 8      | 5      | 5      | 5      | 5      |
| h1 - Mast lowered height                                   | mm | 2085   | 2235   | 2335   | 2485   | 2685   | 2835   | 2935   | 3085   | 3185   |
| h2 - Mast free lift                                        | mm | 140    | 140    | 140    | 140    | 140    | 140    | 140    | 140    | 140    |
| h3 - Mast lifting height                                   | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4300   | 4500   | 4800   | 5000   |
| h4 - Mast extended height                                  | mm | 3643   | 3943   | 4143   | 4243   | 4643   | 4943   | 5143   | 5443   | 5643   |
| Residual capacity at max height                            | kg | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with integrated side shift at max height | kg | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with hooked-on side shift at max height  | kg | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   |
| Height at max capacity                                     | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4300   | 4500   | 4800   | 5000   |
| Height at max capacity with integrated sideshift           | mm | 3000   | 3300   | 3500   | 3700   | 4000   | 4300   | 4500   | 4800   | 5000   |

| Free Lift Duplex (FLD)                                     |    | FLD 30 | FLD 33 | FLD 37 | FLD 40 |
|------------------------------------------------------------|----|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 5      | 5      | 5      | 5      |
| β - Mast/fork carriage tilt, backward                      | °  | 8      | 8      | 8      | 8      |
| h1 - Mast lowered height                                   | mm | 2035   | 2185   | 2385   | 2585   |
| h2 - Mast free lift                                        | mm | 1370   | 1520   | 1720   | 1920   |
| h3 - Mast lifting height                                   | mm | 3000   | 3300   | 3700   | 4000   |
| h4 - Mast extended height                                  | mm | 3665   | 3965   | 4365   | 4665   |
| Residual capacity at max height                            | kg | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with integrated side shift at max height | kg | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with hooked-on side shift at max height  | kg | 2500   | 2500   | 2500   | 2500   |
| Height at max capacity                                     | mm | 3000   | 3300   | 3700   | 4000   |
| Height at max capacity with integrated sideshift           | mm | 3000   | 3300   | 3700   | 4000   |

| Free Lift Triplex (FLT)                                    |    | FLT 40 | FLT 43 | FLT 48 | FLT 50 | FLT 55 | FLT 60 |
|------------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward                       | °  | 5      | 5      | 5      | 5      | 5      | 5      |
| β - Mast/fork carriage tilt, backward                      | °  | 5      | 5      | 5      | 5      | 5      | 5      |
| h1 - Mast lowered height                                   | mm | 2035   | 2135   | 2285   | 2385   | 2585   | 2835   |
| h2 - Mast free lift                                        | mm | 1370   | 1470   | 1620   | 1720   | 1920   | 2170   |
| h3 - Mast lifting height                                   | mm | 4000   | 4300   | 4800   | 5000   | 5500   | 6000   |
| h4 - Mast extended height                                  | mm | 4665   | 4965   | 5465   | 5665   | 6165   | 6665   |
| Residual capacity at max height                            | kg | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with integrated side shift at max height | kg | 2500   | 2500   | 2500   | 2500   | 2500   | 2500   |
| Residual capacity with hooked-on side shift at max height  | kg | 2500   | 2500   | 2500   | 2500   | 2450   | 2400   |
| Height at max capacity                                     | mm | 4000   | 4300   | 4800   | 5000   | 5500   | 6000   |
| Height at max capacity with integrated sideshift           | mm | 4000   | 4300   | 4800   | 5000   | 5500   | 6000   |



**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)



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