

Technical sheet :

# ME 316



 **MANITOU**  
HANDLING YOUR WORLD

|       | Technical characteristics                                       |           | Metric                   |
|-------|-----------------------------------------------------------------|-----------|--------------------------|
| 1.1   | Manufacturer                                                    |           | Manitou                  |
| 1.2   | Model Name                                                      |           | ME 316                   |
| 1.3   | Power source                                                    |           | Electrical               |
| 1.4   | Operator type                                                   |           | Seated                   |
| 1.5   | Max. capacity                                                   | Q         | 1600 kg                  |
| 1.6   | Load center of gravity                                          | c         | 500 mm                   |
| 1.8   | Load distance, centre of drive axle to fork                     | x         | 355 mm                   |
| 1.9   | Wheelbase                                                       | y         | 1358 mm                  |
|       | <b>Weight</b>                                                   |           |                          |
| 2.1   | Service weight                                                  |           | 3120 kg                  |
| 2.2   | Weight on front axle (laden) / rear axle (laden)                |           | 4100 kg / 620 kg         |
| 2.3   | Weight on front axle (Unladen) / rear axle (Unladen)            |           | 1440 kg / 1680 kg        |
|       | <b>Wheels</b>                                                   |           |                          |
| 3.1   | Tires type                                                      |           | Solid tires              |
| 3.2   | Dimensions of front wheels                                      |           | 18x7-8                   |
| 3.3   | Dimensions of rear wheels                                       |           | 15x4,5-8                 |
| 3.5   | Number of front wheels / rear wheels                            |           | 2 / 1                    |
| 3.5.2 | Number of drive wheels                                          |           | 2                        |
| 3.6   | Front wheel gauge                                               | b10       | 910 mm                   |
| 3.7   | Rear wheel gauge                                                | b11       | 175 mm                   |
|       | <b>Dimensions</b>                                               |           |                          |
| 4.7   | Height of overhead guard (cabin)                                | h6        | 2040 mm                  |
| 4.8   | Seat height/stand height                                        | h7        | 1000 mm                  |
| 4.12  | Height of towing bar (coupling height)                          | h10       | 500 mm                   |
| 4.19  | Overall length                                                  | l1        | 2968 mm                  |
| 4.20  | Length to face of forks                                         | l2        | 1898 mm                  |
| 4.21  | Overall width                                                   | b1        | 1086 mm                  |
| 4.22  | Forks section / width / length                                  | s / e / l | 35 mm x 100 mm x 1070 mm |
| 4.23  | Fork carriage ISO 2328 (class/form) A/B                         |           | 2A                       |
| 4.24  | Fork carriage width                                             | b3        | 1000 mm                  |
| 4.31  | Ground clearance below mast                                     | m1        | 100 mm                   |
| 4.32  | Ground clearance at centre of wheelbase                         | m2        | 110 mm                   |
| 4.33  | Aisle Width for pallets 1000 x 1200 crossways                   | Ast       | 3237 mm                  |
| 4.34  | Aisle width for 800 x 1200 pallet lengthways                    | Ast       | 3365 mm                  |
| 4.35  | Turning radius                                                  | Wa        | 1555 mm                  |
|       | <b>Performances</b>                                             |           |                          |
| 5.1   | Travel speed (laden / unladen)                                  |           | 16 km/h-18 km/h          |
| 5.2   | Lifting speed (laden / unladen)                                 |           | 0.40 m/s-0.47 m/s        |
| 5.3   | Lowering speed (laden / unladen)                                |           | 0.46 m/s-0.44 m/s        |
| 5.5   | Drawbar pull (Laden / Unladen)                                  |           | 750 daN / 772 daN        |
| 5.7   | Gradeability (laden / unladen)                                  |           | 16 % / 18 %              |
| 5.10  | Service brake                                                   |           | Oil bath                 |
|       | <b>Engine</b>                                                   |           |                          |
| 6.1   | Number of drive motor / Drive motor rating S2 60 min            |           | 2 / 4.50 kW              |
| 6.2   | Lift motor rating at S3 15%                                     |           | 8.60 kW                  |
| 6.3   | Battery according to DIN 43531/35/36 A, B, C                    |           | DIN43531 A               |
| 6.4   | Battery voltage / capacity                                      |           | 48 V / 575 Ah            |
| 6.6   | Energy consumption                                              |           | 4.30 kWh                 |
|       | <b>Miscellaneous</b>                                            |           |                          |
| 8.1   | Type of drive control                                           |           | Electronic               |
| 8.2   | Working hydraulic pressure for attachments                      |           | 180 bar                  |
| 8.3   | Oil flow rate for attachments                                   |           | 35 l/min                 |
| 8.4   | Measured/guaranteed mean noise level at the ear of the operator |           | < 70 dB                  |
| 8.4   | Sound level at the driver's ear according to DIN 12 053         |           | 70 dB                    |

## ME 316 - Dimensional drawing



## Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD)                               |    | FVD 27 | FVD 30 | FVD 33 | FVD 36 | FVD 40 | FVD 43 | FVD 45 |
|------------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                           | °  | 5.50   | 5.50   | 5.50   | 5.50   | 3.50   | 3.50   | 3.50   |
| Mast/fork carriage tilt, backward                          | °  | 6      | 6      | 6      | 6      | 5      | 5      | 5      |
| h1 - Mast lowered height                                   | mm | 1845   | 1995   | 2145   | 2295   | 2545   | 2710   | 2820   |
| h2 - Mast free lift                                        | mm | 145    | 145    | 145    | 145    | 145    | 145    | 145    |
| h3 - Mast lifting height                                   | mm | 2700   | 3000   | 3300   | 3600   | 4000   | 4300   | 4500   |
| h4 - Mast extended height                                  | mm | 3265   | 3565   | 3865   | 4165   | 4565   | 4865   | 5065   |
| Residual capacity at max height                            | kg | 1600   | 1600   | 1600   | 1600   | 1600   | 1600   | 1500   |
| Residual capacity with integrated side shift at max height | kg | 1600   | 1600   | 1600   | 1600   | 1600   | 1600   | 1500   |
| Residual capacity with hooked-on side shift at max height  | kg | 1600   | 1600   | 1600   | 1600   | 1550   | 1500   | 1400   |
| Height at max capacity                                     | mm | 2700   | 3000   | 3300   | 3600   | 4000   | 4300   | 4500   |
| Height at max capacity with integrated sideshift           | mm | 2700   | 3000   | 3300   | 3600   | 4000   | 4300   | 4500   |

| Free Lift Duplex (FLD)                                     |    | FLD 27 | FLD 30 | FLD 33 | FLD 36 | FLD 40 |
|------------------------------------------------------------|----|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                           | °  | 5.50   | 5.50   | 5.50   | 5.50   | 3.50   |
| Mast/fork carriage tilt, backward                          | °  | 6      | 6      | 6      | 6      | 5      |
| h1 - Mast lowered height                                   | mm | 1845   | 1995   | 2145   | 2295   | 2545   |
| h2 - Mast free lift                                        | mm | 1260   | 1410   | 1560   | 1710   | 1960   |
| h3 - Mast lifting height                                   | mm | 2700   | 3000   | 3300   | 3600   | 4000   |
| h4 - Mast extended height                                  | mm | 3295   | 3595   | 3895   | 4195   | 4595   |
| Residual capacity at max height                            | kg | 1600   | 1600   | 1600   | 1600   | 1600   |
| Residual capacity with integrated side shift at max height | kg | 1600   | 1600   | 1600   | 1600   | 1600   |
| Residual capacity with hooked-on side shift at max height  | kg | 1600   | 1600   | 1600   | 1600   | 1550   |
| Height at max capacity                                     | mm | 2700   | 3000   | 3300   | 3600   | 4000   |
| Height at max capacity with integrated sideshift           | mm | 2700   | 3000   | 3300   | 3600   | 4000   |

| Free Lift Triplex (FLT)                                    |    | FLT 40 | FLT 43 | FLT 45 | FLT 48 | FLT 50 | FLT 55 | FLT 60 | FLT 65 |
|------------------------------------------------------------|----|--------|--------|--------|--------|--------|--------|--------|--------|
| Mast/fork carriage tilt, forward                           | °  | 3.50   | 3.50   | 3.50   | 3.50   | 3.50   | 3.50   | 3.50   | 3.50   |
| Mast/fork carriage tilt, backward                          | °  | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      |
| h1 - Mast lowered height                                   | mm | 1910   | 2010   | 2075   | 2175   | 2240   | 2410   | 2625   | 2840   |
| h2 - Mast free lift                                        | mm | 1325   | 1425   | 1490   | 1590   | 1655   | 1825   | 2010   | 2010   |
| h3 - Mast lifting height                                   | mm | 4000   | 4300   | 4500   | 4800   | 5000   | 5500   | 6000   | 6500   |
| h4 - Mast extended height                                  | mm | 4595   | 4895   | 5095   | 5395   | 5595   | 6095   | 6625   | 7170   |
| Residual capacity at max height                            | kg | 1600   | 1550   | 1500   | 1450   | 1400   | 1250   | 1100   | 900    |
| Residual capacity with integrated side shift at max height | kg | 1600   | 1550   | 1500   | 1450   | 1400   | 1250   | 1100   | 900    |
| Residual capacity with hooked-on side shift at max height  | kg | 1500   | 1450   | 1400   | 1350   | 1300   | 1150   | 1000   | 800    |
| Height at max capacity                                     | mm | 4000   | 4300   | 4500   | 4800   | 5000   | 5500   | 6000   | 2500   |



**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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