

Technical sheet :

ME 420



 **MANITOU**
HANDLING YOUR WORLD

| Technical characteristics | | | Metric |
|---------------------------|---|-----------|--------------------------|
| 1.1 | Manufacturer | | Manitou |
| 1.2 | Model Name | | ME 420 |
| 1.3 | Power source | | Electrical |
| 1.4 | Operator type | | Seated |
| 1.5 | Max. capacity | Q | 2000 kg |
| 1.6 | Load center of gravity | c | 500 mm |
| 1.8 | Load distance, centre of drive axle to fork | x | 448 mm |
| 1.9 | Wheelbase | y | 1485 mm |
| Weight | | | |
| 2.1 | Service weight | | 4000 kg |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 5360 kg / 640 kg |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) | | 1910 kg / 2090 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 | 1058 mm |
| 3.7 | Rear wheel gauge | b11 | 960 mm |
| Dimensions | | | |
| 4.7 | Height of overhead guard (cabin) | h6 | 2155 mm |
| 4.8 | Seat height/stand height | h7 | 1070 mm |
| 4.12 | Height of towing bar (coupling height) | h10 | 303 mm |
| 4.19 | Overall length | l1 | 3492 mm |
| 4.20 | Length to face of forks | l2 | 2342 mm |
| 4.21 | Overall width | b1 | 1265 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 | 1038 mm |
| 4.31 | Ground clearance below mast | m1 | 112 mm |
| 4.32 | Ground clearance at centre of wheelbase | m2 | 120 mm |
| 4.33 | Aisle Width for pallets 1000 x 1200 crossways | Ast | 3738 mm |
| 4.34 | Aisle width for 800 x 1200 pallet lengthways | Ast | 3938 mm |
| 4.35 | Turning radius | Wa | 2090 mm |
| 4.36 | Internal turning radius (over tyres) | b13 | 730 mm |
| Performances | | | |
| 5.1 | Travel speed (laden / unladen) | | 14 km/h-14 km/h |
| 5.2 | Lifting speed (laden / unladen) | | 0.28 m/s-0.40 m/s |
| 5.3 | Lowering speed (laden / unladen) | | 0.42 m/s-0.29 m/s |
| 5.5 | Drawbar pull (Laden / Unladen) | | 1400 daN / 1250 daN |
| 5.7 | Gradeability (laden / unladen) | | 11 % / 12 % |
| 5.10 | Service brake | | Hydraulic |
| Engine | | | |
| 6.1 | Drive motor rating S2 60 min | | 11 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 B |
| 6.4 | Battery voltage / capacity | | 48 V / 700 Ah |
| 6.6 | Energy consumption according to VDI cycle (kWh/h) | | 5 kWh/h |
| Miscellaneous | | | |
| 8.1 | Type of drive control | | Electronic |
| 8.2 | Working hydraulic pressure for attachments | | 175 bar |
| 8.3 | Oil flow rate for attachments | | 35 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 420 - 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 |
|--|----|--------|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward | ° | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| β - Mast/fork carriage tilt, backward | ° | 6 | 10 | 10 | 10 | 10 | 6 | 6 |
| h1 - Mast lowered height | mm | 1855 | 2005 | 2170 | 2305 | 2555 | 2730 | 2830 |
| h2 - Mast free lift | mm | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| h3 - Mast lifting height | mm | 2700 | 3000 | 3300 | 3600 | 4000 | 4300 | 4500 |
| h4 - Mast extended height | mm | 3350 | 3650 | 3980 | 4250 | 4650 | 4970 | 5150 |
| Residual capacity at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Residual capacity with integrated side shift at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Residual capacity with hooked-on side shift at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 | 1950 | 1900 |
| 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 |
|--|----|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward | ° | 5 | 5 | 5 | 5 | 5 |
| β - Mast/fork carriage tilt, backward | ° | 6 | 10 | 10 | 10 | 10 |
| h1 - Mast lowered height | mm | 1866 | 1980 | 2130 | 2280 | 2530 |
| h2 - Mast free lift | mm | 1250 | 1350 | 1500 | 1650 | 1900 |
| h3 - Mast lifting height | mm | 2700 | 3000 | 3300 | 3600 | 4000 |
| h4 - Mast extended height | mm | 3370 | 3635 | 3970 | 4270 | 4635 |
| Residual capacity at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 |
| Residual capacity with integrated side shift at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 |
| Residual capacity with hooked-on side shift at max height | kg | 2000 | 2000 | 2000 | 2000 | 2000 |
| 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 |
|--|----|--------|--------|--------|--------|--------|--------|--------|--------|
| α - Mast/fork carriage tilt, forward | ° | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 |
| β - Mast/fork carriage tilt, backward | ° | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| h1 - Mast lowered height | mm | 1925 | 2025 | 2095 | 2195 | 2260 | 2425 | 2645 | 2820 |
| h2 - Mast free lift | mm | 1255 | 1355 | 1425 | 1525 | 1590 | 1755 | 1975 | 2150 |
| h3 - Mast lifting height | mm | 4000 | 4300 | 4500 | 4800 | 5000 | 5500 | 6000 | 6500 |
| h4 - Mast extended height | mm | 4680 | 4980 | 5230 | 5480 | 5680 | 5180 | 6690 | 7180 |
| Residual capacity at max height | kg | 2000 | 2000 | 2000 | 1950 | 1850 | 1800 | 1650 | 1550 |
| Residual capacity with integrated side shift at max height | kg | 2000 | 2000 | 1950 | 1900 | 1800 | 1750 | 1600 | 1500 |
| Residual capacity with hooked-on side shift at max height | kg | 1900 | 1900 | 1850 | 1800 | 1700 | 1650 | 1500 | 1400 |
| Height at max capacity | mm | 4000 | 4300 | 4500 | 4000 | 4000 | 4000 | 4000 | 4000 |
| Height at max capacity with integrated sideshift | mm | 4000 | 4300 | 4500 | 4000 | 4000 | 4000 | 4000 | 4000 |



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