

Technical sheet :

ES 412 ET



| Technical characteristics | | Metric | |
|---------------------------|---|-----------|--------------------------|
| 1.1 | Manufacturer | | Manitou |
| 1.2 | Model Name | | ES 412 ET |
| 1.3 | Power source | | Electrical |
| 1.4 | Operator type | | Pedestrian |
| 1.5 | Max. capacity | Q | 1200 kg |
| 1.6 | Load center of gravity | c | 600 mm |
| 1.8 | Distance from Load backrest to center of rear axle | x | 684 mm |
| 1.9 | Wheelbase | y | 1246 mm |
| Weight | | | |
| 2.1 | Service weight | | 874 kg |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 729 kg / 1342 kg |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) | | 612 kg / 262 kg |
| Wheels | | | |
| 3.1 | Tires type | | Polyurethane |
| 3.3 | Number of load wheels / Size of load wheels | | 2 / 82x68 |
| 3.4 | Number of stabilizer wheels / Size of the stabilizer wheels | | 1 / 125x70 |
| 3.5 | Number of front wheels / rear wheels | | 2 / 2 |
| 3.5.2 | Number of drive wheels / Size of drive wheels | | 1/230x75 |
| 3.6 | Front wheel gauge | b10 | 517 mm |
| 3.7 | Rear wheel gauge | b11 | 380 mm |
| Dimensions | | | |
| 4.15 | Fork height in low position | h13 | 86 mm |
| 4.19 | Overall length | l1 | 1875 mm |
| 4.20 | Length to face of forks | l2 | 724 mm |
| 4.21 | Overall width | b1 | 832 mm |
| 4.22 | Forks section / width / length | s / e / l | 180 mm / 60 mm / 1150 mm |
| 4.24 | Fork carriage width | b3 | 680 mm |
| 4.31 | Ground clearance below mast | m1 | 35 mm |
| 4.32 | Ground clearance at centre of wheelbase | m2 | 30 mm |
| 4.35 | Turning radius | Wa | 1470 mm |
| Performances | | | |
| 5.1 | Travel speed (laden / unladen) | | 6 km/h / 6 km/h |
| 5.2 | Lifting speed (laden / unladen) | | 0.10 m/s / 0.16 m/s |
| 5.3 | Lowering speed (laden / unladen) | | 0.14 m/s / 0.12 m/s |
| 5.8 | Max Gradeability (laden / unladen) | | 8 % / 10 % |
| 5.10 | Service brake | | Electro magnetic |
| Engine | | | |
| 6.1 | Drive motor rating S2 60 min | | 1 kW |
| 6.2 | Lift motor rating at S3 15% | | 2 kW |
| 6.3 | Battery according to DIN 43531/35/36 A, B, C | | DIN 43535-B |
| 6.4 | Battery voltage / capacity | | 24 V / 160 Ah |
| 6.5 | Battery weight (+/- 5%) | | 165 kg |
| Miscellaneous | | | |
| 8.1 | Type of drive control | | AC |
| 8.4 | Sound level at the driver's ear according to DIN 12 053 | | 65 dB |

ES 412 ET - Dimensional drawing



Characteristics of masts and residual capacities

| Central Cylinder Duplex (CCD) | | CCD 26 | CCD 29 | CCD 34 |
|---------------------------------|----|--------|--------|--------|
| h1 - Mast lowered height | mm | 1780 | 1930 | 2180 |
| h2 - Mast free lift | mm | 140 | 140 | 140 |
| h3 - Mast lifting height | mm | 2630 | 2930 | 3430 |
| h4 - Mast extended height | mm | 3065 | 3365 | 3865 |
| Residual capacity at max height | kg | 1200 | 1200 | 1000 |

| Central Cylinder Simplex (CCS) | | CCS 15 | CCS 17 |
|---------------------------------|----|--------|--------|
| h1 - Mast lowered height | mm | 1930 | 2180 |
| h2 - Mast free lift | mm | 1500 | 1750 |
| h3 - Mast lifting height | mm | 1500 | 1750 |
| h4 - Mast extended height | mm | 1930 | 2180 |
| Residual capacity at max height | kg | 1200 | 1200 |

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