Technical sheet :



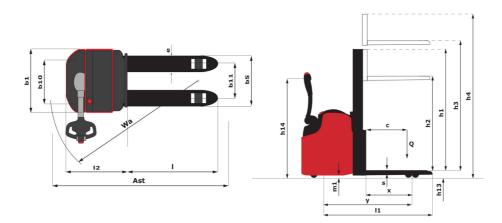




| | Technical characteristics | |
|-------|----------------------------------------------------------------|--|
| 1.1 | Manufacturer | |
| 1.2 | Model Name | |
| 1.3 | Power source | |
| 1.4 | Operator type | |
| 1.5 | Max. capacity | |
| 1.6 | Load center of gravity | |
| 1.8 | Distance from Load backrest to center of rear axle | |
| 1.9 | Wheelbase | |
| | Weight | |
| 2.1 | Service weight | |
| 2.1 | Weight on front axle (laden) / rear axle (laden) | |
| 2.2 | | |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) Wheels | |
| 0.1 | | |
| 3.1 | Tires type | |
| 3.3 | Number of load wheels / Size of load wheels | |
| 3.4 | Number of stabilizer wheels / Size of the stabilizer wheels | |
| 3.5 | Number of front wheels / rear wheels | |
| 3.5.2 | Number of drive wheels / Size of drive wheels | |
| 3.6 | Front wheel gauge | |
| 3.7 | Rear wheel gauge | |
| | Dimensions | |
| 4.15 | Fork height in low position | |
| 4.19 | Overall length | |
| 4.20 | Length to face of forks | |
| 4.21 | Overall width | |
| 4.22 | Forks section / width / length | |
| 4.24 | Fork carriage width | |
| 4.31 | Ground clearance below mast | |
| 4.32 | Ground clearance at centre of wheelbase | |
| 4.35 | Turning radius | |
| | Performances | |
| 5.1 | Travel speed (laden / unladen) | |
| 5.2 | Lifting speed (laden / unladen) | |
| 5.3 | Lowering speed (laden / unladen) | |
| 5.8 | Max Gradeability (laden / unladen) | |
| 5.10 | Service brake | |
| | Engine | |
| 6.1 | Drive motor rating S2 60 min | |
| 6.2 | Lift motor rating at S3 15% | |
| 6.3 | Battery according to DIN 43531/35/36 A, B, C | |
| 6.4 | Battery voltage / capacity | |
| 6.5 | Battery weight (+/- 5%) | |
| 0.0 | Miscellaneous | |
| 8.1 | Type of drive control | |
| 8.4 | Sound level at the driver's ear according to DIN 12 053 | |

| Metric Manitou ES 412 ET Electrical Pedestrian Q 1200 kg c 600 mm x 683 mm y 1245 mm y 1245 mm 2 874 kg 612 kg / 262 kg 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 11 380 mm b10 517 mm b11 380 mm i1 1870 mm i2 720 mm j380 mm 90 mm |
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| ES 412 ET Electrical Pedestrian Q 1200 kg c 600 mm x 683 mm y 1245 mm y 1245 mm a 874 kg b 612 kg / 262 kg a 612 kg / 262 kg b 2 / 82x50 c 2 / 2 c 2 / 2 c 1/ 125x70 b10 517 mm b11 85 mm i1 1870 mm i2 720 mm b1 800 mm |
| Electrical Pedestrian Q 1200 kg c 600 mm x 683 mm y 1245 mm y 1245 mm x 683 mm y 1245 mm y 1245 mm Polyurethane 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 1 / 125x70 2 / 2 1/1 1300 mm h13 85 mm i1 1870 mm i2 720 mm b1 800 mm |
| Pedestrian Q 1200 kg c 600 mm x 683 mm y 1245 mm y 1245 mm x 674 kg 729 kg / 1342 kg 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 1 / 125x70 2 / 2 1 / 1230x75 517 mm b10 517 mm b11 1870 mm 12 720 mm b13 85 mm b14 800 mm |
| Q 1200 kg c 600 mm x 683 mm y 1245 mm y 1245 mm x 674 kg x 612 kg / 262 kg y 2 / 82x50 x 2 / 2 x 1/125x70 x 2 / 2 x 1/230x75 b10 517 mm b11 385 mm x 1870 mm x 720 mm b1 800 mm |
| c 600 mm x 683 mm y 1245 mm y 1245 mm 874 kg 729 kg / 1342 kg 612 kg / 262 kg 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 1 / 125x70 2 / 2 1 / 1230x75 517 mm b10 517 mm b11 385 mm 11 1870 mm 12 720 mm b1 800 mm |
| x 683 mm y 1245 mm x 874 kg x 729 kg / 1342 kg x 612 kg / 262 kg x 90/yurethane x 2 / 2 x 1/125x70 x 2 / 2 x 1/230x75 x 380 mm x 720 mm x 385 mm x 380 mm |
| y 1245 mm 874 kg 729 kg / 1342 kg 612 kg / 262 kg 729 kg / 1342 kg 612 kg / 262 kg 729 kg / 1342 kg 612 kg / 262 kg 720 kg 72 |
| 874 kg 729 kg / 1342 kg 612 kg / 262 kg 90lyurethane 2 / 82x50 1 / 125x70 2 / 2 11/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| 729 kg / 1342 kg 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 11/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| 729 kg / 1342 kg 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 11/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| 612 kg / 262 kg Polyurethane 2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| Polyurethane 2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| 2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm |
| 2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm |
| 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm 11 1870 mm 12 720 mm b1 800 mm |
| 2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm |
| 1/230x75 b10 517 mm b11 380 mm 11 85 mm 11 1870 mm 12 720 mm b1 800 mm |
| b10 517 mm b11 380 mm b13 85 mm l1 1870 mm l2 720 mm b1 800 mm |
| b11 380 mm I 85 mm I1 1870 mm I2 720 mm b1 800 mm |
| h13 85 mm l1 1870 mm l2 720 mm b1 800 mm |
| I1 1870 mm I2 720 mm b1 800 mm |
| I1 1870 mm I2 720 mm b1 800 mm |
| l2 720 mm b1 800 mm |
| b1 800 mm |
| |
| s / e / l 180 mm / 60 mm / 1150 mm |
| |
| b3 680 m |
| m1 35 mm |
| m2 20 mm |
| Wa 1400 mm |
| |
| 6 km/h / 6 km/h |
| 0.10 m/s / 0.16 m/s |
| 0.14 m/s / 0.12 m/s |
| 8 % / 10 % |
| Electro magnetic |
| |
| 1 kW |
| 2 kW |
| DIN 43535-B |
| 24 V / 160 Ah |
| 150 kg |
| |
| AC |
| 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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