Technical sheet:

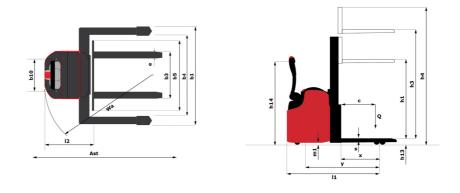
ES 412 LE





| | | 23-12 22 3 | ES 412 EE Orcated on August 2, 2020 at 2.00 AW 010 | | |
|-------|---|------------|--|--|--|
| | Technical characteristics | | Metric | | |
| 1.1 | Manufacturer | | Manitou | | |
| 1.2 | Model Name | | ES 412 LE | | |
| 1.3 | Power source | | Electrical | | |
| 1.4 | Operator type | | Pedestrian | | |
| 1.5 | Max. capacity | Q | 1200 kg | | |
| 1.6 | Load center of gravity | С | 600 mm | | |
| 1.8 | Distance from Load backrest to center of rear axle | x | 683 mm | | |
| 1.9 | Wheelbase | у | 1245 mm | | |
| | Weight | | | | |
| 2.1 | Service weight | | 924 kg | | |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 743 kg / 1381 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 / 82x70 | | |
| 3.4 | Number of castor wheels / Size of castor wheels | | 1/1 | | |
| 3.4 | Number of stabilizer wheels / Size of the stabilizer wheels | | 2 / 125x50 | | |
| 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 | 978 mm | | |
| | Dimensions | | | | |
| 4.15 | Fork height in low position | h13 | 85 mm | | |
| 4.19 | Overall length | l1 | 1870 mm | | |
| 4.20 | Length to face of forks | 12 | 720 mm | | |
| 4.21 | Overall width | b1 | 1106 mm | | |
| 4.22 | Forks section / width / length | s / e / I | 60 mm / 180 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 | 20 mm | | |
| 4.9 | Height tiller max. | h14 | 1050 mm | | |
| | Performances | | | | |
| 5.1 | Travel speed (laden / unladen) | | 6 km/h / 6 km/h | | |
| 5.2 | Lifting speed (laden / unladen) | | 0.12 m/s / 0.24 m/s | | |
| 5.3 | Lowering speed (laden / unladen) | | 0.30 m/s / 0.20 m/s | | |
| 5.8 | Max Gradeability (laden / unladen) | | 8 % / 10 % | | |
| 5.10 | Service brake | | Electro magnetic | | |
| | Engine | | geuc | | |
| 6.1 | Drive motor rating S2 60 min | | 1.20 kW | | |
| 6.2 | Lift motor rating at S3 15% | | 3 kW | | |
| 6.3 | Battery according to DIN 43531/35/36 A, B, C | | DIN 43535-B | | |
| 6.4 | Battery voltage / capacity | | 24 V / 180 Ah | | |
| 6.5 | Battery weight (+/- 5%) | | 176 kg | | |
| 3.0 | Miscellaneous | | 170 kg | | |
| 8.1 | Type of drive control | | AC | | |
| 8.4 | Sound level at the driver's ear according to DIN 12 053 | | 65 dB | | |
| 0.4 | Sound level at the dilver's ear according to Dilv 12 033 | | OD CO | | |

ES 412 LE - Dimensional drawing

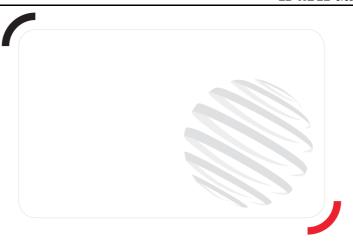


Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD) | | FVD 29 | FVD 34 | FVD 38 |
|---------------------------------|----|--------|--------|--------|
| h1 - Mast lowered height | mm | 1940 | 2190 | 2390 |
| h3 - Mast lifting height | mm | 2940 | 3440 | 3840 |
| h4 - Mast extended height | mm | 3365 | 3865 | 4265 |
| Residual capacity at max height | kg | 1200 | 1200 | 1200 |

| Free Lift Duplex (FLD) | | FLD 29 | FLD 34 |
|---------------------------------|----|--------|--------|
| h1 - Mast lowered height | mm | 1940 | 2190 |
| h2 - Mast free lift | mm | 1510 | 1760 |
| h3 - Mast lifting height | mm | 2935 | 3435 |
| h4 - Mast extended height | mm | 3365 | 3865 |
| Residual capacity at max height | kg | 1200 | 1200 |
| Height at may canacity | mm | 2035 | 2/125 |

| Free Lift Triplex (FLT) | FLT 42 | |
|---------------------------------|--------|------|
| h1 - Mast lowered height | mm | 1960 |
| h2 - Mast free lift | mm | 1470 |
| h3 - Mast lifting height | mm | 4240 |
| h4 - Mast extended height | mm | 4730 |
| Residual capacity at max height | kg | 1200 |
| Height at max capacity | mm | 4240 |





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