

Technical sheet :

# ES 312 EASY

OXYGEN



 **MANITOU**  
HANDLING YOUR WORLD

| Technical characteristics |   |           | Metric                   |
|---------------------------|---|-----------|--------------------------|
| 1.1                       | Manufacturer  |           | MANITOU                  |
| 1.2                       | Model Name  |           | ES 312 Easy              |
| 1.3                       | Power source  |           | Electrical - Lithium     |
| 1.4                       | Operator type   |           | Walking alongside        |
| 1.5                       | Max. capacity   | Q         | 1200 kg                  |
| 1.6                       | Load center of gravity  | c         | 600 mm                   |
| 1.8                       | Load distance, centre of drive axle to fork (low/raised) - Low position / Raised position | x         | 700 mm / 700 mm          |
| 1.9                       | Wheelbase   | y         | 1318 mm                  |
| Weight                    |   |           |                          |
| 2.1                       | Service weight  |           | 1020 kg                  |
| 2.2                       | Weight on front axle (laden) / rear axle (laden)  |           | 625 kg / 1595 kg         |
| 2.3                       | Weight on front axle (Unladen) / rear axle (Unladen)                                      |           | 685 kg / 335 kg          |
| Wheels                    |   |           |                          |
| 3.1                       | Tires type  |           | Polyurethane cushion     |
| 3.3                       | Number of load wheels / Size of load wheels   |           | 4 / 83x80                |
| 3.4                       | Number of stabilizer wheels / Size of the stabilizer wheels                               |           | 1 / 140x55               |
| 3.5                       | Number of front wheels / rear wheels  |           | 2 / 4                    |
| 3.5.2                     | Number of drive wheels / Size of drive wheels   |           | 1/250x80                 |
| 3.6                       | Front wheel gauge   | b10       | 510 mm                   |
| 3.7                       | Rear wheel gauge  | b11       | 385 mm                   |
| Dimensions                |   |           |                          |
| 4.10                      | Height of wheel arms  | h8        | 80 mm                    |
| 4.15                      | Fork height in low position   | h13       | 90 mm                    |
| 4.19                      | Overall length  | l1        | 1934 mm                  |
| 4.20                      | Length to face of forks   | l2        | 784 mm                   |
| 4.21                      | Overall width   | b1        | 800 mm                   |
| 4.22                      | Forks section / width / length  | s / e / l | 60 mm / 185 mm / 1150 mm |
| 4.24                      | Fork carriage width   | b3        | 680 mm                   |
| 4.25                      | Forks spread  | b5        | 570 mm                   |
| 4.32                      | Ground clearance at centre of wheelbase   | m2        | 25 mm                    |
| 4.33                      | Aisle Width for pallets 1000 x 1200 crossways   | Ast       | 2420 mm                  |
| 4.34                      | Aisle width for 800 x 1200 pallet lengthways  | Ast       | 2390 mm                  |
| 4.35                      | Turning radius  | Wa        | 1550 mm                  |
| 4.9                       | Height tiller min. / max.   | h14       | 790 mm / 1205 mm         |
| Performances              |   |           |                          |
| 5.1                       | Travel speed (laden / unladen)  |           | 6 km/h / 6 km/h          |
| 5.2                       | Lifting speed (laden / unladen)   |           | 0.22 m/s / 0.47 m/s      |
| 5.3                       | Lowering speed (laden / unladen)  |           | 0.45 m/s / 0.40 m/s      |
| 5.8                       | Max Gradeability (laden / unladen)  |           | 8 % / 16 %               |
| 5.10                      | Service brake   |           | Electro magnetic         |
| Engine                    |   |           |                          |
| 6.1                       | Drive motor rating S2 60 min  |           | 2.20 kW                  |
| 6.2                       | Lift motor rating at S3 15%   |           | 4.20 kW                  |
| 6.4                       | Battery voltage / capacity  |           | 48 V / 105 Ah            |
| 6.5                       | Battery technology  |           | Lithium-ion              |
| 6.5                       | Battery weight (+/- 5%)   |           | 65 kg                    |
| 6.6.1                     | Energy consumption according to DIN EN 16796  |           | 0.55 kWh/h               |

### ES 312 Easy - Dimensional drawing



## Characteristics of masts and residual capacities

| Full Visibility Duplex (FVD)    |    | FVD 30 |
|---------------------------------|----|--------|
| h1 - Mast lowered height        | mm | 1990   |
| h2 - Mast free lift             | mm | 90     |
| h3 - Mast lifting height        | mm | 3000   |
| h4 - Mast extended height       | mm | 3490   |
| Residual capacity at max height | kg | 1200   |
| Height at max capacity          | mm | 3090   |

| Free Lift Triplex (FLT)         |    | FLT 43 |
|---------------------------------|----|--------|
| h1 - Mast lowered height        | mm | 1890   |
| h2 - Mast free lift             | mm | 1425   |
| h3 - Mast lifting height        | mm | 4300   |
| h4 - Mast extended height       | mm | 4780   |
| Residual capacity at max height | kg | 805    |
| Height at max capacity          | mm | 3290   |

## Equipment

| Standard   |
|--|
| Battery - 5.04kWh - Lithium-ion                          |
| Onboard charger - 0.96kW AC - Lithium-ion - Single-phase |
| Pincode - On tiller                                      |
| Polyurethane tandem-load wheels                          |

| Optional   |
|--|
| Cold environment (from -28°C (-18°F))                    |
| External charger - 2.4kW AC - Lithium-ion - Single-phase |
| Key switch entry   |
| Soft polyurethane drive wheel - 75 shore                 |



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