

Technical sheet :

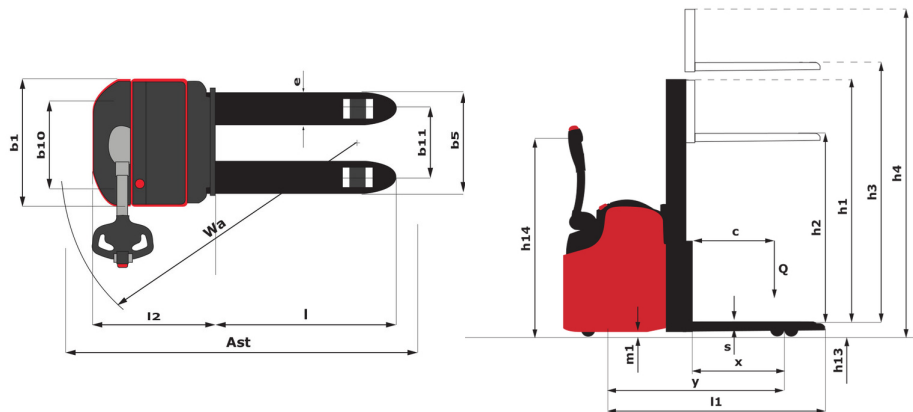
ES 820



 **MANITOU**
HANDLING YOUR WORLD

| Technical characteristics | | | Metric |
|---------------------------|---|-----------|--------------------------|
| 1.1 | Manufacturer | | Manitou |
| 1.2 | Model Name | | ES 820 FR |
| 1.3 | Power source | | Electrical |
| 1.4 | Operator type | | Pedestrian |
| 1.5 | Max. capacity | Q | 2000 kg |
| 1.6 | Load center of gravity | c | 600 mm |
| 1.8 | Distance from Load backrest to center of rear axle | x | 661 mm |
| 1.9 | Wheelbase | y | 1378 mm |
| Weight | | | |
| 2.1 | Service weight | | 1620 kg |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 1180 kg / 2510 kg |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) | | 1125 kg / 495 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 | | 2 / 120x50 |
| 3.5 | Number of front wheels / rear wheels | | 3 / 4 |
| 3.5.2 | Number of drive wheels / Size of drive wheels | | 1/254x100 |
| 3.6 | Front wheel gauge | b10 | 664 mm |
| 3.7 | Rear wheel gauge | b11 | 393 mm |
| Dimensions | | | |
| 4.15 | Fork height in low position | h13 | 85 mm |
| 4.19 | Overall length | l1 | 2048 mm |
| 4.20 | Length to face of forks | l2 | 898 mm |
| 4.21 | Overall width | b1 | 890 mm |
| 4.22 | Forks section / width / length | s / e / l | 70 mm / 200 mm / 1150 mm |
| 4.24 | Fork carriage width | b3 | 700 mm |
| 4.31 | Ground clearance below mast | m1 | 30 mm |
| 4.32 | Ground clearance at centre of wheelbase | m2 | 21 mm |
| 4.35 | Turning radius | Wa | 1591 mm |
| 4.9 | Height tiller min. / max. | h14 / h14 | 975 mm / 1375 mm |
| Performances | | | |
| 5.1 | Travel speed (laden / unladen) | | 6 km/h / 6 km/h |
| 5.2 | Lifting speed (laden / unladen) | | 0.11 m/s / 0.20 m/s |
| 5.3 | Lowering speed (laden / unladen) | | 0.22 m/s / 0.21 m/s |
| 5.8 | Max Gradeability (laden / unladen) | | 6 % / 10 % |
| 5.10 | Service brake | | Electro magnetic |
| Engine | | | |
| 6.1 | Drive motor rating S2 60 min | | 2 kW |
| 6.2 | Lift motor rating at S3 15% | | 4 kW |
| 6.3 | Battery according to DIN 43531/35/36 A, B, C | | Traction |
| 6.4 | Battery voltage / capacity | | 24 V / 315 Ah |
| 6.5 | Battery weight (+/- 5%) | | 275 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 820 - Dimensional drawing



Characteristics of masts and residual capacities

| Central Cylinder Duplex (CCD) | | FVD 29 | FVD 34 |
|---------------------------------|----|--------|--------|
| h1 - Mast lowered height | mm | 1940 | 2190 |
| h3 - Mast lifting height | mm | 2940 | 3440 |
| h4 - Mast extended height | mm | 3365 | 3865 |
| Residual capacity at max height | kg | 1600 | 1300 |

| Central Cylinder Simplex (CCS) | | CCS 15 | CCS 17 |
|---------------------------------|----|--------|--------|
| h1 - Mast lowered height | mm | 1940 | 2190 |
| h2 - Mast free lift | mm | 1510 | 1760 |
| h3 - Mast lifting height | mm | 1510 | 1760 |
| h4 - Mast extended height | mm | 1940 | 2190 |
| Residual capacity at max height | kg | 2000 | 2000 |

| 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 | 1600 | 1300 |

| Free Lift Triplex (FLT) | | FLT 42 | FLT 47 | FLT 54 |
|---------------------------------|----|--------|--------|--------|
| h1 - Mast lowered height | mm | 1900 | 2060 | 2300 |
| h2 - Mast free lift | mm | 1465 | 1625 | 1875 |
| h3 - Mast lifting height | mm | 4245 | 4725 | 5455 |
| h4 - Mast extended height | mm | 4710 | 5190 | 5880 |
| Residual capacity at max height | kg | 750 | 550 | 450 |



Head Office

B.P. 249 - 430 rue de l'Aubinière

44150 Ancenis Cedex - France

Tel: +33 (0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97

www.manitou.com



This publication provides a description of the configuration versions and options for Manitou products, which may differ for equipment. The equipment presented in this brochure may be part of a series, as an option, or it may not be available, depending on the versions. Manitou reserves the right, at any time and without notice, to amend the specifications described and represented. The specifications provided do not bind the manufacturer. For more details, please contact your Manitou agent. This is not a contractually binding document. The presentation of the products is not contractually binding. List of specifications non-exhaustive. The logos as well as the visual identity of the company are owned by Manitou and cannot be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are only provided for consultation and information purposes.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,668,399 euros - 857 802 508 RCS Nantes