Technical sheet :

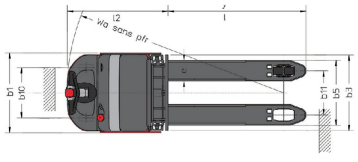
# ES 420 DL PFR 9

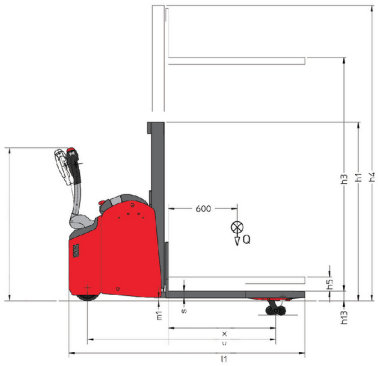


MANITOU
HANDLING YOUR WORLD

| | Technical characteristics | | Metric | Imperial |
|---|---|---|---|---|
| 1.1 | Manufacturer | | Manitou | Manitou |
| 1.2 | Model Name | | ES 420 DL PFR 9 | ES 420 DL PFR 9 |
| 1.3 | Power source | | Electrical | Electrical |
| 1.4 | Operator type | | Scope | Scope |
| 1.5 | Max. capacity | Q | 2000 kg | 4409 lb |
| 1.51 | Nominal capacity on wrapover forks | Q | 1000 kg | 2205 lb |
| 1.52 | Nominal capacity in double stacking 1 / 2 | Q / Q | 1000 kg + 1000 kg | 2205 lb + 2205 lb |
| 1.6 | Load center of gravity | c | 600 mm | 24 in |
| 1.8 | Distance from Load backrest to center of rear axle | x | 997 mm | 39 in |
| 1.9 | Wheelbase | y | 1704 mm | 67 in |
| | **Weight** | | | |
| 2.1 | Service weight | | 1060 kg | 2337 lb |
| 2.2 | Weight on front axle (laden) / rear axle (laden) | | 1485 kg / 1590 kg | 3274 lb / 3505 lb |
| 2.3 | Weight on front axle (Unladen) / rear axle (Unladen) | | 765 kg / 310 kg | 1687 lb / 683 lb |
| | **Wheels** | | | |
| 3.1 | Tires type | | Polyurethane | Polyurethane |
| 3.3 | Number of load wheels / Size of load wheels | | 4 / 82x68 | 4 / 82x68 |
| 3.4 | Number of stabilizer wheels / Size of the stabilizer wheels | | 2 / 120x50 | 2 / 120x50 |
| 3.5 | Number of front wheels / rear wheels | | 2 / 4 | 2 / 4 |
| 3.5.2 | Number of drive wheels / Size of drive wheels | | 1/230x75 | 1/230x75 |
| 3.6 | Front wheel gauge | b10 | 435 mm | 17 in |
| 3.7 | Rear wheel gauge | b11 | 380 mm | 15 in |
| | **Dimensions** | | | |
| 4.19 | Overall length | l1 | 2140 mm | 84 in |
| 4.20 | Length to face of forks | l2 | 950 mm | 37 in |
| 4.21 | Overall width | b1 | 688 mm | 27 in |
| 4.22 | Forks section / width / length | s / e / l | 60 mm / 80 mm / 1190 mm | 2 in / 3 in / 47 in |
| 4.24 | Fork carriage width | b3 | 650 mm | 26 in |
| 4.31 | Ground clearance below mast | m1 | 25 mm | 0.98 in |
| 4.32 | Ground clearance at centre of wheelbase | m2 | 30 mm | 1 in |
| 4.35 | Turning radius | Wa | 2010 mm | 79 in |
| 4.9 | Height tiller min. / max. | h14 / h14 | 1045 mm / 1275 mm | 41 in / 50 in |
| | **Performances** | | | |
| 5.1 | Travel speed (laden / unladen) | | 8.50 km/h / 9 km/h | 5 mph / 6 mph |
| 5.2 | Lifting speed (laden / unladen) | | 0.11 m/s / 0.18 m/s | 0.36 ft/s / 0.59 ft/s |
| 5.3 | Lowering speed (laden / unladen) | | 0.20 m/s / 0.24 m/s | 0.66 ft/s / 0.79 ft/s |
| 5.8 | Max Gradeability (laden / unladen) | | 9 % / 18 % | 9 % / 18 % |
| 5.10 | Service brake | | Electro magnetic | Electro magnetic |
| | **Engine** | | | |
| 6.1 | Drive motor rating S2 60 min | | 1.70 kW | 1.70 kW |
| 6.2 | Lift motor rating at S3 15% | | 2 kW | 2 kW |
| 6.3 | Battery according to DIN 43531/35/36 A, B, C | | No | No |
| 6.4 | Battery voltage / capacity | | 24 V / 270 Ah | 24 V / 270 Ah |
| 6.5 | Battery weight (+/- 5%) | | 245 kg | 540 lb |
| | **Miscellaneous** | | | |
| 8.1 | Type of drive control | | AC | AC |
| 8.4 | Sound level at the driver's ear according to DIN 12 053 | | 65 dB | 65 dB |

## ES 420 DL PFR 9 - Dimensional drawing



# Characteristics of masts and residual capacities

| Free Lift Triplex (FLT) | | FLT 21 |
|---|---|---|
| h1 - Mast lowered height | in (mm) | 43.3 (1100) |
| h3 - Mast lifting height | in (mm) | 83.1 (2110) |
| h4 - Mast extended height | in (mm) | 97.8 (2485) |
| Residual capacity at max height | lb (kg) | 2205 (1000) |

**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