

Technical sheet :

# ***ES 420 DL PFR 9***

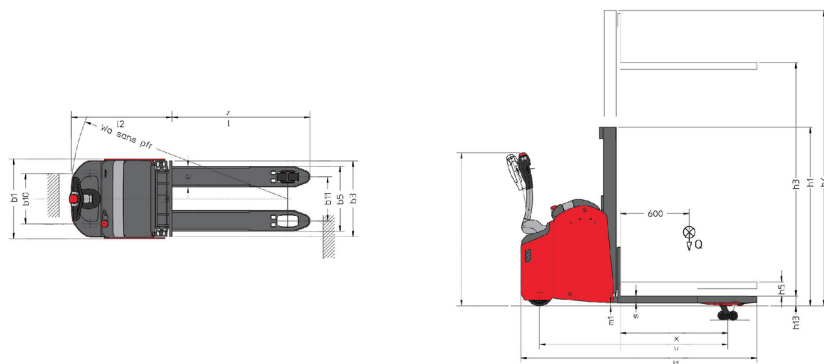
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 **MANITOU**  
HANDLING YOUR WORLD

	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		Carried	Carried
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
	<b>Weight</b>			
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
	<b>Wheels</b>			
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
	<b>Dimensions</b>			
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
	<b>Performances</b>			
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
	<b>Engine</b>			
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
	<b>Miscellaneous</b>			
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)



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