

Technical sheet :

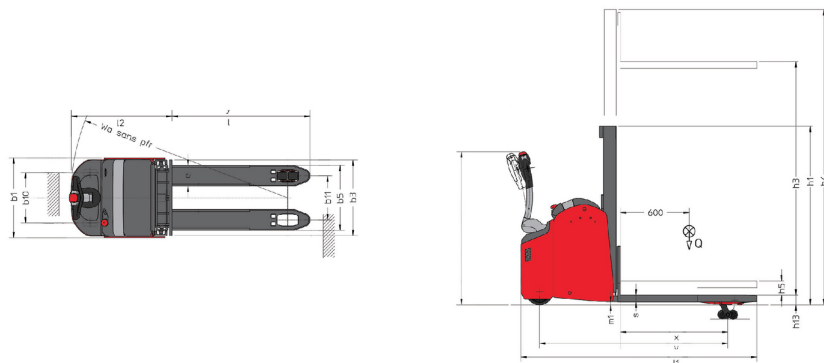
# ES 420 DL

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Technical characteristics			Metric	Imperial
1.1	Manufacturer		Manitou	Manitou
1.2	Model Name		ES 420 DL	ES 420 DL
1.3	Power source		Electrical	Electrical
1.4	Operator type		Pedestrian	Pedestrian
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	937 mm	37 in
1.9	Wheelbase	y	1644 mm	65 in
Weight				
2.1	Service weight		1020 kg	2249 lb
2.2	Weight on front axle (laden) / rear axle (laden)		1460 kg / 1560 kg	3219 lb / 3439 lb
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		730 kg / 290 kg	1609 lb / 639 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		3 / 4	3 / 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				
4.15	Fork height in low position	h13	85 mm	3 in
4.19	Overall length	l1	2060 mm	81 in
4.20	Length to face of forks	l2	870 mm	34 in
4.21	Overall width	b1	688 mm	27 in
4.22	Forks section / width / length	s / e / l	160 mm / 180 mm / 1190 mm	6 in / 7 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	1870 mm	74 in
4.9	Height tiller min. / max.	h14 / h14	866 mm / 1320 mm	34 in / 52 in
Performances				
5.1	Travel speed (laden / unladen)		5.50 km/h / 6 km/h	3 mph / 4 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)		10 % / 20 %	10 % / 20 %
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 - Dimensional drawing



# Characteristics of masts and residual capacities

Central Cylinder Duplex (CCD)		CCD 17	CCD 21
h1 - Mast lowered height	in (mm)	53.7 (1365)	61.4 (1560)
h3 - Mast lifting height	in (mm)	67.9 (1725)	83.7 (2125)
h4 - Mast extended height	in (mm)	86 (2185)	101.6 (2580)
Residual capacity at max height	lb (kg)	2205 (1000)	2205 (1000)

Central Cylinder Simplex (CCS)		CCS 17
h1 - Mast lowered height	in (mm)	85.8 (2180)
h2 - Mast free lift	in (mm)	67.9 (1725)
h3 - Mast lifting height	in (mm)	67.9 (1725)
h4 - Mast extended height	in (mm)	85.8 (2180)
Residual capacity at max height	lb (kg)	2205 (1000)



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