

Technical sheet :

# **ES 410 LE**

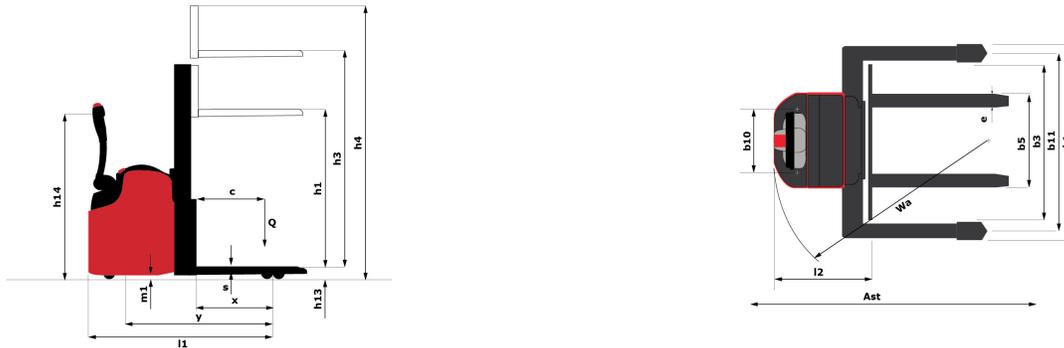
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Technical characteristics			Metric	Imperial
1.1	Manufacturer		Manitou	Manitou
1.2	Model Name		ES 410 LE	ES 410 LE
1.3	Power source		Battery	Battery
1.4	Operator type		Pedestrian	Pedestrian
1.5	Max. capacity	Q	1000 kg	2205 lbs
1.6	Load centre of gravity	c	600 mm	23.622 in
1.8	Distance from Load backrest to center of rear axle	x	723 mm	2372 ft 1 in
1.9	Wheelbase	y	1285 mm	50.591 in
Weight				
2.1	Service Weight		920 kg	2028 lbs
2.2	Weight on front axle (laden) / rear axle (laden)		728 kg / 1192 kg	1605 lbs / 2628 lbs
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		644 kg / 276 kg	1420 lbs / 608 lbs
Wheels				
3.1	Tyres type		Polyurethane	Polyurethane
3.2	Number of drive wheels / Size of drive wheels		1x230x75	1x230x75
3.3	Number of load wheels / Size of load wheels		2 / 78x78	2 / 78x78
3.4	Number of castor wheels		1	1
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		2 / 125x50	2 / 125x50
3.5	Number of front wheels / rear wheels		2 / 2	2 / 2
3.6	Front wheel gauge	b10	517 mm	20.354 in
3.7	Rear wheel gauge	b11	978 mm	38.504 in
Dimensions				
4.2	Height mast Lowered	h1	1940 mm	76.378 in
4.4	Lifting Height	h3	2930 mm	115.354 in
4.5	Height mast extended	h4	3365 mm	132.48 in
4.9	Height tiller up min./max. / max.	h14 / h14	1050 mm / 1050 mm	41.339 in / 41.339 in
4.15	Fork height in low position	h13	85 mm	3.346 in
4.19	Overall length	l1	1870 mm	73.622 in
4.20	Length to face of forks	l2	720 mm	28.346 in
4.21	Overall width	b1	1106 mm	43.543 in
4.22	Forks section / width / length	s / e / l	30 mm / 100 mm / 1150 mm	1.181 in / 3.937 in / 45.276 in
4.26	Distance between wheel arms/loading surfaces	b4	850 mm	33.465 in
4.23	Fork carriage ISO 2328 (class/form) A/B		2B	2B
4.24	Fork carriage width	b3	720 mm	2362 ft 2 in
4.31	Ground clearance below mast	m1	35 mm	114 ft 10 in
4.32	Ground clearance at centre of wheelbase	m2	20 mm	65 ft 7 in
4.34	Aisle Width for pallets 800 x 1200 crossways	Ast	2347 mm	92.402 in
4.35	Turning radius	Wa	1465 mm	4806 ft 5 in
Performances				
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h	3.7 mph / 3.7 mph
5.2	Lifting speed (laden / unladen)		0.14 m/s / 0.24 m/s	0.46 ft/s / 0.79 ft/s
5.3	Lowering speed (laden / unladen)		0.3 m/s / 0.2 m/s	0.98 ft/s / 0.66 ft/s
5.8	Max Gradeability (laden / unladen)		8 % / 10 %	8 % / 10 %

Performances				
5.9	Service brake		Electro magnetic	Electro magnetic
Engine				
6.1	Drive motor rating S2 60 min		1.2 kW	1.2 kW
6.2	Lift motor rating at S3 15%		3 kW	3 kW
6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43535-B	DIN 43535-B
6.4	Battery / Batteries capacity		24 V / 180 Ah	24 V / 180 Ah
6.5	Battery weight (+/- 5%)		176 kg	388 lbs
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(A)	65 dB(A)

# Dimensional drawing

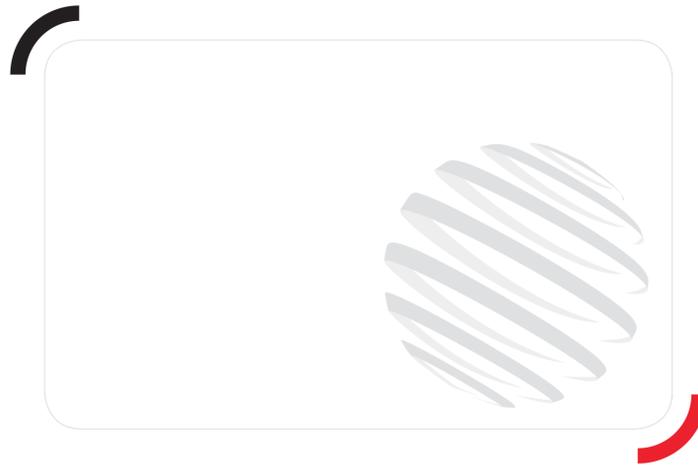


## Characteristics of masts and residual capacities

Full Visibility Duplex		FVD 29	FVD 34	FVD 38
h3 - Mast lifting height	mm	2940	3440	3840
h1 - Mast height lowered	mm	1940	2190	2390
h4 - Mast height extended	mm	3365	3865	4265
Residual capacity at max height	kg	1000	850	750
Residual capacity without attachment (Industrial load chart)	kg		900	1000

Free Lift Duplex		FLD 29	FLD 34
h3 - Mast lifting height	mm	2935	3435
h2 - Mast free lift	mm	1510	1760
h1 - Mast height lowered	mm	1940	2190
h4 - Mast height extended	mm	3365	3865
Residual capacity at max height	kg	1000	900

Free Lift Triplex		FLT 42
h3 - Mast lifting height	mm	4240
h2 - Mast free lift	mm	1470
h1 - Mast height lowered	mm	1960
h4 - Mast height extended	mm	4240
Residual capacity at max height	kg	550



Siège Social

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](http://www.manitou.com)



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