

Technical sheet :

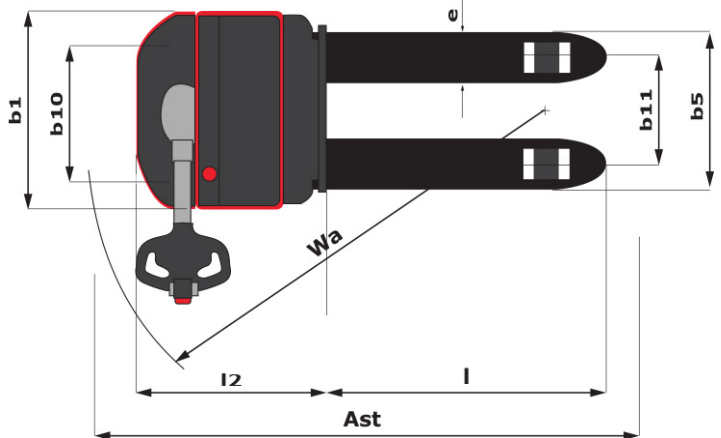
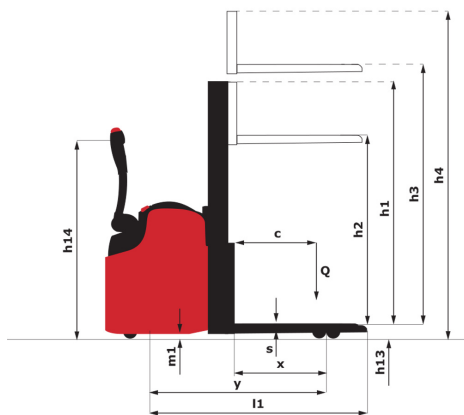
# **ES 410**

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	Technical characteristics		Metric
1.1	Manufacturer		Manitou
1.2	Model Name		ES 410
1.3	Power source		Battery
1.4	Operator type		Pedestrian
1.5	Max. capacity	Q	1000 kg
1.6	Load centre of gravity	c	600 mm
1.8	Distance from Load backrest to center of rear axle	x	723 mm
1.9	Wheelbase	y	1285 mm
	<b>Weight</b>		
2.1	Service weight		870 kg
2.2	Weight on front axle (laden) / rear axle (laden)		709 kg / 1161 kg
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		609 kg / 261 kg
	<b>Wheels</b>		
3.1	Tyres type		Polyurethane
3.5.2	Number of drive wheels - Size of drive wheels		1 x 230x75
3.3	Number of load wheels - Size of load wheels		2 x 125x50
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		1 x 125x50
3.5	Number of front wheels / rear wheels		2 / 2
3.6	Front wheel gauge	b10	517 mm
3.7	Rear wheel gauge	b11	380 mm
	<b>Dimensions</b>		
4.2	Mast height lowered	h1	1930 mm
4.4	Mast lifting height *	h3	2930 mm
4.5	Mast height extended	h4	3365 mm
4.9	Height tiller up max.	h14	1050 mm
4.15	Fork height in low position	h13	85 mm
4.19	Overall length	l1	1870 mm
4.20	Length to face of forks	l2	720 mm
4.21	Overall width	b1	800 mm
4.22	Forks section / width / length	s / e / l	180 mm x 60 mm / 1150 mm
4.24	Fork carriage width	b3	680 mm
4.31	Ground clearance below mast	m1	35 mm
4.32	Ground clearance at centre of wheelbase	m2	20 mm
4.33	Aisle width for 1000 x 1200 pallet widthways	Ast	2200 mm
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2296 mm
4.35	Turning radius	Wa	1465 mm
	<b>Performances</b>		
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h
5.2	Lifting speed (laden / unladen)		0.11 m/s / 0.16 m/s
5.3	Lowering speed (laden / unladen)		0.14 m/s / 0.12 m/s
5.7	Gradeability (laden / unladen)		8 % / 10 %
5.10	Service brake		Electro magnetic
	<b>Engine</b>		
6.1	Drive motor rating S2 60 min		1 kW
6.2	Lift motor rating at S3 15%		2 kW
6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43535-B
6.4	Battery / Batteries capacity		24 V - 160 Ah
6.5	Battery weight (+/- 5%)		143 kg
	<b>Miscellaneous</b>		
8.1	Type of drive control		AC
8.4	Sound level at the driver's ear according to DIN 12 053		65 dB(A)

## Dimensional drawing

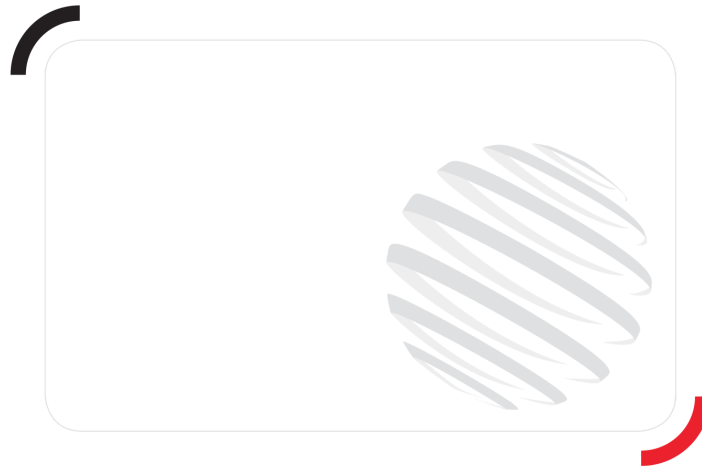


## Characteristics of masts and residual capacities

Full Visibility Duplex		FVD 29	FVD 34	FVD 38
h1 - Height mast lowered *	mm	1940	2129000	2390
h3 - Lifting Height	mm	2940	3440000	3840
h4 - Height mast extended *	mm	3365	3865000	4265
Residual capacity without attachment (Industrial load chart)	kg	1000	850	850

Free Lift Duplex		FLD 29	FLD 34
h1 - Height mast lowered *	mm	1940	2190
h2 - Free lift	mm	1510	1760
h3 - Lifting Height	mm	2935	3435
h4 - Height mast extended *	mm	3653	3865
Residual capacity without attachment (Industrial load chart)	kg	1000	850

Free Lift Triplex		FLT 42
h1 - Height mast lowered *	mm	1960
h2 - Free lift	mm	1470
h3 - Lifting Height	mm	4240
h4 - Height mast extended *	mm	4730
Residual capacity without attachment (Industrial load chart)	kg	550



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