

Technical sheet :

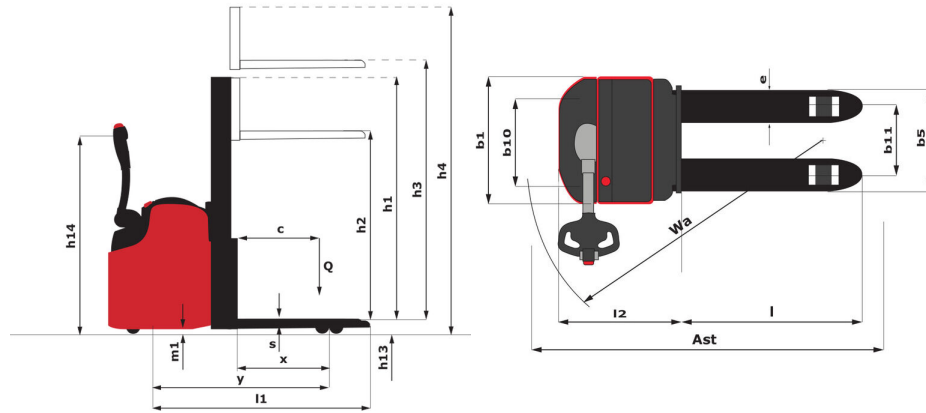
# **ES 412 ET**

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	Technical characteristics		Metric
1.1	Manufacturer		Manitou
1.2	Model Name		ES 412 ET
1.3	Power source		Battery
1.4	Operator type		Pedestrian
1.5	Max. capacity	Q	1200 kg
1.6	Load centre of gravity	c	600 mm
1.8	Distance from Load backrest to center of rear axle	x	683 m
1.9	Wheelbase	y	1245 mm
<b>Weight</b>			
2.1	Service weight		874 kg
2.2	Weight on front axle (laden) / rear axle (laden)		729 kg / 1342 kg
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		612 kg / 262 kg
<b>Wheels</b>			
3.1	Tyres type		Polyurethane
3.5.2	Number of drive wheels / Size of drive wheels		1x230x75
3.3	Number of load wheels / Size of load wheels		2 / 82x50
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		1 / 125x70
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>			
4.15	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 / 60 mm / 1150 mm
4.24	Fork carriage width	b3	680 m
4.31	Ground clearance below mast	m1	35 m
4.32	Ground clearance at centre of wheelbase	m2	20 m
4.35	Turning radius	Wa	1400 mm
<b>Performances</b>			
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h
5.2	Lifting speed (laden / unladen)		0.10 m/s / 0.16 m/s
5.3	Lowering speed (laden / unladen)		0.14 m/s / 0.12 m/s
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%)		150 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)

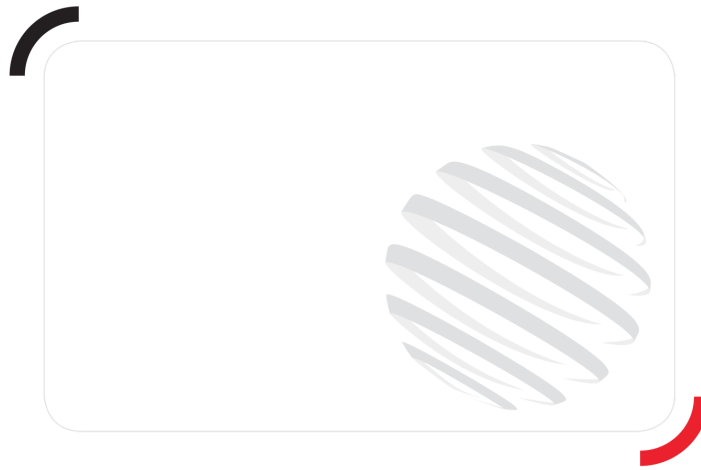
## ES 412 ET - Dimensional drawing



## Characteristics of masts and residual capacities

Central Cylinder Duplex		CCD 26	CCD 29	CCD 34
h3 - Mast lifting height *	mm	2930000	2930000	2930000
h2 - Mast free lift *	mm	140	140	140
h1 - Mast height lowered	mm	1930	1930	1930
h4 - Mast height extended	mm	3365000	3365000	3365000
Residual capacity without attachment (Industrial load chart)	kg	1200	1200	900

Central Cylinder Simplex		CCS 15	CCS 17
h3 - Mast lifting height *	mm	2930000	2930000
h2 - Mast free lift *	mm	140	140
h1 - Mast height lowered	mm	1930	1930
h4 - Mast height extended	mm	3365000	3365000
Residual capacity without attachment (Industrial load chart)	kg	1200	1200



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