

Technical sheet :

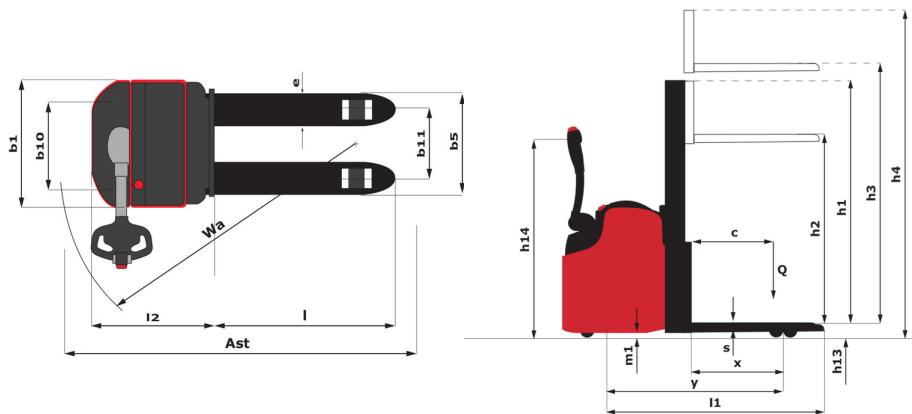
# **ES 412 ET**



 **MANITOU**  
HANDLING YOUR WORLD

Technical characteristics		Metric	
1.1	Manufacturer	Manitou	
1.2	Model Name	ES 412 ET	
1.3	Power source	Electrical - Lead	
1.4	Operator type	Pedestrian	
1.5	Max. capacity	1200 kg	
1.6	Load center of gravity	600 mm	
1.8	Distance from Load backrest to center of rear axle	684 mm	
1.9	Wheelbase	1246 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	Tires type	Polyurethane cushion	
3.3	Number of load wheels / Size of load wheels	2 / 82x68	
3.4	Number of stabilizer wheels / Size of the stabilizer wheels	1 / 125x70	
3.5	Number of front wheels / rear wheels	2 / 2	
3.5.2	Number of drive wheels / Size of drive wheels	1/230x75	
3.6	Front wheel gauge	517 mm	
3.7	Rear wheel gauge	380 mm	
<b>Dimensions</b>			
4.15	Fork height in low position	86 mm	
4.19	Overall length	1875 mm	
4.20	Length to face of forks	724 mm	
4.21	Overall width	832 mm	
4.22	Forks section / width / length	180 mm / 60 mm / 1150 mm	
4.24	Fork carriage width	680 m	
4.31	Ground clearance below mast	35 mm	
4.32	Ground clearance at centre of wheelbase	30 mm	
4.35	Turning radius	1470 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	
5.8	Max 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 voltage / capacity	24 V / 160 Ah	
6.5	Battery weight (+/- 5%)	165 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	

## ES 412 ET - Dimensional drawing



## Characteristics of masts and residual capacities

Central Cylinder Duplex (CCD)	CCD 26	CCD 29	CCD 34
h1 - Mast lowered height mm	1780	1930	2180
h2 - Mast free lift mm	140	140	140
h3 - Mast lifting height mm	2630	2930	3430
h4 - Mast extended height mm	3065	3365	3865
Residual capacity at max height kg	1200	1200	1000

Central Cylinder Simplex (CCS)	CCS 15	CCS 17
h1 - Mast lowered height mm	1930	2180
h2 - Mast free lift mm	1500	1750
h3 - Mast lifting height mm	1500	1750
h4 - Mast extended height mm	1930	2180
Residual capacity at max height kg	1200	1200



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