Technical sheet :



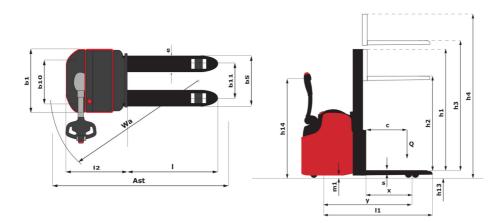




	Technical characteristics	
1.1	Manufacturer	
1.2	Model Name	
1.3	Power source	
1.4	Operator type	
1.5	Max. capacity	
1.6	Load center of gravity	
1.8	Distance from Load backrest to center of rear axle	
1.9	Wheelbase	
	Weight	
2.1	Service weight	
2.1	Weight on front axle (laden) / rear axle (laden)	
2.2		
2.3	Weight on front axle (Unladen) / rear axle (Unladen) Wheels	
0.1		
3.1	Tires type	
3.3	Number of load wheels / Size of load wheels	
3.4	Number of stabilizer wheels / Size of the stabilizer wheels	
3.5	Number of front wheels / rear wheels	
3.5.2	Number of drive wheels / Size of drive wheels	
3.6	Front wheel gauge	
3.7	Rear wheel gauge	
	Dimensions	
4.15	Fork height in low position	
4.19	Overall length	
4.20	Length to face of forks	
4.21	Overall width	
4.22	Forks section / width / length	
4.24	Fork carriage width	
4.31	Ground clearance below mast	
4.32	Ground clearance at centre of wheelbase	
4.35	Turning radius	
	Performances	
5.1	Travel speed (laden / unladen)	
5.2	Lifting speed (laden / unladen)	
5.3	Lowering speed (laden / unladen)	
5.8	Max Gradeability (laden / unladen)	
5.10	Service brake	
	Engine	
6.1	Drive motor rating S2 60 min	
6.2	Lift motor rating at S3 15%	
6.3	Battery according to DIN 43531/35/36 A, B, C	
6.4	Battery voltage / capacity	
6.5	Battery weight (+/- 5%)	
0.0	Miscellaneous	
8.1	Type of drive control	
8.4	Sound level at the driver's ear according to DIN 12 053	

Metric       Manitou       ES 412 ET       Electrical       Pedestrian       Q     1200 kg       c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       2     874 kg       612 kg / 262 kg     612 kg / 262 kg       Polyurethane     2 / 82x50       1 / 125x70     2 / 2       11     380 mm       b10     517 mm       b11     380 mm       i1     1870 mm       i2     720 mm       j380 mm     90 mm
ES 412 ET       Electrical       Pedestrian       Q     1200 kg       c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       a     874 kg       b     612 kg / 262 kg       a     612 kg / 262 kg       b     2 / 82x50       c     2 / 2       c     2 / 2       c     1/ 125x70       b10     517 mm       b11     85 mm       i1     1870 mm       i2     720 mm       b1     800 mm
Electrical       Pedestrian       Q     1200 kg       c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       x     683 mm       y     1245 mm       y     1245 mm       Polyurethane     612 kg / 262 kg       Polyurethane     2 / 82x50       1 / 125x70     2 / 2       1 / 125x70     2 / 2       1/1     1300 mm       h13     85 mm       i1     1870 mm       i2     720 mm       b1     800 mm
Pedestrian       Q     1200 kg       c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       x     674 kg       729 kg / 1342 kg     612 kg / 262 kg       Polyurethane     2 / 82x50       1 / 125x70     2 / 2       1 / 125x70     2 / 2       1 / 1230x75     517 mm       b10     517 mm       b11     1870 mm       12     720 mm       b13     85 mm       b14     800 mm
Q     1200 kg       c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       x     674 kg       x     612 kg / 262 kg       y     2 / 82x50       x     2 / 2       x     1/125x70       x     2 / 2       x     1/230x75       b10     517 mm       b11     385 mm       x     1870 mm       x     720 mm       b1     800 mm
c     600 mm       x     683 mm       y     1245 mm       y     1245 mm       874 kg     729 kg / 1342 kg       612 kg / 262 kg     612 kg / 262 kg       Polyurethane     2 / 82x50       1 / 125x70     2 / 2       1 / 125x70     2 / 2       1 / 1230x75     517 mm       b10     517 mm       b11     385 mm       11     1870 mm       12     720 mm       b1     800 mm
x     683 mm       y     1245 mm       x     874 kg       x     729 kg / 1342 kg       x     612 kg / 262 kg       x     90/yurethane       x     2 / 2       x     1/125x70       x     2 / 2       x     1/230x75       x     380 mm       x     720 mm       x     385 mm       x     380 mm
y 1245 mm 874 kg 729 kg / 1342 kg 612 kg / 262 kg 729 kg / 1342 kg 612 kg / 262 kg 729 kg / 1342 kg 612 kg / 262 kg 720 kg 72
874 kg   729 kg / 1342 kg   612 kg / 262 kg   90lyurethane   2 / 82x50   1 / 125x70   2 / 2   11/230x75   b10   517 mm   b11   380 mm   11   1870 mm   12   720 mm   b1   800 mm
729 kg / 1342 kg   612 kg / 262 kg   Polyurethane   2 / 82x50   1 / 125x70   2 / 2   11/230x75   b10   517 mm   b11   380 mm   11   1870 mm   12   720 mm   b1   800 mm
729 kg / 1342 kg   612 kg / 262 kg   Polyurethane   2 / 82x50   1 / 125x70   2 / 2   11/230x75   b10   517 mm   b11   380 mm   11   1870 mm   12   720 mm   b1   800 mm
612 kg / 262 kg   Polyurethane   2 / 82x50   1 / 125x70   2 / 2   1/230x75   b10   517 mm   b11   380 mm   11   1870 mm   12   720 mm   b1   800 mm
Polyurethane       2 / 82x50       1 / 125x70       2 / 2       1/230x75       b10       517 mm       b11       380 mm       11       1870 mm       12       720 mm       b1       800 mm
2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm
2 / 82x50 1 / 125x70 2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm
1 / 125x70   2 / 2   1/230x75   b10   517 mm   b11   380 mm   11   1870 mm   12   720 mm   b1   800 mm
2 / 2 1/230x75 b10 517 mm b11 380 mm h13 85 mm l1 1870 mm l2 720 mm b1 800 mm
1/230x75   b10 517 mm   b11 380 mm   11 85 mm   11 1870 mm   12 720 mm   b1 800 mm
b10     517 mm       b11     380 mm       b13     85 mm       l1     1870 mm       l2     720 mm       b1     800 mm
b11     380 mm       I     85 mm       I1     1870 mm       I2     720 mm       b1     800 mm
h13     85 mm       l1     1870 mm       l2     720 mm       b1     800 mm
I1     1870 mm       I2     720 mm       b1     800 mm
I1     1870 mm       I2     720 mm       b1     800 mm
l2 720 mm b1 800 mm
b1 800 mm
s / e / l 180 mm / 60 mm / 1150 mm
b3 680 m
m1 35 mm
m2 20 mm
Wa 1400 mm
6 km/h / 6 km/h
0.10 m/s / 0.16 m/s
0.14 m/s / 0.12 m/s
8 % / 10 %
Electro magnetic
1 kW
2 kW
DIN 43535-B
24 V / 160 Ah
150 kg
AC
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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