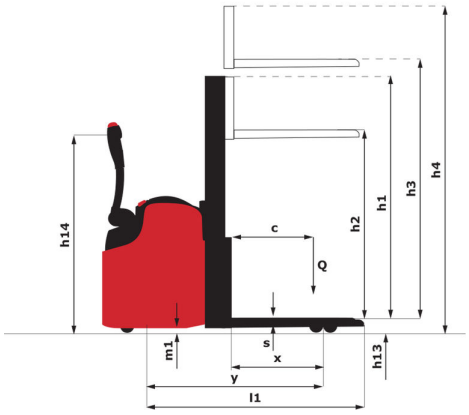
Technical sheet :

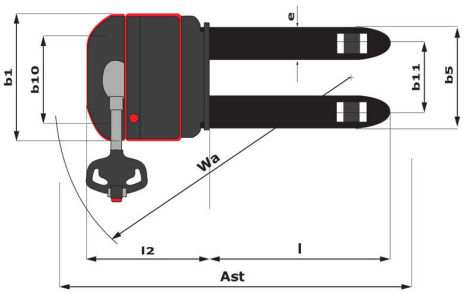
ES 414

MANITOU
HANDLING YOUR WORLD

	Technical characteristics		Metric
1.1	Manufacturer		Manitou
1.2	Model Name		ES 414
1.3	Power source		Battery
1.4	Operator type		Pedestrian
1.5	Max. capacity	Q	1400 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
	Weight		
2.1	Service weight		911 kg
2.2	Weight on front axle (laden) / rear axle (laden)		808 kg / 1505 kg
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		638 kg / 273 kg
	Wheels		
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 / 82x70
3.4	Number of castor wheels		1
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		2 / 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
	Dimensions		
4.2	Height mast lowered *	h1	1940 mm
4.4	Lifting Height	h3	2940 mm
4.5	Height mast 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	60 mm / 180 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 pallets 1000 x 1200 crossways	Ast	2200 mm
4.35	Turning radius	Wa	1400 mm
	Performances		
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h
5.2	Lifting speed (laden / unladen)		0.10 m/s / 0.24 m/s
5.3	Lowering speed (laden / unladen)		0.30 m/s / 0.20 m/s
5.8	Max Gradeability (laden / unladen)		8 % / 10 %
5.10	Service brake		Electro magnetic
	Engine		
6.1	Drive motor rating S2 60 min		1.20 kW
6.2	Lift motor rating at S3 15%		3 kW
6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43535-B
6.4	Battery / Batteries capacity		24 V / 250 Ah
6.5	Battery weight (+/- 5%)		213 kg
	Miscellaneous		
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
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	1250	1050	850
Residual capacity without attachment (Industrial load chart)	kg	1250	1050	850
Height at max capacity	mm	2700	2700	2700

Free Lift Duplex		FLD 29	FLD 34
h3 - Mast lifting height *	mm	2935	3435
h2 - Mast free lift *	mm	1420	1670
h1 - Mast height lowered	mm	1940	2190
h4 - Mast height extended	mm	3365	3865
Residual capacity at max height	kg	1250	1000
Residual capacity without attachment (Industrial load chart)	kg	1250	1000
Height at max capacity	mm	2700	2700

Free Lift Triplex		FLT 42
h3 - Mast lifting height *	mm	4240
h2 - Mast free lift *	mm	1380
h1 - Mast height lowered	mm	1890
h4 - Mast height extended	mm	4678
Residual capacity at max height	kg	700
Residual capacity without attachment (Industrial load chart)	kg	700
Height at max capacity	mm	2700

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