

MANILEC

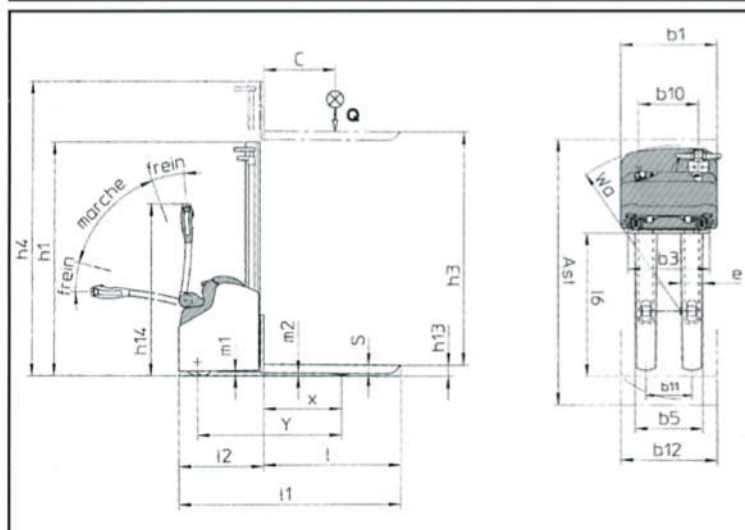
ES 410/412
ES 414

Electric stacker



 **MANITOU**

		MANITOU						
		ES 410	ES 412	ES 414				
Designation	1.1	Manufacturer						
	1.2	Model type						
	1.3	Powered by: battery, diesel, petrol, LPG, mains electric		Battery	Battery	Battery		
	1.4	Driving method: manual, walk-along, upright, seated, preparation		Pedestrian				
	1.5	Nominal capacity	Q	t	1	1,2	1,4	
	1.6	Height to centre of gravity	C	mm	600	600	600	
	1.8	Distance from fork face to track wheels (in raised pos'n)	x	mm	723	723	723	
	1.9	Wheelbase (drive axle to track wheels), top/bottom position	y	mm	1285	1245	1245	
	Weights	2.1	Weight in working order		kg	870	874	920
2.2		Axle loading when load (front/rear)		kg	709/1161	729/1342	783/1537	
2.3		Axle loading when unload (front/rear)		kg	609/261	612/262	644/276	
Wheels	3.1	Tyres (front/rear)			Polyurethane	Polyurethane	Polyurethane	
	3.2	Front wheel dimensions (dia x width)		mm	230x75	230x75	230x75	
	3.3	Rear wheel dimensions (dia x width)		mm	78x78	82x70	82x70	
	3.4	Outrigger dimensions		mm	125x50	125x50	125x50	
	3.5	Number of wheels front / rear (x = drive wheel)				1x1/2	1x1/4	1x1/4
	3.6	Track centres, front	b10	mm	517	517	517	
	3.7	Track centres, rear	b11	mm	380	380	380	
Dimensions	4.2	Height with mast lowered	h1	mm	See table of masts			
	4.3	Normal free lift	h2	mm	See table of masts			
	4.4	Standard lift	h3	mm	See table of masts			
	4.5	Height with mast raised	h4	mm	See table of masts			
	4.6	Initial lift	h5	mm	-	-	-	
	4.9	Handle height in driving position	h14	mm	1425	1425	1425	
	4.15	Fork height when lowered	h13	mm	90 ⁺⁵	90 ⁺⁵	90 ⁺⁵	
	4.19	Overall length	l1	mm	1870	1870	1870	
	4.20	Length to front face of forks	l2	mm	720	720	720	
	4.21	Overall width	b1	mm	800	800	800	
	4.22	Fork dimensions (thick x wide x long)	s/e/l	mm	75x180x1150	75x180x1150	75x180x1150	
	4.24	Width of fork carriage	b3	mm	680	680	680	
	4.25	Fork Pitch	b5	mm	560/495	560/495	560/495	
	4.26	Width between carrying arms (min./max.)	b4	mm	-	-	-	
	4.31	Ground clearance under mast	m1	mm	35	35	35	
4.32	Ground clearance at centre of wheelbase	m2	mm	20	20	20		
4.33	Aisle width with 1000x1200 pallet widthwise (l6xb12)	AST	mm	-	-	-		
4.34	Aisle width with 800x1200 pallet lengthwise (b12xl6)	AST	mm	2287	2222	2222		
4.35	Turning radius (top/bottom position)	Wa	mm	1465	1400	1400		
Performance	5.1	Travel speed load/unload		km/h	4,8/5	4,7/5	4,6/5	
	5.2	Lifting speed, load/unload		m/s	0,14/0,24	0,12/0,24	0,10/0,24	
	5.3	Lowering speed, load/unload		m/s	0,30/0,20	0,30/0,20	0,30/0,20	
	5.8	Maximum slope laden/unladen (S2 5 min.)		%	8/10	8/10	7/10	
	5.10	Drive brake			Electromagnetic	Electromagnetic	Electromagnetic	
	5.11	Parking brake			Handle release	Handle release	Handle release	
Drive unit	6.1	Drive motor power (S2 60 min)		kW	1	1	1	
	6.2	Lift motor power (S3 10%)		kW	3	3	3	
	6.3	Battery type as per standard DIN 43531/35/36,A,B,C			Traction	Traction	Traction	
	6.4	Battery voltage and capacity	V/Ah		24/180 or 240	24/180 or 240	24/180 or 240	
	6.5	Battery weight (+/- 5%)		kg	180/225	180/225	180/225	
Misc	8.1	Speed control			Sepex Mosfet Variator			
	8.4	Average sound level at driver's ears (translation)	dB (A)		65	65	65	



Mast ref.	Height of raised fork		Height of stacker with mast		
	dim. in mm	maxi h3+h13	free h2	lowered h1	raised h4
Simplex S15		1510	1510	1940	1940
	S17	1760	1760	2190	2190
Duplex D29		2940	/	1940	3365
	D34	3440	/	2190	3865
	D38	3840	/	2390	4265
D43		4340	/	2640	4765
	DLL29	2940	1510	1940	3365
Free lift duplex DLL34		3440	1760	2190	3865
	DLL38	3840	1960	2390	4265
	DLL43	4340	2210	2640	4765



MANITOU may, without notice, improve and modify the products presented in this data sheet.