

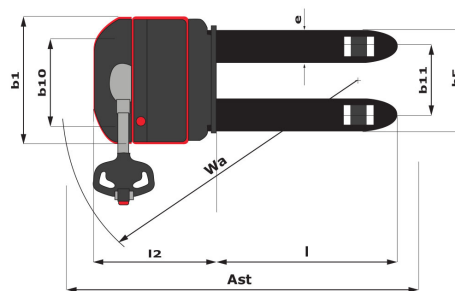
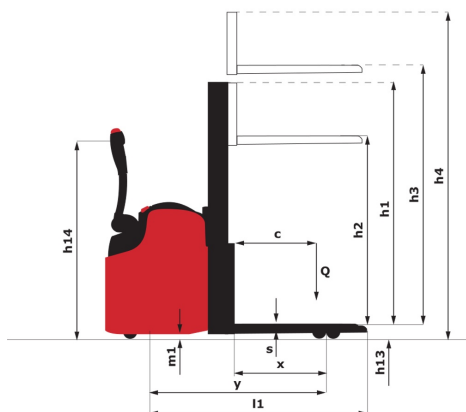
Technical sheet :

ES 820



Technical characteristics			Metric
1.1	Manufacturer		Manitou
1.2	Model Name		ES 820 FR
1.3	Power source		Battery
1.4	Operator type		Pedestrian
1.5	Max. capacity	Q	2000 kg
1.6	Load centre of gravity	c	600 mm
1.8	Distance from Load backrest to center of rear axle	x	661 m
1.9	Wheelbase	y	1378 mm
Weight			
2.1	Service weight		1620 kg
2.2	Weight on front axle (laden) / rear axle (laden)		1180 kg / 2510 kg
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		1125 kg / 495 kg
Wheels			
3.1	Tyres type		Polyurethane
3.5.2	Number of drive wheels - Size of drive wheels		1 x 254x100
3.3	Number of load wheels - Size of load wheels		2 x 82x68
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		2 x 120x50
3.5	Number of front wheels / rear wheels		3 / 4
3.6	Front wheel gauge	b10	664 mm
3.7	Rear wheel gauge	b11	393 mm
Dimensions			
4.2	Mast height lowered	h1	1940 mm
4.4	Mast lifting height *	h3	2845 mm
4.5	Mast height extended	h4	3395 m
4.9	Height tiller up min. / max.	h14 / h14	975 mm / 1375 mm
4.15	Fork height in low position	h13	85 mm
4.19	Overall length	l1	2048 m
4.20	Length to face of forks	l2	898 mm
4.21	Overall width	b1	890 mm
4.22	Forks section / width / length	s / e / l	70 mm x 200 mm / 1150 mm
4.24	Fork carriage width	b3	700 m
4.31	Ground clearance below mast	m1	30 m
4.32	Ground clearance at centre of wheelbase	m2	21 mm
4.33	Aisle width for 1000 x 1200 pallet widthways	Ast	2469 mm
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2448 mm
4.35	Turning radius	Wa	1591 mm
Performances			
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h
5.2	Lifting speed (laden / unladen)		0.11 m/s / 0.20 m/s
5.3	Lowering speed (laden / unladen)		0.22 m/s / 0.21 m/s
5.7	Gradeability (laden / unladen)		6 % / 10 %
5.10	Service brake		Electro magnetic
Engine			
6.1	Drive motor rating S2 60 min		2 kW
6.2	Lift motor rating at S3 15%		4 kW
6.3	Battery according to DIN 43531/35/36 A, B, C		Traction
6.4	Battery / Batteries capacity		24 V - 315 Ah
6.5	Battery weight (+/- 5%)		275 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

Central Cylinder Simplex		CCS 15	CCS 17
h2 - Free lift	mm	1510	1760
h1 - Height mast lowered *	mm	1940	2190
h3 - Lifting Height	mm	1510	1760
h4 - Height mast extended *	mm	1940	2190
Residual capacity without attachment (Industrial load chart)	kg	2000	2000

Central Cylinder Duplex		FVD 29	FVD 34
h2 - Free lift	mm	2940	
h1 - Height mast lowered *	mm	1940	2190
h3 - Lifting Height	mm		3440
h4 - Height mast extended *	mm	3365	3865
Residual capacity without attachment (Industrial load chart)	kg	1600	1300

Free Lift Duplex		FLD 29	FLD 34
h2 - Free lift	mm	1510	1760
h1 - Height mast lowered *	mm	1940	2190
h3 - Lifting Height	mm	2935	3435
h4 - Height mast extended *	mm	3365	3865
Residual capacity without attachment (Industrial load chart)	kg	1600	1300

Free Lift Triplex		FLT 42	FLT 47	FLT 54
h2 - Free lift	mm	1465	1625	1880
h1 - Height mast lowered *	mm	1900	2060	2300
h3 - Lifting Height	mm	4245	4725	5460
h4 - Height mast extended *	mm	4710	5190	5880
Residual capacity without attachment (Industrial load chart)	kg	750	550	450



Siège Social

430 rue de l'Aubinière - 44150 Ancenis Cedex - France

Tel: +33(0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97

www.manitou.com



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