

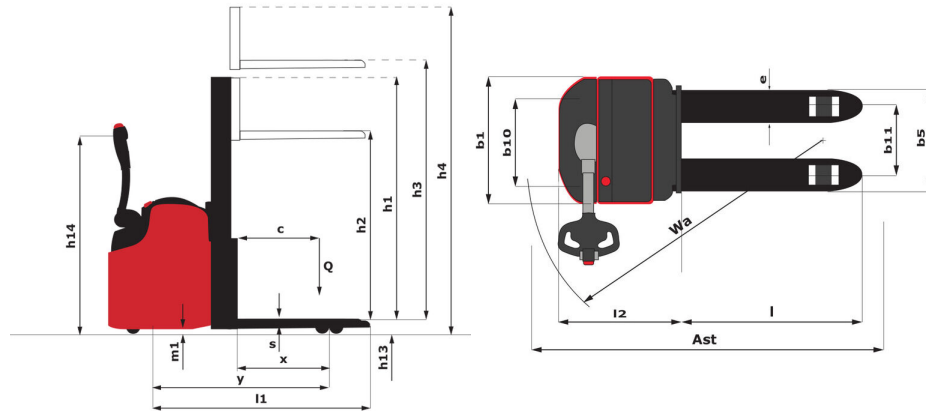
Technical sheet :

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		1x254x100
3.3	Number of load wheels / Size of load wheels		2 / 82x68
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		2 / 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		
4.9	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 / 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
4.35	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
5.10	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)

ES 820 - Dimensional drawing



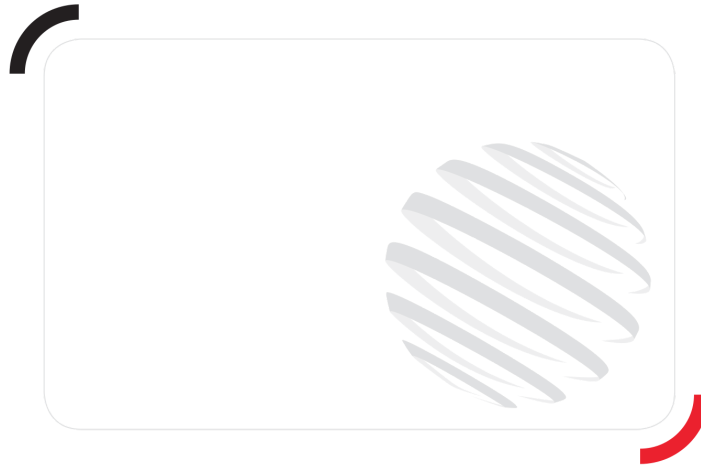
Characteristics of masts and residual capacities

Central Cylinder Simplex		CCS 15	CSS 17
h3 - Mast lifting height *	mm	2845	2845
h1 - Mast height lowered	mm	1940	1940
h4 - Mast height extended	mm	3395	3395
Residual capacity without attachment (Industrial load chart)	kg	2000	2000

Central Cylinder Duplex		FVD 29	FVD 34
h3 - Mast lifting height *	mm	2845	2845
h1 - Mast height lowered	mm	1940	1940
h4 - Mast height extended	mm	3395	3395
Residual capacity without attachment (Industrial load chart)	kg	1600	1300

Free Lift Duplex		FLD 29	FLD 34
h3 - Mast lifting height *	mm	2845	2845
h1 - Mast height lowered	mm	1940	1940
h4 - Mast height extended	mm	3395	3395
Residual capacity without attachment (Industrial load chart)	kg	1600	1300

Free Lift Triplex		FLT 42	FLT 47	FLT 54
h3 - Mast lifting height *	mm	2845	2845	2845
h1 - Mast height lowered	mm	1940	1940	1940
h4 - Mast height extended	mm	3395	3395	3395
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



This brochure describes versions and configuration options for Manitou products which may be fitted with different equipment. The equipment described in this brochure may be standard, optional or not available depending on version. Manitou reserves the right to change the specifications shown and described at any time and without prior warning. The manufacturer is not liable for the specifications given. For more information, contact your Manitou dealer. Non-contractual document. Product descriptions may differ from actual products. List of specifications is not comprehensive. The logos and visual identity of the company are the property of Manitou and may not be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are provided for information only.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,668,399 euros - 857 802 508 RCS Nantes