Technical sheet :

ES 820

MANITOU
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	Technical characteristics		Metric
1.1	Manufacturer		Manitou
1.2	Model Name		ES 820 FR
1.3	Power source		Electrical
1.4	Operator type		Pedestrian
1.5	Max. capacity	Q	2000 kg
1.6	Load center of gravity	c	600 mm
1.8	Distance from Load backrest to center of rear axle	x	661 mm
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	Tires type		Polyurethane
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
3.5.2	Number of drive wheels / Size of drive wheels		1/254x100
3.6	Front wheel gauge	b10	664 mm
3.7	Rear wheel gauge	b11	393 mm
	Dimensions		
4.15	Fork height in low position	h13	82 mm
4.19	Overall length	l1	2048 mm
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 / 185 mm / 1150 mm
4.24	Fork carriage width	b3	700 m
4.31	Ground clearance below mast	m1	30 mm
4.32	Ground clearance at centre of wheelbase	m2	25 mm
4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2469 mm
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2448 mm
4.35	Turning radius	Wa	1591 mm
4.9	Height tiller min. / max.	h14 / h14	975 mm / 1375 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)		0.21 m/s / 0.22 m/s
5.8	Max 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 voltage / capacity		24 V / 315 Ah
6.5	Battery weight (+/- 5%)		273 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

ES 820 - Dimensional drawing

Characteristics of masts and residual capacities

Central Cylinder Duplex (CCD)		FVD 29	FVD 34
h1 - Mast lowered height	mm	1940	2190
h3 - Mast lifting height	mm	2940	3440
h4 - Mast extended height	mm	3365	3865
Residual capacity at max height	kg	1600	1300

Central Cylinder Simplex (CCS)		CCS 15	CCS 17
h1 - Mast lowered height	mm	1940	2190
h2 - Mast free lift	mm	1510	1760
h3 - Mast lifting height	mm	1510	1760
h4 - Mast extended height	mm	1940	2190
Residual capacity at max height	kg	2000	2000

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	mm	1940	2190
h2 - Mast free lift	mm	1510	1760
h3 - Mast lifting height	mm	2935	3435
h4 - Mast extended height	mm	3365	3865
Residual capacity at max height	kg	1600	1300

Free Lift Triplex (FLT)		FLT 42	FLT 47	FLT 54
h1 - Mast lowered height	mm	1900	2060	2300
h2 - Mast free lift	mm	1465	1625	1875
h3 - Mast lifting height	mm	4245	4725	5455
h4 - Mast extended height	mm	4710	5190	5880
Residual capacity at max height	kg	750	550	450

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Head Office
B.P. 249 - 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