

Technical sheet :

# **ES 616 LI**

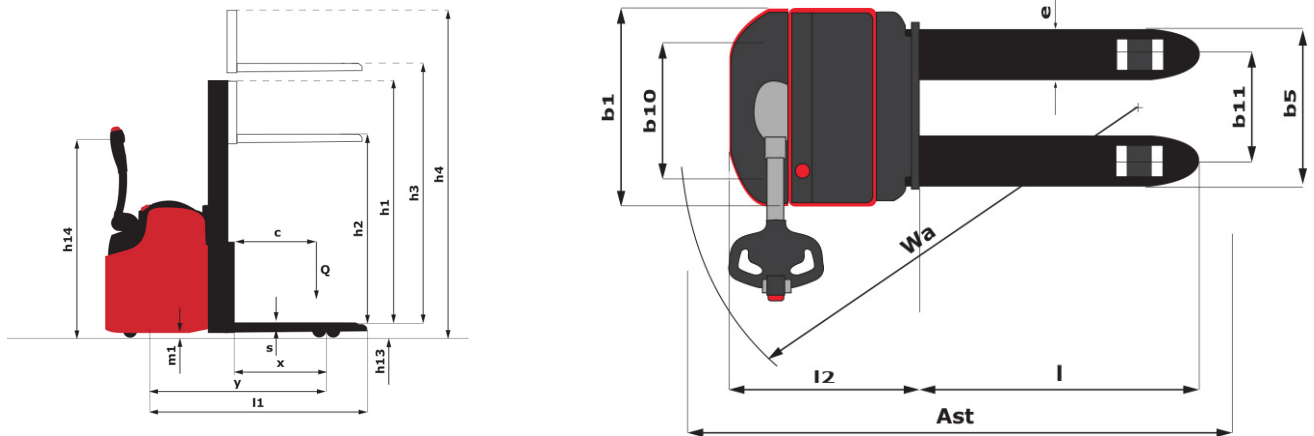
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Technical characteristics			Metric	Imperial
1.1	Manufacturer		Manitou	Manitou
1.2	Model Name		ES 616 LI	ES 616 LI
1.3	Power source		Battery	Battery
1.4	Operator type		Pedestrian	Pedestrian
1.5	Max. capacity	Q	1600 kg	3527 lbs
1.6	Load centre of gravity	c	600 mm	23.622 in
1.8	Distance from Load backrest to center of rear axle	x	848 mm	33.386 in
1.9	Wheelbase	y	1492 mm	58.74 in
Weight				
2.1	Service Weight		1327 kg	2926 lbs
2.2	Weight on front axle (laden) / rear axle (laden)		1246 kg / 1670 kg	2747 lbs / 3682 lbs
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		1033 kg / 290 kg	2277 lbs / 639 lbs
Wheels				
3.1	Tyres type		Bandage	Bandage
3.2	Number of drive wheels - Size of drive wheels		1 x 230x70	1 x 230x70
3.3	Number of load wheels - Size of load wheels		2 x 140x60	2 x 140x60
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		1 x 140x60	1 x 140x60
3.5	Number of front wheels / rear wheels		2 / 4	2 / 4
3.6	Front wheel gauge	b10	529 mm	20.827 in
3.7	Rear wheel gauge	b11	380 mm	14.961 in
Dimensions				
4.2	Mast height lowered	h1	1953 mm	76.89 in
4.4	Mast lifting height	h3	2935 mm	115.551 in
4.5	Mast height extended	h4	3390 mm	11122 ft 1 in
4.9	Height tiller up min./max. / max.	h14 / h14	750 mm / 1250 mm	29.528 in / 49.213 in
4.15	Fork height in low position	h13	86 mm	3.386 in
4.19	Overall length	l1	2174 mm	85.591 in
4.20	Length to face of forks	l2	976 mm	38.425 in
4.21	Overall width	b1	800 mm	31.496 in
4.22	Forks section / width / length	s / e / l	60 mm x 185 mm x 1190 mm	2.362 in x 7.283 in x 46.85 in
4.24	Fork carriage width	b3	700 mm	2296 ft 7 in
4.32	Ground clearance at centre of wheelbase	m2	30 mm	1.181 in
4.33	Aisle width for 1000 x 1200 pallet widthways	Ast	2653 mm	104.449 in
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2568 mm	101.102 in
4.35	Turning radius	Wa	1588 mm	62.52 in
Performances				
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h	3.7 mph / 3.7 mph
5.2	Lifting speed (laden / unladen)		0.18 m/s / 0.3 m/s	0.59 ft/s / 0.98 ft/s
5.3	Lowering speed (laden / unladen)		0.27 m/s / 0.22 m/s	0.89 ft/s / 0.72 ft/s
5.7	Gradeability - laden / unladen		7 % / 10 %	7 % / 10 %
5.9	Service brake		Electro magnetic	Electro magnetic
Engine				
6.1	Drive motor rating S2 60 min		1.5 kW	1.5 kW

	Engine			
6.2	Lift motor rating at S3 15%		3 kW	3 kW
6.3	Battery according to DIN 43531/35/36 A, B, C		DIN 43535-B	DIN 43535-B
6.4	Battery / Batteries capacity		24 V - 180 Ah	24 V - 180 Ah
6.5	Battery weight (+/- 5%)		189 kg	417 lbs
	Miscellaneous			
8.1	Type of drive control		AC	AC
8.4	Sound level at the driver's ear according to DIN 12 053		65 dB(A)	65 dB(A)

## Dimensional drawing



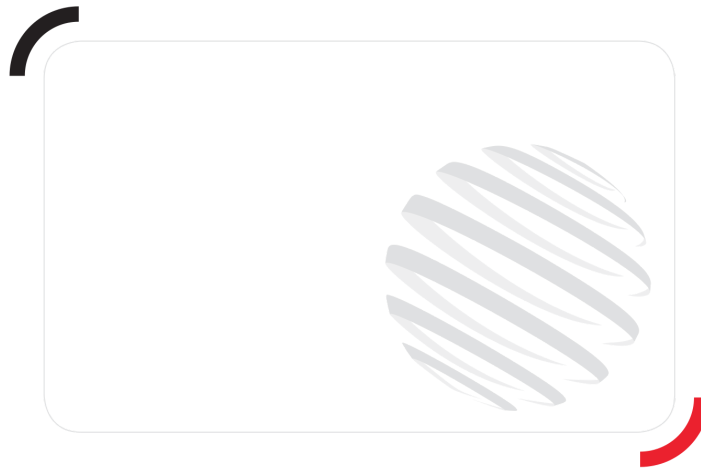
## Characteristics of masts and residual capacities

Central Cylinder Simplex		CCS 15	CCS 17
h2 - Free lift	mm	1506	1756
h1 - Height mast Lowered	mm	1953	2203
h3 - Lifting Height	mm	1505	1755
h4 - Height mast extended	mm	1960	2210
Residual capacity without attachment (Industrial load chart)	kg	1600	1600

Full Visibility Duplex		FVD 29	FVD 34	FVD 38
h1 - Height mast Lowered	mm	1953	2203	2403
h3 - Lifting Height	mm	2935	3435	3835
h4 - Height mast extended	mm	3390	3890	4290
Residual capacity without attachment (Industrial load chart)	kg	1300	1000	700

Free Lift Duplex		FLD 29	FLD 34
h2 - Free lift	mm	1506	1756
h1 - Height mast Lowered	mm	1953	2203000
h3 - Lifting Height	mm	2930	3430
h4 - Height mast extended	mm	3385	3885
Residual capacity without attachment (Industrial load chart)	kg	1300	1000

Free Lift Triplex		FLT 42	FLT 47	FLT 54
h2 - Free lift	mm	1466	1626	1875
h1 - Height mast Lowered	mm	1911	2071000	2300
h3 - Lifting Height	mm	4245	4725	5455
h4 - Height mast extended	mm	4723	5203	5880
Residual capacity without attachment (Industrial load chart)	kg	600	470	450



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