

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		Electrical	Electrical
1.4	Operator type		Pedestrian	Pedestrian
1.5	Max. capacity	Q	1600 kg	3527 lb
1.6	Load center of gravity	c	600 mm	24 in
1.8	Distance from Load backrest to center of rear axle	x	848 mm	33 in
1.9	Wheelbase	y	1492 mm	59 in
Weight				
2.1	Service weight		1327 kg	2926 lb
2.2	Weight on front axle (laden) / rear axle (laden)		1246 kg / 1670 kg	2747 lb / 3682 lb
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		1033 kg / 290 kg	2277 lb / 639 lb
Wheels				
3.1	Tires type		Bandage	Bandage
3.3	Number of load wheels / Size of load wheels		2 / 140x60	2 / 140x60
3.4	Number of stabilizer wheels / Size of the stabilizer wheels		1 / 140x60	1 / 140x60
3.5	Number of front wheels / rear wheels		2 / 4	2 / 4
3.5.2	Number of drive wheels / Size of drive wheels		1/230x70	1/230x70
3.6	Front wheel gauge	b10	529 mm	21 in
3.7	Rear wheel gauge	b11	380 mm	15 in
Dimensions				
4.6	Initial lift	h5	110 mm	4 in
4.15	Fork height in low position	h13	86 mm	3 in
4.19	Overall length	l1	2174 mm	86 in
4.20	Length to face of forks	l2	976 mm	38 in
4.21	Overall width	b1	800 mm	31 in
4.22	Forks section / width / length	s / e / l	60 mm / 185 mm / 1190 mm	2 in / 7 in / 47 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 in
4.33	Aisle Width for pallets 1000 x 1200 crossways	Ast	2520 mm	99 in
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2435 mm	96 in
4.35	Turning radius	Wa	1588 mm	63 in
4.9	Height tiller min. / max.	h14 / h14	750 mm / 1250 mm	30 in / 49 in
Performances				
5.1	Travel speed (laden / unladen)		6 km/h / 6 km/h	4 mph / 4 mph
5.2	Lifting speed (laden / unladen)		0.18 m/s / 0.30 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
5.8	Max Gradeability (laden / unladen)		7 % / 10 %	7 % / 10 %
5.10	Service brake		Electro magnetic	Electro magnetic
Engine				
6.1	Drive motor rating S2 60 min		1.50 kW	1.50 kW
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 voltage / capacity		24 V / 180 Ah	24 V / 180 Ah
6.5	Battery weight (+/- 5%)		189 kg	417 lb
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	65 dB

## ES 616 LI - Dimensional drawing



# Characteristics of masts and residual capacities

Central Cylinder Simplex (CCS)		CCS 15	CCS 17
h1 - Mast lowered height	in (mm)	76.9 (1953)	86.7 (2203)
h2 - Mast free lift	in (mm)	59.3 (1506)	69.1 (1756)
h3 - Mast lifting height	in (mm)	59.3 (1506)	69.1 (1756)
h4 - Mast extended height	in (mm)	77.2 (1960)	87 (2210)
Residual capacity at max height	lb (kg)	3527 (1600)	3527 (1600)

Full Visibility Duplex (FVD)		FVD 29	FVD 34	FVD 38
h1 - Mast lowered height	in (mm)	76.9 (1953)	86.7 (2203)	94.6 (2403)
h3 - Mast lifting height	in (mm)	115.6 (2936)	135.3 (3436)	151 (3836)
h4 - Mast extended height	in (mm)	133.5 (3390)	153.1 (3890)	168.9 (4290)
Residual capacity at max height	lb (kg)	2976 (1350)	2425 (1100)	1874 (850)

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	in (mm)	76.9 (1953)	86.7 (2203)
h2 - Mast free lift	in (mm)	59.3 (1506)	69.1 (1756)
h3 - Mast lifting height	in (mm)	115.4 (2931)	135.1 (3431)
h4 - Mast extended height	in (mm)	133.3 (3385)	153 (3885)
Residual capacity at max height	lb (kg)	2976 (1350)	2425 (1100)

Free Lift Triplex (FLT)		FLT 42	FLT 47	FLT 54
h1 - Mast lowered height	in (mm)	75.2 (1911)	81.5 (2071)	91.1 (2315)
h2 - Mast free lift	in (mm)	57.7 (1466)	64 (1626)	74 (1880)
h3 - Mast lifting height	in (mm)	167.2 (4246)	186.1 (4726)	215 (5460)
h4 - Mast extended height	in (mm)	185.9 (4723)	204.8 (5203)	232.1 (5895)
Residual capacity at max height	lb (kg)	1477 (670)	1102 (500)	992 (450)



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