Technical sheet :

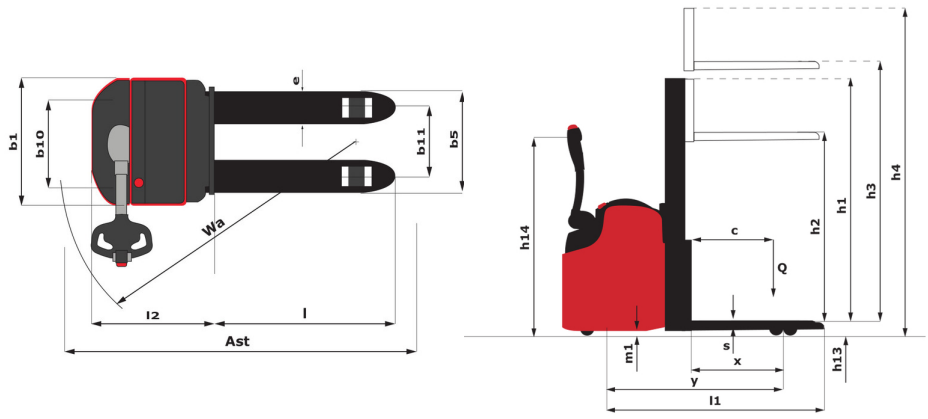
ES 616



MANITOU
HANDLING YOUR WORLD

	Technical characteristics		Metric	Imperial
1.1	Manufacturer		Manitou	Manitou
1.2	Model Name		ES 616	ES 616
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	687 mm	27 in
1.9	Wheelbase	y	1250 mm	49 in
	Weight			
2.1	Service weight		1327 kg	2926 lb
2.2	Weight on front axle (laden) / rear axle (laden)		1064 kg / 1620 kg	2346 lb / 3571 lb
2.3	Weight on front axle (Unladen) / rear axle (Unladen)		851 kg / 240 kg	1876 lb / 529 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 / 2	2 / 2
3.5.2	Number of drive wheels / Size of drive wheels		1/230x70	1/230x70
3.6	Front wheel gauge	b10	529 m	1735 ft 7 in
3.7	Rear wheel gauge	b11	380 mm	15 in
	Dimensions			
4.15	Fork height in low position	h13	85 mm	3 in
4.19	Overall length	l1	1910 mm	75 in
4.20	Length to face of forks	l2	761 mm	30 in
4.21	Overall width	b1	800 mm	31 in
4.22	Forks section / width / length	s / e / l	60 mm / 185 mm / 1150 mm	2 in / 7 in / 45 in
4.24	Fork carriage width	b3	700 mm	28 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	2464 mm	97 in
4.34	Aisle width for 800 x 1200 pallet lengthways	Ast	2438 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 - Dimensional drawing



Characteristics of masts and residual capacities

Central Cylinder Simplex (CCS)		CCS 15	CCS 17
h1 - Mast lowered height	in (mm)	76 (1930)	85.8 (2180)
h2 - Mast free lift	in (mm)	59.3 (1505)	69.1 (1755)
h3 - Mast lifting height	in (mm)	59.3 (1505)	69.1 (1755)
h4 - Mast extended height	in (mm)	76.5 (1944)	86.4 (2194)
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 (1930)	85.8 (2180)	93.7 (2380)
h3 - Mast lifting height	in (mm)	115.6 (2935)	135.2 (3435)	151 (3835)
h4 - Mast extended height	in (mm)	132.8 (3374)	152.5 (3874)	168.3 (4274)
Residual capacity at max height	lb (kg)	2976 (1350)	2425 (1100)	1984 (900)

Free Lift Duplex (FLD)		FLD 29	FLD 34
h1 - Mast lowered height	in (mm)	76 (1930)	85.8 (2180)
h2 - Mast free lift	in (mm)	59.3 (1505)	69.1 (1755)
h3 - Mast lifting height	in (mm)	115.4 (2930)	135 (3430)
h4 - Mast extended height	in (mm)	132.6 (3369)	152.3 (3869)
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)	74.4 (1889)	80.7 (2049)	90.6 (2300)
h2 - Mast free lift	in (mm)	57.7 (1465)	64 (1625)	73.8 (1875)
h3 - Mast lifting height	in (mm)	167.1 (4245)	186 (4725)	214.8 (5455)
h4 - Mast extended height	in (mm)	185.1 (4701)	204 (5181)	231.5 (5880)
Residual capacity at max height	lb (kg)	1543 (700)	1213 (550)	1102 (500)

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