



MS16S

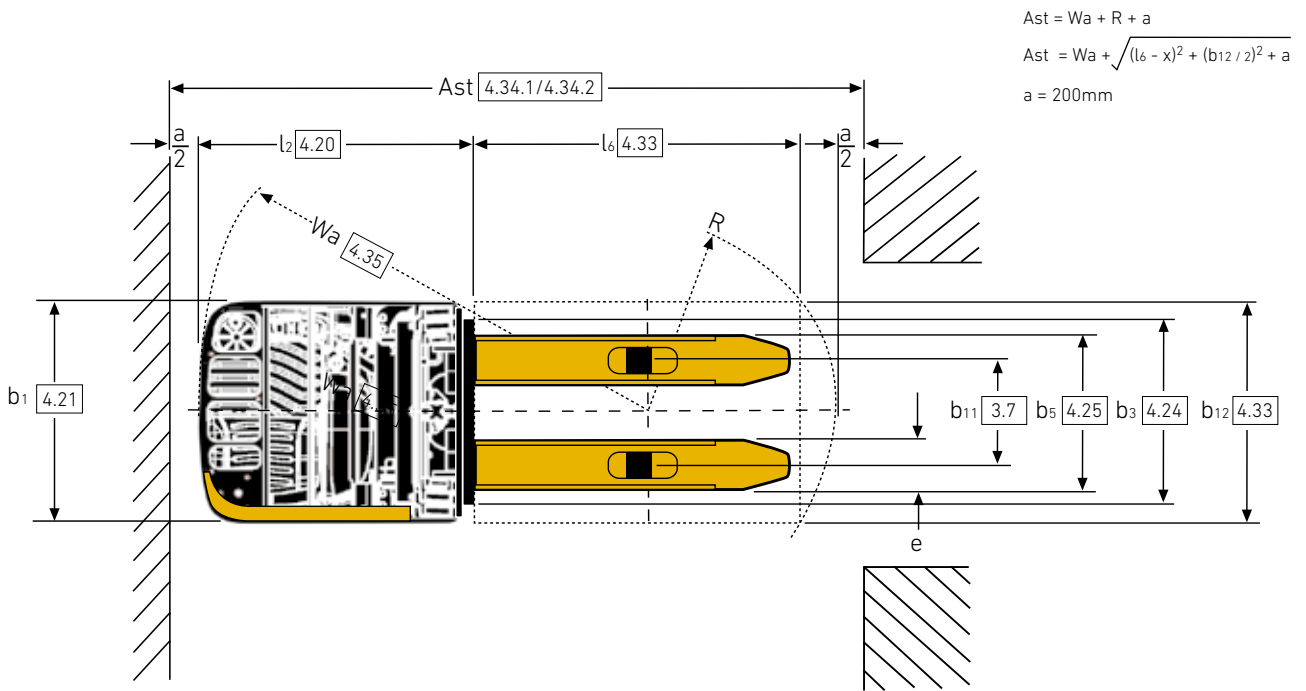
SPEC SHEET

1,600 kg

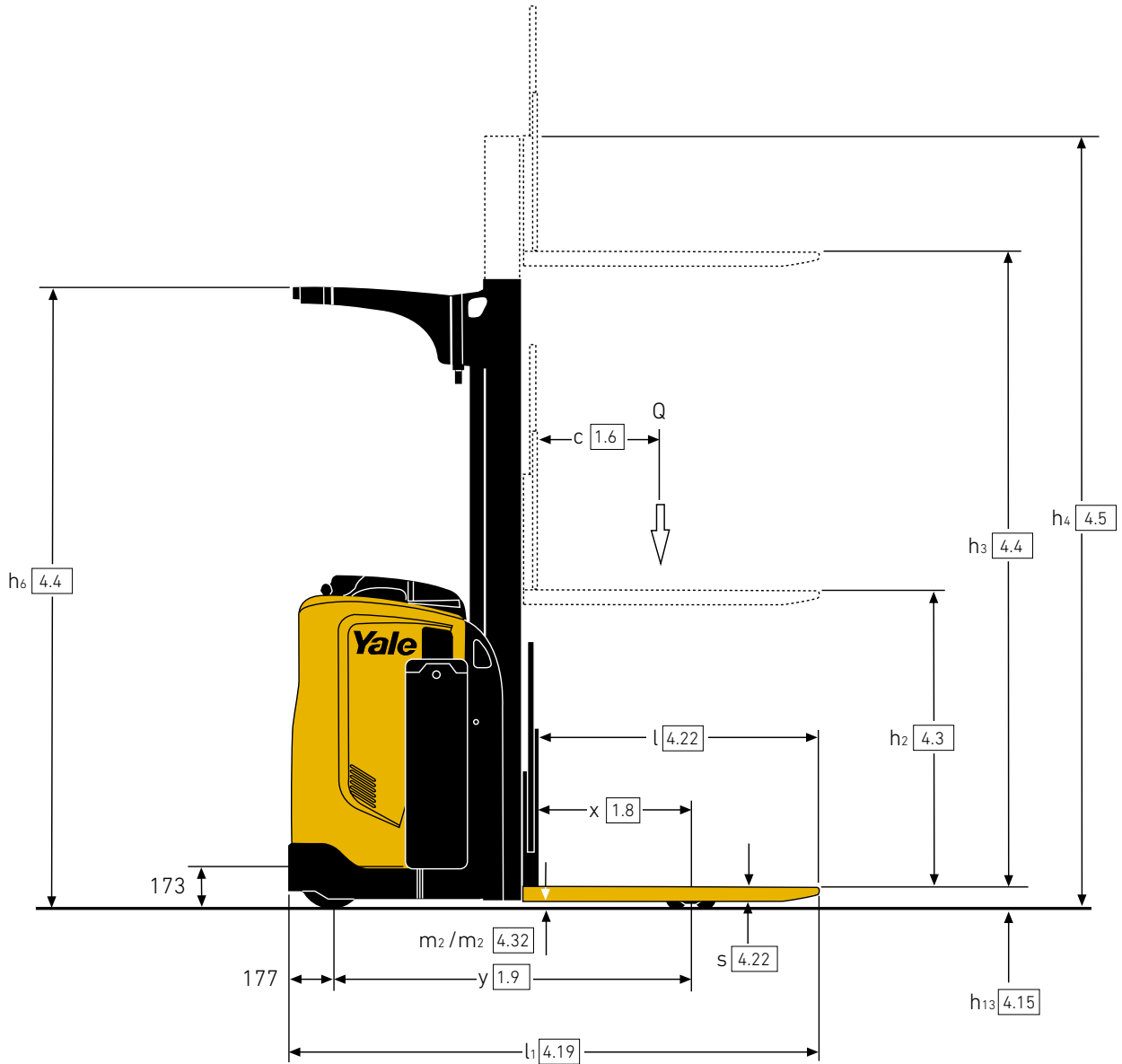
MS16S

Rider Stacker Truck

TRUCK DIMENSIONS – MS16S



TRUCK DIMENSIONS – MS16S



VDI 2198 – GENERAL SPECIFICATIONS – MS16S

GENERAL	1.1	Manufacturer		Yale
	1.2	Model designation		MS16S
	1.3	Drive		Electric (battery)
	1.4	Operator type		Stand / seated
	1.5	Rated capacity/Rated load	Q (t)	1.6
	1.6	Load centre distance ⁽¹⁾	c (mm)	600 ⁽²⁾
	1.8	Load distance, centre of drive axle to fork ⁽¹⁾	x (mm)	674
	1.9	Wheelbase ⁽¹⁾	y (mm)	1463
	WEIGHT	2.1	Service weight	kg
2.2		Axle loading, laden front/rear	kg	1153 / 2090
2.3		Axle loading, unladen front/rear	kg	1088 / 555
TYRES	3.1	Tyres front/rear		Vulkollan
	3.2	Tyre size, front	ø (mm x mm)	254 x 90
	3.3	Tyre size, rear	ø (mm x mm)	85 x 66
	3.4	Additional wheels (dimensions)	ø (mm x mm)	150 x 79
	3.5	Wheels, number front/rear (x = driven wheels)		1x + 1 / 4
	3.6	Tread, front	b ₁₀ (mm)	475
	3.7	Tread, rear	b ₁₁ (mm)	400
DIMENSIONS	4.2	Height, mast lowered ⁽³⁾	h ₁ (mm)	2300
	4.3	Free lift ⁽³⁾	h ₂ (mm)	100
	4.4	Lift ⁽³⁾	h ₃ (mm)	3600
	4.5	Height, mast extended ⁽³⁾	h ₄ (mm)	4128
	4.7	Height of overhead guard ⁽³⁾	h ₆ (mm)	2245
	4.8	Height of seat / platform	h ₇ (mm)	935 / 297
	4.10	Height of wheel arms	h ₈ (mm)	85
	4.15	Height, lowered	h ₁₃ (mm)	90
	4.19	Overall length ⁽¹⁾	l ₁ (mm)	2159
	4.20	Length to face of forks ⁽¹⁾	l ₂ (mm)	993
	4.21	Overall width	b ₁ (mm)	798
	4.22	Fork dimensions ^{(1) (4)}	s/e/l (mm)	55 / 185 / 1150
	4.24	Fork-carriage width	b ₃ (mm)	673
	4.25	Distance between fork-arms ⁽¹⁾	b ₅ (mm)	570
	4.31	Ground clearance, laden, below mast	m ₁ (mm)	25
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	25
	4.33	Load dimension b ₁₂ × l ₆ crossways ⁽¹⁾	b ₁₂ × l ₆ (mm)	800 x 1200
4.34.1	Aisle width for pallets 1000mm x 1200mm crossways ^{(1) (5)}	Ast (mm)	2523	
4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise ^{(1) (5)}	Ast (mm)	2501	
4.35	Turning radius ⁽¹⁾	Wa (mm)	1640	
PERFORMANCE	5.1	Travel speed, laden/unladen	km/h	9
	5.1.1	Travel speed, laden/unladen, backwards	km/h	9
	5.2	Lift speed, laden/unladen	m/s	0.14 / 0.28
	5.3	Lowering speed, laden/unladen	m/s	0.40 / 0.35
	5.7	Gradeability, laden/unladen	%	0.9 / 3.4
	5.8	Max. gradeability, laden/unladen	%	8.0 / 13.0
	5.10	Service brake		Electro Magnetic
ELECTRIC	6.1	Drive motor S2 60 minute rating	kW	2.6
	6.2	Lift motor, S3 15% rating	kW	3.0 ⁽⁶⁾
	6.3	Battery according to DIN 43531/35/36 A,B,C, no		no
	6.4	Battery voltage/nominal capacity K5	(V) / (Ah)	24 / 465
	6.5	Battery weight ⁽⁷⁾	kg	366 ^{(7) (8)}
	6.6	Energy consumption according to VDI cycle	kWh/h @ no of cycles	1.26
	8.1	Type of drive unit		AC Controller
	10.7	Sound pressure level at the driver's seat	dB (A)	72.14

(1) See Forks table

(2) Applies to one pallet = 1200mm

(3) See Mast table

(4) With 2 stage mast and b₅ = 570mm the s dimension increases 5mm for first 250mm at toe

(5) Stacking aisle widths (lines 4.34.1 & 4.34.2) are based on the VDI standard calculation as shown on illustration. The British Industrial Truck Association recommends the addition of 100mm to the total clearance (dimension a) for extra operating margin at the rear of the truck

(6) Value referred to S3 12%

(7) The battery nominal weight may change according to supplier in the range 366-393kg

(8) The battery actual weight is nominal weight +/- 5%

MAST DIMENSIONS – MS16S

h ₁ (mm)	h ₂ (mm)	h ₁ (mm)	h ₄ ⁽²⁾ (mm)	h ₄ (mm)	Weight ⁽³⁾ (mm)
2-Stage No Free-Lift (NFL) Mast					
3400	100	2200 ⁽¹⁾	2200 ⁽¹⁾	2145	369
3600	100	2300 ⁽¹⁾	2300 ⁽¹⁾	2245	382
3800	100	2400 ⁽¹⁾	2400 ⁽¹⁾	2345	395
4000	100	2500 ⁽¹⁾	2500 ⁽¹⁾	2445	409
4200	100	2600 ⁽¹⁾	2600 ⁽¹⁾	2545	422
2-Stage Full Free-Lift (FFL) Mast					
3340	1718	2150	2150	2145	380
3540	1818	2250	2250	2245	393
3740	1918	2350	2350	2345	406
3940	2018	2450	2450	2445	419
4140	2118	2550	2550	2545	432
3-Stage Full Free-Lift (FFL) Mast					
4900	1618	2150	2150	2145	518
5180	1718	2250	2250	2245	537
5460	1818	2350	2350	2345	556
5740	1918	2450	2450	2445	575
6020	2018	2550	2550	2545	594

(1) With free lift of 100mm

(2) With load backrest (h=1000) for carriage h₄ + 562mm (mast 2 stage), + 524 (mast 3 stage)

(3) All weights are: mast structures (weldment, cylinders, chain, pulley) + oil.
EXCLUDED: forks, accessories

FORK DIMENSIONS – MS16S

Fork length ⁽¹⁾ l (mm)	Load centre distance c (mm)	Wheelbase y (mm)	Overall length l ₁ (mm)	Length to face of forks ⁽²⁾ l ₂ (mm)	Load distance ⁽¹⁾ (mm)	Turning radius W _a (mm)	Distance between fork arms b _s (mm)	Load dimensions			Aisle width Ast (mm)
								l ₆ (mm)	b ₁₂ (mm)	Pallet position	
2-Stage Mast											
1000	500	1463	1966	966	674	1640	570	1000	1200	Crossways	1000
								1200	800	Lengthwise	
1150	600	1463	2116	966	674	1640	570	1000	1200	Crossways	1150
								1200	800	Lengthwise	
3-Stage Mast											
1000	500	1463	2009	1009	631	1640	570	1000	1200	Crossways	1000
								1200	800	Lengthwise	
1150	575	1463	2159	1009	631	1640	570	1000	1200	Crossways	1150
								1200	800	Lengthwise	

(1) 2-stage only: less 27mm with a load backrest fitted.

(2) 2-stage only: add 27mm with a load backrest fitted.

All values are nominal values and they are subject to tolerances.







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