MSE series

1,000kg / 1,200kg

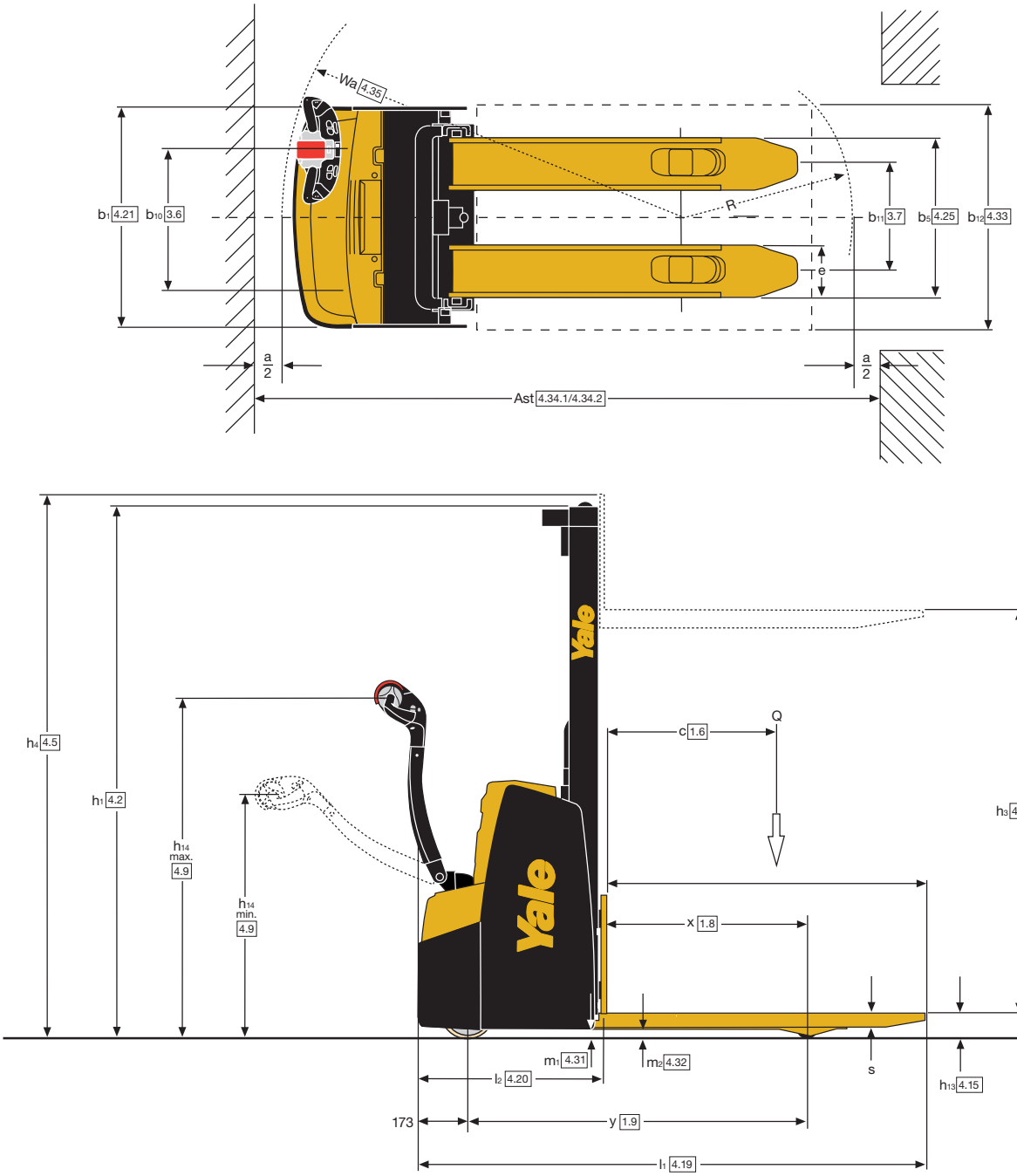
Yale®

People. Products. Productivity.™

Pedestrian Stacker

- Combi MOSFET AC control
- Dual lift/lower controls on tiller head
- Vertically mid-mounted horizontally off-set tiller arm
- Robust chassis design

Truck Dimensions - MS10-12E



Mast details - MS10E, MS12E

Model	Mast type	h_3 (mm)	h_2 (mm)	h_1 [1] (mm)	h_4 [3] (mm)	Weight [2] (kg)
MS10E MS12E	1 stage FFL, type "C"	1440	-	1900	1945	120
		1640	-	2100	2145	127
		1840	-	2300	2345	135
		2040	-	2500	2545	142
MS10E MS12E	2 stage NFL, type "C"	2380	100	1750	2890	188
		2580	100	1850	3090	196
		2780	100	1950	3290	203
		2980	100	2050	3490	210
		3180	100	2150	3690	218
		3380	100	2250	3890	225
		3580	100	2350	4090	233
MS12E	2 stage NFL, type "C"	3780	100	2450	4290	239
		3980	100	2550	4490	256
		4180	100	2650	4690	263

[1] With free lift of 100 mm.
[2] All weights are: mast structures (weldment, cylinders, chain, pulley) + oil EXCLUDED: forks, accessories
[3] With optional load backrest value is increased of 585mm

VDI 2198 – General Specifications

Distinguishing mark	1.1	Manufacturer (abbreviation)		Yale	Yale
	1.2	Manufacturer's type designition		**MS10E**	**MS12E**
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric (battery)	Electric (battery)
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Pedestrian	Pedestrian
	1.5	Rated capacity/Rated load	Q (t)	1.0	1.2
	1.6	Load centre distance	c (mm)	600	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	728	728
	1.9	Wheelbase	y (mm)	1219	1219
Weights	2.1	Service weight	kg	790	801
	2.2	Axle loading, laden front/rear	kg	661 / 1129	686 / 1315
	2.3	Axle loading, unladen front/rear	kg	568 / 223	574 / 227
Tyres/chassis	3.1	Tyres: polyurethane, topthane, vulkollan, front/rear		Poly/Poly	Poly/Poly
	3.2	Tyre size, front	ø mm x mm	230 x 75	230 x 75
	3.3	Tyre size, rear	ø mm x mm	85 x 100	85 x 100
	3.4	Additional wheels (dimensions)	ø mm x mm	150 x 50	150 x 50
	3.5	Wheels, number front/rear (x = driven wheels)		1x + 1/ 2	1x + 1/ 2
	3.6	Tread, front	b_{10} (mm)	510	510
	3.7	Tread, rear	b_{11} (mm)	400	400
Dimensions	4.2	Height, mast lowered	h_1 (mm)	1750	1750
	4.3	Free lift	h_2 (mm)	100	100
	4.4	Lift	h_3 (mm)	2380	2380
	4.5	Height, mast extended	h_4 (mm)	2890	2890
	4.9	Height drawbar in driving position min./max.	h_{14} (mm)	867 / 1223	867 / 1223
	4.15	Height, lowered	h_{13} (mm)	89	89
	4.19	Overall length	l_1 (mm)	1815	1815
	4.20	Length to face of forks	l_2 (mm)	665	665
	4.21	Overall width	b_1/b_2 (mm)	790	790
	4.22	Fork dimensions [4]	s/e/l (mm)	55 / 185 / 1150	55 / 185 / 1150
	4.25	Distance between fork-arms	b_5 (mm)	570	570
	4.31	Ground clearance, laden, below mast	m_1 (mm)	50	50
	4.32	Ground clearance, center of wheelbase	m_2 (mm)	29	29
	4.33	Load dimension $b_{12} \times l_6$ crossways	$b_{12} \times l_6$ (mm)	1000 x 1200	1000 x 1200
	4.34.1	Aisle width for pallets 1200mm x 1000mm crossways	A_{st} (mm)	2285	2285
	4.34.2	Aisle width for pallets 800mm x 1200mm lengthwise	A_{st} (mm)	2245	2245
	4.35	Turning radius	W_a (mm)	1426	1426
Performance data	5.1	Travel speed, laden/unladen	km/h	6 / 6	6 / 6
	5.1.1	Travel speed, laden/unladen, backwards	km/h	6 / 6	6 / 6
	5.2	Lift speed, laden/unladen	m/s	0.13 / 0.25	0.12 / 0.25
	5.3	Lowering speed, laden/unladen	m/s	0.36 / 0.31	0.36 / 0.31
	5.7	Gradeability, laden/unladen	%	5.8 / 15.7	5.0 / 15.5
	5.8	Max. gradeability, laden/unladen	%	13.8 / 24.6	12.2 / 24.0
	5.10	Service brake		Electromagnetic	Electromagnetic
Electric engine	6.1	Drive motor, S2 60 min. rating	kW	1.2	1.2
	6.2	Lift motor S3 15% rating	kW	2.2kW (S3 5%)	2.2kW (S3 5%)
	6.3	Battery according to DIN 43531/35/36 A,B,C, no		no	no
	6.4	Battery voltage/nominal capacity K5	(V)/(Ah)	24V / 200Ah [2]	24V / 200Ah [3]
	6.5	Battery weight [1]	kg	185	185
	6.6	Energy consumption according to VDI cycle	kWh/h at no. of cycles	0.74	0.84
	8.1	Type of drive unit		AC-Controller	AC-Controller
	10.7	Sound pressure level at the driver's position	dB(A)	66	66

[1] These values may vary of +/-5%.

[2] Available batteries 24V / 150Ah (144kg) ; 24V / 200Ah. Polypropylene case version (160kg) ; 24V / 150Ah. Polypropylene case version (125kg).

[3] Available batteries 24V / 200Ah. Polypropylene case version (160kg).

[4] With 2 stage mast and b_5 = 570mm, the 's' dimension increases 5mm for first 250mm at toe.

All values are nominal values and they are subject to tolerances.
For further information, please contact the manufacturer.
Yale products might be subject to change without notice.
Lift trucks illustrated may feature optional equipment.
Values may vary with alternative configurations.

MSE series

Models: MS10E. MS12E

People. Products. Productivity.

Tiller head and controls
The tiller head is designed for operator comfort and features an ergonomic shaped handle with angled grips and integral hand guard. Large, low effort, butterfly buttons control the direction of travel and speed as well as the electromagnetic brake. All controls are accessible without the operators hand being removed from the handle.

Lift and lower buttons are conveniently located on the tiller head and can be readily accessed for left or right hand use. The horn is located on top of the tiller head and can be actuated by the thumb or fore finger. The creep speed control allows all functions of the truck to be operated with the tiller arm in the vertical position when operated at reduced speed for manoeuvring in tight confines.

Tiller arm
The tiller arm is mounted onto the drive unit. The offset position increases visibility around the mast. The tiller arm is spring assisted and returns automatically to the vertical position when released.

The tiller must be in the operating position, or the creep speed button depressed for the truck to be fully operational, including traction and mast operations.

Dashboard instrumentation
The truck's dash board features a battery discharge indicator. The red mushroom shaped button can be pressed to stop the truck immediately in case of an emergency.

Chassis
The compact chassis width of 790mm allows the handling of loads in tight spaces.

Mast and Forks
For durability the mast guard is made from wire mesh. The fork section for 1 and 2 stage masts is the same, 60mm for the first 250mm from the carriage, then 55mm to the tip.

Battery
The battery is 24V - 150 Ah, a battery charger is built into the truck. A 200Ah battery is available for the 1.2t model

Wheels
Wheels are manufactured from various compounds to suit specific applications.

Electric motors
A powerful 1.2 kW traction motor, which guarantees an excellent response to operating commands and maintains sufficient torque in various situations. Maintenance is limited; with inspection intervals recommended every 1000 hours of service for a long operational life. The lift motor is a 2.2 kW DC compound motor, which makes light work of any workload.

The 2.2 kW DC lift motor provides the power output to match the truck's operational requirements.

Hydraulic system
A heavy duty compound wound motor drives the pump. Inputs to the motor and valve are received from the controller to control lifting and lowering performance. Lift/lower functions are actuated directly from the tiller head controls via the Combi MOSFET controller. A flow control valve regulates lowering speeds and a protection valve prevents further lowering in the event of a line break. A transparent oil reservoir allows the oil level to be easily checked.

Electronic controls
A Combi MOSFET controller regulates both the traction motor and the lift motor. High energy efficiency and motor performance allows considerable hourly operational usage. Smooth progressive control is available at all times. The controller features automatic braking (reverse current braking) and regenerative braking on release of the butterfly buttons as well as anti roll-back/start-up on gradients. Using a plug-in console, the controller can be adjusted for forward and reverse travel speeds, reverse current braking, release braking, lift and lowering speeds, and deceleration breaking. The operator and application performance requirements can be easily matched to ensure maximum productivity.

Options
- Lexan Mast Guard
- MDI (Multi Device Information)
- Yale Vision telematics
- Load backrest

HYSTER-YALE UK LIMITED
trading as **Yale Europe Materials Handling**
Centennial House, Frimley Business Park,
Frimley, Surrey GU16 7SG, United Kingdom.
Tel: +44 (0) 1276 538500
Fax: +44 (0) 1276 538559
www.yale-forklifts.eu

Publication part no. 220990516 Rev.012 Printed in The Netherlands (0718HG) EN.
Safety: This truck conforms to the current EU requirements. Specification is subject to change without notice.