

# MC series

1,000kg / 1,200kg / 1,500kg

## Counterbalanced Stacker



## SPECIFICATION SHEET

Models: MC10, MC12, MC15

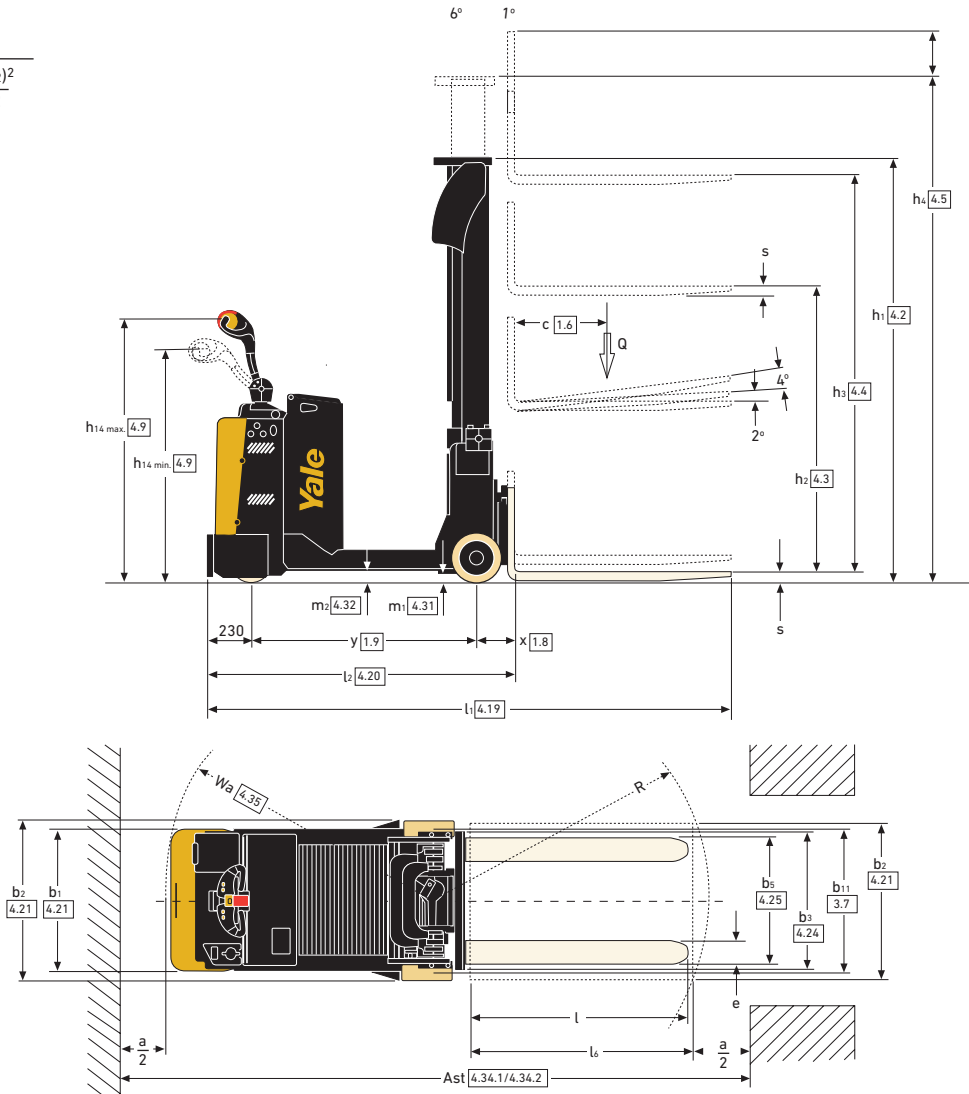
## Truck Dimensions

$$Ast = Wa + R + a$$

$$R = \frac{\sqrt{(l_6 + x)^2 + (b_{12})^2}}{2}$$

a = 200mm

l<sub>6</sub> = Load length

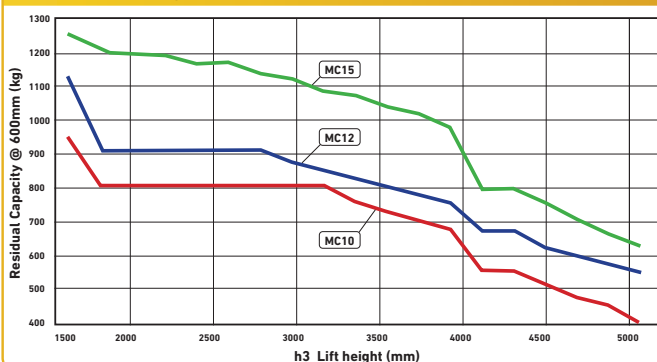


## Mast details - BETA profile

Mast type	Height, mast lowered h <sub>1</sub> <sup>(1)</sup> (mm)	Free lift h <sub>2</sub> (mm)	Lift height h <sub>3</sub> (mm)	Height, mast extended h <sub>4</sub> <sup>(2)</sup> (mm)	Height, overhead guard h <sub>6</sub> (mm)	Weight <sup>(3)</sup> (kg)
2 stage LFL	1925	100	2572	3161	-	595
	2125	100	2972	3561	2262	618
	2325	100	3372	3961	2312	640
	2475	100	3672	4261	2412	657
	2675	100	4072	4661	2612	691
3 stage FFL	1875	1305	3876	4451	-	725
	1975	1405	4176	4751	-	740
	2125	1555	4626	5201	2312	765
	2275	1705	5076	5651	2312	792

<sup>(1)</sup> With free lift of 100mm. <sup>(2)</sup> With load backrest for carriage h<sub>4</sub> + 461mm. <sup>(3)</sup> All weights are: mast structures (weldment, cylinders, chain, pulley) + oil. EXCLUDED: forks, accessories.

## Capacities graph



## VDI 2198 – General Specifications

Distinguishing mark	1.1	Manufacturer (abbreviation)		Yale	Yale	Yale	
	1.2	Manufacturer's type designation		<b>MC10</b>	<b>MC12</b>	<b>MC15</b>	
	1.3	Drive: electric (battery type, mains,), diesel, petrol, fuel gas		Battery	Battery	Battery	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Pedestrian	Pedestrian	Pedestrian	
	1.5	Rated capacity/Rated load	Q (t)	1.0	1.2	1.5	
	1.6	Load centre distance	c (mm)	500	500	500	
	1.8	Load distance, centre of drive axle to fork	x (mm)	211	211	211	
	1.9	Wheelbase	y (mm)	1300	1450	1600	
	Weights	2.1	Service weight <sup>(3)</sup>	kg	2180	2280	2360
2.2		Axle loading, laden front/rear	kg	520 / 2660	545 / 2935	515 / 3345	
2.3		Axle loading, unladen front/rear	kg	1175 / 1005	1290 / 990	1420 / 940	
Tyres/chassis	3.1	Tyres: polyurethane, tophane, NDIIthane, front/rear		NDIIthane / NDIIthane	NDIIthane / NDIIthane	NDIIthane / NDIIthane	
	3.2	Tyre size, front	ø (mm x mm)	254 x 125	254 x 125	254 x 125	
	3.3	Tyre size, rear	ø (mm x mm)	200 x 100	200 x 100	200 x 100	
	3.5	Wheels, number front/rear (x = driven wheels)		1x/2	1x/2	1x/2	
	3.7	Tread, rear	b11 (mm)	837	837	837	
	Dimensions	4.2	Height, mast lowered <sup>(7)</sup>	h1 (mm)	2325	2325	2325
		4.3	Free lift	h3 (mm)	100	100	100
4.4		Lift	h4 (mm)	3372	3372	3372	
4.5		Height, mast extended <sup>(8)</sup>	h6 (mm)	3961	3961	3961	
4.7		Height of overhead guard (cabin)	h14 (mm)	2312	2312	2312	
4.9		Height drawbar in driving position min./max. <sup>(4)</sup>	h13 (mm)	1180 / 1485	1180 / 1485	1180 / 1485	
4.15		Height, lowered	l1 (mm)	35	35	35	
4.19		Overall length	l2 (mm)	2742	2892	3042	
4.20		Length to face of forks	b1/b2 (mm)	1742	1892	2042	
4.21		Overall width	s/e/l (mm)	788 / 939	788 / 939	788 / 939	
4.22		Fork dimensions DIN ISO 2331 <sup>(1)</sup>	II A	35 / 100 / 1000	35 / 100 / 1000	35 / 100 / 1000	
4.24		Fork carriage width	b3 (mm)	700	700	700	
4.25		Forks spread	b5 (mm)	240 / 672	240 / 672	240 / 672	
4.31		Ground clearance, laden, below mast	m1 (mm)	59	59	59	
4.32		Ground clearance, centre of wheelbase	m2 (mm)	76	76	76	
4.33		Load dimension b12 x l6	b12 x l6 (mm)	800 x 1200	800 x 1200	800 x 1200	
4.34.1		Aisle width for pallets 1000mm x 1200mm crossways	Ast (mm)	3111	3258	3406	
4.34.2		Aisle width for pallets 800mm x 1200mm lengthwise	Ast (mm)	3227	3374	3522	
4.35		Turning radius	Wa (mm)	1560	1707	1855	
Performance data	5.1	Travel speed, laden/unladen	km/h	6 / 6	6 / 6	6 / 6	
	5.1.1	Travel speed, laden/unladen, backwards	km/h	6 / 6	6 / 6	6 / 6	
	5.2	Lift speed, laden/unladen	m/s	0,18 / 0,27	0,14 / 0,27	0,13 / 0,27	
	5.3	Lowering speed, laden/unladen	m/s	0,33 / 0,27	0,33 / 0,27	0,33 / 0,27	
	5.8	Max. gradeability, laden/unladen	%	11 / 11	10 / 10	9 / 9	
	5.10	Service brake		Electric / Electromagnetic			
Electric engine	6.1	Drive motor rating S2 60 min	kW	4	4	4	
	6.2	Lift motor rating at S3 15% <sup>(2)</sup>	kW	3	3	3	
	6.3	Battery according to DIN 43531/35/36 A,B,C, no		no	no	no	
	6.4	Battery voltage/nominal capacity K5	V/Ah	24 / 300 <sup>(4)(5)</sup>	24 / 400 <sup>(6)</sup>	24 / 400 <sup>(6)</sup>	
	6.5	Battery weight <sup>(3)</sup>	kg	233	303	303	
	6.6	Energy consumption according to DIN EN 16796	kWh/h	1,53	1,97	2,4	
	6.7	Turnover output according to VDI 2198	t/h	38	45,6	57	
	6.8	Turnover efficiency according to VDI 2198	t/kWh	31	31	31	
8.1	Type of drive unit		AC-Controller	AC-Controller	AC-Controller		
10.7	Sound pressure level at the driver's seat	dB (A)	< 70	< 70	< 70		

<sup>(1)</sup> Option 35/100/1200

<sup>(2)</sup> Value referred to S3 10%

<sup>(3)</sup> These values may vary of +/- 5%

<sup>(4)</sup> Available battery 24V / 400Ah (303kg)

<sup>(5)</sup> Available Li-Ion battery 24V / 180Ah (208kg + ballast 24 kg); Li-Ion battery 24V / 240Ah (214kg + ballast 24kg)

<sup>(6)</sup> Available Li-Ion battery 24V / 180Ah (208kg + ballast 86kg); Li-Ion battery 24V / 240Ah (214kg + ballast 86kg)

<sup>(7)</sup> With free lift of 100mm (2 stage LFL only)

<sup>(8)</sup> With load backrest for carriage h4 + 461mm

**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.**

# MC series

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## Tiller head and controls

The tiller head features an ergonomic shaped handle with angled grips and integral hand guard. Large, low-effort, butterfly buttons control direction of travel, speed and the electromagnetic brake - all without the operator's hand moving from the handle.

Left hand buttons operate slow speeds for fine positioning, right hand ones for proportional lifting and lowering. The horn is on top of the tiller head, actuated by the thumb or fore finger.

When activated, the travel direction inverter button (emergency stop), automatically reverses travel direction, stopping the truck. The creep speed control allows all functions to be operated with the tiller in the vertical position at reduced speed for manoeuvring in tight confines.

## Instrumentation

The pallet truck's dash board features a multi-function indicator displaying information on the status of the truck and alarm conditions should they occur. Operational information includes that provided by the battery discharge indicator and odometer. The red mushroom shaped button can be activated to stop the truck immediately in case of an emergency.

## Masts

A range of masts is available to match all operating needs. The none dampening masts are available in two stage LFL and three stage FFL configuration as standard.

## Battery

A range of Lead Acid and Lithium Ion batteries is available to suit different requirements.

## Electric motors

The 4kW AC motor provides instant response to forward and reverse traction inputs, providing considerable torque. The maintenance free motor (inspection intervals required every 1,000 operating hours) provides low cost long operational life. The 3kW DC lift motor provides power to match the truck's operational requirements.

## Hydraulic unit

The silent, powerful hydraulic pump, activated by the electric motor, is of double gear type. The transparent tank makes the checking of the hydraulic oil level easy. All hydraulics functions are actuated by solenoid valves activated directly by the tiller push buttons. Lift and lowering are by proportional control.

## Electronic controls

The Combi MOSFET controller manages both the AC traction engine and the DC lift motor eliminating the need for contactors. High energy efficiency and motor performance increases shift operation time and reduces battery charging. The combined characteristics of the traction motor and the operator control panel enhance the efficiency of the release and inversion braking, without reduction of autonomy. This leaves the electromagnetic brake for parking and emergencies. Electronic performance parameters are easily customised by a service technician. The truck performance output can easily be matched to ensure the maximum application requirements.

## Options

Options available include:

- Selection of drive wheels
- Selection of fork lengths
- Key Pad
- A4 document holder
- Cold store - 30°C
- Load backrest
- Mast selection
- Side shift
- Pedestrian Awareness Light.

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**Safety:** This truck conforms to the current EU requirements.

Specification is subject to change without notice.

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Company Registration Number: 02636775.