

Yale Robotics

MO
series

2,500kg

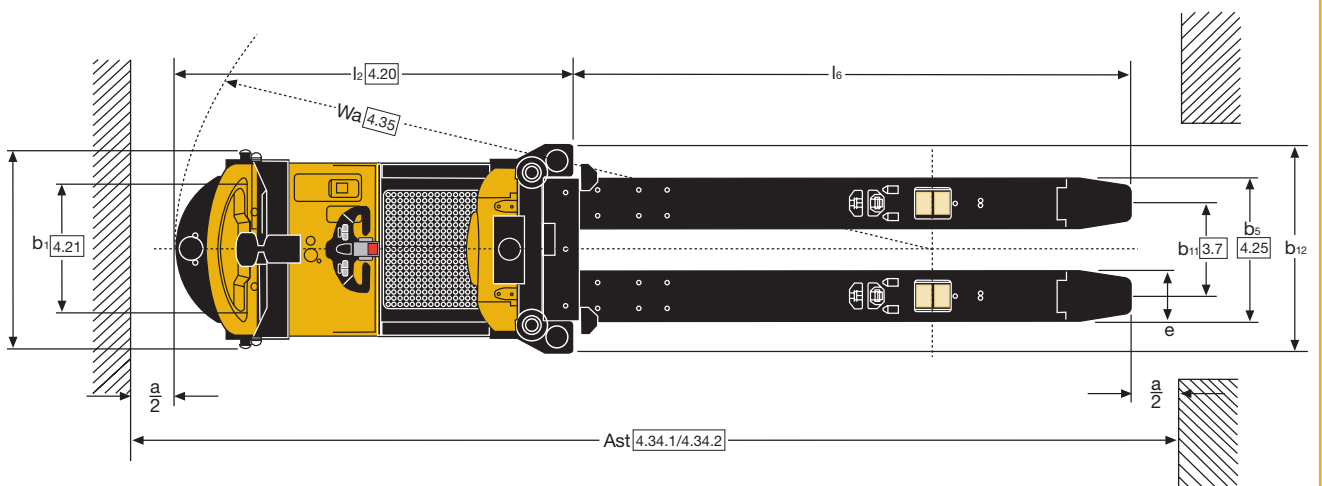
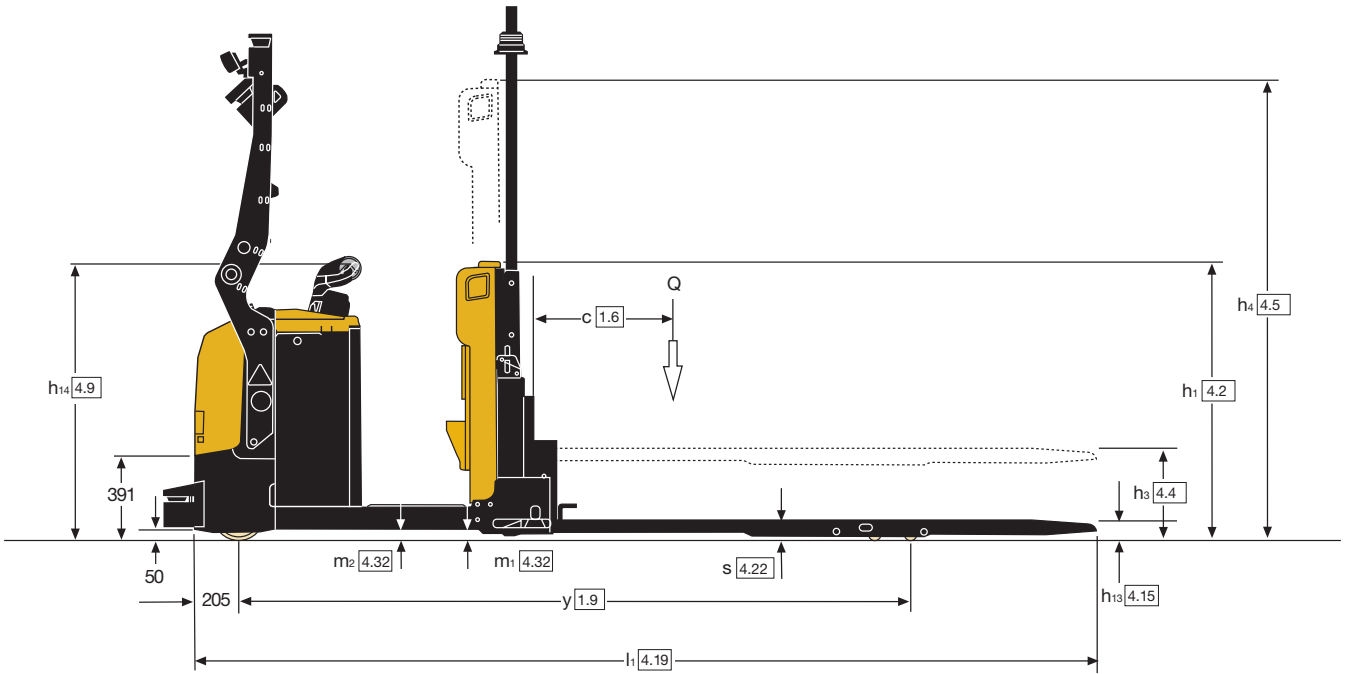
Yale®
People. Products. Productivity.™

Internal Transportation



- Robotic and manual dual-mode operation
- CAN bus technology
- Horizontal transport over short and long distances

Truck Dimensions



VDI 2198 - General Specifications

Distinguishing mark	1.1	Manufacturer (abbreviation)		Yale	
	1.2	Manufacturer's type designation		MO25	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric (battery)	
	1.4	Operator type: hand, pedestrian, standing, seated, internal transportation		Internal transportation	
	1.5	Rated capacity/rated load	Q (t)	2.5	
	1.6	Load centre distance	c (mm)	1200 ⁽¹⁾	
	1.8	Load distance, centre of drive axle to fork	x (mm)	1620	
	1.9	Wheelbase	y (mm)	3208	
	Weights	2.1	Service weight	kg	1221
2.2		Axle loading, laden front/rear	kg	1370 / 2295	
2.3		Axle loading, unladen front/rear	kg	905 / 260	
Tyres/chassis	3.1	Tyres: polyurethane, tophane, Vulkollan [®] , front/rear		Vulkollan / Vulkollan	
	3.2	Tyre size, front	ø (mm x mm)	254 x 90	
	3.3	Tyre size, rear	ø (mm x mm)	85 x 90	
	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)	437	
	3.7	Tread, rear	b ₁₁ (mm)	376	
Dimensions	4.2	Height of mast, lowered	h ₁ (mm)	2485	
	4.4	Lift	h ₃ (mm)	120	
	4.5	Height, mast extended	h ₄ (mm)	-	
	4.8	Seat height relating to SIP/stand height	h ₇ (mm)	152	
	4.9	Height drawbar in driving position min./max.	h ₁₄ (mm)	1317	
	4.15	Height, lowered	h ₁₃ (mm)	85	
	4.19	Overall length	l ₁ (mm)	3048	
	4.20	Length to face of forks	l ₂ (mm)	1848	
	4.21	Overall width	b ₁ /b ₂ (mm)	952	
	4.22	Fork dimensions ISO 2331	s/e/l (mm)	60 / 184 / 1200	
	4.25	Distance between fork-arms	b ₅ (mm)	560	
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)	25	
	4.33	Load dimensions b ₁₂ x l ₆ crossways	b ₁₂ x l ₆ (mm)	800 x 1200 ⁽¹⁾	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	A _{st} (mm)	5190	
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	A _{st} (mm)	5162 ⁽¹⁾	
4.35	Turning radius	W _a (mm)	3413 ⁽¹⁾		
Performance data	5.1	Travel speed, laden/unladen	km/h	5.4	
	5.1.1	Travel speed, laden/unladen, backwards	km/h	2.8	
	5.2.1	Lift speed, laden/unladen (Forks)	m/s	0.023 / 0.039	
	5.3.1	Lowering speed, laden/unladen (Forks)	m/s	0.038 / 0.018	
	5.7	Gradeability, laden/unladen	%	6 / 20	
	5.8	Max. gradeability, laden/unladen	%	3 / 3	
	5.9	Acceleration time, laden/unladen	s	8.9 / 5.5	
	5.10	Service brake		Electromagnetic	
	Electric-engine	6.1	Drive motor rating S2 60 min	kW	2.6
		6.2	Lift motor rating at S3 15%	kW	1.2
6.3		Battery according to DIN 43531/35/36 A, B, C, no		no	
6.4		Battery voltage/nominal capacity Ks	(V)/(ah)	24 / 620	
6.5		Battery weight	kg	480	
6.6		Energy consumption according to VDI cycle ⁽²⁾	kWh/h @ no. of cycles	1.13	
8.1	Type of drive unit		AC-Controller / Automation driven by Balyo		
10.7	Average noise level at the operator's ear according to EN 12053	dB(A)	< 67.5		

⁽¹⁾ Applies to 2 pallets = 2400mm

⁽²⁾ Values obtained with 40 cycles

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.

MO series

Models: MO25



Robotics

This truck has Yale robotics fitted. Our solutions are based on the established Yale® manual truck range. This dual-mode design provides both flexibility of operation and simplicity of servicing, with our authorised dealer network already familiar with 90% of the mechanical and electrical systems of each robotic unit. For pre-sales support, warehouse systems specialists are available to visit potential sites to collect data and suggest solutions where required.

Productivity

- The powerful 2.6kW AC drive motor delivers high performance acceleration, braking and travel speed, models ideal for stop and go operations.
- Effortless electrical steering and automatic speed reduction on cornering ensure excellent control and high productivity.

Ergonomics

- Scooter control with electric steering allows the operator to remain within the truck footprint at all times for protection as well as reducing operator fatigue and increasing productivity.
- The large platform area increases operator comfort and allows easier pass through to optimize picking from both sides.

Cost of Ownership

- Integrated system controls, AC traction and DC pump motors increase energy efficiency.
- Regenerative braking reduces the use of the service brake and dissipates heat from the traction motor increasing the life of key components.
- Motors and controllers are protected against damage and debris, reducing servicing and repair costs.

Dependability

- The solid frame construction and quality components ensure long-term reliability and durability.

- A sturdy wrap around bumper plate protects the truck against impacts and damage and minimises repair costs.
- The truck's electronics, sealed electrical connectors and Hall effect sensors and switches - are all protected from damage to ensure excellent reliability, maximum productivity and reduced servicing costs.

Serviceability

- The CAN bus system and diagnostics can be controlled and monitored via the console or through the single plugpoint. Fault codes can be displayed on the console for easy service identification.
- The low maintenance AC traction motor with built in thermal protection is fully enclosed for protection against damage and debris, minimising service downtime.

Available Options include:

- Coasting function with slow-speed forward, lifting and lowering forks buttons.

Miscellaneous

- Key pad
- Side battery extraction
- Floor-level bumper (rubber bumper)
- Mid mounted bumper (bull bar)
- Universal support bar on motor compartment
- Various drive wheels
- Various storage compartments
- Standard and extended warranty options.

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
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Safety: This truck conforms to the current EU requirements. Specification is subject to change without notice.

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