

FORTENS™



**STRONG PARTNERS.
TOUGH TRUCKS.™**



LPG FORKLIFT TRUCKS

H6.0-7.0FT FORTENS / FORTENS ADVANCE / FORTENS ADVANCE+

6 000-7 000 KG



FORTENS, FORTENS ADVANCE, FORTENS ADVANCE+ H6.0FT

DISTINGUISHING MARK	1.1	Manufacturer (abbreviation)	
	1.2	Manufacturer's type designation	
		Model	
		Engine / transmission	
		Brake type	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	
	1.5	Rated capacity/rated load	Q (t)
	1.6	Load centre distance	c (mm)
	1.8	Load distance, centre of drive axle to fork	x (mm)
1.9	Wheelbase	y (mm)	

WEIGHTS	2.1	Service weight Σ	kg
	2.2	Axle loading laden, front/rear	kg
	2.3	Axle loading unladen, front/rear	kg

TYRES/CHASSIS	3.1	Tyres: L = pneumatic, V = solid, SE = Pneumatic-Shaped Solid	
	3.2	Tyre size, front	
	3.3	Tyre size, rear	
	3.5	Number of wheels, front/rear (X = driven)	
	3.6	Tread, front	b_{10} (mm)
	3.7	Tread, rear	b_{11} (mm)

DIMENSIONS	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)
	4.2	Height of mast, lowered	h_1 (mm)
	4.3	Free lift, \uparrow	h_2 (mm)
	4.4	Lift \uparrow	h_3 (mm)
	4.5	Height of mast, extended \blacksquare	h_4 (mm)
	4.7	Height of overhead guard (cabin) \blacktriangleleft	h_5 (mm)
	4.7.1	Cab height (open cab)	mm
	4.8	Seat height relating to SIP/stand height \bullet	h_6 (mm)
	4.12	Coupling height	h_{10} (mm)
	4.19	Overall length	l_1 (mm)
	4.20	Length to face of forks	l_2 (mm)
	4.21	Overall width	b_1/b_2 (mm)
	4.22	Fork dimensions DIN ISO 2331	$s/e/l$ (mm)
	4.23	Fork carriage ISO 2328, class/type A, B	
	4.24	Fork carriage width \bullet	b_3 (mm)
	4.31	Ground clearance, laden, below mast	m_1 (mm)
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)
	4.33	Aisle width with pallets 1 000 long x 1 200 crossways \blacklozenge	A_1 (mm)
	4.34	Aisle width with pallets 800 wide x 1 200 crossways \blacklozenge	A_2 (mm)
	4.35	Turning radius	W_0 (mm)
	4.36	Internal turning radius	b_{13} (mm)
4.41	90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)	(mm)	
4.42	Step Height (from ground to running board)	(mm)	
4.43	Step Height (between intermediate steps between running board and floor)	(mm)	

PERFORMANCE DATA	5.1	Travel speed laden/unladen	km/h
	5.1.1	Travel speed, laden/unladen, backwards	km/h
	5.2	Lift speed, laden/unladen	m/sec
	5.3	Lowering speed, laden/unladen	m/sec
	5.5	Drawbar pull, laden/unladen	kN
	5.7	Gradeability, laden/unladen	%
	5.10	Service brake	

7.5	Fuel consumption according to VDI cycle	l/h or kg/h
-----	---	-------------

ADDITIONAL DATA	10.1	Operating pressure for attachments	bar
	10.2	Oil volume for attachments \blacklozenge	l/min
	10.3	Hydraulic oil tank, capacity	l
	10.7	Sound pressure level at the driver's seat DIN 12053 (without / with cab) L_{PAZ} \bullet	dB (A)
	10.7.2	Sound power level during the drive cycle L_{WAZ}	dB
	10.7.1	Guaranteed sound power 2000/14/EC L_{WAZ}	dB
	10.8	Towing coupling, type DIN	

HYSTER		HYSTER		HYSTER		HYSTER	
H6.0FT		H6.0FT		H6.0FT		H6.0FT	
Fortens™		Fortens™		Fortens™ Advance		Fortens™ Advance+	
PSI 4.3L Electronic Powershift, 2-Speed		PSI 4.3L Electronic Powershift, 2-Speed with Soft Shift Power Reversal		PSI 4.3L DuraMatch™ 3, 3-Speed		PSI 4.3L DuraMatch™ Plus 3, 3-Speed	
Wet Brakes		Wet Brakes		Wet Brakes		Wet Brakes	
LPG		LPG		LPG		LPG	
Seated		Seated		Seated		Seated	
6.0		6.0		6.0		6.0	
600		600		600		600	
601		601		601		601	
2235		2235		2235		2235	

8493		8493		8493		8493	
13052	1441	13052	1441	13052	1441	13052	1441
3828	4665	3828	4665	3828	4665	3828	4665

L			L			L			L		
8.25x15 14PR			8.25x15 14PR			8.25x15 14PR			8.25x15 14PR		
8.25x15 14PR			8.25x15 14PR			8.25x15 14PR			8.25x15 14PR		
4X	2		4X	2		4X	2		4X	2	
1846			1846			1846			1846		
1536			1536			1536			1536		

5			10			5			10			5			10		
2540			2540			2540			2540			2540			2540		
100			100			100			100			100			100		
2940			2940			2940			2940			2940			2940		
4195			4195			4195			4195			4195			4195		
2531			2531			2531			2531			2531			2531		
1540			1540			1540			1540			1540			1540		
474			474			474			474			474			474		
4805			4805			4805			4805			4805			4805		
4805			4805			4805			4805			4805			4805		
3605			3605			3605			3605			3605			3605		
2082			2082			2082			2082			2082			2082		
60	150	1200	60	150	1200	60	150	1200	60	150	1200	60	150	1200			
IVA			IVA			IVA			IVA			IVA					
1980			1980			1980			1980			1980					
125			125			125			125			125					
253			253			253			253			253					
5163			5163			5163			5163			5163					
5329			5329			5329			5329			5329					
3320			3320			3320			3320			3320					
230			230			230			230			230					
2823			2823			2823			2823			2823					
321			321			321			321			321					
256			256			256			256			256					

21.3	23.0	21.3	23.0	23.6	25.7	23.6	25.7
21.3	23.0	21.3	23.0	21.3	23.0	21.3	23.0
0.51	0.52	0.51	0.52	0.51	0.52	0.51	0.52
0.58	0.53	0.58	0.53	0.58	0.53	0.58	0.53
33.4	24.4	33.4	24.4	44.5	24.4	44.5	24.4
24%	31%	24%	31%	33%	31%	33%	31%
Hydraulic		Hydraulic		Hydraulic		Hydraulic	

6.2	6.2	6.5	6.5
-----	-----	-----	-----

155	155	155	155
83.3	83.3	83.3	83.3
71.7	71.7	71.7	71.7
82	78	82	78
103	103	103	103
107	107	107	107
Pin	Pin	Pin	Pin

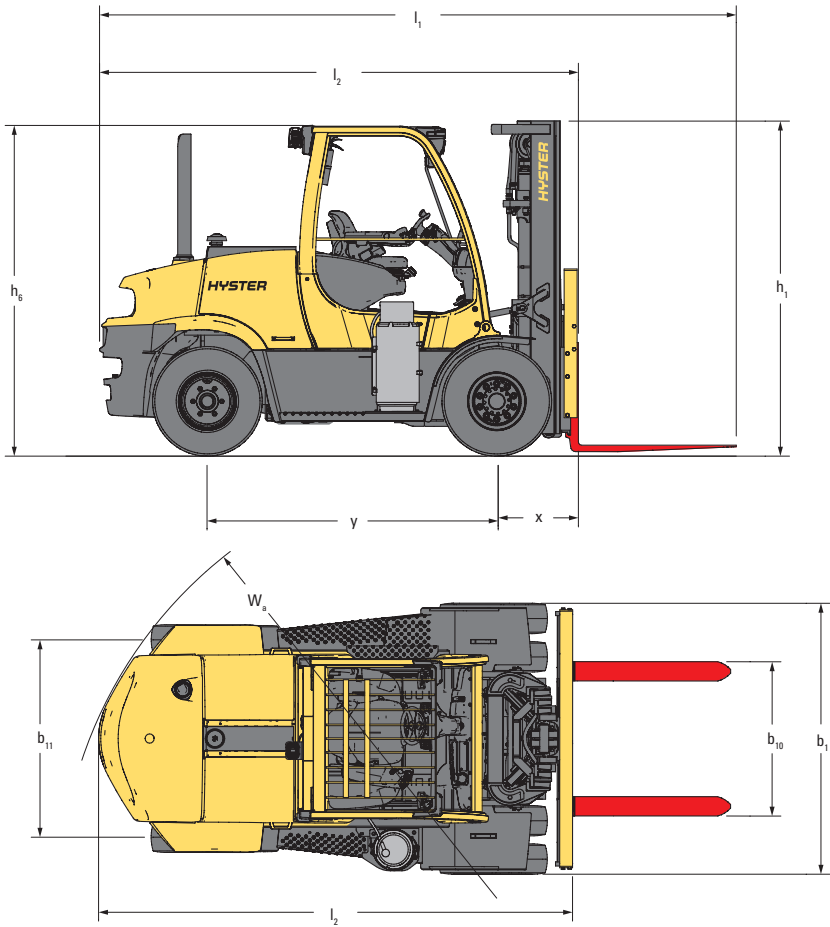
Specification data is based on VDI 2198.

FORTENS, FORTENS ADVANCE, FORTENS ADVANCE+ H7.0FT

DISTINGUISHING MARK	1.1	Manufacturer (abbreviation)							
	1.2	Manufacturer's type designation							
		Model							
		Engine / transmission							
		Brake type							
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas							
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker							
	1.5	Rated capacity/rated load	Q (t)						
	1.6	Load centre distance	c (mm)						
	1.8	Load distance, centre of drive axle to fork	x (mm)						
1.9	Wheelbase	y (mm)							
WEIGHTS	2.1	Service weight Σ	kg						
	2.2	Axle loading laden, front/rear	kg						
	2.3	Axle loading unladen, front/rear	kg						
TYRES/CHASSIS	3.1	Tyres: L = pneumatic, V = solid, SE = Pneumatic-Shaped Solid							
	3.2	Tyre size, front							
	3.3	Tyre size, rear							
	3.5	Number of wheels, front/rear (X = driven)							
	3.6	Tread, front	b ₁₀ (mm)						
	3.7	Tread, rear	b ₁₁ (mm)						
DIMENSIONS	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)						
	4.2	Height of mast, lowered	h ₁ (mm)						
	4.3	Free lift, \uparrow	h ₂ (mm)						
	4.4	Lift \uparrow	h ₃ (mm)						
	4.5	Height of mast, extended \blacksquare	h ₄ (mm)						
	4.7	Height of overhead guard (cabin) \blacktriangleleft	h ₅ (mm)						
	4.7.1	Cab height (open cab)	mm						
	4.8	Seat height relating to SIP/stand height \bullet	h ₆ (mm)						
	4.12	Coupling height	h ₁₀ (mm)						
	4.19	Overall length	l ₁ (mm)						
	4.20	Length to face of forks	l ₂ (mm)						
	4.21	Overall width	b ₁ /b ₂ (mm)						
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)						
	4.23	Fork carriage ISO 2328, class/type A, B							
	4.24	Fork carriage width \bullet	b ₃ (mm)						
	4.31	Ground clearance, laden, below mast	m ₁ (mm)						
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)						
	4.33	Aisle width with pallets 1 000 long x 1 200 crossways \blacklozenge	A ₁ (mm)						
	4.34	Aisle width with pallets 800 wide x 1 200 crossways \blacklozenge	A ₂ (mm)						
	4.35	Turning radius	W ₁ (mm)						
	4.36	Internal turning radius	b ₁₃ (mm)						
	4.41	90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)	(mm)						
	4.42	Step Height (from ground to running board)	(mm)						
4.43	Step Height (between intermediate steps between running board and floor)	(mm)							
PERFORMANCE DATA	5.1	Travel speed laden/unladen	km/h						
	5.1.1	Travel speed, laden/unladen, backwards	km/h						
	5.2	Lift speed, laden/unladen	m/sec						
	5.3	Lowering speed, laden/unladen	m/sec						
	5.5	Drawbar pull, laden/unladen	kN						
	5.7	Gradeability, laden/unladen	%						
	5.10	Service brake							
ADDITIONAL DATA	7.5	Fuel consumption according to VDI cycle	l/h or kg/h						
	10.1	Operating pressure for attachments	bar						
	10.2	Oil volume for attachments \blacklozenge	l/min						
	10.3	Hydraulic oil tank, capacity	l						
	10.7	Sound pressure level at the driver's seat DIN 12053 (without / with cab) L _{PAZ} \bullet	dB (A)						
	10.7.2	Sound power level during the drive cycle L _{WAZ}	dB						
	10.7.1	Guaranteed sound power 2000/14/EC L _{WAZ}	dB						
	10.8	Towing coupling, type DIN							

Specification data is based on VDI 2198.

TRUCK DIMENSIONS



= Centre of gravity of unladen truck

For $b_{12}/2 \leq b_{13}$: $AST = W_a + x + l_6 + a$

For $b_{12}/2 > b_{13}$: $AST = W_a + \sqrt{(l_6 + x)^2 + (b_{12}/2 - b_{13})^2}$

Minimum operating clearance

(VDI standard = 200 mm BITA recommendation = 300 mm)

l_6 = Load length

NOTE:

Specifications are affected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. Inform your dealer of the nature and condition of the intended operating area when purchasing your Hyster Truck.

- ✘ With standard equipment: mast, carriage and forks.
- Add 32 mm with load backrest
- || Bottom of forks
- Without load backrest
- Full suspension seat in depressed position
- + h_6 subject to +/- 5 mm tolerance 2 549 mm for cab option
- ◆ Stacking aisle width (lines 4.33 & 4.34) is based on the VDI standard calculation as shown on illustration. The British Industrial Truck Association recommends the addition of 100 mm to the total clearance (dimension a) for extra operating margin at the rear of truck.
- † Gradeability figures are provided for comparison of tractive performance, but are not intended to endorse the operation of the vehicle on the stated inclines. Follow instructions in the operating manual regarding operation on inclines.
- ◇ Variable
- ⊗ Measured according to the test cycles and based on the weighting values contained in EN12053

MAST TABLES:

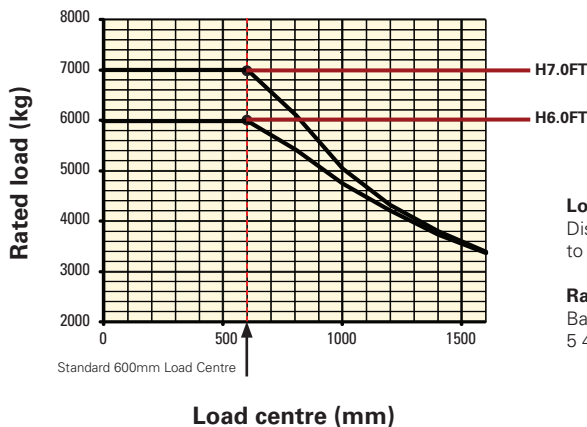
- ▽ Deduct 224 mm without load backrest
- ❖ Deduct 224 mm with load backrest

EQUIPMENT AND WEIGHT:

Weights (line 2.1) are based on the following specifications:

Complete truck with 3000mm 2-stage limited free lift mast, 1980mm carriage, 1200mm forks, e-hydraulics, overhead guard and standard pneumatic drive and steer tyres

RATED CAPACITIES



Load centre
Distance from front of forks to centre of gravity of load.

Rated load
Based on vertical masts up to 5 400 mm to top of forks.

NOTICE

Care must be exercised when handling elevated loads. When the carriage and/or load is elevated, truck stability is reduced. It is important that mast tilt in either direction be kept to a minimum when loads are elevated

Operators must be trained and must read, understand and follow the instructions contained in the Operating Manual.

All values are nominal values and they are subject to tolerances. For further information, please contact the manufacturer.

Hyster products might be subject to change without notice.

Lift trucks illustrated may feature optional equipment. Values may vary with alternative configurations.

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

MAST AND CAPACITY INFORMATION

Values shown are for standard equipment. When using non-standard equipment these values may change. Please contact your Hyster dealer for information

MASTS H6.0-7.0FT

Mast type	Maximum fork height (mm)	Back tilt	Overall lowered height (mm)	Overall Extended height (mm)	Free lift (top of forks) (mm)
2-Stage Limited Free Lift	3000	10°	2540	4354✦	160
	3400	10°	2740	4754✦	160
	4400	10°	3240	5754✦	160
	5400	10°	3740	6754✦	160
	6000	6°	4165	7354✦	160
3-Stage Full Free Lift	4700	6°	2570	6054✦	1440 ▽
	5600	6°	2870	6954✦	1740 ▽
	6200	6°	3120	7554✦	1990 ▽

H6.0-7.0FT – Capacity Chart in kg @ 600mm Load Centre

Mast type	Maximum fork height (mm)	All Tyre Types					
		With standard carriage		With carriage + sideshift		With carriage + sideshifting fork positioner	
		H6.0FT	H7.0FT	H6.0FT	H7.0FT	H6.0FT	H7.0FT
2-Stage Limited Free Lift	3000	6000	7000	5760	6710	5690	6630
	3400	6000	7000	5750	6700	5680	6620
	4400	6000	7000	5700	6650	5630	6570
	5400	6000	7000	5670	6620	5600	6540
	6000	5810	6800	5480	6410	5410	6340
3-Stage Full Free Lift	4700	6000	7000	5560	6480	5490	6400
	5600	5910	6900	5450	6360	5380	6290
	6200	5720	6700	5260	6150	5190	6080

NOTES

To calculate truck capacities with alternative truck specifications to the ones shown in the above tables, please contact your Hyster dealer.

The rated capacities shown are masts in a vertical position on trucks equipped with standard or sideshift carriage, and nominal length forks. Masts above the maximum fork heights shown in the mast table are classified as high lift, and depending on the tyre/tread configuration may require reduced capacity, restricted back tilt or wide tread.

Values shown are for standard equipment. When using non-standard equipment, these values may change. Please contact your Hyster dealer for information.

POWERTRAINS

1.3	Drive: electric (battery or mains), diesel, petrol, LPG	LPG	
COMBUSTION-ENGINE	7.1	Engine manufacturer/type	PSI 4.3L
	7.2	Engine power according to ISO 1585	71.6 kW
	7.3	Rated speed	2400 min-1
	7.3.1	Torque at 1/min	285 Nm/min-1
	7.4	Number of cylinders/displacement	6 4302 cm ³
	7.10	Battery voltage/nominal capacity	12 132 V/Ah
DRIVE MECHANISM	8.1	Type of drive unit	Hydrodynamic
	8.2	Manufacturer/type	DANA Powershift
	8.6	Wheel drive/drive axle manufacturer/type	DANA
	8.11	Service brake	Hydraulic
	8.12	Parking brake	Hand Lever

PRODUCT PACKAGES

The Hyster Fortens™ range been designed to match the vast range of application requirements and business objectives that customers demand. The H6.0-7.0FT Series is available in several truck packages, with multiple powertrain combinations to choose from, to best match operational demands. Each configuration offers improved efficiency, advanced dependability, lower cost of ownership and simple serviceability.

Model / Bundle	H6.0FT			H7.0FT		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens	PSI 4.3L	Electronic Powershift, 2-speed	Wet	PSI 4.3L	Electronic Powershift, 2-speed	Wet
Fortens	PSI 4.3L	Electronic Powershift, 2-speed with Soft Shift Power Reversal	Wet	PSI 4.3L	Electronic Powershift, 2-speed with Soft Shift Power Reversal	Wet
Fortens Advance	PSI 4.3L	DuraMatch™ 3, 3-speed	Wet	PSI 4.3L	DuraMatch™ 3, 3-Speed	Wet
Fortens Advance+	PSI 4.3L	DuraMatch™ Plus 3, 3-speed	Wet	PSI 4.3L	DuraMatch™ Plus 3, 3-Speed	Wet

Please refer to the Price List for full option configurations.

PRODUCT FEATURES

The Hyster Fortens H6.0-7.0FT series represents a powerful, compact materials handling solution for a wide range of demanding applications. These trucks are ideally suited to handling operations with high attachment usage such as paper, beverage, timber, metals and construction materials. It's compact design ensures that space and on-site efficiency can be maximised to maintain low operating costs.

Fortens H6.0-7.0FT series models feature PSI 4.3L LPG engine.

THE CHOICE OF TRANSMISSIONS

The Standard Fortens Stage IIIB model features 2-speed (2F/2R) Electronic Powershift with **Soft Shift Power Reversal** function for handling delicate loads, which inhibits direction changes at speeds of over 3.5km/h.

The Fortens Advance models feature the DuraMatch™3 transmission, providing:

- **Auto Deceleration System (ADS)** automatically slows the truck when the accelerator pedal is released, and finally brings the truck to a stop, which helps to significantly extend brake life. In addition, this feature assists the driver to accurately position the truck in front of a load. There are 10 ADS settings, programmable via the dash display by a service technician, which deliver different braking characteristics, from very gradual to aggressive, to suit the needs of the application.
- **Controlled Power Reversal;** the Pacesetter VSM™ controls the transmission to deliver smooth direction changes. The VSM reduces the throttle to slow the engine, initiates auto-deceleration to stop the truck, changes the transmission direction automatically and increases the throttle to accelerate the truck. The system virtually eliminates tyre spin and shock loads on the transmission and significantly increases tyre life. As with ADS, the system is programmable via the dash display by a service technician, with settings from 1 to 10, to suit the needs of the application.

- **Controlled Roll-Back on ramp;** the transmission controls the rate of decent of the truck on a ramp, when the brake and throttle pedal are released, to provide maximum control on a grade and increase operator productivity.
- **First Gear** offers **Increased Drawbar Pull** for use on gradients.
- **Second & Third Gears** (where available) provide maximum engine efficiency in applications where longer travel distances are common.

The Fortens Advance+ models feature the electronically controlled three-speed extended function DuraMatch™ Plus3 transmission. This transmission, in addition to the above, features:

- **Throttle Response Management** allows the operator to manage his travel speed, according to the position of his foot on the accelerator pedal. For example, a certain speed can be maintained both on the flat and on a gradient, without the need to depress the pedal further. The system also compensates for hydraulic operation and drawbar pull.
- **Dynamic Auto Deceleration System;** as with the DuraMatch™3, the operator can slow the truck down without using the brake and the rate of braking is determined by the dashboard settings 1-10. In addition, thanks to the Throttle Response Management feature, the rate of deceleration can be further fine-tuned according to the rate at which the driver releases his foot from the accelerator pedal.
- **Auto-Speed Hydraulics with Automatic Inching Control;** when lifting a load, the engine speed is automatically increased to provide full hydraulic power. The Pacesetter VSM™ maintains the current travel speed (or prevents travel) until operator steps on accelerator. No operator inching is required and productivity is increased by simplifying operator actions.

PRODUCT FEATURES (2)

The transmissions are compatible with the combi-cooler radiator and a superior counterweight tunnel design coupled with a "pusher" type fan, to provide the industry's best cooling.

The standard Oil-immersed brakes offer reduced maintenance and repair time and costs, which results in extended truck dependability and uptime. These trucks are ideally suited to applications in wet, dirty or corrosive environments, and ensure consistent braking performance over the lifetime of the truck. This is thanks to the sealed unit that houses and protects the brakes, so preventing contaminants and damage.

All powertrains are controlled, protected and managed by the **Pacesetter VSM™** industrial on-board computer, featuring a CANbus communications network.

This system permits adjustment and optimisation of the truck's performance, in addition to monitoring key functions. It enables quick, easy diagnostics, minimizing repair downtime and unnecessary parts swapping. Hassle-Free Hydraulic systems, featuring Leak-free O-ring face seal fittings reduce leaks for enhanced reliability.

Non-mechanical, Hall-Effect sensors and switches have been fitted and are designed to outlast the life of the truck.

The operator compartment features class-leading **ergonomics** for maximum driver comfort and productivity.

- Operator space is optimised, thanks to a new overhead guard design and significantly more floor space.
- The Easy-to-use 3-point entry design of operator compartment features conveniently positioned hand-grips and three non-slip steps, with an initial step height of just **32.1cm**. The isolated operator compartment minimises the effect of powertrain vibration.

- The adjustable armrest that accompanies the E-hydraulic TouchPoint™ mini-levers moves with the seat and telescopes forward.
- The Rear grab handle with horn button facilitates reverse driving.
- An infinitely adjustable steering column, 30cm diameter steering wheel with spinner knob and full-suspension seat enhance driver comfort.

The Hyster Fortens is the fastest and easiest lift truck to **service**.

- An active regenerating diesel particulate filter significantly reduces the number of services interventions. DPF performance is constantly monitored and displayed on supplemental display at operator eye level.
- Simple service access to both sides of the engine compartment is via a gull-wing hood and a simplified layout of wiring and hydraulics offers greater access to components, which in turn decreases service time for unscheduled repairs and regular maintenance.
- Fast, colour-coded daily checks and diagnostic systems can be managed via the dash display.
- An engine coolant change and Hydraulic oil change interval of 4,000 hours also contributes to reduced downtime.

STRONG PARTNERS. TOUGH TRUCKS.™

FOR DEMANDING OPERATIONS, EVERYWHERE.

Hyster supplies a complete range of warehouse equipment, IC and electric counterbalanced trucks, container handlers and reach stackers. Hyster is committed to being much more than a lift truck supplier.

Our aim is to offer a complete partnership capable of responding to the full spectrum of material handling issues: Whether you need professional consultancy on your fleet management, fully qualified service support, or reliable parts supply, you can depend on Hyster.

Our network of highly trained dealers provides expert, responsive local support. They can offer cost-effective finance packages and introduce effectively managed maintenance programmes to ensure that you get the best possible value. Our business is dealing with your material handling needs so you can focus on the success of your business today and in the future.



HYSTER EUROPE

Centennial House, Frimley Business Park, Frimley, Surrey, GU16 7SG, England.

Tel: +44 (0) 1276 538500



www.hyster.eu



infoeurope@hyster.com



[/HysterEurope](https://www.facebook.com/HysterEurope)




[@HysterEurope](https://twitter.com/HysterEurope)




[/HysterEurope](https://www.youtube.com/HysterEurope)



HYSTER-YALE UK LIMITED trading as Hyster Europe. Registered Address: Centennial House, Building 4.5, Frimley Business Park, Frimley, Surrey GU16 7SG, United Kingdom. Registered in England and Wales. Company Registration Number: 02636775.

HYSTER,  and FORTENS are registered trademarks in the European Union and certain other jurisdictions.

MONOTROL® is a registered trademark, and DURAMATCH and  are trademarks in the United States and in certain other jurisdictions.

Hyster products are subject to change without notice. Lift trucks illustrated may feature optional equipment.