



TM

STRONG PARTNERS. TOUGH TRUCKS.

FORTENS™

IC Counterbalanced Lift Trucks
H6.0-7.0FT Fortens / Fortens Advance/ Fortens Advance+

6 000 – 7 000 kg



Fortens H6.0FT, H7.0FT

CHARACTERISTICS		HYSTER		HYSTER		HYSTER		HYSTER		CHARACTERISTICS										
1.1	Manufacturer	Fortens		Fortens		Fortens		Fortens		1.1										
1.2	Model designation	H6.0FT		H6.0FT		H7.0FT		H7.0FT		1.2										
	Model - Manufacturer designation	Fortens		Fortens		Fortens		Fortens												
	Engine / transmission	Cummins 3.3L Electronic Powershift		GM 4.3L Electronic Powershift		Cummins 3.3L Electronic Powershift		GM 4.3L Electronic Powershift												
	Brake type	Wet Brakes		Wet Brakes		Wet Brakes		Wet Brakes												
1.3	Power: battery, diesel, LPG, electric mains	Diesel		LPG		Diesel		LPG		1.3										
1.4	Operation: manual, pedestrian, stand, seat, orderpicker	Seat		Seat		Seat		Seat		1.4										
1.5	Load capacity	6 000		6 000		7 000		7 000		1.5										
1.6	Load centre	600		600		600		600		1.6										
1.8	Load distance	601		601		601		601		1.8										
1.9	Wheelbase	2 235		2 235		2 235		2 235		1.9										
WEIGHTS		8 950		8 900		9 462		9 410		WEIGHTS										
2.1	Unladen weight	kg		kg		kg		kg		2.1										
2.2	Axle loading with load, front/rear	kg		kg		kg		kg		2.2										
2.3	Axle loading without load, front/rear	kg		kg		kg		kg		2.3										
WHEELS & TYRES		L		L		L		L		WHEELS & TYRES										
3.1	Tyres: L=pneumatic, V=solid, SE=pneumatic-shaped solid	L		L		L		L		3.1										
3.2	Tyre size, front	8,25 x15 14PR		8,25 x15 14PR		8,25 x15 14PR		8,25 x15 14PR		3.2										
3.3	Tyre size, rear	8,25 x15 14PR		8,25 x15 14PR		8,25 x15 14PR		8,25 x15 14PR		3.3										
3.5	Number of wheels, front/rear (X = driven)	4X 2		4X 2		4X 2		4X 2		3.5										
3.6	Track width, front	b ₁₀ (mm)		1 846		1 846		1 846		3.6										
3.7	Track width, rear	b ₁₁ (mm)		1 535		1 535		1 535		3.7										
DIMENSIONS		5		10		5		10		5		10		4.1						
4.1	Mast tilt, α = forward/β = back	degrees		degrees		degrees		degrees		degrees		degrees		4.1						
4.2	Height of mast, lowered	h ₁ (mm)		2 740		2 740		2 740		2 740		2 740		4.2						
4.3	Free lift ↑	h ₂ (mm)		100		100		100		100		100		4.3						
4.4	Lift height ↑	h ₃ (mm)		3 340		3 340		3 340		3 340		3 340		4.4						
4.5	Height of mast, extended +	h ₄ (mm)		4 530		4 530		4 530		4 530		4 530		4.5						
4.7	Overhead guard height ■	h ₆ (mm)		2 531		2 531		2 531		2 531		2 531		4.7						
4.8	Seat height ○	h ₇ (mm)		1 540		1 540		1 540		1 540		1 540		4.8						
4.12	Towing coupling height	h ₁₀ (mm)		474		474		474		474		474		4.12						
4.19	Overall length	l ₁ (mm)		4 805		4 805		4 869		4 869		4 869		4.19						
4.20	Length to face of forks	l ₂ (mm)		3 605		3 605		3 669		3 669		3 669		4.20						
4.21	Overall width - dual-drive wheels	b ₂ (mm)		2 082		2 082		2 082		2 082		2 082		4.21						
4.22	Fork dimensions	s/e/l (mm)		60 150 1 200		60 150 1 200		60 150 1 200		60 150 1 200		60 150 1 200		4.22						
4.23	Fork carriage DIN 15173. Class, A/B	IV A		IV A		IV A		IV A		IV A		IV A		4.23						
4.24	Fork carriage width ●	b ₃ (mm)		1 980		1 980		1 980		1 980		1 980		4.24						
4.31	Ground clearance under mast, with load	m ₁ (mm)		125		125		125		125		125		4.31						
4.32	Ground clearance, centre of wheelbase	m ₂ (mm)		253		253		253		253		253		4.32						
4.33	Aisle width with pallets 1 000 mm x 1 200 mm wide ◆	Ast (mm)		5 163		5 163		5 231		5 231		5 231		4.33						
4.34	Aisle width with pallets 800 mm x 1 200 mm long ◆	Ast (mm)		5 329		5 329		5 397		5 397		5 397		4.34						
4.35	Outer turning radius	W ₆ (mm)		3 320		3 320		3 388		3 388		3 388		4.35						
4.36	Inner turning radius	b ₁₃ (mm)		230		230		230		230		230		4.36						
PERFORMANCE		21,1		21,6		22,4		22,9		21,1		21,6		22,4		22,9		5.1		
5.1	Travel speed with/without load	km/h		km/h		km/h		km/h		km/h		km/h		km/h		km/h		5.1		
5.2	Lifting speed with/without load (2LFL)	m/sec		0,49		0,50		0,53		0,54		0,45		0,46		0,53		0,54		5.2
5.3	Lowering speed with/without load (2LFL)	m/sec		0,58		0,43		0,58		0,43		0,58		0,43		0,58		0,43		5.3
5.5	Drawbar pull with/without load @ 1,6 km/h	N		38 680		26 950		35 422		27 109		38 430		26 220		35 177		26 397		5.5
5.6	Maximum drawbar pull with/without load	N		48 260		26 950		42 773		27 109		48 020		26 220		42 529		26 397		5.6
5.7	Gradeability with/without load @ 1,6 km/h ↑	%		26,9		31,9		25,1		18,2		24,3		29,1		22,6		16,2		5.7
5.8	Maximum gradeability with/without load †	%		34,3		31,9		30,6		18,2		30,9		29,1		27,6		16,2		5.8
5.10	Service brake	Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		5.10		
ENGINE		Cummins QSB3.3		GM 4.3L		Cummins QSB3.3		GM 4.3L		Cummins QSB3.3		GM 4.3L		ENGINE						
7.1	Engine manufacturer/type	Cummins QSB3.3		GM 4.3L		Cummins QSB3.3		GM 4.3L		Cummins QSB3.3		GM 4.3L		7.1						
7.2	Engine output, in accordance with ISO 1585	kW		60		75		60		75		60		7.2						
7.3	Governed speed	rpm		2 200		2 400		2 200		2 400		2 400		7.3						
7.4	Number of cylinders/displacements	cm ³		4 3 261		6 4 302		4 3 261		6 4 302		6 4 302		7.4						
OTHER		Automatic		Automatic		Automatic		Automatic		Automatic		Automatic		OTHER						
8.1	Drive control	Automatic		Automatic		Automatic		Automatic		Automatic		Automatic		8.1						
8.2	Working pressure for attachments	bar		155		155		155		155		155		8.2						
8.3	Oil flow for attachments ⚡	l/min		83,3		83,3		83,3		83,3		83,3		8.3						
8.4	Average noise level at operator's ear (without / with cab) ◇	dB (A)		79 78		82 78		79 78		82 78		82 78		8.4						
	Guaranteed sound power 2001/14/EC (Lwaz)	dB		105		107		105		107		107								
8.5	Towing coupling type	Pin		Pin		Pin		Pin		Pin		Pin		8.5						

Specification Data is based on VDI 2198

Equipment and weight:

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

Complete truck with 3 400 mm 2-stage limited free lift mast, 1 980 mm carriage, 1 200 mm forks, e-hydraulics, overhead guard and standard pneumatic drive and steer tyres.

Fortens Advance & Fortens Advance+ H6.0FT, H7.0FT

		H6.0FT	H6.0FT	H7.0FT	H7.0FT				
CHARACTERISTICS	1.1	Manufacturer				1.1			
	1.2	Model designation				1.2			
		Model - Manufacturer designation							
		Engine / transmission							
		Brake type							
	1.3	Power: battery, diesel, LPG, electric mains				1.3			
	1.4	Operation: manual, pedestrian, stand, seat, orderpicker				1.4			
	1.5	Load capacity	Q (kg)		1.5				
	1.6	Load centre	c (mm)		1.6				
1.8	Load distance	x (mm)		1.8					
1.9	Wheelbase	y (mm)		1.9					
WEIGHTS	2.1	Unladen weight		kg		2.1			
	2.2	Axle loading with load, front/rear		kg		2.2			
	2.3	Axle loading without load, front/rear		kg		2.3			
WHEELS & TYRES	3.1	Tyres: L=pneumatic, V=solid, SE=pneumatic-shaped solid				3.1			
	3.2	Tyre size, front				3.2			
	3.3	Tyre size, rear				3.3			
	3.5	Number of wheels, front/rear (X = driven)				3.5			
	3.6	Track width, front	b ₁₀ (mm)		3.6				
	3.7	Track width, rear	b ₁₁ (mm)		3.7				
	DIMENSIONS	4.1	Mast tilt, α = forward/β = back		degrees		4.1		
4.2		Height of mast, lowered		h ₁ (mm)		4.2			
4.3		Free lift †		h ₂ (mm)		4.3			
4.4		Lift height †		h ₃ (mm)		4.4			
4.5		Height of mast, extended +		h ₄ (mm)		4.5			
4.7		Overhead guard height ■		h ₆ (mm)		4.7			
4.8		Seat height ○		h ₇ (mm)		4.8			
4.12		Towing coupling height		h ₁₀ (mm)		4.12			
4.19		Overall length		l ₁ (mm)		4.19			
4.20		Length to face of forks		l ₂ (mm)		4.20			
4.21		Overall width - dual-drive wheels		b ₂ (mm)		4.21			
4.22		Fork dimensions		s/e/l (mm)		4.22			
4.23		Fork carriage DIN 15173. Class, A/B				4.23			
4.24		Fork carriage width ●		b ₃ (mm)		4.24			
4.31		Ground clearance under mast, with load		m ₁ (mm)		4.31			
4.32		Ground clearance, centre of wheelbase		m ₂ (mm)		4.32			
4.33		Aisle width with pallets 1 000 mm x 1 200 mm wide ◆		Ast (mm)		4.33			
4.34		Aisle width with pallets 800 mm x 1 200 mm long ◆		Ast (mm)		4.34			
4.35		Outer turning radius		W ₀ (mm)		4.35			
4.36		Inner turning radius		b ₁₃ (mm)		4.36			
PERFORMANCE		5.1	Travel speed with/without load		km/h		5.1		
	5.2	Lifting speed with/without load (2LFL)		m/sec		5.2			
	5.3	Lowering speed with/without load (2LFL)		m/sec		5.3			
	5.5	Drawbar pull with/without load @ 1,6 km/h		N		5.5			
	5.6	Maximum drawbar pull with/without load		N		5.6			
	5.7	Gradeability with/without load @ 1,6 km/h †		%		5.7			
	5.8	Maximum gradeability with/without load †		%		5.8			
	5.10	Service brake				5.10			
	ENGINE	7.1	Engine manufacturer/type				7.1		
		7.2	Engine output, in accordance with ISO 1585		kW		7.2		
7.3		Governed speed		rpm		7.3			
7.4		Number of cylinders/displacements		cm ³		7.4			
OTHER	8.1	Drive control				8.1			
	8.2	Working pressure for attachments		bar		8.2			
	8.3	Oil flow for attachments †		l/min		8.3			
	8.4	Average noise level at operator's ear (without / with cab) ◇		dB (A)		8.4			
	8.5	Towing coupling type				8.5			

Specification Data is based on VDI 2198

Equipment and weight:

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

Complete truck with 3 400 mm 2-stage limited free lift mast, 1 980 mm carriage, 1 200 mm forks, e-hydraulics, overhead guard and standard pneumatic drive and steer tyres.

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

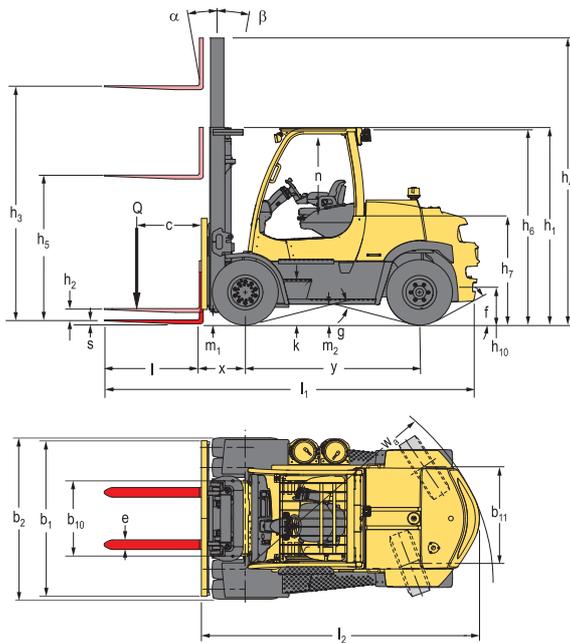
	Maximum fork height (mm)	Back tilt	Overall lowered height (mm)	Overall extended height (mm)	Free lift (top of forks) (mm)
2-Stage limited free lift	3 000	10°	2 540	4 354 ❖	160
	3 400	10°	2 740	4 754 ❖	160
	4 400	10°	3 240	5 754 ❖	160
	5 400	10°	3 740	6 754 ❖	160
	6 000	10°	4 165	7 354 ❖	160
3-Stage full free lift	4 700	6°	2 570	6 054 ❖	1 440 ▽
	5 600	6°	2 870	6 954 ❖	1 740 ▽
	6 200	6°	3 120	7 554 ❖	1 990 ▽

H6.0-7.0FT - Capacity chart in kg @ 600 mm load centre

All tyres							
Maximum fork height (mm)	With Carriage Only		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	3 000	6 000	7 000	5 760	6 710	5 690	6 630
	3 400	6 000	7 000	5 750	6 700	5 680	6 620
	4 400	6 000	7 000	5 700	6 650	5 630	6 570
	5 400	6 000	7 000	5 670	6 620	5 600	6 540
	6 000	5 810	6 800	5 480	6 410	5 410	6 340
3-Stage full free lift	4 700	6 000	7 000	5 560	6 480	5 490	6 400
	5 600	5 910	6 900	5 450	6 360	5 380	6 290
	6 200	5 720	6 700	5 260	6 150	5 190	6 080

Note: To calculate truck capacities with alternative truck specifications to the ones shown in the above tables, please consult your Hyster dealer. The rated capacities shown are for 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.

Truck dimensions



= Centre of gravity of unladen truck

$Ast = W_a + x + l_6 + a$ (see lines 4.33 & 4.34)

a = Minimum operating clearance

(V.D.I. 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. If these specifications are critical, the proposed application should be discussed with your dealer.

- ¶ Bottom of forks
 - ✦ Without load backrest
 - h_6 subject to +/- 5 mm tolerance 2 549 mm for Cab option
 - Full suspension seat in depressed position
 - Add 32 mm with load backrest
 - ◆ Stacking aisle width (lines 4.33 & 4.34) is based on the V.D.I. 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 (lines 5.7 & 5.8) 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
 - 🗨 Consult your Hyster lift truck dealer
- Mast tables:**
- ❖ Deduct 224 mm without load backrest
 - ▽ Deduct 224 mm with load backrest

Model

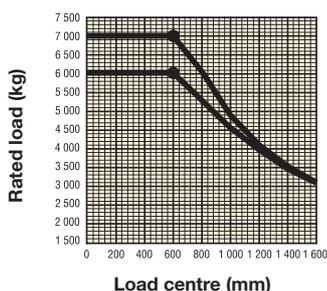
H6.0FT

H7.0FT

Dimensions (mm)

f	51%	46%
g	50%	50%
k	321	321
n (OHG) ¶	1 062	1 062
n (Cab) ¶	1 045	1 045

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.

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 adhere to the instructions contained in the Operating Manual.

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



This truck conforms to the current EU requirements.

Product Packages

The Hyster Fortens™ range has 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		
DIESEL	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens	Cummins 3.3L Turbo	Powershift Transmission 2 speed	Wet	Cummins 3.3L Turbo	Powershift Transmission 2 speed	Wet
Fortens Advance	Cummins 3.3L Turbo	DuraMatch™ Electronic 3 speed	Wet	Cummins 3.3L Turbo	DuraMatch™ Electronic 3 speed	Wet
Fortens Advance+	Cummins 3.3L Turbo	DuraMatch™ Plus 3 speed	Wet	Cummins 3.3L Turbo	DuraMatch™ Plus 3 speed	Wet
Model / Bundle	H6.0FT			H7.0FT		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens	GM 4.3L V6	Powershift Transmission 2 speed	Wet	GM 4.3L V6	Powershift Transmission 2 speed	Wet
Fortens Advance	GM 4.3L V6	DuraMatch™ Electronic 3 speed	Wet	GM 4.3L V6	DuraMatch™ Electronic 3 speed	Wet
Fortens Advance+	GM 4.3L V6	DuraMatch™ Plus 3 speed	Wet	GM 4.3L V6	DuraMatch™ Plus 3 speed	Wet

Product Features

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

The Fortens Advance models feature the electronically controlled 3-speed (3F/2R) **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 descent 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.

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 & 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 onboard 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.

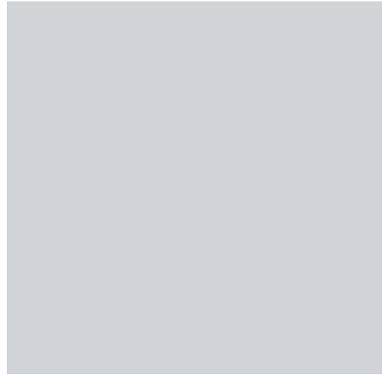
Non-mechanical, Hall-Effect sensors and switches have been fitted and are designed to outlast the life of the truck.

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 **32.1 cm**. 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, 30 cm 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**.

- 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 product range, including Warehouse trucks, 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 materials 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 materials handling needs so you can focus on the success of your business today and in the future.



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