



TM

STRONG PARTNERS. TOUGH TRUCKS.

FORTENS™

IC Counterbalanced Lift Trucks
S4.0-5.5FT Fortens Advance / Fortens Advance+

4 000 – 5 500 kg



Fortens Advance S4.0FT, S4.5FT, S5.5FT, S5.5FTS

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
WEIGHTS	1.7	Load distance (load face)	x (mm)				1.7
	1.8	Wheelbase	y (mm)				1.8
	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, standard/wide	b ₁ /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 _s (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 (2-stage limited free lift)	m/sec				5.2
	5.3	Lowering speed with/without load (2-stage limited free lift)	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 @ 4,8 km/h †	%				5.7
	5.8	Maximum gradeability with/without load @ 1,6 km/h †	%				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 / DIN 6271	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 (nominal relief pressure)	bar				8.2
	8.3	Oil flow for attachments (nominal) ✕	l/min				8.3
	8.4	Average noise level at operator's ear (Lpaz) ◇	dB (A)				8.4
		Guaranteed sound power 2001/14/EC (Lwaz)	dB				
	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 050mm (S4.0FT) 2 800 mm (S4.5-5.5FT) 2-stage limited free lift mast, standard carriage, 1 000mm (S4.0FT) / 1 200mm (S4.5-5.5FT) forks, e-hydraulics, overhead guard and standard cushion drive and steer tyres.

Fortens Advance+ S4.0FT, S4.5FT, S5.5FT, S5.5FTS

CHARACTERISTICS	1.1	Manufacturer			HYSTER		HYSTER		HYSTER		HYSTER		1.1
	1.2	Model designation			S4,0FT		S4,5FT		S5,5FT		S5,5FTS		1.2
		Model - Manufacturer designation			Fortens Advance +		Fortens Advance +		Fortens Advance +		Fortens Advance +		
		Engine / transmission			GM 4.3L DuraMatch Plus2		GM 4.3L DuraMatch Plus2		GM 4.3L DuraMatch Plus2		GM 4.3L DuraMatch Plus2		
		Brake type			Wet Brakes		Wet Brakes		Wet Brakes		Wet Brakes		
	1.3	Power: battery, diesel, LPG, electric mains			LPG		LPG		LPG		LPG		1.3
	1.4	Operation: manual, pedestrian, stand, seat, orderpicker			Seat		Seat		Seat		Seat		1.4
	1.5	Load capacity	Q (kg)		4 000		4 500		5 500		5 500		1.5
	1.6	Load centre	c (mm)		500		600		600		600		1.6
1.7	Load distance (load face)	x (mm)		447		462		462		462		1.7	
1.8	Wheelbase	y (mm)		1 570		1 790		1 790		1 790		1.8	
WEIGHTS	2.1	Unladen weight	kg		5 932		7 267		7 885		7 909		2.1
	2.2	Axle loading with load, front/rear	kg		8 832		978		10 591		1 148		2.2
	2.3	Axle loading without load, front/rear	kg		2 343		3 589		3 228		4 039		2.3
WHEELS & TYRES	3.1	Tyres: L=pneumatic, V=solid, SE=pneumatic-shaped solid			V		V		V		V		3.1
	3.2	Tyre size, front			22,00 x 9 - 16		22,00 x 12 - 16		22,00 x 12 - 16		22,00 x 12 - 16		3.2
	3.3	Tyre size, rear			18,00 x 7 - 12,1		18,00 x 8 - 12,1		18,00 x 8 - 12,1		18,00 x 8 - 12,1		3.3
	3.5	Number of wheels, front/rear (X = driven)			2X		2X		2X		2X		3.5
	3.6	Track width, front	b ₁₀ (mm)		941,4		1 015,2		1 015,2		1 015,2		3.6
	3.7	Track width, rear	b ₁₁ (mm)		978,2		1 003,8		1 003,8		1 003,8		3.7
DIMENSIONS	4.1	Mast tilt, α = forward/β = back	degrees		5		6		5		6		4.1
	4.2	Height of mast, lowered	h ₁ (mm)		2 130		2 135		2 135		2 135		4.2
	4.3	Free lift ▴	h ₂ (mm)		100		100		100		100		4.3
	4.4	Lift height ▴	h ₃ (mm)		3 000		2 740		2 740		2 740		4.4
	4.5	Height of mast, extended +	h ₄ (mm)		3 780		3 655		3 655		3 655		4.5
	4.7	Overhead guard height ■	h ₆ (mm)		2 171		2 175		2 175		2 175		4.7
	4.8	Seat height ○	h ₇ (mm)		1 221		1 339		1 339		1 339		4.8
	4.12	Towing coupling height	h ₁₀ (mm)		367		371		371		371		4.12
	4.19	Overall length	l ₁ (mm)		3 630		3 969		4 062		3 899		4.19
	4.20	Length to face of forks	l ₂ (mm)		2 630		2 769		2 862		2 699		4.20
	4.21	Overall width, standard/wide	b ₁ /b ₂ (mm)		1 170		1 270		1 320		1 420		4.21
	4.22	Fork dimensions	s/e/l (mm)		50		125		1 000		60		4.22
	4.23	Fork carriage DIN 15173. Class, A/B			III A		IV A		IV A		IV A		4.23
	4.24	Fork carriage width ●	b ₃ (mm)		1 070		1 070		1 070		1 070		4.24
	4.31	Ground clearance under mast, with load	m ₁ (mm)		114		118		118		118		4.31
	4.32	Ground clearance, centre of wheelbase	m ₂ (mm)		152		156		156		156		4.32
	4.33	Aisle width with pallets 1 000 mm x 1 200 mm wide ◆	Ast (mm)		4 032		4 191		4 278		4 119		4.33
	4.34	Aisle width with pallets 800 mm x 1 200 mm long ◆	Ast (mm)		4 174		4 336		4 423		4 264		4.34
	4.35	Outer turning radius	W ₃ (mm)		2 298		2 447		2 534		2 375		4.35
	4.36	Inner turning radius	b ₁₃ (mm)		90		102		102		102		4.36
PERFORMANCE	5.1	Travel speed with/without load	km/h		20,1		19,5		20,1		19,5		5.1
	5.2	Lifting speed with/without load (2-stage limited free lift)	m/sec		0,61		0,62		0,56		0,57		5.2
	5.3	Lowering speed with/without load (2-stage limited free lift)	m/sec		0,55		0,47		0,51		0,42		5.3
	5.5	Drawbar pull with/without load @ 1,6 km/h	N		31 150		13 354		31 150		16 848		5.5
	5.6	Maximum drawbar pull with/without load	N		31 150		13 354		31 150		16 848		5.6
	5.7	Gradeability with/without load @ 4,8 km/h †	%		28,0		22,6		21,5		18,7		5.7
	5.8	Maximum gradeability with/without load @ 1,6 km/h †	%		34,2		22,6		27,9		25,7		5.8
5.10	Service brake			Hydraulic		Hydraulic		Hydraulic		Hydraulic		5.10	
ENGINE	7.1	Engine manufacturer/type			GM 4.3L		GM 4.3L		GM 4.3L		GM 4.3L		7.1
	7.2	Engine output, in accordance with ISO 1585 / DIN 6271	kW		73,0		73,0		73,0		73,0		7.2
	7.3	Governed speed	rpm		2 400		2 400		2 400		2 400		7.3
	7.4	Number of cylinders/displacements	cm ³		6		4 302		6		4 302		7.4
OTHER	8.1	Drive control			Automatic		Automatic		Automatic		Automatic		8.1
	8.2	Working pressure for attachments (nominal relief pressure)	bar		155		155		155		155		8.2
	8.3	Oil flow for attachments (nominal) ⚡	l/min		83,3		83,3		83,3		83,3		8.3
	8.4	Average noise level at operator's ear (Lpaz) ◇	dB (A)		84		84		84		84		8.4
		Guaranteed sound power 2001/14/EC (Lwaz)	dB		106		106		106		106		
	8,5	Towing coupling type			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 3 050 mm (S4.0FT) 2 800 mm (S4.5-5.5FT) 2-stage limited free lift mast, standard carriage, 1 000 mm (S4.0FT) / 1 200 mm (S4.5-5.5FT) forks, e-hydraulics, overhead guard and standard cushion 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 S4.0FT

	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	3 050	6°	2 135	4 285 ❖	150 ▽
	3 650	6°	2 435	4 885 ❖	150 ▽
	4 250	6°	2 735	5 485 ❖	150 ▽
2-Stage full free lift	3 075	6°	2 135	4 310 ❖	1 350 ▽
3-Stage full free lift	4 415	6°	2 134	5 650 ❖	1 350 ▽
	4 950	6°	2 335	6 185 ❖	1 550 ▽
	5 550	6°	2 535	6 785 ❖	1 750 ▽
	6 000	6°	2 735	7 235 ❖	1 950 ▽

Masts S4.5-5.5FTS

	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	2 800	6°	2 140	4 035 ❖	160 ▽
	3 400	6°	2 440	4 635 ❖	160 ▽
	4 000	6°	2 740	5 235 ❖	160 ▽
2-Stage full free lift	2 825	6°	2 140	4 060 ❖	1 230 ▽
3-Stage full free lift	4 145	6°	2 140	5 380 ❖	1 225 ▽
	4 700	6°	2 340	5 935 ❖	1 425 ▽
	5 300	6°	2 540	6 535 ❖	1 625 ▽

S4.0FT - Capacity chart in kg @ 500 mm load centre

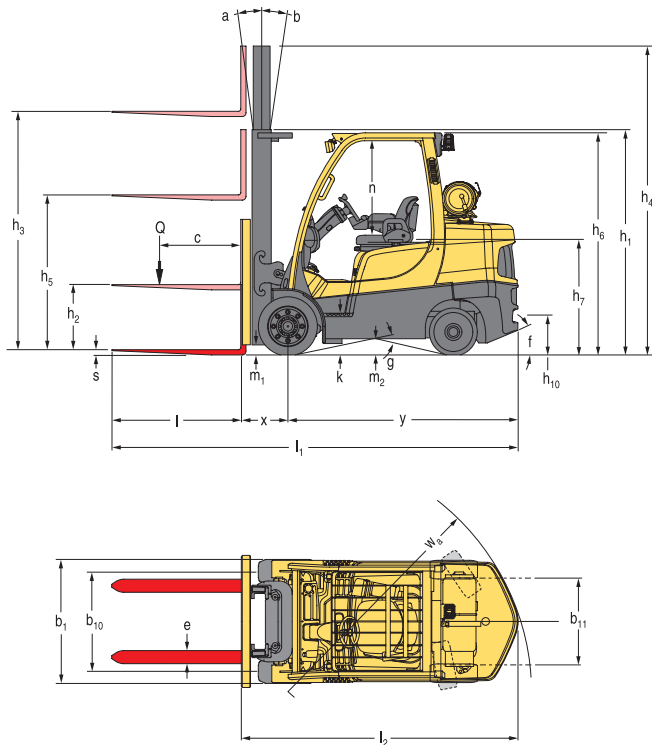
Cushion tyres			
Maximum fork height (mm)	Without sideshift		With sideshift
	S4.0FT		S4.0FT
2-Stage limited free lift	3 050	4 000	4 000
	3 650	4 000	4 000
	4 250	4 000	4 000
2-Stage full free lift	3 075	4 000	4 000
3-Stage full free lift	4 415	4 000 ⚡	3 910 ⚡
	4 950	3 890 ⚡	3 790 ⚡
	5 550	3 760 ⚡	3 650 ⚡
	6 000	3 650 ⚡	3 530 ⚡

S4.5-5.5FTS - Capacity chart in kg @ 600 mm load centre

Cushion tyres							
Maximum fork height (mm)	Without sideshift			With sideshift			
	S4.5FT	S5.5FT	S5.5FTS	S4.5FT	S5.5FT	S5.5FTS	
2-Stage limited free lift	2 800	4 500	5 500	5 500	4 500	5 500	5 460 ⚡
	3 400	4 500	5 500	5 500	4 500	5 500	5 440 ⚡
	4 000	4 500	5 500	5 500	4 500	5 500	5 430 ⚡
2-Stage full free lift	2 825	4 500	5 500	5 500	4 500	5 500	5 450
3-Stage full free lift	4 145	4 500 ⚡	5 500 ⚡	5 500 ⚡	4 430 ⚡	5 310 ⚡	5 260 ⚡
	4 700	4 500 ⚡	5 500 ⚡	5 500 ⚡	4 410 ⚡	5 300 ⚡	5 250 ⚡
	5 300	4 380 ⚡	5 370 ⚡	5 360 ⚡	4 280 ⚡	5 160 ⚡	5 110 ⚡

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
- Full suspension seat in depressed position
- Add 32 mm with load backrest
- ◆ Stacking aisle width (lines 4.33 & 4.34) are 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 the 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:

- ❖ With load backrest
- ▽ Without load backrest
- Wide tread required

Model

S4.0FT

S4.5FT

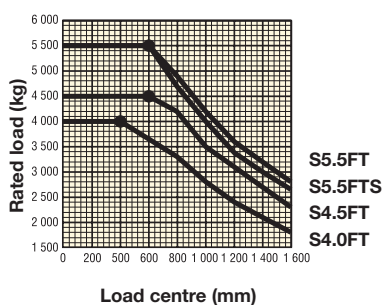
S5.5FT

S5.5FTS

Dimensions (mm)

f	40%	32%	32%	32%
g	22.7°	22°	21°	21°
k	391,5	395,5	395,5	395,5
n	1 062	1 062	1 062	1 062

Rated capacities



Load centre

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

Rated load

Based on vertical masts up to 4 250mm (S4.0FT) and 4 000mm (S4.5-5.5FT)

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 been designed to match the vast range of application requirements and business objectives that customers demand.

The S4.0-5.5FT 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	S4.0FT			S4.5FT		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens Advance	GM 4.3L V6	DuraMatch™ Electronic 1 speed	ADS Drum	GM 4.3L V6	DuraMatch™ Electronic 1 speed	ADS Drum
	GM 4.3L V6	DuraMatch™ Electronic 1 speed	Wet	GM 4.3L V6	DuraMatch™ Electronic 1 speed	Wet
Fortens Advance+	GM 4.3L V6	DuraMatch™ Plus 2 speed	Wet	GM 4.3L V6	DuraMatch™ Plus 2 speed	Wet
Model / Bundle	S5.5FT			S5.5FTS		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens Advance	GM 4.3L V6	DuraMatch™ Electronic 1 speed	ADS Drum	GM 4.3L V6	DuraMatch™ Electronic 1 speed	ADS Drum
	GM 4.3L V6	DuraMatch™ Electronic 1 speed	Wet	GM 4.3L V6	DuraMatch™ Electronic 1 speed	Wet
Fortens Advance+	GM 4.3L V6	DuraMatch™ Plus 2 speed	Wet	GM 4.3L V6	DuraMatch™ Plus 2 speed	Wet

Please refer to the Price List for full option configurations.

Product Features

The Fortens Advance models feature the electronically controlled single-speed **DuraMatch™ transmission**, providing:

- **Auto Deceleration System** automatically slows the truck when the accelerator pedal is released, which significantly extends brake life. This feature is programmable through the dash display, to match application needs from delicate to more aggressive settings for maximum productivity.
- **Controlled Power Reversal** controls direction changes through the transmission, virtually eliminating tyre spin and significantly increasing tyre life.
- **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 reduce driver fatigue.

The Fortens Advance+ models feature the electronically controlled two-speed extended function **DuraMatch™ Plus2 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 on a gradient, without the need to depress the pedal further.
- **Extended Auto Deceleration System**; as with the DuraMatch™ allows the operator to slow the truck down without using the brake. However, thanks to the Throttle Response Management feature, the rate of deceleration is dependant on the rate at which the driver releases his foot from the accelerator pedal. On this model, the ADS is not adjustable through the dash display.
- **Auto-Speed Hydraulics with Automatic Inching Control**; the engine speed is automatically increased to provide full hydraulic power, while travel speed remains constant.
- **First Gear** offers **Increased Drawbar Pull** for use on gradients.
- **Second Gear** provides maximum engine efficiency in applications where longer travel distances are common.

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 available Oil-immersed brakes offer reduced maintenance & repair time and costs, which results in extended truck dependability and uptime.

Trucks fitted with Oil-immersed brakes 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 has an open non-slip step with a height of just 39,5cm.
- The isolated drivetrain minimises the effect of powertrain vibration.
- The adjustable armrest that accompanies the TouchPoint™ or TouchControl™ E-hydraulic configurations 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**.

- Complete cowl-to-counterweight service access 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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