



STRONG PARTNERS. TOUGH TRUCKS.

FORTENS™



IC Counterbalanced Lift Trucks
S6.0-7.0FT Fortens / Fortens Advance

6 000-7 000 kg

Fortens S6.0FT, S7.0FT

CHARACTERISTICS	1.1	Manufacturer	HYSTER		HYSTER		HYSTER		HYSTER					
	1.2	Model designation	S6.0FT		S6.0FT		S7.0FT		S7.0FT					
		Model - Manufacturer designation	Fortens		Fortens		Fortens		Fortens					
		Engine/Transmission	GM 4.3L Electronic Powershift		Kubota 3.8L Electronic Powershift		GM 4.3L Electronic Powershift		Kubota 3.8L Electronic Powershift					
		Brake Type	Wet Brakes		Wet Brakes		Wet Brakes		Wet Brakes					
	1.3	Power: battery, diesel, LPG, electric mains	LPG		Diesel		LPG		Diesel					
	1.4	Operation: manual, pedestrian, stand, seat, orderpicker	Seat		Seat		Seat		Seat					
	1.5	Load capacity	6 000		6 000		7 000		7 000					
	1.6	Load centre	600		600		600		600					
1.8	Load distance	500		500		500		500						
1.9	Wheelbase	1830		1830		1830		1830						
WEIGHTS	2.1	Unladen weight	8835		8887		9699		9751					
	2.2	Axle loading with load, front / rear	13791	1168	13817	1194	15449	1281	15475	1307				
	2.3	Axle loading without load, front / rear	3841	4994	3867	5020	4025	5674	4051	5700				
WHEELS & TYRES	3.1	Tyres: L=Pneumatic, V=Solid, SE=Pneumatic Shaped Solid	V		V		V		V					
	3.2	Tyre size, front	28 x 12 x 22		28 x 12 x 22		28 x 12 x 22		28 x 12 x 22					
	3.3	Tyre size, rear	22 x 8 x 6		22 x 8 x 16		22 x 8 x 16		22 x 8 x 16					
	3.5	Number of wheels, front / rear (X = driven)	2X	2	2X	2	2X	2	2X	2				
	3.6	Track width, front	1133		1133		1133		1133					
3.7	Track width, rear	1192		1192		1192		1192						
DIMENSIONS	4.1	Mast tilt, forward α / back β	6		10		6		10		6		10	
	4.2	Height of mast, lowered	2697		2697		2697		2697		2697		2697	
	4.3	Free lift \uparrow	100		100		100		100		100		100	
	4.4	Lift height \uparrow	3340		3340		3340		3340		3340		3340	
	4.5	Height of mast, extended \blacksquare	4575		4575		4575		4575		4575		4575	
	4.7	Height to top of overhead guard (high) $+$	2302		2302		2302		2302		2302		2302	
	4.8	Seat height \odot	1231		1231		1231		1231		1231		1231	
	4.12	Towing coupling height	388		388		388		388		388		388	
	4.19	Overall length	4130		4130		4130		4130		4130		4130	
	4.20	Length to face of forks	2930		2930		2930		2930		2930		2930	
	4.21	Overall width	1438		1438		1438		1438		1438		1438	
	4.22	Fork dimensions	60	150	1200	60	150	1200	60	150	1200	60	150	1200
	4.23	Fork carriage to DIN 15173. Class, A/B	IVA		IVA		IVA		IVA		IVA		IVA	
	4.24	Fork carriage width \bullet	1219		1219		1219		1219		1219		1219	
4.31	Ground clearance under mast, with load	113		113		113		113		113		113		
4.32	Ground clearance at centre of wheelbase	188		188		188		188		188		188		
4.33	Aisle width with pallets 1 000 long x 1 200 wide \blacklozenge	4364		4364		4364		4364		4364		4364		
4.34	Aisle width with pallets 800 wide x 1 200 long \blacklozenge	4510		4510		4510		4510		4510		4510		
4.35	Outer turning radius	2585		2585		2585		2585		2585		2585		
4.36	Inner turning radius	108		108		108		108		108		108		
PERFORMANCE	5.1	Travel speed with / without load	20.5	19.8	20.7	20.0	20.5	19.8	20.7	20.0				
	5.2	Lifting speed with / without load	0.53	0.53	0.48	0.49	0.53	0.53	0.45	0.49				
	5.3	Lowering speed with / without load	0.56	0.43	0.58	0.53	0.56	0.43	0.58	0.53				
	5.5	Drawbar pull with / without load, @ 1.6 km/h	39500	20100	38670	21870	39200	19200	38360	23090				
	5.6	Maximum drawbar pull with / without load,	48300	20100	50370	21870	48100	19200	50050	23090				
	5.7	Gradeability with / without load, @ 4.8 km/h \uparrow	17.6	24.0	15.2	24.8	15.9	21.6	13.4	22.4				
5.8	Maximum Gradeability with / without load, @ 1.6 km/h \uparrow	28.1	24.0	26.2	24.8	25.3	21.6	24.1	23.9					
5.10	Service brake	Hydraulic		Hydraulic		Hydraulic		Hydraulic						
POWER UNIT	7.1	Engine manufacturer / type	GM 4.3L		Kubota V3800 3.8L		GM 4.3L		Kubota V3800 3.8L					
	7.2	Engine output, in accordance with ISO1585	77		55		77		55					
	7.3	Governed speed	2400		2200		2400		2200					
	7.4	Number of cylinders / displacement	6	4302	4	3769	6	4302	4	3769				
	7.5	Fuel Consumption per VDI test cycle	TBC		6.17		TBC		6.66					
OTHER	8.1	Drive control	Automatic		Automatic		Automatic		Automatic					
	8.2	Working pressure for attachments	153		153		153		153					
	8.3	Oil flow for attachments \blacklozenge	83.3		83.3		83.3		83.3					
	8.4	Average noise level at operator's ear L_{PAZ} \oplus	83		81		83		81					
	8.5	Guaranteed sound power 2001/14/EC L_{WAZ}	108		104		108		104					
	Towing coupling type	Pin		Pin		Pin		Pin						

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, standard carriage, 1 200 mm forks, e-hydraulics, overhead guard and standard cushion drive and steer tyres.

Fortens Advance S6.0FT, S7.0FT

CHARACTERISTICS	1.1	Manufacturer	
	1.2	Model designation	
		Model - Manufacturer designation	
		Engine/Transmission	
		Brake Type	
	1.3	Power: battery, diesel, LPG, electric mains	
	1.4	Operation: manual, pedestrian, stand, seat, orderpicker	
	1.5	Load capacity	Q (kg)
	1.6	Load centre	c (mm)
1.8	Load distance	x (mm)	
1.9	Wheelbase	y (mm)	

WEIGHTS	2.1	Unladen weight	kg
	2.2	Axle loading with load, front / rear	kg
	2.3	Axle loading without load, front / rear	kg

WHEELS & TYRES	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	Track width, front	b10 (mm)
	3.7	Track width, rear	b11 (mm)

DIMENSIONS	4.1	Mast tilt, forward α / back β	degrees
	4.2	Height of mast, lowered	h1 (mm)
	4.3	Free lift \uparrow	h2 (mm)
	4.4	Lift height \uparrow	h3 (mm)
	4.5	Height of mast, extended \blacksquare	h4 (mm)
	4.7	Height to top of overhead guard (high) $+$	h6 (mm)
	4.8	Seat height \odot	h7 (mm)
	4.12	Towing coupling height	h10 (mm)
	4.19	Overall length	l1 (mm)
	4.20	Length to face of forks	l2 (mm)
	4.21	Overall width	b1 (mm)
	4.22	Fork dimensions	s/e/l (mm)
	4.23	Fork carriage to DIN 15173. Class, A/B	
	4.24	Fork carriage width \bullet	b3 (mm)
	4.31	Ground clearance under mast, with load	m1 (mm)
	4.32	Ground clearance at centre of wheelbase	m2 (mm)
	4.33	Aisle width with pallets 1 000 long x 1 200 wide \blacklozenge	Ast (mm)
	4.34	Aisle width with pallets 800 wide x 1 200 long \blacklozenge	Ast (mm)
4.35	Outer turning radius	Wa (mm)	
4.36	Inner turning radius	b13 (mm)	

PERFORMANCE	5.1	Travel speed with / without load	km/h
	5.2	Lifting speed with / without load	m/sec
	5.3	Lowering speed with / without load	m/sec
	5.5	Drawbar pull with / without load, @ 1.6 km/h	N
	5.6	Maximum drawbar pull with / without load,	N
	5.7	Gradeability with / without load, @ 4.8 km/h \uparrow	%
	5.8	Maximum Gradeability with / without load, @ 1.6 km/h \uparrow	%
5.10	Service brake		

POWER UNIT	7.1	Engine manufacturer / type	
	7.2	Engine output, in accordance with ISO1585	kW
	7.3	Governed speed	rpm
	7.4	Number of cylinders / displacement	cm3
	7.5	Fuel Consumption per VDI test cycle	l/hr (DSL), kg/hr (LPG)

OTHER	8.1	Drive control	
	8.2	Working pressure for attachments	bar
	8.3	Oil flow for attachments \diamond	l/min
	8.4	Average noise level at operator's ear L_{PAZ} \odot	dB(A)
		Guaranteed sound power 2001/14/EC L_{WAZ}	dB
8.5	Towing coupling type		

HYSTER		HYSTER		HYSTER		HYSTER	
S6.0FT		S6.0FT		S7.0FT		S7.0FT	
Fortens Advance		Fortens Advance		Fortens Advance		Fortens Advance	
GM 4.3L		Kubota 3.8L		GM 4.3L		Kubota 3.8L	
DuraMatch™ Electronic		DuraMatch™ Electronic		DuraMatch™ Electronic		DuraMatch™ Electronic	
Wet Brakes		Wet Brakes		Wet Brakes		Wet Brakes	
LPG		Diesel		LPG		Diesel	
Seat		Seat		Seat		Seat	
6 000		6 000		7 000		7 000	
600		600		600		600	
500		500		500		500	
1830		1830		1830		1830	

8835		8887		9699		9751	
13791	1168	13817	1194	15449	1281	15475	1307
3841	4994	3867	5020	4025	5674	4051	5700

V		V		V		V	
28 x 12 x 22		28 x 12 x 22		28 x 12 x 22		28 x 12 x 22	
22 x 8 x 16		22 x 8 x 16		22 x 8 x 16		22 x 8 x 16	
2X	2	2X	2	2X	2	2X	2
1133		1133		1133		1133	
1192		1192		1192		1192	

6			10			6			10			6			10		
2697			2697			2697			2697			2697			2697		
100			100			100			100			100			100		
3340			3340			3340			3340			3340			3340		
4575			4575			4575			4575			4575			4575		
2302			2302			2302			2302			2302			2302		
1231			1231			1231			1231			1231			1231		
388			388			388			388			388			388		
4130			4130			4130			4130			4130			4130		
2930			2930			2930			2930			2930			2930		
1438			1438			1438			1438			1438			1438		
60	150	1200	60	150	1200	60	150	1200	60	150	1200	60	150	1200	60	150	1200
IVA			IVA			IVA			IVA			IVA			IVA		
1219			1219			1219			1219			1219			1219		
113			113			113			113			113			113		
188			188			188			188			188			188		
4364			4364			4364			4364			4364			4364		
4510			4510			4510			4510			4510			4510		
2585			2585			2585			2585			2585			2585		
108			108			108			108			108			108		

21.3	20.6	20.9	20.2	21.3	20.6	20.9	20.2
0.53	0.53	0.48	0.49	0.53	0.53	0.45	0.49
0.56	0.43	0.58	0.53	0.56	0.43	0.58	0.53
44500	20100	45360	23090	44500	19200	45360	23090
44500	20100	45360	23090	44500	19200	45360	23090
17.6	24.0	15.5	24.8	16.0	21.6	13.7	23.9
32.0	24.0	31.5	24.8	29.1	21.6	27.9	23.9
Hydraulic		Hydraulic		Hydraulic		Hydraulic	

GM 4.3L		Kubota V3800 3.8L		GM 4.3L		Kubota V3800 3.8L	
77		55		77		55	
2400		2200		2400		2200	
6	4302	4	3769	6	4302	4	3769
TBC		6.36		TBC		6.85	

Automatic		Automatic		Automatic		Automatic	
153		153		153		153	
83.3		83.3		83.3		83.3	
83		81		83		81	
108		104		108		104	
Pin		Pin		Pin		Pin	

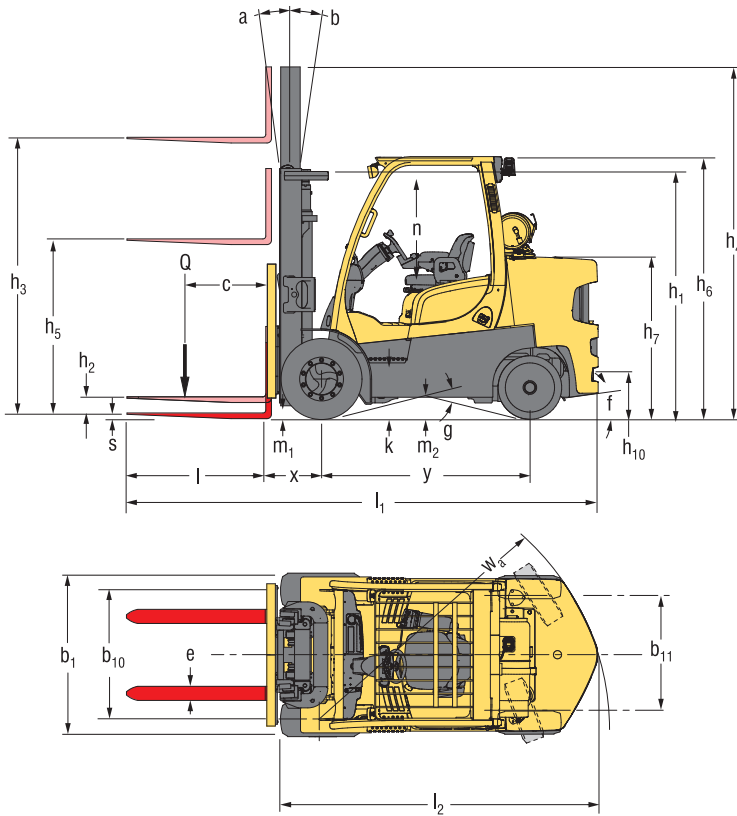
Specification data is based on VDI 2198

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, standard carriage, 1 200 mm forks, e-hydraulics, overhead guard and standard cushion drive and steer tyres.

Truck Dimensions



☉ = Centre of gravity of unladen truck

$$Ast = W_a + x + l_g + a \text{ (see lines 4.33 \& 4.34)}$$

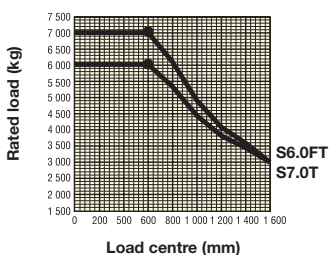
a = Minimum operating clearance

(V.D.I. standard = 200 mm BITA recommendation = 300 mm)

l_g = Load length

Dimensions (mm)	S6.0FT	S7.0FT
f	42%	42%
g	24.9°	24.9°
k	531	531
n 	1 062	1 062

Rated Capacities



Load centre

Distance from front forks to centre of gravity of load.

Rated load

Based on vertical masts up to 4 700 mm to top of forks.

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.

- Without load backrest
- + h6 subject to +/- 5 mm tolerance
- ▣ Full suspension seat in depressed position
- ¶ Bottom of forks
- 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

Mast tables:

- ▲ With load backrest
- ✕ Without load backrest

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.

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 S6.0-7.0FT

	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	2400	10°	2197	3632 ▲	160 ✕
	3400	10°	2697	4632 ▲	160 ✕
	4400	10°	3197	5632 ▲	160 ✕
3-Stage full free lift	3800	6°	2227	5026 ▲	995 ✕
	4700	6°	2527	5926 ▲	1295 ✕
	5600	6°	2827	6826 ▲	1595 ✕
	6200	6°	3077	7426 ▲	1845 ✕

S6.0-7.0FT - Capacity Chart in kg @ 500mm Load Centre

	Maximum fork height (mm)	Cushion Tyres					
		With standard carriage		With carriage + sideshift		With carriage + sideshifting fork positioner	
		S6.0FT	S7.0FT	S6.0FT	S7.0FT	S6.0FT	S7.0FT
2-Stage limited free lift	2400	6000	7000	5730	6580	5680	6530
	3400	6000	7000	5700	6550	5650	6500
	4400	6000	7000	5650	6490	5600	6440
3-Stage full free lift	3800	6000	7000	5630	6430	5570	6380
	4700	6000	7000	5600	6400	5550	6350
	5600	5800	6740	5390	6190	5340	6140

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.



Product Packages

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

The S6.0-7.0FT 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	S6.0FT			S7.0FT		
Diesel	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens	Kubota 3.8L Turbo *	Powershift Transmission 2-speed	Wet	Kubota 3.8L *	Powershift Transmission 2-speed	Wet
Fortens Advance	Kubota 3.8L Turbo *	DuraMatch™ Electronic 3-speed	Wet	Kubota 3.8L *	DuraMatch™ Electronic 3-speed	Wet

Model / Bundle	S6.0FT			S7.0FT		
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

* The Kubota V3800 3.8L Turbo Diesel engine is equipped with a cooled EGR system, which requires the use of Low (<500ppm) or Ultra-Low (<15ppm) sulphur fuel.



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 3.5km/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 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 (when available) provide maximum engine efficiency in applications where longer travel distances are common.

The transmissions are compatible with the combicooler 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 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 53.1 cm.
- The isolated drivetrain minimises the effect of powertrain vibration.
- The new FLM80 Full Suspension Seat together with the isolated powertrain provide best in class Whole-Body Vibration levels of 0.6m/s², ensuring that the operator remains comfortable throughout the shift and fatigue, aches and pains are kept to a minimum.
- The new mini-lever armrest features a new contoured design, and - in addition to the hydraulic functions - features a horn and direction switch, ensuring that all key truck functions are within constant, easy reach.
- 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 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.



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