

FORTENS™



**STRONG PARTNERS.
TOUGH TRUCKS.™**



LPG FORKLIFT TRUCKS

S6.0-7.0FT FORTENS / FORTENS ADVANCE / FORTENS ADVANCE+



6 000-7 000 KG

FORTENS, FORTENS ADVANCE, FORTENS ADVANCE+ S6.0FT, S7.0FT LPG

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	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	Wheels, number front/rear (x = driven wheels)
	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, mast lowered h ₁ (mm)
	4.3	Free lift h ₂ (mm)
	4.4	Lift h ₃ (mm)
	4.5	Height, mast extended h ₄ (mm)
	4.7	Height of overhead guard (cabin) h ₆ (mm)
	4.8	Seat height/stand height h ₇ (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 ISO 2331 s/e/l (mm)
	4.23	Fork carriage ISO 2328, class/type A, B
	4.24	Fork carriage width 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	Load dimension b ₁₂ × l ₆ crossways b ₁₂ × l ₆ (mm)
	4.34	Aisle width predetermined load dimensions A ₂₄ (mm)
	4.34.1	Aisle width for pallets 1000 × 1200 crossways A ₂₄ (mm)
	4.34.2	Aisle width for pallets 800 × 1200 crossways A ₂₄ (mm)
	4.35	Turning radius W ₁ (mm)
	4.36	Internal turning radius b ₁₃ (mm)
	4.41	90° intersecting aisle (with pallet L = 1000mm x W = 1200mm) (mm)
	4.42	Step height (from ground to running board) (mm)
	4.43	Step height (between intermediate steps 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/s
	5.3	Lowering speed, laden/unladen	m/s
	5.5	Drawbar pull, laden/unladen ■	N
	5.7	Gradeability, laden/unladen □	%
	5.9	Acceleration time, laden/unladen ➔	s
	5.10	Service brake	

COMBUSTION ENGINE	7.1	Engine manufacturer/type
	7.2	Engine power according to ISO 1585 kW
	7.3	Rated speed min-1
	7.3.1	Torque at 1/min Nm/min-1
	7.4	Number of cylinders/displacement (-)/cm³
	7.5	Fuel consumption according to VDI cycle kg/h
	7.10	Battery voltage/nominal capacity ● (V)/(Ah)

ADDITIONAL DATA	8.1	Type of drive unit
	10.1	Operating pressure for attachments bar
	10.2	Oil volume for attachments l/min
	10.3	Hydraulic oil tank, capacity l
	10.4	Fuel tank, capacity l
	10.7	Sound pressure level at the driver's seat dB (A)
	10.7.1	Sound power level during the workcycle dB (A)
	10.7.2	Guaranteed sound power 2000/14/EC dB (A)
	10.8	Towing coupling, type DIN

HYSTER	HYSTER	HYSTER	HYSTER
S6.0FT	S6.0FT	S6.0FT	S6.0FT
Fortens	Fortens	Fortens Advance	Fortens Advance+
PSI 4.3L	PSI 4.3L	PSI 4.3L	PSI 4.3L
Basic Powershift 2-speed	Basic Powershift 2-speed plus Soft Shift Power Reversal	DuraMatch™ 3-speed	DuraMatch™ Plus3 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
498	498	498	498
1830	1830	1830	1830

8616		8616		8616		8616	
13124	1492	13124	1492	13124	1492	13124	1492
3526	5090	3526	5090	3526	5090	3526	5090

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 8x 16		22 x 8 x 16	
2x	2	2x	2	2x	2	2x	2
1133		1133		1133		1133	
1192		1192		1192		1192	

6			6			6			6		
2697			2697			2697			2697		
100			100			100			100		
3340			3340			3340			3340		
4575			4575			4575			4575		
2302			2302			2302			2302		
1335			1335			1335			1335		
388			388			388			388		
4128			4128			4128			4128		
2928			2928			2928			2928		
1438			1438			1438			1438		
60	150	1200	60	150	1200	60	150	1200	60	150	1200
IVA			IVA			IVA			IVA		
1219			1219			1219			1219		
113			113			113			113		
188			188			188			188		
1200 x 1000			1200 x 1000			1200 x 1000			1200 x 1000		
4283			4283			4283			4283		
4483			4483			4483			4483		
4483			4483			4483			4483		
2585			2585			2585			2585		
751			751			751			751		
2292			2292			2292			2292		
531			531			531			531		
313			313			313			313		

20.1	19.4	20.1	19.4	20.8	20.4	20.8	20.4
20.1	19.4	20.1	19.4	18.2	17.9	18.2	17.9
0.53	0.54	0.53	0.54	0.53	0.54	0.53	0.54
0.58	0.53	0.58	0.53	0.58	0.53	0.58	0.53
38440	21350	38440	21350	44500	21350	44500	21350
16.6	24.8	16.6	24.8	20.2	24.8	20.2	24.8
6.2	5.4	6.2	5.4	6.5	6.1	6.5	6.1
Hydraulic		Hydraulic		Hydraulic		Hydraulic	

PSI 4.3L		PSI 4.3L		PSI 4.3L		PSI 4.3L	
72		72		72		72	
2400		2400		2400		2400	
285	2400	285	2400	285	2400	285	2400
6	4302	6	4302	6	4302	6	4302
5.40		5.40		5.60		5.60	
12	105	12	105	12	105	12	105

Hydrodynamic	Hydrodynamic	Hydrodynamic	Hydrodynamic
153	153	153	153
83.3	83.3	83.3	83.3
64.7	64.7	64.7	64.7
38.6	38.6	38.6	38.6
83	83	83	83
103	103	103	103
108	108	108	108
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.

HYSTER	HYSTER	HYSTER	HYSTER	1.1	DISTINGUISHING MARK
S7.0FT	S7.0FT	S7.0FT	S7.0FT	1.2	
Fortens	Fortens	Fortens Advance	Fortens Advance+		
PSI 4.3L	PSI 4.3L	PSI 4.3L	PSI 4.3L		
Basic Powershift 2-speed	Basic Powershift 2-speed plus Soft Shift Power Reversal	DuraMatch™ 3-speed	DuraMatch™ Plus3 3-speed		
Wet Brakes	Wet Brakes	Wet Brakes	Wet Brakes		
LPG	LPG	LPG	LPG	1.3	
Seated	Seated	Seated	Seated	1.4	
7.0	7.0	7.0	7.0	1.5	
600	600	600	600	1.6	
498	498	498	498	1.8	
2100	2100	2100	2100	1.9	

9480	9480	9480	9480	2.1	WEIGHTS
14908	1572	14908	1572	2.2	
3710	5770	3710	5770	2.3	

V	V	V	V	3.1	TYRES/CHASSIS
28 x 12 x 22	28 x 12 x 22	28 x 12 x 22	28 x 12 x 22	3.2	
22 x 8 x 16	22 x 8 x 16	22 x 8 x 16	22 x 8 x 16	3.3	
2x	2	2x	2	3.5	
1133	1133	1133	1133	3.6	
1192	1192	1192	1192	3.7	

610			610			610			610			4.1		
2697			2697			2697			2697			4.2		
100			100			100			100			4.3		
3340			3340			3340			3340			4.4		
4575			4575			4575			4575			4.5		
2302			2302			2302			2302			4.7		
1335			1335			1335			1335			4.8		
388			388			388			388			4.12		
4128			4128			4128			4128			4.19		
2928			2928			2928			2928			4.20		
1438			1438			1438			1438			4.21		
60	150	1200	60	150	1200	60	150	1200	60	150	1200	4.22		
IVA			IVA			IVA			IVA			4.23		
1219			1219			1219			1219			4.24		
113			113			113			113			4.31		
188			188			188			188			4.32		
1200 x 1000			1200 x 1000			1200 x 1000			1200 x 1000			4.33		
4283			4283			4283			4283			4.34		
4483			4483			4483			4483			4.34.1		
4483			4483			4483			4483			4.34.2		
2585			2585			2585			2585			4.35		
751			751			751			751			4.36		
2292			2292			2292			2292			4.41		
531			531			531			531			4.42		
313			313			313			313			4.43		

DIMENSIONS

20.1	19.4	20.1	19.4	20.8	20.4	20.8	20.4	5.1	PERFORMANCE DATA
20.1	19.4	20.1	19.4	18.2	17.9	18.2	17.9	5.1.1	
0.53	0.54	0.53	0.54	0.53	0.54	0.53	0.54	5.2	
0.58	0.53	0.58	0.53	0.58	0.53	0.58	0.53	5.3	
38100	22550	38100	22550	44500	22550	44500	22550	5.5	
14.7	23.9	14.7	23.9	17.9	23.9	17.9	23.9	5.7	
6.5	5.5	6.5	5.5	6.7	6.2	6.7	6.2	5.9	
Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	5.10	

PSI 4.3L	PSI 4.3L	PSI 4.3L	PSI 4.3L	7.1	COMBUSTION ENGINE
72	72	72	72	7.2	
2400	2400	2400	2400	7.3	
285	2400	285	2400	7.3.1	
6	4302	6	4302	7.4	
6.50	6.50	6.80	6.80	7.5	
12	105	12	105	7.10	

Hydrodynamic	Hydrodynamic	Hydrodynamic	Hydrodynamic	8.1	ADDITIONAL DATA
153	153	153	153	10.1	
83.3	83.3	83.3	83.3	10.2	
64.7	64.7	64.7	64.7	10.3	
38.6	38.6	38.6	38.6	10.7	
83	83	83	83	10.7	
103	103	103	103	10.7.1	
108	108	108	108	10.7.2	
Pin	Pin	Pin	Pin	10.8	

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.

- at 1.6 km/h
- at 4.8km/h
- + to 15m (per VDI 2198 December 2012)
- Battery ampere hour (Ah) nominal capacity ratings are estimated.
- ◆ With and without cab.

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 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

S6.0-7.0FT MASTS

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	2 400	10°	2 197	3 632 ▲	160 ✕
	3 400	10°	2 697	4 632 ▲	160 ✕
	4 400	10°	3 197	5 632 ▲	160 ✕
3-Stage Full Free Lift	3 800	6°	2 227	5 026 ▲	995 ✕
	4 700	6°	2 527	5 926 ▲	1 295 ✕
	5 600	6°	2 827	6 826 ▲	1 595 ✕
	6 200	6°	3 077	7 426 ▲	1 845 ✕

S6.0-7.0FT - Capacity Chart in kg @ 600mm Load Centre

Mast type	Maximum fork height (mm)	Cushion Tyres					
		With carriage only		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	2 400	6 000	7 000	5 730	6 580	5 680	6 530
	3 400	6 000	7 000	5 700	6 550	5 650	6 500
	4 400	6 000	7 000	5 650	6 490	5 600	6 440
3-Stage Full Free Lift	3 800	6 000	7 000	5 630	6 430	5 570	6 380
	4 700	6 000	7 000	5 600	6 400	5 550	6 350
	5 600	5 800	6 740	5 390	6 190	5 340	6 140

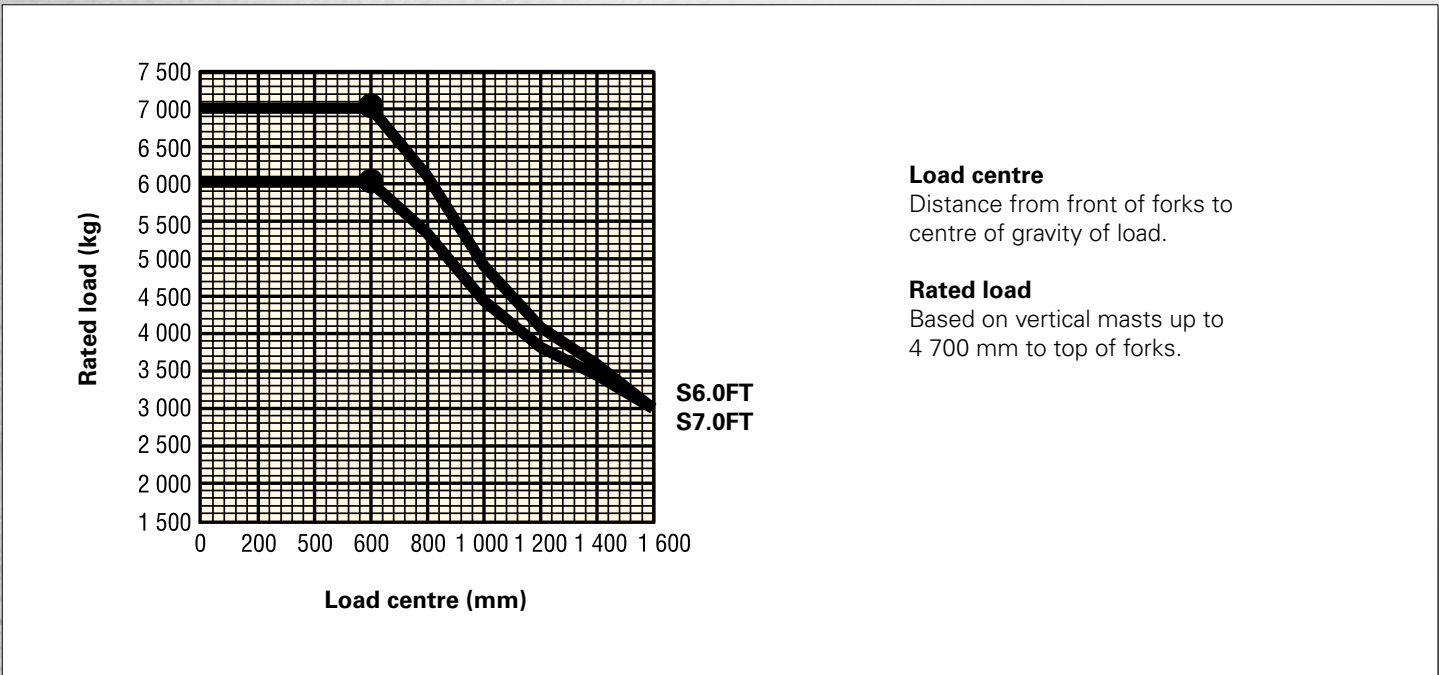
NOTES

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

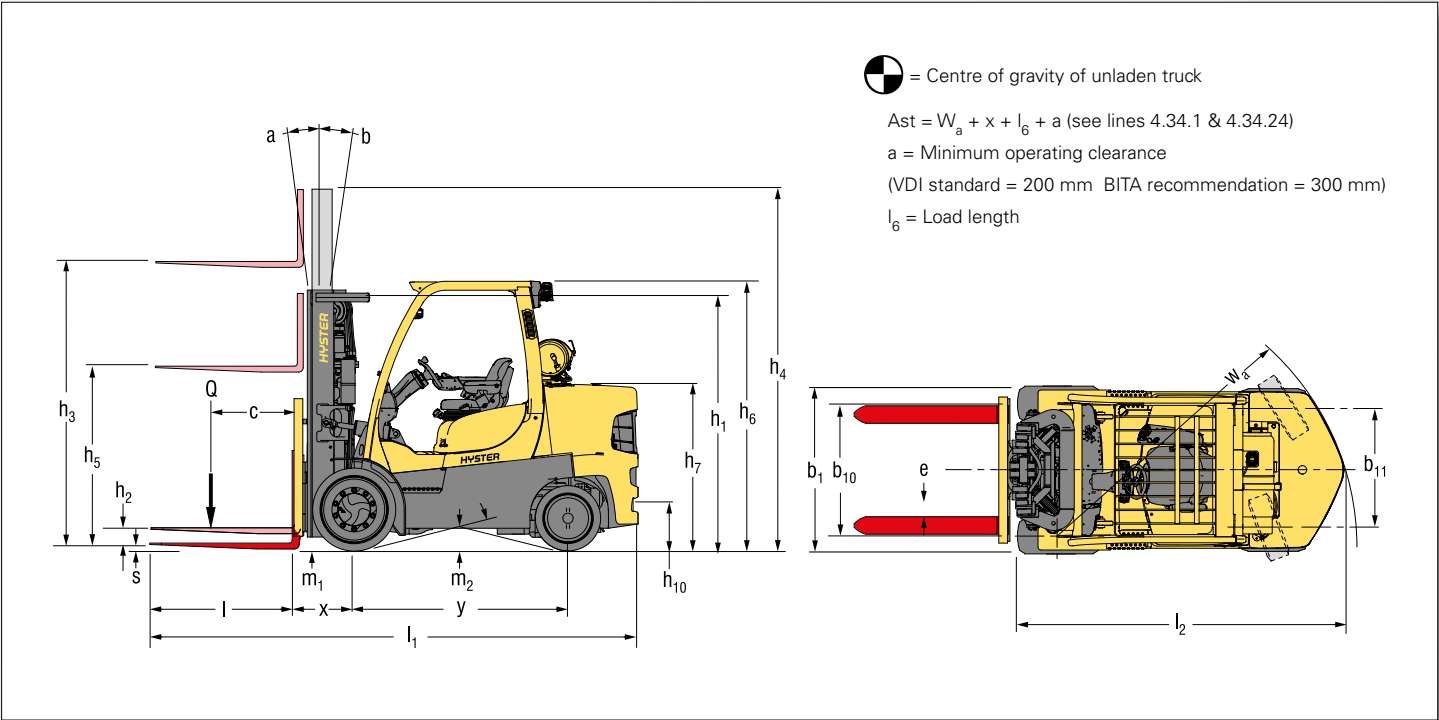
The rated capacities shown are for masts in a vertical position on trucks equipped with standard or sideshift carriage, and nominal length forks. Masts above the maximum fork heights shown in the mast table are classified as high lift, and depending on the tyre/tread configuration may require reduced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

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

RATED CAPACITIES



TRUCK DIMENSIONS



PRODUCT PACKAGES

The Hyster Fortens™ range has 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		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens	PSI 4.3L	Electronic Powershift 2-speed	Wet brakes	PSI 4.3L	Electronic Powershift 2-speed	Wet brakes
Fortens Advance	PSI 4.3L	Electronic Powershift with Soft Shift Power Reversal 2-speed	Wet brakes	PSI 4.3L	Electronic Powershift with Soft Shift Power Reversal 2-speed	Wet brakes
	PSI 4.3L	DuraMatch™ 3-speed	Wet brakes	PSI 4.3L	DuraMatch™ 3-speed	Wet brakes
Fortens Advance +	PSI 4.3L	DuraMatch™ Plus3 3-speed	Wet brakes	PSI 4.3L	DuraMatch™ Plus3 3-speed	Wet brakes

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	72	
	7.3 Rated speed	2400	
	7.3.1 Torque at 1/min	285 / 2400	
	7.4 Number of cylinders/displacement	6 / 4302	
	7.6 Turnover output	TBA	
	7.7 Energy consumption at turnover output	TBA	
	7.10 Battery voltage/nominal capacity ⚡	12 / 105	
DRIVE MECHANISM	8.1 Type of drive unit	Hydrodynamic	
	8.2 Manufacturer/type	NMHG/Electronic	
	8.6 Wheel drive/drive axle manufacturer/type	Dana or NMHG/WBA	
	8.11 Service brake	Hydraulic	
8.12 Parking brake		Multi Disc Brake	

⚡ Battery ampere hour (Ah) nominal capacity ratings are estimated.

PRODUCT FEATURES

The Hyster Fortens S6.0-7.0FT Series represents a powerful, compact materials handling solution for heavy duty indoor applications such as paper roll storage.

It's compact frame and shorter wheelbase ensures that space and on-site efficiency can be maximised to maintain low operating costs.

Hyster Fortens S6.0-7.0FT models feature the PSI 4.3L LPG engine.

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 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 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.

PRODUCT FEATURES

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 31.3 cm.
- The isolated drivetrain minimises the effect of powertrain vibration.

- The Full Suspension Seat together with the isolated powertrain provide best in class Whole-Body Vibration levels of 0.6m/s^2 , ensuring that the operator remains comfortable throughout the shift and fatigue, aches and pains are kept to a minimum.
- The TouchPoint™ 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, 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.

- 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.