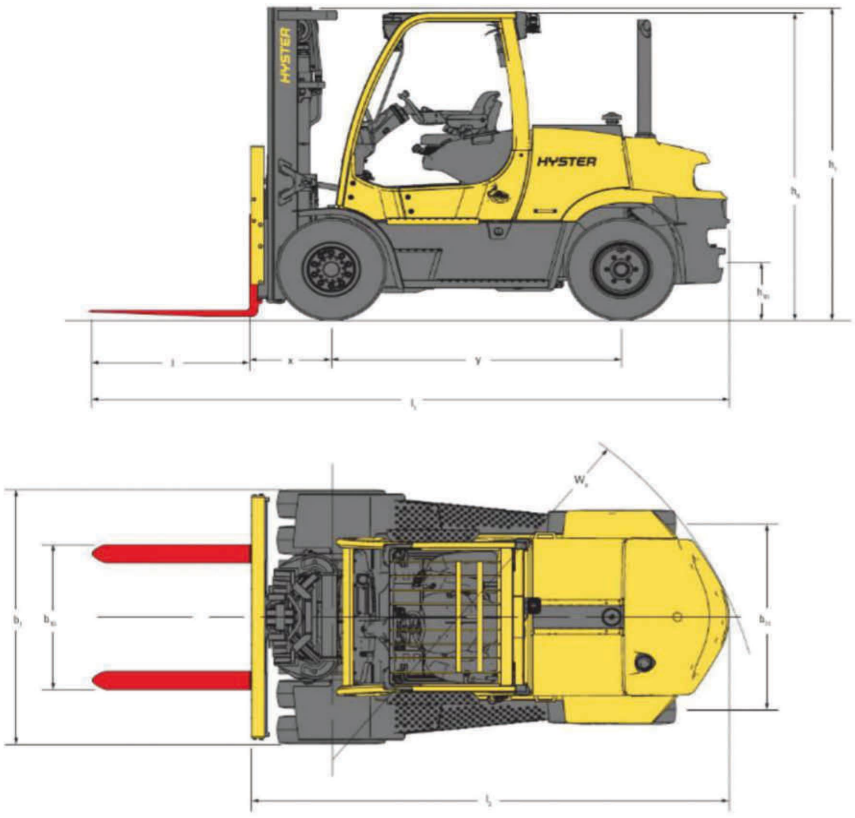
FORTENS H7.0FT

				HYSTER	
DISTINGUISHING MARK	1.1	Manufacturer (abbreviation)			
	1.2	Manufacturer's type designation		H7.0FT	
		Model		Fortens	
		Engine / transmission		Kubota 3.8L 55kW Electronic Powershift, 2-Speed with Softshift Power Reversal	
		Brake type		Wet Brakes	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Diesel	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	
	1.5	Rated capacity/rated load	Q (t)	7.0	
	1.6	Load centre distance	c (mm)	600	
	1.8	Load distance, centre of drive axle to fork	x (mm)	601	
	1.9	Wheelbase	y (mm)	2235	
WEIGHTS	2.1	Service weight ✕	kg	9071	
	2.2	Axle loading laden, front/rear	kg	14477	1594
	2.3	Axle loading unladen, front/rear	kg	3717	5354
TYRES/CHASSIS	3.1	L = pneumatic, V = solid, SE = Pneumatic-Shaped Solid		L	
	3.2	Tyre size, front		8.25x15 14PR	
	3.3	Tyre size, rear		8.25x15 14PR	
	3.5	Number of wheels, front/rear (x = driven wheels)		4X	2
	3.6	Tread, front	b_{10} (mm)	1846	
	3.7	Tread, rear	b_{11} (mm)	1536	
DIMENSIONS	4.1	Tilt of mast/fork carriage forward/backward	α / β (°)	5	10
	4.2	Height, mast lowered	h_1 (mm)	2540	
	4.3	Free lift, ¶	h_2 (mm)	100	
	4.4	Lift ¶	h_3 (mm)	2940	
	4.5	Height, mast extended ■	h_4 (mm)	4195	
	4.7	Height of overhead guard (cabin) ✦	h_6 (mm)	2531	
	4.7.1	Cab height (open cab)	mm	1540	
	4.8	Seat height/stand height ✪	h_7 (mm)	474	
	4.12	Coupling height	h_{10} (mm)	4805	
	4.19	Overall length	l_1 (mm)	4869	
	4.20	Length to face of forks	l_2 (mm)	3669	
	4.21	Overall width	b_1/b_2 (mm)	2082	
	4.22	Fork dimensions	s/e/l (mm)	60	150 / 1200
	4.23	Fork carriage ISO 2328, class/type A, B		IVA	
	4.24	Fork carriage width ●	b_3 (mm)	1980	
	4.31	Ground clearance, laden, below mast	m_1 (mm)	125	
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	253	
	4.33	Aisle width for pallets 1000 × 1200 crossways ◆	A_{st} (mm)	5231	
	4.34	Aisle width for pallets 800 × 1200 lengthways ◆	A_{st} (mm)	5397	
	4.35	Turning radius (outer)	W_a (mm)	3388	
	4.36	Inner turning radius	b_{13} (mm)	230	
	4.41	90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)	(mm)	2856	
	4.42	Step Height (from ground to running board)	(mm)	321	
	4.43	Step Height (between intermediate steps between running board and floor)	(mm)	256	
PERFORMANCE	5.1	Travel speed laden/unladen	km/h	19.5	21.3
	5.1.1	Travel speed, laden/unladen, backwards	km/h	22.1	24.3
	5.2	Lift speed, laden/unladen (2LFL)	m/sec	0.43	0.48
	5.3	Lowering speed, laden/unladen (2LFL)	m/sec	0.58	0.53
	5.5	Drawbar pull, laden/unladen @ 1.6 km/h	kN	35.6	25.7
	5.7	Gradeability, laden/unladen @ 1.6 km/h	%	22%	30%
	5.9	Acceleration time, laden/unladen	sec	TBC	
	5.10	Service brake		Hydraulic	
	7.5	Fuel consumption according to VDI cycle	kg/h	7.4	
ADDITIONAL DATA	10.1	Operating pressure for attachments (nominal relief pressure)	bar	155	
	10.2	Oil volume for attachments (nominal) ✧	l/min	83.3	
	10.3	Hydraulic oil tank, capacity	litres	71.7	
	10.4	Fuel tank, capacity	litres	74.8	
	10.7	Sound level at driver's ear according DIN 12053 (without / with cab) ✪	dB(A) L_{pA2}	77	77
	10.7.2	Sound power level during the drive cycle	dB L_{WA2}	101	
	10.7.1	Guaranteed sound power 2001/14/EC	dB L_{WA2}	105	
	10.8	Towing coupling, type DIN		Pin	

Specification data is based on VDI 2198.

TRUCK DIMENSIONS



= Centre of gravity of unladen truck

For $b_{12}/2 <= b_{13}$: 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 4.34.1 & 4.34.2) 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:

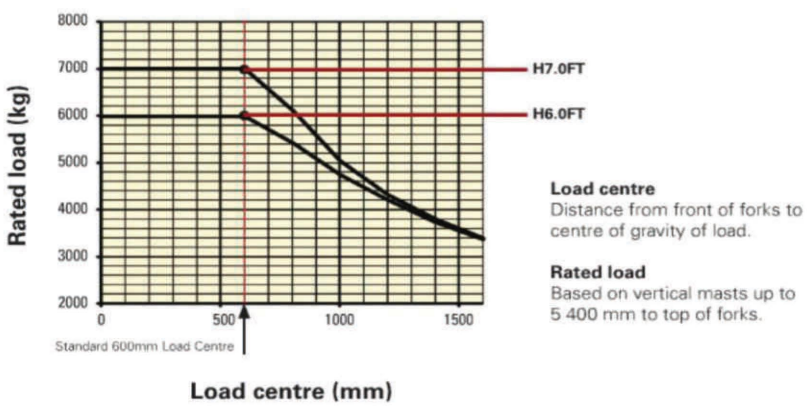
- ▽ Deduct 224 mm without load backrest
- ❖ Deduct 224 mm with load backrest

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.

MASTS H7.0FT

Mast type	Maximum fork height (mm)	Back tilt	Overall lowered height (mm)	Overall Extended height (mm)	Free lift (top of forks) (mm)
3-Stage Full Free Lift	4700	6°	2570	6054❖	1440 ▽

H7.0FT – Capacity Chart in kg @ 600mm Load Centre

Mast type	Maximum fork height (mm)	All Tyre Types With carriage + sideshifting fork positioner H7.0FT
3-Stage Full Free Lift	4700	6400

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	Diesel
COMBUSTION-ENGINE	7.1	Engine manufacturer/type	Kubota 3.8L
	7.2	Engine power according to ISO 1585 kW	55
	7.3	Rated speed min–1	2200
	7.3.1	Torque at 1/min Nm/min–1	308.5 / 1400
	7.4	Number of cylinders/displacement cm^3	4 / 3769
	7.10	Battery voltage/nominal capacity ◈ V/Ah	12 / 210
DRIVE MECHANISM	8.1	Type of drive unit	Hydrodynamic
	8.2	Manufacturer/type	DANA
	8.6	Wheel drive/drive axle manufacturer/type	DANA
	8.11	Service brake	Hydraulic
	8.12	Parking brake	Hand Lever

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

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	H7.0FT		
DIESEL	Engine	Transmission	Brakes
Fortens	Kubota 3.8L 55kW	Electronic Powershift 2-speed with Soft Shift Power reversal	Wet

PRODUCT FEATURES

The new 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.

THE KUBOTA 3800 SERIES ENGINES

Fortens Advance and Advance models feature the electronically controlled Kubota V3800 E4 55kW or 78kW diesel engines.

The Kubota V3800 E4 55kW diesel engine is fully compliant with Stage IIIB requirements for regulated markets and is equipped with a DOC as standard. These engines meet the stringent emissions regulations by using a number of technologies including cooled exhaust gas recirculation, charge air cooling and a Diesel Oxidising Catalyst.

The Kubota V3800 E4 78kW Stage IV compliant diesel engine use familiar technologies like Exhaust Gas Recirculation (EGR) in combination with a Diesel Particulate Filter (DPF). For these engines we are currently using Selective Catalytic Reduction (SCR) technology to significantly reduce Nitrogen Oxide (NOx) emission levels. Using these technologies together achieves full emission compliance to Stage IV.

Hyster Stage IIIB and Stage IV trucks stand for profitable low emissions through intelligent design. They are recognisable by the Stage IIIB or Stage IV symbol.

THE CHOICE OF TRANSMISSIONS

The Fortens 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.

PRODUCT FEATURES (2)

- **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 Contro**l; 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 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.