



TM

STRONG PARTNERS. TOUGH TRUCKS.

FORTENS™

IC Counterbalanced Lift Trucks
S2.0-3.5FT Fortens Advance / Fortens Advance+

2 000 – 3 500 kg



Fortens Advance S2.0FT, S2.5FT, S3.0FT, S3.5FT

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, 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 _a (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	m/sec				5.2
	5.3	Lowering speed with/without load	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	bar				8.2
	8.3	Oil flow for attachments ⚡	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 290mm (S2.0-2.5FT) / 3 205mm (S3.0-3.5FT) 2-stage limited free lift mast, standard carriage, 1 000mm forks, e-hydraulics, overhead guard and standard cushion drive and steer tyres.

Fortens Advance+ S2.0FT, S2.5FT, S3.0FT, S3.5FT

CHARACTERISTICS	1.1	Manufacturer	CHARACTERISTICS
	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	WEIGHTS
	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	WHEELS & TYRES
	3.2	Tyre size, front	
	3.3	Tyre size, rear	
	3.5	Number of wheels, front/rear (X = driven)	
	3.6	Track width, front b ₁₀ (mm)	
	3.7	Track width, rear b ₁₁ (mm)	
DIMENSIONS	4.1	Mast tilt, α = forward/β = back degrees	DIMENSIONS
	4.2	Height of mast, lowered h ₁ (mm)	
	4.3	Free lift ¶ h ₂ (mm)	
	4.4	Lift height ¶ h ₃ (mm)	
	4.5	Height of mast, extended + h ₄ (mm)	
	4.7	Overhead guard height ■ h ₆ (mm)	
	4.8	Seat height ○ h ₇ (mm)	
	4.12	Towing 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, standard/wide b ₁ /b ₂ (mm)	
	4.22	Fork dimensions s/e/l (mm)	
	4.23	Fork carriage DIN 15173, Class, A/B	
	4.24	Fork carriage width ● b ₃ (mm)	
	4.31	Ground clearance under mast, with load m ₁ (mm)	
	4.32	Ground clearance, centre of wheelbase m ₂ (mm)	
	4.33	Aisle width with pallets 1 000 mm x 1 200 mm wide ◆ Ast (mm)	
	4.34	Aisle width with pallets 800 mm x 1 200 mm long ◆ Ast (mm)	
	4.35	Outer turning radius W _a (mm)	
	4.36	Inner turning radius b ₁₃ (mm)	
PERFORMANCE	5.1	Travel speed with/without load km/h	PERFORMANCE
	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 † %	
	5.8	Maximum gradeability with/without load @ 1,6 km/h † %	
	5.10	Service brake	
ENGINE	7.1	Engine manufacturer/type	ENGINE
	7.2	Engine output, in accordance with ISO 1585 / DIN 6271 kW	
	7.3	Governed speed rpm	
	7.4	Number of cylinders/displacements cm ³	
OTHER	8.1	Drive control	OTHER
	8.2	Working pressure for attachments bar	
	8.3	Oil flow for attachments l/min	
	8.4	Average noise level at operator's ear (Lpaz) ◇ dB (A)	
		Guaranteed sound power 2001/14/EC (Lwaz) dB	
	8.5	Towing coupling type	

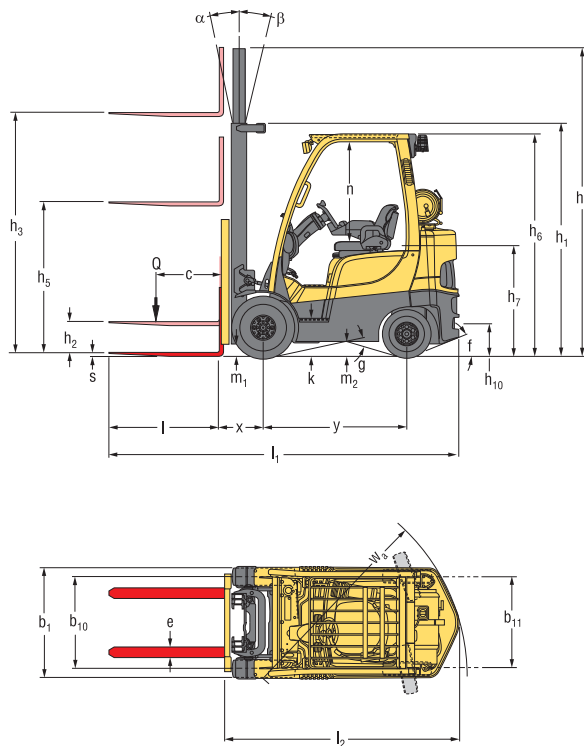
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Truck dimensions



= 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
- Subtract 32 mm without 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

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.

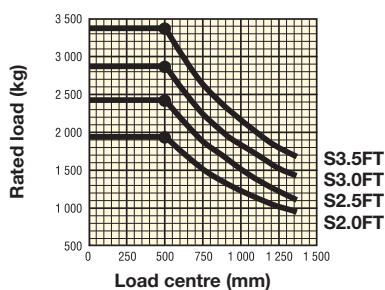
Model

S2.0FT S2.5FT S3.0FT S3.5FT

Dimensions (mm)

f	50%	45%	39%	39%
g	33,3°	33,3°	33,3°	33,3°
k	350	350	350	350
n	1 067	1 067	1 067	1 067

Rated capacities



Load centre

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

Rated load

Based on vertical masts up to 4 350 mm (S2.0-2.5FT) and 4 170 mm (S3.0-3.5FT).

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 S2.0-2.5FT

	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	3 290	5°	2 135	4 515 ❖	140 ▽
	4 830	5°	2 985	6 055 ❖	140 ▽
2-Stage full free lift	3 300	5°	2 135	4 525 ❖	1 575 ▽
3-Stage full free lift	4 950	5°	2 135	6 170 ❖	1 595 ▽
	5 550	5°	2 385	6 770 ❖	1 845 ▽
	6 000	5°	2 585	7 220 ❖	2 045 ▽

Masts S3.0-3.5FT

	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	3 205	5°	2 185	4 435 ❖	150 ▽
	3 310	5°	2 235	4 535 ❖	1 590 ▽
3-Stage full free lift	4 765	5°	2 235	5 995 ❖	1 605 ▽
	4 915	5°	2 285	6 145 ❖	1 655 ▽
	5 965	5°	2 735	7 195 ❖	2 105 ▽

S2.0-3.5FT - Capacity chart in kg @ 500 mm load centre

Cushion tyres										
	Maximum fork height (mm)	Without sideshift		With integral sideshift		Maximum fork height (mm)	Without sideshift		With integral sideshift	
		S2.0FT	S2.5FT	S2.0FT	S2.5FT		S3.0FT	S3.5FT	S3.0FT	S3.5FT
2-Stage limited free lift	3 290	2 000	2 500	2 000	2 500	3 205	3 000	3 360	2 990	3 310
	4 830	1 920	2 410	1 910	2 400	3 705	3 000	3 310	2 970	3 270
2-Stage full free lift	3 300	2 000	2 500	2 000	2 500	3 310	3 000	3 360	2 980	3 310
3-Stage full free lift	4 950	1 900	2 390	1 890	2 370	4 765	2 890	3 380	2 840	3 330
	5 550	1 800	2 270	1 770	2 240	4 915	2 860	3 350 ◀	2 810	3 300 ◀
	6 000	1 710	2 180 ◀	1 680	2 140	5 965	2 110 ◀	1 870 ◀	2 160 ◀	1 910 ◀

S2.0-3.5FT - Capacity chart in kg @ 600 mm load centre

Cushion tyres										
	Maximum fork height (mm)	Without sideshift		With integral sideshift		Maximum fork height (mm)	Without sideshift		With integral sideshift	
		S2.0FT	S2.5FT	S2.0FT	S2.5FT		S3.0FT	S3.5FT	S3.0FT	S3.5FT
2-Stage limited free lift	3 290	1 900	2 350	1 820	2 260	3 205	2 820	3 280	2 700	3 140
	4 830	1 800	2 250	1 720	2 160	3 705	2 810	3 270	2 680	3 120
2-Stage full free lift	3 300	1 890	2 350	1 810	2 250	3 310	2 810	3 280	2 690	3 140
3-Stage full free lift	4 950	1 780	2 220	1 700	2 130	4 765	2 680	3 140	2 560	3 000
	5 550	1 670	2 100	1 600	2 020	4 915	2 650	3 110 ◀	2 530	2 980 ◀
	6 000	1 580	2 010	1 510	1 930	5 965	2 110 ◀	1 870 ◀	2 160 ◀	1 910 ◀

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

The S2.0-3.5FT 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	S2.0FT			S2.5FT		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens Advance	Mazda 2.2l	DuraMatch™ Electronic 1 speed	ADS Drum	Mazda 2.2l	DuraMatch™ Electronic 1 speed	ADS Drum
Fortens Advance+	GM 2.4l	DuraMatch™ Electronic 1 speed	ADS Drum	GM 2.4l	DuraMatch™ Electronic 1 speed	ADS Drum
Model / Bundle	S3.0FT			S3.5FT		
LPG	Engine	Transmission	Brakes	Engine	Transmission	Brakes
Fortens Advance	Mazda 2.2l	DuraMatch™ Electronic 1 speed	ADS Drum	Mazda 2.2l	DuraMatch™ Electronic 1 speed	ADS Drum
Fortens Advance+	GM 2.4l	DuraMatch™ Electronic 1 speed	ADS Drum	GM 2.4l	DuraMatch™ Electronic 1 speed	ADS Drum

Please refer to the Price List for full option configurations.

Product Features

The Fortens Advance & Fortens Advance+ models are available with the electronically controlled **DuraMatch™ 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.

The transmission is compatible with 2 available aluminium core radiators and a superior counterweight tunnel design coupled with a "pusher" type fan, to provide the industry's best cooling.

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.

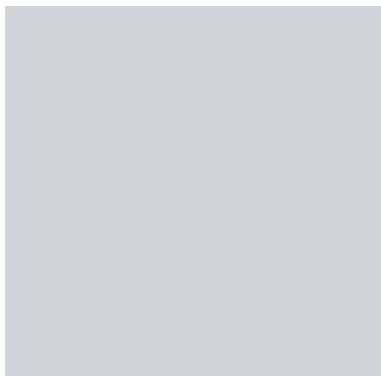
Non-mechanical, Hall-Effect sensors and switches have been fitted and are designed to outlast the life of the truck.

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 the operator compartment has an open non-slip step with a height of just 35 cm.
- 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 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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