



**STRONG PARTNERS.  
TOUGH TRUCKS.™**

**FORTENS™**

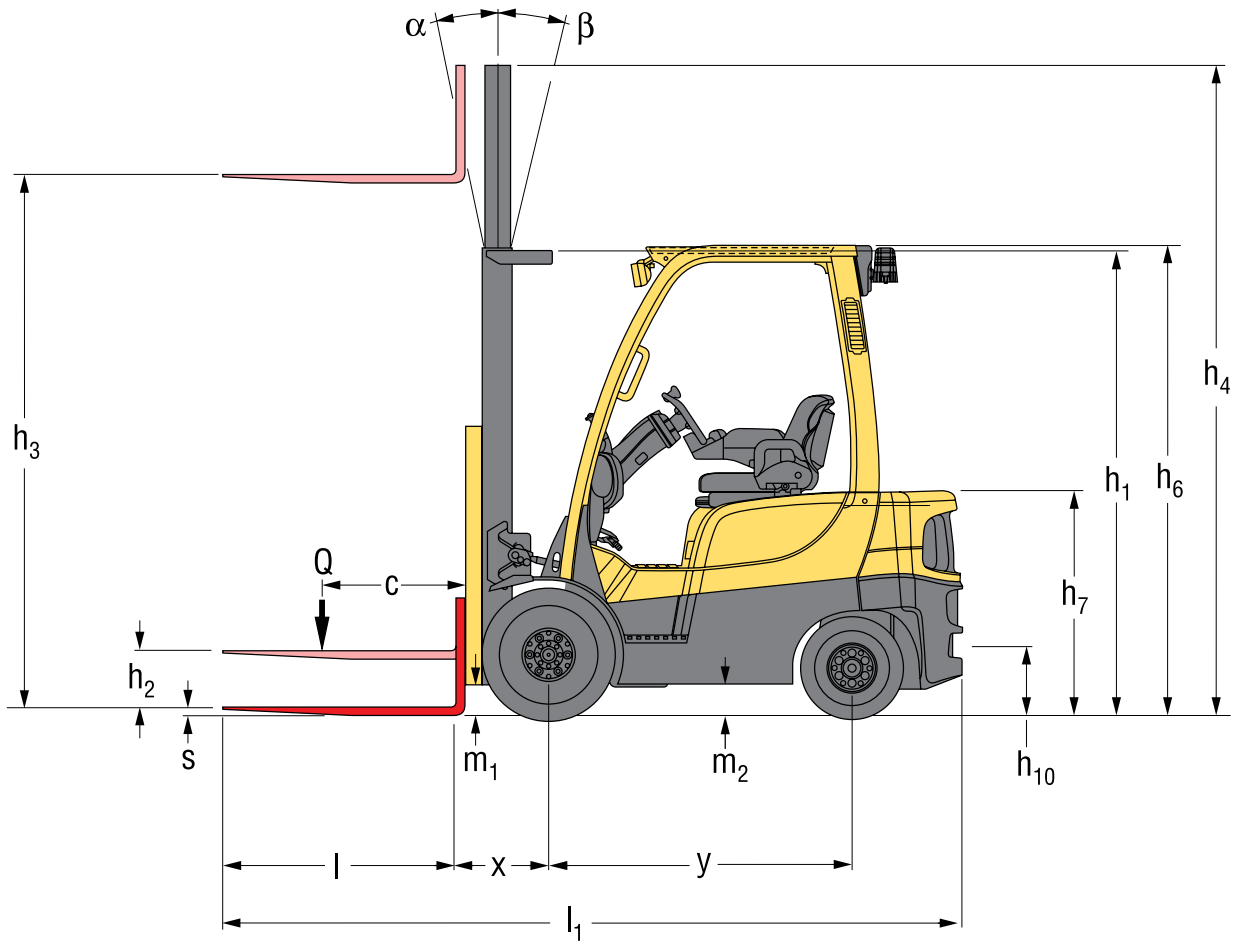


## **H1.6-2.0FTS SERIES TECHNICAL GUIDE**



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# > TRUCK DIMENSIONS

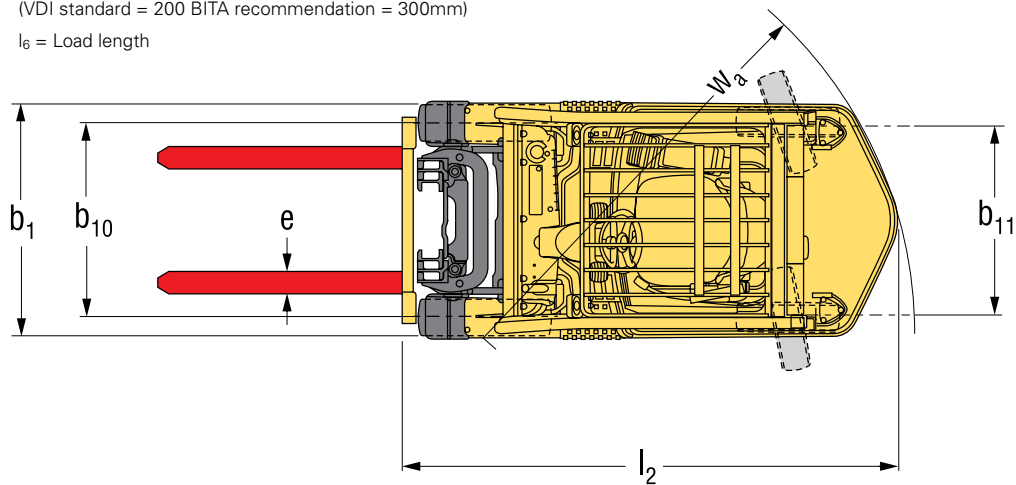


$$A_{st} = W_a + \sqrt{l_6^2 + x^2 + (b_{12}/2 - b_{13})^2} + a$$

$a$  = minimum operating clearance

(VDI standard = 200 BITA recommendation = 300mm)

$l_6$  = Load length



# MAST AND CAPACITY INFORMATION



## MASTS H1.6-2.0FT RATED CAPACITY KG @ 500 MM LOAD CENTRE

	Maximum fork height h <sub>3</sub> + s (mm)	Back tilt (°)	Lowered height h <sub>1</sub> (mm)	Extended height h <sub>4</sub> (mm)	Free lift height h <sub>2</sub> + s (mm)	Pneumatic shaped solid tyres					
						Without sideshift (kg)			With ISS (kg)		
						H1.6FT	H1.8FT	H2.0FTS	H1.6FT	H1.8FT	H2.0FTS
2-STAGE LIMITED FREE LIFT	3 330	5°	2 175	4 555 (1)	140	1600	1800	2000	1600	1750	1970
	3 830	5°	2 425	5 055 (1)	140	1600	1800	2000	1600	1740	1960
	4 330	5°	2 775	5 555 (1)	140	1600	1740	1940	1600	1680	1900
2-STAGE FULL FREE LIFT	3 215	5°	2 125	4 440	1 550	1600	1800	2000	1600	1590	1970
3-STAGE FULL FREE LIFT	4 450	3°	2 025	5 670	1 455 (2)	1570	1740	1910	1570	1680	1880
	4 900	3°	2 175	6 120	1 605 (2)	1490	1650	1790 (3)	1480	1590	1790
	5 500	3°	2 425	6 720	1 855 (2)	1330	1500 (3)	1520 (3)	1320	1450 (3)	1510 (3)

## MASTS H1.6-2.0FT RATED CAPACITY KG @ 600 MM LOAD CENTRE

	Maximum fork height h <sub>3</sub> + s (mm)	Back tilt (°)	Lowered height h <sub>1</sub> (mm)	Extended height h <sub>4</sub> (mm)	Free lift height h <sub>2</sub> + s (mm)	Pneumatic shaped solid tyres					
						Without sideshift (kg)			With ISS (kg)		
						H1.6FT	H1.8FT	H2.0FTS	H1.6FT	H1.8FT	H2.0FTS
2-STAGE LIMITED FREE LIFT	3 330	5°	2 175	4 555 (1)	140	1560	1670	1880	1480	1580	1780
	3 830	5°	2 425	5 055 (1)	140	1550	1660	1870	1470	1570	1770
	4 330	5°	2 775	5 555 (1)	140	1550	1600	1810	1460	1520	1720
2-STAGE FULL FREE LIFT	3 215	5°	2 125	4 440	1 550	1550	1680	1870	1470	1590	1780
3-STAGE FULL FREE LIFT	4 450	3°	2 025	5 670	1 455 (2)	1500	1600	1790	1410	1510	1700
	4 900	3°	2 175	6 120	1 605 (2)	1410	1510	1700 (3)	1330	1430	1610
	5 500	3°	2 425	6 720	1 855 (2)	1290	1300 (3)	1520 (3)	1220	1310 (3)	1480 (3)

## MASTS H1.6-2.0FT RATED CAPACITY KG @ 500 MM LOAD CENTRE

	Maximum fork height h <sub>3</sub> + s (mm)	Back tilt (°)	Lowered height h <sub>1</sub> (mm)	Extended height h <sub>4</sub> (mm)	Free lift height h <sub>2</sub> + s (mm)	Pneumatic radial tyres					
						Without sideshift (kg)			With ISS (kg)		
						H1.6FT	H1.8FT	H2.0FTS	H1.6FT	H1.8FT	H2.0FTS
2-STAGE LIMITED FREE LIFT	3 330	5°	2 175	4 555 (1)	140	1600	1800	2000	1600	1750	1970
	3 830	5°	2 425	5 055 (1)	140	1600	1800	2000	1600	1740	1960
	4 330	5°	2 775	5 555 (1)	140	1600	1740	1940 (4)	1600	1680	1900 (4)
2-STAGE FULL FREE LIFT	3 215	5°	2 125	4 440	1 550	1600	1800	2000	1600	1760	1970
3-STAGE FULL FREE LIFT	4 450	3°	2 025	5 670	1 455 (2)	1570 (4)	1680 (4)	1690 (4)	1570 (4)	1670 (4)	1880 (4)
	4 900	3°	2 175	6 120	1 605 (2)	1490 (3)	1650 (3)	1380 (4)	1480 (3)	1580 (3)	1360 (4)
	5 500	3°	2 425	6 720	1 855 (2)	1330 (3)	1320 (3)	1040 (4)	1280 (3)	1290 (3)	1010 (4)

## MASTS H1.6-2.0FT RATED CAPACITY KG @ 600 MM LOAD CENTRE

	Maximum fork height h <sub>3</sub> + s (mm)	Back tilt (°)	Lowered height h <sub>1</sub> (mm)	Extended height h <sub>4</sub> (mm)	Free lift height h <sub>2</sub> + s (mm)	Pneumatic radial tyres					
						Without sideshift (kg)			With ISS (kg)		
						H1.6FT	H1.8FT	H2.0FTS	H1.6FT	H1.8FT	H2.0FTS
2-STAGE LIMITED FREE LIFT	3 330	5°	2 175	4 555 (1)	140	1560	1670	1880	1480	1580	1780
	3 830	5°	2 425	5 055 (1)	140	1550	1660	1870	1470	1570	1770
	4 330	5°	2 775	5 555 (1)	140	1550	1600	1810 (4)	1460	1520	1720 (4)
2-STAGE FULL FREE LIFT	3 215	5°	2 125	4 440	1 550	1550	1680	1870	1470	1590	1780
3-STAGE FULL FREE LIFT	4 450	3°	2 025	5 670	1 455 (2)	1500 (4)	1600 (4)	1680 (4)	1410 (4)	1510 (4)	1670 (4)
	4 900	3°	2 175	6 120	1 605 (2)	1410 (3)	1380 (3)	1380 (4)	1330 (3)	1430 (3)	1360 (4)
	5 500	3°	2 425	6 720	1 855 (2)	1320 (3)	1040 (3)	1040 (4)	1210 (3)	1290 (3)	1010 (4)

**NOTE:** To calculate truck capacities with alternative truck specifications to the ones shown in the above tables, please use the Hy-Rater software

# > H1.6FT, H1.8FT, H2.0FTS FORTENS

			HYSTER		HYSTER		HYSTER			
			H1.6FT		H1.6FT		H1.8FT			
GENERAL	1-1	Manufacturer				HYSTER		HYSTER		
	1-2	Model designation				H1.6FT		H1.8FT		
		Model				Fortens		Fortens		
		Engine / transmission				Yanmar 2.6L Electronic Powershift 1-speed		PSI 2.0L Electronic Powershift 1-speed		
		Brake type				Drum		Drum		
	1-3	Drive				Diesel		LPG		
	1-4	Operator type				Seated		Seated		
	1-5	Rated capacity/rated load	Q <sub>1</sub>	t	1.6		1.6		1.8	
	1-6	Load centre distance	c	mm	500		500		500	
	1-8	Load distance, centre of drive axle to fork	x	mm	384		384		384	
1-9	Wheelbase	y	mm	1385		1385		1385		
WEIGHT	2-1	Service weight				3059		3059		
	2-2	Axle loading with load, front / rear				3856   565		4190   509		
	2-3	Axle loading without load, front / rear				1521   1538		1506   1628		
WHEELS	3-1	Tyre type				SE		SE		
	3-2	Tyre size, front				6.50 x 10-10		6.50 x 10-10		
	3-3	Tyre size, front				5.00 x 8		5.00 x 8		
	3-5	Wheels, number front / rear (x = driven wheels)				2x / 2		2x / 2		
	3-6	Tread, front	b <sub>10</sub>	mm	890		890		890	
	3-7	Tread, rear	b <sub>11</sub>	mm	895		895		895	
	DIMENSIONS	4-1	Tilt of mast / fork carriage forward / backward				6 / 5		6 / 5	
4-2		Height, mast lowered				2175		2175		
4-3		Free lift (1)				100		100		
4-4		Lift (1)				3290		3290		
4-5		Height, mast extended (2)				3905		3905		
4-7		Height of overhead guard (cabin) (3)				2149		2149		
4-8		Seat height relating to SIP (4)				1043		1044		
4-12		Coupling height				321		321		
4-19		Overall length				3236		3236		
4-20		Length to face of forks				2236		2236		
4-21		Overall width (5)				1068 / 1108 / 1238		1068 / 1108 / 1238		
4-22		Fork dimensions DIN ISO 2331				40 x 80 x 1000		40 x 80 x 1000		
4-23		Fork carriage ISO 2328, class/type A, B				II A		II A		
4-24		Fork carriage width (7)				977		977		
4-31		Ground clearance, laden, below mast				110		110		
4-32		Ground clearance, centre of wheelbase				146		146		
4-33		Load dimension b12 x l6 crossways				1000 x 1200		1000 x 1200		
4-34		Aisle width predetermined load dimensions				3539		3539		
4-34-1		Aisle width for pallets 1000 x 1200 crossways (8)				3539		3539		
4-34-4		Aisle width for pallets 800 x 1200 lengthways (8)				3739		3739		
4-35		Turning radius				1955		1955		
4-36		Internal turning radius				584		584		
4-41		90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)				1830		1830		
4-42	Step height (from ground to running board)				691		691			
4-43	Step height (between intermediate steps between running board and floor)				371		371			
PERFORMANCE	5-1	Travel speed with / without load				20.5   20.9		21.1   21.5		
	5-2	Lifting speed with / without load				0.64   0.72		0.58   0.60		
	5-3	Lowering speed with / without load				0.51   0.47		0.51   0.47		
	5-5	Drawbar pull, laden/unladen (9)				12390   7470		11393   7470		
	5-7	Gradeability - 1.6 km/h, with / without load (10)				21.6   29.0		19.2   29.0		
	5-9	Acceleration time, laden/unladen				TBD   TBD		4.6   3.9		
	5-10	Service brake				Hydraulic		Hydraulic		
7-5	Fuel consumption according to VDI cycle				2.86		2.35			



# H1.6FT, H1.8FT, H2.0FTS FORTENS



			HYSTER		HYSTER		HYSTER				
			H1.8FT		H2.0FTS		H2.0FTS				
GENERAL	1-1	Manufacturer									
	1-2	Model designation									
		Model		Fortens		Fortens		Fortens			
		Engine / transmission		PSI 2.0L Electronic Powershift 1-speed		Yanmar 2.6L Electronic Powershift 1-speed		PSI 2.0L Electronic Powershift 1-speed			
		Brake type		Drum		Drum		Drum			
	1-3	Drive		LPG		Diesel		LPG			
	1-4	Operator type		Seated		Seated		Seated			
	1-5	Rated capacity/rated load	Q <sub>1</sub>	t	1.8		2.0		2.0		
	1-6	Load centre distance	c	mm	500		500		500		
	1-8	Load distance, centre of drive axle to fork	x	mm	384		384		384		
1-9	Wheelbase	y	mm	1385		1385		1385			
WEIGHT	2-1	Service weight		kg	3134		3294		3294		
	2-2	Axle loading with load, front / rear		kg	4190	509	4460	580	4460	580	
	2-3	Axle loading without load, front / rear		kg	1506	1628	1465	1829	1465	1829	
WHEELS	3-1	Tyre type			SE		SE		SE		
	3-2	Tyre size, front			6.50 x 10-10		6.50 x 10-10		6.50 x 10-10		
	3-3	Tyre size, front			5.00 x 8		5.00 x 8		5.00 x 8		
	3-5	Wheels, number front / rear (x = driven wheels)			2x / 2		2x / 2		2x / 2		
	3-6	Tread, front	b <sub>10</sub>	mm	890		890		890		
	3-7	Tread, rear	b <sub>11</sub>	mm	895		895		895		
	DIMENSIONS	4-1	Tilt of mast / fork carriage forward / backward		(°)	6 / 5		6 / 5		6 / 5	
4-2		Height, mast lowered	h <sub>1</sub>	mm	2175		2175		2175		
4-3		Free lift (1)	h <sub>2</sub>	mm	100		100		100		
4-4		Lift (1)	h <sub>3</sub>	mm	3290		3290		3290		
4-5		Height, mast extended (2)	h <sub>4</sub>	mm	3905		3905		3905		
4-7		Height of overhead guard (cabin) (3)	h <sub>6</sub>	mm	2149		2149		2149		
4-8		Seat height relating to SIP (4)	h <sub>7</sub>	mm	1044		1044		1044		
4-12		Coupling height	h <sub>10</sub>	mm	321		321		321		
4-19		Overall length	l <sub>1</sub>	mm	3236		3268		3268		
4-20		Length to face of forks	l <sub>2</sub>	mm	2236		2268		2268		
4-21		Overall width (5)	b <sub>1</sub> /b <sub>2</sub>	mm	1068 / 1108 / 1238		1068 / 1108 / (6)		1068 / 1108 / (6)		
4-22		Fork dimensions DIN ISO 2331	s/e/l	mm	40 x 80 x 1000		40 x 80 x 1000		40 x 80 x 1000		
4-23		Fork carriage ISO 2328, class/type A, B		mm	II A		II A		II A		
4-24		Fork carriage width (7)	b <sub>3</sub>	mm	977		977		977		
4-31		Ground clearance, laden, below mast	m <sub>1</sub>	mm	110		110		110		
4-32		Ground clearance, centre of wheelbase	m <sub>2</sub>	mm	146		146		146		
4-33		Load dimension b <sub>12</sub> x l <sub>6</sub> crossways	b <sub>12</sub> x l <sub>6</sub>	mm	1000 x 1200		1000 x 1200		1000 x 1200		
4-34		Aisle width predetermined load dimensions	A <sub>st</sub>	mm	3539		3569		3569		
4-34-1		Aisle width for pallets 1000 x 1200 crossways (8)	A <sub>st</sub>	mm	3539		3569		3569		
4-34-4		Aisle width for pallets 800 x 1200 lengthways (8)	A <sub>st</sub>	mm	3739		3769		3769		
4-35		Turning radius	W <sub>a</sub>	mm	1955		1985		1985		
4-36		Internal turning radius	b <sub>13</sub>	mm	584		584		584		
4-41		90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)			1830		1855		1855		
4-42		Step height (from ground to running board)			691		691		691		
4-43		Step height (between intermediate steps between running board and floor)			371		371		371		
PERFORMANCE		5-1	Travel speed with / without load		km/h	21.1	21.5	20.5	20.9	21.1	21.5
		5-2	Lifting speed with / without load		m/s	0.58	0.60	0.62	0.72	0.58	0.602
	5-3	Lowering speed with / without load		m/s	0.51	0.47	0.51	0.47	0.51	0.47	
	5-5	Drawbar pull, laden/unladen (9)		N	11353	7200	12140	6930	11297	6930	
	5-7	Gradeability - 1.6 km/h, with / without load (10)		%	18.0	26.3	17.9	23.6	16.6	23.6	
	5-9	Acceleration time, laden/unladen		s	4.7	4.0	TBD	TBD	4.8	4.1	
	5-10	Service brake			Hydraulic		Hydraulic		Hydraulic		
7-5	Fuel consumption according to VDI cycle		l/h	2.42		3.11		2.52			

# > H1.6FT, H1.8FT, H2.0FTS FORTENS ADVANCE

			HYSTER		HYSTER		HYSTER			
			H1.6FT		H1.6FT		H1.8FT			
GENERAL	1-1	Manufacturer								
	1-2	Model designation								
		Model		Fortens Advance		Fortens Advance		Fortens Advance		
		Engine / transmission		Yanmar 2.6L DuraMatch™ 1-speed		PSI 2.0L DuraMatch™ 1-speed		Yanmar 2.6L DuraMatch™ 1-speed		
		Brake type		ADS Drum		ADS Drum		ADS Drum		
	1-3	Drive		Diesel		LPG		Diesel		
	1-4	Operator type		Seated		Seated		Seated		
	1-5	Rated capacity/rated load	Q <sub>1</sub>	t	1.6		1.6		1.8	
	1-6	Load centre distance	c	mm	500		500		500	
	1-8	Load distance, centre of drive axle to fork	x	mm	384		384		384	
1-9	Wheelbase	y	mm	1385		1385		1385		
WEIGHT	2-1	Service weight								
	2-2	Axle loading with load, front / rear		kg		3856   565		4190   509		
	2-3	Axle loading without load, front / rear		kg		1521   1538		1506   1628		
WHEELS	3-1	Tyre type		SE		SE		SE		
	3-2	Tyre size, front		6.50 x 10-10		6.50 x 10-10		6.50 x 10-10		
	3-3	Tyre size, front		5.00 x 8		5.00 x 8		5.00 x 8		
	3-5	Wheels, number front / rear (x = driven wheels)		2x / 2		2x / 2		2x / 2		
	3-6	Tread, front	b <sub>10</sub>	mm	890		890		890	
	3-7	Tread, rear	b <sub>11</sub>	mm	895		895		895	
	DIMENSIONS	4-1	Tilt of mast / fork carriage forward / backward		(°)		6 / 5		6 / 5	
4-2		Height, mast lowered		h <sub>1</sub>		mm		2175		
4-3		Free lift (1)		h <sub>2</sub>		mm		100		
4-4		Lift (1)		h <sub>3</sub>		mm		3290		
4-5		Height, mast extended (2)		h <sub>4</sub>		mm		3905		
4-7		Height of overhead guard (cabin) (3)		h <sub>6</sub>		mm		2149		
4-8		Seat height relating to SIP (4)		h <sub>7</sub>		mm		1044		
4-12		Coupling height		h <sub>10</sub>		mm		321		
4-19		Overall length		l <sub>1</sub>		mm		3236		
4-20		Length to face of forks		l <sub>2</sub>		mm		2236		
4-21		Overall width (5)		b <sub>1</sub> /b <sub>2</sub>		mm		1068 / 1108 / 1238		
4-22		Fork dimensions DIN ISO 2331		s/e/l		mm		40 x 80 x 1000		
4-23		Fork carriage ISO 2328, class/type A, B				mm		II A		
4-24		Fork carriage width (7)		b <sub>3</sub>		mm		977		
4-31		Ground clearance, laden, below mast		m <sub>1</sub>		mm		110		
4-32		Ground clearance, centre of wheelbase		m <sub>2</sub>		mm		146		
4-33		Load dimension b12 x l6 crossways		b <sub>12</sub> x l <sub>6</sub>		mm		1000 x 1200		
4-34		Aisle width predetermined load dimensions		A <sub>st</sub>		mm		3539		
4-34-1		Aisle width for pallets 1000 x 1200 crossways (8)		A <sub>st</sub>		mm		3539		
4-34-4		Aisle width for pallets 800 x 1200 lengthways (8)		A <sub>st</sub>		mm		3739		
4-35		Turning radius		W <sub>a</sub>		mm		1955		
4-36		Internal turning radius		b <sub>13</sub>		mm		584		
4-41		90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)						1830		
4-42		Step height (from ground to running board)						691		
4-43		Step height (between intermediate steps between running board and floor)						371		
PERFORMANCE		5-1	Travel speed with / without load		km/h		20.5   20.9		21.1   21.5	
	5-2	Lifting speed with / without load		m/s		0.64   0.72		0.58   0.60		
	5-3	Lowering speed with / without load		m/s		0.51   0.47		0.51   0.47		
	5-5	Drawbar pull, laden/unladen (9)		N		12390   7470		11393   7470		
	5-7	Gradeability - 1.6 km/h, with / without load (10)		%		21.6   29.0		19.2   29.0		
	5-9	Acceleration time, laden/unladen		s		TBD   TBD		4.6   3.9		
	5-10	Service brake				Hydraulic		Hydraulic		
7-5	Fuel consumption according to VDI cycle		l/h		2.86		2.35			

# H1.6FT, H1.8FT, H2.0FTS FORTENS ADVANCE



			HYSTER		HYSTER		HYSTER					
			H1.8FT		H2.0FTS		H2.0FTS					
GENERAL	1-1	Manufacturer										
	1-2	Model designation										
		Model		Fortens Advance		Fortens Advance		Fortens Advance				
		Engine / transmission		PSI 2.0L Duramatch™ 1-speed		Yanmar 2.6L Duramatch™ 1-speed		PSI 2.0L Duramatch™ 1-speed				
		Brake type		ADS Drum		ADS Drum		ADS Drum				
	1-3	Drive		LPG		Diesel		LPG				
	1-4	Operator type		Seated		Seated		Seated				
	1-5	Rated capacity/rated load	Q <sub>1</sub>	t	1.8		2.0		2.0			
	1-6	Load centre distance	c	mm	500		500		500			
	1-8	Load distance, centre of drive axle to fork	x	mm	384		384		384			
1-9	Wheelbase	y	mm	1385		1385		1385				
WEIGHT	2-1	Service weight										
	2-2	Axle loading with load, front / rear		kg		4190	509	4460	580	4460	580	
	2-3	Axle loading without load, front / rear		kg		1506	1628	1521	1829	1465	1829	
WHEELS	3-1	Tyre type				SE		SE		SE		
	3-2	Tyre size, front				6.50 x 10-10		6.50 x 10-10		6.50 x 10-10		
	3-3	Tyre size, front				5.00 x 8		5.00 x 8		5.00 x 8		
	3-5	Wheels, number front / rear (x = driven wheels)				2x / 2		2x / 2		2x / 2		
	3-6	Tread, front	b <sub>10</sub>	mm	890		890		890			
	3-7	Tread, rear	b <sub>11</sub>	mm	895		895		895			
	DIMENSIONS	4-1	Tilt of mast / fork carriage forward / backward		(°)		6 / 5		6 / 5		6 / 5	
4-2		Height, mast lowered		h <sub>1</sub>		mm		2175		2175		
4-3		Free lift (1)		h <sub>2</sub>		mm		100		100		
4-4		Lift (1)		h <sub>3</sub>		mm		3290		3290		
4-5		Height, mast extended (2)		h <sub>4</sub>		mm		3905		3905		
4-7		Height of overhead guard (cabin) (3)		h <sub>6</sub>		mm		2149		2149		
4-8		Seat height relating to SIP (4)		h <sub>7</sub>		mm		1044		1044		
4-12		Coupling height		h <sub>10</sub>		mm		321		321		
4-19		Overall length		l <sub>1</sub>		mm		3236		3268		
4-20		Length to face of forks		l <sub>2</sub>		mm		2236		2268		
4-21		Overall width (5)		b <sub>1</sub> /b <sub>2</sub>		mm		1072 / 1112 / 1242		1068 / 1108 / (6)		
4-22		Fork dimensions DIN ISO 2331		s/e/l		mm		40 x 80 x 1000		40 x 80 x 1000		
4-23		Fork carriage ISO 2328, class/type A, B				mm		II A		II A		
4-24		Fork carriage width (7)		b <sub>3</sub>		mm		977		977		
4-31		Ground clearance, laden, below mast		m <sub>1</sub>		mm		110		110		
4-32		Ground clearance, centre of wheelbase		m <sub>2</sub>		mm		146		146		
4-33		Load dimension b <sub>12</sub> x l <sub>6</sub> crossways		b <sub>12</sub> x l <sub>6</sub>		mm		1000 x 1200		1000 x 1200		
4-34		Aisle width predetermined load dimensions		A <sub>st</sub>		mm		3539		3539		
4-34-1		Aisle width for pallets 1000 x 1200 crossways (8)		A <sub>st</sub>		mm		3539		3539		
4-34-4		Aisle width for pallets 800 x 1200 lengthways (8)		A <sub>st</sub>		mm		3739		3769		
4-35		Turning radius		W <sub>a</sub>		mm		1955		1985		
4-36		Internal turning radius		b <sub>13</sub>		mm		584		584		
4-41		90° intersecting aisle (with pallet W = 1200mm, L = 1000mm)						1830		1855		
4-42		Step height (from ground to running board)						691		691		
4-43		Step height (between intermediate steps between running board and floor)						371		371		
PERFORMANCE		5-1	Travel speed with / without load		km/h		21.1	21.5	20.5	20.9	21.1	21.5
		5-2	Lifting speed with / without load		m/s		0.58	0.60	0.62	0.72	0.58	0.602
	5-3	Lowering speed with / without load		m/s		0.51	0.47	0.51	0.47	0.51	0.47	
	5-5	Drawbar pull, laden/unladen (9)		N		11353	7200	12140	6930	11297	6930	
	5-7	Gradeability - 1.6 km/h, with / without load (10)		%		18.0	26.3	17.9	23.6	16.6	23.6	
	5-9	Acceleration time, laden/unladen		s		4.7	4.0	TBD	TBD	4.8	4.1	
	5-10	Service brake				Hydraulic		Hydraulic		Hydraulic		
7-5	Fuel consumption according to VDI cycle		l/h		2.42		3.11		2.52			

# > POWERTRAINS

GENERAL	1-1	Manufacturer			HYSTER	HYSTER
	1-2	Model designation			H1.6-2.0FTS	H1.6-2.0FTS
	1-3	Powertrain / drivetrain			Diesel	LPG

ENGINE	7-1	Engine manufacturer / model			Yanmar 4TNE92	PSI 2.0L
	7-2	Engine power output according to ISO 1585		kW	29.1	33.0
	7-3	Rated speed		rpm	2400	2400
	7-3-1	Engine torque @rpm (1/min)		N-m	143 @ 1400	136 @ 2300
	7-4	Number of cylinders / displacement		# / cm <sup>3</sup>	4 / 2659	4 / 1997
	7-8	Alternator output		Amps		
	7-10	Battery voltage, rated capacity		V / Ah		

DRIVE	8-1	Drive control / transmission		Type / #	Automatic Powershift	Automatic Powershift
	8-11	Service brake		Type	Drum	Drum
	8-12	Parking brake		Type	Mechanical	Mechanical

MISC	10-1	Operating pressure for attachments		bar	0 - 155	0 - 155
	10-2	Oil volume for attachments (10)		l/min	69	58
	10-3	Hydraulic oil tank, capacity		l	15.4	15.4
	10-4	Fuel tank, capacity		l	38.4	15.2
	10-7	Sound pressure level at the driver's seat (11)	Lpaz	dB(A)	79	77
	10-7-1	Guaranteed sound power 2001/14/EC	Lwaz	dB	102	101
	10-8	Towing coupling, type DIN 15170			Yes / Pin	Yes / Pin

## MODEL TABLE NOTES:

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.

- (1) Bottom of forks
- (2) Without load backrest
- (3) h6 subject to +/- 5 mm tolerance
- (4) Full-suspension seat in depressed position
- (5) Standard/Intermediate/Wide.
- (6) Wide tread not available on H2.0FTS.
- (7) Add 32mm with load backrest
- (8) Stacking aisle width (lines 4.34.1& 4.34.2) are 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 the truck.
- (9) @ 1.6km/h. Drawbar pull performance figure (line 5.4) is only indicative for comparison purpose. These performances are only possible for a short period of time.
- (10) @ 4.8km/h. 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.


- (11) Variable
- (12) LPAZ, Measured according to the test cycles and based on the weighting values contained in EN12053  
LWAZ, measured according to the test cycles and based on the weighting values contained in EN12053

## MAST CAPACITY TABLE NOTES:

- (1) With load backrest
- (2) Without load backrest
- (3) Wide Tread Width Drive Tyres must be specified
- (4) Intermediate Tread Width Drive Tyres must be specified

## NOTICE:

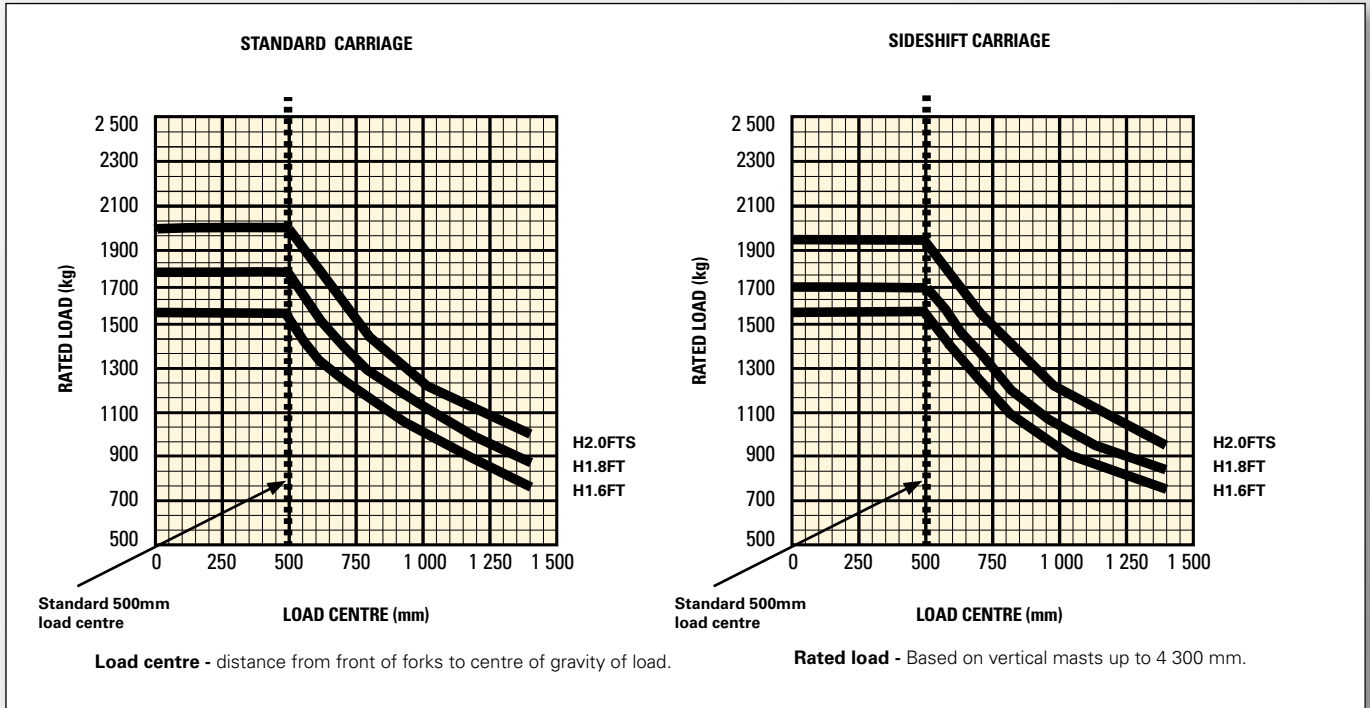
Care must be exercised when handling elevated loads. Operators must be trained and must read, understand and follow the instructions contained in the Operating Manual.  
All values are nominal values and they are subject to tolerances. For further information, please contact the manufacturer.  
Hyster products are subject to change without notice.  
Lift trucks illustrated may feature optional equipment. Values may vary with alternative configurations.

 **Safety:** This truck conforms to the current EU requirements.

Specification data is based on VDI 2198.



# RATED CAPACITIES <



# STANDARD AND OPTIONAL EQUIPMENT <

PERFORMANCE	STD	OPT
Hyster Fortens	X	
Hyster Fortens Advance		X
Yanmar 2.6L diesel engine	X	
PSI 2.0L LPG engine		X
Serpentine Radiator		X
Anti-Clog Radiator	X	
Upswept Exhaust	X	
Lowered Upswept Exhaust		X
Horizontal Exhaust		X
Powertrain Protection System with Engine Shutdown		X
High Air Intake	X	
High Air Intake with Precleaner		X
Electronic Powershift - 1 Speed Transmission	X	
DuraMatch™ - 1 Speed Transmission		X
Drum brakes	X	
DRIVE		
Multiple Traction Speed Limit 13/6 km/h (Adjustable)		X
Multiple Traction Speed Limit 13/8 km/h		X
Multiple Traction Speed Limit 13/10 km/h		X
Standard Tread	X	
Intermediate Tread		X
Wide Tread		X
6.50 x 10 Pneumatic Radial Drive Tyres		X
6.50 x 10 Solid Non-Marking Drive Tyres		X
6.50 x 10 Superelastic Drive Tyres	X	
5.00 X 8 Pneumatic Radial Steer Tyre		X
5.00 X 8 Superelastic Non-Marking Steer Tyres		X
5.00 X 8 Superelastic Steer Tyres	X	
18 x 7-8 Superelastic Steer Tyres	X	
18 x 7-8 Solid Non-Marking Steer Tyres		X

LIFT	STD	OPT
2 Stage Limited Free Lift	X	
2 Stage Full Free Lift		X
3 Stage Full Free Lift		X
Lift Height - 3330mm (2175mm Lowered Height)	X	
Various other Lift Heights		X
Mast tilt - 6° Forward / 5° Back	X	
Mast tilt - 6° Forward / 4° Back		X
Mast tilt - 6° Forward / 3° Back		X
Tilt Speed Restrictor - 1 degree per second (Mechanical)		X
Tilt Speed Restrictor - 1 degree per second (Electronically Adjusted)		X
Hydraulic Accumulator		X
HANDLING	STD	OPT
Auto Speed Hydraulics		X
3 Hydraulic Functions (1 Auxiliary)	X	
4 Hydraulic Functions (2 Auxiliary)		X
Without Hose Group	X	
3 Functions Hose Group (1 Auxiliary)		X
4 Functions Hose Group (2 Auxiliary)		X
980mm Carriage - Class 2	X	
980mm Integral Sideshift Carriage - Class 2		X
980mm Integral Sideshift Carriage with Fork Positioner - Class 2		X
980mm Hook Type Carriage		X
980mm Hook Type Integral Sideshift Carriage		X
980mm Integral Sideshift Carriage with Fork Positioner		X
980mm Load Backrest		X
1220mm High load backrest	X	
1000mm x 80mm x 40mm Hook Type Standard Taper Forks - Class 2	X	
1000mm x 100mm x 40mm Hook Type Standard Taper Forks - Class 2	X	
Other various fork sizes		X

## > STANDARD AND OPTIONAL EQUIPMENT

CAB	STD	OPT
Full Steel Modular Cab		X
Steel Modular Cab with PVC Doors		X
Top Sun Blind for Cab Trucks		X
Front Sun Blind for Cab Trucks		X
Auxiliary Equipment Mounting Bar		X
PVC Top Screen		X
Glass Top Screen		X
Solid Top Screen + Front Screen with Washer/Wiper		X
Solid Top Screen + Front & Rear Screen with Washer/Wipers		X
Solid Top Screen + Front & Rear Screen with Washer/Wipers + PVC Doors		X
ERGONOMICS	STD	OPT
2149mm Overhead Guard	X	
1970mm Flat Plate Overhead Guard		X
2081mm Overhead Guard		X
2082mm Drive In Rack Overhead Guard		X
2149mm Drive In Rack Overhead Guard		X
Load Weight Display		X
Operator Password Start		X
Operator Pre-Shift Electronic Checklist		X
Dual Mirrors Side View		X
Full Suspension Vinyl Seat	X	
Full Suspension Cloth Seat		X
Full Suspension Swivel Vinyl Seat		X
Full Suspension Swivel Cloth Seat		X
Heated Full Suspension Cloth Seat		X
High Backrest Lumbar Support Vinyl		X
High Backrest Lumbar Support Cloth		X
Full Suspension FLM36 (Low Profile) Vinyl Seat		X
Full Suspension FLM36 (Low Profile) Cloth Seat		X
Grammer Air Suspension Vinyl Seat		X
Grammer Air Suspension Cloth Seat		X
Air-Suspension Seat FLA Vinyl Seat		X
Air-Suspension Seat FLA Cloth Seat		X
Standard Seat Belt		X
Hi-Vis Red Seat Belt		X
Hi-Vis Red Seat Belt with Interlock		X
Hi-Vis Red Seat Belt with Sequential Interlock		X
Manual lever hydraulic controls	X	
Hydraulic controls, designed for clamping applications		X
TouchPoint™, mini lever hydraulic controls		X
TouchPoint™, mini lever hydraulic controls, with Return to Set Tilt		X
Joystick hydraulic controls		X
Directional Lever	X	
Monotrol		X
Directional Control Switch (Integrated in Arm rest)		X
Dash Mounted 12V Auxiliary Power Outlet		X
VISIBILITY	STD	OPT
Work Light Package - 2 Front and 1 Rear Halogen Work Lights with Side, Stop, Tail, & Reverse Lights		X
Work Light Package - 2 Front and 1 Rear LED Work Lights with Side, Stop, Tail, & Reverse Lights	X	
Automatic Lights		X
Mast Mounted LED Lights		X
Front Work Lights Keyswitch Activated, Rear Work Lights Back-Up Activated		X
Keyswitch Activation for Work Lights		X
LED Work Light Protection		X

OPERATION	STD	OPT
15kg Steel Tank		X
Swing Out LPG Tank Bracket		X
Swing Out and Drop Down LPG Tank Bracket		X
Fixed LPG Bracket		X
Pressure Fuel Level Sensor		X
Optical Fuel Level Sensor		X
Acme Screw Connector (Non German, UK)		X
Impact Monitor with 30 Second Shutdown		X
Impact Monitor with Immediate Shutdown		X
Premium Monitoring System		X
Sealed Alternator		X
Non-Vented Hood	X	
Full underbody mesh belly pan		X
Visible alarm – Amber strobe light		X
Audible alarm – Reverse direction activated		X
Audible alarm – Reverse direction white noise		X
Audible alarm – Motion Alarm		X
Hazard Warning Lights - Keyswitch Activated		X
Hazard Warning Lights - Switch Activated		X
Pedestrian Awareness Light (P.A.L.)		X
Front Pedestrian Awareness Light (P.A.L.)		X
Seat Switch Activated Engine, Lights and Display Shutdown System		X
Signal Activated Engine Shutdown System		X
Battery Disconnect		X
Key switch start	X	
Push Button with Operator Password		X
Hyster Tracker wireless asset management system		X
Hyster Tracker wireless asset management - Access		X
Hyster Tracker wireless asset management - Verification		X
Hyster Tracker wireless asset management - Monitoring		X
APPEARANCE	STD	OPT
Hyster yellow paint base truck	X	
Special paint base truck		X
Hazard warning striping on counterweight		X
SUPPLEMENTAL	STD	OPT
Warranty: 12 Months / 2,000 Hours manufacturer's warranty	X	
Warranty: 36 Months / 6,000 Hours extended warranty		X

*\*Available only on models with DuraMatch™ transmission. Please refer to the Price List for full option configurations. Other options available through Special Products Engineering Department (SPED). Contact Hyster for details.*

## This series of trucks is available in two configurations

The Fortens™ truck offers first-rate performance for many applications, geared to minimise cost of acquisition without compromising performance.

The Fortens Advance truck provides excellent performance for applications, optimised for lowest hourly operating cost.

### ENGINES & FUEL SYSTEM

Heavy Duty Diesel Engines from Yanmar have super quick glow plugs allowing the engine to start quickly and reliably under cold conditions, the cold start device delivering a cleaner exhaust by advancing the fuel injection timing based on water temperature. Emissions have been reduced by controlling fuel injection timing according to engine load.

For LPG trucks a 2.0L PSI engine is utilised with full throttle power of 33.0 kW at 2400 rpm, and maximum torque is 136 Nm at 2300 rpm. It has a robust design with a cast iron cylinder block and HT (high tension) wires, distributor caps or rotors.

### TRANSMISSION

The Standard Fortens model features an Electronic Powershift Transmission. The 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 descent 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.

Aluminium core radiator 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, minimising repair downtime and unnecessary parts swapping. Hassle-Free Hydraulic systems, featuring Leak-free O-ring face seal fittings reduce leaks for enhanced reliability.

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

- **Autospeed Hydraulics** With optional Auto-speed Hydraulics the engine speed is automatically increased to provide full hydraulic power. The Pacesetter VSM maintains the current travel speed (or prevents travel) until the operator steps on the accelerator. No operator inching is required and productivity and efficiency is increased by simplifying operator actions.

The operator compartment features class-leading **Ergonomics** for maximum driver comfort and productivity.

- Operator space is optimised, thanks to the overhead guard design and generous 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 37.1 cm.
- The isolated drivetrain minimises the effect of powertrain vibration.
- The adjustable armrest that accompanies the TouchPoint™ 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, 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 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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