

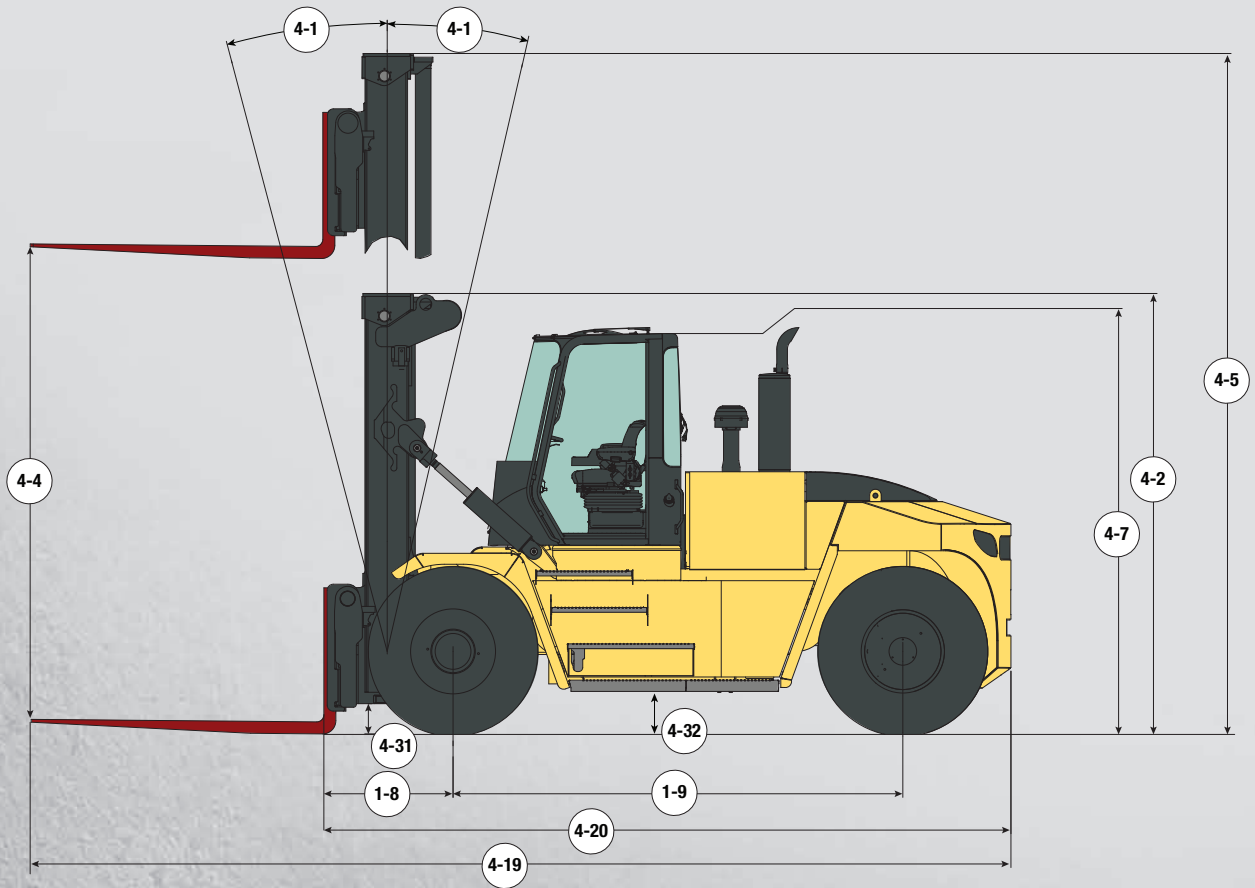
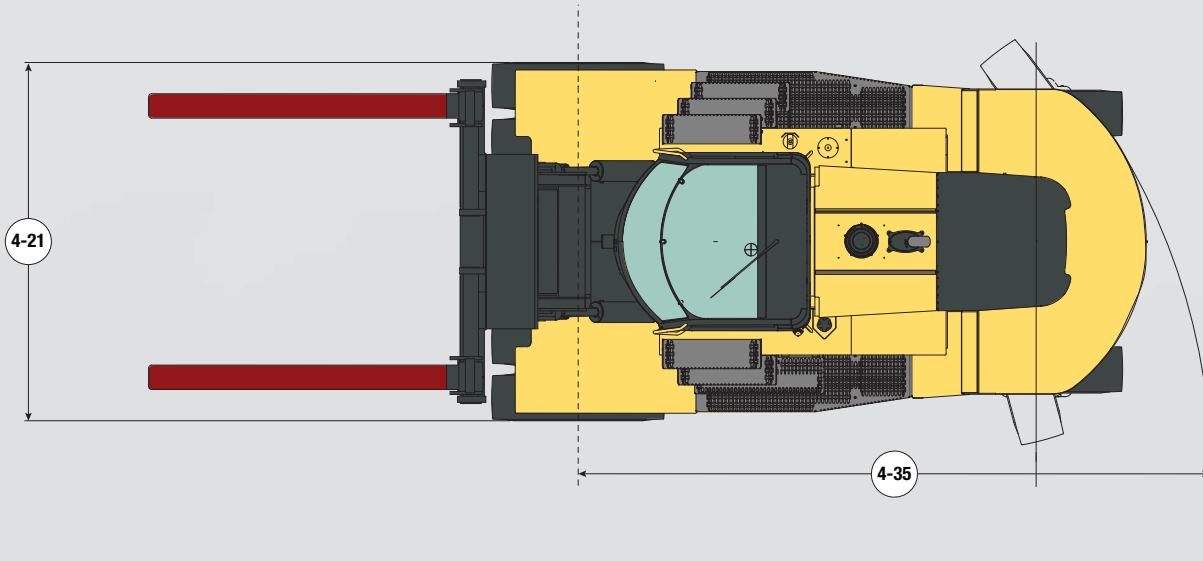


**STRONG PARTNERS.
TOUGH TRUCKS.™**

H400-450XD SERIES TECHNICAL GUIDE

WWW.HYSTER.COM

➤ H400-450XD DIMENSIONS



Circled dimensions correspond to the line numbers on the tabulated chart inside the Technical Guide. Dimensions are in inches (millimeters).

H400-450XD SPECIFICATIONS ◀

	Description	Units		English		Metric		English		Metric			
GENERAL	1-1	Manufacturer		HYSTER				HYSTER					
	1-2	Model designation		H400XDS36				H400XD36					
	1-3	Powertrain / drivetrain		Diesel				Diesel					
	1-4	Operator type		Seated				Seated					
	1-5	Rated load capacity	lbs	kg	40,000		18,144		40,000		18,144		
	1-6	Load center	in	mm	36		914		36		914		
	1-8	Load distance (1)	in	mm	43		1,086		43		1,086		
	1-9	Wheelbase	in	mm	138		3,500		148		3,750		
	WEIGHTS	2-1	Total truck weight without load		lbs	kg	61,024		27,680		59,664		27,063
2-2		Axle loading with load, front / rear		lbs	kg	93,209	42,279	7,815	3,545	91,792	41,636	7,873	3,571
2-3		Axle loading without load, front / rear		lbs	kg	30,691	13,921	30,333	13,759	30,774	13,959	28,889	13,104
WHEELS	3-1	Tire type		Pneumatic				Pneumatic					
	3-2	Tire size, front		14.00 x 24PR				14.00 x 24PR					
	3-3	Tire size, rear		14.00 x 24PR				14.00 x 24PR					
	3-5	Number of tires, front / rear (x driven)		#		4x / 2		4x / 2		4x / 2			
	3-6	Tread width, front	in	mm	82		2,095		82		2,095		
	3-7	Tread width, rear	in	mm	83		2,108		83		2,108		
	DIMENSIONS	4-1	Mast tilt, forward / back		degrees		10 / 12		10 / 12		10 / 12		
4-2		Height of mast lowered (2)	in	mm	146		3,692		146		3,692		
4-3		Freelift	in	mm	0		0		0		0		
4-4		Lift height (top of fork)	in	mm	148		3,760		148		3,760		
4-5		Height, extended	in	mm	218		5,517		218		5,517		
4-7		Height to top of operator compartment (open cab)	in	mm	134		3,401		134		3,401		
4-8		Seat height to SIP (3)	in	mm	87		2,204		87		2,204		
4-19		Overall length	in	mm	312		7,927		322		8,177		
4-20		Length to load face	in	mm	216		5,487		226		5,737		
4-21		Overall width of truck	in	mm	115		2,923		115		2,923		
4-22		Fork dimension	in	mm	3.9 / 7.9 / 96		100 / 200 / 2,440		3.9 / 7.9 / 96		100 / 200 / 2,440		
4-23		Fork carriage type	Type		Dual function sideshift				Dual function sideshift				
4-24		Carriage width	in	mm	105		2,672		105		2,672		
4-25-1		Fork spread, min (in-in)	in	mm	33		848		33		848		
4-25-2		Fork spread, max (out-out)	in	mm	94		2,393		94		2,393		
4-30		Sideshift	in	mm	13		336		13		336		
4-31		Ground clearance, under mast with load	in	mm	12		299		12		299		
4-32		Ground clearance, center of wheelbase	in	mm	15		374		15		374		
4-34		Minimum aisle width (add load length & clearance)	in	mm	237		6,020		249		6,336		
4-35		Outside turning radius	in	mm	194		4,934		207		5,250		
PERFORMANCE (TIER 4)		PERFORMANCE		WITH TIER 4 FINAL CUMMINS QSB 6.7L ENGINE									
		5-1	Travel speed, with / without load	mph	km/h	16	25	16	25	16	25	16	25
		5-2	Lifting speed, with / without load	ft/min	m/s	59	0.30	65	0.33	89	0.45	98	0.50
	5-3	Lowering speed, with / without load	ft/min	m/s	98	0.50	98	0.50	98	0.50	98	0.50	
	5-5	Drawbar pull – 1 mph (1.6 km / h), with / without load	lbs	kN	36,194	161	37,093	165	36,419	162	37,093	165	
	5-6	Drawbar pull – stall, with / without load	lbs	kN	44,962	200	45,636	203	44,962	200	45,636	203	
	5-7	Gradeability – 1 mph (1.6 km / h), with / without load	%		38		33		39		34		
	5-8	Gradeability stall, with load / without load	%		50		33		51		34		
PERFORMANCE (TIER 3)	PERFORMANCE		WITH TIER 3 CUMMINS QSB 6.7L ENGINE										
	5-1a	Travel speed, with / without load	mph	km/h	16	25	16	25	16	25	16	25	
	5-2	Lifting speed, with / without load	ft/min	m/s	59	0.30	65	0.33	89	0.45	98	0.50	
	5-3	Lowering speed, with / without load	ft/min	m/s	98	0.50	98	0.50	98	0.50	98	0.50	
	5-5	Drawbar pull – 1 mph (1.6 km / h), with / without load	lbs	kN	36,194	161	37,093	165	36,419	162	37,093	165	
	5-6	Drawbar pull – stall, with / without load	lbs	kN	44,962	200	45,636	203	44,962	200	45,636	203	
	5-7	Gradeability – 1 mph (1.6 km / h), with / without	%		38		33		39		34		
	5-8	Gradeability – stall, with / without	%		50		33		51		34		

CERTIFICATION: Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance specifications are for a truck equipped as described under Standard Equipment on this technical guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature, condition of the operating area, proper service and maintenance of the vehicle. If these specifications are critical, the proposed application should be discussed with your dealer.

(1) Center of drive axle to front face of forks (2) Unladen with new tires (3) Full suspension seat in depressed position

H400-450XD SPECIFICATIONS

	Description	Units		English		Metric		English		Metric				
GENERAL	1-1	Manufacturer		HYSTER				HYSTER						
	1-2	Model designation		H450XDS36				H450XD36						
	1-3	Powertrain / drivetrain		Diesel				Diesel						
	1-4	Operator type		Seated				Seated						
	1-5	Rated load capacity	lbs	kg	45,000		20,412		45,000		20,412			
	1-6	Load center	in	mm	36		914		36		914			
	1-8	Load distance (1)	in	mm	42		1,069		42		1,069			
	1-9	Wheelbase	in	mm	138		3,500		148		3,750			
	WEIGHTS	2-1	Total truck weight without load		lbs	kg	65,477		29,700		62,893		28,528	
2-2		Axle loading with load, front / rear		lbs	kg	101,501	46,040	8,977	4,072	99,642	45,197	8,252	3,743	
2-3		Axle loading without load, front / rear		lbs	kg	31,696	14,377	33,781	15,353	31,491	14,284	31,405	14,245	
WHEELS	3-1	Tire type		Pneumatic				Pneumatic						
	3-2	Tire size, front		14.00 x 24PR				14.00 x 24PR						
	3-3	Tire size, rear		14.00 x 24PR				14.00 x 24PR						
	3-5	Number of tires, front / rear (x driven)		#		4x / 2		4x / 2		4x / 2				
	3-6	Tread width, front	in	mm	82		2,095		82		2,095			
	3-7	Tread width, rear	in	mm	83		2,108		83		2,108			
	DIMENSIONS	4-1	Mast tilt, forward / back		degrees		10 / 12		10 / 12		10 / 12			
4-2		Height of mast lowered (2)	in	mm	149		3,780		149		3,780			
4-3		Freelift	in	mm	0		0		0		0			
4-4		Lift height (top of fork)	in	mm	148		3,760		148		3,760			
4-5		Height, extended	in	mm	221		5,605		221		5,605			
4-7		Height to top of operator compartment (open cab)	in	mm	134		3,401		134		3,401			
4-8		Seat height to SIP (3)	in	mm	87		2,204		87		2,204			
4-19		Overall length	in	mm	311		7,910		321		8,160			
4-20		Length to load face	in	mm	215		5,470		225		5,720			
4-21		Overall width of truck	in	mm	115		2,923		115		2,923			
4-22		Fork dimension	in	mm	3.9 / 9.8 / 96		100 / 250 / 2,440		3.9 / 9.8 / 96		100 / 250 / 2,440			
4-23		Fork carriage type	Type		Dual function sideshift				Dual function sideshift					
4-24		Carriage width	in	mm	116		2,940		116		2,940			
4-25-1		Fork spread, min (in-in)	in	mm	33		847		33		847			
4-25-2		Fork spread, max (out-out)	in	mm	107		2,712		107		2,712			
4-30		Sideshift	in	mm	16		404		16		404			
4-31		Ground clearance, under mast with load	in	mm	11		270		11		270			
4-32		Ground clearance, center of wheelbase	in	mm	15		374		15		374			
4-34		Minimum aisle width (add load length & clearance)	in	mm	236		6,003		249		6,319			
4-35		Outside turning radius	in	mm	194		4,934		207		5,250			
PERFORMANCE (TIER 4)		PERFORMANCE WITH TIER 4 FINAL CUMMINS QSB 6.7L ENGINE												
	5-1	Travel speed, with / without load	mph	km/h	16	25	16	25	16	25	16	25		
	5-2	Lifting speed, with / without load	ft/min	m/s	49	0.25	55	0.28	75	0.38	83	0.42		
	5-3	Lowering speed, with / without load	ft/min	m/s	98	0.50	98	0.50	98	0.50	98	0.50		
	5-5	Drawbar pull – 1 mph (1.6 km / h), with / without load	lbs	kN	36,194	161	36,869	164	36,194	161	36,869	164		
	5-6	Drawbar pull – stall, with / without load	lbs	kN	44,737	199	45,636	203	44,737	199	45,636	203		
	5-7	Gradeability – 1 mph (1.6 km / h), with / without load			%		35		32		36		33	
	5-8	Gradeability stall, with load / without load			%		44		32		46		33	
PERFORMANCE (TIER 3)	PERFORMANCE WITH TIER 3 CUMMINS QSB 6.7L ENGINE													
	5-1a	Travel speed, with / without load	mph	km/h	16	25	16	25	16	25	16	25		
	5-2	Lifting speed, with / without load	ft/min	m/s	49	0.25	55	0.28	75	0.38	83	0.42		
	5-3	Lowering speed, with / without load	ft/min	m/s	98	0.50	98	0.50	98	0.50	98	0.50		
	5-5	Drawbar pull – 1 mph (1.6 km / h), with / without load	lbs	kN	36,194	161	36,869	164	36,194	161	36,869	164		
	5-6	Drawbar pull – stall, with / without load	lbs	kN	44,737	199	45,636	203	44,737	199	45,636	203		
	5-7	Gradeability – 1 mph (1.6 km / h), with / without			%		35		32		36		33	
	5-8	Gradeability – stall, with / without			%		44		32		46		33	

CERTIFICATION: Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance specifications are for a truck equipped as described under Standard Equipment on this technical guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature, condition of the operating area, proper service and maintenance of the vehicle. If these specifications are critical, the proposed application should be discussed with your dealer.

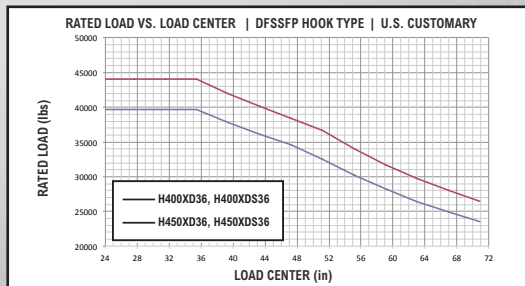
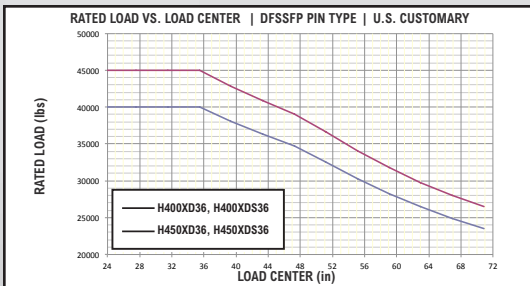
(1) Center of drive axle to front face of forks (2) Unladen with new tires (3) Full suspension seat in depressed position

POWERTRAINS						
GENERAL	Description		Units		English	Metric
	1-1	Manufacturer			HYSTER	
	1-2	Model designation			H400-450XD/S36	H450XD36
	1-3	Powertrain / drivetrain			Diesel	Diesel
ENGINE	7-1	Engine manufacturer / model			Cummins / QSB 6.7L	
	7-1a	EPA tier compliance			Tier 4F / Stage IV	Tier 3 / Stage III
	7-2	Engine power output – rated	hp	kW	220@2000	164@2000
	7-2-1	Engine power output – peak	hp	kW	231@1800	172@1800
	7-3	Rated speed	rpm		2,000	
	7-3-1	Engine torque @ rpm (1 / min)	lb-ft	N-m	700@1400	949@1400
	7-4	Number of cylinders / displacement	# / in ³	# / cm ³	6 / 408	6 / 6,690
		Turbocharger	Type		Variable geometry, water-cooled	
	7-8	Alternator output	Amps		120	
	7-9	Electrical system voltage	V		24	
DRIVE	8-0	Drive control / transmission	Type		Powershift transmission	
	8-1	Type of drive unit	Type		Torque converter	
	8-2	Transmission manufacturer / type	Type		ZF 5WG211	
	8-2-1	Transmission speeds forward / reverse	#		5 / 3	
	8-3	Wheel drive / drive axle manufacturer / type	Type		AxleTech PRC1756W3H	
	8-4	Service brake	Type		Oil immersed (wet) disc	
	8-5	Parking brake	Type		Dry disc on drive axle	
	MISC	10-1	Operating pressure for attachments	psi	MPa	3,263
10-2		Oil flow for attachments	gpm	l / m	26	100
10-3		Hydraulic oil tank, capacity	gal	l	54	203
10-4		Fuel tank, capacity	gal	l	80	303
10-4-1		DEF tank, capacity	gal	l	10	38
10-5		Steering design	Type		Hydraulic power steering	
10-6		Number of steering rotation	#		4.4	
10-7		Sound pressure level at the driver's seat LpAZ	dB(A)		72.7	
10-7-1	Sound power level during the workcycle LwAZ	dB		100.4		
10-8	Towing coupling, type DIN	Type		Yes / pin		

H400XD/S36 MAST DIMENSIONS					
4-4 lift height (top of fork)		4-2 Mast lowered ht.		4-5 Overall extended ht.	
in	mm	in	mm	in	mm
2-STAGE ONLY					
147	3750	146	3692	217	5517
183	4650	163	4142	253	6417
212	5400	178	4517	282	7167
244	6200	194	4917	314	7967
263	6700	204	5167	334	8467
275	7000	210	5317	346	8767

H450XD/S36 MAST DIMENSIONS					
4-4 Lift Height (top of fork)		4-2 Mast lowered ht.		4-5 Overall extended ht.	
in	mm	in	mm	in	mm
2-STAGE ONLY					
147	3750	149	3780	221	5605
183	4650	167	4230	256	6505
212	5400	182	4605	286	7255
244	6200	197	5005	317	8055
263	6700	207	5255	337	8555
275	7000	213	5405	349	8855

RATED CAPACITIES



Model H400XDS36: 40,000 lbs. at 36" (18,144 kg at 914mm) load center
 Model H450XDS36: 45,000 lbs. at 36" (20,412 kg at 914mm) load center
 Model H400XD36: 40,000 lbs. at 36" (18,144 kg at 914mm) load center
 Model H450XD36: 45,000 lbs. at 36" (20,412 kg at 914mm) load center
 Conversion Factor: 1.0" = 25.4 mm | 1 lb = 0.45 k

Rated capacities are for trucks equipped with:
 • 2-stage (lower mast) to 147" (3750 mm) maximum fork height
 • 105" (2672 mm) carriage width (H400XD/S36)
 • 116" (2940 mm) carriage width (H450XD/S36)
 • 96" (2440 mm) long forks
 Contact your dealer for other capacity information.

STANDARD FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
Cummins QSB 6.7L diesel engine rated 220 hp tier 4 / 164 kW stage IV*	x	
Cummins QSB 6.7L diesel engine rated 220 hp tier 3 / 164 kW stage IIIA*	x	
Tier 4 / stage IV compliant	x	
Tier 3 / stage IIIA compliant	x	
Wastegate turbocharger, water cooled*	x	
Variable geometry turbocharger, water cooled*	x	
Hibernate Idle	x	
On-demand cooling fan*	x	
120 amp alternator	x	
Powertrain protection system	x	
Heavy duty air intake	x	
High mount exhaust	x	
ZF Transmission 5WG211 5-speeds fwd / 3-speeds reverse auto-shifting	x	
AxleTech Drive Axle PRC1756 W3H with wet disc brakes	x	
DRIVE	STD	OPT
Travel speed limiter - unconditional and customer adjustable		x
Travel speed limiter - loaded (adjustable)		x
14.00-24 24PR pneumatic bias ply drive and steer tires	x	
14.00-R24 pneumatic radial drive and steer tires		x
14.00-24 pneumatic shaped solid drive and steer tires		x
LIFT	STD	OPT
On-demand load sensing hydraulic system	x	
Automatic throttle-up when lifting (in neutral or inching)	x	
2 Stage non free lift mast	x	
Mast tilt - 5° forward / 5° back		x
Mast tilt - 10° forward / 6° back		x
Mast tilt - 10° forward / 7° back		x
Mast tilt - 10° forward / 9° back		x
Mast tilt - 10° forward / 10° back		x
Mast tilt - 10° forward / 12° back	x	
Pressure compensated lowering	x	
Hydraulic system temperature protection with performance de-rate		x
HANDLING	STD	OPT
Mast tilt indicator - mechanical		x
105" (2680mm) Pin type dual function sideshift carriage with simultaneous and individual fork positioner**	x	
105" (2680mm) Quick disconnect hook type dual function sideshift carriage with simultaneous and individual fork positioner***		x

HANDLING (continued)	STD	OPT
105" (2680mm) Quick disconnect hook type dual function sideshift carriage with individual fork positioner and 1 spare auxiliary function**		x
115" (2940mm) Pin type dual function sideshift carriage with simultaneous and individual fork positioner***	x	
115" (2940mm) Quick disconnect hook type dual function sideshift carriage with simultaneous and individual fork positioner***		x
115" (2940mm) Quick disconnect hook type dual function sideshift carriage with individual fork positioner and 1 spare auxiliary function***		x
96" (2440mm) Long x 3.9" (100mm) thick x 7.9" (200mm) wide pin type forks with standard taper**	x	
96" (2440mm) Long x 3.9" (100mm) thick x 9.8" (250mm) wide pin type forks with standard taper***	x	
Pin type forks (various sizes)		x
Hook type forks (various sizes)		x
ERGONOMICS	STD	OPT
Open operator compartment (without doors & screens)	x	
Enclosed operator cabin		x
Powered tilt operator compartment for service		x
Manual tilt operator compartment for service	x	
Isolated cabin mounting for low noise and vibration	x	
Operator presence system	x	
Mechanical suspension seat	x	
Air suspension seat		x
Deluxe air suspension seat		x
Low backrest seat	x	
High backrest seat		x
Armrest on left side	x	
Cloth seat cover		x
Vinyl seat cover	x	
Seat heating		x
Seat ventilation		x
2-point high visibility seatbelt	x	
Lateral seat sliding mechanism		x
Floor mat	x	
Interior dome light	x	
Front, top and rear wipers		x
"H"-pattern front wiper		x
"I"-pattern front wiper		x
Front and rear window defrosters		x
Right side door (enclosed operator cabin)	x	
Handrails for exit and entry	x	
Rain top		x

* Standard or optional in select markets or select models.

** H400XD36 and H400XDS36

*** H450XD36 and H450XDS36

STANDARD FEATURES AND OPTIONS <

ERGONOMICS (continued)	STD	OPT
Wire mesh installed on top of operator compartment		x
7" Integrated Performance Display	x	
Touchpoint™ mini levers hydraulic control integrated in control arm	x	
Joystick hydraulic control integrated in control arm		x
Steering wheel with spinner knob	x	
Directional control lever on steering column	x	
Hyster Monotrol pedal directional control		x
Directional control switch (integrated into control arm)		x
Directional control on joystick		x
Park brake - manual	x	
Interior wide angle mirrors	x	
Heater with adjustable speed fan		x
Telescoping & tilting steering column	x	
24-12 DC converter with 1 socket and 2 USB outlets	x	
24-12 DC converter with 2 sockets and 2 USB outlets		x
Air conditioning and automatic climate control		x
Reading light		x
Sun shades on top and rear (standard with air conditioning and automatic climate control)		x
Sun visors front window		x
Cloth trainer seat with 2-point seatbelt		x
Recirculation fan (enclosed operator cabin)	x	
Accessory mounting bracket on cab front right pillar		x
Document holder on cab front right pillar		x
Heated top- and/or rear window		x
Radio preparation with 2 speakers and antenna		x
VISIBILITY	STD	OPT
Steel bars on top of cab (open operator compartment)	x	
Top window with armoured glass (enclosed operator cabin)	x	
Steel bars under armoured glass top window (enclosed operator cabin)		x
Exterior mirrors mounted to handrails		x
Rear view camera system		x
Radar object detection system		x
Halogen work lights	x	
High Performance LED work lights		x
Two Halogen head lights mounted on front fenders	x	
Two LED head lights mounted on front fenders		x
Two mast mounted work lights	x	
Four cabin mounted work lights		x
Two rearward work lights mounted on the cabin	x	
LED stop / tail / brake lights	x	
Turn signals, hazard & marker lights (LED)		x

OPERATION	STD	OPT
Air horn 112 dBA		x
Electric horn 105 dBA	x	
Visible alarm – amber strobe light, keyswitch activated	x	
Audible alarm – reverse direction activated 82–102 dB(A), self-adjusting	x	
Forward motion alarm		x
Seatbelt interlock for engine start and truck operation		x
Air conditioning shut-off with open door		x
Automatic engine shutdown with timer		x
Lockable battery disconnect switch	x	
Battery jump start connector (NATO plug)		x
Truck Start with key switch and start button	x	
Operator password (display) for truck start	x	
Fuses replaced by electric circuit breakers		x
Non-lockable fuel cap	x	
Lockable fuel cap		x
Fuel strainer in fuel filler neck		x
Hyster Tracker wireless asset management - access / verification		x
Hyster Tracker wireless asset management - monitoring	x	
Auto greasing system for base truck		x
Centralized greasing system for top end mast		x
24 volt electrical system	x	
Engine block heater 110 or 240 volt		x
Steer wheel lug nut protection	x	
Front and rear mud guards		x
Lifting eyes - 2 front and 2 rear		x
APPEARANCE	STD	OPT
Hyster yellow paint base truck	x	
Special paint base truck		x
SUPPLEMENTAL	STD	OPT
Literature package	x	
Operator's manual	x	
CE certification*		x
Warranty: 12 months / 2,000 hours parts & labor manufacturer's warranty*	x	

* Standard or optional in select markets or select models.


** H400XD36 and H400XDS36

*** H450XD36 and H450XDS36



Hyster Company
P.O. Box 7006
Greenville, North Carolina
27835-7006
Part No. H400-450XD-TG
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