

# H190-280XD SERIES

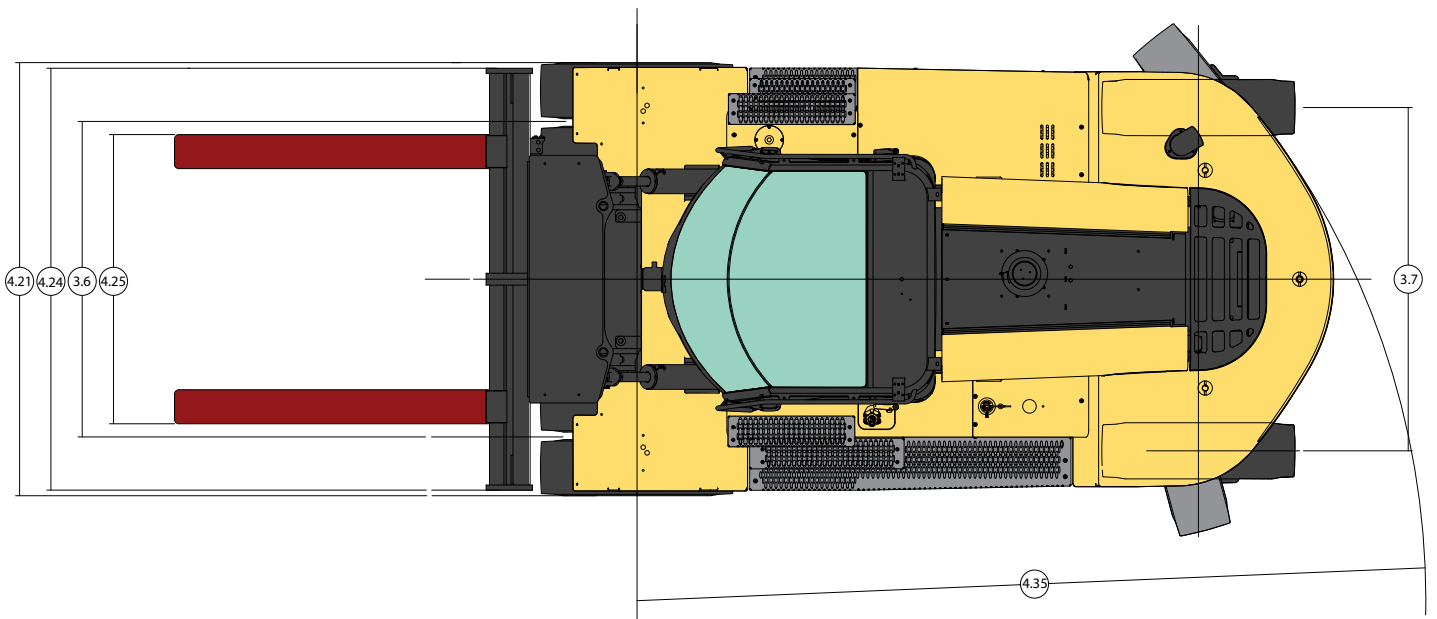
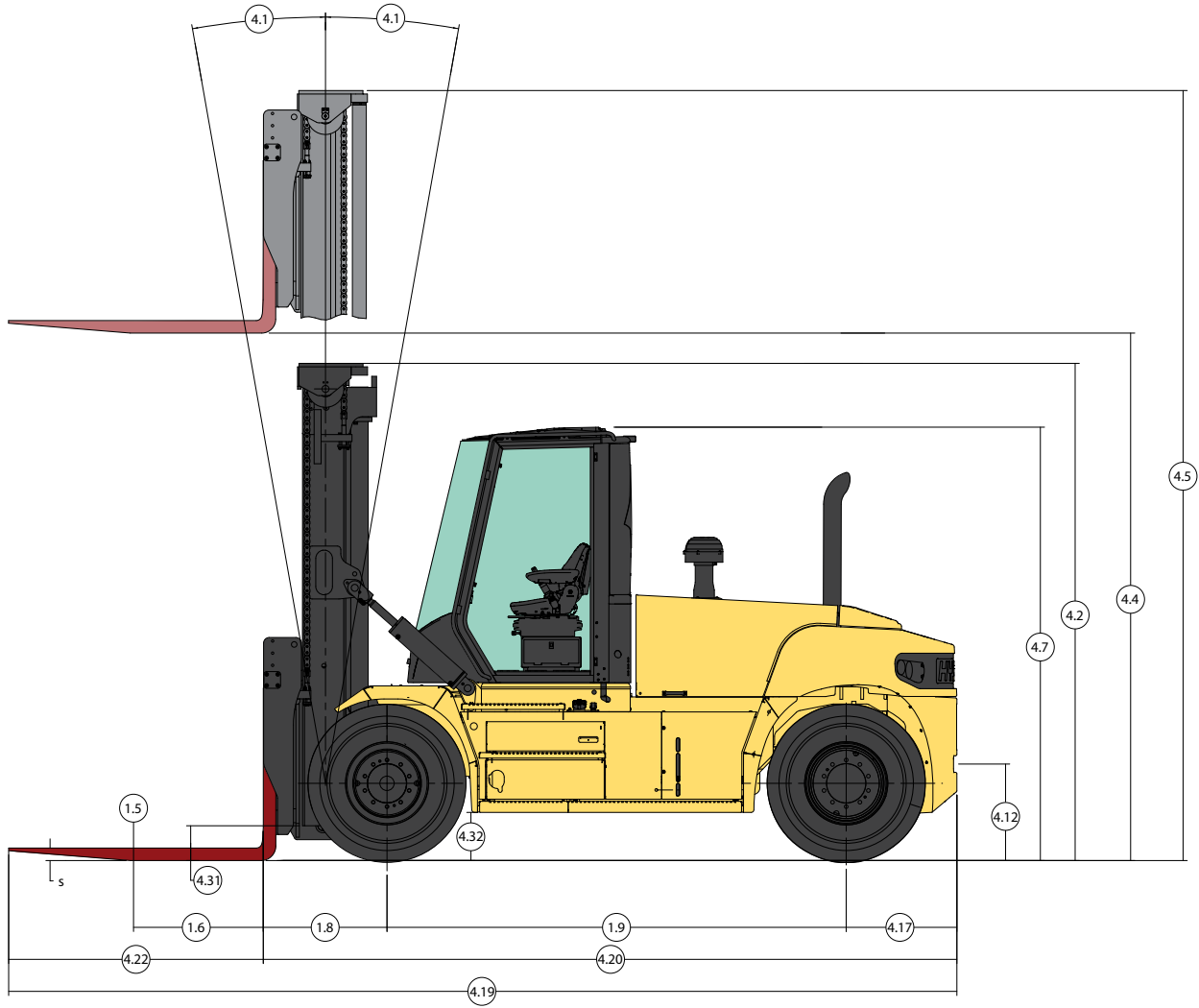
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## HEAVY DUTY FORKLIFT TRUCK PNEUMATIC TIRE PRODUCT TECHNICAL GUIDE



# DIMENSIONS



# H190XD | H210XD SPECIFICATIONS

		H190XD				H210XD							
		H190XD		H210XD		H190XD		H210XD					
GENERAL	1-1	Manufacturer		HYSTER				HYSTER					
	1-2	Model designation		H190XD				H210XD					
	1-3	Powertrain/drivetrain		Diesel				Diesel					
	1-4	Operator type		Seated				Seated					
	1-5	Rated load capacity	lb	kg	19,000		8,618		21,000		9,525		
	1-6	Load center	in	mm	24		610		24		610		
	1-8	Load distance	in	mm	31.9		810		31.9		810		
	1-9	Wheelbase	in	mm	106		2,700		106		2,700		
	WEIGHTS	2-1	Total truck weight without load		lb	kg	28,403		12,883		29,548		13,403
2-2		Axle loading with load, front/rear		lb	kg	43,704	3,699	19,824	1,678	46,529	4,019	21,105	1,823
2-3		Axle loading without load, front/rear		lb	kg	14,722	13,681	6,678	6,206	14,495	15,053	6,575	6,828
WHEELS	3-1	Tire type		Type		Pneumatic				Pneumatic			
	3-2	Tire size, front		10.00-20 16PR				10.00-20 16PR					
	3-3	Tire size, rear		10.00-20 16PR				10.00-20 16PR					
	3-5	Number of tires, front/rear ( X driven )		#		x4/2				x4/2			
	3-6	Tread width, front		in	mm	72.5		1,842		72.5		1,842	
	3-7	Tread width, rear		in	mm	79.5		2,019		79.5		2,019	
	DIMENSIONS	4-1	Mast tilt, forward/back		Degrees		15F/12B				15F/12B		
4-2		Height of mast lowered		in	mm	129		3,260		129		3,260	
4-3		Freelift		in	mm	0		0		0		0	
4-4		Lift height (top of fork)		in	mm	147		3,750		147		3,750	
4-4-1		Lift height (bottom of fork)		in	mm	145		3,675		145		3,675	
4-5		Height, extended		in	mm	201		5,097		201		5,097	
4-7		Height to top of operator compartment (open cab)		in	mm	120.3		3,056		120.3		3,056	
4-7-1		Height, top of operator comp (closed cab)		in	mm	121.3		3,081		121.3		3,081	
4-7-2		Height, top of operator comp (closed cab w/AC)		in	mm	121.3		3,081		121.3		3,081	
4-7-3		Height, top of operator comp (closed cab w/strobe light)		in	mm	125.1		3,178		125.1		3,178	
4-7-4		Height, top of operator comp (closed cab w/work lights)		in	mm	127.2		3,231		127.2		3,231	
4-7-5		Height, top of operator comp (closed cab w/AC & strobe)		in	mm	126.3		3,208		126.3		3,208	
4-8		Seat height to seat point index (SIP)		in	mm	74		1,875		74		1,875	
4-19		Overall length		in	mm	217		5,522		217		5,522	
4-20		Length to load face		in	mm	169		4,303		169		4,303	
4-21		Overall width of truck		in	mm	98		2,489		98		2,489	
4-22		Fork dimension		in	mm	3/8/48		75/200/1,220		3/8/48		75/200/1,220	
4-23		Fork carriage type		Type		Standard pin type carriage				Standard pin type carriage			
4-24		Carriage width		in	mm	94.3		2,396		94.3		2,396	
4-25-1		Fork spread, min (in-in)		in	mm	2.8		70		2.8		70	
4-25-2		Fork spread, max (out-out)		in	mm	91.3		2,320		91.3		2,320	
4-30		Sideshift		in	mm	0		0		0		0	
4-31		Ground clearance, under mast w/o load		in	mm	10.0		253		10.0		253	
4-32	Ground clearance, center of wheelbase		in	mm	12.3		313		12.3		313		
4-34	Minimum aisle width (add load length & clearance)		in	mm	183		4,660		183		4,660		
4-35	Outside turning radius		in	mm	152		3,850		152		3,850		
Tier 4F			Cummins QSB 4.5L				Cummins QSB 4.5L						
PERFORMANCE	5-1	Travel speed, with/without load		mph	km/h	18.5	19.3	30	31	18.5	19.3	30	31
	5-2-1	Lifting speed, with/without load - 90cc pump		ft/min	m/s	89	89	0.45	0.45	89	89	0.45	0.45
	5-2-2	Lifting speed, with/without load - 111cc pump		ft/min	m/s	124	132	0.63	0.67	124	132	0.63	0.67
	5-2-3	Lifting speed, with/without load - 126cc pump		ft/min	m/s	-	-	-	-	-	-	-	-
	5-3	Lowering speed, with/without load		ft/min	m/s	106	95	0.54	0.48	106	95	0.54	0.48
	5-5	Drawbar pull - 1 mph (1.6 km/h), with/without load		lb	kN	21,600	22,400	96	100	21,500	22,300	96	99
	5-6	Drawbar pull - stall, with/without load		lb	kN	24,100	24,800	107	110	24,000	24,800	107	110
	5-7	Gradeability - 1 mph (1.6 km/h), with/without load		%		52/34				49/32			
5-8	Gradeability stall, with load/without load		%		52/34				52/32				

# H230XDS | H230XD SPECIFICATIONS

		HYSTER				HYSTER							
		H230XDS				H230XD							
GENERAL	1-1	Manufacturer		HYSTER				HYSTER					
	1-2	Model designation		H230XDS				H230XD					
	1-3	Powertrain/drivetrain		Diesel				Diesel					
	1-4	Operator type		Seated				Seated					
	1-5	Rated load capacity	lb	kg	23,000	10,433	23,000	10,433	23,000	10,433			
	1-6	Load center	in	mm	24	610	24	610	24	610			
	1-8	Load distance	in	mm	31.9	810	31.9	810	31.9	810			
	1-9	Wheelbase	in	mm	106	2,700	114	2,900	114	2,900			
	WEIGHTS	2-1	Total truck weight without load		lb	kg	31,676	14,368	30,765	13,955			
2-2		Axle loading with load, front/rear		lb	kg	50,080	4,596	22,716	2,085	49,655	4,111	22,523	1,865
2-3		Axle loading without load, front/rear		lb	kg	14,996	16,680	6,802	7,566	15,404	15,362	6,987	6,968
WHEELS	3-1	Tire type		Pneumatic				Pneumatic					
	3-2	Tire size, front		10.00-20 16PR				10.00-20 16PR					
	3-3	Tire size, rear		10.00-20 16PR				10.00-20 16PR					
	3-5	Number of tires, front/rear ( X driven )		#				x4/2					
	3-6	Tread width, front	in	mm	72.5	1,842	72.5	1,842	72.5	1,842			
	3-7	Tread width, rear	in	mm	79.5	2,019	79.5	2,019	79.5	2,019			
	DIMENSIONS	4-1	Mast tilt, forward/back		°				15F/12B				
4-2		Height of mast lowered		in	mm	139	3,510	139	3,510	139	3,510		
4-3		Freelift		in	mm	0	0	0	0	0	0		
4-4		Lift height (top of fork)		in	mm	147	3,750	147	3,750	147	3,750		
4-4-1		Lift height (bottom of fork)		in	mm	145	3,675	145	3,675	145	3,675		
4-5		Height, extended		in	mm	211	5,347	211	5,347	211	5,347		
4-7		Height to top of operator compartment (open cab)		in	mm	120.3	3,056	120.3	3,056	120.3	3,056		
4-7-1		Height, top of operator comp (closed cab)		in	mm	121.3	3,081	121.3	3,081	121.3	3,081		
4-7-2		Height, top of operator comp (closed cab w/AC)		in	mm	121.3	3,081	121.3	3,081	121.3	3,081		
4-7-3		Height, top of operator comp (closed cab w/strobe light)		in	mm	125.1	3,178	125.1	3,178	125.1	3,178		
4-7-4		Height, top of operator comp (closed cab w/work lights)		in	mm	127.2	3,231	127.2	3,231	127.2	3,231		
4-7-5		Height, top of operator comp (closed cab w/AC & strobe)		in	mm	126.3	3,208	126.3	3,208	126.3	3,208		
4-8		Seat height to seat point index (SIP)		in	mm	74	1,875	74	1,875	74	1,875		
4-19		Overall length		in	mm	217	5,522	225	5,723	225	5,723		
4-20		Length to load face		in	mm	169	4,303	177	4,503	177	4,503		
4-21		Overall width of truck		in	mm	98	2,489	98	2,489	98	2,489		
4-22		Fork dimension		in	mm	3/8/48	75/200/1,220	3/8/48	75/200/1,220	3/8/48	75/200/1,220		
4-23		Fork carriage type		Type				Standard pin type carriage					
4-24		Carriage width		in	mm	94.3	2,396	94.3	2,396	94.3	2,396		
4-25-1		Fork spread, min (in-in)		in	mm	2.8	70	2.8	70	2.8	70		
4-25-2		Fork spread, max (out-out)		in	mm	91.3	2,320	91.3	2,320	91.3	2,320		
4-30		Sideshift		in	mm	0	0	0	0	0	0		
4-31		Ground clearance, under mast w/o load		in	mm	10.0	253	10.0	253	10.0	253		
4-32		Ground clearance, center of wheelbase		in	mm	12.3	313	12.3	313	12.3	313		
4-34		Minimum aisle width (add load length & clearance)		in	mm	183	4,660	194	4,917	194	4,917		
4-35		Outside turning radius		in	mm	152	3,850	162	4,107	162	4,107		
Tier 4F				Cummins QSB 4.5L				Cummins QSB 4.5L					
PERFORMANCE		5-1	Travel speed, with/without load		mph	km/h	18.5	19.3	30	31	18.5	19.3	30
	5-2-1	Lifting speed, with/without load - 90cc pump		ft/min	m/s	79	79	0.40	0.40	79	79	0.40	0.40
	5-2-2	Lifting speed, with/without load - 111cc pump		ft/min	m/s	98	106	0.50	0.54	98	106	0.50	0.54
	5-2-3	Lifting speed, with/without load - 126cc pump		ft/min	m/s	-	-	-	-	-	-	-	-
	5-3	Lowering speed, with/without load		ft/min	m/s	106	95	0.54	0.48	106	95	0.54	0.48
	5-5	Drawbar pull - 1 mph (1.6 km/h), with/without load		lb	kN	21,300	22,200	95	99	21,400	22,300	95	99
	5-6	Drawbar pull - stall, with/without load		lb	kN	23,800	24,700	106	110	23,800	24,700	106	110
	5-7	Gradeability - 1 mph (1.6 km/h), with/without load		%		44/31				45/33			
5-8	Gradeability stall, with load/without load		%		50/31				51/33				
Tier 3: Cummins QSB 6.7L				Cummins QSB 6.7L				Cummins QSB 6.7L					
PERFORMANCE	5-1	Travel speed, with/without load		mph	km/h	-	-	-	-	18.5	19.3	30	31
	5-2-1	Lifting speed, with/without load - 90cc pump		ft/min	m/s	-	-	-	-	79	79	0.40	0.40
	5-2-2	Lifting speed, with/without load - 111cc pump		ft/min	m/s	-	-	-	-	93	106	0.47	0.54
	5-2-3	Lifting speed, with/without load - 126cc pump		ft/min	m/s	-	-	-	-	-	-	-	-
	5-3	Lowering speed, with/without load		ft/min	m/s	-	-	-	-	106	95	0.54	0.48
	5-5	Drawbar pull - 1 mph (1.6 km/h), with/without load		lb	kN	-	-	-	-	20,200	21,100	90	94
	5-6	Drawbar pull - stall, with/without load		lb	kN	-	-	-	-	22,500	23,400	100	104
	5-7	Gradeability - 1 mph (1.6 km/h), with/without load		%		-				42/33			
5-8	Gradeability stall, with load/without load		%		-				48/33				

# H250XD | H280XD SPECIFICATIONS

			HYSTER				HYSTER					
			H250XD				H280XD					
GENERAL	1-1	Manufacturer					HYSTER					
	1-2	Model designation					H250XD					
	1-3	Powertrain/drivetrain					Diesel					
	1-4	Operator type					Seated					
	1-5	Rated load capacity	lb	kg	25,000	11,340	28,000	12,701				
	1-6	Load center	in	mm	24	610	24	610				
	1-8	Load distance	in	mm	31.9	810	31.9	810				
	1-9	Wheelbase	in	mm	114	2,900	114	2,900				
	WEIGHTS	2-1	Total truck weight without load	lb	kg	31,916	14,477	33,878	15,367			
2-2		Axle loading with load, front/rear	lb	kg	52,462	4,454	23,796	2,020	58,896	4,982	26,715	2,260
2-3		Axle loading without load, front/rear	lb	kg	15,233	16,684	6,910	7,568	15,199	18,679	6,894	8,473
WHEELS	3-1	Tire type	Type		Pneumatic				Pneumatic			
	3-2	Tire size, front			10.00-20 16PR				10.00-20 16PR			
	3-3	Tire size, rear			10.00-20 16PR				10.00-20 16PR			
	3-5	Number of tires, front/rear ( X driven )	#		x4/2				x4/2			
	3-6	Tread width, front	in	mm	72.5	1,842	72.5	1,842				
	3-7	Tread width, rear	in	mm	79.5	2,019	79.5	2,019				
	DIMENSIONS	4-1	Mast tilt, forward/back	°		15°F/12°B				15°F/12°B		
4-2		Height of mast lowered	in	mm	139	3,510	139	3,510				
4-3		Freelift	in	mm	0	0	0	0				
4-4		Lift height (top of fork)	in	mm	147	3,750	147	3,750				
4-4-1		Lift height (bottom of fork)	in	mm	145	3,675	145	3,675				
4-5		Height, extended	in	mm	211	5,347	211	5,347				
4-7		Height to top of operator compartment (open cab)	in	mm	120.3	3,056	120.3	3,056				
4-7-1		Height, top of operator comp (closed cab)	in	mm	121.3	3,081	121.3	3,081				
4-7-2		Height, top of operator comp (closed cab w/ AC)	in	mm	121.3	3,081	121.3	3,081				
4-7-3		Height, top of operator comp (closed cab w/ strobe light)	in	mm	125.1	3,178	125.1	3,178				
4-7-4		Height, top of operator comp (closed cab w/ work lights)	in	mm	127.2	3,231	127.2	3,231				
4-7-5		Height, top of operator comp (closed cab w/ AC & strobe)	in	mm	126.3	3,208	126.3	3,208				
4-8		Seat height to seat point index (SIP)	in	mm	74	1,875	74	1,875				
4-19		Overall length	in	mm	225	5,723	225	5,723				
4-20		Length to load face	in	mm	177	4,503	177	4,503				
4-21		Overall width of truck	in	mm	98	2,489	98	2,489				
4-22		Fork dimension	in	mm	3/8/48	75/200/1,220	3/8/48	75/200/1,220				
4-23		Fork carriage type	Type		Standard pin type carriage				Standard pin type carriage			
4-24		Carriage width	in	mm	94.3	2,396	94.3	2,396				
4-25-1		Fork spread, min (in-in)	in	mm	2.8	70	2.8	70				
4-25-2		Fork spread, max (out-out)	in	mm	91.3	2,320	91.3	2,320				
4-30	Sideshift	in	mm	0	0	0	0					
4-31	Ground clearance, under mast w/o load	in	mm	10.0	253	10.0	253					
4-32	Ground clearance, center of wheelbase	in	mm	12.3	313	12.3	313					
4-34	Minimum aisle width (add load length & clearance)	in	mm	194	4,917	194	4,917					
4-35	Outside turning radius	in	mm	162	4,107	162	4,107					
Tier 4F					Cummins QSB 4.5L				Cummins QSB 4.5L			
PERFORMANCE	5-1	Travel speed, with/without load	mph	km/h	18.5	19.3	30	31	18.5	19.3	30	31
	5-2-1	Lifting speed, with/without load - 90cc pump	ft/min	m/s	79	79	0.40	0.40	79	79	0.40	0.40
	5-2-2	Lifting speed, with/without load - 111cc pump	ft/min	m/s	98	106	0.50	0.54	98	106	0.40	0.54
	5-2-3	Lifting speed, with/without load - 126cc pump	ft/min	m/s	-	-	-	-	-	-	-	-
	5-3	Lowering speed, with/without load	ft/min	m/s	106	95	0.54	0.48	106	95	0.54	0.48
	5-5	Drawbar pull - 1 mph (1.6 km/h), with/without load	lb	kN	21,300	22,300	95	99	21,100	22,100	94	98
	5-6	Drawbar pull - stall, with/without load	lb	kN	23,800	24,700	106	110	23,600	24,600	105	109
	5-7	Gradeability - 1 mph (1.6 km/h), with/without load	%		43/32				38/32			
5-8	Gradeability stall, with load/without load	%		49/32				43/32				
Tier 3: Cummins QSB 6.7L					Cummins QSB 6.7L				Cummins QSB 6.7L			
PERFORMANCE	5-1	Travel speed, with/without load	mph	km/h	18.5	19.3	30	31	18.5	19.3	30	31
	5-2-1	Lifting speed, with/without load - 90cc pump	ft/min	m/s	79	79	0.40	0.40	79	79	0.40	0.40
	5-2-2	Lifting speed, with/without load - 111cc pump	ft/min	m/s	93	106	0.47	0.54	93	106	0.47	0.54
	5-2-3	Lifting speed, with/without load - 126cc pump	ft/min	m/s	-	-	-	-	-	-	-	-
	5-3	Lowering speed, with/without load	ft/min	m/s	106	95	0.54	0.48	106	95	0.54	0.48
	5-5	Drawbar pull - 1 mph (1.6 km/h), with/without load	lb	kN	20,100	21,100	89	94	19,900	21,000	89	93
	5-6	Drawbar pull - stall, with/without load	lb	kN	22,500	23,400	100	104	22,300	23,300	99	104
	5-7	Gradeability - 1 mph (1.6 km/h), with/without load	%		40/32				36/32			
5-8	Gradeability stall, with load/without load	%		46/32				41/32				

# POWERTRAINS


POWERTRAINS											
GENERAL	1-1	Manufacturer			HYSTER						
	1-2	Model designation		H190-280XD(S)		H230-280XD		H230-280XD			
	1-3	Powertrain/drivetrain			Diesel		Diesel		Diesel		
ENGINE	7-1	Engine Manufacturer/model		Cummins/QSB 4.5L		Cummins/QSB 6.7L		Cummins/QSB 6.7L			
	7-1a	EPA Tier Compliance			Tier 4F/Stage IV		Tier 3/Stage IIIA		Tier 4/Stage IV		
	7-2	Engine power output - rated	hp	kW	160 @2300	119 @2300	156@2300	116@2300	164@2300	122@2300	
	7-2-1	Engine power output - peak	hp	kW	164 @2200	122 @2200	156@2300	116@2300	168@2100	125@2100	
	7-3	Rated speed	rpm		2,300		2,300		2,300		
	7-3a	Peak speed	rpm		2,200		2,300		2,100		
	7-3-1	Engine torque @ rpm (1/min)	lb-ft	N-m	460@1500	624@1500	440@1500	597@1500	540@1500	732@1500	
	7-4	Number of cylinders/displacement	#/in3	#/cm3	4/275	4/4500	6/409	6/6700	6/409	6/6700	
	x	Turbocharger	Type		Variable Geometry, Water cooled		Wastegate, Water cooled		Variable Geometry, Water cooled		
	7-8	Alternator output	Amps		120		120		120		
	7-9	Electrical system voltage	V		24		24		24		
	7-10	Battery voltage/nominal capacity	V/Ah		24/102		24/102		24/102		
	8-0	Drive control/transmission	Type		Powershift Transmission		Powershift Transmission		Powershift Transmission		
	DRIVE	8-1	Type of drive unit	Type		Torque Converter		Torque Converter		Torque Converter	
		8-2	Transmission manufacturer/type	Type		ZF/3WG161		ZF/3WG161		ZF/3WG161	
8-2-1		Transmission speeds forward/reverse	#		3/3		3/3		3/3		
8-3		Wheel drive/drive axle manufacturer/type	Type		Kessler/D61		Kessler/D61		Kessler/D61		
8-4		Service brake	Type		Oil immersed (wet) disc		Oil immersed (wet) disc		Oil immersed (wet) disc		
8-5	Parking brake	Type		Spring apply, dry disc on drive axle		Spring apply, dry disc on drive axle		Spring apply, dry disc on drive axle			
MISC	10-1	Operating pressure for attachments	psi	MPa	3,263	23	3,263	23	3,263	23	
	10-2	Oil flow for attachments	gpm	l/m	26.4	100	26.4	100	26.4	100	
	10-3	Hydraulic oil tank, capacity	gal	l	27	102	32	121	32	121	
	10-4	Fuel tank, capacity	gal	l	30	114	40	151	40	151	
	10-4-1	DEF tank, capacity	gal	l	5	19	N/A	N/A	5	19	
	10-5	Steering design	Type		Hydraulic power steering		Hydraulic power steering		Hydraulic power steering		
	10-6	Number of steering rotation	#		5		5		5		
	10-8	Towing coupling, type DIN	Type		Pin		Pin		Pin		

## 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.

All capacities are according to ANSI B56.

Specification data is based on VDI 2198.

 Safety: This truck conforms to the current ANSI requirements.

## 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.

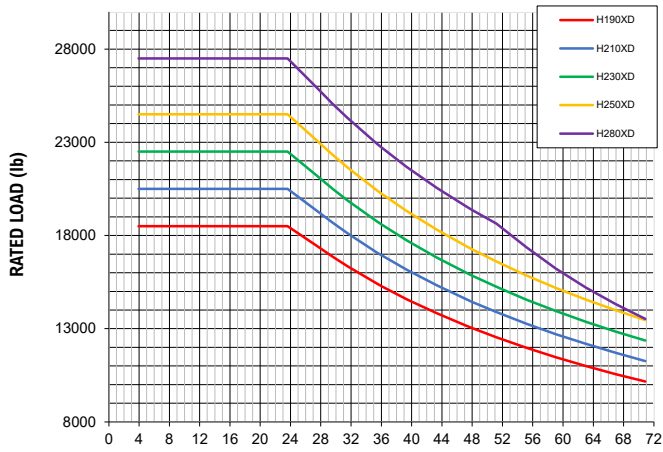
Hyster products are subject to change without notice.

Lift trucks illustrated may feature optional equipment. Values may vary with alternative configurations.

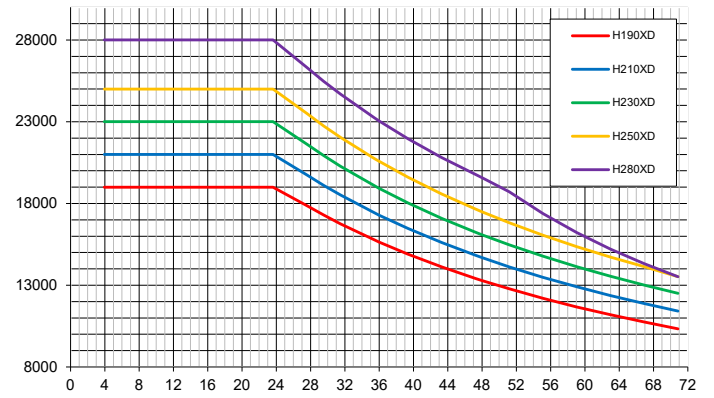
CERTIFICATION: Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance 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.

NOTE: Specifications, unless otherwise listed, are for a standard truck without optional equipment.

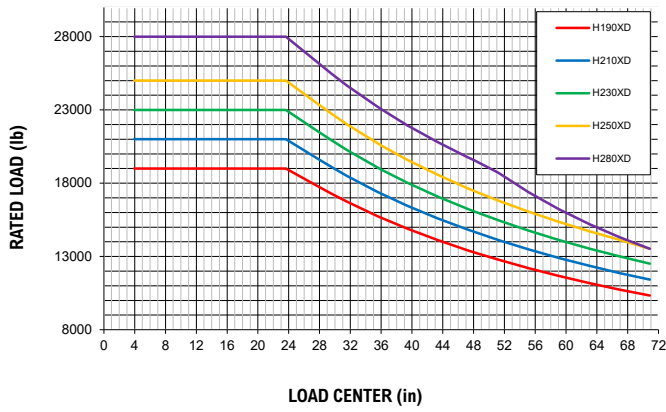
**RATED LOAD VS. LOAD CENTER | DF-SS-FP CARRIAGE | U.S. CUSTOMARY**



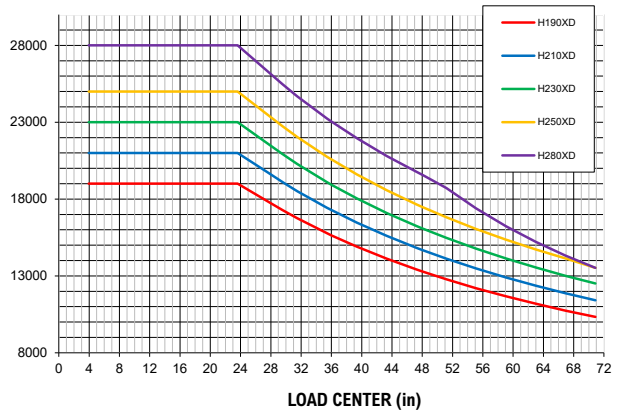
**RATED LOAD VS. LOAD CENTER | STD PIN TYPE | U.S. CUSTOMARY**



**RATED LOAD VS. LOAD CENTER | STD PIN TYPE WITH FP | U.S. CUSTOMARY**



**RATED LOAD VS. LOAD CENTER | SIDE SHIFT PIN TYPE WITH FP | U.S. CUSTOMARY**



# FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
Cummins QSB 4.5L Tier 4F diesel engine 160 hp (119 kW)*	x	
Cummins QSB 6.7L Tier 4F diesel engine 164 hp (122 kW)*		x
Cummins QSB 6.7L Tier 3 diesel engine 156 hp (116 kW)*	x	
Tier 4/Stage IV compliant	x	
Tier 3/Stage IIIA compliant	x	
Wastegate turbocharger, water cooled - Tier 3/Stage IIIA	x	
Variable geometry turbocharger, water cooled - Tier 4	x	
Delayed engine shutdown for turbo cool down		x
On-demand cooling fan	x	
120 amp alternator	x	
Performance modes selectable in Integrated Performance Display	x	
Powertrain protection system	x	
Heavy duty air intake	x	
Heavy duty air intake (raised)		x
Low mount exhaust (below chassis)	x	
High mount exhaust		x
ZF Transmission WG161 3-speeds fwd/3-speeds reverse auto-shifting	x	
Kessler D61 drive axle with wet disc brakes	x	
DRIVE	STD	OPT
Travel speed limiter - unconditional and customer adjustable		x
Travel speed limiter - loaded (adjustable)		x
10.00 - 20 16PR Pneumatic Bias Ply drive and steer tires	x	
10.00 - R20 Michelin XZM Radial drive and steer tires		x
10.00 - R20 Trelleborg Radial drive and steer tires		x
10.00 - 20 Pneumatic Shaped Solid drive and steer tires		x
LIFT	STD	OPT
90cc Dual Pump Hydraulic System	x	
111cc Dual Pump Hydraulic System		x
On-Demand Load Sensing Hydraulic System	x	
Automatic throttle-up when lifting (in neutral or inching)	x	
Variable lap mast for low roller forces	x	
2-stage non free lift mast	x	
2-stage full free lift mast		x
3-stage full free lift mast		x
Mast tilt - 5° forward/6° back		x
Mast tilt - 5° forward/12° back		x
Mast tilt - 15° forward/10° back		x
Mast tilt - 15° forward/12° back	x	
Mast tilt - 20.5° forward/7° back		x
Mast tilt Indicator - mechanical		x
Hydraulic Accumulator		x
Pressure compensated lowering		x
Hydraulic system temperature protection with performance derate		x
HANDLING	STD	OPT
94.3" (2396 mm) pin type carriage with mechanical fork locks	x	
94.3" (2396 mm) pin type carriage with simultaneous and independent fork positioner		x
94.3" (2396 mm) pin type carriage with simultaneous and independent fork positioner (for lumber applications)		x
94.3" (2396 mm) pin type apron-style sideshift carriage		x
92.5" (2350 mm) pin type apron-style sideshift carriage with simultaneous fork positioner		x

HANDLING (continued)	STD	OPT
94.3" (2396 mm) pin type apron-style sideshift carriage with simultaneous and independent fork positioner		x
94.3" (2396 mm) pin type apron-style sideshift carriage with simultaneous and independent fork positioner (for lumber applications)		x
94.4" (2398 mm) QD hook type dual function sideshift carriage with simultaneous and independent fork positioner		x
94.4" (2398 mm) QD hook type dual function sideshift carriage with simultaneous fork positioner and 2 auxiliary functions		x
69" (1760 mm) high load backrest		x
79" (2010 mm) high load backrest		x
98" (2500mm) high load stabilizer (for lumber applications)		x
48" long x 3" thick x 8" wide (1220 mm x 75 mm x 200 mm) forks	x	
Pin type forks (various sizes)		x
Pin type forks for lumber applications		x
Hook type quick disconnect DFSSFP forks (various sizes)		x
ERGONOMICS	STD	OPT
Open operator compartment (without doors & screens)	x	
Enclosed operator cabin		x
Manual tilt operator compartment for service	x	
Powered 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	
Coat hook	x	
Front, top and rear wipers		x
"H"-pattern front wiper (enclosed operator cabin)		x
"I"-pattern front wiper (enclosed operator cabin)		x
Laminated glass operator compartment front window		x
Tinted operator compartment windows (doors, rear and top window)		x
Tinted operator compartment top window		x
Lexan top window		x
Plexiglass shield in front of front window		x
Wire mesh installed on top of operator compartment		x
Vertical steel bar front window guard		x
Operator shield wire mesh		x
7" Integrated Performance Display	x	
Touchpoint™ mini-levers hydraulic control integrated in control arm	x	
Joystick hydraulic control integrated in control arm		x

\*Standard or optional in select markets or on select models. Other options available through Special Products Engineering Department (SPED). Contact Hyster for details.



# FEATURES AND OPTIONS

<b>ERGONOMICS (continued)</b>	<b>STD</b>	<b>OPT</b>
Steering wheel without spinner knob	x	
Steering wheel with spinner knob		x
Directional control lever on steering column	x	
Hyster Monotrol® pedal directional control		x
Directional control on mini-levers or joystick		x
Park brake - push button applied	x	
Park brake - automatically applied		x
Heater with adjustable speed fan (enclosed operator cabin)		x
Telescoping & tilting steering column	x	
USB outlet inside armrest	x	
24-12 volt DC converter with 1 socket and 2 USB outlets	x	
24-12 volt DC converter with 2 sockets and 2 USB outlets		x
Air conditioning		x
Automatic climate control		x
Reading light		x
Sun shades on top and rear		x
Sun visors front window		x
Trainer seat		x
Recirculation fan		x
Additional recirculation fan		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 set-up (wiring, two speakers and antenna)		x
<b>VISIBILITY</b>	<b>STD</b>	<b>OPT</b>
Steel bars on top of cab (open operator compartment)	x	
Top window with armored glass (enclosed operator cabin)	x	
Steel bars under armored glass top window (enclosed operator cabin)		x
Interior wide angle mirrors	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 head lights mounted on front fenders		x
Four 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
<b>OPERATION</b>	<b>STD</b>	<b>OPT</b>
Air horn 112 dBA		x
Electric horn 105 dBA	x	
Visible alarm – Amber strobe light, ignition activated		x
Audible alarm – reverse direction activated 82–102 dB(A), self-adjusting		x
Audible alarm – reverse direction white noise		x
Forward/reverse motion alarm		x
Blue LED spotlight – rear/front and rear		x
Air conditioning shut-off with open door		x

<b>OPERATION (continued)</b>	<b>STD</b>	<b>OPT</b>
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	
Seatbelt Interlock for truck start	x	
Power distribution group with fuses	x	
Fuses Below 30 amps 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 system	x	
Hyster Tracker™ wireless asset management - access/verification		x
Hyster Tracker™ wireless asset management - Monitoring		x
Auto greasing system for base truck		x
24-volt electrical system	x	
Engine block heater 110 or 240 volt		x
Steer wheel lug nut protection		x
Front mud flaps		x
Rear mud flaps		x
Front and rear mud guards		x
Lifting eyes - 2 front and 2 rear		x
<b>APPEARANCE</b>	<b>STD</b>	<b>OPT</b>
Second capacity plate		x
Hyster yellow paint base truck	x	
Special paint base truck		x
Operator compartment special paint (complete cab)		x
Hazard warning striping on counterweight		x
<b>SUPPLEMENTAL</b>	<b>STD</b>	<b>OPT</b>
Literature package	x	
Operator's manual	x	
CE certification		x
U.L. Label - Standard Construction	x	
Warranty: 12 Months /2,000 hours parts & labor manufacturer's warranty*		x
Warranty: 12 Months/2,000 hours parts manufacturer's warranty*	x	

\*Standard or optional in select markets or on select models. Other options available through Special Products Engineering Department (SPED). Contact Hyster for details.

**RANGE OF 2-STAGE NON-FREE LIFT MASTS**



**RANGE OF PIN TYPE AND HOOK TYPE FORKS**



**94.3" PIN TYPE STANDARD CARRIAGE**



**98.5" PIN TYPE APRON STYLE SIDESHIFT CARRIAGE WITH SIMULTANEOUS AND INDEPENDENT FORK POSITIONER (FOR LUMBER APPLICATIONS)**



**94.3" PIN TYPE CARRIAGE WITH SIMULTANEOUS AND INDEPENDENT FORK POSITIONER**



**94.3" PIN TYPE APRON STYLE SIDESHIFT CARRIAGE**




**94.3" QD HOOK TYPE DUAL FUNCTION SIDESHIFT WITH SIMULTANEOUS AND INDEPENDENT FORK POSITIONER**





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