

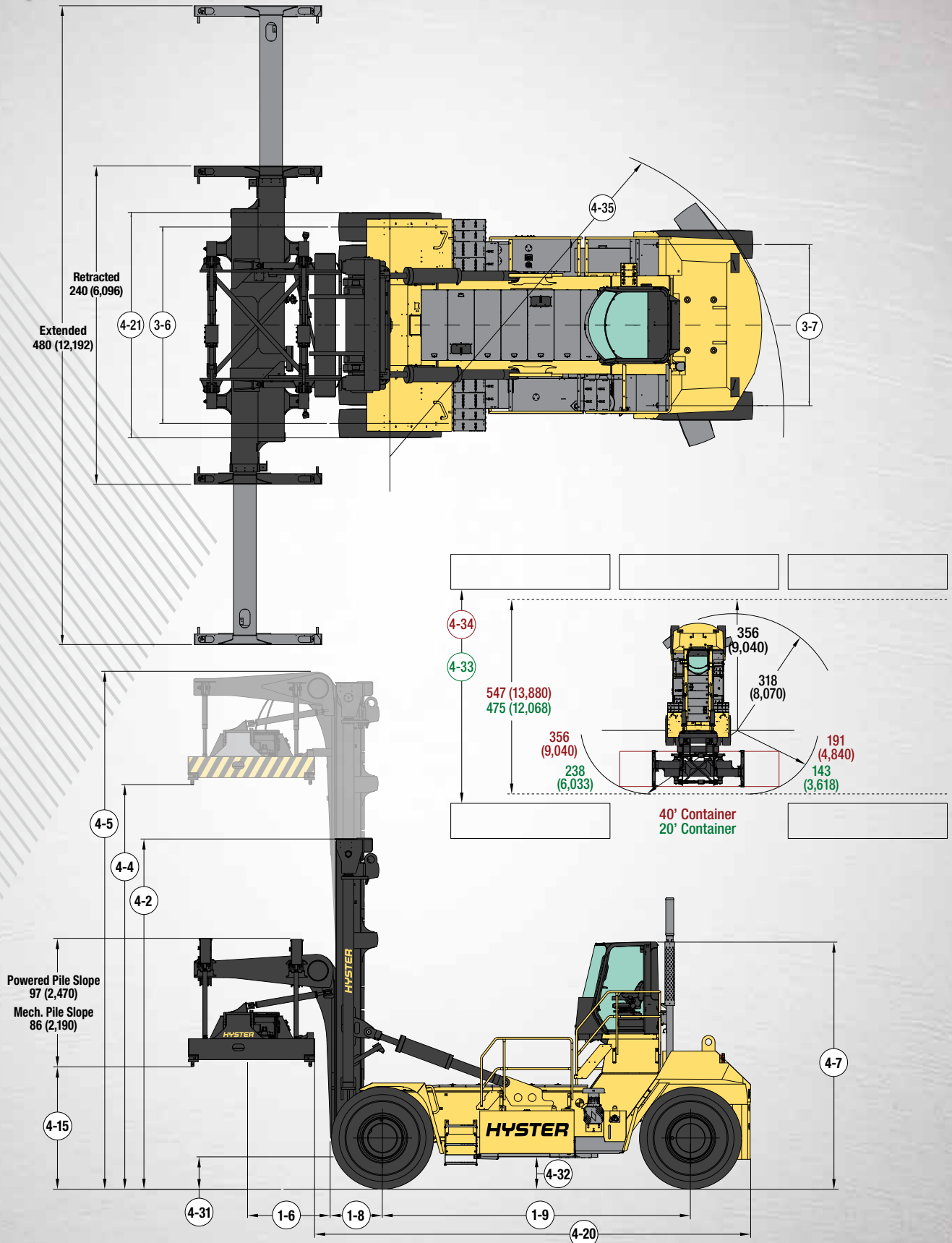
H1050-1150HD-CH SERIES



**STRONG PARTNERS.
TOUGH TRUCKS.™**

TECHNICAL GUIDE
Masted Container Handler

H1050-1150HD-CH DIMENSIONS



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

CERTIFICATION: These Hyster® lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI 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.

H1050-1150HD-CH SPECIFICATIONS

	Description	Units		English	Metric	English	Metric	English	Metric		
GENERAL	1-1	Manufacturer		HYSTER		HYSTER		HYSTER			
	1-2	Model designation, Loaded Container Handler Truck		H1050HD-CH 3-high		H1150HD-CH 4-high		H1150HD-CH 5-high			
	1-5	Rated load capacity - extended	lbs	kg	80,469	36,500	88,185	40,000	88,185	40,000	
	1-5	Rated load capacity - retracted	lbs	kg	88,185	40,000	88,185	40,000	88,185	40,000	
	1-6	Load center - extended	in	mm	68.9	1,749	68.9	1,749	68.9	1,749	
	1-6	Load center - retracted	in	mm	59.4	1,509	59.4	1,509	59.4	1,509	
	1-8	Load distance	in	mm	35.4	900	35.4	900	35.4	900	
	1-9	Wheelbase	in	mm	232	5,900	232	5,900	232	5,900	
	WEIGHTS	2-1	Total truck weight without load	lbs	kg	157,827	71,589	165,543	75,089	171,070	77,596
2-2a		Axle loading with load	front	lbs	kg	225,436	102,256	226,300	102,648	232,425	105,426
2-2b			rear	lbs	kg	20,574	9,332	27,428	12,441	26,830	12,170
2-3a		Axle loading without load	front	lbs	kg	101,246	45,925	102,109	46,316	108,234	49,094
2-3b			rear	lbs	kg	56,580	25,664	63,434	28,773	62,836	28,502
WHEELS	3-1	Tire type		Pneumatic		Pneumatic		Pneumatic			
	3-2	Tire size	front	18.00 x 25-40PR		18.00 x 25-40PR		18.00 x 25-40PR			
	3-3		rear	18.00 x 25-40PR		18.00 x 25-40PR		18.00 x 25-40PR			
	3-6	Track width	front	in	mm	119	3,030	119	3,030	119	3,030
	3-7		rear	in	mm	121	3,075	121	3,075	121	3,075
	4-1	Mast tilt, forward / back		degrees	6 / 10		6 / 10		6 / 10		
	4-2	Height of mast lowered	in	mm	314	7,977	314	7,977	371	9,426	
DIMENSIONS	4-4	Container stacking		3-high x 9'6"		4-high x 9'6"		5-high x 9'6"			
	4-4	Lift height under Twistlocks - max lift	in	mm	366	9,290	474	12,034	588	14,930	
	4-5	Height extended (top of spreader)	in	mm	463	11,752	571	14,496	685	17,392	
	4-7	Height to top of operator compartment	in	mm	183	4,650	183	4,650	183	4,650	
	4-15	Height below spreader, lowered (MPS / PPS)	in	mm	90 / 90	2,280 / 2,280	90 / 90	2,280 / 2,280	90 / 90	2,280 / 2,280	
	4-19	Overall length	in	mm	421	10,698	421	10,698	421	10,698	
	4-20	Length to load face	in	mm	325	8,260	325	8,260	325	8,260	
	4-21	Overall width over drive tires	in	mm	165	4,200	165	4,200	165	4,200	
	4-23a	Spreader			ISO 20' - 40'		ISO 20' - 40'		ISO 20' - 40'		
	4-23b	Pile slope			Mechanical +/-3°		Mechanical +/-3°		Mechanical +/-3°		
	4-24	Overall width with 20' container	in	mm	240	6,100	240	6,100	240	6,100	
	4-28	Spreader reach	in	mm	9.4	240	9.4	240	9.4	240	
	4-30	Side shift movement (each direction)	in	mm	15.7	400	15.7	400	15.7	400	
	4-31	Ground clearance, under mast with load	in	mm	13.8	350	13.8	350	13.8	350	
	4-32	Ground clearance, center of wheelbase	in	mm	14.6	370	14.6	370	14.6	370	
	4-33	Min. aisle width for 20' container (incl 10% clearance)	in	mm	507	12,885	507	12,885	507	12,885	
	4-34	Min. aisle width for 40' container (incl 10% clearance)	in	mm	608	15,450	608	15,450	608	15,450	
4-35	Outside turning radius	in	mm	318	8,070	318	8,070	318	8,070		
5-10	Service brake			Oil immersed (wet) disc		Oil immersed (wet) disc		Oil immersed (wet) disc			
5-11	Park brake			Spring apply, dry disc		Spring apply, dry disc		Spring apply, dry disc			
8-8	Fuel tank capacity	gal	liter	219	830	219	830	219	830		
PERFORMANCE	PERFORMANCE			WITH CUMMINS QSL 9L TIER 4 FINAL ENGINE							
	5-1a	Travel speed	with load	mph	km/h	13.9	22.3	13.9	22.3	13.9	22.3
	5-1b		without load	mph	km/h	14.5	23.3	14.5	23.3	14.5	23.3
	5-2a	Lifting speed	with load	ft/min	m/s	51	0.26	51	0.26	51	0.26
	5-2b		without load	ft/min	m/s	59	0.30	59	0.30	59	0.30
	5-3a	Lowering speed	with load	ft/min	m/s	98	0.50	98	0.50	98	0.50
	5-3b		without load	ft/min	m/s	98	0.50	98	0.50	98	0.50
	5-5	Drawbar pull - 1 mph (1.6 km/h)	lbs	kN	81,606	363	81,381	362	81,381	362	
	5-6	Drawbar pull - max	lbs	kN	106,784	475	106,559	474	106,559	474	
	5-7	Gradeability no load/rated load - 1 mph (1.6 km/h)		%	47/36	47/36	46/34	46/34	46/34	46/34	
	5-8	Gradeability no load/rated load - max		%	47/50	47/50	46/46	46/46	46/46	46/46	
	PERFORMANCE			WITH CUMMINS QSM 11L TIER 3 ENGINE							
	5-1a	Travel speed	with load	mph	km/h	13.9	22.3	13.9	22.3	13.9	22.3
	5-1b		without load	mph	km/h	14.5	23.3	14.5	23.3	14.5	23.3
	5-2a	Lifting speed	with load	ft/min	m/s	51	0.26	51	0.26	51	0.26
	5-2b		without load	ft/min	m/s	59	0.30	59	0.30	59	0.30
	5-3a	Lowering speed	with load	ft/min	m/s	98	0.50	98	0.50	98	0.50
5-3b		without load	ft/min	m/s	98	0.50	98	0.50	98	0.50	
5-5	Drawbar pull - 1 mph (1.6 km/h)	lbs	kN	75,378	335	75,131	334	75,131	334		
5-6	Drawbar pull - max	lbs	kN	104,379	464	104,131	463	104,131	463		
5-7	Gradeability no load/rated load - 1 mph (1.6 km/h)		%	47/33	47/33	46/31	46/31	46/31	46/31		
5-8	Gradeability no load/rated load - max		%	47/48	47/48	46/45	46/45	46/45	46/45		

H1050-1150HD-CH SPECIFICATIONS

		Units		English	Metric	English	Metric	English	Metric		
GENERAL	Description				English	Metric	English	Metric	English	Metric	
	1-1	Manufacturer			HYSTER		HYSTER		HYSTER		
	1-2	Model designation, Loaded Container Handler Truck			H1150HD-CH 5-high		H1150HD-CH 6-high		H1150HD-CH 6-high		
	1-5	Rated load capacity - extended	lbs	kg	88,185	40,000	80,000	36,300	80,000	36,300	
	1-5	Rated load capacity - retracted	lbs	kg	88,185	40,000	80,000	36,300	80,000	36,300	
	1-6	Load center - extended	in	mm	68.9	1,749	68.9	1,749	68.9	1,749	
	1-6	Load center - retracted	in	mm	59.4	1,509	59.4	1,509	59.4	1,509	
	1-8	Load distance	in	mm	35.4	900	35.4	900	35.4	900	
	1-9	Wheelbase	in	mm	232	5,900	232	5,900	232	5,900	
WEIGHTS	2-1	Total truck weight without load	lbs	kg	175,567	79,636	176,683	80,142	181,180	82,182	
	2-2a	Axle loading with load	front	lbs	kg	235,423	106,786	227,109	103,015	230,107	104,375
	2-2b		rear	lbs	kg	28,329	12,850	29,574	13,414	31,073	14,094
	2-3a	Axle loading without load	front	lbs	kg	111,232	50,454	114,445	51,911	117,443	53,271
	2-3b		rear	lbs	kg	64,335	29,182	62,238	28,231	63,737	28,911
WHEELS	3-1	Tire type			Pneumatic		Pneumatic		Pneumatic		
	3-2	Tire size	front			18.00 x 33-36PR		18.00 x 25-40PR		18.00 x 33-36PR	
	3-3		rear			18.00 x 33-36PR		18.00 x 25-40PR		18.00 x 33-36PR	
	3-6	Track width	front	in	mm	119	3,030	148	3,758	148	3,758
	3-7		rear	in	mm	121	3,075	121	3,075	121	3,075
	4-1	Mast tilt, forward / back	degrees		6 / 10		6 / 10		6 / 10		
	4-2	Height of mast lowered	in	mm	376	9,546	425	10,795	430	10,915	
DIMENSIONS	4-4	Container stacking			5-high x 9'6"		6-high x 9'6"		6-high x 9'6"		
	4-4	Lift height under Twistlocks - max lift	in	mm	588	14,930	702	17,831	702	17,831	
	4-5	Height extended (top of spreader)	in	mm	685	17,392	799	20,292	799	20,292	
	4-7	Height to top of operator compartment	in	mm	183	4,650	183	4,650	183	4,650	
	4-15	Height below spreader, lowered (MPS / PPS)	in	mm	90 / 90	2,280 / 2,280	90 / 90	2,280 / 2,280	90 / 90	2,280 / 2,280	
	4-19	Overall length	in	mm	421	10,698	421	10,698	421	10,698	
	4-20	Length to load face	in	mm	325	8,260	325	8,260	325	8,260	
	4-21	Overall width over drive tires	in	mm	165	4,200	194	4,928	194	4,928	
	4-23a	Spreader			ISO 20' - 40'		ISO 20' - 40'		ISO 20' - 40'		
	4-23b	Pile slope			Mechanical +/-3°		Mechanical +/-3°		Mechanical +/-3°		
	4-24	Overall width with 20' container	in	mm	240	6,100	240	6,100	240	6,100	
	4-28	Spreader reach	in	mm	9.4	240	9.4	240	9.4	240	
	4-30	Side shift movement (each direction)	in	mm	15.7	400	15.7	400	15.7	400	
	4-31	Ground clearance, under mast with load	in	mm	18.5	470	13.8	350	18.5	470	
	4-32	Ground clearance, center of wheelbase	in	mm	19.3	490	14.6	370	19.3	490	
	4-33	Min. aisle width for 20' container (incl 10% clearance)	in	mm	507	12,885	507	12,885	507	12,885	
	4-34	Min. aisle width for 40' container (incl 10% clearance)	in	mm	608	15,450	608	15,450	608	15,450	
	4-35	Outside turning radius	in	mm	318	8,070	318	8,070	318	8,070	
	5-10	Service brake			Oil immersed (wet) disc		Oil immersed (wet) disc		Oil immersed (wet) disc		
5-11	Park brake			Spring apply, dry disc		Spring apply, dry disc		Spring apply, dry disc			
8-8	Fuel tank capacity	gal	liter	219	830	219	830	219	830		
PERFORMANCE	PERFORMANCE				WITH CUMMINS QSL 9L TIER 4 FINAL ENGINE						
	5-1a	Travel speed	with load	mph	km/h	15.0	24.1	13.9	22.4	15.0	24.1
	5-1b		without load	mph	km/h	14.7	23.7	14.5	23.3	14.7	23.7
	5-2a	Lifting speed	with load	ft/min	m/s	51.2	0.26	51.2	0.26	51.2	0.26
	5-2b		without load	ft/min	m/s	59.1	0.30	59.1	0.30	59.1	0.30
	5-3a	Lowering speed	with load	ft/min	m/s	98.4	0.50	98.4	0.50	98.4	0.50
	5-3b		without load	ft/min	m/s	98.4	0.50	98.4	0.50	98.4	0.50
	5-5	Drawbar pull - 1 mph (1.6 km/h)	lbs	kN	73,962	329	81,381	362	73,962	329	
	5-6	Drawbar pull - max	lbs	kN	94,420	420	106,559	474	94,420	420	
	5-7	Gradeability no load/rated load - 1 mph (1.6 km/h)			%	46/29	46/29	46/34	46/34	46/29	46/29
	5-8	Gradeability no load/rated load - max			%	24/38	46/38	24/38	46/46	24/38	46/38
	PERFORMANCE				WITH CUMMINS QSM 11L TIER 3 ENGINE						
	5-1a	Travel speed	with load	mph	km/h	13.5	21.7	12.6	20.3	13.5	21.7
	5-1b		without load	mph	km/h	14.3	23.0	14.3	23.0	14.3	23.0
	5-2a	Lifting speed	with load	ft/min	m/s	51	0.26	51	0.26	51	0.26
	5-2b		without load	ft/min	m/s	59	0.30	59	0.30	59	0.30
	5-3a	Lowering speed	with load	ft/min	m/s	98	0.50	98	0.50	98	0.50
	5-3b		without load	ft/min	m/s	98	0.50	98	0.50	98	0.50
	5-5	Drawbar pull - 1 mph (1.6 km/h)	lbs	kN	76,098	339	75,131	334	76,098	339	
	5-6	Drawbar pull - max	lbs	kN	92,509	412	104,131	463	92,509	412	
5-7	Gradeability no load/rated load - 1 mph (1.6 km/h)			%	46/30	46/30	46/31	46/31	46/30	46/30	
5-8	Gradeability no load/rated load - max			%	46/37	46/37	46/45	46/45	46/37	46/37	

H1050-1150HD-CH SPECIFICATIONS

H1050-1150HD-CH MAST DIMENSIONS

Container stacking				3-High x 9'6"		4-High x 9'6"		5-High x 9'6"		6-High x 9'6" ²	
				English	Metric	English	Metric	English	Metric	English	Metric
4-4	Mast lift height	in	mm	276	7010	384	9754	498	12650	702	17831
4-2	Height of mast, lowered ¹	in	mm	257	6513	311	7884	369	9369	424	10770
4-3	Free lift	in	mm	0	0	0	0	0	0	0	0
4-5	Height, mast extended	in	mm	366	9290	474	12034	588	14930	799	20292
4-15	Height under twistlocks, lowered	in	mm	90	2280	90	2280	90	2280	90	2280

¹ Dimensions with 18.00 x 25 tires; add 5" for 18.00 x 33 tires.

² 6-high stacking requires wide drive axle (194" overall width).

POWERTRAINS

1-3	Power type	Diesel				Diesel	
7-1	Engine Manufacturer / model	Cummins QSL 9				Cummins QSM 11	
	EPA Tier Compliance	Tier 4 Final				Tier 3	
7-2	Engine power output - Rated	hp	kW	350	261	335	250
	Engine power output - Peak	hp	kW	363	271	365	272
7-3	Governed speed	rpm		2100		2100	
7-4	Number of cylinders / displacement	# / liters		6 / 8.9		6 / 10.8	
7-5	Engine torque - Max	lb-ft	N-m	1,200	1,627	1,235	1,674
	Turbocharger	Type		Water-Cooled Variable Geometry		Water-Cooled Wastegate	
7-9	Alternator output	Amps		120		120	
8-0	Transmission Manufacturer / model	SOH TE-32				SOH TE-32	
8-1	Transmission type & speeds	Powershift 4F / 4R				Powershift 4F / 4R	
	Drive Axle Manufacturer / model	Kessler D102				Kessler D102	

FEATURES AND OPTIONS

ENGINE – TIER 4 FINAL

Cummins QSL 6-cylinder diesel engine delivers 350 hp rated (363 hp peak) and 1200 lb-ft of maximum torque. EPA Tier 4 Final compliant engine features cooled exhaust gas recirculation (EGR) technology with selective catalytic reduction (SCR) and an integrated diesel exhaust fluid (DEF) delivery system. A 2-stage diesel oxidation catalyst (DOC) is also included for particulate matter (PM) reduction. Innovative selectable ECO performance modes offer excellent fuel economy and maximum productivity providing up to 20% fuel consumption³ reduction over Tier 3 baseline engines.

Hibernate idle saves fuel by lowering engine speed when functions are not being used.⁴ Also includes:

- Water-cooled variable geometry turbocharger
- 120 amp alternator
- Automatic throttle-up on hoist enables engine to run in most efficient rpm range.
- Standard diffuser for exhaust temperature reduction

OPTIONAL ENGINE – TIER 3

(limited availability for US and Canada):

Cummins QSB 6-cylinder diesel engine delivers rated 335 hp (365 hp peak) and 1235 lb-ft of maximum torque. EPA Tier 3 compliant. Also includes:

- Water-cooled wastegate turbocharger
- 120 amp alternator

CONTAINER ATTACHMENT

Equipped with Hyster® model 818 Gantry mounted spreader. Extends from 20' to 40' to handle both ISO and domestic with twistlock pockets in the standard ISO position. The spreader features 31.5" of sideshift; 3 degrees of mechanical pile slope; 4 twistlocks to engage corner castings; and 1 lifting eye in each of the 4 corners.

- Powered Pile Slope is optional allowing the operator to control the horizontal orientation of the spreader hydraulically by raising/lowering either the right or left side of the spreader up to 6 degrees.
- Includes container counter
- Electronic Twistlock Position indicator with LED signals and audible tone inside the cab

ELECTRICAL SYSTEM

- Sealed Deutsch connectors
- CANbus system for easy diagnostics of engine, transmission and hydraulics

HYDRAULIC SYSTEM

- Leak-free ORFS fittings
- Parker Hannifin gear-type pumps

³ Based on fuel consumption testing conducted in July of 2014. Actual results may vary based on duty cycle and application specific and weather conditions.

⁴ Requires ultra-low sulfur diesel fuel and low-ash engine oil.

STANDARD EQUIPMENT

- 4-high x 9'6" stacking 2-stage mast
- Gantry mounted Hyster® 818 spreader with 3 degrees mechanical pile slope
- Tier 4 Final Cummins QSL 9L featuring cooled EGR with SCR integrated DEF delivery system, two-stage DOC and exhaust temperature diffuser
- Hydraulically driven, on-demand cooling fan
- Integrated heavy duty intake pre-cleaner with dual element filter
- Spicer Off-Highway TE-32 4-speed auto-shifting transmission with APC 200 controller
- Kessler D102 planetary drive axle with wet disc brakes
- Powertrain protection system for engine and transmission - high temperature or low oil pressure
- 219 gallon fuel tank
- 174 gallon hydraulic tank
- 15 gallon DEF tank
- CANbus electrical control system for engine, transmission and hydraulics
- 18.00 x 25-40PR bias pneumatic drive and steer tires
- Directional control lever with direction change interlock system
- Mast tilt: 6° forward / 10° back
- Mechanical mast tilt indicator
- Enclosed operator compartment with: seatside joystick hydraulic control; multifunction display panel; interior wide angle mirrors; telescoping and tilting steering column; steering wheel with spinner knob; floor mat; isolated mounting for low noise and vibration; 24-12V DC converter; front (single blade), top & rear wipers; heater
- Mechanical, full-suspension cloth seat with integrated, adjustable armrest and seat belt
- Operator restraint system
- Operator presence system
- Left & right hand side stairway and handrails
- Exterior mirrors mounted on front fenders
- Electric air horn (112 dBA)
- 24V electrical system
- Halogen light kit includes:
 - Front: 4 halogen work lights on fenders; 4 halogen work lights on top of cab; 2 marker lights on fenders
 - Rear: 2 rear-mounted halogen lights on top of cab; 2 stop, tail and back-up lights; turn signals and hazard lights; hazard switch
- Visible alarm - amber strobe light - key switch activated
- Audible alarm - reverse direction activated
- Non-locking fuel cap
- Lockable battery disconnect switch
- Hydraulic accumulator - lift circuit
- Steer wheel lug protection
- Electronic twistlock position indicator with LED signals and audible tone
- Anti-slack chain system with lift/lower interrupt
- Chain anchor protection
- Operator's manual
- Removable, lightweight deck plates allow access to complete engine compartment for ease of service

OPTIONAL EQUIPMENT


- Tier 3 Cummins QSM 11L engine
- Masts for 3, 5, and 6-high x 9'6" loaded container handling
- Spreader with 6 degrees powered pile slope
- Spreader to handle Wide Twistlock Position (WTP) containers
- Inset container guides
- Automatic greasing systems for chassis, mast and spreader
- Wide drive axle (194" overall width)
- Various treaded, slick and radial tires
- 18.00 x 33 bias pneumatic drive and steer tires
- Air conditioning
- Various inside cabin options including but not limited to:
 - Reading lights, top and rear sun shades, recirculation fan
 - Trainer seat, accessory mounting post, radio preparation kit
 - Heated top window, rear locking console (not available with trainer seat)
- Various seat options including:
 - Mechanical full-suspension vinyl seat
 - Air ride full suspension cloth or vinyl seat with high backrest
 - Deluxe air ride full-suspension cloth seats with/without heated cushions
- 2 and 3-point high visibility seat belts
- High Intensity Discharge (HID) xenon lighting
- Traction speed limiter – unconditional; adjustable from 6-15 mph (preset to 12 mph)
- Empty seat engine shutdown - adjustable from 3-15 minutes (factory preset to 15 minutes)
- Automatic 20'/40' spreader function
- Automatic tilting cab for use when high stacking (required with 6-high stacking) with on/off switch

Special attachments, equipment or accessories not listed above may be available through Applications Engineering for specific application requirements.



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