

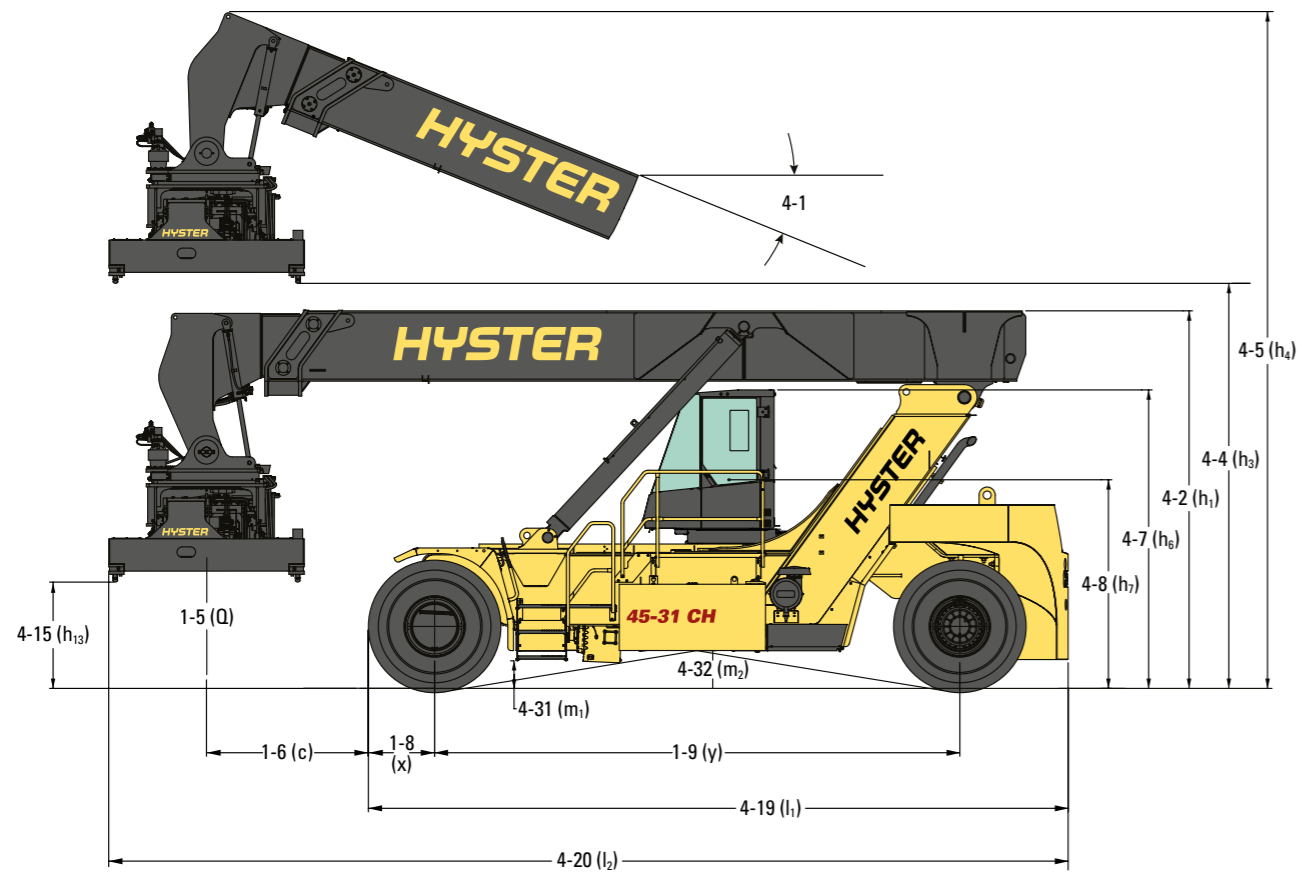
# RS45 SERIES

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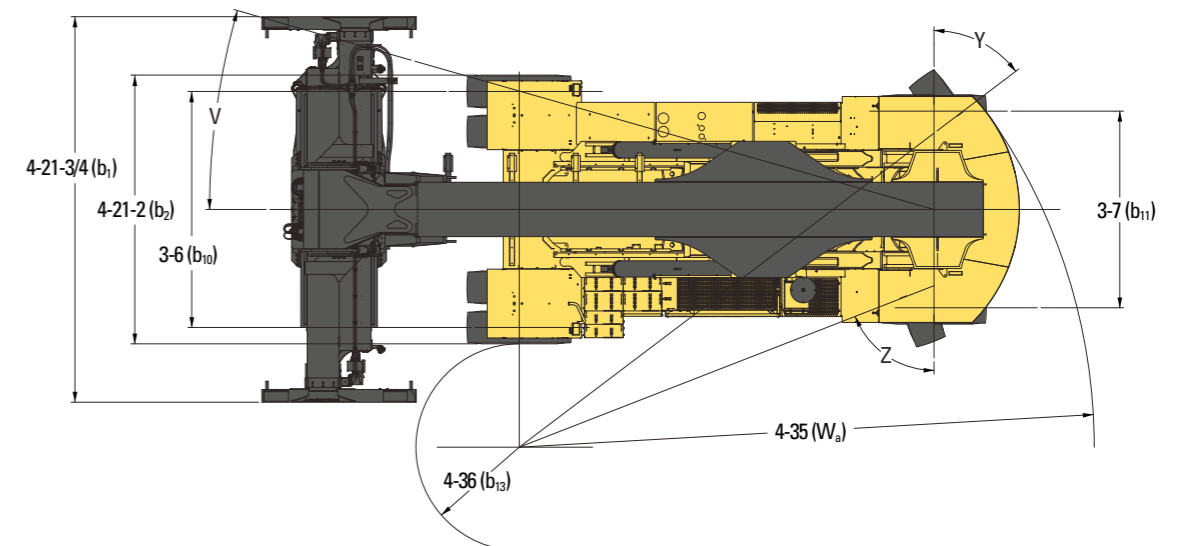
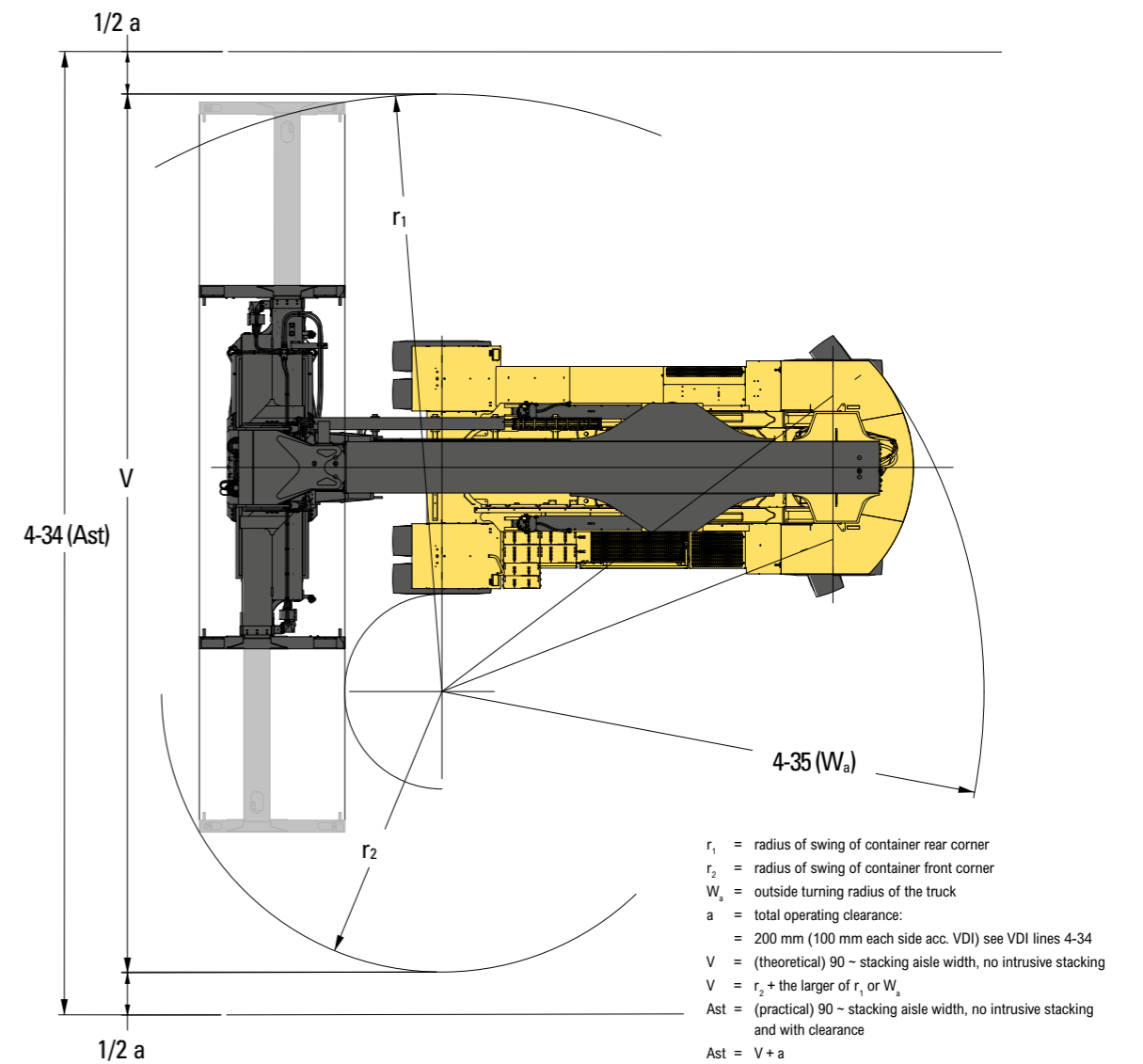
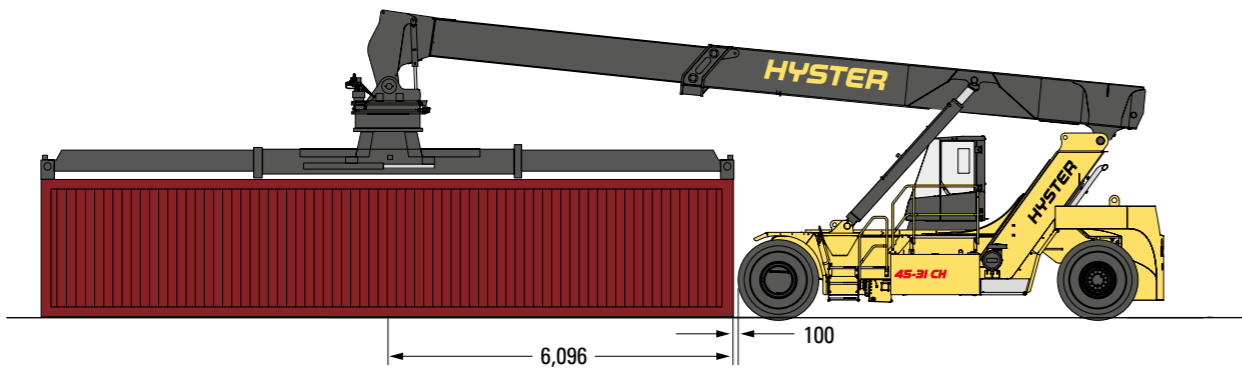
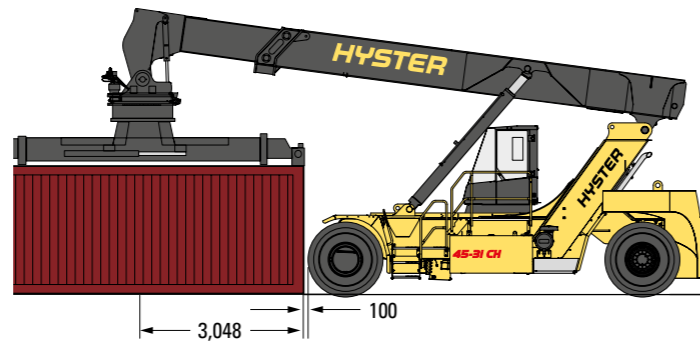


## REACHSTACKER PRODUCT TECHNICAL GUIDE





MAXIMUM CAPACITY CONTAINER PICKING END TO END		
MODEL	20'	40'
	kg	kg
RS45-27	31,000	12,300
RS45-31	34,000	15,000



GENERAL	1-1	Manufacturer	HYSTER					
	1-2	Model designation	RS45-27CH (A921)		RS45-31CH (A921)			
	1-3	Powertrain / drivetrain	Diesel					
	1-4	Operator type	Seated					
	1-5-1	Load capacity at load centre distance $c_1$	$Q_1$	kg	45,000			
	1-5-2	Load capacity at load centre distance $c_2$	$Q_2$	kg	27,000	31,000		
	1-5-3	Load capacity at load centre distance $c_3$	$Q_3$	kg	12,300	15,000		
	1-6-1	Load centre distance $c_1$ (1)	$c_1$	mm	1,565			
	1-6-2	Load centre distance $c_2$ (1)	$c_2$	mm	3,815			
	1-6-3	Load centre distance $c_3$ (1)	$c_3$	mm	6,315			
1-8	Load distance	x	mm	835				
1-9	Wheelbase	y	mm	6,500				
1-10	Stacking height at first row (number x container height)	#		5 x 9' 6"				
WEIGHT	2-1	Service weight		kg	62,300	65,300		
	2-2	Axle loading with load, front / rear at $c_1$		kg	93,000	14,300	92,800	17,500
	2-3	Axle loading without load, front / rear at $c_1$		kg	31,400	30,900	31,200	34,100
WHEELS	3-1	Tyre type front/rear	Pneumatic					
	3-2	Tyre size, front	18.00-25 40PR					
	3-3	Tyre size, rear	18.00-25 40PR					
	3-5	Number of wheels, front / rear (x = driven wheels)	x4 / 2					
	3-6	Tread, front	$b_{10}$	mm	3,703			
	3-7	Tread, rear	$b_{11}$	mm	3,060			
	3-8	Tread, total	$b_{12}$	mm	6,763			
DIMENSIONS	4-1	Boom angle minimum / maximum		degrees	0 / 59			
	4-2	Height of boom lowered	$h_1$	mm	4,700			
	4-4-1	Lift height at load centre $c_1$ (2)	$h_{3,1}$	mm	15,080			
	4-4-2	Lift height at load centre $c_2$ (2)	$h_{3,2}$	mm	13,470			
	4-4-3	Lift height at load centre $c_3$ (2)	$h_{3,3}$	mm	10,320			
	4-5	Height, boom extended	$h_4$	mm	18,110			
	4-7	Height of overhead guard (cabin)	$h_6$	mm	3,720			
	4-8	Seat height to SIP (3)	$h_7$	mm	2,555			
	4-15	Height under twistlock - lowered (2)	$h_{13}$	mm	1,275			
	4-19	Overall length	$l_1$	mm	8,660			
	4-20	Overall length including boom retracted	$l_2$	mm	11,875			
	4-21	Overall width across all of truck	$b_2$	mm	4,200			
	4-21-1	Overall width across spreader 20'	$b_{1,20}$	mm	6,100			
	4-21-2	Overall width across spreader 40'	$b_{1,40}$	mm	12,200			
	4-28	Reach distance	$l_4$	mm	4,310			
	4-31	Ground clearance, lowest point	$m_1$	mm	285			
	4-32	Ground clearance, centre or wheelbase	$m_2$	mm	437			
	4-34-1	Aisle width: 20' container, reduced / full stroke (4)	$Ast_{20}$	mm	12,520 / 11,950			
	4-34-2	Aisle width: 40' container, reduced / full stroke (4)	$Ast_{40}$	mm	14,040 / 13,830			
	4-35	Outside turning radius, reduced / full stroke	$W_a$	mm	8,990 / 8,450			
4-36	Internal turning radius, reduced / full stroke	$b_{13}$	mm	1,620 / 1,040				
PERFORMANCE	5-1	Travel speed with / without load		km/h	20 / 23			
	5-2	Lifting speed with / without load		m/s	0.24 / 0.41			
	5-3	Lowering speed with / without load		m/s	0.45 / 0.45			
	5-4	Telescoping speed 20' - 40'		sec	9			
	5-5	Drawbar pull - 1 mph (1.6 km/h) with / without load		kN	308	316	305	313
	5-7	Gradeability - 1 mph (1.6 km/h) with / without load (5)		%	24	38	23	36

(1) From face of front tyres  
 (2) With Mechanical Pile Slope (MPS). For optional Powered Pile Slope (PPS) function: deduct 310 mm  
 (3) Full suspension seat in depressed position  
 (4) Spreader at 8.0 m high, central above front axle; container 0mm in front of tyres; includes 2 x 100 mm clearance; full/reduced stroke steer cylinder  
 (5) Gradeability figures are provided for comparison of tractive performance, but are not intended to endorse the operation of vehicle on the stated inclines.

GENERAL	1-1	Manufacturer	HYSTER			
	1-2	Model designation	RS45-27/31CH (A921)		RS45-27/31CH (A921)	
	1-3	Powertrain / drivetrain	Diesel			
ENGINE	7-1	Engine manufacturer / model	Cummins / QSL9 227			
	7-1-1	EPA / CE Tier compliance	Tier 3 / Stage IIIA			
	7-2	Engine power output according to ISO 1585		kW	227	
	7-2-1	Engine power output . peak		kW	247	
	7-3	Rated speed		rpm	2,000	
	7-3-1	Engine torque @rpm (1/min)		N.m	1,424 @ 1500	
	7-4	Number of cylinders / displacement		# / cm <sup>3</sup>	6 / 8900	
	7-5	Turbocharger			Wastegate, air cooled	
	7-8	Alternator output		Amps	120	
	7-10	Battery voltage, rated capacity		V / Ah	24 / 160	
DRIVE	8-1	Drive control / transmission		Type / #	Hydrodynamic Transmission	
	8-2	Transmission manufacturer / type		Type / #	Spicer Off Highway / TE.27	
	8-4	Transmission speeds forward / backward		#	4 / 4	
	8-5	Coupling		Type	Torque Converter	
	8-6	Wheel drive / drive axle manufacturer / type		Type / #	Kessler / D102	
	8-11	Service brake		Type	Oil immersed (wet) disc	
SPREADER	8-12	Parking brake		Type	Spring applied, dry disc on drive axle	
	9-1	Spreader manufacturer / type		Type / #	Elme / 817	
	9-1-1	Pile slope, mechanical without PPS		degrees	3	
	9-1-2	Pile slope, total with PPS		degrees	6	
	9-3	Size of containers		ft	ISO 20' . 40'	
	9-4	Side shift	$b_s$	mm	+800 / -800	
MISC	9-6-1	Rotation angle, without override		degrees	n/a	
	9-6-2	Rotation angle, with override		degrees	+195 / -105	
	10-3	Hydraulic tank capacity		l	625	
	10-4	Fuel tank capacity		l	830	
	10-5	Steering design			Hydrostatic	
	10-7	Sound pressure level at driver's seat	Lpaz	dB(A)	78	
	10-7-1	Sound power level during the work cycle	Lwaz	dB(A)	109	

**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 EN1459.

All specifications and capacities are valid for trucks equipped with a Hyster® container handling spreader for handling ISO containers.

**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.

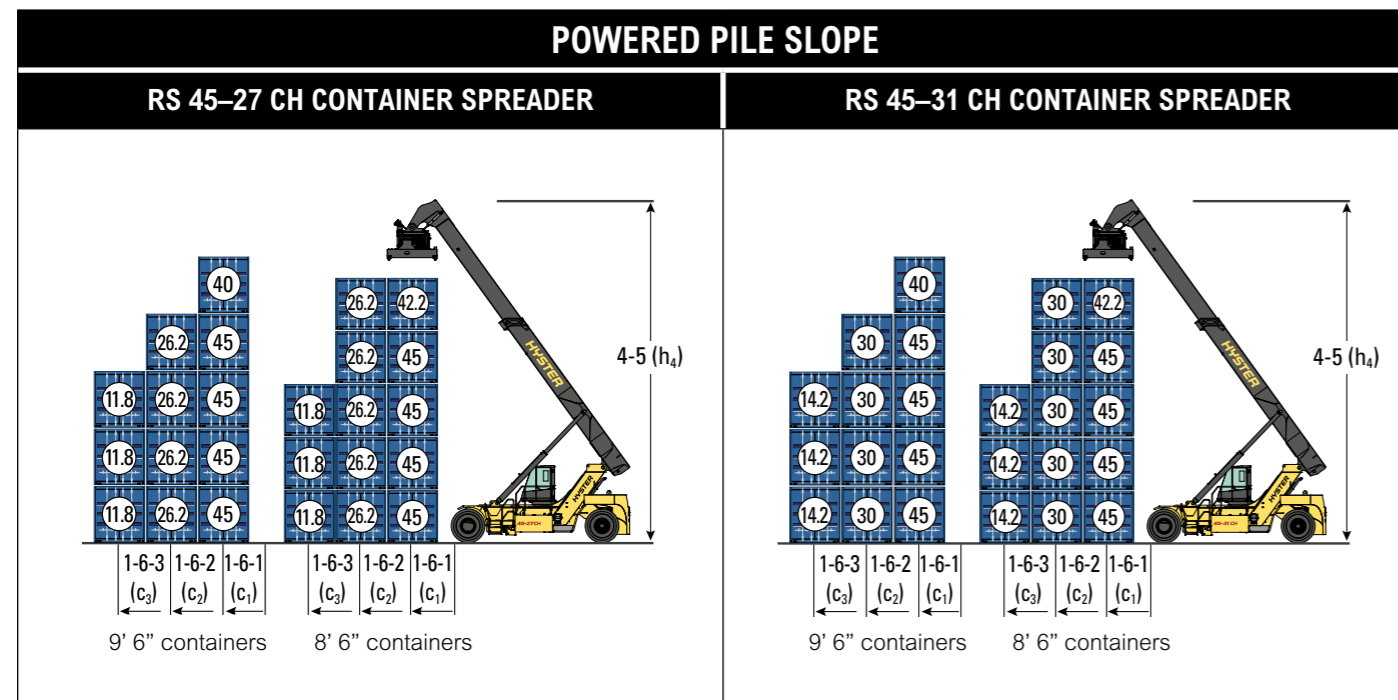
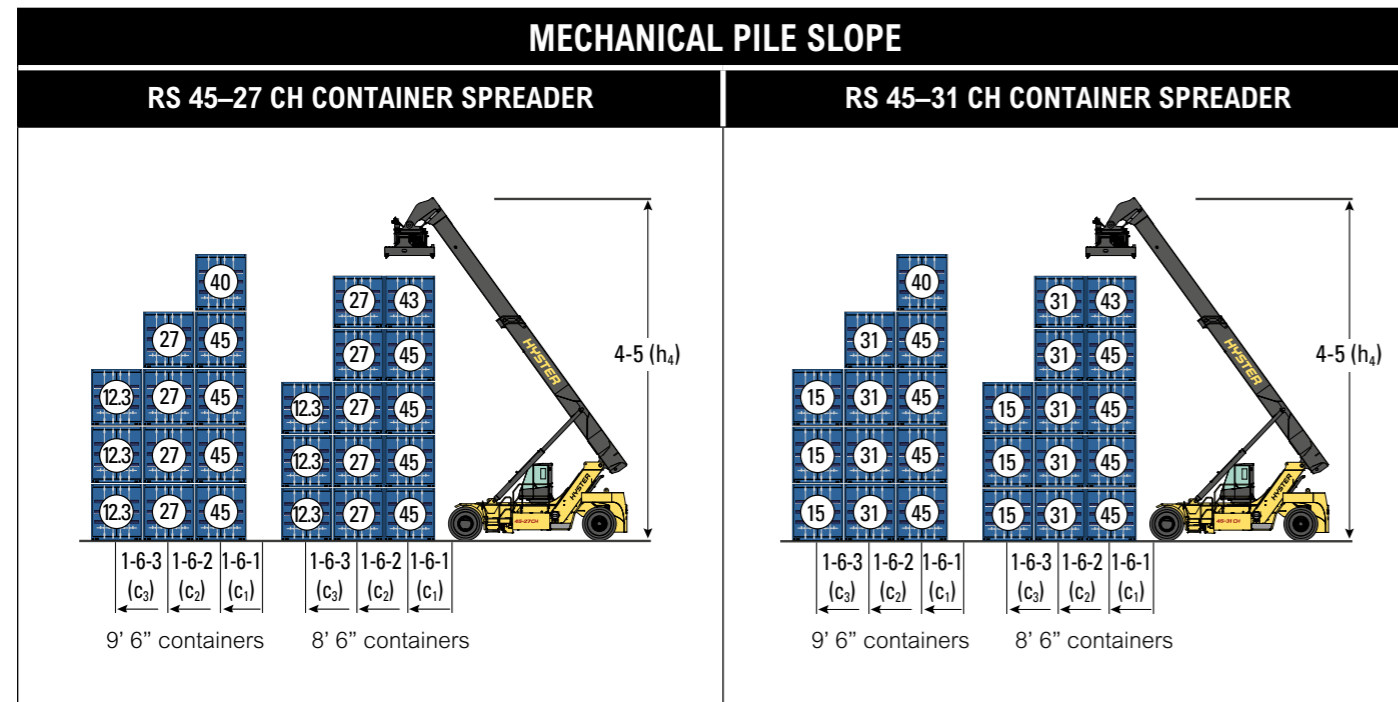
**CERTIFICATION:** Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance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

Specification data is based on VDI 2198.



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



**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.

PERFORMANCE	STD	OPT
Cummins QSL 9 turbo diesel engine delivering 227 kW (rated) / 247 kW (max)	X	
Tier 3 / Stage IIIA compliant	X	
Wastegate turbocharger	X	
Hibernate Idle	X	
Hydraulically driven on-demand cooling fan	X	
120 amp alternator	X	
Powertrain protection system	X	
Spicer Off-Highway TE-27 4-speed auto-shifting transmission	X	
Kessler D102 drive axle with wet disc brakes	X	
DRIVE	STD	OPT
Traction speed limiter when carrying container (adjustable)	X	
Traction speed limiter - unconditional (adjustable)		X
Steer axle with reduced stroke steer cylinder for longer tyre life*		X
Steer axle with full stroke steer cylinder for tight turning radius*		X
E3 pneumatic drive and steer tyres Continental Container Master 18.00x25. 40PR		X
18.00 x 25-40 Advance Bias Drive and Steer Tyres	X	
E4 pneumatic drive and steer tyres Continental Container Master 18.00-25.40PR		X
E4 pneumatic drive and steer tyres Goodyear ELV-4B 18.00-25.40PR		X
Drive and steer Slick Tyres Bridgestone 18.00-25.40PR		X
Drive and steer Slick Radial Tyres Goodyear EV5S 18.00 R25		X
LIFT	STD	OPT
On-demand load sensing hydraulic system	X	
Automatic throttle-up when lifting (in neutral or inching)	X	
2-stage boom for 5-high 1st row stacking	X	
3B6 load moment indicator (integrated in digital operator display)	X	
High speed hoist system - below 10 tons	X	
Hydraulic system temperature protection		X
Container weighing system SOLAS compliant		X
HANDLING	STD	OPT
CANBus spreader, ELME model 817 with rotation	X	
Mechanical Pile Slope	X	
Powered Pile Slope		X
Powered dampening		X
4 lifting eyes located on end beam corners	X	
4 lifting eyes located under centre beam of spreader		X
Rotation stops with override		X
VISIBILITY	STD	OPT
External wide angle mirrors mounted on rear of front fenders	X	
High performance LED work lights	X	
LED twistlock indicator lights	X	
LED stop/tail/brake lights	X	
Turn signals, hazard & marker lights (LED)*	X	
APPEARANCE	STD	OPT
Hyster yellow paint base truck and Hyster black paint on cab, boom and rims	X	

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

ERGONOMICS	STD	OPT
Powered sliding cabin (1200 mm), including additional mirrors on top of fenders	X	
Isolated mounting for low noise and vibration	X	
Front, top and rear wipers	X	
Left side handrails, stairway and cabin door	X	
Seat-side joystick hydraulic control	X	
Steering wheel spinner knob	X	
Directional control lever	X	
Interior wide angle mirrors	X	
Heater with 3-speed fan	X	
Telescoping & tilting steering column	X	
Recirculation fan	X	
DC/DC converter 24 volt/12 volt with socket*	X	
Air conditioning		X
Sun shades on top and rear		X
Radio preparation set-up (wiring, two speakers and antenna)	X	
Reading light	X	
Operator presence system	X	
Mechanical suspension seat	X	
Deluxe air suspension seat		X
Low backrest*		X
High backrest*		X
Cloth seat cover	X	
Vinyl seat cover		X
2-point high visibility seatbelt	X	
3-point high visibility seatbelt		X
OPERATION	STD	OPT
Electric air horn 112 dB	X	
Visible alarm - amber strobe light, key switch activated*		X
Visible alarm - amber strobe light, switch and key switch activated*		X
Audible alarm - reverse direction activated 82-102 dB(A), self-adjusting	X	
Seatbelt interlock for engine start	X	
Tyre pressure monitoring system		X
Lockable battery disconnect switch	X	
Trainer seat		X
Non-locking fuel cap		X
Lockable fuel cap	X	
Hyster Tracker wireless asset management - monitoring*		X
Hyster Tracker wireless asset management - access / verification		X
Auto greasing system for basic truck and outer boom		X
Auto greasing system for inner boom and spreader		X
24 volt electrical system	X	
Steer wheel lug nut protection	X	
Engine compartment light		X
SUPPLEMENTAL	STD	OPT
Literature package	X	
Operator's manual	X	
Warranty: 12 months / 2,000 hours manufacturer's warranty	X	
CE Certification		X




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Visit us online at [www.hyster.com](http://www.hyster.com) or call us at **+44 (0) 1276 538500**.

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Hyster products are subject to change without notice. Trucks may be shown with optional equipment.



Safety: This truck conforms to the current EU and UK CA requirements