

INDUSTRIAL LIFT TRUCK SPECIFICATION SHEET

GRS-4531

Reach Stacker

8.5-ft./9.5-ft High Containers:

- 1st Row 5/5-High Stacking
- 2nd Row 5/4-High Stacking
- 3rd Row 4/3-High Stacking
- 840-mm (33-in) Load Center
- 6,000-mm (236-in) Wheelbase





GRS-4531 Reach Stacker

Safe & Reliable

Durable & Reliable

- High-quality components from internationally recognized brands

Standard Safety Equipment

- 6-sensor reverse radar
- Rearview Camera
- LMI (anti-tipping)

Comprehensive Safety Protection Technology

- Safety technologies such as operator presence switch, dynamic anti-tipping protection (LMI), spreader twist-lock interlocks, and engine protection system are used to ensure safe operations

Easy Maintenance

CANbus Communication

- CANbus communication monitors the vehicle condition in real-time, and allows convenient troubleshooting

Removable Access Panels

- All the maintenance points are in readily accessible in safe positions. A central electrical control panel greatly simplifies the maintenance and repair and improves efficiency

Stylish & Comfortable

Ergonomic

- An ergonomically designed cabin layout with conveniently placed buttons, adjustable steering wheel, and a suspension seat with an adjustable backrest allow the operator to work a full shift in comfort

Quiet, Comfortable, Visible

- Low operator sound at less than 78dB, heater, AC, sunshade, and other equipment, provide a more comfortable operating environment. The curved front and rear windows, large skylight, and all-glass side doors enable outstanding visibility.

Energy-Saving & Efficient

Efficient Control Systems

- Electric proportional control, power on demand, vertical lift, demand cooling fan, and torque control enable efficient and flexible operation

Hydraulic Load Sensing System

- Improved system efficiency by reducing input power under transient conditions, and minimizing heat losses, resulting in reduced fuel consumption and longer fluid life.

Vehicle LED Lighting System

- High-performance, long-life LED lighting is standard



Strong Powertrain

High Performance Low Fuel Consumption

- With high performance and low fuel consumption, the low-speed, high-torque Cummins QSM11 engine has advanced fault diagnosis and fault protection functions with a displacement of 10.8L, in-line 6 cylinders, and meets EPA Tier 3 and EU IIIA emission requirement
- It is equipped with a Donaldson two-stage heavy-duty air filter and a high-efficiency cyclone pre-filter
- DANA36000 gearbox has a reliable structure and proven performance
- KESSLER's heavy-duty reinforced drive axle, with multi-disc wet brakes, combined with a brake oil filtration and independent cooling system are well suited to heavy-duty operating conditions
- The large 800-liter fuel tank meets the requirements of multi-shift operation between refueling



Efficient Hydraulic System

High Performance

- Parker hydraulic valves, combined with Danfoss variable load-sense hydraulic pumps reduces engine load
- Flexible and precise electronic proportional control
- High-speed lifting under light loads increases efficiency
- Dedicated hydraulic oil cooler with independent temperature control
- Balanced high and low-pressure oil filters improve the reliability of the hydraulic system
- Multiple hydraulic test ports included to simplify repair and maintenance work



ELME Innovation Spreader

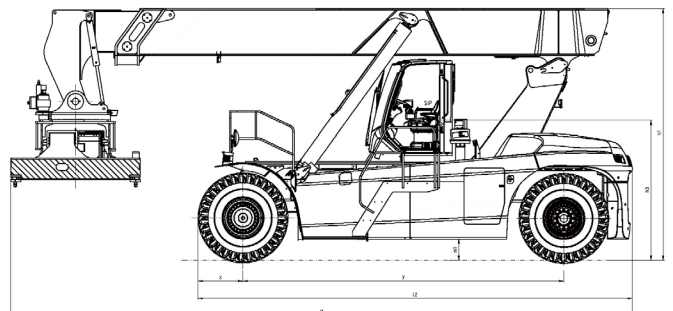
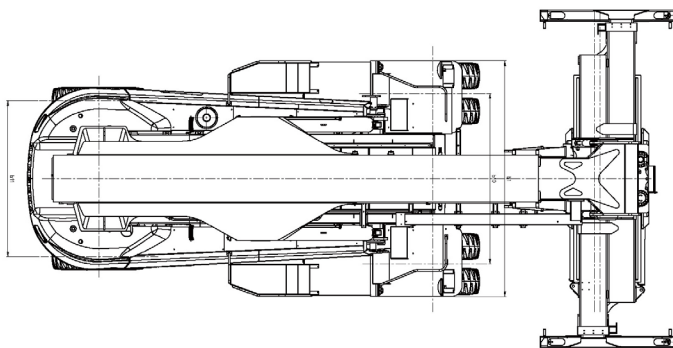
High Performance

- The new ELME817 series telescopic container spreader optimizes the design of the telescopic beam, turntable, etc. to increase structural strength, and reduce weight by 16%, while prolonging service life by 30%
- The hydraulic cylinder arrangement is designed to be easier to maintain.
- The hydraulic system's design is optimized so that the spreader system has less pressure loss and is more energy efficient
- With electro-hydraulic proportional control, the speed is adjustable, and the rotation angle of the spreader can be precisely controlled
- The latest programmable controller is used to provide more configuration options. Fault code information is provided according to J1939 protocol, making the fault query quick and simple
- The twist-lock interlock device and status indicator are provided to avoid:
 - » Lifting the container when less than four corners are locked.
 - » Unlocking when the container is raised.
- Lift controls are disabled when twist-locks are not fully engaged with the load



GRS-4531 Reachstacker Dimensions:

General	Model	Manufacturer's Designation	GRS-4531				
	Center of Gravity (COG) Distance from tire face to:	C 1st Row (Center of Container) 1st Container	in (mm)	77	1,965		
		C 2nd Row (Center of Container)	in (mm)	150	3,815		
		C 3rd Row (Center of Container)	in (mm)	249	6,315		
	Rated Stacking Capacity: 9.5-ft Container (2.9m)	Q 1st Row 4-High Stacking @ 77-in. (1,965 mm) COG	lbs (kg)	99,208	45,000		
		Q 1st Row 5-High Stacking @ 77-in. (1,965 mm) COG	lbs (kg)	94,798	43,000		
		Q 2nd Row 4-High Stacking @ 150-in. (3,815 mm) COG	lbs (kg)	68,343	31,000		
		Q 3rd Row 3-High Stacking @ 249-in. (6,315 mm) COG	lbs (kg)	35,274	16,000		
	Wheelbase	Y Distance	in (mm)	236	6,000		
	Power Type	Diesel					
Weight	Total Apprx.	Service Weight	lb (kg)	159,174	72,200		
		Static with Rated Load (Front)	lb (kg)	219,139	99,400		
		Static with Rated Load (Rear)	lb (kg)	39,242	17,800		
		Static with No Load (Front)	lb (kg)	73,634	33,400		
		Static with No Load (Rear)	lb (kg)	85,539	38,800		
Dimensions	Width	B11 Tread Width (Steer)	in (mm)	110	2,790		
		B10 Tread Width (Drive)	in (mm)	120	3,050		
		B1 Truck Width Over Drive Axle	in (mm)	166	4,220		
	Length	L2 Overall Length	in (mm)	320	8,123		
		L1 Overall Complete Unit (Boom Down and Retracted)	in (mm)	458	11,625		
		X Drive Axle CL To Face Of Tires (Nominal)	in (mm)	33	840		
	Height	H3 SIP Height	in (mm)	103	2,615		
		H1 Height to Top of Boom (Fully Lowered)	in (mm)	185	4,700		
		H2 Height to Top of Boom (Fully Raised)	in (mm)	598	15,200		
	Attachment Dimensions	Underclearance	M1 Ground Clearance Minimum	in (mm)	16	400	
			20-ft Container (6.1m)	Length of Attachment (Retracted)	in (mm)	240	6,096
40-ft Container (12.2m)			Length of Attachment (Expanded)	in (mm)	480	12,192	
20-ft Container (6.1m)			Min. Aisle for 90° Stacking	in (mm)	447	11,350	
40-ft Container (12.2m)			Min. Aisle for 90° Stacking	in (mm)	537	13,650	
Sideshift (+/-)			in (mm)	31	800		
Attachment Rotation (CW/CCW)			Degrees	+105/-195			
Boom Angle (Max)			Degrees	60°			
Turn Radius			Truck Only	Minimum Outside (Tailswing)	in (mm)	319	8,100
Wheels & Tires	Tire Type	Cushion or Pneumatic (Front / Rear)			Pneumatic/Pneumatic		
		Wheels & Tires	Number (Front / Rear)			4/2	
			Size (Front & Rear)			18.00-25-40pr	
		Brakes	Service Brake				Wet Disc
Parking Brake					Hand Actuated		
Misc.	Hydraulic Fluid	Tank Capacity	gal (L)	211	800		
		Diesel Fuel	Tank Capacity	gal (L)	211	800	
	Cabin Noise	Sound Pressure Level at Driver's Seat				dB (A)	78
		Towing Coupling, type DIN 15170				in (mm)	2



Engine:

Optional Engine International Shipments Only

Engine	Make & Model	Volvo TAD1181VE†				Cummins QSM11††				
	Tier Compliance	TIER 4F				Tier 3				
	Fuel - Engine Type	Diesel - 4 Stroke				Diesel - 4 Stroke				
	Output	hp (Kw)	355	265		335	250			
	Gov'n Speed w/Load	RPM	2100				2100			
	Cyl/Displacement	cyl/cu-in (L)	6	660	10.8	6	660	10.8		
	Peak Torque*	ft-lbs/RPM (Nm/RPM)	1324	1400	1795	1400	1235	1400	1674	1400
Electrical	Battery	Volt (2 batteries)	24				24			
	Alternator	Amp	110				110			

† This engine requires (DEF) Diesel Exhaust Fluid and features (SCR) Selective Catalytic Reduction, (DPF) Diesel Particulate Filter, diagnostic and maintenance monitor, fuel/water separator and engine/trans. protection systems. Emission certification: US EPA Tier 4 Final

†† Standard features are electronic diagnostic and maintenance monitor, fuel/water separator and engine/transmission protection systems. Emission certification: US EPA Tier III, Carb Tier III, EU Stage III. Attention: Taylor models equipped with U.S. EPA Tier 3 certified engines are available for sale outside of the highly regulated countries of North America, Europe and Japan. Refer to the off-road diesel engine emission regulations of the specific country in question for verification.

Transmission:

Trans.	Make & Model	Dana 36000		Dana 36000			
	Number of Speeds	Fwd/Rev	4/4		4/4		
	Gear Change	Automatic Gearshift				Automatic Gearshift	

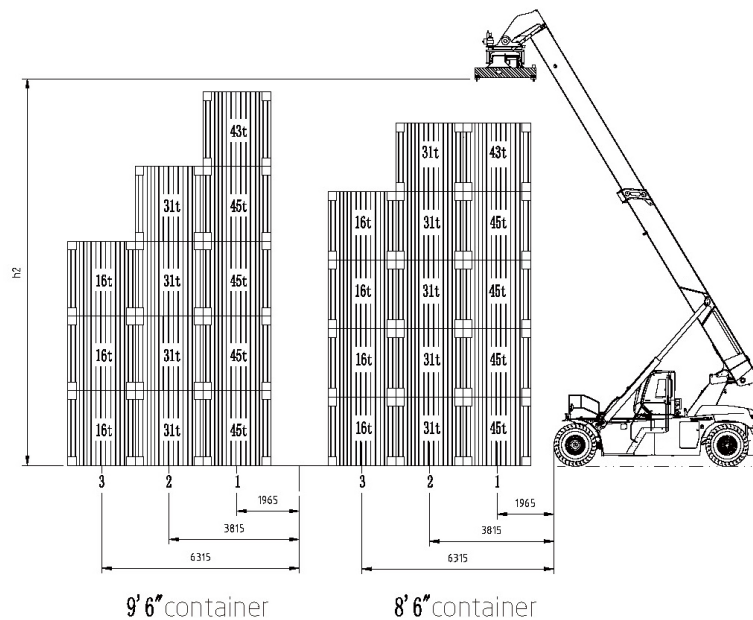
Axles:

Drive Axle	Make & Model	Wet Disc	Kessler D-102		Kessler D-102		
Steer Axle	Make & Model	Welded Beam Type				Welded Beam Type	

Performance: †

Travel Speed	Maximum Fwd/Rev - No Load	mph (km/h)	13.7	22
	Maximum Fwd/Rev - With Load	mph (km/h)	12.4	20
Lift Speed	Unloaded	fpm (m/s)	88	0.45
	Loaded	fpm (m/s)	49	0.25
Lowering Speed	Unloaded	fpm (m/s)	63	0.32
	Loaded	fpm (m/s)	59	0.30
Tractive Effort	At Stall	lb (kN)	66,768	297
Gradeability	With Load	%	20	

† NOTE: Performance specifications are based on trucks with standard equipment. Performance specifications are affected by the condition of the vehicle, its components, and the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your Taylor sales representative.



Standard Features: GRS-4531

- Powered moving cab
- Sunshade
- Reading light
- Speed-adjustable wiper
- Heat and air conditioning
- Radio
- Adjustable Steering wheel
- Multi-directional armrest adjustment
- Operator presence (OPS)
- Pneumatic tires
- Donaldson dual stage air filter
- Traction control
- Vehicle toolkit
- Fully hydraulic power steering
- Load-sensing hydraulic system
- Independent brake oil circuit
- Independent brake oil cooling
- Independent hydraulic oil cooling
- Torque converter oil temperature management
- Vehicle LED lights
- Main power disconnect switch
- 6-sensor reverse radar (3m)
- Color LCD
- Reverse alarm
- Air horn
- 24V CANbus communication
- Spreader twist-lock interlock
- Power on-demand
- Proportional spreader control
- Dynamic anti-tipping protection (LMI)
- Vertical lift control
- Spreader sway prevention
- Light load high-speed lifting
- Lighting control system
- Electrical safety protection
- Maintenance Indicator
- Fault diagnosis system
- Twist-lock counter

Options:

- Solid tires
- Tire pressure monitoring
- Spark arrester
- Fire extinguisher
- Engine block heater
- Twist-lock camera
- Four-channel driving monitoring system
- Container weighing system
- Vision+

Vehicle Information Package

- Operators Guide
- Maintenance and Service documentation including key circuit drawings (Serial Number Specific Parts Book is available upon request)



Fully-Suspended All-Round Vision Cab

- The fully-suspended cab can be repaired and maintained easily, override switch allows manual movement of the cabin with power loss.
- Sound and heat insulation shield vibration and noise.
- Large curved front and rear windows, all-glass left and right doors, and a large glass skylight enhance visibility.
- Tilt and telescopic steering column, fully-suspended adjustable seat with high-back and safety belt, and OPS Operator Presence System.
- Heat, defrost, and air-conditioning with dual ventilation modes, sun shades, and adjustable wipers enhance operator comfort.

Vehicle Cooling

- Electric fans are used independently to cool hydraulic and brake oil to meet high ambient requirements.
- Torque converter oil temperature control management ensures that the gearbox operates within the optimal temperature range.
- High-power bar-fin heat exchangers and suction fans are used for charge-air and jacket water cooling to meet high ambient requirements

Appearance & Performance

- Streamlined design of the vehicle presents an elegant and sturdy profile.
- The optimized counterweight contour significantly reduces the turning radius of the vehicle, and increases the side and rear views.
- Handrails and anti-skid surfaces ensure safe access to the machine.



Safety System

- 24V electrical system, 110A alternator, main power disconnect switch, and emergency shutdown switch.
- Advanced CAN bus communication is used to monitor the status of the engine, transmission, spreader, and vehicle, with fault protection. The data is displayed on a high-definition color screen, easily viewed by the operator.
- Dynamic anti-tipping protection (LMI)
- Load indicator:
 - green (indicating normal operation)
 - orange (indicating warning)
 - red (indicating action required)
- Display: twist lock status, boom length, actual load, maximum load, boom height, boom angle, extension, load percentage bar, alarm code, etc.
- Centrally controlled lighting system, integrated switch panel, and ergonomic layout enable comfortable and easy operation.
- The CAN bus controls allow short-circuit and open-circuit diagnosis of LED lighting.

NEED OPTIONS?

Just ask one of our Taylor Specialist.

Taylor Machine Works was founded on the promise of meeting our customer's needs. The signage on our original facility in 1927 stated "We Engineer and Build What You Need" and those ideals still ring true today! From multiple Mast, Carriage and Fork configurations to Special Attachments that are unique to your business, we will step forward to meet the challenge. We have a dedicated engineering group focused on meeting special request from our customers. This ensures that you have the exact equipment you need to tackle your rugged applications. With hundreds of options readily available for our trucks, and the ability to custom engineer any other need that arises, Taylor Machine Works is here ready to serve.

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DISCLAIMER:

This vehicle is certified to meet the applicable design and performance criteria required for Powered Industrial Trucks in OSHA Safety and Health Standards, Title 29 CFR, Part 1910.178, and the applicable design and performance requirements in ANSI B56.1 that were in effect at the time of manufacture. These standards also apply to the user and should be adhered to while operating this vehicle.

All specifications are subject to change without notice. Some operating data may be affected by the condition of the vehicle, how it is operated and the nature and condition of the operating area. If these specifications are critical, contact the factory.



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