

# Kalmar Reachstacker DRG100-120

Dedicated to flexible  
empty and semi-laden  
container handling



# Loaded with productive versatility.

The Kalmar DRG100-120. With this reachstacker for empty and semi-laden container handling you get it all. The ability to handle all sorts of containers, flat racks and slinged loads up to 12 tonnes precisely and safely. The rotation necessary for efficient action in confined spaces. And the quality that makes your business prosper, both in the short and long term.

### Three high-productive models:

The DRG100-S6 and the DRG120-S6 stack 6-high in the first row with container loads up to 10 and 12 tonnes.

The DRG100-S8 stacks 8-high and up to 10 tonnes in the first row.

### Everything within container handling

The Kalmar DRG100-120 has the capacity to handle all types of containers (standard ISO, reefers, tanks, specials and flat racks) and slinged loads up to 12 tonnes.

- Standard ISO containers 20 ft – 40 ft and pick-up in 40 ft position for 45 ft – 56 ft sizes
- Standard ISO heights 4 ft – 9 ft 6 in or special 10 ft 6 in
- Reefer containers 20 ft – 40 ft (45 ft pick-up in 40 ft position)
- Tank containers 20 ft – 30 ft
- Flat racks 20 ft – 40 ft
- Slinged load in 4 lift hooks

### All common spaces

A reachstacker like the Kalmar DRG100-120 adds another dimension to empty container handling. Containers can be transported at full width, turned 45° or lengthwise at 90°, making it possible to deliver “end-on” into and through low workshop doors, port sheds and other tight openings. Operators don’t have to pick up containers right-angled, and can increase efficiency and handling speed during yard stacking, loading of road trucks or container repairs.

Rotate, lift at a 45° angle, drive forwards or reverse with a full tilt stroke, reach 6 or 8 containers high and work in second or third row. All this is possible – and easy. You can even do a unique 1,000 mm side shift and rotate the container so the door is on the right side.

The Kalmar DRG100-120 is the only reachstacker for empty and semi-laden container handling on the market that can offer all of these smart functions.

### Fully equipped – safe and sound

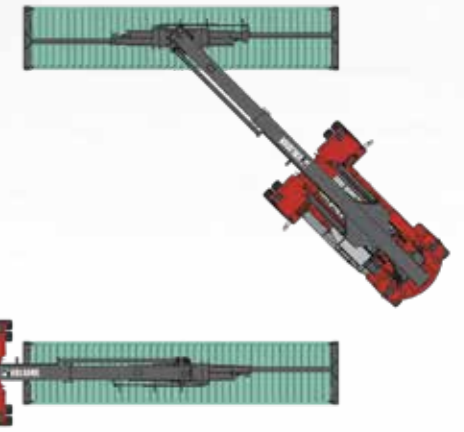
Our G-Generation reachstackers are safe machines and the Kalmar DRG100-120 is no exception. Extremely stable – it’s the only reachstacker on the market with the high-capacity 5.4 m wheelbase. It has the best combined lift capacity in rows 1-2-3, a spreader with the biggest side shift and 4 extra lift hooks, front and reverse tilts, twistlock status indicators, dual rotation motors and brakes, and a complete LED lamp kit as a standard.

Options include a Reverse Warning System with a detection range from 0.5 up to 9 m and a Fire Suppression System for increased safety. Plus it offers the benchmark of the world’s best driver’s cabin, providing a working environment that keeps the operator comfortable, alert and in full control over all kinds of loads.

### All clear for efficient workshops

Service, maintenance and repair of containers and tank cleaning may be the lesser part of your operations. To further minimise your total cost of ownership, G-Generation reachstackers have a service life that’s longer than ever.

The Kalmar DRG100-120 offers full flexibility with full rotation, large sideshift and tilt to allow you to both transport and perform services, maintenance, repairs and cleaning with maximum efficiency. Low and narrow workshop doors don’t present a problem for our reachstackers. Just turn the container lengthwise and drive inside.



High stability with long wheelbase.



# It's a new twist to productivity, efficiency and safety



We built the first commercial reachstacker thirty years ago. And we've been stacking up innovations ever since, constantly inspired by the challenges of cargo handling – and cargo handlers – across the world. Our G-Generation with the Kalmar DRG100-120 reachstacker is the latest development that takes productivity, efficiency and safety to a new level of excellence.

## Delivering every day

Productivity & Performance, Best Lifetime Value, Safety & Ergonomics, Environmentally-Friendly are guiding stars at Kalmar, and have made our reachstackers the preferred choice in more than 160 countries.

## 10,000 good reasons to choose Kalmar

The Kalmar DRG100-120 is built on our latest technology platform, G-Generation, which is based on our experience from our more than 10,000 reachstackers sold. Our goal was to provide the most outstanding operator experience, the highest level of productivity and the best lifetime value. An ergonomic cabin, integrated components, an electrical control system, a high degree of automation and intuitive, digital interfaces are just a few of the standard features.



## Make every move count

When choosing the right machine for you, consider the full value. Kalmar reachstackers excel at reducing your total cost of ownership. With well-proven quality materials, durable components and sturdy design, the Kalmar DRG100-120 is a profitable choice. Extremely reliable, it optimises uptime and minimises operational and maintenance costs on a daily basis – but also in regards to lifetime value.



We are fully prepared to provide rapid support for the entire life cycle of your machine, before it leaves the factory floor. With Kalmar you also have the industry's most extensive support and after-sales network at your disposal. Our global presence and local service helps to ensure

swift response for everything from spare parts and product support teams down to individual, local service technicians.

After all, what good is even the best equipment on the market if it's left standing still? Our aim is to protect your investment, which is why our top priority is to minimise the costs of unnecessary downtime. This is also helps explain why Kalmar reachstackers consistently maintain one of the highest resale values.

## Save time, money and the environment

The Kalmar DRG100-120 is equipped with modern, high-tech and fuel-efficient Volvo diesel engines, EU3 / Tier 3, EU4 / Tier 4F or EU5\* emission standards. The 6-in-line engines give you all the power and torque you need for empty and semi-laden container handling but with a lower fuel cost. Performance needs can change by the day – or even by the hour. Kalmar offers three performance modes from which to choose, based on your needs for productivity, profitability and performance. With Kalmar EDM (ECO Drive Modes) on the display the operator can select the performance level needed.

The Kalmar Start/Stop system is an automated start-stop function that makes it possible to achieve up to 10% fuel savings through automatic activation and deactivation of your machine. By substantially cutting down on idle time, it also provides an effortless way to reduce emissions and unnecessary wear on components.

The LED Light Kit is standard and gives the driver extremely strong illumination power at all times, even in bad weather or after sunset. LED increases the lifetime of the working lights to 30,000 hours and cuts energy consumption.

The Kalmar DRG100-120 also offers longer service and maintenance intervals, which cuts costs and increases uptime. The machine is easy to access for service. And Kalmar's extensive, swift global service and after-sales network makes sure your uptime is maximised.

\* Available 2019/20.

» **Power Mode** is ideal when you require maximum performance at all times, more moves or tonne per hour.

» **Normal Mode** allows for higher profitability with up to 15% fuel savings per tonne of cargo.

» **Economy Mode** lets you save even more fuel per hour, offering up to 25% in reduced fuel consumption and reducing emissions.



## Service intervals for DRG reachstackers

Description	Check (hours)	Filter (hours)	Oil (hours)
First Machine service	500		
Working hydraulics (return line – no oil sample)		1 000	4 000
Working hydraulics (return line – with oil sample)		1 000	4 000 – 10 000
Working hydraulics (fine filter longlife)		500	
Engine (no oil sample) – Volvo EU4/EPA 4-Final		500	1 000
Engine (no oil sample) - Volvo EU3A/EPA 3		500	500
Transmission		1 000	1 000
Drive axle <sup>1)</sup>			2 000
Spreader rotation hydraulic motor <sup>1)</sup>			2 000

1) First oil change & filter change at 500 h – then after every 2 000 h



Up display allows you to monitor loading and unloading as symbols shift from green to yellow to red, showing the twistlock and support jack status.

**Superior ergonomic design**

The patented side-tilting steering wheel can be angled to the side or moved forwards slightly to avoid obstruction and increase comfort. It also provides better control of loads and allows new steering possibilities.

The patented with a built-in directional shift knob (forward/ reverse shifter) stays firmly secured in position for smooth, safe directional changes while optimising lifting capacity and ergonomically reducing arm fatigue.

The fully integrated, adjustable multi-seat provides the best

possible sitting posture for long shifts and demanding operations.

The ergonomically designed comfort pedals are floor-based to minimise strain on the foot while enabling hard driving.

Our standard Climate package is the most powerful on the market. It has the highest capacity heater, cooling and filtered airflow for super interior comfort.

**Improve your performance**

Kalmar Insight is a performance management tool for cargo handling, which gives you an easy to use overview of your fleet operations, by aggregating data from multiple sources, including equipment built by other manufacturers. This information is then accessed through an easy to use interface that is available on mobile, tablet or more traditional

screens. You can review your entire fleet activities, schedule maintenance activities and order the required parts automatically. All enabling you to take action on real-time information, that will help improve your overall operations immediately. Kalmar Insight comes fitted and ready to be activated in all new Kalmar equipment, it can also be retro fitted into existing Kalmar equipment or those built by other manufacturers. Kalmar Insight, turning data into actionable, impactful insights.

# Boosting the core of efficiency

Reachstackers are only as good as their operators. So to make sure they can operate on a high level, we handle them with care. The EGO cabin of the Kalmar DRG100-120 offers an outstanding working environment and driving experience. The result is less downtime, fewer cargo damages and more alert, productive and healthy operators.

**Experience the best**

The EGO cabin is the result of our insight into operating conditions across the world, years of development and thousands of tests. It provides a seamless operating environment that minimises fatigue and enables optimal load handling.

**Endless visibility**

The open cabin design features slim profiles, no A-pillars and a wide-curved, corner-wrapped windscreen. With a near absence of blind spots, visibility is optimised at all angles. The windscreen is equipped with unique high-capacity double wipers, and the roof with a single wiper. These dry and clean the

surface to ensure visibility in wet and dirty conditions. The best you can get!

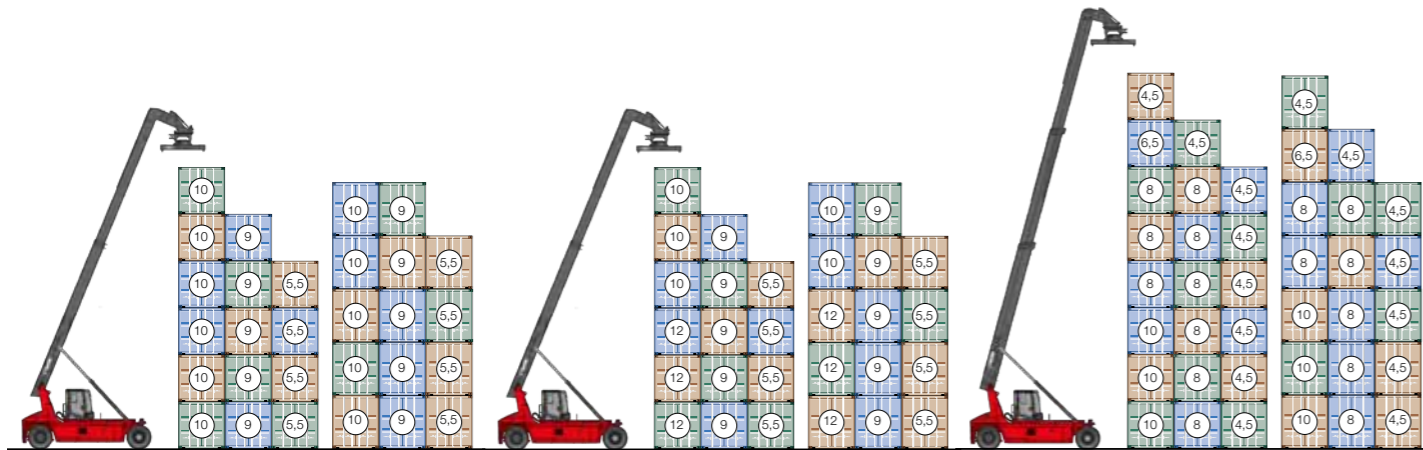
**Stay in control naturally**

The main operation work console, switches and indicators for data display and machine control systems are logically organised and well placed within sight and reach.

Fully equipped with electronic tools and an easy-to-use Kalmar Information Colour Display with intuitive Human-Machine Interface (HMI). All check-ups are easy to perform – you can see, hear, touch and react to inputs on the machine's performance without losing focus on your load. The intuitive Head



# The mechanics of full capacity



DRG100-54S6

DRG120-54S6

DRG100-54S8

# Long-lasting, hard-working hydraulics

- Load-sensing hydraulics (power-on-demand) with highly efficient variable piston pumps for increased oil and fuel efficiency with fewer heat and pressure peaks
- Exceptionally clean working oil 24/7, with return-line filters (2x10 um), servo filter (10 um) and low-pressure ultra-fine filter (5 um) to reduce particles, sludge and water. Also a brake-oil filter (10 um)
- Powerful double oil cooling for working hydraulics (l) and for the brake hydraulics. Two separate oil tanks with oil volume of 525 liter (425+100).

This amounts to uniquely long-lasting hydraulics!



Precise lifting of long container end-on - 40 ft

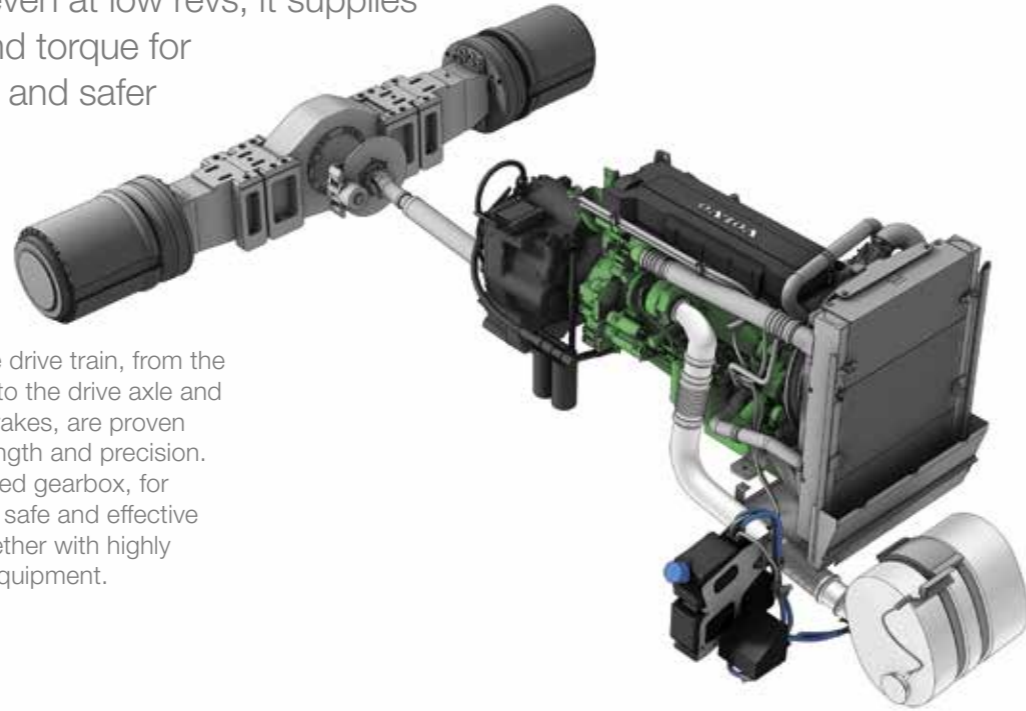


Superior end-on lifting capacity - 20 ft



# Strong drive trains – driving precise performance

The Kalmar DRG100-120 is equipped with the Volvo D-8 engine series in EU3 / Tier 3, EU4 / Tier 4F or EU5\* emission levels and DANA automatic transmission. Reliable, powerful and fuel efficient even at low revs, it supplies massive power and torque for rapid acceleration and safer manoeuvrability.



### Durable and reliable

All the components in the drive train, from the engine and transmission to the drive axle and the oil-cooled wet disc brakes, are proven for lifetime durability, strength and precision. The electronically controlled gearbox, for instance, helps to ensure safe and effective driving at all speeds, together with highly precise control of lifting equipment.

	DRG100-120		
	EU3 / Tier 3	EU4 / Tier 4F	EU5*
Engine emission approvals	EU3 / Tier 3	EU4 / Tier 4F	EU5*
Engine brand / series	Volvo Penta / D8	Volvo Penta / D8	Volvo Penta / D8
Engine model	TAD-851-VE	TAD-871-VE	TAD-881-VE
Engine after treatment type	No SCR, no AdBlue, no EGR	With SCR, Adblue & cooled EGR	With SCR, Adblue & cooled EGR
	No particle filter	No particle filter	With particle filter
Engine design / cylinders	6-inline / common rail	6-inline / common rail	6-inline / common rail
Engine intercooler technology	Intercooler (air-to-air)	Intercooler (air-to-air)	Intercooler (air-to-air)
Engine displacement	(dm <sup>3</sup> ) 7.7	7.7	7.7
Max power @ engine speed	(kW) 185	185	185
Max torque @ engine speed	(Nm) 1,160	1,160	1,160
Fuel consumption – average diesel	(l/h) 8–15	8–15	8–15
Fuel consumption – average adblue	% -	1 - 5	1 - 5
Transmission brand/model (gears FW + RV)	Dana TE-17300 (3+3)	Dana TE-17300 (3+3)	Dana LTE-14400 (4+4 / Lock-Up)*
Transmission gear shift type		Automatic powershift	
Transmission clutch type		Torque converter	
Drive axle brand / series		Kessler / D81 (WDB)	
Service brake / cooling		Wet Disc Brakes with oil cooling	
Alternator, power		AC – 3640 (28 x 130)	

# Advanced redundant electronics – increase uptime

The electrical control system of the Kalmar DRG100-120 is smart, intuitive and reliable. A distributed and redundant CAN-bus technology, developed by Kalmar, constantly monitors the engine, transmission, hydraulics and spreader functions to provide the operator with constant real-time data to help maximise uptime. Thanks to segmented wiring with a long lifetime, few wires and connection points, the system is not prone to faults and is easy to configure, diagnose and service.

### Safe and proven diagnostics

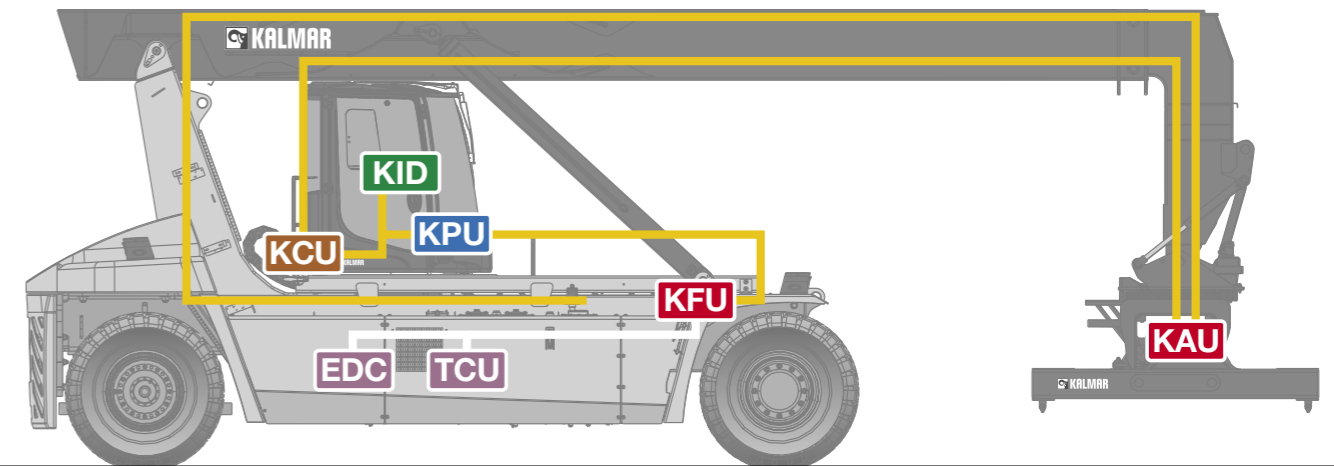
The CAN-bus system constantly feeds condition-monitoring data to the eye-level colour display in the cabin. Pop-up messages mean the operator can simply check the display's troubleshooting page and find the error codes that lead straight to the relevant section of the operator's manual.

### Smart sensors for fluid levels

Sensors alert the operator to low engine oil or coolant levels – long before any stoppage or component damage occurs. This avoids costly consequences of fluid levels being checked too late.

### Central lubrication on truck and spreader

An optional central lubrication system can be installed to ensure greater control over the machine's lubrication cycle. Electronically monitored and controlled, it alerts the operator in advance whenever a blockage or other malfunction arises – anywhere in the lubrication cycle.



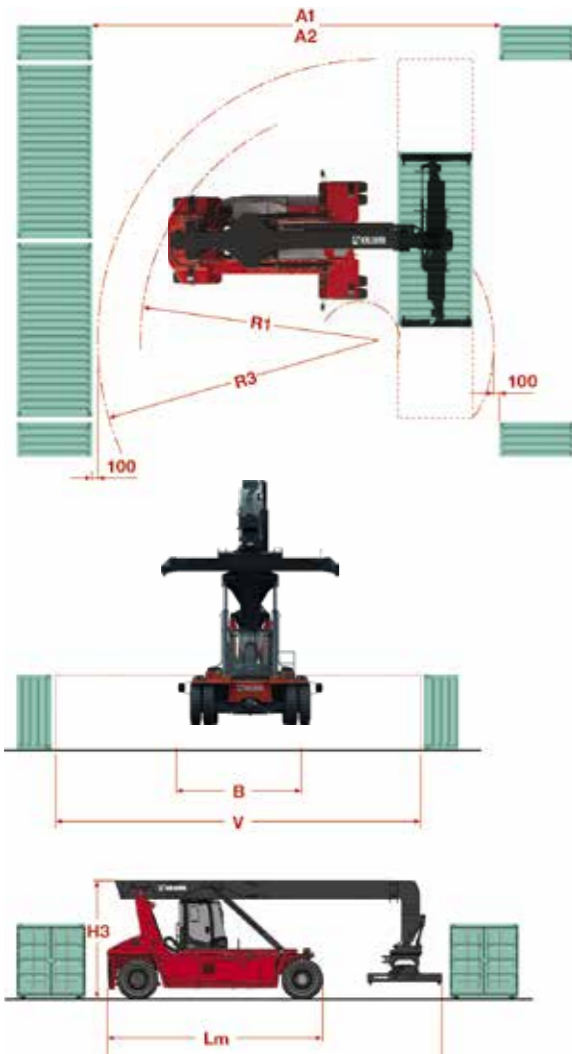
- KCU Kalmar Cabin Unit
- KPU Kalmar Panel Unit
- KID Kalmar Information Display

- EDC Electronic Diesel Control
- TCU Transmission Control Unit

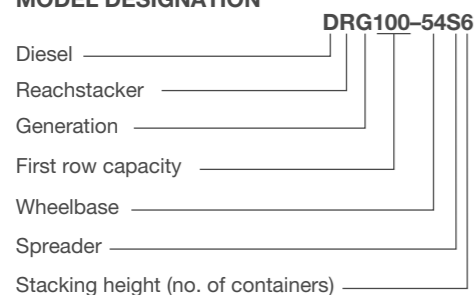
- KAU Kalmar Attachment Unit
- KFU Kalmar Frame Unit

\* Available 2019/20.

# Technical information



## MODEL DESIGNATION



		KALMAR DRG100-54S6			KALMAR DRG120-54S6			KALMAR DRG100-54S8					
		Empty and semi laden			Empty and semi laden			Empty and semi laden					
<b>MAIN DATA</b>	Type of handling												
	Lifting capacity, in container row 1-2-3	Q1-Q2-Q3	(kgs)	10000	9000	5500	12000	9000	5500	10000	8000	4500	
	Lifting capacity, in container row 1-2-3, at max height	Q1-Q2-Q3	(kgs)	10000	9000	5500	10000	9000	5500	4500	4500	4500	
	Load centre, from front face of tyres, row 1-2-3	L4-L5-L6	(mm)	2690	3840	6340	2690	3840	6340	2690	3840	6340	
	Stacking height, in container row 1-2-3, of 8'6" / 9'6"			6 / 5	5 / 5	4 / 4	6 / 5	5 / 5	4 / 4	8 / 7	7 / 6	6 / 5	
	Spreader type, extension stops, locking			MPS	20 ft + 40 ft	Twistlocks 4x	MPS	20 ft & 40 ft	Twistlocks 4x	MPS	20 ft & 40 ft	Twistlocks 4x	
<b>WEIGHTS</b>	Lost load centre, to front face of tyres	x	(mm)		700			700			700		
	Wheelbase	L3	(mm)		5400			5400			5400		
	Service weight, standard truck		(kgs)		39000			39000			40300		
	Axle load, front at load centre L4, unloaded - rated load		(kgs)		22300 - 38600			22300 - 38600			23400 - 39700		
<b>WHEELS</b>	Axle load, front at load centre L5, unloaded - rated load		(kgs)		24100 - 40700			24100 - 40700			25000 - 39700		
	Axle load, rear at load centre L4, unloaded - rated load		(kgs)		16700 - 10400			16700 - 10400			16900 - 10600		
	Axle load, rear at load centre L5, unloaded - rated load		(kgs)		14900 - 7300			14900 - 7300			15300 - 8600		
	Tyre type, tyre design, tube design			Pneumatic	Diagonal	Tubeless	Pneumatic	Diagonal	Tubeless	Pneumatic	Diagonal	Tubeless	
	Tyres, dimension, PLY rating (front + rear), star rating		(in)	14.00 x 24"	PR24	E3	14.00 x 24"	PR24	E3	14.00 x 24"	PR24	E3	
<b>DIMENSIONS</b>	Tyre pressure (front + rear)		(MPa)		1,0 - 1,0			1,0 - 1,0			1,0 - 1,0		
	Rim dimension (front + rear)		(in)		10,00 x 24"			10,00 x 24"			10,00 x 24"		
	Number of wheels, driven / front + rear				4 / 4	2		4 / 4	2		4 / 4	2	
	Track width (front + rear)	S1 - S2	(mm)		3,280-2,600			3,280-2,600			3,280-2,600		
	Boom type - cylinder design				Duplex / 2-stage / single cylinder			Duplex / 2-stage / single cylinder			Triplex / 3-stage / single cylinder		
	Boom angle, min-max	alfa	(deg)		0-67,5			0-67,5			0-75		
	Boom height, min-max	H3-H5	(mm)		3900 - 18700			3900 - 18700			4050 - 24150		
	Chassis height - top of boom fixation, max	H2	(mm)		3650			3650			3650		
	Lift height, min in twistlocks, in container row 1-2-3	H4a	(mm)		600			600			600		
	Lift height, max in twistlocks, in container row 1-2-3	H4b	(mm)		16200	14700	12000	16200	14700	12000	21150	20600	19000
<b>DRIVE LINE</b>	Truck height - cabin roof	H6	(mm)		3270			3270			3270		
	Seat height - inside cabin	H8	(mm)		2200			2200			2200		
	Overall truck length, without and with boom	L	(mm)		7100 - 1200			11200 - 10050			7100 - 10950		
	Truck width over drive axle	B	(mm)		4150			4150			4150		
	Spreader width, min-max	Va - Vb	(mm)		6055 - 12185			6055 - 12185			6055 - 12185		
	Spreader sideshift	V1	(mm)		+/-1000 (total 2000)			+/-1000 (total 2000)			+/-1000 (total 2000)		
	Spreader rotation, number of motors, number of brakes	beta	(deg)		+195 / -105	2	2	+195 / -105	2	2	+195 / -105	2	2
	Spreader length tilt, tilt angle, lock function		(deg)		optional	+/- 5	tilt lock	optional	+/- 5	tilt lock	optional	+/- 5	tilt lock
	Spreader side tilt, tilt angle, tilt power		(deg)		MPS	+/- 5	by gravity	MPS	+/- 5	by gravity	MPS	+/- 5	by gravity
	Ground clearance, steer axle - middle - front		(mm)		320	240	350	320	240	350	320	240	350
	Aisle width, with 20 ft - 40 ft container	A1-A2	(mm)			11200 - 14200			11200 - 14200			11200 - 14200	
	Turning radius, outer with 20 ft - 40 ft container	R1-R3	(mm)			7000 - 8600			7000 - 8600			7000 - 8600	
	Turning radius, inner	R2	(mm)			350			350			350	
<b>OTHERS</b>	Travelling speed, forward - reverse, unloaded - at rated load		(km/h)		30 - 30 / 30 - 30			30 - 30 / 30 - 30			30 - 30 / 30 - 30		
	Gradeability, at max - at 2 km/h, unloaded - at rated load		(%)		33 - 26 / 27 - 21			33 - 26 / 27 - 21			33 - 26 / 27 - 21		
	Lifting speed, unloaded - at 70% of rated load		(m/s)		0,50 - 0,42			0,50 - 0,42			0,50 - 0,42		
	Lowering speed, unloaded - at rated load		(m/s)		0,42 - 0,48			0,42 - 0,48			0,42 - 0,48		
<b>OTHERS</b>	Hydraulic system, type, number of tanks				Load-sensing / working oil & brake oil tanks			Load-sensing / working oil & brake oil tanks			Load-sensing / working oil & brake oil tanks		
	Working pressure boom / spreader		(MPa)		23,0 / 16,0			23,0 / 16,0			23,0 / 16,0		
	Tank volumes of working oil & brake oil		(dm <sup>3</sup> )		525 (425 + 100)			525 (425 + 100)			525 (425 + 100)		
	Noise level LpAZ acc. to EN12053, inside cabin		(dB(A))		Eco mode: 69 - 71 / Power mode: 72 - 75			Eco mode: 69 - 71 / Power mode: 72 - 75			Eco mode: 69 - 71 / Power mode: 72 - 75		
	Noise level LwAZ acc. to 2000/14/EC, outside cabin		(dB(A))		Eco mode: 104 - 108 / Power mode: 110 - 111			Eco mode: 104 - 108 / Power mode: 110 - 111			Eco mode: 104 - 108 / Power mode: 110 - 111		
	Towing hook				Yes			Yes			Yes		
	Electronic overload, monitoring & safety system				Yes / Yes / Yes			Yes / Yes / Yes			Yes / Yes / Yes		
Longitudinal load monitoring information & controls				Yes - LLMI / Yes - LLMC			Yes - LLMI / Yes - LLMC			Yes - LLMI / Yes - LLMC			

# Standard

## Kalmar DRG100-120, S6-S8 // Empty Container Reachstackers // 10-12 tonnes

### Norms, standards and regulations

- Machinery Directive 2006/42/EC
- Safety Variable Reach Trucks
- Safety Low & High Lift Trucks ANSI/ B56.1
- Stability Variable Reach Trucks
- CE-marking for trucks within EU/EEA
- ANSI/ITSDF-marking for North America trucks

### Chassis

- Strong and durable heavy-duty chassis
- Safe access steps, platform & hand rails (LHS)
- Long bottom access step
- Lifting eyes and anchor points (front & rear)
- Good rear end visibility of the truck
- Towing pin (rear - incasted)

### Body

- Steps with anti-slip protection
- Rear view mirrors - rear on front mudguards
- Strong and protective mudguards (front & rear)
- Noise insulation kit for the complete truck

### Steer Axle (rear)

- Kalmar steer axle mounted dual pivot bearings
- Orbitrol power steering with double acting cylinder

### Drive Axle (front)

- Kessler planetary axle with differential drive
- Wide axle for high side stability (4150 mm)
- Oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 µm) for the brakes
- Brake tank (100 lit), cooling & breather filter

### Wheels (tyres & rims)

- Drive tyres 14.00x24"/PR24 (4x)
- Steer tyres 14.00x24"/PR24 (2x)

### Drive train (CAN-bus)

- Volvo D-8 in EU stage 3A and 4 emission levels
- 6-cylinder diesel engines with pre-heater
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Fully automatic transmission DANA TE-17 (3+3)
- Transmission monitoring and reverse protection
- Decutch function activated by pedal switch
- Heavy-duty radiators for engine + transmission

### Load-Sensing Hydraulics

- Load-sensing variable piston pumps (3x)
- Pumps for boom, spreader, brakes & steering
- Vane pumps for brake & oil cooling (2x)
- Return filters for the work hydraulics (2x/10 µm)
- Hydraulic longlife fine filter with by-pass (5 µm)
- Servo filter for the work hydraulics (10 µm)
- Pressure filter for the brakes (10 µm)
- Regeneration high-speed lifting & extension
- Boom end-damping (in-out/up-down/20-40°)
- Power steer, power brakes & ORFS-couplings
- Hydraulic tank (425 lit), cooling & breather filter
- Separated dual oil tanks

### Lifting boom

- Strong, durable box-type boom with guide pads
- Duplex 2-stage S6
- Triplex 3-stage S8
- Long boom nose for flat racks (H4 = 600 mm)
- Boom with 2 lift cylinders & 1 extension cylinder

### Attachment

- Top lift 10-12 tonnes, hydraulic extension 20'-40'
- 4 floating twistlocks & indication LED lamps
- Safety locking, alignment pins & sensors (4x)
- Large sideshift of ±1000 mm
- Rotation +195°/-105 deg (2 motors & 2 brakes)
- Mechanical Pile Slope MPS ±5 deg
- Lift hooks for slings on end beams (4x)
- Tilt lock, container at 90 deg (max 5 km/h)

### Electrical system 24V

- Battery box 2x12V & main power switch
- Electric service box on chassis (LHS)
- 2 working LED-lights on attachment
- 2 working LED-lights on boom
- 2 working LED-lights on front edge cabin
- 2 rear LED-lights on fenders (when reversing)
- 2 head light LED on front fenders
- 2 position LED-lights on each side
- 2 tail LED-lights / brake LED-lights
- 4 LED-blinkers (front-rear/left-right)
- 2 flashing brake LED-lights (when reversing)
- 1 rotating warning LED-beacon
- 1 acoustic signal / reverse alarm (in reverse)

### Cabin

#### Structure

- Spacious, modern cabin with best ergonomics level
- Large windows, good visibility, in all directions
- Manual moveable cabin (stroke 1750 mm)
- Instep handle (left side)
- Sliding window on both sides
- Doors with air damper and key lock (L + R)
- Tinted laminated windows

### Comfort

- Seat Kalmar, mech. spring, high back
- Adjustable armrest (RHS) & 2-point safety belt
- Inside rear view mirror (right side)
- Interior lights with fade away function
- 2x24V el. connection in door columns (L + R)
- Fully adjustable steering wheel incl tilt function
- Fully adjustable colour display
- Electric adjustable operational console with joystick, operational buttons & armrest (RHS)
- Power steering wheel with steer knob
- Electric horn
- LED background light for buttons & switches

### Controls

- Joystick for boom, spreader & forward / reverse
- Auto rev-up accelerator at lifting/extension
- Electric accelerator pedal (hanging)
- Double brake pedals (L + R)
- Button for electronic hand brake (on/off)
- Automatic gear shifting (P1)
- Only first gear activated (P2)
- Only second gear activated (P3)
- Safety override for hydraulic functions (by code)
- Multi-function lever LHS (horn, gear/direction switch, high/low beam)
- Warning - hand brake (on/off) leaving seat
- Hour meter

### Climate

- ECC, electronic climate control (heater, ventilator and filter)
- Air-condition incl. fresh air and recirculation filter
- Wipers/washers on front, rear and roof windows
- Interval wiper functions on front, rear and roof
- Tinted windows

### Information systems

- Colour display & automatic fault analysis
- Menu control with toggle wheel & push buttons
- Electronic safety, overload, scale & synchronized lift
- LLMI Longitudinal Load Moment Indicator
- LLMC Longitudinal Load Moment Control

### ECO Drive Modes (EDM):

- Power mode
- Normal mode
- Economy mode

### Operator menu:

- System voltage
- Actual gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Hydraulic oil temperature
- Transmission oil temperature
- Engine oil pressure & coolant level
- Engine oil level
- Clock and date
- Load & Load distance (LC)
- Boom extension & Boom angle
- Operating time (hours)
- Service time indicator (hours)
- Boom angle and boom extension
- Electronic weight scale functions
- Status of heating system & AC system
- Fuel level (diesel and optional AdBlue)
- Estimated operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics

### Pop-up menu:

- Overload warning
- Overload warning steering axle (high or low)

### Head-Up display for twistlock indication:

- LED indicators for alignment & twistlocks

### Various warning lights & signals:

- Charging battery
- Low brake pressure
- Failure indicator
- Safety system disconnected
- High engine coolant temperature
- Low engine coolant level
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level
- Hydraulic oil temperature

### Indicator lamps:

- High beam
- Direction indicator
- Parking brake

### Fleet management:

- Equipped with telemetric hardware for Kalmar Insight

### Colour

- Cabin: Iron-Grey RAL 7011
- Chassis, tanks & mudguards: Red RAL 3000
- Boom, attachment & axles: Black RAL 7021
- Rims: Iron-Grey RAL 7011

### Documentation and decals

- Load chart diagram inside cabin
- Machine data sign on chassis incl. load chart
- Warning, tyre pressure & oil pressure stickers
- Information & joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual
- Spare parts catalogue



# Optional

## Kalmar DRG100-120, S6-S8 // Empty Container Reachstackers // 10-12 tonnes

### Chassis

- DRG100-54S6 (L3=5400 mm / 6-high 8'6")
- DRG120-54S6 (L3=5400 mm / 6-high 8'6")
- DRG100-54S8 (L3=5400 mm / 8-high 8'6")

### Cabin

#### Structure

- Hydraulic tilting cabin (stroke 0-10 degrees)
- Step for roof access

### Comfort

- Seat with Air-cushion, heating & 3-p belt
- Head rest for the seat
- Armrest with adjustment (LHS)
- Horizontal dampening/suspension of seat
- Extra trainer seat incl 2-p safety belt (LHS)
- Bracket for terminal and monitor (RHS)
- Writing pad, A4 paper box and reading lamp (RHS)

### Controls

- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl switch for forward/reverse

### Climate

- Sun visor front window
- Sun visor roof window
- Sun visor rear window
- Microfilter in additional to std filter
- AC/ECC switched off when door is open
- Postheating

### Drive train

- Volvo TAD-851-VE (EU3A, 185 kW, 1160 Nm) + DANA TE-17300 (3+3 gears)
- Volvo TAD-871-VE (EU4, 185 kW, 1160 Nm) + DANA TE-17300 (3+3 gears)
- Volvo TAD-881-VE (EU5, 185 kW, 1160 Nm) + DANA TE-14400 (4+4 gears / lockup)\*
- Start/stop function to save fuel
- Automatic engine and ignition stop at idle
- Precleaner air intake incl raised air intake
- Speed limitation
- Wheel nut protection on steer tyres

### Hydraulics

- High pressure filter

### Body

- Anti slip protection on fenders and tanks
- Mud flaps (front or/and rear)
- External rear view mirror 2/pc
- Long bottom access step (on right hand side)

### Electrical system 24V

- Radio with CD/MP3
- 2x24V + 12V/5V USB sockets in door columns (L+R)
- 2x24V + 2x12V sockets in door columns (L+R)
- Electric air pressure horn
- Height limitation system for lifting boom
- Load center limitation for lifting boom
- Speed limitation, please specify km/h
- Container lights, LED 4x, on front mudguards
- Extra working light, LED 2x, on spreader
- Extra working light, LED 2x, on boom middle
- Extra working light, LED 4x, on boom front
- Electric heated mirrors, front fender/std pos
- Electric heated & adjustable mirrors, front fenders/std pos

### Wheels

- Spare wheel & rim 14.00x24"/PR24

### Colour

- Other colour than std, chassis
- Reinforced anti-corrosion protection

### Documentation and decals

- Extra set of documentation
- Workshop manual
- Volvo workshop manual
- Load chart lbs/inch in cab & sign "no riders"
- Documentation on cd or memory stick

### Additional equipment

- Camera with monitor in cab direction rearward (6-7 m)
- Reverse warning system, incl. 4x sensors, TV-camera & monitor
- Tyre pressure monitoring system (Bluetooth)
- Diesel powered cabin heater 5 kW
- Alcolook Draeger or Foxguard in cabin
- Semi-automatic fire suppression system (Dafo)
- Fire extinguisher 6 kg, powder
- Tool kit
- Lockable fuel cap
- Cabin heater incl 220V outlet
- Engine heater incl. cab heater
- Engine heater incl. cab heater US std
- Engine/hydraulic oil heater incl cab heater
- Engine/hydraulic oil heater incl cab heater US std
- Central greasing base machine
- Central greasing spreader
- Filter kit 2000 hrs

### Fleet Management

- Kalmar Insight licence (only in certified countries)
- Kalmar Insight Driver Monitor (RFID reader + 10 unique driver tags)
- Kalmar Insight extra monitoring tags (10 unique driver tags)

### Attachment (toplift)

- Tilt function ±5 deg (fwd/rev), incl tilt lock & speed limit 5 km/h
- Rotations stop spreader ±25 deg + override switch
- Automatic extension 20'-40' incl 30' stop

### Training

- Contact Kalmar Training Center for training programs
- Working ECO driving



\* Available 2019/20.





# KALMAR

Making your every move count

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