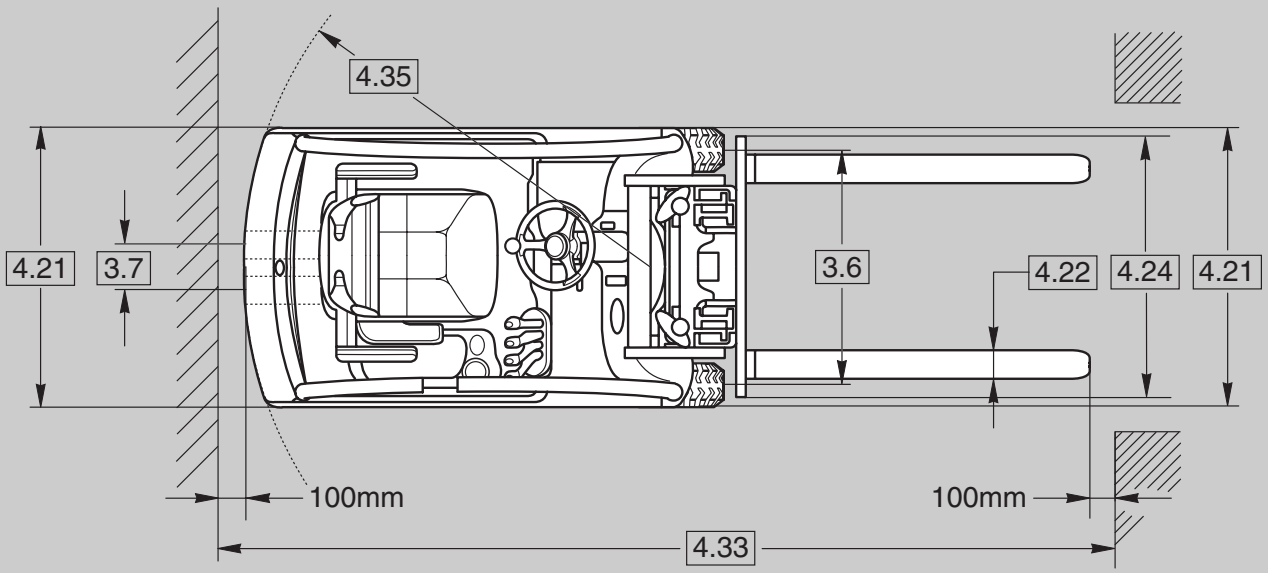
Specifications

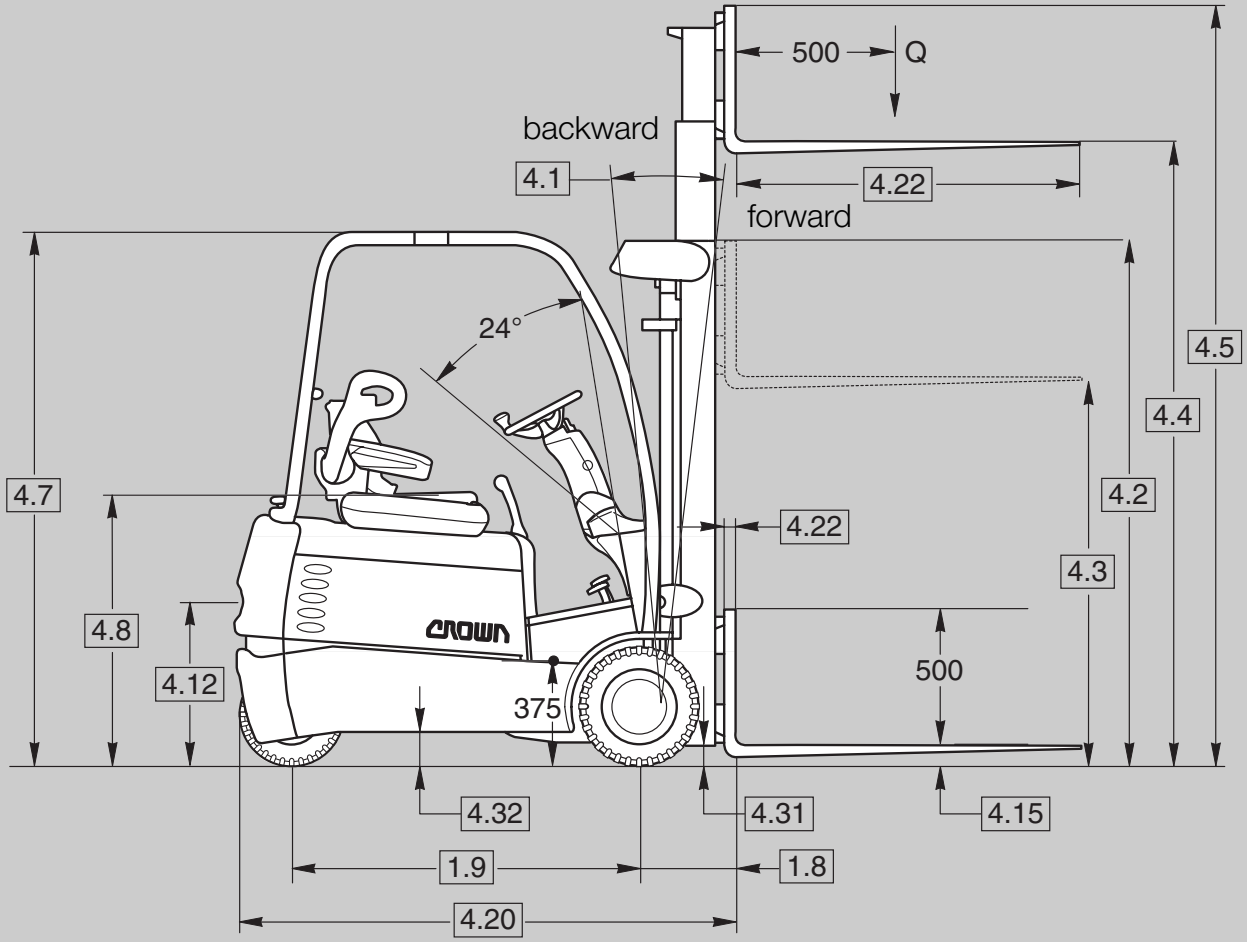
SC 4200 Series

Three Wheel
Counterbalance Truck

SC 4200

Series


4.35
4.21
3.7
3.6
4.22
4.24
4.21
100mm
100mm
4.33


500
Q
backward
4.1
4.22
forward
24°
4.5
4.4
4.7
4.2
4.22
4.3
4.8
4.12
500
375
4.32
4.31
4.15
1.9
1.8
4.20

General Information	1.1	**Manufacturer**				Crown Equipment Corporation				
	1.2	**Model**				SC 4210	SC 4220	SC 4220	SC 4240	SC 4240
						1.3	1.3	1.6	1.6	1.8
	1.3	**Power**	electric			battery				
	1.4	**Operator Type**				sit down				
	1.5	**Load Capacity**		Q	t	1.25	1.25	1.6	1.6	1.8
	1.6	**Load Centre**		c	mm	500				
	1.8	**Load Distance ***		x	mm	362	362	362	362	368
	1.9	**Wheel Base**		y	mm	1187	1295	1295	1403	1403
Weights	2.1	**Weight**	less battery, std./high batt.		kg	2595/2525	2610/2540	2610/2540	2675/2605	2685/2615
	2.2	**Axle Load**	w. load front / rear		kg	3830/575	3805/765	4385/530	4400/720	4750/590
	2.3	**Axle Load**	w.o. load front / rear		kg	1675/1480	1720/1600	1720/1600	1825/1705	1840/1700
Tyres	3.1	**Tyre Type**				Super Elastic / SE				
	3.2	**Tyres**	power unit side		inch	18x7-8	18x7-8	18x7-8	18x7-8	200/50-10
	3.3		load side		mm	15 x 4.5 - 8				
	3.5	**Wheels**	no. (x=driven) front/rear			2x / 2				
	3.6	**Track Width**	power unit side	b10	mm	873				
	3.7		load side	b11	mm	176				
Dimensions	4.1	**Mast Tilt**	forward / backward		°	see table 1				
	4.2	**Mast**	collapsed height	h1	mm	see table 1				
	4.3	**Free Lift**	w.o. load backrest	h2	mm	see table 1				
	4.4	**Lift Height**		h3	mm	see table 1				
	4.5	**Mast**	extended height, w.o. lbr	h4	mm	see table 1				
	4.7	**Overhead Guard Height**	std. height batt./high batt.	h6	mm	1980/2075				
	4.8	**Seat Height**	std. height batt./high batt.	h7	mm	908/1026	915/1033	915/1033	922/1040	922/1040
	4.12	**Tow Hitch Height**		h10	mm	580				
	4.15	**Lowered Fork Height**		h13	mm	45				
	4.20	**Headlength ***		l2	mm	1754	1862	1862	1970	1976
	4.21	**Overall Width**	front / rear	b1/b2	mm	1025	1025	1025	1025	1080/1025
	4.22	**Fork Dimension**		thxw	mm	38x100	38x100	38x100	38x100	45x100
	4.22		standard / option	l	mm	990 / 760, 915, 1065, 1145, 1220, 1370, 1525				
	4.23	**Fork Carriage**	ISO	b5	mm	2 A				
	4.24	**Fork Carriage Width**	w. lbr / w.o. lbr	b3	mm	990 / 965				
	4.31	**Ground Clearance**	with load below mast	m1	mm	68				
	4.32		centre wheelbase	m2	mm	115				
	4.33	**Working Aisle Width**	minimum		mm	see table 2				
	4.35	**Turning Radius**		Wa	mm	1392	1500	1500	1608	1608
Performance	5.1	**Travel Speed**	w./w.o. load		km/h	14.0 / 15		13.5 / 15		
	5.2	**Lift Speed**	w./w.o. load		m/s	0.42/0.55	0.42/0.55	0.40/0.55	0.40/0.55	0.37/0.55
	5.3	**Lower Speed**	w./w.o. load		m/s	0.50/0.50				
	5.5	**Tractive Effort**	w./w.o. load (60 min. rtg.)		N	4150/4390	4110/4360	4050/4360	4000/4320	3960/4320
	5.6	**Max. Tractive Effort**	w./w.o. load (intermit)		N	9660/9900	9625/9870	9560/9870	9510/9830	9470/9830
	5.7	**Gradeability**	w./w.o. load (60 min. rtg.)		%	9.6/14.2	9.2/13.4	8.4/13.4	8.0/12.5	7.6/12.5
	5.8	**Max. Gradeability**	w./w.o. load (intermit)		%	19/27	18.5/25.5	17/25.5	16.5/24	16/24
	5.9	**Acceleration Time**	w./w.o. load		s	4.4/3.8	4.5/3.9	4.5/3.9	4.5/3.9	4.6/4.0
	5.10	**Brake**	service			Foot-Motor / Electric Assist				
			parking			Auto-Electric / Dual Disc				
Motors	6.1	**Traction Motor**	60 min. rating		kW	2 x 4.8				
	6.2	**Lift Motor**	15% on time		kW	7.9				
	6.3	**Max. Battery Box Size**	standard height battery	lxwxh	mm	414x830x627	522x830x627	522x830x627	630x830x627	630x830x627
			high battery	lxwxh	mm	418x835x784	526x835x784	526x835x784	634x835x784	634x835x784
	6.4	**Battery Voltage**	nom. cap. K5 std. battery		V/Ah	48/330-375	48/440-500	48/440-500	48/550-625	48/550-625
			nom. cap. K5 high battery		V/Ah	48/420-465	48/560-620	48/560-620	487700-775	48/700-775
	6.5	**Battery Weight**	min./max. std. battery		kg	532/611	673/779	673/779	813/951	813/951
			min./max. high battery		kg	702/809	886/1023	886/1023	1062/1242	1062/1242
Misc.	8.1	**Type of Control**	drive / lift			Transistor				
	8.2	**Available Working Pressure for Attachments**			bar	235				

* +29 mm for integrated sideshift, +59 mm for hook on sideshift

Table 1 – Mast Chart

					TL mast							
4.1	**Mast Tilt**	forward / backward		°	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5
4.2	**Mast**	collapsed height	h1	mm	1955	2110	2260	2415	2540	2665	2845	3035
4.3	**Free Lift**		h2	mm	155	155	155	155	155	155	155	155
4.4	**Lift Height**		h3	mm	2890	3195	3500	3805	4055	4200	4555***	4935
4.5	**Mast**	extended height, w.o. lbr.	h4	mm	3470	3775	4080	4385	4640	4780	5135	5520
		extended height, with lbr.	h4	mm	4110	4415	4720	5025	5275	5420	5775	6155

					TT mast								Quad
4.1	**Mast Tilt**	forward / backward		°	5/5	5/5	3/5	3/5	3/5	3/5	3/5	3/5	2/3
4.2	**Mast**	collapsed height	h1	mm	1955	2110	2260	2415	2540	2665	2845	3035	2110
4.3	**Free Lift**	without load backrest*	h2	mm	1450	1605	1755	1910	2035	2165	2340	2530	1560
		with load backrest	h2	mm	735	890	1040	1195	1320	1450	1625	1815	845
4.4	**Lift Height**		h3	mm	4370	4825	5285	5740	6120	6390	6925**	7495	6095***
4.5	**Mast**	extended height, w.o. lbr.	h4	mm	4875	5330	5790	6245	6625	6895	7430	8000	6620
		extended height, with lbr.	h4	mm	5590	6045	6505	6960	7340	7610	8145	8715	7335

* -115 mm with integrated sideshift
** +115 mm with integrated sideshift
*** Lift height is a non-standard option, if chosen, the order may receive extended lead time

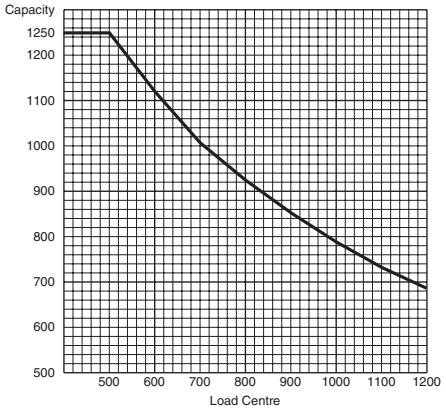
Table 2 – Working Aisle Width

TT Mast	1.9 Wheelbase	Pallets length x width	VDI 2198*	90° Stacking* intrusive	90° Stacking* non intrusive
SC 4210	1187	800 x 1200	2900	2755	2900
		1200 x 800	3205	3155	3205
		1000 x 1200	3080	2955	3085
		1200 x 1000	3230	3155	3235
SC 4220	1295	800 x 1200	3005	2860	3000
		1200 x 800	3310	3260	3310
		1000 x 1200	3185	3060	3185
		1200 x 1000	3340	3260	3340
SC 4240 1.6	1403	800 x 1200	3115	2970	3100
		1200 x 800	3420	3370	3410
		1000 x 1200	3295	3170	3285
		1200 x 1000	3445	3370	3440
SC 4240 1.8	1403	800 x 1200	3120	2975	3105
		1200 x 800	3425	3375	3420
		1000 x 1200	3300	3175	3290
		1200 x 1000	3455	3375	3445

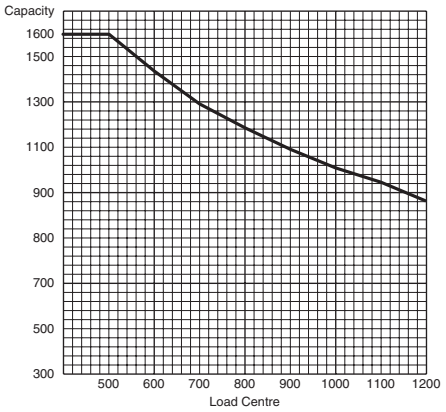
* +29 mm for integrated sideshift, +59 mm for hook on sideshift

Load Centre Capacity Chart

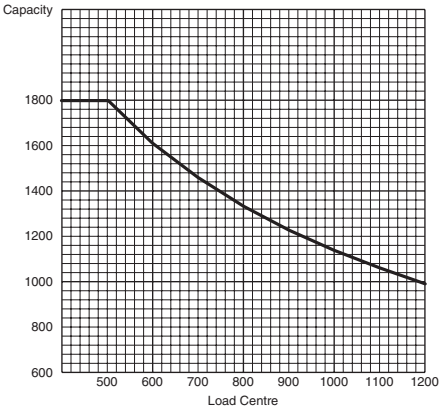
1.25



1.6



1.8



Capacities
At 500 mm load centre
Model SC 4200-1.3 & 1.3H – 1250 kg
Model SC 4200-1.6 & 1.6H – 1600 kg
Model SC 4200-1.8 & 1.8H – 1800 kg

Standard Equipment
1. Crown's Access 1 2 3™ Comprehensive System Control
2. InfoPoint System™
3. Crown-manufactured AC drive and AC lift motors
4. e-GEN™ Braking System with automatic parking brake
5. Intrinsic Stability System
   - Travel speed reduction and appropriate electronic brake control when forks are above free lift
   - Controlled tilt speeds
   - Counterweight exceeds required standards
   - Cornering speed control
   - Ramp hold
   - Ramp speed control
6. Driveability standard features
   - 375 mm step height
   - Large, unobstructed floorboard
   - Non-slip rubber floor mat
   - Automotive type rubber covered accelerator and brake pedals
   - Automatic parking brake (seat activated)
   - Large, entry/exit "window"
   - Entry/exit to both sides
   - Rounded edges on battery cover for easy entry/exit
   - Comfort suspension safety seat with shoulder restraint and anti-cinch safety belt
   - Adjustable armrest
   - Storage tray
   - Compact steering wheel with spinner knob and steering column
   - Infinitely adjustable tilt steering column with natural position for forward/reverse selector
   - Operator forward design for enhanced visibility
   - Low dashboard for fork and floor visibility
   - Urethane covered control handles with tactile feedback
7. Crown display
   - Battery discharge indicator with lift interrupt and re-key feature
   - Hour meters / travel distance / stop watch
   - Pin code access capable
   - Event code display with five (5) key navigation
   - Access 1 2 3 diagnostics
   - P1, P2, P3 Performance tuning
8. SBE 320 blue battery connector
9. DIN 43531 battery compartment sizes with lift out battery access
10. Dual 15" superelastic steer tyres
11. Large 18" superelastic drive tyres
12. On demand power steering
13. Proportional rack and pinion steering
14. Waterfall design overhead guard
15. No tool lift out floorboards for service access
16. 48 volt system
17. High visibility mast with in-line hose routing
18. O-ring face seal hydraulic fittings
19. 5° forward / 5° back tilt
20. High visibility triplex mast
21. 2 levers for lift/lower and tilt function and third function hydraulics
22. Tow pin

Optional Equipment
1. TL and quad mast styles
2. Auxiliary mast hydraulics
   - single function
   - double function, with 4 spool valve
3. Single or double quick disconnect hydraulic connectors
4. Hook-on or integrated sideshift
5. 1220 mm high load backrest
6. Fork lengths
7. Choice of tyres
   - Non-marking smooth or lug rubber tyres
   - Standard or non-marking cushion tyres
   - Pneumatic tyres, SC4200-1.3 and 1.6, h3 < 5005 mm only
8. Suspension seat with hip restraint
9. Freezer and corrosion conditioning
10. Light packages
    - Work lights
    - Flashing lights
    - Brake, tail and back-up light
11. Keyless on/off switch
12. Audible travel alarm
13. Work Assist™ Accessories
    - Clip pad and hook
    - Clamp
    - Clamp and mounting plate
    - Rear view mirror

Driveability
The SC 4200 Series incorporates numerous design features to improve operator comfort and productivity. A large step positioned at a low height of only 375mm greatly improves entry/exit on both sides of the truck. A low battery cover helps the operator glide into the truck's full suspension seat.
The overhead guard is shaped to open up the entry/exit window on either side. The narrow offset tilt steer column and steer wheel further facilitate entry/exit. Floorboards are large, unobstructed and rubber covered to insulate the operator from vibration. Brake and accelerator pedals are rubber covered to provide good grip and comfort.
Several designs contribute to better visibility everywhere you look. A low dashboard for fork visibility, a unique waterfall overhead guard for load handling at height, a high visibility mast and a compact steer column all improve operator visibility around the truck.
Control handles are crafted into the compartment and "fanned" for easy selection. They are urethane covered with tactile feedback for comfort and easy selection. Control actuation forces are minimal and responsive.

Crown Drive System
Crown has applied the latest generation AC drive system, enhanced with Access 1 2 3 technology. The demand for high efficiency systems that closely match customer torque requirements is met with this latest generation control system. Crown-manufactured, independently controlled, AC drive motors are specifically designed to optimise system integration between the traction and braking controls.
Crown's Access 1 2 3 technology provides optimum performance and control by offering a communication interface for operators and technicians, intelligent coordination of lift truck system and simplified service with advanced diagnostics.
The Crown display is used for easy troubleshooting, access service history and set performance features. Three modes of performance can be selected to accommodate operator experience or application requirements.

e-GEN™ Braking System

Variable regenerative motor braking is optimised and assisted with electric friction brakes, eliminating maintenance associated with typical wet, disk or drum style brakes. The appropriate amount of stopping force is applied to match operator brake input and the current operating conditions of the truck.

The closed loop Access 1 2 3 traction control will automatically keep the truck on hold until a travel input is requested, even when operating on a ramp.

Automatic electric parking brakes activate when the operator leaves the seat, a travel input has not been requested or battery power has been disconnected.

Proportional Rack and Pinion Steering System

On-demand power steering is served by the main hydraulic pump when steering is requested. The hydrostatic power steering uses a large, totally enclosed rack and pinion gear assembly.

The steering geometry is matched to the controller to deliver smooth steering at all angles. The advantage is less tyre scrubbing which extends tyre life. Both motors receive power, even in the tightest turns. This helps the truck to accelerate, turn and manoeuvre even from a full turn start position.

Cornering speed control regulates the drive motor's output by the turning degree of the truck. The advantage is smooth, stable steering which may increase operator confidence and productivity.

Large, 380 mm diameter dual steer wheels provide good traction and stability and support straight travel over long distances.

Hydraulics

Low noise hydraulic pump serves both lift and steer systems. The hydraulic system provides continuous filtration through suction filter and easy to service return filter.
Hydraulic valve actuation is precise and oil is controlled using metered spool valves. 3 spool valve for lift/lower, tilt and an auxiliary function is standard and features an integrated pressure relief valve for system protection. A pressure compensation lowering valve ensures safe controlled lowering speeds.

Ram displacement type lift cylinders and two double acting tilt cylinders are Crown-manufactured and designed for long life. All rams and piston rods are hard chrome plated to reduce pitting corrosion and extend cylinder packing life. O-ring face seal fittings are used to eliminate leaks.

Mast Assembly

Crown-manufactured three-stage mast assembly utilises a "flush-face" interlocked I-beam design to improve visibility and reduce truck length. Roller bearing studs are welded on both sides of the rails for maximum strength and roller bearings are canted to run in the thick cross section of the rail. High strength steel mast sections with sealed for life rollers are constructed for low mast deflection and high rigidity. Tie bars wrap around the rails for added strength and to resist off-centre load forces.

"In-line" hose routing opens up visibility. Cylinders are placed behind the rails to create a high visibility design.

The mast has four points of attachment to the truck for good load force distribution. Two mounting points are at the frame, where tilt cylinders attach. Tilt cylinders use spherical bushings to resist off-centre load distortions. Two large diameter axles secure the mast to the drive units.
A range of mast types are available:
TL offers maximum visibility through the mast by eliminating the inner free lift cylinder.
TT offers maximum flexibility with full free lift capability.
The Quad mast offers lowest collapsed heights.

Drive Units

Two independent double reduction gear drives: The first reduction gear uses spiral bevel gears for low noise and efficiency. The second reduction gear uses helical gears. The heavy duty drive unit gears are constantly lubricated in an oil bath.
This time proven design is quiet and reliable, providing years of trouble-free service.

Carriage

An FEM / ISO / ITA Class II carriage is standard. Fork spread is adjustable between 314 – 914 mm. An optional hook-on type ISO sideshifter or other attachments are easy to add. Forged high strength steel forks with fork tip indicators are available in various lengths.

Safety Regulations

Conforms to European safety standards. Dimensions and performance data given may vary due to manufacturing tolerances. Performance is based on an average size vehicle and is affected by weight, condition of truck, how it is equipped and the conditions of the operating area. Crown products and specifications are subject to change without notice.

SC 4200 SPEC GB 02/08, 50
M03427-006-00
Printed in Germany

European Manufacturing:
Crown Gabelstapler GmbH & Co. KG
Roding, Germany
www.crown.com