

CROWN

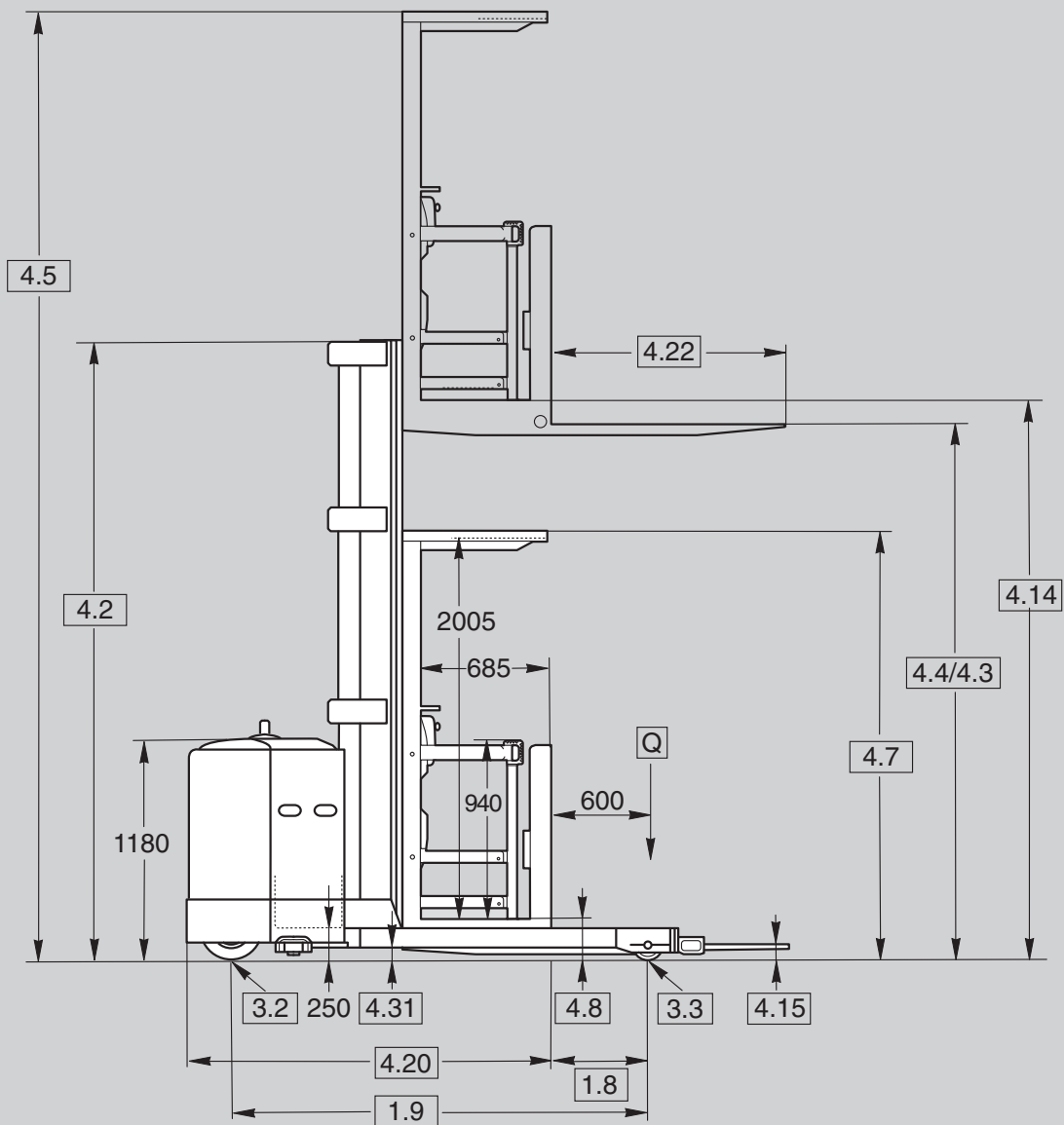
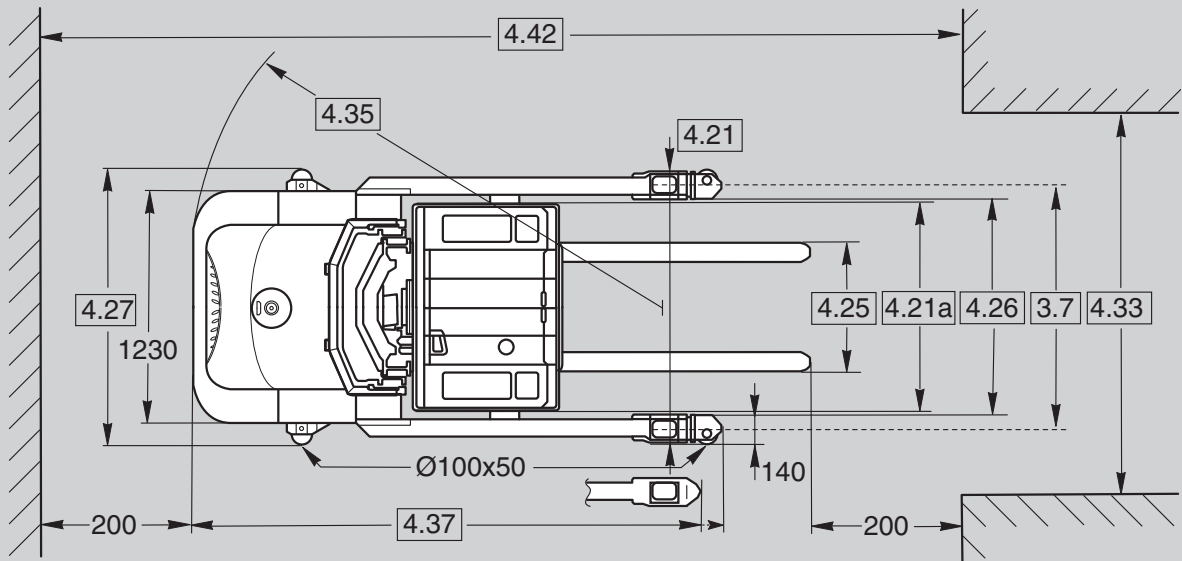
SP 3500 SERIES

Four-Point

Specifications

High-Level Order Picker





General Information	1.1	Manufacturer	Crown Equipment Corporation			
	1.2	Type				SP 3571-1.25
						TT
	1.3	Power				electric
	1.4	Operator Type				order picker
	1.5	Load Capacity*		Q	t	1.25
	1.6	Load Centre		c	mm	600
	1.8	Load Distance		x	mm	545
	1.9	Wheel Base		y	mm	2225
Weights	2.1	Weight	less battery		kg	see table 3
	2.2	Axle Load	w. load, front / rear		kg	see table 3
	2.3	Axle Load	w.o. load, front / rear		kg	see table 3
Tyres	3.1	Tyres Type				polyurethane
	3.2	Tyres	front		mm	Ø 330 x 140
	3.3	Tyres	rear		mm	Ø 150 x 110
	3.4	Additional Wheels	castor wheels		mm	Ø 255 x 75
	3.5	Wheels	number (x=driven) front/rear			1x + 1/2
	3.6	Track Width	front	b10	mm	762
	3.7	Track Width	rear	b11	mm	see table 3
Dimensions	4.2	Mast	collapsed height	h1	mm	see table 3
	4.3	Free Lift		h2	mm	see table 3
	4.4	Lift Height		h3	mm	see table 3
	4.5	Mast	extended height	h4	mm	see table 3
	4.7	Overhead Guard Height		h6	mm	2300
	4.8	Operator Stand Height	lowered	h7	mm	240
	4.14	Operator Stand Height	raised	h12	mm	see table 3
	4.15	Fork Height	lowered	h13		75
	4.20	Headlength		l2	mm	1920
	4.21	Overall Width	front / rear	b1/b2	mm	1230 / see table 3
	4.21a	Platform Width**	standard	b9	mm	1220
			optional	b9	mm	1070 / 1370 / 1525 / 1625
	4.22	Fork Dimension	standard	thxwxl	mm	50 x 100 x 1145
			optional length		mm	760/915/990/1065/1220/1370/1525/1830/2135
	4.25	Width Across Forks	min. - max.	b5	mm	610 - 760
	4.26	Inside Straddle Width		b4	mm	see table 3
	4.27	Width Across Guide Rollers	in 6.5 mm increments	b6	mm	see table 3
	4.31	Ground Clearance	with load below mast	m1	mm	62
4.33	Working Aisle Width***	minimum	Ast	mm	see table 3	
4.35	Turning Radius		Wa	mm	2500	
4.37	Length Across Outrigger	with / without guide rollers	l7	mm	2765 / 2680	
4.42	Transfer Aisle Width****	1000 x 1200 length	Ast3	mm	3582	
		800 x 1200 length	Ast3	mm	3582	
Perform.	5.1	Travel Speed	w./w.o. load		km/h	see table 1
	5.2	Lift Speed	w./w.o. load		m/s	0.22/0.36
	5.3	Lowering Speed	w./w.o. load		m/s	0.38/0.41
	5.10	Service Brake				electro-magnetic, regenerative
Motors	6.1	Traction Motor	60 min. rating		kW	3.9
	6.2	Lift Motor	15% on time		kW	2 x 2.5
	6.3	Max. Battery Size		lxwxh	mm	920 x 360 x 790
	6.4	Battery Voltage	nominal capacity K5		V/Ah	24V / 500-800
	6.5	Battery Weight	minimum		kg	690
8.1	Type of Controller					AC traction

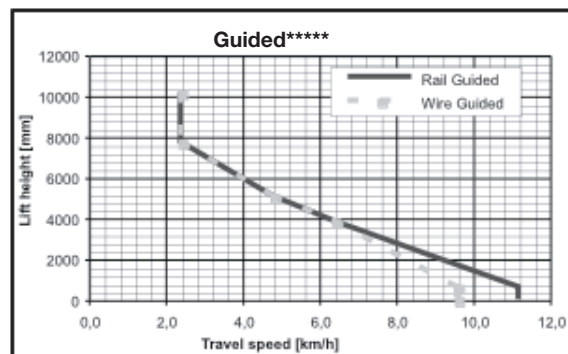
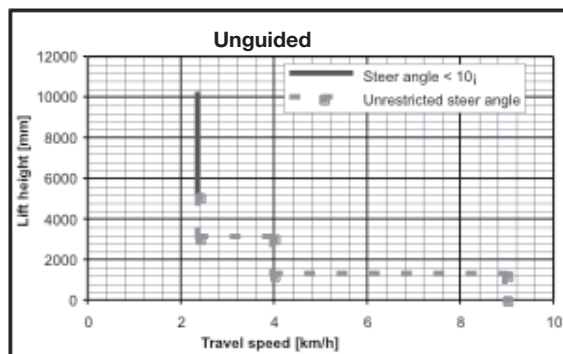
* Capacity derating is dependant upon the combination of lift height, outside straddle width, platform width and load centre (fork length)

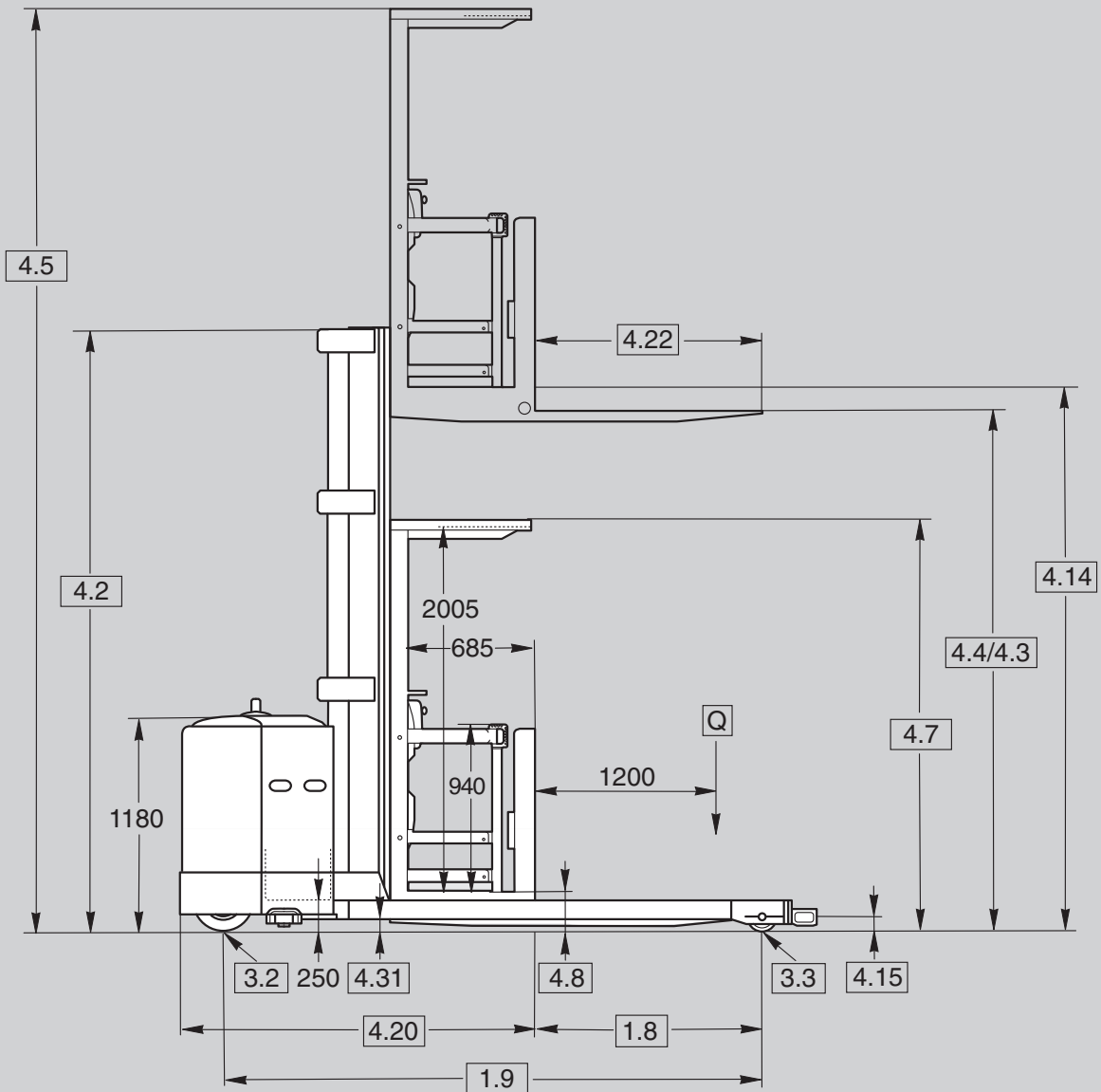
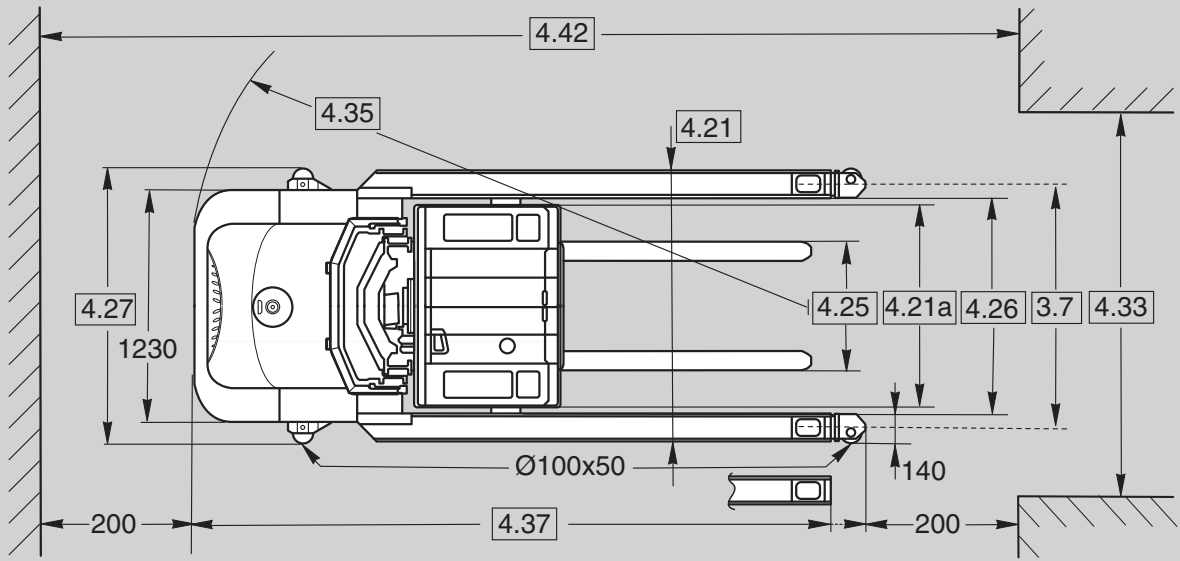
** Max. 305 mm greater than outside straddle width
4.21 (Overall Width, rear)

*** Assumes 200 mm clearance
**** Assumes 400 mm clearance

***** Power unit direction

Table 1 Travel Speed (km/h) with/without load





General Information	1.1	Manufacturer	Crown Equipment Corporation			
	1.2	Type	SP 3581-0.625			
			TT			
	1.3	Power	electric			
	1.4	Operator Type	order picker			
	1.5	Load Capacity*	Q	t	0.625	
	1.6	Load Centre	c	mm	1200	
	1.8	Load Distance	x	mm	1300	
	1.9	Wheel Base	y	mm	2980	
Weights	2.1	Weight	less battery	kg	see table 4	
	2.2	Axle Load	w. load, front / rear	kg	see table 4	
	2.3	Axle Load	w.o. load, front / rear	kg	see table 4	
Tyres	3.1	Tyres Type			polyurethane	
	3.2	Tyres	front	mm	Ø 330 x 140	
	3.3	Tyres	rear	mm	Ø 200 x 95	
	3.4	Additional Wheels	castor wheels	mm	Ø 255 x 75	
	3.5	Wheels	number (x=driven) front/rear		1x + 1/2	
	3.6	Track Width	front	b10	mm	762
	3.7	Track Width	rear	b11	mm	see table 4
Dimensions	4.2	Mast	collapsed height	h1	mm	see table 4
	4.3	Free Lift		h2	mm	see table 4
	4.4	Lift Height		h3	mm	see table 4
	4.5	Mast	extended height	h4	mm	see table 4
	4.7	Overhead Guard Height		h6	mm	2400
	4.8	Operator Stand Height	lowered	h7	mm	330
	4.14	Operator Stand Height	raised	h12	mm	see table 4
	4.15	Fork Height	lowered	h13		165
	4.20	Headlength		l2	mm	1920
	4.21	Overall Width	front / rear	b1/b2	mm	1230 / see table 4
	4.21a	Platform Width**	standard	b9	mm	1220
			optional	b9	mm	1070 / 1370 / 1525 / 1625
	4.22	Fork Dimension	standard	thxwxl	mm	50 x 100 x 1370
			optional length		mm	1525 / 1830 / 2135
	4.25	Width Across Forks	min. - max.	b5	mm	610 - 760
	4.26	Inside Straddle Width		b4	mm	see table 4
	4.27	Width Across Guide Rollers	in 6.5 mm increments	b6	mm	see table 4
4.31	Ground Clearance	with load below mast	m1	mm	62	
4.33	Working Aisle Width***	minimum	Ast	mm	see table 4	
4.35	Turning Radius		Wa	mm	3241	
4.37	Length Across Outrigger	with / without guide rollers	l7	mm	3545 / 3380	
4.42	Transfer Aisle Width****	1220 x 1830 length	Ast3	mm	4190	
		1220 x 2440 length	Ast3	mm	4800	
Perform.	5.1	Travel Speed	w./w.o. load	km/h	see table 2	
	5.2	Lift Speed	w./w.o. load	m/s	0.27/0.36	
	5.3	Lowering Speed	w./w.o. load	m/s	0.38/0.41	
	5.10	Service Brake			electro-magnetic, regenerative	
Motors	6.1	Traction Motor	60 min. rating	kW	3.9	
	6.2	Lift Motor	15% on time	kW	2 x 2.5	
	6.3	Max. Battery Size		lxwxh	mm	920 x 360 x 790
	6.4	Battery Voltage	nominal capacity K5	V/Ah		24V / 500-800
	6.5	Battery Weight	minimum	kg		690
8.1	Type of Controller				AC traction	

* Capacity derating is dependant upon the combination of lift height, outside straddle width, platform width and load centre (fork length)

** Max. 305 mm greater than outside straddle width
4.21 (Overall Width, rear)

*** Assumes 200 mm clearance
**** Assumes 400 mm clearance

***** Power unit direction

Table 2 Travel Speed (km/h) with/without load

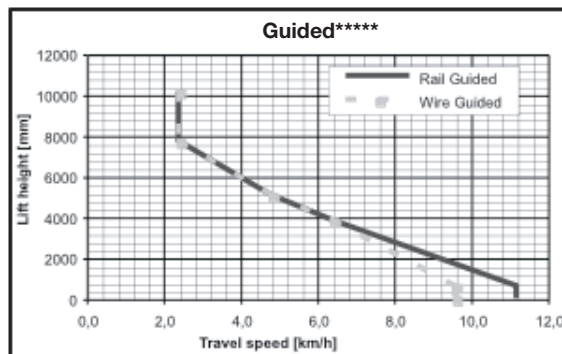
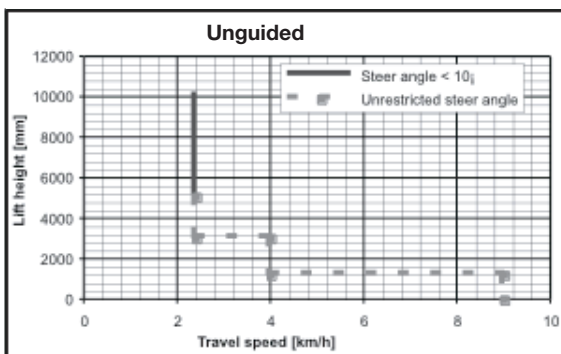




Table 3					SP 3571							
					TT							
2.1	Weight SP 3571	less battery		kg	3015	3100	3275	3315	3355	3440	3485	3525
2.2	Axle Load	w. load, front		kg	2620	2675	2695	2825	2850	2910	2935	2965
		w. load, rear		kg	2335	2365	2415	2430	2445	2475	2490	2500
2.3	Axle Load	w.o. load, front		kg	2660	2715	2835	2865	2890	2950	2975	3005
		w.o. load, rear		kg	1045	1075	1130	1140	1155	1180	1195	1210
3.7	Track Width	rear, in 25 mm increments	b11	mm	1105 – 1740							
4.2	Mast	collapsed height	h1	mm	2415	2720	3025	3175	3330	3630	3785	3935
4.3	Free Lift		h2	mm	165	470	775	925	1080	1385	1535	1690
4.4	Lift Height		h3	mm	5335	6095	7010	7470	7925	8380	8840	9295
4.5	Mast	extended height	h4	mm	7610	8370	9285	9740	10200	10655	11112	11570
4.14	Operator Stand Height	raised	h12	mm	5500	6260	7175	7630	8090	8550	9005	9460
4.21	Overall Width	rear, in 25 mm increments	b2	mm	1245 – 1880							
4.26	Inside Straddle Width	in 25 mm increments	b4	mm	965 – 1600							
4.27	Width Across Guide Rollers	in 6.5 mm increments	b6	mm	1257 – 1994							
4.33	Working Aisle Width	minimum	Ast	mm	1470							

Table 4					SP 3581							
					TT							
2.1	Weight SP 3581	less battery		kg	3100	3185	3355	3400	3440	3525	3570	3620
2.2	Axle Load	w. load, front		kg	2935	2995	3130	3160	3195	3255	3290	3325
		w. load, rear		kg	1480	1505	1542	1550	1565	1585	1595	1605
2.3	Axle Load	w.o. load, front		kg	2915	2980	3115	3145	3175	3240	3275	3310
		w.o. load, rear		kg	875	895	930	945	955	975	985	1000
3.7	Track Width	rear, in 25 mm increments	b11	mm	1092 – 1727							
4.2	Mast	collapsed height	h1	mm	2415	2720	3025	3175	3330	3630	3785	3935
4.3	Free Lift		h2	mm	165	470	775	925	1080	1385	1535	1690
4.4	Lift Height		h3	mm	5335	6095	7010	7470	7925	8380	8840	9295
4.5	Mast	extended height	h4	mm	7610	8370	9285	9740	10200	10655	11112	11570
4.14	Operator Stand Height	raised	h12	mm	5500	6260	7175	7630	8090	8550	9005	9460
4.21	Overall Width	rear, in 25 mm increments	b2	mm	1220 – 1850							
4.26	Inside Straddle Width	in 25 mm increments	b4	mm	965 – 1600							
4.27	Width Across Guide Rollers	in 6.5 mm increments	b6	mm	1257 – 1994							
4.33	Working Aisle Width	minimum	Ast	mm	1420							

Standard Equipment

1. Crown's Access 1 2 3® Comprehensive System Control
2. Crown manufactured AC traction motor
3. Electronic steering
4. Linear speed control for gradual reduction in speed as platform is raised
5. Two-speed lift and lower with soft start and stop
6. High speed lifting is automatically cut out when forks are 305 mm from max. elevation
7. High speed lowering is automatically cut out when forks are 380 mm from the floor
8. Programmable lift/lower cut outs
9. Intelligent Braking System (IBS)
10. Crown's Information Display
 - PIN code access capable
 - Standard steer wheel position indicator
 - Start up and run time diagnostics
 - Hour meters / travel distance / stop watch
 - Battery discharge indicator with lift interrupt
 - 3 selectable traction performance profiles
 - Access 1 2 3 onboard diagnostic with real time troubleshooting capabilities
11. Soft urethane twist grip with "cam grip"
12. 10° angled steering wheel with soft feel spinner
13. Storage compartment
14. Crown's anti-fatigue floor mat
15. Clear visibility platform window
16. Clear visibility mast design
17. Key switch
18. Horn
19. Strobe light
20. Hinged, lift off steel power unit doors
21. SBE 320 battery connector
22. Battery roll out function, with Ø 50 mm battery compartment rollers
23. Top battery access for service

24. Removable steel battery side covers
25. Adjustable battery retainer
26. Emergency power disconnect
27. Egress system
28. Crown's InfoPoint® feature
29. Colour-coded wiring
30. Poly drive tyre, castor and load wheels
31. Pin mounted fully forged cantilever forks
32. Hinged side and rear gates with power inhibit

Optional Equipment

1. End of aisle control system (rail guidance required)
2. Aisle guide wheels for rail guidance
3. Enhanced steer wheel position indicator
4. Battery retainer interlock switch
5. Work lights, dome lights and two-speed fans
6. Hand adjustable spotlights
7. Mast mounted spotlights
8. Flashing amber light
9. Audible travel alarm
10. Zone Select key switch
11. Fork raise cutout with or without override and/or lower cutout with override
12. Corrosion conditioning
13. Freezer conditioning
14. Power source for accessories
15. Overhead guard with 50 x 50 mm steel mesh cover or Plexiglas cover
16. Extended operator compartment height of 2185 mm (may increase collapsed height and will increase extended height by 180 mm)
17. Wire mesh screen (std. with freezer conditioning)
18. Work Assist™ Accessories
 - Clip pad and hook
 - Plate
 - Pocket
 - Clamp
 - Tube
19. Poly or Vulkollan non-marking drive tyre
20. Vulkollan load wheels
21. Pallet clamps
 - Euro pallet (150 mm centre stringer width)

- Chep pallet (100 mm centre stringer width)
 - GMA pallet (38 mm centre stringer width)
22. Variation of different platforms
 23. Pallet detection sensor
 24. Cart locking options
 25. Box section forks 75 x 150 x 1370, 1525, 1830 and 2135 mm (may be required if platform / cart is used)
 26. InfoLink ready

Human Factor

The operator area is designed for maximum visibility and stability for increased operator confidence and comfort. The operator platform features a large window (0.7 m²) for excellent visibility. A Crown designed clear-view mast gives the operator one forward and two peripheral windows for maximum visibility when the platform is lowered. The full free lift mast provides unobstructed visibility through the window when raised.

A low-profile power unit, low placement of the lower cross brace, and an outer C-channel rail assembly also contribute to excellent visibility.

A soft urethane twist grip is solidly mounted to the truck console to provide excellent stability for the operator during travel, plugging and braking. Controls for raise/lower, horn and emergency disconnect are conveniently located for efficient operation and minimal operator fatigue.

The steering wheel is angled at 10° and recessed to maximise the work area and reduce steer effort. The steering wheel and spinner knob are covered with soft urethane to reduce grip force and insulate against vibration. Control location keeps the operator's posture neutral at all times.

The anti-fatigue floor mat, made of a microcellular composition, absorbs shock and vibration. The brake pedal has a low-profile design and is flush with the floor mat when depressed.

Heavy-duty side gates, with three horizontal and one vertical support rail, communicate security to the operator. For additional safety, cut-out switches disengage truck operation when gates are raised. Two work lights, two dome lights and a two-speed fan are optional. Power-on key prevents unauthorised operation of the truck; start position initialises truck self-test. The information display panel provides concise, clear feedback for the operator during truck operation.

Access 1 2 3®

The Access 1 2 3 Comprehensive System Control is a modular communications and control system. It monitors all on-board sensors, makes decisions based on the sensor readings, and subsequently, controls all system movements safely and smoothly. All four modules are in constant communication with each other via a CAN (Control Area Network) bus so that real-time information is accessible to the system at all times.

- Interactive Display Module
- Traction Control Module
- Vehicle Control Module
- Steering Control Module

The display module provides concise, clear feedback for the operator. The display includes a full featured on-board service tool so service engineers can actively view inputs and outputs during truck operation. No laptop or service terminal is required.

Truck performance specifications (maximum travel speed, coast, plugging, acceleration, travel speed at height, and low speed lowering) are adjustable using Access 1 2 3. This enables customising truck performance to meet specific application or operator requirements.

Drive System

Crown has applied the latest generation AC drive system, enhanced with Access 1 2 3 technology. A Crown manufactured drive unit uses spiral bevel and helical gears from motor to drive wheel axle.

Fixed, mounted drive motor does not rotate minimising wear on electrical cables.

Crown's AC Drive system dramatically improves travel speeds, acceleration and deceleration, thus increasing productivity.

The standard linear speed control provides smooth travel speed transition as lift heights change and increases productivity.

Intelligent Braking System (IBS)

Crown's patented Intelligent Braking System combines motor braking with optimum amounts of friction braking. The appropriate level of braking is applied dependent upon platform height, direction of travel, and truck weight. Braking force is automatically reduced as height increases and speed decreases.

Optimum braking for the right elevation gives operators more confidence and better control, while eliminating abrupt stops and reducing platform sway. Braking can also be accomplished by proportional plugging which permits the operator to control the rate of deceleration when extended stopping distance is preferred.

Steering

Standard on the SP 3500 Series is electronic steering that is microprocessor based. Steering wheel rotation provides smooth, operator feedback. Steer effort is minimal, lock to lock is 4.5 turns. Drive wheel rotates a full 180° for maximum manoeuvrability. Auto centring drive tyre for trucks equipped with rail guidance.

Hydraulics

Heavy-duty motors and gear pumps are assembled into an integral unit. Crown manufactured solenoid type manifolds with built-in check and relief valves. Two-speed lowering/lifting with proportional soft-start/stop is standard on both models.

Low-speed lowering/lifting is adjustable. Soft-start lowering feature reduces the harshness at the beginning and end of the lowering cycle. Maximum lowering speed is regulated by a pressure compensating flow control valve.

Velocity fuses are used in all cylinders to stop lowering should the speed exceed a preset value due to a line rupture. A hydraulic accumulator is used to cushion raise and lower functions. Manual lowering control allows lowering of platform from ground level. Oil reservoir is designed with a 100 mesh screen at the fill location, a suction strainer, spin-on type 10 micron return line filter and a magnetic drain plug.

Mast Assembly

High visibility two- and three-stage masts feature nested rail design with lift cylinders positioned behind mast rails. Three-stage mast has a low centre cylinder for free lift. Routing of hoses and cables optimises visibility through mast. Built-in sensors detect chain slack and shut down primary lower function. Exclusive staging bumpers virtually eliminate platform impact as the mast stages.

Negative rail drop allows shimming of mast rollers without major disassembly.

Power Unit

Power unit is fabricated from heavy-gauge steel. Lower skirt is 230 mm high and 20 mm thick for component protection. Rugged steel doors suspended on heavy-duty hinges protect power unit components. Doors swing wide or can be lifted off for unrestricted service access. Battery side covers are all steel. An optional battery retainer interlock switch is available. Top battery cover allows access for service.

Safety Shield

Safety glass to protect operator from chains and moving parts while in his normal operating position. Optional wire mesh shield (standard on freezer conditioning).

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.

