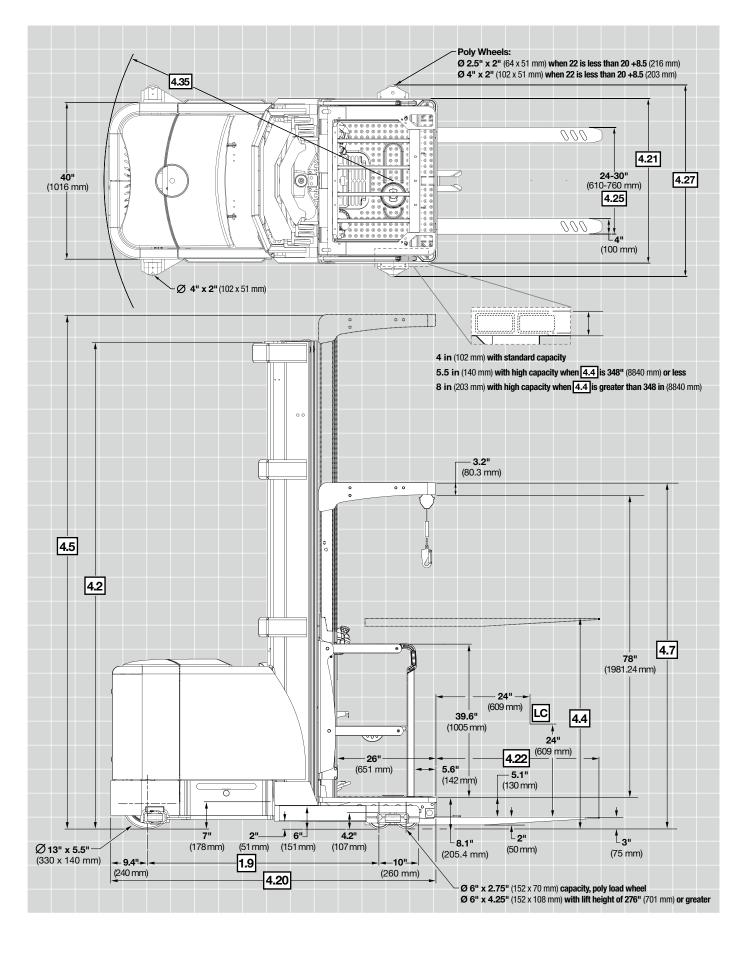


# **SP 1500** SERIES

Specifications Stockpicker



# 



SP 1510 Fixed Fork Specifications

					1		Imp	erial			Me	etric	
	1.1	Manufacturer					iinp		n Equipme	nt Corpora			
<b>_</b>	1.2	Model							SP 1				
art	1.3	Power Source	Electric		Volt				24/3	6/48			
Σ	1.4	Operator Type							Stock				
ji	1.5	Rated Capacity*		Q	lbs/kg		3,0	00			13	360	
list	1.6	Load Center		с	in/mm		2	4			60	00	
Distinguishing Mark	1.8	Load Distance		х	in/mm		1	3			3	36	
isti		Battery Compartment				В	С	D	E	В	С	D	E
	1.9	Wheelbase	TL	у	in/mm	52	54.3	56	58.6	1320	1380	1420	1490
			Π	у	in/mm	51.3	53.6	55.2	57.8	1305	1360	1405	1470
	2.1	Service Weight**	Less Battery		lbs/kg	6,394	6,239	6,261	6,305	2900	2830	2840	2860
pt	2.2	Axle Load**	W. Load. Front/Rear		lbs/kg	7,006/	7,352/	7,846/	8,287/	3178/	3335/	3559/	3759/
Weight					100/119	18,360	18,528	18,770	19,010	8328	8404	8514	8623
5	2.3	Axle Load**	W.O. Load, Front/Rear		lbs/kg	10,946/	11,136/ 8,669	11,524/	11,805/	4965/ 3786	5051/ 3932	5227/ 4090	5354/ 4272
2	0.1	Tiree			-	8,347	0,009	9,017	9,418		3932	4090	4212
Tires/Wheels/ Chassis	3.1 3.2	Tires Tire Size	Front		in /mana		Ø6x2	) 75***	polyure	linane	Q 150	v 70 ***	
/Wh	3.2	Tire Size	Rear		in/mm in/mm		Ø 13					x 70 *** x 140	
G	3.5	Wheels	Number Front/Back (x=Dri	ven)			015	X J.J	4/-	1 v	0 000	7 140	
-	4.2	Mast Collapsed Height		h1	in/mm				4/				
	4.2	Free Lift		h2	in/mm								
	4.3	Lift Height		h3	in/mm				see table 1	2 and 3			
	4.5	Mast Extended Height		h4	in/mm				300 (00)0 1	, 2, and 0			
	4.5	Overhead Guard Height		h6	in/mm								
	4.8	Stand Height		h7	in/mm		8.	1			21	06	
	4.14	Stand Height		112	in/mm		0.		see table 1	2 and 3			
	4.15	Fork Height		13	in/mm		3	3	000 10010	, 2, and 0	75	5.5	
Dimensions	4.20	Head Length	TL	12	in/mm	74.7	77	, 78.7	81.3	1895	1955	2000	2065
nsi	1.20	nouu Longui	Π	12	in/mm	75.5	77.7	79.4	82	1915	1975	2015	2085
a e	4.21	Overall Width	Front/Rear b1/		in/mm	10.0		10.1	02	1010	1010	2010	2000
ā	4.21a	Overall Width		b9	in/mm				see table 1	, 2, and 3			
	4.22	Fork Dimensions	Standard LxW		in/mm		42x	4x2			1065x	102x51	
	1.22		Optional Length		in/mm	30.3		8, 54, 60, 7	2 84	760/915/99		0/1370/1525/	/1830/2135
	4.25	Fork Spread	· · ·	b5	in/mm		24-		2,01			-762	
	4.27	Width Across Guide Roller		b6	in/mm				see table 1	, 2, and 3			
	4.31	Ground Clearance	With Load Below Mast	m1	in/mm		2	)			5	51	
	4.35	Turning Radius	TL	Wa	in/mm	70	72	74	77	1780	1835	1875	1945
			Π	Wa	in/mm	69	72	73	76	1760	1815	1855	1925
	5.1	Travel Speed	w./w.o. load	n	nph/kph				see ta	ble 4			
	5.2	Lift Speed	24v w./w.o. load	fp	om - m/s		43/	71			0.22	/0.36	
			36v w./w.o. load	fp	om - m/s		85/	115			0.43	/0.58	
ta			36v Optional w./w.o. loa	ad fp	om - m/s		85/	130			0.43	/0.66	
Data			48v w./w.o. load		om - m/s		98/				0.50		
g	5.3	Lowering Speed	24v w./w.o. load	·	om - m/s		80/				0.41		
nat			36v w./w.o. load		om - m/s			/80				/0.41	
for			48v w./w.o. load	·	om - m/s		80/				•	/0.41	
Performan			24v Optional		om - m/s		11					56 †	
-			36v Optional		om - m/s		20	-				)4 †	
	5.10	Service Brake	48v Optional		om - m/s		20	י ט	regene	rativa	1.(	)4 <sup>†</sup>	
	5.10	Parking Brake							electro-n				
	6.1	Traction Motor	24v 60 min. rating		HP/kW		5.	2	0.0000-11	agriotio	3	.9	
	0.1		36v 60 min. rating		HP/kW		6.					.8	
			48v 60 min. rating		HP/kW		6.				•	.8	
2	6.2	Pump Motor	24v 15% on time		HP/kW		2					5	
oto			36v 15% on time		HP/kW		2					5	
Electric Motor			48v 15% on time		HP/kW		2					5	
tric	6.3	Max. Battery Box Size	LxW	бун	in/mm	38.4 x	38.4 x	38.7 x	38.7 x	976 x 362	976 x 413	983 x 462	
lec		-				14.25 x 31		18.2 x 31	20.75 x 31	x 787	x 787	x 787	x 787
ш	6.4	Battery Voltage			V				24/3				
		<b>.</b>	max ar	<u> </u>	Ah	4 504			1,680/1,		1	1	
	6.5	Battery Weight	24v minimu		lbs/kg	1,521	2,000	2,280	2,600	690	910	1035	1180
		Duive Unit	36v and 48v minimu	um	lbs/kg	1,700				775			
	8.1	Drive Unit							AC tra				

\*Max Capacity: 1250 kg (2,755 lb) for Collapsed Heights up to 4090 mm (161 in) 1100 kg (2,420 lb) for Collapsed Heights greater than 4090 mm (161 in) and up to 4345 mm (171 in)
 \*\* Value shown with TT mast 6095 mm (240 in) lift height, 2720 mm (107 in) collapsed height, 1065 mm (42 in) overall width and platform width.
 \*\*\* Ø 152 x 108 mm (6 x 4.25 in) if max lift height [4.4] is 7010 mm (275 in) or greater.
 † 1.04 m/s (205 fpm) if weight is < 680 kg (1500 lb) If weight is > 680 kg (1500 lb), lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed is 0.56 m/s (110 fpm)

SP 1510 Fixed Fork Specifications

#### TABLE 1 - SP1510 Standard Straddle

								TL N	∕last			
4.2	Mast	Collapsed height	h1	in mm	89.5	2275	95	2415	107	2720	119	3025
4.3	Free Lift		h2	in mm	3	75	6	150	6	150	6	150
4.4	Lift Height		h3	in mm	136	3450	148	3755	172	4365	194	4925
4.5	Mast	Extended height	h4	in mm	223	5665	235	5970	260	6605	281	7140
4.7	Overhead Guard Height		h6	in mm	86	2190	86	2190	86	2190	86	2330
4.14	<b>Operator Stand Height</b>	Raised	h12	in mm	142	3606	154	3911	178	4521	200	5080
4.21	Overall Width	Front/rear	b2	in mm	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065
4.21a	Overall Width	Operator platform		in mm	42	1065	42	1065	42	1065	42	1065
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	45.5 to 65.25	1156 to 1658						

					TL	Mast			Π	Mast		
4.2	Mast	Collapsed height	h1	in mm	131	3330	89.5	2275	95	2415	107	2720
4.3	Free Lift		h2	in mm	6	150	3	75	8	200	15	380
4.4	Lift Height		h3	in mm	214	5435	195	4950	210	5330	240	6095
4.5	Mast	Extended height	h4	in mm	301	7650	283	7190	298	7570	328	8335
4.7	Overhead Guard Height		h6	in mm	86	2330	86	2190	86	2190	86	2330
4.14	<b>Operator Stand Height</b>	Raised	h12	in mm	220	5588	201	5105	216	5486	246	6248
4.21	Overall Width	Front/rear	b2	in mm	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065
4.21a	Overall Width	Operator platform		in mm	42	1065	42	1065	42	1065	42	1065
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	45.5 to 65.25	1156 to 1658						

### TABLE 2 - SP1510 Standard Straddle

								1 TT	Mast			
4.2	Mast	Collapsed height	h1	in mm	119	3025	125	3175	131	3330	143	3635
4.3	Free Lift		h2	in mm	27	685	33	840	39	1135	51	1295
4.4	Lift Height		h3	in mm	276	7010	294	7465	312	7920	330	8380
4.5	Mast	Extended height	h4	in mm	364	9250	382	9705	400	10160	418	10620
4.7	Overhead Guard Height		h6	in mm	86	2330	86	2330	86	2330	86	2330
4.14	Operator Stand Height	Raised	h12	in mm	282	7162	300	7620	318	8077	336	8534
4.21	Overall Width	Front/rear	b2	in mm	48/48	1220/1220	54/54	1375/1375	54/54	1375/1375	54/54	1375/1375
4.21a	Overall Width	Operator platform		in mm	48	1220	54	1375	54	1375	54	1375
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	48.75 to 71.25	1238 to 1809	54.75 to 77.25	1390 to 1962	54.75 to 77.25	1390 to 1962	56.75 to 79.25	1441 to 2013

			TT Mast									
4.2	Mast	Collapsed height	h1	in mm	149	3785	155	3935	161	4090	171	4345
4.3	Free Lift		h2	in mm	57	1450	63	1600	69	1755	79	2005
4.4	Lift Height		h3	in mm	348	8835	366	9295	384	9750	402	10210
4.5	Mast	Extended height	h4	in mm	436	11075	454	11535	473	12015	490	12450
4.7	Overhead Guard Height		h6	in mm	86	2330	86	2330	86	2330	86	2330
4.14	Operator Stand Height	Raised	h12	in mm	354	8991	372	9449	390	9906	408	10363
4.21	Overall Width	Front/rear	b2	in mm	60/60	1525/1525	60/60	1525/1525	64/64	1625/1625	64/64	1625/1625
4.21a	Overall Width	Operator platform		in mm	60	1525	60	1525	64	1625	64	1625
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	60.75 to 83.25	1543 to 2115	60.75 to 83.25	1543 to 2115	64.75 to 87.25	1645 to 2216	64.75 to 87.25	1645 to 2216

SP 1510 Fixed Fork Specifications

#### TABLE 3 - SP1510 Narrow Straddle

									П	Mast				
4.2	Mast	Collapsed height	h1	in mm	125	3175	131	3330	143	3635	149	3785	155	3935
4.3	Free Lift		h2	in mm	33	840	39	990	51	1295	57	1450	63	1600
4.4	Lift Height		h3	in mm	294	7465	312	7920	330	8380	348	8835	366	9295
4.5	Mast	Extended height	h4	in mm	382	9705	400	10160	418	10620	436	11075	454	11535
4.7	<b>Overhead Guard Height</b>		h6	in mm	86	2330	86	2330	86	2330	86	2330	86	2330
4.14	<b>Operator Stand Height</b>	Raised	h12	in mm	300	7620	318	8077	336	8534	354	8991	372	9449
4.21	Overall Width	Front/rear	b2	in mm	48/48	1220/1220	48/48	1220/1220	48/48	1220/1220	54/54	1375/1375	54/54	1375/1375
4.21a	Overall Width	Operator platform		in mm	48	1220	48	1220	48	1220	54	1375	54	1375
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	48.75 to 71.25	1238 to 1809	48.75 to 71.25	1238 to 1809	48.75 to 71.25	1238 to 1809	56.75 to 79.25	1440 to 2013	56.75 to 79.25	1440 to 2013

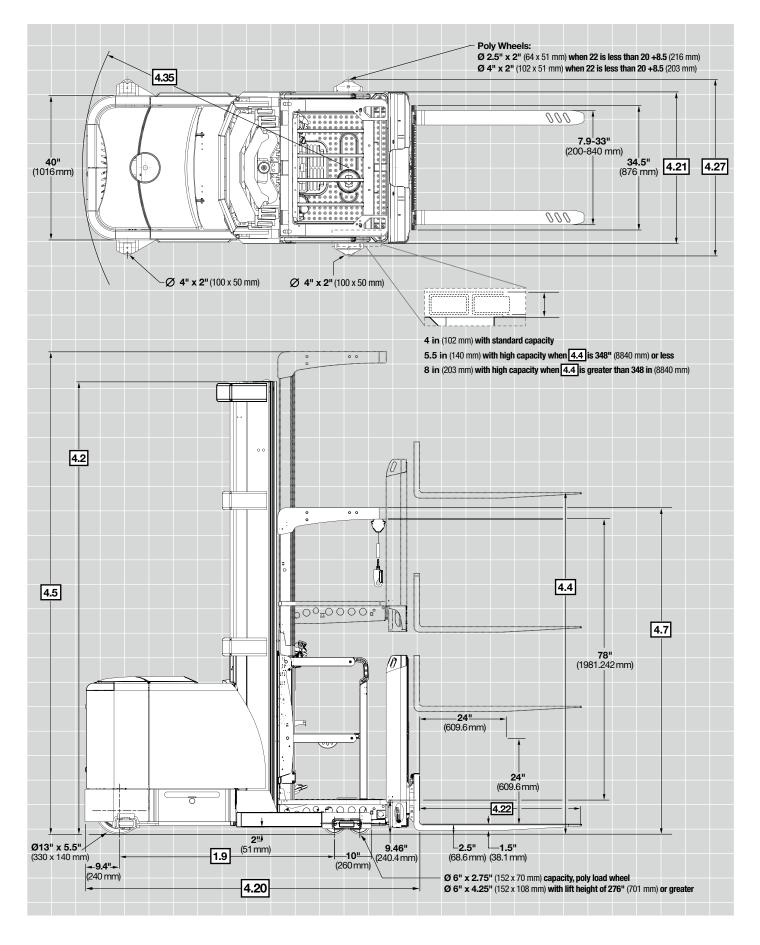
#### **TABLE 4 - Travel Speeds**

	Standard Straddle < 240" (6095 mm) Lift Height and All Narrow Straddle Lift Heights											
	Power Unit First (I	l < 12 degrees PUF) Travel Speed Loaded										
Imperi	al	Metric										
Fork Height (in)	mph	Fork Height (mm)	km/h									
0-24	7.5	0-610	12									
24-40	7.5-6.9	610-1016	12.0-11.1									
40-64	6.9-6.0	1016-1625	11.1-9.6									
64-120	6.0-3.8	1625-3048	9.6-6.0									
120-152	3.8-2.7	3048-3861	6.0-4.3									
152-176	2.7-1.5	3861-4470	4.3-2.4									
176-192	1.5	4470-4877	2.4									
192-216	1.5	4877-5486	2.4									
216-max	1.5	5486-max	2.4									

#### **High Capacity Standard Straddle** Lift Heights > = 240" (6095 mm) Steered Wheel < 12 degrees Power Unit First (PUF) Travel Speed Empty/Loaded Metric Imperial Fork Height (in) Fork Height (mm) mph km/h 7.5 0-610 12 0-24 24-40 7.5-7.1 610-1016 12.0-11.4 1016-1625 11.4-10.5 40-64 7.1-6.5 64-120 6.5-4.5 1625-3048 10.5-7.2 3048-3861 120-152 4.5-3.4 7.2-5.5 152-176 3.4-2.6 3861-4470 5.5-4.2 4470-4877 4.2-3.5 176-192 2.6-2.2 192-216 2.2-1.5 4877-5486 3.5-2.4 216-max 1.5 5486-max 2.4

- <sup>(1)</sup> Top travel speed is reduced to 80% at a 12° steering angle, beyond 12° travel speeds gradually reduce down to 50% of top travel speed. Steering angle is automatically limited to within 12° straight travel as indicated below:
  - Standard Capacity above 192" (4877 mm)
- <sup>(2)</sup> For guided trucks, from 0-60 inches (0-1524 mm), travel speeds in the Forks First (FF) direction of travel are approximately 0.5 mph (0.8 km/h) less than travel speeds in the Power Unit First (PUF) direction. Forks First travel for non-guided trucks will be limited to a max travel speed of 5.5 mph (8.9 kmp)

# 



SP 1520 Aux Lift

Specifications

						Imp	erial			Me	etric		
	1.1	Manufacturer					Crow	n Equipme		ation			
ť	1.2	Model				-		SP 1					
Distinguishing Mark	1.3	Power Source	Electric	Volt				24/3					
ng	1.4	Operator Type		lla a () . a.			00	Stock	DICKER				
shi	1.5		Q	lbs/kg			200				000		
gui	1.6 1.8		C C X	in/mm in/mm			4 3				00 36		
١	1.0	Battery Compartment	<u> </u>		В	C	D	E	В		50 D	E	
ő	1.9	Wheelbase	TL y	in/mm	52	54	56	59	1320	1380	1420	1490	
	1.0		ТТ у	1	51	54	55	58	1305	1360	1405	1470	
	2.1	Service Weight**	Less Battery	lbs/kg	6,845	6,702	6,724	6,768	3105	3040	3050	3070	
Weight	2.2	Axle Load**	W. Load, Front/Rear	lbs/kg	6,391/	6,762/	7,271/	7,736/	2899/	3067/	3298/	3509/	
ē			W. LOad, HOH/Heal	ID5/Kg	18,777	18,918	19,145	19,361	8517	8581	8684	8782	
5	2.3	Axle Load**	W.O. Load, Front/Rear	lbs/kg	10,342/ 9,967	10,554/ 10,265	10,957/ 10,598	11,263/ 10,975	4691/ 4521	4787/ 4656	4970/ 4807	5109/ 4978	
3	3.1	Tires			3,307	10,200	10,000	polyure		4000	4007	4370	
sis	3.2	Tire Size	Front	in/mm		Ø6x	2.75***	porjan		Ø 152	x 70 ***		
has	3.3	Tire Size	Rear	in/mm			x 5.5				) x 140		
Chassis	3.5	Wheels	Number Front/Back (x=Driven)					4/	1x		-		
	4.2	Mast Collapsed Height	h1	in/mm		6			0			а. -	
	4.3	Free Lift	h2	in/mm	]								
	4.4	, v	h3	in/mm	]			see table	1 and 2				
	4.5		h4	in/mm									
	4.7	Overhead Guard Height	h6	in/mm									
	4.8	Stand Height	Lowered h7	in/mm		9.	45			2	40		
	4.14	Stand Height	Elevated h12	in/mm				see table	1 and 2				
Suc	4.15	Fork Height	Lowered h13	in/mm	0.4		3	00	0105	1	5.5	0000	
<u>s</u>	4.20	Head Length	TL 12 Π 12	in/mm in/mm	84 85	86 87	88 88	90 91	2125 2145	2185 2200	2225 2245	2290 2310	
Dimensions	4.21	Overall Width	Front/Rear b1/b2	in/mm	00	01	00	91					
	4.21a	Overall Width	Operator Platform b9	in/mm	1			see table	le 1 and 2				
	4.22	Fork Dimensions	Standard LxWxT	in/mm		45x4	x1.5		1145x102x38				
			Optional Length	in/mm			9,42,48			0/1070/1220			
	4.25	Fork Spread	Min Max. b5	in/mm		8.0	-33						
	4.27	Width Across Guide Roller	In .25" Increments b6	in/mm				see table	1 and 2				
	4.31	Ground Clearance	With Load Below Mast m1	in/mm			2	·		1	51		
	4.35	Turning Radius	TL Wa	in/mm	70	72	74	77	1780	1835	1875	1945	
	E 1	Trough Crossed	TT Wa	in/mm	69	72	73	76	1760	1815	1855	1925	
	5.1	Travel Speed	w./w.o. load	mph/kph			/71	see ta		0.00	/0.00		
	5.2	Lift Speed	24V w./w.o. load 36V w./w.o. load	fpm - m/s fpm - m/s		43,	115				2/0.36		
			36V Optional w./w.o. load	fpm - m/s			130				3/0.66		
			48V w./w.o. load	fpm - m/s			140				)/0.71		
ata	5.3	Lowering Speed	24V w./w.o. load	fpm - m/s			/80				/0.41		
o e			36V w./w.o. load	fpm - m/s			/80			0.41	/0.41		
Performance Data			48V w./w.o. load	fpm - m/s			/80				/0.41		
Ĩ			24v Optional	fpm - m/s		11	0 †			0.8	56 <sup>†</sup>		
Ē			36v Optional	fpm - m/s		20	-				D4 †		
Ье			48v Optional	fpm - m/s	ļ	20	5†			1.0	D4 †		
		Aux Mast Travel Speed	w./w.o. load	mph/kmh	00.1	00.1	00.1	Si					
		Aux Mast Lift Speed	w./w.o. load	fpm - m/s	39.4	39.4	39.4	39.4	0.2	0.2	0.2	0.2	
	5 10	Aux Mast Lower Speed	w./w.o. load	fpm - m/s	18.7	18.7	18.7	18.7 regene	0.095	0.095	0.095	0.095	
	5.10 5.11	Service Brake Parking Brake											
	6.1	Traction Motor	24v 60 min. rating	HP/kW		5	.2	0.0000-1	tro-magnetic 3.9				
			36v 60 min. rating	HP/kW			.4		4.8				
			48v 60 min. rating	HP/kW	1		.4				.8		
5	6.2	Pump Motor	24v 15% on time	HP/kW			0				15		
Jot			36v 15% on time	HP/kW		2	0				15		
2 0			48v 15% on time	HP/kW		r	0			1	15		
Ĕ	6.3	Max. Battery Box Size	LxWxH	VxH in/mm 38.4 x 38.4 x 38.7 x 38.7 x 976 x 362 976 x 413 14.25 x 31 16.25 x 31 18.2 x 31 20.75 x 31 x 787 x 787						983 x 5			
	0.4	Battery Voltage			14.25 X 31	15 x כ2.סו ן	10.2 X 31			x 787	x 787	x 787	
Шĕ			L	V         24/36/48           mp         Ah         1,690/1,240/930									
Electric Motor	6.4	, <b>.</b>	may amp	Δh									
Elec			24v minimum	Ah Ibs/ka	1,520				1				
Elec	6.5		max amp     24v     36v and 48v	Ah Ibs/kg Ibs/kg	1,520 1,700	2,000	2,280	2,600	690 775	910	1035	1180	

 \*Max Capacity: 1250 kg (2755 lb) for Collapsed Heights up to 4090 mm (161 in) 1100 kg (2420 lb) for Collapsed Heights greater than 4090 mm (161 in) and up to 4345 mm (171 in)
 \*\* Value shown with TT mast 6905 mm (272 in) lift height, 2720 mm (107 in) collapsed height, 1220 mm (48 in) overall width and platform width.
 \*\* Ø 152 x 108 mm (6 x 4.25 in) if max lift height [4.4] is 885 mm (271 in) or greater.
 † 1.04 m/s (205 fpm) if weight is < 680 kg (1500 lb) If weight is > 680 kg (1500 lb), lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases based on measured weight (at 1135 kg (2500 lb) lower speed linearly decreases lower is 0.56 m/s (110 fpm)

SP 1520 Aux Lift

#### TABLE 1 - SP1520 Standard Straddle

						TL N	∕last					
4.2	Mast	Collapsed height	h1	in mm	91	2315	95	2415	107	2720	119	3025
4.3	Free Lift		h2	in mm	34.5	875	37.5	950	37.5	950	37.5	950
4.4	Lift Height		h3	in mm	167	4240	179	4545	203	5155	225	5715
4.5	Mast	Extended height	h4	in mm	224	5690	236	5995	260	6605	282	7165
4.7	Overhead Guard Height		h6	in mm	88	2240	88	2240	94	2380	94	2380
4.14	Operator Stand Height	Raised	h12	in mm	142	3605	154	3910	178	4520	200	5080
4.21	Overall Width	Front/rear	b2	in mm	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065
4.21a	Overall Width	Operator platform		in mm	42	1065	42	1065	42	1065	42	1065
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	42.9 to 65.4	1090 to 1661						

					TL	Mast			П	Mast		
4.2	Mast	Collapsed height	h1	in mm	131	3330	91	2315	95	2415	107	2720
4.3	Free Lift		h2	in mm	37.5	950	34	830	38	965	45	1145
4.4	Lift Height		h3	in mm	245	6220	227	5765	242	6145	272	6905
4.5	Mast	Extended height	h4	in mm	302	7675	284	7215	299	7595	329	8360
4.7	<b>Overhead Guard Height</b>		h6	in mm	94	2380	88	2240	88	2240	94	2380
4.14	<b>Operator Stand Height</b>	Raised	h12	in mm	220	5590	202	5130	217	5510	247	6260
4.21	Overall Width	Front/rear	b2	in mm	42/42	1065/1065	42/42	1065/1065	42/42	1065/1065	48/48	1220/1220
4.21a	Overall Width	Operator platform		in mm	42	1065	42	1065	42	1065	48	1220
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	42.9 to 65.4	1090 to 1661	42.9 to 65.4	1090 to 1661	42.9 to 65.4	1090 to 1661	48.8 to 71.3	1238 to 1809

#### TABLE 2 - SP1520 Standard Straddle

									Π	Mast				
4.2	Mast	Collapsed height	h1	in mm	119	3025	125	3175	131	3330	143	3635	149	3785
4.3	Free Lift		h2	in mm	57	1445	63	1600	69	1750	81	2055	87	2205
4.4	Lift Height		h3	in mm	308	7820	326	8280	344	8735	362	9190	380	9650
4.5	Mast	Extended height	h4	in mm	365	9275	383	9730	401	10190	419	10645	437	11100
4.7	<b>Overhead Guard Height</b>		h6	in mm	94	2380	94	2380	94	2380	94	2380	94	2380
4.14	<b>Operator Stand Height</b>	Raised	h12	in mm	283	7188	301	7645	319	8100	337	8550	355	9015
4.21	Overall Width	Front/rear	b2	in mm	54/54	1375/1375	54/54	1375/1375	56/56	1425/1425	60/60	1525/1525	60/60	1525/1525
4.21a	Overall Width	Operator platform		in mm	54	1375	54	1375	54	1375	60	1525	60	1525
4.27	Width Across Guide Rollers	In 6.5 mm increments	b6	in mm	54.7 to 77.2	1389 to 1961	54.7 to 77.2	1389 to 1961	56.7 to 79.2	1440 to 2012	60.8 to 83.3	1544 to 2116	60.8 to 83.3	1544 to 2116

#### **TABLE 3 - Travel Speeds**

Standard and Narrow Straddle												
Steered Wheel < 12 degrees Power Unit First (PUF) Travel Speed Empty/Loaded												
Imperial Metric												
Fork Height (in) mph Fork Height (mm) km/h												
0-24	7.5	0-610	12.0									
24-40	7.5	610-1016	12.0									
40-64	7.5-6.0	1016-1625	12.0-9.6									
64-120	6.0-3.8	1625-3048	9.6-6.1									
120-152	3.8-2.6	3048-3861	6.1-4.2									
152-176	2.6-1.8	3861-4470	4.2-2.9									
176-192	1.8-1.5	4470-4877	2.9-2.4									
192-216	1.5	4877-5486	2.4									
216-max	1.5	5486-max	2.4									

- <sup>(1)</sup> Top travel speed is reduced to 80% at a 12° steering angle, beyond 12° travel speeds gradually reduce down to 50% of top travel speed. Steering angle is automatically limited to within 12° straight travel as indicated below:
  - Standard Capacity above 192" (4877 mm)
- (2) For guided trucks, from 0-60 inches (0-1524 mm), travel speeds in the Forks First (FF) direction of travel are approximately 0.5 mph (0.8 km/h) less than travel speeds in the Power Unit First (PUF) direction. Forks First travel for non-guided trucks will be limited to a max travel speed of 5.5 mph (8.9 kmp)

### SP 1500 Series

#### **Technical Information**

#### **Standard Equipment**

- 1. Crown's Gena Operating System
- 2. 24, 36, or 48-volt electrical system
- 3. High Speed Lift (48V models)
- 4. AC lift, traction, and steer motors
- 5. Linear height speed control gradually reduces travel speed as the platform raises
- 6. Variable Lift/Lower
- 7. Regenerative Lower
- 8. Programmable lift/lower cutouts (up to 6)
  - Zone Select: designate lift/lower cutouts into 3 separate zones
- 9. OnTrac Anti-Slip Traction Control
- Intelligent Braking System combines the optimum amount of friction and motor braking
- 11. Intelligent Steering System automatically slows the travel speed when in a turn and provides smooth, electronic steering
- 12. Manual Wire Sense (with optional wire guidance)
- 13. Connectivity\*
  - Cellular radio
  - Wireless truck firmware updates
  - Wireless truck data collection
- Push wireless settings
- 14. Integrated InfoLink Hardware \*\*
  - Smart card reader

  - Impact sensor
  - Wi-Fi radio
- 15. RAM Mounted 7" Color Touch Screen Display with Integrated Speaker
  - Optically bonded 2mm thick capacitive touch screen

\*\* Functional with an active InfoLink service plan.

- Integrated navigation buttons for freezer/cold storage applications
- Multiple languages
- Vehicle status icons

- Customizable dashboard
   with widgets
  - Steer Wheel Indicator/ Wire Guidance
  - Stopwatch
  - Battery Discharge Indicator
  - Hour Meter
  - Height
  - Clock
  - Odometer
  - Zone Select
  - Calculator
- Performance modes
- Safety Reminders
- Enhanced service diagnostics and troubleshooting
  - Detailed event information and
  - information and history
     Built-in analyzer
  - Step-by-step
  - calibrations - Features
  - programmability

    Adjust performance
  - settings
- Maintenance Mode\*\*
- Visual Inspection Checklist\*\*
- Impact strobe light and audible alert tone\*\*
- 16. Start-up and run-time diagnostics
- 17. Corrosion Conditioning
- 18. Heavy-duty power unit
  - Removable steel
     battery side covers
  - Hinged, lift-off steel power unit doors
  - · Hinged, top battery cover
  - 2" (51 mm) diameter battery rollers
- 19. Service panel with platform raise/lower buttons located behind power unit doors
- 20. Manual lowering valve located behind power unit doors
- 21. LED flashing light
- 22. Four battery compartment sizes: 14.6" (371 mm), 16.8" (427 mm), 18.5" (470 mm), 21.1" (536 mm)

\* Crown Lift Trucks with the Gena OS are connected products. Please see crown.com for the data use policy to see more.

- 23. SB 350 battery connector
- 24. Color-coded wiring
- 25. 13" (330 mm) diameter poly drive tire
- 26. 6" (152 mm) diameter tandem load wheels
- 27. Operator-centric platform
  - Visibility windows unmatched views at any elevation
    - Large upper window wire mesh screen
    - Exclusive middle window wire mesh screen
    - Center floorboard window (1510 model)
    - Side floorboard slot windows
    - Aux mast visibility windows (SP 1520 model) – wire mesh screen
  - Cantilever side gates with cutout switches and integrated gas strut, padding, and bungee cord
  - Premium anti-fatigue floor mat
  - 6" (152 mm) diameter brake pedal
  - Ergonomically designed operator controls
    - Right hand controls optimized for blending traction, lift/lower, and horn
      - i. Thumbwheel for traction control
      - ii. Paddle for lift/lower control
      - iii. Urethane covered hand grip with integrated horn button
  - Left hand steering control
    - i. Exclusive, adjustable horizontal and vertical tiller knob orientation
    - ii. Spinner knob with urethane pad inserts
    - iii. Urethane hand grip for stability in guided aisles

- 78" (1980 mm) tall operator compartment
- Built-in platform storage
- Integrated Work Assist
   mounting rails
  - Flexibility in positioning Work Assist accessories
  - Center mounted Work Assist organizer bin
- Retractable tether and body harness
- Alternative tether attachment locations
- Key switch
- USB charging port (5V, 2 amp)
- 28. 1.5" (38 mm) manual pallet grab
- 29. InfoPoint Component Maps

### **Optional Equipment**

(102 mm)

straddle

8. Fork Lengths

cutouts

Guard

window

window

platforms

9

7. Narrow Straddle

Xpress Lower
 High Speed Lift (36V models)
 Independent right and left

height adjustability of 4"

5. End-of-aisle control system

6. High capacity for standard

Pallet/Cart Detection

11. Keyless user access

conditioning)

12. Display navigation knob

(standard with freezer

13. Panoramic Lexan Overhead

14. Clear glass upper visibility

15. Clear poly middle visibility

16. Clear poly aux mast visibility

60" (1525 mm), and 64"

(1625 mm) wide operator

windows (SP 1520 model)

17. 48" (1220 mm), 54" (1370 mm),

10. Override switch for lift/lower

(wire or rail guidance required)

4. Wire and/or rail guidance

power unit facing control set

- 18. 84" (2130 mm) tall operator compartment
- LED Work Lights, LED Dome Lights, and Dual Operator Fans
- 20. LED Spotlights
  - OHG mounted, adjustableMast mounted
- 21. OHG extensions with built-in LED pick bay lights
- 22. Floor Spotlight Blue
- 23. Travel Alarm
- 24. Operator Backrest/Perch (SP 1520 model)
- 25. Full length side gates with cutout switches and integrated gas struts, padding, and bungee cord
- 26. Side gates raised travel and lift/lower functionality – programmable
- 27. Battery retainer interlock switch
- 28. V-Force Lithium-Ion Ready
- 29. Fuel Cell Ready
- 30. 4" (102 mm), 6" (152 mm), or variable width 1.5" – 6" (38 – 152 mm) manual pallet grab
- Variable width 1.5" 6" (38 152 mm) electric pallet grab
- 32. Freezer Conditioning

 Includes corrosion conditioning, ribbed floor mat, and wire mesh windows

- 33. Positive/Negative accessory cable (@ truck voltage)
- 34. UL EE Rating
- 35. 30" (762 mm) lanyard boom
- 36. Load wheel and drive tire compounds
- 37. Rearview Mirrors
- 38. Work Assist Accessories
  - Additional USB Power Supply
  - Scan Gun Holder
  - Ram Mount
  - Shrink wrap holder
  - Drink holder
  - Angled storage buckets
  - Clipboard

- Pocket inserts for standard organizer bin
- Cargo net
- Trash bracket
- Corner tray
- Center window bracket
- Gate mounted reusable bag
- Gate mounted pocket
- Large, magnetic mounted, power unit storage bin
- 39. Special paint
- 40. Fire extinguisher
- 41. Aluminum platform extension
- 42. Fork facing controls or dual facing (fork and power unit) controls (SP 1520 model)
- 43. Locking gates

#### Crown's Gena Operating System

Leverages Crown's proven, integrated control module structure to provide an enhanced user experience for operators, service technicians, and managers. Integrated InfoLink hardware allows for seamless enabling of Crown's telematics fleet management solution.

The Gena Operating System monitors inputs from all onboard sensors and responds instantaneously to control truck systems for safe, optimized performance. All control modules are in constant communication via a CAN (Control Area Network) bus so that real time information is accessible to the system at all times.

Standard safety and performance features further boost operator confidence and productivity, increasing throughput in narrow aisle applications. Real-time truck communication to the user through the Gena display equates to a powerful data-rich experience. Wireless firmware downloads ensure that the Gena operating system can be easily updated without requiring the use of a handset or laptop.

\* Functional with an active InfoLink service plan.

## 7" Touch Screen Display

The industrial grade, capacitive touch screen display provides intuitive menus and configurable widgets to enhance operator engagement, productivity and situational awareness. Large on-screen color graphics provide a bolstered visual interface while an integrated speaker provides unique audible tones specific to the onscreen communication.

Screens also offer contextsensitive assistance, including alerts, automated assistance, and dynamic real-time data. Safety reminder messages and an inspection checklist with visual cues\* provide industry exclusive capabilities that reinforce operator training to assist in facility safety.

A refined service menu enables viewing of multiple lift truck inputs and outputs and step-by-step calibrations with voltage readouts which assists in expediting trouble shooting. Technicians can quickly access service history, set up performance parameters, and enable or disable truck features through the display.

#### **Operator Platform**

The operator platform is designed for visibility, stability, and ergonomics to increase operator confidence and comfort. The operator platform features a large upper visibility window. A Crown-designed clear-visibility mast affords upper window visibility through the mast while also providing unobstructed peripheral views when the platform is lowered. The clear-visibility mast, with full free lift, extends both the upper and middle platform windows above the mast channels for unobstructed and unmatched visibility when elevated.

An industry exclusive standard mid-window provides exceptional power unit first visibility at height. Standard center floor and side floor slot windows allow for easy viewing under the platform and of the outriggers while elevated. The SP 1520 features standard aux mast windows which provide elevated forks first visibility below a raised load. An optional panoramic overhead guard provides unobstructed views above the truck while elevating.

The right-hand control set features a fixed, urethane covered hand grip. The hand grip has an integrated horn button and a thumbwheel at the end for traction control. A paddle near the hand grip actuates lift and lower. This design optimizes blending of functions without sacrificing operator stability. Traction, lift/ lower, and horn engagement can be seamlessly blended while maintaining a consistent solid point of contact. The left- hand control set features an industry exclusive tiller knob orientation adjustment which provides operator flexibility in all applications while still remaining a solid point of contact to bolster operator confidence. The tiller knob is angled at 10° to reduce steer effort in the vertical position. An optional 4" (102 mm) of independent height adjustability for the power unit facing controls provides even more operational flexibility and comfort.

The premium anti-fatigue platform cushion, made of a microcellular composition, absorbs shock and vibration. A 6" (152 mm) diameter brake pedal has a lowprofile design that is flush with the platform cushion when engaged for maximum comfort. Heavyduty side gates feature integrated gas struts for easy lifting and lowering as well as integrated padding for a comfortable leaning point when order picking. Both gates include a built-in bungee cord for quick access to pick labels or other frequently used paperwork. Standard interlock cut-out switches disengage truck operation when the side gates are raised; however, this functionality can be modified. Contact your Crown dealer.

A light/fan package option, consisting of two work lights, two dome lights, and two operator fans, provides enhanced operator comfort and confidence. Integrated Work Assist mounting rails in the platform structure provides flexibility in positioning accessories and work tools to improve operator efficiency. A USB charging port, organizer bin, and integrated storage compartments are also standard. A foot-applied and foot-released pallet clamp for use with pallets having center stringers is also provided.

### **Technical Information**

#### SP 1500 Series

#### SP 1500 Series

#### **Crown Drive System**

Crown's AC drive system, enhanced with Gena technology, provides exceptional travel speeds, acceleration and deceleration, thus increasing productivity. A Crown-manufactured drive unit uses spiral bevel and helical gears from motor to drive wheel axle. A fixed, mounted drive motor does not rotate which minimizes wear on electrical cables.

Standard linear height speed control provides smooth travel speed transitions as lift heights change, increasing productivity.

Standard OnTrac anti-slip traction control monitors truck dynamics, optimizes tractive effort, reduces spinning during acceleration, prevents lock-up during braking, and can extend tire life. It improves traction performance in wet, dusty, or cold storage conditions.

#### **Intelligent Steering**

Crown's intelligent steering system slows the truck automatically when the steer tiller is turned beyond 12° enabling superior truck stability during turning. The Gena operating system monitors the height of the operator platform, truck speed, and steer wheel position at all times. The tiller knob rotation provides smooth, operator feedback. Auto-centering of the drive tire occurs at start up.

#### Intelligent Braking

Crown's intelligent braking system combines variable motor braking with a three-step friction brake to optimize safety and comfort for the operator. 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. In addition, friction brake use is minimized, which prolongs brake life.

Braking can also be accomplished by proportional plugging, which permits the operator to control the rate of deceleration when extended stopping distance is preferred.

#### **Enhanced Hydraulics**

Heavy-duty AC pump motor and gear pump is assembled into an integral unit. Regenerative lowering, as well as variable lifting and lowering, are both standard on all voltage offerings.

A high-speed lift option, available for the 36V model, and standard lift performance on the 48V model, provide leading lift speeds. The Xpress Lower option, which is available for all voltages, more than doubles the standard lowering speeds to aid in the reduction of picking cycle times.

Hydraulic cylinder cushioning provides smooth and consistent lifting and lowering performance throughout the entire range of lift height which enhances operator comfort and confidence during operation.

#### **The Crown Mast Assembly**

High visibility two- and threestage masts feature a nested rail design with lift cylinders positioned behind the mast rails. The threestage mast has a compact center cylinder yoke design for enhanced visibility in the power unit direction. Integrated mast guides between the channels provide smooth and quiet operation while traveling. Routing of hoses and cables optimizes visibility throughout the mast. Built in sensors detect chain slack and shut down primary lower function if chain slack is detected. Negative rail drop allows for shimming of mast rollers without major disassembly.

#### Heavy-Duty Low Profile Power Unit

Power unit is fabricated from heavy-gauge steel. Lower skirt is 0.75" (19 mm) steel that runs 9" (228 mm) high for component protection. Rugged steel doors suspended on heavy-duty pin hinges cover power unit componentry. Doors swing wide for open access. Doors can be lifted off for unrestricted service access. Door fastening bolts have exclusive convex design that mates with concave door holes for faster alignment and installation. Lift-off battery side covers are all steel. An optional battery retainer interlock switch is available. Top battery access is available by lifting cover. Cover has integral support post. A standard panel is located behind the power unit doors to provide technicians with raise/ lower functionality of the platform.

#### Wheels and Tires

Polyurethane drive tire, 13" (330 mm) diameter x 5.5" (140 mm) wide x 8" (203 mm) hub diameter. Tandem load wheels are 6" (152 mm) diameter polyurethane x 2.8" (70 mm) wide (4.25" (108 mm) wide for high capacity trucks). Optional polyurethane aisle guide wheels are 2" (51 mm) wide with a 4" (102 mm) or 2.5" (64 mm) diameter.

#### Forks

2" (51 mm) thick x 4" (102 mm) wide forged steel. Fork spread (adjustable) 24" (610 mm) to 30" (760 mm). Standard length is 36" (915mm). Optional lengths available.

#### Warning Device Options Audible Alerts

Safety considerations and dangers associated with audible travel alarms include:

- Multiple alarms can cause confusion.
- Workers ignore the alarms after day-in and day-out exposure.
- Operator may transfer the responsibility for "looking out" to the pedestrians.
- Annoys operators and pedestrians.

#### **Other Options Available**

Contact factory for additional options.

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 vehicle, how it is equipped and the conditions of the operating area. Products and specifications are subject to change without notice.

# 

You can count on Crown to build lift trucks designed for safe operation, but that's only part of the safety equation. Crown encourages safe operating practices through ongoing operator training, safety-focused supervision, maintenance and a safe working environment. Go to crown.com and view our safety section to learn more.

# crown.com

Because Crown is continually improving its products, specifications are subject to change without notice.

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