

CROWN

Specifications

**WF 3000 Series
ST/SX 3000 Series**

Pedestrian Powered
Stacker

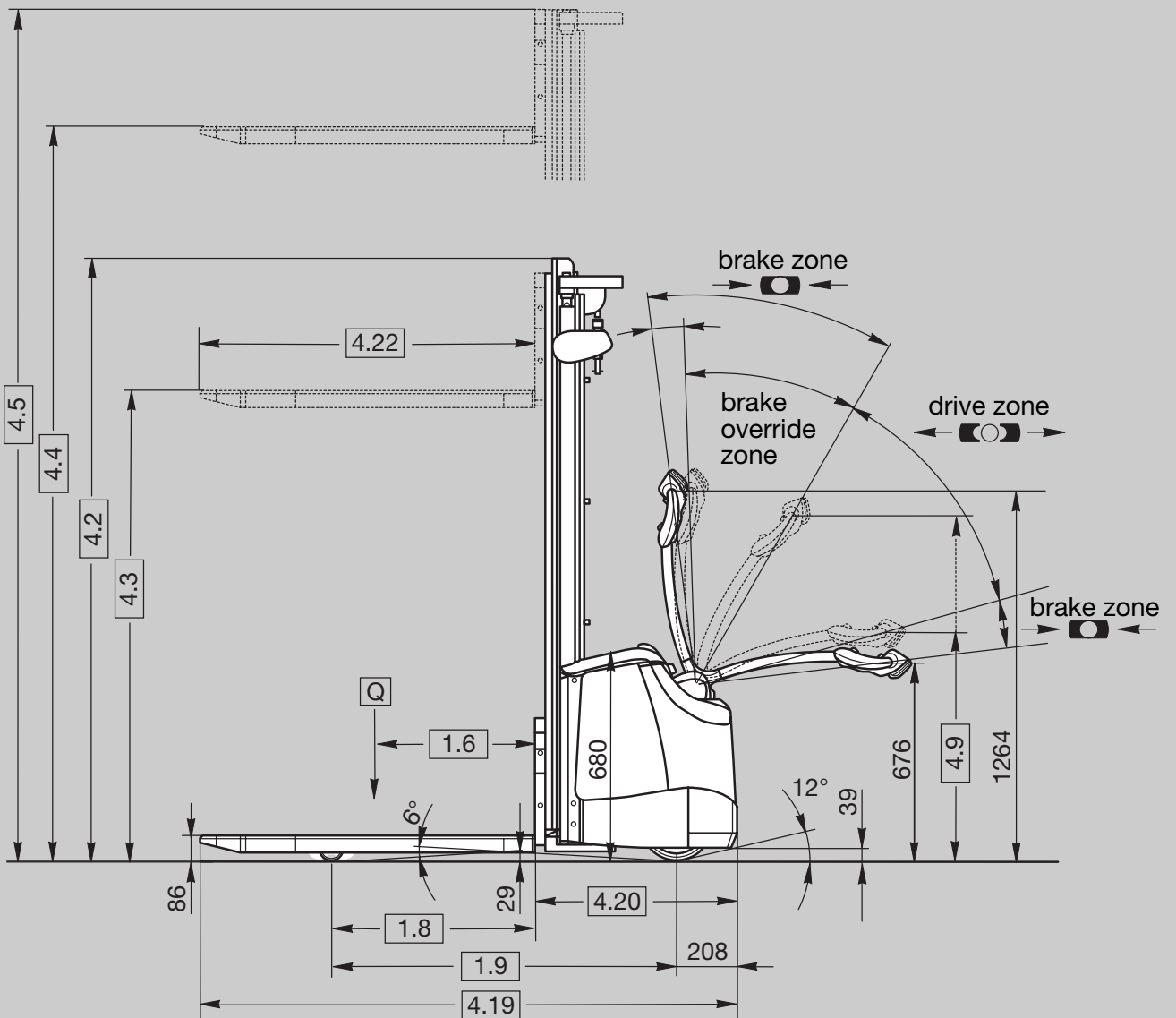
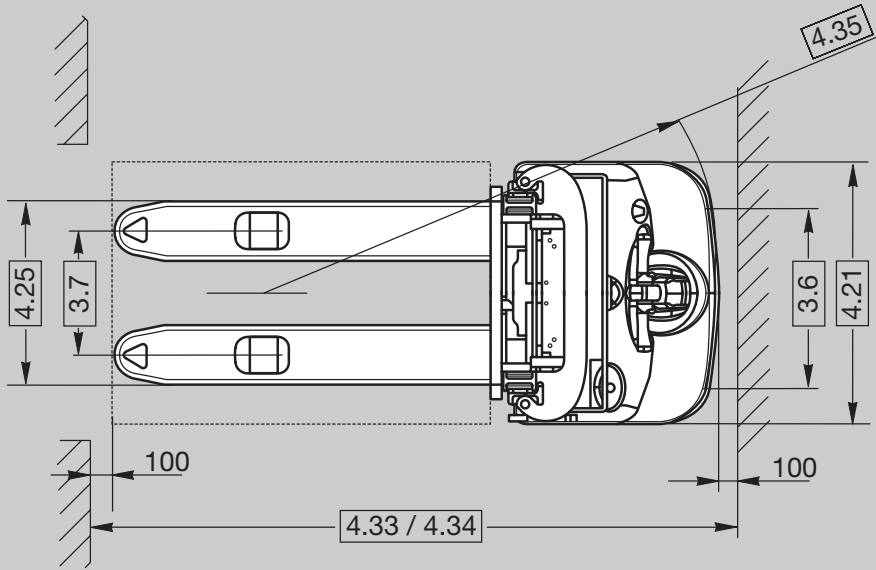
WF 3000

ST 3000

SX 3000

Series





General Information	1.1	Manufacturer	Crown Equipment Corporation													
	1.2	Model					WF3000-1.0 NT	WF3000-1.0 TL	WF3000-1.0 TF	WF3000-1.2 TL	WF3000-1.2 TF					
	1.3	Power	electric													
	1.4	Operator Type	pedestrian													
	1.5	Load Capacity		Q	t	1.0					1.2					
	1.6	Load Centre		c	mm	600										
	1.8	Load Distance		x	mm	698										
	1.9	Wheel Base		y	mm	1182										
	Weight	2.1	Weight	less battery		kg	see table 1									
2.2		Axle Load	with load front/rear 94 Ah MF		kg	564/1121	650/1198	659/1195	-	-						
			160 Ah Ind.		kg	-	712/1212	721/1209	-	-						
			180 Ah Ind.		kg	-	732/1216	741/1214	741/1407	751/1404						
2.3		Axle Load	w.o. load front/rear 94 Ah MF		kg	494/191	602/246	610/244	-	-						
			160 Ah Ind.		kg	-	664/260	672/258	-	-						
	180 Ah Ind.		kg	-	683/265	693/262	683/265	693/262								
Tyres	3.1	Tyre Type			mm	Rubber + Vulkollan/Vulkollan					Vulkollan					
	3.2	Wheel Size	front		mm	Ø 254 x 70					Ø 254 x 85					
	3.3	Wheel Size	rear		mm	Ø 82 x 104										
	3.4	Additional Wheels	castor wheel		mm	Ø 140 x 54										
	3.5	Wheels	no. (x=driven) front/rear			1x + 1/2										
	3.6	Track Width	front		b10	mm	510									
	3.7	Track Width	rear		b11	mm	382									
Dimensions	4.2	Mast	collapsed height		h1	mm	see table 1									
	4.3	Free Lift			h2	mm	see table 1									
	4.4	Lift Height			h3	mm	see table 1									
	4.5	Mast	extended height		h4	mm	see table 1									
	4.9	Tiller Arm Height	in drive position min./max.		h14	mm	779 / 1181									
	4.15	Lowered Fork Height			h13	mm	86									
	4.19	Overall Length			l1	mm	1843									
	4.20	Headlength			l2	mm	692									
	4.21	Overall Width	front		b1	mm	805									
	4.22	Fork Dimensions			thxwxl	mm	170 x 60 x 1150					186 x 60 x 1150				
	4.25	Width Across Forks			b5	mm	560 / 670									
	4.32	Ground Clearance	centre of wheelbase		m2	mm	29									
	4.33	Working Aisle Width	1000 x 1200 length		Ast	mm	2310									
4.34	Working Aisle Width	800 x 1200 length		Ast	mm	2243										
4.35	Turning Radius			Wa	mm	1401										
Performance	5.1	Travel Speed	w./w.o. load		km/h	5.0 / 5.5					5.5 / 6.0					
	5.2	Lift Speed	w./w.o. load		m/s	0.13 / 0.20					0.11 / 0.20					
	5.3	Lowering Speed	w./w.o. load		m/s	0.42 / 0.38										
	5.7	Gradeability	w./w.o. load, 30 min. rating		%	4.9 / 9.1					4.4 / 8.7					
	5.8	Max. Gradeability	w./w.o. load, 5 min. rating		%	8.4 / 15.7					9.5 / 19.4					
	5.10	Service Brake	electric													
Motors	6.1	Traction Motor	60 min. rating		kW	0.7					1.4					
	6.2	Lift Motor			kW	2.2										
	6.3	Max. Battery Box Size	DIN 43535 L-shape		lxwxh	mm	111 / 210 x 784 x 537									
	6.4	Battery Voltage	nominal capacity 5h rating		V/Ah	2x12V / 94 ^A					-					
					V/Ah	24 / 160 ^B					-					
					V/Ah	24 / 180 ^C										
6.5	Battery Weight	nominal + 5%		kg	72 ^A					-						
				kg	150 ^B					-						
				kg	172 ^C											
8.1	Type of Controller	drive			transistor											

^A Maintenance free battery pack

^B Industrial type 160 Ah capacity

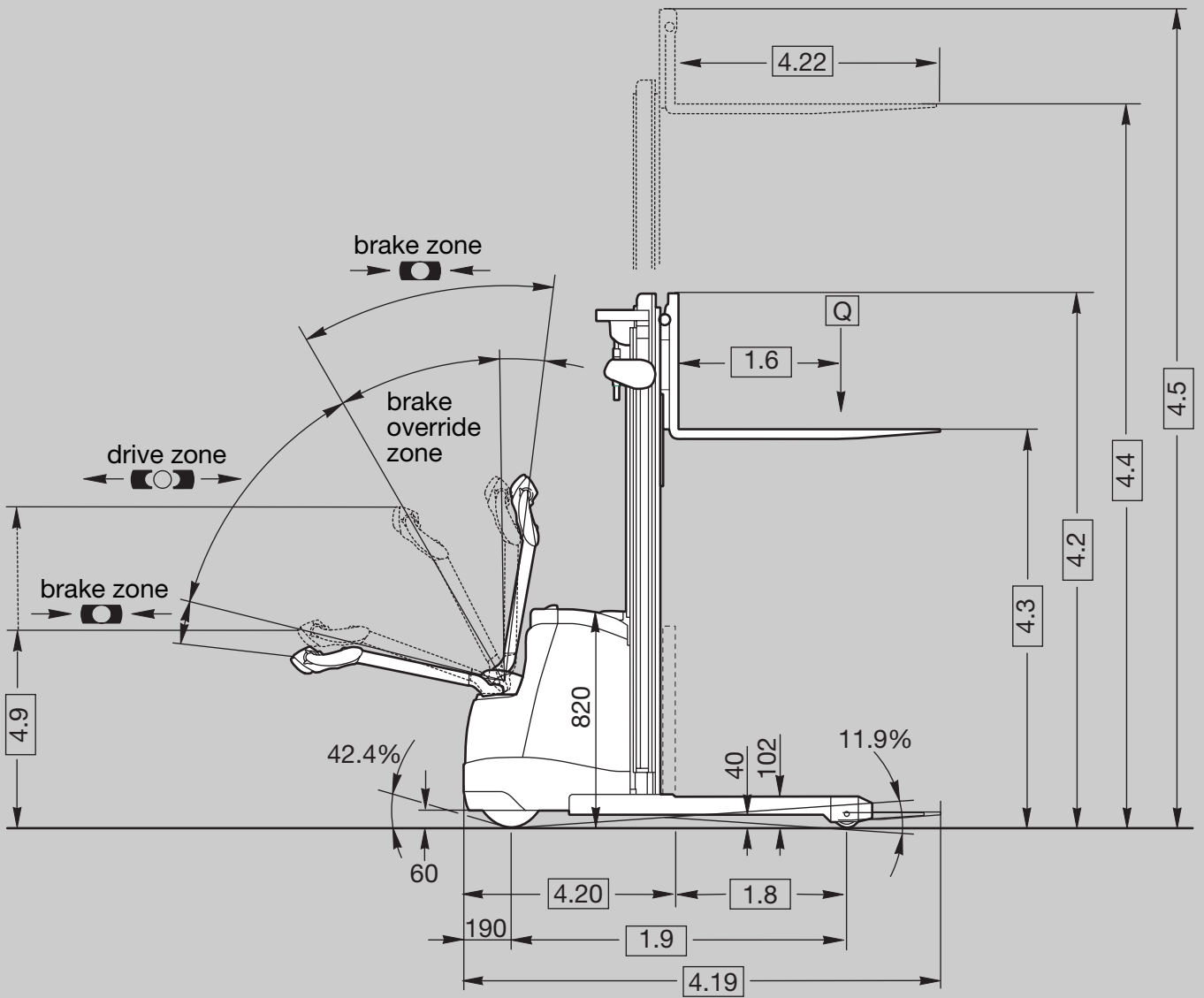
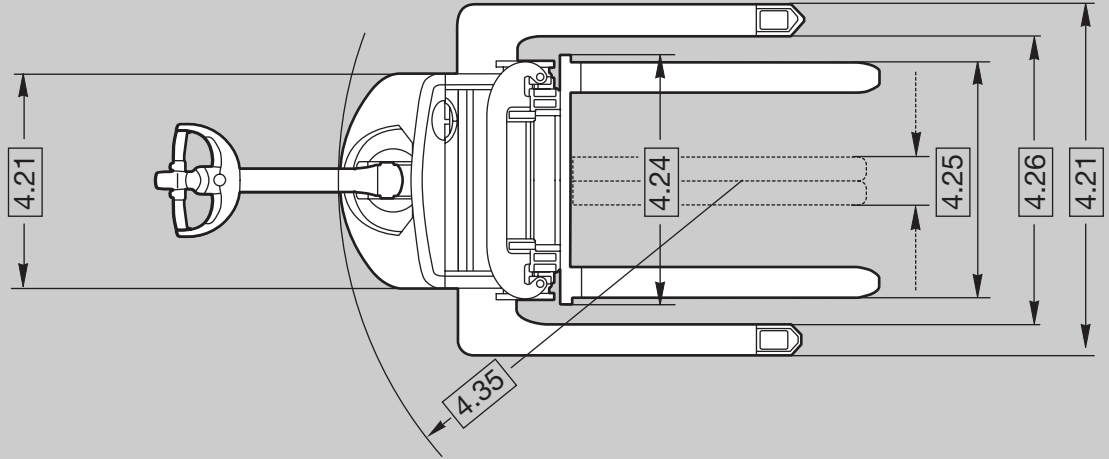
^C Industrial type 180 Ah capacity

Table 1 Lift Height

	WF 3000-1.0										WF 3000-1.2									
	NT		TL				TF				TL				TF					
4.2 Mast collapsed	1970	2400	1750	1970	2170	2400	1750	1970	2170	2400	1750	1970	2170	2400	2650	1750	1970	2170	2400	2650
4.3 Free Lift *	1480	1970	180	180	180	180	1250	1470	1670	1910	1750	180	180	180	180	1250	1470	1670	1910	2160
4.4 Lift Height	1550	2000	2500	2930	3330	3800	2600	3030	3430	3900	2500	2930	3330	3800	4300	2600	3030	3430	3900	4400
4.5 Mast extended **	1970	2400	2896	3326	3726	4196	2996	3426	3826	4296	2896	3326	3726	4196	4696	2996	3426	3826	4296	4796
2.1 Weight less batt.	598	619	696	717	736	759	702	723	742	765	697	718	737	760	784	703	724	743	766	789

* with optional load backrest: NT/TF mast - 804 mm

** with optional load backrest: NT/TL/TF mast + 804 mm



ST/SX 3000 Series Specifications

General Information	1.1	Manufacturer	Crown Equipment Corporation							
	1.2	Model				ST 3000N 1.0	ST 3000 1.0	SX 3000N 1.35	SX 3000 1.35	
	1.3	Power	electric							
	1.4	Operator Type	pedestrian							
	1.5	Load Capacity		Q	kg	1000		1350		
	1.6	Load Centre		c	mm	600				
	1.8	Load Distance		x	mm	621 / 603		686 / 666		
	1.9	Wheel Base		y	mm	1255		1362		
	2.1	Weight	less battery		kg	see table 1				
Tyres	3.1	Tyre Type			mm	Rubber+ Poly/Vulkollan		Vulkollan + Poly/Vulkollan		
	3.2	Wheel Size	front		mm	Ø 254 x 100		Ø 254 x 85		
	3.3	Wheel Size	rear		mm	Ø 102 x 50				
	3.4	Additional Wheels	castor wheel		mm	Ø 90 x 50				
	3.5	Wheels	no. (x=driven) front/rear			1x + 2 / 2				
Dimensions	4.2	Mast	collapsed height		h1	mm	see table 1			
	4.3	Free Lift			h2	mm	see table 1			
	4.4	Lift Height			h3	mm	see table 1			
	4.5	Mast	extended height		h4	mm	see table 1			
	4.9	Tiller Arm Height	in drive position min./max.		h14	mm	790 / 1206			
	4.15	Lowered Fork Height			h13	mm	51		50	
	4.19	Overall Length			l1	mm	see table 2			
	4.20	Headlength			l2	mm	see table 2			
	4.21	Overall Width	front		b1	mm	712			
			rear		b2	mm	inside straddle width + 152		inside straddle width + 204	
	4.22	Fork Dimensions			thxwxl	mm	38 x 76 x 1145		38 x 102 x 1145	
	4.24	Fork Carriage Width			b3	mm	810			
	4.25	Width Across Forks	adjustable min./max.		b5	mm	232 - 765		252 - 785	
	4.26	Inside Straddle Width	infinite adjustment		b4	mm	865-1165	965-1270	865-1165	965-1270
	4.32	Ground Clearance	centre of wheelbase		m2	mm	40			
4.33	Working Aisle Width	traverse		Ast	mm	see table 2				
4.34	Working Aisle Width	length		Ast	mm	see table 2				
4.35	Turning Radius			Wa	mm	1446		1553		
Performance	5.1	Travel Speed	w./w.o. load			km/h	5.0 / 5.5		5.5 / 6.0	
	5.2	Lift Speed	w./w.o. load			m/s	0.13 / 0.20		0.16 / 0.25	
	5.3	Lowering Speed	w./w.o. load			m/s	0.25 / 0.25		0.26 / 0.21	
	5.7	Gradeability	w./w.o. load, 30 min. rating			%	4.9 / 9.1		4.4 / 8.7	
	5.8	Max. Gradeability	w./w.o. load, 5 min. rating			%	8.4 / 15.7		9.5 / 19.4	
	5.10	Service Brake					electric			
Motors	6.1	Traction Motor	60 min. rating			kW	0.7		1.4	
	6.2	Lift Motor				kW	2.2		3.0	
	6.3	Max. Battery Box Size	DIN 43535 / A		lxwxh	mm	185 x 649 x 613		230 x 670 x 600	
	6.4	Battery Voltage	nominal capacity 5h rating			V/Ah	2 x 12V / 94 MF		4 x 6V / 192 MF	
	6.5	Battery Weight	nominal + 5%			kg	60		121	
8.1	Type of Controller	drive				transistor				

Table 1 Lift Height

				ST 3000 / SX 3000 1.0 / 1.35						
				TL				TT		
4.2	Mast	collapsed height	mm	1700	1910	2110	2350	2600	1858	1858
4.3	Free Lift *		mm	150				1348	1348	
4.4	Lift Height		mm	2400	2820	3220	3700	4200	3900	4250
4.5	Mast **	extended height	mm	2910	3330	3730	4210	4710	4410	4760
2.1	Weight	ST less battery	kg	792	810	828	849	871	847	847
2.1	Weight	SX less battery	kg	955	973	991	1012	1034	1071	1071

Table 2 Aisle width dimension (VDI 2198)

				ST 3000		SX 3000	
				TL	TT	TL	TT
4.19	Overall Length		mm	1975	1993	2017	2037
4.20	Headlength		mm	825	843	867	887
4.33	Working Aisle Width	traverse 800 x 1200	mm	2360	2360	2489	2489
		1000 x 1200	mm	2356	2364	2489	2489
4.34	Working Aisle Width	length 1200 x 800	mm	2350	2364	2404	2420
		1200 x 1000	mm	2411	2425	2470	2485

* with optional load backrest: TT mast - 692 mm

** with optional load backrest: TL/TT mast + 692 mm

Standard Equipment

1. X10° control handle
2. 24-Volt electrical system
3. MOSFET transistorised traction control
4. Separately excited drive motor (SEM)
5. Batteries
 - WF 1.0 and ST: 94 Ah maintenance free
 - WF 1.2: 180 Ah wet industrial
 - SX: 192 Ah maintenance free
6. DIN 80A battery connector
7. 30-amp solid state charger with retractable cord
8. Brake, spring applied, electro-magnetically released
9. Brake override zone, travel possible in upper brake zone at creep speed
10. Ramp hold
11. Electrical service braking system (regenerative and wear-resistant)
12. Heavy-duty drive unit
13. Auto reverse safety switch
14. Colour-coded wiring
15. High speed cut-out at elevated heights
16. Two pre-programmed performance levels
17. Rubber drive tyre (WF 1.0 and ST)
18. Vulkollan drive tyre (WF 1.2 and SX)
19. Vulkollan load wheels
20. Vulkollan castor wheel (WF)
21. Two spring-loaded castor wheels (ST and SX)
22. Adjustable ISO/FEM forged hook-on forks (ST and SX)
23. Adjustable outriggers (ST and SX)
24. Storage tray above battery
25. Plexiglas mast guard
26. One-speed lift, two-speed lower
27. Hydraulic control module
28. Horn button in each handgrip
29. Key switch
30. Battery discharge indicator with hour meter and lift-lockout (WF 1.2 and SX)

Optional Equipment

1. Rubber drive tyre (WF 1.2 and SX)
2. Vulkollan drive tyre (WF 1.0 and ST)
3. Hand held diagnostic set for
 - performance adjustment
 - truck diagnostic

4. Load backrest
 - WF: 750 x 1200 mm
 - ST, SX: 830 x 1200 mm
5. Maintenance free or wet industrial battery options
6. Battery watering system
7. SBE160 red battery connector
8. Freezer conditioning -30° operating temperature (WF 1.2 and SX)
9. Auxiliary hydraulics with sideshift (SX)
10. Flashing light
11. Travel alarm
12. Work Assist™ accessories
 - Clip pad and hook
 - Storage pockets
 - Remote raise/lower control
13. Without battery or charger
14. Tandem load wheels
15. Battery discharge indicator with hour meter and lift-lockout (WF 1.0 and ST)
16. Fork length and fork spread options

X10° Control Handle

The centre-mounted control handle keeps the operator a safe distance from the power unit in both left and right hand turns.

Handgrips have an anti-static urethane cover for insulation from cold and vibration. Die cast aluminium alloy housing provides impact resistance. Modular circuit board design ensures high reliability while allowing for easy service.

Full function control handle includes travel speed and direction, raise, lower, safety reverse button, performance setting switch, horn buttons and optional auxiliary hydraulic controls.

Exclusive automatic Brake Override feature allows travel (creep speed) with the handle near vertical - a feature that greatly improves manoeuvrability in tight areas. The rabbit/turtle switch incorporates two levels of programmable travel performance to match operator experience and application requirements.

Electrical System

24-volt fused electrical system with built in 30-amp charger. This premium fan-cooled, solid-state charger is durable and efficient. It has an advanced memory feature

to allow for opportunity charging and can be set for either maintenance free or industrial batteries. A retractable power cord is standard.

The traction control module (TCM) is sealed from dirt, dust and moisture for trouble-free operation. Features include over-temperature protection, polarity protection, self-test and diagnostics. Transistor control is programmable for specific tasks or operator skill level.

The separately excited motor (SEM) provides excellent acceleration and nearly constant travel speed regardless of loading. Ramp hold feature eliminates rollback on slopes when the brake is released. Regenerative motor braking is activated under a downhill condition, during plugging or when the directional control is returned to neutral.

Drive Unit and Brakes

The Crown engineered heavy-duty gearbox is designed for low noise, efficient power transmission and a lifetime of reliable use in the roughest applications. The drive unit mounts in the truck chassis with tapered roller bearings that disperse load forces evenly, reducing maintenance and downtime.

The drive unit is equipped with an electromagnetic disc brake that is spring applied and electrically released. Brake is activated by the control handle position. Brake rotor and disc are easily accessed for inspection and replacement. Regenerative motor braking assists brake effort and improves component life.

Hydraulic System

Heavy-duty hydraulic motor with integral pump and reservoir for maximum efficiency and durability.

The hydraulic control module (HCM) provides quick, smooth initiation and stopping of lift function. Single-speed lift and two-speed lowering is standard.

Cylinder rods are hard-chrome plated with polyurethane seals. Relief valve tuned to capacity protects all components in the hydraulic system.

Auxiliary hydraulic circuit suitable for sideshifter is optional on SX 3000.

Chassis

All models feature a heavy gauge one-piece welded steel frame backed by a lifetime warranty. Removable steel covers protect all critical system components. The low-profile power unit has been optimised to provide the best fork tip visibility available.

Mast

High visibility two- and three-stage mast design features nested I-beams and canted rollers. Lift cylinders are positioned in outer I-beam profile for best visibility through the mast and clear view onto the forks tips during load handling. Mast cushioning between staging ensures smooth operation. Heavy-duty mast and chain rollers are sealed and lubricated for life. Mast design allows easy access to carriage rollers.

Fork Carriage

The WF series features fixed formed steel forks welded to a high visibility backrest. This design accommodates Euro pallets or other containers without bottom boards.

The ST/SX series features adjustable hook-on ISO forks. This design is ideally suited for all types of pallets and containers that have bottom boards or require four-way pallet entry.

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.

