CROWN

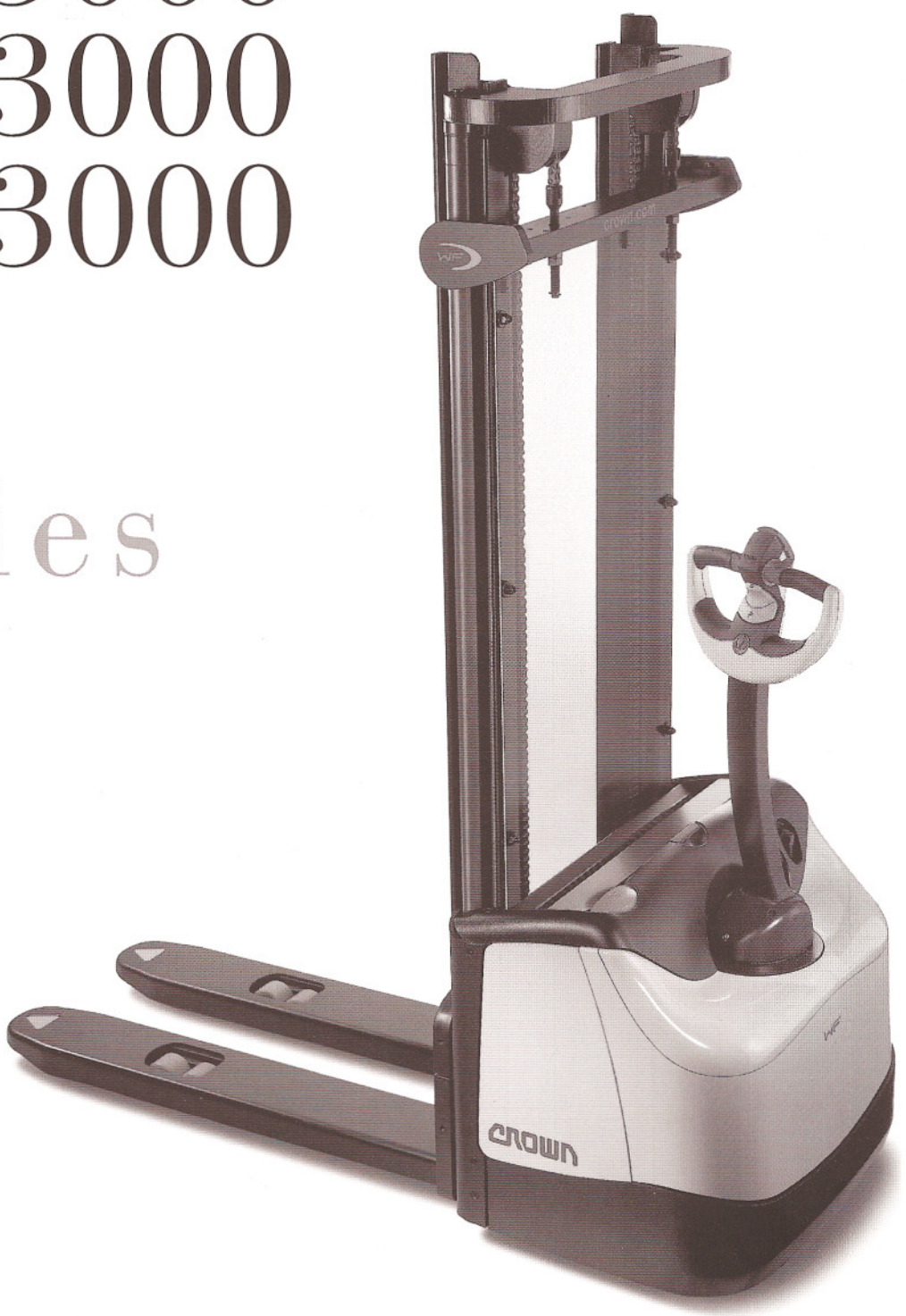
Specifications

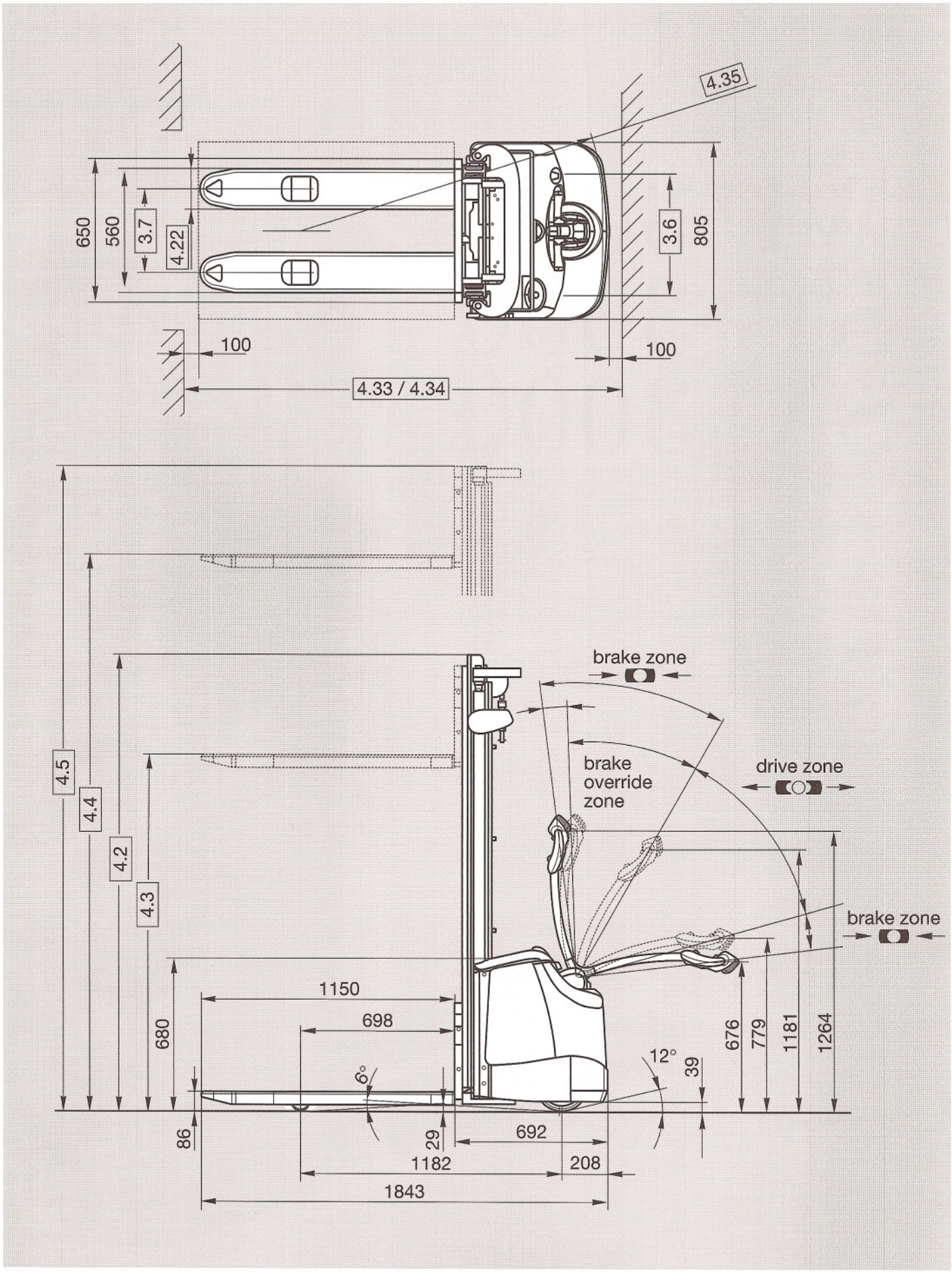
WF 3000 Series
ST/SX 3000 Series

Stacker

WF 3000
ST 3000
SX 3000

Series



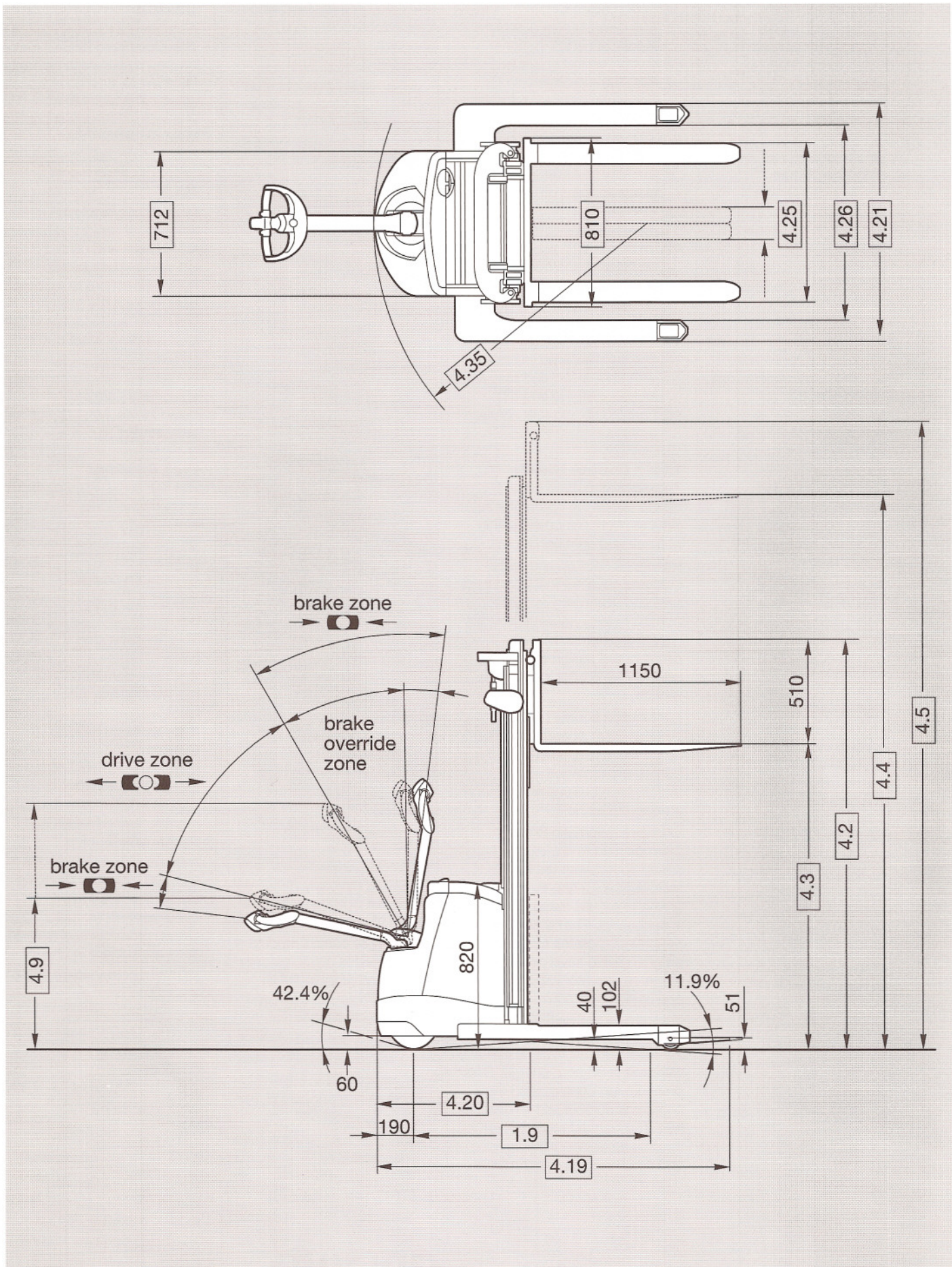

4.35
650
560
3.7
4.22
3.6
805
100
100
4.33 / 4.34
brake zone
brake
override
zone
drive zone
brake zone
4.5
4.4
4.2
4.3
1150
698
680
6°
12°
39
676
779
1181
1264
86
29
692
1182
208
1843

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**				walkie				
	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	3.2	**Wheel Size**	front/drive Vulkollan		mm				Ø 254 x 85	
			Rubber		mm	Ø 254 x 70				
	3.3	**Wheel Size**	rear/load Vulkollan		mm	Ø 82 x 104				
	3.4	**Additional Wheels**	castor wheel Vulkollan		mm	Ø 140 x 54				
	3.5	**Wheels**	no. (x=driven) front/rear			1x, 1/2				
	3.6	**Track Width**	front	b_{10}	mm	510				
	3.7	**Track Width**	rear	b_{11}	mm	382				
Dimensions	4.2	**Mast**	collapsed height	h_1	mm	see table 1				
	4.3	**Free Lift**	w.o. load backrest	h_2	mm	see table 1				
	4.4	**Lift Height**		h_3	mm	see table 1				
	4.5	**Mast**	extended height w.o. lbr.	h_4	mm	see table 1				
	4.9	**Tiller Arm Height**	in drive position min./max.	h_{14}	mm	779 / 1181				
	4.15	**Lowered Fork Height**		h_{13}	mm	86				
	4.19	**Overall Length**	with 1150 mm fork length	l_1	mm	1843				
	4.20	**Headlength**		l_2	mm	692				
	4.21	**Overall Width**		b_1	mm	805				
	4.22	**Fork Dimensions**		thxw	mm	170 x 60			186 x 60	
	4.25	**Width Across Forks**		b_5	mm	560 / 670				
	4.31	**Ground Clearance**	with load below mast	m_1	mm	29				
	4.34	**Working Aisle Width**	800 x 1200 length	Ast	mm	2229				
			1000 x 1200 length	Ast	mm	2296				
	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	**Collapsed Height**	1970	2400	1750	1970	2170	2400	1750	1970	2170	2400	1750	1970	2170	2400	2650	1750	1970	2170	2400	2650
4.3	**Free Lift, w.o. lbr**	1480	1970	180	180	180	180	1250	1470	1670	1910	180	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 ext. w.o.lbr**	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


712
810
4.25
4.26
4.21
4.35
brake zone
brake override zone
drive zone
brake zone
1150
510
4.5
4.4
4.2
4.3
4.9
820
42.4%
40
102
11.9%
51
60
4.20
190
1.9
4.19

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**				walkie				
	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	3.2	**Wheel Size**	front Rubber		mm	Ø 254 x 100				
			Vulkollan		mm			Ø 254 x 85		
	3.3	**Wheel Size**	rear/load Vulkollan		mm	Ø 102 x 50				
	3.4	**Additional Wheels**	castor wheel Poly		mm	Ø 90 x 50				
	3.5	**Wheels**	no. (x=driven) front/rear			1x, 2 / 2				
Dimensions	4.2	**Mast**	collapsed height	h_1	mm	see table 1				
	4.3	**Free Lift**	w.o. load backrest	h_2	mm	see table 1				
	4.4	**Lift Height**		h_3	mm	see table 1				
	4.5	**Mast**	extended height w.o. lbr.	h_4	mm	see table 1				
	4.9	**Tiller Arm Height**	in drive position min./max.	h_{14}	mm	790 / 1206				
	4.15	**Lowered Fork Height**		h_{13}	mm	51		50		
	4.19	**Overall Length**	with 1150 mm fork length	l_1	mm	see table 2				
	4.20	**Headlength**		l_2	mm	see table 2				
	4.21	**Overall Width**	front	b_1	mm	712				
			rear	b_1	mm	inside straddle width + 152		inside straddle width + 204		
	4.22	**Fork Dimensions**		thxw	mm	38 x 76		38 x 102		
	4.25	**Width Across Forks**	adjustable min./max.	b_5	mm	232 - 765		252 - 785		
	4.26	**Inside Straddle Width**	infinite adjustment	b_4	mm	865-1165	965-1270	865-1165	965-1270	
	4.31	**Ground Clearance**	with load below mast	m_1	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						
	Mast Type			TL					TT	
4.4	**Lift Height**		mm	2400	2820	3220	3700	4200	3900	4250
4.2	**Mast**	collapsed height	mm	1700	1910	2110	2350	2600	1858	1858
4.3	**Free Lift**		mm	150					1348	1348
4.5	**Mast**	extended w.o. lbr.	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	
	Mast Type				TL	TT	TL	TT
4.19	**Overall Length**	with 1150 mm fork 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

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
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.

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CROWN

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