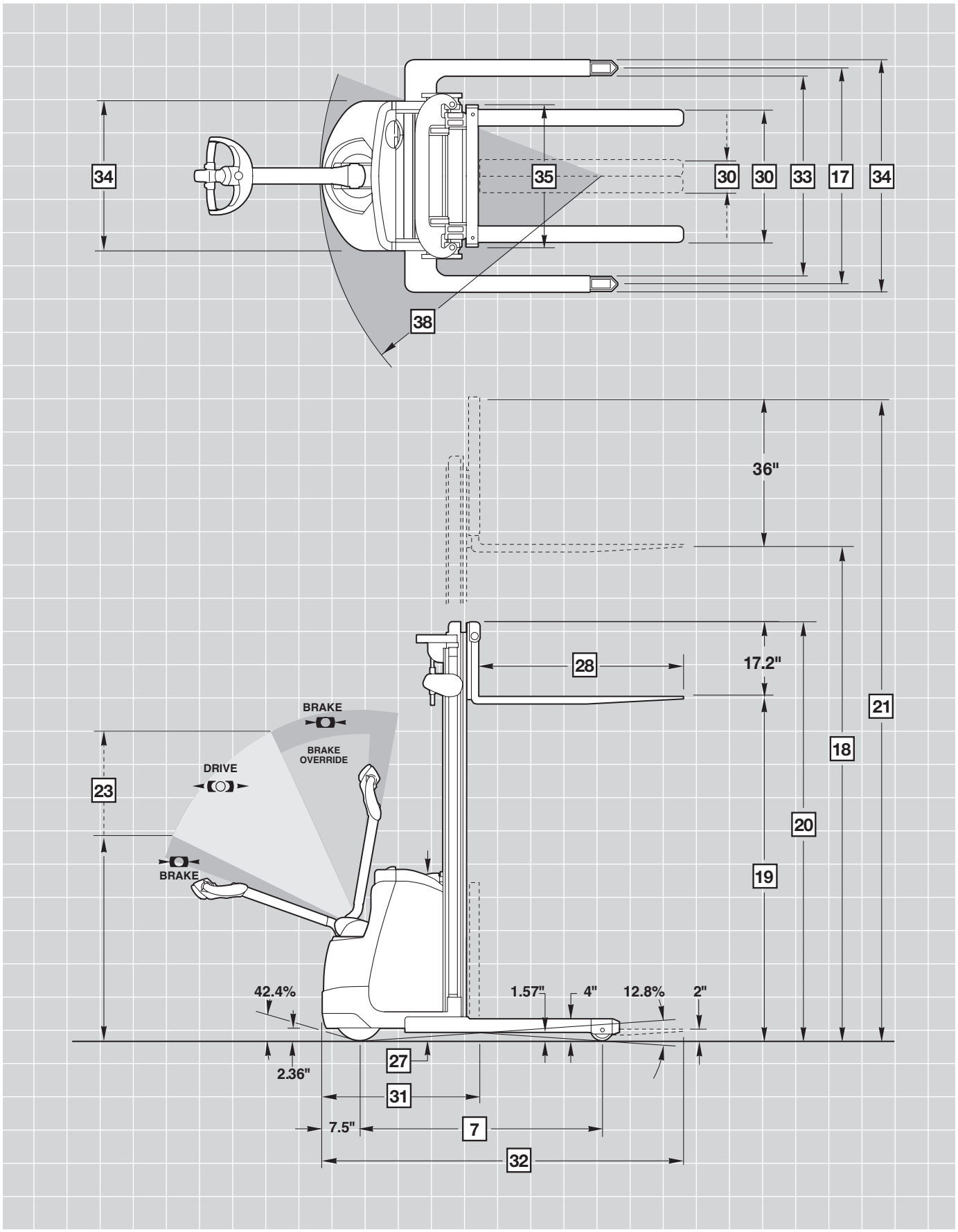
Specifications

ST 3000 Series
SX 3000 Series

Stackers

ST/SX 3000 Series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34
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36"
28
17.2"
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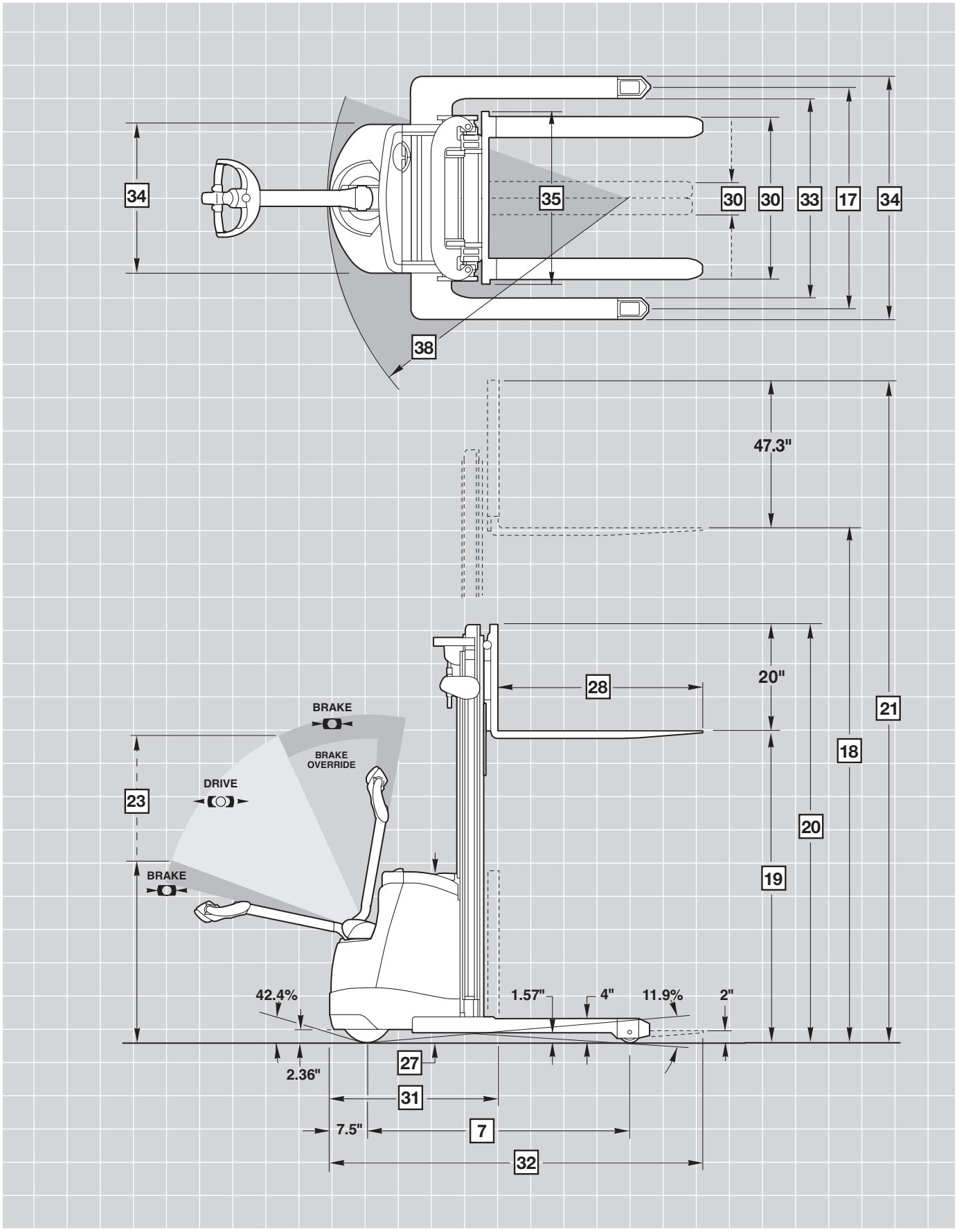
18
20
19
BRAKE
BRAKE OVERRIDE
DRIVE
23
BRAKE
42.4%
1.57"
4"
12.8%
2"
27
2.36"
31
7.5"
7
32

General Information	1	**Manufacturer**			**Crown Equipment Corporation**			
	2	**Model**			ST 3000N-20	ST 3000-20	ST 3000-20	ST 3000-20
		Mast Type		in (mm)	TL-128 (3236)	TL-128 (3236)	TT-154 (3912)	TT-168 (4267)
	3	**Power**			Electric			
	4	**Operator Type**			Walkie			
	5	**Load Capacity**	Max	lb (kg)	2000 (907)			
	6	**Load Center**		in (mm)	24 (600)			
	7	**Wheelbase**		in (mm)	49 (1255)			
	8	**Weight Less Battery**		lb (kg)	1775 (805)	1828 (829)	2004 (909)	2004 (909)
Tires	13	**Wheel Size Front (d x w)**	Vulkollan	in (mm)	10 x 3.35 (254 x 85)			
			Rubber	in (mm)	10 x 4 (254 x 100)			
	14	**Wheel Size Rear (d x w)**	Vulkollan	in (mm)	4 x 2 (102 x 50)			
			Steel	in (mm)	4 x 2 (102 x 50)			
	15	**Additional Wheels Caster Wheel (d x w)**	Poly	in (mm)	3.54 x 2 (90 x 50)			
	16	**Wheels Number (x=driven)**	Front/Rear		1x / 2			
	17	**Track Width**	Rear	in (mm)	Inside Straddle + 3 (76)			
Dimensions	18	**Lift Height**		in (mm)	127.4 (3236)	127.4 (3236)	154 (3912)	168 (4267)
	18a	**Capacity at Lift Height**	24" Load Center	lb (kg)	2000 (907)	2000 (907)	2000 (907)	2000 (907)
			26" Load Center	lb (kg)	1850 (840)	1850 (840)	1850 (840)	1850 (840)
			28" Load Center	lb (kg)	1720 (780)	1720 (780)	1720 (780)	1720 (780)
			30" Load Center	lb (kg)	1600 (725)	1600 (725)	1600 (725)	1600 (725)
	19	**Free Lift**	w/o Load Backrest	in (mm)	6 (152)	6 (152)	56 (1422)	56 (1422)
	20	**Collapsed Height**		in (mm)	83 (2108)	83 (2108)	73 (1858)	73 (1858)
	21	**Extended Height**	w/o Load Backrest	in (mm)	Lift Height + 17.2 (436)			
			w/Load Backrest	in (mm)	Lift Height + 36 (914)			
	22	**Load Backrest Width**	Load Backrest Height 36" (914) High	in (mm)	36 (914) / 42 (1067) / 48 (1219)			
	23	**Tiller Arm Ht in Drive Position**	Min/Max	in (mm)	31.1 (790) / 47.5 (1206)			
	24	**Outrigger Height**		in (mm)	4 (100)			
	25	**Lowered Fork Height**		in (mm)	2 (51)			
	27	**Power Unit Height**		in (mm)	32.28 (820)			
	28	**Fork Lengths**		in (mm)	36 (914) / 42 (1067) / 48 (1219)			
	29	**Fork Dimensions**	Thickness x Width	in (mm)	1.5 x 3 (38 x 76)			
	30	**Width Across Forks**	Adjustable Min/Max	in (mm)	6.57 - 24.8 (167 - 630)			
	31	**Headlength**		in (mm)	32.24 (819)	32.24 (819)	32.95 (837)	32.95 (837)
	32	**Overall Length**			Headlength + Fork Length			
	33	**Inside Straddle**		in (mm)	29.3-36 (744-914)	38-50 (965-1270)	38-50 (965-1270)	38-50 (965-1270)
	34	**Overall Width**	Front	in (mm)	28.03 (712)			
			Rear	in (mm)	Inside Straddle + 6 (152)			
	35	**Fork Carriage Width**		in (mm)	26.57 (675)			
	36	**Ground Clearance**	w/Load below Mast	in (mm)	1.57 (40)			
	37		Center Wheelbase	in (mm)	1.57 (40)			
	38	**Turning Radius**		in (mm)	56.73 (1446)			
Performance	39	**Length w/Outriggers**		in (mm)	60.28 (1536)			
	40	**Travel Speed**	w/wo Load	mph (km/h)	3.11 / 3.42 (5.0 / 5.5)			
	41	**Lift Speed**	w/wo Load	fpm (m/s)	25.59 / 39.37 (.13 / .20)			
	42	**Lowering Speed 1**	w/wo Load	fpm (m/s)	49.21 / 49.21 (.25 / .25)			
		Lowering Speed 2	w/wo Load	fpm (m/s)	19.69 / 11.81 (.10 / .06)			
	43	**Gradeability**	w/wo Load, 60 min Rating	%	2.4 / 4.5			
			w/wo Load, 30 min Rating	%	4.9 / 9.1			
	44	**Max Gradeability**	w/wo Load, 5 min Rating	%	8.4 / 15.7			
	45	**Service Brake**			Electric			
Battery	46	**Maximum Battery Box**	L x W x H	in (mm)	7.28 x 25.55 x 24.13 (185 x 649 x 613) (w/No Clearance)			
	47	**Battery Voltage (Nominal Capacity 6 Hour Rating)**	4x Automotive Starter	V/Ah	24 / 87			
			2x 12v MF	V/Ah	24 / 95			
			4x Semi-industrial	V/Ah	24 / 156			
			4x 6v MF	V/Ah	24 / 195			
	48	**Type of Controller**	Drive		Transistor			
	49	**Battery Weight**	4x Automotive Starter	lb (kg)	128 (58)			
			2x 12v MF	lb (kg)	132 (60)			
			4x Semi-industrial	lb (kg)	220 (100)			
			4x 6v MF	lb (kg)	267 (121)			

English conversions are approximations. Metric conversions should be done to find true values.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General Information	1	**Manufacturer**			**Crown Equipment Corporation**		
	2	**Model**			SX 3000-30	SX 3000-30	SX 3000-30
		Mast Type		in (mm)	TL-128 (3236)	TT-154 (3912)	TT-168 (4267)
	3	**Power**			Electric		
	4	**Operator Type**			Walkie		
	5	**Load Capacity**	Max	lb (kg)	3000 (1361)		
	6	**Load Center**		in (mm)	24 (600)		
	7	**Wheelbase**		in (mm)	53.6 (1362)		
	8	**Weight Less Battery**	Auxiliary	lb (kg)	2247 (1019)	2423 (1099)	2423 (1099)
			No Auxiliary	lb (kg)	2143 (972)	2319 (1052)	2319 (1052)
Tires	13	**Wheel Size Front (d x w)**	Vulkollan	in (mm)	10 x 3.35 (254 x 85)		
			Rubber	in (mm)	10 x 4 (254 x 100)		
	14	**Wheel Size Rear (d x w)**	Vulkollan	in (mm)	4 x 3 (102 x 73)		
	15	**Additional Wheels Caster Wheel (d x w)**	Poly	in (mm)	3.54 x 2 (90 x 50)		
	16	**Wheels Number (x=driven)**	Front/Rear		1x / 2		
	17	**Track Width**	Rear	in (mm)	Inside Straddle + 4 (102)		
Dimensions	18	**Lift Height**		in (mm)	127.4 (3236)	154 (3912)	168 (4267)
	18a	**Capacity at Lift Height****	24" Load Center	lb (kg)	3000 (1361)	3000 (1361)	2500 (1134)
			26" Load Center	lb (kg)	2700 (1225)	2700 (1225)	2200 (998)
			28" Load Center	lb (kg)	2500 (1134)	2500 (1134)	2000 (907)
			30" Load Center	lb (kg)	2250 (1020)	2250 (1020)	1750 (795)
	19	**Free Lift**	w/o Load Backrest	in (mm)	6 (152)	53 (1347)	53 (1347)
	20	**Collapsed Height**		in (mm)	83 (2108)	73 (1858)	73 (1858)
	21	**Extended Height**	w/o Load Backrest	in (mm)	Lift Height + 20 (510)		
			w/Load Backrest	in (mm)	Lift Height + 47.3 (1202)		
	22	**Load Backrest Size**		in (mm)	47.3 (1202) H x 32.7 (832) W		
	23	**Tiller Arm Ht in Drive Position**	Min/Max	in (mm)	31.1 (790) / 47.5 (1206)		
	24	**Outrigger Height**		in (mm)	4 (100)		
	25	**Lowered Fork Height**		in (mm)	2 (50)		
	27	**Power Unit Height**		in (mm)	32.28 (820)		
	28	**Fork Lengths**		in (mm)	36 (914) / 42 (1067) / 48 (1219)		
	29	**Fork Dimensions**	Thickness x Width	in (mm)	1.5 x 4 (38 x 102)		
	30	**Width Across Forks**	Adjustable Min/Max	in (mm)	10 - 30.93 (253.6 - 785.6)		
	31	**Headlength***		in (mm)	34.02* (869*)	34.72* (887*)	34.72* (887*)
	32	**Overall Length**			Headlength + Fork Length		
	33	**Inside Straddle**		in (mm)	38-50 (965-1270)		
	34	**Overall Width**	Front	in (mm)	28.03 (712)		
			Rear	in (mm)	Inside Straddle + 8 (204)		
	35	**Fork Carriage Width**		in (mm)	31.89 (810)		
	36	**Ground Clearance**	w/Load below Mast	in (mm)	1.57 (40)		
	37		Center Wheelbase	in (mm)	1.57 (40)		
	38	**Turning Radius**		in (mm)	61.14 (1553)		
Performance	39	**Length with Outriggers**		in (mm)	65 (1651)		
	40	**Travel Speed**	w/wo Load	mph (km/h)	3.42 / 3.73 (5.5 / 6.0)		
	41	**Lift Speed**	w/wo Load	fpm (m/s)	31.50 / 49.21 (.16 / .25)		
	42	**Lowering Speed 1**	w/wo Load	fpm (m/s)	51.18 / 41.34 (.26 / .21)		
		Lowering Speed 2	w/wo Load	fpm (m/s)	11.81 / 5.91 (.06 / .03)		
	43	**Gradeability**	w/wo Load, 60 min Rating	%	2.6 / 5.2		
			w/wo Load, 30 min Rating	%	4.4 / 8.7		
	44	**Max Gradeability**	w/wo Load, 5 min Rating	%	9.5 / 19.4		
	45	**Service Brake**			Electric		
Battery	46	**Maximum Battery Box**	L x W x H	in (mm)	9.1 x 26.4 x 23.62 (230 x 670 x 600) (w/No Clearance)		
	47	**Battery Voltage (Nominal**	4x 6v MF	V/Ah	24 / 195		
		Capacity 6 Hour Rating)	300 Industrial	V/Ah	24 / 300		
	48	**Type of Controller**	Drive		Transistor		
	49	**Battery Weight**	4x 6v MF	lb (kg)	267 (121)		
			300 amp hour Industrial	lb (kg)	360-710 (163-322)		

* Add 2.24" (57 mm) for Sideshift Option.
**Deduct 300 lb for Sideshift Option.
English conversions are approximations. Metric conversions should be done to find true values.

Standard Equipment

1. 24 volt fused electrical system
2. MOSFET transistorized traction control system
3. Separately excited drive motor (SEM)
4. Wet-cell starter battery pack, four 6-volt batteries at 87 amp hour (ST)
5. Maintenance-free battery pack, four 6-volt batteries at 195 amp hour (SX)
6. 30 amp fully automatic charger
7. Electric brake
8. Brake override
9. Anti-roll down
10. Regenerative motor braking
11. Heavy-duty drive unit
12. Drive unit enclosed in high ductile strength steel frame
13. Stamped steel power unit cover
14. Safety reversing button
15. 175 amp connector with disconnect handle
16. Color-coded wiring
17. High speed cut-out at lift height
18. Two pre-programmed performance levels
19. 10" x 3.35" wide Vulkollan drive tire
20. Vulkollan load wheels
    4" x 2" wide (ST)
    4" x 3" wide (SX)
21. Adjustable outriggers
22. Battery compartment storage tray
23. Plexiglas mast guard
24. One-speed lift, two-speed lower – soft start hydraulics (SX only)
25. Horn
26. Key switch
27. Discharge indicator with hour meter and lift lockout
28. Hydraulic thermal protection switch (SX only)

Optional Equipment

1. Rubber drive tire
2. Non-marking rubber drive tire
3. Diamond siped rubber drive tire
4. Spring loaded poly casters
5. Handset analyzer for calibration or fault analyzing
6. 36" high load backrest (ST), 48" high load backrest (SX)
7. Maintenance-free, semi-industrial or starter battery package (ST)
9. Freezer/corrosion conditioning (SX only)
10. Keyless on/off toggle switch in lieu of key switch
11. Steel load wheels (ST only)
12. Wire mesh mast guard
13. Sideshift (SX only)
14. Soft start hydraulic control (ST only)
15. Work Assist™ Accessories:
    - Clip pad and hook
    - Operator fan
    - Storage pocket
    - Remote raise/lower control
16. Work Assist Options:
    - Load backrest tray
    - Work platform

      Platform options:
      - Work lights
      - Operator fan
      - Clip pad and hook
      - Adjustable load tray
      - Remote raise/lower control
      - Casters
    - Snap-on platform (ST only)

Battery and Charger

ST 3000-20

Battery package options are as follows:

- Maintenance-free battery pack, two 12-volt batteries at 95 amp hour
  four 6-volt batteries at 195 amp hour
- Semi-industrial deep cycle battery pack, four 6-volt batteries at 156 amp hour
- Wet-cell starter battery pack, four 6-volt batteries at 87 amp hour

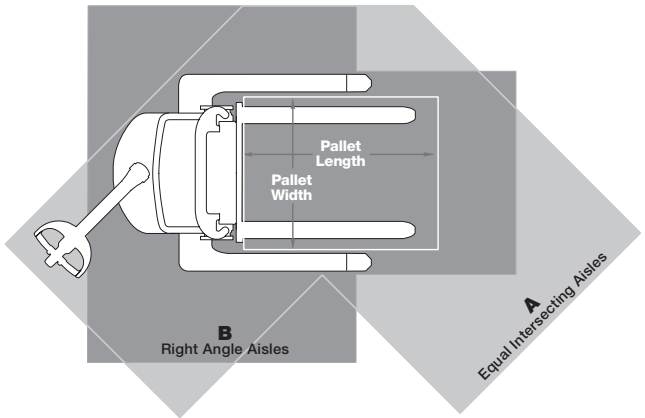
Flooded battery packs have a slide-out feature to check water level of bottom batteries.

SX 3000-20

Battery options are as follows:

- Maintenance-free battery pack, four 6-volt batteries at 195 amp hour
- Industrial battery - The 9.1" battery compartment will accept an industrial storage battery up to 300 amp hour capacity.

A built-in 30-amp charger is standard with all battery packs. This premium fan-cooled, solid-state charger is durable and efficient. It has an advanced memory feature to allow for opportunity charging. The charger can be set for either maintenance free, wet cell or industrial batteries. An extension cord is included with any truck equipped with the built-in battery charger.



ST 3000 – Right Angle and Intersecting Aisle

Pallet Width		Pallet Length									
		30		36		40		42		48	
		A	B	A	B	A	B	A	B	A	B
36	in	57.6	62.9	57.6	62.9	57.6	62.9	57.6	62.9	57.6	68.4
	mm	1463	1599	1463	1599	1463	1599	1463	1599	1463	1738
40	in	60.9	64.0	60.9	64.0	60.9	64.0	60.9	64.0	60.9	68.6
	mm	1546	1625	1546	1625	1546	1625	1546	1625	1546	1625
42	in	62.5	64.5	62.5	64.5	62.5	64.5	62.5	64.5	62.5	68.7
	mm	1588	1638	1588	1638	1588	1638	1588	1638	1588	1746
48	in	67.5	69.0	67.5	69.0	67.5	69.0	67.5	69.0	67.5	72.0
	mm	1715	1752	1715	1752	1715	1752	1715	1752	1715	1829

Add 6" to all aisle dimensions for maximum maneuverability.

SX 3000 – Right Angle and Intersecting Aisle

Pallet Width		Pallet Length									
		30		36		40		42		48	
		A	B	A	B	A	B	A	B	A	B
36	in	61.2	67.1	61.2	67.1	61.2	67.1	61.2	67.1	61.2	67.8
	mm	1554	1704	1554	1704	1554	1704	1554	1704	1554	1722
40	in	64.5	68.1	64.5	68.1	64.5	68.1	64.5	68.1	64.5	68.1
	mm	1638	1730	1638	1730	1638	1730	1638	1730	1638	1730
42	in	66.1	68.6	66.1	68.6	66.1	68.6	66.1	68.6	66.1	68.6
	mm	1680	1743	1680	1743	1680	1743	1680	1743	1680	1743
48	in	71.1	72.9	71.1	72.9	71.1	72.9	71.1	72.9	71.1	72.9
	mm	1807	1851	1807	1851	1807	1851	1807	1851	1807	1851

Add 6" to all aisle dimensions for maximum maneuverability.
Add 2" if sideshift option is used.

Operator Controls
The control hand grips are urethane covered for insulation from cold and vibration. Full function control handle includes travel direction, raise, lower and reversing switch.

The physical efforts to hold the handle at a comfortable height was minimized to reduce fatigue a distinct advantage. The operator is positioned to maximize the steer effort and maintain excellent visibility.

The rabbit/turtle switch incorporates two levels of programmable travel performance to match operator experience and application environment.

Exclusive brake override allows slow speed travel with the handle near vertical. This feature improves maneuverability in tight areas.

Performance
The ST/SX 3000 Series benefits from Crown's design and engineering excellence.

The transistor control module works in conjunction with a new separately excited (SEM) drive motor to provide excellent acceleration and top travel speed loaded or empty. Transistor control is programmable for specific tasks or operator skill levels.

Smooth travel and lift combine with excellent controls to reduce product damage and increase productivity.

Electrical System
A heavy-duty 24-volt fused electrical system provides good travel and lift speeds.

Separately excited motor control eliminates directional contactors reducing maintenance and downtime.

The transistor control is sealed from dirt, dust and moisture for trouble-free operation. Transistor control features include over-temperature protection, polarity protection, self-test and visible diagnostics.

Regenerative motor braking is activated under a downhill condition, during plugging or when the directional control is returned to neutral. "Regen" reduces heat build-up and extends motor brush life.

An anti-roll down feature will apply the brakes if the truck rolls without a travel command.

175-amp battery connector with standard disconnect handle.

Hydraulic System
Heavy-duty hydraulic motor (ST–2.2 kw, SX–3.0 kw) with integral pump and reservoir for maximum efficiency and durability.

Single-speed lift and two-speed lowering is available to the operator.

Cylinder rods are hard-plated chrome with polyurethane seals.

Relief valve tuned to capacity protects all components in the hydraulic system.

Drive Unit and Brakes
Heavy-duty gearbox with spur gears for low noise emission.

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.

Drive unit mounts in truck frame with a permanently lubricated, twin-conical roller bearing that disperses load forces evenly, reducing maintenance and downtime.

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 fork tips during load handling. Mast cushioning between stages ensures smooth operation. Heavy-duty mast and chain rollers are sealed and lubricated for life. Mast design allows for easy access to carriage rollers.

Fork Carriage
ST 3000 Series feature 25" wide pin-type fork carriage. Forks are adjustable from 6.5" to 24.8". Standard fork lengths are 36", 42" and 48".

SX 3000 Series feature a standard 32" wide ITA Class II fork carriage. Forks are adjustable from 10" to 31". Standard fork lengths are 36", 42" and 48".

Serviceability
One-piece steel power unit cover is removed easily for access to all major components.

Brake rotor and disc inspection and replacement are easy.

Drive motor brush access is excellent.

Color-coded wiring speeds troubleshooting and the transistor control module uses visible LED flashes for fault communication. Optional plug-in hand set analyzer for servicing and programming capability.

Control handle switch cap is easily removed to expose components.

Wheels and Tires

- Drive tire – Vulkollan
  10" dia x 3.35" wide
- Load wheels – Vulkollan
  4" dia x 2" wide (ST)
  4" dia x 3" wide (SX)
- Optional poly casters are
  3.5" dia x 2" wide

Other Options
1. Audible travel alarm

2. Flashing lights

Safety considerations and dangers associated with audible travel alarms and flashing lights include:

- Multiple alarms and/or lights can cause confusion.
- Workers ignore the alarms and/or lights 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 your local Crown dealer.

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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