CROWN

SC 4000 Series

sit-down rider lift truck

specifications

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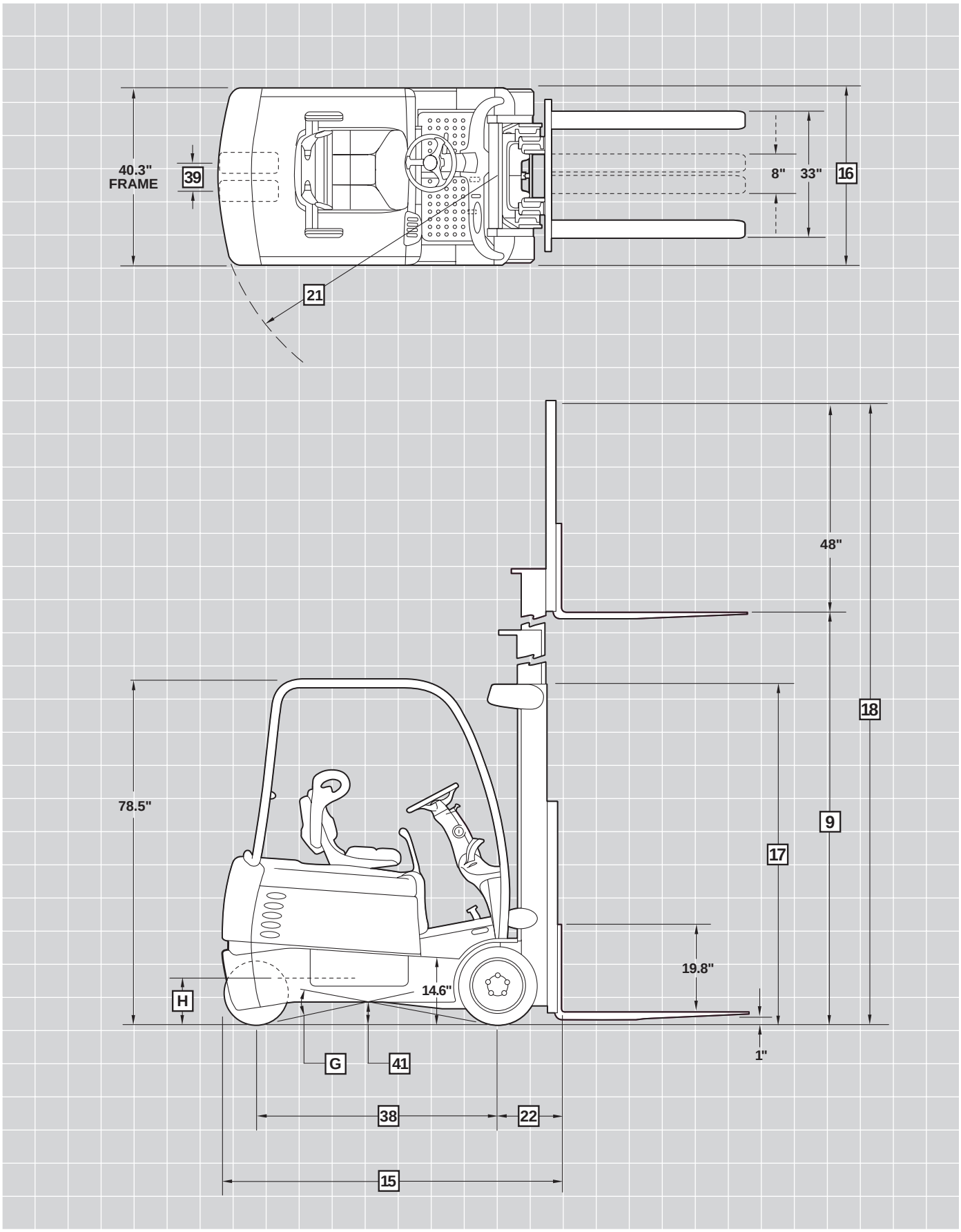

General Information	1	**Manufacturer**			**Crown Equipment Corporation**				
	2	**Model**		SC	4010-30	4020-30	4020-35	4040-35	4040-40
	3	**Load Capacity***	Rated to 154 in	lb	3000	3000	3500	3500	4000
	4	**Load Center**	Fork Face to Load CG	in	24				
	5	**Power**	Electric		36 Volts				
	6	**Operator Type**			Sit-down				
	7	**Tire Type**	Press-on Solid		Cushion				
	8	**Wheels (x = driven)**	Number Front/Rear		2x / 2				
Dimensions	9	**Mast****	Lifting Height	in	190				
	11		Free Lift Height†	in	35				
	12	**Fork Carriage**			ITA Class II				
	13	**Forks**	Standard L x W x T	in	36 x 4 x 1.5	36 x 4 x 1.5	36 x 4 x 1.75	36 x 4 x 1.75	36 x 4 x 1.75
			Optional Lengths	in	30, 39, 42, 45, 48, 54, 60				
	14	**Tilt**	F°/B°	degree	2 / 5				
	15	**Headlength**		in	67.9	72.4	72.6	77.2	77.2
	16	**Width Overall**	Standard Tread	in	40.3	40.3	40.3	40.3	42.3
	17	**Height**	Mast Collapsed	in	83				
	18		Mast Extended†	in	238				
	21	**Turning Radius**		in	53.6	58.1	58.1	62.7	62.7
	22	**Load Distance**	Center of wheel to fork face	in	14.3		14.5		
	23	**Aisle Width**	Right Angle Stack	in	Turn Radius + Load Distance + Load Length + Clearance				
Speeds	24	**Speed Travel††**	Empty/Loaded	36V mph	8.0/7.5	8.5/7.7	8.5/7.7	8.5/7.7	8.2/7.1
	25	**Speed Lift††**	Empty/Loaded	36V fpm	90/63	90/63	90/60	90/60	90/58
	26	**Speed Lower**	Empty/Loaded	fpm	90/90	90/90	90/90	90/90	90/90
Weights	32	**Weight, Less Battery**		lb	6149	5974	6216	6040	6260
	33	**Axle Load with Max Battery**	Unloaded Front	lb	4047	4300	4316	4518	4506
	34		Unloaded Rear	lb	3852	3924	4150	4122	4355
Chassis	35	**Tires**	Number Front/Rear		2 / 2				
	36		Size Front	in	18x7x12.1	18x7x12.1	18x7x12.1	18x7x12.1	18x8x12.1
	37		Size Rear	in	15 x 5 x 11.25				
	38	**Wheelbase**		in	45.6	50.1	50.1	54.7	54.7
	39	**Tread Width**	Front	in	33.3	33.3	33.3	33.3	34.3
			Rear	in	6.7				
	40	**Ground Clearance, Loaded**	Lowest Point	in	3.0				
	41		Center of Wheelbase	in	4.8	5.0	5.0	5.0	5.0
	G	**Grade Clearance, Loaded**		%	27.1	24.6	24.6	22.4	22.4
	42	**Brakes**	Service		Foot - Mechanical				
	43		Parking		Hand - Mechanical				
Battery	44	**Battery**	Type		Lead Acid				
	45		Capacity	AH	510	680	680	850	850
				KWH	17.8	23.7	23.7	29.6	29.6
	46		Weight - Min	lb	1475	1850	1850	2250	2250
			Weight - Max	lb	1750	2250	2250	2600	2600
			Size - Max	Length	16.01	20.50	20.50	24.88	24.88
				Width	38.81				
				Height	22.80				
	H	**Battery Floor Height**	With Rollers / w/o Rollers	in	10.4/9.8				
Motors	47	**Motors**	Traction Motor, dia	in	7.5				
	48		Lift Motor, dia	in	6.7				
	57	**Operating Pressure**	For Attachments	psi	Up to 3100 psi				

* Optional masts, attachments, longer load dimensions, and higher lifting heights may result in derating of the capacity. Contact dealer.
** Other mast heights available. See chart for other standard mast heights.
† Includes load backrest.
†† Performance specifications are based on a truck equipped with a 190" triple telescopic mast.

SC 4000 Series **Specifications**

Mast Chart SC 4000 Series			TT					QUAD
9	Lifting Height	in	172	190	208	226	241	240
11	Free Lift Height*	in	29	35	41	47	52	36
14	Tilt F/B	degree	2/5	2/5	2/5	2/3	2/3	2/3
17	Mast Collapsed Height	in	77	83	89	95	100	84
18	Mast Extended Height*	in	220.5	238.5	256.5	274.5	289.5	288.5

*Includes load backrest.

SC 4000 Series **Technical Information**

Standard Equipment

1. Crown drive system with GE transistor controller
2. 36 volt system
3. Driveability standard features
   - 15" step height
   - Large, uncluttered floorboard
   - Rubber floor mat
   - Rubber accelerator and brake pedal
   - Large, entry/exit “window”
   - Contoured battery cover for easy entry/exit
   - Custom seat with seat belt and side restraint
   - Compact steering wheel and steering column
   - Infinitely adjustable tilt steering
   - Operator forward design for enhanced visibility
   - Low cowl for fork and floor visibility
   - Urethane covered control handles with tactile feedback
   - Natural position for forward/reverse selector
   - Parking brake with tone alert
4. Performance profiling
5. 350 amp battery connector
6. Hour meter
7. Battery discharge indicator
8. LED diagnostics with 16 fault memory
9. Color coded wiring
10. Lift out or side removal battery access
11. Dual 15" steer tires
12. Large 18" cushion drive tires
13. Crown manufactured drive and lift motors
14. Mechanical disc brake with “regen” assist
15. Proportional rack and pinion steering
16. Steering speed limit
17. Overhead guard
18. 48" high load backrest
19. No tool lift out floorboards for service access
20. High visibility mast with in-line hose routing
21. O-ring face seal hydraulic fittings

Optional Equipment

1. Anti-cinch seat belt
2. Battery rollers
3. Lift interrupt
4. Freezer and corrosion conditioning
5. Sideshifter
6. Hydraulic valves for attachments
7. Quick disconnect connectors
8. Steering spinner knob
9. Full suspension seat
10. Storage tray with armrest
11. Keyless on/off switch
12. Fork lengths
13. Polished and tapered forks
14. Load backrest heights
15. Non-marking smooth or lug rubber tires
16. Drive-in rack overhead guard
17. Bottlers tilt
18. Fan
19. Fire extinguisher
20. Mirrors
21. Working lights
22. Flashing lights
23. Brake, tail and back-up light
24. Audible travel alarms

Driveability

The SC 4000 benefits from Crown’s design and engineering excellence. Numerous design features improve operator comfort and productivity.

A low 15" step height first greets the operator. A low battery cover that is streamlined helps the operator glide into the truck’s seat. The overhead guard is shaped to open up the entry/exit window. The compact tilt steer column and steer wheel further facilitate entry/exit. Floorboards are large, uncluttered and rubber covered to insulate the operator from vibration. Brake and accelerator pedals are rubber covered to provide good grip and comfort.

Several designs contribute to better visibility everywhere you look. A low cowl for fork visibility, a unique waterfall overhead guard for load handling, a high visibility mast and a compact steer column all work for operator visibility.

Control handles are crafted into the compartment and “fanned” for easy selection. They are urethane covered with tactile feedback for comfort and easy selection. Control actuation forces are minimal and responsive.

Crown Drive System

Crown has applied the latest generation General Electric separately excited drive system . The demand for high efficiency systems that closely match customer torque requirements is met with this generation controller. By independently controlling the field and armature, the best attributes of both series wound and shunt wound motors is provided.

Transistorized dual motor controllers regulate both drive motors. Motors are designed and built in Crown’s facility in New Knoxville, Ohio. Vertically mounted drive motors provide easy brush access. Floorboards remove without tools to expose motor ends.

Three modes of performance can be selected, (performance profiling), to accommodate operator experience or application requirements.

A distribution panel is conveniently located with all test points, control fuses and central wiring for easy troubleshooting. An optional handset plugs in to easily access service history and set performance features. An RS-232 serial link for extended and continuous status communications is standard. Utilizing the separately excited transistor control the forward, reverse and 1A bypass contactors needed in past designs is eliminated. This means fewer parts and electrical connections and fewer contactor tips which require maintenance.

Proportional Rack and Pinion Steering System

Hydrostatic power steering uses a large, totally enclosed rack and pinion gear assembly.

The steering geometry is matched to the controller to deliver smooth steering at all angles. The advantage is less tire scrubbing which extends tire life.

Both motors receive power, even in the tightest turns. This helps the truck to accelerate, turn and maneuver even from a full turn start position.

A “steering speed limit” regulates the drive motor’s output by the turning degree of the truck. The advantage is smooth, stable steering which may increase operator confidence and productivity.

Large, (15" diameter) dual steer wheels provide good traction and stability.

Mechanical Disc Brake with “regen” Assist

Both drive units have a brake assembly located on the intermediate shaft of the drive unit. This location creates a brake multiplication factor about 5:1. Braking is also assisted utilizing regenerative motor brake current. This solid state design reduces heat build-up and brake wear when braking and returns motor current to the battery. Brake rotor and friction pads are accessible through the mast assembly when brake inspection or replacement is performed.

Hydraulics

The hydraulic system provides continuous filtration. A heat stabilized polymer hydraulic tank is free from contamination and retains strength over a wide range of temperatures. Hydraulic attachments can be added easily in the field using modular valve bodies. Hydraulic valve handle actuation is precise, and oil is controlled using metered spool valves.

Ram displacement type lift cylinders and two double acting tilt cylinders are Crown manufactured. All rams and piston rods are hard chrome plated to reduce pitting and extend cylinder packing life. O-ring face seal fittings are used to eliminate leaks.

Mast Assembly

Crown manufactured mast assembly utilizes a “flush-face” interlocked I-beam design to improve visibility and save truck length. Roller bearing studs are welded on both sides of the rails for maximum strength and roller bearings are canted to run in the thick cross section of the rail. Tie bars wrap around the rails for added strength and to resist off-center load forces.

The hosing is applied using “in-line” routing to open up visibility. Cylinders are placed to the sides to create a high visibility design.

The mast has four points of attachment to the truck for good load force distribution. Two mounting points are at the frame, where tilt cylinders attach. Tilt cylinders use spherical bushings to resist off center load distortions. Two large diameter trunions secure the mast to the drive unit.

Drive Units and Motors

Two independent double reduction gear drives offer 22.5 to 1 gear reduction. The first reduction uses spiral bevel gears for low noise and efficiency. The second reduction uses helical gears.The drive unit gears are constantly lubricated in an oil bath. The drive units position the drive motors upright for easy drive motor brush inspection.

This time proven design is quiet and reliable, providing years of trouble free service.

Carriage

An ITA class II carriage is standard. An optional hook type ITA sideshifter or other attachments are easily added. Optional fork lengths are available.

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 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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New Bremen, Ohio 45869 USA
Phone: 419/629-2311
Fax: 419/629-3796
crown.com