SP 3500 SERIES

Specifications
Four-Point Stockpicker
SP 3580F Model
## Imperial Metric

### General Information
1. **Manufacturer**: Crown Equipment Corporation
2. **Model**: SP 3580F
3. **Load Capacity**:
   - 48" (1200 mm) Load Center to 330" (8380 mm)
   - lb kg 1500 680
4. **Load Center**: Platform face to load CG in mm 48 1220
5. **Power**: Electric 24 Volts
6. **Operator Type**: Stand-up Rider Stockpicker
7. **Tire Type**: Load / Drive / Caster Poly / Poly / Poly
8. **Wheels**: Load / Drive / Caster 2 / 1 / 1
9. **Mast Type**: Triple-telescopic TT

### Dimensions
10. **Lift Height (LH)** in mm 210 5335 240 6095 276 7010 294 7470 312 7925 330 8380 348** 8840** 366** 9295**
11. **Free Lift** With LBR in mm 8 205 20 510 32 815 38 965 44 1120 56 1425 62 1575 68 1730
12. **Collapsed Height** in mm 95 2415 107 2720 119 3025 125 3175 131 3330 143 3630 149 3785 155 3935
13. **Extended Height (EH)** in mm 298 7570 328 8330 364 9250 382 9705 400 10160 418 10620 436 11075 454 11535
14. **Truck Weight** Without Battery in lb kg 7073 3210 7228 3280 7665 3475 7786 3530 7879 3575 8008 3630 8102 3675 8195 3720
15. **Head Length** in mm 75.6 1920
16. **Wheelbase** in mm 117.3 2980
17. **Turning Radius** in mm 127.6 3241
18. **Aisle Guide Wheel Range** in mm 49.5" to 77.5" (125.7 to 196.8 cm) Greater than inside straddle in.25" increments
   - 1260 to 1970 (3200 to 5000 mm)
19. **Straddle Width**
   - Inside Straddle in mm 38 to 63 in 1" increments 970 to 1600 in 25 mm increments
   - Add 10" Add 254
20. **Operator Compartment Width** in mm 48 Standard; 42, 54, 60 and 64 Optional 1220 Standard; 1070, 1370, 1525 and 1625 Optional
21. **Speed Travel** Empty / Loaded mph km/h See Chart See Chart
22. **Speed Lift** Empty / Loaded fpm m/s 40/30 Low, 71/53 High .203/.152 Low, .360/.269 High
23. **Speed Lower** Empty / Loaded fpm m/s 40/38 Low, 80/76 High .203/.193 Low, .406/.386 High

### Performance
24. **Battery**
   - Type Lead Acid Lead Acid
   - Min Weight in lb kg 1520 690
   - Max Amp amp 1085 1085
   - Max Size L X W X H in mm 36.25 x 14.25 x 31 920 x 360 x 790
   - Connector Location/ Length (J) A/20 A/500
   - Standard Connector SB350 Red SB350 Red
   - 60 Min Rating hp kw 5.2 3.9

### Lift Height
<table>
<thead>
<tr>
<th>Lift Height</th>
<th>Steered Wheel &lt; 10° (1)</th>
<th>Guided (2)</th>
<th>Power Unit First (PUF) (3)</th>
<th>Travel Speed Empty / Loaded</th>
</tr>
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<tbody>
<tr>
<td>Linear SP 3580F</td>
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### Notes
1. Contact factory. Capacity depends on maximum lift height, straddle width, load center and fork length.
2. Minimum straddle ID = 42"
Standard Equipment
1. Crown’s Access 1 2 3® Comprehensive System Control
2. Crown’s AC traction control system
3. 24-volt electrical system
4. Electronic steering
5. Linear Height Speed Control
6. Two-speed raise/lower with soft start and stop
7. Programmable lift/lower cut outs
8. Intelligent Braking System with low-profile brake pedal
9. Lift motor brush wear and overtemp indicator
10. Crown Display
   - Battery discharge indicator with lift interrupt
   - Hour meters/travel distance/stop watch
   - PIN code access capable
   - Access 1 2 3 diagnostics
   - P1, P2, P3 Performance
   - Standard steer tire direction indicator (non wire-guided trucks)
   - Enhanced steer tire direction indicator (wire-guided trucks)
11. Soft urethane twist grip with “cam grip”
12. 10° angled steer wheel with soft feel spinner
13. Storage compartment
14. Premium platform cushion
15. Clear visibility platform window
16. Wire mesh screen
17. Clear visibility mast design
18. Key switch
19. Horn
20. LED flashing light
21. Hinged side gates with power disconnect
22. 14.25" (362 mm) battery compartment
23. 350 amp battery connector
24. 2" (51 mm) diameter battery compartment rollers
25. Top battery access for service
26. Removable steel battery side covers
27. Adjustable battery retainer
28. Hinged, lift off steel power unit doors
29. Corrosion conditioning
30. Emergency power cut-out
31. Retractable tether and body harness
32. Pallet clamp
33. InfoPoint® Quick Reference Guide and Maps
34. Color-coded wiring
35. 8" (203 mm) diameter load wheels

Optional Equipment
1. Crown wire guidance (broadband technology) operates on all frequencies ranging from 5.2 through 10 kHz without changing components. Not available with SP 3580F Cart Handling Model.
2. End of Aisle Control System (wire or rail guidance required)
3. Aisle guide wheels for rail guidance
4. Battery retainer interlock switch
5. Work lights, dome light and two-speed fan
6. Spotlights
7. Flashing light, amber
8. Programmable lift/lower cutouts with over-rides
9. Zone select key switch
10. 48", 54", 60" and 64" (1220 mm, 1370 mm, 1525 mm, and 1625 mm) wide operator platforms
11. Freezer conditioning (includes corrosion conditioning, ribbed floor mat, and wire mesh windshield)
12. Glass windshield
13. Load wheel and drive tire compunds
14. 30" (762 mm) lanyard boom
15. InfoLink® Ready System
16. InfoLink for Windows® Ready System
17. Positive / negative accessory cable
18. Special paint
19. Work Assist® Accessories
   - Clip pad and hook
   - Plate
   - Pocket
20. Fire extinguisher

Operator Platform
The operator area is designed for maximum visibility and stability for increased operator confidence and comfort.

The operator platform features a large window (1088 sq in) (701934 mm²) for excellent visibility. A Crown-designed clear-visibility mast affords the platform window one forward and two peripheral windows for maximum visibility, even when the platform is lowered.

The clear-visibility mast, with full free lift, extends the platform window above the mast channels for unobstructed visibility when raised.

A low-profile power unit, low placement of the lower cross brace and an outer C-channel rail assembly also contribute to excellent visibility.

A soft urethane twist grip is solidly mounted to the truck console to provide excellent stability for the operator during truck, plugging and braking. Controls for lift/lower, horn and emergency disconnect are all conveniently located for efficient operation and minimal operator fatigue. The steering wheel is angled at 10° and recessed to maximize the work area and reduce steer effort. The steering wheel and spinner knob are covered with soft urethane to reduce grip force and insulate against vibration. Control location keeps the operator’s posture neutral at all times.

The platform cushion, made of a microcellular composition, absorbs shock and vibration. The brake pedal has a low-profile design and when engaged is flush with the platform for maximum comfort. Heavy-duty side gates, with two horizontal and one vertical support rails, communicate security to the operator. For additional safety, cut-out switches disengage truck operation when side gates are raised.

Two work lights, two dome lights and a two-speed fan are optional. “Power-on” key prevents unauthorized operation of the truck. The Access 1 2 3 Display Panel provides concise, clear feedback for the operator during truck operation.

Crown’s Access 1 2 3...
The Comprehensive Access 1 2 3 System Control is a modular based communications and control system. It monitors all on-board sensors, makes decisions based on the sensor readings, and subsequently, controls all system movements safely and smoothly. All five modules are in constant communications with each other via a CAN (Control Area Network) bus so that real information is accessible to the system at all times.

- Interactive Display Module
- Traction Control Module
- Vehicle Control Module
- Steering Control Module
- Guidance Control Module

Crown Drive System
Crown has applied the latest generation AC drive system, enhanced with Access 1 2 3 technology. A Crown-manufactured drive unit uses spiral bevel and helical gears from motor to drive wheel axle.

Fixed, mounted drive motor does not rotate minimizing wear on electrical cables. Drive tire changing is simplified with this drive unit.

Crown’s AC Drive system dramatically improves travel speeds, acceleration and deceleration, thus increasing productivity.

The standard linear speed control provides smooth travel speed transition as lift heights change and increases productivity.

Travel System
Truck performance specifications (maximum travel speed, coast, plugging, acceleration, travel speed at height, and low speed lowering) are adjustable using Access 1 2 3. This enables customizing truck performance to meet specific application or operator requirements.

Crown’s InfoPoint® system offers evolutionary refinement for service simplicity. The InfoPoint Quick Reference Guide, on-truck component maps and information nuggets located throughout the truck allow technicians to troubleshoot without schematics, wiring diagrams, or service manuals for more than 95 percent of repairs.
The InfoPoint Quick Reference Guide provides code definition and overall component ID so the technician knows what it is, where it is, and what it does (Three W's). InfoPoint ensures faster, simpler, and higher quality service.

**Intelligent Steering**

Standard on the SP 3500 Series is electronic steering that is microprocessor based. Crown’s intelligent steering feature slows the truck automatically when the steer wheel is turned beyond 10°. Access 1 2 3 monitors the height of the operator platform, truck speed and steer wheel position.

Steering wheel rotation provides smooth, operator feedback. Steer effort is minimal, lock to lock revolutions is 4.5 turns. Drive wheel rotates a full 180° for maximum maneuverability. Auto centering drive tire for trucks equipped with rail guidance. Steering is connected to the Control System for full diagnostics and operator interface.

**Intelligent Braking System**

Crow’s patented Intelligent Braking System combines motor braking with optimum amounts of friction braking (three varying levels of force). 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. Brake lining life can be expected to last up to twice as long before replacement is necessary.

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

**Simplified Hydraulics**

Heavy-duty series wound pump motors and gear pumps are assembled into an integral unit. Two speed lift (high/low) is standard. Crown-manufactured solenoid type manifolds with built-in checks and relief valves. Two-speed lowering (high/low) with soft start is standard. Low speed lowering is adjustable with the use of the Access 1 2 3 Display. Soft-start lowering feature reduces the harshness at the beginning and end of the lowering cycle. The softer start is accomplished by controlling how quickly the proportional valve is opened or closed. Valve actuation is controlled by a driver in the steering control module.

Maximum lowering speed is regulated by a pressure compensating flow control valve. Velocity fuses are used in all cylinders to stop lowering should lowering speed exceed a preset value due to a line rupture. A hydraulic accumulator is used to cushion raise and lower functions. Manual lowering control on manifold block allows lowering of platform from ground level. Oil reservoir is designed with a 100 mesh screen at the fill location, a suction strainer, spin-on type 10 micron return line filter and a magnetic drain plug.

**Four-wheel Configuration**

A drive tire, castor wheel, and two load wheels provide a four-point foot print. Caster is adjustable to compensate for tire wear.

The Crown Mast Assembly

High visibility three-stage mast feature nested rail design with lift cylinders positioned behind mast rails. A low center position cylinder for free lift along with proper routing of hoses and cables, optimizes visibility through the mast. Built-in sensors detect chain slack and shut down primary lower function. Exclusive spring-loaded staging bumpers virtually eliminate platform impact as platform stages. Negative rail drop allows shimming of mast rollers without major disassembly.

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**Stronger Low Profile Power Unit**

Power unit is fabricated from heavy-gauge steel. Lower skirt is 0.75” (19 mm) steel that runs 0” (22.8 mm) high for component protection. Rugged steel doors suspended on heavy-duty pin hinges cover power unit compo- nentry. Doors swing wide for open access. Doors can also be lifted off for unrestricted service access. Door bolts have exclusive convex design that mates with concave door holes for fast reinstallation of door bolts. 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.

**Wheels and Tires**

Polyurethane drive tire, 13” (330 mm) diameter x 5.5” (140 mm) wide x 9.5” (241 mm) hub diameter. 8” (203 mm) diameter polyurethane x 3.8” (96 mm) wide load wheels. Optional polyurethane aisle guide wheels are 2” (51 mm) wide with a 4” (102 mm) or 2.5” (63.5 mm) diameter. Casters have dual 3” (76 mm) diameter x 10” (254 mm) diameter polyurethane wheel loads.

**Forks**

A 2” (51 mm) thick x 4” (102 mm) wide x 60” (1525 mm) long forked steel is standard for Cart Handling and optional on Platform trucks. Fork Spread is 24” (610 mm) to 30” (762 mm).

A 3” (76 mm) thick x 6” (152 mm) wide x 84” (2134 mm) diameter long box section is standard on Platform trucks and optional on Cart Handling trucks. Optional lengths available. Fork spread (adjustable) 28” (711 mm) to 30” (762 mm).

**Technical Information**

**Pallet Clamp**

Standard equipment includes a foot-applied, hand-released pallet clamp designed for use with pallets having center stringers.

**Warning Device Options**

Audible or Visual Alerts

Safety considerations and dangers associated with audible travel alarms and 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 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 truck, how it is equipped and the conditions of the operating area. Crown products and specifications are subject to change without notice.

Crown Equipment Corporation
New Bremen, Ohio 45869 USA
Tel 419-629-2311
Fax 419-629-3796
crown.com

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.

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