

CROWN

Specifications

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

Stacker

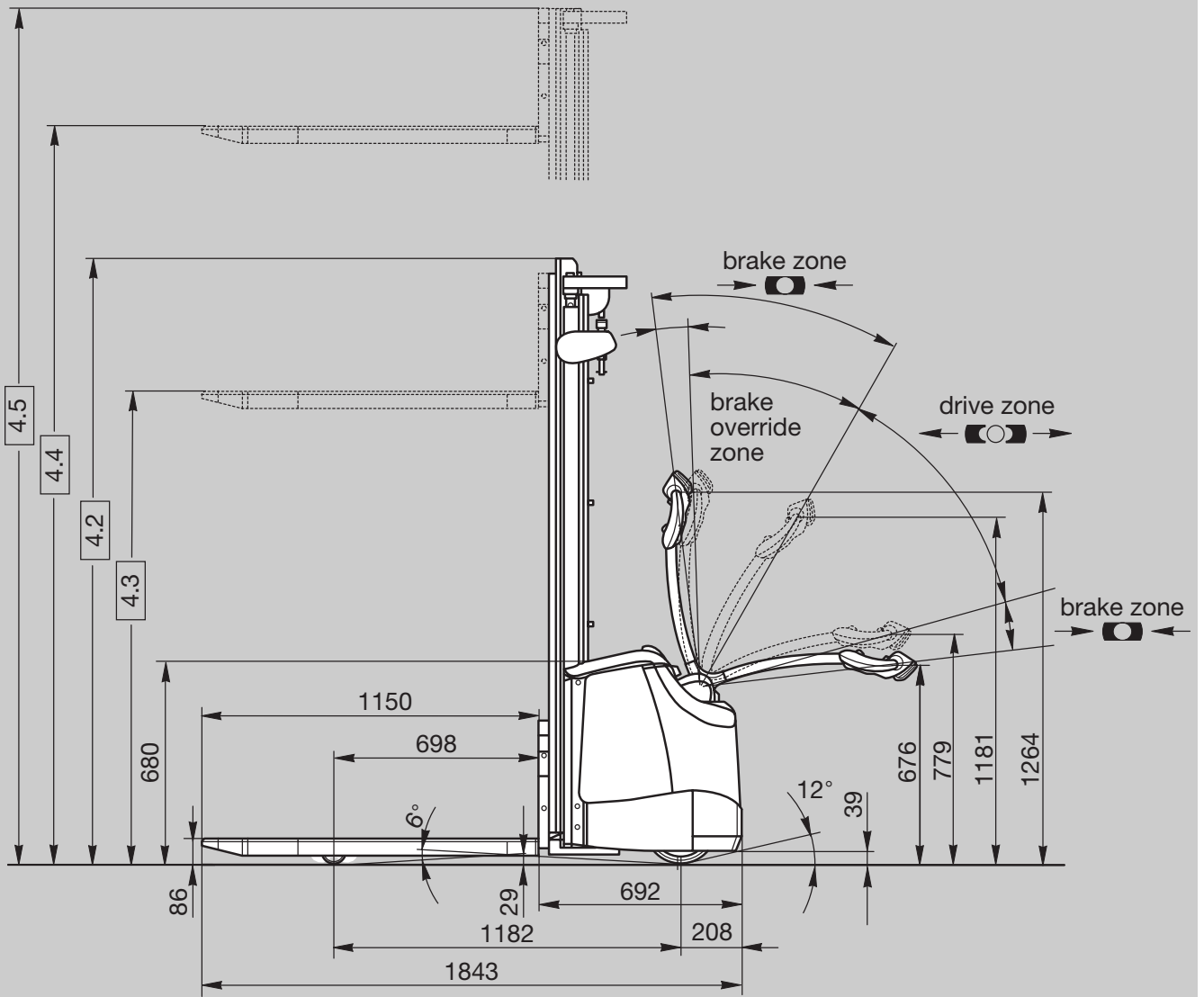
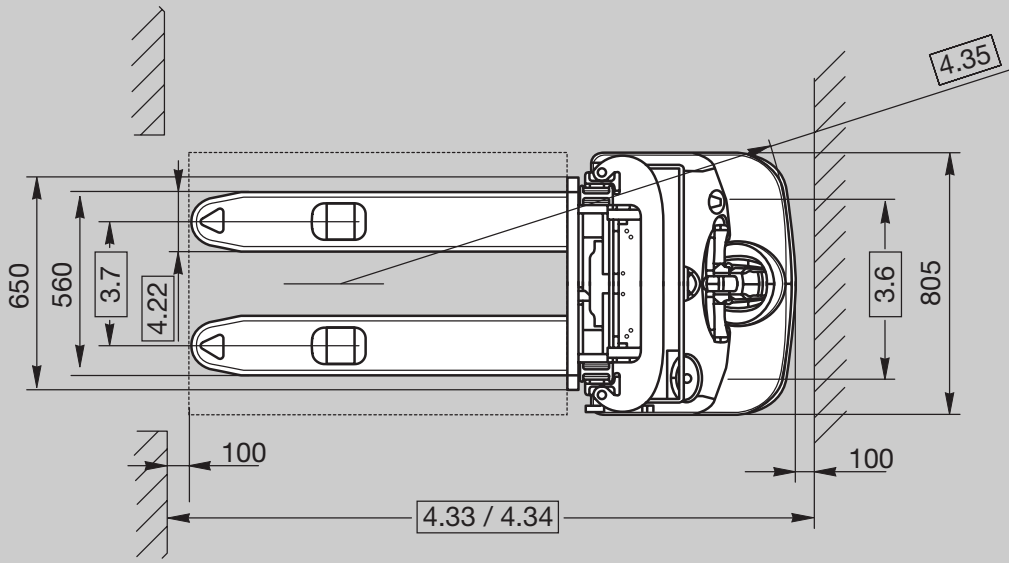
WF 3000

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 | 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 | 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 | w.o. load backrest | | h2 | mm | | | | | | | | | | | | | | | | see table 1 | | | | |
| | 4.4 | Lift Height | | | h3 | mm | | | | | | | | | | | | | | | | see table 1 | | | | |
| | 4.5 | Mast | extended height w.o. lbr. | | 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 | with 1150 mm fork length | | l1 | mm | | | | | | | | | | | | | | | | 1843 | | | | |
| | 4.20 | Headlength | | | l2 | mm | | | | | | | | | | | | | | | | 692 | | | | |
| | 4.21 | Overall Width | | | b1 | mm | | | | | | | | | | | | | | | | 805 | | | | |
| | 4.22 | Fork Dimensions | | | thxw | mm | 170 x 60 | | | | | | 186 x 60 | | | | | | | | | | | | | |
| | 4.25 | Width Across Forks | | | b5 | mm | 560 / 670 | | | | | | | | | | | | | | | | | | | |
| | 4.31 | Ground Clearance | with load below mast | | m1 | mm | 29 | | | | | | | | | | | | | | | | | | | |
| | 4.34 | Working Aisle Width | 800 x 1200 length | | Ast | mm | | | | | | | | | | | | | | | | 2229 | | | | |
| 1000 x 1200 length | | | Ast | mm | | | | | | | | | | | | | | | | 2296 | | | | | | |
| | | | 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 | | | | | | | | | | | | | | | | | | | | |

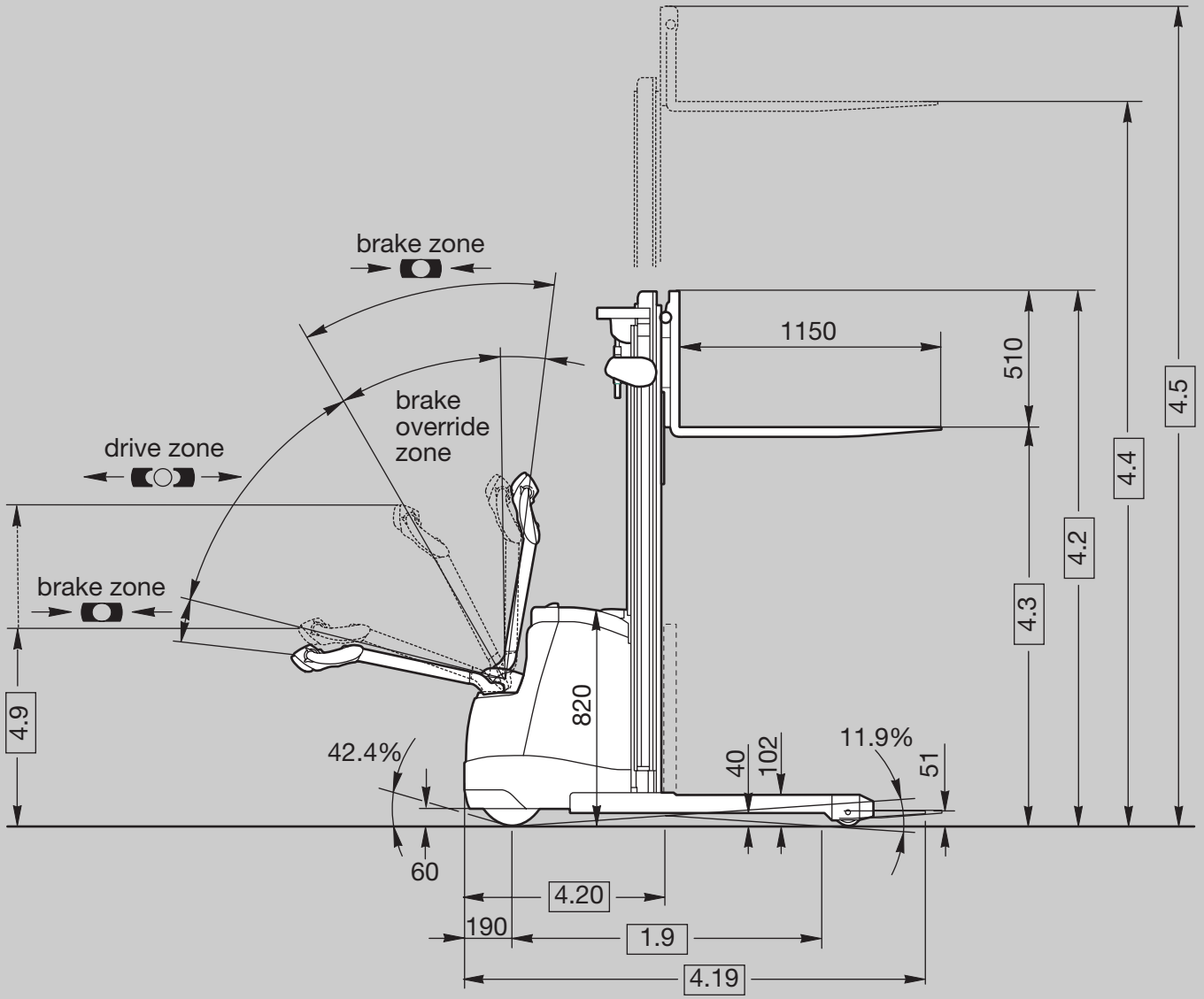
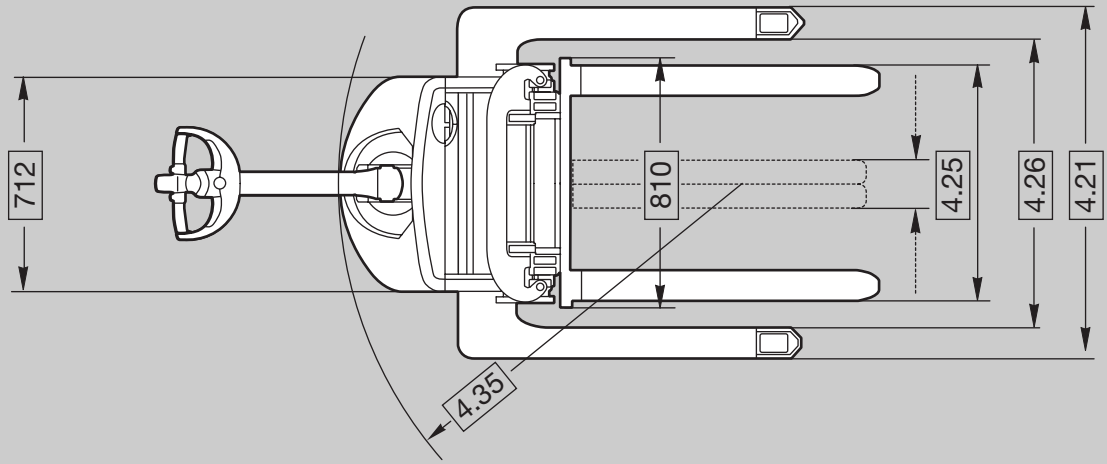
^A Maintenance free battery pack

^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 | 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 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 |



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 | 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 | h1 | mm | see table 1 | | | | |
| | 4.3 | Free Lift | w.o. load backrest | h2 | mm | see table 1 | | | | |
| | 4.4 | Lift Height | | h3 | mm | see table 1 | | | | |
| | 4.5 | Mast | extended height w.o. lbr. | 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 | with 1150 mm fork length | l1 | mm | see table 2 | | | | |
| | 4.20 | Headlength | | l2 | mm | see table 2 | | | | |
| | 4.21 | Overall Width | front | b1 | mm | 712 | | | | |
| | | | rear | b1 | 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. | b5 | mm | 232 - 765 | | 252 - 785 | | |
| | 4.26 | Inside Straddle Width | infinite adjustment | b4 | mm | 865-1165 | 965-1270 | 865-1165 | 965-1270 | |
| | 4.31 | Ground Clearance | with load below mast | m1 | 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 | | |
| 4.4 | 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 | | |
| 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 | |
|------|----------------------------|--------------------------|----|---------|------|---------|------|
| | | | | 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. Electric brake
9. Brake override
10. Ramp hold
11. Regenerative motor braking
12. Heavy-duty drive unit
13. Safety reversing button
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. Handset analyser for calibration or fault analysing
4. Load backrest
5. Maintenance free or wet industrial battery options
6. Battery watering system

7. SBE160 red battery connector
8. Freezer conditioning (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
 - Fan
 - 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.

European Manufacturing:

Crown Gabelstapler GmbH & Co. KG
Roding, Germany

Crown Equipment
Galway, Ireland

www.crown.com

