

# GRADALL®

## XL 7310 V

STEEL MILL MAINTENANCE



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## SPECIFICATIONS

### Engine

- Volvo TAD571 VE Tier 4f, 4 cycle, inline 4 cylinder, liquid cooled, electronic controlled
- Vertical canister style lube and main fuel filters and fuel/water separation with manual feed pump attached to engine
- Water in fuel indicator and alarm

**Gross Rating:** 173 hp @ 2200 rpm (129kW)  
590 ft lb Torque @ 1100-1500 rpm (800Nm)

**Net Rating:** 153 hp @ 2200 rpm (114kW)

- Variable viscous fan clutch system
- Vertical stacked hydraulic oil cooler, charge air cooler and radiator
- Block heater

**Maximum slope:** 30°

- 24 volt starter, 100 amp alternator
- Two SAE #C31-S 1000 CCA batteries
- Two-stage dry type air cleaner with centrifugal pre-cleaner and safety element, vacuator valve and service indicator

**Fuel tank capacity:** 90 gallons (341 L)

### Operator Cab

- All-weather cab
- Tinted safety glass windows
- Acoustical lining
- Four-way adjustable seat
- AM/FM radio
- Filtered fresh air heater
- Defroster
- Air conditioner
- Front window has heat resistant glass
- Rearview mirror on left side
- Standard equipment includes operator's seat belt and swing lights
- Camera system with three external cameras

### Controls

- Two electronic joysticks (hoist and bucket, telescope and swing)
- One rocker switch (tilt) control
- Joysticks mounted on arm pods
- Quick change joystick pattern switch located on instrument panel
- Self-centering joysticks; when controls are released, power for movement disengages and swing and tilt brake set automatically

- Tilting/telescoping steering column
- Hydraulic foot pedal controls braking functions
- Travel speed is regulated with an electronic foot pedal control
- Switch on the FWD/REV selector provides 1st/2nd gear selection
- Independent rocker switches control park brake and travel alarm mode

### Engine Controls and Instrumentation

- Key operated ignition/starter switch, throttle and main battery disconnect switch
- Air cleaner condition indicator
- Electronic monitor indicates fuel level, low battery charge, lube oil pressure, high coolant temperature, engine rpm and engine hours with shutdown protocol
- Fuel saving auto idle feature sends engine rpm to idle when control circuits are in neutral for seven seconds

### Boom

- Two piece triangular telescoping boom
- Adjustable boom rollers with eccentric shafts
- 360° continuous boom tilt
- 75° boom pivot angle
- Auxiliary hydraulics

### Hydraulic System

#### Pumps

- One load-sensing, axial piston pump; oil flow 0-110 gpm (0-416 L/min)
- Tandem gear pump (steering, brake/pilot) 10 gpm (38 L/min), 6 gpm (23 L/min)

#### System Monitor

- Electronic monitor in cab indicates
  - Low hydraulic fluid level
  - High hydraulic fluid temperature
  - System working pressure
  - System pilot pressure

### SYSTEM SPECIFICATIONS

#### Six cylinders

- One tool: 5.0" (127 mm) ID, 3.0" (76 mm) rod, 25.9" (658 mm) stroke
- Two hoist: 4.25" (108 mm) ID, 3.0" (76 mm) rod, 53.43" (1357 mm) stroke
- One telescope: 5.0" (127 mm) ID, 3.25" (83 mm) rod, 13'6" (3.94 m) stroke
- Two single-acting axle oscillation cylinders: 4.528" ID, 4.528" rod (115 mm x 115 mm), 6.25" (159 mm) stroke

### Three hydraulic motors

- Swing, 68 hp (51 kW)
- Tilt, 28 hp (21 kW)
- Propel motor, 113 hp (84 kW)

### Operating pressures:

- Hoist.....4,900 psi (331 BAR)
- Tilt.....2,400 psi (165 BAR)
- Swing.....4,500 psi (310 BAR)
- Tool.....4,900 psi (331 BAR)
- Telescope.....3,300 psi (228 BAR)
- Propel.....4,900 psi (331 BAR)
- Pilot System.....550 psi (38 BAR)
- Braking & Steering.....2,400 psi (165 BAR)

### Oil Capacity

- Reservoir system 61 gallon (231 L)
- Pressurized reservoir with visual oil level gauges

### Filtration System

- 10 micron return filter
- 10 micron pilot filter
- Fin and tube-type oil cooler with thermal by-pass and relief valves
- Pressure-compensated, load-sensing valves with circuit reliefs in all circuits

### Undercarriage

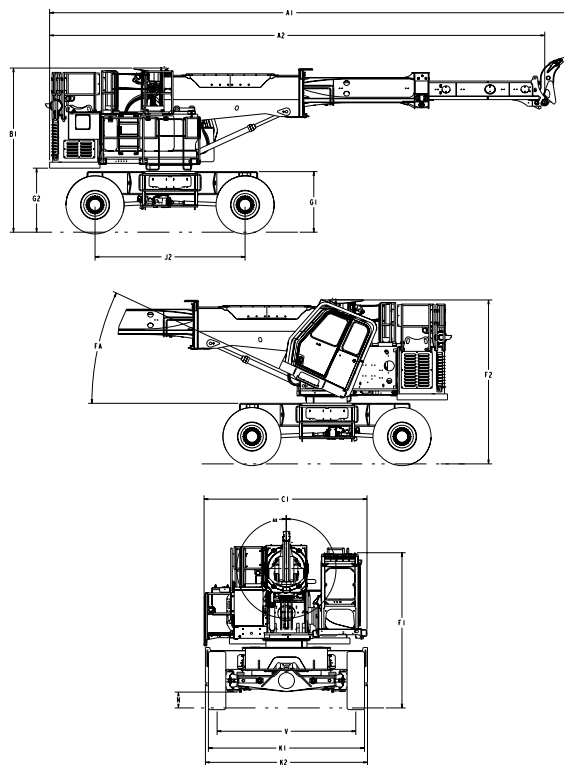
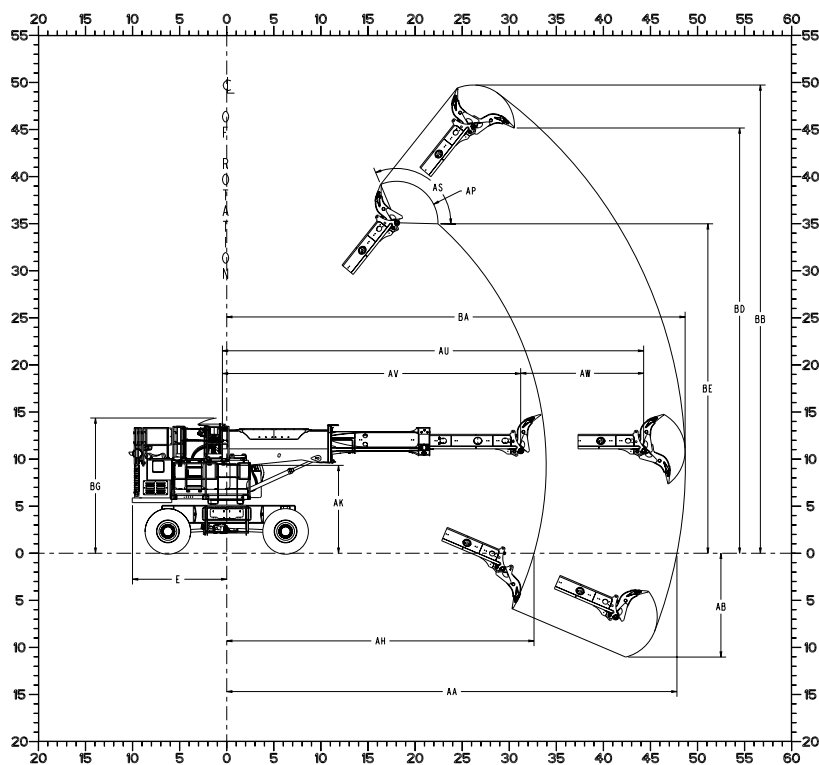
- Full-time 4 x 4 drive with 2-speed Powershift transmission
- Rigid mount rear axle
- Oscillating front steer axle with automatic lock-out cylinders
- Four-wheel enclosed sealed wet-disc brakes
- Access ladders on both sides and both ends of machine
- Locking toolboxes on each side

**Maximum Travel Speed:** 11 mph (17.7 kph)

**Maximum Gradeability:** 47%

**Minimum Turning Radius:** 38 ft (11.6 m)

**Tires:** 16.00 x 25 (28 ply)



## Dimensions

- A1** Overall length (boom level) with scaling hook: 43'5" (13.2)
- A2** Overall length (boom level) without scaling hook: 41'3" (12.6)
- B1** Overall height (boom level): 13'8" (4.2)
- C1** Width of upperstructure: 13'4" (4.1)
- E** Swing clearance, rear of upperstructure: 10'0" (3.0)
- F1** Top of cab guard to groundline (cab level): 13'2" (4.0)
- F2** Top of cab guard to groundline (cab at full tilt): 13'6" (4.1)
- FA** Cab tilt: 25°
- G1** Clearance, upperstructure to groundline: 5'2" (1.6)
- G2** Clearance, counterweight to groundline: 5'4" (1.6)
- J2** Nominal distance between centerlines of front and rear axles: 12'6" (3.8)
- K1** Width of chassis, toolboxes in inner position: 13'1" (4.0)
- K2** Width of chassis, toolboxes in outer position: 13'6" (4.1)
- N** Ground clearance: 1'4" (0.4)
- V** Wheel centerline to wheel centerline: 11'7" (3.5)
- AA** Maximum radius at groundline: 45'5" (13.8)
- AB** Maximum depth: 11'0" (3.4)
- AH** Minimum radius at groundline: 30'4" (9.2)
- AK** Boom pivot to groundline: 9'4" (2.8)
- AP** Scaling hook tooth radius: 4'5" (1.3)
- AS** Attachment pivot angle: 114°
- AU** Maximum telescoping boom length  
(boom pivot to attachment pivot): 44'9" (13.6)
- AV** Minimum telescoping boom length  
(boom pivot to attachment pivot): 31'8" (9.6)
- AW** Telescoping boom travel: 13'1" (4.0)
- AX** Boom tilt angle: 360° continuous
- BA** Maximum radius of working equipment: 48'8" (14.8)
- BB** Maximum height of working equipment: 49'9" (15.1)
- BD** Minimum clearance of scaling tooth, with attachment  
pivot at maximum height: 45'2" (13.8)
- BE** Minimum clearance of scaling tooth at maximum  
boom height: 35'0" (10.7)
- BG** Maximum height of working equipment with boom  
below groundline: 14'4" (4.4)

Specifications subject to change without notice.  
Metric units are meters (m) unless noted.  
Machines shown may have optional equipment.

It is Gradall Policy to continually improve its products. Therefore designs, materials and specifications are subject to change without notice and without incurring any liability on units already sold. Units shown may have optional equipment.

# GRADALL®

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## Weight

- Approximate working weight  
- 77,500 lbs (35,153 kg)

## Function Forces

- Rated Boom In:** 23,210 lbs (103 kN)
- Rated Boom Out:** 27,357 lbs (122 kN)
- Rated Ripper:** 19,888 lbs (89 kN)
- Boom Rotating Torque:** 18,375 ft lbs (24,913 Nm)
- Boom Rotating Speed:** 5.3 rpm