

# GRADALL<sup>®</sup> XL 4200 V

HYDRAULIC  
EXCAVATOR



## SPECIFICATIONS

### Engine

- Volvo TAD571 VE, Tier 4f, 4 cycle, inline 4 cylinder, liquid cooled, electronic controlled
- Vertical canister style lube filter attached to engine
- Vertical canister style main fuel filter 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 air cleaner with high-efficiency pre-cleaner, vacuator valve and remote service indicator

**Fuel tank capacity:** 99 gallons (375 L)

### Operator Cab

- All-weather cab with tinted safety glass windows
- Skylight
- Acoustical lining
- Four-way adjustable operator's seat
- Seat belt
- AM/FM radio
- Filtered fresh air heater
- Defroster and A/C
- Front window slides to overhead storage
- Rearview mirrors on right and left sides
- Windshield wiper and washer
- LED swing lights
- LED work lights

### Controls

- Two electronic joysticks (hoist and bucket, telescope and swing)
- One rocker switch (tilt) control upperstructure
- Joysticks mounted on arm pods
- Quick change joystick pattern switch located on instrument panel
- Joysticks are self-centering; when controls are released, power for movement disengages and swing and tilt brake set automatically
- Two electric foot pedals (with handles) control crawler travel speed and direction, crawler steering and crawler brakes
- Toggle switch on arm pod allows selection of two crawler speed ranges

### 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
- 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
- 220° boom tilt
- 105° boom pivot angle
- Auxiliary hydraulics

### Hydraulic System

#### Pumps

- One load-sensing, axial piston pump; oil flow 0-110 gpm (0-416 L/min)
- Gear pump, pilot, 6 gpm (23L/min)

#### System Monitor

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

#### SYSTEM SPECIFICATIONS

##### Four Cylinders

- One tool: 5.0" ID, 3.0" rod (127 mm x 76 mm), 25.9" (658 mm) stroke
- Two hoist: 4.25" ID, 3.15" rod (108 mm x 80 mm), 31.0" (787 mm) stroke
- One telescope: 3.5" ID, 2.559" rod (89 mm x 65 mm), 12'6" (3.81 m) stroke

##### Four Hydraulic Motors

- Swing, 64 hp (48 kW)
- Tilt, 21 hp (16 kW)
- Two propel motors, 120 hp (89 kW) each

##### Operating Pressures:

- Hoist..... 4,900 psi (331 BAR)
- Tilt ..... 2,500 psi (172 BAR)
- Swing ..... 4,200 psi (290 BAR)
- Tool ..... 4,900 psi (331 BAR)
- Telescope ..... 4,900 psi (331 BAR)
- Propel..... 4,900 psi (331 BAR)
- Pilot System ..... 550 psi (38 BAR)

##### Oil Capacity

- Reservoir system 65 gal (246 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

## Crawler Drive

- Dual range, high torque piston motor powers each track
- Three-stage planetary drive with integral speed limiting valve and automatic spring-set/hydraulic release wet disc parking brake

**Travel Speed:** on flat, level surface:

High Speed: 3.4 mph (5.5 kmh)  
Low Speed: 1.9 mph (3.1 kmh)

- Automatic two-speed control shifts crawler drive into low speed under difficult travel conditions
- Manual override switch for loading the machine for transport

**Gradeability:**

- 58%, limited by engine lubrication requirements

**Drawbar Pull**

- 38,324 lb (170 kN)

**Individual Track Control**

- Tracks counter-rotate to pivot machine about the swing centerline
- Electronically operated travel alarm signals crawler movement in either direction

## Swing

- Priority swing circuit with axial piston motor
- Planetary transmission

**Swing speed:** 7.0 rpm

**Swing Brake**

- Automatic spring-set/hydraulic release wet-disc parking brake
- Dynamic braking is provided by the hydraulic system

## Function Forces

**Rated Boom Force:** 22,075 lbs (98.2 kN)

**Rated Bucket Breakout Force:**

25,405 lbs (113 kN)

## Weight

- Approximate working weight with 36" (914 mm) excavating bucket, fuel tank half full and no operator

Pad Size	Weight	Bearing Pressure
31.5" 800 mm	46,862 lb (21,256 kg)	5.7 psi (39.3 kPa)
23.6" 600 mm	45,746 lb (20,750 kg)	7.3 psi (50.3 kPa)

## GRADALL Model XL 4200 V Excavator Lift Capacity: LB (KG)

LOAD POINT HEIGHT		LOAD RADIUS										
		10' 0" (3.0 m)		15' 0" (4.6 m)		20' 0" (6.1 m)		25' 0" (7.6 m)		Maximum Radius		
		Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side		Over End	Over Side
Above Ground Level	15' 0" (4.6 m)			9850 (4470)	9850 (4470)	6955 (3155)	6955 (3155)	5110 (2320)	5110 (2320)	25' 6" (7.8 m)	4965 (2250)	4965 (2250)
	10' 0" (3.0 m)			11800 (5350)	11800 (5350)	7910 (3590)	7910 (3590)	5655 (2565)	5655 (2565)	26' 11" (8.2 m)	5030 (2280)	5030 (2280)
	BOOM LEVEL 7' 9" (2.4 m)			12375 (5615)	12375 (5615)	8190 (3715)	8190 (3715)	5820 (2640)	5820 (2640)	27' 2" (8.3 m)	5080 (2305)	5080 (2305)
	5' 0" (1.5 m)			12590 (5710)	12590 (5710)	8345 (3785)	8345 (3785)	5930 (2690)	5930 (2690)	27' 3" (8.3 m)	5155 (2340)	5155 (2340)
At Ground Level				11475 (5205)	11475 (5205)	8045 (3650)	8045 (3650)	5850 (2655)	5850 (2655)	26' 8" (8.1 m)	5310 (2410)	5310 (2410)
Below Ground Level	5' 0" (1.5 m)	10845 (4920)	10845 (4920)	9320 (4225)	9320 (4225)	7160 (3250)	7160 (3250)			24' 11" (7.6 m)	5475 (2485)	5475 (2485)
	10' 0" (3.0 m)	7130 (3235)	7130 (3235)	7190 (3260)	7190 (3260)	6035 (2735)	6035 (2735)			21' 10" (6.7 m)	5580 (2530)	5580 (2530)
	15' 0" (4.6 m)	4745 (2150)	4745 (2150)	5445 (2470)	5445 (2470)					16' 7" (5.1 m)	5345 (2425)	5345 (2425)

**NOTE:** The above loads are in compliance with the SAE standard J1097 DEC2005. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

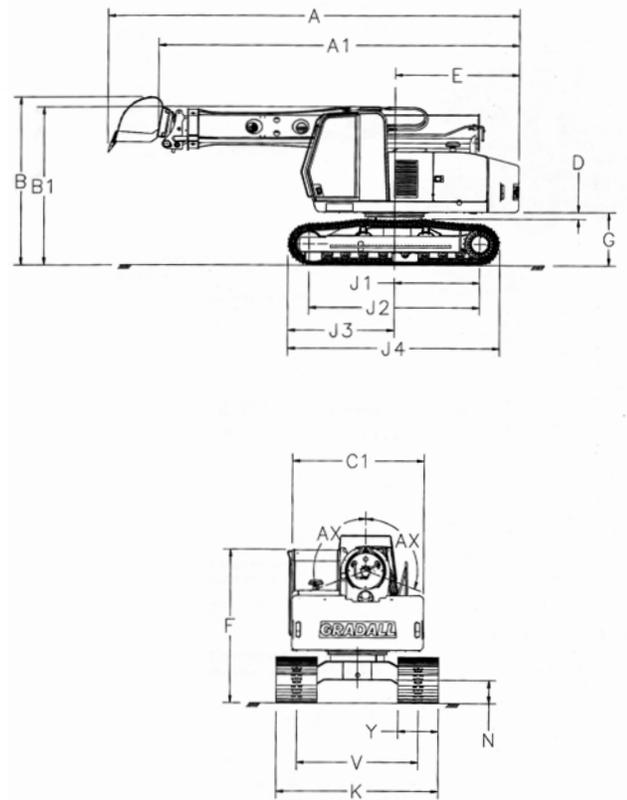
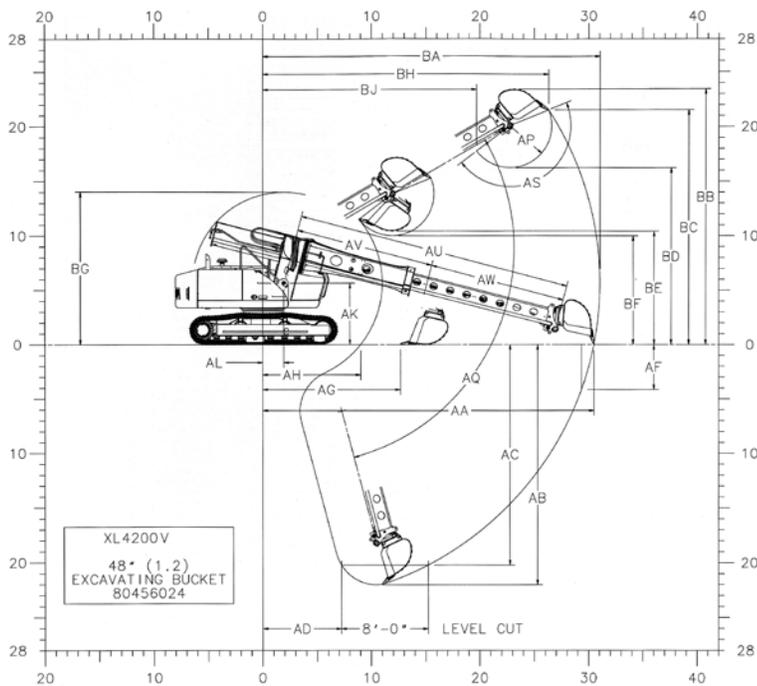
The rated lift capacity is based on the machine being equipped with 8,850 lb (4014 kg) counterweight, standard boom, standard tires, no auxiliary hydraulics and no bucket.

**NOTE:** Bucket adjustment values are 87% of the actual bucket weights.

The load point is located on the bucket pivot point, including loads listed for maximum radius.

Do not attempt to lift or hold any load greater than these rated values at specified load radii and heights. The weight of slings and any auxiliary devices must be deducted from the rated load to determine the net load that may be lifted.

**ATTENTION:** All rated loads are based on the machine being stationary and level on a firm supporting surface. The user must make allowance for particular job conditions such as soft or uneven ground, out of level conditions, side loads, hazardous conditions, experience of personnel, etc. The operator and other personnel must read and understand the operator manual before operating this machine. Rules for safe operation of equipment must be adhered to at all times.



## Dimensions

- A** Overall length with bucket open: 26' 6" (8.1)
- A1** Overall length without bucket: 23' 3" (7.1)
- B** Overall height with bucket open: 10' 9" (3.3)
- B1** Overall height without bucket: 10' 1" (3.1)
- C1** Width of upperstructure: 8' 6" (2.6)
- D** Minimum clearance, upperstructure to undercarriage: 5" (130 mm)
- E** Swing clearance, rear of upperstructure: 8' 0" (2.4)
- F** Top of cab to groundline: 9' 10" (3.0)
- G** Clearance, upperstructure to groundline: 3' 5" (1.0)
- J1** Axis of rotation to centerline of drive sprockets: 5' 1" (1.7)
- J2** Nominal distance between centerlines of drive sprockets and idlers: 11' 0" (3.4)
- J3** Axis of rotation to end of track assembly: 6' 10" (2.1)
- J4** Nominal overall length of track assembly: 13' 8" (4.2)
- K** Width of crawler (Standard): 10' 6" (3.2)  
Width of crawler (Optional): 9' 10" (3.0)
- N** Ground clearance (per SAE J1234): 18" (454 mm)
- V** Track gauge, roller centerline to roller centerline: 7' 10" (2.4)
- Y** Width of crawler track assembly (standard): 31' 5" (800 mm)  
Width of crawler track assembly (optional): 23' 6" (600 mm)
- AA** Maximum radius at groundline (165° pivot): 30' 6" (9.3)
- AB** Maximum digging depth (165° pivot): 22' 0" (6.7)
- AC** Maximum depth for 8' level cut: 20' 3" (6.2)
- AD** Minimum radius for 8' level cut at depth "AC": 7' 3" (2.2)
- AF** Maximum depth of vertical wall which can be excavated: 4' 2" (1.3)
- AG** Minimum level cut radius with bucket flat on groundline: 12' 8" (3.9)
- AH** Minimum radius at groundline: 9' 0" (2.8)
- AK** Boom pivot to groundline: 5' 8" (1.7)
- AL** Boom pivot to axis of rotation: 1' 11" (585 mm)
- AP** Bucket tooth radius: 3' 10" (1.2)
- AQ** Boom pivot angle: 30° Up and 75° Down
- AS** Bucket pivot angle: 165°
- AU** Maximum telescoping boom length (boom pivot to bucket pivot): 25' 3" (7.7)
- AV** Minimum telescoping boom length (boom pivot to bucket pivot): 12' 9" (3.9)
- AW** Telescoping boom travel: 12' 6" (3.8)
- AX** Bucket tilt angle (both sides of center): 110°
- BA** Maximum radius of working equipment: 31' 0" (9.5)
- BB** Maximum height of working equipment: 23' 5" (7.1)
- BC** Maximum bucket tooth height: 21' 7" (6.6)
- BD** Minimum clearance of bucket teeth with bucket pivot at maximum height: 16' 3" (5.0)
- BE** Minimum clearance of fully curled bucket at maximum boom height: 10' 5" (3.2)
- BF** Minimum clearance of bucket teeth at maximum boom height: 10' 0" (3.0)
- BG** Maximum height of working equipment with bucket below groundline: 14' 0" (4.3)
- BH** Radius of bucket teeth at maximum height: 26' 4" (8.0)
- BJ** Minimum radius of bucket teeth at maximum bucket pivot height: 19' 8" (6.0)
- Transport dimensions without attachment**  
Length: 23' 3" (7.1)  
Height: 10' 1" (3.1)  
Width: 10' 6" (3.2)

## Optional Equipment

- Vandalism protection kit including window covers
- Strobe light

## Attachments

- Quick change and reversible buckets fabricated using steel plate with high strength, low alloy cutting edges and wear strips
- Standard attachments available for wide range of applications
- Capacities shown are in heaped cubic yard



### Excavating Bucket

		yd <sup>3</sup>	m <sup>3</sup>
8045-6020	24" (610mm) 603 lbs (274 kg)	3/8	0.31
8045-6021	30" (762mm) 660 lbs (300 kg)	1/2	0.41
8045-6022	36" (914mm) 741 lbs (336 kg)	5/8	0.54
8045-6023	42" (1.07m) 841 lbs (382 kg)	3/4	0.64
8045-6024	48" (1.22 m) 957 lbs (434 kg)	1	0.76
8065-6117	48" (1.1m) 959 lbs (435 kg)	1 1/2	1.15



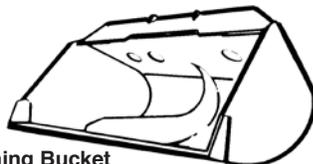
### Trenching Bucket

		yd <sup>3</sup>	m <sup>3</sup>
8065-6104	15" (381mm) 897 lbs (407 kg)	1/5	0.15
8065-6012	21" (533mm) 982 lbs (445 kg)	1/4	0.19



### Pavement Removal Bucket

8065-6102	40" (1.0 m) 1262 lbs (573 kg)		
8065-6115	18" (0.457 m) 929 lbs (421 kg)		
8065-6116	24" (0.610 m) 1,219 lbs (553 kg)		
8065-6114	28" (0.711 m) 1,310 lbs (594 kg)		



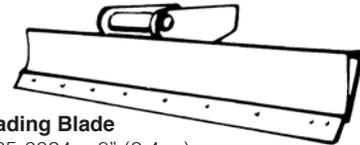
### Ditching Bucket

		yd <sup>3</sup>	m <sup>3</sup>
8065-6040	30" (0.762 m) 521 lbs (236 kg)	3/8	0.3
8065-6007	60" (1.52m) 807 lbs (366 kg)	7/8	0.73
8065-6006	66" (1.68m) 892 lbs (405 kg)	1	0.76
8065-6002	72" (1.83 m) 944 lbs (428 kg)	1 1/8	0.87
8065-6118	72" (1.83m) 1148 lbs (521 kg)	1 3/5	1.22



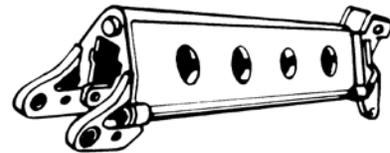
### Dredging Bucket

		yd <sup>3</sup>	m <sup>3</sup>
8065-6013	72" (1.83m) 1114 lbs (505 kg)	1 1/8	0.87



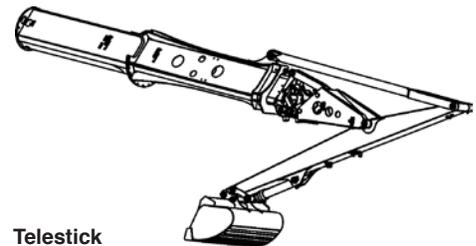
### Grading Blade

8065-6024	8" (2.4 m) 630 lbs (285 kg)		
-----------	--------------------------------	--	--



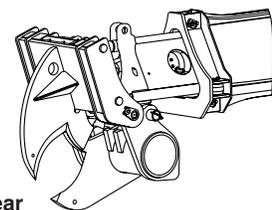
### Boom Extension

8065-5028	4' (1.2 m) 1,090 lbs (495 kg)		
8065-5029	6' (1.8 m) 1,250 lbs (560 kg)		
8065-5030	8' (2.4 m) 1,389 lbs (631 kg)		



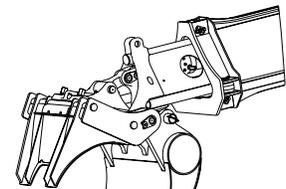
### Telestick

8075-5045	3,600 lbs (1,633 kg)		
-----------	----------------------	--	--



### Tree Limb Shear

8045-5052	1,948 lbs (884 kg)		
-----------	--------------------	--	--



### Fixed Thumb Grapple

8075-5023	1,574 lbs (714 kg)		
-----------	--------------------	--	--

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®

406 Mill Ave. SW, New Philadelphia, Ohio 44663  
Phone: 800-445-4752  
www.Gradall.com