OPTIONAL EQUIPMENT

Work lights: 2 floodlights on boom cradle, 4 floodlights on cab, 2 floodlights on left front shrouding.

Windshield washer and wiper.

Vandalism protection kit: Lexan cab windows, locking reservoir cap and sight gauge cover; locking engine hood, fuel cap and battery box.

Spark arrestor.

Revolving beacon.

Cold start package for engine: includes ether start kit and additional battery.

Air conditioning.

Inside hose trough with additional hosing and piping for pneumatic or hydraulic powered attachments.

360° continuous boom tilt.

Telestick attachment.

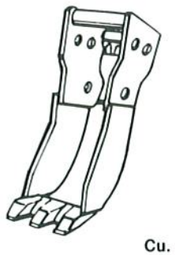
GRADALL®

406 Mill Ave. SW, New Philadelphia, Ohio 44663
Phone (216) 339-2211 FAX (216) 339-8468

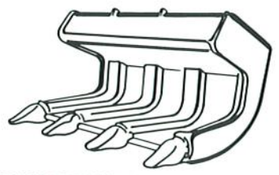
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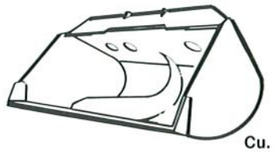
	Cu. yd.	m³
8065-6004 24″ (61cm) Excavating bucket	3/8	.31
8065-6005 30″ (76cm) Excavating bucket	1/2	.41
8065-6008 36″ (91cm) Excavating bucket	5/8	.54
8065-6010 42″ (107cm) Excavating bucket	3/4	.64
8065-6001 48″ (122cm) Excavating bucket	1	.76



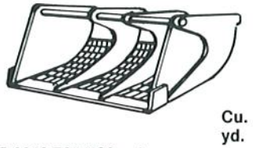
	Cu. yd.	m³
8065-6011 15″ (38cm) Trenching bucket	1/5	.15
8065-6012 21″ (53cm) Trenching bucket	1/4	.19



8065-6003 40″ (102cm)
Pavement removal bucket



	Cu. yd.	m³
8065-6007 60″ (152cm) Ditching bucket	7/8	.73
8065-6006 66″ (168cm) Ditching bucket	1	.76
8065-6002 72″ (183cm) Ditching bucket	1 1/8	.87



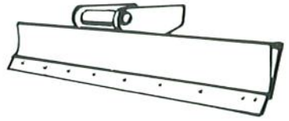
	Cu. yd.	m³
8065-6013 72″ (183cm) Dredging bucket	1 1/8	.87



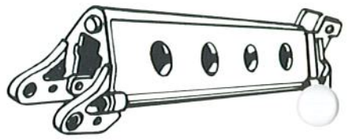
8065-6009 Single-tooth ripper



8065-6015 Industrial hook



8065-6014 8′ (2.4m) Grading blade

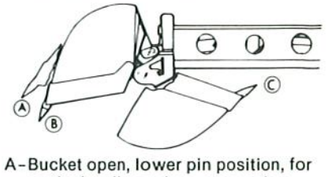


8065-5001 4′ (1.2m) Boom extension
8065-5002 6′ (1.8m) Boom extension
8065-5003 8′ (2.4m) Boom extension
8065-5004 12′ (3.7m) Tubular Boom extension
8065-5005 Telestick attachment

ATTACHMENTS

Buckets fabricated of 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 cu. yd.

TWO POSITION BUCKET



A–Bucket open, lower pin position, for vertical walls or deep excavating. Bucket pivot 165°.

B–Bucket open, upper pin position, f most applications. Bucket pivot

C–Bucket closed, either pin position.

Printed in U.S.A.



Gradall XL *4200*

Excavator Specifications and Operating Ranges

UPPERSTRUCTURE ENGINE

Cummins 6BT5.9 diesel, turbocharged, liquid cooled, 4 cycle, 6 cylinder, 359 cid (5.9L). 4.02″ bore x 4.72″ stroke (102mm x 120mm), 17.5:1 compression ratio.

145 hp (108kW) gross at 2200 rpm, 133 hp (99kW) net at 2200 rpm. 400 ft-lb (542Nm) gross torque at 1600 rpm.

Altitude capability 9850′ (3000m). Derate 4% per 1000′ (300m) above 9850′ (3000m).

Maximum slope: 45°

12 volt starter, 105 amp alternator, two SAE #C31S 700 CCA batteries, two-stage dry type air cleaner with centrifugal precleaner, ejector valve and service indicator, spin-on oil filter, spin-on fuel filter/water separator.

Fuel tank capacity: 75 gallons (284L)

HYDRAULIC SYSTEM

PUMPS

Main—Two load sensing axial piston pumps; 0-60 GPM (0-227 L/min) each.

Swing—Axial piston pump; 0-16 GPM (0-61 L/min).

Auxiliary—Tandem gear pump for pilot control, and cooling circuits; 20.6 GPM (78 L/min).

SYSTEM MONITOR

Electronic monitor in cab indicates low hydraulic fluid level, high hydraulic fluid temperature, and condition of return and suction filters.

SYSTEM SPECIFICATIONS

Four double acting cylinders—
2 boom hoist: 5.0″ ID, 3.0″ rod (127mm x 76mm), 26.25″ (667mm) stroke.
1 tool: 5″ ID, 3.0″ rod (127mm x 76mm), 18.875″ (479mm) stroke.
1 telescope: 4″ ID, 2.75″ rod (102mm x 70mm), 12′6″ (3.81m) stroke.

Four hydraulic motors—
Swing, 53 hp (39kW); tilt, 26 hp (19kW); two crawler drive, 93 hp (69kW) each.

Operating pressures—
Hoist, 3900 psi (26,871kPa)
Tilt, 2800 psi (19,292kPa)
Swing, 5700 psi (39,273kPa)
Tool, 4300 psi (29,627kPa)
Telescope, 3200 psi (22,048kPa)
Crawler, 4300 psi (29,627kPa)
Pilot system, 480 psi (3,307 kPa)

Oil capacity—reservoir 75 gallons (284L), system 95 gallons (360L). Pressurized reservoir with visual oil leve gauges.

Filtration system—combination of 8 micron and 10 micron in-line suction and return filters, plus 10 micron return filter, magnet and 100 mesh strainer in reservoir.

Fin and tube-type oil cooler, with thermal by-pass and relief valves.

Pressure compensated load sensing valves with circuit reliefs in all valves.

UPPERSTRUCTURE CAB

All-weather cab with tinted safety glass windows, skylight, acoustical lining, four-way adjustable operator's seat, filtered fresh air heater and defroster. Front window slides to overhead storage.

CONTROLS

Two hydraulic joysticks (hoist & bucket, telescope & swing), one rocker switch (tilt) control upperstructure. Hydraulic joysticks mounted on arm rests, independently adjustable for individual operator comfort and convenience.

Two foot pedals control crawler steering, travel and brakes; toggle switch for selection of crawler speed range.

Joysticks and pedals are self-centering; when controls are released power for movement disengages and swing and crawler brakes set automatically.

Engine controls—key operated ignition/starter switch, throttle, hour meter and air cleaner condition indicator. Electronic monitor indicates fuel level, low battery charge, coolant level and lube oil pressure, high coolant temperature, and engine rpm.

SWING

Independent closed loop swing circuit with axial piston pump and motor. Planetary transmission.
Swing speed: 8.0 rpm.
Swing brake: automatic swing parking brake, spring-set hydraulic release. Dynamic braking provided by hydraulic system.

UNDERCARRIAGE

Tractor type crawler with triple grouser heavy-duty pads.
Sealed track links, lubricated and sealed idlers and rollers, hydraulic track tension adjustment, bolt on track guides, motor and hose guards, front and rear tow eyes.
Track length: 12'9" (3.9m)
Track pads: 24" (600mm) or 31.5" (800mm).
Overall width: 9' 1" (2.8m) with 24" (600mm) pads.
9' 9" (3.0m) with 31.5" (800mm) pads.
Ground clearance: 20" (50.0cm)

WEIGHT

Approximate working weight with 36" (91cm) bucket, fuel tank half full—

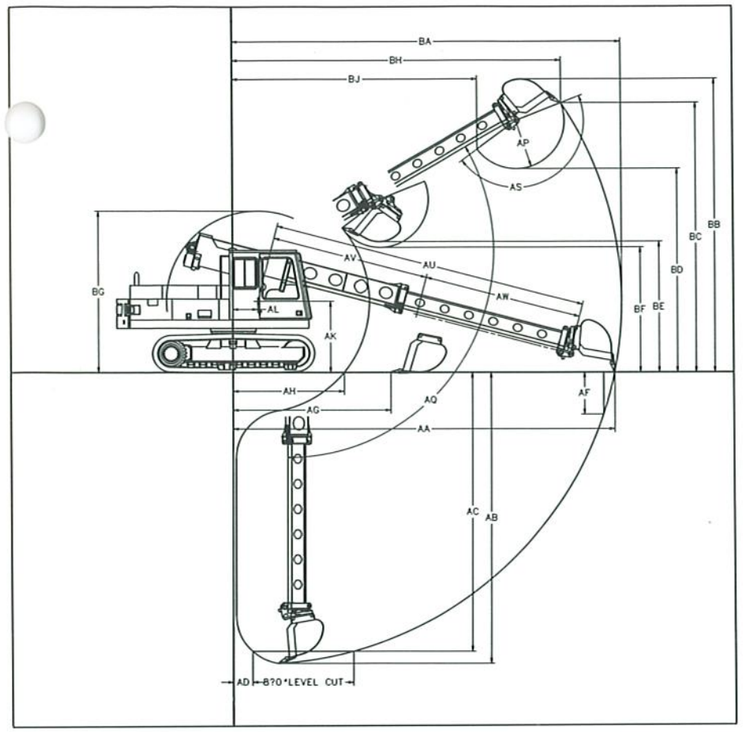
	24" (600mm) Pads	31.5" (800mm) Pads
Weight	43,220 lb. (19,605 kg)	44,320 lb. (20,104 kg)
Bearing Pressure	6.9 psi (.48 kg/cm²)	5.4 psi (.38 kg/cm²)

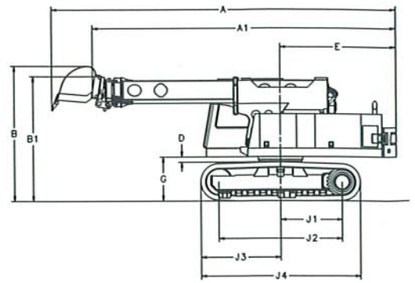
CRAWLER DRIVE

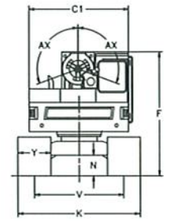
Dual range high torque piston motor, 93 hp (69kW), powers each track. Three stage planetary drive with integral speed limiting valve and automatic spring set—hydraulic release wet disc parking brake.
Travel speed on flat, level surface—mph (km/hr):

Speed Selector	
High	0-2.4 (0-3.7)
Low	0-1.52 (0-2.5)

Travel speed range can be shifted while moving.
Gradeability: 100%, limited by engine lubrication requirements.
Drawbar pull: 35,946 lbs. (160kN).
Individual track control. Tracks counter-rotate to pivot machine around on centerline.
Electrically operated travel alarm mounted in counterweight area signals crawler movement in either direction. Meets SAE J-994b Type B classification.







GRADALL XL 4200 CRAWLER RATED LIFT CAPACITY OVER END OR SIDE-LB. (KG)

LOAD POINT HEIGHT		LOAD RADIUS					
		Minimum Radius	10' (3.0m)	15' (4.6m)	20' (6.1m)	25' (7.6m)	Maximum Radius
Above Ground Level	15' (4.6m)	11070 @ 10'6" (5020 @ 3.2m)		7510 (3410)	5105 (2320)	3545 (1610)	3495 @ 25'2" (1585 @ 7.7m)
	10' (3m)	10655 @ 13'10" (4835 @ 4.2m)		9500 (4310)	6110 (2770)	4130 (1870)	3650 @ 26'8" (1655 @ 8.1m)
	Boom Level 7'9" (2.4m)	10755 @ 14'5" (4880 @ 4.4m)		10165 (4610)	6440 (2920)	4330 (1965)	3745 @ 26'11" (1700 @ 8.2m)
	5' (1.5m)	11020 @ 14'7" (5000 @ 4.5m)		10575 (4795)	6690 (3035)	4500 (2040)	3865 @ 27'0" (1755 @ 8.2m)
At Ground Level		11615 @ 13'4" (5270 @ 4.1m)		10010 (4540)	6640 (3010)	4555 (2065)	4110 @ 26'5" (1865 @ 8.1m)
Below Ground Level	5' (1.5m)	11450 @ 8'10" (5190 @ 2.7m)	11100 (5035)	8460 (3840)	6070 (2750)		4435 @ 24'8" (2010 @ 7.5m)
	10' (3m)	3030 @ 4'1" (1375 @ 1.3m)	8095 (3670)	6825 (3095)	5250 (2380)		4800 @ 21'6" (2180 @ 6.5m)
	15' (4.6m)	2970 @ 4'1" (1350 @ 1.3m)	6130 (2780)	5445 (2470)			5225 @ 16'1" (2370 @ 4.9m)

The above loads are in compliance with SAE Standard J1097 Nov88. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.
All loads with an asterisk (*) indicate the load is limited by tipping rather than hydraulic capacity.
The rated lift capacity is based on the machine being equipped with 5600 lb. (2540 kg) counterweight, 31.5" (800mm) or 24" (600mm) tracks, and 8065-6008 36" (122cm) excavating bucket weighing 780 lbs. (354kg). For other buckets adjust the listed capacities as follows:
8065-6006 66" (168cm) ditching—subtract 245 lbs. (111kg)
8065-6010 42" (107cm) excavating—subtract 130 lbs. (59kg)
8065-6001 48" (122cm) excavating—subtract 260 lbs. (118kg)
8065-6004 24" (61cm) excavating—add 260 lbs. (118 kg)
8065-6005 30" (76cm) excavating—add 130 lbs. (59kg)
8065-6002 72" (183cm) ditching—subtract 305 lbs. (138kg)
8065-6003 40" (102cm) pavement removal—subtract 280 lbs. (126kg)
8065-6007 60" (152cm) ditching—subtract 150 lbs. (67kg)
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 lifting devices must be deducted from the rated load to determine the net load that may be lifted.

CAUTION: All rated loads are based on the machine being stationary and level on a firm supporting surface. For safe working loads, the user is expected to make due allowance for his 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 should fully acquaint themselves with the Operator's Manual furnished by the manufacturer before operating this machine, and rules for safe operation of equipment should be adhered to at all times.

Shown with 8095-6001 48" (122cm) excavating bucket

A	27'6" (8.4)	Overall length with bucket
A1	24'3" (7.4)	Overall length without bucket
B	10'9" (3.3)	Overall height with bucket
B1	9'11" (3)	Overall height without bucket
C1	8'0" (2.4)	Width of upperstructure
D	5" (0.1)	Minimum clearance, upperstructure to undercarriage
E	9'3" (2.8)	Swing clearance, rear of upperstructure
F	9'10" (3)	Top of cradle to groundline
G	42" (1.1)	Clearance, upperstructure to groundline
J1	4'11" (1.5)	Axis of rotation to centerline of drive sprockets
J2	9'10" (3)	Nominal distance between centerlines of drive sprockets and idlers
J3	6'5" (1.9)	Axis of rotation to end of track assembly
J4	12'9" (3.9)	Nominal overall length of track assembly
K	9'9" (2.9)	Width of crawler
N	20" (0.5)	Ground clearance (per SAE J1234)
V	7'2" (2.2)	Track gage, roller centerline to roller centerline
Y	31.5" (0.8)	Width of crawler track assembly
AA	30'3" (9.2)	Maximum radius at groundline (165° pivot)
AB	23'2" (7.1)	Maximum digging depth (165° pivot)
AC	22'2" (6.7)	Maximum depth for 8' level cut
AD	18" (0.4)	Minimum radius of 8' level cut at depth "AC"
AF	3'4" (1)	Maximum depth of vertical wall which can be excavated
AG	12'6" (3.8)	Minimum level cut radius with bucket flat on groundline
AH	8'9" (2.7)	Minimum radius at groundline
AK	5'8" (1.7)	Boom pivot to groundline
AL	22.5" (0.6)	Boom pivot to axis of rotation
AP	46" (1.2)	Bucket tooth radius
AQ	30° Up & 90° Down	Boom pivot angle
AS	135° & 165°	Bucket pivot angle
AU	25'0" (7.6)	Maximum telescoping boom length (boom pivot to bucket pivot)
AV	12' 6" (3.8)	Minimum telescoping boom length (boom pivot to bucket pivot)
AW	12'6" (3.8)	Telescoping boom travel
AX	110°	Bucket tilt angle (both sides of center, 220° total)
BA	30'9" (9.4)	Maximum radius of working equipment (165° pivot)
BB	23'4" (7.1)	Maximum height of working equipment
BC	21'5" (6.5)	Maximum bucket tooth height
BD	16'2" (4.9)	Minimum clearance of bucket teeth with bucket pivot at maximum height
BE	10'5" (3.2)	Minimum clearance of fully curled bucket at maximum boom height (165° pivot)
BF	9'11" (3)	Minimum clearance of bucket teeth at maximum boom height
BG	12'10" (3.9)	Maximum height of working equipment with bucket below groundline
BH	26'1" (7.9)	Radius of bucket teeth at maximum height (165° pivot)
BJ	19'5" (5.9)	Minimum radius of bucket teeth at maximum bucket pivot height (165° pivot)

Rated bucket tangential force with 36" (91cm) bucket: 18,900 lb. (84kN)
Rated telescoping boom crowd force: 21,650 lb. (96.4kN)

Transport dimensions without attachment

Length: 24'3" (7.4)
Height: 9'11" (3)
Width: on 24" (0.6) pads—9'1" (2.8)
on 31.5" (0.8) pads—9'9" (2.9)