

Series CD4430



NEW! Cab-Down Rough Terrain Crane



BADGER
EQUIPMENT COMPANY

Custom Built in America. For Today. For the Future.



217 Patneau Drive
Winona, Minnesota 55987
Phone: (507) 454-1563
Fax: (507) 453-6441
www.badgerequipment.com

Custom Built in America. For Today. For the Future.

Courtesy of CraneMarket

FEATURES

- 3 Section 75' Synchronized Boom
- 2 Section 53' Boom
- Self Lubricating Boom Slider Pads
- Two Speed Planetary Grooved Drum Hoist - with negative draft flange
- Auxiliary Hoist Option
- Hoist Drum Rotation Indicator
- High Visibility Cab – with multi position seat, in dash display, main wiper and upper wiper
- Electronic Joystick Controls
- Continuous 360 Degree Rotation
- Optional Load Moment Indicator – with digital display, CANbus system interface and overload shutdown
- Radio Anti Two Block System
- Rugged, Weatherproof Automotive Style Electrical System
- Design meets ANSI B30.5 Recommendations
- Heavy Duty Steel Fenders – integrated with the fuel and hydraulic tanks
- Electronically Controlled Powershift – six (6) forward speeds and six (6) reverse speeds
- All Wheel Drive – all wheel steer and crab steering
- Auto Centering Axles – rear have oscillation
- Hydraulic Disc Brakes (4)
- Planetary Swing Drive - two on the 4430R
- Swing Brake – two on the 4430R
- 24 Volt System
- Cantilever Style Outriggers



CD4430 30 TON CAPACITY

Machine weight 52,200 lbs. (2 section boom)
Machine weight 55,500 lbs. (3 section boom)



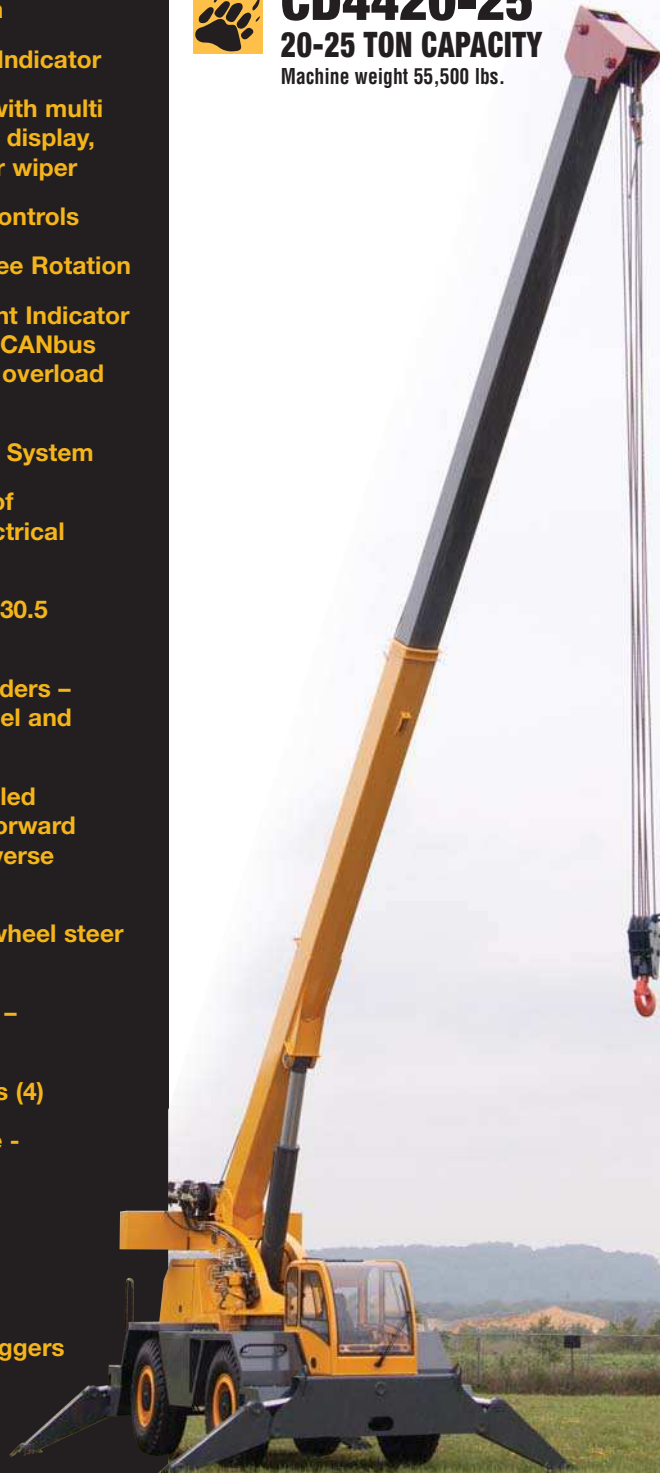
CD4430R 30 TON CAPACITY HI-RAIL EQUIPPED

Machine weight 58,500 lbs. (2 section boom)



CD4420-25 20-25 TON CAPACITY

Machine weight 55,500 lbs.



General

ENGINE

Cummins QSB 4.5 diesel engine, turbocharged, 4 cylinder water cooled 160 HP @2500 RPM (or Optional QSB 6.7 160 HP 6 cylinder). Electronic sensors and controls to reduce service issues and provide easy maintenance. Cummins 2 year, 2000 hour standard engine warranty.

Engine accessories:

Dry type air cleaner, with restriction indicator.

- Grid and optional block heater.

POWER TRAIN:

Electronically controlled powershift with six (6) forward speeds and six (6) reverse speeds. Torque converter.

- 3 forward speeds, high range.
- 3 forward speeds, low range
- Rear axle disconnect

Maximum top travel speed of 25-MPH.

AXLES:

Front: Rigid, front planetary type steer axle.

Rear: Oscillating rear planetary steer axle.

Both offer optional Auto Centering feature.

SUSPENSION:

Oscillation with hydraulic lockout device.

BRAKES:

Fully hydraulic disc type brakes on all four wheel locations.

Emergency braking and parking brake system is spring applied and hydraulic release mounted on the front axle input shaft.

TIRES:

Manufacturers standard of sufficient load capacity for a fully loaded crane to perform pick and carry operation. All optional foam-filled tires are matching and of premium grade.

STEERING:

Hydraulic four wheel power steering with tilt steering column.

Hydraulic type steering with four (4) steering modes.

- 2 wheel front
- 2 wheel rear
- 4 wheel coordinated
- 4 wheel crab

Optional: Synchronized auto centering is available.

ELECTRICAL:

24 volt charging system with weather proof electrical harnesses.

Alternator: 70 ampere minimum rated capacity

Batteries: Two (2) batteries.

FUEL TANK:

Tank capacity is 75 gallons. Optional 110 gallon capacity.

CARRIER:

High tensile steel with all welded triple-box beam construction fully reinforced. Fully machined turntable mounting plate and integrally welded outrigger mounts. Decking has skid resistant surfaces including tool storage compartment. Access steps and grab handles are provided on left and right sides as well as front and rear corners. High-tensile steel design that produces high strength frame that reduces bending and weight.

Courtesy of Crane.Market

Specifications

OPERATORS CAB:

Fully enclosed one (1) person clearview pressurized cab mounted on the front center of the carrier. All steel construction and has two hinged entry doors with tinted safety glass windows and shatter resistant windshield and roof glass.

- Air conditioning, automotive dash style
- Two each lockable exit doors (right and left side with shock absorber design)
- Sliding windows in doors
- Mirrors
- Fire extinguisher
- Adjustable sun visor
- Windshield wiper
- Heater and defroster
- Eleven way adjustable, cushioned seat with seat belt.
- Optional heated seat

ELECTRONIC INSTRUMENT PANEL:

- Fuel level
- Tachometer
- Speedometer
- 6.5" LCD CANbus display
- Engine oil pressure
- Hydraulic oil pressure
- Engine water temperature
- Torque converter oil temperature

Additional Equipment:

- Slow moving vehicle sign
- Emergency 24v pump for hydraulics
- Factory installed work lights
- Factory installed turn signals
- Back up alarm, steam cleanable, "ECCO"

HYDRAULIC SYSTEM:

- Boom telescope
- Boom hoist
- Boom swing
- Winching
- Outriggers

PUMPS:

Three (3) variable piston pumps for all crane functions.

CYLINDERS:

Double acting and of adequate size and length for all service functions.

HYDRAULIC RESERVOIR:

110 gallon minimum capacity reservoir with oil level and temperature indicator. Tank is constructed of steel and has internal baffles and diffuser. Filtration is 10-micron return filter with bypass protection and is located on the exterior of the hydraulic tank.
[Class 22/18/13E ISO4406-1999]

HYDRAULIC LINES:

All hydraulic lines are pressure compensated/load sensing system for all crane operating functions and have provisions to prevent chaffing during operation. All fittings are O-Ring face seal type.

BOOM:

Fully synchronized, two (2) section boom (30.5' to 53' in length) of six-sided box type construction. Consists of one (1) double acting telescopic cylinder. The cylinder is equipped with integral holding valves. Accessible wear pads for both vertical and horizontal forces support boom sections. Made of formed and welded high-tensile steel plate for maximum strength and weight ratio. Three (3) section boom is optional.

UPPER STRUCTURE:

All welded design made from high alloy steel plate. Bolt on cast counterweight – 9000 lbs.

BOOM HEAD:

Welded to the inner boom section with a minimum of five (5) sheaves mounted on heavy duty anti-friction bearings. Auxiliary lifting sheave mounted on the main boom for single line work.

Jib:

No specs yet.

TURNTABLE:

Upper structure is mounted on an anti-friction bearing of the shear ball design. Single row, ball type with external teeth and is bolted to the revolving upper structure and bolted to the carrier frame.

BOOM SWING AND BRAKE SYSTEM:

Boom swing is 360 continuous and is hydraulically driven through planetary reduction type gears. Maximum swing speed (unloaded) is 3 R.P.M. Swing brake is heavy duty multiple disk actuated automatically from the operators cab. Two (2) position swing lock for pick and carry as well as travel modes.

MAIN HOIST:

Lebus grooved drum driven by a 2 speed hydraulic axial piston motor through a winch speed reducer for power load lowering and raising. Equipped with a counterbalance and wet disk brake system. Includes a drum rotation indicator.

WIRE ROPE:

Has three (3) complete wraps of cable on the drum at maximum boom extension and elevation with line at maximum parting and the hook block at ground level. Cable is 5/8" x 433 feet minimum. Maximum permissible load is 10,000 pounds with a minimum line speed of 385-FPM.

LOAD BLOCK:

Rating exceeds the cranes gross lift capacity and is equipped with a safety latch and is permanently marked with the maximum capacity. A six (6)-part sheave block and swivel hook with safety latch is provided.

OPTIONAL AUXILIARY HOIST:

Lebus grooved drum driven by a 2 speed hydraulic axial piston motor through a winch speed reducer for power load lowering and raising. Equipped with an automatic brake and counterbalance valve. Auxiliary hoist is controlled independently of the main hoist.

OPTIONAL WIRE ROPE:

Three (3) complete wraps of cable on the auxiliary drum at maximum boom extension and elevation (including jib use) with the hook block at ground level.

OPTIONAL OVER HAUL BALL:

Furnished with a down-haul weight of sufficient size and weight to keep the cable tightly wrapped on the auxiliary winch drum. Hook is equipped with a safety latch.

ANTI TWO BLOCK DEVICE:

Unit has a pendant type wireless warning device with audio alarm and warning light.

CONTROLS:

Hand Controls are electronic joystick controlled type. All levers and pedals will be positioned for optimum efficiency.

Hand operated controls include the following:

- Swing
- Main winch
- Auxiliary winch
- Throttle lock
- Boom hoist
- High and low winch speed control
- Swing Brake
- Boom telescope
- Horn

Foot controls include:

- Accelerator
- Service brakes

Control switches include the following:

- Lights
- Ignition
- Engine stop
- Parking brake
- Steering modes
- Windshield wipers
- A.C./Heater/Defroster
- Outriggers

Permanently engraved labels, indicating control function and direction are furnished.

MULTI POSITION OUTRIGGERS:

Cantilever style outriggers are standard. Out and Down style outriggers are optional, controlled by switches in the cab.

LIGHTING:

The following lights are furnished and installed:

Two (2) brake/turn taillights.
Two (2) sealed beam headlights.
Optional Four (4) worklights.

F.R.A. COMPLIANT PACKAGE:

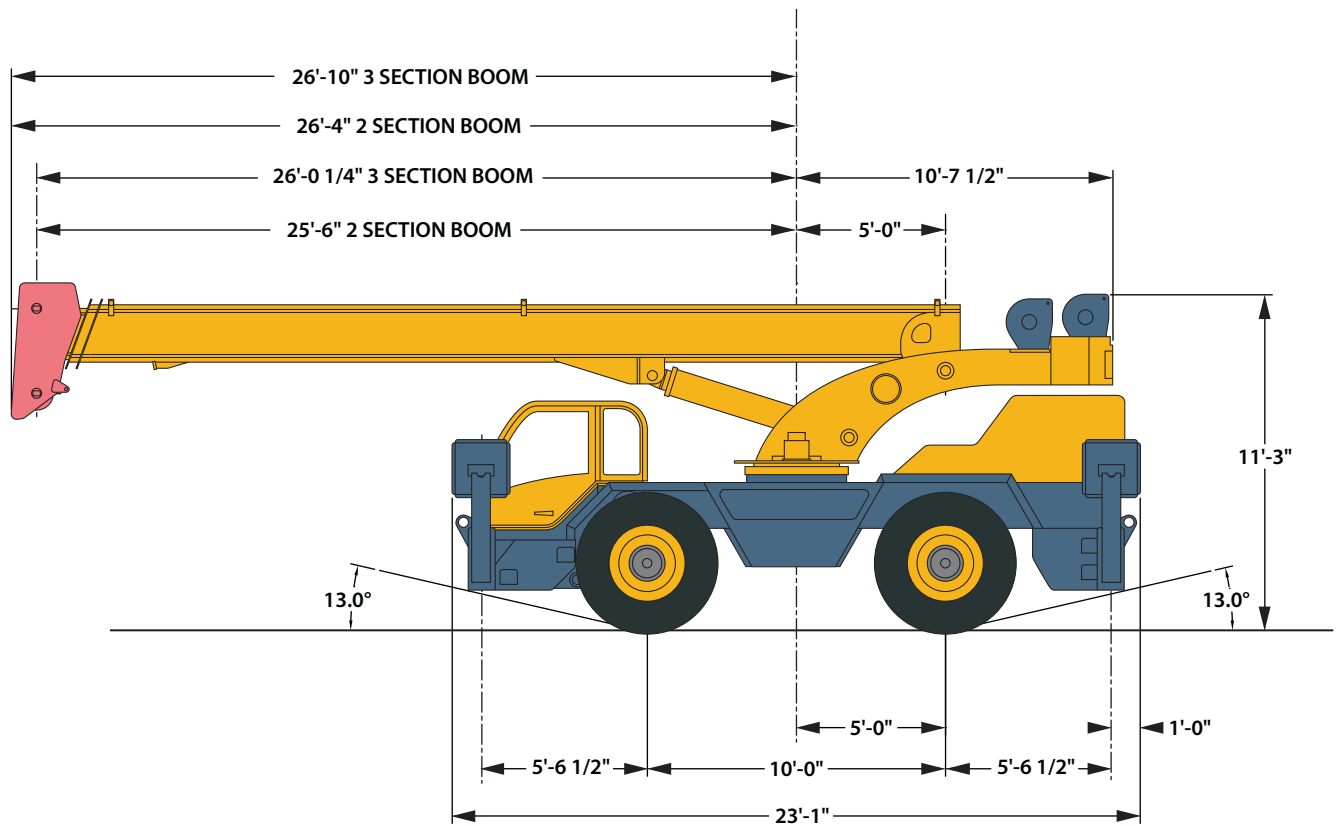
Standard on the CD4430R. Friction drive High-Rail gear with anti-free wheel design.

WARRANTY:

1 year and 1500 hours standard warranty.

All specifications are subject to change.

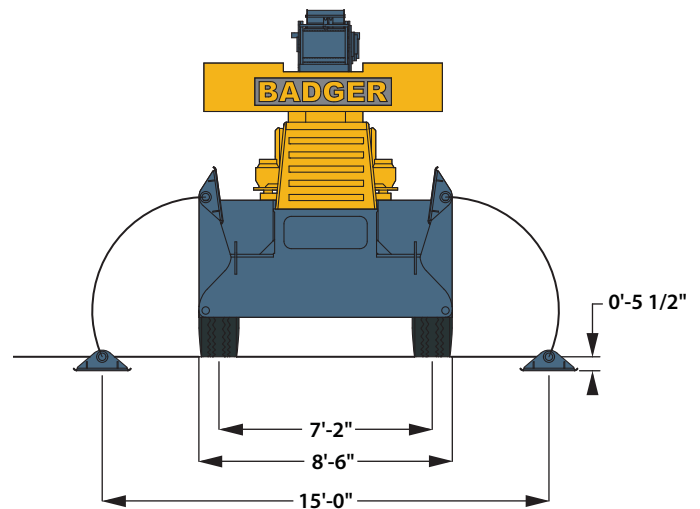
General Dimensions



For a complete list of optional equipment or to schedule a demo please see your Authorized Badger Dealer or visit www.badgerequipment.com



(PHOTO WITH OPTIONAL RAIL GEAR)



Custom Built in America. For Today. For the Future.



217 Patneau Drive
Winona, Minnesota 55987
Phone: (507) 454-1563
Fax: (507) 453-6441
www.badgerequipment.com



Badger Equipment is a Division of Manitex International, Inc.

Courtesy of CraneMarket

3 Section Load Charts

LIFTING CAPACITIES - POUNDS 3 SECTION (31' - 75' BOOM)

On OUTRIGGERS

LOAD RADIUS (ft)	BOOM LENGTH (ft)																	
	31			40			50			60			70			75		
	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)
10	61	60000	60000	68	55000	55000												
12	57	50000	50000	65	50000	50000	70	45000	45000									
15	50	40000	40000	60	40000	40000	66	37500	37500	71	35000	35000						
20	36	30000	25500	51	30000	25500	60	29000	25500	65	28000	25500	69	28000	25500			
25	15	24000	17000	41	24000	17000	53	24000	17000	60	24000	17000	65	22000	17000	66	20000	17000
30				29	20000	14000	46	18000	14000	54	17000	14000	60	16500	14000	62	16500	14000
35				0	17100	10600	37	17000	10600	48	16500	10600	55	15700	10600	58	15000	10600
40							26	11900	8500	41	11900	8500	50	11900	8500	53	11900	8500
45							0	9300	6800	34	9300	6800	44	9300	6800	48	9300	6800
50										24	8000	5500	38	8000	5500	43	8000	5500
55										0	6800	4650	31	6800	4650	37	6800	4650
60													22	5950	4950	30	5950	4950
65													0	5650	3400	21	5650	3400
70																0	5400	2950

On TIRES

On TIRES		PICK AND CARRY			
LOAD RADIUS (ft)	50 MAX BOOM LENGTH (ft)	Stationary	Creep		2.5 MPH
		360° (lb)	STRAIGHT OVER FRONT (lb)		
10	31	18000	33000	25000	21000
12	31	15000	29000	22000	18000
15	40	11000	23000	17500	15000
20	40	7000	15000	13000	11000
25	45	5000	11000	9000	8000
30	45	3000	7000	7000	6000
35	45	2000	6000	6000	5000
40	53	1500	5000	5000	4000
45	60		3500	3500	3500
50	65		3000	3000	3000
55	70		2000	2000	2000
60	70		1400	1400	1400
65	75		1000		



All specifications are subject to change.

Recommended Tire Pressure

Tire Size	Stationary	Creep	2.5 MPH	Travel
1600 X 25-32 PR	125 PSI	125 PSI	95 PSI	95 PSI



BADGER
EQUIPMENT COMPANY

Custom Built in America. For Today. For the Future.



217 Patneau Drive
Winona, Minnesota 55987
Phone: (507) 454-1563
Fax: (507) 453-6441
www.badgerequipment.com



Badger Equipment is a Division of Manitex International, Inc.

Courtesy of Crane.Market

2 Section Load Charts

LIFTING CAPACITIES - POUNDS 2 SECTION (30.5' - 53' BOOM)

On OUTRIGGERS

LOAD RADIUS (ft)	BOOM LENGTH (ft)																	
	31			35			40			45			50			53		
	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)	BOOM ANGLE (deg)	OVER FRONT (lb)	360° (lb)
10	61	60000	60000	65	55000	55000	68	55000	55000	71	55000	55000						
12	57	50000	50000	61	50000	50000	65	50000	50000	68	50000	50000	70	45000	45000	71	42000	42000
15	50	40000	40000	55	40000	40000	60	40000	40000	64	40000	40000	66	40000	40000	68	33600	33600
20	36	30000	30000	44	30000	30000	51	30000	30000	56	30000	30000	60	30000	30000	62	30000	25200
25	15	24000	22800	31	24000	22800	41	24000	22800	48	24000	22800	53	22000	20000	56	20000	20000
30				0	20000	16900	29	20000	16900	39	20000	16900	46	18000	15000	49	16000	15000
35							0	17100	13100	27	17100	11000	37	14000	11000	41	14000	11000
40										0	14000	8500	26	12000	8500	32	12000	8500
45													0	10000	7800	19	10000	7800
48																0	9000	6700

On RAIL

On RAIL		360° STATIONARY				15° DEFINED ARC COVER FRONT					
LOAD RADIUS (ft)	50 MAX BOOM LENGTH (ft)	0 mph	Superelevation			0 mph	Creep (Superelevation)			LOAD RADIUS (ft)	MAX NO LOAD LOAD BOOM (deg)
			< 2 in	2 < 4 in	4 < 6 in		< 2 in	2 < 4 in	4 < 6 in		
10	30.5	18000				39750				10	61
12	30.5	16100				35250	28200			12	56
15	30.5	13500	10800	9000	7200	30000	24000	20000	16000	15	49
20	35	9150	7320	6100	4880	22500	18000	15000	12000	20	44
25	37	5250	4200	3500	2800	17400	13920	11600	9280	25	36
30	40	4300	3456	2880	2304	13425	10740	8950	7160	30	29
35	45	3500	2805	2338	1870	10500	8400	7000	5600	35	27
40	50	2700	2220	1850	1480	8475	6780	5650	4520	40	26
45	53	2000	1620	1350	1080	7050	5640	4700	3760	45	19
48	53	1700	1356	1130	904	6450	5160	4300	3440	48	0

On TIRES

LOAD RADIUS (ft)	50 MAX BOOM LENGTH (ft)	PICK AND CARRY			
		Stationary	Creep	2.5 MPH	
				360° (lb)	STRAIGHT OVER FRONT (lb)
10	30.5	18000	33000	25000	21000
12	30.5	15000	29000	22000	18000
15	40	11000	23000	17500	15000
20	40	7000	15000	13000	11000
25	45	5000	11000	9000	8000
30	45	3000	7000	7000	6000
35	45	2000	6000	6000	5000
40	53	1500	5000	5000	4000
45	53		3500	3500	3500
48	53		3000	3000	3000



Recommended Tire Pressure

Tire Size	Stationary	Creep	2.5 MPH	Travel
1600 X 25-32 PR	125 PSI	125 PSI	95 PSI	95 PSI

All specifications are subject to change.



Custom Built in America. For Today. For the Future.



217 Patneau Drive
Winona, Minnesota 55987
Phone: (507) 454-1563
Fax: (507) 453-6441
www.badgerequipment.com



Badger Equipment is a Division of Manitex International, Inc.

Courtesy of CraneMarket