

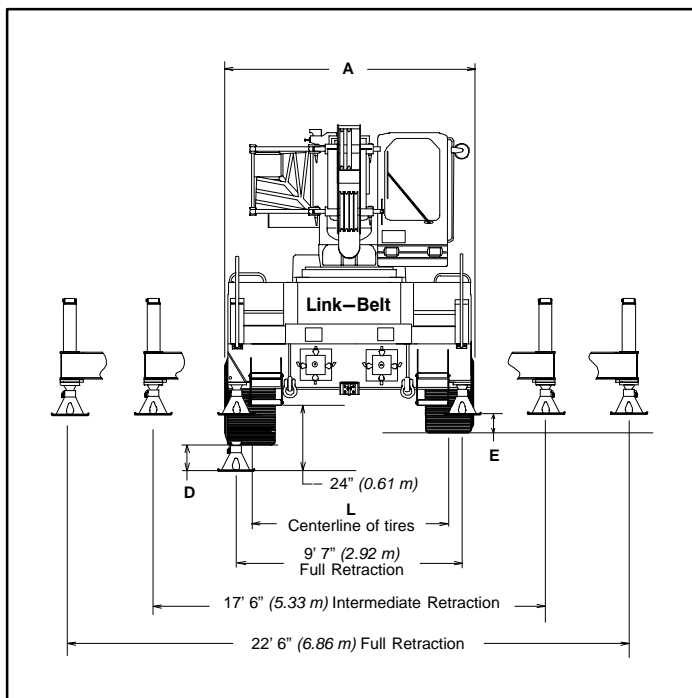
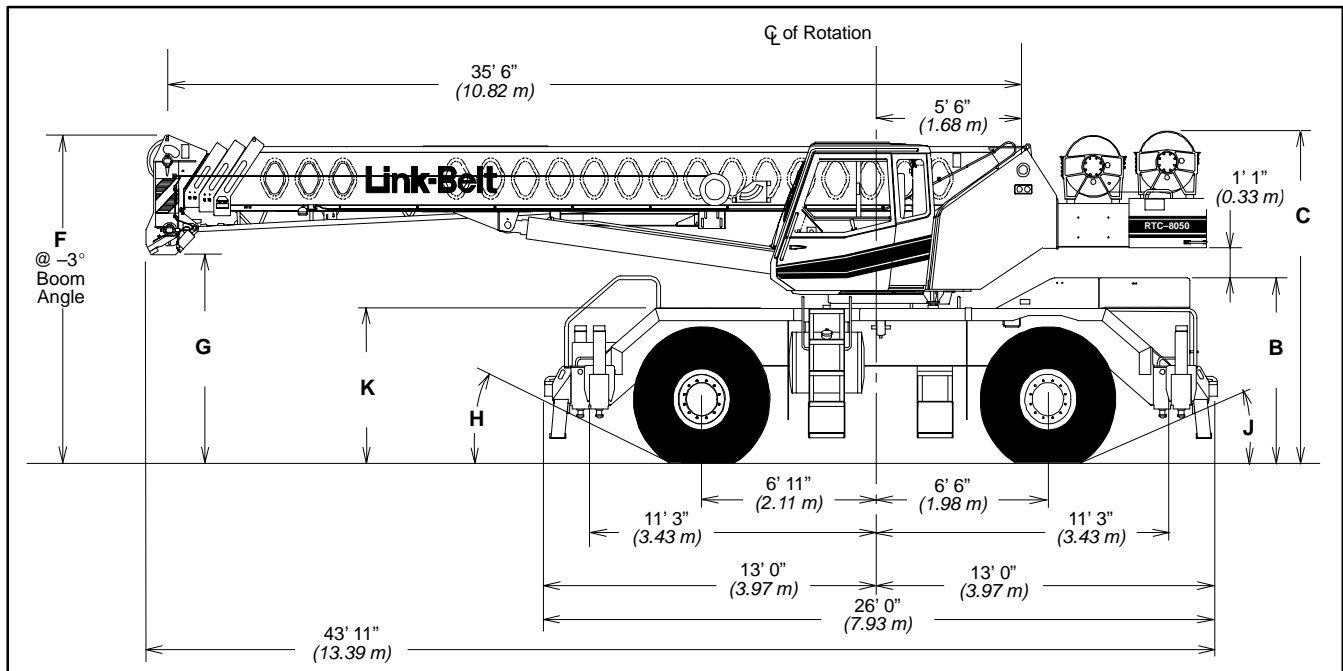
Specifications

Telescopic Boom Rough Terrain Crane

RTC-8050

50-ton (45.36 metric ton)

Series II



General Dimensions	feet	metric
Turning Radius (4-wheel steer – centerline of tires)	20'	6.09
Turning Radius (2-wheel steer – centerline of tires)	36'	10.97
Turning Radius (4-wheel steer – outside front carrier corner)	23' 4"	7.11
Turning Radius (2-wheel steer – outside front carrier corner)	39' 0"	11.89
Tailswing of counterweight	12' 10"	3.90

Dimension	Tire Size	
	23.5 x 25	23.5 R 25
A	10' 3.5" (3.14 m)	10' 3" (3.12 m)
B	6' 7.75" (2.03 m)	6' 9.5" (2.06 m)
C	11' 11.75" (3.65 m)	12' 1.5" (3.70 m)
D	7.75" (0.20 m)	7" (0.18 m)
E	10" (0.25 m)	11.75" (0.30 m)
F	10' 0.25" (3.05 m)	10' 2" (3.10 m)
G	7' 6" (2.29 m)	7' 7.75" (2.33 m)
H	24°	24.8°
J	21°	22°
K	6' 6.75" (1.69 m)	6' 8.5" (1.74 m)
L	8' 3" (2.51 m)	8' 3" (2.51 m)

Upper Structure

■ Boom

Patented Design

- Boom side plates have diamond shaped impressions for superior strength to weight ratio and 100,000 p.s.i. (689.5 MPa) steel angle chords for lateral stiffness.
- Boom telescope sections are supported by top, bottom and adjustable side wear shoes to prevent metal to metal contact.

Standard Boom

- 35.5' – 110' (10.82 – 33.53 m) four-section full power boom.
- Basic mode (or mode 'B') is the full power, synchronized mode of telescoping all sections proportionally.
- The exclusive **A-max** mode (or mode 'A') extends only the inner mid-section to 60.3' (18.38 m) offering increased capacities for in-close, maximum capacity picks.
- Mechanical Boom Angle Indicator

Boom Head

- Four 16.5" (0.42 m) root diameter nylon sheaves handle up to eight parts of wire rope
- Quick-reeve design
- Rope dead end lugs provided on each side of boom head
- Easily removable wire rope guards
- Fly pinning alignment tool

Boom Elevation

- One Link-Belt designed hydraulic cylinder with holding valve and bushing in each end.
- Hand control for controlling boom elevation from -3° to 78°.

Optional Auxiliary Lifting Sheave

- Single 16.5" (0.42 m) root diameter nylon sheave with removable wire rope guard.
- Use with one or two parts of line.
- Does not affect erection of fly or use of main head sheaves for multiple reeving.

Optional

- 60-ton (54.43 mt) 4-sheave, quick reeve™ hook block
- 40-ton (36.29 mt) 4-sheave, quick reeve™ hook block
- 8.5-ton (7.7 mt) hook ball (swivel or non-swivel)
- Boom floodlight

■ Fly

Optional

- 28.5' (8.69 m) One-piece lattice fly, stowable, offsettable to 2°, 20° or 40°.
- Lugs to allow for second section.
- 28.5' – 51' (8.69 – 15.54 m) Two-piece (bifold) stowable, offsettable to 2°, 20° or 40°.

■ Cab and Controls

Environmental ULTRA CAB™

- LCF-2000 construction process featuring laminated fibrous composite material.

- Isolated from sound with acoustical vinyl insulation.
- Six-way adjustable operator's seat with retractable seat belt.
- Four-way adjustable tilting-telescoping and locking steering wheel.
- All windows are tinted and tempered safety glass.
- Slide by door opens to 3' (0.91 m) width.
- Sliding rear and right side windows and swing up roof window for maximum visibility and ventilation.
- Audible swing alarm
- Backup alarm
- 12-volt accessory outlet
- Electric windshield wiper
- Top hatch window wiper
- Fire extinguisher
- Windshield washer
- Warning horn
- Travel lights
- Sun screen
- Mirrors
- Cup holder
- Circulating fan

Optional

- Amber strobe light
- Emergency steering system
- Hot water cab heater
- Amber rotating beacon
- Air conditioning

Controls

Hydraulic controls (joystick type) for:

- Rear winch
- Optional front winch
- Drum rotation indicators
- Single-axis optional
- Hand-held outrigger controls and sight level bubble also provided in upper cab.
- Boom hoist
- Swing

Foot controls for:

- Boom telescope
- Swing brake
- Engine throttle with throttle lock

Cab Instrumentation

Corner-post mounted gauges with integral audio/visual warning system for:

- Tachometer
- Oil pressure
- Converter temperature
- Hydraulic oil temperature
- Water temperature
- Voltmeter
- Fuel

■ Rated Capacity Limiter

- **Microguard 434** Graphic audio-visual warning system built into the cornerpost with anti-two block and function limiters.
- Anti-two block weight designed for quick reeve of hookblock.

Operating data available includes:

- Machine configuration
- Boom length
- Head height
- % of allowed load
- Actual load
- Boom angle
- Radius of load
- Allowed load

Presetable alarms include:

- Maximum and minimum boom angles.
- Maximum tip height.
- Maximum boom length.
- Swing left/right positions.
- Operator defined area alarm is standard.

Optional

- **Internal RCL light bar:** Visually informs operator when crane is approaching maximum load capacity with a series of green, yellow and red lights.
- **External RCL light bar:** Visually informs ground crew when crane is approaching maximum load capacity kickouts and pre-settable alarms with a series of three lights; green, yellow and red.

■ Swing

- Bi-directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 2.8 r.p.m.
- **Swing park brake** – 360° electric over hydraulic (spring applied, hydraulic released) multi-disc brake mounted on the speed reducer. Operated by toggle switch in overhead control console.
- **Swing brake** – 360°, foot operated, hydraulic applied disc brake mounted on the speed reducer.
- **Swing lock** – Standard; two position travel lock operated from the operator's cab.
- **Counterweight** – 12,500 lbs. (5 670 kg) Bolted to upper structure frame.

Optional

- 360° pawl-in-gear swing lock (meets New York City requirements).

■ Hydraulic System

Main Pump

- Three-section gear-type pump.
- Combined pump capacity 117 gpm (443 lpm)
- Mounted on transmission converter, powered by engine through a pump disconnect.
- Pump disconnect is a spline-type clutch engaged/disengaged from carrier.
- Pump operates at 3,500 p.s.i. (24.1 MPa) maximum system pressure.
- O-Ring Face Seal (ORFS) technology throughout with hydraulic oil cooler.

Telescope / Outrigger / Steering Pump –

- Single gear-type pump, 22 gpm (83 lpm) maximum. Mounted on transmission, powered by engine through a direct mechanical drive.
- Pump operates at 3,000 p.s.i. (20.7 MPa) maximum system pressure.

Reservoir

- 140 gal. (303 L) capacity. Diffuser for deaeration.

Filtration:

- One 10-micron filter located inside hydraulic reservoir.
- Accessible for easy replacement.

Control Valves:

- Five separate, pilot operated control valves allow simultaneous operation of all crane functions.
- Winch control valves are pressure compensated for improved metering.

■ Load Hoist System

Standard

- 2M rear winch with grooved lagging.
- Two-speed motor and automatic brake.
- Power up/down mode of operation.
- Controls for future addition of front winch.
- Bi-directional gear-type hydraulic motor, driven through a planetary reduction unit for positive operator control under all load conditions.

- Asynchronous parallel double crossover grooved drums minimize rope harmonic motion.
- Rotation resistant wire rope.

Line Pulls and Speeds

- Maximum line pull 15,390 lbs. (6 980 kg) and maximum line speed of 455 f.p.m. (139 m/min) on standard 16" (0.41 m) root diameter grooved drum.

Optional

- 2M front winch with two-speed motor, automatic brake, grooved lagging and power up/down mode of operation.
- Hoist drum cable followers.
- Third wrap indicators.

Carrier

■ Type

- 10' 6" (3.20 m) wide, 161" (4.09 m) wheel-base.
- 4 x 4 x 4 – (4-wheel steer, 4-wheel drive) For rough terrain with limited turning area.

Frame

- 100,000 p.s.i. (689.5 MPa) steel, double walled construction.
- Integral 100,000 p.s.i. (689.5 MPa) steel outrigger boxes.

Standard Carrier Equipment

- Two front, two rear, and two mid-point carrier steps
- Non-slip safety strips on carrier deck
- Deep front storage unit
- Full deck fenders
- Pontoon storage
- Full lighting package
- Front towing shackles
- Hook block tie back

Optional

- Front and rear mounted pintle hook

■ Engine

Engine	Cummins 6BT 5.9 L
Cylinders – cycle	6 – 4
Bore	4.02 in. (102.11 mm)
Stroke	4.72 in. (119.89 mm)
Displacement	359 cu. in. (5.9 L)
Maximum brake hp	185 @ 2,500 rpm
Peak torque (ft. lb.)	553 @ 1,500 rpm
Electric system	12 volt
Starting system	12 volt
Fuel capacity	75 gallons (283.9 L)
Alternator	130 amps
Crankcase capacity (total system)	17.2 qts. (16.3 L)
<ul style="list-style-type: none"> • Water/fuel separator on engine • 110-volt block heater • Ether injection package – optional 	

■ Transmission

- Funk DF-150 power shift transmission with eight speeds forward and four reverse.
- Rear axle disconnect for two or four-wheel drive.
- LCD indicator providing gear and diagnostic information.

■ Axles

Front and Rear Axles

- Heavy duty planetary drive/steer type

■ Suspension

Front Axle

- Rigid mounted to frame

Rear Axle

- Fully independent 4-Link
- Automatic axle oscillation lockout cylinders engage when upper structure rotates past 2.5° of centerline

Optional

- Rear Hydro-gas Ride™

■ Steering

- Hydraulic front-wheel, rear-wheel, four-wheel and "crab" steering
- Modes selected by rotary switch on overhead console.
- All modes are fully coordinated and controlled by steering wheel.

Optional

- Rear steer indicator

■ Tires

Front and Rear

- Standard 23.5 x 25 (20-PR) Earthmover type.

Optional

- 23.5R25 2 star radials
- Spare tires and rims

■ Brakes

Service

- Fully hydraulic disc-type brakes at each wheel end with independent front and rear system. Controlled by foot pedal in cab.

Parking/Emergency

- Spring applied, hydraulic released, cab controlled, wet, multiple disc-type integral to the transmission.

■ Outriggers

- Three position operation capability.
- Four hydraulic, telescoping beam and jack outriggers.
- Vertical jack cylinders equipped with integral holding valve.
- Beams extend to 22' 6" (6.86 m) centerline-to-centerline and retract to within 10' 6" (3.20 m) of the overall crane width.
- Equipped with stowable, lightweight 19" (0.48 m) square steel pontoons.
- Hand-held controls and sight level bubble located in upper structure cab.

Confined Area Lifting Capacities (CALC™) System

- Three operational outrigger configurations are available:
 - Full extension – 22' 6" (6.86 m)
 - Intermediate position – 17' 6" (4.33 m)
 - Full retraction – 9' 7" (2.92 m)
- For confined area operation, rated lifting capacities are provided for the intermediate and fully retracted outrigger positions.
- When the outrigger position levers (located on the outrigger beams) are engaged, the operator can set the crane in the intermediate or full retraction outrigger position without leaving the cab.

■ Travel Speeds and Gradability

Tires	23.5 x 25 (20-PR)
Maximum Speed	25 (40.23 km/h)
Gradability at stall	90%
Maximum Tractive Effort at Stall	53,765 lbs. (24 387 kg)
Gradability at 1.0 mph (1.6 km/hr)	60%
Maximum Tractive Effort at 1.0 mph. (1.6 km/hr)	34,250 lbs. @ 1,500 rpm (15 536 kg)

■ Axle Loads

Base machine with standard 35.5' – 110' (10.82 – 33.53 m) four-section boom, 2M main winch with 2-speed hoisting and power up/down, 600' (182.88 m) of 3/4" (19 mm) wire rope. 4x4x4 carrier with Cummins 6BTA5.9 engine, 23.5x25 tires, 75 gals. (283.91 L) of fuel, tow shackles and hook block tieback.	G.V.W. [□]		Upper facing front				Upper facing rear			
			Front axle		Rear axle		Front axle		Rear axle	
		lbs.	kg.	lbs.	kg.	lbs.	kg.	lbs.	kg.	lbs.
	72,430	32 853	34 013	15 428	38,417	17 426	31,307	14 201	38,106	17 285
Cold weather starting aids – ether injector	6	3	-2	-0.9	8	4	-2	-0.9	8	4
23.5R25 Tires	428	194	213	97	215	98	213	97	215	98
Pintle hook, front	13	6	18	8	-5	-2	18	8	-5	-2
Pintle hook, rear	13	6	-5	-2	18	8	-5	-2	18	8
Rear steer indicator	3	1	0	0	3	1	0	0	3	1
Hydro-gas Suspension	52	24	18	8	34	15	18	8	34	15
Winch roller – rear winch	93	42	-39	-18	132	60	129	59	-36	-17
Winch roller – front winch	93	42	-19	-9	112	51	109	49	-16	-7
2M Auxiliary Winch	19	9	-2	-0.9	21	10	21	10	-2	-0.9
600' (182.88 m) of 3/4" (19 mm) wire rope on auxiliary winch	669	303	-88	-40	757	343	734	333	-65	-30
Cab heater	50	23	25	11	25	11	23	10	27	12
Air conditioning in operator's cab	315	143	74	34	241	109	231	105	84	38
360 degree swing lock	76	34	28	13	48	22	45	20	31	14
Emergency steer system	136	62	15	7	121	55	116	53	20	9
Fly brackets to boom base sections for fly options	99	45	146	66	-47	-21	-51	-23	150	68
28.5' (8.68 m) fixed fly (stowed)	1,291	585	2,237	1 015	-947	-430	-990	-449	2,281	1 035
28.5' – 51' (8.68 – 15.54 m) offset fly (stowed)	1,861	844	3,060	1 388	-1,199	-544	-1,263	-573	3,124	1,417
Floodlight to boom base section	10	5	23	10	-13	-6	-13	-6	23	10
60-ton (54.43 mt) capacity hook block to front/rear bumper	1,109	503	1,530	694	-421	-191	-459	-208	1 568	711
40-ton (36.29 mt) capacity hook block to front/rear bumper	720	327	994	451	-274	-124	-298	-135	1,108	462
8.5-ton (7.7 mt) capacity hook block to front/rear bumper	360	163	497	225	-137	-62	-149	-68	509	231
Auxiliary lifting sheave	91	41	257	117	-166	-75	-169	-77	260	118

□ – Adjust gross weight and axle loading according to component weight. Note: All weights are ± 3%.

Tire	Max. Axle Load @ 25 mph (40.23 km/hr)
23.5 x 25 (20-PR)	38,800 (17 600 kg)
23.5R25 2 Star	38,800 (17 600 kg)