



GENERAL INFORMATION ONLY

Link-Belt
CONSTRUCTION EQUIPMENT

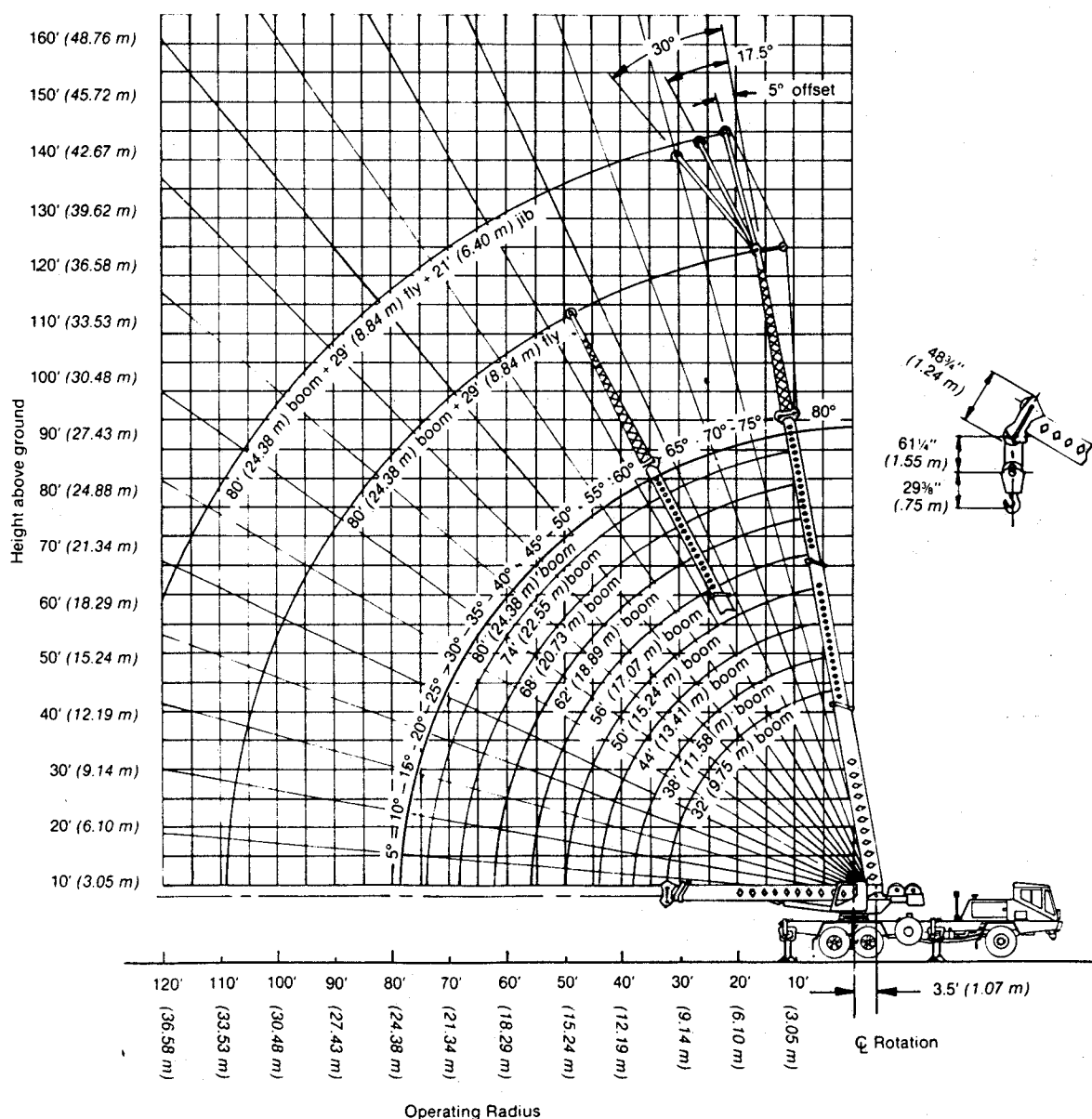
PCSA Class 10-95

Lifting Capacities

Hydraulic Crane

HTC-814XL 14-ton (12.70 metric ton)

3-Section Boom



CAUTION: This material is supplied for reference only. Operator **MUST** refer to in-cab capacity plate to determine allowable machine lifting capacities and operating procedures.



GENERAL INFORMATION ONLY

HTC - 814XL Lifting Capacities

Refer to Operating Instructions page 4

8' (2.44 m) carrier

32' - 80' (9.75 - 24.38 m) 3-section boom

Capacities^① On Outriggers- 3 - Section Boom

Load radius	32' (9.75 m)		38' (11.58 m)		44' (13.41 m)		50' (15.24 m)		56' (17.07 m)		62' (18.89 m)		68' (20.73 m)		74' (22.55 m)		80' (24.38 m)	
	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear	Side	Rear
10' 3.05m	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700						
12' 3.66m	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700				
15' 4.57m	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	26 500 12 020	26 500 12 020	21 500 9 752	21 500 9 752
20' 6.10m	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	28,000 12 700	26 900 ^a 12 202	26 900 12 202	24 100 10 932	24 100 10 932	22 100 10 024	22 100 10 024	20 300 9 208	20 300 9 208
25' 7.62m	21 900 9 934	27 900 12 655	21 900 9 934	27 900 12 655	21 900 9 934	27 900 12 655	21 900 9 934	27 900 12 655	21 900 9 934	26 100 11 839	21 900 9 934	22 900 10 387	20 500 9 299	20 500 9 299	18 800 8 528	18 800 8 528	17 300 7 847	17 300 7 847
30' 9.14m			15 800 7 167	20 800 9 435	15 800 7 167	20 800 9 435	15 800 7 167	20 800 9 435	15 800 7 167	20 800 9 435	15 800 8 981	19 800 8 981	15 800 7 167	17 800 8 074	15 800 7 167	16 200 7 348	15 000 6 804	15 000 6 804
35' 10.67m					12 000 5 443	16 300 7 394	12 000 5 443	16 300 7 394	12 000 5 443	16 300 7 394	12 000 5 443	16 300 7 394	12 000 5 443	15 600 7 076	12 000 5 443	14 200 6 441	12 000 5 443	13 100 5 942
40' 12.19m							9 500 4 309	13 200 5 987	9 500 4 309	13 200 5 987	9 500 4 309	13 200 5 987	9 500 4 309	13 200 5 987	9 500 4 309	12 600 5 715	9 500 4 309	11 600 5 262
45' 13.72m							7 500 3 402	10 800 4 899	7 500 3 402	10 800 4 899	7 500 3 402	10 800 4 899	7 500 3 402	10 800 4 899	7 500 3 402	10 800 4 899	7 500 3 402	10 400 4 717
50' 15.24m									6 100 2 767	9 100 4 128	6 100 2 767	9 100 4 128	6 100 2 767	9 100 4 128	6 100 2 767	9 100 4 128	6 100 2 767	9 300 4 218
55' 16.76m											5 100 2 313	7 700 3 493	5 100 2 313	7 700 3 493	5 100 2 313	7 700 3 493	5 100 2 313	7 700 3 493
60' 18.29m													4 200 1 905	6 600 2 994	4 200 1 905	6 600 2 994	4 200 1 905	6 600 2 994
65' 19.81m															3 500 1 588	5 700 2 585	3 500 1 588	5 700 2 585
70' 21.34m																	2 900 1 769	5 000 2 268
75' 22.86m																	2 300 1 043	4 300 1 950

^① All capacities are based on outriggers fully extended with boom sections extended equal distance.

Note: For 360° capacities, use the over side capacities with the bumper outrigger set in proper working position.

Main Boom Capacities^① On Tires

Load radius		1.0 m.p.h. (1.61 km/hr) over rear only		Crane capacities on tires depend on tire capacity, condition of tires, and tire pressures.		
Feet	meters	Pounds	kilograms	Tires	Ply rating	1.0 m.p.h. (1.61 km/hr) Inflation
10	3.05	21,600	9 797			
12	3.66	18,200	8 255	10.0 x 20.0 11.0 x 20.0 16.5 x 22.5	12 12 16	65 p.s.i. (4.48 Bars) 55 p.s.i. (3.79 Bars) 90 p.s.i. (6.21 Bars)
15	4.57	13,600	6 169			
20	6.10	9,000	4 082			
25	7.62	6,200	2 812			
30	9.14	4,400	1 996			
35	10.67	3,200	1 451			
40	12.19	2,300	1 043			
45	13.72	1,600	726			
50	15.24	1,100	499			

^① See Operating Instructions; Set-Up Number 3 and 4.

Wire rope size and type

Wire rope application	Size and type used	Wire rope description
Main winch	5/8" (16 mm) diameter, Type "N"	Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope core, right lay, regular lay.
Auxiliary winch	5/8" (16 mm) diameter, Type "N"	
Jib frontstay pendants ^①	1/2" (13 mm) diameter, Type "N"	
Jib backstay pendants ^②	1/2" (13 mm) diameter, Type "N"	

^① Jib frontstay pendants - 24' 3-5/8" (7.45 m)^② Jib backstay pendants - 32' 3/4" (9.77 m)



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CONSTRUCTION EQUIPMENT**HTC - 814XL Lifting Capacities**

8' (2.44m) carrier

32' - 80' (9.75 - 24.38 m) 3-section boom

Refer to Operating Instructions page

Capacities① On Outriggers			
Load radius	109' (33.22 m) ② 80' (24.38 m) boom plus 29' (8.84 m) fly		
	Boom angle	Side	Rear
25' 7.62 m	77°	9,500 4 309	9,500 4 309
30' 9.14 m	75°	9,500 4 309	9,500 4 309
35' 10.67 m	73°	9,500 4 309	9,500 4 309
40' 12.19 m	70°	9,000 4 082	9,000 4 082
45' 13.72 m	67°	8,000 3 629	8,000 3 629
50' 15.24 m	64°	7,100 3 220	7,100 3 220
55' 16.76 m	61°	5,900 2 676	6,400 2 903
60' 18.29 m	58°	5,000 2 268	5,800 2 650
65' 19.81 m	55°	4,200 1 905	5,200 2 359
70' 21.34 m	51°	3,500 1 588	4,800 2 177
75' 22.86 m	48°	3,000 1 361	4,400 1 996
80' 24.38 m	44°	2,500 1 134	4,000 1 814
85' 25.90 m	39°	2,100 952	3,700 1 678
90' 27.43 m	34°	1,700 771	3,300 1 497
95' 28.95 m	29°		2,900 1 315
	21°		2,500 1 134

① All capacities are based on outriggers fully extended with boom sections extended equal distance.

② Calculating capacities for extended or retracted boom plus fly must be based on boom angle only; see Operating Instructions Number 16.

Deductions For Auxiliary Load Handling Equipment	
Picking From Main Boom With	
Aux. Head	200 Lbs.
Jib Stowed	600 Lbs.
Fly Stowed	600 Lbs.
Fly Erected	1500 Lbs.
Fly & Jib Stowed	1200 Lbs.
Fly & Jib Erected	4200 Lbs.
Picking From 29 Ft. Fly With	
Jib Erected	1300 Lbs.
Jib Stowed	600 Lbs.

Jib Capacities①			
29' (8.84 m) fly plus 21' (6.40 m) jib			
Boom angle	Jib Offset		
	5°	17.5°	30°
80°	5,500 2 494	5,400 2 449	4,100 1 860
75°	5,500 2 494	4,800 2 177	3,700 1 678
70°	5,300 2 404	4,400 1 996	3,500 1 587
65°	4,000 1 814	3,500 1 588	3,200 1 451
60°	2,900 1 315	2,600 1 179	2,400 1 089
55°	2,100 952	1,900 862	1,700 771
50°	1,500 680	1,400 635	1,300 590

① All capacities are based on outriggers fully extended with boom sections extended equal distance.

Drum wire rope capacities

Wire rope layer	Main and auxiliary drum 10 1/2" (.27 m) root diameter smooth lagging			
	5/8" (16 mm) wire rope			
	Rope per layer		Total wire rope	
	Feet	meters	Feet	meters
1	74	22.55	74	22.55
2	85	25.91	159	48.46
3	90	27.43	249	75.89
4	98	29.87	347	105.76
5	106	32.31	453	138.07
6	115	35.05	568	173.13

Wire rope layer	Main and auxiliary drum 15 1/2" (.38 m) root diameter grooved lagging			
	5/8" (16 mm) wire rope			
	Rope per layer		Total wire rope	
	Feet	meters	Feet	meters
1	103	31.39	103	31.39
2	111	33.83	214	65.23
3	120	36.58	334	101.80
4	128	39.01	462	140.82
5	136	41.52	598	182.27
6	144	43.89	742	226.16

Line speeds and pulls

Layer	Speed	Main or auxiliary winch - 10 1/2" (.27 m) drum						Main or auxiliary winch - 15 1/2" (.38 m) drum					
		Line speeds		Line pulls				Line speeds		Line pulls			
				Available*		Permissible				Available*		Permissible	
		F.p.m.	m/min.	Lbs.	kgs.	Lbs.	kgs.	F.p.m.	m/min.	Lbs.	kgs.	Lbs.	kgs.
1st	Low	133	40.54	12,970	5 883	11,700	5 307	186	56.69	9,260	4 200	8,420	3 819
	High	266	81.08	6,480	2 939	5,890	2 672	372	113.38	4,630	2 100	4,210	1 910
2nd	Low	148	45.11	11,670	5 207	10,610	4 812	201	61.26	8,570	3 887	7,790	3 533
	High	296	90.22	5,840	2 649	5,300	2 404	402	122.52	4,290	1 945	3,900	1 769
3rd	Low	163	49.68	10,610	4 812	9,640	4 372	216	65.83	7,980	3 619	7,260	3 293
	High	325	99.06	5,310	2 408	4,820	2 186	432	131.67	3,990	1 809	3,630	1 646
4th	Low	177	53.94	9,730	4 413	8,840	4 009	231	70.40	7,470	3 388	6,790	3 079
	High	355	108.20	4,860	2 204	4,420	2 004	462	140.81	3,730	1 691	3,390	1 537
5th	Low	192	58.52	8,980	4 073	8,160	3 701	246	74.98	7,020	3 184	6,380	2 893
	High	384	117.04	4,490	2 036	4,080	1 850	492	149.96	3,510	1 592	3,190	1 446
6th	Low	207	63.09	8,340	3 783	7,580	3 438	261	79.55	6,620	3 003	6,010	2 726
	High	413	125.88	4,170	1 891	3,790	1 719	522	159.11	3,310	1 501	3,010	1 365

HTC-814XL hydraulic circuit pressure settings	
Function	Pressure
Boom hoist	2,900 p.s.i. (200.0 Bars)
Wire rope hoist	2,500 p.s.i. (172.41 Bars)
Swing	1,500 p.s.i. (103.45 Bars) at port relief
Innermid telescope	2,500 p.s.i. (172.41 Bars)
Outermid telescope	2,500 p.s.i. (172.41 Bars)
Steering	2,100 p.s.i. (144.79 Bars)
Outriggers	2,500 p.s.i. (172.41 Bars)
Winch brake and clutch	1,500 p.s.i. (103.45 Bars)



HTC - 814XL Warning and Operating Instructions

Read and understand these operating instructions and the chart values before operating crane. Operation which does not follow these instructions may result in an accident.

General:

1. Rated lifting Capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped by Link-Belt Construction Equipment Company. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the operator's parts and safety manuals supplied with this machine. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.
4. The maximum allowable lifting capacities are based on machine standing level on firm supporting surface.

Set-Up:

1. The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, outrigger beams must be fully extended with tires free of supporting surface.
3. Crane capacities on tires depend on tire capacity, condition of tires, and tire pressure. On-tire picks require lifting from main boom head only on a smooth and level surface. Boom sections must be extended equally. Pick and carry operations are restricted to 1 m.p.h. (1.61 km/hr) maximum speed. The boom must be centered over rear with swinglock engaged and the load must be restrained from swinging. Lifts with fly or fly-jib combination erected are prohibited on tires.
4. When making lifts on rubber, tires must be inflated to

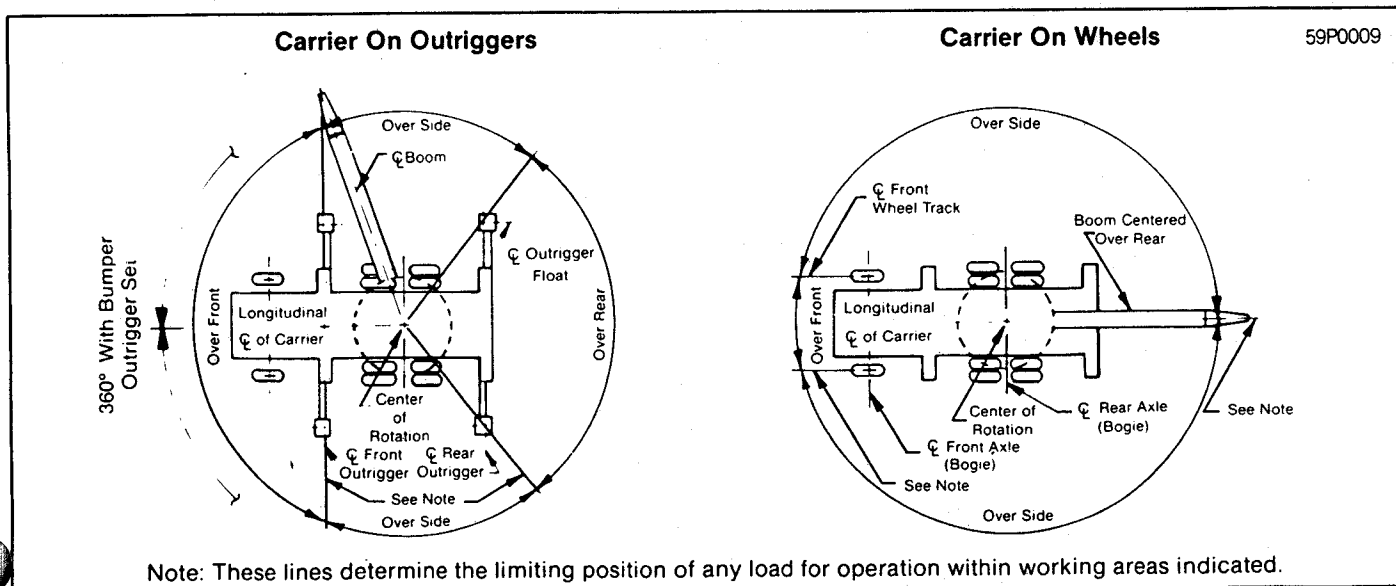
the recommended pressure.

5. For machine equipped with front bumper outrigger, the front bumper outrigger must be set in proper working position before swinging boom lengths greater than 32' (9.75 m) 360°.
6. Outriggers must be set before swinging boom to over side position as defined on working area plate No. 59P0009.
7. When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 25' (7.62 m) radius. Machine must be on outriggers during this operation.
8. For required parts of line see wire rope strength plate.

Operation:

1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip machine to determine allowable load. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacity. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50' (15.24 m) and the boom angle is restricted to a minimum of 35°. Manual extended, fly or fly-jib combinations are prohibited for both clam and magnet operations.
2. The crane capacities shown on outriggers do not exceed 85% of the tipping loads and crane capacities shown on tires do not exceed 85% of the tipping loads as determined by SAE crane stability test code J-765a.
3. The crane capacities above the bold lines are based on structural strength or hydraulic limitations.
4. Rated lifting capacities include the weight of hook block, slings, bucket, magnet and auxiliary lifting devices and their weights must be subtracted from the listed rated load to obtain the net load to be lifted. Also see in-cab capacity chart for deductions for auxiliary head, fly and jib.
5. Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
6. Rated lifting capacities are for lift crane service only.
7. Do not operate at radii or boom lengths where capacities are not listed. At these positions, the machine can overturn without any load on the hook.
8. The maximum loads which can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the load rating chart.
9. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
10. The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electrical wires, etc. Side load on boom, fly or jib is extremely dangerous.
11. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2' (.61 m). Effective length of boom is length shown on boom length indicator plus 2' (.61 m).
12. Power sections must be extended equally.
13. The least stable rated working area on outriggers is over the side.
14. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see wire rope strength plate) is considered excessive and must be accounted for. Use working range plate to estimate the extra feet of rope then deduct .72 lb. (.33 kg) for each foot of wire rope before attempting to lift a load.
15. With front bumper outrigger set, use over side capacity values for 360° working area.
16. For boom lengths plus fly less than 109' (33.22 m) the rated loads are determined by boom angle only in the column headed 109' (33.22 m). For angles not shown, use the next lower boom angle to determine allowable capacity.
17. The 21' (6.40 m) jib capacities are based on main boom angle regardless of main boom length. For angles not shown use next lower boom angle to determine allowable capacity. Capacity values can be used to operate over rear or over side. Warning: do not lower 21' (6.40 m) jib in working position below 50° unless boom is fully retracted.
18. The 32' (9.75 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 38' (11.58 m) boom length.

HTC - 814XL Working Areas



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We are constantly improving our products and therefore reserve the right to change designs and specifications

Link-Belt Construction Equipment Company Lexington, Kentucky

