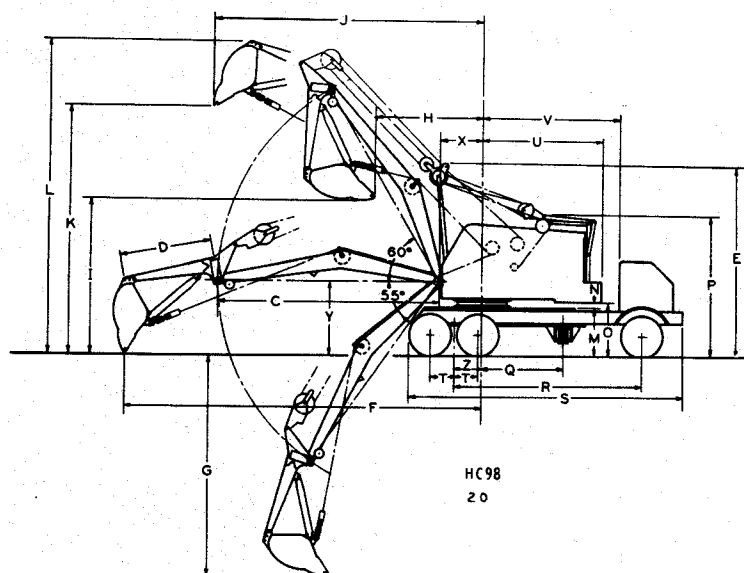
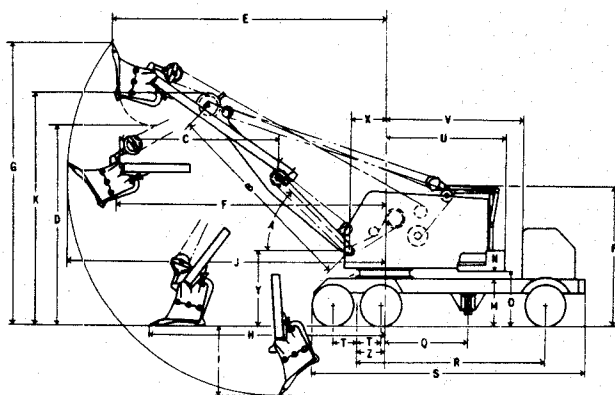


**LINK-BELT
SPEEDER****Clearances-Specifications-Working Ranges
HC-98 ZEPHYRCRANE Shovel and Hoe**HC98
20**SHOVEL WORKING RANGES**

BOOM ANGLE	A	60°	55°	50°	45°	40°
Dipper Capacity, Cubic Yards	B	1	1	1	1	1
Boom Length	C	18'	18'	18'	18'	18'
Dipper Stick Length	D	14' 4"	14' 4"	14' 4"	14' 4"	14' 4"
Maximum Dumping Height	E	21' 10"	19' 8"	19' 3"	17' 8"	16' 2"
Dumping Radius at Max. Height	F	18' 4"	19' 10"	21' 2"	22' 6"	23' 6"
Maximum Dumping Radius	G	22' 2"	23' 0"	23' 7"	24' 2"	24' 6"
Maximum Cutting Height	H	29' 10"	28' 4"	26' 9"	24' 10"	23' 1"
Maximum Clean-Up Radius	I	20' 5"	21' 1"	21' 3"	21' 5"	21' 6"
Maximum Digging Depth	J	4' 5"	4' 11"	5' 5"	6' 2"	6' 6"
Maximum Cutting Radius	K	26' 9"	27' 5"	28' 0"	28' 7"	29' 2"
Boom Clearance Height	L	23' 7"	22' 8"	21' 10"	20' 7"	19' 7"
Radius of Boom Hinge Pin	X					3' 2"
Height of Boom Hinge Pin	Y					6' 8"

HOE WORKING RANGES

Bucket Capacity, Cubic Yards		1
Bucket Cutting Widths		42" 44"
Boom Length	C	20'
Dipper Arm Length	D	8' 2"
Height of Hoe Mast	E	17' 7"
Maximum Digging Radius	F	32' 4"
Maximum Digging Depth*	G	20' 2"
Radius Beginning of Dump	H	9' 9"
Ground Clearance Beginning of Dump	I	14' 2"
Clearance Radius End of Dump	J	24' 5"
Ground Clearance End of Dump	K	22' 3"
Overall Height End of Dump	L	28' 1"
Radius of Boom Hinge Pin	X	3' 11"
Height of Boom Hinge Pin	Y	6' 8"

* Dimension "G" shows maximum digging depth with 55° boom. The maximum "effective" digging depth will vary according to character of excavation and soil.

**GENERAL DIMENSIONS COMMON TO
BOTH SHOVEL AND HOE**

Overall Width over Tires	M	9' 0"
Overall Width with Outriggers Extended	N	14' 5"
Overall Height, Top of Ring Gear Plate	O	4' 4"
Clearance Between Truck and Counterweight "A"	P	5'
Ground Clearance under Counterweight "A"		4' 9"
Overall Height, Retractable Gantry Lowered		12' 6"
Overall Height, Retractable Gantry Raised		15' 5"
Overall Height, Low Gantry		12' 4"
Center Line Rotation to Front Outrigger Center	Q	7' 6"
Truck Wheelbase	R	17' 1"
Overall Truck Length	S	24' 10"
Center Rear Axles to Center Rear Wheel	T	2' 2"
Tailswing (Counterweight "A")	U	10' 10"
Center Line Rotation to Back of Truck Cab	V	12' 7"
Center Line Rotation to Center Rear Axles	Z	2' 6"

BRIEF SPECIFICATIONS

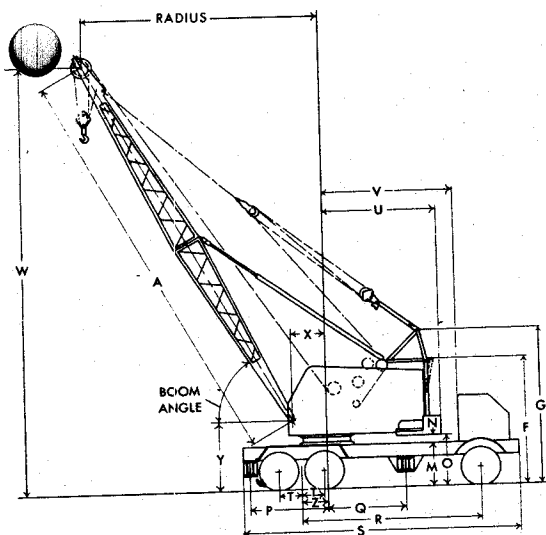
CARRIER — Heavy-duty all-welded frame, 12:00 x 20, 14-ply tires. Dual tires on tandem axle; single tires on front axle. 6 x 4 drive and 6-wheel air brakes. 10 speeds forward with standard engine; 2 speeds reverse. Road speeds up to 28 m.p.h. Standard Waukesha 140GK engine stripped develops 142 maximum brake horsepower at 2250 r.p.m. Optional at extra cost, — Waukesha 145 GK gasoline engine. Turning radius: 44 feet.

Complete Machine	Shovel	Hoe
Working weight, standard engine	76,300 lbs.	74,800 lbs.
Hoist line speed, 1-part line	139 f.p.m.	
Hoist line pull @ 139 f.p.m. line speed	21,200 lbs.	
Crowd speed	81.5 f.p.m.	
Retract speed	115 f.p.m.	
Inhaul line speed, 1-part line		139 f.p.m.
Inhaul line pull @ 139 f.p.m. line speed		21,200 lbs.
Swing speed	3.9 r.p.m.	3.9 r.p.m.

**WE ARE CONSTANTLY IMPROVING OUR PRODUCTS AND THEREFORE RESERVE
THE RIGHT TO CHANGE DESIGNS AND SPECIFICATIONS**

For Certified Dimensions, Consult Factory

LINK-BELT SPEEDER CORPORATION — CEDAR RAPIDS, IOWA

**LINK-BELT
SPEEDER****Clearance-Specifications-
Working Ranges HC-98 Zephyrcrane
(CAPACITIES WITH LOW GANTRY*)****GENERAL DIMENSIONS**

Basic Boom Length	A	40'
Overall Height, Retractable Gantry Lowered	F	12' 6"
Overall Height, Retractable Gantry Raised	G	15' 5"
Overall Height, Low Gantry		12' 4"
Overall Height, Top of Ring Gear Plate	M	4' 4"
Clearance Between Truck and Counterweight "A"	N	5' 5"
Ground Clearance under Counterweight "A"	O	4' 9"
Center Line Rotation to Rear Outrigger Center	P	7' 6"
Center Line Rotation to Front Outrigger Center	Q	7' 6"
Truck Wheelbase	R	17' 1"
Overall Width (Over Tires)		9' 0"
Overall Length of Truck	S	26' 4"
Center Rear Axles to Center Rear Wheel	T	2' 2"
Tailswing (Counterweight "A")	U	10' 10"
Center Line Rotation to Back of Truck Cab	V	12' 7"
Radius of Boom Hinge Pin	X	3' 2"
Height of Boom Hinge Pin	Y	6' 8"
Center Line Rotation to Center Rear Axles	Z	2' 6"

LIFTING CAPACITIES WITH COUNTERWEIGHT "A" AND LOW GANTRY

R	40' BOOM					45' BOOM					R	
	B	W	With Outriggers Side or Rear	Without Outriggers		B	W	With Outriggers Side or Rear	Without Outriggers			
				Side	Rear				Side	Reat		
10	80°	46' 1"	60,000	30,300	46,200							10
12	77°	45' 8"	50,000	26,300	36,100	79°	50' 10"	49,850	26,150	35,950		12
15	73°	44' 10"	47,500	21,500	26,800	75°	50' 1"	47,350	21,350	26,650		15
20	65°	43' 0"	31,000	15,400	18,600	68°	48' 5"	30,850	15,250	18,450		20
25	57°	40' 3"	23,500	11,500	14,100	61°	46' 1"	23,350	11,350	13,950		25
30	48°	36' 4"	18,300	9,000	11,200	53°	42' 10"	18,150	8,850	11,050		30
35	37°	31' 0"	15,000	7,300	9,200	45°	38' 5"	14,850	7,150	9,050		35
40	23°	22' 4"	12,300	6,100	7,700	35°	32' 7"	12,150	5,950	7,550		40
45						21°	23' 2"	10,150	5,050	6,350		45

R	50' BOOM					60' BOOM					R
	B	W	With Outriggers Side or Rear	Without Outriggers		B	W	With Outriggers Side or Rear	Without Outriggers		
				Side	Rear				Side	Rear	
12	80°	55' 11"	49,700	26,000	35,800	79°	65' 6"	46,900	20,900	26,200	12
15	76°	55' 3"	47,200	21,200	26,500	74°	64' 3"	30,400	14,800	18,000	15
20	70°	53' 9"	30,700	15,100	18,300	69°	62' 7"	22,900	10,900	13,500	20
25	64°	51' 8"	23,200	11,200	13,800	63°	60' 4"	17,700	8,400	10,600	25
30	57°	48' 11"	18,000	8,700	10,900	58°	57' 6"	14,400	6,700	8,600	30
35	50°	45' 3"	14,700	7,000	8,900	52°	54' 1"	11,700	5,500	7,100	35
40	43°	40' 6"	12,000	5,800	7,400	46°	49' 8"	9,700	4,600	5,900	40
45	33°	34' 2"	10,000	4,900	6,200	39°	44' 4"	8,400	3,800	5,000	45
50	21°	24' 3"	8,700	4,100	5,300	19°	25' 11"	6,200	2,700	3,700	50
60											60

R—Radius in feet.

B—Boom angle in degrees.

W—Ground to centerline boom head shaft.

All capacities shown are not more than 85% of minimum tipping loads with machine standing on firm level ground. Allowance must be made in the above lifting capacity tables if the rear outrigger box is removed.

* The low gantry is available at a reduction in price for booms up to and including 60 feet.

When figuring bucket or magnet capacities, use the capacities shown in the column, "Without Outriggers Side." For normal dragline work, on firm level ground, the capacities shown in the above lifting capacity table should not be exceeded; for clamshell, lifting magnet and similar work, where the outward swing of the load in rotation adds to the load imposed on the machine, these capacities should be reduced by at least 20%. Weight of bucket or magnet plus load should not exceed the resulting net capacity at the maximum desired operating radius, or the following, whichever is least — dragline 7,500 lbs., clamshell or magnet 9,000 lbs. These are maximum values and allowance must be made for soft or uneven footing, bucket suction and other unfavorable conditions. Boom length for average dragline, clamshell, magnet or similar work should not exceed 60 feet.

① For lifting crane service only.

159 f.p.m.

Hoist line speed, single

159 f.p.m.

LIFTING CRANE AND CLAMSHELL

Approximate working weight with 40' boom, high gantry, standard gasoline engine but no bucket, hookblock or tagline/winder	70,600 lbs.
Crane hoist line speed, 1-part line	139 f.p.m.
Crane hoist line pull @ 139 f.p.m. line speed	21,200 lbs.
Closing (or Holding) line speed, 1-part line	159 f.p.m.
Closing (or Holding) line pull @ 159 f.p.m. line speed	18,500 lbs.
Swing speed	3.9 r.p.m.

DRAGLINE

Approximate working weight with 40' boom, high gantry, standard gasoline engine, but no bucket	71,100 lbs.
Inhaul line speed, 1-part line	139 f.p.m.
Inhaul line pull @ 139 f.p.m. line speed	21,200 lbs.
Hoist line speed, 1-part line	159 f.p.m.
Hoist line pull @ 159 f.p.m. line speed	18,500 lbs.
Swing speed	3.9 r.p.m.



Lifting Capacities HC-98 Zephyrcrane

(CAPACITIES WITH RETRACTABLE HIGH GANTRY*)

LIFTING CAPACITIES WITH COUNTERWEIGHT "A" AND RETRACTABLE HIGH GANTRY															
R	40' BOOM					45' BOOM					50' BOOM				
	B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers	
				Side	Rear				Side	Rear				Side	Rear
10	80°	46' 1"	60,000	30,300	47,300										
12	77°	45' 8"	50,000	26,300	37,000	79°	50' 10"	49,850	26,150	36,850	80°	55' 11"	49,700	26,000	36,700
15	73°	44' 10"	47,500	21,500	27,600	75°	50' 1"	47,350	21,350	27,450	76°	55' 3"	47,200	21,200	27,300
20	65°	43' 0"	31,000	15,400	19,200	68°	48' 5"	30,850	15,250	19,050	70°	53' 9"	30,700	15,100	18,900
25	57°	40' 3"	23,500	11,600	14,500	61°	46' 1"	23,350	11,450	14,350	64°	51' 8"	23,200	11,300	14,200
30	48°	36' 4"	19,400	9,100	11,500	53°	42' 10"	19,250	8,950	11,350	57°	48' 11"	19,100	8,800	11,200
35	37°	31' 0"	16,800	7,400	9,500	45°	38' 5"	16,650	7,250	9,350	50°	45' 3"	16,500	7,100	9,200
40	23°	22' 4"	14,800	6,200	8,000	35°	32' 7"	14,650	6,050	7,850	43°	40' 6"	14,500	5,900	7,700
45						21°	23' 2"	12,650	5,050	6,650	33°	34' 2"	12,500	4,900	6,500
50											21°	24' 3"	10,800	4,100	5,500

R	55' BOOM					60' BOOM					70' BOOM ①				
	B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers	
				Side	Rear				Side	Rear				Side	Rear
12	81°	61' 0"	49,550	25,850	36,550										
15	78°	60' 6"	47,050	21,050	27,150	79°	65' 6"	46,900	20,900	27,000	80°	75' 8"	46,600	20,600	26,700
20	72°	59' 0"	30,550	14,950	18,750	74°	64' 3"	30,400	14,800	18,600	76°	74' 8"	30,100	14,500	18,300
25	67°	57' 2"	23,050	11,150	14,050	69°	62' 7"	22,900	11,000	13,900	72°	73' 2"	22,600	10,700	13,600
30	61°	54' 8"	18,950	8,650	11,050	63°	60' 4"	18,800	8,500	10,900	67°	71' 3"	18,500	8,200	10,600
35	55°	51' 7"	16,350	6,950	9,050	58°	57' 6"	16,200	6,800	8,900	63°	69' 0"	15,900	6,500	8,600
40	48°	47' 6"	14,350	5,750	7,550	52°	54' 1"	14,200	5,600	7,400	58°	66' 2"	13,900	5,300	7,100
45	40°	42' 5"	12,350	4,750	6,350	46°	49' 8"	12,200	4,600	6,200	53°	62' 9"	11,900	4,300	5,900
50	31°	35' 6"	10,650	3,950	5,350	39°	44' 4"	10,500	3,800	5,200	48°	58' 8"	10,200	3,500	4,900
55	20°	25' 2"	9,350	3,350	4,750	30°	37' 0"	9,200	3,200	4,600	42°	53' 8"	8,900	2,900	4,300
60						19°	25' 11"	8,100	2,700	4,000	36°	47' 5"	7,800	2,400	3,700
70											17°	27' 4"	6,100	1,700	2,700

R	80' BOOM ①					90' BOOM ①					100' BOOM ①					R
	B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers		B	W	With Outriggers	Without Outriggers		
				Side or Rear	Side				Rear	Side or Rear				Side	Rear	
			Side or Rear	Side	Rear			Side or Rear	Side	Rear			Side or Rear	Side	Rear	
20	78°	84' 11"	29,800	14,200	18,000	79°	95' 1"	29,500	13,900	17,700	80°	105' 3"	29,200	13,600	17,400	20
25	74°	83' 8"	22,300	10,400	13,300	76°	94' 0"	22,000	10,100	13,000	77°	104' 3"	21,700	9,800	12,700	25
30	70°	82' 0"	18,200	7,900	10,300	73°	92' 7"	17,900	7,600	10,000	74°	103' 0"	17,600	7,300	9,700	30
35	67°	80' 2"	15,600	6,200	8,300	69°	90' 10"	15,300	5,900	8,000	71°	101' 6"	15,000	5,600	7,700	35
40	63°	77' 8"	13,600	5,000	6,800	66°	88' 9"	13,300	4,700	6,500	68°	99' 8"	13,000	4,400	6,200	40
45	58°	74' 11"	11,600	4,000	5,600	62°	86' 4"	11,300	3,700	5,300	65°	97' 6"	11,000	3,400	5,000	45
50	54°	71' 7"	9,900	3,200	4,600	59°	83' 6"	9,600	2,900	4,300	62°	95' 0"	9,300	2,600	4,000	50
55	50°	67' 8"	8,600	2,600	4,000	55°	80' 3"	8,300	2,300	3,700	59°	92' 2"	8,000	2,000	3,400	55
60	45°	63' 0"	7,500	2,100	3,400	51°	76' 5"	7,200	1,800	3,100	55°	88' 11"	6,900	1,500	2,800	60
70	33°	50' 8"	5,800	1,400	2,400	42°	66' 11"	5,500	1,100	2,100	48°	81' 1"	5,200	800	1,800	70
80	16°	29' 1"	4,600	800	1,700	31°	53' 6"	4,300	500	1,400	40°	70' 8"	4,000	200	1,100	80
90						15°	30' 4"	3,400		900	30°	56' 3"	3,100		600	90
100											14°	31' 8"	2,400		100	100

R—Radius in feet.

B—Boom angle in degrees.

W—Ground to centerline boom head shaft.

All capacities shown are not more than 85% of minimum tipping loads with machine standing on firm level ground. Allowance must be made in the above lifting capacity tables if the rear outrigger box is removed.

* Retractable high gantry recommended for booms over 60 feet long.

When figuring bucket or magnet capacities, use the capacities shown in the column, "Without Outriggers Side." For normal dragline work, on firm level ground, the capacities shown in the above lifting capacity table should not be exceeded; for clamshell, lifting magnet and similar work, where the outward swing of the load in rotation adds to the load imposed on the machine, these capacities should be reduced by at least 20%. Weight of bucket or magnet plus load should not exceed the resulting net capacity at the maximum desired operating radius, or the following, whichever is least — dragline 7,500 lbs., clamshell or magnet 9,000 lbs. These are maximum values and allowance must be made for soft or uneven footing, bucket suction and other unfavorable conditions. Boom length for average dragline, clamshell, magnet or similar work should not exceed 60 feet.

① For lifting crane service only.

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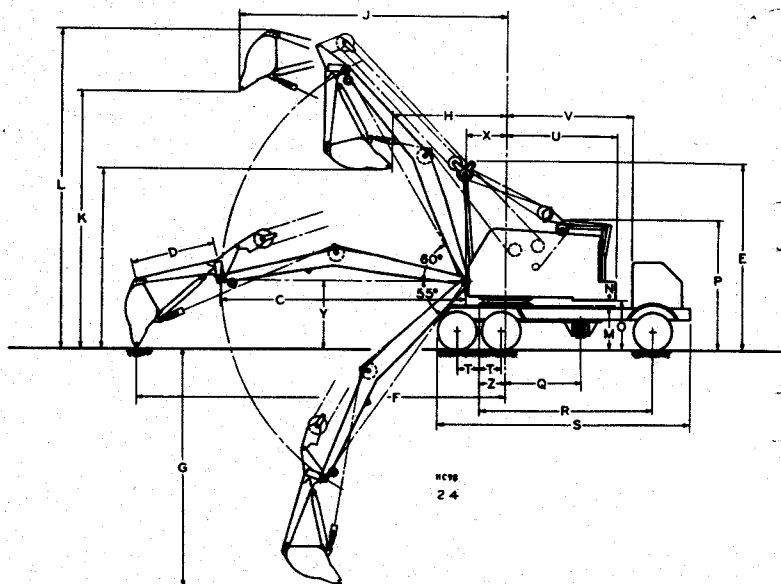
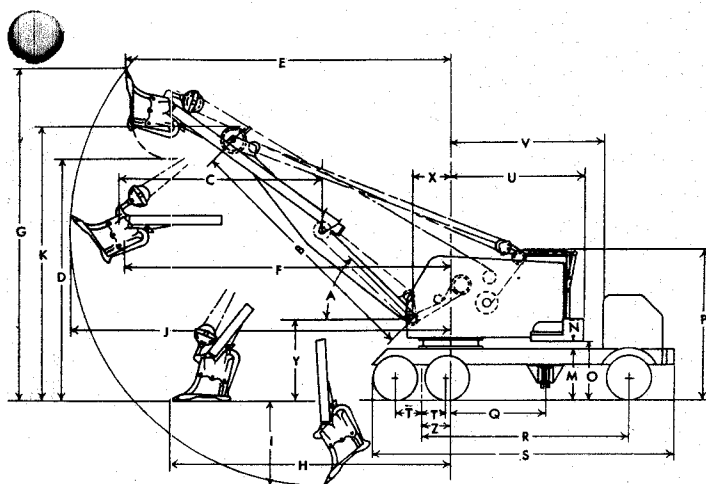
For Certified Dimensions, Consult Factory

LINK-BELT SPEEDER CORPORATION — CEDAR RAPIDS, IOWA

**LINK-BELT
SPEEDER**

Clearances-Specifications-Working Ranges

HC-98 Zephyrcrane-Long Boom Shovel and Hoe



SHOVEL WORKING RANGES

BOOM ANGLE	A	60°	55°	50°	45°	40°
Dipper Capacity, Cubic Yards	1	1	1	1	1	1
Boom Length	B	21'	21'	21'	21'	21'
Dipper Stick Length	C	16' 3"	16' 3"	16' 3"	16' 3"	16' 3"
Maximum Dumping Height	D	24' 10"	23' 5"	21' 10"	20' 1"	18' 2"
Dumping Radius at Max. Height	E	19' 11"	21' 8"	23' 4"	24' 10"	26' 1"
Maximum Dumping Radius	F	24' 10"	25' 8"	26' 5"	27' 1"	28' 9"
Maximum Cutting Height	G	33' 4"	31' 4"	29' 5"	27' 5"	25' 2"
Maximum Clean-Up Radius	H	22' 5"	22' 8"	22' 11"	23' 5"	23' 11"
Maximum Digging Depth	I	5' 1"	5' 7"	6' 3"	6' 11"	7' 6"
Maximum Cutting Radius	J	29' 5"	30' 3"	31' 0"	31' 8"	32' 4"
Boom Clearance Height	K	26' 1"	25' 0"	23' 11"	22' 8"	21' 3"
Radius of Boom Hinge Pin			X			3' 2"
Height of Boom Hinge Pin			Y			6' 8"

HOE WORKING RANGES

Bucket Capacity, Cubic Yards	1
Bucket Cutting Widths	42" 44"
Boom Length	24' 0"
Dipper Arm Length	8' 2"
Height of Hoe Mast	18' 7"
Maximum Digging Radius	36' 1"
Maximum Digging Depth*	23' 6"
Radius Beginning of Dump	11' 4"
Ground Clearance Beginning of Dump	17' 7"
Clearance Radius End of Dump	26' 6"
Ground Clearance End of Dump	25' 7"
Overall Height End of Dump	31' 6"
Radius of Boom Hinge Pin	3' 11"
Height of Boom Hinge Pin	6' 8"

* Dimension "G" shows maximum digging depth with 55° boom. The maximum "effective" digging depth will vary according to character of excavation and soil.

GENERAL DIMENSIONS COMMON TO BOTH SHOVEL AND HOE

Overall Width over Tires	M	9' 0"
Overall Height, Top of Ring Gear Plate	N	4' 4"
Clearance Between Truck and Counterweight "A"	O	5"
Ground Clearance under Counterweight "A"	P	4' 9"
Overall Height, Retractable Gantry Lowered		12' 6"
Overall Height, Retractable Gantry Raised		15' 5"
Overall Height, Low Gantry		12' 4"
Center Line Rotation to Front Outrigger Center	Q	7' 6"
Truck Wheelbase	R	17' 1"
Overall Truck Length	S	24' 10"
Center Rear Axles to Center Rear Wheel	T	2' 2"
Tailswing (Counterweight "A")	U	10' 10"
Center Line Rotation to Back of Truck Cab	V	12' 7"
Center Line Rotation to Center Rear Axles	Z	2' 6"

BRIEF SPECIFICATIONS

CARRIER — Heavy-duty all-welded frame, 12:00 x 20, 14-ply tires. Dual tires on tandem axle; single tires on front axle. 6 x 4 drive and 6-wheel air brakes. 10 speeds forward with standard engine; 2 speeds reverse. Road speeds up to 28 m.p.h. Standard Waukesha 140GK engine stripped develops 142 maximum brake horsepower at 2250 r.p.m. Optional at extra cost — Waukesha 145 GK gasoline engine. Turning radius: 44 feet.

Complete Machine	Shovel	Hoe
Working weight, standard engine	77,450 lbs.	75,900 lbs.
Hoist line speed, 1-part line	139 f.p.m.	
Hoist line pull @ 139 f.p.m. line speed	21,200 lbs.	
Crowd speed	81.5 f.p.m.	
Retract speed	115 f.p.m.	
Inhaul line speed, 1-part line		139 f.p.m.
Inhaul line pull @ 139 f.p.m. line speed		21,200 lbs.
Swing speed	3.9 r.p.m.	3.9 r.p.m.

WE ARE CONSTANTLY IMPROVING OUR PRODUCTS AND THEREFORE RESERVE
THE RIGHT TO CHANGE DESIGNS AND SPECIFICATIONS

For Certified Dimensions, Consult Factory

LINK-BELT SPEEDER CORPORATION — CEDAR RAPIDS, IOWA

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