

LINK-BELT SPEEDER CORP., CHICAGO, ILL.

DETAIL SPECIFICATIONS



3/4 YD.

CRAWLER BASE

GENERAL INFORMATION ONLY

TWO-SPEEDER lug-driven crawler track belts each 32 shoes, 9" pitch of manganese alloy steel, heat-treated, smooth both sides, self-cleaning.

TRACK PINS—1 1/8" diameter, full width of track shoe.

TRACK SHOES:

Standard 20" flat, total ground contact 4,220 sq. in. or 29.3 sq. ft.

Optional 24" flat, total ground contact, 5,064 sq. in. or 35.2 sq. ft.

TRACK ROLLERS—7 per belt, double-flanged, 10" tread diameter, hub babbitted, 2 1/2" diameter, 5 3/4" long.

CRAWLER REAR DRIVE SPROCKET—26 3/8" pitch diameter, 9 teeth, welded to chain drive sprocket and bronze-bushed 3 1/2" diameter, 12" long. Crawler front idler roller, 23 1/8" tread diameter, bronze-bushed, 3 1/2" diameter, 5 1/4" long. Sprocket and idler shafts are 3 1/2" diameter.

CRAWLER TRACK FRAME members—15", 35 lb. channels.

Main cross members 8" H-beams, 48 lb.

Longitudinal frame members—10", 35 lb. I-beams.

DRIVE CHAINS—Link-Belt XXS-40, 3.075" pitch, 1 1/2 x 5/16" side bars, 5/8" diameter pins, 1 1/4" diameter rollers, all alloy steel, heat-treated.

CHAIN SPROCKETS—Rear, 21 teeth; front 9 teeth.

TRACTION SHAFT—3 piece 3" diameter, S.A.E. 4140 chrome-moly steel. Traction bevel gear, 12" diameter, 24 teeth, 3" face, alloy steel, cut teeth, fully enclosed in steel case, running in oil bath. Traction pinion, 7" diameter, 14 teeth, 3" face. Shaft has 4 babbitted bearings 4" diameter, 5" long.

CENTER PIN BEARING—Riveted and welded to frame members, with 6" diameter bronze bushing, 4 1/2" long.

TURNTABLE—Cast steel with machined roller path 73" diameter, and internal gear 60" pitch diameter, 120 teeth, 3" face.

TRACTION LOCK—Regular SPEEDER traction lock engaging with traction shaft and adjustable to forward, reverse or neutral, controlled from operator's position in cab.

CRAWLER BASE DATA:

Overall length of crawlers—11'-3"

Length of ground contact—8'-9 1/2"

Overall width with 20" tracks—9'-2"

Overall width with 24" tracks—9'-6"

Maximum grade climbable—30%

Crawler ground contact, 20" tracks—4220 sq. in., 29.3 sq. ft.

Crawler ground contact, 24" tracks—5064 sq. in., 35.2 sq. ft.

Crawler travel speed—1.00 M.P.H.

UPPER REVOLVING FRAME

TURNTABLE ROLLERS—Six 5 3/4" diameter, 3 1/2" face, 2 1/2" diameter bronze bushing, 3 3/4" long. Rollers machined from alloy steel blanks, heat-treated.

CENTER PIN—6" diameter, alloy steel with 3" x 4" bronze bushing for travel shaft. Center pin bolted to upper frame.

FRAME—12", 35 lb. I-beams with cross ties and plates electric welded.

GASOLINE ENGINE:

Waukesha 6 MZR, 6-cylinder, 4 $\frac{1}{4}$ " bore, 4 $\frac{3}{4}$ " stroke.
Displacement—404 cubic inches.
Normal speed, 1400 R.P.M., 72 H.P., 270 ft. lbs. torque.
Carburetor—Zenith, 155.
Magneto—American Bosch, U-6.
Air Filter—Vortox oil bath-type, 1830-D.
Oil Filter—Waukesha-Michiana "Duo-Flo".
Starter—Delco-Remy, 724-D.
Generator—Delco-Remy, 941-H.
Governor—Waukesha centrifugal, built-in type.
Battery—6-volt, 17-plate, standard make.
Fuel Tank—50 gallon, gravity feed.
Radiator—"Perfex". Cooling system capacity, 8 $\frac{1}{4}$ gallons.
Crank Case oil capacity—10 Quarts.

DIESEL ENGINE—"Caterpillar" D-4600, 6 cylinder, 4 $\frac{1}{4}$ " bore, 5 $\frac{1}{2}$ " stroke.

Displacement—468 cubic inches.
Normal speed, 1400 R.P.M., piston speed 1283 F.P.M., 75 H.P., 276 ft. lbs. torque.
Lubricating Oil Filter—260 "Purolator".
Air Filter—Donaldson.
Fuel Filter—Two stage, edge and wire wound.
Starter—2 cylinder gasoline engine, 15 H.P., 3,000 R.P.M.
Fuel Tank—33 gallons, pump feed.
Radiator—"Caterpillar". Cooling system capacity, 14 gallons.
Lubricating Oil Capacity—18 quarts.

CLUTCH—"Twin Disc" clutch, C-111-P-2, 11 $\frac{1}{2}$ " diameter, single plate, 2 $\frac{1}{8}$ " diameter shaft.

TRANSMISSION—4 strand, $\frac{3}{4}$ " pitch, Link-Belt roller chain enclosed. Sprockets—18 and 125 teeth.

MAIN POWER SHAFT—3" diameter S.A.E. 4140-202 R.P.M. mounted on Link-Belt Shafer self-aligning roller bearings. Drive pinion 28-T., 2 $\frac{3}{4}$ " face, hardened.

REVERSE SHAFT—3" diameter S.A.E. 4140 chrome-moly steel.

Normal speed, 60 R.P.M.
Bearings—Bronze, 3" diameter, 6 $\frac{1}{4}$ " long.
Spur Gear, 24" diameter, 2 $\frac{3}{4}$ " face, machine-cut teeth, 3 pitch.
Miter gears, 10" diameter, 18 teeth, 3" face, cast teeth.
Swing and traction clutches, 20" diameter, 3 $\frac{1}{2}$ " face, double band, external contracting type, manually operated.

DRUMS—Two independent cast steel drums are used, all 13 $\frac{1}{2}$ " long between flanges, with 20" diameter clutch flanges.

Clutches are all 20"x3 $\frac{1}{2}$ " double band, external contracting, manually operated. (Power boosters on special order only.)
Brake on front is 20"x4" external contracting, foot-operated with locking ratchet on foot pedal.
Brake on hoist drum is 24"x4".
Hoist drum is 11 $\frac{5}{8}$ " P.D. grooved for cable.
Front drum is 8" base diameter with removable 3-piece steel lagging.
Drum speeds—60 R.P.M.
Drum shafts, 3" diameter, S.A.E. 4140 chrome-moly.
Drum bearings—3"x4" bronze.

VERTICAL SHAFTS AND GEARS:

Vertical drive, swing and quill gear shafts 3" diameter, splined for gears, all S.A.E. 4140 chrome-moly steel.

Vertical shaft bearings, bronze, 3" diameter, 4" long.
Travel sliding and swing gears, 3" face, 4 pitch, 12", 11 $\frac{1}{2}$ " and 18" pitch diameter.
Swing lock engages with turntable gear.
Swing pinion 14-tooth, 3" face with cast teeth.

BOOM HOIST—Spur-gear rapid-type located on independent shaft below hoist drum. Boom hoist shaft driven by 1 $\frac{1}{4}$ " roller chain from reverse shaft using a double band external contracting clutch 14 $\frac{3}{4}$ " diameter, 3 $\frac{1}{2}$ " face. Boom hoist drum 7" diameter, 4-inches wide, fitted with independent ratchet and pawl. Boom hoist drum interlocks with gearing by pawls so that lowering may be controlled by engine throttle in addition to foot-operated band brake. Line speed 140 feet per minute on a single line.

A-FRAME—Tubular steel front members, flat bar rear tension members.

CAB—No. 14 gauge steel sides, 14 gauge top. Sliding doors on sides and rear. Inside height 6'-4", width 8'-0". Safety glass panels in operator's compartment.

COUNTERWEIGHT:

5,800 lb. for shovel. 1145 lbs. extra weight for dragline and crane duty.

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DIMENSIONS:

Rear radius of cab—8-10½".
Overall height—10'-4".
Radius of boom hinge pin—3'-8".
Height of boom hinge pin—4'-9¾".

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SPEEDS:

Swing speed—5 R.P.M.
Hoist drum—11⅝" P.D. plain drum, 8,500 lbs. Line pull at 180 F.P.M.
Shovel crowd 110 F.P.M.
Shovel retract 154 F.P.M.
Dragline inhaul—9½" P.D. taper-grooved lagging, 10,500 lbs. at 145 F.P.M.
Boom hoist drum—7" diameter, 140 F.P.M. on single line.

SHOVEL ATTACHMENT—(Chain Crowd)

BOOM—17'-0" center to center of pins, made of box welded steel.
Shipper shaft 2½" diameter, with 17-tooth crowd pinions, 2" face, 6.8" P.D.
Main sheaves steel, 16½" P.D. bronze-bushed 2½" diameter, 3½" long.
Boom hoist sheaves 7½" P.D. bronze-bushed.

DIPPER STICKS—Hollow welded, 4"x6", with chrome nickel rack, 13 feet long.

BUCKET—¾ cubic yard, 34" wide inside, cast steel head, ⅜" plate body, 1" lip, ½" door. Four chrome nickel steel removable teeth 3" wide, 12" long. Weight 1650 lbs. Bucket with manganese steel front can be furnished at extra cost.

PADLOCK BLOCK—Sheave 16½" P.D., bronze-bushed 2½" inside diameter, 3½" long.

CROWDING ACTION—The front drum has a split 20-tooth sprocket and is reversed by a chain drive from the reverse shaft. Crowd and retract chains are 2" pitch heavy-duty type with alloy steel side bars and pins. The front drum sprocket drives to a countershaft at the base of the boom and up to the shipper shaft. Both drives have takeup idlers. The shipper shaft has chrome nickel steel pinions engaging with the crowd racks on the dipper sticks. Crowd and reverse are handled with one lever.

CABLES:

Hoist—⅝"x65 ft. 6x19 Improved Plow, Hemp Center.
Boom—½"x110 ft. 6x19 Improved Plow, Hemp Center.
Trip—5/16"x32 ft. 6x19 Improved Plow, Hemp Center.
Weight of cables—90 lbs.
Weight complete with cables—5600 lbs.

CRANE, CLAMSHELL, AND DRAGLINE ATTACHMENTS

BOOM—Standard length 35 ft. Extra center sections 5 and 10 ft. Standard box boom is made of four 2½"x2½"x¼" steel angles latticed with 1¼"x1¼"x3/16" angles. Boom has lattice bars welded and is 20½" deep and 22¾" wide at center, width at bottom 34½". End sheaves are 15¾" P.D. with hub 3½" long bronze-bushed for 2½" diameter shaft. Boom hoist sheaves are 10" P.D.

Weight of 35 ft. boom without cables—1,400 lbs.
Weight of 40 ft. boom without cables—1,650 lbs.
Weight of 45 ft. boom without cables—1,800 lbs.

DRAGLINE BUCKET—¾ yard capacity, body made of ⅜" plate, lip ¾"x12" plate steel with four removable and reversible chrome nickel steel teeth. Inhaul chains ¾"x7 ft., hoist chains ⅝".
Bridle sheave 10" P.D. Bucket 37" wide inside.
Dump clearance—9'-0".

Weight complete with chains—1,850 lbs. empty.
Weight with average material—4,500 lbs.

FAIRLEAD—Sheave-type, cast steel frame with two vertical swing sheaves, 11⅝" P.D., 1½" diameter shaft, roller bearings. Two horizontal guide sheaves are 5" diameter, 1½" pin, chilled iron, bronze-bushed. Weight of fairlead, 300 lbs.

CABLES:

Dragline:

	Boom Length		
	35 Ft.	40 Ft.	45 Ft.
Inhaul— $\frac{5}{8}$ " Improved Plow, Wire Rope center, Lang Lay-----	45	50	55 Ft.
Hoist— $\frac{5}{8}$ " Improved Plow, Hemp Center-----	85	95	105 Ft.
Boom— $\frac{1}{2}$ " Improved Plow, Hemp Center-----	126	152	177 Ft.
Weight—Complete set -----	135	160	180 Lbs.

Clamshell

	Boom Length		
	35 Ft.	40 Ft.	45 Ft.
Closing line— $\frac{5}{8}$ " Improved Plow, Hemp Center -----	115	125	135 Ft.
Holding line— $\frac{5}{8}$ " Improved Plow, Hemp Center -----	95	105	115 Ft.
Boom— $\frac{1}{2}$ " Improved Plow, Hemp Center-----	126	152	177 Ft.
Tagline— $\frac{5}{16}$ " Regular Plow, Hemp Center-----	50	55	60 Ft.
Weight—Complete set -----	140	160	180 Lbs.

CLAMSHELL BUCKET—The machine will handle any standard make clamshell bucket of $\frac{3}{4}$ yard capacity.

THE LINK-BELT SPEEDER CORPORATION RESERVES THE RIGHT TO CHANGE THESE SPECIFICATIONS WITHOUT NOTICE

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