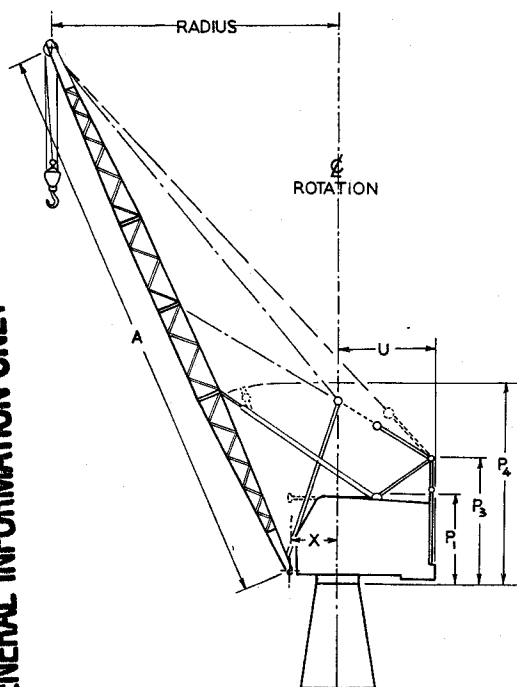




Link-Belt "TC" PEDESTAL MOUNTED CRANES

SPECIFICATIONS APPLICABLE TO "TC" MODELS
48A—78B—108C—138—218—238
318—338—418A—518



GENERAL INFORMATION ONLY

LIFTING CRANE RATINGS

48A — 20 Tons	238 — 115/125 Tons
78B — 35 Tons	318 — 75 Tons
108C — 50 Tons	338 — 100 Tons
138 — 65 Tons	418A — 110 Tons
218 — 82 Tons	518 — 150 Tons

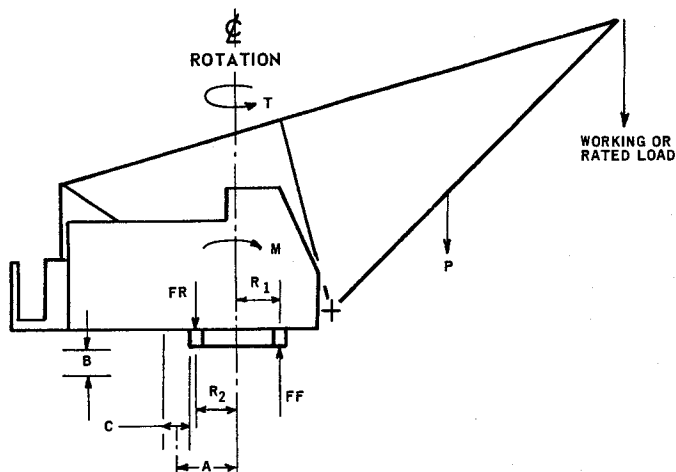
GENERAL DIMENSIONS											
		48A	78B	108C	138	218	238	318	338	418A	518
Basic boom length — Angle	A	25'	35'	40'	NA	NA	NA	50'	50'	50'	NA
Basic boom length — Tubular	A	NA	NA	NA	40'	40'	50'	50'	50'	50'	60'
Over-all height, low gantry ①	P ₁	7' 1"	8' 2"	8' 6"	7' 6"	7' 11"	8' 2"	9' 5"	9' 5"	9' 7"	9' 6"
Over-all height, retractable gantry raised ①	P ₃	—	11' 4"	12' 0"	—	—	—	—	—	—	—
Over-all height, boom live mast vertical ①	P ₄	14' 4"	26' 6"	NA	27' 10"	28' 2"	34' 9"	31' 5"	31' 5"	35' 8"	35' 9"
Radius of boom hinge pin	X	2' 8"	3' 1"	3' 2"	3' 2"	3' 6"	3' 6"	4' 7"	4' 7"	4' 7"	4' 8"

① Measured from bottom of roller path mounting plate (78B, 108C, 418A) or from bottom of turntable bearing mounting base (138, 218, 238) or turntable bearing mounting plate (48A, 318, 338, 518).



MAXIMUM LOAD VALUES & REACTION LOCATIONS — "TC" Models Only

		48A	78B	108C	138	218	238	318	338	418A	518
Front reaction (lbs.)	FF	137,950	240,000	273,200	437,000	503,100	740,900	512,200	563,100	564,000	768,000
Rear reaction (lbs.)	FR	88,300	155,000	183,000	306,000	344,900	542,400	300,000	300,000	210,000	338,800
Moment @ C/L rotation (ft. lbs.)	M	362,000	706,600	944,700	1,473,000	1,761,000	2,566,100	1,963,000	2,053,500	2,104,500	3,271,600
Torsional load (ft. lbs.)	T	27,600	41,500	59,600	73,500	97,900	125,700	117,200	117,200	140,000	145,800
Thrust (lbs.)	P	62,700	119,500	151,400	189,000	228,400	313,730	240,500	311,600	357,100	468,900
Reaction location (ft.)	R ₁	1.6	1.82	2.08	2.0	2.09	2.0	2.417	2.417	2.73	2.974
Reaction location (ft.)	R ₂	1.6	1.82	2.08	2.0	2.09	2.0	2.417	2.417	2.73	2.974



"Proper construction of — and connection of mounting plate and/or mounting base to — supporting structure shall be the responsibility of the owner."

Note: Direction of arrows at "FF" and "FR" denotes reaction for support of revolving superstructure.

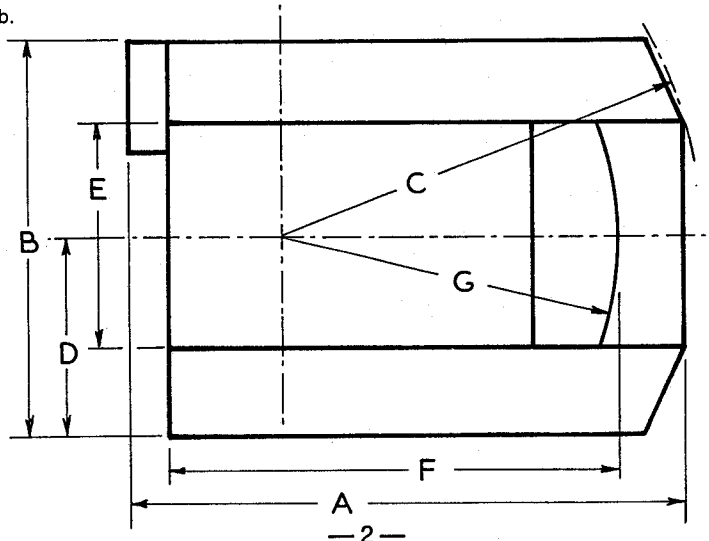
MINIMUM CLEARANCE DIMENSIONS — For removing vertical swing shaft

		48A	78B	108C	138	218	238	318	338	418A	518
C/L rotation to C/L vertical swing shaft	A	16"	19 1/2"	21 1/2"	38"	41"	41"	41 1/4"	41 1/4"	28"	28"
Clearance under mounting plate required to remove vertical swing shaft	B	21 1/2"	26"	32"	12 1/2"	12 3/4"	15 3/4"	22"	22"	36"	36"
Diameter of swing pinion	C	8"	10 1/2"	10"	10"	10"	9 1/4"	12"	12"	13"	13"

DIMENSIONS OF REVOLVING CRANE UPPER LESS BOOM

		48A	78B	108C	138	218	238	318	338	418A	518
Over-all length with catwalk	A	13'10"	16'10"	18'3"	21'1 1/8"	21'5"	21'6"	17'3"	17'3"	20'4 1/8"	20'11 7/8"
Over-all width with catwalk ①	B	12'3"	13'0"	13'2 1/4"	15'8"	15'8"	15'8"	15'1"	15'1"	15'2 1/4"	16'9 1/8"
Tailswing of catwalk at rear	C	11'6"	13'3"	14'2"	16'5"	16'11"	16'11"	NA	NA	NA	NA
C/L rotation to outside of catwalk	D	6'1 1/2"	6'6"	6'7 1/8"	8'1"	8'1"	8'1"	7'6"	7'6"	7'7 1/8"	8'4 1/8"
Over-all width without catwalk	E	7'6"	7'10"	8'0"	10'6"	10'6"	10'6"	10'10"	10'10"	11'0"	11'0"
Over-all length without catwalk	F	11'8 13/16"	14'3 1/8"	15'1 1/8"	17'11 5/8"	18'3 1/2"	18'6 1/2"	17'3"	17'3"	20'1 3/4"	20'11 1/2"
Tailswing of counterweight only	G	8'9"	10'6 1/2"	11'5"	13'5"	14'0"	14'4"	14'5"	14'11"	15'2"	15'10"

① Catwalks along both sides of cab.



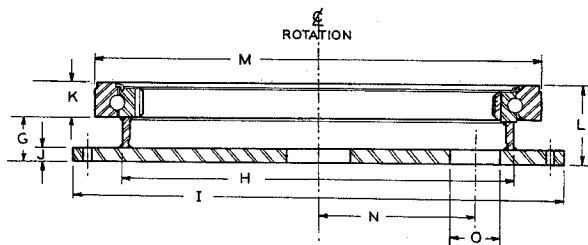
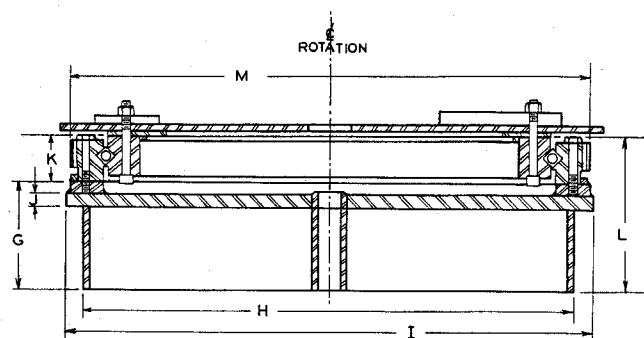
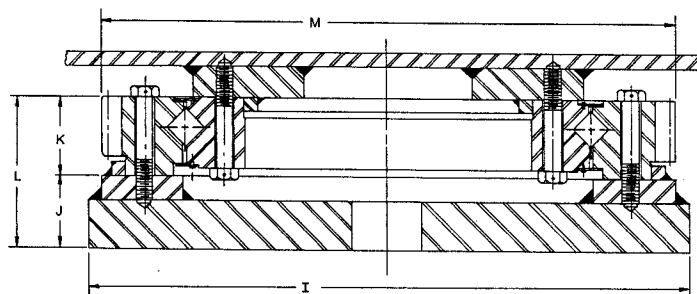
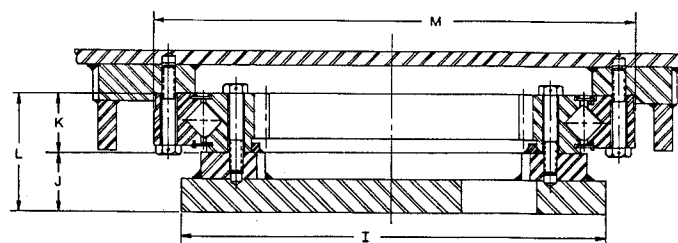
**TURNTABLE BEARING MOUNTING DIMENSIONS**

		48A	78B ①	138	218	238	318	338	518
Over-all height turntable bearing mounting base	G	4 ³ / ₄ "	16 ¹ / ₂ "	15 ³ / ₄ "	15 ³ / ₄ "	15 ³ / ₄ "	NA	NA	NA
Diameter turntable bearing mounting base	H	42 ¹ / ₁₆ "	50 ⁵ / ₈ "	65 ¹ / ₄ "	71"	71"	NA	NA	NA
Diameter turntable bearing mounting plate	I	53"	56"	70"	76 ¹ / ₂ "	76 ¹ / ₂ "	77"	77"	84"
Thickness turntable bearing mounting plate	J	1 ¹ / ₂ "	1 ¹ / ₂ "	2"	2"	2"	5 ¹ / ₄ " ②	5 ¹ / ₄ " ②	7" ②
Over-all height — turntable bearing only	K	3 ³ / ₄ "	5 ⁵ / ₁₆ "	5 ³ / ₄ "	6 ¹ / ₂ "	6 ¹ / ₂ "	5 ⁵ / ₈ "	5 ⁵ / ₈ "	6 ¹ / ₄ "
Over-all height — turntable bearing & mounting	L	8 ¹ / ₂ "	21 ³ / ₈ "	21 ¹ / ₂ "	22 ¹ / ₄ "	22 ¹ / ₄ "	10 ⁷ / ₈ "	10 ⁷ / ₈ "	13 ³ / ₄ "
Diameter turntable bearing	M	48 ¹ / ₈ "	54"	69"	75 ¹ / ₄ "	75 ¹ / ₄ "	75"	75"	90"
C/L rotation to C/L swing pinion access hole	N	16"	19 ¹ / ₂ "	NA ③	NA ③	NA ③	NA ③	NA ③	28"
Diameter swing pinion access hole	O	8"	10 ¹ / ₂ "	NA ③	NA ③	NA ③	NA ③	NA ③	13"

① Turntable bearing optional on TC-78B.

② Dimension includes thickness of mounting plate plus spacer block between plate and bearing.

③ Equipped with external ring gear and swing pinion.

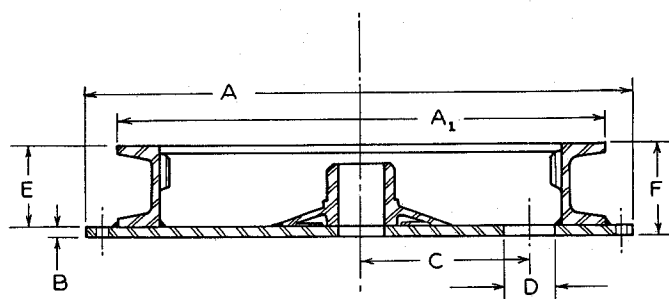
TC-48A**TC-78B, 138, 218, 238****TC-318, 338****TC-518**



HOOK ROLLER PATH MOUNTING DIMENSIONS

		78B	108C	418A
Length & width hook roller path mounting plate (welded)	A,	59" / 67 ³ / ₄ "	65" / 74"	84" / 84"
Length & width hook roller path mounting plate (bolted)	A	65 ¹ / ₄ " dia.	72" dia.	NA
Thickness hook roller path mounting plate	B	1 ¹ / ₄ "	1 ¹ / ₄ "	3 ¹ / ₂ "
C/L rotation to C/L swing pinion access hole	C	19 ¹ / ₂ "	21 ¹ / ₂ "	28"
Diameter of swing pinion access hole	D	10 ¹ / ₂ "	10"	13"
Over-all height of roller path only	E	9 2 ¹ / ₃₂ "	10 ³ / ₄ "	15 ¹ / ₂ "
Over-all height of roller path & mounting plate	F	10 2 ⁹ / ₃₂ "	12"	19"

TC-78B, 108C, 418A



GENERAL SPECIFICATIONS — Applicable to all models unless specifically noted otherwise.

UPPER

UPPER FRAME — All-welded, stress relieved, precision machined.

MACHINERY SIDE HOUSINGS — All-welded, stress relieved, and line bored for positive shaft and gear alignment. Depending on specific model, side housings may be either fabricated integrally with upper frame or as separate units which bolt on machined surfaces on upper frame.

MOUNTING OF UPPER ON SUPPORTING STRUCTURE—

ROLLER PATH WITH INTEGRAL RING (SWING) GEAR — Double-flanged, machined roller path welded to mounting plate which is fixed to supporting structure. Internal ring (swing) gear cast integral with roller path, and swing pinion meshes with this ring (swing) gear. Standard on TC-78B, 108C, and 418A.

Turntable Rollers — Heat treated, conical, hook-type rollers mounted on anti-friction bearings; shim adjusted to compensate for roller path or roller wear. Eight rollers mounted in four equalized pairs — two front and two rear. Standard on TC-78B, 108C, and 418A.

TURNTABLE BEARING WITH INTEGRAL RING (SWING) GEAR — Outer race of bearing bolted to upper revolving frame; inner race bolted to mounting plate which is either fixed to supporting structure or to mounting base which is fixed to supporting structure. Integral ring (swing) gear may be either internal or external of bearing, depending on model, and swing pinion meshes with this ring gear. Standard on TC-48A, 138, 218, 238, 318, 338, and 518. Optional on TC-78B.

TRANSMISSION — Link-Belt roller chain enclosed in chain case; pump-driven oil stream lubrication. Engine pinion and chain wheel have machine-cut teeth.

REDUCTION SHAFT — Mounted in side housings on anti-friction bearings.

Drive Pinions — Two heat treated, machine-cut teeth pinions; involute splined to reduction shaft.

CLUTCHES — Speed-o-Matic power hydraulic actuated for all functions (other than engine master clutch). Internal expanding, 2-shoe type, aluminum alloy shoes. Clutch drums bolted to spur gears.

DRUMS — Front and rear main, and optional (depending on machine model) third, operating drums.

Shafts — Mounted in line bores on anti-friction bearings. Front and rear drum shafts (only) extended to accommodate power load lowering clutches.

TC-78B and 108C — Special front and rear drum shafts furnished with optional planetary drive units; not furnished as standard equipment on basic machine.

TC-138, 218, 238, 318, 338, and 518 — Extended front and rear drum shafts standard to accommodate planetary drive units.

TC-418A — Optional extended rear drum shaft required to accommodate field installation of load lowering clutch or auxiliary hoist brake; not furnished as standard equipment on basic machine.

Spur Gears — Machine-cut teeth; mounted on anti-friction bearings on shafts.



Brakes — Two-piece, external contracting band; mechanically foot pedal operated on front, rear, and optional third operating drums. Mechanical latch on each brake foot pedal permits locking drum brakes in applied position.

Brake Drums — Involute splined to shaft.

Drum Laggings — (For main operating drums). Smooth laggings on front and rear drums — standard on all models for crane application.

TC-48A, 78B, and 108C — Two-piece, removable laggings bolted to brake drums and clamped to shafts.

TC-138, 218, and 238 — One-piece laggings, involute splined to shaft.

TC-318, 338, 418A, and 518 — Two-piece, removable laggings bolted to lagging adaptors which are splined on the shafts.

Drum Rotation Indicators — Standard for both front and rear main operating drums on all models. Dials mounted on front of control stand actuated by flexible shaft drives attached to drum shafts.

TWO-SPEED FRONT AND REAR DRUMS — Gear driven (for hoist only). Intermediate gears installed in side housings convert 2-shoe load lowering clutches to high-speed hoist clutches; hoist rope speed increased 100% over standard speeds. Optional on TC-78B and 108C only; but not available if machine is equipped with power load lowering clutches or auxiliary rear drum brake.

PLANETARY DRIVE UNITS FOR FRONT AND REAR DRUMS — For hoist and/or lowering. Planetary drive unit mounts between spur gear and 2-shoe clutch drum on extended shaft; provides 70% increase or 40% decrease of standard load hoist or lowering rope speeds. Optional on TC-78B, 108C, 138, 218, 238, 318, and 338 (for increased hoist speed only). Not available on TC-78B or 108C when equipped with gear-driven hoist drums or auxiliary rear drum brake, and not available for third operating drum on any TC model.

AUXILIARY 2-SHOE REAR DRUM BRAKE — Optional for rear drum only on TC-108C, 418A, and 518. Increases brake lining contact area. Pressure on mechanical brake pedal applies the standard rear drum brake band and the auxiliary 2-shoe brake simultaneously. Mechanical linkage actuates the control mechanism of a variable pressure valve to direct hydraulic pressure to the auxiliary brake cylinder. **Note:** Power load lowering clutch; 2-speed gear-driven hoist, or 2-speed planetary drive unit on lowering (left) side for rear drum not available on machine equipped with auxiliary 2-shoe hoist drum brake.

INDEPENDENT SWING SHAFT (Horizontal) — Mounted in line bore on anti-friction bearings. Independent swing and swing brake standard on all TC models.

Spur Gears — Machine-cut teeth; mounted on shaft on anti-friction bearings.

Bevel Gear — Involute splined to shaft; fully enclosed and running in oil.

INDEPENDENT BOOMHOIST — Spur gear, or worm gear, driven, with precision boom raising and lowering controlled through Speed-o-Matic power hydraulic 2-shoe clutches or planetary drive units. A rope drum locking pawl, manually controlled from operator's position, is provided on all boomhoists; permits locking boomhoist wire rope drum to avoid boom's creeping down against brake. Both spur gear and worm gear boomhoists

equipped with automatic, spring applied, hydraulically released brakes.

BOOMHOIST MECHANISMS —

INDEPENDENT, SPUR GEAR DRIVEN — Standard for TC-48A, 78B, 108C, 138, 218, 238, 318, and 338.

Drum Shaft — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine-cut teeth; mounted on anti-friction bearings.

Brake — External contracting band; spring applied, hydraulically released.

Wire Rope Drums — Involute splined to shaft. Single drum with grooved lagging standard for 78B and 108C; single drum with smooth lagging standard on 48A; single smooth drum (no lagging) standard for TC-138, 218, and 238; dual smooth drums (no lagging) standard for TC-318, 338, 418A, and 518.

Planetary Boom Lowering — Standard for TC-138, 218, and 238 only; not available on other TC models. Unit mounts on outer end of boomhoist drum shaft. Planetary activated by external contracting band brake which is controlled by operator from control stand.

High-Speed Boom Lowering Clutch — Optional on TC-138, 218, and 238 only — not available on other TC models. Two-shoe clutch spider splined to shaft outside the planetary unit; clutch drum bolted to outer face of planetary housing.

INDEPENDENT, WORM GEAR DRIVEN — Standard for TC-418A and 518. Powered from reverse shaft through bevel gears and vertical propeller shaft into worm gear boomhoist drive. (Description of drum shaft, spur gears, and brake same as spur gear-driven boomhoist.)

BOOMHOIST LIMITING DEVICE — Standard. Cab-mounted device which, when it comes in contact with the boom, causes simultaneous engagement of the automatic spring applied boomhoist brake and disengagement of — or relief of pressure to — the boomhoist clutch.

BOOMHOIST BAIL — Supports boom suspension system; sheaves mounted on anti-friction bearings.

BOOMSTOPS — Dual; rigid or telescoping.

Angle Booms — TC-48A, 78B, 108C; mounted on cab top; rigid tubular, spring-loaded bumper ends. TC-318, 338, and 418A; rail-type, telescoping, spring bumpers.

Tubular Booms — TC-78B, 108C; telescoping tubular, attached to upper end of boom base section, spring bumpers. TC-138, 218, 238; lever type, rigid, tubular, supported in position by telescoping struts attached near boom base, spring-loaded bumpers. TC-418A and 518; rail type, rigid, tubular, spring bumpers.

BOOMHOIST BRIDLE — Serves as connection between boom pendants and boomhoist wire rope reeving to bail.

BOOM LIVE MAST — Mounted at base of boom; supports boomhoist bridle and mid-point suspension pendants when required.

SWING MECHANISM — Independent swing standard.

Horizontal Swing Shaft — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine-cut teeth. Mounted on shaft on anti-friction bearings.



Bevel Gear — Involute splined on shaft; fully enclosed and running in oil.

Vertical Drive Shaft — Mounted in line bore on anti-friction bearings.

Bevel Gear — Involute splined on shaft. Fully enclosed and running in oil.

Spur Gear — Machine-cut teeth; involute splined on shaft. Fully enclosed and running in oil.

Vertical Swing Shaft — Mounted in line bore on anti-friction bearings.

Spur Gear — Machine-cut teeth, involute splined to shaft; fully enclosed and running in oil.

Swing Pinion — Involute splined to shaft; teeth mesh with teeth of ring (swing) gear which is integral with hook roller path or turntable bearing — depending on specific model.

Swing Lock — Mechanically controlled pawl engages with teeth of ring (swing) gear.

Swing Brake — Two-directional, external contracting band — spring applied, power hydraulically released; mounted on vertical swing shaft for TC-48A, 78B, 108C, 418A, and 518; mounted on horizontal swing shaft for TC-138, 218, 238, 318, and 338. Brake drums splined on shaft.

CAB — Operator's door may be hinged or roll on ball bearing rollers; operator cab door and windows equipped with safety glass panels. Standard equipment includes electric horn warning device, dry chemical fire extinguisher, hand grab rails, roof-top access ladder, and skid-resistant finish on roof. Optional equipment includes cab heater, fan-type defroster, and catwalks.

CONTROL SYSTEM — Speed-o-Matic power hydraulics; an open system. Operating pressure is transmitted through oil to all operating 2-shoe clutch cylinders, swing brake, and boomhoist drum brake cylinders. The system includes a pump to provide a constant flow of oil, an accumulator to maintain operating pressure, and variable pressure operator-controlled valves to regulate this pressure to each clutch cylinder.

Pump — TC-48A — Lear Siegler; 4 g.p.m. @ 2,000 r.p.m. All other models — Vickers; rated at 4.7 g.p.m. @ 1,200 r.p.m.

Oil Filter — FMC; replaceable Skinner ribbon-type filter element.

Relief Valve — FMC; set to operate at 1,250 p.s.i.

Unloader Valve — FMC; set to unload pump at a maximum 1,050 p.s.i. and to load pump when pressure drops below 900 p.s.i.

Accumulator — FMC; piston-type, pre-charged with nitrogen gas to 650 p.s.i.

Sump Tank — FMC; equipped with filter and strainer assembly to keep oil clean. TC-48A — 5½-gal. capacity; all other models, 7-gal. capacity.

Control Valves — FMC; variable pressure type.

AUXILIARY CONTROLS — (In operator's cab)

Swing Brake — Std. on all models.

Foot Throttle — Std. on all models.

Hand Throttle — Std. on all models.

Optional Hand Throttle — Mounted on swing control lever. Available on all models.

ELECTRIC MOTOR DRIVE — Optional; available only for TC-78B and TC-108C. 50 h.p. motor for TC-78B; 75 h.p. motor for TC-108C.

Open squirrel cage motor; 440 volt A.C., 3-phase, 60-cycle, 1,800 r.p.m. Motor equipped with double-end

shaft — shaft at outer end for installation of chain drive pinion; shaft at inner end for installation of V-belt pulley(s) to drive Speed-o-Matic power hydraulic system pump and optional magnet generator.

Additional equipment includes across-the-line starter, start and stop station (switch) at operator's position, transformer for 220-volt, 110-volt, 12-volt A.C., rectifier for 12-volt D.C.; and 120-ampere, 600-volt, 4-conductor collector ring assembly complete with vertical shaft and enclosure. Collector ring assembly mounts below hook roller path mounting plate and transfers electrical power up to electric motor mounted in revolving crane upper.

LIFTING MAGNET INSTALLATIONS — Optional; available only for TC-48A, 78B, and 108C.

GENERATORS — V-belt driven from upper diesel engine or electric motor; actuated by master control box usually located at rear of upper machinery. Generator installed in right rear platform recess, in front of engine mounting frame and under chain case on machines equipped with diesel engines; on a platform at rear of cab interior above motor on machines equipped with electric motor drive.

NOTE: Generator cannot be installed on machine equipped with optional auxiliary diesel fuel tank since installation area for generator controller and auxiliary tank is identical and space is limited to one or the other. Also, on the TC-78B and TC-108C — where diesel engines with hydraulic coupling drives are available — the slip characteristics of the hydraulic coupling (when any operating clutch is engaged) may cause the generator to slow down. To avoid a voltage drop, which could cause part or all of the magnet load to fall, special operating procedures are required.

Onan Magnet Generator With Over-Excitation —

10 KW — Suitable for 30" or larger, 230-volt magnets rated at 18.5 to 42 operating amperes. Available for TC-48A and TC-78B.

15 KW — Suitable for 39" or larger, 230-volt magnets rated at 18.5 to 63 operating amperes. Available for TC-78B and TC-108C.

Cadiz-Ohio Magnet Generator With Over-Excitation —

20 KW — Suitable for use with 230-volt magnets only where magnet specification requires 17 to 20 KW. Available for TC-108C.

CONTROLLER — E. C. & M. automatic type; mounted on right front corner of platform, just inside door. Rheostat mounted inside door of controller; can be adjusted for speed of load "drop" for light or heavy scrap.

CONTROLS — Push button type. "Lift-Hold" button is mounted on swing control lever. "Drop" button is mounted on top of control stand for arm or hand touch control.

Over-excitation — When button swing control lever is pushed, it draws 275 volts into the magnet for load "lift". When load is free of pile, button is released and voltage is reduced to 200 for "holding" load. Over-excitation feature permits maximum magnet load lift without excessive magnet over-heating.

Main Rheostat — Mounted to right of the operator; provides voltage adjustment for the load "hold" cycle.

WIRING — Heavy-duty, 230-volt cable and wire provide exclusive heat assurances, long-lasting performance, reduced electrical maintenance and repair problems.

Voltmeter — Included for reading the voltage and setting rheostat.



TAGLINE & MAGNET REELS — Optional. Rud-O-Matic combination tagline winder and magnet cable take-up reel. Model #630 for TC-48A; #636 for TC-78B and TC-108C.

HOOK BLOCK AND MAGNET CABLE — Optional. 6½-ton, single-sheave hook block and cable from controller to magnet.

TAGLINE — Optional for all models for crane, clamshell or grapple applications. Rud-O-Matic spring-wound drum type; mounted on crane boom.

DETAIL SPECIFICATIONS

DRUM WIRE ROPE CAPACITIES, LINE SPEED & LINE PULL — (Available line pull, not based on wire rope strength)

FRONT DRUM	48A	78B		108C		138	218	238	318	338	418A	518
Root diameter	8 ³ / ₈ "	12"	12" ④	13 ¹ / ₄ "	13 ¹ / ₄ " ④	14"	17 ¹ / ₄ "	17 ¹ / ₄ "	20"	20"	24 ³ / ₈ "	19 ¹ / ₈ "
Lagging type	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth
Wire rope diameter	1 ¹ / ₂ "	5 ⁵ / ₈ "	5 ⁵ / ₈ "	3 ³ / ₄ "	3 ³ / ₄ "	3 ³ / ₄ "	3 ³ / ₄ "	1"	7 ⁷ / ₈ "	1"	1"	1 ¹ / ₈ "
FIRST LAYER WIRE ROPE —												
Line speed — f.p.m. } ①	150	147	147	150	150	162	179	171	166	167	149	119
Line pull — lbs. }	11,100	17,220	17,240	23,000	23,000	20,200	21,500	26,100	27,400	27,200	35,000	45,200
Line speed — f.p.m. } ②	—	294	294	300	300	—	—	—	—	—	—	—
Line pull — lbs. }	—	8,080	8,090	11,160	11,160	—	—	—	—	—	—	—
Line speed — f.p.m. } ③	—	—	—	255	255	276	304	291	—	—	—	—
Line pull — lbs. }	—	—	—	12,770	12,770	11,200	11,940	14,500	—	—	—	—
Wire rope capacity	31'	57'	57'	54'	54'	77'	118'	88'	119'	105'	107'	75'
LAST LAYER WIRE ROPE —												
Line speed — f.p.m. } ①	248	235	249	247	279	311	268	283	262	261	207	211
Line pull — lbs. }	6,742	10,800	10,150	14,000	12,400	10,500	14,300	15,700	17,300	17,300	25,100	24,700
Line speed — f.p.m. } ②	—	470	498	494	558	—	—	—	—	—	—	—
Line pull — lbs. }	—	5,070	4,760	6,790	6,010	—	—	—	—	—	—	—
Line speed — f.p.m. } ③	—	—	—	419	474	529	456	481	—	—	—	—
Line pull — lbs. }	—	—	—	7,770	6,880	5,840	7,940	8,720	—	—	—	—
Maximum layers wire rope	7	7	8	7	9	10	7	7	8	7	6	8
Maximum wire rope capacity	292'	543'	645'	481'	661'	1,071'	1,008'	790'	1,283'	986'	812'	895'

① Standard machine — crane lagging.

② Machine equipped with gear-driven high speed drum.

③ Machine equipped with planetary-driven high speed drum.

④ Special high flange, high wire rope capacity crane lagging.

REAR DRUM	48A	78B	108C	138	218	238	318	338	418A	518
Root diameter	8⅜"	12"	13¼"	14"	17¼"	17¼"	20"	20"	24⅜"	27"
Lagging type	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth
Wire rope diameter	½"	⅝"	¾"	¾"	¾"	1"	7/8"	1"	1"	1⅜"
FIRST LAYER WIRE ROPE —										
Line speed — f.p.m. } ①	150	147	150	162	179	171	166	167	149	155
Line pull — lbs. } ①	10,800	16,700	22,400	20,200	21,500	26,100	27,400	27,200	35,000	35,000
Line speed — f.p.m. } ②	—	294	300	—	—	—	—	—	267	278
Line pull — lbs. } ②	—	7,840	10,870	—	—	—	—	—	19,300	19,300
Line speed — f.p.m. } ③	—	—	255	276	304	291	282	—	—	—
Line pull — lbs. } ③	—	—	12,440	11,200	11,940	14,500	15,222	—	—	—
Wire rope capacity	31'	57'	54'	77'	118'	88'	119'	105'	107'	103'
LAST LAYER WIRE ROPE —										
Line speed — f.p.m. } ①	248	235	246	311	268	283	262	261	207	193
Line pull — lbs. } ①	6,540	10,480	13,600	10,500	14,300	15,700	17,300	17,300	25,100	28,200
Line speed — f.p.m. } ②	—	470	492	—	—	—	—	—	374	346
Line pull — lbs. } ②	—	4,920	6,600	—	—	—	—	—	13,900	15,600
Line speed — f.p.m. } ③	—	—	418	529	456	481	445	—	—	—
Line pull — lbs. } ③	—	—	7,550	5,840	7,940	8,720	9,610	—	—	—
Maximum layers wire rope	7	7	7	10	7	7	8	7	6	4
Maximum wire rope capacity	292'	543'	481'	1,071'	1,008'	790'	1,283'	986'	812'	479'

① Standard machine — crane lagging.

② Machine equipped with gear-driven high speed drum.

③ Machine equipped with planetary-driven high speed drum.

**DRUM WIRE ROPE CAPACITIES, LINE SPEED & LINE PULL — (Available line pull, not based on wire rope strength)**

THIRD DRUM	48A	78B	108C	138	218	238	318	338	418A	518
Root diameter		9"	9"	10 1/2"	11 1/4"	12 1/4"			13 1/4"	13 1/4"
Lagging type		Grooved	Grooved	Smooth	Smooth	Smooth			Smooth	Smooth
Wire rope diameter	↓	5/8"	5/8"	3/4"	3/4"	7/8"	↓	↓	7/8"	7/8"
FIRST LAYER WIRE ROPE —										
Line speed — f.p.m.		113	123	131	132	136			135	135
Line pull — lbs.	↓	10,000	10,000	22,800	25,900	30,800	↓	↓	22,200	22,200
Wire rope capacity	NA	33'	35'	60'	80'	74'	NA	NA	69'	69'
LAST LAYER WIRE ROPE —										
Line speed — f.p.m.	↑	185	202	201	198	208	↑	↑	200	200
Line pull — lbs.		6,000	6,000	14,800	17,200	20,100			14,800	14,800
Maximum layers wire rope		6	6	5	5	5			5	5
Maximum wire rope capacity		278'	297'	370'	495'	460'			451'	451'

NA — Not available.

DRUM CLUTCHES —

CLUTCH DRUM SIZE	48A	78B	108C	138	218	238	318	338	418A	518
Front drum	14"x3 1/2"	18"x4 1/2"	20"x5"	18"x4 1/2"	20"x5"	23"x6"	30"x6 1/2"	30"x6 1/2"	37"x5 1/2"	37"x5 1/2"
Rear drum	14"x3 1/2"	18"x4 1/2"	20"x5"	18"x4 1/2"	20"x5"	23"x6"	30"x6 1/2"	30"x6 1/2"	37"x5 1/2"	37"x5 1/2"
Front & Rear drum load lowering	④ 14"x3 1/2"	⑤ 18"x4 1/2"	20"x5"	⑥ 18"x4 1/2"	⑥ 20"x5"	④ 23"x6"	④ 30"x6 1/2"	④ 30"x6 1/2"	④ 30"x6 1/2"	④ 30"x6 1/2"
Swing	14"x3 1/2"	18"x4 1/2"	20"x5"	18"x4 1/2"	20"x5"	23"x6"	30"x6 1/2"	30"x6 1/2"	30"x6 1/2"	30"x6 1/2"
Boom hoist	14"x3 1/2"	18"x4 1/2"	20"x5"	18"x4 1/2"	20"x5"	23"x6"	20"x5"	20"x5"	17 1/4"x4"	17 1/4"x4"
Boom lowering	14"x3 1/2"	18"x4 1/2"	20"x5"	② 18"x4 1/2"	② 20"x5"	② 23"x6"	20"x5"	20"x5"	17 1/4"x4"	17 1/4"x4"
Third drum hoist ①	NA	17 1/4"x4"	17 1/4"x4"	③ 18"x4 1/2"	③ 20"x5"	③ 23"x6"	NA	NA	20"x5"	20"x5"

① Optional.

② Low speed planetary.

③ Optional load lowering clutch of same size available.

④ Optional on front and rear drums.

⑤ Standard on front and rear drums.

⑥ Standard on rear drum; same size optional on front drum.

NA — Not available or not applicable.

DRUM BRAKES —

BRAKE DRUM SIZE	48A	78B	108C	138	218	238	318	338	418A	518
Front drum	18" x 3"	23" x 4 1/4"	27" x 4 1/2"	32" x 4 1/2"	34" x 5"	34" x 5 1/2"	38" x 6"	38" x 6"	44" x 6"	44" x 6"
Rear drum	18" x 3"	23" x 4 1/4"	27" x 4 1/2"	32" x 4 1/2"	34" x 5"	34" x 5 1/2"	38" x 6"	38" x 6"	44" x 6"	44" x 6"
Third drum	18" x 3"	18" x 3 1/2"	18" x 3 1/2"	26" x 4 1/2"	28" x 5"	28" x 5 1/2"	27" x 4 1/2"	27" x 4 1/2"	27" x 4 1/2"	27" x 4 1/2"

BOOMHOIST —

BOOMHOIST TYPE	48A	78B	108C	138	218	238	318	338	418A	518
Spur gear driven	Std.	Std.	Std.	Std.	Std.	Std.	Std.	Std.	—	—
Worm gear driven	—	—	—	—	—	—	—	—	Std.	Std.
DRUM STYLE										
Single	Std.	Std.	Std.	Std.	Std.	Std.	—	—	—	—
Dual	—	—	—	—	—	—	Std.	Std.	Std.	Std.
BOOM LOWERING CONTROL										
Power hydraulic clutch	Std.	Std.	Std.	—	—	—	Std.	Std.	Std.	Std.
Planetary drive unit ①	—	—	—	Std. ②	Std. ②	Std. ②	—	—	—	—

① Low speed standard.

② High speed available as option.

**CRANE BOOMS —**

ANGLE BOOMS	48A	78B	108C	138	218	238	318	338	418A	518
Basic length	25'	35'	40'				50'		50'	50'
Top section	11'6"	15'	20'				25'		25'	25'
Base section	13'6"	20'	20'				25'		25'	25'
Main chord angles (inches)	2 1/2 x 2 1/2 x 1/4	①	①				4x4x3/8		4x4x7/16	4x4x7/16
Dimensions at connections	26"x29 1/2"	34"x34"	34"x34"				48"x48"		54"x60"	54"x60"
Type connections	Pinned ②	Pinned ②	Pinned ②				Bolted		Pinned	Pinned
Boomfoot—Width & Centers	1 1/2"/29"	1 5/8"/35"	1 5/8"/38"	↓	↓	↓	2 3/4"/54 1/2"	↓	2 3/4"/54 1/2"	2 3/4"/54 1/2"
Boomfoot pin diameter	2 1/2"	2 3/4"	3"	NA	NA	NA	4"	NA	4"	5"
Extensions available	5'-10'-20'	5'-10'-15'-20'	5'-10'-20'	↑	↑	↑	10'-15'-20'-30'	↑	10'-20'-30'	10'-20'-30'
Pendants—Size & Type	7/8"-“N”	1 1/8"-“N”	1 1/4"-“N”				1 1/2"-“N” ③		1 1/2"-“N” ③	1 3/8"-“N”
Number boompoint sheaves	3	3	3				4		4	5
Boom midpoint suspension pendants	⑤	⑤	⑤				7/8"-“N” ④		7/8"-“N” ④	7/8"-“N” ④
Boom live mast	⑤	⑤	⑤				④		④	Standard
Boompoint roller guards	NA	Optional	Optional				Standard		Standard	Standard

① 3"x3"x3/8" base section; 3"x3"x5/16" top section.

② Bolted connections optional.

③ 1 1/4" required with boom live mast.

④ Required for specific boom lengths.

⑤ Not required.

NA — Not available.

TUBULAR BOOMS	48A	78B	108C	138	218	238	318	338	418A	518
Basic length				40'	40'	50'		50'	50'	60'
Top section				20'	20'	25'		25'	25'	30'
Base section				20'	20'	25'		25'	25'	30'
Main chord tubes (inches)				3" round	3" round	3 5/8" round		3 5/8" round	3 5/8" round	4" round
Dimensions at connections				54"x44"	60"x50"	60"x54"		60"x54"	60"x54"	70"x62"
Type connections				Pinned	Pinned	Pinned		Pinned	Pinned	Pinned
Style lugs	↓	↓	↓	In-line	In-line	In-line	↓	In-line	In-line	In-line
Boomfoot—Width & Centers	NA	NA	NA	2 3/8"/54"	2 1/2"/60"	2 3/4"/60"	NA	2 3/4"/54 1/2"	2 3/4"/54 1/2"	2 3/4"/54 1/2"
Boomfoot pin diameter	↑	↑	↑	3 1/4"	3 1/2"	4"	↑	4"	4"	5"
Extensions available				10'-15'-20'-30'	10'-15'-20'-30'-40'	10'-20'-30'-40'		10'-20'-30'-40'	10'-20'-30'-40'	10'-20'-30'-40'
Pendants—Size & Type				1 1/4"-“N”	1 1/4"-“N”	1 3/8"-“N”		1 1/2"-“N” ①	1 3/8"-“N”	1 1/2"-“N” ①
Number boompoint sheaves				5	5	5		5	4	5
Boom midpoint suspension pendants ②				7/8"-“N”	7/8"-“N”	7/8"-“N”		7/8"-“N”	7/8"-“N”	7/8"-“N”
Boompoint roller guards				NA	NA	NA		NA	NA	NA

NA — Not available.

① 1 1/4" pendants required with boom live mast.

② Required for specific boom lengths.

BOOMHOIST BRIDLE — Serves as connection between boom pendants and boomhoist wire rope reeving to bail.

	48A	78B	108C	138	218	238	318	338	418A	518
No. bridle sheaves	5	5	5	7	7	7	5	7	4	10

BOOM LIVE MAST — Supports boomhoist bridle — required as follows:

48A	78B	108C	138	218	238	318	338	418A	518
Std.	①	①	Std.	Std.	Std.	②	②	③	Std.

① Retractable high gantry only — standard.

② Required for maximum lift crane service and for boom lengths exceeding 100'.

③ Required for maximum lift crane service and for angle boom lengths exceeding 100' or for tubular boom lengths exceeding 120'.

NOTE: Boom live mast also required for angle or tubular boom lengths exceeding 50' when equipped with a jib.

**BAIL — Supports boom suspension system; sheaves mounted on anti-friction bearings.**

	48A	78B	108C	138	218	238	318	338	418A	518
Number sheaves	5	5	5	6	7	7	4	4	4	8
Bail mounting	①	②	②	①	①	①	①	①	①	①

① Pinned to upper frame.

② Pinned to retractable gantry.

COUNTERWEIGHTS — Pounds (For machines equipped with std. diesel engine)

	48A	78B		108C			138	218	238	318	338	418A	518
CTWT. "A" Number pieces	9,200 1	13,200① 1	15,200② 1	19,200③ 1	13,900④ 1	14,800⑤ 1	18,000 1	21,000 1	26,900 2	15,000 1	15,000 1	24,000 1	20,000 1
CTWT. "AB" Number pieces	NA —	NA —	NA —	NA —	NA —	NA —	NA —	NA —	47,300 2	32,000 2	52,500 2	63,000 2	90,000 2

① Diesel engine—lifting crane & duty cycle.

② Electric motor—lifting crane & duty cycle and for diesel engine—maximum lifting crane only.

③ Diesel engine—maximum lifting crane only.

④ Diesel engine—lifting crane & duty cycle.

⑤ Electric motor—lifting crane & duty cycle.

NA—Not Available.

SWING SPEED — Based on std. diesel engine running at full load speed.

	48A	78B	108C	138	218	238	318	338	418A	518
R.p.m.	4.8	3.9	3.9	3.36	2.98	2.8	3.18	3.01	2.9	3.0

ENGINES — Standard diesel; full pressure lubrication, oil filter, air cleaner, hour meter, hand and foot throttles, fuel tank with fuel gauge and self-closing cap with locking eye for padlock.

SPECIFICATIONS	48A	78B	108C	138	218	238	318	338	418A	518
Manufacturer	GM	GM	GM	GM	GM	GM	GM	GM	GM	GM
Series	3-53N	3-71N	4-71N	4-71N	6-71N ①	6-71N ①	6-71N ③	6-71N ④	6-71N ③	8V-71N
Number cylinders	3	3	4	4	6	6	6	6	6	8
Bore/Stroke (inches)	3 ⁷ / ₈ x4 ¹ / ₂	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5	4 ¹ / ₄ x5
Piston displacement (cu. in.)	159.2	212.7	283.7	283.7	425.6	425.6	425.6	425.6	425.6	568
Pinion high idle speed (r.p.m.)	2,100	1,990	1,990	1,990	1,940	2,040	2,065	1,430	2,200	1,465
Engine full load speed (r.p.m.)	1,925	1,815	1,850	1,850	1,800	1,900	1,925	1,885	2,060	1,895
Net engine h.p. @ f.l.s.	60	84	112	112	165	171	171	170	190	230
Peak torque (lbs. ft.)	164	271	351	351	1,400	1,400	532	1,400	558	1,665
Peak torque (r.p.m.)	1,000	1,200	1,200	1,200	Converter Stall	Converter Stall	1,200	Converter Stall	1,200	Converter Stall
Electrical system	12-volt	12-volt	12-volt	12-volt	12-volt	12-volt	12-volt	12-volt	12-volt	12-volt
Batteries	2/6-volt	2/6-volt	2/6-volt	2/6-volt	1/12-volt	1/12-volt	1/12-volt	1/12-volt	1/12-volt	2/12-volt
Clutch — Type	Friction	Friction	Friction	Friction	Disconnect between engine & torque converter	Disconnect between engine & torque converter	Friction Twin Disc SP211-HP-1 w/hyd. coupling	Disconnect between engine & torque converter	Friction Twin Disc SP211-HP-1 w/hyd. coupling	Disconnect between engine & torque converter
— Make	Twin Disc	Twin Disc ②	Twin Disc	Twin Disc						
— Model	C108-HF-4	SP111-HP-1	SP111-HP-1	SP111-HP-1						
Transmission —										
No. chain wheel teeth	123	161	161	161	161	171	93	93	164	164
No. engine pinion teeth	16	17	17	17	28	21	18	26	20	30

① Allison single stage torque converter #TCDO-475.

② Or optional Cotta TSU transmission.

③ Twin Disc hydraulic coupling.

④ Allison single stage torque converter #TCDOA-475.

GENERAL INFORMATION ONLY

**WIRE ROPE TYPES**

Type "C" — 6 x 25 (6 x 19 class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, regular lay.

Type "F" — 6 x 25 (6 x 19 class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, regular lay.

Type "K" — 19 x 7 non-rotating, improved plow steel, preformed, wire center core.

Type "M" — 6 x 25 (6 x 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Type "N" — 6 x 25 (6 x 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.

Type "P" — 19 x 7 non-rotating, extra improved plow steel, preformed, wire center core.

Type "T" — Flattened strand, extra improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Wireco Style "B" — $\frac{3}{4}$ " diameter or smaller rope (6x25).

Wireco Style "G" — $\frac{7}{8}$ " diameter or larger rope (6x30).

WIRE ROPE — Application, Size & Type

WIRE ROPE	48A	78B	108C	138	218	238	318	338	418A	518
Main load hoist	$\frac{1}{2}$ " - "N"	$\frac{5}{8}$ " - "N"	$\frac{3}{4}$ " - "N"	—	—	—	$\frac{7}{8}$ " - "N"	—	1" - "N"	$1\frac{1}{8}$ " - "N"
Jib load hoist (2-part)	$\frac{1}{2}$ " - "N"	$\frac{5}{8}$ " - "F"	$\frac{5}{8}$ " - "N"	—	—	—	$\frac{7}{8}$ " - "N"	—	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"
Jib load hoist (1-part)	$\frac{1}{2}$ " - "P"	$\frac{5}{8}$ " - "P"	$\frac{5}{8}$ " - "P"	—	—	—	$\frac{7}{8}$ " - "P"	—	$\frac{7}{8}$ " - "P"	$\frac{7}{8}$ " - "P"
Boom hoist (without live mast)	—	$\frac{5}{8}$ " - "N"	$\frac{5}{8}$ " - "N"	—	—	—	$\frac{3}{4}$ " - "T"	—	$\frac{3}{4}$ " - "N"	—
Boom hoist (with live mast)	$\frac{1}{2}$ " - "N"	—	—	—	—	—	$\frac{3}{4}$ " - "T"	—	$\frac{3}{4}$ " - "T"	$\frac{3}{4}$ " - "T"
Boom pendants (without live mast)	—	—	$\frac{1}{8}$ " - "N"	—	—	—	$\frac{1}{2}$ " - "N"	—	$\frac{1}{2}$ " - "N"	—
Boom pendants (with live mast)	$\frac{7}{8}$ " - "N"	$\frac{1}{8}$ " - "N"	$\frac{1}{4}$ " - "N"	—	—	—	$\frac{1}{4}$ " - "N"	—	$\frac{1}{4}$ " - "N"	$\frac{1}{8}$ " - "N"
Boom midpoint suspension pendants (without live mast)	—	—	—	—	—	—	$\frac{7}{8}$ " - "N"	—	$\frac{7}{8}$ " - "N"	—
Boom midpoint suspension pendants (with live mast)	—	—	—	$\frac{3}{4}$ " - "F"	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"	$\frac{7}{8}$ " - "N"
Jib staylines	$\frac{5}{8}$ " - "F"	$\frac{5}{8}$ " - "F"	$\frac{5}{8}$ " - "F"	—	—	—	—	—	$\frac{3}{4}$ " - "N"	$\frac{3}{4}$ " - "N"
Clamshell (holding)	$\frac{1}{2}$ " - "N"	$\frac{5}{8}$ " - "F"	$\frac{3}{4}$ " - "N"	—	—	—	$\frac{7}{8}$ " - "M"	—	$\frac{7}{8}$ " - "M"	$\frac{7}{8}$ " - "M"
Clamshell (closing)	$\frac{1}{2}$ " - "N"	$\frac{5}{8}$ " - "F"	$\frac{3}{4}$ " - "N"	—	—	—	$\frac{7}{8}$ " - "M"	—	$\frac{7}{8}$ " - "M"	$\frac{7}{8}$ " - "M"

NOTE: Each category — shaded line is for Angle Boom; clear line is for Tubular Boom.

GENERAL INFORMATION ONLY



JIBS — Optional. Equipped with single peak sheave mounted on anti-friction bearings, equalizer sheaves, and telescoping jib mast stops. Jib mast stops pinned from mast to jib lower section and from mast to boom top section.

Specifications	48A	78B	108C	138	218	238	318	338	418A	518
Type offered —	—	—	—	—	—	—	—	—	—	—
Angle	YES	YES	YES	NA	NA	NA	YES	NA	YES	YES
Tubular	NA	NA	NA	YES	YES	YES	NA	YES	YES	YES
Effective over-all length	20'0"	20'0"	20'0"	—	—	—	20'0"	—	20'0"	20'0"
	—	—	—	20'0"	30'0"	30'0"	—	30'0"	30'0"	30'0"
Upper section	10'0"	10'0"	10'0"	—	—	—	10'0"	—	10'0"	10'0"
	—	—	—	10'0"	15'0"	15'0"	—	15'0"	15'0"	15'0"
Lower section	10'0"	10'0"	10'0"	—	—	—	10'0"	—	10'0"	10'0"
	—	—	—	10'0"	15'0"	13'3"	—	15'0"	15'0"	15'0"
Extensions available	10'0"	10'0"	10'0"	—	—	—	10'-15'	—	10'-15'	10'-15'
	—	—	—	10'0"	15'0"	15'0"	—	10'-15'	10'-15'	10'-15'
Main chord dimensions (in.)	1 1/2" x 1 1/2" x 3/16"	①	②	—	—	—	2 1/2" x 2 1/2" x 3/16"	—	2 1/2" x 2 1/2" x 3/16"	2 1/2" x 2 1/2" x 3/16"
	—	—	—	1 1/2" O.D.	2" O.D.	2 1/4" O.D.	—	2 1/4" O.D.	2 1/4" O.D.	2 1/4" O.D.
Dimensions at connections	16" x 16"	18" x 22 3/4"	18" x 22 3/4"	—	—	—	20" x 24"	—	20" x 24"	20" x 24"
	—	—	—	24" x 30"	24" x 32"	30" x 36"	—	30" x 36"	30" x 36"	30" x 36"
Type connections	bolted	bolted	bolted	—	—	—	bolted	—	bolted	bolted
	—	—	—	pinned	pinned	pinned	—	pinned	pinned	pinned
Jib mast height	7'0"	10'0"	10'0"	—	—	—	10'0"	—	10'0"	10'0"
	—	—	—	10'0"	12'1"	13'6"	—	13'6"	13'6"	13'6"
Equalizer sheaves	Std.	Std.	Std.	—	—	—	Std.	—	Std.	Std.
	—	—	—	Std.	Std.	Std.	—	Std.	Std.	Std.
Backstay line anchor —	—	—	—	—	—	—	—	—	—	—
Base of boom top section	Std.	Std.	Std.	—	—	—	NA	—	NA	NA
	—	—	—	Std.	Std.	NA	—	Std.	Std.	Std.
Base of first boom extension below top section	NA	NA	NA	—	—	—	NA	—	NA	NA
	—	—	—	NA	NA	Std.	—	NA	NA	NA
On base section of boom	NA	NA	NA	—	—	—	Std.	—	Std.	Std.
	—	—	—	NA	NA	NA	—	NA	NA	NA
Max. jib length permitted	30'0"	40'0"	50'0"	—	—	—	40'0"	—	40'0"	40'0"
	—	—	—	50'0"	60'0"	60'0"	—	60'0"	60'0"	70'0"

① Lower section chord angles are 2" x 2" x 1/4".
Upper section chord angles are 2" x 2" x 3/16".

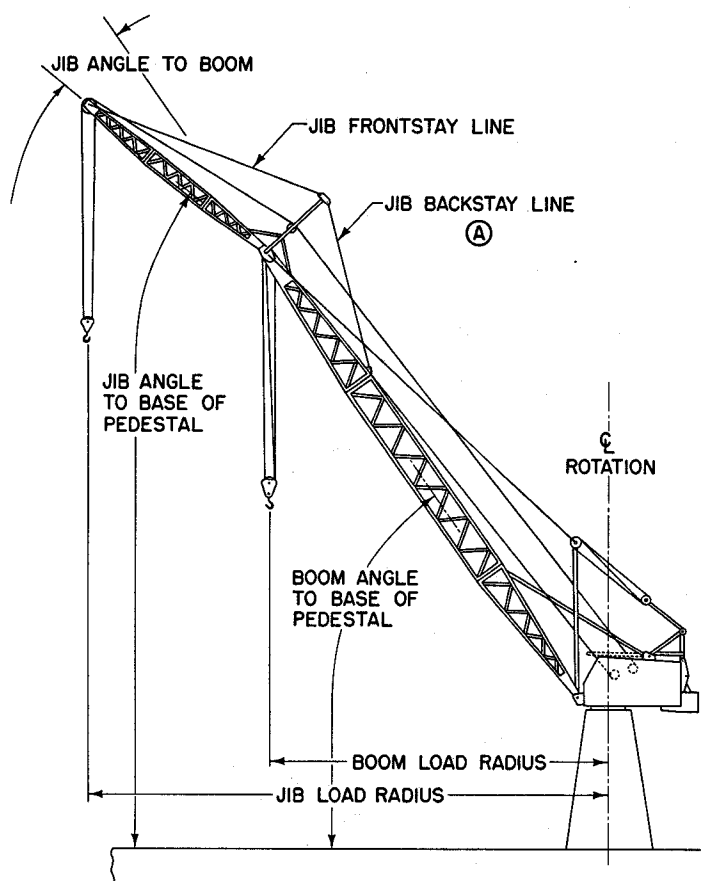
② Lower section chord angles are 3 1/2" x 3 1/2" x 3/16".
Upper section chord angles are 3 1/2" x 3 1/2" x 3/16".

NOTE: Each category — shaded line is for Angle Boom; clear line is for Tubular Boom.

GENERAL INFORMATION ONLY

**"TC" PEDESTAL MOUNTED CRANE JIB CAPACITIES — Pounds**

Refer to all NOTES accompanying each jib capacity chart as well as GENERAL NOTES on page 15.

**GENERAL INFORMATION ONLY****TC-48A**

Jib Angle To Ground	ANGLE JIB LENGTH	
	20'	30'
80°	10,000	8,000
65°	8,000	6,000
50°	6,000	4,500
35°	4,500	3,500
20°	4,000	2,500

- Capacities shown are in pounds and are based on an FMC jib with a cross section 16" wide by 16" deep and used with a 7'0" high jib strut in the proper working position.
- The jib backstay line (A) is anchored to lower end of boom top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 350 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 20' jib — 1,100 lbs.
 - 30' jib — 1,300 lbs.

TC-78B & TC-108C

Jib Angle To Ground	ANGLE JIB LENGTH		
	20'	30'	40'
80°	12,000	10,000	8,000
65°	10,000	8,000	6,000
50°	8,000	6,000	4,000
35°	7,500	5,500	3,500
20°	7,500	5,500	3,500

- Capacities shown are in pounds and are based on an FMC jib with a cross section 22³/₄" wide by 18" deep and used with a 10'0" high jib strut in the proper working position.
- The jib backstay line (A) is anchored to lower end of boom top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 300 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:

(1) 20' jib — 1,600 lbs.	(3) 40' jib — 2,200 lbs.
(2) 30' jib — 1,900 lbs.	



GENERAL INFORMATION ONLY

TC-138

Jib Angle To Ground	TUBULAR JIB LENGTH			
	20'	30'	40'	50'
80°	20,000	16,000	12,000	8,000
65°	16,000	13,000	10,000	6,000
50°	13,000	10,000	8,000	5,000
35°	10,500	8,000	6,000	4,000
20°	9,500	7,000	5,000	3,000

- Capacities shown are in pounds and are based on an FMC jib with a cross section 30" wide by 24" deep and used with a 10' 0" high jib mast in the proper working position.
- The jib backstay line ④ is anchored to lower end of boom top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 600 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 20' jib — 1,600 lbs.
 - 30' jib — 1,900 lbs.
 - 40' jib — 2,200 lbs.
 - 50' jib — 2,500 lbs.

TC-238

Jib Angle To Ground	TUBULAR JIB LENGTH		
	30'	45'	60'
80°	30,000	24,000	20,000
65°	26,000	20,000	16,000
50°	22,000	14,000	9,000
35°	16,000	10,000	6,000
20°	15,000	8,000	5,000

- Capacities shown are in pounds and are based on an FMC jib with a cross section 36" wide by 30" deep and used with a 13' 6" high jib mast in proper working position.
- The jib backstay line ④ is anchored to lower end of the first boom section below the top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 200 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When handling loads off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 30' jib — deduct 2,200 lbs.
 - 45' jib — deduct 2,700 lbs.
 - 60' jib — deduct 3,200 lbs.

TC-218

Jib Angle To Ground	TUBULAR JIB LENGTH		
	30'	45'	60'
80°	24,000	17,000	14,000
65°	17,000	13,000	10,000
50°	13,000	8,000	6,000
35°	11,500	7,000	5,000
20°	10,000	5,000	3,000

- Capacities shown are in pounds and are based on an FMC jib with a cross section 32" wide by 24" deep and used with a 12' 1" high jib mast in proper working position.
- The jib backstay line ④ is anchored to lower end of boom top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 100 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When handling loads off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 30' jib — deduct 2,000 lbs.
 - 45' jib — deduct 2,400 lbs.
 - 60' jib — deduct 3,200 lbs.

TC-318

Jib Angle To Ground	ANGLE JIB LENGTH		
	20'	30'	40'
80°	20,000	17,000	14,000
65°	17,500	14,500	11,500
50°	15,000	12,000	9,000
35°	12,500	9,500	6,500
20°	10,000	7,000	5,000

- Capacities shown are in pounds and are based on an FMC jib with a cross section 24" wide by 20" deep and used with a 10' 0" high jib strut in the proper working position.
- The jib backstay line ④ is anchored to lower end of boom base section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 500 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 20' jib — 2,000 lbs.
 - 30' jib — 2,400 lbs.
 - 40' jib — 2,800 lbs.

**TC-338**

Jib Angle To Ground	TUBULAR JIB LENGTH		
	30'	45'	60'
80°	30,000	26,000	22,000
65°	26,000	22,000	18,000
50°	22,000	14,000	9,000
35°	16,000	10,000	6,000
20°	15,000	8,000	5,000

- Capacities shown are in pounds and are based on an FMC jib with a cross section 36" wide by 30" deep and used with a 13' 6" high jib mast in the proper working position.
- The jib backstay line ④ is anchored to lower end of boom top section.
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 600 lbs. from the capacity shown for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 30' jib — deduct 2,200 lbs.
 - 45' jib — deduct 2,700 lbs.
 - 60' jib — deduct 3,200 lbs.

TC-518

Jib Angle To Ground	ANGLE JIB LENGTH			TUBULAR JIB LENGTH			
	20'	30'	40'	30'	45'	60'	70'
80°	20,000	17,000	14,000	30,000	26,000	22,000	19,000
65°	17,500	14,500	11,500	26,000	22,000	18,000	15,000
50°	15,000	12,000	9,000	22,000	14,000	9,000	8,000
35°	12,500	9,500	6,500	16,000	10,000	6,000	5,000
20°	10,000	7,000	5,000	15,000	8,000	5,000	4,000

- Capacities shown are in pounds and are based on FMC jibs. Jib cross-section; Angle, 24" wide by 20" deep. Tubular, 36" wide by 30" deep. Use jibs with a 10' 0" high (Angle), or 13' 6" high (Tubular) jib mast in the proper working position.
- The jib backstay line ④ is anchored to lower end of boom top section (tubular), or to lower end of boom base section (angle).
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 500 lbs. from the angle boom and 600 lbs. from the tubular boom capacities shown on the respective lifting crane capacity charts for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:

ANGLE JIB

- 20' jib — 2,000 lbs.
- 30' jib — 2,400 lbs.
- 40' jib — 2,800 lbs.

TUBULAR JIB

- 30' jib — 2,200 lbs.
- 45' jib — 2,700 lbs.
- 60' jib — 3,200 lbs.
- 70' jib — 3,540 lbs.

TC-418A

Jib Angle To Ground	ANGLE JIB LENGTH			TUBULAR JIB LENGTH		
	20'	30'	40'	30'	45'	60'
80°	20,000	17,000	14,000	30,000	26,000	22,000
65°	17,500	14,500	11,500	26,000	22,000	18,000
50°	15,000	12,000	9,000	22,000	14,000	9,000
35°	12,500	9,500	6,500	16,000	10,000	6,000
20°	10,000	7,000	5,000	15,000	8,000	5,000

- Capacities shown are in pounds and are based on FMC jibs. Jib cross-section; Angle, 24" wide by 20" deep. Tubular, 36" wide by 30" deep. Use jibs with a 10' 0" high (Angle), or 13' 6" high (Tubular) jib mast in the proper working position.
- The jib backstay line ④ is anchored to lower end of boom top section (tubular), or to lower end of boom base section (angle).
- If the total length of boom and jib exceeds the longest boom length listed in the lifting capacity chart deduct 500 lbs. from the angle boom and 600 lbs. from the tubular boom capacities shown on the respective lifting crane capacity charts for the longest boom length for the radius required in note 3b. on page 15 under "GENERAL NOTES".
 - The jib capacity is the resulting figure unless restricted by the maximum jib capacities shown above.
- Determining lifting crane capacities with jib on boom:
 - When operating off the main boom peak sheaves with a jib on the boom, the following reductions in machine lifting capacities must be made:

ANGLE JIB

- 20' jib — 2,000 lbs.
- 30' jib — 2,400 lbs.
- 40' jib — 2,800 lbs.

TUBULAR JIB

- 30' jib — 2,200 lbs.
- 45' jib — 2,700 lbs.
- 60' jib — 3,200 lbs.

GENERAL NOTES

- For jib angle to ground, deduct jib angle to boom from the boom angle to ground.
- The jib angle to boom must not exceed 30°.
- Determining machine jib capacities
 - Add the length of boom plus length of jib used.
 - Determine the jib load radius.
 - Refer to lifting crane capacity chart and select the boom length that corresponds to the total length of boom and jib in (a) and the radius in (b).
 - The jib capacity is equal to the lifting crane capacity unless restricted by the maximum jib capacities shown above.

GENERAL INFORMATION ONLY