FMC

Link-Belt®
HC-238
125-ton truck crane

GENERAL INFORMATION ONLY

General specifications — crane upper, attachments & auxiliary equipment

Crane Upper

Upper Revolving Frame — All-welded, stress relieved, precision machined; machinery side housings welded integral with frame.

Turntable Bearing With Integral Swing Gear — Outer bearing race with integral, external swing (ring) gear, bolted to carrier deck; inner race bolted to upper revolving frame.

Transmission — Quadruple roller chain enclosed in oil tight chain case with integral lubricant sump; pump driven oil stream lubrication.

Machinery Gear Train — "Full-Function" design, two-directional power available to all operating shafts; shafts mounted in line bores on anti-friction bearings. All operating functions independent of one another.

Clutches — Speed-o-Matic power hydraulic actuated for all clutch-controlled functions (except engine master clutch). Internal expanding, 2-shoe type, aluminum alloy shoes; clutch drums bolted to spur gears — units mounted on shafts on anti-friction bearings; clutch spiders involute splined to shafts.

Main Operating Drums — Tandem design.

Front & Rear Drums — One-piece, 17¼" (.44 m) root dia. smooth drums; involute splined on shafts.

Brakes — Two-piece, external contracting band; mechanically foot pedal operated. Foot pedals equipped with latch to permit locking brakes in applied position. Brakes 34" (.86 m) dia., 5" (.13 m) face width.

Clutches (Hoist) — 23" (.58 m) dia., 6" (.15 m) face width.

Clutches (Power load lowering) — Standard on rear drum, optional on front drum; 23" (.58 m) dia., 6" (.15 m) face width.

Planetary Drive Units — Optional; available for load hoist or lowering on either or both front and rear main operating drums. Planetary units mount (on extended drum shafts) between drum spur gears and 2-shoe clutch drums. Available for **either** 70% increase **or** 40% decrease of standard load hoist or lowering line speeds — choice of increased or decreased line speeds predetermined by customer at time of order. Two-shoe clutches control standard line speeds. Planetary drive units controlled by external contracting band brakes through push button located on hoist/lowering drum clutch control levers.

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

Third Operating Drum — Optional; mounts forward of front main operating drum. Available for use as third load drum, controlled tagline, etc.; design and control similar to main operating drums. One-piece, 12¼" (.31 m) root dia. smooth drum; involute splined to shaft.

Brake — Two-piece, external contracting band; mechanically foot pedal operated. Foot pedal equipped with latch to permit locking brake in applied position. Brake 28" (.71 m) dia., 5" (.13 m) face width.

Clutch (Hoist/Inhaul) — 23" (.58 m) dia., 6" (.15 m) face width.

Clutch (Power load lowering) — Optional; 23" (.58 m) dia., 6" (.15 m) face width.

— Note: Installation of optional third operating drum includes required installation of power load lowering clutch/gear unit on front main operating drum shaft.

Swing Mechanism — Spur gear driven; single bevel gears (enclosed and running in oil) on horizontal and vertical swing shafts. Swing pinion, involute splined to vertical swing shaft, meshes with external teeth of swing gear integral with outer race of turntable bearing.

Clutches — 23" (.58 m) dia., 6" (.15 m) face width.

Brake — External contracting band; spring applied, hydraulically released by operator controlled lever. Brake drum involute splined to horizontal swing shaft; brake 20" (.51 m) dia., 3¼" (82.6 mm) face width.

Swing Lock — Mechanically controlled pawl engages external teeth of turntable bearing swing (ring) gear.

Swing Speed — 2.8 r.p.m.

Independent Boomhoist — Spur gear driven; precision boom raising through 2-shoe clutch, boom lowering through planetary drive unit. Rope drum, 12¼" (.31 m) root dia. smooth; involute splined to shaft. Rope drum locking pawl, manually controlled from operator's position, is provided.

Brake — Two-piece external contracting band; spring applied, hydraulically released a hoist clutch or lowering planetary are engaged. Brake drum involute splined to shaft; brake 28" (.71 m) dia., 5" (.13 m) face width.

Clutch (Hoist) — 23" (.58 m) dia., 6" (.15 m) face width.

Planetary (Lowering) — Mounts on outer en of shaft; planetary external contracting band brake hydraulically controlled by boom hoist/lowering control lever.

Clutch (Lowering) — Optional; in addition to planetary boom lowering. Two-shoe clutch permits higher speed boom lowering; mounted on shaft outside planetary unit, clutch drum bolted to outer face of planetary housing. Clutch controlled by solenoid push button located on boom hoist/lowering control lever.

Bail — Integral part of machinery side housings with cross-over sheave frame pinned to bail; supports boom suspension system. Contains 7 sheaves mounted on anti-friction bearings, for 16-part boomhoist rope reeving.

Cab — Operator door hinged, rear double doors on ball bearing rollers; other machinery access doors hinged. Safety glass panels in operator cab door and windows. Electric horn warning device, dry chemical fire extinguisher, hand grab rails, roof-top access ladder, skid-resistant finish on roof — all standard. Optional — cab heater, defroster fan, electric windshield wiper, and carrier outrigger controls in crane cab.

Counterweight — Held in position on 2 hydraulically controlled frustums; frustum control valves located at rear of upper cab. "B" ctwt. pinned in position on top of "A" ctwt. for ease in mounting or dismounting. Total "A" or "AB" ctwt. power hydraulically raised from, or lowered to, carrier deck in seconds. Ctwt. for crane upper furnished as follows on respective carriers:

260" (6.60 m) 8 x 4, 11' 0" (3.35 m) wide — "A" ctwt. — 24,000# (10,896 kg); ctwt. "AB" — 44,400# (20,158 kg).

260" (6.60 m), 8 x 4, 11' 10" (3.61 m) wide — "A" ctwt. — 26,900# (12,213 kg); ctwt. "AB" — 47,300# (21,474 kg).

267" (6.78 m), 10 x 4, 11' 10" (3.61 m) wide — "A" ctwt. — 26,900# (12,213 kg); ctwt. "AB" — 47,300# (21,474 kg).

Engines — Full pressure lubrication, oil filter, air cleaner, hour meter, hand and foot throttles, 75-gal. (283.88 liters) capacity fuel tank with fuel gauge and flame arrester fill unit, and electrical (General Motors) or manual (Cummins) control cable shut down.

Control System — Speed-o-Matic power hydraulics, a variable pressure system. Operating pressure transmitted through oil to all operating 2-shoe clutch cylinders, swing brake and boomhoist drum brake cylinders. System includes a pump to provide constant oil flow, accumulator to maintain operating pressure, and variable pressure operator-controlled valves to regulate pressure to the cylinders.

Pump — Vickers; rated at 5 g.p.m. (18.93 lit/m) at 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. (87.89 kg/cm²).

Unloader Valve – FMC; set to unload pump at a maximum 1,050 p.s.i. (73.82 kg/cm²) and to load pump when pressure drops below 900 p.s.i. (63.27 kg/cm²).

Accumulator — FMC; piston-type, precharged with nitrogen gas to 650 p.s.i. (45.70 kg/cm²).

Sump Tank — FMC; 7-gal. (26.50 liters) capacity with filter and strainer assembly.

Control Valves — FMC; variable pressure type.

ecifications	GM 6-71N With Single Stage Torque Converter①	GM 6-71N With Three Stage Torque Converter②	Cummins N855-P220 With Three Stage Torque Converter②
Number cylinders	6	6	6
Bore and Stroke (inches)	4¼ x 5 (.108 x .13 m)	4¼ x 5 (.108 x .13 m)	5⅛ x 6 (.13 x .152 m)
Piston Displacement (cu. in.)	425.6 (6975.6 cm³)	425.6 (6975.6 cm³)	855 (14,013.5 cm³)
High idle speed — r.p.m. Engine r.p.m. @ f.l.s.	1,940 1,800	1,940 1,800	1,980 1,800
Net engine h.p. @ f.l.s.	165	165	165
Peak torque — ft. lbs.	1,400 (193.6 kgm)	2,360 (326.4 kgm)	2,220 (307.0 kgm)
Peak torque r.p.m.	(output stall)	(output stall)	(output stall)
Electrical system Batteries	12-volt 1/12-volt	12-volt 1/12-volt	12-volt 2/12-volt
Clutch or Power Take-off	Disconnect between engine & converter	Disconnect between engine & converter	Disconnect between engine & converter
Transmission — No. chain wheel teeth No. engine pinion teeth	 171 21	 171 22	 171 22

① Allison TCDO 475
② Twin Disc CO-10066TC-1

GENERAL INFORMATION ONLY

Crane Boom, Jib & Auxiliary Equipment

Boom & Extensions — Round tubular main chords, alloy steel; round tubular steel lattice, fully coped.

Base Section — 25' (7.62 m) long; 60" (1.52 m) wide by 54" (1.37 m) deep, with main chords 3⅝" (92.1 mm) o.d. Section equipped with basic pendants.

Boomfeet — 2¾" (69.9 mm) wide on 60" (1.52 m) centers.

Extensions — Available in 10' (3.05 m), 20' (6.10 m), 30' (9.14 m) and 40' (12.19 m) lengths with appropriate length pendants and 1 hoist line deflector roller per extension.

Top Sections — Choice of 3; each equipped with basic pendants and head sheaves mounted on anti-friction bearings.

Open Throat — 25' (7.62 m) long; five 21" (.53 m) root dia. head sheaves, 2 hoist line deflector rollers. Permissible boom lengths without jib — minimum 50' (15.24 m); maximum 230' (70.10 m). Maximum boom length when using jib — 200' (60.96 m).

Hammerhead — 5' (1.52 m) long; six 21" (.53 m) root dia. head sheaves, two 21" (.53 m) root dia. deflector sheaves, and backstay lines for jib (if jib ordered). Permissible boom lengths without jib — minimum 30' (9.14 m); maximum 230' (70.10 m). Maximum boom length when using jib — 200' (60.96 m).

Tapered Tip — 45' (13.72 m) long, tapered from 60" x 54" (1.52 m x 1.37 m) to 36" x 17" (.91 m x .43 m) cross section; tapered tip section's upper half has open throat on underneath side. Equipped with two 28⅜" (.72 m) root dia. sheaves, 3 hoist line deflector rollers, pendant spreader bar, and backstay lines for jib (if ordered). Boom minimum length — 110' (33.53 m); maximum main boom length — 230' (70.10 m), with or without jib.

Connections — In-line pin connections.

Boom Stops — Dual, lever type, with spring-loaded bumper ends.

Boomhoist Bridle & Spreader Bar — Serves as connection for boom suspension system. Bridle contains eight 15" (.38 m) root dia. sheaves (for 16-part boomhoist reeving) mounted on anti-friction bearings, and two 15" (.38 m) root dia. auxiliary load hoist sheaves, mounted on bronze bushings, which enable boom live mast to be used for machine assembly or disassembly.

Boom Live Mast — Supports boomhoist bridle and boom midpoint suspension pendants. Required for all boom lengths. Hydraulically extends from 25' 6" (7.77 m) to 30' 0" (9.14 m) working position, mechanically retracts to 25' 6" (7.77 m) position. **Note:** Retracted 25' 6" (7.77 m) position required for 30' (9.14 m) hammerhead boom maximum capacities, and used to reduce over-all height for travel.

required for 30' (9.14 m) hammerhead boom maximum capacities, and used to reduce over-all height for travel.

Boom Live Mast Stops — Incorporated with boom stops; manually positioned when using live mast as short boom.

Boom Angle Indicator — Mounted on boom near base.

Load Hoist Line Deflector Rollers — To minimize hoist line chafing on top side of boom. Rollers mounted on anti-friction bearings. One roller furnished with each extension, 2 furnished with open throat top section; 3 rollers furnished with tapered tip top section.

Boom Pendants — Standard; furnished for basic boom lengths plus appropriate length pendants with each boom extension.

Boom Midpoint Suspension Pendants — Required for all boom lengths exceeding 160' (48.77 m) when equipped with either open throat, tapered tip or hammerhead top section booms. Pendants connected at 85' (25.91 m) point of boom.

Pendant Spreader Bar — For tapered tip top section only. Mounted between boom suspension pendants to maintain "straight line" pendant spread from boomhoist bridle/spreader bar to point near base of tapered tip top section, and to prevent interference between boom pendants and jib backstay lines. Standard equipment — use required for booms 210' (64.01 m) thru 230' (70.10 m) long when equipped with jib; use optional for booms 110' (33.53 m) thru 230' (70.10 m) long without jib.

Boom Folding Equipment — Optional; for folding 90' (27.43 m) or 110' (33.53 m) long booms equipped with open throat top section. Includes folding struts, folding shaft, special 10' (3.05 m) long pin-connected boom extension with pendants, 1 hoist line deflector roller, and 1 boom peak wheel with 6:50 x 16C (6-ply rating) tire with tube. Special 10' (3.05 m) extension equipped with lifting lugs to accommodate boom folding shaft. (Combination of boom sections must be of such length that portion folded under is 20' (6.10 m) shorter than that above it). **Note:** Folding equipment not available for booms equipped with hammerhead or tapered tip top sections.

Jib — Two-piece, 28' 3" (8.61 m) long (effective length 30' 0' — 9.14 m), with 15' (4.57 m) long top section and 13' 3" (4.04 m) long base section. Jib mounts to lugs at tip of boom top section. Jib 30" (.76 m) deep by 36" (.91 m) wide at connections; alloy steel tubular chords, 2¼" (57.2 mm) o.d.

Jib Extensions — Available in 10' (3.05 m) and 15' (4.57 m) lengths with appropriate length pendants. Maximum boom/jib lengths permitted:
— Open throat boom; 200' (60.96 m) boom plus 60' (18.29 m) jib.
— Hammerhead boom; 200' (60.96 m) boom plus 60' (18.29 m) jib.
— Tapered tip boom; 230' (70.10 m) boom plus 70' (21.34 m) jib.

Connections — In-line pin connections.

Jib Peak Machinery — Single sheave, 21" (.53 m) root dia., mounted on anti-friction bearings. Anchor provided at peak of jib for 2-part hoist line (whipline); jib frontstay line anchors are suspended from head shaft.

Jib Mast — 13' 6" (4.11 m) high, mounted on jib base section. Two deflector sheaves mounted within jib mast, on anti-friction bearings, for jib whipline. Two equalizer sheaves mounted at top of mast — one for jib frontstay line, one for jib backstay line.

Jib Stops — Telescoping type; spring loaded, pinned from jib mast to boom top section and from jib mast to jib base section.

Auxiliary Equipment —

Load Hoist Wire Ropes — Main load hoist rope standard; jib load hoist rope (whipline) furnished with machine **only** if jib is ordered.

Hook Blocks — Blocks, or weighted ball w/swivel hook, optional — refer price list.

Hand Throttle — Lever type on swing control lever, optional.

Wire Rope —

Application — Size & Type Used

Boomhoist — ⅞" (22.23 mm) dia., Type "T".

Main Load Hoist — 1" (25.4 mm) dia., Type "N".

Jib Load Hoist (Whipline) — 2-part line, ⅞" (22.23 mm) dia., Type "N"; 1-part line, ⅞" (22.23 mm) dia., Type "P".

Jib Staylines — ¾" (19.05 mm) dia., Type "N".

Boom Pendants — 1⅜" (34.93 mm) dia., Type "N".

Boom Midpoint Suspension Pendants — ⅞" (22.23 mm) dia., Type "N".

Third Drum — ⅞" (22.23 mm), Type "N".

Wire Rope Types —

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 rope center core.

Type "T" — 6 x 30 flattened strand, extra improved plow steel, preformed independent wire rope center, right lay, lang lay.

GENERAL INFORMATION ONLY

Drum Wire Rope Capacities, Line Speed and Pull —
(Available line pull, not based on wire rope strength)

Attachment	Wire Rope Diameter		Drum Root Diameter		Type	Line Speed and Pull: First Layer Rope Line Speed		Line Pull		Full Drum Rope Line Speed		Line Pull		Drum Capacity: First Layer		Full Drum	
	Inches	Milli-meters	Inches	Meters		F.P.M.	M/Min.	Lbs.	Kgs.	F.P.M.	M/Min.	Lbs.	Kgs.	Feet	Meters	Feet	Meters
Front and Rear Drums																	
Crane*	1	25.4	17¼	.44	Smooth	171 291	52.12 88.70	26,100 14,500	11,839 6,577	283 481	86.26 146.61	15,700 8,722	7,122 3,956	88	26.82	790	240.79
Third Drum																	
Crane	⅞	22.2	12¼	.31	Smooth	136	41.45	30,800	13,971	208	63.40	20,100	9,117	74	22.56	459	139.90
Boomhoist Drum																	
Crane	⅞	22.2	12¼	.31	Smooth	136	41.45	30,800	13,971	208	63.40	20,100	9,117	74	22.56	459	139.90

*First line in category — standard drums.
Second line in category — drums equipped with high speed planetary drives.

Main Load Hoist Wire Rope Lengths

Parts of Line	Boom Lengths: 30′ (9.14 m) Feet	Meters	40′ (12.19 m) Feet	Meters	50′ (15.24 m) Feet	Meters	60′ (18.29 m) Feet	Meters	70′ (21.34 m) Feet	Meters	80′ (24.38 m) Feet	Meters	90′ (27.43 m) Feet	Meters
1	80	24.38	100	30.48	120	36.58	140	42.67	160	48.77	180	54.86	200	60.96
2	120	36.58	150	45.72	180	54.86	210	64.01	240	73.15	270	82.30	300	91.44
3	160	48.77	200	60.96	240	73.15	280	85.34	320	97.54	360	109.73	400	121.92
4	200	60.96	250	76.20	300	91.44	350	106.68	400	121.92	450	137.16	500	152.40
5	240	73.15	300	91.44	360	109.73	420	128.02	480	146.30	540	164.59	600	182.88
6	280	85.34	350	106.68	420	128.02	490	149.35	560	170.69	630	192.02	700	213.36
7	320	97.54	400	121.92	480	146.30	560	170.69	640	195.07	720	219.46	800	243.84
8	360	109.73	450	137.16	540	164.59	630	192.02	720	219.46	810	246.89	900	274.32
9	400	121.92	500	152.40	600	182.88	700	213.36	800	243.84	900	274.32	1,000	304.80
10	440	134.11	550	167.64	660	201.17	770	234.70	880	268.22	990	301.75		
11	480	146.30	600	182.88	720	219.46	840	256.03	960	292.61				
12	520	158.50	650	198.12	780	237.74	910	277.37	1,020	310.90				

Parts of Line	Boom Lengths: 100′ (30.48 m) Feet	Meters	110′ (33.53 m) Feet	Meters	120′ (36.58 m) Feet	Meters	130′ (39.62 m) Feet	Meters	140′ (42.67 m) Feet	Meters	150′ (45.72 m) Feet	Meters	160′ (48.77 m) Feet	Meters
1	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54	340	103.63
2	330	100.58	360	109.73	390	118.87	420	128.02	450	137.16	480	146.30	510	155.45
3	440	134.11	480	146.30	520	158.50	560	170.69	600	182.88	640	195.07	680	207.26
4	550	167.64	600	182.88	650	198.12	700	213.36	750	228.60	800	243.84	850	259.08
5	660	201.17	720	219.46	780	237.74	840	256.03	900	274.32	960	292.61	1,020	310.90
6	770	234.70	840	256.03	910	277.37	980	298.70						
7	880	268.22	960	292.61										
8	990	301.75												

Parts of Line	Boom Lengths: 170′ (51.82 m) Feet	Meters	180′ (54.86 m) Feet	Meters	190′ (57.91 m) Feet	Meters	200′ (60.96 m) Feet	Meters	210′ (64.01 m) Feet	Meters	220′ (67.06 m) Feet	Meters	230′ (70.10 m) Feet	Meters
1	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30
2	540	164.59	570	173.74	600	182.88	630	192.02	660	201.17	690	210.31	720	219.46
3	720	219.46	760	231.65	800	243.84	840	256.03	880	268.22	920	280.42	960	292.61
4	900	274.32	950	289.56	1,000	304.80	1,050	320.04						

GENERAL INFORMATION ONLY

Jib Load Hoist (Whipline) Wire Rope Lengths

Jib Length	Parts of Line	Boom Lengths													
		50′ (15.24 m)		60′ (18.29 m)		70′ (21.34 m)		80′ (24.38 m)		90′ (27.43 m)		100′ (30.48 m)		110′ (33.53 m)	
		Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
30′ (9.14 m)	1	180	54.86	200	60.96	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44
	2	265	80.77	295	89.92	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64
40′ (12.19 m)	1	200	60.96	220	67.06	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54
	2	295	89.92	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78
50′ (15.24 m)	1	220	67.06	240	73.15	260	79.25	280	83.34	300	91.44	320	97.54	340	103.63
	2	325	99.06	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78	505	153.92
60′ (18.29 m)	1	240	73.15	260	79.25	280	85.34	300	91.44	320	97.54	340	103.63	360	109.73
	2	355	108.20	385	117.35	415	126.49	445	135.64	475	144.78	505	153.92	535	163.07
70′ (21.34 m)	1	← Not Applicable →												380	115.82
	2													565	172.21

Jib Length	Parts of Line	Boom Lengths													
		120′ (36.58 m)		130′ (39.62 m)		140′ (42.67 m)		150′ (45.72 m)		160′ (48.77 m)		170′ (51.82 m)		180′ (54.86 m)	
		Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
30′ (9.14 m)	1	320	97.54	340	103.63	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11
	2	475	144.78	505	153.92	535	163.07	565	172.21	595	181.36	625	190.50	655	199.64
40′ (12.19 m)	1	340	103.63	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21
	2	505	153.92	535	163.07	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79
50′ (15.24 m)	1	360	109.73	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30
	2	535	163.07	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93
60′ (18.29 m)	1	380	115.82	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30	500	152.40
	2	565	172.21	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93	745	227.08
70′ (21.34 m)	1	400	121.92	420	128.02	440	134.11	460	140.21	480	146.30	500	152.40	520	158.50
	2	595	181.36	625	190.50	655	199.64	685	208.79	715	217.93	745	227.08	775	236.22

Jib Length	Parts of Line	Boom Lengths									
		190′ (57.91 m)		200′ (60.96 m)		210′ (64.01 m)		220′ (67.06 m)		230′ (70.10 m)	
		Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
30′ (9.14 m)	1	460	140.21	480	146.30	500	152.40	520	158.50	540	164.59
	2	685	208.79	715	217.93	745	227.08	775	236.22	805	245.36
40′ (12.19 m)	1	480	146.30	500	152.40	520	158.50	540	164.59	560	170.69
	2	715	217.93	745	227.08	775	236.22	805	245.36	835	254.51
50′ (15.24 m)	1	500	152.40	520	158.50	540	164.59	560	170.69	580	176.78
	2	745	227.08	775	236.22	805	245.36	835	254.51	865	263.65
60′ (18.29 m)	1	520	158.50	540	164.59	560	170.69	580	176.78	600	182.88
	2	775	236.22	805	245.36	835	254.51	865	263.65	895	272.80
70′ (21.34 m)	1	540	164.59	560	170.69	580	176.78	600	182.88	620	188.98
	2	805	245.36	835	254.51	865	263.65	895	272.80	925	281.94

GENERAL INFORMATION ONLY

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

FMC

Link-Belt®

HC-238

125-ton truck crane

GENERAL INFORMATION ONLY

Carrier specifications

Choice of 3 FMC Carriers	260" (6.60 m) Wheelbase 8 x 4 Drive 11' 0" (3.35 m) Wide		260" (6.60 m) Wheelbase 8 x 4 Drive 11' 10" (3.61 m) Wide		267" (6.78 m) Wheelbase 10 x 4 Drive 11' 10" (3.61 m) Wide	
General Dimensions	**Feet**	**Meters**	**Feet**	**Meters**	**Feet**	**Meters**
Over-all width, outriggers extended — over floats	24' 6"	7.47	24' 6"	7.47	24' 6"	7.47
Over-all width, outriggers extended — centerline of jacks	22' 0"	6.71	22' 0"	6.71	22' 0"	6.71
Over-all width, outriggers retracted — floats removed	11' 0"	3.35	11' 10"	3.60	11' 10"	3.60
Wheelbase	21' 8"	6.60	21' 8"	6.60	22' 3"	6.78
Minimum ground clearance	9 3/16"	.23	9 9/16"	.24	9 9/16"	.24
Tailswing — ctwt. "A", across corners	14' 4"	4.37	14' 4"	4.37	14' 4"	4.37
Tailswing — ctwt. "AB", across corners	14' 6"	4.42	14' 6"	4.42	14' 6"	4.42
Over-all cab width	10' 6"	3.20	10' 6"	3.20	10' 6"	3.20
Ground clearance under upper ctwt.	5' 3"	1.60	5' 3"	1.60	5' 3"	1.60
Radius of boom hinge pin	3' 6"	1.07	3' 6"	1.07	3' 6"	1.07
Height of boom hinge pin	6' 7½"	2.02	6' 7½"	2.02	6' 7½"	2.02
Basic boom length — w/Ⓐ	50' 0"	15.24	50' 0"	15.24	50' 0"	15.24
— w/Ⓑ	110' 0"	33.53	110' 0"	33.53	110' 0"	33.53
— w/Ⓒ	30' 0"	9.14	30' 0"	9.14	30' 0"	9.14
Over-all length w/basic boom in travel position over rear of carrier (with bumper ctwt.) — w/Ⓐ	—	—	—	—	—	—
	79' 10 3/16"	21.59	79' 8 5/16"	21.59	82' 10 5/16"	25.25
— w/Ⓑ	→ See Note ←					
— w/Ⓒ	58' 7 3/16"	17.86	58' 5 5/16"	17.81	61' 7 5/16"	20.91
Over-all length w/basic boom in travel position over front of carrier — w/Ⓐ	—	—	—	—	—	—
	69' 9"	21.26	69' 9"	21.26	69' 9"	21.26
— w/Ⓑ	→ See Note ←					
— w/Ⓒ	48' 6"	14.78	48' 6"	14.78	48' 6"	14.78
Height, over boom live mast w/basic boom in travel position over rear of carrier — w/Ⓐ	—	—	—	—	—	—
	12' 2"	3.71	12' 2"	3.71	12' 2"	3.71
— w/Ⓑ	→ See Note ←					
— w/Ⓒ	11' 7"*	3.53*	11' 7"*	3.53*	11' 7"*	3.53*
Height, over boom live mast w/basic boom in travel position over front of carrier — w/Ⓐ	—	—	—	—	—	—
	14' 9½"	4.51	14' 9½"	4.51	14' 9½"	4.51
— w/Ⓑ	→ See Note ←					
— w/Ⓒ	14' 11"	4.55	14' 11"	4.55	14' 11"	4.55

Ⓐ Boom w/open throat top section
Ⓑ Boom w/tapered tip top section
Ⓒ Boom w/hammerhead top section

*Over-all height of bail sheave at cab top — 12' 1⅜" (3.70 m)

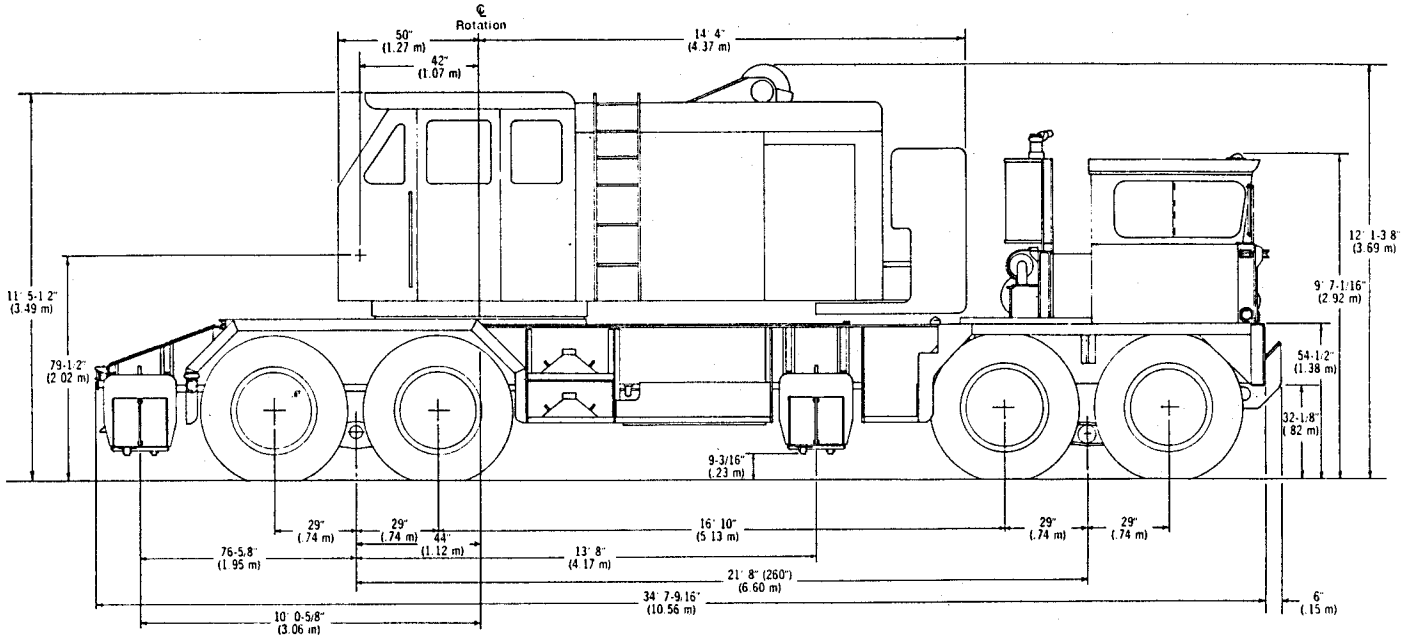
Note: Boom w/tapered tip top section cannot be travelled with over the road.

0618757.5

(Supersedes Flysheet CRF22003-5-72)

Printed in U.S.A.

Carrier — 260″ (6.60 m) wheelbase; **8 x 4, 11′ 0″ (3.35 m) wide**

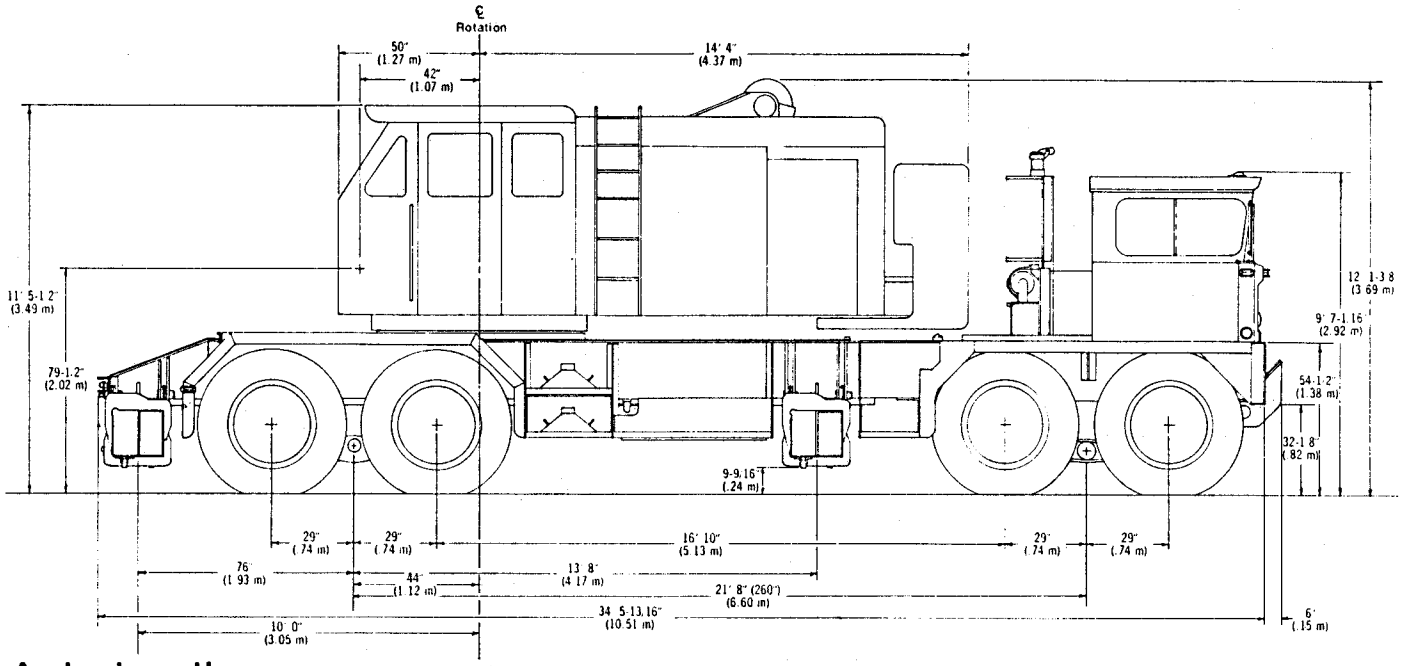


Axle loadings — approximate

Basic upper machinery w/24,000# (10,866 kg) ctwt. "A", boomhoist planetary, rear drum load lowering clutch, GM 6-71N diesel w/single stage torque converter; mounted on 260" (6.60 m) wheelbase, 8 x 4 drive, 11' 0" (3.35 m) wide carrier with GM 8V-71N diesel, 14:00 x 24-L (20-ply rating) transport type tires, hydraulic outriggers front and rear w/4 floats in storage racks, and 14,500# (6,577 kg) front bumper ctwt. "A".	Basic Machine Weight			Upper Facing Front				Upper Facing Rear			
				Front		Rear		Front		Rear	
	*	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.
	A	61,290	27,801	−11,742	− 5,326	73,032	33,127	32,505	14,744	28,785	13,057
	B	75,900	34,428	40,215	18,242	35,685	16,187	40,215	18,242	35,685	16,187
	C	137,190	62,229	28,473	12,916	108,717	49,314	72,720	32,986	64,470	29,244
Adjust axle loadings accordingly for these components:	Component Weights			Front		Rear		Front		Rear	
		Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.
High speed boom lowering clutch		+ 420	+ 191	− 50	− 23	+ 470	+ 214	+ 190	+ 86	+ 230	+ 105
Boomhoist wire rope — 675′ (205.74 m) Type "T", 7/8" (22.23 mm) dia.		+ 970	+ 440	− 280	− 127	+ 1,250	+ 567	+ 610	+ 277	+ 360	+ 163
Front drum load lowering clutch		+ 620	+ 281	+ 80	+ 36	+ 540	+ 245	+ 150	+ 68	+ 470	+ 213
Front drum planetary (hoist)		+ 790	+ 358	+ 90	+ 41	+ 700	+ 317	+ 180	+ 82	+ 610	+ 276
Front drum planetary (lowering) — includes load lowering clutch/gear assembly		+ 1,410	+ 640	+ 180	+ 82	+ 1,230	+ 558	+ 340	+ 154	+ 1,070	+ 486
Rear drum wire rope — 1,050′ (320.04 m) Type "N", 1" (25.40 mm) dia.		+ 1,940	+ 880	− 40	− 18	+ 1,980	+ 898	+ 695	+ 315	+ 1,245	+ 565
Rear drum planetary (hoist)		+ 790	+ 358	− 20	− 9	+ 810	+ 367	+ 280	+ 127	+ 510	+ 231
Rear drum planetary (lowering)		+ 790	+ 358	− 20	− 9	+ 810	+ 367	+ 280	+ 127	+ 510	+ 231
Third drum — includes front drum load lowering clutch/gear assembly to power third drum		+ 2,360	+ 1,070	+ 360	+ 163	+ 2,000	+ 907	+ 440	+ 200	+ 1,920	+ 870
Third drum — as above, but with load lowering clutch		+ 2,950	+ 1,338	+ 590	+ 268	+ 2,360	+ 1,070	+ 410	+ 186	+ 2,540	+ 1,152
Third drum wire rope — 460′ (140.21 m) Type "N", 7/8" (22.23 mm) dia.		+ 660	+ 299	+ 140	+ 64	+ 520	+ 235	+ 80	+ 36	+ 580	+ 263
Upper counterweight "A"		−24,000	−10,886	+10,482	+ 4,755	−34,482	−15,641	−18,605	− 8,439	− 5,395	− 2,447
Upper counterweight "B"		+20,400	+ 9,253	− 8,960	− 4,064	+29,360	+13,317	+15,870	+ 7,198	+ 4,530	+ 2,055
30′ (9.14 m) Tubular boom w/accessories & Hammerhead top section		+ 5,060	+ 2,295	+ 6,780	+ 3,075	− 1,720	− 780	− 5,070	− 2,300	+10,130	+ 4,595
5′ (1.52 m) Hammerhead top section w/accessories		− 2,950	− 1,338	− 4,730	− 2,145	+ 1,780	+ 807	+ 3,730	+ 1,692	− 6,680	− 3,030
50′ (15.24 m) Tubular boom w/accessories & Open Throat top section		+ 6,430	+ 2,917	+12,500	+ 5,670	− 6,070	− 2,753	−10,330	− 4,686	+16,760	+ 7,603
25′ (7.62 m) Open Throat top section w/accessories		− 4,320	− 1,960	+10,450	+ 4,740	− 6,130	− 2,780	+ 8,990	+ 4,078	−13,310	− 6,038
Opt. GM 6-71N diesel engine w/3-stage torque converter — Upper		+ 20	+ 9	− 6	− 3	+ 26	+ 12	+ 13	+ 6	+ 7	+ 3
Opt. Cummins N855-P220 diesel w/3-stage torque converter — Upper		+ 830	+ 376	− 240	− 109	+ 1,070	+ 485	+ 530	+ 240	+ 300	+ 136
Boom stops		+ 730	+ 331	+ 230	+ 104	+ 500	+ 227	+ 20	+ 9	+ 710	+ 322
Boom live mast (retracted & horizontal), bridle and spreader bar		+ 7,000	+ 3,175	+ 8,280	+ 3,756	− 1,280	− 581	− 5,900	− 2,676	+12,900	+ 5,851
Front outrigger box, beams and jacks		− 7,300	− 3,311	− 4,605	− 2,088	− 2,697	− 1,223	− 4,605	− 2,088	− 2,697	− 1,223
Rear outrigger box, beams and jacks		− 7,300	− 3,311	+ 2,152	+ 976	− 9,454	− 4,287	+ 2,152	+ 976	− 9,454	− 4,287
Outrigger floats		− 480	− 218	− 140	− 64	− 340	− 154	− 140	− 64	− 340	− 154
Bumper counterweight "A"		−14,500	− 6,577	−18,475	− 8,380	+ 3,975	+ 1,803	−18,475	− 8,380	+ 3,975	− 1,803
Bumper counterweight "B"		+ 7,000	+ 3,175	+ 9,145	+ 4,148	− 2,145	− 973	+ 9,145	+ 4,148	− 2,145	− 973
Opt. Cummins NTF 295 diesel engine in Carrier		+ 400	+ 181	+ 400	+ 181	+ 0	+ 0	+ 400	+ 181	+ 0	+ 0

*A=Upper, B=Carrier, C=Total

Carrier — 260″ (6.60 m) wheelbase, **8 x 4, 11′ 10″ (3.61 m) wide**

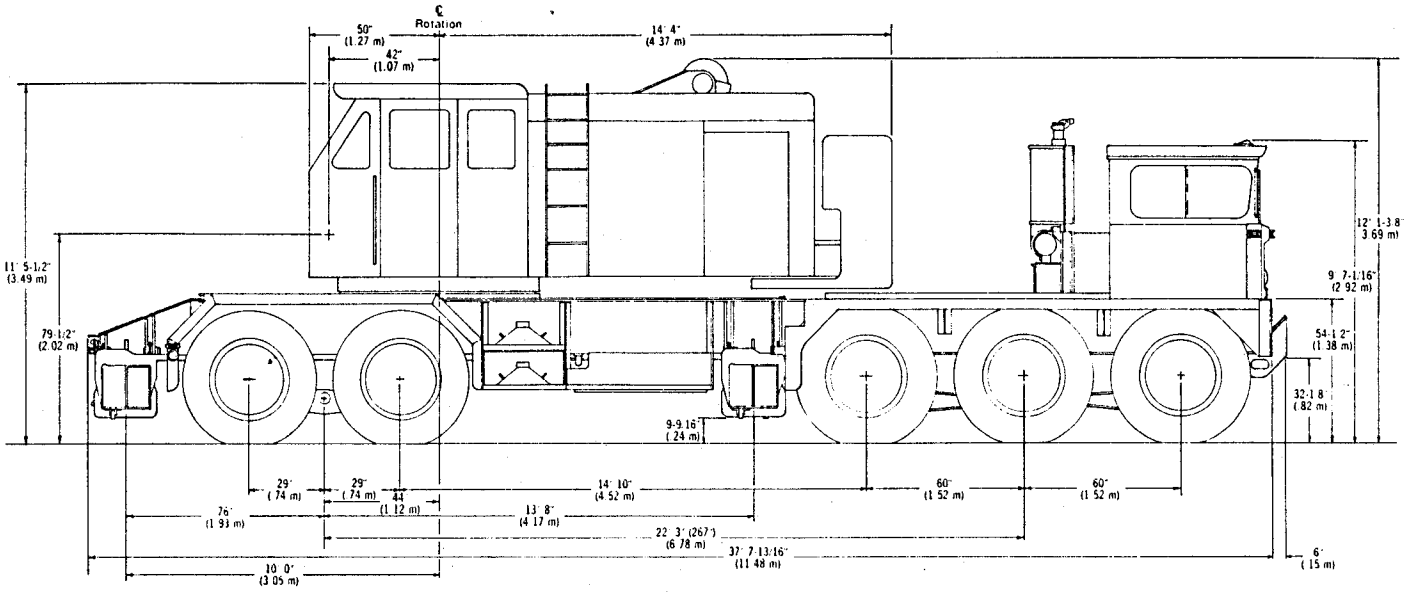


Axle loadings — approximate

Basic upper machinery w/26,900# (12,202 kg) ctwt. "A", boomhoist planetary, rear drum load lowering clutch, GM 6-71N diesel w/single stage torque converter; mounted on 260″ (6.60 m) wheelbase, 8 x 4 drive, 11′ 10″ (3.60 m) wide carrier with GM 8V-71N diesel, 14:00 x 24-L (20-ply rating) transport type tires, hydraulic outriggers front and rear w/4 floats in storage racks, and 11,200# (5,080 kg) front bumper ctwt. "A".	Basic Machine Weight			Upper Facing Front				Upper Facing Rear			
				Front		Rear		Front		Rear	
	*	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.
	A	64,190	29,117	−13,000	− 5,897	77,190	35,013	34,750	15,763	29,440	13,354
	B	73,160	33,185	36,080	16,366	37,080	16,819	36,080	16,366	37,080	16,819
	C	137,350	62,302	23,080	10,469	114,270	51,832	70,830	32,129	66,520	30,173
Adjust axle loadings accordingly for these components:	Component Weights			Front		Rear		Front		Rear	
		Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.
High speed boom lowering clutch		+ 420	+ 191	− 50	− 23	+ 470	+ 214	+ 190	+ 86	+ 230	+ 105
Boomhoist wire rope — 675′ (205.74 m) Type "T", ⅞″ (22.23 mm) dia.		+ 970	+ 440	− 280	− 127	+ 1,250	+ 567	+ 610	+ 277	+ 360	+ 163
Front drum load lowering clutch		+ 620	+ 281	+ 80	+ 36	+ 540	+ 245	+ 150	+ 68	+ 470	+ 213
Front drum planetary (hoist)		+ 790	+ 358	+ 90	+ 41	+ 700	+ 317	+ 180	+ 82	+ 610	+ 276
Front drum planetary (lowering) — includes load lowering clutch/gear assembly		+ 1,410	+ 640	+ 180	+ 82	+ 1,230	+ 558	+ 340	+ 154	+ 1,070	+ 486
Rear drum wire rope — 1,050′ (320.04 m) Type "N", 1″ (25.40 mm) dia.		+ 1,940	+ 880	− 40	− 18	+ 1,980	+ 898	+ 695	+ 315	+ 1,245	+ 565
Rear drum planetary (hoist)		+ 790	+ 358	− 20	− 9	+ 810	+ 367	+ 280	+ 127	+ 510	+ 231
Rear drum planetary (lowering)		+ 790	+ 358	− 20	− 9	+ 810	− 367	+ 280	+ 127	+ 510	+ 231
Third drum — includes front drum load lowering clutch/gear assembly to power third drum		+ 2,360	+ 1,070	+ 360	+ 163	+ 2,000	+ 907	+ 440	+ 200	+ 1,920	+ 870
Third drum — as above, but with load lowering clutch		+ 2,950	+ 1,338	+ 590	+ 268	+ 2,360	+ 1,070	+ 410	+ 186	+ 2,540	+ 1,152
Third drum wire rope — 460′ (140.21 m) Type "N", ⅞″ (22.23 mm) dia.		+ 660	+ 299	+ 140	+ 64	+ 520	+ 235	+ 80	+ 36	+ 580	+ 263
Upper counterweight "A"		−26,900	−12,202	+11,740	+ 5,325	−38,640	−17,527	−20,850	− 9,458	− 6,050	− 2,744
Upper counterweight "B"		+20,400	+ 9,253	− 8,960	− 4,064	+29,360	+13,317	+15,870	+ 7,198	+ 4,530	+ 2,055
30′ (9.14 m) Tubular boom w/accessories & Hammerhead top section		+ 5,060	+ 2,295	+ 6,780	+ 3,075	− 1,720	− 780	− 5,070	− 2,300	+10,130	+ 4,595
5′ (1.52 m) Hammerhead top section w/accessories		− 2,950	− 1,338	− 4,730	− 2,145	+ 1,780	+ 807	+ 3,730	+ 1,692	− 6,680	−3,030
50′ (15.24 m) Tubular boom w/accessories & open throat top section		+ 6,430	+ 2,917	+12,500	+ 5,670	− 6,070	− 2,753	−10,330	− 4,686	+16,760	+ 7,603
25′ (7.62 m) Open Throat & top section w/accessories		− 4,320	− 1,960	+10,450	+ 4,740	− 6,130	− 2,780	+ 8,990	+ 4,078	-13,310	− 6,038
Opt. GM 6-71N diesel engine w/3-stage torque converter — Upper		+ 20	+ 9	− 6	− 3	+ 26	+ 12	+ 13	+ 6	+ 7	+ 3
Opt. Cummins N855-P220 diesel engine w/3-stage torque converter — Upper		+ 830	+ 376	− 240	− 109	+ 1,070	+ 485	+ 530	+ 240	+ 300	+ 136
Boom stops		+ 730	+ 331	+ 230		+ 500	+ 227	+ 20	+ 9	+ 710	+ 322
Boom live mast (retracted & horizontal), bridle and spreader bar		+ 7,000	+ 3,175	+ 8,280	+ 3,756	− 1,280	− 581	− 5,900	− 2,676	+12,900	+ 5,851
Front outrigger box, beams and jacks		− 7,300	− 3,311	− 4,605	− 2,088	− 2,697	− 1,223	− 4,605	− 2,088	− 2,697	− 1,223
Rear outrigger box, beams and jacks		− 7,300	− 3,311	+ 2,152	+ 976	− 9,454	− 4,287	+ 2,152	+ 976	− 9,454	− 4,287
Four floats		− 480	− 218	− 140	− 64	− 340	− 154	− 140	− 64	− 340	− 154
Bumper counterweight "A"		−11,200	− 5,080	+14,200	+ 6,441	− 3,000	− 1,361	+14,200	+ 6,441	− 3,000	− 1,361
Bumper counterweight "B"		+ 7,600	+ 3,447	+ 9,880	+ 4,481	− 2,280	− 1,034	+ 9,880	+ 4,481	− 2,280	− 1,034
Opt. Cummins NTF 295 diesel engine in Carrier		+ 400	+ 181	+ 400	+ 181	+ 0	+ 0	+ 400	+ 181	+ 0	+ 0

*A=Upper, B=Carrier, C=Total

Carrier — 267″ (6.78 m) wheelbase, 10 x 4, 11′ 10″ (3.61 m) wide



Axle loadings — approximate

Basic upper machinery w/26,900# (12,202 kg) ctwt. "A", boomhoist planetary, rear drum load lowering clutch, GM 6-71N diesel w/single stage torque converter; mounted on 267" (6.78 m) wheelbase, 10 x 4 drive, 11' 10" (3.60 m) wide carrier with GM 8V-71N diesel, 14:00 x 24-L (20-ply rating) transport type tires, hydraulic outriggers front and rear, w/4 floats in storage racks, and 6,400# (2,903 kg) front bumper ctwt. "A".	Basic Machine Weight		Upper Facing Front				Upper Facing Rear			
			Front		Rear		Front		Rear	
*	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.	Lbs.	Kgs.
A	64,190	29,116	-12,750	- 5,783	76,940	34,900	34,100	15,468	30,090	13,649
B	73,500	33,340	36,200	16,420	37,300	16,919	36,200	16,420	37,300	16,919
C	137,690	62,456	23,450	10,637	114,240	51,819	70,300	31,888	67,390	30,568
Component Weights			**Front**		**Rear**		**Front**		**Rear**	
Adjust axle loadings accordingly for these components:	**Lbs.**	**Kgs.**	**Lbs.**	**Kgs.**	**Lbs.**	**Kgs.**	**Lbs.**	**Kgs.**	**Lbs.**	**Kgs.**
High speed boom lowering clutch	+ 420	+ 191	- 50	- 23	+ 470	+ 214	+ 190	+ 86	+ 230	+ 105
Boomhoist wire rope — 675' (205.74 m) Type "T", 7/8" (22.23 mm) dia.	+ 970	+ 440	- 270	- 122	+ 1,240	+ 562	+ 600	+ 272	+ 370	+ 168
Front drum load lowering clutch	+ 620	+ 281	+ 70	+ 32	+ 550	+ 249	+ 140	+ 64	+ 480	+ 217
Front drum planetary (hoist)	+ 790	+ 358	+ 90	+ 41	+ 700	+ 317	+ 180	+ 82	+ 610	+ 276
Front drum planetary (lowering) — includes load lowering clutch/gear assembly	+ 1,410	+ 640	+ 160	+ 73	+ 1,250	+ 567	+ 320	+ 145	+ 1,090	+ 495
Rear drum wire rope — 1,050' (320.04 m) Type "N", 1" (25.40 mm) dia.	+ 1,940	+ 880	- 40	- 18	+ 1,980	+ 898	+ 680	+ 308	+ 1,260	+ 572
Rear drum planetary (hoist)	+ 790	+ 358	- 20	- 9	+ 810	+ 367	+ 270	+ 122	+ 520	+ 236
Rear drum planetary (lowering)	+ 790	+ 358	- 20	- 9	+ 810	+ 367	+ 270	+ 122	+ 520	+ 520
Third drum — includes front drum load lowering clutch/gear assembly to power third drum	+ 2,360	+ 1,070	+ 350	+ 159	+ 2,010	+ 911	+ 430	+ 195	+ 1,930	+ 875
Third drum — as above, but with load lowering clutch	+ 2,950	+ 1,338	+ 580	+ 263	+ 2,370	+ 1,075	+ 400	+ 181	+ 2,550	+ 1,157
Third drum wire rope — 460' (140.21 m) Type "N", 7/8" (22.23 mm) dia.	+ 660	+ 299	+ 140	+ 64	+ 520	+ 235	+ 80	+ 36	+ 580	+ 263
Upper counterweight "A"	-26,900	-12,202	+11,520	+ 5,225	-38,420	-17,427	-20,460	- 9,281	- 6,440	- 2,921
Upper counterweight "B"	+20,400	+ 9,253	- 8,790	- 3,987	+29,190	+13,240	+15,570	+ 7,063	+ 4,830	+ 2,190
30' (9.14 m) Tubular boom w/accessories & Hammerhead top section	+ 5,060	+ 2,295	+ 6,650	+ 3,016	- 1,590	- 721	- 4,970	- 2,254	+10,030	+ 4,549
5' (1.52 m) Hammerhead top section w/accessories	- 2,950	- 1,338	- 4,640	- 2,105	+ 1,690	+ 767	+ 3,660	+ 1,660	- 6,610	- 2,998
50' (15.24 m) Tubular boom w/accessories & Open Throat top section	+ 6,430	+ 2,917	+12,260	+ 5,561	- 5,830	- 2,644	-10,130	- 4,595	+16,560	+ 7,512
25' (7.62 m) Open Throat top section w/accessories	- 4,320	- 1,960	-10,250	- 4,650	+ 5,930	+ 2,690	+ 8,820	+ 4,000	-13,140	- 5,960
Opt. GM 6-71N diesel engine w/3-stage torque converter — Upper	+ 20	+ 9	- 6	- 3	+ 26	+ 12	+ 12	+ 5	+ 8	+ 4
Opt. Cummins N855-P22 diesel engine w/3-stage torque converter — Upper	+ 830	+ 376	- 240	- 109	+ 1,070	+ 485	+ 520	+ 235	+ 310	+ 141
Boom stops	+ 730	+ 331	+ 230	+ 104	+ 500	+ 227	+ 20	+ 9	+ 710	+ 322
Boom live mast (retracted & horizontal), bridle and spreader bar	+ 7,000	+ 3,175	+ 8,120	+ 3,683	- 1,120	- 508	- 5,790	- 2,626	+12,790	+ 5,801
Front outrigger box, beams and jacks	- 7,300	- 3,311	- 4,510	- 2,046	- 2,790	- 1,265	- 4,510	- 2,046	- 2,790	- 1,265
Rear outrigger box, beams and jacks	- 7,300	- 3,311	+ 2,080	+ 943	- 9,380	- 4,254	+ 2,080	+ 943	- 9,380	- 4,254
Four floats	- 480	- 218	- 140	- 64	- 340	- 154	- 140	- 64	- 340	- 154
Bumper counterweight "A"	- 6,400	- 2,903	- 8,700	- 3,946	+ 2,300	+ 1,043	- 8,700	- 3,946	+ 2,300	+ 1,043
Bumper counterweight "B"	+ 7,200	+ 3,266	+ 9,800	+ 4,445	- 2,600	- 1,179	+ 9,800	+ 4,445	- 2,600	- 1,179
Opt. Cummins NTF 295 diesel engine in Carrier	+ 400	+ 181	+ 400	+ 181	+ 0	+ 0	+ 400	+ 181	+ 0	+ 0

*A=Upper, B=Carrier, C=Total

Carrier Specifications — Note: Specifications applicable to all three FMC carriers unless otherwise specified.

Type — Choice of 3
8 x 4 drive, 260" (6.60 m) wheelbase, 11' 0" (3.35 m) wide.
8 x 4 drive, 260" (6.60 m) wheelbase, **11' 10" (3.61 m)** wide.
10 x 4 drive, 267" (6.78 m) wheelbase, 11' 10" (3.61 m) wide.

Frame — Main members heat treated alloy steel; machined surface for mounting outer race of turntable bearing.

Front Axles — Bogie beam mounted, single wheels.

8 x 4, 260" (6.60 m) w.b., 11' 0" (3.35 m) wide – Tandem axles, Eaton FTCA-34L-32; 104" (2.64 m) track.

8 x 4, 260" (6.60 m) w.b., **11' 10" (3.61 m) wide** — Tandem axles, Eaton FTCA-34L-1; 114" (2.89 m) track.

10 x 4, 267" (6.78 m) w.b., 11' 10" (3.61 m) wide — Tandem (3) axles, Shuler FTCA-34L-24; 114" (2.89 m) track.

Bogie — Hendrickson; fiber bushed torque rods. Two 8 x 4 carriers have rubber bushed bogies; 10 x 4 carrier bogie is bronze bushed.

Rear Axles — Tandem, Clark Planetary BD-71000, double reduction, bogie mounted; dual wheels.

8 x 4, 260" (6.60 m) w.b., 11'0" (3.35 m) wide – 100⅝" (2.56 m) track.

8 x 4, 260" (6.60 m) w.b., **11'10" (3.61 m) wide** — 109⅞" (2.79 m) track.

10 x 4, 267" (6.78 m) w.b., 11'10" (3.61 m) wide — 109⅞" (2.79 m) track.

Bogie — Hendrickson bronze bushed equalizer beams; fiber bushed torque rods.

Wheels & Rims — Front; cast spoke type. Rear; integral with planetary hubs.

Tires — Single tires front; dual tires rear.

Standard — 14:00 x 24L (20-ply rating), transport type tread.

Optional — 14:00 x 24N (24-ply rating), General HCT Nygen.

Tag Axle — Optional; Transport Trailer, equipped with air brakes, 10:00 x 20F (12-ply rating) dual tires.

Outriggers — Full width, double box, front and rear; pin connected to carrier frame. Hydraulically operated beams and jack cylinders individually controlled from either side of carrier. Hydraulic power supplied by PTO driven hydraulic pump. Check valve at each jack cylinder. Optional — outrigger controls in carrier cab or crane cab in addition to standard controls.

Hydraulic Removal of Outrigger Box Pins — Optional

Floats — Low profile, alloy steel, lightweight; 30" (.76 m) square base.

Trailer Hitch — Optional; includes air and electric connections at rear of carrier for trailer lights and air brakes.

Brakes — Air. Two 8 x 4 carriers have 8-wheel brakes, 10 x 4 carrier has 10-wheel brakes.

Service — Dual diaphragm air chambers on four rear wheels, single diaphragm air chambers on four or six front wheels.

Size and Area — Rear wheels — 20" x 7" (.51 x .18 m); total effective lining area, 574 sq. inches (3,703 cm^2) per axle. Front wheels — 17¼" x 4" (2.73 x .10 m); total effective lining area, 248 sq. inches (1,601 cm^2) per axle.

Digging — Service brakes applied by hand-controlled air valve on carrier dash.

Parking — Brakes on four rear wheels applied and air chamber push rods automatically mechanically locked with air control valve on dash.

Emergency — Brakes on four rear wheels apply and mechanically lock automatically if air pressure drops to 40 p.s.i. (2.81 kg/cm^2) in system. Emergency brake may be manually applied any time by hand control of dash-mounted air control valve.

Steering — Power hydraulic assist. Ross HPS70; 18" (.46 m) dia. steering wheel.

Engines — Diesel; 12-volt alternator, starter, pressure lubrication, hydraulic pump, dry type air cleaner, 15 c.f.m. (4.25 cu. m/min.) air compressor, radiator with automatic air operated shutters.

Standard — GM8V-71N diesel, 8 cylinder, 2 cycle, 4¼" (.11 m) bore, 5" (.13 m) stroke, 568 cu. in. (9,310 cm^3) displacement, 280 brake horsepower @ 2,300 r.p.m. governed load speed. Peak torque 760 ft. lbs. (105.11 kgm) @ 1,200 r.p.m. Control cable manual shut down.

Optional — Cummins NTF-295 diesel, 6 cylinder, 4 cycle, 5½" (.14 m) bore, 6" (.15 m) stroke, 855 cu. in. (14,013 cm^3) displacement, 295 brake horsepower @ 2,300 r.p.m. governed load speed. Peak torque 740 ft. lbs. (102.34 kgm) @ 1,500 r.p.m. Electric shut down.

Clutch — Lipe-Rollway, 14" (.36 m), 2-plate, dry disc.

Transmissions —

Main — Eaton RTO-915; 15 speeds forward, 3 reverse.

Auxiliary — Eaton AT-1202; 2-speed, midship mounting.

Universals — Mechanics type drive tubes; needle bearings.

Cab — One-man, offset, fully enclosed. Rubber suspension mounted bucket seat with seat belt. Noise absorbing insulation with vinyl covering, sound reduction headliner, carpet floor mat; isolated from engine compartment, rubber mounted for sound level reduction. Instrument panel and dash includes speedometer, odometer, ammeter, and gauges for fuel, engine temperature, air and oil pressures. Low air pressure warning buzzer, key locking switch, push-button starter, throttle control, tachometer, fire extinguisher, heater and defroster, 2-speed electric windshield wiper, and windshield washer. Optional — outrigger controls in carrier cab.

Electrical System — 12-volt; including dual sealed beam headlights, directional signals with 4-way flashing system, stop and tail lights, clearance lights, horn, lighting of instrument panel, dome light, headlight dimmer switch, and two 12-volt, 200 ampere hour batteries.

Standard Auxiliary Equipment — Bus-type rear view mirrors, boom guide, lug wrench, 2-way reading bubble levels at 4 positions on carrier frame, tire gauge and tire inflation hose. High pressure lube fittings at all bearing points. Two 45-gal. (170.31 liter) capacity fuel tanks, hand grab rails, carrier deck access ladder, back-up alarm, skid-resistant finish on carrier deck.

Turning Ability —

FMC Carriers	Turning Circle	Curb Clearance Circle	Vehicle Clearance Circle		
	Centerline of Outer Front Tire	Outside of Outer Front Tire	Over Outside of Front Bumper	Over Outside of Front Bumper Ctwt. "A"	Over Outside of Front Bumper Ctwt. "AB"
8 x 4, 11' 0" (3.35 m) wide	104' 9½" (31.94 m) dia.	106' 1" (32.34 m) dia.	110' 1⅜" (33.56 m) dia.	111' 8" (34.03 m) dia.	112' 1½" (34.18 m) dia.
8 x 4, 11' 10" (3.61 m) wide	118' 8" (36.17 m) dia.	120' 0" (36.58 m) dia.	123' 4" (37.59 m) dia.	124' 4" (37.89 m) dia.	124' 10" (38.05 m) dia.
10 x 4, 11' 10" (3.61 m) wide	119' 0" (36.27 m) dia.	120' 2" (36.63 m) dia.	123' 7½" (37.68 m) dia.	124' 3¾" (37.90 m) dia.	124' 10" (38.05 m) dia.

Bumper Counterweight — Mounts on front bumper ctwt. hooks; easily removable.

nper Ctwt. "A" — applicable on machines ,uipped with open throat top section booms 50' (15.24 m) through 180' (54.86 m) long — or hammerhead top section booms 30' (9.14 m) through 180' (54.86 m) long. Bumper ctwt. "A" used with either "A" or "AB" upper ctwts.

Bumper Ctwt. "AB" — applicable **only,** (see note) to machines equipped with "A" upper ctwt. — and is required on all machines equipped with either open throat or hammerhead top section booms 190' (57.91 m) through 230' (70.10 m) long. "AB" bumper ctwt. must not be used in conjunction with "AB" upper ctwt. — or with booms less than 180' (54.86 m) long — due to strength of materials.

Note: Tapered tip booms 210' (64.01 m) through 230' (70.10 m) long, equipped with jib, **require** use of "AB" upper and "AB" bumper ctwts.

FMC Carriers	Bumper Counterweights		
	Ctwt. "A"	Ctwt. "B"	Ctwt. "AB"
8 x 4, 11' 0" (3.34 m) wide	14,500# (6,583 kg)	7,000# (3,178 kg)	21,500# (9,761 kg)
8 x 4, 11' 10" (3.61 m) wide	11,200# (5,085 kg)	7,600# (3,540 kg)	18,800# (8,535 kg)
10 x 4, 11' 10" (3.61 m) wide	6,400# (2,903 kg)	7,200# (3,266 kg)	13,600# (6,169 kg)

Counterweight Instructions

Counterweight Combinations①	Allowable Boom Lengths					
	Boom with 25' (7.62 m) Open Throat Top Section		Boom with 5' (1.52 m) Hammerhead Top Section		Boom with 45' (13.72 m) Tapered Tip Top Section	
	Without Jib	With Jib	Without Jib	With Jib	Without Jib	With Jib
"A" Upper & "A" Bumper	50'-180' (15.24-54.86 m)	50'-180' (15.24-54.86 m)	30'-180' (9.14-54.86 m)	50'-180' (15.24-54.86 m)	110'-180' (33.53-54.86 m)	110'-180' (33.53-54.86 m)
"A" Upper & "AB" Bumper	190'-230' (57.83-70.10 m)	190'-200' (57.83-60.96 m)	190'-230' (57.83-70.10 m)	190'-200' (57.83-60.96 m)	190'-230' (57.83-70.10 m)	190'-200' (57.83-60.96 m)
"AB" Upper & "A" Bumper②	50'-230' (15.24-70.10 m)	50'-200' (15.24-60.96 m)	30'-230' (9.14-70.10 m)	50'-200' (15.24-60.96 m)	110'-230' (33.53-70.10 m)	110'-200' (33.53-60.96 m)
"AB" Upper & "AB" Bumper②	← Not permitted →					210'-230' (64.01-70.10 m)

①Counterweight combinations must only be used as shown on this chart. Any other usage of combinations may cause machine overturn or other damage.

②"AB" upper ctwt. — do not swing over side until outriggers are fully extended and properly set or machine overturn will occur.

Carrier Speeds — All HC-238 carrier speeds based on ,ines at 2,300 r.p.m. governed full load speed.

Gear		Main — Eaton RTO-915	Standard or Optional Engines Auxiliary — Eaton AT-1202			
			1.00:1.00		2.036:1.0	
			M.P.H.	Km/hr.	M.P.H.	Km/hr
High	10th	.81	40.5	65.16	19.9	32.02
	9th	1.00	32.8	52.78	16.1	25.90
	8th	1.26	26.1	41.99	12.8	20.60
	7th	1.59	20.6	33.15	10.1	16.25
	6th	2.04	16.1	25.90	7.9	12.71
	Rev.	2.21	14.9	23.97	7.3	11.75
Low	5th	2.59	12.7	20.43	6.3	10.14
	4th	3.20	10.3	16.57	5.1	8.21
	3rd	4.04	8.1	13.03	4.0	6.44
	2nd	5.10	6.4	10.30	3.2	5.15
	1st	6.51	5.0	8.05	2.5	4.02
	Rev.	7.06	4.7	7.56	2.3	3.70
Deep Reduction	5th	3.87	8.5	13.68	4.2	6.76
	4th	4.78	6.9	11.10	3.4	5.47
	3rd	6.03	5.4	8.69	2.7	4.34
	2nd	7.62	4.3	6.92	2.2	3.54
	1st	9.73	3.4	5.47	1.8	2.90
	Rev.	10.55	3.1	4.99	1.5	2.41

Creep speed in deep reduction low (1st) — based on peak engine torque of 1,200 r.p.m. for GM8V-71N; 1,500 r.p.m. for Cummins NTF-295. Creep speeds are .87 m.p.h. (1.24 km/hr.) with GM8V-71N engine; 1.1 m.p.h. (1.77 km/hr.) with optional Cummins NTF-5 engine. Rear axle ratio 10.218 to 1.

Carrier Weights — Approximate weights, less turntable bearing.

FMC Carriers	With Bumper Counterweight	
	"A"	"AB"
8 x 4, 11' 0" (3.34 m) wide	75,900# (34,459 kg)	82,900# (37,637 kg)
8 x 4, 11' 10" (3.61 m) wide	73,160# (33,215 kg)	80,760# (36,665 kg)
10 x 4, 11' 10" (3.61 m) wide	73,500# (33,369 kg)	80,700# (36,638 kg)

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

MEMBER PCSA