



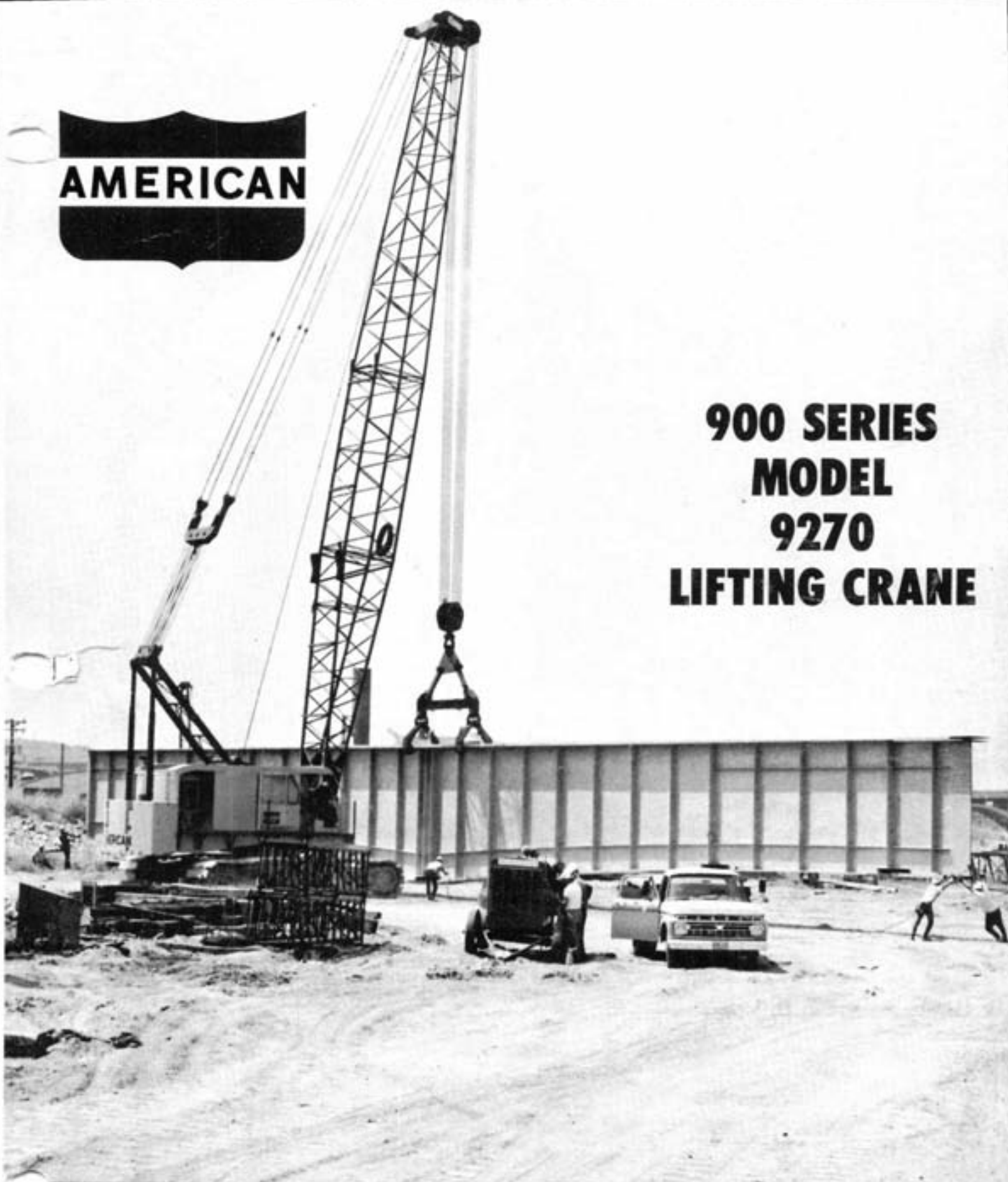
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900 SERIES MODEL 9270 LIFTING CRANE



SPECIFICATIONS

**AMERICAN HOIST
& DERRICK COMPANY**

ST. PAUL, MINNESOTA 55107



AMERICAN MODEL 9270 LIFTING CRANE RATINGS — HAMMERHEAD III

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
70'	16	83	272,010	300,000
	20	80	189,820	231,070
	25	75	137,030	162,500
	30	71	106,690	124,730
	35	67	86,980	100,810
	40	62	73,140	84,290
	50	52	54,970	62,940
	60	41	43,560	49,730
70	26	35,700*	40,720	
80'	17	83	245,390	300,000
	20	81	189,570	230,890
	25	77	136,750	162,270
	30	74	106,390	124,470
	35	70	86,670	100,530
	40	66	72,830	84,000
	50	58	54,660	62,650
	60	49	43,260	49,440
70	38	35,420	40,450	
80	24	29,670*	33,910*	
90'	18	83	223,330	276,920
	20	82	189,320	230,690
	25	79	136,460	162,010
	30	75	106,080	124,180
	35	72	86,350	100,230
	40	69	72,500	83,690
	50	62	54,330	62,330
	60	54	42,920	49,120
70	46	35,090	40,130	
80	36	29,360	33,610	
90	22	24,980*	28,190*	
100'	19	83	204,720	251,570
	20	83	189,070	230,500
	25	80	136,160	161,750
	30	77	105,760	123,890
	35	74	86,020	99,910
	40	71	72,160	83,360
	50	65	53,980	61,990
	60	58	42,570	48,780
70	51	34,740	39,800	
80	43	29,020	33,280	
90	34	24,650	28,330	
100	21	21,190*	23,460*	
110'	21	83	175,300	212,380
	25	81	135,860	161,490
	30	78	105,430	123,590
	35	75	85,670	99,590
	40	73	71,800	83,030
	50	67	53,620	61,650
	60	61	42,210	48,430
	70	55	34,380	39,440
80	49	28,660	32,930	
90	41	24,300	27,980	
100	32	20,860	24,090	
110	20	18,050*	19,550*	
120'	22	83	163,250	196,740
	25	81	135,550	161,220
	30	79	105,100	123,290
	35	77	85,330	99,270
	40	74	71,450	82,690
	50	69	53,250	61,290
	60	64	41,840	48,070
	70	59	34,000	39,080
80	53	28,290	32,560	
90	46	23,930	27,620	
100	39	20,500	23,740	
110	31	17,700	20,600*	
120	19	15,390*	17,990*	
130'	23	83	152,600	183,100
	25	82	135,250	160,950
	30	80	104,770	122,980
	35	78	84,980	98,940
	40	75	71,090	82,350
	50	71	52,880	60,930
	60	66	41,460	47,700
	70	61	33,630	38,700
80	56	27,910	32,190	
90	50	23,560	27,250	
100	44	20,120	23,370	
110	38	17,340	20,230	
120	30	15,030	17,640*	
130	18	13,080*	15,460*	



AMERICAN MODEL 720 LIFTING CRANE RATINGS

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
230'*	35	83	81,440	95,610
	40	82	67,420	78,860
	50	79	49,060	57,240
	60	77	37,550	43,890
	70	74	29,660	34,830
	80	72	23,920	28,270
	90	69	19,540	23,300
	100	66	16,100	19,400
	110	63	13,320	16,260
	120	61	11,020	13,680
	130	58	9,100	11,520
	140	55	7,460	9,680
	150	52	6,040	8,100

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
230'*	160	48	4,800	6,720
	170	45	3,720	5,500
	180	41	2,760	4,430
	190	37	1,890	3,470
	200	33	1,120	2,600
	210	28	—	1,820
	220	22	—	1,100
	230	18	—	—
240'*	36	83	77,890	91,450
	40	82	67,050	78,500
	50	80	48,670	56,870
	60	77	37,150	43,510
	70	75	29,260	34,430
	80	72	23,500	27,870
	90	69	19,540	23,300
	100	66	16,100	19,400

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
240'*	90	70	19,130	22,890
	100	67	15,690	18,990
	110	65	12,900	15,850
	120	62	10,610	13,270
	130	59	8,680	11,100
	140	56	7,040	9,270
	150	54	5,630	7,680
	160	50	4,390	6,300
	170	47	3,310	5,090
	180	44	2,340	4,020
	190	40	1,480	3,060
	200	37	—	2,190
	210	32	—	1,410

Load ratings do not exceed 75% of tipping with crane standing level on firm, uniformly supporting surface. Safe loads depend on ground conditions, boom length, radius of operation and proper handling, all of which must be taken into consideration of user. "Radius in feet" is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets and other load-carrying devices are considered part of the load.

Ratings indicated in *italic* represent boom positions which, without load, provide less than standard backward stability. Machine should be on firm level ground when working in these boom positions.

Ratings marked (*) require retractable A-frame in fully raised position.

Crane, with side frames extended and G-D-E-F counterweight, will self erect 240 ft. main boom with hammerhead less jib or:

240 ft. Boom plus 20 ft. No. 9 jib
240 ft. Boom plus 30 ft. No. 9 jib
230 ft. Boom plus 40 ft. No. 9 jib
220 ft. Boom plus 50 ft. No. 9 jib

240 ft. Boom plus 20 ft. No. 15 jib
240 ft. Boom plus 30 ft. No. 15 jib
230 ft. Boom plus 40 ft. No. 15 jib

220 ft. Boom plus 50 ft. No. 15 jib
240 ft. Boom plus 40 ft. No. 9 HL jib
240 ft. Boom plus 50 ft. No. 9 HL jib

230 ft. Boom plus 60 ft. No. 9 HL jib
230 ft. Boom plus 70 ft. No. 9 HL jib
220 ft. Boom plus 80 ft. No. 9 HL jib

AMERICAN MODEL 9270 LIFTING CRANE RATINGS—TAPERED TIP

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
100'	21	81	178,070	194,000
	25	78	138,700	164,250
	30	76	108,330	126,430
	35	73	88,610	102,480
	40	70	74,760	85,950
	50	63	56,600	64,600
	60	57	45,210	51,400
	70	50	37,390	42,430
	80	40	31,680	35,930
	90	32	27,320	30,990
	100	18	23,870	27,090*
	110	17	20,840	23,710*
110'	22	81	166,130	194,000
	25	80	138,490	164,080
	30	77	108,100	126,230
	35	74	88,360	102,260
	40	71	74,510	85,720
	50	66	56,340	64,360
	60	60	44,950	51,160
	70	54	37,130	42,180
	80	47	31,420	35,680
	90	39	27,070	30,740
	100	30	23,630	26,860
	110	17	20,840	23,710*
120'	24	81	146,440	174,280
	25	80	138,270	163,900
	30	78	107,860	126,020
	35	76	88,110	102,030
	40	73	74,250	85,480
	50	68	56,070	64,100
	60	63	44,670	50,900
	70	57	36,850	41,920
	80	51	31,150	35,410
	90	45	26,800	30,480
	100	38	23,370	26,600
	110	29	20,580	23,470
	120	17	18,270	20,870*
130'	25	81	138,060	163,730
	30	79	107,620	125,810
	35	77	87,853	101,800
	40	74	73,980	85,230
	50	70	55,800	63,840
	60	65	44,390	50,630
	70	60	36,370	41,650
	80	55	30,860	35,140
	90	49	26,520	30,200
	100	41	22,200	25,470
	110	34	19,430	22,350
	120	26	17,150	19,770
	130	17	15,220	17,610

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
130'	100	43	23,090	26,330
	110	36	20,310	23,200
	120	28	18,010	20,620
	130	16	16,070	18,440*
	27	81	123,870	146,000
	30	80	107,370	125,600
	35	78	87,590	101,570
	40	76	73,710	84,980
140'*	50	71	55,510	63,580
	60	67	44,100	50,350
	70	62	36,280	41,370
	80	58	30,570	34,860
	90	53	26,230	29,920
	100	47	22,800	26,050
	110	41	20,030	22,930
	120	35	17,730	20,350
	130	27	15,800	18,180
	140	15	14,140	16,330
	29	81	112,140	131,550
	30	80	107,130	125,380
150'*	35	78	87,330	101,330
	40	77	73,440	84,730
	50	73	55,230	63,310
	60	69	43,820	50,080
	70	64	35,990	41,080
	80	60	30,280	34,570
	90	56	25,930	29,640
	100	51	22,500	25,760
	110	46	19,730	22,640
	120	40	17,440	20,060
	130	34	15,520	17,900
	140	26	13,870	16,060
	150	15	12,430	14,460
160'*	30	81	106,880	125,170
	35	79	87,070	101,090
	40	77	73,170	84,480
	50	74	54,940	63,040
	60	70	43,520	49,790
	70	66	35,690	40,800
	80	62	29,980	34,280
	90	58	25,630	29,340
	100	54	22,200	25,470
	110	49	19,430	22,350
	120	44	17,150	19,770
	130	39	15,220	17,610

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
160'*	140	33	13,580	15,770
	150	25	12,160	14,180
	160	14	10,900	12,790
	32	81	97,770	114,120
170'*	35	80	86,800	100,850
	40	78	72,890	84,220
	50	75	54,650	62,770
	60	71	43,230	49,510
	70	68	35,390	40,510
	80	64	29,680	33,990
	90	60	25,330	29,030
	100	56	21,900	25,170
	110	52	19,130	22,050
	120	47	16,840	19,480
	130	43	14,920	17,320
	140	37	13,280	15,480
180'*	150	32	11,860	13,900
	160	24	10,620	12,510
	170	14	9,520	11,280
	33	81	93,580	109,110
	35	80	86,540	100,610
	40	79	72,620	83,970
	50	76	54,360	62,490
	60	72	42,930	49,220
	70	69	35,090	40,210
	80	65	29,370	33,690
	90	62	25,020	28,750
	100	58	21,590	24,870
190'*	110	54	18,820	21,750
	120	50	16,540	19,170
	130	46	14,610	17,020
	140	41	12,980	15,180
	150	36	11,560	13,600
	160	31	10,320	12,220
	170	24	9,230	11,000
	180	14	8,250	9,910
	35	81	86,270	100,370
	40	79	72,340	83,710
	50	76	54,070	62,210
	60	73	42,630	48,940
	70	70	34,780	39,920
	80	67	29,060	33,390
	90	63	24,710	28,450
	100	60	21,280	24,570
	110	56	18,510	21,440



AMERICAN MODEL 72/0 LIFTING CRANE RATINGS—TAPERED TIP (CONTINUED)

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
190'	120	53	16,230	18,870
	130	49	14,300	16,710
	140	45	12,670	14,880
	150	40	11,250	13,300
	160	35	10,020	11,920
	170	30	8,930	10,700
	180	23	7,960	9,620
	190	13	7,080	8,650
200'	36	81	82,840	96,320
	40	80	72,060	83,450
	50	77	53,780	61,940
	60	74	42,330	48,650
	70	71	34,480	39,620
	80	68	28,750	33,090
	90	65	24,400	28,140
	100	62	20,970	24,260
	110	58	18,200	21,130
	120	55	15,910	18,560
	130	51	13,990	16,400
	140	48	12,350	14,570
	150	44	10,940	12,990
	160	39	9,710	11,610
	170	34	8,620	10,400
	180	29	7,660	9,320
	190	22	6,790	8,360
	200	13	6,000	7,480
210'	38	81	76,830	89,210
	40	80	71,780	83,200
	50	78	53,490	61,660
	60	75	42,030	48,360
	70	72	34,170	39,330
	80	69	28,440	32,790
	90	66	24,090	27,840
	100	63	20,660	23,950
	110	60	17,880	20,820
	120	57	15,600	18,250
	130	53	13,680	16,090
	140	50	12,040	14,260
	150	46	10,630	12,680
	160	42	9,400	11,300
	170	38	8,310	10,090
	180	34	7,350	9,020
	190	28	6,490	8,060
	200	22	5,700	7,190
	210	13	4,990	6,390
220'	39	81	73,950	85,850
	40	81	71,500	82,940
	50	78	53,190	61,380
	60	76	41,720	48,070
	70	73	33,860	39,030
	80	70	28,130	32,490
	90	67	23,770	27,530
	100	64	20,340	23,640
	110	62	17,570	20,510
	120	59	15,280	17,940
	130	55	13,360	15,780
	140	52	11,720	13,950
	150	49	10,310	12,370
	160	45	9,080	10,990
	170	41	8,000	9,780
	180	37	7,030	8,710
	190	33	6,170	7,750
	200	28	5,400	6,880
	210	21	4,690	6,100
	220	12	4,040	5,380
230'	41	81	68,910	79,940
	50	79	52,900	61,100
	60	76	41,420	47,780
	70	74	33,550	38,730
	80	71	27,820	32,180

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
230'	90	68	23,460	27,220
	100	66	20,020	23,330
	110	63	17,250	20,200
	120	60	14,960	17,620
	130	57	13,040	15,470
	140	54	11,400	13,630
	150	51	9,990	12,050
	160	48	8,760	10,670
	170	44	7,680	9,470
	180	40	6,720	8,390
	190	36	5,860	7,440
	200	32	5,080	6,570
	210	27	4,380	5,790
	220	21	3,740	5,080
	230	12	3,140	4,420
240'	43	81	64,390	74,660
	50	79	52,610	60,820
	60	77	41,120	47,490
	70	74	33,240	38,430
	80	72	27,510	31,880
	90	69	23,140	26,910
	100	67	19,700	23,020
	110	64	16,930	19,890
	120	61	14,640	17,310
	130	59	12,720	15,150
	140	56	11,080	13,310
	150	53	9,670	11,730
	160	50	8,440	10,360
	170	47	7,360	9,150
	180	43	6,400	8,080
	190	40	5,540	7,120
250'	44	81	62,150	67,240
	50	80	52,310	60,540
	60	77	40,810	47,190
	70	75	32,930	38,130
	80	73	27,190	31,570
	90	70	22,820	26,600
	100	68	19,380	22,710
	110	65	16,610	19,570
	120	63	14,320	16,990
	130	60	12,390	14,830
	140	57	10,760	13,000
	150	55	9,350	11,410
	160	52	8,120	10,040
	170	49	7,040	8,830
	180	46	6,080	7,760
	190	42	5,220	6,800
260'	46	81	58,250	61,170
	50	80	52,020	60,260
	60	78	40,510	46,900
	70	76	32,620	37,830
	80	73	26,880	31,260
	90	71	22,500	26,290
	100	69	19,060	22,390
	110	66	16,290	19,260
	120	64	13,990	16,680
	130	61	12,070	14,510
	140	59	10,430	12,680
	150	56	9,020	11,090
	160	53	7,790	9,720

Boom Length	Radius in Feet	Boom Angle Degrees	Side Frames Retracted	Side Frames Extended
260'	170	51	6,710	8,510
	180	48	5,751	7,440
	190	45	4,890	6,480
	200	41	4,120	5,630
	210	38	3,430	4,850
	220	34	2,790	4,140
	230	30	2,210	3,500
	240	25	1,680	2,900
270'	47	81	55,020	55,020
	50	80	51,720	53,630
	60	78	40,200	46,610
	70	76	32,310	37,530
	80	74	26,560	30,960
	90	72	22,190	25,980
	100	69	18,740	22,080
	110	67	15,960	18,940
	120	65	13,670	16,360
	130	62	11,750	14,190
	140	60	10,110	12,360
	150	58	8,700	10,770
	160	55	7,470	9,400
	170	52	6,390	8,190
	180	50	5,430	7,120
	190	47	4,570	6,160
280'	200	44	3,800	5,300
	210	41	3,100	4,530
	220	37	2,470	3,820
	230	34	1,890	3,180
	240	30	1,360	2,590
	49	81	50,190	50,190
	50	81	49,550	49,550
	60	79	39,900	43,940
	70	77	32,000	37,230
	80	74	26,240	30,650
	90	72	21,870	25,670
	100	70	18,420	21,770
	110	68	15,640	18,620
	120	66	13,350	16,040
	130	63	11,420	13,870
	140	61	9,780	12,030
	150	59	8,370	10,450
290'	160	56	7,140	9,070
	170	54	6,060	7,870
	180	51	5,100	6,790
	190	49	4,240	5,840
	200	46	3,470	4,980
	210	43	2,780	4,200
	220	40	2,140	3,500
	230	37	1,570	2,860
	240	33	1,030	2,270
	50	81	45,250	45,250
	60	79	39,590	40,550
	70	77	31,690	36,340
	80	75	25,930	30,340
	90	73	21,550	25,360
	100	71	18,100	21,450
	110	69	15,320	18,310
	120	67	13,020	15,720
	130	64	11,100	13,550
	140	62	9,460	11,710
	150	60	8,040	10,130
	160	58	6,810	8,750
	170	55	5,730	7,540
	180	53	4,770	6,470
	190	50	3,920	5,510
	200	48	3,150	4,660
	210	45	2,450	3,880
	220	42	1,820	3,180
	230	39	1,240	2,540
	240	36	—	1,950

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Load ratings do not exceed 75% of tipping with crane standing level on uniformly supporting surface. Safe loads depend on ground conditions, boom length, radius of operation and proper handling, all of which must be taken into consideration of user. "Radius in feet" is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets and other load-carrying devices are considered part of the load.

Ratings indicated in *italics* represent boom positions which *without load*, provide

280 ft. Boom plus 20 ft. No. 9 Jib
280 ft. Boom plus 30 ft. No. 9 Jib
270 ft. Boom plus 40 ft. No. 9 Jib
270 ft. Boom plus 50 ft. No. 9 Jib

280 ft. Boom plus 20 ft. No. 15 Jib
280 ft. Boom plus 30 ft. No. 15 Jib
270 ft. Boom plus 40 ft. No. 15 Jib

less than standard backward stability. Machine should be on firm level ground when working in these boom positions.

Hanger block is required for ratings over 55,000 lbs. Deduct 800 lbs. from above ratings when hanger block is in place.

Ratings marked (*) require retractable A-frame in fully raised position.

Crane, with side frames extended and G-D-E-F counterweight, will self-erect 290 ft. main boom with tapered tip less jib, or:

270 ft. Boom plus 50 ft. No. 15 Jib
290 ft. Boom plus 40 ft. No. 9HL Jib
280 ft. Boom plus 50 ft. No. 9HL Jib

280 ft. Boom plus 60 ft. No. 9HL Jib
270 ft. Boom plus 70 ft. No. 9HL Jib
270 ft. Boom plus 80 ft. No. 9HL Jib



JIB RATINGS

JIB OFFSET "A"

MAXIMUM JIB RATING IN POUNDS

NO. 9 JIB RATINGS				
	20 ft. Jib	30 ft. Jib	40 ft. Jib	50 ft. Jib
0 to 6 ft.	18,000	18,000	14,500	10,500
9 ft.	18,000	17,300	14,100	10,250
12 ft.	18,000	15,300	12,400	10,000
15 ft.	—	13,500	10,750	8,800
18 ft.	—	—	10,000	8,150
21 ft.	—	—	—	7,750
Effective Jib Weight at Boom Point	1,550	2,100	2,800	3,600

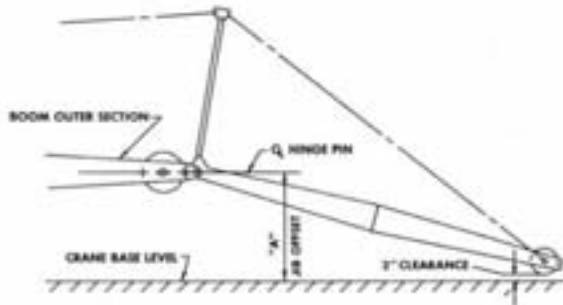
No. 9 Jib ratings are based on 100 ft. minimum boom length with tubular chord boom with hammerhead and 150 ft. minimum boom length with tubular chord boom with tapered tip.

NO. 15 JIB RATINGS				
	20 ft. Jib	30 ft. Jib	40 ft. Jib	50 ft. Jib
0 to 6 ft.	30,000	30,000	21,000	16,500
9 ft.	30,000	28,250	21,000	16,500
12 ft.	30,000	23,400	17,500	14,000
15 ft.	—	18,500	15,000	12,000
18 ft.	—	—	13,250	11,000
21 ft.	—	—	—	10,000
Effective Jib Weight at Boom Point	1,900	2,250	2,800	3,600

No. 15 jib ratings are based on 120 ft. minimum boom length with tubular chord boom with hammerhead and 150 ft. minimum boom length with tubular chord boom with tapered tip.

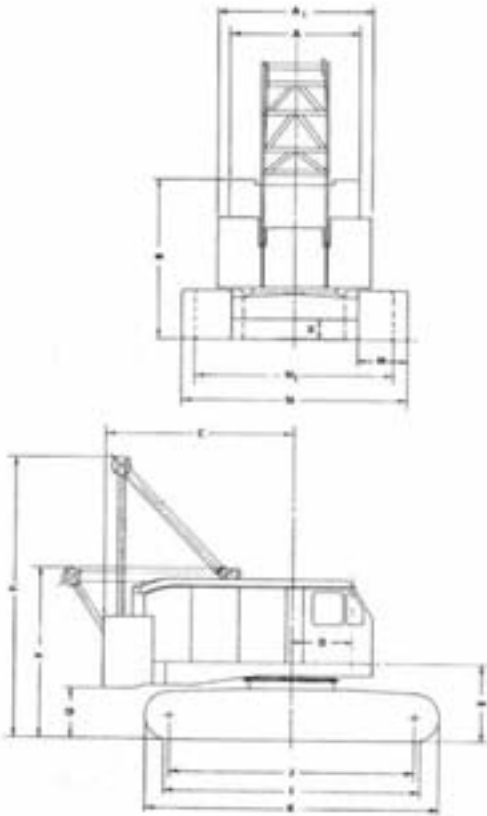
NO. 9HL JIB RATINGS					
	40 ft. Jib	50 ft. Jib	60 ft. Jib	70 ft. Jib	80 ft. Jib
0 to 8 ft.	19,000	17,000	14,500	12,500	10,500
12 ft.	16,600	14,800	12,600	11,300	9,600
16 ft.	14,400	12,800	11,600	10,100	8,600
20 ft.	12,000	11,000	10,300	9,000	8,000
24 ft.	—	—	9,000	8,000	7,000
28 ft.	—	—	8,000	7,000	6,200
32 ft.	—	—	—	—	5,400
Effective Jib Weight at Boom Point	1,850	2,350	2,750	3,700	4,300

No. 9HL Jib ratings are based on 160 ft. minimum boom length with tubular chord boom with tapered tip or hammerhead.



Jib ratings are based on the minimum boom length specified above. For ratings on shorter booms consult factory. The jib load rating is the lesser of: (a) the maximum jib rating, or (b) the main boom rating at the jib working radius, reduced by the effective jib weight and by the weight of all suspended load-carrying devices. The main boom rating with jib in place must be reduced by the effective jib weight, the weight of main fall blocks and slings, and twice the weight of jib tackle.

GENERAL DIMENSIONS



A	Width of Cab	11' 0"
A ₁	Width over Counterweight	13' 2"
B	Height Over Cab	13' 7½"
C	Tailswing	17' 1¼"
D	Center of Pivot to Center of Boom Foot	5' ¾"
E	Ground to Center Boom Foot	6' 9½"
F	Height Over A-Frame, Lowered	14' 6¾"
F ₁	Height Over A-Frame, Raised	24' 6½"
G	Ground to Bottom of Counterweight	4' 4¾"
H	Minimum Ground Clearance Under Crawler Base	1' 9"
I	Crawler Bearing Length	21' 0"
J	Center to Center Crawler Tumblers	19' 8"
K	Overall Length of Crawlers	23' 9"
M	Width of Tread Shoes (Standard)	44"
M ₁	Width of Tread Shoes (Optional)	38"
M ₂	Width of Tread Shoes (Optional)	50"
N	Overall Width Over Crawlers — Extended (with 38" shoes)	18' 3"
	Overall Width Over Crawlers — Extended (with 44" shoes)	18' 9"
	Overall Width Over Crawlers — Extended (with 50" shoes)	19' 3"
N ₁	Overall Width Over Crawlers — Retracted (with 38" shoes)	15' 9"
	Overall Width Over Crawlers — Retracted (with 44" shoes)	16' 3"
	Overall Width Over Crawlers — Retracted (with 50" shoes)	16' 9"

**MODEL 7270 GENERAL SPECIFICATIONS****UPPER MACHINERY****STANDARD ENGINE:**

CUMMINS MODEL NT-855-P-310 diesel engine with three stage torque converter; six cylinder, 5½" bore, 6" stroke, 855 cu in. displacement, rated 289 hp @ 2100 rpm converter input; 24 volt electric starting; battery charging alternator, variable speed engine and torque converter governor; glow plug starting; heavy duty dry type air cleaner.

ALTERNATE ENGINES RECOMMENDED FOR EXCAVATOR OR LIFT CRANE SERVICE.

*Alternate Engines with Single Stage Torque Converter:
(Delete Controlled Load Lowering)*

CUMMINS Model NT-855-P-310 diesel engine with single stage torque converter; six cylinder, 5½" bore, 6" stroke, 855 cu in. displacement, rated 289 hp @ 2100 rpm converter input; 24 volt electric starting; battery charging alternator; variable speed engine and torque converter governor; glow plug starting; heavy duty dry type air cleaner.

CATERPILLAR Model D-343-A diesel engine with single stage torque converter; six cylinder, turbo-charged, 5.4" bore, 6.5" stroke, 893 cu in. displacement; rated 305 hp @ 2050 rpm converter input; 24 volt electric starting; battery charging generator; variable speed engine and torque converter governor; heavy duty dry type air cleaner.

Alternate Engines with Three Stage Torque Converter:

CATERPILLAR Model D-343-A diesel engine with three stage torque converter; six cylinder, turbo-charged 5.4" bore, 6.5" stroke, 893 cu in. displacement; rated 289 hp @ 2000 rpm converter input; 24 volt electric starting; battery charging generator; variable speed engine and torque converter governor; heavy duty dry type air cleaner.

GENERAL MOTORS Model 12V-71 diesel engine with three stage torque converter; twelve cylinder, 4¼" bore, 5" stroke, 852 cu in. displacement, two valve; two cycle; rated 310 hp @ 2000 rpm converter input; 24 volt electric starting; battery charging alternator; variable speed engine and torque converter governor; ether starting kit; heavy duty dry type air cleaner.

ALTERNATE ENGINE RECOMMENDED FOR LIFT CRANE SERVICE ONLY.

GENERAL MOTORS Model 8V-71-N diesel engine with three stage torque converter; eight cylinder, 4¼" bore, 5" stroke, 568 cu in. displacement; four valve; two cycle; rated 284 hp @ 2100 rpm converter input; 24 volt electric starting; battery charging alternator; variable speed engine and torque converter governor; ether starting kit; heavy duty dry type air cleaner.

ALTERNATE ELECTRIC POWER:

(Delete Controlled Load Lowering)

150 hp, 220/440 volt, 3-phase, 60 cycle, 1800 rpm, open, squirrel cage electric motor with control equipment (across-the-line start); connection for outside power supply; collector rings at center pin.

FUEL TANK: 190 gallon capacity.

POWER TRANSMISSION: Multiple roller chain transmits power from engine to operating machinery; completely enclosed, running in oil for long trouble-free service.

COUNTERWEIGHT: "G-D-E-F," 96,000 lbs made up of basic hollow casting with inserts and overlays; securely bolted to machinery base; reduced for duty cycle service (drag, clam, grapple, hoe, magnet) to 59,000 lbs by removal of D₃, E₁ and E₂ overlays and F counterweight insert.

ROTATING MACHINERY BASE: Tapered deep girder construction extending straight through from boom foot to engine base and counterweight support; boom foot, shaft pillow blocks, A-frame and counterweight connections fall directly over girder for utmost simplicity and strength; girders wide spaced for wide boom foot and wide drum laggings; electric welded steel plate construction with bored and drilled holes located by jigs and fixtures to insure proper alignment.

LOAD AND HOOK ROLLERS: Large tapered load rollers transmit downward loads to machined upper roller path on carbody; tapered hook rollers transmit uplift loads to lower roller path on carbody; two sets double equalizing load rollers and two sets double equalizing hook rollers in front; two sets double equalizing hook rollers and two single load rollers in rear; rollers mounted on anti-friction bearings; adjustment for wear by means of eccentric hook roller axle.

DRIVE SHAFT ASSEMBLY: Independent primary drive shaft consists of forged alloy steel shaft with integral cut steel pinion; ductile iron roller chain sprocket with steel hub insert splined to shaft; shaft mounted in pressure grease lubricated anti-friction bearings. This shaft assembly has a single purpose of speed reduction and is not compromised by mounting clutches for other functions.

TRAVEL/SWING ASSEMBLY: Main clutch shaft is heat-treated alloy steel mounted in anti-friction bearings and splined to clutch spiders and cut tooth driving spur gear; bevel pinions are cut tooth hardened alloy steel, oil lubricated; bevel pinions on anti-friction bearings mounted in case; air controlled, tandem band, internal reversing clutches have extra thick moulded liners for long service life and stable operation; smooth operation for swing and travel assured by high responsive variable pressure air control. Vertical swing shaft is heat-treated alloy steel, mounted on bronze bushings in machinery base cover casting and gear case lower casting; swing pinion is cut tooth alloy steel, accurately matched with revolving bullgear; alloy cast iron brake wheel and cast steel jaw clutch are mounted on accurately cut splines; horizontal cut tooth spur gear is bronze bushed, running in oil; air controlled shifter for swing-travel jaw clutches. Vertical reverse shaft is heat-treated alloy steel, pressed into main swing clutch housing with lower end supported by bore in machinery base; hardened alloy steel integral cut tooth bevel gear and spur pinion is mounted on tapered roller bearings and running in oil; design insures permanent accurate alignment of mating bevel and spur gears; easily removed as a unit with main swing clutch shaft assembly.

INDEPENDENT SWING — AIR CONTROLLED FOR ERECTION CRANE SERVICE ONLY:

Smaller, moderate speed, internal air controlled tandem band clutches; all gears mounted in anti-friction bearings and running in oil; independent swing clutches connected to swing gearing at all times; main swing clutches may be used for independent travel when this arrangement is provided or may also be used for heavy duty swinging by operation of swing-travel shifter; foot operated contracting band swing brake on independent swing clutch ring.

INDEPENDENT SWING — HYDROSTATIC: (Optional) Variable displacement hydraulic swing motor supplied with constantly available high pressure oil by hydraulic accumulator

**AMERICAN MODEL 9270 LIFTING CRANE**

system; swing torque control in direct relation to swing lever; completely independent of other operations and engine speed; no slippage, hence no heat loss; plugging energy is stored in accumulator and used for accelerating in next cycle; as accumulator system stores swinging energy only a small pump is required; leaving more horsepower available for hoisting operation; hydraulic motor is flange-mounted at top of an inclined drive structure housing a double cut spur reduction and external air-controlled swing brake; ties into same lower bevel gear set as air-controlled independent swing; hydraulic motor is servo-controlled and feel of the load is built in through springs in control linkage.

MAIN DRUM ASSEMBLY: Twin alloy cast iron drums with integral brake and clutch surfaces, drums mounted in anti-friction bearings; drums skeleton type with split cast steel laggings bolted in place; alloy steel drum shaft mounted in anti-friction bearings in machinery base; clutch spiders and spur gear splined to drum shaft; air controlled clutches with tandem internal expanding bands with thick moulded liners; smooth operation assured by high responsive variable pressure air controls; large external contracting band drum brakes with extra thick moulded liners; raised cooling flange on brake drum for efficient, even dissipation of heat; brake foot pedal operated from operator's position; fully compensated air booster cylinder begins to energize at moderate brake pedal force to reduce effort without affecting the sensitive feel required for slipping loads; brake shafts and pins mounted on anti-friction bearings for responsive operation with minimum effort; brake and clutch surfaces stress relieved for smooth operation without scoring.

CONTROLLED LOAD LOWERING: Available for either or both main drums; drum is roller chain driven from clutch shaft forward of and below main drums; air operated internal expanding tandem band clutches controlled by forward motion of drum clutch lever; clutches and clutch shaft mounted on anti-friction bearings; in combination with three-stage torque converter permits lowering loads continuously under full control by engine throttle; can be used in combination with third drum with all controls completely independent whether one or both drums are equipped with load lowering. Controlled load lowering for one drum included as standard equipment; optional on second drum.

THIRD DRUM: (Optional) Mounted on dead shaft at shovel boom foot location forward of cab; roller chain driven from clutch shaft forward of and below main drum shaft; air operated internal expanding tandem band clutch and manual contracting band brake; clutch and clutch shaft mounted in anti-friction bearings; involute splines; may be used in combination with controlled load lowering with controls completely independent.

TUBULAR CHORD CRANE BOOM: Lightweight, pin-connected, deep section crane boom with chords of tubular T-1 steel and with tubular lattice; boom is 77" cross section and can be extended to 290 feet; the basic inner section is 30 ft long; a 40 ft long tapered intermediate section can be fitted either with a five sheave pin-connected hammerhead or with a 30 ft two sheave pin-connected outer section; the hammerhead is for heavy lifts; the tapered outer section is for long boom operations and has a second sheave for an auxiliary load line or for clam-shell service; tapered tip is closed throat design; a hanger block is included for multiple reeving of the load line with the tapered tip; center sections are available in 20 ft and 50 ft lengths, pin-connected; boom sections have built-in camber and belly lines are not required for long booms; boom suspension arrangement consists of two double 1 1/2" diameter pendant suspension cables extending from the outer bail to the boom point with thirteen part boom hoist line; pendants are added or removed for boom length changes; boom lengths of 250 ft or more require not less than three 50 ft center sections.

JIBS: Three different jibs are offered for single load line operation; the No. 9 and No. 15 jibs are basic 20 ft, two piece alloy steel chord angle construction with tubular lattice; both can be extended to 50 ft maximum length with the addition of 10 ft inserts; the lightweight No. 9HL jib is constructed with T-1 tubular chords and tubular lattice; basic length is 40 ft two piece which can be extended to 80 ft with the addition of 10 ft and 20 ft inserts.

SAFETY BOOM STOPS: Telescoping pipe safety boom stops for any length boom prevent overhoisting and backward boom motion due to failure of hoisting line or hoisting tackle; standard on all machines.

BOOM HOIST SAFETY SHUT OFF: Prevents the operator from over hoisting the boom; located at the bottom of boom and actuated when the boom reaches a predetermined angle; when actuated this valve cuts off air supply to boom hoist clutch and sets the boom hoist brake.

RETRACTABLE A-FRAME: Is raised or lowered by means of bail rigging with no special equipment required; standard on all machines, the counterweight is easily removed without outside assistance.

INDEPENDENT BOOM HOIST: Cast steel drum and integral cut steel spur gear operate on bronze bushings; boom hoist drum shaft is high carbon steel, mounted in bored holes in machinery base; single boom hoist drum with spring set, air released locking pawl provided to hold boom during operation or when machine is standing idle; integral cut tooth spur gear and clutch ring are mounted on anti-friction bearings on clutch shaft; shaft is high carbon steel and operates in bronze bushings pressed into machinery deck; clutch spider and pinion splined to clutch shaft. Boom hoist clutch is air controlled, internal expanding band; alloy cast iron brake wheel is keyed to shaft to facilitate removal; brake is spring set and air released with single valve control for both hoisting and lowering.

CONTROLLED BOOM LOWERING: Boom lowering speed limited by speed of engine; rapid, safe boom handling; slower boom lowering by reduced engine speed; overrunning sprag clutch mechanism mounted on independent shaft engages positively and smoothly; disconnect provided for reversed gear operations; shifter interlocked with boom brake to prevent "live boom."

CAB: Fully enclosed with glazed doors and windows; all safety glass windows mounted in rubber; removable windows in operator's cab; operator's compartment totally enclosed, shielding him from engine and machinery noise; door at rear of operator's compartment provides direct access to machinery; sliding doors on sides and rear; hinged door on operator's cab roof for vision; ladder to roof at left front; running boards standard; elevated operator's cab optional.

LOWER MACHINERY

CARBODY: Heavy duty cast alloy steel carbody of deep box construction; through-bored for accurate alignment of crawler axles and horizontal travel shaft; alloy cast steel bullgear and roller path welded to machined top of carbody; double tapered roller path is accurately machined to roller contour.

CENTER PIVOT TUBE: Cast steel center pivot tube integral with carbody; pressure lubricated bronze pivot bushings in rotating machinery base; horizontal load only — no uplift.



TRAVEL AND STEERING: Three section horizontal travel shaft for easy assembly and removal; bevel gearing and sliding jaw clutches fully enclosed and running in oil; single lever air control provides engaged, neutral and locked position of each multiple jaw clutch permitting straight ahead, long radius and short radius turns; interlock keeps one clutch engaged at all times eliminating danger of machine running away on a grade.

TRAVEL LOCK: Ratchet arrangement, air controlled from operator's position; permits travel in one direction while preventing movement in opposite direction; lock may also be set to prevent travel in either direction.

CRAWLER SIDE FRAMES: Cast steel tumbler yokes and axle sleeves electrically welded to rolled steel shapes form rigid crawler side frames; axle sleeves accurately bored for mounting to crawler axle.

CRAWLER ROLLERS: Large hardened cast steel crawler rollers mounted on heavy bronze bushings; spaced close together to prevent any possibility of tread shoes buckling up between rollers; axles drilled for pressure grease lubrication.

CRAWLER SHOES: Heavy, double wall, box section alloy steel castings for maximum strength and long wear; self-cleaning design prevents shoe breakage; 45 shoes on each side frame: 44" width standard; 38" or 50" width optional; through hardened pins, loaded in multiple shear.

CRAWLER DRIVE: Heavy cast steel drive tumblers, splined to drive sprocket axles; self-cleaning design; self-cleaning idler tumblers bronze bushed with pressure grease lubrication; stationary shafts mounted in side frames; alloy steel drive sprocket axles, splined to drive tumblers and sprockets; axles mounted in pressure grease lubricated bronze bushings; crawler chain is heavy alloy roller chain; cast steel self-cleaning sprockets, mounted outside crawler side frames for easy maintenance; unnecessary to brake chain when removing side frames.

CRAWLER DRIVE ADJUSTMENT: Drive chain and crawler shoe adjustment by means of hydraulic jack; rigid holding and positioning by shims; motion and wear between sprocket and crawler side frame eliminated; positive alignment of sprockets; hydraulic jack carried in tool box.

CRAWLER WIDTH ADJUSTMENT: Removable cast steel jaw clutch torque tubes are furnished between the carbody and side frames; in retracted position the side frame jaw clutch directly engages the jaw clutch at side of carbody; machine can be operated in narrow position under restricted conditions or in extended position with full crane ratings.

GENERAL

CONTROLS: Graduated air controls, pioneered by AMERICAN, put "feel" at every operator's finger-tips, insure higher production, more accurate control; air line alcohol dispenser, to absorb excess moisture in air system due to condensation.

MATERIALS: Gear and pinions are heat-treated alloy or high carbon steel; cut teeth on all gears except rotating ring gear which has accurately moulded teeth.

Involute splines are used throughout machine for maximum tooth strength through minimum diameter where needed; self centering; equalized bearing and stresses among all teeth; smooth tooth surface; easy interchangeability of parts.

Anti-friction bearings are used on all main or high speed shafts and wherever practical to provide friction-free, smooth operation with minimum maintenance.

LUBRICATION: All anti-friction bearings and bronze bushings requiring short period lubrication are provided with pressure grease fittings; swing deck gears are provided with oil bath lubrication; drum gear train and the swing bullgear are arranged for grease lubrication.

ATTACHMENTS: Attachments for duty cycle work in combination with lift crane service are available for 9270. Counterweight must be reduced to 59,000 lbs.

Dragline attachment includes full revolving fairlead, dirt-guard under dragline drum, drum lagging, 1 1/4" hoist line and 1 3/4" dragline.

Clamshell attachment for clam or grapple work includes Rud-O-Matic tagline winder mounted in boom, drum lagging, 1 1/4" holding line and 1 1/4" closing line.

PERFORMANCE

Rated Travel Speed: 0.8 MPH

Rated Swing Speed: 2.28 RPM

Single Line Speed:

Crane-Clam Hoist 165 FPM

Magnet, Drag Hoist 200 FPM

Drag Pull-In 145 FPM

Third Drum 192 FPM

OR 142 FPM

Line Pull:

Crane-Clam Hoist 40,000 LBS SLP

Magnet, Drag Hoist 33,000 LBS SLP

Drag Pull-In 45,000 LBS SLP

Third Drum 15,000 LBS SLP

OR 21,000 LBS SLP

Weight: Basic 9270 Lift Crane (70 FT Boom With Hammerhead) 299,600 LBS

Ground Pressure 13.5 PSI

Components removable for shipment:

Counterweight 96,000 LBS

Crane block 3,025 LBS

Hammerhead 4,600 LBS

Boom outer 2,325 LBS

Boom inner 4,000 LBS

Telescopic boom stops 300 LBS

Outer bail assembly 2,450 LBS

A-frame 3,900 LBS

Side frames (2) 63,760 LBS

Crawler axles (4) 11,680 LBS

Torque tubes (2) 920 LBS

Carbody 24,200 LBS

NOTE: In accordance with varying material situations and the Company's policy of constant product improvement these specifications subject to change without notice and without incurring responsibility to units previously sold.



MODEL 7270 DUTY CYCLE RATINGS WITH 59,000 LB. COUNTERWEIGHT

Boom Length	Radius in Feet	Boom Angle Degrees	Lifting Crane Rating	Clamshell & Magnet Rating	Dragline Rating
100'	21	81	168,270	28,000	27,000
	25	78	128,320	28,000	27,000
	30	76	98,580	28,000	27,000
	35	73	79,740	28,000	27,000
	40	70	66,730	28,000	27,000
	50	63	49,930	28,000	27,000
	60	57	39,540	28,000	27,000
	70	50	32,480	28,000	27,000
	80	41	27,350	24,620	27,000
	90	32	23,450	21,110	23,450
	100	18	20,370	18,330	20,370
110'	23	81	145,530	28,000	27,000
	25	80	128,150	28,000	27,000
	30	77	98,380	28,000	27,000
	35	74	79,520	28,000	27,000
	40	71	66,500	28,000	27,000
	50	66	49,690	28,000	27,000
	60	60	39,290	28,000	27,000
	70	54	32,220	28,000	27,000
	80	47	27,100	24,390	27,000
	90	39	23,200	20,880	23,200
	100	30	20,140	18,130	20,140
	110	17	17,650	15,890	17,650
120'	24	81	136,140	28,000	27,000
	25	80	127,980	28,000	27,000
	30	78	98,170	28,000	27,000
	35	76	79,290	28,000	27,000
	40	73	66,260	28,000	27,000
	50	68	49,440	28,000	27,000
	60	63	39,030	28,000	27,000
	70	57	31,960	28,000	27,000
	80	51	26,830	23,740	26,830
	90	45	22,940	20,650	22,940
	100	38	19,880	17,890	19,880
	110	29	17,410	15,670	17,410
	120	17	15,350	13,820	15,350
130'	26	81	120,530	28,000	—
	30	79	97,960	28,000	—
	35	77	79,060	28,000	—

Boom Length	Radius in Feet	Boom Angle Degrees	Lifting Crane Rating	Clamshell & Magnet Rating	Dragline Rating
130'	40	74	66,020	28,000	—
	50	70	49,170	28,000	—
	60	65	38,770	28,000	—
	70	60	31,690	28,000	—
	80	55	26,560	23,900	—
	90	49	22,670	20,400	—
	100	43	19,610	17,650	—
	110	36	17,140	15,430	—
	120	28	15,100	13,590	—
	130	16	13,370	12,030	—
140'*	27	81	113,810	28,000	—
	30	80	97,750	28,000	—
	35	78	78,830	28,000	—
	40	76	65,770	28,000	—
	50	71	48,910	28,000	—
	60	67	38,490	28,000	—
	70	62	31,410	28,000	—
	80	58	26,280	23,650	—
	90	53	22,390	20,150	—
	100	47	19,330	17,400	—
	110	41	16,860	15,140	—
	120	35	14,830	13,350	—
	130	27	13,110	11,800	—
	140	15	11,640	10,480	—
150'*	29	81	102,390	—	—
	30	80	97,530	—	—
	35	78	78,590	—	—
	40	77	65,520	—	—
	50	73	48,640	—	—
	60	69	38,210	—	—
	70	64	31,130	—	—
	80	60	25,990	—	—
	90	56	22,100	—	—
	100	51	19,040	—	—
	110	46	16,580	—	—
	120	40	14,540	—	—
	130	34	12,830	—	—
	140	26	11,370	—	—
	150	15	10,100	—	—

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Rating marked (*) require retractable A-Frame in fully raised position.

Crane ratings do not exceed 75% of tipping load with side frames extended.

Maximum recommended dragline boom length is 100 ft. For duty cycle service (dragline, clamshell, grapple, backhoe, magnet, etc.) counterweight must be reduced to 59,000 lb. by removing D₂, E₁ and E₂ overlays and F counterweight insert.