



Model HC230 Crawler Crane - Ratings In Pounds
 77ST Hammerhead Tip Boom
 150,800 Pound Upper Counterweight
 32,000 Pound Carbody Counterweight

BOOM LENGTH (FEET)	RADIUS (FEET)	BOOM ANGLE (DEGREES)	360 DEGREE RATING (POUNDS)	FROM BOOM POINT TO GROUND (FEET)
60' BOOM	14	83.5	460,000 *	68
	15	82.6	460,000 *	68
	20	77.8	373,680 *	67
	25	72.9	298,970 *	65
	30	67.8	238,210	63
	35	62.5	188,200	61
	40	57.0	155,000	58
	50	44.4	113,540	49
70' BOOM	60	27.4	88,670	34
	15	83.6	460,000 *	78
	20	79.5	373,440 *	77
	25	75.4	298,770 *	76
	30	71.1	238,350	74
	35	66.7	188,270	72
	40	62.2	155,030	69
	50	52.3	113,540	62
80' BOOM	60	40.9	88,720	52
	70	25.2	72,060	36
	16	83.7	460,000 *	88
	20	80.8	373,200 *	87
	25	77.2	298,580 *	86
	30	73.5	238,440	85
	35	69.8	188,320	83
	40	65.9	155,070	81
90' BOOM	50	57.7	113,570	75
	60	48.7	88,760	67
	70	38.0	72,120	56
	80	23.5	60,300	38
	17	83.7	438,910 *	98
	20	81.8	372,960 *	97
	25	78.6	298,390 *	96
	30	75.4	238,400	95
90' BOOM	35	72.1	188,210	94
	40	68.7	154,920	92
	50	61.7	113,380	87
	60	54.1	88,550	80
	70	45.7	71,920	71
	80	35.7	60,150	59
	90	22.0	51,190	40





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100' BOOM	18	83.8	414,150 *	108
	20	82.6	372,720 *	108
	25	79.8	298,200 *	107
	30	76.9	238,320	106
	35	73.9	188,080	104
	40	70.9	154,780	102
	50	64.7	113,210	98
	60	58.2	88,410	92
	70	51.1	71,750	85
	80	43.2	60,020	75
	90	33.8	51,080	62
	100	20.8	44,120	41
110' BOOM	19	83.8	392,210 *	118
	20	83.3	372,490 *	118
	25	80.7	298,010 *	117
	30	78.1	238,290	116
	35	75.4	188,050	115
	40	72.7	154,750	113
	50	67.2	113,180	109
	60	61.4	88,380	104
	70	55.2	71,720	98
	80	48.5	60,020	89
	90	41.0	51,090	79
	100	32.1	44,150	65
	110	19.8	38,590	43
120' BOOM	20	83.9	367,710 *	128
	25	81.5	297,820 *	127
	30	79.1	238,170	126
	35	76.6	187,860	125
	40	74.2	154,530	123
	50	69.1	112,910	120
	60	63.9	88,090	115
	70	58.5	71,410	110
	80	52.7	59,710	103
	90	46.3	50,780	94
		100	39.2	43,840
	110	30.7	38,280	67
	120	18.9	33,720	45





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130' BOOM	21	83.9	333,250 *	138
	25	82.1	297,630 *	137
	30	79.9	237,980	136
	35	77.7	187,640	135
	40	75.4	154,290	134
	50	70.8	112,640	131
	60	66.1	87,830	127
	70	61.1	71,120	121
	80	56.0	59,450	115
	90	50.4	50,510	107
	100	44.4	43,560	98
	110	37.6	38,010	86
	120	29.4	33,460	70
130	18.1	29,770	46	
140' BOOM	22	83.9	301,050 *	148
	25	82.7	292,400 *	147
	30	80.6	237,830	146
	35	78.6	187,420	145
	40	76.5	154,030	144
	50	72.2	112,340	141
	60	67.9	87,500	137
	70	63.4	70,770	133
	80	58.7	59,110	127
	90	53.7	50,160	120
	100	48.5	43,200	112
	110	42.7	37,640	102
	120	36.1	33,100	89
130	28.3	29,450	73	
140	17.4	26,200	48	
150' BOOM	23	83.9	269,490 *	158
	25	83.2	268,500 *	157
	30	81.3	237,580	157
	35	79.3	187,140	156
	40	77.4	153,740	155
	50	73.4	112,030	152
	60	69.4	87,190	148
	70	65.3	70,450	144
	80	61.0	58,800	139
	90	56.5	49,840	132
	100	51.8	42,880	125
	110	46.7	37,320	116
	120	41.1	32,770	105
130	34.8	29,170	92	
140	27.3	25,930	75	
150	16.8	23,140	49	





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BOOM LENGTH (FEET)	RADIUS (FEET)	BOOM ANGLE (DEGREES)	360 DEGREE RATING (POUNDS)	FROM BOOM POINT TO GROUND (FEET)
160' BOOM	24	84.0	232,350 *	168
	25	83.6	231,880 *	167
	30	81.8	230,130 *	167
	35	80.0	186,880	166
	40	78.2	153,480	165
	50	74.5	111,780	162
	60	70.8	86,960	159
	70	66.9	70,210	155
	80	63.0	58,590	150
	90	58.9	49,630	144
	100	54.6	42,670	138
	110	50.0	37,110	130
	120	45.1	32,810	120
	130	39.8	29,000	109
	140	33.7	25,780	95
150	26.4	23,010	77	
160	16.2	20,590	50	
170' BOOM	25	84.0	200,960 *	178
	30	82.3	199,300 *	177
	35	80.6	187,040	176
	40	78.9	153,230	175
	50	75.4	111,470	173
	60	71.9	86,640	170
	70	68.3	69,850	166
	80	64.7	58,240	161
	90	60.9	49,260	156
	100	56.9	42,280	150
	110	52.8	36,710	143
	120	48.4	32,440	134
	130	43.7	28,630	124
	140	38.5	25,410	112
	150	32.6	22,630	98
160	25.6	20,230	79	
170	15.7	18,120	52	





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180' BOOM	26	84.0	174,950 *	187
	30	82.7	173,590 *	187
	35	81.1	172,260 *	186
	40	79.5	152,920	185
	50	76.2	111,140	183
	60	73.0	86,300	180
	70	69.6	69,500	177
	80	66.2	57,900	172
	90	62.6	48,920	167
	100	59.0	41,940	162
	110	55.2	36,360	155
	120	51.2	32,110	147
	130	46.9	28,300	138
	140	42.4	25,070	128
	150	37.4	22,310	116
160	31.7	19,900	101	
170	24.8	17,800	82	
180	15.2	15,930	53	
190' BOOM	28	83.7	155,410 *	197
	30	83.1	155,140 *	197
	35	81.6	153,460 *	196
	40	80.0	151,970 *	195
	50	77.0	110,820	193
	60	73.9	85,960	191
	70	70.7	69,130	187
	80	67.5	57,530	183
	90	64.2	48,540	179
	100	60.8	41,540	173
	110	57.2	35,950	167
	120	53.6	31,730	160
	130	49.7	27,910	152
	140	45.6	24,680	143
	150	41.2	21,910	132
160	36.3	19,510	119	
170	30.8	17,410	104	
180	24.1	15,550	84	
190	14.8	13,890	54	





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200' BOOM	29	83.7	137,310 *	207
	30	83.4	137,010 *	207
	35	82.0	135,540 *	206
	40	80.5	134,070 *	206
	50	77.6	110,470	204
	60	74.7	85,600	201
	70	71.7	68,760	198
	80	68.7	57,170	194
	90	65.6	48,160	190
	100	62.4	41,170	185
	110	59.1	35,570	179
	120	55.7	31,390	172
	130	52.1	27,560	165
	140	48.4	24,320	156
	150	44.4	21,560	147
	160	40.1	19,150	135
	170	35.4	17,050	122
180	30.0	15,200	106	
190	23.5	13,550	86	
200	14.4	12,070	56	
210' BOOM	30	83.7	121,970 *	217
	35	82.4	120,830 *	217
	40	81.0	120,650 *	216
	50	78.2	110,600	214
	60	75.4	85,290	211
	70	72.6	68,440	208
	80	69.7	56,870	205
	90	66.8	47,870	201
	100	63.8	40,860	196
	110	60.7	35,270	191
	120	57.5	31,110	184
	130	54.2	27,280	178
	140	50.8	24,050	170
	150	47.1	21,280	161
	160	43.2	18,890	151
	170	39.1	16,780	139
	180	34.5	14,940	125
190	29.2	13,280	109	
200	22.9	11,810	88	
210	14.0	10,500	57	





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220' BOOM	31	83.8	111,710 *	227
	35	82.7	110,600 *	227
	40	81.4	109,300 *	226
	50	78.8	106,900 *	224
	60	76.1	84,960	222
	70	73.4	68,080	219
	80	70.7	56,510	216
	90	67.9	47,490	212
	100	65.1	40,470	207
	110	62.1	34,870	202
	120	59.2	30,730	196
	130	56.1	26,890	190
	140	52.9	23,660	183
	150	49.5	20,880	174
	160	46.0	18,480	165
	170	42.2	16,380	154
180	38.1	14,530	142	
190	33.6	12,880	128	
200	28.5	11,410	111	
210	22.4	10,080	90	
220	13.7	8,880	58	
230' BOOM	32	83.8	100,910 *	237
	35	83.0	100,110 *	237
	40	81.8	98,820 *	236
	50	79.3	96,320 *	234
	60	76.7	84,600	232
	70	74.2	67,700	229
	80	71.5	56,150	226
	90	68.9	47,120	222
	100	66.2	40,100	218
	110	63.5	34,480	213
	120	60.6	30,360	208
	130	57.7	26,540	202
	140	54.7	23,290	195
	150	51.6	20,510	187
	160	48.3	18,110	179
	170	44.9	16,000	169
180	41.2	14,150	158	
190	37.2	12,510	146	
200	32.9	11,030	131	
210	27.9	9,710	114	
220	21.8	8,510	92	
230	13.4	7,430	59	





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BOOM LENGTH (FEET)	RADIUS (FEET)	BOOM ANGLE (DEGREES)	360 DEGREE RATING (POUNDS)	FROM BOOM POINT TO GROUND (FEET)
240' BOOM	33	83.8	90,870 *	247
	35	83.3	90,360 *	247
	40	82.1	89,110 *	246
	50	79.7	86,760 *	244
	60	77.3	84,250	242
	70	74.8	67,320	240
	80	72.3	55,780	237
	90	69.8	46,730	233
	100	67.3	39,700	229
	110	64.6	34,080	225
	120	62.0	29,980	219
	130	59.2	26,140	214
	140	56.4	22,890	207
	150	53.5	20,110	200
	160	50.4	17,700	192
	170	47.2	15,590	183
	180	43.9	13,730	173
	190	40.3	12,080	162
	200	36.4	10,610	149
	210	32.1	9,280	134
220	27.3	8,090	116	
230	21.4	7,000	93	
240	13.1	6,010	60	
250' BOOM	34	83.8	82,230 *	257
	35	83.6	81,990 *	257
	40	82.4	80,840 *	256
	50	80.1	80,560 *	255
	60	77.8	79,710 *	253
	70	75.4	67,500	250
	80	73.1	55,410	247
	90	70.7	46,350	244
	100	68.2	39,310	240
	110	65.7	33,680	236
	120	63.2	29,600	231
	130	60.6	25,750	225
	140	57.9	22,510	219
	150	55.2	19,720	212
	160	52.3	17,310	205
	170	49.3	15,210	197
	180	46.2	13,350	187
	190	42.9	11,690	177
	200	39.4	10,220	165
	210	35.7	8,890	152
220	31.5	7,700	137	
230	26.7	6,610	118	
240	20.9	5,630	95	
250	12.8	4,720	61	





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 **WARNING**

This rating chart is invalid if the crane has been modified or altered by use of other than GENUINE AMERICAN PARTS as such modifications or alterations may affect its capacity or safe operation. See American Crane Corporation Service Bulliten #259.

Ratings in this chart are in POUNDS and do not exceed the percentage of tipping specified for this crane by ANSI B30.5. All ratings require that the crane be standing level on a firm uniformly supporting surface.

Do not lift loads in excess of those shown on this chart. Lifting loads in excess of those shown or operation not in accordance with good operating practice, including limitations shown on page 3499 of Operator's Manual, can cause tipping, structural damage or catastrophic failure.

Asterisk (*) areas on this chart indicate ratings which are limited by strength of material or factors other than stability (tipping).

" RADIUS IN FEET " is the horizontal distance at ground level from the crane centerline of rotation to a vertical line through the center of gravity of the suspended load.

When using the main boom fall with jib in place, the main fall ratings must be reduced by the jib effective weight shown on the jib rating chart plus twice the weight of all suspended blocks, slings, rope, etc., at the jib fall. See Appendix A.

When using the main boom fall with boom tip extension in place, the main fall ratings must be reduced by the weight of the boom tip extension plus twice the weight of all suspended blocks, slings, rope, etc., at the boom tip extension fall. See Appendix A.

Blocks, slings, buckets and other load carrying devices are considered part of the load. The weight of standard hoisting ropes for the rating at a given radius has been calculated as part of the boom point load and need not be considered in determining net allowable loads. See Appendix A.

This chart was developed exclusively for use with a boom only. Under no circumstances are these ratings to be interpreted for use with a jib.

Ratings shown on this chart make no allowance for such factors as out of plumb loads, wind, poor soil conditions, improper inflation of rubber tires and dynamic effects due to excessive operating speeds. The user (operator) must exercise judgement to make allowance for these conditions. See page 3499 of Operator's Manual for detailed information.

No account is taken of the wind force on the load. This effect, which can be substantial for loads with large surface areas, must be considered by the user. In any wind it is strongly recommended that taglines be used to control the load.





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BOOM HOIST LINE is 18 parts of 7/8 inch diameter 6 x 26, WS, FW, RAL, IWRC, EIPS wire rope with a minimum breaking strength of 79,600 pounds.

BOOM PENDANT SUSPENSION is 4 parts of 1-3/8 inch diameter EEIPS wire rope with a minimum breaking strength of 211,000 pounds.

MAIN LOAD LINE is 1-1/8 inch diameter 6x25, FW, RRL, IWRC, EEIPS wire rope with a minimum breaking strength of 143,000 pounds.

ALTERNATE LOAD LINE (ROTATION RESISTANT) –
 1-1/8 inch diameter BRIDON ENDURANCE DYFORM 34LR Grade 2160 wire rope with a minimum breaking strength of 167,200 pounds.

ERECTION

Erection "OVER THE END" is with the boom over the idler end with idler tumblers blocked (See *HC230 Operator's Manual* for blocking instructions) "OVER THE SIDE" is with the boom 90° to the sideframes. Blocks, slings and other load carrying devices must be on the ground during erection.

77ST HAMMERHEAD TIP BOOM MAXIMUM BOOM & JIB SELF-ERECTION DATA				
JIB	OVER-THE-SIDE		OVER-THE-END BLOCKED	
	BOOM LENGTH (FEET)	JIB LENGTH (FEET)	BOOM LENGTH (FEET)	JIB LENGTH (FEET)
16HL	250	100	250	100





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LOAD HOISTING INFORMATION - 1-1/8 inch diameter EEIPS wire rope			
MAXIMUM LIFTING CAPACITY - LBS.	MINIMUM PARTS OF LINE	MAXIMUM HOISTING DISTANCE - FEET	
		MAIN HOIST	AUX HOIST
460,000	12	105	105
449,420	11	110	110
408,570	10	130	130
367,710	9	145	145
326,850	8	160	160
286,000	7	185	185
245,140	6	215	215
204,280	5	260	260
163,420	4	325	325
122,570	3	435	435
81,710	2	655	655
40,850	1	1,310	1,310

LOAD HOISTING INFORMATION (ROTATION RESISTANT LOAD LINE)			
1-1/8 inch diameter BRIDON ENDURANCE DYFORM 34LR Grade 2160 wire rope			
MAXIMUM LIFTING CAPACITY - LBS.	MINIMUM PARTS OF LINE	MAXIMUM HOISTING DISTANCE - FEET	
		MAIN - (FRONT)	AUX. - (REAR)
401,280	12	105	105
367,840	11	110	110
334,400	10	130	130
300,960	9	145	145
267,520	8	160	160
234,080	7	185	185
200,640	6	215	215
167,200	5	260	260
133,760	4	325	325
100,320	3	435	435
66,880	2	655	655
33,440	1	1,310	1,310





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BOOM COMPOSITION CHART - 77ST HAMMERHEAD							
BOOM LENGTH (FEET)	BOOM SECTIONS						
	25' 92HI INNER	15' 92/77 TRANSITION	10' 77S CENTER	20' 77S CENTER	50' 77S CENTER	19.5' 77HL OUTER	0' HAMMER HEAD
60	1	1	0	0	0	1	1
70	1	1	1	0	0	1	1
80	1	1	0	1	0	1	1
90	1	1	1	1	0	1	1
100	1	1	0	2	0	1	1
110	1	1	0	0	1	1	1
120	1	1	1	0	1	1	1
130	1	1	0	1	1	1	1
140	1	1	1	1	1	1	1
150	1	1	0	2	1	1	1
160	1	1	0	0	2	1	1
170	1	1	1	0	2	1	1
180	1	1	0	1	2	1	1
190	1	1	1	1	2	1	1
200	1	1	0	2	2	1	1
210	1	1	0	0	3	1	1
220	1	1	1	0	3	1	1
230	1	1	0	1	3	1	1
240	1	1	1	1	3	1	1
250	1	1	0	2	3	1	1

