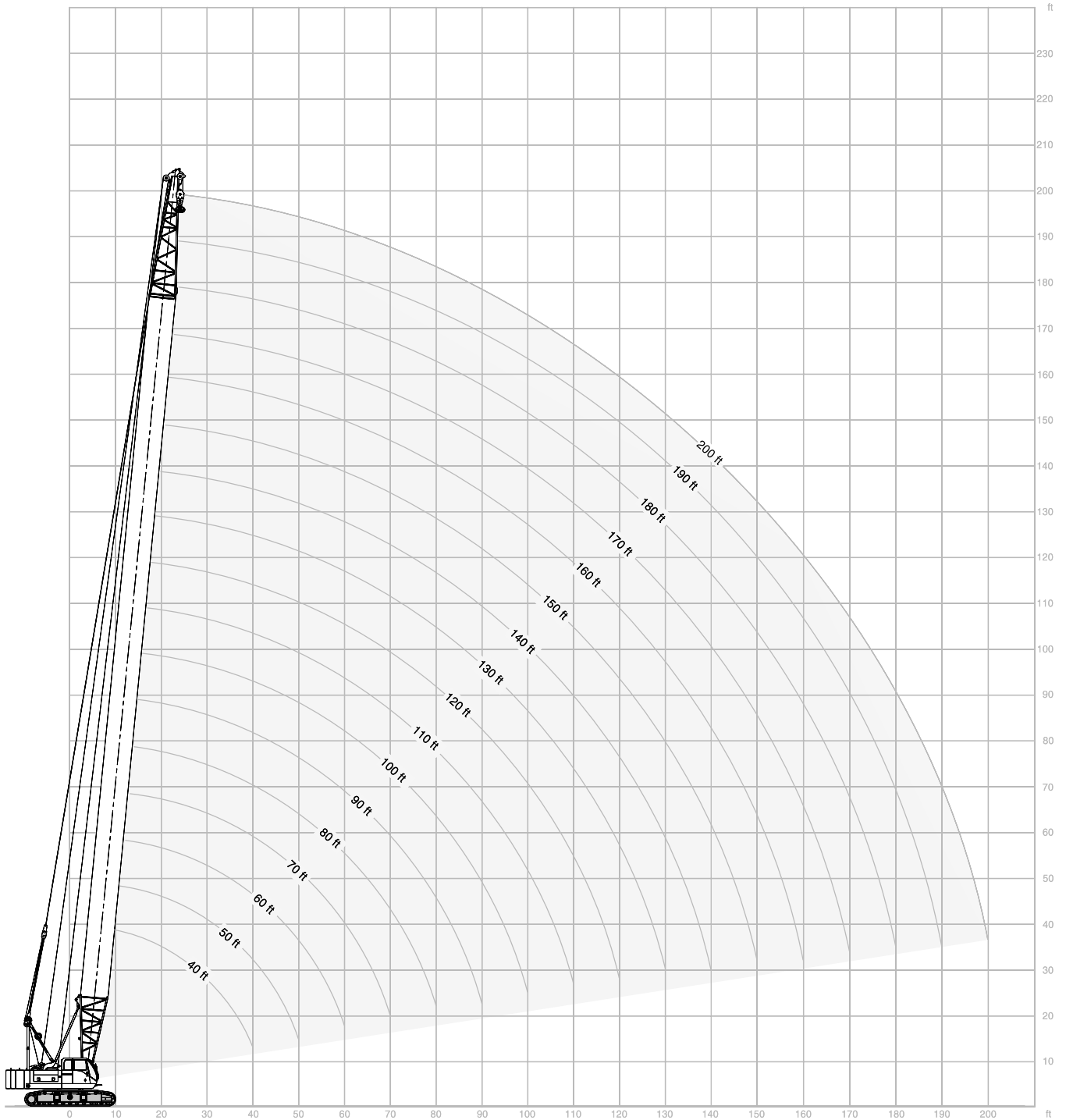




LIFTING CHARTS - Crawler Cranes

TEREX MODEL HC 80 - 80 TON CAPACITY

**RANGE DIAGRAM, 47HI BOOM**



# STERLING CRANE

## WITH 47HI OFFSET TIP BOOM

 58,100 lb

360°

ANSI B 30.5

### 40' (12.2 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
11	80.5	160,000*	45
12	79.0	160,000*	45
15	74.6	141,480	44
20	67.0	87,810	42
25	58.8	63,360	40
30	49.9	49,350	36
35	39.5	40,320	31
40	25.8	33,970	23

### 50' (15.2 m) Boom length

13	80.1	160,000*	55
15	77.8	141,440	54
20	71.8	87,750	53
25	65.6	63,280	51
30	59.1	49,250	48
35	52.0	40,220	45
40	44.2	33,860	40
50	22.9	25,540	25

### 60' (18.3 m) Boom length

14	80.8	145,370*	65
15	79.8	141,380	64
20	74.9	87,660	63
25	69.9	63,170	62
30	64.7	49,120	60
35	59.2	40,100	57
40	53.4	33,730	54
50	40.2	25,400	44
60	20.8	20,230	27

### 70' (21.3 m) Boom length

16	80.5	125,040*	74
20	77.1	87,590	74
25	72.9	63,090	72
30	68.5	49,040	71
35	64.0	40,020	68
40	59.3	33,640	66
50	49.2	25,310	58
60	37.0	20,150	48
70	19.2	16,580	28

### 80' (24.4 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
17	80.9	109,250*	84
20	78.8	87,470	84
25	75.1	62,960	83
30	71.3	48,880	81
35	67.5	39,870	79
40	63.5	33,480	77
50	55.1	25,140	71
60	45.8	20,000	63
70	34.5	16,430	51
80	17.9	13,830	30

### 90' (27.4 m) Boom length

19	80.7	94,540	94
20	80.0	87,330	94
25	76.8	62,810	93
30	73.5	48,720	92
35	70.1	39,720	90
40	66.7	33,320	88
50	59.5	24,970	83
60	51.7	19,840	76
70	43.0	16,260	67
80	32.5	13,660	54
90	16.9	11,690	32


### 100' (30.5 m) Boom length

21	80.4	80,910	104
25	78.1	62,690	103
30	75.2	48,580	102
35	72.2	39,590	101
40	69.1	33,190	99
50	62.8	24,840	94
60	56.1	19,720	88
70	48.9	16,130	81
80	40.7	13,540	71
90	30.7	11,560	56
100	16.0	10,010	33

### 110' (33.5 m) Boom length

22	80.8	72,040*	114
25	79.2	62,530	113
30	76.5	48,420	112
35	73.8	39,430	111
40	71.1	33,020	109
50	65.5	24,650	105
60	59.6	19,560	100
70	53.3	15,970	94
80	46.4	13,360	85
90	38.7	11,380	74
100	29.2	9,840	59
110	15.2	8,590	34

## KEY

 Counterweight

CB Central ballast

# STERLING CRANE

## WITH 47HI OFFSET TIP BOOM

58,100 lb

360°

ANSI B 30.5

### 120' (36.6 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
24	80.6	60,160 *	124
25	80.1	60,160 *	124
30	77.7	48,260	123
35	75.2	39,260	121
40	72.7	32,850	120
50	67.6	24,470	116
60	62.3	19,390	112
70	56.8	15,800	106
80	50.8	13,190	98
90	44.3	11,210	89
100	37.0	9,660	78
110	28.0	8,410	62
120	14.5	7,390	36

### 130' (39.6 m) Boom length

25	80.9	50,970 *	134
30	78.6	48,100	133
35	76.4	39,120	132
40	74.1	32,700	130
50	69.4	24,320	127
60	64.7	19,240	123
70	59.6	15,650	118
80	54.4	13,040	111
90	48.7	11,060	103
100	42.5	9,510	93
110	35.4	8,250	81
120	26.8	7,230	64
130	13.9	6,380	37

### 140' (42.7 m) Boom length

27	80.7	42,380 *	144
30	79.5	42,370 *	143
35	77.4	38,950	142
40	75.3	32,530	141
50	71.0	24,140	138
60	66.6	19,070	134
70	62.0	15,480	129
80	57.3	12,860	123
90	52.2	10,880	116
100	46.8	9,330	108
110	40.9	8,070	97
120	34.1	7,040	84
130	25.8	6,180	66
140	13.4	5,470	38

### 150' (45.7 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
28	80.9	36,630 *	154
30	80.2	36,540 *	153
35	78.2	36,070 *	152
40	76.3	32,360	151
50	72.3	23,960	148
60	68.2	18,900	145
70	64.0	15,310	140
80	59.7	12,690	135
90	55.1	10,710	128
100	50.3	9,150	121
110	45.1	7,890	112
120	39.4	6,860	101
130	32.9	6,000	87
140	24.9	5,270	69
150	12.9	4,650	39

### 160' (48.8 m) Boom length

30	80.8	31,770 *	163
35	79.0	31,370 *	162
40	77.1	30,790 *	161
50	73.4	23,800	159
60	69.7	18,750	155
70	65.8	15,150	151
80	61.8	12,530	146
90	57.6	10,550	141
100	53.2	8,990	134
110	48.6	7,730	125
120	43.6	6,690	116
130	38.1	5,830	104
140	31.8	5,100	90
150	24.1	4,480	71
160	12.5	3,950	40

### 170' (51.8 m) Boom length

31	81.0	27,710 *	173
35	79.6	27,340 *	173
40	77.9	26,810 *	172
50	74.4	23,610	169
60	70.9	18,580	166
70	67.3	14,980	162
80	63.6	12,360	158
90	59.7	10,360	152
100	55.7	8,800	146
110	51.5	7,540	139
120	47.1	6,510	130
130	42.2	5,650	120
140	36.9	4,920	108
150	30.8	4,290	93
160	23.4	3,750	73
170	12.1	3,290	41

# STERLING CRANE

## WITH 47HI OFFSET TIP BOOM

58,100 lb

360°

ANSI B 30.5

### 180' (54.9 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
33	80.9	24,240 *	183
35	80.2	24,110 *	183
40	78.6	23,210 *	182
50	75.3	20,080 *	180
60	72.0	18,410	177
70	68.6	14,800	173
80	65.1	12,180	169
90	61.6	10,190	164
100	57.9	8,630	158
110	54.0	7,360	151
120	50.0	6,330	143
130	45.7	5,460	134
140	41.0	4,720	123
150	35.8	4,100	111
160	29.9	3,550	95
170	22.7	3,080	75
180	11.8	2,690	42

### 200' (61.0 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
36	80.9	16,750 *	203
40	79.7	16,230 *	202
50	76.8	15,000 *	200
60	73.8	13,800 *	198
70	70.8	12,770 *	194
80	67.8	11,840	191
90	64.6	9,840	186
100	61.4	8,270	181
110	58.1	7,010	175
120	54.6	5,970	169
130	51.0	5,100	161
140	47.2	4,370	152
150	43.2	3,740	142
160	38.8	3,190	131
170	33.9	2,710	117
180	28.4	2,300	100
190	21.5	1,940	79
200	11.2	1,560 *	44

### 190' (57.9 m) Boom length

Radius (Feet)	Boom Angle (Degrees)	Side Frames Extended (Pounds)	From Boom Pt. to Ground (Feet)
35	80.7	19,320 *	193
40	79.2	18,660 *	192
50	76.1	17,360 *	190
60	73.0	16,110 *	187
70	69.8	14,640	184
80	66.5	12,010	180
90	63.2	10,020	175
100	59.8	8,460	170
110	56.2	7,200	163
120	52.5	6,160	156
130	48.5	5,290	148
140	44.4	4,550	138
150	39.8	3,930	127
160	34.8	3,390	114
170	29.1	2,910	98
180	22.1	2,500	77
190	11.5	2,150	43

# STERLING CRANE

## NOTES TO LIFTING CAPACITY

### ⚠ 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.

BOOM HOIST LINE is 14 parts of 5/8 inch diameter EIPS wire rope with a minimum breaking strength of 41,200 pounds.

PENDANT SUSPENSION LINE is 2 parts of 1-1/4 inch diameter MONOLAY wire rope with a minimum breaking strength of 172,800 pounds.

MAIN LOAD LINE is 7/8 inch diameter EIPS wire rope with a minimum breaking strength of 79,600 pounds.

### ERECTION

Erection is with the A-Frame fully raised. Erection „OVER THE END“ is with the boom over the idler end. Erection „OVER THE SIDE“ is with the boom 90° to the sideframes and with the side frames extended. Blocks, slings and other load carrying devices must be on the ground during erection.

MAXIMUM BOOM & JIB SELF-ERECTION DATA		
	OVER THE END & OVER THE SIDE	
	BOOM LENGTH (FEET)	JIB LENGTH (FEET)
#7HL JIB	200	0
	170	60
#9HL JIB	200	0
	170	60

BOOM LENGTH (FEET)	47HI BOOM COMPOSITION CHART				
	BOOM SECTIONS				
	20' 47HI INNER	10' 47H CENTER	20' 47H CENTER	30' 47H CENTER	20' 47H or 47HI OUTER
40	1	0	0	0	1
50	1	1	0	0	1
60	1	0	1	0	1
70	1	0	0	1	1
80	1	1	0	1	1
90	1	0	1	1	1
100	1	0	0	2	1
110	1	1	0	2	1
120	1	0	1	2	1
130	1	0	0	3	1
140	1	1	0	3	1
150	1	0	1	3	1
160	1	0	0	4	1
170	1	1	0	4	1
180	1	0	1	4	1
190	1	0	0	5	1
200	1	1	0	5	1

LOAD HOISTING INFORMATION - 7/8 inch diameter EIPS wire rope			
MAXIMUM LIFTING CAPACITY - LBS.	MINIMUM PARTS OF LINE	MAXIMUM HOISTING DISTANCE - FEET	
		MAIN - (RIGHT)	AUX. - (LEFT)
160,000	8	73	73
159,180	7	84	84
136,440	6	98	98
113,700	5	117	117
90,960	4	147	147
68,220	3	196	196
45,480	2	294	294
22,740	1	588	588