

**WARNING:**

BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. BOOM ANGLE BEFORE LOADING SHOULD BE GREATER TO ACCOUNT FOR DEFLECTIONS. DO NOT EXCEED THE OPERATING RADIUS FOR RATED LOADS.

POSITIONING OR OPERATION OF POWERED BOOM LENGTHS AT AN ANGLE BEYOND THE MAXIMUMS OR MINIMUMS SHOWN, IS NOT INTENDED OR APPROVED.

POSITIONING OR OPERATION OF LATTICE EXTENSIONS AT BOOM ANGLES BEYOND THE MAXIMUMS OR MINIMUMS SHOWN, IS NOT INTENDED OR APPROVED.

FOR POWERED BOOM LENGTHS NOT SHOWN, USE RATING OF NEXT LONGER POWERED BOOM. FOR LOAD RADI NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.

CRANE LOAD RATINGS ON OUTRIGGERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. AN ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.

FACTICAL WORKING LOADS DEPEND ON SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY. DANGEROUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.

THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND POWERED BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY SECTION WITHIN THE LIMITS OF THE LOAD RATING CHART.

WHEN LIFTING A LOAD ALL SECTIONS OF POWERED BOOM MUST BE EQUALLY EXTENDED WITHIN ONE FOOT.

**DEFINITIONS:**

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION BEFORE LOADING TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH LOAD APPLIED.

BOOM ANGLE, AS SHOWN IN COLUMN HEADED BY  $\alpha$ , IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.



32R1010

**DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS**

DESCRIPTION	WITHOUT HOOK BLOCK ON BOOM POINT	HOOK BLOCK ON POWERED BOOM POINT					
		8.5 - 20 TON	85 TON	8.5 - 20 TON WITH AUXILIARY SHEAVE	85 TON WITH AUXILIARY SHEAVE		
HOOK BLOCK WEIGHT		---	580	1130	775	1328	
HOISTING LOAD FROM POWERED BOOM	STOWED	---	950	1500	1150	1700	
	38 FT. LATTICE EXTENSION	---	4000	4550	4200	4750	
	ERECTED ON Y3	---	5850	6200	5850	6400	
	8.5-15 TON BALL	---	6050	6600	6250	6800	
	20 TON BLOCK	---	---	---	---	---	
	STOWED	---	850	1400	1050	1600	
HOISTING LOAD FROM EXTENSION	40 FT. LATTICE EXTENSION	---	5700	6250	5900	6450	
	ERECTED ONLY	---	7400	7900	7550	8100	
	8.5-15 TON BALL	---	7800	8300	7950	8500	
	20 TON BLOCK	---	---	---	---	---	
	ERECTED ONLY	---	5700	6250	5900	6450	
	8.5-15 TON BALL	---	7800	8350	8000	8550	
20 TON BLOCK	---	8300	8850	8500	9050		
HOISTING LOAD FROM EXTENSION	38 FT. LATTICE EXTENSION	---	470	800	1100	900	1200
	8.5-15 TON BALL	---	580	900	1200	1000	1300
	20 TON BLOCK	---	---	---	---	---	---
	40 FT. LATTICE EXTENSION	---	470	800	1100	900	1200
	8.5-15 TON BALL	---	580	900	1200	1000	1300
	20 TON BLOCK	---	---	---	---	---	---
60 FT. LATTICE EXTENSION	---	470	750	1000	850	1100	
8.5-15 TON BALL	---	580	850	1100	950	1200	
20 TON BLOCK	---	---	---	---	---	---	

NOTE: THESE LOAD DEDUCTIONS APPLY ONLY TO P&H SUPPLIED EQUIPMENT. (SEE INFORMATION NOTE #3)

**MAIN HOIST REEVING**

3/4 DIA. WIRE ROPE BREAKING STRENGTH 58,800 LBS. 8 X 25 FW IWRC

PART OF LINE	1	2	3	4	5	6	7	8	9	10
MAXIMUM LOAD	15000	30000	45000	60000	75000	90000	105000	120000	130000	-

**AUXILIARY HOIST REEVING**

3/4 DIA. WIRE ROPE BREAKING STRENGTH 51,800 LBS. 8 X 19 IWRC

5/8 DIA. WIRE ROPE BREAKING STRENGTH 41,200 LBS. 8 X 25 FW IWRC

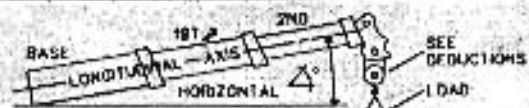
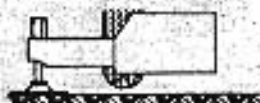
PART OF LINE	1	2	3	4	5	6	7	8	9	10
MAXIMUM LOAD	10000	20000	30000	40000	50000	60000	70000	80000	90000	100000

S/N 57402

NOTE: OPERATION

# MODEL CN T650 - 65 TON HYDRAULIC CRANE LOAD RATING CHART

RATED LOADS IN POUNDS  
ON OUTRIGGERS



POWERED BOOM LENGTH IN FEET - MANUAL RETRACTED

OPERATING RADIUS FT	40 FT.		45 FT.		55 FT.		65 FT.		75 FT.		85 FT.		97.3 FT.		OPERATING RADIUS FT							
	LOADED BOOM ANGLE °	RATED LOAD POUNDS		LOADED BOOM ANGLE °	RATED LOAD POUNDS		LOADED BOOM ANGLE °	RATED LOAD POUNDS		LOADED BOOM ANGLE °	RATED LOAD POUNDS		LOADED BOOM ANGLE °	RATED LOAD POUNDS								
		SIDE	REAR		SIDE	REAR		SIDE	REAR		SIDE	REAR		SIDE		REAR	SIDE	REAR				
10	68	130000		71	102000		73	94800							10							
12	65	115000		68	98400		72	88000		75	80400				12							
15	60	87000		64	86900		61	84000		73	72800		75	60500		15						
20	51	63500		56	63500		61	63400		68	63200		72	53000		74	44500		77	33000		20
25	40	49000		48	49000		57	49000		63	48900		68	45000		71	39000		74	32500		25
30	27	35800	36700	38	35800	36700	50	35800	36700	58	35800	36700	63	35800	36700	67	34200		71	29000		30
35				25	25800	27400	43	25800	27400	52	25800	27400	59	25800	27400	63	25800	27400	67	25500		35
40							34	19500	21200	46	19500	21200	54	19500	21200	58	19500	21200	64	19500	21200	40
45							22	14800	16500	39	14800	16500	49	14800	16500	55	14800	16500	61	14800	16500	45
50										31	11800	13300	43	11800	13300	51	11600	13300	57	11600	13300	50
55										20	9100	10700	37	9100	10700	48	9100	10700	53	9100	10700	55
60													29	7000	8500	41	7000	8500	49	7000	8500	60
65													19	5500	6900	35	5500	6900	45	5500	6900	65
70																28	4200	5500	40	4200	5500	70
75																18	3100	4400	35	3100	4400	75
80																			29	2100	3400	80
85																			22	-	2500	85

## INFORMATION:

1. CRANE LOAD RATINGS DO NOT EXCEED 85% OF TIPPING.
2. RATINGS ABOVE THE HEAVY LINE ARE BASED ON THE MACHINE'S HYDRAULIC OR STRUCTURAL COMPETENCE AND NOT ON MACHINE STABILITY.
3. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR STOWED LATTICE EXTENSION, OPTIONAL ATTACHMENTS, HOOKS AND HOOKBLOCKS (SEE DEDUCTIONS CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
4. CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS FULLY EXTENDED AND SET TO A DISTANCE OF 11 FEET 9 3/4 INCH FROM THE LONGITUDINAL AXIS OF THE CARRIER TO THE OUTRIGGER FLOAT PIVOT CONNECTION WITH ALL LOAD REMOVED FROM CARRIER WHEELS.
5. COUNTERWEIGHT 2500 LBS. WITH NONE REMOVABLE.

USE OF THIS EQUIPMENT IN EXCESS OF RATED LOADS AND DISREGARD OF INSTRUCTIONS IS AN UNSAFE PRACTICE AND WILL R

## LOAD RATINGS IN POUNDS WITH OUTRIGGERS EXTENDED

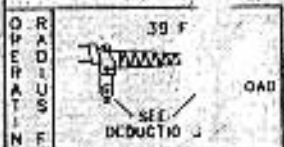
## PINNED SECTION EXTENDED



FOR ALL BOOM LENGTHS 88.7 TO 128 FT.

OPERATING RADIUS IN FEET	RATED LOAD IN POUNDS	
	SIDE	REAR
30	76	20
35	74	19000
40	72	17500
45	69	8500
50	67	13000
55	64	11300
60	61	9100
65	59	7500
70	56	6100
75	53	5000
80	49	4100
85	46	3200
90	43	2500
100	35	2300

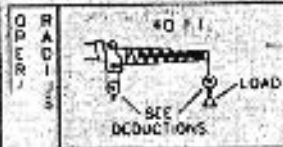
## LATTICE EXTENSION WITH PINNED SECTION RETRACTED



FOR ALL BOOM LENGTHS 79 TO 134.3 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	77	16000	
35	75	14000	
40	73	12000	
45	71	10000	
50	69	8000	
55	67	6000	
60	64	4500	10500
65	62	3000	9300
70	60	1700	8000
75	57	1000	6700
80	55	600	5600
85	52	3600	4700
90	49	2000	3800
100	43	1100	2500

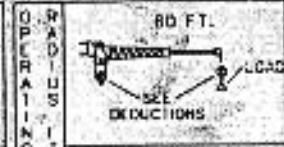
## LATTICE EXTENSION WITH PINNED SECTION RETRACTED



FOR ALL BOOM LENGTHS 80 TO 137.3 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	77	15600	
35	75	14200	
40	73	13000	
45	71	12100	
50	69	11100	
55	67	10300	
60	64	9700	9700
65	62	7300	8600
70	60	6000	7200
75	57	4800	6000
80	54	3800	4900
85	51	2900	4000
90	48	2100	3200
100	42	1600	1800

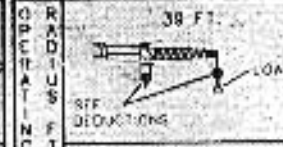
## LATTICE EXTENSION WITH PINNED SECTION EXTENDED



FOR ALL BOOM LENGTHS 100 TO 157.3 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	77	10000	
35	75	9300	
40	75	8600	
45	74	8600	
50	72	8000	
55	70	7500	
60	68	7000	
65	66	6600	
70	64	6200	
75	62	5900	
80	60	5000	5600
85	58	4100	5100
90	56	3400	4300
100	51	2000	3000
110	46	1800	1800

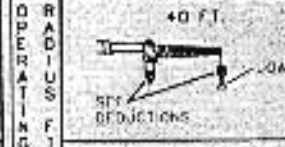
## LATTICE EXTENSION WITH PINNED SECTION EXTENDED



FOR ALL BOOM LENGTHS 107.7 TO 165 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	77	11200	
35	75	10500	
40	77	11200	
45	76	10500	
50	74	9800	
55	72	9200	
60	70	8600	
65	69	8100	
70	67	7400	7700
75	65	6300	7200
80	63	5300	6300
85	60	4400	5400
90	58	3600	4600
100	53	2400	3300
110	48	2100	2100

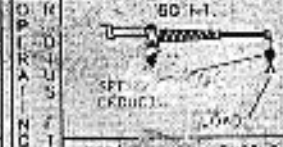
## LATTICE EXTENSION WITH PINNED SECTION EXTENDED



FOR ALL BOOM LENGTHS 108.7 TO 166 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	78	10300	
35	76	9600	
40	78	10300	
45	78	9600	
50	74	9000	
55	72	8400	
60	71	7800	
65	69	7300	
70	67	6700	6800
75	65	5500	6400
80	63	4500	5600
85	61	3600	4700
90	59	2900	3900
100	54	2400	2400

## LATTICE EXTENSION WITH PINNED SECTION EXTENDED



FOR ALL BOOM LENGTHS 109 TO 166 FT.

OPERATING RADIUS IN FEET	BOOM ANGLE	RATED LOAD IN POUNDS	
		SIDE	REAR
30	78	8000	
35	77	7500	
40	77	7500	
45	78	8000	
50	77	7500	
55	75	7000	
60	73	6800	
65	72	6100	
70	70	5700	
75	69	5400	
80	67	5100	
85	65	4700	4800
90	64	4000	4500
100	60	2700	3600
110	56	2400	2400

## NOTE:

1. WHEN BOOM IS NOT FULLY EXTENDED, USE ONLY BOOM ANGLES, NOT OPERATING RADIUS TO DETERMINE LOAD RATING.
2. FOR BOOM ANGLES NOT SHOWN, USE RATING OF NEXT LOWER BOOM ANGLE.
3. FOR BUCKET RATINGS ON 60 FT. EXTENSION, DEDUCT 20% FROM LOAD RATINGS.

## WARNING:

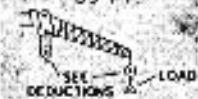
- A TIPPING CONDITION WILL OCCUR (WITH OR WITHOUT A HOOKBLOCK) WITH 39 FT., 40 FT., OR 60 FT. BOOM EXTENSION DUE TO THE FOLLOWING CONDITIONS:
1. DO NOT EXCEED 110 FT. OPERATING RADIUS WITH PINNED MAIN BOOM SECTION RETRACTED.
  2. DO NOT EXCEED 110 FT. OPERATING RADIUS WITH PINNED MAIN BOOM SECTION EXTENDED.

# LOAD RATINGS FOR OFFSET EXTENSION

## LOAD RATINGS IN POUNDS FOR 17° OFFSET WITH OUTRIGGERS EXTENDED

### LATTICE EXTENSION WITH PINNED SECTION RETRACTED

39 FT.



FOR ALL BOOM LENGTHS 79 TO 136.3 FT.

40 FT.



FOR ALL BOOM LENGTHS 80 TO 137.3 FT.

60 FT.



FOR ALL BOOM LENGTHS 100 TO 157.3 FT.

59 FT.



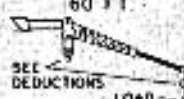
FOR ALL BOOM LENGTHS 107.7 TO 165 FT.

40 FT.



FOR ALL BOOM LENGTHS 108.7 TO 186 FT.

60 FT.



FOR ALL BOOM LENGTHS 128.7 TO 188 FT.

OPERATOR'S RADIUS IN FEET

136.3 FOOT BOOM ONLY

36  
40  
45  
50  
55  
60  
65  
70  
75  
80  
85  
90  
100  
110

CRANE BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36	78	9300
40	76	8900
45	74	8500
50	72	8100
55	69	7800
60	67	7500
65	65	7200
70	62	7000
75	60	6400 6800
80	57	5300 6400
85	54	4400 5400
90	52	3500 4500
100	45	2100 3100
110	37	- 1800

157.3 FOOT BOOM ONLY  
CRANE BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36	78	8000
40	76	7700
45	74	7300
50	72	7000
55	70	6700
60	68	6400
65	66	6100
70	63	5700
75	61	5100 6000
80	58	4600 5700
85	55	3700 4700
90	53	2800 3800
100	46	- 2300

157.3 FOOT BOOM ONLY  
LOADED BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36		
40		
45		
50	77	5100
55	75	4900
60	73	4700
65	71	4500
70	69	4300
75	67	4100
80	65	3900
85	63	3800
90	61	3700
100	58	2900 3400
110	51	- 2500

FOR 165 FOOT BOOM ONLY  
LOADED BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36		
40		
45		
50	77	8300
55	75	8100
60	73	7700
65	71	7300
70	69	6900
75	67	6500
80	65	6000 6200
85	63	5100 5900
90	61	4300 5300
100	57	2900 3800
110	52	1800 2600

FOR 166 FOOT BOOM ONLY  
LOADED BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36		
40		
45		
50	77	7300
55	76	7100
60	74	6900
65	72	6400
70	70	6000
75	68	5700
80	66	5300 5400
85	64	4400 5100
90	62	3600 4600
100	57	2100 3100
110	52	- 1800

FOR 188 FOOT BOOM ONLY  
LOADED BOOM ANGLE  
RATED LOAD IN POUNDS  
SIDE REAR

36		
40		
45		
50		
55		
60	78	4800
65	76	4600
70	74	4400
75	73	4200
80	71	4000
85	69	3800
90	68	3700
100	64	3400
110	60	2300 3100
120	56	- 2100

- NOTES: 1. SEE MAIN LOAD RATING CHART ON OUTRIGGERS FOR WARNINGS, DEFINITIONS, INFORMATION.  
2. FOR BUCKET RATINGS ON 60 FT. EXTENSION, DEDUCT 20% FROM LOAD RATINGS.  
3. STABILITY RATINGS DO NOT EXCEED 85% OF TIPPING LOADS.  
4. WHEN BOOM IS NOT FULLY EXTENDED USE ONLY BOOM ANGLES, NOT OPERATING RADIUS.  
5. FOR BOOM ANGLES NOT SHOWN, USE RATING OF NEXT LOWER BOOM ANGLE.  
6. 2500 LB. COUNTERWEIGHT WITH NONE REMOVABLE.



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# EXTENSION WITH 126 FOOT BOOM

## LOAD RATINGS IN POUNDS FOR 30° OFFSET WITH OUTRIGGERS EXTENDED

LATTICE EXTENSION WITH PINNED SECTION RETRACTED						LATTICE EXTENSION WITH PINNED SECTION EXTENDED											
39 FT.			40 FT.			60 FT.			39 FT.			40 FT.			60 FT.		
OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 79 TO 138.3 FT.		OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 80 TO 157.5 FT.		OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 100 TO 157.5 FT.		OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 107.7 TO 165 FT.		OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 128.7 TO 165 FT.		OPERATING RADIUS IN FEET FOR 126.3 FOOT BOOM ONLY	FOR ALL BOOM LENGTHS 128.7 TO 165 FT.	
	LOADED BOOM ANGLE	RATED LOAD IN POUNDS		LOADED BOOM ANGLE	RATED LOAD IN POUNDS		LOADED BOOM ANGLE	RATED LOAD IN POUNDS		LOADED BOOM ANGLE	RATED LOAD IN POUNDS		LOADED BOOM ANGLE	RATED LOAD IN POUNDS		LOADED BOOM ANGLE	RATED LOAD IN POUNDS
	SIDE	REAR		SIDE	REAR		SIDE	REAR		SIDE	REAR		SIDE	REAR		SIDE	REAR
36			36			36			36			36			36		
40			40			40			40			40			40		
45	77	7100	45	77	6300	45			45			45			45		
50	75	6900	50	76	6100	50			50			50			50		
55	73	6700	55	73	5900	55			55	78	6800	55	78	5900	55		
60	71	6500	60	71	5700	60	77	3900	60	76	6600	60	76	5800	60		
65	68	6300	65	69	5500	65	75	3700	65	74	6500	65	74	5600	65		
70	66	6100	70	66	5400	70	73	3600	70	72	6400	70	73	5500	70	78	3700
75	63	6000	75	63	5200	75	71	3500	75	70	6300	75	71	5300	75	76	3600
80	60	5900	80	61	5100	80	69	3400	80	68	6200	80	69	5000	80	74	3500
85	57	4900	85	58	4200	85	67	3300	85	66	5600	85	66	4700	85	73	3400
90	55	4000	90	55	3300	90	64	3200	90	64	4800	90	64	4100	90	71	3300
100	48	2400	100	48	-	100	60	3000	100	59	3300	100	60	2500	100	67	3200
110	40	-	110	54	2200	110	54	2200	110	54	2000	110	55	-	110	63	2800
			120	48	-	120	48	-	120	49	-	120	59	-	120	59	-

ATION AND REEVING.

US TO DETERMINE LOAD RATING.

- WARNINGS:**
- DO NOT EXCEED 120 FT. RADIUS (WITH OR WITHOUT HOOK BLOCK) WITH 39 FT., 40 FT. OR 60 FT. BOOM EXTENSION OR A TIPPING CONDITION WILL OCCUR.
  - DEDUCTIONS FROM OFFSET EXTENSION LOAD RATINGS MUST BE APPLIED ACCORDING TO DEDUCTION TABLE SHOWN ON MAIN LOAD RATING CHART.

AND DISREGARD OF INSTRUCTIONS IS AN UNSAFE PRACTICE AND WILL RESULT IN DENIAL OF WARRANTY CLAIMS