

**TDS****22 TON****28 ft. - 70 ft. BOOM****PCSA CLASS****85% OF****RATED LIFTING CAPACITY
ON OUTRIGGERS****OVER SIDE — Without Front Jack**

Radius in Feet	Main Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	44,000 (64)	36,000 (69)	36,000 (73)					
12	40,000 (59.5)	36,000 (65.5)	36,000 (70)	35,000 (73)				
15	31,000 (51.5)	31,000 (59.5)	30,700 (65)	29,850 (69)	29,150 (72)	28,600 (74.5)		
20	23,200 (36.5)	23,200 (49)	23,200 (57)	23,200 (62)	23,000 (66)	22,600 (69.5)	22,150 (72)	20,500 (74)
25	17,950 (6)	17,950 (36)	17,950 (47.5)	17,950 (54.5)	17,950 (60)	17,950 (64)	17,950 (67)	17,650 (69.5)
30		13,430 (15.5)	13,430 (36.5)	13,430 (46.5)	13,430 (53)	13,430 (58)	13,430 (62)	13,430 (65)
35	See Warning Note 16		9,960 (20)	9,960 (36.5)	9,960 (45.5)	9,960 (51.5)	9,960 (56.5)	9,960 (60)
40				7,510 (23)	7,510 (36.5)	7,510 (45)	7,510 (50.5)	7,510 (55)
45					6,100 (25)	6,100 (37)	6,100 (44.5)	6,100 (49.5)
50						4,830 (26.5)	4,830 (37)	4,830 (43.5)
55						4,010 (3.5)	4,010 (28)	4,010 (37)
60							3,410 (13)	3,410 (28.5)
65								2,920 (15.5)
Min. boom angle (deg.) for indicated length (no load)								0
Max. boom length (ft.) at 0 deg. boom angle (no load)								70

NOTE: Boom angles are in degrees.

A6-829-005896 & -003716D

LIFTING CAPACITY NOTES:**GENERAL:**

1. Rated loads as shown on capacity chart pertain to this crane as originally manufactured and equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity. Use only the jib or boom extension supplied with this crane, do not substitute jibs or boom extensions without the written approval of Grove Mfg. Co.
2. Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance shall be in compliance with the information in the Operator's and Safety Handbooks, Service and Parts Manuals supplied with this crane. If these manuals are missing, order replacements from the manufacturer.
3. The operator and other personnel associated with this crane shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.

SETUP:

1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports of sufficient strength under the outrigger floats or tires to spread the load to a larger bearing surface.
2. For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
3. When equipped with front jack cylinder, the front jack cylinder shall be set in accordance with the written procedure.
4. When equipped with extendable counterweight, the counterweight shall be fully extended before operation.
5. Tires shall be inflated to the recommended pressure before lifting on rubber.
6. With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.
7. Rotation resistant wire rope is best suited for single line lifting operations. Consult the wire rope manufacturer for specific recommendations concerning multiple part reeving.
8. Do not transport crane with boom extension or jib erected.

OPERATION:

1. Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell operation, weight of load must not exceed 80% of rated lifting capacities.
2. All rated loads have been tested to and meet minimum requirements of SAE J-1063 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load as determined by SAE J-765a Crane Stability Test Code.
3. Rated loads include the weight of hook block, slings and auxiliary lifting devices and their combined weights shall be subtracted from the listed ratings to obtain the net load which may be lifted.
4. Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.

OVER REAR — With

Radius in Feet	Main Boom Length in Feet			
	28	34	40	46
10	44,000 (64)	36,000 (69)	36,000 (73)	
12	40,000 (59.5)	36,000 (65.5)	36,000 (70)	35,000 (73)
15	31,000 (51.5)	31,000 (59.5)	30,700 (65)	29,850 (69)
20	23,200 (36.5)	23,200 (49)	23,200 (57)	23,200 (62)
25	17,950 (6)	17,950 (36)	17,950 (47.5)	17,950 (54.5)
30		15,050 (15.5)	15,050 (36.5)	15,050 (46.5)
35	See Warning Note 16		12,010 (20)	12,010 (36.5)
40				9,600 (23)
45				
50				
55				
60				
65				
Min. boom angle (deg.) for indicated length (no load)				0
Max. boom length (ft.) at 0 deg. boom angle (no load)				70

NOTE: Boom angles are in degrees.

TD522

22 TON CAPACITY
28 ft. - 70 ft. BOOM (FULL POWER)

PCSA CLASS 10-75
85% OF TIPPING

GR
FUL
CARRIER

RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS FULLY EXTENDED

OVER REAR – With or Without Front Jack

Radius in Feet	28	34	40	46	52	58	64	70
10	44,000 (64)	36,000 (69)	36,000 (73)					
12	40,000 (59.5)	36,000 (65.5)	36,000 (70)	35,000 (73)				
15	31,000 (51.5)	31,000 (59.5)	30,700 (65)	29,850 (69)	29,150 (72)	28,600 (74.5)		
20	23,200 (36.5)	23,200 (49)	23,200 (57)	23,200 (62)	23,000 (66)	22,600 (69.5)	22,150 (72)	20,500 (74)
25	17,950 (6)	17,950 (36)	17,950 (47.5)	17,950 (54.5)	17,950 (60)	17,950 (64)	17,950 (67)	17,650 (69.5)
30		15,050 (15.5)	15,050 (36.5)	15,050 (46.5)	15,050 (53)	15,050 (58)	14,950 (62)	14,750 (65)
35	See Warning Note 16		12,010 (20)	12,010 (36.5)	12,010 (45.5)	12,010 (51.5)	12,010 (56.5)	12,010 (60)
40				9,650 (23)	9,650 (36.5)	9,650 (45)	9,650 (50.5)	9,650 (55)
45					8,030 (25)	8,030 (37)	8,030 (44.5)	8,030 (49.5)
50						6,700 (26.5)	6,700 (37)	6,700 (43.5)
55						5,620 (3.5)	5,620 (28)	5,620 (37)
60							4,780 (13)	4,780 (28.5)
65								4,100 (15.5)
Min. boom angle (deg.) for indicated length (no load)								0
Max. boom length (ft.) at 0 deg. boom angle (no load)								70

-003716D

Radius in Feet	Main Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	44,000 (64)	36,000 (69)	36,000 (73)					
12	40,000 (59.5)	36,000 (65.5)	36,000 (70)	35,000 (73)				
15	31,000 (51.5)	31,000 (59.5)	30,700 (65)	29,850 (69)	29,150 (72)	28,600 (74.5)		
20	23,200 (36.5)	23,200 (49)	23,200 (57)	23,200 (62)	23,000 (66)	22,600 (69.5)	22,150 (72)	20,500 (74)
25	17,950 (6)	17,950 (36)	17,950 (47.5)	17,950 (54.5)	17,950 (60)	17,950 (64)	17,950 (67)	17,650 (69.5)
30		15,050 (15.5)	15,050 (36.5)	15,050 (46.5)	15,050 (53)	15,050 (58)	14,950 (62)	14,750 (65)
35	See Warning Note 16		12,010 (20)	12,010 (36.5)	12,010 (45.5)	12,010 (51.5)	12,010 (56.5)	12,010 (60)
40				9,650 (23)	9,650 (36.5)	9,650 (45)	9,650 (50.5)	9,650 (55)
45					8,030 (25)	8,030 (37)	8,030 (44.5)	8,030 (49.5)
50						6,700 (26.5)	6,700 (37)	6,700 (43.5)
55						5,620 (3.5)	5,620 (28)	5,620 (37)
60							4,780 (13)	4,780 (28.5)
65								4,100 (15.5)
Min. boom angle (deg.) for indicated length (no load)								0
Max. boom length (ft.) at 0 deg. boom angle (no load)								70

NOTE: Boom angles are in degrees.

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Radius in Feet	28	34
10	44,000 (64)	36,000 (69)
12	40,000 (59.5)	36,000 (65.5)
15	31,000 (51.5)	31,000 (59.5)
20	23,200 (36.5)	23,200 (49)
25	17,950 (6)	17,950 (36)
30		14,270 (15.5)
35	See Warning Note 16	
40		
45		
50		
55		
60		
65		
Min. boom angle (deg.) for		
Max. boom length (ft.) at 0		

NOTE: Boom angles are in degrees.

to this crane as originally manufactured and equipped. Any modification other than that specified can result in a reduction of capacity. Repairs and alterations, if made with this crane, do not substitute jibs or boom extensions.

properly operated or maintained. Operation and maintenance instructions should be read and understood. Operator's and Safety Handbooks, Service and Parts Manuals, and other documents should be read and understood before operation.

This crane shall fully acquaint themselves with the latest ANSI Safety Standards for cranes.

surface. Depending on the nature of the supporting surface, it may be necessary to use outrigger floats or tires to spread the load.

When operating on tires, the tires should be raised free of crane weight before operating.

The front jack cylinder shall be set in accordance with the written instructions.

The counterweight shall be fully extended before operation. Before lifting on rubber, the maximum capacities may not be obtainable with standard tires.

For line lifting operations. Consult the wire rope manufacturer for proper reeving. Do not attempt to lift a load which may be damaged by the crane.

Do not tip the machine to determine allowable loads. For rated capacities, consult the crane's rated capacity chart.

For requirements of SAE J-1063 - Cantilevered Boom Crane, consult the crane's rated capacity chart.

For requirements of SAE J-765a Crane, consult the crane's rated capacity chart.

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For requirements of SAE J-765a Crane, consult the crane's rated capacity chart.

5. Rated loads do not account for wind on lifted load or boom. It is recommended when operating in high winds, rated loads and boom lengths be appropriately reduced.

6. Rated loads are for lift crane service only.

7. Do not operate at a radius or boom length where capacities are not listed. At these limits, the crane is not designed to operate and may overturn without any load on the hook.

8. The maximum load which can be telescoped is not definable because of variations in load, maintenance, but it is safe to attempt retraction and extension within the limits of the rated capacity.

9. When either boom length or radius or both are between values listed, the smallest load capacity shall be used. When both boom length and radius are between values listed, the smallest load capacity shall be used.

10. For safe operation, the user shall make due allowances for his particular job conditions, such as uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stops, hazardous conditions, experience of personnel, two machine lifts, traveling with load, etc. Pull on boom or jib is extremely dangerous.

11. Power telescoping boom sections must be extended equally at all times.

12. Handling of personnel from the boom is not authorized except with equipment furnished by the manufacturer.

13. Keep load handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.

14. The boom angle before loading should be greater than the loaded boom angle to account for deflection.

15. Capacities appearing above the bold line are based on structural strength and tipping capacities. Capacities below the bold line are based on tipping capacities only.

16. Capacities for the 28 ft. (8.6m) boom length shall be lifted with the boom fully retracted. Capacities shall not exceed those shown for the 34 ft. (10.4m).

17. Radii less than 35 feet or 12 meters not recommended when lifting over front on machines equipped with front jack cylinder.)

DEFINITIONS:

1. Operating Radius: Horizontal distance from a projection of the axis of rotation to the center of the vertical hoist line or tackle with load applied.

2. Loaded Boom Angle (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the boom and the horizontal, after lifting the rated load at the rated radius with the rated capacity.

3. Working Area: Areas measured in a circular arc about the center line of rotation as shown in the diagram.

4. Freely Suspended Load: Load hanging free with no direct external force applied except gravity.

5. Side Load: Horizontal force applied to the lifted load either on the ground or in the air.

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CAPACITY
M (FULL POWER)
SS 10-75
TIPPING

GROVE®

FULL HYDRAULIC CARRIER-MOUNTED CRANE

ACITIES IN POUNDS
FULLY EXTENDED

Without Front Jack

Length in Feet				
	52	58	64	70
0				
0	29,150 (72)	28,600 (74.5)		
0	23,000 (66)	22,600 (69.5)	22,150 (72)	20,500 (74)
0	17,950 (60)	17,950 (64)	17,950 (67)	17,650 (69.5)
0	15,050 (53)	15,050 (58)	14,950 (62)	14,750 (65)
0	12,010 (45.5)	12,010 (51.5)	12,010 (56.5)	12,010 (60)
0	9,650 (36.5)	9,650 (45)	9,650 (50.5)	9,650 (55)
	8,030 (25)	8,030 (37)	8,030 (44.5)	8,030 (49.5)
		6,700 (26.5)	6,700 (37)	6,700 (43.5)
		5,620 (3.5)	5,620 (28)	5,620 (37)
			4,780 (13)	4,780 (28.5)
				4,100 (15.5)
h (no load)	0			
gle (no load)	70			

A6-829-005894 & -003716D

360° — With Front Jack

Radius in Feet	Main Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	44,000 (64)	36,000 (69)	36,000 (73)					
12	40,000 (59.5)	36,000 (65.5)	36,000 (70)	35,000 (73)				
15	31,000 (51.5)	31,000 (59.5)	30,700 (65)	29,850 (69)	29,150 (72)	28,600 (74.5)		
20	23,200 (36.5)	23,200 (49)	23,200 (57)	23,200 (62)	23,000 (66)	22,600 (69.5)	22,150 (72)	20,500 (74)
25	17,950 (6)	17,950 (36)	17,950 (47.5)	17,950 (54.5)	17,950 (60)	17,950 (64)	17,950 (67)	17,650 (69.5)
30		14,270 (15.5)	14,270 (36.5)	14,270 (46.5)	14,270 (53)	14,270 (58)	14,270 (62)	14,270 (65)
35	See Warning Note 16		10,920 (20)	10,920 (36.5)	10,920 (45.5)	10,920 (51.5)	10,920 (56.5)	10,920 (60)
40				8,420 (23)	8,420 (36.5)	8,420 (45)	8,420 (50.5)	8,420 (55)
45					6,920 (25)	6,920 (37)	6,920 (44.5)	6,920 (49.5)
50						5,840 (26.5)	5,840 (37)	5,840 (43.5)
55						4,870 (3.5)	4,870 (28)	4,870 (37)
60							3,980 (13)	3,980 (28.5)
65								3,260 (15.5)
Min. boom angle (deg.) for indicated length (no load)								0
Max. boom length (ft.) at 0 deg. boom angle (no load)								70

NOTE: Boom angles are in degrees.

A6-829-005925 & -003716D

- Rated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is above 20 mph (32 km/h), rated loads and boom lengths be appropriately reduced.
- Rated loads are for lift crane service only.
- Do not operate at a radius or boom length where capacities are not listed. At these positions, the crane may overturn without any load on the hook.
- The maximum load which can be telescoped is not definable because of variations in loadings and crane maintenance, but it is safe to attempt retraction and extension within the limits of the capacity chart.
- When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
- For safe operation, the user shall make due allowances for his particular job conditions, such as; soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. Side pull on boom or jib is extremely dangerous.
- Power telescoping boom sections must be extended equally at all times.
- Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- Keep load handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.
- The boom angle before loading should be greater than the loaded boom angle to account for deflection.
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities for the 28 ft. (8.6m) boom length shall be lifted with the boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 34 ft. (10.4m).
- Radii less than 35 feet or 12 meters not recommended when lifting over front on machine. (Only applicable to machines equipped with front jack cylinder.)

DEFINITIONS:

- Operating Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- Loaded Boom Angle (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the boom base section and the horizontal, after lifting the rated load at the rated radius with the rated boom length.
- Working Area: Areas measured in a circular arc about the center line of rotation as shown on the working area diagram.
- Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cable.
- Side Load: Horizontal force applied to the lifted load either on the ground or in the air.



TD522

22 TON CAPACITY
28 ft. - 70 ft. BOOM (FULL POWER)

PCSA CLASS 10-75
85% OF TIPPING

JIB CAPACITIES IN POUNDS

23 ft. - 38 ft. TELE. JIB
On Outriggers - Over Side & Rear
Without Front Jack

Boom Angle	23 ft. JIB (fully retracted)						33 ft. JIB						38 ft. JIB (fully extended)					
	0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
75°	27.5	12,500	31.4	7,300	35.0	4,500	29.0	7,600	35.3	4,900	41.5	2,900	31.0	5,000	39.0	3,750	45.4	2,230
70	33.3	9,390	37.8	6,390	40.6	4,150	35.9	6,500	42.5	4,270	48.8	2,650	37.9	4,650	45.6	3,300	51.8	1,990
65	40.2	6,440	44.7	5,750	47.2	3,900	43.9	5,300	50.2	3,820	56.1	2,440	46.3	4,470	53.7	2,950	59.3	1,870
60	47.0	4,780	51.3	4,410	53.6	3,680	51.6	4,100	57.5	3,280	62.8	2,330	54.3	3,470	61.2	2,640	66.4	1,770
55	53.2	3,570	57.3	3,370	59.5	3,020	58.8	3,120	64.3	2,580	69.2	2,230	62.0	2,810	68.4	2,450	72.9	1,680
50	59.2	2,760	62.9	2,630	65.1	2,500	65.7	2,440	70.7	2,040	74.9	1,910	69.2	2,150	75.0	1,910	78.9	1,620
45	64.7	2,180	68.0	2,070	69.9	2,030	71.9	1,900	76.5	1,620	80.2	1,510	75.8	1,630	81.1	1,500	84.3	1,410
40	69.6	1,730	72.6	1,650	74.2	1,620	77.7	1,510	81.7	1,280	84.7	1,270	81.8	1,290	86.4	1,190	89.0	1,150
35	74.0	1,360	76.6	1,350	77.9	1,260	82.8	1,200	86.2	1,030	88.6	1,030	87.2	1,040	91.2	970	93.0	900
30	77.8	1,040	80.1	1,040	81.0	950	87.3	960	90.2	810	91.8	810	92.0	820				

A6-829-005943

No Load Stability On Outriggers Side & Rear with 23' - 38' Tele. Jib Installed:

	Tele. Jib Fully Retracted 93'	33' Tele. Jib Length 103'	Tele. Jib Fully Extended 108'
Minimum boom angle for indicated boom length	17°	20°	25°
Maximum boom length including jib for 0° boom angle	88.7'	96.2'	97'

23 ft. - 38 ft. TELE. JIB
On Outriggers - 360°
With Front Jack

Boom Angle	23 ft. JIB (fully retracted)						33 ft. JIB						38 ft. JIB (fully extended)					
	0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
75°	27.5	12,500	31.4	7,300	35.0	4,500	29.0	7,600	35.3	4,900	41.5	2,900	31.0	5,000	39.0	3,750	45.4	2,230
70	33.3	9,390	37.8	6,390	40.6	4,150	35.9	6,500	42.5	4,270	48.8	2,650	37.9	4,650	45.6	3,300	51.8	1,990
65	40.2	6,670	44.7	5,750	47.2	3,900	43.9	5,300	50.2	3,820	56.1	2,440	46.3	4,470	53.7	2,950	59.3	1,870
60	47.0	5,020	51.3	4,630	53.6	3,680	51.6	4,300	57.5	3,450	62.8	2,330	54.3	3,550	61.2	2,640	66.4	1,770
55	53.2	3,860	57.3	3,420	59.5	3,120	58.8	3,320	64.3	2,770	69.2	2,230	62.0	2,910	68.4	2,450	72.9	1,680
50	59.2	3,080	62.9	2,790	65.1	2,650	65.7	2,590	70.7	2,190	74.9	1,910	69.2	2,430	75.0	2,030	78.9	1,620
45	64.7	2,450	68.0	2,280	69.9	2,180	71.9	2,060	76.5	1,730	80.2	1,600	75.8	1,920	81.1	1,660	84.3	1,500
40	69.6	1,980	72.6	1,870	74.2	1,750	77.7	1,640	81.7	1,400	84.7	1,360	81.8	1,480	86.4	1,360	89.0	1,240
35	74.0	1,580	76.6	1,530	77.9	1,440	82.8	1,300	86.2	1,150	88.6	1,130	87.2	1,080	91.2	1,020	93.0	980
30	77.8	1,290	80.1	1,270	81.0	1,230	87.3	1,020	90.2	940	91.8	920	92.0	860	95.2	840	96.3	830

A6-829-005939

No Load Stability On Outriggers 360° With 23' - 38' Tele. Jib Installed:

	Tele. Jib Fully Retracted 93'	33' Tele. Jib Length 103'	Tele. Jib Fully Extended 108'
Minimum Boom Angle for Indicated Boom Length	0°	3°	6°
Maximum Boom Length Including Jib for 0° Boom Angle	93'	102'	106.7'

JIB CAPACITY NOTES

- 23' (7.1m) Tele. Jib length may be used for double line lifting service. 33' (10.1m) and 38' (11.6m) jib lengths may be used for single line lifting service only. Capacities are based on structural strength of 23'-38' (7.1m-11.6m) Tele. Jib at a given main boom angle regardless of main boom length.
- WARNING: Operation of machine with heavier loads than the

- capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
- Capacities listed are with fully extended outriggers only.
 - WARNING: Lifting on rubber with jib is prohibited.
 - Reference radii listed are for fully extended boom only 70' (21.2m).

WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

23 ft. JIB with 28-70 ft. BOOM	
*Stowed -	250 lbs.
*Erected -	1,985 lbs.

23-38 ft. TELE. JIB with 28-70 ft. BOOM	
*Stowed	- 414 lbs.
*Erected (Retracted)	- 3,659 lbs.
*Erected (Extended)	- 4,611 lbs.

*Reduction of main boom capacities.

HOOKBLOCKS	
22 Ton, 3 Sheave	455 lbs.
15 Ton, 2 Sheave	292 lbs.
12 Ton, 1 Sheave	360 lbs.
Auxiliary Boom Head	100 lbs.
5 Ton Headache Ball	172 lbs.

NOTE: All Load Handling Devices and Boom Attachments are Considered Part of the Load and Suitable Allowances MUST BE MADE for Their Combined Weights. Weights are for Grove furnished equipment.

GROVE® TD522

23 ft. "A" FRAME JIB On Outriggers - Over Side & Rear Without Front Jack

Boom Angle	0° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
75°	27.0	12,000	32.5	7,700	35.7	5,070
70	33.3	9,550	38.1	7,000	41.2	4,800
65	40.2	6,840	44.9	5,840	47.8	4,500
60	47.0	5,370	51.3	4,620	54.0	4,030
55	53.2	4,230	57.3	3,660	59.8	3,360
50	59.2	3,350	62.9	2,940	65.1	2,750
45	64.7	2,610	68.0	2,370	69.9	2,200
40	69.6	2,080	72.6	1,910	74.2	1,800
35	74.0	1,780	76.6	1,540	77.9	1,520
30	77.8	1,500	80.1	1,250	81.0	1,230

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23 ft. "A" FRAME JIB On Outriggers - 360° With Front Jack

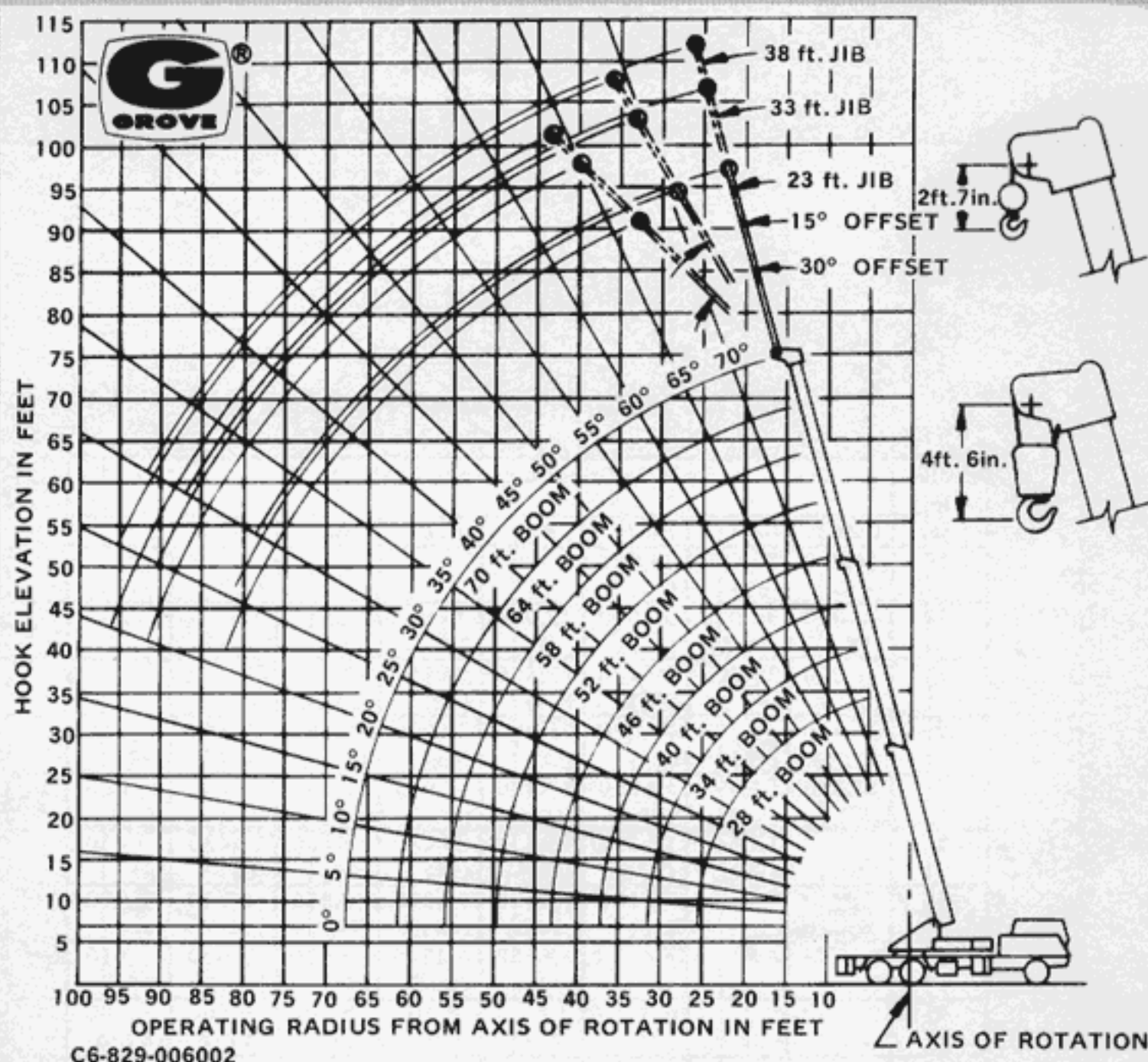
Boom Angle	0° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
75°	27.0	12,000	32.5	7,700	35.7	5,070
70	33.3	10,400	38.1	7,000	41.2	4,800
65	40.2	8,300	44.9	6,300	47.8	4,500
60	47.0	5,870	51.3	5,450	54.0	4,300
55	53.2	4,450	57.3	4,080	59.8	3,690
50	59.2	3,560	62.9	3,170	65.1	3,030
45	64.7	2,910	68.0	2,610	69.9	2,590
40	69.6	2,400	72.6	2,230	74.2	2,160
35	74.0	2,020	76.6	1,920	77.9	1,880
30	77.8	1,730	80.1	1,680	81.0	1,670

A6-829-005937

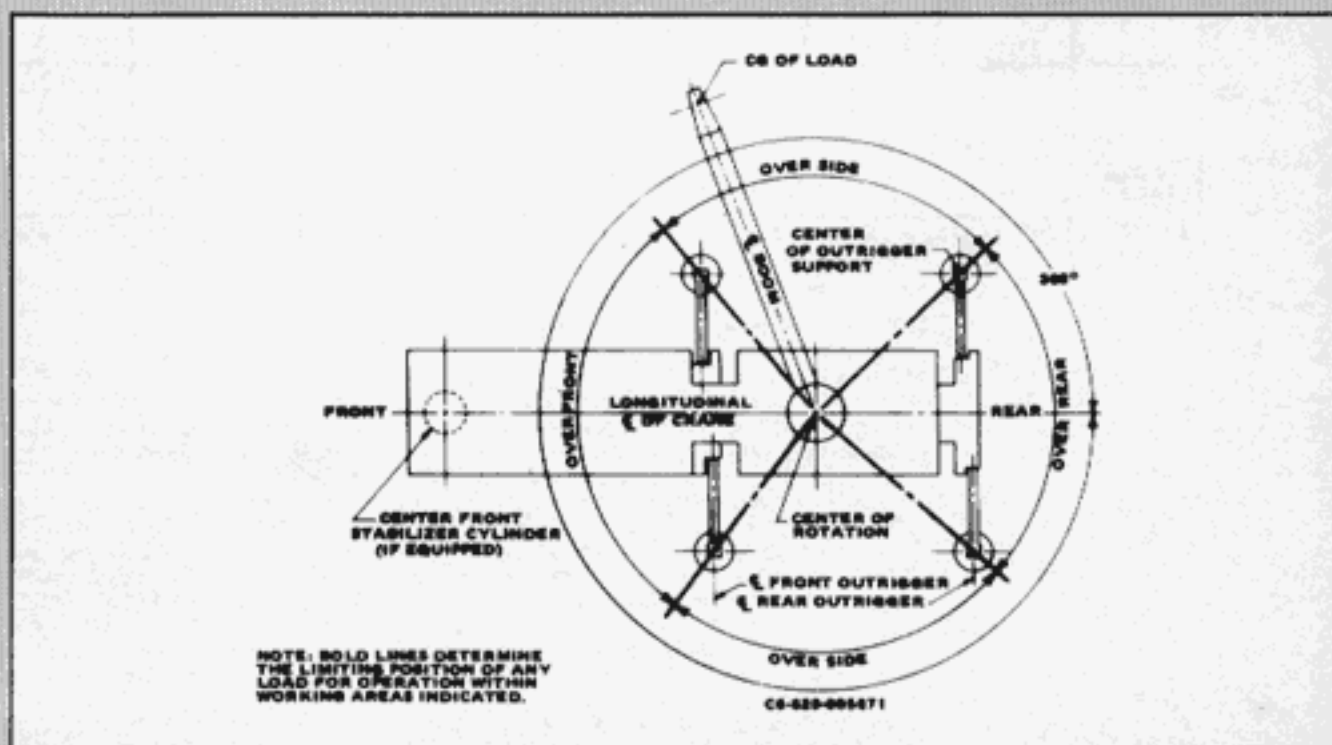
JIB CAPACITY NOTES:

- All capacities are in pounds 23 ft. jib may be used for double line lifting service. Capacities are based on structural strength of 23 ft. jib at a given main boom angle regardless of main boom length.
- WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
- Capacities listed are with fully extended outriggers only.
- WARNING:** Lifting on rubber with jib is prohibited.
- Reference radii listed are for fully extended main boom only.
- No load stability on outriggers with 23 ft. jib installed:
 - Minimum boom angle for fully extended main boom = 0°.
 - Maximum boom length at 0° main boom angle = 93 ft.

RANGE DIAGRAM



LIFTING AREA DIAGRAM


GROVE MANUFACTURING COMPANY

Division of Kidde, Inc.

KIDDE

Box 21, Shady Grove, Pennsylvania 17256-0021

Phone: (717) 597-8121 Telex: 842308 Cable: GROVE MFG

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