



Mobile Crane Operator Certification

Telescoping Boom Cranes 21-75 Tons

Load Chart Handout

for

Terex RT 555

Grove RT875E

Courtesy of Terex



TEREX

RT500-1 SERIES

50-55 US Ton Rough Terrain Crane



FEATURES

- 50-55 tons (45-50 mt)
maximum lifting capacity
- 110 ft. (33.5 m)
maximum boom length
- 170 ft. (51.8 m)
maximum tip height
- Four-section full power mechanically
synchronized boom with single lever
control
- Swingaway jib offsettable
0°, 15° or 30°
- Two-speed main and auxiliary
winches
- Quick-reeving boom head and hook
block
- Fully independent multi-position out
and down outriggers
- Environmental operator's cab opti-
mizes load visibility and productivity
- Electro-proportional joystick control
- RCI 510 Rated Capacity Indicator
- Easy to read load chart books include
range diagrams
- 12 month or 2,000 hour crane
warranty and 5 year or 10,000 hours
warranty on major weldments

**Simple, Available
and Cost Effective™**

Machines shown may have optional equipment.



TEREX RT 555

rough terrain crane
55 ton capacity

ON OUTRIGGERS - FULLY EXTENDED

BOOM LENGTH 35'				BOOM LENGTH 50'			BOOM LENGTH 65'			BOOM LENGTH 80'			BOOM LENGTH 95'			BOOM LENGTH 110'			
LOAD RADIUS (FT)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	BOOM ANGLE (DEG.) REF.	OVER FRONT (LB)	360° (LB)	
10	66.7	110,000*	110,000*	73.9	60,100*	60,100*													
12	63.1	96,700*	93,700*	71.5	60,100*	60,100*													
15	57.5	75,200*	73,100*	69.7	60,100*	60,100*	73.2	58,800*	58,800*										
20	47.1	53,600*	52,300*	61.5	54,900*	53,600*	68.5	52,200*	52,200*	72.7	38,700*	38,700*							
25	34.5	40,700*	39,700*	54.8	42,000*	41,100*	63.7	42,700*	41,700*	68.9	33,600*	33,600*	72.3	29,300*	29,300*				
30	14.8	31,900*	31,200*	47.4	33,400*	32,700*	58.6	34,100*	33,400*	65.0	29,600*	29,600*	69.1	25,000*	25,900*	72.1	22,900*	22,900*	
35	**			39.0	27,300*	26,700*	53.3	28,000*	27,400*	61.0	26,500*	26,500*	65.9	23,000*	23,000*	69.3	20,500*	20,500*	
40				28.8	22,000	21,000	47.6	22,700	21,700	56.8	23,000	22,000	62.5	20,800*	20,800*	66.5	18,400*	18,400*	
45				12.4	17,400	16,500	41.3	18,300	17,400	52.4	18,600	17,700	59.1	18,800*	17,900	63.6	16,500*	16,500*	
50				**			34.1	14,900	14,200	47.7	15,300	14,600	55.5	15,500	14,800	60.7	14,900*	14,900	
55							25.2	12,300	11,700	42.7	12,700	12,100	51.7	12,900	12,300	57.7	13,000	12,400	
60							10.9	10,100	9,600	37.1	10,700	10,100	47.8	10,900	10,400	54.5	11,000	10,500	
65							**			30.6	9,000	8,500	43.6	9,200	8,800	51.3	9,400	8,900	
70										22.6	7,500	7,100	39.0	7,900	7,400	47.8	8,000	7,600	
75										9.8	6,300	5,900	33.9	6,700	6,300	44.2	6,800	6,500	
80										**			28.1	5,700	5,300	40.4	5,900	5,500	
85													20.8	4,800	4,400	36.1	5,000	4,700	
90													9.0	3,900	3,600	31.5	4,200	3,900	
95													**				26.5	3,500	3,200
100																	19.3	2,900	2,400
105																	8.4	2,300	2,100
110																			

ON OUTRIGGERS - FULLY EXTENDED - JIB ERECTED UNUSED

BOOM LENGTH 35 FT				BOOM LENGTH 50 FT				BOOM LENGTH 65 FT				BOOM LENGTH 80 FT			
LOAD RADIUS (FT)	LOADED BOOM ANGLE (DEG)	OVER FRONT (LB)	360 DEGREES (LB)	LOAD RADIUS (FT)	LOADED BOOM ANGLE (DEG)	OVER FRONT (LB)	360 DEGREES (LB)	LOAD RADIUS (FT)	LOADED BOOM ANGLE (DEG)	OVER FRONT (LB)	360 DEGREES (LB)	LOAD RADIUS (FT)	LOADED BOOM ANGLE (DEG)	OVER FRONT (LB)	360 DEGREES (LB)
10.0	66.7	110,000*	110,000*	10.0	73.9	60,000*	60,000*								
12.0	63.1	93,900*	90,900*	12.0	71.5	60,000*	60,000*								
15.0	57.5	72,500*	70,500*	15.0	67.9	60,000*	60,000*	15.0	73.2	58,700*	58,700*				
20.0	47.1	51,200*	49,900*	20.0	61.5	52,400*	51,000*	20.0	68.5	52,100*	51,600*	20.0	72.7	38,600*	38,600*
25.0	34.5	38,300*	37,400*	25.0	54.8	39,600*	38,600*	25.0	63.7	40,200*	39,200*	25.0	68.9	33,500*	33,500*
30.0	14.8	29,600*	28,900*	30.0	47.4	31,000*	30,300*	30.0	58.6	31,700*	30,900*	30.0	65.0	29,500*	29,500*
31.2	0.0	19,000*	19,000*	35.0	39.0	24,900*	24,300	35.0	53.3	25,600*	25,000*	35.0	61.0	25,900*	25,400*
				40.0	28.8	19,300	18,300	40.0	47.6	20,100	19,100	40.0	56.8	20,600	19,500
				45.0	12.4	14,800	14,000	45.0	41.3	15,700	14,900	45.0	52.4	16,100	15,300
				46.2	0.0	10,700*	10,700*	50.0	34.1	12,400	11,700	50.0	47.7	12,800	12,100
								55.0	25.2	9,800	9,200	55.0	42.7	10,300	9,700
								60.0	10.9	7,800	7,200	60.0	37.1	8,300	7,800
								61.2	0.0	6,200*	6,200*	65.0	30.6	6,600	6,200
												70.0	22.6	5,200	4,800
												75.0	9.8	4,000	3,700
												76.2	0.0	3,500*	3,400



TEREX RT 555

rough terrain crane
55 ton capacity

SIDE STOW JIB ON FULLY EXTENDED OUTRIGGERS

LOADED BOOM ANGLE (DEG)	32 FT OFFSETABLE JIB/NO PULLOUT INSTALLED						33 FT OFFSETABLE JIB/PULLOUT RETRACTED						57 FT OFFSETABLE JIB						LOADED BOOM ANGLE (DEG)
	0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET		0° OFFSET		15° OFFSET		30° OFFSET		
	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	LOAD RADIUS (REF) (FT)	360 DEGREES (LB)	
75	38	12,100*	45	8,500*	52	6,600*	38	12,100*	46	8,500*	53	6,600*	46	6,100*	61	4,600*	71	3,400*	75
73	43	11,600*	50	8,200*	57	6,400*	44	11,600*	51	8,200*	58	6,400*	53	6,100*	66	4,400*	77	3,300*	73
71	49	11,100*	56	7,800*	62	6,300*	50	11,100*	57	7,800*	63	6,300*	59	5,900*	73	4,200*	83	3,200*	71
68	56	10,400*	63	7,400*	69	6,000*	57	10,400*	64	7,400*	70	6,000*	67	5,600*	80	3,900*	90	3,100*	68
65	63	9,600*	69	7,100*	75	5,900*	64	8,700	70	7,100*	76	5,900*	75	5,200*	88	3,700*	96	3,000*	65
62	70	8,500	75	6,800*	80	5,700*	71	7,100	76	6,500	81	5,700*	84	4,800*	95	3,500*	102	2,900*	62
59	76	7,100	81	6,500	86	5,500*	78	6,100	83	5,600	87	5,200	93	4,500*	103	3,400*	108	2,800*	59
55	83	5,800	89	5,800	92	5,100	85	4,900	90	4,400	93	4,000	103	3,700	111	3,200*	114	2,700*	55
51	90	4,600	95	4,300	99	4,100	91	3,900	97	3,400	101	3,200	112	2,800	118	2,600	121	2,500	51
47	97	3,800	102	3,600	105	3,400	98	3,000	103	2,700	107	2,600	120	2,200	125	2,100	128	2,000	47
43	103	3,100	108	3,000	111	2,900	104	2,100	110	2,100	112	2,100	128	1,700	132	1,600	135	1,500	43
38	111	2,400	115	2,300	117	2,200	112	1,500	117	1,600	118	1,500	135	1,200	139	1,100	142	1,100	38
32	119	1,700	122	1,800	124	1,700	120	1,000	123	1,000	125	1,000	143	700					32
25	126	1,200	129	1,200															25
17	133	800																	17

MAXIMUM PERMISSIBLE HOIST LINE LOAD

LINE PARTS	1	2	3	4	5	6	7	8	9	10
MAIN & AUX HOIST	11,250	22,500	33,750	45,000	56,250	67,500	78,750	90,000	101,250	112,250

DEDUCTIONS for Load Handling Devices

All Jibs in Stowed Position 0 lbs
 Auxiliary Boom in Head Sheave. 100 lbs
 7-Ton Ball & Hook. 239 lbs
 22-Ton 2-Sheave Hook Block. 580 lbs
 50-Ton 5-Sheave Hook Block. 888 lbs
 Load Line. 1 lb/ft

SELECTED NOTES • TEREX RT 555

1. A **freely suspended load** is a load hanging free with no direct external force applied except by the hoist rope.
2. Crane load ratings are based on the crane being leveled and standing on a firm, uniform supporting surface.
3. Use of jibs, lattice-type boom extensions, or fourth section pullouts extended is not permitted for pick-and-carry operations.
4. The use of more parts of line than required by the load may result in having insufficient rope to allow the hook to reach the ground.
5. Do not elevate the boom above 60° unless the boom is positioned in-line with the crane's chassis or the outriggers are extended. Failure to observe this warning may result in loss of stability.
6. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
7. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
8. Do not operate at longer radii than those listed on the applicable load rating chart (cross-hatched areas shown on range diagrams).
9. The boom angles shown on the capacity chart give an approximation of the operating radius for a specific boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
10. Power telescoping boom sections must be extended equally.
- 11(a). Rated loads include the weight of hook block, slings, and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted.

- 11(b). When lifting over the jib the weight of any hook block, slings, and auxiliary lifting devices at the boom head must be added to the load.
- 11(c). When jibs are erected but unused add two (2) times the weight of any hook block, slings, and auxiliary lifting devices at the jib head to the load.
12. Rated loads do not exceed 85% on outriggers or 75% on tires, of the tipping load as determined by SAE Crane Stability Test Code J765a. Structural strength ratings in chart are indicated with an asterisk(*)
13. Rated loads are based on freely suspended loads. No attempt shall be made to drag a load horizontally on the ground in any direction.
14. The user shall operate at reduced ratings to allow for adverse 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.
15. The maximum load which can be telescoped is not definable, because of variations in loadings and crane maintenance, but it is permissible to attempt retraction and extension if load ratings are not exceeded.
16. Load ratings are dependent upon the crane being maintained according to manufacturer's specifications.
17. It is recommended that the load handling devices, including hooks and hook blocks, be kept away from boom head at all times.
18. Do not lift with outrigger beams positioned between the fully extended and intermediate (pinned) positions.

GROVE®

RT875E

product
guide

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features

- 75 ton (68 mt) capacity
- 41 ft-128 ft (12.6 m-39.0 m)
4 section, full power boom
- 33 ft-56 ft (10.0 m-17.0 m)
offsettable lattice
swingaway extension
- 20 ft (6.1 m) or 40 ft (12.2 m)
extension inserts
- Grove MEGAFORM™ boom
- 18,000 lb (8 165 kg)
hydraulic removable
counterweight
- 275 bhp (205 kW) Tier III
Cummins diesel engine



Rough Terrain Hydraulic Crane



GROVE RT875E



FULL HYDRAULIC SELF-PROPELLED CRANE • 75 TON CAPACITY
PCSA CLASS 10-336 • 85% OF TIPPING

 41.3-128 ft.

 18,000 lbs

 100%
24' spread

 360°

	 Pounds									
Feet	Main Boom Length in Feet									
	41.3	50	60	**70	80	90	100	110	120	128
10	+150,000 (71)	124,000 (74.5)	105,500 (77.5)							
12	+150,000 (67.5)	124,000 (72)	105,500 (75.5)	59,500 (78)						
15	130,000 (63)	124,000 (68.5)	104,000 (72.5)	59,500 (75.5)	42,100 (78)	*42,000 (78)				
20	100,000 (54.5)	99,850 (62)	85,900 (67.5)	59,500 (71)	42,100 (74)	42,000 (76)	*39,650 (78)	*31,950 (78)		
25	80,550 (44.5)	80,250 (55)	72,550 (62)	57,050 (66.5)	42,100 (70)	42,000 (73)	39,650 (75)	31,950 (77)	*25,750 (78)	*22,000 (78)
30	59,050 (31.5)	58,150 (47)	57,850 (56)	49,300 (62)	42,100 (66)	39,050 (69.5)	36,150 (72)	31,950 (74)	25,750 (76)	22,000 (77)
35		43,250 (37.5)	43,000 (49.5)	42,600 (57)	38,150 (62)	34,100 (66)	31,350 (68.5)	29,300 (71.5)	25,750 (73.5)	22,000 (74.5)
40		33,600 (24.5)	33,400 (42.5)	32,950 (52)	33,750 (58)	30,050 (62)	27,500 (65.5)	25,650 (68.5)	23,900 (71)	22,000 (72.5)
45			26,600 (34)	26,200 (46)	27,400 (53)	26,750 (58.5)	24,400 (62)	22,700 (65.5)	21,450 (68)	20,650 (70)
50	See Note 16		21,600 (22)	21,150 (39.5)	22,450 (48.5)	23,250 (54.5)	21,850 (59)	20,250 (62.5)	19,100 (65.5)	18,350 (67.5)
55				17,250 (31.5)	18,650 (43)	19,400 (50)	19,700 (55)	18,200 (59.5)	17,100 (63)	16,400 (65)
60				14,200 (21)	15,600 (37)	16,400 (45.5)	17,050 (51.5)	16,450 (56)	15,450 (60)	14,750 (62.5)
65					13,100 (29.5)	13,850 (40.5)	14,550 (47.5)	14,950 (53)	14,000 (57)	13,350 (59.5)
70					11,050 (19)	11,800 (34.5)	12,450 (43)	12,900 (49.5)	12,700 (54)	12,150 (57)
75						10,000 (28)	10,700 (38.5)	11,200 (45.5)	11,600 (51)	11,050 (54)
80						8,540 (18)	9,170 (33)	9,670 (41.5)	10,150 (47.5)	10,100 (51)
85							7,860 (26.5)	8,360 (37)	8,850 (44)	9,180 (48)
90							6,710 (17.5)	7,210 (32)	7,700 (40)	8,050 (44.5)
95								6,200 (25.5)	6,700 (35.5)	7,050 (41)
100								5,310 (17)	5,800 (30.5)	6,160 (37)
105									5,010 (25)	5,360 (32.5)
110									4,290 (16.5)	4,640 (27.5)
115										4,000 (21.5)
120										3,410 (10.5)

Minimum boom angle (deg.) for indicated length (no load) 9

Maximum boom length (ft.) at 0 deg. boom angle (no load) 120

#LMI operating code. Refer to LMI manual for instructions.

*This capacity is based upon maximum obtainable boom angle.

Note: () Boom angles are in degrees.

+9 parts line required to lift this capacity (using aux. boom nose). Refer to Operator's & Safety Handbook for reeving diagram.

Lifting Capacities at Zero Degree Boom Angle

Boom Angle	Main Boom Length in Feet								
	41.3	50	60	**70	80	90	100	110	120
0°	20,750 (34.1)	15,150 (42.8)	10,500 (52.8)	6,700 (63)	5,100 (72.8)	3,900 (82.8)	2,900 (92.8)	2,000 (102.8)	1,300 (112.8)

Note: () Reference radii in feet.

**This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.

A6-829-103645

Note: Boom angles are in degrees.

GROVE RT875E



Pounds						
Feet	33 ft. LENGTH			56 ft. LENGTH		
	0° OFFSET #0021	20° OFFSET #0022	40° OFFSET #0023	0° OFFSET #0041	20° OFFSET #0042	40° OFFSET #0043
35	11,900 (78)					
40	11,900 (77)			6,060 (78)		
45	11,900 (75.5)	*11,900 (78)		6,060 (77.5)		
50	11,900 (73.5)	10,600 (76.5)	*9,790 (78)	6,060 (76)		
55	11,900 (71.5)	9,770 (74.5)	8,470 (77)	6,060 (74.5)		
60	11,000 (69.5)	9,020 (72.5)	7,920 (75)	6,060 (72.5)	*6,060 (78)	
65	10,000 (67.5)	8,360 (70.5)	7,430 (73)	6,060 (71.5)	5,900 (76.5)	
70	9,190 (65.5)	7,780 (68.5)	6,980 (71)	6,060 (69.5)	5,730 (75)	*5,060 (78)
75	8,460 (63.5)	7,260 (66.5)	6,580 (69)	6,060 (67.5)	5,330 (73)	4,640 (77)
80	7,820 (61.5)	6,790 (64.5)	6,210 (66.5)	6,040 (66)	4,980 (71.5)	4,370 (75.5)
85	7,250 (59.5)	6,370 (62)	5,870 (64.5)	5,570 (64)	4,650 (69.5)	4,120 (73.5)
90	6,740 (57)	5,990 (60)	5,560 (62)	5,150 (62.5)	4,360 (67.5)	3,890 (71.5)
95	6,290 (55)	5,640 (57.5)	5,280 (60)	4,780 (60.5)	4,090 (66)	3,680 (69.5)
100	5,880 (52.5)	5,320 (55.5)	5,020 (57.5)	4,440 (58.5)	3,840 (64)	3,480 (67.5)
105	5,510 (50)	5,030 (53)	4,770 (55)	4,130 (56.5)	3,610 (62)	3,300 (65.5)
110	5,170 (47.5)	4,760 (50.5)	4,550 (52)	3,850 (54.5)	3,400 (60)	3,130 (63.5)
115	4,830 (45)	4,510 (47.5)	4,340 (49.5)	3,590 (52.5)	3,200 (58)	2,970 (61)
120	4,230 (42)	4,280 (45)	4,150 (46.5)	3,360 (50.5)	3,020 (55.5)	2,820 (59)
125	3,690 (39)	3,960 (41.5)		3,140 (48)	2,840 (53.5)	2,680 (56.5)
130	3,200 (36)	3,430 (38.5)		2,940 (46)	2,690 (51)	2,540 (54)
135	2,740 (32)	2,930 (35)		2,760 (43.5)	2,540 (48.5)	2,420 (51.5)
140	2,320 (28)	2,480 (30.5)		2,590 (41)	2,400 (46)	2,300 (48.5)
145	1,940 (23)			2,430 (38.5)	2,270 (43.5)	
150	1,580 (16.5)			2,070 (35.5)	2,140 (40.5)	
155				1,730 (32.5)	2,030 (37)	
160				1,420 (29)	1,710 (33.5)	
165				1,120 (24.5)		
Minimum boom angle (°) for indicated length (no load)	15	28	44	23	31	46
Maximum boom length (ft.) at 0° boom angle (no load)	110			110		

NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.
 *This capacity is based upon maximum boom angle.

A6-829-103653



Pounds						
#9005						
Feet	Main Boom Length in Feet					
	41.3	50	60	*70	80	90
12	49,200 (67.5)	40,750 (72)				
15	39,150 (63)	35,700 (68.5)				
20	24,200 (54.5)	24,350 (62)	22,800 (67.5)	22,000 (71)		
25	16,200 (44.5)	16,200 (55)	15,600 (62)	15,950 (66.5)	15,850 (70)	
30	11,250 (31.5)	11,250 (47)	10,950 (56)	10,650 (62)	11,600 (66)	12,150 (69.5)
35		7,900 (37.5)	7,690 (49.5)	7,270 (57)	8,420 (62)	8,820 (66)
40		5,490 (24.5)	5,280 (42.5)	4,880 (52)	6,020 (58)	6,330 (62)
45			3,430 (34)	3,110 (46)	4,130 (53)	4,480 (58.5)
50			1,350 (22)	1,740 (39.5)	2,610 (48.5)	3,040 (54.5)
55					1,360 (43)	1,070 (50)
Minimum boom angle (deg.) for indicated length (no load)			21	38.5	42	49
Maximum boom length (ft.) at 0 deg. boom angle (no load)					50	

Weight Reductions for Load Handling Devices

33 FT.-56 FT. FOLDING BOOM EXTENSION

*33 ft. Extension (Erected) -	3,700 lb.
*56 ft. Extension (Erected) -	7,830 lb.
*76 ft. (1 insert Erected) -	10,350 lb.
*96 ft. (2 inserts Erected) -	13,300 lb.

*Reduction of main boom capacities
(no deduct required for stowed boom extension)

AUXILIARY BOOM NOSE 136 lb.

HOOBLOCK AND OVERHAUL BALL:

75 Ton, 4 Sheave Hookblock	1,275 lb.+
10 Ton, Overhaul Ball	568 lb. +

Hoists	Cable Specs	Permissible Line Pulls	Nominal Cable Length
Main	3/4" (19 mm) 6x37 Class, EIPS, IWRC Special Flexible Min. Breaking Str. 58,800 lb.	16,800 lb.	600 ft.
Main & Aux.	3/4" (19 mm) Flex-X 35 Rotation Resistant (non-rotating) Min. Breaking Strength 85,800 lb.	16,800 lb.	607 ft.

The approximate weight of 3/4" wire rope is 1.5 lb./ft.