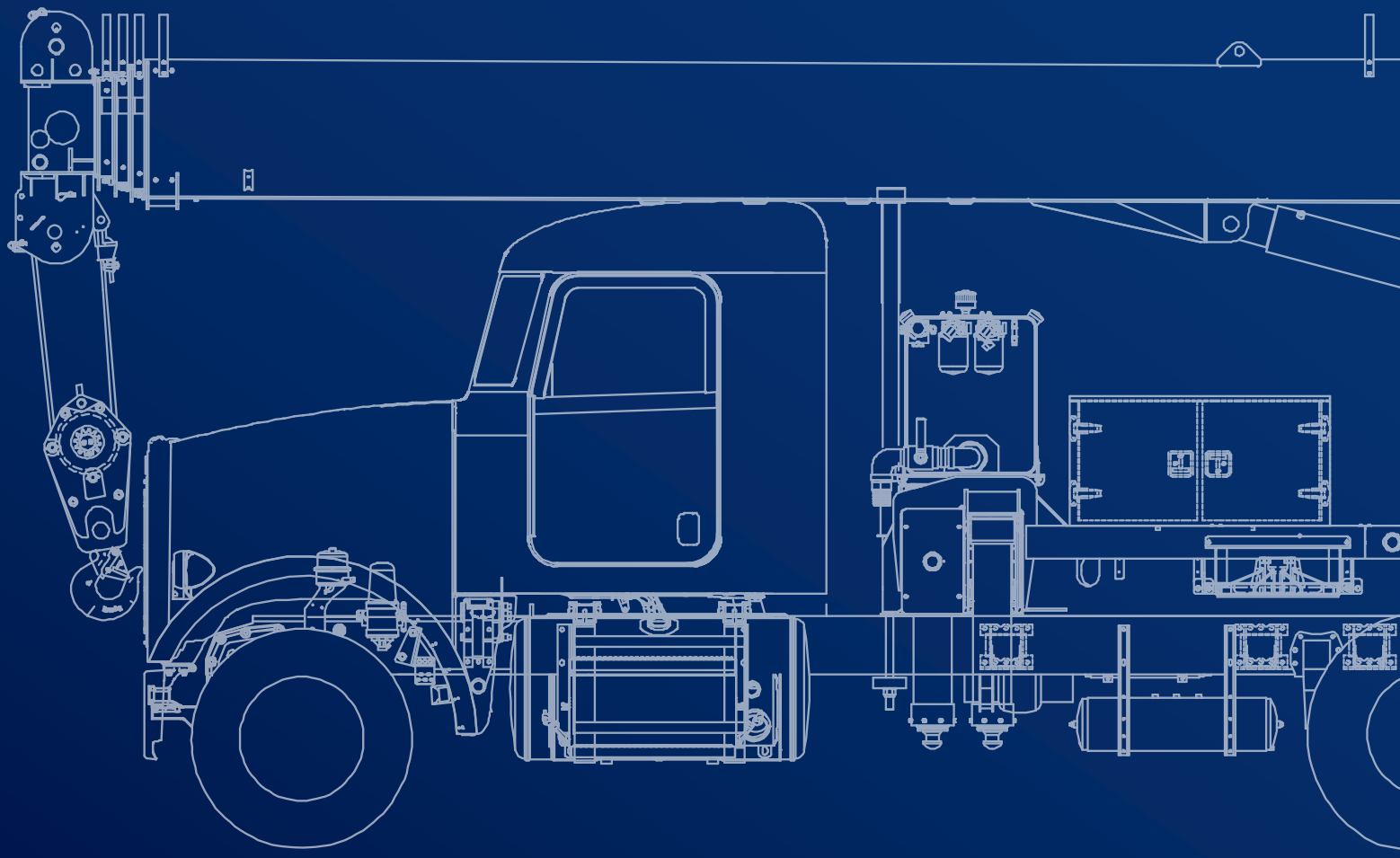
TADANO

TECHNICAL DATA | IMPERIAL

TC 400 / TC 450

SERIES PRODUCT GUIDE

40 TON (36.3 MT) / 45 TON (40.8 MT) TELESCOPIC CRANE



TADANO

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Key


Operator aids


Cab


Heating / Air conditioning


Controls


Hoist speed


1 - Main hoist 2 - Auxiliary winch
3 - Recovery winch


Rope length


Rope – Standard / optional


Rope diameter


Permissible line pull

Maximum line pull


Slewing / Allowable slewing range


Slewing gears


Slewing brake


Outriggers / Lifting on outriggers


2-person man basket


Counterweight


Radio remote control


Hook block


Distance from hook to head sheave pin


Hook and ball

Hydraulics


Boom elevation angle


Max. boom length with extension


Boom with extension retracted


Boom angle


Telescoping mode


Working radius


Boom length


Hydraulic actuated boom

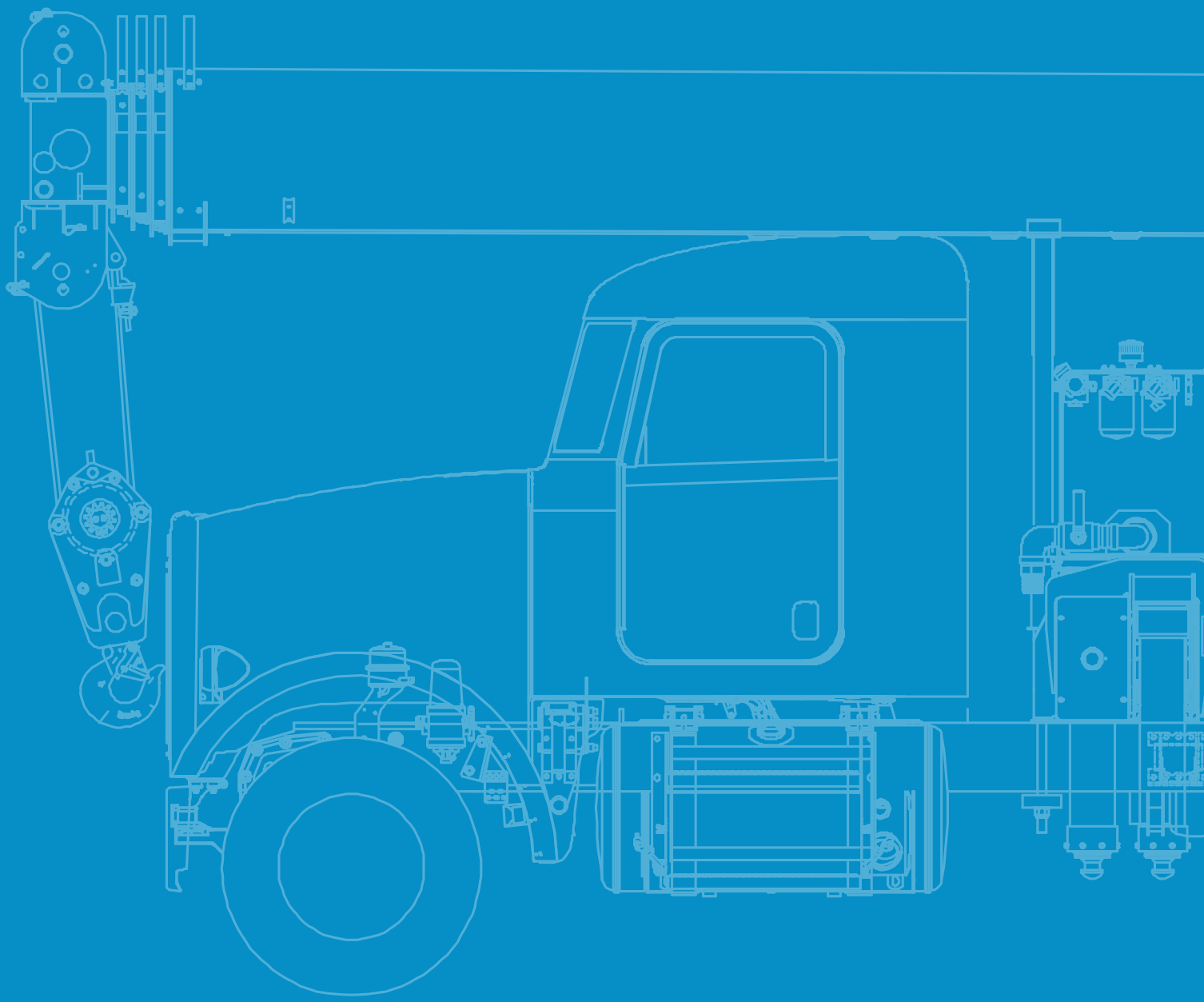

Full power mechanical synchronized


Boom head / Hook block dimension


Main boom with auxiliary head


Tip height

TC400 / TC450

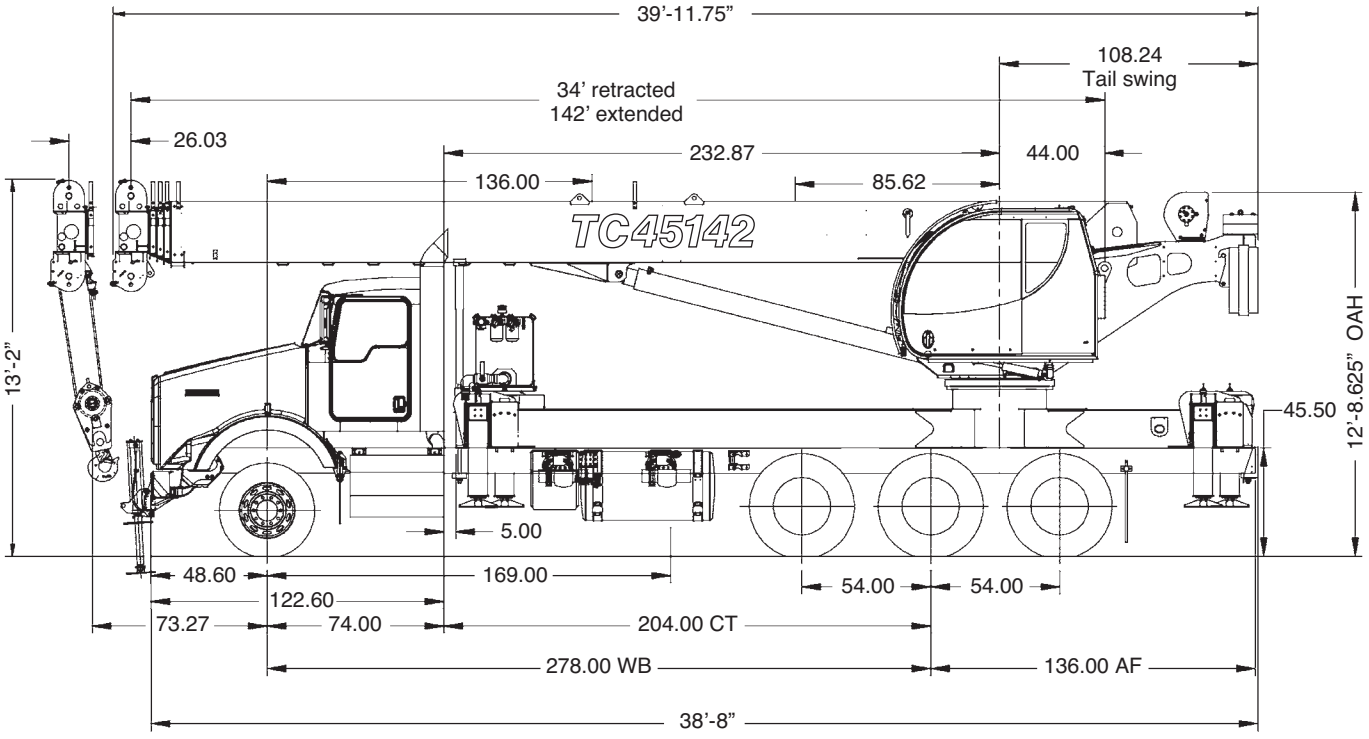


Courtesy of CraneMarket.com

TC450 Series Chassis Data

Dimensions

TC45142



Chassis Data	
Model	**TC45142**
Wheel base (WB)	278 in. (7,061 mm)
Cab to tandem (CT)	204 in. (5,182 mm)
Frame section modulus at 360° area of operation	27.0 in^3 110,000 psi · 758,422 kPa
Cab to end of frame (EOF)	316 in. (8,026 mm)
Nominal frame width	34 in. (864 mm)

Truck Axle Weight	
Front axle (GW)	20,000 lbs (9,790 kg)
Rear axle	40,000 lbs (19,580 kg)
Tag axle rating	12,500 lbs (5,669 kg)
Min. truck axle weight – Front**	9,000 lbs (4,082 kg)
Min. truck axle weight – Rear**	9,600 lbs (4,354 kg)

Crane Weight	
Crane with cab	45,550 lbs (20,661 kg)
Aluminum platform	621 lbs (282 kg)
Tele jib	1,620 lbs (735 kg)

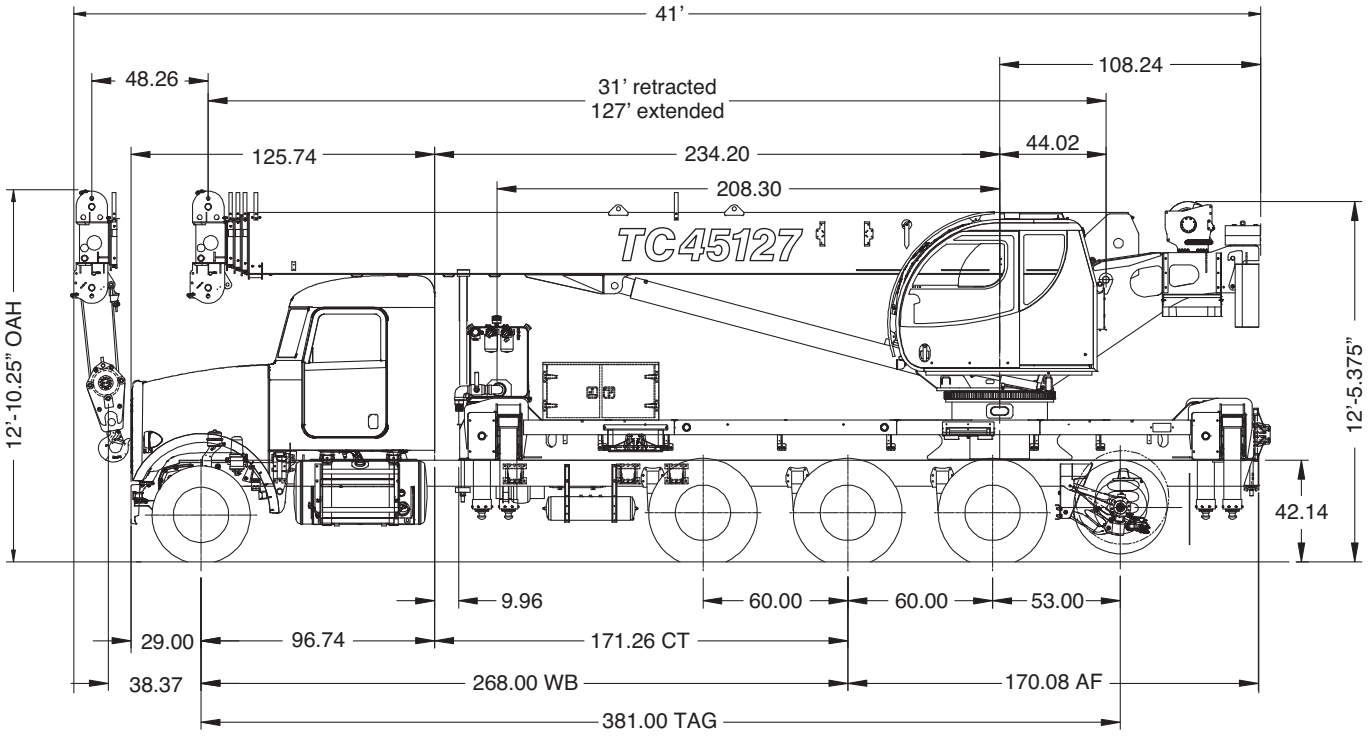
** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC450 Series Chassis Data

Dimensions

TC45127



Chassis Data	
Model	**TC45127**
Wheel base (WB)	268 in. (6,807 mm)
Cab to tandem (CT)	181 in. (4,597 mm)
Frame section modulus at 360° area of operation	27.0 in^3 110,000 psi · 758,422 kPa
Cab to end of frame (EOF)	346 in. (8,788 mm)
Nominal frame width	34 in. (864 mm)

Truck Axle Weight	
Front axle (GAWR)	20,000 lbs (9,790 kg)
Rear axle (GAWR)	40,000 lbs (19,580 kg)
Tag axle (GAWR)	12,500 lbs (5,669 kg)
Min. truck axle weight – Front**	9,000 lbs (4,082 kg)
Min. truck axle weight – Rear**	9,600 lbs (4,354 kg)

Crane Weight	
Crane with cab	40,738 lbs (18,479 kg)
Aluminum platform	621 lbs (282 kg)
Tele jib	1,620 lbs (735 kg)

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

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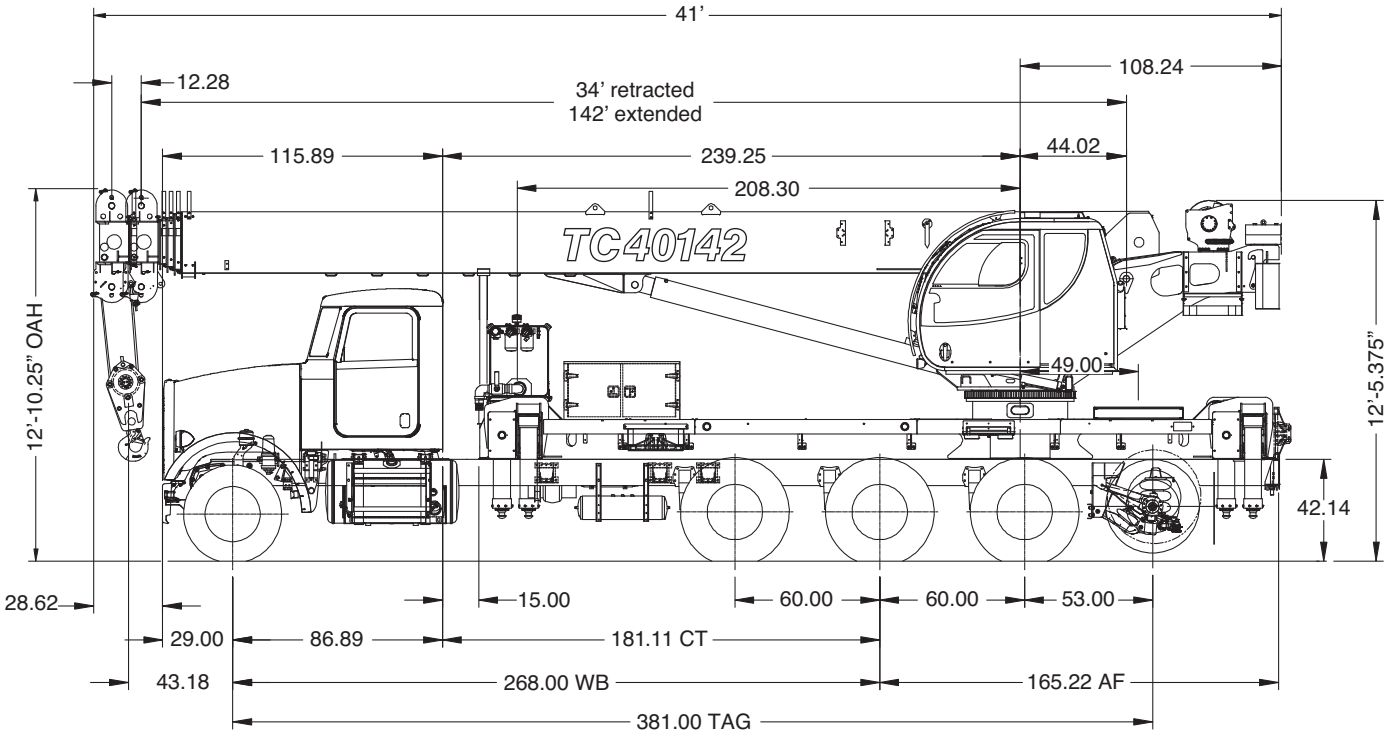
TC400 Series Chassis Data

Dimensions

TC40142



Chassis Data	
Model	**TC40142**
Wheel base (WB)	268 in. (6,807 mm)
Cab to tandem (CT)	181 in. (4,597 mm)
Frame section modulus at 360° area of operation	27.0 in^3 110,000 psi · 758,422 kPa
Cab to end of frame (EOF)	346 in. (8,788 mm)
Nominal frame width	34 in. (864 mm)

Truck Axle Weight	
Front axle (GAWR)	20,000 lbs (9,790 kg)
Rear axle (GAWR)	40,000 lbs (19,580 kg)
Tag axle (GAWR)	12,500 lbs (5,669 kg)
Min. truck axle weight – Front**	9,000 lbs (4,082 kg)
Min. truck axle weight – Rear**	9,600 lbs (4,354 kg)

Crane Weight	
Crane with cab	39,500 lbs (17,917 kg)
Aluminum platform	621 lbs (282 kg)
Tele jib	1,620 lbs (735 kg)

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

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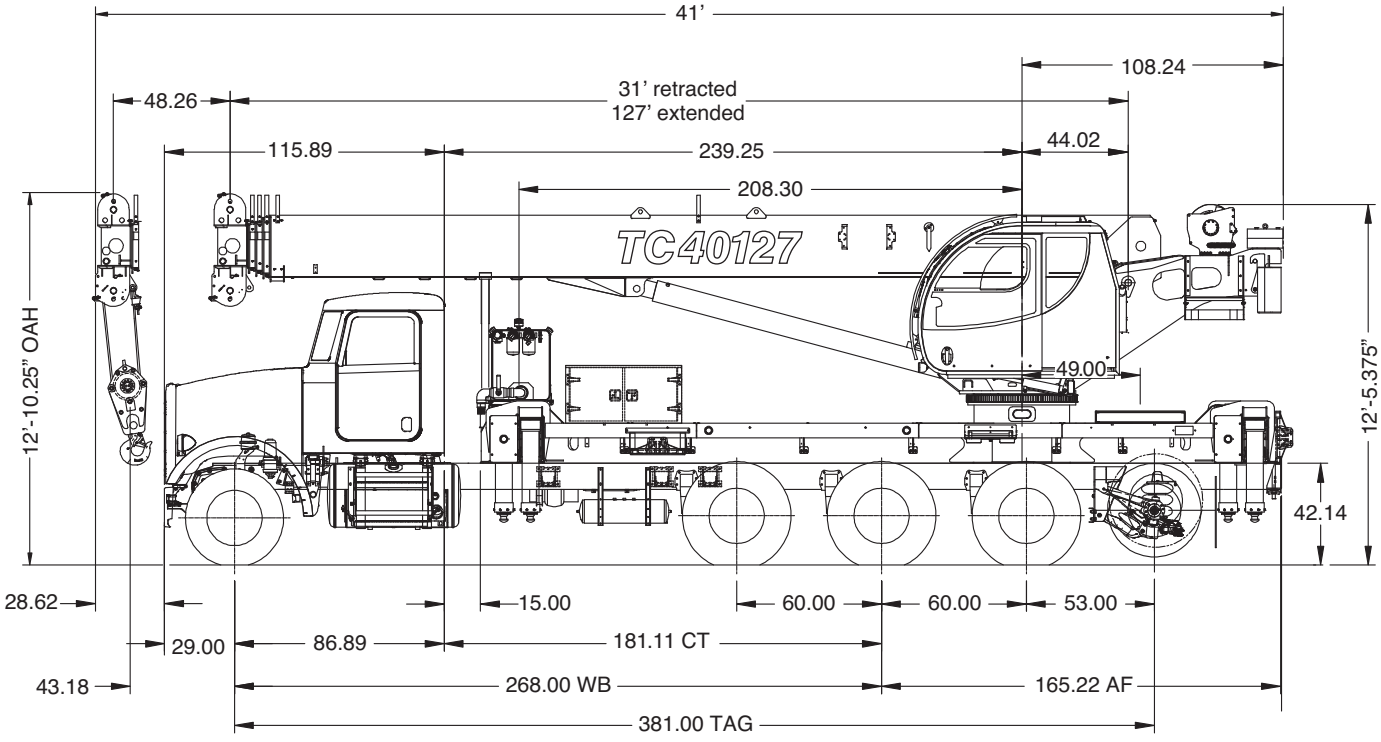
TC400 Series Chassis Data

Dimensions

TC40127



Chassis Data	
Model	**TC40127**
Wheel base (WB)	268 in. (6,807 mm)
Cab to tandem (CT)	181 in. (4,597 mm)
Frame section modulus at 360° area of operation	27.0 in^3 110,000 psi · 758,422 kPa
Cab to end of frame (EOF)	346 in. (8,788 mm)
Nominal frame width	34 in. (864 mm)

Truck Axle Weight	
Front axle (GAWR)	20,000 lbs (9,790 kg)
Rear axle (GAWR)	40,000 lbs (19,580 kg)
Tag axle (GAWR)	12,500 lbs (5,669 kg)
Min. truck axle weight – Front**	9,000 lbs (4,082 kg)
Min. truck axle weight – Rear**	9,600 lbs (4,354 kg)

Crane Weight	
Crane with cab	38,738 lbs (17,592 kg)
Aluminum platform	621 lbs (282 kg)
Tele jib	1,620 lbs (735 kg)

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

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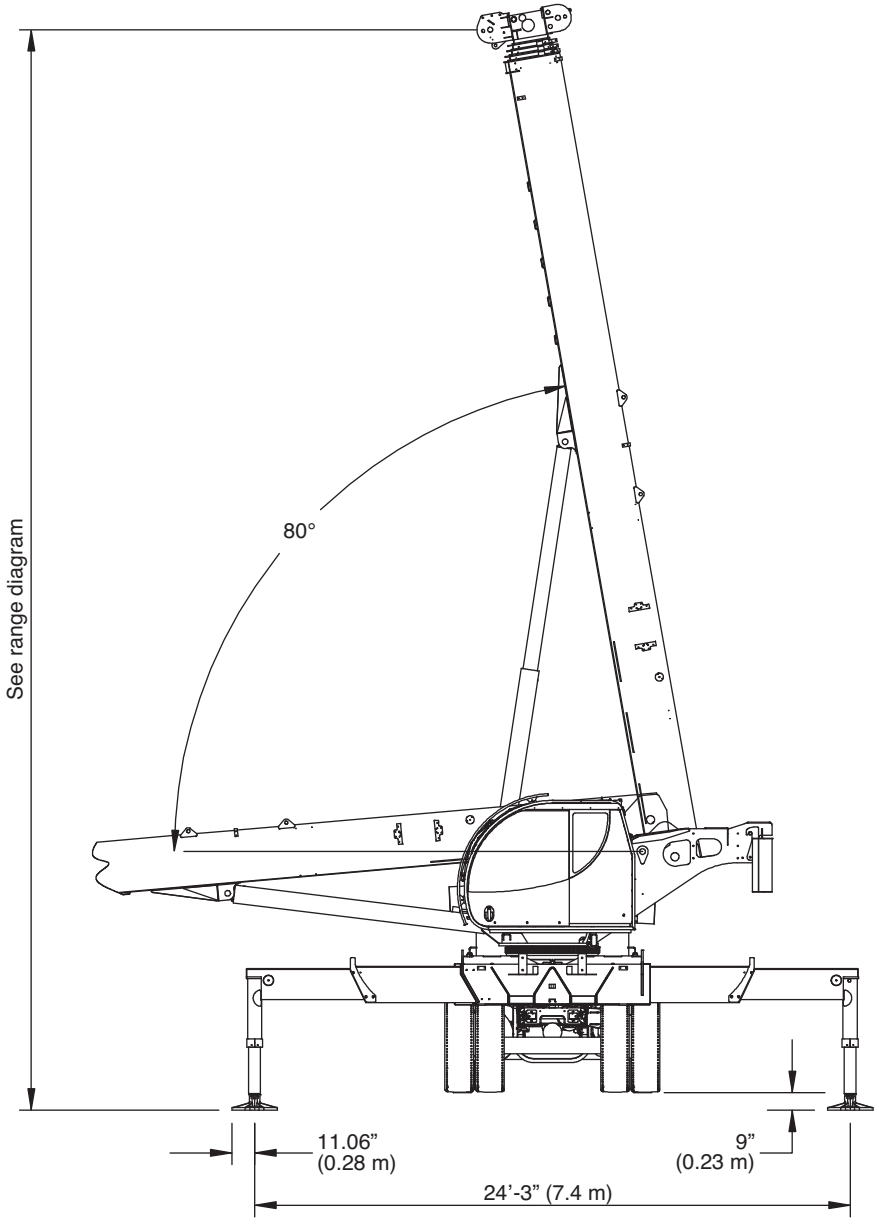
Outrigger Extension

Full Extension



Sub Frame

– Pedestal sub-frame and stabilizers are mounted to chassis by threaded rods and clamp plates

– Sub-frame: Torsion resistant, rigid 4-plate design mounted under crane full length of truck frame

– Rear underride protection: Standard on factory mounted cranes

Electrical System

– State-of-the-art, weather-resistant components throughout

– Hermetically sealed enclosure includes power in relays and circuit status LEDs

– 12-24 Volt capability

– PLC / CANBUS technology

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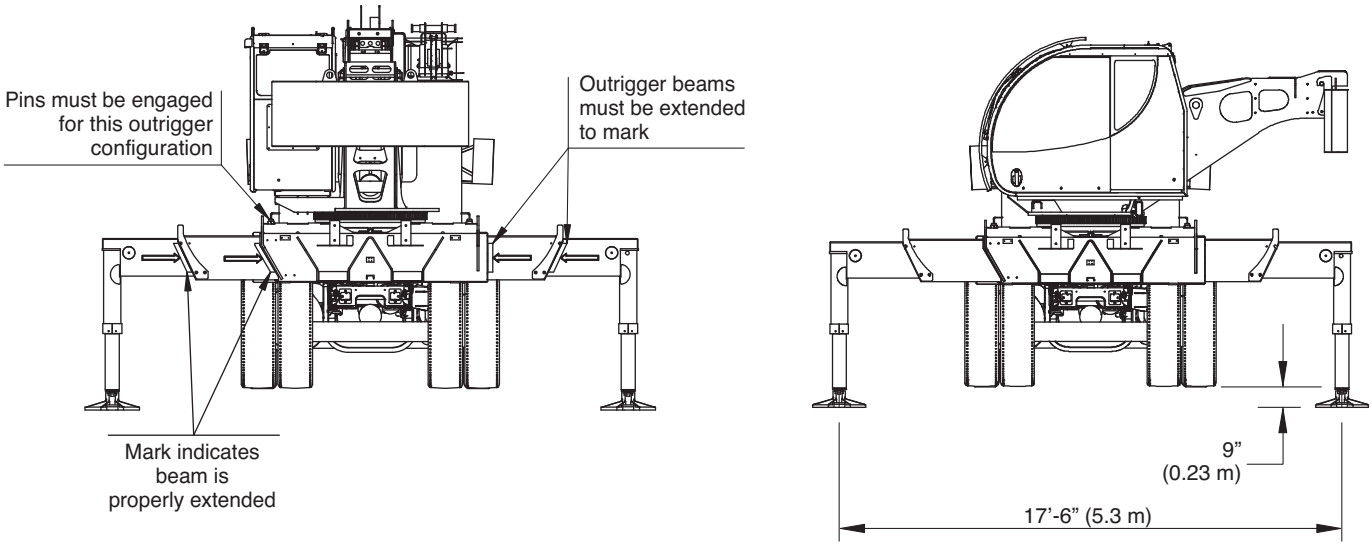
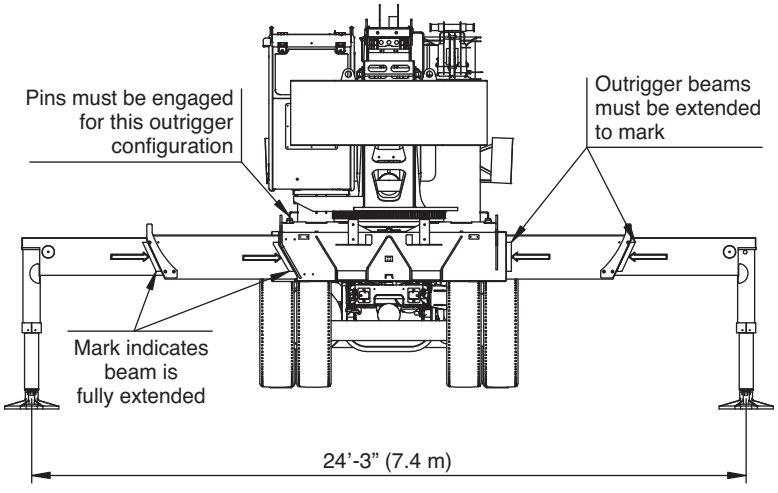
Outrigger Extension

Intermediate Spread



Fully Retracted Spread



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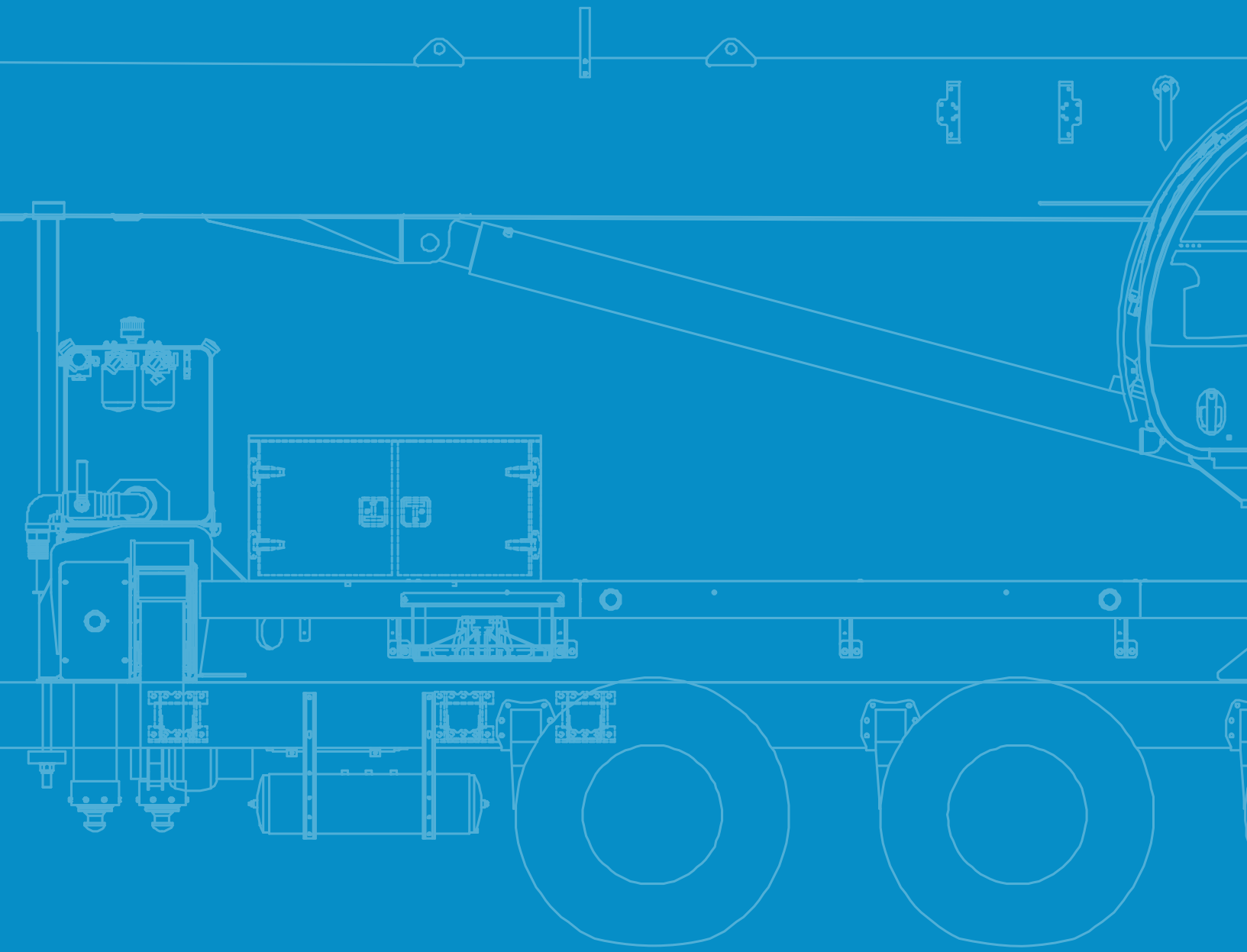
Notes

TC400 / TC450



Courtesy of CraneMarket.com

TC45142 Load Chart

Main Boom
Jib

34 ft – 142 ft – 5 section | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

	34 ft		47 ft (A)		61 ft (B)		74 ft (C)		88 ft (D)		101 ft (E)		115 ft (F)		128 ft (G)		142 ft (H)	
		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity
ft	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs
7	73	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	71	80,000	77	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	67	70,500	74	42,000	79	42,000	-	-	-	-	-	-	-	-	-	-	-	-
12	64	62,100	72	42,000	77	42,000	80	34,060	-	-	-	-	-	-	-	-	-	-
15	58	49,450	68	42,000	74	40,960	78	32,860	80	23,430	-	-	-	-	-	-	-	-
20	47	35,640	61	36,240	69	36,570	74	30,970	77	21,610	79	16,510	-	-	-	-	-	-
25	33	27,160	54	27,810	64	28,140	70	28,310	74	19,730	76	15,160	79	13,500	-	-	-	-
30	9	19,390	46	22,100	58	22,450	65	22,630	70	18,300	74	13,960	77	12,420	79	10,000	80	8,000
35	-	-	36	17,980	52	18,350	61	18,530	67	17,060	71	12,860	74	11,420	76	9,800	78	7,800
40	-	-	23	14,840	46	15,250	56	15,440	63	15,570	68	11,860	71	10,540	74	9,400	76	7,600
45	-	-	-	-	39	12,820	51	13,020	59	13,150	64	10,990	69	9,550	72	8,800	74	7,350
50	-	-	-	-	30	10,850	46	11,070	55	11,210	61	10,200	66	8,870	69	8,300	72	7,050
55	-	-	-	-	18	8,870	40	9,170	51	9,340	58	9,430	63	8,260	67	7,900	70	6,800
60	-	-	-	-	-	-	33	7,610	47	7,790	54	7,890	60	7,680	64	7,450	68	6,500
65	-	-	-	-	-	-	24	6,330	42	6,520	50	6,630	57	6,710	62	6,770	66	6,100
70	-	-	-	-	-	-	-	-	36	5,480	46	5,590	54	5,670	59	5,720	64	5,700
75	-	-	-	-	-	-	-	-	30	4,590	42	4,700	51	4,790	56	4,840	61	4,880
80	-	-	-	-	-	-	-	-	21	3,820	37	3,950	47	4,030	54	4,090	59	4,130
85	-	-	-	-	-	-	-	-	-	-	32	3,300	43	3,380	51	3,440	56	3,480
90	-	-	-	-	-	-	-	-	-	-	25	2,720	39	2,810	47	2,870	54	2,910
95	-	-	-	-	-	-	-	-	-	-	17	2,200	35	2,310	44	2,370	51	2,410
100	-	-	-	-	-	-	-	-	-	-	-	-	30	1,870	40	1,930	48	1,970
105	-	-	-	-	-	-	-	-	-	-	-	-	23	1,460	36	1,530	45	1,580
110	-	-	-	-	-	-	-	-	-	-	-	-	12	1,090	32	1,170	42	1,220
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	840	38	900
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Deductions from main boom capacities for stowed jibs

840 lbs	560 lbs	450 lbs	380 lbs	330 lbs	290 lbs	260 lbs	230 lbs	210 lbs

NOTES:

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

↑ Structural
↓ Stability

Jib 30.5 ft – 55 ft | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
35	79.0	3,450	-	-
40	77.2	3,400	79.4	2,500
45	76.1	3,350	78.0	2,250
50	74.7	3,330	76.7	2,250
55	73.2	3,180	75.6	2,250
60	71.5	2,920	74.5	2,250
65	69.4	2,760	73.1	2,100
70	68.0	2,610	72.1	1,970

	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
75	66.3	2,470	70.5	1,860
80	64.5	2,340	68.7	1,760
85	62.9	2,220	67.1	1,670
90	61.1	2,110	66.1	1,590
95	59.4	2,010	64.6	1,530
100	57.4	1,920	62.9	1,460
105	54.5	1,550	61.4	1,400
110	52.7	1,190	60.2	1,340

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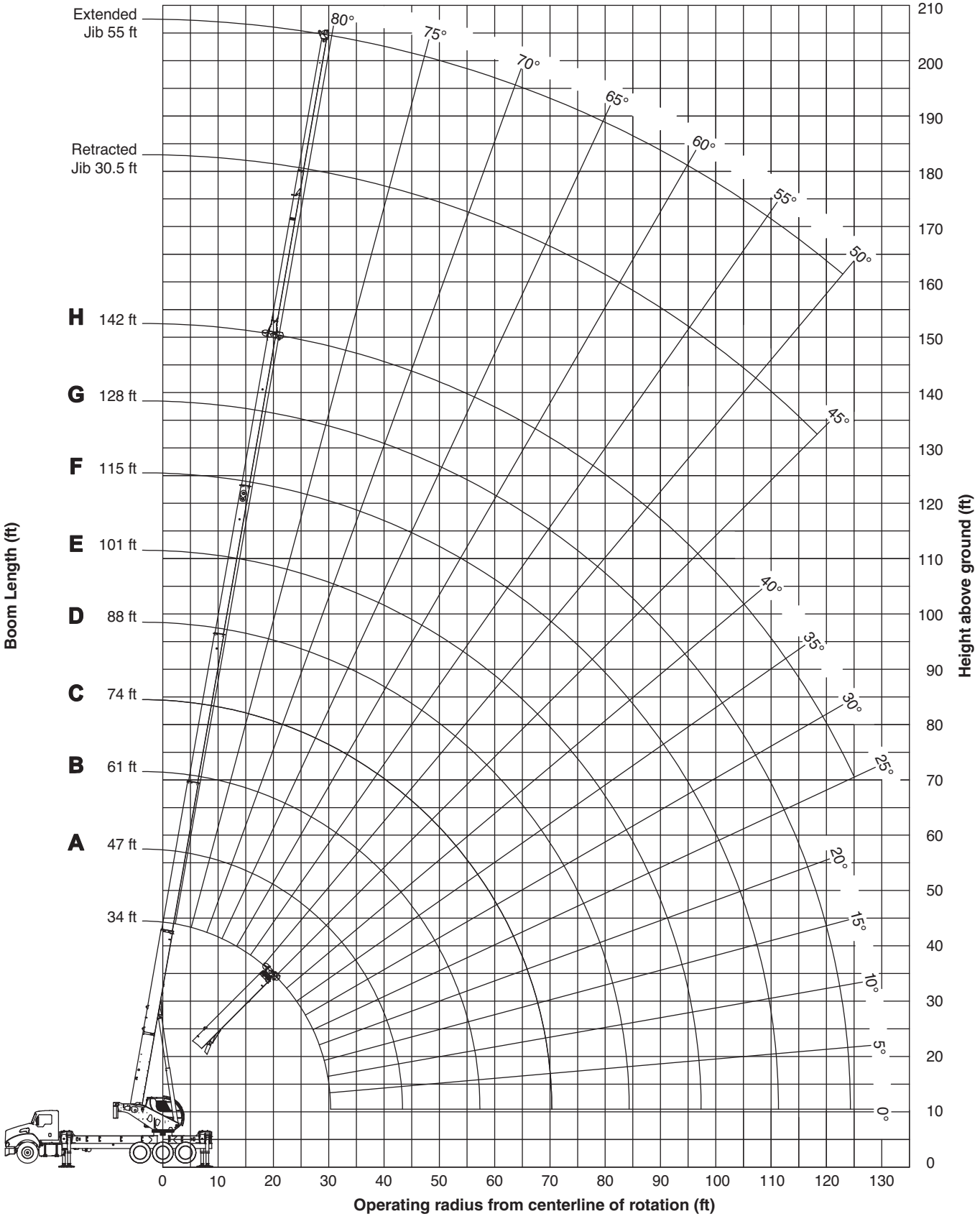
TC45142 Boom Diagram

Main Boom
Jib



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TC40142 Load Chart

Main Boom
Jib

34 ft – 142 ft – 5 section | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

	34 ft		47 ft (A)		61 ft (B)		74 ft (C)		88 ft (D)		101 ft (E)		115 ft (F)		128 ft (G)		142 ft (H)	
		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity
ft	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs
7	73	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	71	80,000	77	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	67	70,500	74	42,000	79	42,000	-	-	-	-	-	-	-	-	-	-	-	-
12	64	61,000	72	42,000	77	42,000	80	35,700	-	-	-	-	-	-	-	-	-	-
15	58	47,890	68	42,000	74	40,960	78	35,700	80	24,200	-	-	-	-	-	-	-	-
20	47	34,460	61	35,060	69	35,380	74	30,970	77	24,200	79	17,550	-	-	-	-	-	-
25	33	26,210	54	26,850	64	27,180	70	27,360	74	21,730	76	16,210	79	13,650	-	-	-	-
30	9	19,380	46	21,310	58	21,650	65	21,830	70	19,680	74	15,010	77	12,750	79	10,050	80	8,000
35	-	-	36	17,290	52	17,660	61	17,850	67	17,060	71	13,860	74	11,700	76	9,800	78	7,800
40	-	-	23	14,240	46	14,640	56	14,840	63	14,970	68	12,810	71	10,920	74	9,400	76	7,600
45	-	-	-	-	39	12,280	51	12,480	59	12,620	64	11,440	69	10,230	72	8,800	74	7,350
50	-	-	-	-	30	10,370	46	10,590	55	10,730	61	10,200	66	9,550	69	8,300	72	7,050
55	-	-	-	-	18	8,470	40	8,770	51	8,940	58	9,050	63	8,260	67	7,900	70	6,800
60	-	-	-	-	-	-	33	7,250	47	7,430	54	7,540	60	7,620	64	7,450	68	6,500
65	-	-	-	-	-	-	24	5,770	42	5,980	50	6,110	57	6,390	62	6,440	66	6,100
70	-	-	-	-	-	-	8	4,630	36	4,890	46	5,020	54	5,110	59	5,170	64	5,220
75	-	-	-	-	-	-	-	-	30	3,990	42	4,120	51	4,200	56	4,270	61	4,320
80	-	-	-	-	-	-	-	-	21	3,220	37	3,360	47	3,450	54	3,510	59	3,560
85	-	-	-	-	-	-	-	-	-	-	32	2,710	43	2,810	51	2,870	56	2,910
90	-	-	-	-	-	-	-	-	-	-	25	2,140	39	2,250	47	2,300	54	2,350
95	-	-	-	-	-	-	-	-	-	-	17	1,630	35	1,750	44	1,820	51	1,870
100	-	-	-	-	-	-	-	-	-	-	-	-	30	1,320	40	1,390	48	1,440
105	-	-	-	-	-	-	-	-	-	-	-	-	23	940	36	1,000	45	1,050
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	710
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Deductions from main boom capacities for stowed jibs

840 lbs	560 lbs	450 lbs	380 lbs	330 lbs	290 lbs	260 lbs	230 lbs	210 lbs

NOTES:

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

↑ Structural
↓ Stability

Jib 30.5 ft – 55 ft | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

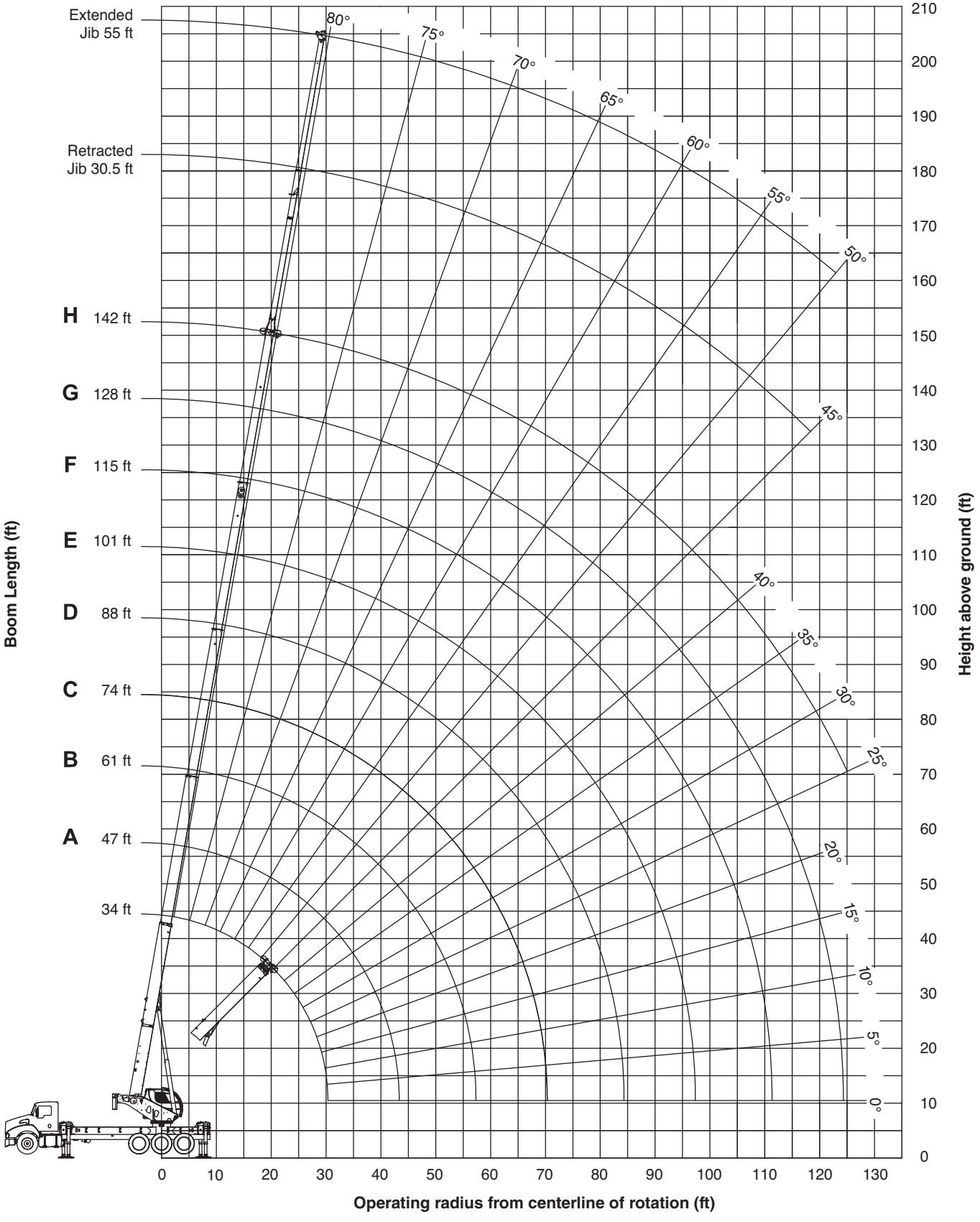
	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
35	79.0	3,450	-	-
40	77.2	3,400	79.4	2,500
45	76.1	3,350	78.0	2,250
50	74.7	3,330	76.7	2,250
55	73.2	3,180	75.6	2,250
60	71.5	2,920	74.5	2,250
65	69.4	2,760	73.1	2,100
70	68.0	2,610	72.1	1,970

	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
75	66.3	2,470	70.5	1,860
80	64.5	2,340	68.7	1,760
85	62.9	2,220	67.1	1,670
90	61.1	2,110	66.1	1,590
95	59.4	2,010	64.6	1,530
100	57.4	1,760	62.9	1,460
105	54.5	1,370	61.4	1,400
110	52.7	1,020	60.2	1,340

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC40142 Boom Diagram

Main Boom
Jib



Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC45127 Load Chart

Main Boom
Jib

31 ft – 127 ft – 5 section | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

	31 ft		43 ft (A)		55 ft (B)		67 ft (C)		79 ft (D)		91 ft (E)		103 ft (F)		115 ft (G)		127 ft (H)	
		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity
ft	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs
7	70	90,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	68	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	64	71,920	72	42,000	76	42,000	-	-	-	-	-	-	-	-	-	-	-	-
12	60	61,860	69	42,000	74	42,000	-	-	-	-	-	-	-	-	-	-	-	-
15	54	48,860	65	42,000	70	42,000	74	37,500	77	27,900	-	-	-	-	-	-	-	-
20	41	35,160	57	35,810	65	36,130	70	33,000	73	25,180	75	19,500	77	17,000	78	17,000	-	-
25	23	26,830	49	27,560	59	27,890	65	28,090	69	22,810	72	17,650	74	15,570	76	13,500	77	10,000
30	-	-	39	21,970	53	22,330	60	22,520	65	20,940	68	16,250	71	14,420	73	12,420	75	10,000
35	-	-	26	17,920	46	18,310	55	18,520	61	17,060	65	15,030	68	13,300	70	11,420	72	9,800
40	-	-	-	-	38	15,270	50	15,490	57	15,630	61	13,780	65	12,120	68	10,540	70	9,300
45	-	-	-	-	28	12,880	44	13,120	52	13,260	58	10,990	62	11,050	65	9,830	68	8,800
50	-	-	-	-	13	10,870	37	11,210	47	11,360	54	10,200	59	8,870	62	9,050	65	8,300
55	-	-	-	-	-	-	29	9,280	42	9,470	50	9,430	55	8,260	59	8,260	63	7,800
60	-	-	-	-	-	-	18	7,740	37	7,950	46	8,070	52	7,680	57	7,680	60	7,450
65	-	-	-	-	-	-	-	-	30	6,700	41	6,830	48	6,600	53	6,980	57	7,000
70	-	-	-	-	-	-	-	-	21	5,670	36	5,810	44	5,520	50	5,960	55	6,000
75	-	-	-	-	-	-	-	-	5	4,760	30	4,940	40	4,600	47	5,090	52	5,140
80	-	-	-	-	-	-	-	-	-	-	23	4,180	36	3,840	43	4,360	49	4,400
85	-	-	-	-	-	-	-	-	-	-	13	3,470	31	3,180	40	3,670	46	3,730
90	-	-	-	-	-	-	-	-	-	-	-	-	25	2,610	36	3,010	43	3,140
95	-	-	-	-	-	-	-	-	-	-	-	-	17	2,110	31	2,500	39	2,620
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	2,050	35	2,160
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	1,650	31	1,750
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	1,280	27	1,390
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	1,060
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	760

Deductions from main boom capacities for stowed jibs

840 lbs	610 lbs	480 lbs	400 lbs	340 lbs	300 lbs	260 lbs	240 lbs	220 lbs

NOTES:

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

Structural
Stability

Jib 30.5 ft – 55 ft | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

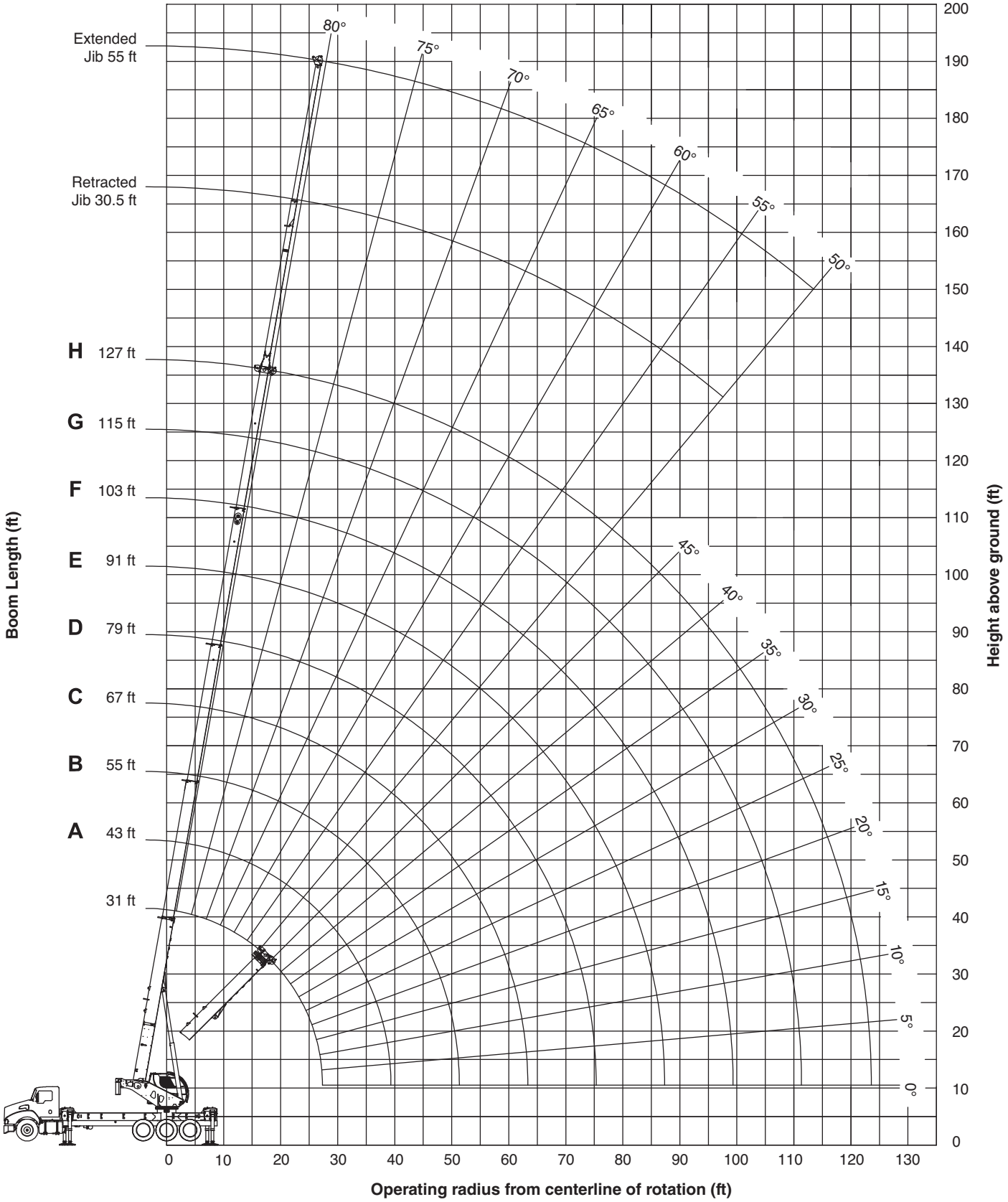
	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
20	79.0	3,450	-	-
25	77.1	3,400	-	-
30	75.3	3,320	78.9	2,500
35	73.4	3,190	77.3	2,500
40	71.5	2,910	75.7	2,500
45	69.5	2,770	74.1	2,200
50	67.6	2,570	72.4	2,010
55	65.6	2,420	70.8	1,870

	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
60	63.6	2,270	69.1	1,780
65	61.6	2,130	67.4	1,680
70	59.5	2,010	65.7	1,570
75	57.3	1,910	64.0	1,500
80	55.2	1,630	62.2	1,430
85	52.9	1,230	60.4	1,350
90	-	-	58.6	1,250
95	-	-	-	-

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC45127 Boom Diagram

Main Boom
Jib



Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC40127 Load Chart

Main Boom
Jib

31 ft – 127 ft – 5 section | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

	31 ft		43 ft (A)		55 ft (B)		67 ft (C)		79 ft (D)		91 ft (E)		103 ft (F)		115 ft (G)		127 ft (H)	
		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity		Load capacity
ft	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs	°	lbs
7	70	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	68	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	64	71,920	72	42,000	76	42,000	-	-	-	-	-	-	-	-	-	-	-	-
12	60	60,600	69	42,000	74	42,000	-	-	-	-	-	-	-	-	-	-	-	-
15	54	47,660	65	42,000	70	42,000	74	37,500	77	27,900	-	-	-	-	-	-	-	-
20	41	34,390	57	35,030	65	35,360	70	33,000	73	25,180	75	19,500	77	17,000	78	17,000	-	-
25	23	26,200	49	26,930	59	27,270	65	27,460	69	22,810	72	17,650	74	15,570	76	13,500	77	10,000
30	-	-	39	21,450	53	21,800	60	22,000	65	20,940	68	16,250	71	14,420	73	12,420	75	10,000
35	-	-	26	17,470	46	17,860	55	18,070	61	17,060	65	15,030	68	13,300	70	11,420	72	9,800
40	-	-	-	-	38	14,880	50	15,100	57	15,230	61	13,780	65	12,120	68	10,540	70	9,300
45	-	-	-	-	28	12,330	44	12,630	52	12,810	58	10,990	62	11,050	65	9,550	68	8,800
50	-	-	-	-	13	9,930	37	10,270	47	10,450	54	10,200	59	8,870	62	8,870	65	8,300
55	-	-	-	-	-	-	29	8,450	42	8,640	50	8,760	55	8,260	59	8,260	63	7,800
60	-	-	-	-	-	-	18	7,000	37	7,200	46	7,330	52	7,410	57	7,480	60	7,450
65	-	-	-	-	-	-	-	-	30	6,020	41	6,160	48	6,250	53	6,310	57	6,360
70	-	-	-	-	-	-	-	-	21	4,940	36	5,100	44	5,200	50	5,270	55	5,330
75	-	-	-	-	-	-	-	-	5	4,010	30	4,210	40	4,320	47	4,390	52	4,450
80	-	-	-	-	-	-	-	-	-	-	23	3,460	36	3,570	43	3,650	49	3,700
85	-	-	-	-	-	-	-	-	-	-	13	2,810	31	2,940	40	3,010	46	3,070
90	-	-	-	-	-	-	-	-	-	-	-	-	25	2,300	36	2,340	43	2,480
95	-	-	-	-	-	-	-	-	-	-	-	-	17	1,830	31	1,880	39	2,000
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	1,560	35	1,620
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	1,180	31	1,240
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	830	27	910
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Deductions from main boom capacities for stowed jibs

840 lbs	610 lbs	480 lbs	400 lbs	340 lbs	300 lbs	260 lbs	240 lbs	220 lbs

NOTES:

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

↑ Structural
↓ Stability

Jib 30.5 ft – 55 ft | **24'-3" (7.4 m)** | **Fully Extended (100 %)**

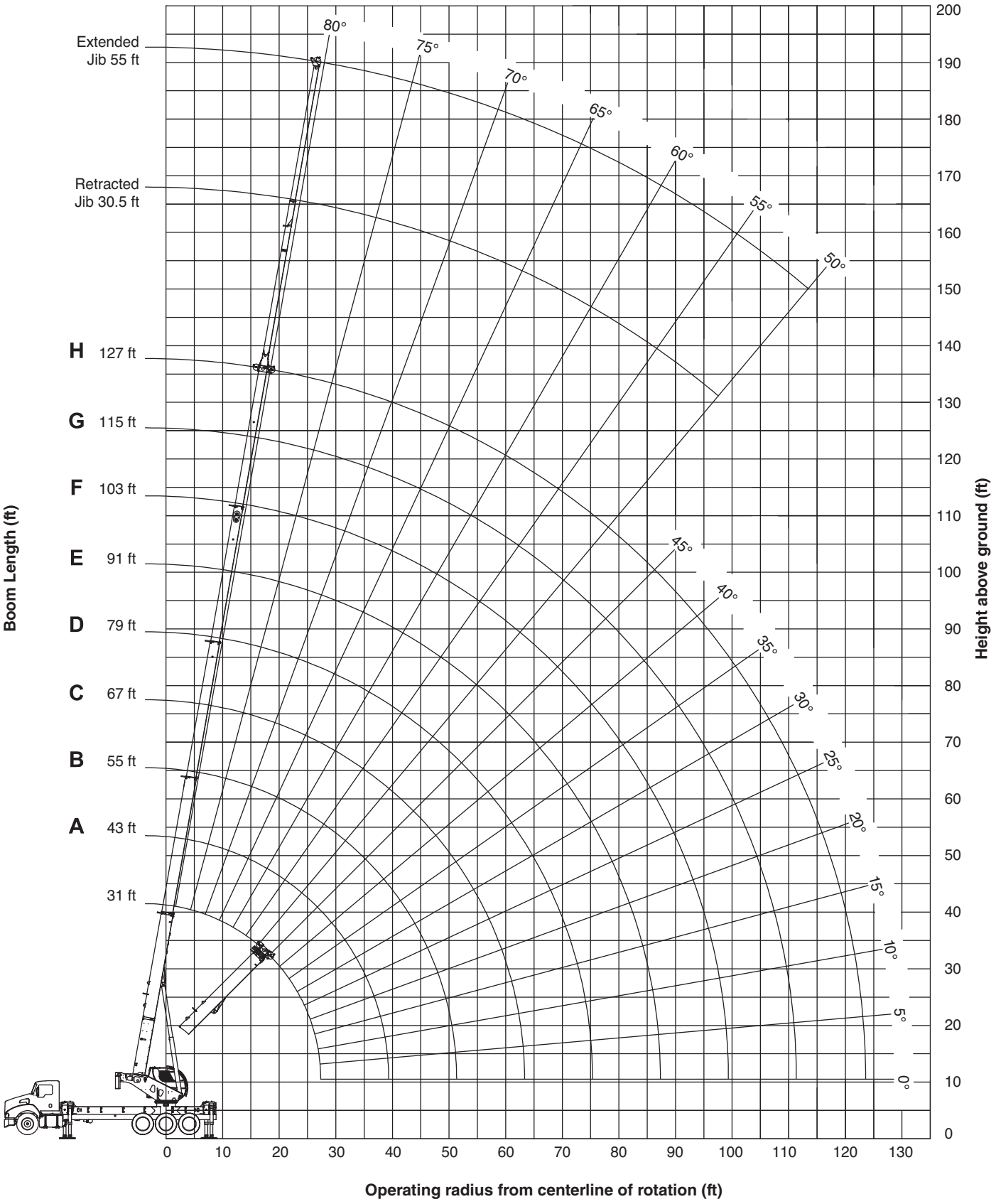
	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
20	79.0	3,450	-	-
25	77.1	3,400	-	-
30	75.3	3,320	78.9	2,500
35	73.4	3,190	77.3	2,500
40	71.5	2,910	75.7	2,500
45	69.5	2,770	74.1	2,200
50	67.6	2,570	72.4	2,010
55	65.6	2,420	70.8	1,870

	Telescopic Jib			
	30.5 ft		55 ft	
		Load capacity		Load capacity
ft	°	lbs	°	lbs
60	63.6	2,270	69.1	1,780
65	61.6	2,130	67.4	1,680
70	59.5	2,010	65.7	1,570
75	57.3	1,910	64.0	1,500
80	55.2	1,630	62.2	1,430
85	52.9	1,230	60.4	1,350
90	-	-	58.6	1,250
95	-	-	-	-

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TC40127 Boom Diagram

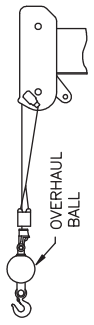
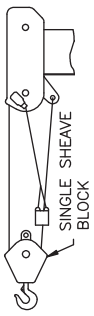
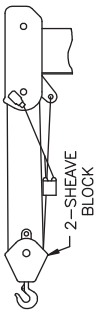
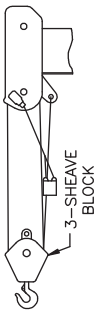
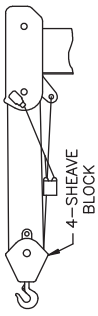
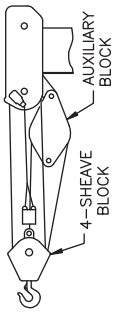
Main Boom
Jib



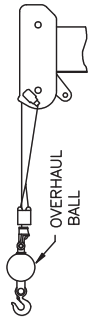
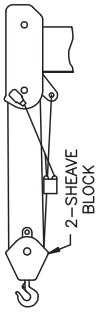
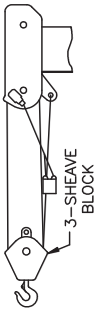
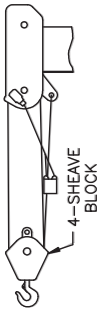
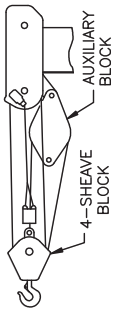
Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

Reeving Diagrams

TC 450

Allowable Line Pull									WARNING
1 part line	2 part line	3 part line	4 part line	5 part line	6 part line	7 part line	8 part line	9 part line	
									**Anti-Two-Block System must be in good operating condition before operating crane.** **Refer to the owner's manual.** **Keep at least 3 wraps of load line on the drum at all times.**
9,500 lbs	**19,000 lbs**	**28,500 lbs**	**38,000 lbs**	**47,500 lbs**	**57,000 lbs**	**66,500 lbs**	**76,000 lbs**	**85,500 lbs**	**5/8" rot resistant (5.0 : 1 SF) 47,500 lbs min. breaking strength**
10,000 lbs	**20,000 lbs**	**30,000 lbs**	**40,000 lbs**	**50,000 lbs**	**60,000 lbs**	**70,000 lbs**	**80,000 lbs**	**90,000 lbs**	**5/8" 6 x 25 IWRC (3.5 : 1 SF) 35,000 lbs min. breaking strength**

TC 400

Allowable Line Pull									WARNING
1 part line	2 part line	3 part line	4 part line	5 part line	6 part line	7 part line	8 part line	9 part line	
									**Anti-Two-Block System must be in good operating condition before operating crane.** **Refer to the owner's manual.** **Keep at least 3 wraps of load line on the drum at all times.**
9,500 lbs	**19,000 lbs**	**28,500 lbs**	**38,000 lbs**	**47,500 lbs**	**57,000 lbs**	**66,500 lbs**	**76,000 lbs**	**80,000 lbs**	**5/8" rot resistant (5.0 : 1 SF) 47,500 lbs min. breaking strength**
10,000 lbs	**20,000 lbs**	**30,000 lbs**	**40,000 lbs**	**50,000 lbs**	**60,000 lbs**	**70,000 lbs**	**80,000 lbs**	**80,000 lbs**	**5/8" 6 x 25 IWRC (3.5 : 1 SF) 35,000 lbs min. breaking strength**

Deductions from rated loads for load handling devices supplied by Tadano

Auxiliary block	50 lbs (22.7 kg)
Overhaul ball	See overhaul ball mfgr. nameplate
Load blocks	See load block mfgr. nameplate
Swing around jib (stowed)	See load chart

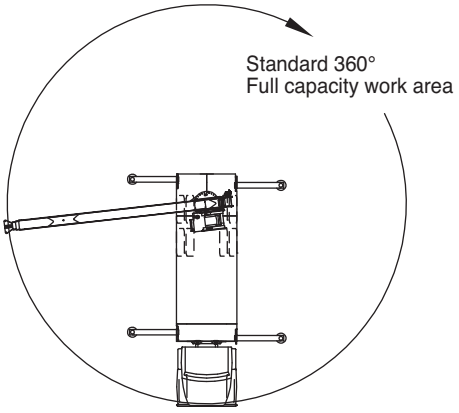
WARNING: Lifting off the main boom point while the jib is erected is not intended nor approved.

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

Area of Operation · LMI Operating Codes

Area of Operation

The full length subframe is shown.
The short subframe configuration requires a front bumper stabilizer.



LMI Operating Codes

Code	Crane Configuration	Outrigger Configuration
3	Main boom	Fully extended
7	Telescopic jib – Retracted	Fully extended
13	Telescopic jib – Extended	Fully extended
25	Personnel lifting platform on main boom	Fully extended
26	Personnel lifting platform on telescopic jib – Retracted	Fully extended
29	Personnel lifting platform on telescopic jib – Extended	Fully extended
4	Main boom	Intermediate

WARNING

1. The operator must read and understand the owner's manual before operating the crane.
2. Positioning or operation of crane beyond areas shown on these charts is not intended or approved except where specified in owner's manual.
3. Loaded boom angles at specified boom lengths give only an approximation of the operating radius. The boom angle before loading should be greater to account for deflections. Do not exceed the operating radius for rated loads.
4. The operating radius shown in the jib rating chart is for fully extended boom only. When boom is not fully extended, use only loaded boom angle to determine load rating of jib.
5. For boom angles not shown on jib load rating chart, use rating of next lower boom angle.
6. For boom lengths not shown, use rating of next shorter or longer boom length, whichever is less. For radii not shown, use rating of next longer radius.
7. Crane load ratings on outriggers are based on freely suspended loads with the machine leveled and standing on a firm uniform supporting surface. No attempt shall be made to move a load horizontally on the ground in any direction.
8. Practical working loads depend on supporting surface, wind, and other factors affecting stability such as hazardous surroundings, experience of personnel, and proper handling, all of which must be taken into account by the operator.
9. The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, and boom lubrication. It is safe to attempt to telescope any load within the limits of the load rating chart. Boom must be fully retracted against boom stops at all times when lifting minimum boom length capacity loads.
10. Lifting off the main boom point while the swing around jib is erected is not intended or approved.

INFORMATION

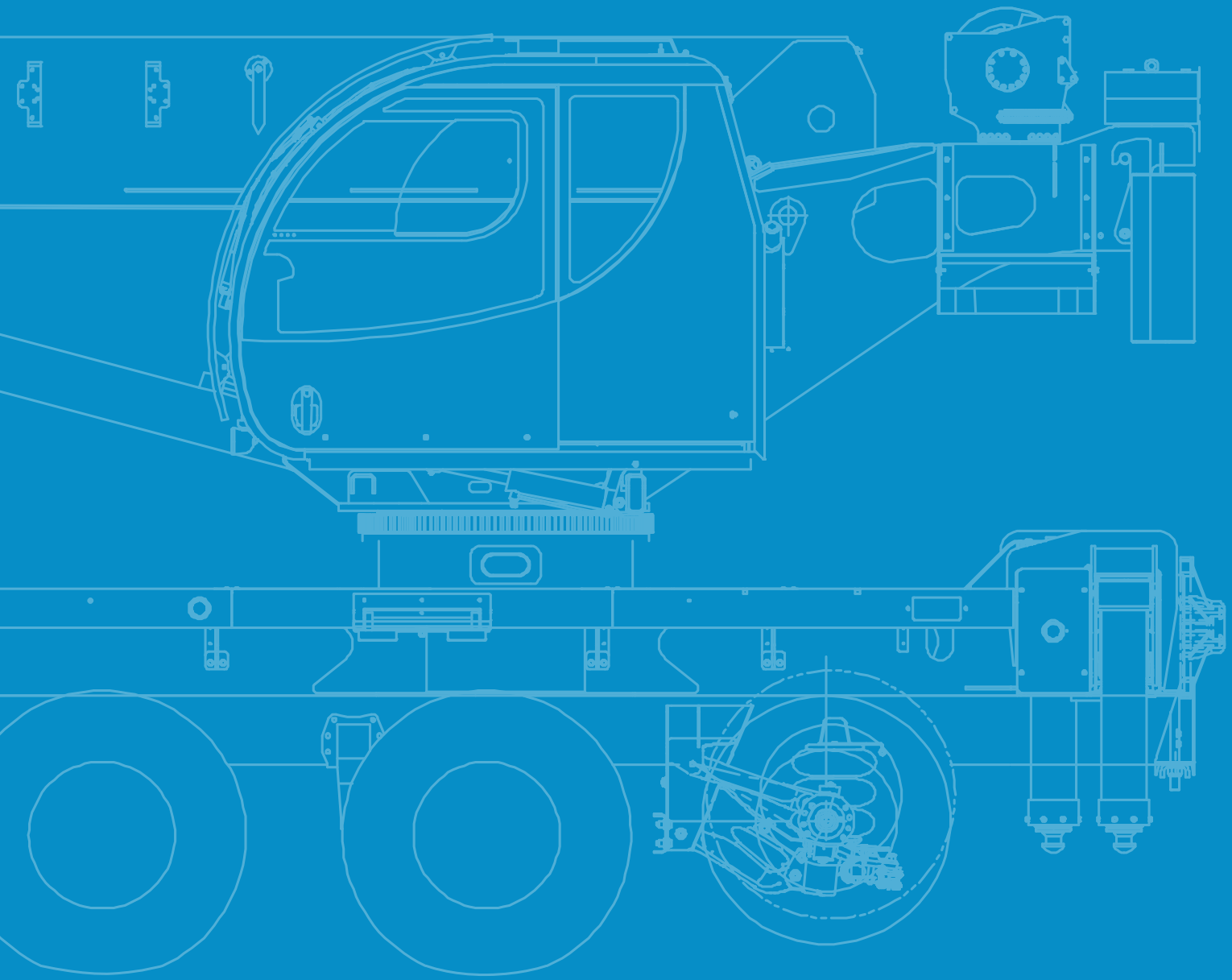
1. Deductions must be made from rated loads for stowed jib, optional attachments, hooks, and load blocks (see deduction chart on page 9). Weights of slings and all other load handling devices shall be considered a part of the load.
2. Load ratings above the blue line are structurally limited capacities. Load ratings below the blue line are stability limited capacities and do not exceed 85% of tipping.

DEFINITIONS

1. Operating radius is the horizontal distance from the axis of rotation to the center of the vertical hoist line or tackle with load applied.
2. Loaded boom angle as shown in the column head by ∠ is the included angle between the horizontal and longitudinal axes of the boom base after lifting rated load at rated radius.

Notes

TC400 / TC450



Courtesy of CraneMarket.com

Technical Description

Boom

Boom lengths: Proportional boom
- 5-section 142 ft (43.3 m)
- 4-section 127 ft (38.7 m)
- 4-sheave load quick reeve boom point
- 2-sheave idler boom point

Self lubricating slider pads

Maximum tip height:
- TC45142 152 ft (46.3 m)
- TC40142 152 ft (46.3 m)
- TC45127 137 ft (41.8 m)
- TC40127 137 ft (41.8 m)

Boom angle (min./max.):
-6° / 80°

Rotation

Ball-bearing swing circle with external gear
Double-reduction planetary gearbox driven by hydraulic motor

Slewing brake: Spring-applied pressure released automatic brake
Free swing and non-free swing selection from the operator‘s keypad

Slewing speed: 1.5 - 2 rpm (nominal)
Boom rotation: 360° continuous

Outriggers

Outriggers: Out-and-down style
FBS – Front Bumper Stabilizer (optional)
Outrigger monitoring system (for verification only)
Outrigger motion alarm

Full extension
- Center to center: 24 ft (7.3 m)

Mid extension
- Center to center: 17.4 ft (5.3 m)

Operator Aids

TC400-TC450 is externally routed A2B cable LMI with crane function cut-offs for overload protection. Color graphic display and HDRI – Hoist Drum Rotation Indicator.
Crane is shipped remote ready.

Hoist, Rope and Hook

Maximum theoretical line speed:
300 fpm (91 mpm)

Technical Description

Hoist, Rope and Hook Cont.

Maximum theoretical bottom-layer line pull:
11,500 lbs (5,216 kg)

Main winch cable diameter: 0.563 ft (14.3 mm)
6 x 25 EIPS IWRC wire rope

Line length:
500 ft (152.4 m)

Main winch:
Bent axis 2-speed hydraulic motor (activated electrically)
Third wrap limiter on both main and auxiliary winch

Overhaul ball:
7 t (6.4 mt) capacity hook with heavy-duty swivel and weight is provided for single line operation

Hydraulics

8-bolt direct mounted PTO and SAE C output (factory mounted units only)

1-section variable displacement piston pump, SAE C input

Piggy back fixed gear pump

Hydraulic reservoir capacity: 155 gallons (587 l)

Pump sections@2000 rpm with 100 psi

- Variable displacement pump: 77 gpm (291 lpm)
- Fixed displacement gear pump: 12 gpm (45 lpm)

Tiltable Cab / Cab Controls

Standard features:
Curved glass, 0° to 20° cab tilt, sliding door, heated cloth seat, 8 seat adjustments, lumbar support, reclining and adjustable head rest, sliding windows, rear pop out window, top hinged hatch, with guard, front and top windshield wiper, heater, air conditioning, 12 volt DC outlet, USB ports, engine monitoring system, E-coated cab (10 year rust warranty)

Controls:
PLC crane controller, CANBUS communication, J1939 truck engine communication, electric hand and foot throttle, twin dual axis joysticks, electric / hydraulic valve actuation, electronic sensor monitoring, Hirschmann / PAT or 3B6 LMI system available, wired ATB and wired wind speed sensors, telematics, GPS monitoring, remote diagnostic capability, Work Area Definition (WADs)

Technical Description – Options

Boom

Jibs

TC400-TC450
- 2-section telescopic jib: 30.8 ft (9.4 m) to 55.1 ft (16.8 m)

Max. Tip Height with Extension

TC40127 and TC45127
- Max. tip height with extension: 190 ft (57.9 m)
- Max. tip height with extension retracted: 165 ft (50.3 m)

TC40142 and TC45142
- Max. tip height with extension: 205 ft (62.5 m)
- Max. tip height with extension retracted: 180 ft (54.9 m)

Tool Boxes

Tool Boxes
- 24 in. L x 18 in. W x 18 in. H (610 mm L x 457 mm W x 457 mm H)
- 48 in. L x 24 in. W x 24 in. H (1,219 mm L x 610 mm W x 610 mm H)

Auxiliary Winch

Auxiliary winch:
Bent axis 2-speed hydraulic motor (activated electrically)
Third wrap limiter on winch

Technical Description – Options

Hydraulics

Front bumper stabilizer
Hydraulic tank heater

Cab

Video camera (1 or 2)
Cab weather band radio system

2-Person Basket

Consult Tadano for specific application and rating
- 2-person steel gravity leveled basket with friction brake
- 2-person aluminum or steel quick-attached rotating basket

Operator Aids

4-function radio remote crane control system either with joysticks
- 900 Mhz
- 400 Mhz

A92.2 aerial lift manbasket dual rating

Wired wind speed sensor

Hoist and Hook

Auxiliary lower sheave block for 2-8 part lines
Load blocks 1-3, 1-6, 2-6 part lines

Notes

Notes

www.tadano.com

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