TUTT BRYANT

HSC SCX1000A-3

26mm ROPE REDUCED COUNTERWEIGHT LOAD CHART

MODEL **SCX1000A-3**

BOOK NO, **RHH90-EN-RL-CW-001**

SERIAL NO, **SC10A – 8022 and up**

Gross Rated Load Table

Counterweight Reduction Type 31.7t Specifications (90t lift specifications)

Counterweight Reduction Type 22.7t Specifications (80t lift specifications)

Counterweight Reduction Type 16.1t Specifications (70t lift specifications)

【Liftcrane Specifications】

(EN)

Hoist Rope 26mm

Use the Gross Rated Load Table suitable for your attachments.

HITACHI SUMITOMO

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Gross Rated Load Table

Counterweight Reduction Type 31.7t Specifications (90t lift specifications)

Counterweight Reduction Type 22.7t Specifications (80t lift specifications)

Counterweight Reduction Type 16.1t Specifications (70t lift specifications)

1 INSTALL COUNTERWEIGHTS (REDUCED TYPE)

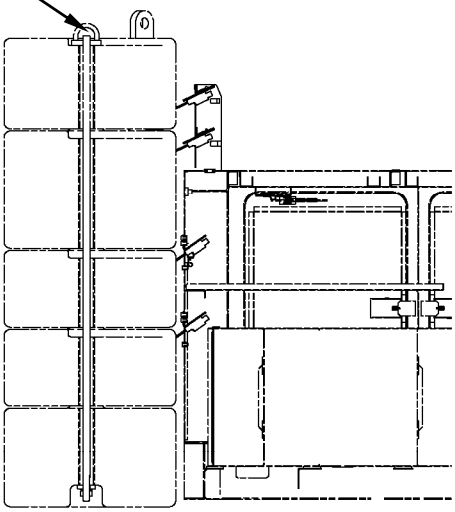
1.1 Install Counterweights

NOTE: For more information on installing/removing counterweights, refer to "Assembling and Disassembling" in Chapter 5 of the Operator's Manual.

1.2 Counterweight Mounting Bolt

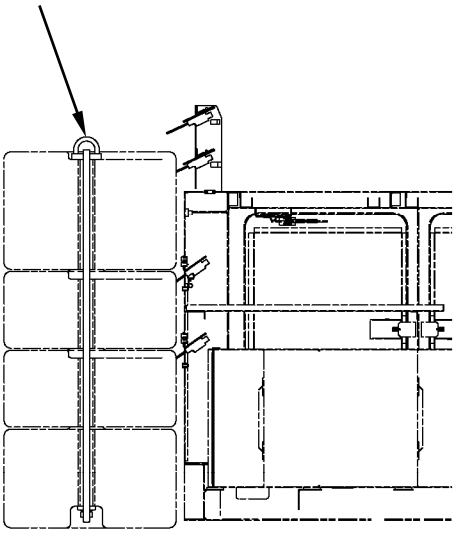
The length of the mounting bolts to secure the counterweights depends on the counterweights combinations. Use the mounting bolts that are appropriate for the combination of counter weights as shown below:

Two M30mm x 2145mm mounting bolts



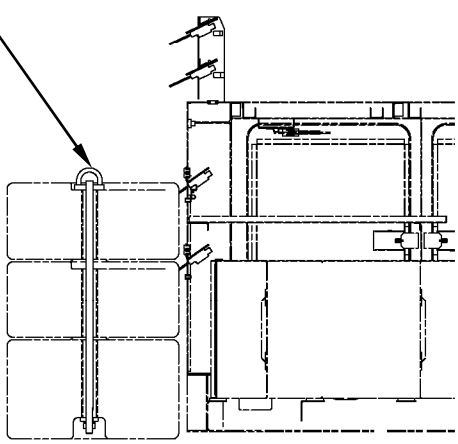
Counterweight base + five counterweights (standard: 37.5t)
(Note) With lower weight

Two M30mm x 1710mm mounting bolts



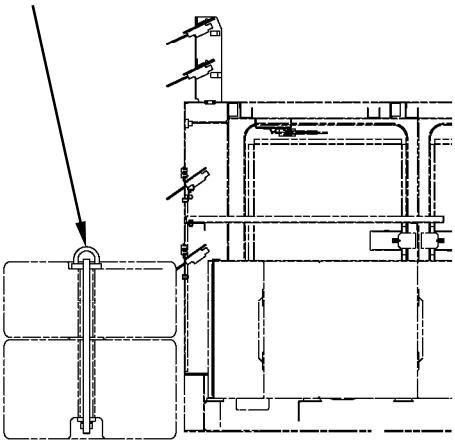
Counterweight base + three counterweights (standard: 31.7t)
(Note) With lower weight

Two M30mm x 1145mm mounting bolts



Counterweight base + two counterweights (standard: 22.7t)
(Note) Without lower weight

Two M30mm x 775mm mounting bolts



Counterweight base + one counterweight (standard: 16.1t)
(Note) Without lower weight

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1.3 Remove Lower Weight

NOTE: For more information on removing the lower weight, refer to "Assembling and Disassembling" in Chapter 5 of the Operator's Manual.
(Limit switches do not require installation or removal when assembling/disassembling.)

1.4 Check Operation of Counterweight (Reduction Type) Detector

WARNING

- **Wrong combination of work performance and counterweights may cause machine damage or tipping over, or personal injury or death. Check the weight condition and performance before operation.**
- **Check the operation of the detector before operation.**

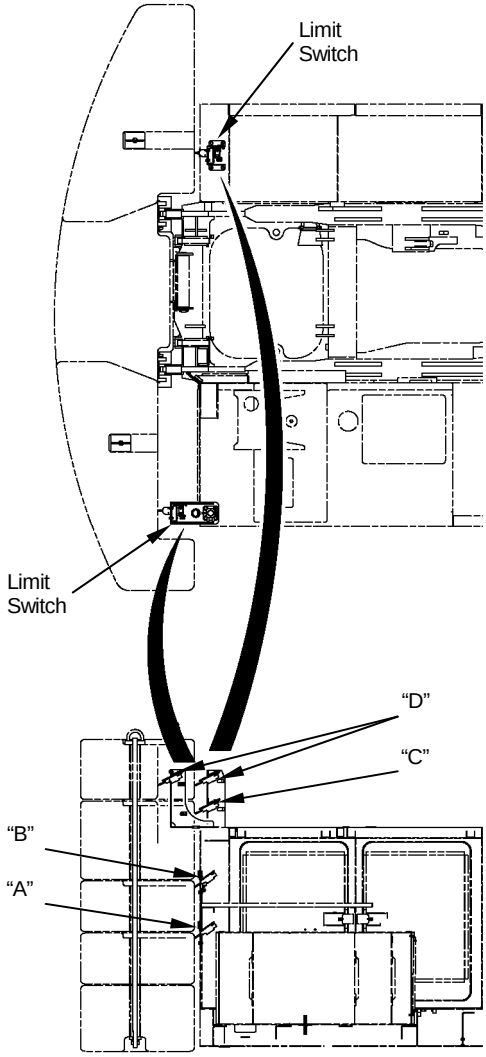
Determine the amount of mounted counterweights using the limit switches at the rear of the house and switch the rated capacity limiter settings.

Operation states of the limit switches

Limit Switch Installation Position	Standard 37.5t	Reduction type 31.7t	Reduction type 22.7t	Reduction type 16.1t
"A"	ON	ON	ON	ON
"B"	ON	ON	ON	OFF
"C"	ON	ON	OFF	OFF
"D"	ON	OFF	OFF	OFF
"E"	ON	ON	OFF	OFF

When the detection signals of the limit switches change, the operator will be notified that the performance will be switched.
- Display the "State confirmation message" on the display screen.
Check that the boom configuration, weight, and body state match the performance displayed on the operation status screen, and press the [X] key. The performance will switch to the selected one.

Limit switch position



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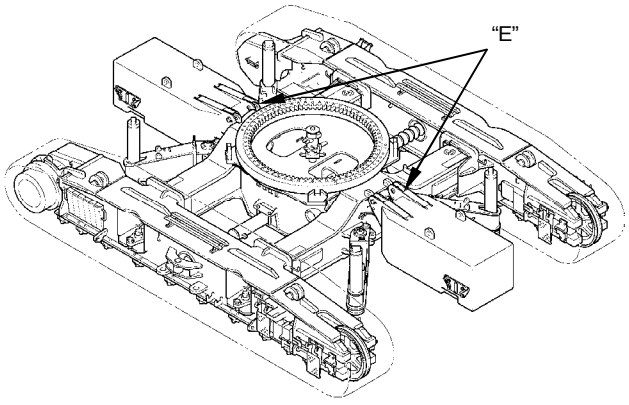

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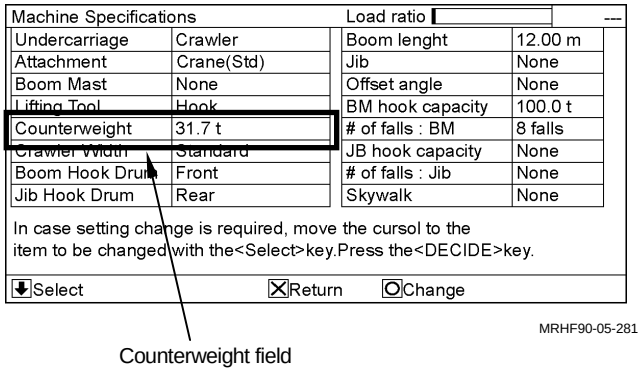
Display of the counterweight field on the display screen

Status	Counterweight field display	Lifting performance
37.5t	Standard (37.5t)	100t lift (Standard)
31.7t	Reduction type (31.7t)	90t lift
22.7t	Reduction type (22.7t)	80t lift
16.1t	Reduction type (16.1t)	70t lift

IMPORTANT: If the actually mounted weights and display of the counterweight field on the display screen don't match, check the limit switches. Please note that the mounted counterweight displayed on the screen does not reflect the actual machine status. Refer to the attached Gross Rated Load Table for the load table.



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Counterweight field

Gross Rated Load Table

Counterweight Reduction Type 31.7t Specifications (90t lift specifications)

2 MAIN BOOM

3 SHORT JIB

4 MAIN BOOM WITH SHORT JIB

5 MAIN BOOM (THIRD DRUM LIFTING)

6 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)

Use the Gross Rated Load Table suitable for your attachments.

2 MAIN BOOM (Counterweight 31.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	90.00									3.8
4.0	88.35									4.0
4.5	79.05	78.90								4.5
5.0	71.45	71.30	70.85							5.0
5.5	65.15	65.00	63.30	59.30 /5.6						5.5
6.0	59.50	59.55	57.15	54.85	51.65 /6.1	44.90 /6.7				6.0
7.0	46.95	46.95	46.80	46.10	44.40	42.85	40.20 /7.2	35.65 /7.8		7.0
8.0	38.60	38.60	38.45	38.40	38.30	37.10	35.95	34.70	32.35 /8.3	8.0
9.0	32.70	32.65	32.50	32.45	32.35	32.30	31.70	30.65	29.70	9.0
10.0	28.30	28.20	28.05	28.00	27.90	27.80	27.65	27.40	26.55	10.0
12.0	22.65 /11.8	22.05	21.85	21.80	21.65	21.60	21.40	21.25	21.05	12.0
14.0		17.95	17.75	17.70	17.55	17.45	17.25	17.10	16.90	14.0
16.0		17.30 /14.4	14.85	14.75	14.60	14.50	14.30	14.15	13.90	16.0
18.0			13.70 /17.0	12.60	12.40	12.30	12.10	11.95	11.70	18.0
20.0				11.20 /19.6	10.70	10.60	10.40	10.20	10.00	20.0
22.0					9.35	9.25	9.05	8.85	8.60	22.0
24.0					9.25 /22.2	8.15	7.95	7.75	7.50	24.0
26.0						7.75 /24.8	7.00	6.80	6.55	26.0
28.0							6.50 /27.4	6.05	5.80	28.0
30.0								5.40	5.15	30.0
32.0									4.55	32.0
34.0									4.40 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)								Working Radius(m)
	39	42	45	48	51	54	57	60	
8.0	29.55 /8.8								8.0
9.0	28.85	26.75 /9.4	24.65 /9.9						9.0
10.0	25.85	25.05	24.40	22.60 /10.5	20.60 /11.1	19.15 /11.6			10.0
12.0	21.05	20.60	20.10	19.60	18.95	18.45	17.65 /12.2	14.55 /12.7	12.0
14.0	16.85	16.65	16.50	16.40	15.95	15.50	15.15	14.10	14.0
16.0	13.90	13.65	13.55	13.40	13.30	13.15	12.90	12.45	16.0
18.0	11.70	11.45	11.30	11.15	11.05	10.95	10.80	10.60	18.0
20.0	9.95	9.70	9.60	9.45	9.35	9.20	9.05	8.85	20.0
22.0	8.60	8.35	8.20	8.05	7.95	7.80	7.65	7.45	22.0
24.0	7.45	7.20	7.05	6.95	6.80	6.65	6.50	6.30	24.0
26.0	6.50	6.30	6.15	6.00	5.85	5.70	5.55	5.35	26.0
28.0	5.75	5.50	5.35	5.20	5.05	4.90	4.75	4.55	28.0
30.0	5.05	4.80	4.65	4.55	4.40	4.25	4.10	3.85	30.0
32.0	4.50	4.25	4.10	3.95	3.80	3.65	3.50	3.25	32.0
34.0	4.00	3.75	3.60	3.45	3.25	3.10	3.00	2.75	34.0
36.0	3.70 /35.2	3.30	3.15	3.00	2.80	2.65	2.50	2.30	36.0
38.0		2.95 /37.8	2.75	2.60	2.40	2.25	2.10	1.90	38.0
40.0			2.40	2.25	2.05	1.90	1.75	1.70 /39.1	40.0
42.0			2.35 /40.4	1.95	1.75	1.70 /41.3	1.70 /40.3		42.0
44.0				1.80 /43.0	1.70 /42.3				44.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 31.7ton counterweight and 12.0ton lowerweight are required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)							
		8 falls	7 falls	6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	100	84	72	60	48	-	-	-
50	1.17	-	-	-	50	48	36	24	-
35	0.90	-	-	-	-	-	35	24	-
12	0.51	-	-	-	-	-	-	-	12

3 SHORT JIB (Counterweight 31.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
4.7	12.00									4.7
5.0	12.00	12.00 /5.3								5.0
5.5	12.00	12.00	12.00 /5.8							5.5
6.0	12.00	12.00	12.00	12.00 /6.3	12.00 /6.9					6.0
7.0	12.00	12.00	12.00	12.00	12.00	12.00 /7.4				7.0
8.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /8.5		8.0
9.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /9.1	9.0
10.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.0
12.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
14.0	12.00 /13.1	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	14.0
16.0		12.00 /15.7	12.00	12.00	12.00	12.00	12.00	12.00	12.00	16.0
18.0			12.00	12.00	12.00	12.00	11.90	11.70	11.45	18.0
20.0			12.00 /18.2	10.70	10.50	10.35	10.15	9.95	9.75	20.0
22.0				10.10 /20.8	9.10	9.00	8.80	8.60	8.35	22.0
24.0					8.35 /23.4	7.90	7.65	7.45	7.20	24.0
26.0						6.90	6.75	6.55	6.30	26.0
28.0							6.00	5.75	5.50	28.0
30.0							5.75 /28.6	5.10	4.85	30.0
32.0								4.75 /31.2	4.25	32.0
34.0									3.80 /33.8	34.0

Unit: ton

Working Radius(m)	Boom length (m)							Working Radius(m)
	39	42	45	48	51	54	57	
9.0	12.00 /9.6							9.0
10.0	12.00	12.00 /10.2	12.00 /10.7	12.00 /11.3	12.00 /11.8			10.0
12.0	12.00	12.00	12.00	12.00	12.00	12.00 /12.4	12.00 /12.9	12.0
14.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	14.0
16.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	16.0
18.0	11.40	11.20	11.05	10.90	10.80	10.65	10.45	18.0
20.0	9.70	9.45	9.30	9.15	9.05	8.90	8.75	20.0
22.0	8.30	8.05	7.90	7.75	7.65	7.50	7.35	22.0
24.0	7.15	6.90	6.75	6.60	6.50	6.35	6.20	24.0
26.0	6.20	5.95	5.80	5.65	5.55	5.40	5.25	26.0
28.0	5.45	5.20	5.00	4.85	4.75	4.55	4.40	28.0
30.0	4.75	4.50	4.35	4.20	4.05	3.90	3.75	30.0
32.0	4.15	3.90	3.75	3.60	3.45	3.30	3.15	32.0
34.0	3.65	3.40	3.25	3.10	2.95	2.75	2.60	34.0
36.0	3.25	2.95	2.80	2.65	2.50	2.30	2.20 /35.7	36.0
38.0	3.15 /36.4	2.55	2.40	2.25	2.20 /37.5	2.20 /36.5		38.0
40.0		2.40 /39.0	2.20 /39.1	2.20 /38.2				40.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 31.7ton counterweight and 12.0ton lowerweight are required for all capacities on this chart.
6. Hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)
100	1.20
50	1.17
35	0.90
12	0.51

4 MAIN BOOM WITH SHORT JIB (Counterweight 31.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	89.80									3.8
4.0	87.70									4.0
4.5	78.35	78.20								4.5
5.0	70.80	70.65	70.30							5.0
5.5	64.50	64.35	62.75	58.70 /5.6						5.5
6.0	59.10	59.05	56.60	54.25	51.05 /6.1	44.30 /6.7				6.0
7.0	46.55	46.50	46.40	45.55	43.85	42.25	39.60 /7.2	35.05 /7.8		7.0
8.0	38.20	38.20	38.05	38.00	37.75	36.55	35.35	34.10	31.70 /8.3	8.0
9.0	32.30	32.25	32.10	32.05	31.90	31.85	31.10	30.05	29.10	9.0
10.0	27.90	27.85	27.65	27.60	27.45	27.40	27.20	26.80	25.95	10.0
12.0	22.30 /11.8	21.65	21.45	21.40	21.25	21.15	20.95	20.80	20.55	12.0
14.0		17.60	17.40	17.30	17.10	17.05	16.85	16.65	16.40	14.0
16.0		16.95 /14.4	14.50	14.35	14.20	14.10	13.90	13.70	13.45	16.0
18.0			13.35 /17.0	12.20	12.00	11.90	11.70	11.50	11.25	18.0
20.0				10.85 /19.6	10.30	10.20	10.00	9.80	9.55	20.0
22.0					9.00	8.85	8.65	8.45	8.20	22.0
24.0					8.85 /22.2	7.75	7.55	7.30	7.05	24.0
26.0						7.40 /24.8	6.65	6.40	6.15	26.0
28.0							6.10 /27.4	5.65	5.35	28.0
30.0								5.00	4.70	30.0
32.0									4.15	32.0
34.0									4.00 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)							Working Radius(m)
	39	42	45	48	51	54	57	
8.0	28.90 /8.8							8.0
9.0	28.25	26.10 /9.4	24.00 /9.9					9.0
10.0	25.20	24.45	23.75	21.95 /10.5	19.95 /11.1	18.35 /11.6		10.0
12.0	20.55	19.95	19.45	18.95	18.25	17.75	16.95 /12.2	12.0
14.0	16.40	16.15	16.00	15.85	15.25	14.85	14.40	14.0
16.0	13.45	13.20	13.05	12.90	12.80	12.55	12.20	16.0
18.0	11.20	10.95	10.80	10.65	10.55	10.40	10.25	18.0
20.0	9.50	9.25	9.10	8.95	8.80	8.65	8.50	20.0
22.0	8.15	7.90	7.70	7.55	7.45	7.25	7.10	22.0
24.0	7.00	6.75	6.60	6.45	6.30	6.15	6.00	24.0
26.0	6.10	5.85	5.65	5.50	5.35	5.20	5.05	26.0
28.0	5.30	5.05	4.90	4.70	4.55	4.40	4.25	28.0
30.0	4.65	4.35	4.20	4.05	3.90	3.70	3.55	30.0
32.0	4.05	3.80	3.65	3.45	3.30	3.15	3.00	32.0
34.0	3.55	3.30	3.15	2.95	2.80	2.60	2.45	34.0
36.0	3.30 /35.2	2.85	2.70	2.55	2.35	2.20 /35.7	2.20 /35.1	36.0
38.0		2.50 /37.8	2.30	2.20 /37.7	2.20 /36.7			38.0
38.5			2.20					38.5

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 31.7ton counterweight and 12.0ton lowerweight are required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)							
		8 falls	7 falls	6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	100	84	72	60	48	-	-	-
50	1.17	-	-	-	50	48	36	24	-
35	0.90	-	-	-	-	-	35	24	-
12	0.51	-	-	-	-	-	-	-	12

5 MAIN BOOM (THIRD DRUM LIFTING)(Counterweight 31.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	90.00									3.8
4.0	88.30									4.0
4.5	78.95	78.80								4.5
5.0	71.40	71.25	70.75							5.0
5.5	65.10	64.95	63.20	59.20 /5.6						5.5
6.0	59.45	59.45	57.10	54.75	51.55 /6.1	44.80 /6.7				6.0
7.0	46.85	46.85	46.75	46.00	44.30	42.75	40.10 /7.2	35.55 /7.8		7.0
8.0	38.55	38.50	38.40	38.35	38.25	37.05	35.85	34.65	32.25 /8.3	8.0
9.0	32.65	32.60	32.45	32.40	32.25	32.20	31.60	30.60	29.65	9.0
10.0	28.20	28.15	28.00	27.95	27.80	27.75	27.55	27.30	26.50	10.0
12.0	22.55 /11.8	21.95	21.80	21.75	21.60	21.50	21.35	21.20	20.95	12.0
14.0		17.90	17.70	17.60	17.45	17.40	17.20	17.05	16.80	14.0
16.0		17.20 /14.4	14.75	14.70	14.50	14.45	14.25	14.05	13.85	16.0
18.0			13.60 /17.0	12.50	12.30	12.25	12.05	11.85	11.65	18.0
20.0				11.15 /19.6	10.65	10.50	10.30	10.15	9.90	20.0
22.0					9.30	9.15	8.95	8.80	8.55	22.0
24.0					9.15 /22.2	8.05	7.85	7.65	7.40	24.0
26.0						7.70 /24.8	6.95	6.75	6.50	26.0
28.0							6.40 /27.4	5.95	5.70	28.0
30.0								5.30	5.05	30.0
32.0									4.50	32.0
34.0									4.30 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)								Working Radius(m)
	39	42	45	48	51	54	57	60	
8.0	29.45 /8.8								8.0
9.0	28.75	26.65 /9.4	24.60 /9.9						9.0
10.0	25.75	25.00	24.30	22.55 /10.5	20.50 /11.1	19.05 /11.6			10.0
12.0	20.95	20.50	20.00	19.50	18.85	18.35	17.60 /12.2	14.90 /12.7	12.0
14.0	16.80	16.55	16.45	16.30	15.85	15.45	15.05	14.40	14.0
16.0	13.80	13.60	13.45	13.30	13.25	13.10	12.80	12.40	16.0
18.0	11.60	11.35	11.25	11.10	11.00	10.85	10.70	10.50	18.0
20.0	9.90	9.65	9.50	9.35	9.25	9.10	8.95	8.75	20.0
22.0	8.50	8.25	8.10	8.00	7.85	7.70	7.60	7.35	22.0
24.0	7.40	7.15	7.00	6.85	6.75	6.60	6.45	6.20	24.0
26.0	6.45	6.20	6.05	5.90	5.80	5.65	5.50	5.25	26.0
28.0	5.65	5.40	5.25	5.10	5.00	4.85	4.70	4.45	28.0
30.0	5.00	4.75	4.60	4.45	4.30	4.15	4.00	3.80	30.0
32.0	4.40	4.15	4.00	3.85	3.70	3.55	3.40	3.20	32.0
34.0	3.90	3.65	3.50	3.35	3.20	3.05	2.90	2.65	34.0
36.0	3.65 /35.2	3.20	3.05	2.90	2.75	2.60	2.45	2.20	36.0
38.0		2.85 /37.8	2.65	2.50	2.35	2.20	2.05	1.80	38.0
40.0			2.30	2.15	2.00	1.80	1.70	1.70 /38.5	40.0
42.0			2.25 /40.4	1.85	1.70 /41.7	1.70 /40.6			42.0
43.0				1.70					43.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 31.7ton counterweight and 12.0ton lowerweight are required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)						
		8 falls	7 falls	6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	100	84	72	60	48	-	-
50	1.17	-	-	-	50	48	36	24
35	0.90	-	-	-	-	-	35	24

6 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)(Counterweight 31.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	89.75									3.8
4.0	87.60									4.0
4.5	78.30	78.15								4.5
5.0	70.70	70.55	70.20							5.0
5.5	64.45	64.30	62.65	58.60 /5.6						5.5
6.0	59.00	59.00	56.50	54.15	50.95 /6.1	44.25 /6.7				6.0
7.0	46.45	46.45	46.30	45.45	43.75	42.20	39.50 /7.2	34.95 /7.8		7.0
8.0	38.15	38.10	37.95	37.90	37.70	36.45	35.25	34.00	31.65 /8.3	8.0
9.0	32.25	32.15	32.00	31.95	31.85	31.75	31.00	30.00	29.00	9.0
10.0	27.85	27.75	27.60	27.50	27.40	27.30	27.10	26.70	25.85	10.0
12.0	22.20 /11.8	21.60	21.40	21.30	21.15	21.10	20.90	20.75	20.50	12.0
14.0		17.50	17.30	17.20	17.05	16.95	16.75	16.60	16.35	14.0
16.0		16.85 /14.4	14.40	14.30	14.10	14.00	13.80	13.65	13.40	16.0
18.0			13.25 /17.0	12.10	11.95	11.80	11.60	11.40	11.20	18.0
20.0				10.75 /19.6	10.25	10.10	9.90	9.70	9.45	20.0
22.0					8.90	8.75	8.55	8.35	8.10	22.0
24.0					8.80 /22.2	7.70	7.45	7.25	7.00	24.0
26.0						7.30 /24.8	6.55	6.30	6.05	26.0
28.0							6.00 /27.4	5.55	5.30	28.0
30.0								4.90	4.65	30.0
32.0									4.05	32.0
34.0									3.90 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)							Working Radius(m)
	39	42	45	48	51	54	57	
8.0	28.80 /8.8							8.0
9.0	28.15	26.00 /9.4	23.95 /9.9					9.0
10.0	25.15	24.35	23.65	21.85 /10.5	19.85 /11.1	18.35 /11.6		10.0
12.0	20.45	19.90	19.35	18.85	18.20	17.65	16.85 /12.2	12.0
14.0	16.30	16.10	15.95	15.75	15.15	14.75	14.35	14.0
16.0	13.35	13.10	12.95	12.80	12.70	12.45	12.10	16.0
18.0	11.15	10.90	10.75	10.60	10.50	10.30	10.20	18.0
20.0	9.40	9.15	9.00	8.85	8.75	8.60	8.45	20.0
22.0	8.05	7.80	7.65	7.50	7.35	7.20	7.05	22.0
24.0	6.95	6.70	6.50	6.35	6.20	6.05	5.90	24.0
26.0	6.00	5.75	5.60	5.45	5.30	5.10	4.95	26.0
28.0	5.20	4.95	4.80	4.65	4.50	4.30	4.15	28.0
30.0	4.55	4.30	4.15	3.95	3.80	3.65	3.50	30.0
32.0	4.00	3.70	3.55	3.40	3.20	3.05	2.90	32.0
34.0	3.50	3.20	3.05	2.90	2.70	2.55	2.40	34.0
36.0	3.20 /35.2	2.80	2.60	2.45	2.25	2.20 /35.6	2.20 /34.9	36.0
38.0		2.45 /37.8	2.20	2.20 /37.4	2.20 /36.4			38.0
38.2			2.20					38.2

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 31.7ton counterweight and 12.0ton lowerweight are required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)						
		8 falls	7 falls	6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	100	84	72	60	48	-	-
50	1.17	-	-	-	50	48	36	24
35	0.90	-	-	-	-	-	35	24

Gross Rated Load Table

Counterweight Reduction Type 22.7t Specifications (80t lift specifications)

7 MAIN BOOM

8 SHORT JIB

9 MAIN BOOM WITH SHORT JIB

10 MAIN BOOM (THIRD DRUM LIFTING)

11 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)

Use the Gross Rated Load Table suitable for your attachments.

7 MAIN BOOM (Counterweight 22.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	80.00									3.8
4.0	78.75									4.0
4.5	68.45	64.30								4.5
5.0	59.50	56.25	53.30							5.0
5.5	51.30	49.95	47.60	44.55 /5.6						5.5
6.0	44.45	44.45	42.90	41.15	38.70 /6.1	33.55 /6.7				6.0
7.0	34.95	34.95	34.80	34.50	33.15	31.95	29.90 /7.2	26.40 /7.8		7.0
8.0	28.65	28.60	28.45	28.45	28.35	27.60	26.65	25.70	23.80 /8.3	8.0
9.0	24.15	24.10	23.95	23.90	23.80	23.75	23.40	22.60	21.80	9.0
10.0	20.85	20.75	20.60	20.55	20.40	20.35	20.20	20.05	19.40	10.0
12.0	16.55 /11.8	16.10	15.90	15.85	15.70	15.65	15.45	15.30	15.10	12.0
14.0		13.00	12.80	12.75	12.60	12.50	12.30	12.15	11.90	14.0
16.0		12.50 /14.4	10.60	10.50	10.35	10.25	10.05	9.90	9.70	16.0
18.0			9.75 /17.0	8.85	8.70	8.60	8.40	8.25	8.00	18.0
20.0				7.85 /19.6	7.40	7.30	7.10	6.95	6.70	20.0
22.0					6.40	6.30	6.10	5.90	5.65	22.0
24.0					6.30 /22.2	5.45	5.25	5.05	4.80	24.0
26.0						5.15 /24.8	4.55	4.35	4.10	26.0
28.0							4.15 /27.4	3.75	3.50	28.0
30.0								3.20	3.00	30.0
32.0									2.60	32.0
34.0									2.45 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)						Working Radius(m)
	39	42	45	48	51	54	
8.0	21.65 /8.8						8.0
9.0	21.15	19.45 /9.4	17.85 /9.9				9.0
10.0	18.80	18.20	17.65	16.25 /10.5	14.65 /11.1	13.50 /11.6	10.0
12.0	15.05	14.75	14.35	13.95	13.40	13.00	12.0
14.0	11.90	11.70	11.55	11.40	11.10	10.75	14.0
16.0	9.65	9.45	9.30	9.15	9.05	8.90	16.0
18.0	7.95	7.75	7.60	7.45	7.35	7.20	18.0
20.0	6.65	6.45	6.30	6.15	6.05	5.90	20.0
22.0	5.60	5.40	5.25	5.10	5.00	4.85	22.0
24.0	4.75	4.50	4.35	4.25	4.10	3.95	24.0
26.0	4.05	3.80	3.65	3.50	3.40	3.25	26.0
28.0	3.45	3.20	3.05	2.90	2.80	2.65	28.0
30.0	2.95	2.70	2.55	2.40	2.25	2.10	30.0
32.0	2.50	2.25	2.10	1.95	1.80	1.70 /31.7	32.0
34.0	2.15	1.90	1.70	1.70 /33.4	1.70 /32.5		34.0
36.0	1.95 /35.2	1.70 /35.1					36.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 22.7ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)						
		7 falls	6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	84	72	60	48	-	-	-
50	1.17	-	-	50	48	36	24	-
35	0.90	-	-	-	-	35	24	-
12	0.51	-	-	-	-	-	-	12

8 SHORT JIB (Counterweight 22.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
4.7	12.00									4.7
5.0	12.00	12.00 /5.3								5.0
5.5	12.00	12.00	12.00 /5.8							5.5
6.0	12.00	12.00	12.00	12.00 /6.3	12.00 /6.9					6.0
7.0	12.00	12.00	12.00	12.00	12.00	12.00 /7.4				7.0
8.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /8.5		8.0
9.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /9.1	9.0
10.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.0
12.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
14.0	12.00 /13.1	12.00	12.00	12.00	12.00	12.00	12.00	11.95	11.75	14.0
16.0		10.95 /15.7	10.45	10.35	10.15	10.05	9.85	9.70	9.45	16.0
18.0			8.80	8.65	8.50	8.35	8.15	8.00	7.75	18.0
20.0			8.65 /18.2	7.40	7.20	7.05	6.85	6.70	6.45	20.0
22.0				6.95 /20.8	6.15	6.05	5.80	5.65	5.40	22.0
24.0					5.55 /23.4	5.20	4.95	4.75	4.50	24.0
26.0						4.50	4.30	4.05	3.80	26.0
28.0							3.70	3.45	3.20	28.0
30.0							3.55 /28.6	2.95	2.70	30.0
32.0								2.70 /31.2	2.30	32.0
32.5									2.20	32.5

Unit: ton

Working Radius(m)	Boom length (m)				Working Radius(m)
	39	42	45	48	
9.0	12.00 /9.6				9.0
10.0	12.00	12.00 /10.2	12.00 /10.7	12.00 /11.3	10.0
12.0	12.00	12.00	12.00	12.00	12.0
14.0	11.70	11.50	11.15	10.75	14.0
16.0	9.40	9.20	9.05	8.90	16.0
18.0	7.70	7.50	7.35	7.20	18.0
20.0	6.40	6.15	6.00	5.85	20.0
22.0	5.35	5.10	4.95	4.80	22.0
24.0	4.45	4.20	4.05	3.90	24.0
26.0	3.75	3.50	3.35	3.20	26.0
28.0	3.15	2.90	2.75	2.60	28.0
30.0	2.65	2.40	2.20	2.20 /29.4	30.0
32.0	2.20	2.20 /30.8			32.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 22.7ton counterweight is required for all capacities on this chart.
6. Hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)
100	1.20
50	1.17
35	0.90
12	0.51

9 MAIN BOOM WITH SHORT JIB (Counterweight 22.7t) - EN RATING

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	79.90									3.8
4.0	78.00									4.0
4.5	67.80	63.70								4.5
5.0	58.90	55.70	52.70							5.0
5.5	50.80	49.40	47.00	43.90 /5.6						5.5
6.0	44.00	44.00	42.30	40.50	38.10 /6.1	32.90 /6.7				6.0
7.0	34.50	34.50	34.40	33.90	32.60	31.30	29.30 /7.2	25.80 /7.8		7.0
8.0	28.20	28.20	28.00	28.00	27.90	27.00	26.00	25.00	23.20 /8.3	8.0
9.0	23.70	23.70	23.50	23.50	23.30	23.30	22.80	22.00	21.20	9.0
10.0	20.40	20.30	20.20	20.10	20.00	19.90	19.70	19.50	18.80	10.0
12.0	16.20 /11.8	15.70	15.50	15.40	15.30	15.20	15.00	14.80	14.60	12.0
14.0		12.60	12.40	12.30	12.10	12.00	11.80	11.70	11.40	14.0
16.0		12.10 /14.4	10.20	10.10	9.90	9.80	9.60	9.40	9.20	16.0
18.0			9.30 /17.0	8.50	8.30	8.20	8.00	7.80	7.50	18.0
20.0				7.40 /19.6	7.00	6.90	6.70	6.50	6.20	20.0
22.0					6.00	5.90	5.60	5.40	5.20	22.0
24.0					5.90 /22.2	5.00	4.80	4.60	4.30	24.0
26.0						4.80 /24.8	4.10	3.90	3.60	26.0
28.0							3.70 /27.4	3.30	3.10	28.0
30.0								2.80	2.60	30.0
32.0									2.20	32.0

Unit: ton

Working Radius(m)	Boom length (m)				Working Radius(m)
	39	42	45	48	
8.0	21.00 /8.8				8.0
9.0	20.50	18.80 /9.4	17.20 /9.9		9.0
10.0	18.20	17.50	17.00	15.60 /10.5	10.0
12.0	14.60	14.10	13.70	13.30	12.0
14.0	11.40	11.20	11.00	10.90	14.0
16.0	9.20	8.90	8.80	8.60	16.0
18.0	7.50	7.20	7.10	6.90	18.0
20.0	6.20	5.90	5.80	5.60	20.0
22.0	5.10	4.90	4.70	4.60	22.0
24.0	4.30	4.00	3.90	3.70	24.0
26.0	3.60	3.30	3.20	3.00	26.0
28.0	3.00	2.70	2.60	2.40	28.0
30.0	2.50	2.20	2.20 /29.6	2.20 /28.8	30.0
32.0	2.20 /31.5				32.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 22.7ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)						
		7 falls	6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	84	72	60	48	-	-	-
50	1.17	-	-	50	48	36	24	-
35	0.90	-	-	-	-	35	24	-
12	0.51	-	-	-	-	-	-	12

10 MAIN BOOM (THIRD DRUM LIFTING)(Counterweight 22.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	80.00									3.8
4.0	78.65									4.0
4.5	68.35	64.20								4.5
5.0	59.40	56.15	53.25							5.0
5.5	51.20	49.85	47.50	44.45 /5.6						5.5
6.0	44.35	44.40	42.85	41.05	38.60 /6.1	33.45 /6.7				6.0
7.0	34.85	34.85	34.75	34.40	33.10	31.85	29.80 /7.2	26.30 /7.8		7.0
8.0	28.55	28.55	28.40	28.35	28.25	27.50	26.60	25.60	23.75 /8.3	8.0
9.0	24.10	24.05	23.90	23.85	23.70	23.65	23.35	22.50	21.75	9.0
10.0	20.75	20.70	20.50	20.45	20.35	20.30	20.10	19.95	19.30	10.0
12.0	16.50 /11.8	16.00	15.85	15.75	15.65	15.55	15.35	15.25	15.00	12.0
14.0		12.90	12.75	12.65	12.50	12.40	12.25	12.05	11.85	14.0
16.0		12.40 /14.4	10.55	10.45	10.25	10.20	10.00	9.85	9.60	16.0
18.0			9.65 /17.0	8.80	8.60	8.50	8.30	8.15	7.90	18.0
20.0				7.75 /19.6	7.35	7.25	7.05	6.85	6.60	20.0
22.0					6.30	6.20	6.00	5.80	5.55	22.0
24.0					6.25 /22.2	5.35	5.15	4.95	4.70	24.0
26.0						5.10 /24.8	4.45	4.25	4.00	26.0
28.0							4.05 /27.4	3.70	3.45	28.0
30.0								3.20	2.95	30.0
32.0									2.50	32.0
34.0									2.40 /32.6	34.0

Unit: ton

Working Radius(m)	Boom length (m)						Working Radius(m)
	39	42	45	48	51	54	
8.0	21.55 /8.8						8.0
9.0	21.05	19.40 /9.4	17.75 /9.9				9.0
10.0	18.75	18.10	17.60	16.20 /10.5	14.60 /11.1	13.45 /11.6	10.0
12.0	15.00	14.70	14.25	13.85	13.30	12.90	12.0
14.0	11.85	11.60	11.45	11.35	11.00	10.65	14.0
16.0	9.60	9.35	9.20	9.10	9.00	8.85	16.0
18.0	7.90	7.65	7.50	7.40	7.30	7.15	18.0
20.0	6.60	6.35	6.20	6.05	5.95	5.80	20.0
22.0	5.55	5.30	5.15	5.00	4.90	4.75	22.0
24.0	4.70	4.45	4.30	4.15	4.05	3.90	24.0
26.0	3.95	3.75	3.60	3.45	3.30	3.15	26.0
28.0	3.40	3.15	3.00	2.85	2.70	2.55	28.0
30.0	2.85	2.60	2.45	2.35	2.20	2.05	30.0
32.0	2.45	2.20	2.05	1.90	1.75	1.70 /31.5	32.0
34.0	2.05	1.80	1.70 /33.8	1.70 /33.1	1.70 /32.3		34.0
36.0	1.85 /35.2	1.70 /34.7					36.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 22.7ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)						
		7 falls	6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	84	72	60	48	-	-
50	1.17	-	-	50	48	36	24
35	0.90	-	-	-	-	35	24

11 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)(Counterweight 22.7t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	79.90									3.8
4.0	78.00									4.0
4.5	67.80	63.60								4.5
5.0	58.85	55.60	52.70							5.0
5.5	50.75	49.30	46.95	43.85 /5.6						5.5
6.0	43.95	43.95	42.25	40.50	38.00 /6.1	32.85 /6.7				6.0
7.0	34.45	34.45	34.30	33.85	32.50	31.30	29.20 /7.2	25.70 /7.8		7.0
8.0	28.15	28.10	27.95	27.90	27.80	26.90	26.00	25.00	23.10 /8.3	8.0
9.0	23.70	23.65	23.50	23.40	23.30	23.20	22.75	21.90	21.10	9.0
10.0	20.35	20.30	20.10	20.05	19.90	19.85	19.65	19.40	18.70	10.0
12.0	16.10 /11.8	15.60	15.45	15.35	15.20	15.10	14.95	14.75	14.55	12.0
14.0		12.55	12.35	12.25	12.10	12.00	11.80	11.65	11.40	14.0
16.0		12.05 /14.4	10.15	10.05	9.85	9.75	9.55	9.40	9.15	16.0
18.0			9.30 /17.0	8.40	8.20	8.10	7.90	7.70	7.45	18.0
20.0				7.40 /19.6	6.95	6.80	6.60	6.40	6.15	20.0
22.0					5.95	5.80	5.60	5.40	5.15	22.0
24.0					5.85 /22.2	5.00	4.75	4.55	4.30	24.0
26.0						4.70 /24.8	4.10	3.85	3.60	26.0
28.0							3.70 /27.4	3.25	3.00	28.0
30.0								2.80	2.50	30.0
32.0									2.20 /31.6	32.0

Unit: ton

Working Radius(m)	Boom length (m)				Working Radius(m)
	39	42	45	48	
8.0	20.95 /8.8				8.0
9.0	20.40	18.75 /9.4	17.10 /9.9		9.0
10.0	18.10	17.45	16.90	15.50 /10.5	10.0
12.0	14.50	14.05	13.60	13.20	12.0
14.0	11.35	11.10	10.95	10.85	14.0
16.0	9.10	8.85	8.70	8.55	16.0
18.0	7.45	7.20	7.05	6.90	18.0
20.0	6.10	5.90	5.70	5.55	20.0
22.0	5.10	4.85	4.65	4.50	22.0
24.0	4.25	4.00	3.80	3.65	24.0
26.0	3.55	3.30	3.10	2.95	26.0
28.0	2.95	2.70	2.50	2.35	28.0
30.0	2.45	2.20	2.20 /29.3	2.20 /28.7	30.0
32.0	2.20 /31.2				32.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
5. 22.7ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)						
		7 falls	6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	84	72	60	48	-	-
50	1.17	-	-	50	48	36	24
35	0.90	-	-	-	-	35	24

Gross Rated Load Table

Counterweight Reduction Type 16.1t Specifications (70t lift specifications)

12 MAIN BOOM

13 SHORT JIB

14 MAIN BOOM WITH SHORT JIB

15 MAIN BOOM (THIRD DRUM LIFTING)

16 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)

Use the Gross Rated Load Table suitable for your attachments.

12 MAIN BOOM (Counterweight 16.1t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	69.75									3.8
4.0	67.30									4.0
4.5	57.15	53.60								4.5
5.0	49.60	46.90	44.40							5.0
5.5	42.55	41.60	39.65	37.05 /5.6						5.5
6.0	36.85	36.85	35.70	34.20	32.10 /6.1	27.75 /6.7				6.0
7.0	28.85	28.85	28.75	28.60	27.45	26.45	24.70 /7.2	21.70 /7.8		7.0
8.0	23.60	23.55	23.45	23.40	23.30	22.75	21.95	21.10	19.50 /8.3	8.0
9.0	19.85	19.80	19.65	19.60	19.50	19.45	19.20	18.50	17.80	9.0
10.0	17.05	17.00	16.85	16.80	16.65	16.60	16.40	16.30	15.80	10.0
12.0	13.50 /11.8	13.10	12.90	12.85	12.70	12.60	12.45	12.30	12.05	12.0
14.0		10.50	10.30	10.20	10.05	10.00	9.80	9.65	9.40	14.0
16.0		10.10 /14.4	8.45	8.35	8.20	8.10	7.95	7.75	7.55	16.0
18.0			7.75 /17.0	7.00	6.80	6.70	6.50	6.35	6.10	18.0
20.0				6.15 /19.6	5.75	5.65	5.45	5.25	5.00	20.0
22.0					4.90	4.80	4.60	4.40	4.15	22.0
24.0					4.80 /22.2	4.10	3.90	3.70	3.45	24.0
26.0						3.85 /24.8	3.30	3.10	2.85	26.0
28.0							2.95 /27.4	2.60	2.35	28.0
30.0								2.20	1.95	30.0
32.0									1.70 /31.4	32.0

Unit: ton

Working Radius(m)	Boom length (m)				Working Radius(m)
	39	42	45	48	
8.0	17.65 /8.8				8.0
9.0	17.20	15.80 /9.4	14.40 /9.9		9.0
10.0	15.25	14.70	14.25	13.05 /10.5	10.0
12.0	12.05	11.80	11.45	11.10	12.0
14.0	9.40	9.20	9.05	8.90	14.0
16.0	7.50	7.30	7.15	7.00	16.0
18.0	6.10	5.85	5.70	5.60	18.0
20.0	5.00	4.75	4.60	4.50	20.0
22.0	4.10	3.90	3.75	3.60	22.0
24.0	3.40	3.15	3.00	2.85	24.0
26.0	2.80	2.55	2.40	2.30	26.0
28.0	2.30	2.05	1.90	1.75	28.0
30.0	1.90	1.70 /29.7	1.70 /29.0	1.70 /28.2	30.0
32.0	1.70 /31.0				32.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 16.1ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)					
		6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	72	60	48	-	-	-
50	1.17	-	50	48	36	24	-
35	0.90	-	-	-	35	24	-
12	0.51	-	-	-	-	-	12

13 SHORT JIB (Counterweight 16.1t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
4.7	12.00									4.7
5.0	12.00	12.00 /5.3								5.0
5.5	12.00	12.00	12.00 /5.8							5.5
6.0	12.00	12.00	12.00	12.00 /6.3	12.00 /6.9					6.0
7.0	12.00	12.00	12.00	12.00	12.00	12.00 /7.4				7.0
8.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /8.5		8.0
9.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 /9.1	9.0
10.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	10.0
12.0	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.90	12.0
14.0	11.55 /13.1	10.35	10.15	10.05	9.90	9.80	9.60	9.45	9.25	14.0
16.0		8.75 /15.7	8.30	8.20	8.00	7.90	7.70	7.55	7.30	16.0
18.0			6.90	6.80	6.60	6.50	6.30	6.10	5.90	18.0
20.0			6.80 /18.2	5.70	5.50	5.40	5.20	5.00	4.75	20.0
22.0				5.35 /20.8	4.65	4.55	4.30	4.15	3.90	22.0
24.0					4.15 /23.4	3.85	3.60	3.40	3.15	24.0
26.0						3.20	3.05	2.80	2.55	26.0
28.0							2.55	2.30	2.20 /27.4	28.0
30.0							2.40 /28.6	2.20 /28.5		30.0

Unit: ton

Working Radius(m)	Boom length (m)			Working Radius(m)
	39	42	45	
9.0	12.00 /9.6			9.0
10.0	12.00	12.00 /10.2	12.00 /10.7	10.0
12.0	11.60	11.10	10.70	12.0
14.0	9.20	9.00	8.60	14.0
16.0	7.30	7.05	6.90	16.0
18.0	5.85	5.60	5.45	18.0
20.0	4.70	4.50	4.35	20.0
22.0	3.85	3.60	3.45	22.0
24.0	3.10	2.85	2.70	24.0
26.0	2.50	2.25	2.20 /25.6	26.0
28.0	2.20 /27.2	2.20 /26.2		28.0
30.0				30.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 16.1ton counterweight is required for all capacities on this chart.
6. hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)
100	1.20
50	1.17
35	0.90
12	0.51

14 MAIN BOOM WITH SHORT JIB (Counterweight 16.1t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	69.10									3.8
4.0	66.70									4.0
4.5	56.50	53.10								4.5
5.0	49.00	46.30	43.90							5.0
5.5	42.10	41.00	39.00	36.50 /5.6						5.5
6.0	36.40	36.40	35.10	33.60	31.50 /6.1	27.10 /6.7				6.0
7.0	28.40	28.40	28.30	28.00	26.90	25.80	24.10 /7.2	21.10 /7.8		7.0
8.0	23.20	23.10	23.00	22.90	22.80	22.10	21.30	20.50	18.90 /8.3	8.0
9.0	19.40	19.40	19.20	19.20	19.00	19.00	18.60	17.90	17.20	9.0
10.0	16.60	16.60	16.40	16.30	16.20	16.10	15.90	15.70	15.10	10.0
12.0	13.10 /11.8	12.70	12.50	12.40	12.30	12.20	12.00	11.80	11.60	12.0
14.0		10.10	9.90	9.80	9.60	9.50	9.30	9.20	8.90	14.0
16.0		9.70 /14.4	8.10	8.00	7.80	7.70	7.50	7.30	7.00	16.0
18.0			7.30 /17.0	6.60	6.40	6.30	6.10	5.90	5.60	18.0
20.0				5.70 /19.6	5.30	5.20	5.00	4.80	4.60	20.0
22.0					4.50	4.40	4.10	3.90	3.70	22.0
24.0					4.40 /22.2	3.70	3.40	3.20	3.00	24.0
26.0						3.40 /24.8	2.90	2.70	2.40	26.0
28.0							2.60 /27.4	2.20	2.20 /26.8	28.0

Unit: ton

Working Radius(m)	Boom length (m)			Working Radius(m)
	39	42	45	
8.0	17.00 /8.8			8.0
9.0	16.60	15.10 /9.4	13.70 /9.9	9.0
10.0	14.60	14.00	13.60	10.0
12.0	11.60	11.20	10.80	12.0
14.0	8.90	8.70	8.50	14.0
16.0	7.00	6.80	6.60	16.0
18.0	5.60	5.40	5.20	18.0
20.0	4.50	4.30	4.10	20.0
22.0	3.60	3.40	3.20	22.0
24.0	2.90	2.70	2.50	24.0
26.0	2.30	2.20 /25.6	2.20 /25.0	26.0
28.0	2.20 /26.4			28.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 16.1ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)	Maximum Rated Load (t)					
		6 falls	5 falls	4 falls	3 falls	2 falls	1 fall
100	1.20	72	60	48	-	-	-
50	1.17	-	50	48	36	24	-
35	0.90	-	-	-	35	24	-
12	0.51	-	-	-	-	-	12

15 MAIN BOOM (THIRD DRUM LIFTING)(Counterweight 16.1t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	69.65									3.8
4.0	67.20									4.0
4.5	57.05	53.60								4.5
5.0	49.50	46.80	44.40							5.0
5.5	42.45	41.50	39.55	36.95 /5.6						5.5
6.0	36.75	36.75	35.60	34.10	32.00 /6.1	27.65 /6.7				6.0
7.0	28.80	28.80	28.65	28.50	27.40	26.35	24.60 /7.2	21.60 /7.8		7.0
8.0	23.50	23.50	23.35	23.30	23.20	22.65	21.85	21.00	19.40 /8.3	8.0
9.0	19.75	19.70	19.55	19.55	19.40	19.35	19.15	18.40	17.70	9.0
10.0	17.00	16.90	16.75	16.70	16.55	16.50	16.35	16.20	15.70	10.0
12.0	13.40 /11.8	13.00	12.80	12.75	12.60	12.55	12.35	12.20	12.00	12.0
14.0		10.40	10.20	10.15	10.00	9.90	9.70	9.55	9.35	14.0
16.0		10.00 /14.4	8.40	8.30	8.10	8.05	7.85	7.70	7.45	16.0
18.0			7.65 /17.0	6.90	6.75	6.65	6.45	6.25	6.05	18.0
20.0				6.05 /19.6	5.65	5.55	5.35	5.20	4.95	20.0
22.0					4.80	4.70	4.50	4.30	4.05	22.0
24.0					4.75 /22.2	4.00	3.80	3.60	3.35	24.0
26.0						3.75 /24.8	3.20	3.00	2.75	26.0
28.0							2.90 /27.4	2.55	2.30	28.0
30.0								2.10	1.85	30.0
32.0									1.70 /31.0	32.0

Unit: ton

Working Radius(m)	Boom length (m)				Working Radius(m)
	39	42	45	48	
8.0	17.55 /8.8				8.0
9.0	17.10	15.70 /9.4	14.30 /9.9		9.0
10.0	15.20	14.60	14.15	12.95 /10.5	10.0
12.0	12.00	11.70	11.35	11.00	12.0
14.0	9.30	9.10	8.95	8.85	14.0
16.0	7.45	7.20	7.05	6.95	16.0
18.0	6.00	5.80	5.65	5.50	18.0
20.0	4.90	4.70	4.55	4.40	20.0
22.0	4.05	3.80	3.65	3.50	22.0
24.0	3.30	3.10	2.95	2.80	24.0
26.0	2.70	2.50	2.35	2.20	26.0
28.0	2.20	2.00	1.85	1.70	28.0
30.0	1.80	1.70 /29.4	1.70 /28.7		30.0
32.0	1.70 /30.6				32.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 16.1ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)					
		6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	72	60	48	-	-
50	1.17	-	50	48	36	24
35	0.90	-	-	-	35	24

16 MAIN BOOM WITH SHORT JIB (THIRD DRUM LIFTING)(Counterweight 16.1t) - EN RATING

Unit: ton

Working Radius(m)	Boom length (m)									Working Radius(m)
	12	15	18	21	24	27	30	33	36	
3.8	69.05									3.8
4.0	66.60									4.0
4.5	56.50	53.00								4.5
5.0	48.95	46.25	43.80							5.0
5.5	42.05	40.95	38.95	36.40 /5.6						5.5
6.0	36.30	36.35	35.05	33.55	31.45 /6.1	27.10 /6.7				6.0
7.0	28.35	28.35	28.25	27.95	26.80	25.75	24.00 /7.2	21.00 /7.8		7.0
8.0	23.10	23.05	22.95	22.90	22.75	22.10	21.30	20.40	18.80 /8.3	8.0
9.0	19.40	19.30	19.15	19.10	18.95	18.90	18.55	17.80	17.10	9.0
10.0	16.60	16.50	16.35	16.30	16.15	16.05	15.90	15.70	15.10	10.0
12.0	13.05 /11.8	12.60	12.45	12.35	12.20	12.10	11.90	11.75	11.50	12.0
14.0		10.05	9.85	9.75	9.60	9.50	9.30	9.10	8.90	14.0
16.0		9.65 /14.4	8.00	7.90	7.70	7.60	7.40	7.25	7.00	16.0
18.0			7.30 /17.0	6.55	6.35	6.25	6.00	5.85	5.60	18.0
20.0				5.70 /19.6	5.25	5.15	4.95	4.75	4.50	20.0
22.0					4.45	4.30	4.10	3.90	3.65	22.0
24.0					4.35 /22.2	3.60	3.40	3.20	2.95	24.0
26.0						3.40 /24.8	2.85	2.60	2.35	26.0
28.0							2.50 /27.4	2.20 /27.7	2.20 /26.6	28.0

Unit: ton

Working Radius(m)	Boom length (m)			Working Radius(m)
	39	42	45	
8.0	16.95 /8.8			8.0
9.0	16.50	15.05 /9.4	13.65 /9.9	9.0
10.0	14.55	13.95	13.50	10.0
12.0	11.50	11.10	10.70	12.0
14.0	8.85	8.60	8.45	14.0
16.0	6.95	6.70	6.55	16.0
18.0	5.55	5.30	5.15	18.0
20.0	4.45	4.20	4.05	20.0
22.0	3.60	3.35	3.15	22.0
24.0	2.85	2.60	2.45	24.0
26.0	2.30	2.20 /25.4	2.20 /24.9	26.0
28.0	2.20 /26.4			28.0

1. The rated loads are determined according to EN13000 rating with the machine on firm level ground.
2. The figures surrounded by bold lines are based on factors other than those which would cause a tipping condition.
3. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook and jib hook, from figures shown above.
4. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
5. 16.1ton counterweight is required for all capacities on this chart.
6. Correlation between the number of reeved lines, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (t)	Hook Weight (t)					
		6 falls	5 falls	4 falls	3 falls	2 falls
100	1.20	72	60	48	-	-
50	1.17	-	50	48	36	24
35	0.90	-	-	-	35	24

17 Conditions to Erect Boom and Crane Jib

WARNING

- **Before raising the boom or lowering the boom, reinforce the ground by laying planks such as steel plates on the ground so that the machine level can be maintained.**
- **If the boom is raised/lowered in the boom raise-prohibited direction, the machine may tip over. Be sure to place pads underneath the front or the rear side of the crawlers before raising/lowering the boom under the condition marked with ▲ in the following tables.**

CAUTION

- **When raising the boom, never lift the hook off the ground until the boom angle enters the working range.**

(1) Conditions required to raise boom depending on types of jib to be attached (with the upper spreader connected to the pendant rope)

Over Front Raising
(with the idlers positioned in the front)
Over Rear Raising
(with the travel motors positioned in the front)

×: Prohibited to raise the boom

●: Possible to raise the boom without using pads.

▲: Possible to raise the boom using pads.

1. Only Boom

1.1 With four counterweights

(Reduction type 31.7t, With lower weight)

Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	●	●	●
45	●	●	●
48	●	●	●
51	●	●	●
54	●	●	●
57	●	●	×
60	▲	▲	×

1.2 With three counterweights

(Reduction type 22.7t, Without lower weight)

Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	●	●	●
45	●	●	●
48	●	●	×
51	▲	▲	×
54	×	×	×
57	×	×	×
60	×	×	×

1.3 **With two counterweights**

(Reduction type 16.1t, Without lower weight)

Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	●	●	●
45	▲	▲	×
48	▲	×	×
51	×	×	×
54	×	×	×
57	×	×	×
60	×	×	×

2. Boom + Short Jib

2.1 With four counterweights

(Reduction type 31.7t, With lower weight)

Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	●	●	●
45	●	●	●
48	●	●	●
51	●	●	●
54	●	●	●
57	●	●	×
60	×	×	×

2.2 With three counterweights

(Reduction type 22.7t, Without lower weight)

Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	●	●	●
45	●	●	×
48	▲	▲	×
51	×	×	×
54	×	×	×
57	×	×	×
60	×	×	×

2.3 With two counterweights

(Reduction type 16.1t, Without lower weight)

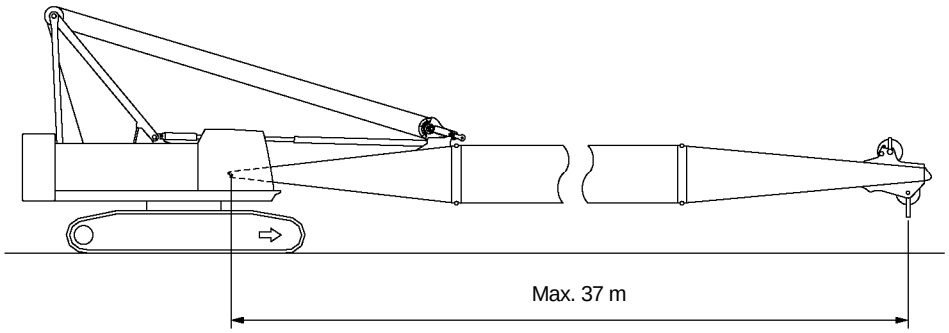
Boom Length (m)	Over Front Raising	Over Rear Raising	Overside Raising
12	●	●	●
15	●	●	●
18	●	●	●
21	●	●	●
24	●	●	●
27	●	●	●
30	●	●	●
33	●	●	●
36	●	●	●
39	●	●	●
42	▲	▲	×
45	▲	×	×
48	×	×	×
51	×	×	×
54	×	×	×
57	×	×	×
60	×	×	×

(2) When the upper spreader is installed on the boom base

CAUTION

- **When the upper spreader is installed on the boom base, do not raise the boom longer than the length illustrated below. The boom may be broken.**
- **Install two (16.1 t) or more counterweights.**

When the boom top is installed:



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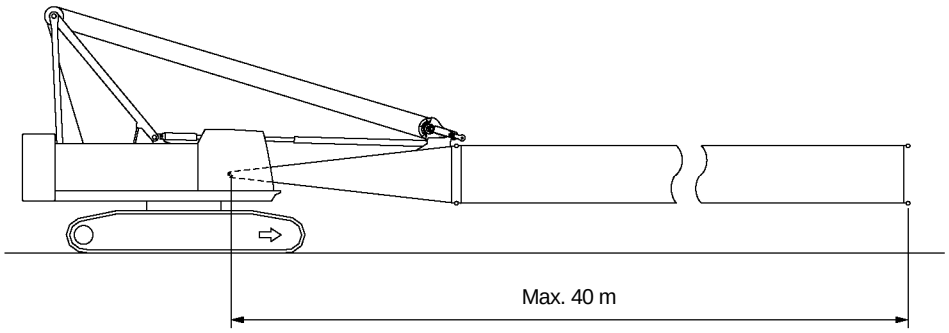
When the boom top is not installed:



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Tutt Bryant Heavy Lift & Shift Locations

Western Region
Perth (South Guildford), WA
Ph: 08 9230 0500
Email: per@tuttbryant.com.au

Karratha, WA
Ph: 08 9143 0089
Email: karratha@tuttbryant.com.au

Northern Region
Darwin (Berrimah), NT
Ph: 08 8924 1333
Email: dwn@tuttbryant.com.au

Eastern Region
Brisbane (Ormeau), QLD
Ph: 07 5540 8700
Email: bne@tuttbryant.com.au

Sydney (Sydney Olympic Park), NSW
Ph: 02 9646 6000
Email: aces@tuttbryant.com.au

Melbourne (Dandenong), VIC
Ph: 03 9554 0300
Email: mel@tuttbryant.com.au

Hunter Region
Muswellbrook, NSW
Ph: 02 6541 6444
Email: mck@tuttbryant.com.au

Online
www.tuttbryant.com.au

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