



SPECIFICATIONS



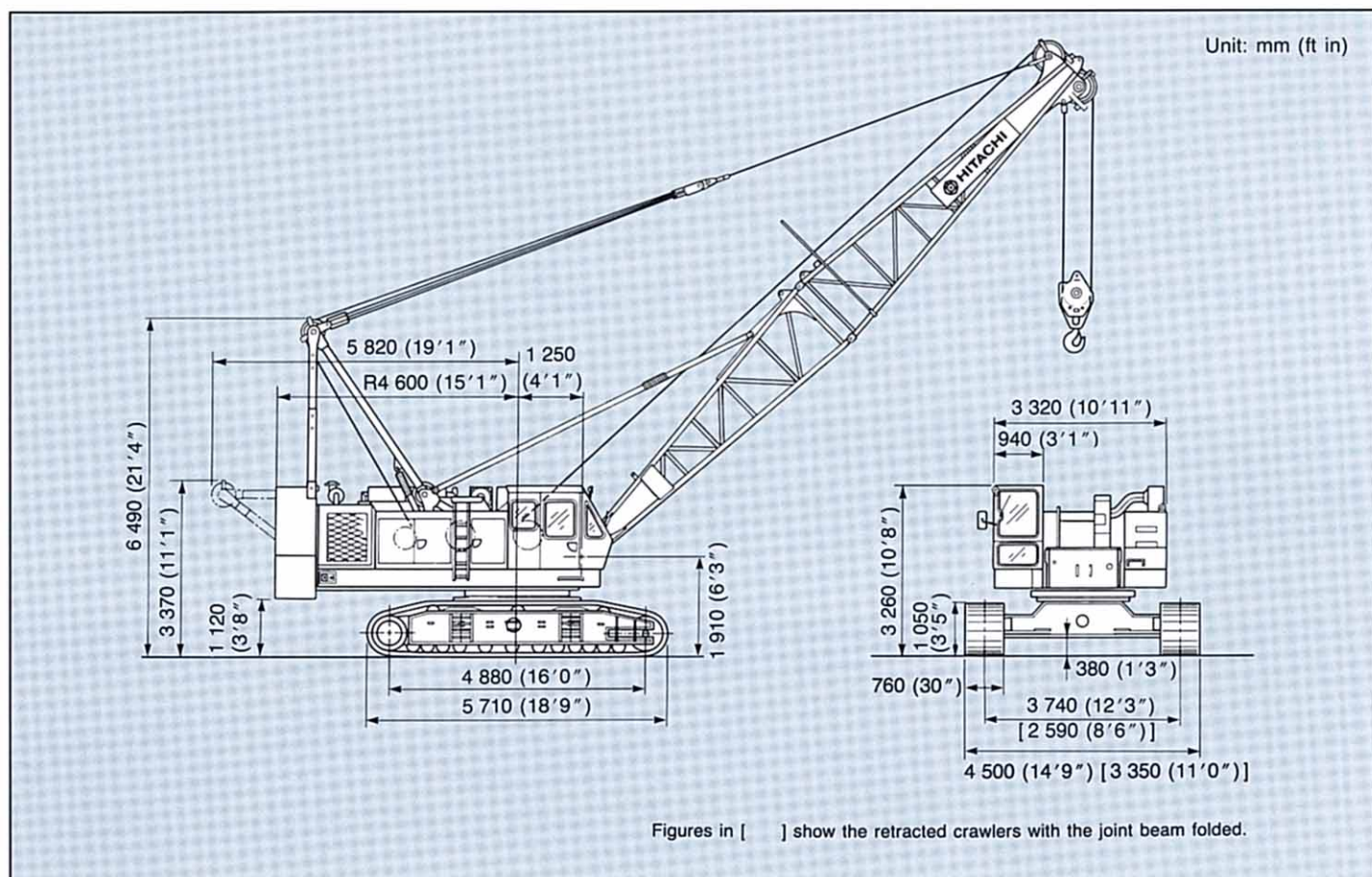
HITACHI

KH250HD

HYDRAULIC CRAWLER CRANE

Max. Lifting Capacity: 65 000 kg (143 300 lb) at 4.0 m (13'1")

Dimensions



Specifications

Maximum rated load		65 000 kg (143 300 lb) at 4.0 m (13'1") Working radius
Boom	Basic boom length	13.0 m (42'8")
	Max. boom length	40.0 m (131'3")
Swing speed	High	0 to 2.7 min ⁻¹ (0 to 2.7 rpm)
	Low	0 to 1.9 min ⁻¹ (0 to 1.9 rpm)
Travel speed*		1.3 km/h (0.81 mph)
Gradeability		17° (30°)
Ground pressure		0.85 bar (0.85 kgf/cm ² , 12.1 psi)
Operating weight	Equipped with basic boom, 65 000 kg (143 300 lb) capacity hook and 16 600 kg (36 600 lb) counterweight	
		67 400 kg (148 600 lb)
Engine	Model	ISUZU 6RB1
	Rated horsepower	165 kW (225 PS) at 2 000 min ⁻¹ (2 000 rpm)

* Speeds may vary with load



HOOKS

Capacity	Self weight	Number of hoist reeving and maximum rated loads kg (lb)								
		7	6	5	4	3	2	1		
65 000 kg (143 300 lb)	950 kg (2 090 lb)	65 000 (143 300)	60 000 (132 270)	50 000 (110 230)	40 000 (88 180)	30 000 (66 130)	20 000 (44 090)	—	For Main Boom	Standard
40 000 kg (88 180 lb)	620 kg (1 370 lb)				40 000 (88 180)	30 000 (66 130)	20 000 (44 090)	—		Optional
25 000 kg (55 120 lb)	730 kg (1 610 lb)					25 000 (55 110)	20 000 (44 090)	—		
10 000 kg (22 050 lb)	370 kg (820 lb)							10 000 (22 040)	For Aux. Jib	
34 200 kg (75 400 lb)	500 kg (1 100 lb)		34 200 (75 400)	28 500 (62 830)	22 800 (50 270)	17 100 (37 700)	11 400 (25 130)	—	For 3rd drum	

DRUMS

Dimensions

	Rope dia.	Width	Drum p.c.d.	Max. rope capacity
Main hoist drum	26 mm (1.024")	644 mm (25.4")	550 mm (21.7")	407 m (1 335')
Aux. hoist drum	26 mm (1.024")	644 mm (25.4")	550 mm (21.7")	407 m (1 335')
3rd hoist drum	20 mm (0.787")	306 mm (12.0")	420 mm (16.5")	190 m (623')

Line speed and line pull

	Max. line speed m/min (ft/min)			Effective line pull	@	Line speed	Max. starting line pull	Max. running line pull
	Hoisting	Lowering						
Main hoist drum	H	60 (197)	60 (197)	147 kN (15 000 kgf, 33 070 lbf)	@	39 m/min (128 ft/min)	177 kN (18 000 kgf, 39 700 lbf)	196 kN (20 000 kgf, 44 090 lbf)
	L	30 (98.4)	30 (98.4)					
Aux. hoist drum	H	60 (197)	60 (197)	147 kN (15 000 kgf, 33 070 lbf)	@	39 m/min (128 ft/min)	177 kN (18 000 kgf, 39 700 lbf)	196 kN (20 000 kgf, 44 090 lbf)
	L	30 (98.4)	30 (98.4)					
3rd hoist drum		40 (131)	40 (131)	112.8 kN (11 500 kgf, 25 350 lbf)	@	34 m/min (111.5 ft/min)	143 kN (14 600 kgf, 32 190 lbf)	150 kN (15 300 kgf, 33 730 lbf)

H: High speed range L: Low speed range

Notes:

- Line speed and line pull are based on first layer of winding at rated engine rpm.
- Hoisting line speed varies with load.
- Line pull is based on a single line pull in high speed range.
- Effective line pull is equivalent to available line pull of mechanical drive winch.

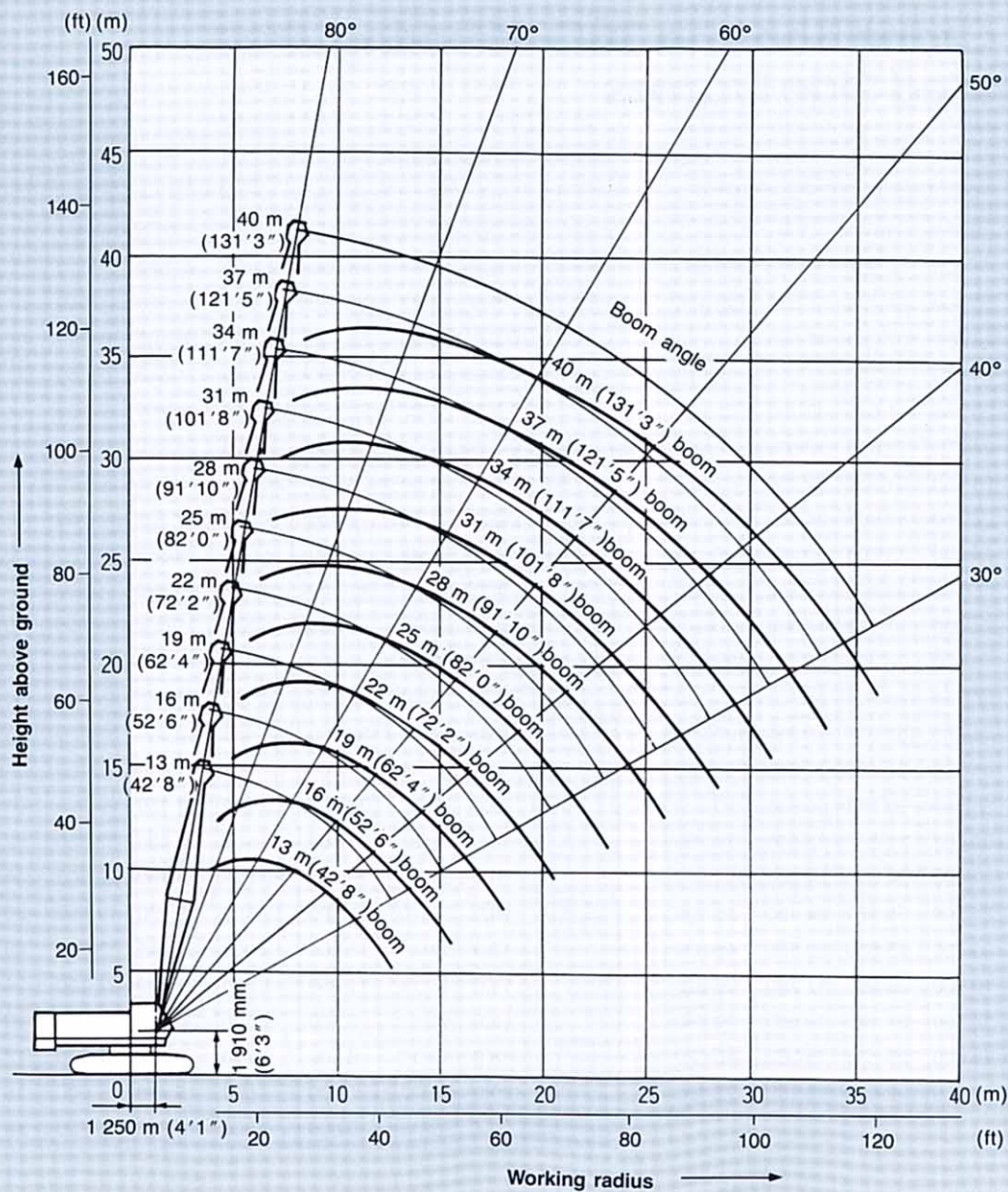
- When starting, hydraulic motor is without rotating, the line pull is "Max. starting line pull". After motor rotating, the line pull becomes "Max. running line pull" shortly.

BOOM HOIST DRUM

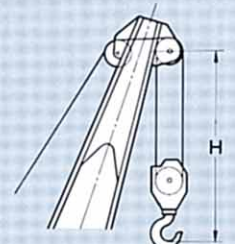
Rope diameter	Hoisting line speed	Lowering line speed
20 mm (0.787")	40 m/min (131 ft/min)	40 m/min (131 ft/min)



Working Ranges



HOOK CLEARANCE



H = 3.2 m (10'6")



Crane Ratings

JIS Rating:

The rated loads shown don't exceed 78% of tipping loads with the machine on firm level ground.

BS Rating:

The rated loads are determined according to BS (British Standard; 1981) on the condition that the machine is stationed on firm, level ground.

PCSA Rating:

The rated load are determined according to PCSA (Power Crane and Shovel Association in U.S.A.) and do not exceed 75% of tipping load on condition that the machine is stationed on firm, level ground.

Tubular Chord Crane Boom in 360° Working Area with Fully Extended Side Frames

Boom length m (ft in)	Working radius m ft in		Rated load				
			JIS rating kg	BS rating kg lb		PCSA rating kg lb	
13.0 (42'8")	4.0	13'1"	65 000	65 000	143 300	65 000	143 300
	4.5	14'9"	56 000	56 000	123 450	56 000	123 450
	5.0	16'5"	48 650	48 650	107 250	48 650	107 250
	5.5	18'1"	41 900	41 900	92 370	41 900	92 370
	6.0	19'8"	36 750	36 750	81 010	36 750	81 010
	6.5	21'4"	32 700	32 700	72 090	32 650	71 980
	7.0	23'0"	29 400	29 400	64 810	29 300	64 590
	8.0	26'3"	24 450	24 450	53 900	24 200	53 350
	9.0	29'6"	20 850	20 850	45 960	20 600	45 410
	10.0	32'10"	18 100	18 100	39 920	17 850	39 350
	12.0	39'4"	14 300	14 300	31 520	14 050	30 970
	12.6	41'4"	13 300	13 300	29 320	13 150	28 990
16.0 (52'6")	4.7	15'5"	54 750	54 750	120 700	54 700	120 590
	5.0	16'5"	48 550	48 550	107 030	48 550	107 030
	5.5	18'1"	41 800	41 800	92 150	41 800	92 150
	6.0	19'8"	36 650	36 650	80 790	36 650	80 790
	6.5	21'4"	32 600	32 600	71 870	32 550	71 760
	7.0	23'0"	29 300	29 300	64 590	29 200	64 370
	8.0	26'3"	24 300	24 300	53 570	24 100	53 130
	9.0	29'6"	20 700	20 700	45 630	20 450	45 080
	10.0	32'10"	18 000	18 000	39 680	17 700	39 020
	12.0	39'4"	14 150	14 150	31 190	13 900	30 640
	14.0	45'11"	11 600	11 600	25 570	11 350	25 020
	15.2	49'10"	10 350	10 350	22 810	10 200	22 480

Boom length m (ft in)	Working radius m ft in		Rated load				
			JIS rating kg	BS rating kg lb		PCSA rating kg lb	
19.0 (62'4")	5.3	17'5"	45 200	45 200	99 640	44 600	98 320
	5.5	18'1"	41 650	41 650	91 820	41 650	91 820
	6.0	19'8"	36 500	36 500	80 460	36 500	80 460
	6.5	21'4"	32 450	32 450	71 540	32 450	71 540
	7.0	23'0"	29 150	29 150	64 260	29 050	64 040
	8.0	26'3"	24 150	24 150	53 240	24 000	52 910
	9.0	29'6"	20 550	20 550	45 300	20 350	44 860
	10.0	32'10"	17 850	17 850	39 350	17 600	38 800
	12.0	39'4"	14 000	14 000	30 860	13 750	30 310
	14.0	45'11"	11 400	11 400	25 130	11 200	24 690
	16.0	52'6"	9 550	9 550	21 050	9 400	20 720
	17.8	58'5"	8 250	8 250	18 180	8 150	17 960
22.0 (72'2")	5.8	19'0"	38 450	38 450	84 760	38 450	84 760
	6.0	19'8"	36 450	36 450	80 350	36 450	80 350
	6.5	21'4"	32 400	32 400	71 420	32 400	71 420
	7.0	23'0"	29 100	29 100	64 150	29 050	64 040
	8.0	26'3"	24 100	24 100	53 130	23 950	52 800
	9.0	29'6"	20 500	20 500	45 190	20 300	44 750
	10.0	32'10"	17 800	17 800	39 240	17 550	38 690
	12.0	39'4"	13 900	13 900	30 640	13 700	30 200
	14.0	45'11"	11 350	11 350	25 020	11 150	24 580
	16.0	52'6"	9 500	9 500	20 940	9 300	20 500
	18.0	59'1"	8 100	8 100	17 850	7 950	17 520
	20.0	65'7"	7 000	7 000	15 430	6 900	15 210
	20.4	66'11"	6 800	6 800	14 990	6 700	14 770



Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
25.0 (82'0")	6.4	21'0"	33 350	33 350	73 520	33 050	72 860
	6.5	21'4"	32 350	32 350	71 310	32 250	71 090
	7.0	23'0"	29 050	29 050	64 040	28 900	63 710
	8.0	26'3"	24 050	24 050	53 020	23 800	52 470
	9.0	29'6"	20 400	20 400	44 970	20 150	44 420
	10.0	32'10"	17 700	17 700	39 020	17 400	38 360
	12.0	39'4"	13 800	13 800	30 420	13 550	29 870
	14.0	45'11"	11 200	11 200	24 690	11 000	24 250
	16.0	52'6"	9 350	9 350	20 610	9 150	20 170
	18.0	59'1"	7 950	7 950	17 520	7 800	17 190
	20.0	65'7"	6 900	6 900	15 210	6 700	14 770
	22.0	72'2"	6 000	6 000	13 220	5 850	12 890
	23.0	75'6"	5 650	5 650	12 450	5 500	12 120
28.0 (91'10")	7.0	23'0"	28 950	28 950	63 820	28 850	63 600
	8.0	26'3"	23 950	23 950	52 800	23 800	52 470
	9.0	29'6"	20 300	20 300	44 750	20 150	44 420
	10.0	32'10"	17 600	17 600	38 800	17 400	38 360
	12.0	39'4"	13 700	13 700	30 200	13 500	29 760
	14.0	45'11"	11 100	11 100	24 470	10 950	24 140
	16.0	52'6"	9 250	9 250	20 390	9 100	20 060
	18.0	59'1"	7 850	7 850	17 300	7 700	16 970
	20.0	65'7"	6 750	6 750	14 880	6 650	14 660
	22.0	72'2"	5 900	5 900	13 000	5 800	12 780
	24.0	78'9"	5 200	5 200	11 460	5 100	11 240
	25.6	84'0"	4 700	4 700	10 360	4 650	10 250

Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
31.0 (101'8")	7.6	24'11"	26 050	26 050	57 430	25 500	56 210
	8.0	26'3"	23 800	23 800	52 470	23 650	52 130
	9.0	29'6"	20 200	20 200	44 530	20 000	44 090
	10.0	32'10"	17 450	17 450	38 470	17 250	38 020
	12.0	39'4"	13 550	13 550	29 870	13 400	29 540
	14.0	45'11"	10 950	10 950	24 140	10 800	23 800
	16.0	52'6"	9 100	9 100	20 060	8 950	19 730
	18.0	59'1"	7 700	7 700	16 970	7 600	16 750
	20.0	65'7"	6 600	6 600	14 550	6 500	14 330
	22.0	72'2"	5 750	5 750	12 670	5 650	12 450
	24.0	78'9"	5 050	5 050	11 130	4 950	10 910
	26.0	85'4"	4 450	4 450	9 810	4 400	9 700
	28.0	91'10"	3 950	3 950	8 700	3 900	8 590
	28.2	92'6"	3 900	3 900	8 590	3 850	8 480
34.0 (111'7")	8.1	26'7"	23 450	23 450	51 690	23 150	51 030
	9.0	29'6"	20 150	20 150	44 420	19 900	43 870
	10.0	32'10"	17 400	17 400	38 360	17 150	37 800
	12.0	39'4"	13 550	13 550	29 870	13 300	29 320
	14.0	45'11"	10 950	10 950	24 140	10 700	23 580
	16.0	52'6"	9 050	9 050	19 950	8 850	19 510
	18.0	59'1"	7 650	7 650	16 860	7 500	16 530
	20.0	65'7"	6 550	6 550	14 440	6 400	14 100
	22.0	72'2"	5 700	5 700	12 560	5 550	12 230
	24.0	78'9"	4 950	4 950	10 910	4 850	10 690
	26.0	85'4"	4 350	4 350	9 590	4 250	9 360
	28.0	91'10"	3 850	3 850	8 480	3 800	8 370
	30.0	98'5"	3 450	3 450	7 600	3 350	7 380
	30.8	101'1"	3 300	3 300	7 270	3 200	7 050



Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
37.0 (121'5")	8.7	28'7"	21 150	21 150	46 620	20 750	45 740
	9.0	29'6"	20 000	20 000	44 090	19 800	43 650
	10.0	32'10"	17 300	17 300	38 140	17 050	37 580
	12.0	39'4"	13 400	13 400	29 540	13 150	28 990
	14.0	45'11"	10 800	10 800	23 800	10 550	23 250
	16.0	52'6"	8 900	8 900	19 620	8 750	19 290
	18.0	59'1"	7 500	7 500	16 530	7 350	16 200
	20.0	65'7"	6 400	6 400	14 100	6 250	13 770
	22.0	72'2"	5 550	5 550	12 230	5 400	11 900
	24.0	78'9"	4 800	4 800	10 580	4 700	10 360
	26.0	85'4"	4 200	4 200	9 250	4 100	9 030
	28.0	91'10"	3 700	3 700	8 150	3 650	8 040
	30.0	98'5"	3 250	3 250	7 160	3 200	7 050
	32.0	105'0"	2 850	2 850	6 280	2 850	6 280
	33.4	109'7"	2 600	2 600	5 730	2 600	5 730

Notes:

1. The rated loads shown are based on the machine on firm level ground without traveling.
2. The rated loads shown include the weight of all lifting attachments such as hook, bucket, etc. The load to be actually lifted will be the rated load minus the weight of all lifting attachments.
3. The rated load for auxiliary jib hook is equal to that of main hook at the same working radius, but do not exceed maximum rated load 10 000 kg (22 040 lb).

Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
40.0 (131'3")	9.3	30'6"	19 250	19 250	42 430	18 850	41 550
	10.0	32'10"	17 150	17 150	37 800	17 000	37 470
	12.0	39'4"	13 300	13 300	29 320	13 150	28 990
	14.0	45'11"	10 700	10 700	23 580	10 550	23 250
	16.0	52'6"	8 800	8 800	19 400	8 700	19 180
	18.0	59'1"	7 400	7 400	16 310	7 300	16 090
	20.0	65'7"	6 300	6 300	13 880	6 250	13 770
	22.0	72'2"	5 400	5 400	11 900	5 350	11 790
	24.0	78'9"	4 700	4 700	10 360	4 650	10 250
	26.0	85'4"	4 100	4 100	9 030	4 050	8 920
	28.0	91'10"	3 600	3 600	7 930	3 600	7 930
	30.0	98'5"	3 100	3 100	6 830	3 100	6 830
	32.0	105'0"	2 700	2 700	5 950	2 700	5 950
	34.0	111'7"	2 350	2 350	5 180	2 350	5 180
	36.0	118'1"	2 050	2 050	4 510	2 050	4 510

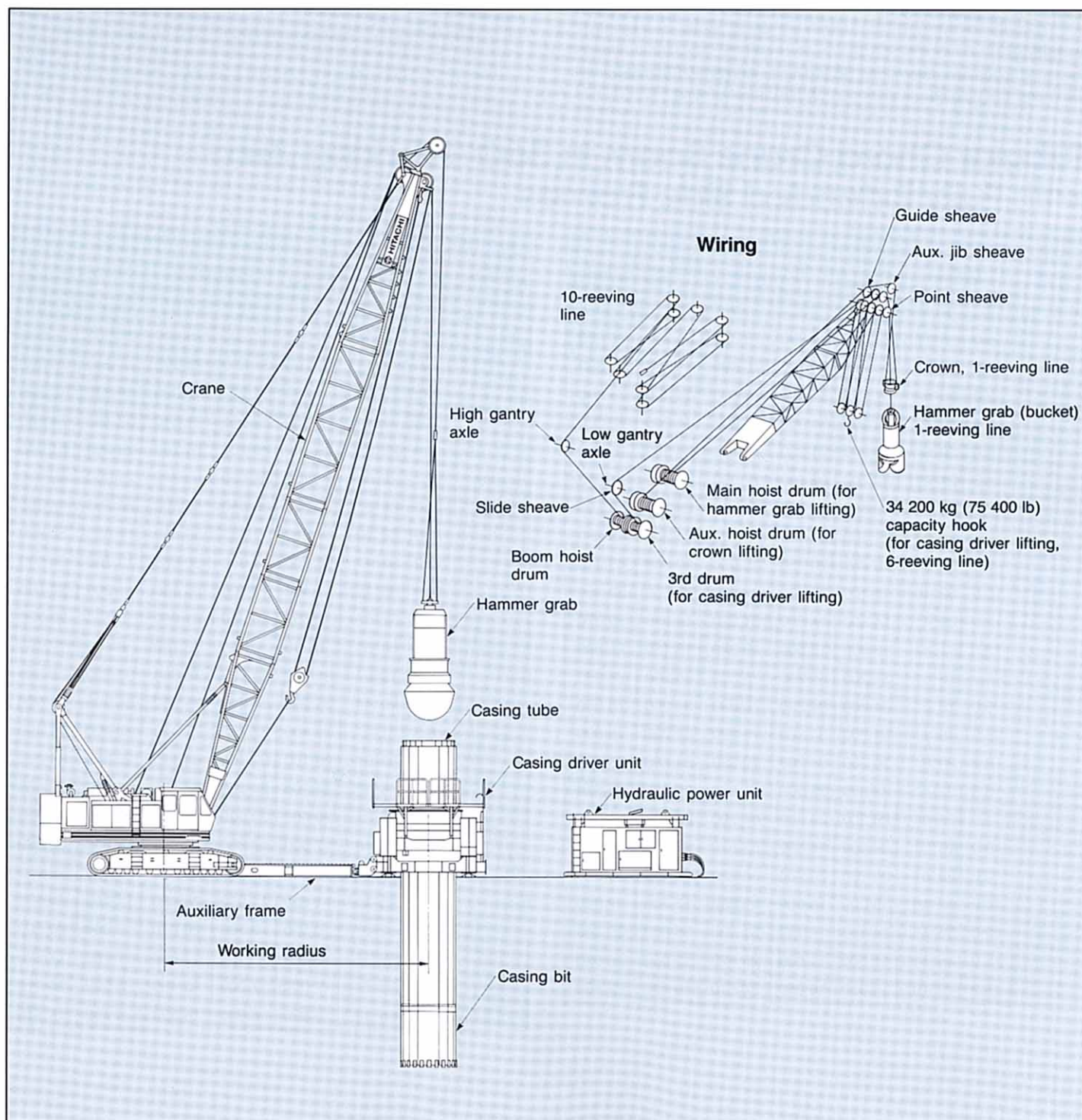
4. When the auxiliary jib is attached to the main boom, the load to be actually lifted is the rated load minus auxiliary jib weight.
Auxiliary jib weight..... 350 kg (770 lb)
5. The auxiliary jib can be attached to the main boom of 13.0 m (42'8") to 40.0 m (131'3") long.
6. Counterweight is 16 600 kg (36 600 lb).



CRANE USING HAMMER GRAB

For HITACHI CD1500/CD2000 Rotary Casing Drivers

General Set-up





Crane Ratings (for 3rd Drum)

JIS Ratings:

The rated loads shown don't exceed 78% of tipping loads with the machine on firm level ground.

BS Rating:

The rated loads are determined according to BS (British Standard; 1981) and the machine is stationed on firm, level ground.

PCSA Rating:

The rated load are determined according to PCSA (Power Crane and Shovel Association in U.S.A.) and do not exceed 75% of tipping load on condition that the machine is stationed on firm, level ground.

Tubular Chord Crane Boom in 360° Working Area with Fully Extended Side Frames

Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
13.0 (42'8")	4.0	13'1"	34 200	34 200	75 390	34 200	75 390
	4.5	14'9"	34 200	34 200	75 390	34 200	75 390
	5.0	16'5"	34 200	34 200	75 390	34 200	75 390
	5.5	18'1"	34 200	34 200	75 390	34 200	75 390
	6.3	20'8"	34 200	34 200	75 390	34 200	75 390
	6.5	21'4"	32 700	32 700	72 090	32 650	71 980
	7.0	23'0"	29 400	29 400	64 810	29 300	64 590
	8.0	26'3"	24 450	24 450	53 900	24 200	53 350
	9.0	29'6"	20 850	20 850	45 960	20 600	45 410
	10.0	32'10"	18 100	18 100	39 900	17 850	39 350
	12.0	39'4"	14 300	14 300	31 520	14 050	30 970
	12.6	41'4"	13 300	13 300	29 320	13 150	28 990
16.0 (52'6")	4.7	15'5"	34 200	34 200	75 390	34 200	75 390
	5.0	16'5"	34 200	34 200	75 390	34 200	75 390
	5.5	18'1"	34 200	34 200	75 390	34 200	75 390
	6.3	20'8"	34 200	34 200	75 390	34 200	75 390
	6.5	21'4"	32 600	32 600	71 870	32 550	71 390
	7.0	23'0"	29 300	29 300	64 590	29 200	64 370
	8.0	26'3"	24 300	24 300	53 570	24 100	53 130
	9.0	29'6"	20 700	20 700	45 630	20 450	45 080
	10.0	32'10"	18 000	18 000	39 680	17 700	39 020
	12.0	39'4"	14 150	14 150	31 190	13 900	30 640
	14.0	45'11"	11 600	11 600	25 570	11 350	25 020
	15.2	49'10"	10 350	10 350	22 810	10 200	22 480

Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
19.0 (62'4")	5.3	17'5"	34 200	34 200	75 390	34 200	75 390
	5.5	18'1"	34 200	34 200	75 390	34 200	75 390
	6.3	20'8"	34 200	34 200	75 390	34 200	75 390
	6.5	21'4"	32 450	32 450	71 540	32 450	71 540
	7.0	23'0"	29 150	29 150	64 260	29 050	64 040
	8.0	26'3"	24 150	24 150	53 240	24 000	52 910
	9.0	29'6"	20 550	20 550	45 300	20 350	44 860
	10.0	32'10"	17 850	17 850	39 350	17 600	38 800
	12.0	39'4"	14 000	14 000	30 860	13 750	30 310
	14.0	45'11"	11 400	11 400	25 130	11 200	24 690
	16.0	52'6"	9 550	9 550	21 050	9 400	20 720
	17.8	58'5"	8 250	8 250	18 180	8 150	17 960
22.0 (72'2")	5.8	19'0"	34 200	34 200	75 390	34 200	75 390
	6.2	20'4"	34 200	34 200	75 390	34 200	75 390
	6.5	21'4"	32 400	32 400	71 420	32 400	71 420
	7.0	23'0"	29 100	29 100	64 150	29 050	64 040
	8.0	26'3"	24 100	24 100	53 130	23 950	52 800
	9.0	29'6"	20 500	20 500	45 190	20 300	44 750
	10.0	32'10"	17 800	17 800	39 240	17 550	38 690
	12.0	39'4"	13 900	13 900	30 640	13 700	30 200
	14.0	45'11"	11 350	11 350	25 020	11 150	24 580
	16.0	52'6"	9 500	9 500	20 940	9 300	20 500
	18.0	59'1"	8 100	8 100	17 850	7 950	17 520
	20.0	65'7"	7 000	7 000	15 430	6 900	15 210
	20.4	66'11"	6 800	6 800	14 990	6 700	14 770



Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
25.0 (82'0")	6.4	21'0"	33 350	33 350	73 520	33 050	72 860
	6.5	21'4"	32 350	32 350	71 310	32 250	71 090
	7.0	23'0"	29 050	29 050	64 040	28 900	63 710
	8.0	26'3"	24 050	24 050	53 020	23 800	52 470
	9.0	29'6"	20 400	20 400	44 970	20 150	44 420
	10.0	32'10"	17 700	17 700	39 020	17 400	38 360
	12.0	39'4"	13 800	13 800	30 420	13 550	29 870
	14.0	45'11"	11 200	11 200	24 690	11 000	24 250
	16.0	52'6"	9 350	9 350	20 610	9 150	20 170
	18.0	59'1"	7 950	7 950	17 520	7 800	17 190
	20.0	65'7"	6 900	6 900	15 210	6 700	14 770
	22.0	72'2"	6 000	6 000	13 220	5 850	12 890
	23.0	75'6"	5 650	5 650	12 450	5 500	12 120

Notes:

1. The rated loads shown are based on the machine on firm level ground without traveling.
2. The rated loads shown include the weight of all lifting attachments such as hook, bucket, etc. The load to be actually lifted will be the rated load minus the weight of all lifting attachments.
3. Counterweight is 16 600 kg (36 600 lb).
4. Maximum number of rope reevings on the 3rd drum is 6. In this case, maximum boom length is 25 m (82'0"), limited by take-up capacity of the 3rd drum.
5. When boom length is 19 m (62'4") or less, 2- and 3-reeving line is not practical. 1-reeving line is not applicable to all boom lengths. Otherwise, when hoisting the hook, the boom is over-hoisted and fallen down rearward.



Hammer Grab Bucket Ratings

Tubular Chord Crane Boom in 360° Working Area with Fully Extended Side Frames

Boom length m (ft in)	Working radius m ft in		Rated load				
			JIS rating kg	BS rating kg lb		PCSA rating kg lb	
13.0 (42'8")	4.3	14'1"	10 000	10 000	22 040	10 000	22 040
	4.5	14'9"	10 000	10 000	22 040	10 000	22 040
	5.0	16'5"	10 000	10 000	22 040	10 000	22 040
	5.5	18'1"	10 000	10 000	22 040	10 000	22 040
	6.0	19'8"	10 000	10 000	22 040	10 000	22 040
	6.5	21'4"	10 000	10 000	22 040	10 000	22 040
	7.0	23'0"	10 000	10 000	22 040	10 000	22 040
	8.0	26'3"	10 000	10 000	22 040	10 000	22 040
	9.0	29'6"	10 000	10 000	22 040	10 000	22 040
	10.0	32'10"	10 000	10 000	22 040	10 000	22 040
	12.0	39'4"	10 000	10 000	22 040	10 000	22 040
16.0 (42'6")	5.0	16'5"	10 000	10 000	22 040	10 000	22 040
	5.5	18'1"	10 000	10 000	22 040	10 000	22 040
	6.0	19'8"	10 000	10 000	22 040	10 000	22 040
	6.5	21'4"	10 000	10 000	22 040	10 000	22 040
	7.0	23'0"	10 000	10 000	22 040	10 000	22 040
	8.0	26'3"	10 000	10 000	22 040	10 000	22 040
	9.0	29'6"	10 000	10 000	22 040	10 000	22 040
	10.0	32'10"	10 000	10 000	22 040	10 000	22 040
	12.0	39'4"	10 000	10 000	22 040	10 000	22 040
	14.0	45'11"	10 000	10 000	22 040	10 000	22 040
	14.6	47'11"	9 850	9 850	21 710	9 650	21 270
19.0 (62'4")	5.6	18'4"	10 000	10 000	22 040	10 000	22 040
	6.0	19'8"	10 000	10 000	22 040	10 000	22 040
	6.5	21'4"	10 000	10 000	22 040	10 000	22 040
	7.0	23'0"	10 000	10 000	22 040	10 000	22 040
	8.0	26'3"	10 000	10 000	22 040	10 000	22 040
	9.0	29'6"	10 000	10 000	22 040	10 000	22 040
	10.0	32'10"	10 000	10 000	22 040	10 000	22 040
	12.0	39'4"	10 000	10 000	22 040	10 000	22 040
	14.0	45'11"	10 000	10 000	22 040	10 000	22 040
	16.0	52'6"	8 600	8 600	18 950	8 450	18 620
	17.0	55'9"	7 950	7 950	17 520	7 850	17 300

Boom length m (ft in)	Working radius m ft in		Rated load				
			JIS rating kg	BS rating kg lb		PCSA rating kg lb	
22.0 (72'2")	6.1	20'0"	10 000	10 000	22 040	10 000	22 040
	6.5	21'4"	10 000	10 000	22 040	10 000	22 040
	7.0	23'0"	10 000	10 000	22 040	10 000	22 040
	8.0	26'3"	10 000	10 000	22 040	10 000	22 040
	9.0	29'6"	10 000	10 000	22 040	10 000	22 040
	10.0	32'10"	10 000	10 000	22 040	10 000	22 040
	12.0	39'4"	10 000	10 000	22 040	10 000	22 040
	14.0	45'11"	10 000	10 000	22 040	10 000	22 040
	16.0	52'6"	8 500	8 500	18 730	8 350	18 400
	18.0	59'1"	7 250	7 250	15 980	7 150	15 760
	19.5	64'0"	6 500	6 500	14 330	6 450	14 210
25.0 (82'0")	6.7	22'0"	10 000	10 000	22 040	10 000	22 040
	7.0	23'0"	10 000	10 000	22 040	10 000	22 040
	8.0	26'3"	10 000	10 000	22 040	10 000	22 040
	9.0	29'6"	10 000	10 000	22 040	10 000	22 040
	10.0	32'10"	10 000	10 000	22 040	10 000	22 040
	12.0	39'4"	10 000	10 000	22 040	10 000	22 040
	14.0	45'11"	10 000	10 000	22 040	9 900	21 820
	16.0	52'6"	8 400	8 400	18 510	8 250	18 180
	18.0	59'1"	7 150	7 150	15 760	7 000	15 430
	20.0	65'7"	6 200	6 200	13 660	6 050	13 330
	22.0	72'2"	5 400	5 400	11 900	5 250	11 570

Notes:

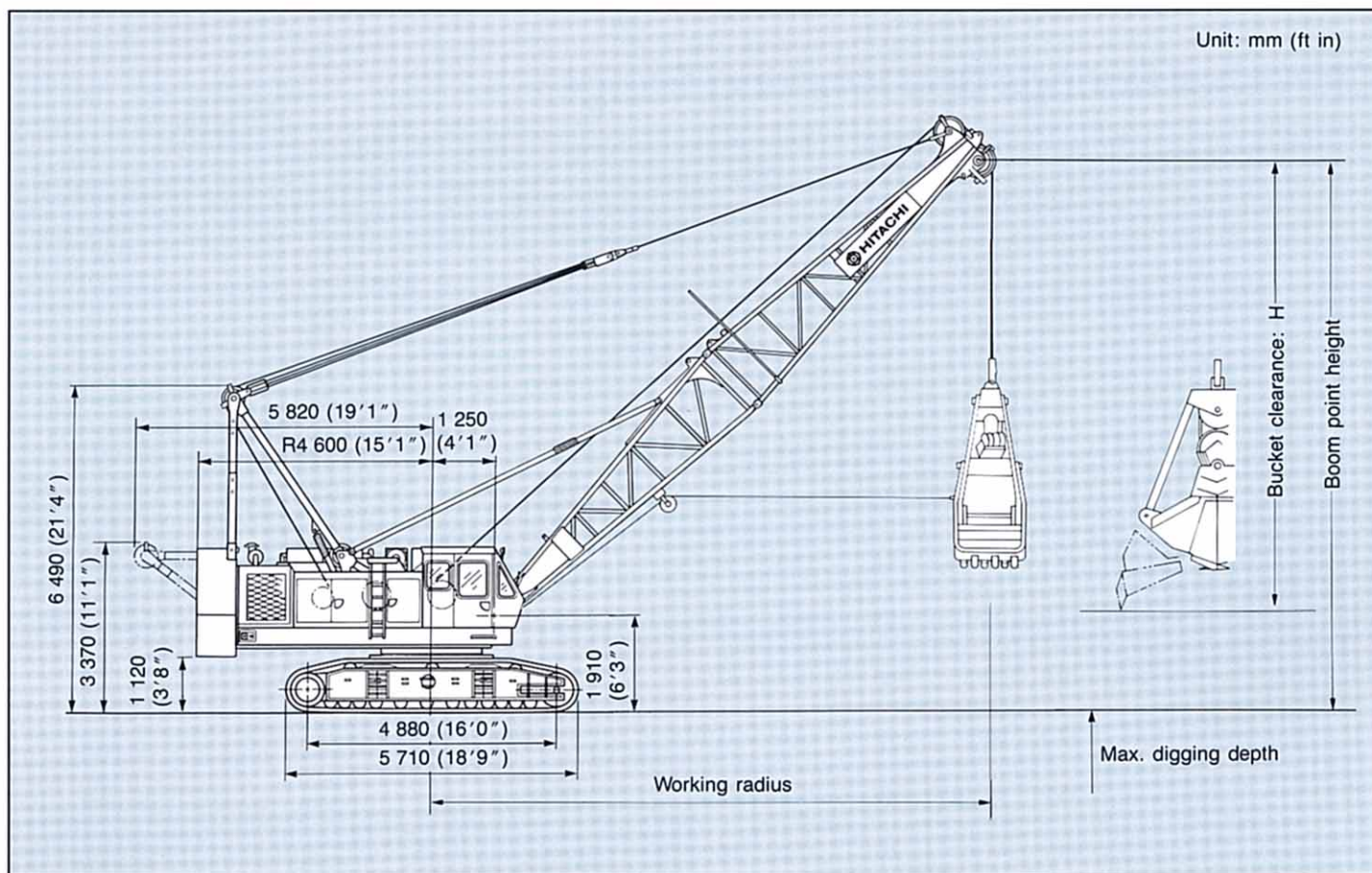
1. The rated loads shown include the bucket weight. The load to be actually lifted is the rated load minus bucket weight.
2. Maximum bucket weight is 5 000 kg (11 020 lb).
3. Counterweight is 16 600 kg (36 600 lb).
4. Allowable boom length for hammer grab bucket operation is from 13.0 m (42'8") through 25.0 m (82'0").



CLAMSHELL

With Tubular CRANE Boom

Dimensions



Specifications

Bucket capacity	2.5 m ³ (3.27 cu yd)
Boom length	13.0 m (42'8") to 22.0 m (72'2")
* Operating weight	72 000 kg (158 700 lb) When equipped with 13.0 m (42'8") boom and 2.5 m ³ (3.27 cu yd) bucket
Ground pressure	0.91 bar (0.91 kgf/cm ² , 12.9 psi)

Notes:

- For common specifications which are not listed above, refer to p.1 and p.2.
- * Operating weights are approximate.

BUCKETS

Capacity	Self weight	Bucket clearance: H	Application
2.5m ³ (3.27 cu yd)	5 500 kg (12 120 lb)	6.9 m (22'8")	General purpose



TAGLINE

	Maximum digging depth
Hydraulic operated type (Option)	36.0 m (118'1")

Clamshell Ratings and Working Ranges

Boom length	Working radius		Boom angle	Boom point height		Rated load		
						JIS rating	BS rating	PCSA rating
m (ft in)	m	ft in	degree	m	ft in	kg	kg (lb)	kg (lb)
13.0 (42'8")	12.4	40'8"	35	9.0	29'6"	10 000	10 000 (22 040)	10 000 (22 040)
	11.0	36'0"	45	10.8	35'5"	10 000	10 000 (22 040)	10 000 (22 040)
	9.3	30'6"	55	12.3	40'4"	10 000	10 000 (22 040)	10 000 (22 040)
	7.3	23'11"	65	13.5	44'3"	10 000	10 000 (22 040)	10 000 (22 040)
16.0 (52'6")	14.8	48'7"	35	10.8	35'5"	9 650	9 650 (21 270)	9 550 (21 050)
	13.1	43'0"	45	12.9	42'4"	10 000	10 000 (22 040)	10 000 (22 040)
	11.0	36'1"	55	14.8	48'7"	10 000	10 000 (22 040)	10 000 (22 040)
	8.6	28'3"	65	16.2	53'2"	10 000	10 000 (22 040)	10 000 (22 040)
19.0 (62'4")	17.3	56'9"	35	12.5	41'0"	7 750	7 750 (17 080)	7 650 (16 860)
	15.2	49'10"	45	15.0	49'3"	9 250	9 250 (20 390)	9 100 (20 060)
	12.7	41'8"	55	17.2	56'5"	10 000	10 000 (22 040)	10 000 (22 040)
	9.9	32'6"	65	18.9	62'0"	10 000	10 000 (22 040)	10 000 (22 040)
22.0 (72'2")	19.8	65'0"	35	14.2	46'7"	6 400	6 400 (14 100)	6 300 (13 880)
	17.3	56'9"	45	17.2	56'5"	7 750	7 750 (17 080)	7 550 (16 640)
	14.4	47'3"	55	19.7	64'8"	9 750	9 750 (21 490)	9 700 (21 380)
	11.1	36'5"	65	21.7	71'2"	10 000	10 000 (22 040)	10 000 (22 040)

Notes:

- The rated loads shown include the bucket weight.
The load to be actually lifted is the rated load minus bucket weight.
- Counterweight is 16 600 kg (36 600 lb).
- Allowable boom length for clamshell operation is from 13.0 m (42'8") through 22.0 m (72'2").
- In operation, crawlers must be extend.

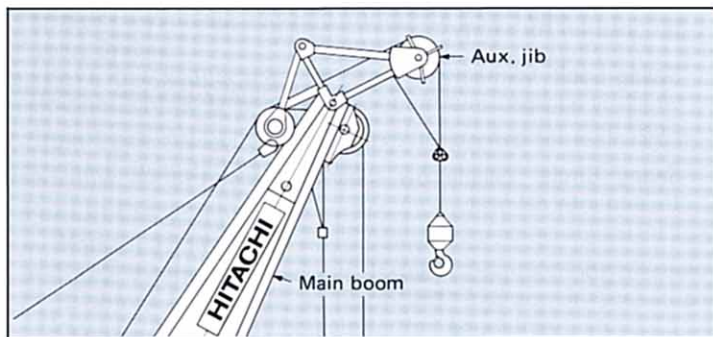
Boom Construction

Boom Construction

Boom length	13.0 m (42'8")	16.0 m (52'6")	19.0 m (62'4")	22.0 m (72'2")	25.0 m (82'0")	28.0 m (91'10")	31.0 m (101'8")	34.0 m (111'7")	37.0 m (121'5")	40.0 m (131'3")
Element										
Lower 6.5 m (21'4")	1	1	1	1	1	1	1	1	1	1
Upper 6.5 m (21'4")	1	1	1	1	1	1	1	1	1	1
Insert 3.0 m (9'10")	—	1	2 —	1 —	2 — (1)	1 — (2)	1 2 —	2 1 —	1 2 —	1 — 1
Insert 6.0 m (19'8")	—	—	— (1)	1 —	1 (2) —	2 (1) —	1 2 (3)	1 3 (2)	2 3 (1)	1 (3) 4
Insert 9.0 m (29'6")	—	—	— —	— (1)	— — (1)	— (1) (1)	1 — —	1 — (1)	1 — (2)	2 1 —
Available hook	65 000 kg (143 300 lb) capacity hook 40 000 kg (88 200 lb) capacity hook 25 000 kg (55 100 lb) capacity hook									
Boom available with auxiliary jib										

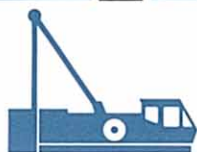
Auxiliary jib (Optional)

Attachable to main boom top for hoisting lightweight load quickly with a single rope used. (For safety: The not use the main and auxiliary hooks at the same time.)





Specifications



SUPERSTRUCTURE



Engine

Model	ISUZU 6RB1
Type	Water-cooled, 4-cycle, 6-cylinder, direct fuel injection type diesel engine, 183 g/ps-hr
Rated horsepower	166 kW (225 PS) at 2 000 min ⁻¹ (2 000 rpm).
Maximum torque	924 N·m (94.3 kgf·m, 682 lbf·ft) at 1 300 min ⁻¹ (1 300 rpm).
Piston displacement	13.7 l (837 cu in)
Fuel tank capacity	400 l (88 Imp gal, 106 U.S. gal)
Electric system	24V DC, AC generating.



Main and Auxiliary Hoist Mechanism

Both main and auxiliary hoist drums are driven independently by swash plate type axial piston motors through reduction gear. Load hoisting/lowering are done by normal/reverse rotation of motor. Smooth, precise power lowering is made possible by the hydraulic brake. A single lever gives a choice of two speeds, high or low, for hoisting/lowering. Hoist/lower speeds are proportioned to the lever stroke, allowing easy matching to job conditions.

Clutches Clutches are of the spring-set, hydraulic-released internal-expanding friction band type; main and auxiliary clutches are alike in size and type, with interchangeable clutch linings.

Brakes External contracting friction band-type mechanical brakes, integrated with link lever, operate under normal load. For a larger load, a spring-type boost device is provided to ensure fatigue-free operation. Mechanical brake locks are equipped as standard. Furthermore, while in neutral position the hoist lever is doubly secured in position by a hydraulic brake and an automatic brake. An automatic brake system or hydraulic positive brake system, in neutral position of the hoist lever, can be selected according to job application.

Drums Main and auxiliary hoist drums are of special alloy cast iron. Both hoist drums are mounted on the longtime-lubricated antifriction ball bearings.

Drum Locks Drum pawl locks are provided for integral lock of drums. They are manually controllable from the operator's seat.



Boom Hoist Mechanism

Completely independent operation.

Boom hoisting/lowering is done by normal/reverse rotation of the swash plate type axial piston motor. Boom lowering is made by power lowering through the hydraulic system. Instant hoisting/lowering of boom is possible. Both hydraulic brake and spring-set hydraulic-released multiplate disc type brake offer positive and safe stopping of boom. When boom is hoisted or lowered brakes are automatically released.

Boom Brakes Spring-set, hydraulic-released multiplate disc type. Brake is automatically actuated when control lever is at neutral position.

Drum Locks Drum pawl lock is manually controlled from operator's seat.



Swing Mechanism

Completely independent operation. Driven by two swash plate type axial piston motors through reduction gear, swing speeds are freely controllable within the 0 to maximum speed with single lever stroking. Swing mechanism offers two-speed selection of swing.

Swing Brake/Swing Parking Brake Two spring-set/hydraulic-released multiplate disc type swing brakes can be hydraulically actuated by brake switch on the swing lever. These brake mechanism are used for swing parking brake, too.

In this case, cannot start the engine without the brake switch on position for safety.

Swing Lock Manually operated mechanical lock with a rod tip which is engaged in a holder of track frame during transportation.

Swing Circle Single-row shear-type ball bearing with heat treated internal gear.



Revolving Frame

All steel welded construction, stress-relieved, precision-machined unit, especially designed for rigidity and strength.

Gantry Lowerable for transportation.

Speedy, easy raising/lowering are possible with optional hydraulic cylinders.

Counterweight Welded structure. Total weight 16 600 kg (36 600 lb)

Consists of 4 sections:

One:	9 450 kg (20 830 lb)
One:	1 390 kg (3 060 lb)
One:	2 880 kg (6 350 lb)
One:	2 880 kg (6 350 lb)



Boom

Tubular Chord CRANE Boom 1 400 mm (55") wide by, 1 400 mm (55") deep at connection, lattice construction, high tensile strength steel tubular chord.

Basic boom 2-piece, total length 13.0 m (42'8"); upper section 6.5 m (21'4") and lower section 6.5 m (21'4").

Boom point Offset boom point, 5 sheaves mounted on anti-friction bearings on boom peak.
Sheave P.C.D.
560 mm (22")

Boom insert 3.0 m (9'10"), 6.0 m (19'8") and 9.0 m (29'6") long available with appurtenant pendants.

Connection type Pin-connected.

Boom backstop Dual-rail, telescopic tubular construction with spring bumper.

Boom hoist bridle . . . Serves as connection between pendants and boom hoist wire rope reeving, equipped with 6 sheaves [420 mm (16.5") p.c.d.] for 12-part boom hoist wire rope reeving.



Operator's Cab

All-weather, well-ventilated, all-round visibility, roomy operator's cab. The completely independent cab is insulated against noise and vibration. Sliding, fold-in front window swings up and stores in roof. Fully adjustable reclining seat.



UNDERCARRIAGE

Traction Mechanism Each track is driven by a swash plate type axial piston motor through reduction gear. This mechanism allows counterrotation of tracks for maximum maneuverability in close quarters. When lever is at neutral position, both hydraulic brake and spring-set/hydraulic-released multiplate disc brake are automatically actuated to effect reliable stopping. Upper and lower rollers, sprockets and idlers are lifetime-lubricated. A hydraulic track adjuster is provided for easy tension adjustment of each track.

Track Frame All-welded, stress relieved, box section construction.

Side Frame Side frames of all-welded construction can be retracted for transportation.

Side Frame Self-loading Device (optional) Both right and left side frames can be speedily removed by side frame removal device (cylinder). And self-loading device allows the machine to load its basic machine onto a trailer through the use of its own hydraulic jack cylinders. Travel motor pipings are connected via self-seal couplings for quick disconnection.

Side Frame Extending/Retracting Device Side frame extending/retracting is done with the cylinder provided inside the track frame. Then, side frame extending/retracting can easily be done in a short time eliminating troublesome piping, etc.

Track Shoes Heat treated alloy steel castings with induction hardened roller path and driving lugs. Shoes are connected by induction-hardened steel pins.

No. of upper rollers (on each side)	3
No. of lower rollers (on each side)	12
No. of track shoes (on each side)	61
Shoe width	760 mm (30")



HYDRAULIC SYSTEM

2 variable displacement piston pumps + 2 gear pumps hydraulic system allows both independent and combined operations of all functions. Variable-displacement piston pumps not only adequately control operating speeds, but also utilize engine horsepower to maximum.

	Pump-1	Pump-2
Type of pump	Variable displacement pump	
Pressure setting	280 bar (280 kgf/cm ² , 3 980 psi)	280 bar (280 kgf/cm ² , 3 980 psi)
Oil flow	235 l/min (51.7 Imp gpm, 61.9 U.S. gpm)	235 l/min (51.7 Imp gpm, 61.9 U.S. gpm)
	Pump-3 + 4	Pump-5
Type of pump	Gear pump	Gear pump
Pressure setting	160 bar (160 kgf/cm ² , 2 280 psi)	43 bar (43 kgf/cm ² , 610 psi)
Oil flow	200 l/min (44.0 Imp gpm, 52.8 U.S. gpm)	45 l/min (9.9 Imp gpm, 11.9 U.S. gpm)

Main and Auxiliary Hoist Motor Swash plate type axial piston motor with counterbalance valve.

Boom Hoist Motor Swash plate type axial piston motor with counterbalance valve.

Swing Motor 2 swash plate type axial piston motors.

Travel Motor Swash plate type axial piston motor with brake valve and spring-set/hydraulic-released multiplate disc brake.

Relief and Brake Valves Each hydraulic circuit incorporates large-capacity relief valves to protect circuit from overload or shock load. Counterbalance valves (compensates safe, positive load lowering and prevents accidental load drop when hydraulic power is suddenly reduced) are provided for hoist motor. Brake valves (consisting of relief valve and counterbalance valve) are provided for travel circuit.

Pressure Setting

MAIN CIRCUIT

- Main relief valves
 - Hoist (main and aux.) 280 bar
(280 kgf/cm², 3 980 psi)
 - Swing 160 bar
(160 kgf/cm², 2 280 psi)
- Overload relief valves
 - Hoist (main and aux.) circuit 287 bar
(287 kgf/cm², 4 080 psi)
 - Boom hoist circuit 250 bar (250 kgf/cm², 3 560 psi)
 - Travel circuit 250 bar (250 kgf/cm², 3 560 psi)

PILOT CIRCUIT

- Main relief valve 43 bar (43 kgf/cm², 610 psi)

Line Filters High filtration 10 μ full-flow filter element is provided to keep hydraulic oil clean and ensure long-term, trouble-free operation. Pilot filter and suction filter are provided for each circuit.



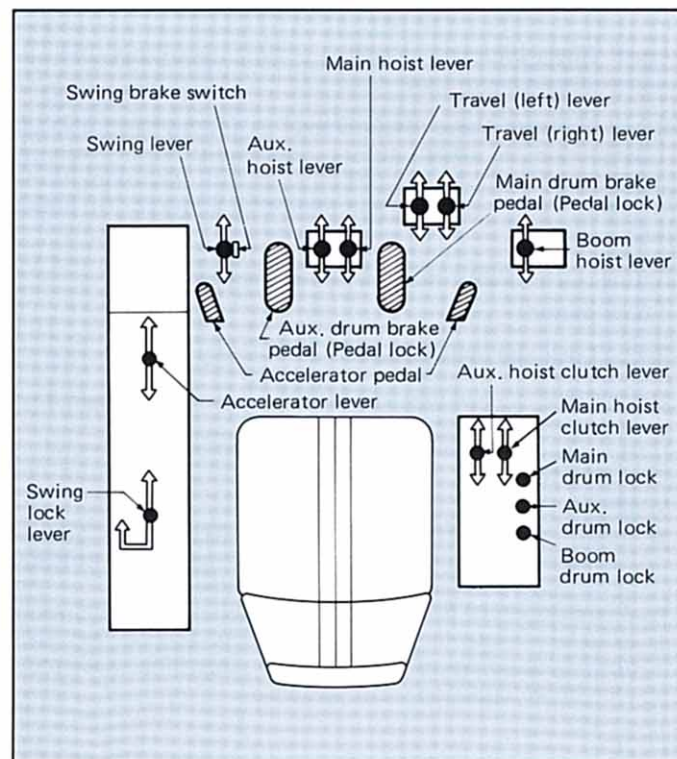
CONTROLS

Boom, Main and Auxiliary Hoist and Travel Remote controlled hydraulic servo. Working speed can be precisely controlled by changing lever stroke.

Swing Mechanical linkage type, featuring smooth, precise swing.

Fuel Control Two foot throttle (accelerator) pedals and hand throttle (accelerator) controls equipped as standard.

Ultra-low Speed Control System Operating speeds for hoisting, boom hoisting/lowering and travel are infinitely variable within a range of 100 to 20% to facilitate alignment, accurate inching and boom detachment under gravity.





This monitor has the following functions

- **Instruments** Machine conditions are shown on meters.
- **Start up inspection monitor** To check the machine condition and safety device before starting operation.
- **Safety monitor** To warn the abnormality of the machine during operation and carelessness. An additional safety function allows the checking of broken electric wires due to boom and hook overhoist.



SAFETY DEVICES

Boom Angle Indicator Mechanical type boom angle indicator is provided at boom foot.

Counterbalance Valve (Brake Valve) A counterbalance valve is incorporated in travel motors, boom hoist motor, main and auxiliary hoist motor respectively. In case the hydraulic line is broken, this valve is automatically actuated to prevent motor rotation.

Spring-set/Hydraulic-released Multiplate Disc Type Travel Brakes

Swing Lock and Swing Brake

Drum Lock A pawl type drum lock is adopted for main drum, auxiliary drum and boom drum.

For Lift Crane

- **Moment Limiter**
- **Hook Overhoist Prevention Device** When the hook reaches its safety hoist limit, an alarm bell rings and an auto-stop device automatically actuates at the same time.
- **Boom Overhoist Prevention Device** When the boom reaches its safety angle limit, a buzzer alarm sounds and boom hoisting automatically stops at the same time. A telescopic type boom backstop is also installed.



SERVICE REFILL CAPACITIES

	Liters	Imp gal	U.S. gal
Fuel tank	440.0	96.7	116.1
Engine coolant	59.0	13.0	15.6
Engine oil	48.0	10.5	12.7
Pump transmission	2.7	0.59	0.7
Boom and winch hoist motor reduction device	11.5	2.53	3.04
Winch hoist motor reduction device (on each side)	14.5	3.2	3.8
Swing reduction device (on each side)	4.0	0.9	1.1
Travel final device (on each side)	15.0	3.30	3.96
Hydraulic system (including tank capacity)	400.0	87.9	105.5
Hydraulic tank	250.0	54.9	66.0



OPTIONAL EQUIPMENT

- **Operator's Cab** Electric fan, car radio, cab cooler.
- **Third Drum**
- **P.T.O.** Driving a generator.
A built-in type lifting magnet or a welder can be installed.
- **Auxiliary Jib for Crane Boom** Can be attached to the top of main boom for auxiliary hook-hoisting operation.
- **Hydraulic Gantry Cylinders**
- **Side Frame Self-loading Device**
- **Joystick Lever**
- **Moment Limiter**
- **Main and Aux. Hoist Drum Cooler**



FRONT-END ATTACHMENTS AVAILABLE



Crane



Clamshell



Transportation Data

Element		Weight kg (lb)	Length × Width × Height mm (ft in)	Note
Basic machine	Basic machine	48 500 (106 920)	13 750 × 3 350* × 3 370 (45'1" (11'0" (11'1")	Including lower boom except counterweight.
		46 600 (102 740)	8 680 × 3 350* × 3 370 (28'6" (11'0" (11'1")	Except lower boom and counterweight.
		32 600 (71 870)	7 940 × 3 320 × 2 990 (26'1" (10'11" (9'10")	Except lower boom, counterweight and crawlers.
		29 700 (65 480)	6 520 × 3 320 × 2 990 (21'5" (10'11" (9'10")	Except lower boom, counterweight, crawlers, high gantry and wire ropes.
	Crawler (R)	7 010 (15 450)	5 710 × 950 × 1 060 (18'9" (3'1" (3'6")	
	Crawler (F)	7 010 (15 450)	5 710 × 950 × 1 060 (18'9" (3'1" (3'6")	
Counterweight	Counterweight (1)	9 450 (20 830)	3 260 × 770 × 720 (10'8" (2'6" (2'4")	
	Counterweight (2)	1 390 (3 060)	1 070 × 1 120 × 470 (3'6" (3'8" (1'7")	
	Counterweight (3)	2 880 (6 350)	800 × 700 × 1 175 (2'7" (2'4" (3'10")	
	Counterweight (4)	2 880 (6 350)	860 × 700 × 1 175 (2'10" (2'4" (3'10")	
Crawler crane attachment	Lower boom	1 340 (2 950)	6 690 × 1 540 × 1 680 (21'11" (5'1" (5'6")	Including boom joint pin and boom foot pin.
	Upper boom	1 760 (3 880)	7 000 × 1 510 × 1 620 (23'0" (4'11" (5'4")	Including pendant rope.
	Backstop	185 (410)	5 090 × 150 × 150 (16'8" (6" (6")	
	Bridle	360 (790)	1 520 × 780 × 310 (5'0" (2'7" (1'0")	
	Boom insert 3 m (9'10")	380 (840)	3 140 × 1 510 × 1 530 (10'4" (4'11" (5'0")	Including pendant rope, pin and guide roller.
	Boom insert 6 m (19'8")	610 (1 340)	6 140 × 1 510 × 1 530 (20'2" (4'11" (5'0")	
	Boom insert 9 m (29'6")	840 (1 850)	9 140 × 1 510 × 1 530 (30'0" (4'11" (5'0")	
	Auxiliary jib	350 (770)	1 620 × 710 × 210 (5'4" (2'4" (8")	
	65 000 kg (143 300 lb) capacity hook	950 (2 090)	2 000 × 730 × 450 (6'7" (2'5" (1'6")	for φ26 mm (1.024") wire rope
	40 000 kg (88 180 lb) capacity hook	620 (1 370)	1 760 × 730 × 360 (5'9" (2'5" (1'2")	for φ26 mm (1.024") wire rope
	25 000 kg (55 110 lb) capacity hook	730 (1 610)	1 740 × 740 × 320 (5'9" (2'5" (1'1")	for φ26 mm (1.024") wire rope
	10 000 kg (22 050 lb) capacity hook	370 (820)	1 025 × 445 × 445 (3'4" (1'6" (1'6")	for φ26 mm (1.024") wire rope
	34 200 kg (75 400 lb) capacity hook	500 (1 100)	1 540 × 570 × 365 (5'1" (1'10" (1'2")	for φ20 mm (0.787") wire rope

* When the crawlers are retracted and joint beam at top of track frame is folded to the side frame.

These specifications are subject to change without notice.

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