



SPECIFICATIONS



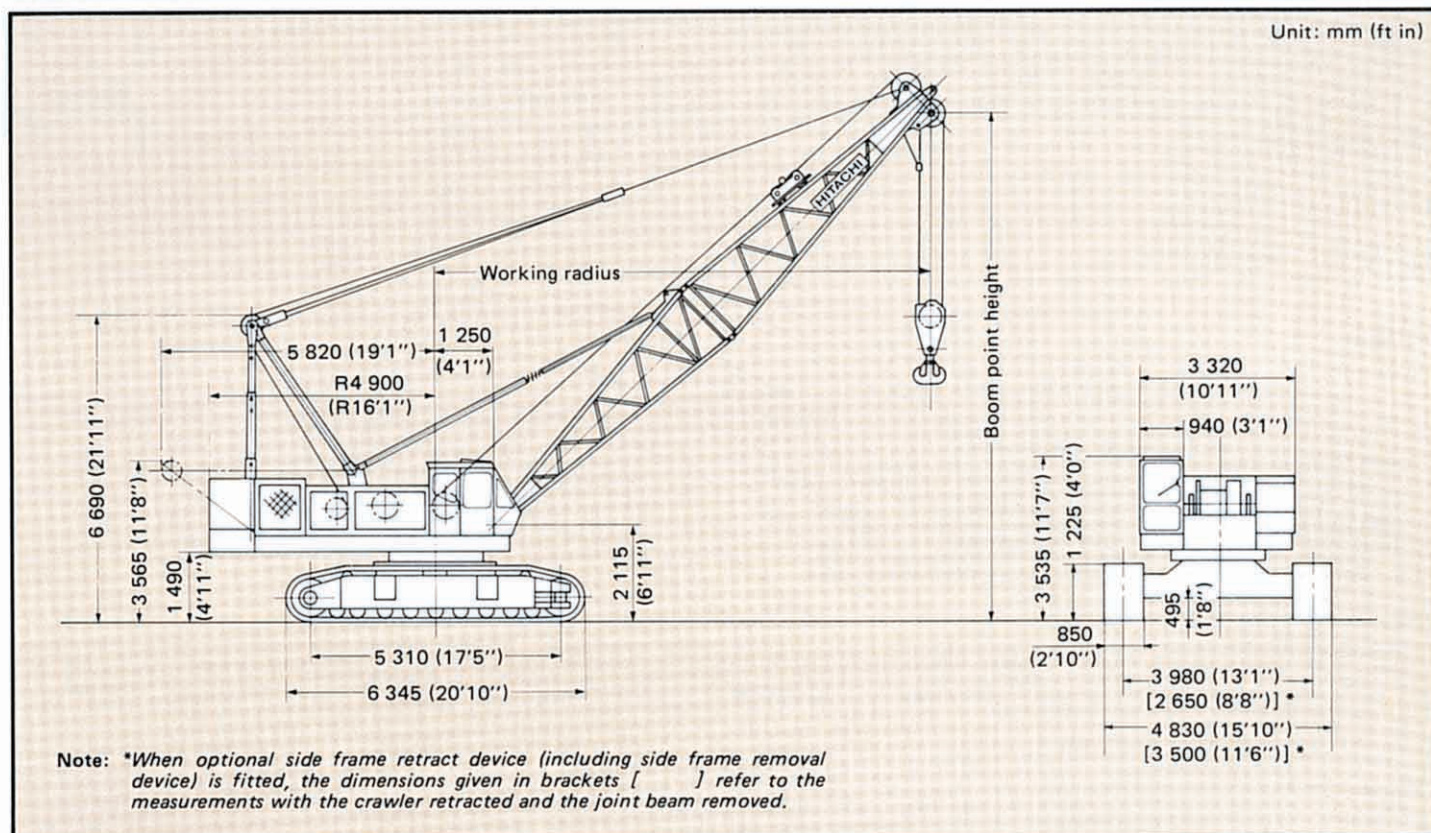
HITACHI

KH300-3

HYDRAULIC CRAWLER CRANE

Max. Lifting Capacity: 80 000 kg (176 300 lb) at 4.0 m (13'1")

Dimensions



Specifications

Maximum rated load		80 000 kg (176 300 lb) at 4.0 m (13'1") working radius
Boom	Basic boom length	13.0 m (42'8")
	Max. boom length	58.0 m (190'3")
	Jib length	9.0 m (29'6") to 18.0 m (59'1")
	Max. boom with jib length	67.0 m (219'10") [49.0 m (160'9") + 18.0 m (59'1")]
Swing speed		High 0 to 3.0 min ⁻¹ (0 to 3.0 rpm)
		Low 0 to 1.9 min ⁻¹ (0 to 1.9 rpm)
Travel speed*		High 0 to 1.4 km/h (0 to 0.87 mph)
		Low 0 to 0.8 km/h (0 to 0.50 mph)
Gradeability		17° (30%)
Ground pressure		0.75 bar (0.75 kgf/cm ² , 10.7 psi)
Operating weight	Equipped with basic boom, 80 000 kg (176 300 lb) capacity hook and 20 800 kg (45 860 lb) counterweight	73 500 kg (162 000 lb)
Engine	Model	ISUZU 6RB1
	Rated horsepower	166 kW (225 PS) at 2 000 min ⁻¹ (2 000 rpm)

*Speeds may vary with load



HOOKS

Capacity	Weight	Number of hoist reeving and maximum rated loads kg (lb)									
		8	7	6	5	4	3	2	1		
80 000 kg (176 300 lb)	970 kg (2 140 lb)	80 000 (176 300)	70 000 (154 300)	60 000 (132 200)	50 000 (110 200)	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 (55 110 lb)	730 kg (1 610 lb)						25 000 (55 110)	20 000 (44 090)			
10 000 kg (22 040 lb)	370 kg (816 lb)								10 000 (22 040)	For jib or aux. jib	

DRUMS

Dimensions

		Rope dia.	Width	Drum p.c.d.	Rope capacity
Standard winches	Main hoist drum	26 mm (1.02")	644 mm (25.4")	550 mm (21.7")	407 m (1 335')
	Aux. hoist drum	26 mm (1.02")	644 mm (25.4")	550 mm (21.7")	407 m (1 335')
Optional winches*	Main hoist drum	28 mm (1.10")	636 mm (25.0")	590 mm (23.2")	399 m (1 309')
	Aux. hoist drum	28 mm (1.10")	636 mm (25.0")	590 mm (23.2")	399 m (1 309')

Note: *Optional winches are used mainly for clamshell and dragline.

(8th layer)

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						
Standard winches	Main hoist drum	H	60 (197)	H	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)	L	30 (98,4)					
	Aux. hoist drum	H	60 (197)	H	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)	L	30 (98,4)					
Optional winches	Main hoist drum	H	65 (213.2)	H	65 (213,2)	137 kN (14 000 kgf) 30 860 lbf	@	41 m/min (135 ft/min)	165 kN (16 800 kgf) 37 040 lbf	182 kN (18 600 kgf) 41 010 lbf
		L	32.5 (106,6)	L	32.5 (106,6)					
	Aux. hoist drum	H	65 (213.2)	H	65 (213,2)	137 kN (14 000 kgf) 30 860 lbf	@	41 m/min (135 ft/min)	165 kN (16 800 kgf) 37 040 lbf	182 kN (18 600 kgf) 41 010 lbf
		L	32,5 (106,6)	L	32,5 (106,6)					

H: High speed range L: Low speed range

Notes:

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

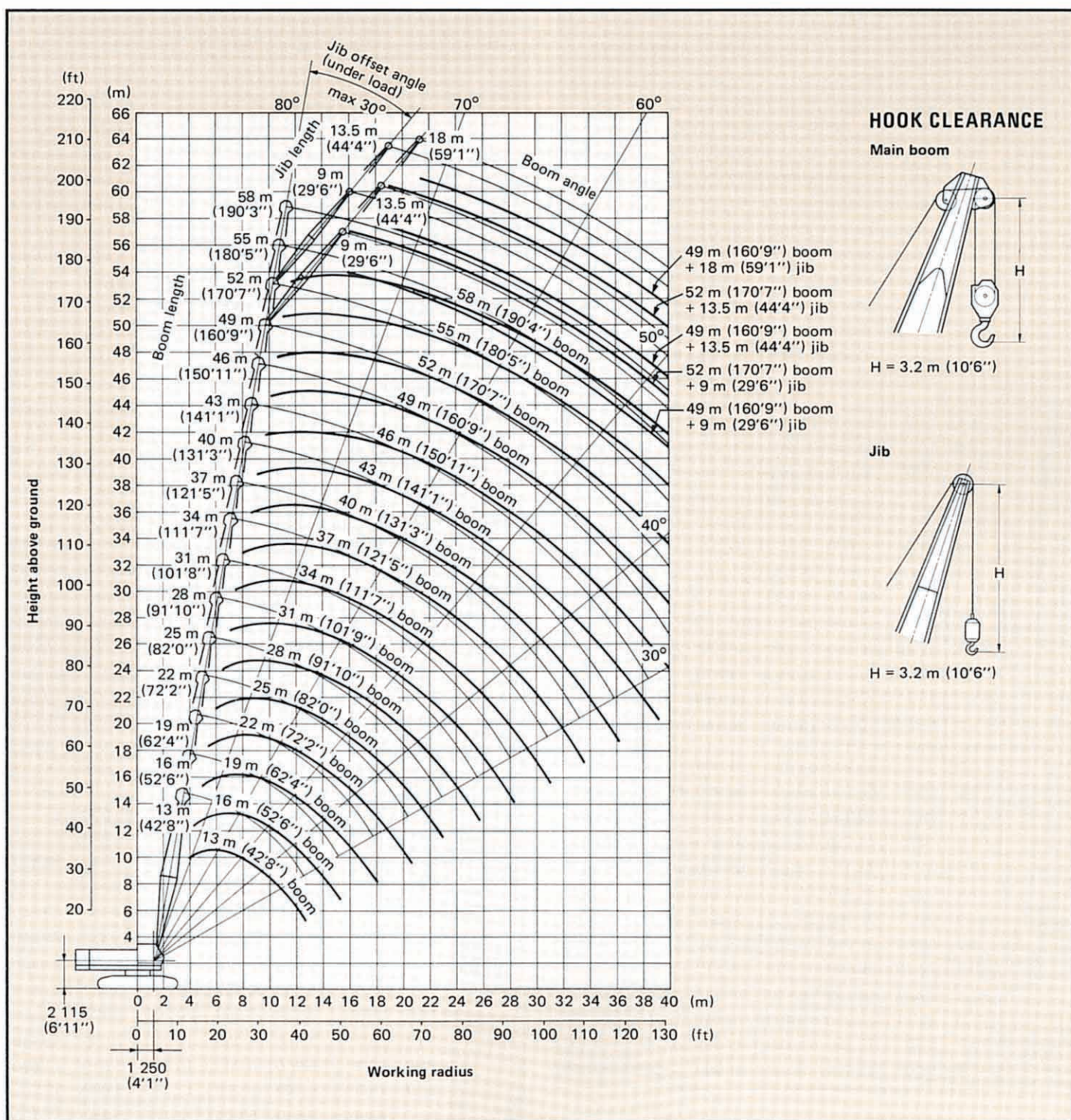
5. When hydraulic motor starts, since it is not rotating line pull is "Max. starting line pull". After motor rotating, the line pull becomes "Max. running line pull" shortly.

BOOM HOIST DRUM

Rope diameter	Hoisting line speed	Lowering line speed
20 mm (0.79")	40 m/min (131 ft/min)	40 m/min (131 ft/min)



Working Ranges





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 loads listed 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

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")	3.9	12'10"	80 000	80 000	176 300	80 000	176 300
	4.0	13'1"	80 000	80 000	176 300	80 000	176 300
	4.5	14'9"	71 100	71 100	156 700	68 350	150 600
	5.0	16'5"	59 000	59 650	131 500	56 700	125 000
	5.5	18'1"	50 350	50 900	112 200	48 400	106 700
	6.0	19'8"	43 850	44 350	97 770	42 150	92 920
	6.5	21'4"	38 800	39 250	86 530	37 300	82 230
	7.0	23'0"	34 750	35 200	77 600	33 450	73 740
	8.0	26'3"	28 700	29 100	64 150	27 600	60 840
	9.0	29'6"	24 400	24 750	54 560	23 450	51 690
	10.0	32'10"	21 200	21 450	47 280	20 350	44 860
	12.0	39'4"	16 650	16 900	37 250	16 050	35 380
	12.7	41'8"	15 550	15 750	34 720	14 950	32 950
16.0 (52'6")	4.4	14'5"	72 700	72 700	160 200	71 950	158 600
	4.5	14'9"	70 950	71 100	156 700	68 200	150 300
	5.0	16'5"	58 800	59 500	131 100	56 550	124 600
	5.5	18'1"	50 150	50 750	111 800	48 250	106 300
	6.0	19'8"	43 650	44 200	97 440	42 000	92 590
	6.5	21'4"	38 600	39 100	86 200	37 150	81 900
	7.0	23'0"	34 600	35 000	77 160	33 250	73 300
	8.0	26'3"	28 500	28 900	63 710	27 400	60 400
	9.0	29'6"	24 200	24 550	54 120	23 250	51 250
	10.0	32'10"	20 950	21 250	46 840	20 150	44 420
	12.0	39'4"	16 450	16 700	36 810	15 800	34 830
	14.0	45'11"	13 450	13 650	30 090	12 950	28 540
	15.3	50'2"	12 000	12 150	26 780	11 550	25 460
19.0 (62'4")	4.9	16'1"	60 900	61 650	135 900	58 600	129 100
	5.0	16'5"	58 700	59 400	130 900	56 450	124 400
	5.5	18'1"	50 050	50 650	111 600	48 100	106 000
	6.0	19'8"	43 550	44 050	97 110	41 850	92 260
	6.5	21'4"	38 500	38 950	85 870	37 000	81 570
	7.0	23'0"	34 450	34 900	76 940	33 100	72 970
	8.0	26'3"	28 350	28 750	63 380	27 300	60 180
	9.0	29'6"	24 050	24 400	53 790	23 100	50 920
	10.0	32'10"	20 800	21 100	46 510	20 000	44 090
	12.0	39'4"	16 250	16 500	36 370	15 650	34 500
	14.0	45'11"	13 250	13 400	29 540	12 750	28 100
	16.0	52'6"	11 100	11 250	24 800	10 700	23 580
	17.9	58'9"	9 650	9 700	21 380	9 250	20 390

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")	5.4	17'9"	51 250	51 900	114 400	49 300	108 600
	5.5	18'1"	50 000	50 600	111 500	48 050	105 900
	6.0	19'8"	43 450	44 000	97 000	41 800	92 150
	6.5	21'4"	38 400	38 900	85 750	36 950	81 460
	7.0	23'0"	34 350	34 800	76 720	33 050	72 860
	8.0	26'3"	28 300	28 700	63 270	27 200	59 960
	9.0	29'6"	23 950	24 300	53 570	23 050	50 810
	10.0	32'10"	20 700	21 050	46 400	19 950	43 980
	12.0	39'4"	16 200	16 400	36 150	15 550	34 280
	14.0	45'11"	13 150	13 300	29 320	12 650	27 880
	16.0	52'6"	11 000	11 100	24 470	10 600	23 360
	18.0	59'1"	9 400	9 450	20 830	9 050	19 950
	20.0	65'7"	8 200	8 200	18 070	7 900	17 410
	20.5	67'3"	7 950	7 950	17 520	7 650	16 860
25.0 (82'0")	5.9	19'4"	44 100	44 650	98 430	42 400	93 470
	6.0	19'8"	43 350	43 900	96 780	41 700	91 930
	6.5	21'4"	38 300	38 800	85 530	36 850	81 240
	7.0	23'0"	34 250	34 700	76 500	32 950	72 640
	8.0	26'3"	28 200	28 600	63 050	27 100	59 740
	9.0	29'6"	23 850	24 200	53 350	22 950	50 590
	10.0	32'10"	20 600	20 900	46 070	19 800	43 650
	12.0	39'4"	16 050	16 250	35 820	15 450	34 060
	14.0	45'11"	13 000	13 150	28 990	12 500	27 550
	16.0	52'6"	10 850	10 950	24 140	10 450	23 030
	18.0	59'1"	9 250	9 300	20 500	8 900	19 620
	20.0	65'7"	8 000	8 000	17 630	7 700	16 970
	22.0	72'2"	7 050	7 000	15 430	6 750	14 880
	23.1	75'9"	6 600	6 550	14 440	6 350	13 990
28.0 (91'10")	6.5	21'4"	38 250	38 750	85 420	36 800	81 130
	7.0	23'0"	34 200	34 650	76 390	32 900	72 530
	8.0	26'3"	28 150	28 500	62 830	27 050	59 630
	9.0	29'6"	23 800	24 150	53 240	22 850	50 370
	10.0	32'10"	20 550	20 850	45 960	19 750	43 540
	12.0	39'4"	16 000	16 150	35 600	15 350	33 840
	14.0	45'11"	12 950	13 050	28 770	12 450	27 440
	16.0	52'6"	10 800	10 850	23 920	10 350	22 810
	18.0	59'1"	9 150	9 200	20 280	8 800	19 400
	20.0	65'7"	7 900	7 900	17 410	7 600	16 750
	22.0	72'2"	6 900	6 900	15 210	6 650	14 660
	24.0	78'9"	6 100	6 050	13 330	5 900	13 000
	25.7	84'4"	5 550	5 500	12 120	5 350	11 790



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")	7.0	23'0"	34 100	34 550	76 160	32 800	72 310
	8.0	26'3"	28 000	28 400	62 610	26 950	59 410
	9.0	29'6"	23 700	24 050	53 020	22 750	50 150
	10.0	32'10"	20 400	20 700	45 630	19 650	43 320
	12.0	39'4"	15 850	16 050	35 380	15 250	33 620
	14.0	45'11"	12 850	12 950	28 540	12 350	27 220
	16.0	52'6"	10 650	10 700	23 580	10 250	22 590
	18.0	59'1"	9 050	9 050	19 950	8 700	19 180
	20.0	65'7"	7 800	7 750	17 080	7 500	16 530
	22.0	72'2"	6 800	6 750	14 880	6 550	14 440
	24.0	78'9"	6 000	5 900	13 000	5 750	12 670
	26.0	85'4"	5 300	5 200	11 460	5 100	11 240
	28.0	91'10"	4 750	4 650	10 250	4 550	10 030
	28.3	92'10"	4 700	4 600	10 140	4 500	9 920
34.0 (111'7")	7.5	24'7"	30 650	31 050	68 450	29 450	64 920
	8.0	26'3"	27 850	28 250	62 280	26 800	59 080
	9.0	29'6"	23 500	23 850	52 580	22 600	49 820
	10.0	32'10"	20 250	20 550	45 300	19 500	42 990
	12.0	39'4"	15 700	15 850	34 940	15 100	33 280
	14.0	45'11"	12 650	12 750	28 100	12 200	26 890
	16.0	52'6"	10 500	10 500	23 140	10 100	22 260
	18.0	59'1"	8 900	8 850	19 510	8 550	18 840
	20.0	65'7"	7 600	7 550	16 640	7 350	16 200
	22.0	72'2"	6 600	6 550	14 440	6 350	13 990
	24.0	78'9"	5 800	5 700	12 560	5 600	12 340
	26.0	85'4"	5 150	5 000	11 020	4 950	10 910
	28.0	91'10"	4 550	4 450	9 810	4 400	9 700
	30.0	98'5"	4 100	3 950	8 700	3 950	8 700
	30.9	101'5"	3 900	3 750	8 260	3 750	8 260
37.0 (121'5")	8.0	26'3"	27 700	28 100	61 940	26 650	58 750
	9.0	29'6"	23 500	23 800	52 470	22 550	49 710
	10.0	32'10"	20 200	20 500	45 190	19 450	42 870
	12.0	39'4"	15 650	15 800	34 830	15 050	33 170
	14.0	45'11"	12 600	12 700	27 990	12 100	26 670
	16.0	52'6"	10 450	10 450	23 030	10 050	22 150
	18.0	59'1"	8 800	8 800	19 400	8 500	18 730
	20.0	65'7"	7 550	7 500	16 530	7 250	15 980
	22.0	72'2"	6 550	6 450	14 210	6 300	13 880
	24.0	78'9"	5 750	5 600	12 340	5 500	12 120
	26.0	85'4"	5 050	4 900	10 800	4 850	10 690
	28.0	91'10"	4 450	4 350	9 590	4 300	9 470
	30.0	98'5"	4 000	3 850	8 480	3 850	8 480
	32.0	105'0"	3 550	3 400	7 490	3 450	7 600
	33.5	109'11"	3 300	3 150	6 940	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
40.0 (131'3")	8.5	27'11"	25 200	25 550	56 320	24 200	53 350
	9.0	29'6"	23 350	23 700	52 240	22 450	49 490
	10.0	32'10"	20 100	20 350	44 860	19 300	42 540
	12.0	39'4"	15 500	15 650	34 500	14 900	32 840
	14.0	45'11"	12 500	12 550	27 660	12 000	26 450
	16.0	52'6"	10 300	10 300	22 700	9 900	21 820
	18.0	59'1"	8 700	8 650	19 070	8 350	18 400
	20.0	65'7"	7 400	7 350	16 200	7 150	15 760
	22.0	72'2"	6 400	6 300	13 880	6 150	13 550
	24.0	78'9"	5 600	5 450	12 010	5 350	11 790
	26.0	85'4"	4 900	4 750	10 470	4 700	10 360
	28.0	91'10"	4 350	4 150	9 140	4 150	9 140
	30.0	98'5"	3 850	3 650	8 040	3 700	8 150
	32.0	105'0"	3 400	3 250	7 160	3 300	7 270
	34.0	111'7"	3 050	2 850	6 280	2 950	6 500
43.0 (141'1")	36.0	118'1"	2 700	2 550	5 620	2 650	5 840
	36.1	118'5"	2 650	2 550	5 620	2 650	5 840
	9.1	29'10"	22 950	23 300	51 360	22 100	48 720
	10.0	32'10"	19 950	20 150	44 420	19 150	42 210
	12.0	39'4"	15 350	15 450	34 060	14 750	32 510
	14.0	45'11"	12 300	12 350	27 220	11 850	26 120
	16.0	52'6"	10 150	10 100	22 260	9 750	21 490
	18.0	59'1"	8 500	8 450	18 620	8 200	18 070
	20.0	65'7"	7 250	7 150	15 760	6 950	15 320
	22.0	72'2"	6 250	6 100	13 440	6 000	13 220
	24.0	78'9"	5 400	5 250	11 570	5 200	11 460
	26.0	85'4"	4 750	4 550	10 030	4 550	10 030
	28.0	91'10"	4 150	4 000	8 810	4 000	8 810
	30.0	98'5"	3 650	3 500	7 710	3 550	7 820
46.0 (150'11")	32.0	105'0"	3 200	3 050	6 720	3 100	6 830
	34.0	111'7"	2 800	2 650	5 840	2 750	6 060
	36.0	118'1"	2 450	2 350	5 180	2 450	5 400
	38.0	124'8"	2 150	2 050	4 510	2 200	4 850
	38.7	127'0"	2 050	1 950	4 290	2 100	4 620
	9.6	31'6"	21 050	21 300	46 950	20 250	44 640
	10.0	32'10"	19 800	20 000	44 090	19 050	41 990
	12.0	39'4"	15 250	15 350	33 840	14 650	32 290
	14.0	45'11"	12 200	12 200	26 890	11 700	25 790
	16.0	52'6"	10 000	10 000	22 040	9 650	21 270
	18.0	59'1"	8 400	8 300	18 290	8 050	17 740
	20.0	65'7"	7 100	7 000	15 430	6 850	15 100
	22.0	72'2"	6 100	5 950	13 110	5 900	13 000
	24.0	78'9"	5 300	5 150	11 350	5 100	11 240
	26.0	85'4"	4 600	4 400	9 700	4 450	9 810
	28.0	91'10"	4 050	3 850	8 480	3 850	8 480
	30.0	98'5"	3 500	3 350	7 380	3 400	7 490
	32.0	105'0"	3 050	2 900	6 390	3 000	6 610
	34.0	111'7"	2 650	2 500	5 510	2 650	5 840
	36.0	118'1"	2 300	2 200	4 850	2 350	5 180
	38.0	124'8"	1 950	1 900	4 180	2 050	4 510
	40.0	131'3"	1 700	1 650	3 630	1 800	3 960

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Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
49.0 (160'9")	10.1	33'2"	19 500	19 650	43 320	18 750	41 330
	12.0	39'4"	15 200	15 250	33 620	14 600	32 180
	14.0	45'11"	12 150	12 150	26 780	11 700	25 790
	16.0	52'6"	9 950	9 900	21 820	9 600	21 160
	18.0	59'1"	8 350	8 250	18 180	8 000	17 630
	20.0	65'7"	7 050	6 950	15 320	6 800	14 990
	22.0	72'2"	6 050	5 900	13 000	5 800	12 780
	24.0	78'9"	5 200	5 050	11 130	5 000	11 020
	26.0	85'4"	4 550	4 350	9 590	4 350	9 590
	28.0	91'10"	3 950	3 750	8 260	3 800	8 370
	30.0	98'5"	3 400	3 250	7 160	3 300	7 270
	32.0	105'0"	2 950	2 800	6 170	2 900	6 390
	34.0	111'7"	2 500	2 400	5 290	2 550	5 620
	36.0	118'1"	2 150	2 050	4 510	2 250	4 960
	38.0	124'8"	1 850	1 750	3 850	1 950	4 290
	40.0	131'3"	1 550	1 500	3 300	1 700	3 740
52.0 (170'7")	10.6	34'9"	18 000	18 150	40 010	17 300	38 140
	12.0	39'4"	15 050	15 150	33 400	14 500	31 960
	14.0	45'11"	12 000	12 000	26 450	11 550	25 460
	16.0	52'6"	9 850	9 750	21 490	9 450	20 830
	18.0	59'1"	8 200	8 100	17 850	7 900	17 410
	20.0	65'7"	6 950	6 800	14 990	6 650	14 660
	22.0	72'2"	5 900	5 750	12 670	5 700	12 560
	24.0	78'9"	5 100	4 900	10 800	4 900	10 800
	26.0	85'4"	4 400	4 200	9 250	4 250	9 360
	28.0	91'10"	3 800	3 600	7 930	3 650	8 040
	30.0	98'5"	3 250	3 100	6 830	3 200	7 050
	32.0	105'0"	2 750	2 650	5 840	2 800	6 170
	34.0	111'7"	2 350	2 250	4 960	2 400	5 290
	36.0	118'1"	2 000	1 900	4 180	2 100	4 620
	38.0	124'8"	1 650	1 600	3 520	1 850	4 070
	40.0	131'3"	1 350	1 350	2 970	1 550	3 410

Boom length	Working radius		Rated load				
			JIS rating	BS rating		PCSA rating	
m (ft in)	m	ft in	kg	kg	lb	kg	lb
55.0 (180'5")	11.1	36'5"	16 650			16 000	35 270
	12.0	39'4"	14 950			14 350	31 630
	14.0	45'11"	11 900			11 450	25 240
	16.0	52'6"	9 700			9 350	20 610
	18.0	59'1"	8 100			7 750	17 080
	20.0	65'7"	6 800			6 550	14 440
	22.0	72'2"	5 800			5 550	12 230
	24.0	78'9"	4 950			4 750	10 470
	26.0	85'4"	4 250	Not applicable		4 100	9 030
	28.0	91'10"	3 650			3 550	7 820
	30.0	98'5"	3 100			3 050	6 720
	32.0	105'0"	2 600			2 650	5 840
	34.0	111'7"	2 200			2 300	5 070
	36.0	118'1"	1 800			2 000	4 400
	38.0	124'8"	1 500			1 650	3 630
	40.0	131'3"	1 200			1 400	3 080
58.0 (190'3")	11.7	38'5"	15 450			14 850	32 730
	12.0	39'4"	14 800			14 250	31 410
	14.0	45'11"	11 750			11 300	24 910
	16.0	52'6"	9 550			9 200	20 280
	18.0	59'1"	7 950			7 650	16 860
	20.0	65'7"	6 650			6 400	14 100
	22.0	72'2"	5 650			5 450	12 010
	24.0	78'9"	4 800			4 650	10 250
	26.0	85'4"	4 100	Not applicable		3 950	8 700
	28.0	91'10"	3 450			3 400	7 490
	30.0	98'5"	2 900			2 900	6 390
	32.0	105'0"	2 400			2 500	5 510
	34.0	111'7"	2 000			2 150	4 730
	36.0	118'1"	1 600			1 800	3 960
	38.0	124'8"	1 300			1 500	3 300
	40.0	131'3"	Not applicable			1 200	2 640

Rated Load for Main Boom

Notes:

- The rated loads shown are based on the machine on firm level ground without traveling.
- 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.
- 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).
- When the jib boom is attached to the main boom, the load to be actually lifted will be the rated load minus weight of jib boom.

Jib length	9.0 m (29'6")	13.5 m (44'4")	18.0 m (59'1")
Jib weight	1 350 kg (2 970 lb)	1 650 kg (3 630 lb)	1 950 kg (4 290 lb)

- 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)

- The jib can be attached to boom of 37.0 m (121'5") to 52.0 m (170'7") long. In case of 52.0 m (170'7") boom, the maximum jib length is 13.5 m (44'4") long.

- The auxiliary jib can be attached to the main boom of 13.0 m (42'8") to 55.0 m (180'5") long.
- Counterweight is 20 800 kg (45 860 lb).

Rated Load for Jib

Maximum jib rating

Jib length		9.0 m (29'6")	13.5 m (44'4")	18.0 m (59'1")
Jib offset angle				
Max. rated load	10°	10 000 kg (22 040 lb)	10 000 kg (22 040 lb)	5 950 kg (13 110 lb)
	30°	9 300 kg (20 500 lb)	5 700 kg (12 560 lb)	3 950 kg (8 700 lb)

Notes:

- The rated load for jib is equal to that of the main boom at the same working radius, but should not exceed maximum jib ratings shown.
The jib offset angle to the main boom is under loaded condition.
- The maximum working radius of the jib do not exceed that of the main boom used.





Main Boom & Jib Construction

Main Boom Construction

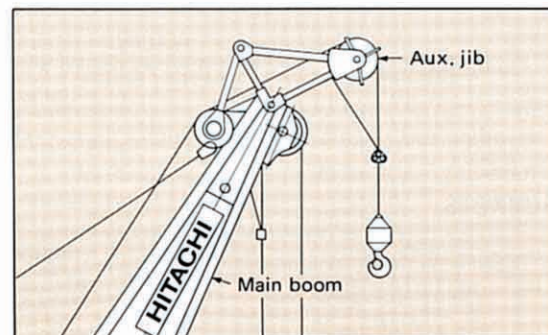
Boom length Element	13.0m (42'8")	16.0m (52'6")	19.0m (62'4")	22.0m (72'2")	25.0m (82'0")	28.0m (91'10")	31.0m (101'8")	34.0m (111'7")	37.0m (121'5")	40.0m (131'3")	43.0m (141'1")	46.0m (150'11")	49.0m (160'9")	52.0m (170'7")	55.0m (180'5")	58.0m (190'3")
Lower 6.5m (21'4")	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Upper 6.5m (21'4")	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Insert 3.0m (9'10")	—	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1
Insert 6.0m (19'8")	—	—	—	1	1	2	1	1	2	1	1	2	1	1	2	1
Insert 9.0m (29'6")	—	—	—	—	—	—	1	1	1	2	2	2	3	3	3	4
Available hook	80 000 kg (176 300 lb) capacity hook															
	40 000 kg (88 180 lb) capacity hook															
	25 000 kg (55 110 lb) capacity hook															
Attachable jib																

Jib Construction

Jib length Element	9.0m (29'6")	13.5m (44'4")	18.0m (59'1")
Lower 4.5m (14'9")	1	1	1
Upper 4.5m (14'9")	1	1	1
Insert 4.5m (14'9")	—	1	2
Number of rope reevings	1	1	1
Available hook	10 000 kg (22 040 lb) capacity hook		

Auxiliary Jib (Optional)

Attachable to main boom top for hoisting light-weight load quickly with a single rope used. (Never use the main and auxiliary hooks at the same time.)

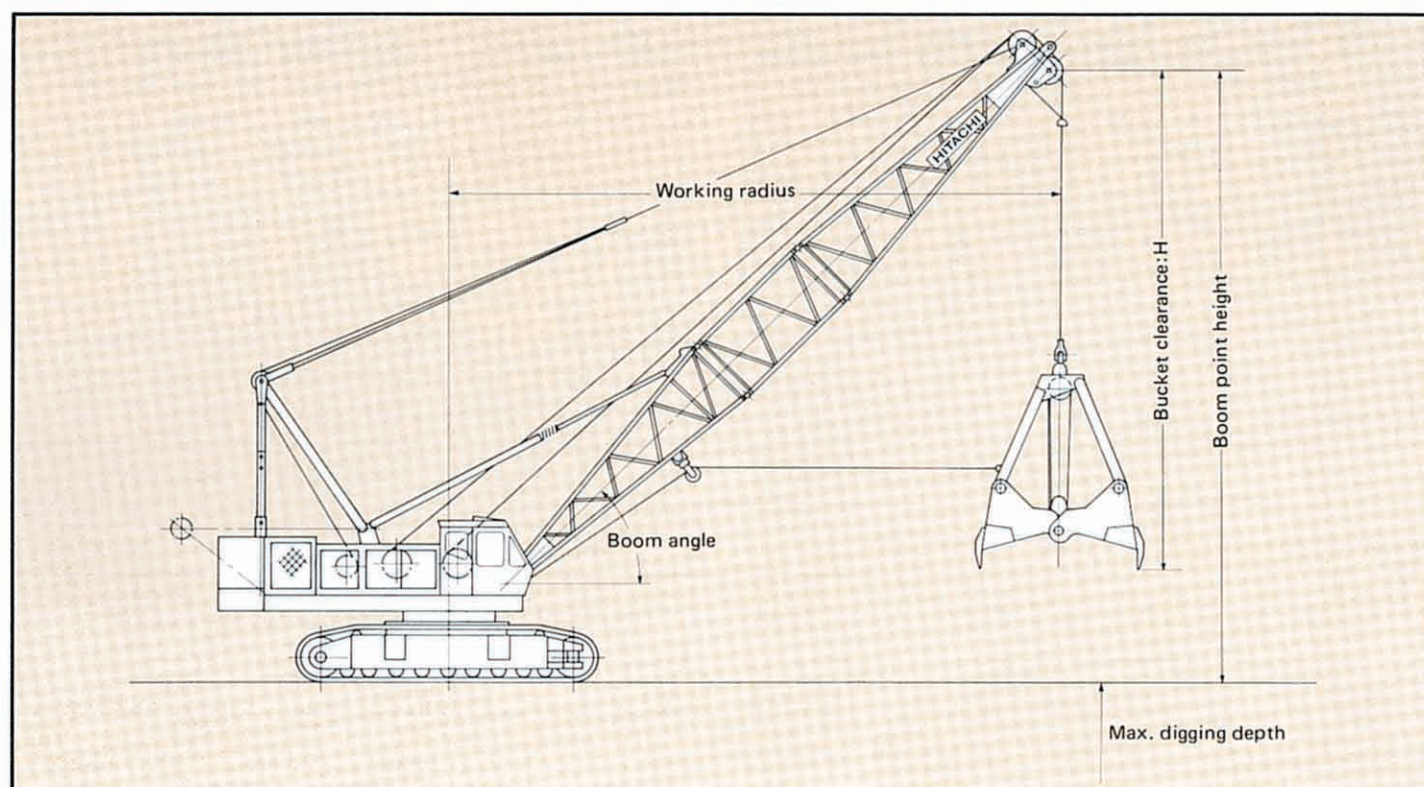




CLAMSHELL

With Tubular CRANE Boom

Dimensions



Specifications

	Standard winch	Optional winch
Max. rated load	10 000 kg (22 040 lb)	11 000 kg (24 250 lb)
Bucket capacity	2.5 m ³ (3-1/4 cu yd) to 5.0 m ³ (6-1/2 cu yd)	2.5 m ³ (3-1/4 cu yd) to 5.0 m ³ (6-1/2 cu yd)
Boom length	13.0 m (42'8") to 22.0 m (72'2")	
Ground pressure	0.79 bar (0.79 kgf/cm ² , 11.2 psi)	0.80 bar (0.80 kgf/cm ² , 11.4 psi)
Operating weight	77 400 kg (170 600 lb) When equipped with 13.0 m (42'8") boom and 2.5 m ³ (3-1/4 cu yd) bucket	77 800 kg (171 500 lb) When equipped with 13.0 m (42'8") boom and 2.5 m ³ (3-1/4 cu yd) bucket

The other specifications such as engine horsepower, drum data, swing speed, travel speed, etc. are same as crane basic machine. See page 1 – 2.

BUCKETS

Capacity	Self weight	Bucket clearance: H	Application
2.5 m ³ (3-1/4 cu yd)	5 000 kg (11 020 lb)	6.9 m (22'8")	General purpose
3.5 m ³ (4-5/8 cu yd)	4 500 kg (9 920 lb)	7.6 m (24'11")	For gravel
5.0 m ³ (6-1/2 cu yd)	4 300 kg (9 460 lb)	8.0 m (26'3")	For coal loading

**TAGLINE**

	Maximum digging depth
Spring type (Standard)	12.0 m (39'4")
Hydraulic operated type (Option)	36.0 m (118'1")

Clamshell Ratings and Working Ranges

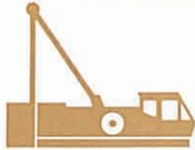
Boom length m (ft in)	Working radius m ft in		Boom angle degree	Boom point height m ft in		Rated load					
						Standard winches			Optional winches		
						JIS kg	BS kg (lb)	PCSA kg (lb)	JIS kg	BS kg (lb)	PCSA kg (lb)
13.0 (42'8")	12.3	40'4"	35	9.2	30'2"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	10.9	35'9"	45	11.0	36'1"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	9.2	30'2"	55	12.5	41'0"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	7.3	23'11"	65	13.7	44'11"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
16.0 (52'6")	14.8	48'7"	35	11.0	36'1"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	10 200 (22 480)	10 800 (23 800)
	13.0	42'8"	45	13.1	43'0"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	10.9	35'9"	55	15.0	49'3"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	8.6	28'3"	65	16.4	53'10"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
19.0 (62'4")	17.2	56'5"	35	12.7	41'8"	9 200	8 200 (18 070)	8 800 (19 400)	9 200	8 200 (18 070)	8 800 (19 400)
	15.2	49'10"	45	15.3	50'2"	10 000	9 600 (21 160)	10 000 (22 040)	10 600	9 600 (21 160)	10 400 (22 920)
	12.7	41'8"	55	17.4	57'1"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
	9.8	32'2"	65	19.1	62'8"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)
22.0 (72'2")	19.7	64'8"	35	14.4	47'3"	7 400	6 600 (14 550)	7 200 (15 870)	7 400	6 600 (14 550)	7 200 (15 870)
	17.3	56'9"	45	17.4	57'1"	8 900	8 000 (17 630)	8 600 (18 950)	8 900	8 000 (17 630)	8 600 (18 950)
	14.4	47'3"	55	19.9	65'3"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	10 200 (22 480)	11 000 (24 250)
	11.1	36'5"	65	21.9	71'10"	10 000	10 000 (22 040)	10 000 (22 040)	11 000	11 000 (24 250)	11 000 (24 250)

Notes:

1. The rated loads shown include the bucket weight.
The load to be actually lifted is the rated load minus bucket weight.
2. Counterweight is 20 800 kg (45 860 lb).
3. Allowable boom length for clamshell operation is from 13.0 m (42'8") through 22.0 m (72'2").



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).
(DIN 6 270, Net)	
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 20 800 kg (45 860 lb)

Consists of 4 sections:	One: 10 000 kg (22 040 lb)
	One: 4 000 kg (8 820 lb)
	One: 3 400 kg (7 500 lb)
	One: 3 400 kg (7 500 lb)



Boom

Tubular Chord CRANE Boom 1 500 mm (59") wide by, 1 500 mm (59") 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, 4 sheaves mounted on anti-friction bearings on boom peak. Sheave P.C.D. 560 mm (22")
	Standard /Optional winches
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.

Note: Angle chord boom is optionally available for dragline and/or clamshell use.



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 Removal Device and Self-loading Device (optional)

Both right and left side frames can be speedily removed by side frame removal device. 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 (optional)

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)	2
No. of lower rollers (on each side)	9
No. of track shoes (on each side)	55
Shoe width	850 mm (33.5")

Track Tension Adjuster Track tension is adjusted by hydraulic power jack at the front idler bearing block and by inserting proper shims.



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	185 bar (185 kgf/cm ² , 2 630 psi)	43 bar (43 kgf/cm ² , 610 psi)
Oil flow	190 l/min (41.8 Imp gpm, 50.1 U.S. gpm)	42 l/min (9.2 Imp gpm, 11.0 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 185 bar
(185 kgf/cm², 2 630 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 10μ 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.



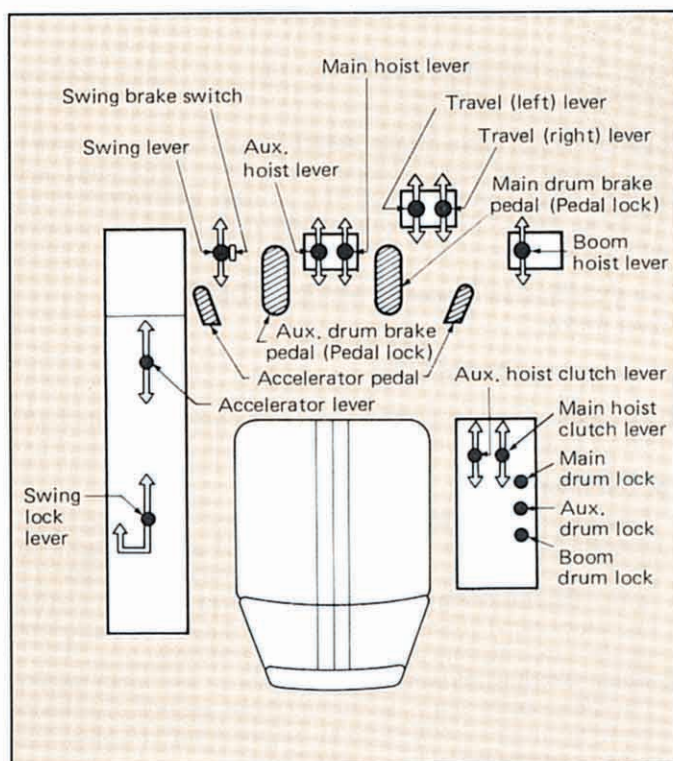
CONTROLS

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.



SERVICE REFILL CAPACITIES

	Liters	Imp gal	U.S. gal
Fuel tank	440.0	96.7	116.1
Engine coolant	57.0	12.5	15.0
Engine oil	48.0	10.5	12.7
Pump transmission	2.7	0.59	0.7
Boom and winch hoist motor reduction device	5.0	1.1	1.3
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)	22.0	4.8	5.8
Hydraulic system (including tank capacity)	400.0	87.9	105.5
Hydraulic tank	250.0	54.9	66.0



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

- **Electric Load Indicator** This indicator is an electrically operated type that reads the weight of a suspended load. The load pick-up device is installed on the upper boom.
- **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.



OPTIONAL EQUIPMENT

- **Operator's Cab** Electric fan, car radio, cab cooler.
- **Third Drum** (Power Lowering)
- **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 Removal Device** Self-loading device and side frame retract device.
- **Joystick Lever**
- **Angle Chord Boom**
- **Moment Limiter**



FRONT-END ATTACHMENTS AVAILABLE



Crane



Clamshell



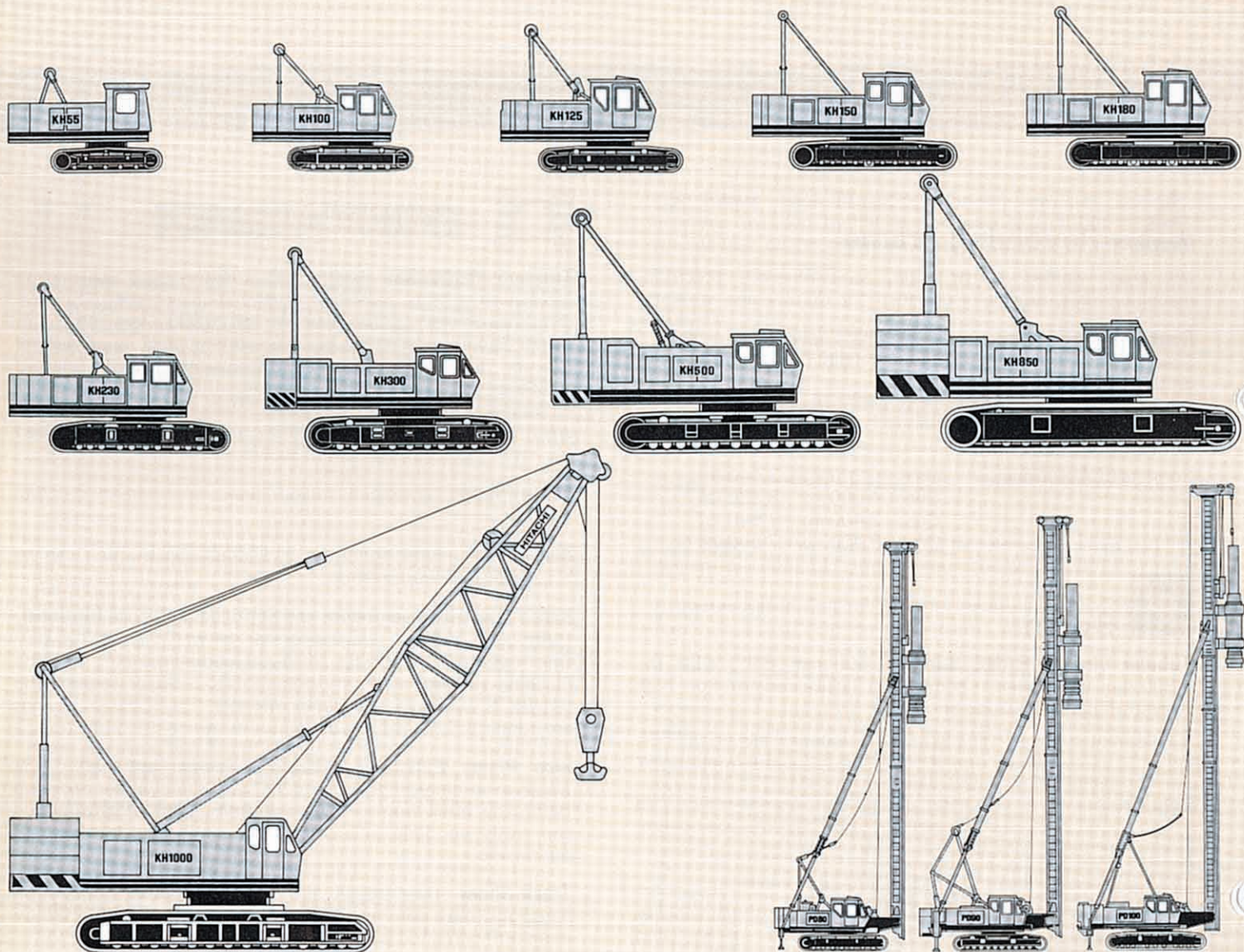
Pontoon-mounted crane



Tower crane



KH AND PD SERIES



These specifications are subject to change without notice.

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