

SPECIFICATIONS

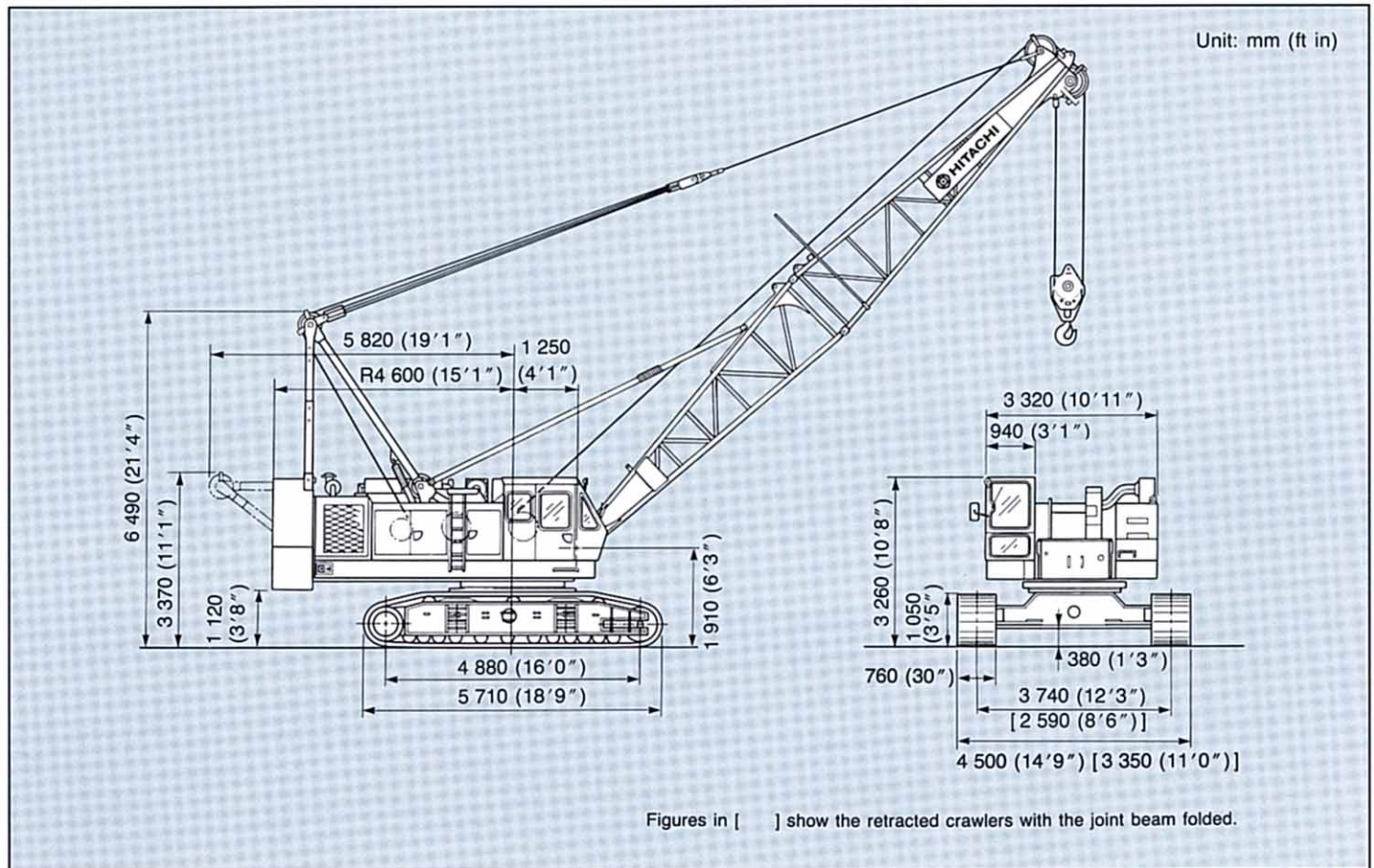


KH250HD

HYDRAULIC CRAWLER CRANE

Max. Lifting Capacity: 65 000 kg (143 300lb) 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 kg) | 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) | 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) | | | | | |
| Aux. hoist drum | 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) | | | | | |
| 3rd hoist drum | | 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

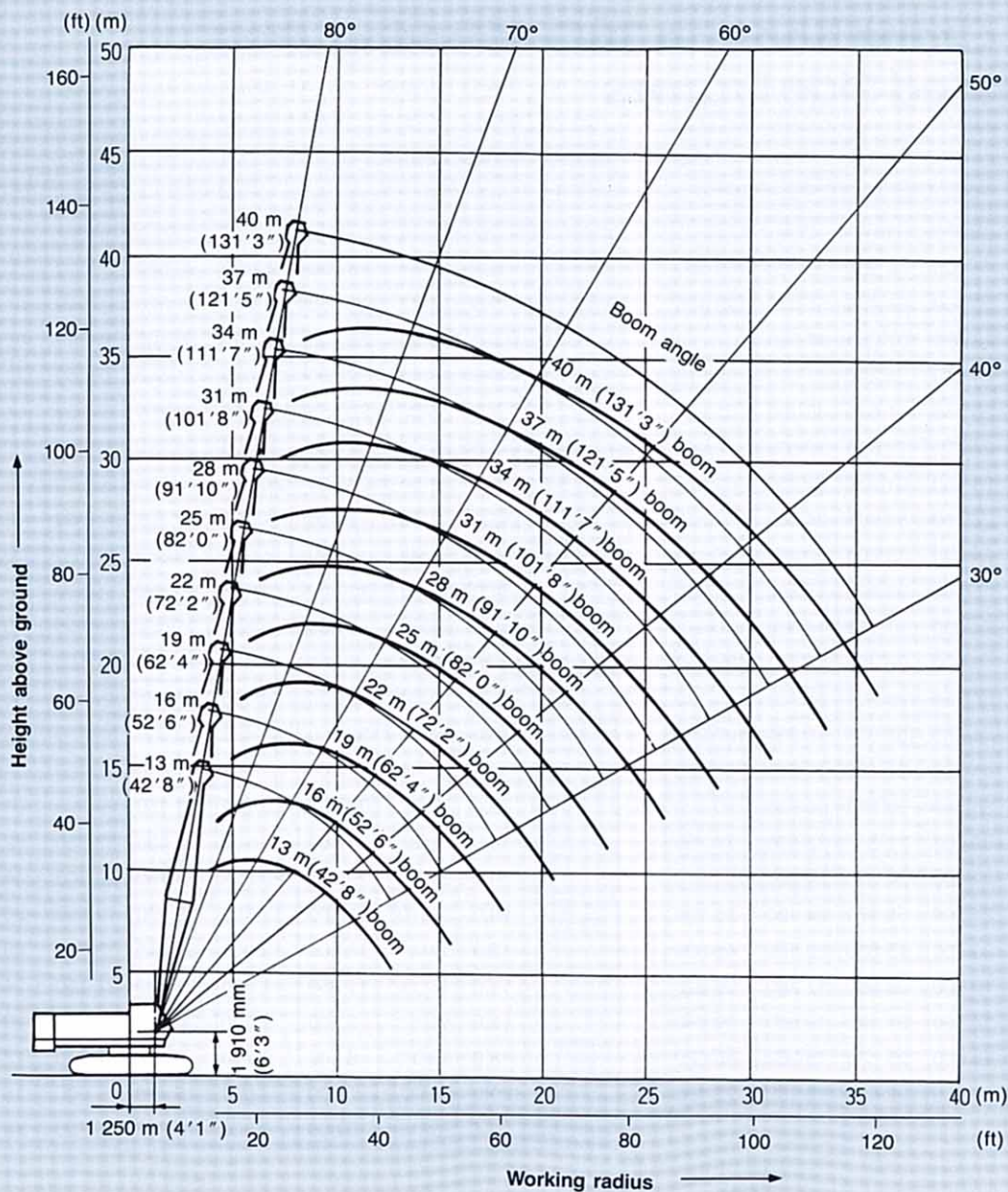
Notes:

- 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.

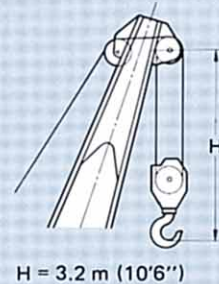
BOOM HOIST DRUM

| 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 | 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" | 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 |
| 16.0 (52'6") | 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 |
| | 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 |
| 22.0 (72'2") | 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" | 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 |
| 22.0 (72'2") | 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 |
| | 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 |
| 22.0 (72'2") | 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 |

| 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 |

Notes:

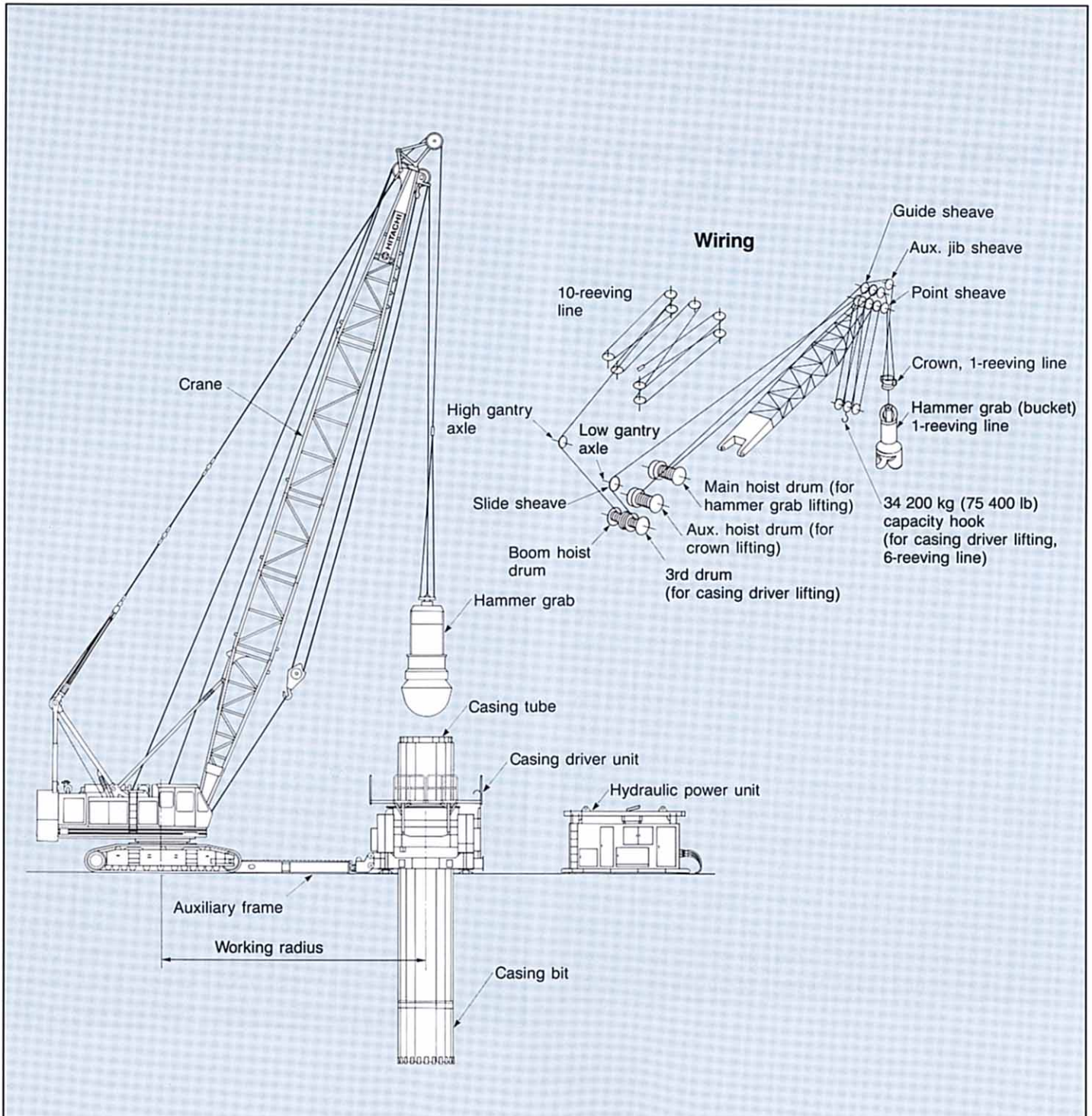
1. The rated loads shown are based on the machine on firm level ground without traveling.
2. The rated loads shown include the weight of all lifting attachments such as hook, bucket, etc. The load to be actually lifted will be the rated load minus the weight of all lifting attachments.
3. The rated load 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).

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 | 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") | 4.3 | 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 | Working radius | | Rated load | | | | |
|-----------------|----------------|--------|------------|-----------|--------|-------------|--------|
| | | | JIS rating | BS rating | | PCSA rating | |
| m (ft in) | m | ft in | kg | kg | lb | 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 | |

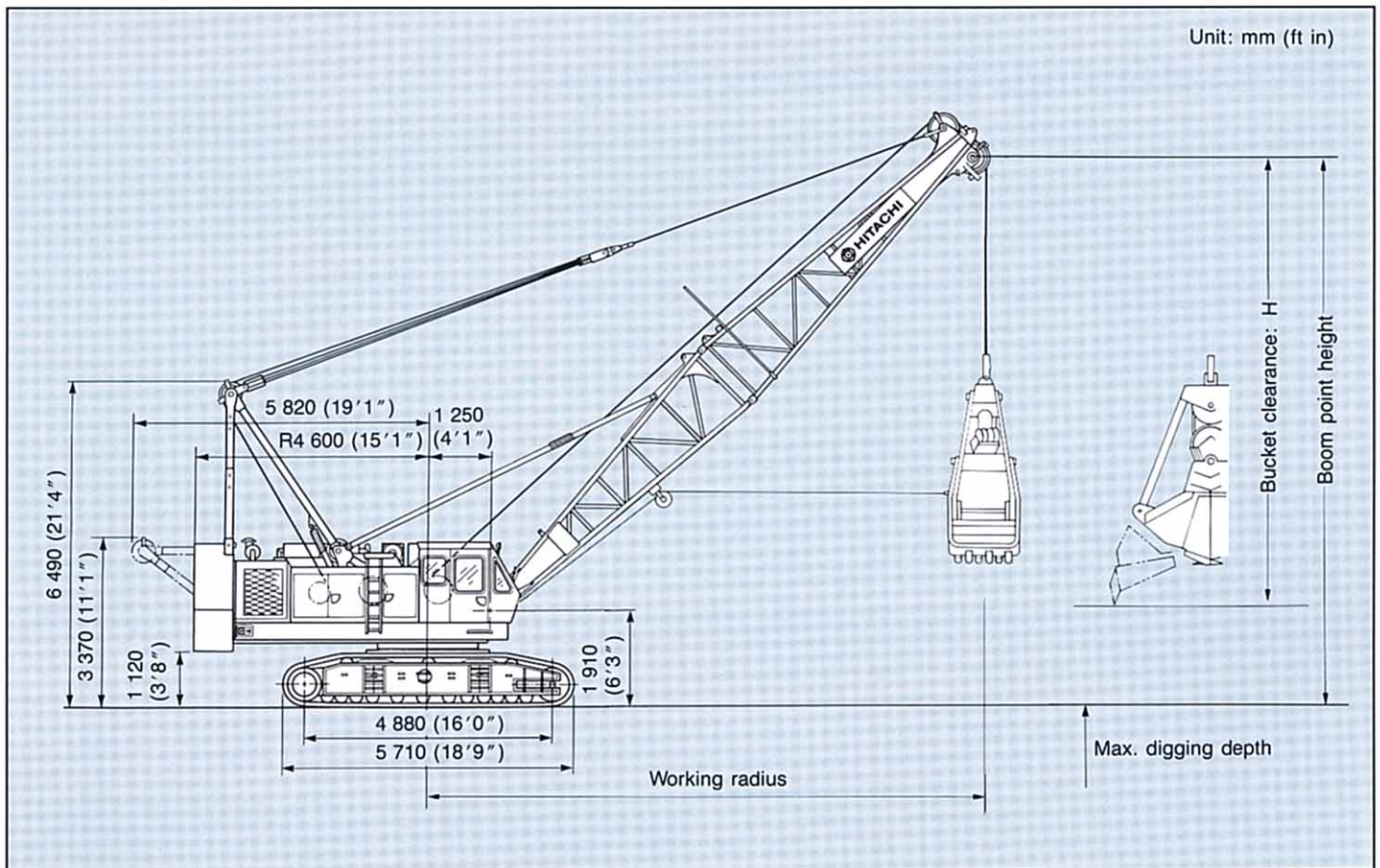
Notes:

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:

1. For common specifications which are not listed above, refer to p.1 and p.2.
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 | | |
|--------------|----------------|--------|------------|-------------------|-------|------------|--------------------|--------------------|
| | m | ft in | | degree | m | ft in | JIS rating | BS rating |
| 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.

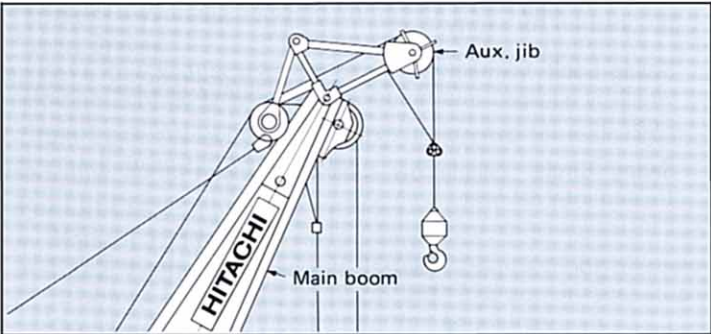
Boom Construction

Boom Construction

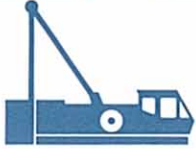
| Boom length | 13.0 m (42'8") | 16.0 m (52'6") | 19.0 m (62'4") | 22.0 m (72'2") | 25.0 m (82'0") | 28.0 m (91'10") | 31.0 m (101'8") | 34.0 m (111'7") | 37.0 m (121'5") | 40.0 m (131'3") | | | | | | | | | | | | | | |
|----------------------|--------------------------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----|-----|-------------------------------------|---|-----|---|---|-----|---|---|-----|---|-----|---|
| 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). |
| (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 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")

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.

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 | |
| 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.



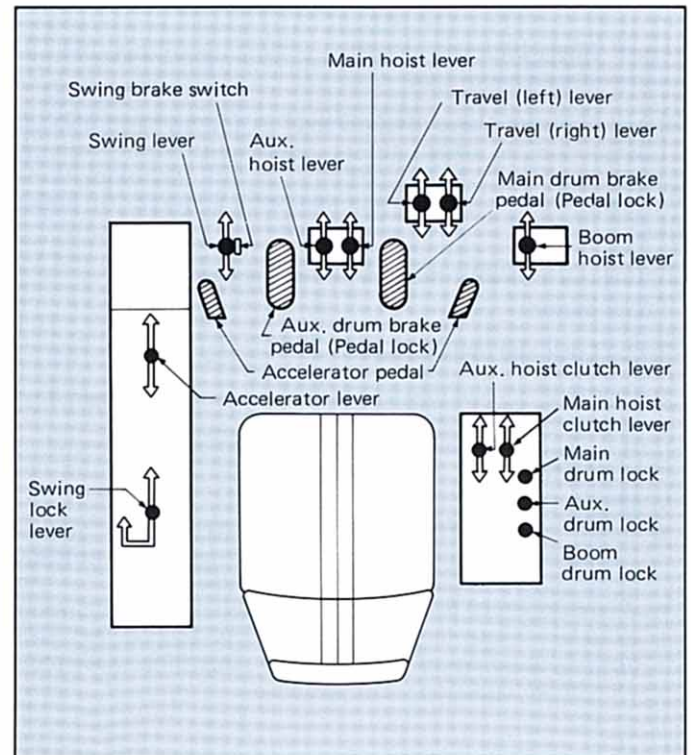
CONTROLS

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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