

# P&H

# 435-TC

CRANE, DRAGLINE, CLAMSHELL



## THE MOST VERSATILE TRUCK CRANE IN THE 35-TON CLASS

All these features are offered as standard equipment only by P&H.

- **"Triple-safe"** independent planetary boom hoist provides precise positive control over power raising and lowering of boom.
- **Exclusive P&H Power Box** design gives positive gear lubrication in oil bath, keeps dirt out.
- **P&H Live Roller Circle** distributes weight of upper load uniformly for smoother swings.
- **"Full feel"**, positive action hydraulic controls.
- **Pin-connected T-1** high capacity tubular steel boom.
- **Handles 170'** boom
- **Heavy duty rear axles** assure longer wear.
- **Air brakes** on all eight wheels.
- **Torsion Bar** distributes side loads—increases stability.
- **Quick**, on-the-job conversion to any attachment.
- **Power steering** for easier handling—greater maneuverability.
- **Aluminum outrigger** floats reduce weight for easier, quicker conversion to highway travel.
- **8 x 4 carrier** designed and constructed to work perfectly with upper.

Bulletin No. KP-435T-3



## KOBE STEEL, LTD.

*Courtesy of Crane Market*

# BASIC MACHINE

## UPPER MACHINERY

### POWER PLANT:

|                                     |                   |
|-------------------------------------|-------------------|
| Diesel: Mitsubishi 6D5 10C-K (std.) | 93 hp @ 1,400 rpm |
| G.M. 4-53, 4 cyl. (opt. extra)      | 88 hp @ 2,200 rpm |
| Cat., D330, 4 cyl. (opt. extra)     | 88 hp @ 2,200 rpm |
| Cummins NHC-4-C1 (opt. extra)       | 90 hp @ 1,600 rpm |

TRANSMISSION: 2 speed. High gear is normal operating speed.

FUEL TANK: Capacity: 220 l (58 gallons)

THROTTLE: Hand grip control for all operations, standard.

CONTROLS: Direct acting hydraulic.

SWING CLUTCHES: Two shoe type, internal expanding

CLUTCHES: Band type, internal expanding.

BRAKES: Band type, external contracting.

BOOM HOIST ASSEMBLY: Independent planetary gear type, with external

ratchet and automatic brake provides for raising and lowering boom under

power and locking boom. Drum mounted on anti-friction bearings.

Boom hoist line speed (raising) 45 m/min (157 fpm)

Boom hoist line speed (lowering) 26 m/min (89 fpm)

MAIN OPERATING DRUMS: Drums opposite each other mounted on anti-

friction bearings on single drum shaft. See attachment sheets for further

details.

THIRD DRUM: Mounts on L.H. extension of independent boom hoist drum shaft

(opposite boom hoist drum). Does not interfere with any other machine function.

Available for application to all machines with crane boom type attach-

ments, optional extra.

GANTRY: High gantry, folding type.

COUNTERWEIGHT: External single piece removable casting for all attach-

ments.

## MITSUBISHI K351 8 x 4 CARRIER

WEIGHT: Including turret and outriggers,

with 12.00 x 20-18 ply tires 19,540 kg (42,990 lbs.)

FRAME: Reinforced channel all welded high strength steel construction.

OUTRIGGER HOUSINGS: Double box type front and rear.

OUTRIGGER BEAMS: High strength steel box full length—reinforced

Extended position from center of truck 2.73 m (9'-11")

Screw jack at beam ends.

HYDRAULIC OUTRIGGERS: Total of 8 double acting hydraulic cylinders

provide independent horizontal and vertical motion of each beam, standard.

Manual outriggers, optional extra.

POWER PLANT:

Diesel: Mitsubishi, 8DC, 8 cyl. 250 hp @ 2,200 rpm

CLUTCH: Single dry disc.

TRANSMISSIONS: Main transmission: 5 speeds forward, plus reverse.

Auxiliary transmission: 2 speeds.

BRAKES—SERVICE: Air on all 8 wheels.

HAND BRAKE: Mechanical at propeller shaft.

SUSPENSION: Front and rear—Torque rods plus equalizer beams.

STEERING: Ball and nut type.

FUEL TANK: Capacity: 200 l (53 gals.)

TIRES: Twelve 12.00 x 20-18 ply, on end off highway type, standard.

CAB: Steel—two men type—low profile cab—safety glass.

LIGHTS: Headlights, tail lights, stop lights, directional signal lights—front

and rear, license plate light. Reflectors on front and rear. Front and rear

lights and license plate recessed in frame 24 volt electrical system.

EQUIPMENT: Front skirts and dirt shields, front and rear fenders engine hood,

leatherette cushion seats, 24 volt battery, horn, rear view mirror, windshield

wiper, illuminated instrument panel, with speedometer, ammeter oil pressure

gauges, fuel gauges, water temperature indicator, low air pressure indicator

light, tow hook—front and rear, dash mounted air brake locking valve, tools

and accessories including two jacks and a set of four aluminum jack

blocks (outrigger).

## PERFORMANCE (Based on Engine)

MAX. SPEED 52 km/h (32.3 mph)

MIN. TURNING RADIUS 12.0 m

% GRADE 28%

## NISSAN PTVW35C 8 x 4 CARRIER

WEIGHT: Including turret and outriggers,

with 12.00 x 20-18 ply tires 18,300 kg (40,400 lbs.)

FRAME: Reinforced channel all welded high strength steel construction.

OUTRIGGER HOUSINGS: Double box type front and rear.

OUTRIGGER BEAMS: High strength steel box full length—reinforced

Extended position from center of truck 2.73 m (9'-11")

Screw jack at beam ends.

HYDRAULIC OUTRIGGERS: Total of 8 double acting hydraulic cylinders

provide independent horizontal and vertical motion of each beam, solenoid

valve controlled, optional extra.

POWER PLANT:

Diesel: Nissan, PD6 6 cyl. 185 hp @ 2,200 rpm

CLUTCH: Single dry plate.

TRANSMISSIONS: Main transmission: 5 speeds forward, plus reverse.

Auxiliary transmission: 2 speed.

BRAKES—SERVICE: Oil with air assisted booster on all 8 wheels.

HAND BRAKE: Mechanical at propeller shaft.

SUSPENSION: Front and rear—Torque rods plus equalizer beams.

STEERING: Hindley worm and roller type, with power booster.

FUEL TANK: Capacity: 200 l (53 gals.)

TIRES: Twelve 12.00 x 20-18 ply, on end off highway type, standard.

CAB: Steel—two men type—offset right side of engine, safety glass.

LIGHTS: Headlights, tail lights, stop lights, directional signal lights—front

and rear, license plate light. Reflectors on front and rear. Front and rear

lights and license plate recessed in frame 24 volt electrical system.

EQUIPMENT: Front skirts and dirt shields, front and rear fenders, engine

hood, leatherette cushion seat, 24 volt battery, horn, rear view mirror, wind-

shield wiper, illuminated instrument panel, with speedometer, ammeter oil

pressure gauge, fuel gauge, water temperature indicator, low air pressure

indicator light, tow hook—front and rear, dash mounted air brake locking

valve, tools and accessories including two jacks and a set of four aluminum

jack blocks.

## PERFORMANCE (Based on Engine)

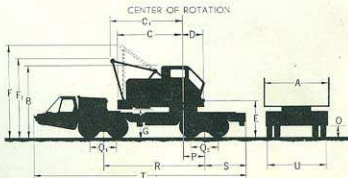
MAX. SPEED 55 km/h (34 mph)

MIN. TURNING RADIUS 11.9 m (39'-3")

% GRADE 25%

## GENERAL DIMENSIONS

|   | MITSUBISHI       | NISSAN          |
|---|------------------|-----------------|
|   | m (ft-in)        | m (ft-in)       |
| A Width of cab  | 2.69 (8-10)      | 2.69 (8-10)     |
| B Height to top of cab                                | 3.62 (11-10 1/2) | 3.71 (12-2)     |
| C Radius of rear end (counterweight)                  | 3.61 (11-10 1/2) | 3.61 (11-10)    |
| C <sub>1</sub> Radius of rear end (gantry lowered)    | 3.85 (12-7 1/2)  | 3.81 (12-4)     |
| D Center of rotation to boom foot pin (except hoist)  | 1.05 (3-5 1/2)   | 1.05 (3-5 1/2)  |
| E Height from ground to boom foot pin                 | 1.83 (6-0 1/2)   | 1.92 (6-3 1/2)  |
| F Clearance height over gantry (raised)               | 5.65 (18-4 1/2)  | 5.18 (17-0)     |
| F <sub>1</sub> Clearance height over gantry (lowered) | 3.80 (12-5 1/2)  | 3.94 (12-11)    |
| G Counterweight ground clearance                      | 1.32 (4-4)       | 1.44 (4-8 1/2)  |
| O Ground clearance (torque rod)                       | 0.27 (8-10 1/2)  | 0.28 (9-1)      |
| P Center of rotation to center of rear bogie          | 1.07 (3-5 1/2)   | 1.10 (3-7 1/2)  |
| Q Distance between axles (front)                      | 1.45 (4-9 1/2)   | 1.30 (4-3 1/2)  |
| Q <sub>1</sub> Distance between axles (rear)          | 1.35 (4-5 1/2)   | 1.30 (4-3 1/2)  |
| R Wheelbase   | 5.00 (16-4 1/2)  | 4.80 (15-8 1/2) |
| S Center of rear bogie to rear of carrier             | 1.86 (6-1 1/2)   | 1.93 (6-4)      |
| T Overall length of carrier with outriggers           | 10.40 (34-1 1/2) | 9.51 (31-2 1/2) |
| U Overall width of carrier (11.00 x 20 tires)         | 2.87 (9-5)       | 2.82 (9-3)      |
| V Turning radius (min.)                               | 12.00 (39-4 1/2) | 11.9 (38-1 1/2) |



# CRANE 35 Ton

## SPECIFICATIONS

### P&H CRANE BOOM

The P&H boom has lattice-type, all-welded construction and chords of tubular T-1 steel which provides the strongest crane boom available with the lowest relative weight.

- The P&H open-throat design provides greater load clearances. Boom point sheaves ride on anti-friction bearings for longer wear.
- Booms feature an "offset" head for added clearance factor which gives increased lifting height for each boom length.
- P&H pin connections permit fast, easy erection and takedown.

### GENERAL DATA

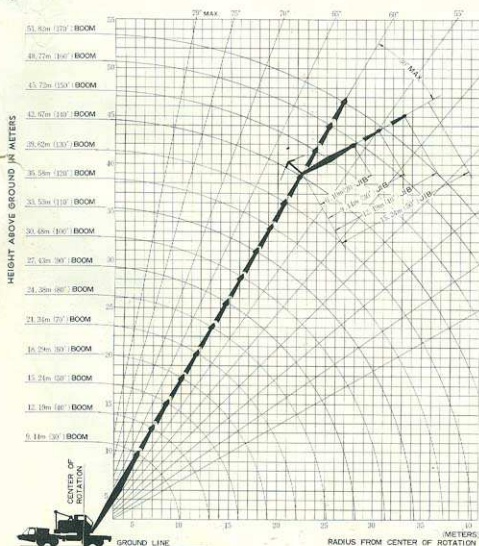
- BOOM:** Tubular T-1 steel chords, lattice construction.  
 Basic length, open throat, pin connected ..... 9.14 m (30'-0")  
 In two equal sections ..... 3.64 m (14 1/2")  
 With three offset boom point sheaves on anti-friction bearings, bottom diameter ..... 3.64 m (14 1/2")  
 1/2 part boom point sheave, optional extra.
- HOOK BLOCK** ..... 35 Ton  
 Three sheave with swivel hook and 7 part hoist line, standard.
- POWER CONTROLLED LOAD LOWERING:** Planetary device for lowering load under power, left hand smooth drum, optional extra.
- GANTRY:** High gantry, folding type, standard.
- WORKING WEIGHT:** (including block) ..... 38,740 kg (85,230 lbs.)  
 (6,800 kg (15,000 lbs.) counterweight included in working weight, furnished as standard.)

### DRUM SHAFT ASSEMBLY

| Lifting Crane Drums (P.D.) | Cable Dia.       | Max. Cable Capacity | Line Pulls             | Line Speeds        |
|----------------------------|------------------|---------------------|------------------------|--------------------|
| **L.H. (Grooved)           | 26 mm (1 1/8")   | 130 m (427')        | 7,450 kg (16,400 lbs.) | 51 m/min (167 fpm) |
| R.H. (Grooved)             | 340 mm (13 3/8") | 26 m (85')          | 7,450 kg (16,400 lbs.) | 51 m/min (167 fpm) |

\*Line pulls and line speeds based on single line in normal operating gear.  
 To fit job requirements, line pull and line speed can be varied by shifting into another gear.

\*\*Grooved drum with power lowering.



### Crane Rated Loads in Kg (Pounds) without Outriggers

| Operating Radius in Ft. (m.) | 9.14 m (30') |           | 12.19 m (40') |           | 15.24 m (50') |           | 18.29 m (60') |           | 21.34 m (70') |           | 24.38 m (80') |           | 27.43 m (90') |           | 30.48 m (100') |           |
|------------------------------|--------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|----------------|-----------|
|                              | Over Side    | Over Rear | Over Side     | Over Rear | Over Side     | Over Rear | Over Side     | Over Rear | Over Side     | Over Rear | Over Side     | Over Rear | Over Side     | Over Rear | Over Side      | Over Rear |
| 3.5                          | 14,790       | 20,000    | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 4                            | 13,110       | 19,430    | 13,010        | 19,350    | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 4.5                          | 11,810       | 18,860    | 11,710        | 18,780    | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 5                            | 10,510       | 18,290    | 10,410        | 18,210    | 9,810         | 14,300    | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 6                            | 9,210        | 17,720    | 9,110         | 17,640    | 8,510         | 13,800    | 8,000         | 13,300    | 7,410         | 12,800    | ...           | ...       | ...           | ...       | ...            | ...       |
| 7                            | 7,910        | 17,150    | 7,810         | 17,070    | 7,210         | 13,300    | 6,610         | 12,800    | 6,010         | 12,300    | 5,410         | 11,800    | ...           | ...       | ...            | ...       |
| 8                            | 6,610        | 16,580    | 6,510         | 16,500    | 5,910         | 12,800    | 5,310         | 12,300    | 4,710         | 11,800    | 4,110         | 11,300    | ...           | ...       | ...            | ...       |
| 9                            | 5,310        | 16,010    | 5,210         | 15,930    | 4,610         | 12,300    | 4,010         | 11,800    | 3,410         | 11,300    | 2,810         | 10,800    | ...           | ...       | ...            | ...       |
| 10                           | 4,010        | 15,440    | 3,910         | 15,360    | 3,310         | 11,800    | 2,710         | 11,300    | 2,110         | 10,800    | 1,510         | 10,300    | ...           | ...       | ...            | ...       |
| 11                           | 2,710        | 14,870    | 2,610         | 14,790    | 2,010         | 11,300    | 1,410         | 10,800    | 810           | 10,300    | 210           | 9,800     | ...           | ...       | ...            | ...       |
| 12                           | 1,410        | 14,300    | 1,310         | 14,220    | 710           | 10,800    | 110           | 10,300    | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 13                           | ...          | 13,730    | ...           | 13,650    | ...           | 9,800     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 14                           | ...          | 13,160    | ...           | 13,080    | ...           | 8,500     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 15                           | ...          | 12,590    | ...           | 12,510    | ...           | 7,200     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 16                           | ...          | 12,020    | ...           | 11,940    | ...           | 5,900     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 17                           | ...          | 11,450    | ...           | 11,370    | ...           | 4,600     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 18                           | ...          | 10,880    | ...           | 10,800    | ...           | 3,300     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 19                           | ...          | 10,310    | ...           | 10,230    | ...           | 2,000     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 20                           | ...          | 9,740     | ...           | 9,660     | ...           | 700       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 21                           | ...          | 9,170     | ...           | 9,090     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 22                           | ...          | 8,600     | ...           | 8,520     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 23                           | ...          | 8,030     | ...           | 7,950     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 24                           | ...          | 7,460     | ...           | 7,380     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 25                           | ...          | 6,890     | ...           | 6,810     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 26                           | ...          | 6,320     | ...           | 6,240     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 27                           | ...          | 5,750     | ...           | 5,670     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 28                           | ...          | 5,180     | ...           | 5,100     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 29                           | ...          | 4,610     | ...           | 4,530     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 30                           | ...          | 4,040     | ...           | 3,960     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 31                           | ...          | 3,470     | ...           | 3,390     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 32                           | ...          | 2,900     | ...           | 2,820     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 33                           | ...          | 2,330     | ...           | 2,250     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 34                           | ...          | 1,760     | ...           | 1,680     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 35                           | ...          | 1,190     | ...           | 1,110     | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 36                           | ...          | 620       | ...           | 540       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |
| 37                           | ...          | 50        | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...           | ...       | ...            | ...       |

### Crane Rated Loads in Kg (Pounds) with Outriggers Fully Extended

| Operating Radius in Ft. (m.) | 9.14 m (30') | 12.19 m (40') | 15.24 m (50') | 18.29 m (60') | 21.34 m (70') | 24.38 m (80') | 27.43 m (90') | 30.48 m (100') | 33.53 m (110') | 36.58 m (120') | 39.63 m (130') | 42.68 m (140') | 45.73 m (150') | 48.78 m (160') | 51.83 m (170') |
|------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                              | 3.5          | 35,000        | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 4                            | 27,000       | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 4.5                          | 21,000       | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 5                            | 15,000       | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 6                            | 11,000       | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 7                            | 8,000        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 8                            | 6,000        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 9                            | 4,500        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 10                           | 3,500        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 11                           | 2,500        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 12                           | 1,800        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 13                           | 1,300        | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 14                           | 900          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 15                           | 650          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 16                           | 450          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 17                           | 300          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 18                           | 200          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 19                           | 150          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 20                           | 100          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 21                           | 75           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 22                           | 50           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 23                           | 35           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 24                           | 25           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 25                           | 18           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 26                           | 13           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 27                           | 10           | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 28                           | 7            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 29                           | 5            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 30                           | 4            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 31                           | 3            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 32                           | 2            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 33                           | 1.5          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 34                           | 1            | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 35                           | 0.75         | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 36                           | 0.5          | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |
| 37                           | 0.35         | ...           | ...           | ...           | ...           | ...           | ...           | ...            | ...            | ...            | ...            | ...            | ...            | ...            | ...            |

Operating radius is horizontal distance from centerline of rotation to a vertical line through the gravity center of the load. The gross crane ratings shown are for units mounted on a Mitsubishi K331 carrier with tandem front and rear axles and do not exceed 75% of tipping loads. These ratings include weight of hook block, slings and all other load handling accessories. Ratings with outriggers based on outriggers fully extended. Gantry must be in raised position when machine is working with crane boom attachments. Not more than one 10 ft. inert permitted in booms longer than 100 ft. When boom is equipped with jib, main hook ratings should be reduced by 60% (to 1,500 lbs.) for 6.10 m (20 ft.) or 9.14 m (30 ft.) and 90% (to 2,000 lbs.) for 12.19 m (40 ft.) jib. Backstays recommended for all boom lengths. Ratings are contingent upon freely suspended loads and machine standing on a firm level, uniform supporting surface. Ratings are required upon machine being equipped with proper Pull Boom. Center hitch required for booms, 39.62 m (130 ft.) and over.

### MAXIMUM BOOM LENGTHS MACHINE CAN LIFT OFF GROUND

| Boom Over | WITH OUTRIGGERS |                                | WITHOUT OUTRIGGERS |                              |
|-----------|-----------------|--------------------------------|--------------------|------------------------------|
|           | Boom Only       | Boom & Jib                     | Boom Only          | Boom & Jib                   |
| Side      | 40.67 m (140')  | 30.48 m + 12.19 m (100' + 40') | 27.43 m (90')      | 21.34 m + 6.10 m (70' + 20') |
| Rear      | 51.82 m (170')  | 39.62 m + 12.19 m (130' + 40') | 33.68 m (110')     | 24.38 m + 5.18 m (80' + 20') |

### MAXIMUM JIB RATED LOADS IN KG (LBS.)

| Offset Angle Jib to Boom Under Full Load | 6.10 m (20')   |               | 9.14 m (30')  |               | 12.19 m (40') |               |
|--|----------------|---------------|---------------|---------------|---------------|---------------|
|  | Jib            | Boom          | Jib           | Boom          | Jib           | Boom          |
| 10°                                      | 4,530 (10,000) | 3,630 (8,000) | 2,730 (6,000) | 2,130 (4,700) | 1,530 (3,400) | 1,130 (2,500) |
| 20°                                      | 4,030 (9,000)  | 3,180 (7,000) | 2,270 (5,000) | 1,770 (3,900) | 1,370 (3,000) | 970 (2,100)   |
| 30° (max.)                               | 3,530 (8,000)  | 2,730 (6,000) | 1,810 (4,000) | 1,410 (3,100) | 1,010 (2,200) | 610 (1,300)   |

Jib rating at any radius from center of rotation is the same as crane rating shown in table for main boom when operated at that radius, but not to exceed maximum jib ratings shown. For booms ratings on jib, deduct 25% from maximum jib ratings. Maximum jib operating radius not to exceed length of set boom on which it is being used. Use of outriggers recommended when jib is equipped with jib.

### HOIST REEVING IN KG (LBS.)

| No. of Parts of Line | Maximum Load   |                 |                 |                 |                 |                 |
|----------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                      | 1              | 2               | 3               | 4               | 5               | 6               |
| Maximum Load         | 5,000 (11,000) | 10,000 (22,000) | 15,000 (33,000) | 20,000 (44,000) | 25,000 (55,000) | 30,000 (66,000) |