

# Kobelco RK 500

## 6. SPECIFICATIONS AND TABULATED DATA

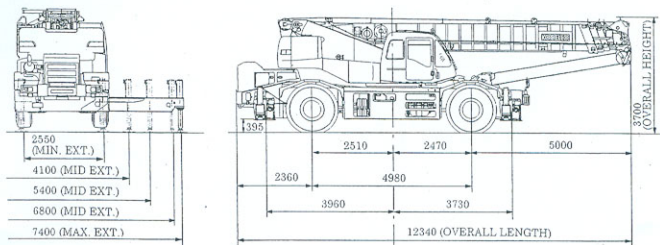
### 6.1 SPECIFICATIONS

The data described here are for reference. Since described values may sometimes be different from those of the actual machine, use these data for reference only.

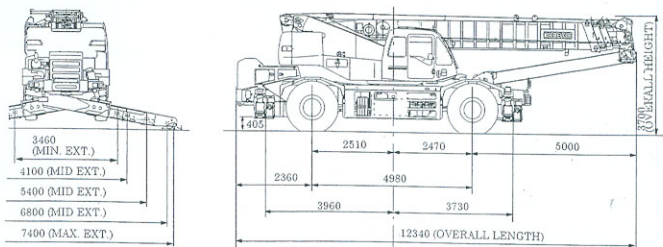
#### 6.1.1 GENERAL DIMENSIONS

General dimension [Unit: mm]

##### 1. MACHINE WITH H-TYPE OUTRIGGERS



##### 2. MACHINE WITH X-TYPE OUTRIGGERS



## 6.1.2 GENERAL SPECIFICATIONS

### 1. CRANE PERFORMANCE

|  |                  |                            |
|--|------------------|----------------------------|
| Rated crane loads                        | 10.2m boom       | 51,000kg × 2.9m (12 parts) |
|  | 17.4m boom       | 28,000kg × 5.0m (6 parts)  |
|  | 24.6m boom       | 20,000kg × 6.0m (5 parts)  |
|  | 31.8m boom       | 14,000kg × 6.5m (4 parts)  |
|  | 39.0m jib        | 7,600kg × 10.0m (1 part)   |
|  | 9.0m jib         | 3,500kg × 75° (1 part)     |
|  | 15.0m jib        | 2,400kg × 77° (1 part)     |
|  | Auxiliary sheave | 4,500kg (1 part)           |
| Main boom length                         | m                | 10.2 - 39.0                |
| Jib length                               | m                | 9.0 - 15.0                 |
| Max. lifting height: main hook/aux. hook | m                | 40.1/54.6                  |
| Main winch line speed: high/low          | m/min            | 122/52 (4th layer)         |
| Aux. winch line speed: high/low          | m/min            | 105/45 (2nd layer)         |
| Boom extending speed                     | sec/m            | 120.0/28.8                 |
| Boom raising speed                       | sec/deg          | 60.0/0° - 82.5°            |
| Swing speed                              | rpm              | 2.4                        |

### 2. CRANE MAIN MECHANISM

|                        |   |  |
|------------------------|---|--|
| Type of main boom      | Box type, 5 sections, 2nd/3rd singly and 4th/5th simultaneously telescoping.  |  |
| Type of jib            | Compressed truss and box type, 2nd drawing out type. Power set jib, 3 step variable tilt type (5°/17°/30°). Sky tilt jib (optional): hydraulically steplessly tilting type (5° to 45°).   |  |
| Boom telescopic system | Direct push by double act. hydr. cyls (triple) with use of wire ropes.  |  |
| Boom hoist system      | Direct push by double act. hydr. cyl. (single).   |  |
| Winch system           | 2 set hydr. motor drive, spur gear reduction. With flow control valve of pressure compensating type. High speed (2 pumps flow) and low speed (1 pump) automatic change. Independent 2 winches with automatic brake and free fall. |  |
| Swing system           | Hydr. motor drive, planetary gear reduction type. Free/lock selector type, with hand brake attached.  |  |
| Outriggers             | Type  | All hydraulic type, H-type or X-type.                  |
|                        | Extending width m   | 7.4/6.8/5.4/4.1/2.55 (min. H-type) 3.46 (min. X-type). |

### 3. WIRE ROPES

|                           |          |   |
|---------------------------|----------|---|
| Main winch wire rope      | mm φ × m | 18 × 220/IWRC6 × Fi (29) C/O hard to twist rope |
| Auxiliary winch wire rope | mm φ × m | 18 × 120/IWRC6 × WS (26) C/O hard to twist rope |

#### 4. HYDRAULIC SYSTEM

|                                |   |
|--------------------------------|---|
| Type of hydraulic pump         | 2 tandem (variable plunger) and 3 tandem gear pumps |
| Capacity of hydraulic oil tank | ℓ 575   |

#### 5. SAFETY DEVICES

|  |  |
|--|--|
|  | Moment limiter, swing automatic stop device, multi-display, overhoist preventive device, working range limit device (with swing range limit), outrigger ext. width automatic detecting device, check and safety monitor, auxiliary brake for work, sling wire lock, winch drum lock device, swing lock device, hydraulic safety valve, boom telescope wrong operation preventive device, outrigger safety device, boom hoist safety device, boom telescope safety device, free fall interlock device, interceptive lever lock for on and off, basic machine inclination meter, antislip seat, swing warning lamp, swing voice alarm. |
|--|--|

#### 6. PERFORMANCE OF CARRIER

|                                   |                    |  |
|-----------------------------------|--------------------|--|
| Maximum traveling speed           | km/h               | 49   |
| Turning radius, 2W steer/4W steer | m                  | 10.9/6.1   |
| Gradeability                      | tan θ (deg.)       | 0.6 (31°)  |
| Engine                            | Model              | Mitsubishi 6D24-TCE2   |
|                                   | Kind               | Water cooled, 4cycle, 6cyls, direct inject. type with inter cooler, diesel |
|                                   | Total displacement | cc 11,945  |
|                                   | Max. output        | PS/rpm 350/2,200   |
|                                   | Max. torque        | kg · m/rpm 135/1,400   |

#### 7. MAJOR MECHANISM OF CARRIER

|                                    |  |   |
|------------------------------------|--|---|
| Traveling drive type               | 4WD (4 × 4)/2WD (4 × 2) selecting type   |   |
| Torque converter                   | 3 element, 1 step, 2 phases<br>Electronic control, full automatic with lock-up clutch. |   |
| Transmission                       | Model  | Electronic control, full automatic shift.   |
|                                    | No. of speed change gear   | 3 speed forward/1 speed reverse (with high/low shift).  |
| Reduction unit form                | Axle 2 step reduction type.  |   |
| Axle front wheel/rear wheel        | All floating type.   |   |
| Steering                           | Form   | Engine rpm induction type all hydraulic type power steering. With emergency steering and reverse steering correcting device.                        |
|                                    | Mode   | Normal (front 2W), cramp (4W), crab (4W) and rear (rear 2W)   |
| Brake                              | Main service brake   | With hydr. air booster, disc type 4 wheel brake, with fluids type retarder, and electro-control exhaust brake linked with torque converter lock-up. |
|                                    | Parking brake  | Propel shaft brake internal expansion type with aux. brake for work.  |
| Suspension                         | Hydr-pneumatic suspension (with hydr. lock cylinder).                                  |   |
| Fuel tank capacity                 | ℓ  | 300   |
| Tires (front wheel and rear wheel) | 505/95 R25 183E ROAD   |   |

## 8. CARRIER SAFETY DEVICES

|  |  |
|--|--|
|  | Emergency steering device, rear steering auto. lock, suspension lock device, engine overrun warning device, check and safety monitor, boom mirror, reverse voice alarm, left turn voice alarm. |
|--|--|

## 9. DIMENSIONS WHEN TRAVELING

|                              |    |             |
|------------------------------|----|-------------|
| Overall length               | mm | 12,340      |
| Overall width                | mm | 2,960       |
| Overall height               | mm | 3,700       |
| Wheelbase (axle distance)    | mm | 4,980       |
| Tread front wheel/rear wheel | mm | 2,380/2,380 |

## 10. TOTAL WEIGHT

|                 |    |        |
|-----------------|----|--------|
| Total load      | kg | 38,495 |
| Front axle load | kg | 19,245 |
| Rear axle load  | kg | 19,250 |

## 11. SEATING CAPACITY

|  |          |
|--|----------|
|  | 1 person |
|--|----------|

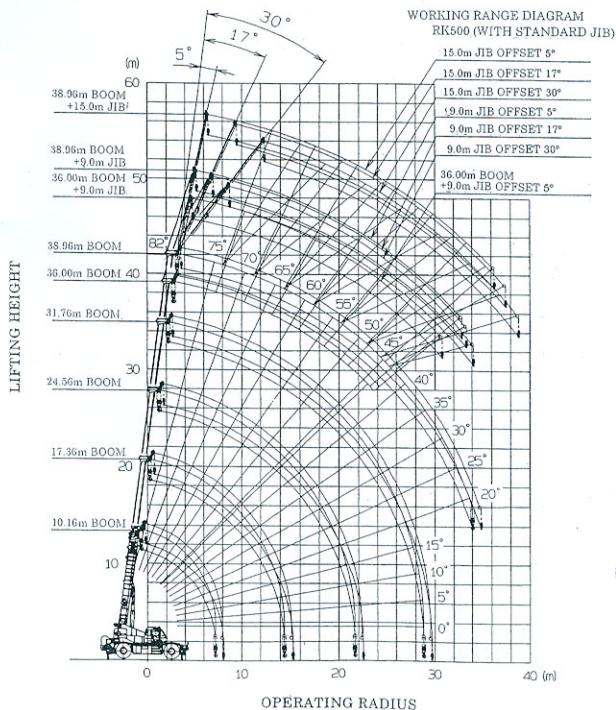
## 6.2 OPERATING RADIUS-LIFTING HEIGHT DIAGRAM

The diagram shows the relations between the operating radius and lifting height and between the boom length and boom hoisting angle.

1. This diagram does not include the boom deflection. Since the actual operating radius is somewhat extended from that shown in this diagram due to deflection of the boom, be careful.
2. The operating radius is the horizontal distance from the centerline of rotation to a vertical line through the centerline of gravity of the load.
3. When estimating a lifting height above the ground, make allowance for sling wire length.

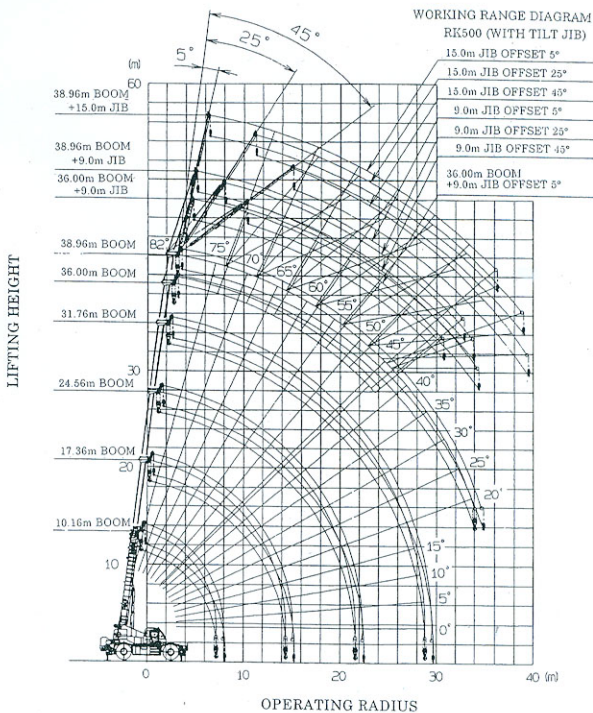
### 6.2.1 WORKING RANGE DIAGRAM (STANDARD JIB)

(NOTE) This diagram does not include deflection of the boom and jib.



## 6.2.2 WORKING RANGE DIAGRAM (TILT JIB)

(NOTE) This diagram does not include deflection of the boom and jib.



6.3. RATED CRANE LOAD TABLE  
1. BOOM RATED LOADS (ton) WITH OUTRIGGERS USED

| Boom Length<br>Operating<br>Radius(m) | Outriggers Max (7.4m) Extended<br>(Whole around) |       |       | Outriggers Mid. (6.8m) Extended<br>(Over side) |       |       | Outriggers Mid. (5.4m) Extended<br>(Over side) |       |       | Outriggers Mid. (4.1m) Extended<br>(Over side) |       |       | Outriggers Min. Extended<br>(Over side) |       | Boom Length<br>(m) |       |       |       |       |      |      |    |     |     |                 |
|---------------------------------------|--|-------|-------|--|-------|-------|--|-------|-------|--|-------|-------|---|-------|--------------------|-------|-------|-------|-------|------|------|----|-----|-----|-----------------|
|                                       | 10.2   | 17.4  | 24.6  | 31.8   | 39.0  | 10.2  | 17.4   | 24.6  | 31.8  | 39.0   | 10.2  | 17.4  | 24.6                                    | 31.8  |                    | 39.0  | 10.2  | 17.4  | 24.6  |      |      |    |     |     |                 |
| 2.9                                   | 51.00  | 28.00 | 20.00 |  | 51.00 | 28.00 | 20.00  |       | 45.00 | 25.00  | 20.00 |       | 40.00                                   | 25.00 | 20.00              | 16.00 | 12.00 | 11.00 | 3.0   |      |      |    |     |     |                 |
| 3.0                                   | 50.00  | 28.00 | 20.00 | 14.00  | 45.00 | 25.00 | 20.00  | 14.00 | 43.00 | 23.00  | 20.00 | 14.00 | 37.30                                   | 25.00 | 20.00              | 14.00 | 12.00 | 11.00 | 3.2   |      |      |    |     |     |                 |
| 3.2                                   | 45.00  | 25.00 | 20.00 | 14.00  | 41.00 | 23.00 | 20.00  | 14.00 | 39.00 | 21.00  | 20.00 | 14.00 | 33.20                                   | 23.00 | 20.00              | 14.00 | 12.00 | 11.00 | 3.5   |      |      |    |     |     |                 |
| 3.5                                   | 41.00  | 23.00 | 20.00 | 14.00  | 38.90 | 23.00 | 20.00  | 14.00 | 37.00 | 21.00  | 20.00 | 14.00 | 30.00                                   | 23.00 | 20.00              | 14.00 | 12.00 | 11.00 | 4.0   |      |      |    |     |     |                 |
| 3.75                                  | 38.90  | 23.00 | 20.00 | 14.00  | 37.00 | 21.00 | 20.00  | 14.00 | 37.00 | 21.00  | 20.00 | 14.00 | 27.00                                   | 23.00 | 20.00              | 14.00 | 12.00 | 11.00 | 4.70  |      |      |    |     |     |                 |
| 4.0                                   | 37.00  | 21.00 | 20.00 | 14.00  | 35.00 | 21.00 | 20.00  | 14.00 | 35.00 | 21.00  | 20.00 | 14.00 | 25.00                                   | 23.00 | 20.00              | 14.00 | 12.00 | 11.00 | 5.0   |      |      |    |     |     |                 |
| 4.5                                   | 33.90  | 20.00 | 20.00 | 14.00  | 33.90 | 20.00 | 20.00  | 14.00 | 33.90 | 20.00  | 20.00 | 14.00 | 23.00                                   | 23.00 | 20.00              | 14.00 | 11.30 | 10.90 | 10.80 | 4.5  |      |    |     |     |                 |
| 5.0                                   | 30.20  | 20.00 | 20.00 | 14.00  | 30.20 | 20.00 | 20.00  | 14.00 | 30.20 | 20.00  | 20.00 | 14.00 | 21.00                                   | 23.00 | 20.00              | 14.00 | 9.20  | 9.05  | 8.90  | 5.0  |      |    |     |     |                 |
| 5.5                                   | 27.50  | 20.00 | 20.00 | 14.00  | 27.50 | 20.00 | 20.00  | 14.00 | 27.50 | 20.00  | 20.00 | 14.00 | 19.00                                   | 23.00 | 20.00              | 14.00 | 7.80  | 7.55  | 7.45  | 5.5  |      |    |     |     |                 |
| 6.0                                   | 25.00  | 20.00 | 20.00 | 14.00  | 25.00 | 20.00 | 20.00  | 14.00 | 25.00 | 20.00  | 20.00 | 14.00 | 17.00                                   | 23.00 | 20.00              | 14.00 | 6.60  | 6.40  | 6.25  | 6.0  |      |    |     |     |                 |
| 6.5                                   | 23.00  | 20.00 | 20.00 | 14.00  | 23.00 | 20.00 | 20.00  | 14.00 | 23.00 | 20.00  | 20.00 | 14.00 | 15.00                                   | 23.00 | 20.00              | 14.00 | 5.60  | 5.45  | 5.30  | 6.5  |      |    |     |     |                 |
| 7.0                                   | 21.00  | 20.00 | 20.00 | 14.00  | 21.00 | 20.00 | 20.00  | 14.00 | 21.00 | 20.00  | 20.00 | 14.00 | 13.00                                   | 23.00 | 20.00              | 14.00 | 4.80  | 4.65  | 4.55  | 7.0  |      |    |     |     |                 |
| 7.5                                   | 19.00  | 20.00 | 20.00 | 14.00  | 19.00 | 20.00 | 20.00  | 14.00 | 19.00 | 20.00  | 20.00 | 14.00 | 11.00                                   | 23.00 | 20.00              | 14.00 | 4.10  | 4.00  | 3.90  | 7.5  |      |    |     |     |                 |
| 8.0                                   | 17.00  | 16.00 | 13.00 | 7.60   | 17.00 | 16.00 | 13.00  | 7.60  | 17.00 | 16.00  | 13.00 | 7.60  | 13.15                                   | 13.15 | 13.00              | 7.60  | 9.40  | 9.00  | 8.90  | 8.0  |      |    |     |     |                 |
| 8.5                                   | 16.00  | 14.70 | 11.90 | 7.60   | 16.00 | 14.70 | 11.90  | 7.60  | 16.00 | 14.70  | 11.90 | 7.60  | 10.60                                   | 10.25 | 11.00              | 7.60  | 7.40  | 7.30  | 7.60  | 8.5  |      |    |     |     |                 |
| 9.0                                   | 15.00  | 13.70 | 11.30 | 7.60   | 15.00 | 13.70 | 11.30  | 7.60  | 15.00 | 13.70  | 11.30 | 7.60  | 9.30                                    | 9.15  | 10.00              | 7.60  | 6.55  | 6.45  | 7.30  | 9.0  |      |    |     |     |                 |
| 9.5                                   | 14.00  | 13.10 | 10.80 | 7.60   | 14.00 | 12.60 | 10.80  | 7.60  | 14.00 | 12.60  | 10.80 | 7.60  | 8.35                                    | 8.20  | 9.10               | 7.60  | 6.20  | 6.10  | 6.95  | 9.5  |      |    |     |     |                 |
| 10.0                                  | 13.10  | 12.30 | 10.30 | 7.60   | 13.10 | 11.20 | 10.30  | 7.60  | 13.10 | 11.20  | 10.30 | 7.60  | 7.50                                    | 7.35  | 8.30               | 7.60  | 6.05  | 5.95  | 6.80  | 10.0 |      |    |     |     |                 |
| 11.0                                  | 11.00  | 10.30 | 9.40  | 7.10   | 11.00 | 9.30  | 9.30   | 9.40  | 7.10  | 11.00  | 9.30  | 9.30  | 9.40                                    | 6.20  | 6.00               | 6.90  | 7.10  | 3.70  | 3.60  | 4.40 | 11.0 |    |     |     |                 |
| 12.0                                  | 9.30   | 9.20  | 8.65  | 6.80   | 9.30  | 8.55  | 8.65   | 6.80  | 7.85  | 7.65   | 8.65  | 6.80  | 5.15                                    | 4.95  | 5.80               | 6.10  | 2.95  | 2.85  | 3.60  | 12.0 |      |    |     |     |                 |
| 13.0                                  | 7.90   | 7.75  | 8.00  | 6.15   | 7.90  | 7.35  | 7.60   | 6.15  | 6.70  | 6.35   | 7.60  | 6.15  | 4.25                                    | 4.05  | 4.90               | 5.40  | 2.20  | 2.15  | 3.00  | 13.0 |      |    |     |     |                 |
| 14.0                                  | 6.75   | 6.60  | 7.40  | 5.75   | 6.75  | 6.40  | 6.60   | 5.75  | 6.50  | 6.15   | 7.40  | 5.75  | 3.50                                    | 3.30  | 4.20               | 4.65  | 1.70  | 1.55  | 2.50  | 14.0 |      |    |     |     |                 |
| 14.4                                  | 4.00   | 6.20  | 7.00  | 5.60   | 4.00  | 5.00  | 6.05   | 5.60  | 4.35  | 3.05   | 3.95  | 4.40  | 1.50                                    | 1.30  | 2.25               | 2.70  | 1.00  | 1.20  | 2.25  | 14.4 |      |    |     |     |                 |
| 15.0                                  | 5.65   | 6.50  | 5.35  |  | 4.55  | 6.05  | 6.35   |       | 3.90  | 4.85   | 5.00  |       | 2.65                                    | 3.60  | 4.05               |       | 1.85  | 2.65  | 3.60  | 15.0 |      |    |     |     |                 |
| 16.0                                  | 4.90   | 5.70  | 5.00  |  | 3.90  | 4.85  | 5.00   |       | 3.30  | 4.25   | 4.70  |       | 2.10                                    | 3.10  | 3.55               |       | 1.60  | 2.45  | 3.40  | 16.0 |      |    |     |     |                 |
| 17.0                                  | 4.25   | 5.00  | 4.70  |  | 3.35  | 4.25  | 4.70   |       | 2.80  | 3.75   | 4.40  |       | 1.65                                    | 2.65  | 3.10               |       | 1.30  | 2.15  | 3.10  | 17.0 |      |    |     |     |                 |
| 18.0                                  | 3.70   | 4.40  | 4.40  |  | 2.80  | 3.75  | 4.40   |       | 2.40  | 3.30   | 4.00  |       | 1.20                                    | 2.15  | 2.70               |       | 1.10  | 1.95  | 2.90  | 18.0 |      |    |     |     |                 |
| 19.0                                  | 3.20   | 3.90  | 4.20  |  | 2.40  | 3.30  | 4.00   |       | 2.00  | 2.90   | 3.60  |       | 0.85                                    | 1.75  | 2.30               |       | 0.75  | 1.60  | 2.50  | 19.0 |      |    |     |     |                 |
| 20.0                                  | 2.70   | 3.45  | 3.65  |  | 2.00  | 2.85  | 3.35   |       | 1.65  | 2.50   | 3.20  |       | 0.65                                    | 1.50  | 2.05               |       | 0.65  | 1.45  | 2.20  | 20.0 |      |    |     |     |                 |
| 21.0                                  | 2.30   | 3.05  | 3.55  |  | 1.65  | 2.50  | 3.00   |       | 1.45  | 2.30   | 2.80  |       | 0.55                                    | 1.40  | 1.95               |       | 0.55  | 1.35  | 2.00  | 21.0 |      |    |     |     |                 |
| 22.0                                  | 2.05   | 2.90  | 3.30  |  | 1.45  | 2.30  | 2.80   |       | 1.25  | 2.15   | 2.65  |       | 0.45                                    | 1.30  | 1.85               |       | 0.45  | 1.25  | 1.90  | 22.0 |      |    |     |     |                 |
| 23.0                                  | 1.85   | 2.75  | 3.15  |  | 1.25  | 2.15  | 2.65   |       | 1.05  | 1.95   | 2.50  |       | 0.35                                    | 1.20  | 1.75               |       | 0.35  | 1.15  | 1.80  | 23.0 |      |    |     |     |                 |
| 24.0                                  | 1.65   | 2.55  |       |  | 1.05  | 1.95  |  |       | 0.90  | 1.80   |       |       | 0.30                                    | 1.10  | 1.60               |       | 0.30  | 1.05  | 1.70  | 24.0 |      |    |     |     |                 |
| 25.0                                  | 1.45   | 2.35  |       |  | 0.85  | 1.75  |  |       | 0.75  | 1.65   |       |       | 0.25                                    | 1.00  | 1.50               |       | 0.25  | 0.95  | 1.60  | 25.0 |      |    |     |     |                 |
| 26.0                                  | 1.25   | 2.15  |       |  | 0.65  | 1.50  |  |       | 0.60  | 1.40   |       |       | 0.20                                    | 0.90  | 1.40               |       | 0.20  | 0.85  | 1.50  | 26.0 |      |    |     |     |                 |
| 27.0                                  | 1.15   | 2.00  |       |  | 0.55  | 1.30  |  |       | 0.50  | 1.30   |       |       | 0.15                                    | 0.80  | 1.30               |       | 0.15  | 0.80  | 1.40  | 27.0 |      |    |     |     |                 |
| 28.0                                  | 1.05   | 1.85  |       |  | 0.45  | 1.15  |  |       | 0.40  | 1.15   |       |       | 0.10                                    | 0.70  | 1.20               |       | 0.10  | 0.75  | 1.30  | 28.0 |      |    |     |     |                 |
| 28.8                                  | 0.90   | 1.40  |       |  | 0.30  | 0.95  |  |       | 0.30  | 0.95   |       |       | 0.05                                    | 0.60  | 1.10               |       | 0.05  | 0.65  | 1.20  | 28.8 |      |    |     |     |                 |
| 29.0                                  | 1.35   |       |       |  | 0.90  |       |  |       | 0.90  |  |       |       | 0.30                                    |       |                    |       | 0.30  |       |       | 30.0 | 29.0 |    |     |     |                 |
| 30.0                                  | 1.15   |       |       |  | 0.70  |       |  |       | 0.70  |  |       |       | 0.25                                    |       |                    |       | 0.25  |       |       | 31.0 | 30.0 |    |     |     |                 |
| 31.0                                  | 1.00   |       |       |  | 0.60  |       |  |       | 0.60  |  |       |       | 0.20                                    |       |                    |       | 0.20  |       |       | 32.0 | 31.0 |    |     |     |                 |
| 32.0                                  | 0.85   |       |       |  | 0.50  |       |  |       | 0.50  |  |       |       | 0.15                                    |       |                    |       | 0.15  |       |       | 33.0 | 32.0 |    |     |     |                 |
| 33.0                                  | 0.70   |       |       |  | 0.40  |       |  |       | 0.40  |  |       |       | 0.10                                    |       |                    |       | 0.10  |       |       | 34.0 | 33.0 |    |     |     |                 |
| 34.0                                  | 0.55   |       |       |  | 0.30  |       |  |       | 0.30  |  |       |       | 0.05                                    |       |                    |       | 0.05  |       |       | 35.0 | 34.0 |    |     |     |                 |
| Min. Boom Angle                       | 0°   | 0°    | 0°    | 0°   | 0°    | 0°    | 0°   | 0°    | 0°    | 0°   | 0°    | 0°    | 0°                                      | 28°   | 36°                | 43°   | 0°    | 0°    | 45°   | 50°  | 55°  | 0° | 39° | 57° | Min. Boom Angle |