

2.2 Technical data

| Item | | Value | Remarks |
|---------------------|---|-------|---|
| Working performance | Max. rated lifting capacity | kg | 85000 |
| | Max. load moment of basic boom | kN.m | 2764 |
| | Max. load moment of max. length main boom | kN.m | 1376 |
| | Max. lifting height of basic boom | m | 12.8 |
| | Max. lifting height of main boom | m | 46.4 |
| | Max. lifting height of jib | m | 62.5 |
| | | | These parameters do not include deflection of boom and jib. |
| Working speeds | Max. hoist rope speed (main winch) | m/min | 140 |
| | Max. hoist rope speed (auxiliary winch) | m/min | 120 |
| | Boom derricking up time | s | 55 |
| | Boom telescoping out time | s | 110 |
| | Slewing speed | r/min | 0 - 1.7 |
| Driving | Max. driving speed | km/h | 75 |
| | Max. gradeability | % | 37 |
| | Min. turning diameter | m | ≤20 |
| | Min. ground clearance | mm | 300 |
| | Oil consumption per hundred kilometers | L | 48 |
| Mass | Deadweight in driving condition | kg | 48000 |
| | Complete vehicle kerb mass | kg | 47870 |
| | Front axle load | kg | 24000 |
| | Rear axle load | kg | 24000 |
| Dimensions | Overall dimensions (L×W×H) | mm | 14500×2800×3850 |
| | Outrigger spread (L) | m | 6.15 |
| | Outrigger spread (W) | m | Completely extended: 7.8 m Intermediately extended: 5.17 m |
| | Tail slewing radius | mm | 4300 |
| | Main boom length | m | 12.0 - 46.0 |
| | Main boom angle | ° | -2 - 80 |
| | Jib length | m | 9.5, 16.0 |
| | Offset | ° | 0, 15, 30 |

2.3 Rated lifting capacity tables

This crane is provided with 21 sheets of rated lifting capacity tables. The operator should select proper rated lifting load referring to resp. lifting capacity tables according to actual working conditions. For details, please refer to Table 2-1 to Table 2-21.

The values in column "I" refer to the extendable length of telescopic cylinder I.

The values in column "II" refer to 3 times extendable length of telescopic cylinder II, namely, the total extendable length of boom section 3, 4 and 5.

Table 2-1

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I and outriggers completely extended, over side and over rear, with 3T fixed counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 85000* | 55000 | | | | | |
| 3.5 | 70000* | 53000 | 43500 | | | | |
| 4.0 | 61500* | 52000 | 43500 | | | | |
| 4.5 | 55000 | 49000 | 42000 | 31000 | | | |
| 5.0 | 50000 | 46000 | 41000 | 31000 | | | |
| 5.5 | 46000 | 43000 | 40000 | 30000 | | | |
| 6.0 | 43000 | 39000 | 38000 | 29000 | 23000 | | |
| 7.0 | 33500 | 32500 | 31500 | 28000 | 22000 | | |
| 8.0 | 25000 | 24000 | 23000 | 23500 | 21000 | 16500 | |
| 9.0 | 20000 | 19000 | 18500 | 20500 | 19500 | 15500 | |
| 10.0 | | 15500 | 15200 | 16500 | 17500 | 14500 | 11500 |
| 11.0 | | 12900 | 12500 | 14000 | 14500 | 13500 | 11500 |
| 12.0 | | 10500 | 10200 | 11500 | 12500 | 12500 | 10500 |
| 14.0 | | | 7200 | 8500 | 9200 | 9600 | 9800 |
| 16.0 | | | 4900 | 6100 | 7000 | 7500 | 7900 |
| 18.0 | | | | 4500 | 5200 | 5800 | 6200 |
| 20.0 | | | | 3300 | 4000 | 4500 | 4800 |
| 22.0 | | | | 2300 | 3100 | 3500 | 3900 |
| 24.0 | | | | | 2200 | 2700 | 3000 |
| 26.0 | | | | | 1600 | 2000 | 2400 |
| 28.0 | | | | | | 1500 | 1800 |
| 30.0 | | | | | | 1100 | 1400 |
| 32.0 | | | | | | | 1000 |
| 34.0 | | | | | | | |
| 36.0 | | | | | | | |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-2

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|
| | Telescopic cylinder I intermediately extended and outriggers completely extended, over side and over rear, with 3T fixed counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 85000* | 55000 | | | | |
| 3.5 | 70000* | 53000 | 30000 | | | |
| 4.0 | 61500* | 52000 | 30000 | | | |
| 4.5 | 55000 | 49000 | 30000 | | | |
| 5.0 | 50000 | 46000 | 30000 | 23000 | | |
| 5.5 | 46000 | 43000 | 30000 | 23000 | | |
| 6.0 | 43000 | 39000 | 29000 | 23000 | | |
| 7.0 | 33500 | 32500 | 28000 | 22000 | 16500 | |
| 8.0 | 25000 | 24000 | 23500 | 21000 | 16500 | 11500 |
| 9.0 | 20000 | 19000 | 20800 | 19500 | 15500 | 11500 |
| 10.0 | | 15500 | 17000 | 18000 | 14500 | 11500 |
| 11.0 | | 12700 | 14200 | 15000 | 13500 | 11500 |
| 12.0 | | 10500 | 12000 | 12800 | 12500 | 10500 |
| 14.0 | | | 8700 | 9500 | 10000 | 9800 |
| 16.0 | | | 6400 | 7200 | 7700 | 8200 |
| 18.0 | | | 4800 | 5500 | 6000 | 6500 |
| 20.0 | | | | 4300 | 4800 | 5200 |
| 22.0 | | | | 3300 | 3800 | 4200 |
| 24.0 | | | | | 3000 | 3400 |
| 26.0 | | | | | 2300 | 2700 |
| 28.0 | | | | | 1800 | 2150 |
| 30.0 | | | | | | 1700 |
| 32.0 | | | | | | 1300 |
| 34.0 | | | | | | |
| 36.0 | | | | | | |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-3

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------|---|-------|-------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers completely extended, over side and over rear, with 3T fixed counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 85000* | 30000 | | | |
| 3.5 | 70000* | 30000 | | | |
| 4.0 | 61500* | 30000 | 23000 | | |
| 4.5 | 55000 | 30000 | 23000 | | |
| 5.0 | 50000 | 30000 | 23000 | | |
| 5.5 | 46000 | 30000 | 23000 | 16500 | |
| 6.0 | 43000 | 29000 | 23000 | 16500 | |
| 7.0 | 33500 | 28000 | 22000 | 16500 | 11500 |
| 8.0 | 25000 | 24000 | 21000 | 15500 | 11500 |
| 9.0 | 20000 | 21500 | 19500 | 14500 | 11500 |
| 10.0 | | 17500 | 18000 | 13500 | 11500 |
| 11.0 | | 14500 | 15500 | 12500 | 11000 |
| 12.0 | | 12500 | 13300 | 12000 | 10500 |
| 14.0 | | 9200 | 10000 | 10500 | 9300 |
| 16.0 | | | 7800 | 8100 | 8300 |
| 18.0 | | | 6100 | 6500 | 6800 |
| 20.0 | | | 4800 | 5200 | 5500 |
| 22.0 | | | | 4200 | 4500 |
| 24.0 | | | | 3400 | 3700 |
| 26.0 | | | | | 3000 |
| 28.0 | | | | | 2500 |
| 30.0 | | | | | 2000 |
| 32.0 | | | | | |
| 34.0 | | | | | |
| 36.0 | | | | | |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-4

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I completely extended and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 62000* | 52000 | | | | | |
| 3.5 | 52000 | 48000 | 42000 | | | | |
| 4.0 | 45000 | 43000 | 40000 | | | | |
| 4.5 | 40000 | 38000 | 37000 | 30000 | | | |
| 5.0 | 35000 | 33000 | 31500 | 30000 | | | |
| 5.5 | 28000 | 27500 | 26000 | 26500 | | | |
| 6.0 | 23000 | 22500 | 22000 | 22500 | 22000 | | |
| 7.0 | 16600 | 16000 | 15500 | 17000 | 17500 | | |
| 8.0 | 12500 | 12000 | 11500 | 13000 | 13500 | 14000 | |
| 9.0 | 9600 | 9200 | 8900 | 10000 | 11000 | 11500 | |
| 10.0 | | 7100 | 6900 | 8100 | 9000 | 9500 | 10000 |
| 11.0 | | 5500 | 5300 | 6500 | 7300 | 7900 | 8300 |
| 12.0 | | 4300 | 4100 | 5300 | 6000 | 6600 | 7000 |
| 14.0 | | | 2300 | 3400 | 4100 | 4600 | 5000 |
| 16.0 | | | 1000 | 2100 | 2800 | 3200 | 3600 |
| 18.0 | | | | 1100 | 1800 | 2200 | 2600 |
| 20.0 | | | | | 1000 | 1500 | 1800 |
| 22.0 | | | | | | 900 | 1200 |
| 24.0 | | | | | | | |
| 26.0 | | | | | | | |
| 28.0 | | | | | | | |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-5

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|
| | Telescopic cylinder I and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 62000* | 52000 | | | | |
| 3.5 | 52000 | 48000 | 30000 | | | |
| 4.0 | 45000 | 43000 | 30000 | | | |
| 4.5 | 40000 | 38000 | 30000 | | | |
| 5.0 | 35000 | 33000 | 30000 | 23000 | | |
| 5.5 | 28000 | 27500 | 28500 | 23000 | | |
| 6.0 | 23000 | 22500 | 23500 | 22000 | | |
| 7.0 | 16600 | 16000 | 17800 | 18500 | 16500 | |
| 8.0 | 12500 | 12000 | 13500 | 14500 | 14800 | 11500 |
| 9.0 | 9600 | 9200 | 10600 | 11500 | 12000 | 11500 |
| 10.0 | | 7100 | 8600 | 9400 | 9800 | 10300 |
| 11.0 | | 5500 | 6900 | 7700 | 8300 | 8700 |
| 12.0 | | 4300 | 5700 | 6400 | 6900 | 7300 |
| 14.0 | | | 3800 | 4500 | 5000 | 5300 |
| 16.0 | | | 2500 | 3100 | 3600 | 3900 |
| 18.0 | | | | 2200 | 2600 | 2900 |
| 20.0 | | | | 1400 | 1800 | 2100 |
| 22.0 | | | | | 1200 | 1500 |
| 24.0 | | | | | | 1000 |
| 26.0 | | | | | | |
| 28.0 | | | | | | |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-6

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------|---|-------|--------------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 62000* | 30000 | | | |
| 3.5 | 52000 | 30000 | | | |
| 4.0 | 45000 | 30000 | 23000 | | |
| 4.5 | 40000 | 30000 | 23000 | | |
| 5.0 | 35000 | 30000 | 23000 | | |
| 5.5 | 28000 | 29000 | 23000 | 16500 | |
| 6.0 | 23000 | 25000 | 23000 900 | 16500 | |
| 7.0 | 16600 | 18500 | 19600 | 16500 | 11500 |
| 8.0 | 12500 | 14300 | 15200 | 15500 | 11500 |
| 9.0 | 9600 | 11300 | 12200 | 12700 | 11500 |
| 10.0 | | 9200 | 10000 | 10500 | 10800 |
| 11.0 | | 7600 | 8300 | 8800 | 9100 |
| 12.0 | | 6300 | 7000 | 7400 | 7800 |
| 14.0 | | 4400 | 5000 | 5500 | 5800 |
| 16.0 | | | 3700 | 4000 | 4300 |
| 18.0 | | | 2700 | 3000 | 3300 |
| 20.0 | | | 1800 | 2300 | 2500 |
| 22.0 | | | | 1600 | 1900 |
| 24.0 | | | | 1100 | 1400 |
| 26.0 | | | | | 1000 |
| 28.0 | | | | | |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-7

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------------|--|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 85000* | 55000 | | | | | |
| 3.5 | 71000* | 53000 | 43500 | | | | |
| 4.0 | 63000* | 52000 | 43500 | | | | |
| 4.5 | 56000 | 49000 | 42000 | 31000 | | | |
| 5.0 | 51500 | 46000 | 41000 | 31000 | | | |
| 5.5 | 48000 | 43000 | 40000 | 30000 | | | |
| 6.0 | 45500 | 40000 | 38000 | 29000 | 23000 | | |
| 7.0 | 37500 | 34500 | 33000 | 28000 | 22000 | | |
| 8.0 | 29000 | 28000 | 27000 | 25000 | 21000 | 16500 | |
| 9.0 | 23000 | 22500 | 22000 | 22500 | 19500 | 15500 | |
| 10.0 | | 18500 | 18000 | 19500 | 18000 | 14500 | 11500 |
| 11.0 | | 15000 | 15000 | 16500 | 16500 | 13500 | 11500 |
| 12.0 | | 13200 | 12900 | 14000 | 14500 | 12500 | 10500 |
| 14.0 | | | 9300 | 10500 | 11000 | 11500 | 9800 |
| 16.0 | | | 6800 | 8100 | 8700 | 9300 | 8700 |
| 18.0 | | | | 6200 | 6900 | 7400 | 7800 |
| 20.0 | | | | 4750 | 5500 | 5900 | 6300 |
| 22.0 | | | | 3650 | 4300 | 4800 | 5200 |
| 24.0 | | | | | 3400 | 3900 | 4300 |
| 26.0 | | | | | 2700 | 3200 | 3500 |
| 28.0 | | | | | | 2500 | 2900 |
| 30.0 | | | | | | 2000 | 2300 |
| 32.0 | | | | | | 1500 | 1900 |
| 34.0 | | | | | | | 1500 |
| 36.0 | | | | | | | 1100 |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-8

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|
| | Telescopic cylinder I intermediately extended and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 85000* | 55000 | | | | |
| 3.5 | 71000* | 53000 | 30000 | | | |
| 4.0 | 63000* | 52000 | 30000 | | | |
| 4.5 | 56000 | 49000 | 30000 | | | |
| 5.0 | 51500 | 46000 | 30000 | 23000 | | |
| 5.5 | 48000 | 43000 | 30000 | 23000 | | |
| 6.0 | 45500 | 40000 | 29000 | 23000 | | |
| 7.0 | 37500 | 34500 | 28000 | 22000 | 16500 | |
| 8.0 | 29000 | 28000 | 25000 | 21000 | 16500 | 11500 |
| 9.0 | 23000 | 22500 | 23500 | 19500 | 15500 | 11500 |
| 10.0 | | 18500 | 20000 | 18000 | 14500 | 11500 |
| 11.0 | | 15000 | 16800 | 17000 | 13500 | 11500 |
| 12.0 | | 13200 | 14300 | 15000 | 12500 | 10500 |
| 14.0 | | | 10500 | 11500 | 11500 | 9800 |
| 16.0 | | | 8200 | 9000 | 9500 | 8700 |
| 18.0 | | | 6300 | 7100 | 7600 | 7800 |
| 20.0 | | | | 5600 | 6100 | 6500 |
| 22.0 | | | | 4500 | 5000 | 5300 |
| 24.0 | | | | | 4000 | 4400 |
| 26.0 | | | | | 3300 | 3600 |
| 28.0 | | | | | 2700 | 3000 |
| 30.0 | | | | | | 2500 |
| 32.0 | | | | | | 2000 |
| 34.0 | | | | | | 1600 |
| 36.0 | | | | | | |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-9

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------------|--|-------|-------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 85000* | 30000 | | | |
| 3.5 | 71000* | 30000 | | | |
| 4.0 | 63000* | 30000 | 23000 | | |
| 4.5 | 56000 | 30000 | 23000 | | |
| 5.0 | 51500 | 30000 | 23000 | | |
| 5.5 | 48000 | 30000 | 23000 | 16500 | |
| 6.0 | 45500 | 29000 | 23000 | 16500 | |
| 7.0 | 37500 | 28000 | 22000 | 16500 | 11500 |
| 8.0 | 29000 | 25000 | 21000 | 15500 | 11500 |
| 9.0 | 23000 | 24000 | 19500 | 14500 | 11500 |
| 10.0 | | 20500 | 18000 | 13500 | 11500 |
| 11.0 | | 17500 | 17000 | 12500 | 11000 |
| 12.0 | | 14800 | 15500 | 12000 | 10500 |
| 14.0 | | 11200 | 12000 | 10500 | 9300 |
| 16.0 | | | 9500 | 9600 | 8300 |
| 18.0 | | | 7600 | 8000 | 7400 |
| 20.0 | | | 6200 | 6500 | 6700 |
| 22.0 | | | | 5400 | 5700 |
| 24.0 | | | | 4500 | 4800 |
| 26.0 | | | | | 4000 |
| 28.0 | | | | | 3400 |
| 30.0 | | | | | 2800 |
| 32.0 | | | | | |
| 34.0 | | | | | |
| 36.0 | | | | | |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-10

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------|---|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I completely extended and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 62000* | 52000 | | | | | |
| 3.5 | 52000 | 48000 | 42000 | | | | |
| 4.0 | 45000 | 43000 | 40000 | | | | |
| 4.5 | 40000 | 38000 | 37000 | 30000 | | | |
| 5.0 | 38000 | 36000 | 34000 | 30000 | | | |
| 5.5 | 34500 | 33500 | 31500 | 30000 | | | |
| 6.0 | 28500 | 27500 | 25000 | 26000 | 23000 | | |
| 7.0 | 20800 | 20000 | 19500 | 21000 | 21500 | | |
| 8.0 | 15800 | 15000 | 15000 | 16500 | 17000 | 16500 | |
| 9.0 | 12500 | 12000 | 11500 | 13000 | 14000 | 14500 | |
| 10.0 | | 9500 | 9300 | 10500 | 11500 | 12000 | 11500 |
| 11.0 | | 7600 | 7400 | 8700 | 9500 | 10000 | 10500 |
| 12.0 | | 6300 | 6000 | 7200 | 8000 | 8500 | 9000 |
| 14.0 | | | 3900 | 5000 | 5700 | 6200 | 6600 |
| 16.0 | | | 2300 | 3000 | 4100 | 4600 | 5000 |
| 18.0 | | | | 2300 | 3000 | 3500 | 3800 |
| 20.0 | | | | 1400 | 2100 | 2500 | 2800 |
| 22.0 | | | | | 1400 | 1800 | 2100 |
| 24.0 | | | | | | 1200 | 1500 |
| 26.0 | | | | | | | 1000 |
| 28.0 | | | | | | | |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-11

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|
| | Telescopic cylinder I and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 62000* | 52000 | | | | |
| 3.5 | 52000 | 48000 | 30000 | | | |
| 4.0 | 45000 | 43000 | 30000 | | | |
| 4.5 | 40000 | 38000 | 30000 | | | |
| 5.0 | 38000 | 36000 | 30000 | 23000 | | |
| 5.5 | 34500 | 33500 | 30000 | 23000 | | |
| 6.0 | 28500 | 27500 | 26000 | 23000 | | |
| 7.0 | 20800 | 20000 | 21500 | 22000 | 16500 | |
| 8.0 | 15800 | 15000 | 16500 | 18800 | 16500 | 11500 |
| 9.0 | 12500 | 12000 | 13500 | 14300 | 15000 | 11500 |
| 10.0 | | 9500 | 11000 | 11800 | 12500 | 11500 |
| 11.0 | | 7600 | 9100 | 9800 | 10500 | 10800 |
| 12.0 | | 6300 | 7600 | 8400 | 8900 | 9300 |
| 14.0 | | | 5400 | 6100 | 6600 | 7000 |
| 16.0 | | | 3800 | 4500 | 5000 | 5300 |
| 18.0 | | | | 3400 | 3800 | 4100 |
| 20.0 | | | | 2400 | 2900 | 3200 |
| 22.0 | | | | | 2100 | 2400 |
| 24.0 | | | | | 1500 | 1800 |
| 26.0 | | | | | | 1300 |
| 28.0 | | | | | | |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-12

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------|--|-------|-------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 62000* | 30000 | | | |
| 3.5 | 52000 | 30000 | | | |
| 4.0 | 45000 | 30000 | 23000 | | |
| 4.5 | 40000 | 30000 | 23000 | | |
| 5.0 | 38000 | 30000 | 23000 | | |
| 5.5 | 34500 | 30000 | 23000 | 16500 | |
| 6.0 | 28500 | 29000 | 23000 | 16500 | |
| 7.0 | 20800 | 22500 | 22000 | 16500 | 11500 |
| 8.0 | 15800 | 17600 | 18500 | 15500 | 11500 |
| 9.0 | 12500 | 14200 | 15000 | 14500 | 11500 |
| 10.0 | | 11700 | 12500 | 13000 | 11500 |
| 11.0 | | 9700 | 10500 | 11000 | 11000 |
| 12.0 | | 8200 | 8900 | 9400 | 9700 |
| 14.0 | | 6000 | 6600 | 7100 | 7400 |
| 16.0 | | | 5000 | 5400 | 5700 |
| 18.0 | | | 3900 | 4300 | 4500 |
| 20.0 | | | 2800 | 3300 | 3600 |
| 22.0 | | | | 2600 | 2800 |
| 24.0 | | | | 2000 | 2200 |
| 26.0 | | | | | 1700 |
| 28.0 | | | | | 1300 |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-13

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------------|--|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 85000* | 55000 | | | | | |
| 3.5 | 72000* | 53000 | 43500 | | | | |
| 4.0 | 64000* | 52000 | 43500 | | | | |
| 4.5 | 57000 | 49000 | 42000 | 31000 | | | |
| 5.0 | 52500 | 46000 | 41000 | 31000 | | | |
| 5.5 | 49000 | 44000 | 40000 | 30000 | | | |
| 6.0 | 47000 | 41000 | 38000 | 29000 | 23000 | | |
| 7.0 | 38500 | 36000 | 33000 | 28000 | 22000 | | |
| 8.0 | 30000 | 29000 | 28000 | 25000 | 21000 | 16500 | |
| 9.0 | 24000 | 23500 | 23000 | 22500 | 19500 | 15500 | |
| 10.0 | | 20000 | 19800 | 21000 | 18000 | 14500 | 11500 |
| 11.0 | | 16500 | 16500 | 17500 | 16500 | 13500 | 11500 |
| 12.0 | | 14200 | 14000 | 15000 | 15500 | 12500 | 10500 |
| 14.0 | | | 10200 | 11300 | 12000 | 11500 | 9800 |
| 16.0 | | | 7600 | 8800 | 9500 | 10000 | 8700 |
| 18.0 | | | | 6900 | 7600 | 8200 | 7800 |
| 20.0 | | | | 5400 | 6100 | 6600 | 7000 |
| 22.0 | | | | 4200 | 4900 | 5400 | 5700 |
| 24.0 | | | | | 3900 | 4400 | 4700 |
| 26.0 | | | | | 3200 | 3600 | 3900 |
| 28.0 | | | | | 2500 | 2950 | 3300 |
| 30.0 | | | | | | 2400 | 2700 |
| 32.0 | | | | | | 1900 | 2250 |
| 34.0 | | | | | | | 1800 |
| 36.0 | | | | | | | 1400 |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-14

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------|-------|-------|-------|
| | Telescopic cylinder I intermediately extended and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 85000* | 55000 | | | | |
| 3.5 | 72000* | 53000 | 30000 | | | |
| 4.0 | 64000* | 52000 | 30000 | | | |
| 4.5 | 57000 | 49000 | 30000 | | | |
| 5.0 | 52500 | 46000 | 30000 | 23000 | | |
| 5.5 | 49000 | 44000 | 30000 | 23000 | | |
| 6.0 | 47000 | 41000 | 29000 | 23000 | | |
| 7.0 | 38500 | 36000 | 28000 | 22000 | 16500 | |
| 8.0 | 30000 | 29000 | 26000 | 21000 | 16500 | 11500 |
| 9.0 | 24000 | 23500 | 25000 | 19500 | 15500 | 11500 |
| 10.0 | | 20000 | 21500 | 18000 | 14500 | 11500 |
| 11.0 | | 16500 | 18000 | 17500 | 13500 | 11500 |
| 12.0 | | 14200 | 15500 | 16300 | 12500 | 10500 |
| 14.0 | | | 11500 | 12400 | 11500 | 9800 |
| 16.0 | | | 9000 | 9800 | 10000 | 8700 |
| 18.0 | | | 7100 | 7900 | 8400 | 7800 |
| 20.0 | | | | 6400 | 6800 | 7000 |
| 22.0 | | | | 5200 | 5600 | 6000 |
| 24.0 | | | | | 4600 | 5000 |
| 26.0 | | | | | 3800 | 4100 |
| 28.0 | | | | | 3200 | 3500 |
| 30.0 | | | | | | 2900 |
| 32.0 | | | | | | 2400 |
| 34.0 | | | | | | 2000 |
| 36.0 | | | | | | |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-15

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------------|--|-------|-------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers completely extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 85000* | 30000 | | | |
| 3.5 | 72000* | 30000 | | | |
| 4.0 | 64000* | 30000 | 23000 | | |
| 4.5 | 57000 | 30000 | 23000 | | |
| 5.0 | 52500 | 30000 | 23000 | | |
| 5.5 | 49000 | 30000 | 23000 | 16500 | |
| 6.0 | 47000 | 29000 | 23000 | 16500 | |
| 7.0 | 38500 | 28000 | 22000 | 16500 | 11500 |
| 8.0 | 30000 | 26000 | 21000 | 16000 | 11500 |
| 9.0 | 24000 | 25000 | 19500 | 14500 | 11500 |
| 10.0 | | 22000 | 18000 | 13500 | 11500 |
| 11.0 | | 18800 | 17500 | 12500 | 11000 |
| 12.0 | | 16000 | 16800 | 12000 | 10500 |
| 14.0 | | 12000 | 13000 | 10500 | 9300 |
| 16.0 | | | 10300 | 9500 | 8300 |
| 18.0 | | | 8400 | 8700 | 7400 |
| 20.0 | | | 6900 | 7300 | 6700 |
| 22.0 | | | | 6100 | 6100 |
| 24.0 | | | | 5100 | 5400 |
| 26.0 | | | | | 4600 |
| 28.0 | | | | | 3900 |
| 30.0 | | | | | 3300 |
| 32.0 | | | | | |
| 34.0 | | | | | |
| 36.0 | | | | | |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-16

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | | |
|--------------------|---|-------|-------|-------|-------|-------|-------|
| | Telescopic cylinder I completely extended and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | | | |
| | 12.0 | 16.2 | 20.4 | 26.8 | 33.2 | 39.6 | 46.0 |
| 3.0 | 62000* | 52000 | | | | | |
| 3.5 | 52000 | 48000 | 42000 | | | | |
| 4.0 | 45000 | 43000 | 40000 | | | | |
| 4.5 | 43000 | 40000 | 38000 | 30000 | | | |
| 5.0 | 40000 | 38000 | 36000 | 30000 | | | |
| 5.5 | 37000 | 36000 | 35000 | 30000 | | | |
| 6.0 | 31000 | 30000 | 29000 | 28000 | 23000 | | |
| 7.0 | 22800 | 22000 | 21500 | 23000 | 22500 | | |
| 8.0 | 17500 | 17000 | 16500 | 18000 | 19000 | 16500 | |
| 9.0 | 13800 | 13300 | 13000 | 14500 | 15500 | 15500 | |
| 10.0 | | 10800 | 10500 | 11500 | 12500 | 13000 | 11500 |
| 11.0 | | 8800 | 8500 | 9600 | 10500 | 11000 | 11000 |
| 12.0 | | 7200 | 7000 | 8200 | 9000 | 9500 | 10000 |
| 14.0 | | | 4600 | 5800 | 6500 | 7000 | 7500 |
| 16.0 | | | 3000 | 4100 | 4800 | 5300 | 5700 |
| 18.0 | | | | 2800 | 3600 | 4000 | 4400 |
| 20.0 | | | | 1800 | 2600 | 3000 | 3400 |
| 22.0 | | | | | 1800 | 2300 | 2600 |
| 24.0 | | | | | 1200 | 1600 | 1900 |
| 26.0 | | | | | | 1000 | 1400 |
| 28.0 | | | | | | | 1000 |
| I | 0 | 4.2 | 8.4 | 8.4 | 8.4 | 8.4 | 8.4 |
| II | 0 | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 8 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | | |

Table 2-17

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | | |
|--------------------------|---|-------|-------------|-------|-------|-------|
| | Telescopic cylinder I and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | | |
| | 12.0 | 16.2 | 22.6 | 29.0 | 35.4 | 41.8 |
| 3.0 | 62000* | 52000 | | | | |
| 3.5 | 52000 | 48000 | 30000 | | | |
| 4.0 | 45000 | 43000 | 30000 00 | | | |
| 4.5 | 43000 | 40000 | 30000 | | | |
| 5.0 | 40000 | 38000 | 30000 | 23000 | | |
| 5.5 | 37000 | 36000 | 30000 | 23000 | | |
| 6.0 | 31000 | 30000 | 29000 | 23000 | | |
| 7.0 | 22800 | 22000 | 24000 | 22000 | 16500 | |
| 8.0 | 17500 | 17000 | 18700 | 19700 | 16500 | 11500 |
| 9.0 | 13800 | 13300 | 15000 | 15800 | 15500 | 11500 |
| 10.0 | | 10800 | 12300 | 13000 | 13700 | 11500 |
| 11.0 | | 8800 | 10200 | 11000 | 11500 | 11500 |
| 12.0 | | 7200 | 8600 | 9400 | 10800 | 10200 |
| 14.0 | | | 6200 | 6900 | 7400 | 7800 |
| 16.0 | | | 4500 | 5200 | 5600 | 6000 |
| 18.0 | | | | 3900 | 4400 | 4700 |
| 20.0 | | | | 3000 | 3400 | 3700 |
| 22.0 | | | | 2200 | 2600 | 2900 |
| 24.0 | | | | | 2000 | 2300 |
| 26.0 | | | | | 1500 | 1700 |
| 28.0 | | | | | | 1300 |
| I | 0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| II | 0 | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 10 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | | |

Table 2-18

Unit: Metric kg

| Working radius (m) | Main boom (m) | | | | |
|--------------------|--|-------------|-------|-------|-------|
| | Telescopic cylinder I completely retracted and outriggers intermediately extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | |
| | 12.0 | 18.4 | 24.8 | 31.2 | 37.6 |
| 3.0 | 62000* | 30000 | | | |
| 3.5 | 52000 | 30000 | | | |
| 4.0 | 45000 | 30000 00 | 23000 | | |
| 4.5 | 43000 | 30000 | 23000 | | |
| 5.0 | 40000 | 30000 | 23000 | | |
| 5.5 | 37000 | 30000 | 23000 | 16500 | |
| 6.0 | 31000 | 29000 | 23000 | 16500 | |
| 7.0 | 22800 | 24000 | 22000 | 16500 | 11500 |
| 8.0 | 17500 | 19300 | 20300 | 15500 | 11500 |
| 9.0 | 13800 | 15600 | 16500 | 14500 | 11500 |
| 10.0 | | 12800 | 13700 | 13700 | 11500 |
| 11.0 | | 10800 | 11500 | 12000 | 11000 |
| 12.0 | | 9200 | 9900 | 10300 | 10500 |
| 14.0 | | 6800 | 7400 | 7900 | 8200 |
| 16.0 | | | 5700 | 6100 | 6400 |
| 18.0 | | | 4400 | 4800 | 5100 |
| 20.0 | | | 3400 | 3800 | 4100 |
| 22.0 | | | | 3000 | 3300 |
| 24.0 | | | | 2400 | 2700 |
| 26.0 | | | | | 2100 |
| 28.0 | | | | | 1600 |
| I | 0 | 0 | 0 | 0 | 0 |
| II | 0 | 6.4 | 12.8 | 19.2 | 25.6 |
| Reevings | 12 | 6 | 5 | 4 | 3 |
| Hook | 60t hook | | | | |

Table 2-19

Unit: Metric kg

| Main boom angle (°) | Main boom (m) + Jib (m) | | | | | |
|---------------------|--|------|------|-------|------|------|
| | Outriggers completely extended, over side and over rear, with 3T fixed counterweight assembled | | | | | |
| | 46+9.5 | | | 46+16 | | |
| | 0° | 15° | 30° | 0° | 15° | 30° |
| 80 | 5000 | 3500 | 3000 | 3000 | 1700 | 1300 |
| 78 | 4700 | 3300 | 2800 | 2700 | 1600 | 1200 |
| 76 | 4400 | 3200 | 2600 | 2400 | 1500 | 1150 |
| 74 | 4100 | 3000 | 2500 | 2100 | 1400 | 1100 |
| 72 | 3800 | 2800 | 2400 | 1950 | 1300 | 1050 |
| 70 | 3500 | 2700 | 2300 | 1850 | 1250 | 1000 |
| 68 | 3200 | 2600 | 2200 | 1700 | 1200 | 1000 |
| 66 | 3000 | 2500 | 2150 | 1600 | 1150 | 1000 |
| 64 | 2600 | 2400 | 2100 | 1500 | 1100 | 950 |
| 62 | 2100 | 2300 | 2050 | 1400 | 1050 | 950 |
| 60 | 1800 | 1900 | 1600 | 1300 | 1050 | 900 |
| 58 | 1600 | 1400 | 1300 | 1250 | 1000 | 900 |
| 56 | 1200 | 1200 | 1100 | 1000 | 900 | 900 |
| 54 | 1000 | 900 | 900 | 800 | | |
| 52 | 800 | | | | | |
| Reevings | 1 | | | | | |
| Hook | 5t hook | | | | | |

Table 2-20

Unit: Metric kg

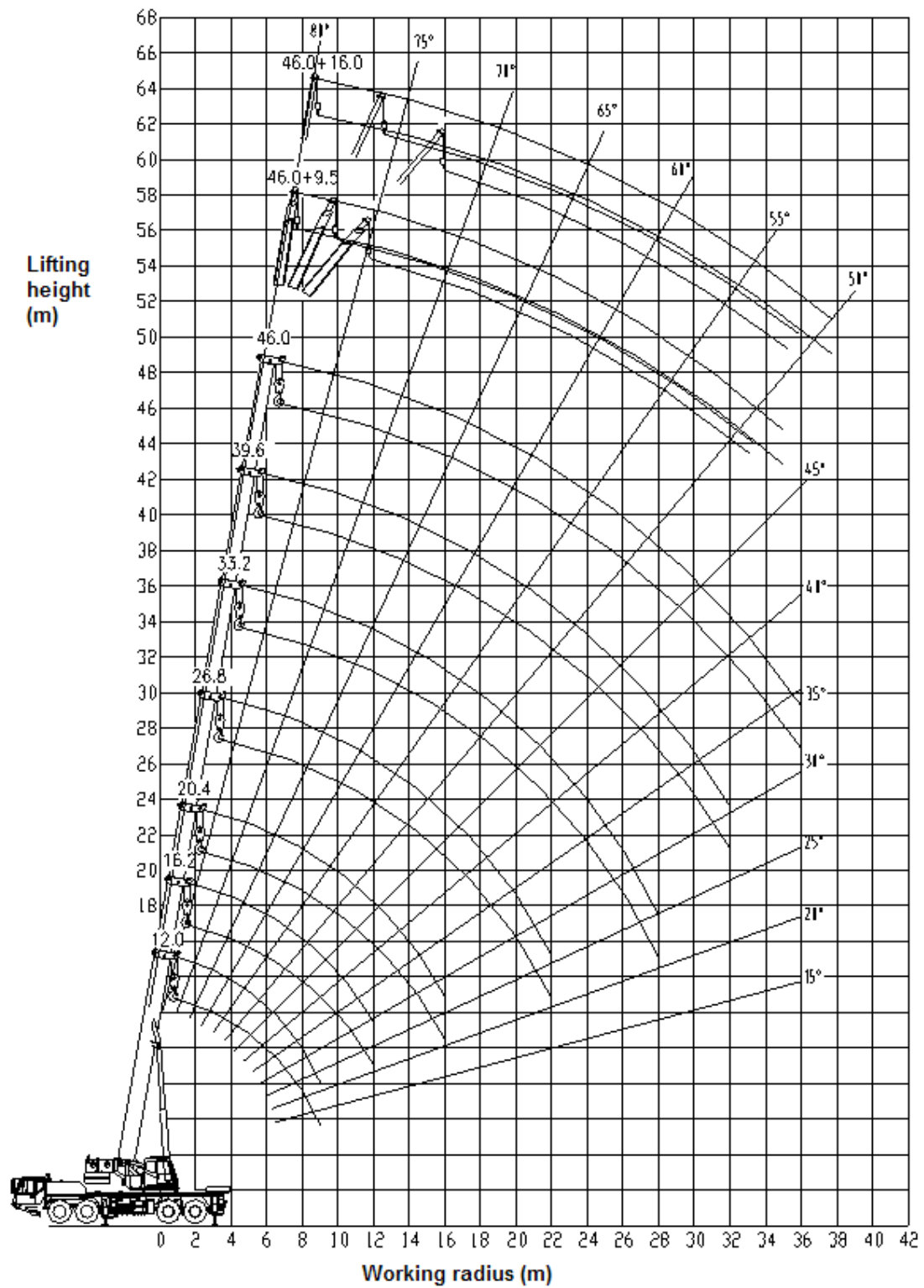
| Main boom angle (°) | Main boom (m) + Jib (m) | | | | | |
|---------------------|---|------|------|-------|------|------|
| | Outriggers completely extended, over side and over rear, with 3T fixed counterweight + 4T movable counterweight assembled | | | | | |
| | 46+9.5 | | | 46+16 | | |
| | 0° | 15° | 30° | 0° | 15° | 30° |
| 80 | 5000 | 3500 | 3000 | 3000 | 1700 | 1300 |
| 78 | 4700 | 3300 | 2800 | 2700 | 1600 | 1200 |
| 76 | 4400 | 3200 | 2600 | 2400 | 1500 | 1150 |
| 74 | 4100 | 3000 | 2500 | 2100 | 1400 | 1100 |
| 72 | 3800 | 2800 | 2400 | 1950 | 1300 | 1050 |
| 70 | 3500 | 2700 | 2300 | 1850 | 1250 | 1000 |
| 68 | 3200 | 2600 | 2200 | 1700 | 1200 | 1000 |
| 66 | 3000 | 2500 | 2150 | 1600 | 1150 | 1000 |
| 64 | 2800 | 2400 | 2100 | 1500 | 1100 | 950 |
| 62 | 2600 | 2300 | 2050 | 1400 | 1050 | 950 |
| 60 | 2400 | 2100 | 1900 | 1300 | 1050 | 900 |
| 58 | 2200 | 2050 | 1800 | 1250 | 1000 | 900 |
| 56 | 2000 | 1850 | 1700 | 1200 | 1000 | 900 |
| 54 | 1600 | 1550 | 1500 | 1150 | 950 | 850 |
| 52 | 1500 | 1400 | 1250 | 1100 | | |
| 50 | 1400 | | | | | |
| Reevings | 1 | | | | | |
| Hook | 5t hook | | | | | |

Table 2-21

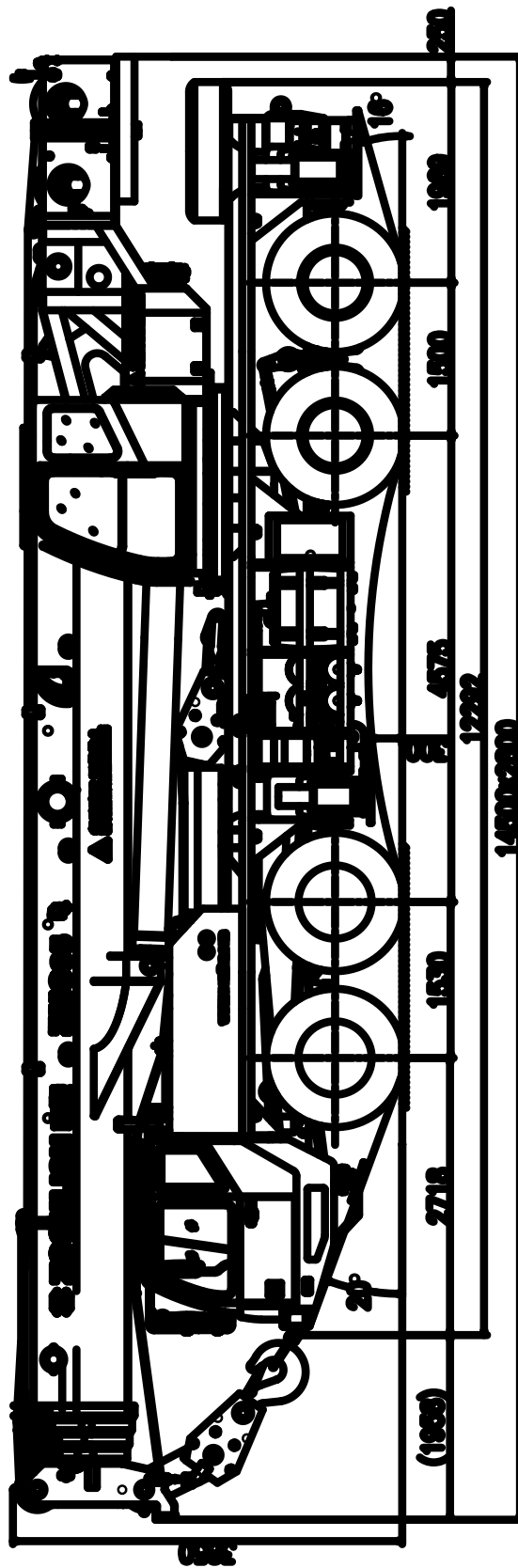
Unit: Metric kg

| Main boom angle (°) | Main boom (m) + Jib (m) | | | | | |
|---------------------|---|------|------|-------|------|------|
| | Outriggers completely extended, over side and over rear, with 3T fixed counterweight + 6T movable counterweight assembled | | | | | |
| | 46+9.5 | | | 46+16 | | |
| | 0° | 15° | 30° | 0° | 15° | 30° |
| 80 | 5000 | 3500 | 3000 | 3000 | 1700 | 1300 |
| 78 | 4700 | 3300 | 2800 | 2700 | 1600 | 1200 |
| 76 | 4400 | 3200 | 2600 | 2400 | 1500 | 1150 |
| 74 | 4100 | 3000 | 2500 | 2100 | 1400 | 1100 |
| 72 | 3800 | 2800 | 2400 | 1950 | 1300 | 1050 |
| 70 | 3500 | 2700 | 2300 | 1850 | 1250 | 1000 |
| 68 | 3200 | 2600 | 2200 | 1700 | 1200 | 1000 |
| 66 | 3000 | 2500 | 2150 | 1600 | 1150 | 1000 |
| 64 | 2800 | 2400 | 2100 | 1500 | 1100 | 950 |
| 62 | 2700 | 2300 | 2050 | 1400 | 1050 | 950 |
| 60 | 2600 | 2200 | 1950 | 1300 | 1050 | 900 |
| 58 | 2500 | 2100 | 1900 | 1250 | 1000 | 900 |
| 56 | 2400 | 2000 | 1850 | 1200 | 1000 | 900 |
| 54 | 2000 | 1900 | 1800 | 1150 | 950 | 850 |
| 52 | 1700 | 1600 | 1500 | 1100 | 950 | 850 |
| 50 | 1500 | 1400 | 1300 | 1050 | | |
| 48 | 1300 | | | | | |
| Reevings | 1 | | | | | |
| Hook | 5t hook | | | | | |

2.4 Lifting height chart



2.5 Overall view (unit: Metric mm)



3 Components, superstructure

3.1 Main boom and telescoping mechanism

The box-shaped main boom consists of 5 U-type boom sections made of low-alloy high-strength steel plate, providing the boom with excellent bending-resistance capacity, super load bearing capacity, light deadweight, large lateral stiffness and small end deflection. Self-created built-in sliding block and optimized design make the deadweight of the boom greatly decreased and the stress on the boom evenly distributed to avoid partial distortion. Furthermore, the boom has good guidance quality and adjustability.

The telescopic boom sections are telescoped in/out via 2 telescopic cylinders and 2 sets of boom extension / retraction wire rope. The 1st telescopic cylinder drives telescopic boom section 1 to telescope in/out; the 2nd telescopic cylinder drives telescopic boom sections 2, 3 and 4 to telescope in / out simultaneously via boom extension / retraction wire rope. This compact design makes the crane work reliably. Each cylinder is fitted with a balance valve.

3.2 Jib

It consists of two jib sections and is folded on the side of boom when it is not used and can be installed and removed by inserted pins.

Jib section 1, reducing and lattice structured, has good load bearing capacity and well stress distribution.

Jib section 2, box-shaped, can be pulled out from jib section 1 to form 2 kinds of jib length (9.5 m and 16.0 m) as required.

Jib section 1 can be attached below 0°, 15° or 30° in relation to top boom section. The offset can be conveniently changed via the pin and pull bracket.

3.3 Slewing table

Single ribbed plate structured and optimized slewing table made of high-strength steel plate makes the layout of articulated points of main boom and derricking mechanism more reasonable. It also has a distinctive structure and beautiful appearance.

The engine hood is of a designed ergonomically.

The securing device installed in the front of the slewing table can prevent the superstructure from slewing during driving.

3.4 Rooster sheave

It is secured at the outside of the top boom section head when it is not used. It can be rotated around the shaft and pinned onto the boom head when it is used.

This option is set up for rapid hoists over the boom head to improve the working efficiency when the loads are light.

3.5 Derricking mechanism

1 front-mounted hydraulic cylinder with balance valve provides the boom with smooth derricking movements from -2° to 80° .

3.6 Slewing mechanism

Single slewing mechanism is adopted.

Via the planetary gear reducer, the hydraulic motor drives the pinion gear on the output shaft to rotate the exterior toothed ring of slewing ring fixed on chassis frame, providing superstructure with 360° unlimited slewing.

The slewing mechanism is of controllable aligning function, which can make the load be aligned automatically during operation. Slewing cushion valve and normally-closed brake can ensure stable and reliable slewing operation of the crane. 4-point contact ball-type slewing ring ensures the slewing table with super-strong load bearing capability and long service life.

3.7 Hoist mechanism

It consists of main and auxiliary hoist mechanisms.

The hydraulic motor drives the grooved drum to lift and lower the hook via planetary gear reducer. A brake is fitted between the motor and reducer.

The main winch and auxiliary winch can work independently.

Models of main and auxiliary winch reducers are the same.

Also, the main winch and auxiliary winch are driven by the variable displacement motor.

The main winch is also equipped with a lowering limit switch.

The built-in planetary reducer is of compact structure, light deadweight and high reliability.

Specifications for high-tensile torsion resistant hoist rope:

Diameter: $\phi 20.0$ mm

Strength grade: 1870 N/mm²

Length of main hoist rope: 220 m

Length of auxiliary hoist rope: 130 m

3.8 Main and auxiliary hooks

Rotatable main hook: 60 t, with 6 pulleys, press nipple and hook safety device

Anti-rotating auxiliary hook (1 reeving): 5 t, with hook safety device

3.9 Operator's cab

It is of steel-structure welded with instrument console and adjustable seat with headrest. The instrument consoles are located in right hand side of operator's cab and right ceiling side of operator's cab. It is equipped with control levers, windshield wiper, washing system, air conditioning and heater. The arrangement provides spacious operating space, reasonable arrangement, human-based design, convenient and safe operation.

3.10 Outriggers

H-type outriggers, which are in box-shaped structure and welded of low-alloy and high-strength steel plate, are of good sectional performance and strong load bearing capability via Pro/E simulated design and actual-used calculation.

2-section horizontal sliding beam can be extended and retracted with a horizontal cylinder and a set of outrigger extension / retraction ropes. Large outrigger span ensures stability of the crane.

The outrigger pad which is mounted at the bottom of vertical cylinder can be pushed inwards (to avoid the complete vehicle from being over-wide during driving) and pulled outwards (for convenient operation) to greatly reduce the labor intensity. After the outriggers are completely extended or retracted, the outrigger pads can be locked with retaining pins.

Outrigger control levers are fitted on both sides of the vehicle for controlling the outriggers to extend or retract simultaneously or independently. Each vertical cylinder is equipped with a two-way hydraulic lock to ensure stable and reliable operation of the crane.

In addition, the crane also can work with outriggers intermediately extended for narrow area operation.

The 5th outrigger is installed beneath the driver's cab. When the 5th outrigger is set up, the crane can realize full range slewing operation.

3.11 Hydraulic system

The open-type hydraulic system adopts advanced pilot-operated proportional joysticks, hydraulic proportional control system and anti-pollution bite-type fitting to ensure the high reliability of the system. The main power element is the variable pump with gear pump. Among which, the variable pump supplies hydraulic oil for main winch, auxiliary winch, derricking mechanism and telescoping mechanism. The tandem gear pump is composed of two gear pumps. One supplies hydraulic oil for chassis hydraulic system, slewing mechanism, the other supplies hydraulic oil for air conditioning system and counterweight handler.

The outrigger control valves are new-type manual chassis control valves to control the horizontal and vertical cylinders' movements. Each of them is fitted with a pressure limiting valve, thus, can prevent the piston rods of horizontal cylinders from bending. The 5th outrigger cylinder and vertical cylinder can be also controlled to retract simultaneously, so damage of the 5th outrigger cylinder can be avoided.

3.12 Electrical system

Single wire system, negative grounded, 24 Volt DC.

The superstructure electrical system includes the devices such as battery master switch, ignition starter switch, engine off button, control light "Power source", warning light "Main / auxiliary winch approaching upper limit", warning light "Main / auxiliary winch approaching lower limit", warning light "The 5th outrigger pressure too high", hoisting limit switch, lowering limit switch, overload protection device, illumination, fan, windshield wiper, horn, load moment limiter and oil cooler fan etc. These devices ensure safe operation and provide good working environment.

3.13 Safety devices

This crane is equipped with an automatic load moment limiter whose display and warning devices are fitted in the operator's cab.

When the actual load approaches 90% of the rated one, the warning light will light up and buzzer will send out acoustic warning.

When the actual load reaches 100% of the rated one, the load moment limiter will send out a stop signal automatically and will cut off all dangerous crane movements via superstructure control circuit and control mechanism.

The basic parameters, such as moment ratio, boom angle, boom length, working radius, actual lifting capacity and rated lifting capacity will be displayed on the digital LCD.

This crane is also equipped with the following safety devices to ensure safety of the crane.

- a) Boom angle indicator
- b) Hoisting limit switch
- c) Hook safety device
- d) Lowering limit switch
- e) The 5th outrigger overpressure warning device
- f) Two-way hydraulic lock
- g) Balance valve
- h) Relief valve

3.14 Air conditioning and heater

A single-cooling air conditioning and heater special for auto are available.

3.15 Counterweight

The underslung counterweights can be assembled according to different working conditions.

It is composed of 3 counterweights: 3T fixed counterweight, 4T movable counterweight and 2T upper movable counterweight. They totally weigh 9T.

There are 3 options for counterweight assembly:

- 1) 3T fixed counterweight

- 2) 3T fixed counterweight + 4T movable counterweight
- 3) 3T fixed counterweight + 4T movable counterweight + 2T upper movable counterweight

4. Specifications, chassis

| | | | |
|---------|--------|-------|----------|
| Chassis | Engine | Model | WP10.375 |
|---------|--------|-------|----------|

| | | | |
|--|--|---|---|
| | | Rated power kW/r/min | 276/2200 |
| | | Max. output torque N.m/r/min | 1460/1200 - 1600 |
| | | Manufacturer | Weichel Power Co., Ltd |
| | | Model | ZLJ5480 |
| | | Type | III |
| | | Code | ZLJ5480V3 |
| | | Limits for exhaust pollutants and smoke | GB3847-2005、 GB17691-2005(National Stage III) |
| | | Manufacturer | Zoomlion Heavy Industry Science and Technology Co., Ltd. |

For detailed information, please refer to the *Technical Specifications, Special Purpose Chassis*.