



TADANO HYDRAULIC TRUCK CRANE

SPEC. SHEET No. TG-500E-3-10505/EX-152 (KG56TXL)
SPEC. SHEET No. TG-500E-3-10605/EX-162 (KG56TXN)

TG-500E

CARRIER : KG56TXL / KG56TXN

GENERAL DATA

| | | |
|--|-----------------------------|-----------|
| CRANE CAPACITY | 50,000 kg at 3.0 m | |
| BOOM | 5-section, 10.65 m - 40.0 m | |
| DIMENSION | | |
| Overall length | approx. | 12,960 mm |
| Overall width | approx. | 2,820 mm |
| Overall height | approx. | 3,730 mm |
| MASS (Including hook block -50 ton, 4 ton capacity) | | |
| Gross vehicle mass | approx. | 38,800 kg |
| - front | approx. | 15,100 kg |
| - rear | approx. | 23,700 kg |
| PERFORMANCE | | |
| Max. travelling speed | computed | 68 km/h |
| Gradeability (tan θ) | computed | 54 % |

CRANE SPECIFICATIONS

MODEL

TG-500E

CAPACITY

50,000 kg at 3.0 m

BOOM

5-section full length power dual-synchronized telescoping boom of hexagonal box construction with 6 sheaves at boom head. The synchronization system consists of three telescope cylinders, an extension cable and a retraction cable.

Hydraulic cylinders fitted with holding valves.

Fully retracted length10.65 m

Fully extended length40.0 m

Extension speed29.35 m in 120 s

JIB

2-staged extension type. Triple offset (5°/25°/45°) type. Stored under base boom section. Single sheave at jib head.

Length9.0 m and 14.6 m

SINGLE TOP (AUXILIARY BOOM SHEAVE)

Single sheave. Mounted to main boom head for single line work.

ELEVATION

By a double-acting hydraulic cylinder, fitted with holding valve.

Elevation speed -3° to 80° in 63 s

TADANO LTD.

HOIST - Main winch

2-speed type with grooved drum driven by hydraulic axial piston motor through planetary winch speed reducer. Power load lowering and hoisting.

Equipped with automatic fail-safe brake with free-fall device by foot brake operation and counterbalance valve.

Hoist lever is fitted with a high-speed switch. Controlled independently of auxiliary winch.

| | |
|-------------------|-------------------------------|
| Single line pull | 41.2 kN {4,200 kgf} |
| Single line speed | |
| High range | 100 m/min. (at the 3rd layer) |
| Normal range | 45 m/min. (at the 3rd layer) |
| Wire rope | Spin-resistant type |
| Diameter x length | 18 mm x 215 m |

HOOK BLOCK - 50 ton capacity

6 sheaves, swivel type hook with safety latch.

HOOK BLOCK - 20 ton capacity

2 sheaves, swivel type hook with safety latch.

HOIST - Auxiliary winch

2-speed type with grooved drum driven by hydraulic axial piston motor through planetary winch speed reducer. Power load lowering and hoisting.

Equipped with automatic fail-safe brake with free-fall device by foot brake operation and counterbalance valve.

Hoist lever is fitted with a high-speed switch.

Controlled independently of main winch.

| | |
|-------------------|------------------------------|
| Single line pull | 39.2 kN {4,000 kgf} |
| Single line speed | |
| High range | 93 m/min. (at the 2nd layer) |
| Normal range | 42 m/min. (at the 2nd layer) |
| Wire rope | Spin-resistant type |
| Diameter x length | 18 mm x 130 m |

HOOK BLOCK - 4 ton capacity

Swivel hook with safety latch for single line use.

SWING

Hydraulic axial piston motor driven through planetary swing speed reducer. Continuous 360° full circle swing on ball bearing slew ring. TADANO Twin Swing System enable to select power-controlled or free swing. Swing lever is fitted with a horn switch.

Equipped with hand-operated swing brake.

| | |
|-------------|-----------------------------|
| Swing speed | 2.0 min ⁻¹ {rpm} |
|-------------|-----------------------------|

HYDRAULIC SYSTEM

| | |
|-----------------------------|---|
| Pumps | Quadruple gear pumps driven by carrier engine through P.T.O. |
| Control valves | Multiple valves actuated by hand levers with integral pressure relief valves. |
| Circuit | Equipped with air cooled type oil cooler. |
| Hydraulic oil tank capacity | Approx. 615 liters |
| Filters | Return line filter |

CRANE CONTROL

By 5 control levers based on ISO standard layout.

CAB

Steel construction with sliding door access and safety glass windows opening at sides, rear and roof. Cloth covered reclining seat with headrest is height-adjustable and back-and-forth adjustable.

Equipments

| |
|--|
| Engine start and stop switch |
| Accelerator lock button |
| Electric windshield wiper and electric sky-light wiper |

SAFETY DEVICES

| |
|---------------------------------------|
| Boom angle indicator |
| Pendant type over-winding cutout |
| Winch automatic fail-safe brake |
| Winch drum lock |
| Hook safety latch |
| Pilot check valves |
| Holding valves |
| Counterbalance valves |
| Hydraulic pressure relief valves |
| Front jack overload alarm |
| Spring center system (Control levers) |
| Winch lever lock |

TADANO Automatic Moment Limiter (Model:AML-LC)

Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range limit function.

Working area for each outrigger position is given separately.

Seven functions are constantly displayed.

Digital liquid crystal display:

| |
|---|
| Boom angle |
| Either boom length or potential hook height |
| Actual working radius |
| Actual hook load |
| Permissible load |
| Either jib offset angle or jib length |
| Boom position indicator |
| Outrigger position indicator |

Bar graphical display :

| |
|--|
| Either moment as percentage or main hydraulic pressure and accumulator pressure (Display changes by alternation key) |
|--|

OUTRIGGERS

4 hydraulically operated outriggers. Each outrigger controlled simultaneously or independently from either side of carrier. Equipped with sight level gauges.

Floats mounted integrally with the jacks retract to within vehicle width. All cylinders fitted with pilot check valves.

Extended width

| | |
|-----------------------|----------|
| Fully | 6,800 mm |
| Middle | 4,600 mm |
| Minimum | 2,390 mm |
| Float size (Diameter) | 400 mm |

FRONT JACK

A fifth hydraulically operated outrigger jack. Mounted to the front frame of carrier to permit 360° lifting capabilities.

Hydraulic cylinder fitted with pilot check valve.

| | |
|-----------------------|-------|
| Float size (Diameter) | 350mm |
|-----------------------|-------|

COUNTERWEIGHT

Integral with swing frame.

STANDARD EQUIPMENT

| |
|--|
| Control pedals for telescoping and auxiliary winch |
| 3 working lights |
| Winch drum rotation indicator (Visual) |
| Winch drum mirror (Hoist mirror) |
| External lamp (AML) |
| Sun visor |
| Cab floor mat |

OPTIONAL EQUIPMENT

| |
|----------------------------------|
| Electric fan |
| Cab heater (Diesel fuel type) |
| Cab cooler (Refrigerant : R134a) |

NOTE :

Each crane motion speed is based on unladen conditions.

MANUFACTURER

NISSAN DIESEL MOTOR CO., LTD

MODEL

KG56TXL Left hand steering, 8 x 4
 KG56TXN Right hand steering, 8 x 4

ENGINE

Model NISSAN RF8
 Type 4 cycle, 8 cylinder in 90°V, direct injection, water cooled diesel engine.
 Piston displacement 16,991 cm³
 Bore x Stroke 138 mm x 142 mm
 Max. output (JIS) 250 kW {340 ps} at 2,200 min⁻¹ {rpm}
 Max. torque (JIS) 1,176 N·m {120 kgf·m} at 1,400 min⁻¹ {rpm}

CLUTCH

Dry single plate, hydraulically operated clutch release mechanism with air assisted booster.

TRANSMISSION

7 forward and 1 reverse speeds, synchromesh on 2nd-7th gears, and constant-mesh on 1st and reverse gears.

AXLES

Front Reverse-elliot type, I-beam
 Rear Full floating type

STEERING

Recirculating ball screw type with linkage power assistance.

SUSPENSION

Front Semi-elliptic leaf springs
 Rear Equalizer beams and torque rods

BRAKE SYSTEM

Service Full air brake on all wheels, dual air line system, internal expanding leading and trailing shoe type.
 Parking Mechanically operated by hand brake lever.
 Internal expanding duo-servo shoe type acting on drum at transmission case rear.
 Auxiliary Electro-pneumatic operated exhaust brake.
 Emergency Pneumatically controlled spring brake, acting on all rear axles.

ELECTRIC SYSTEM

24 V DC. 2 batteries of 12 V (JIS) 115 F 51, 96 Ah at 5-hour rate
 Alternator 24 V - 50 A

FUEL TANK CAPACITY

300 liters

CAB

Steel construction, one sided 2-man type.
 Driver's seat Adjustable suspension type

TIRES

Front 12R22.5 152/148 K, Single x 4
 Rear 12R22.5 152/148 K, Dual x 4
 Spare 12R22.5 152/148 K, x 1

TURN RADIUS

Min. turning radius (at center of extreme outer tire) 11.0 m

EQUIPMENT

STANDARD EQUIPMENT

Fan clutch : Viscous-type
 Intake air heater
 Overheating warning buzzer
 Cooling water level warning buzzer
 Engine over-run alarm
 P.T.O. hour meter
 Seat belt : 3 point type for driver, 2 point type for assistant
 Tilting-telescoping steering wheel
 Windshield wiper (with intermittent wiping) and washer
 Window glass : Tinted, Infrared and Ultraviolet rays absorption
 Tachometer
 Low air pressure warning buzzer
 AM / FM radio
 Car heater (Hot water type) with defroster
 Third differential gear lock
 Speedometer (with odometer)

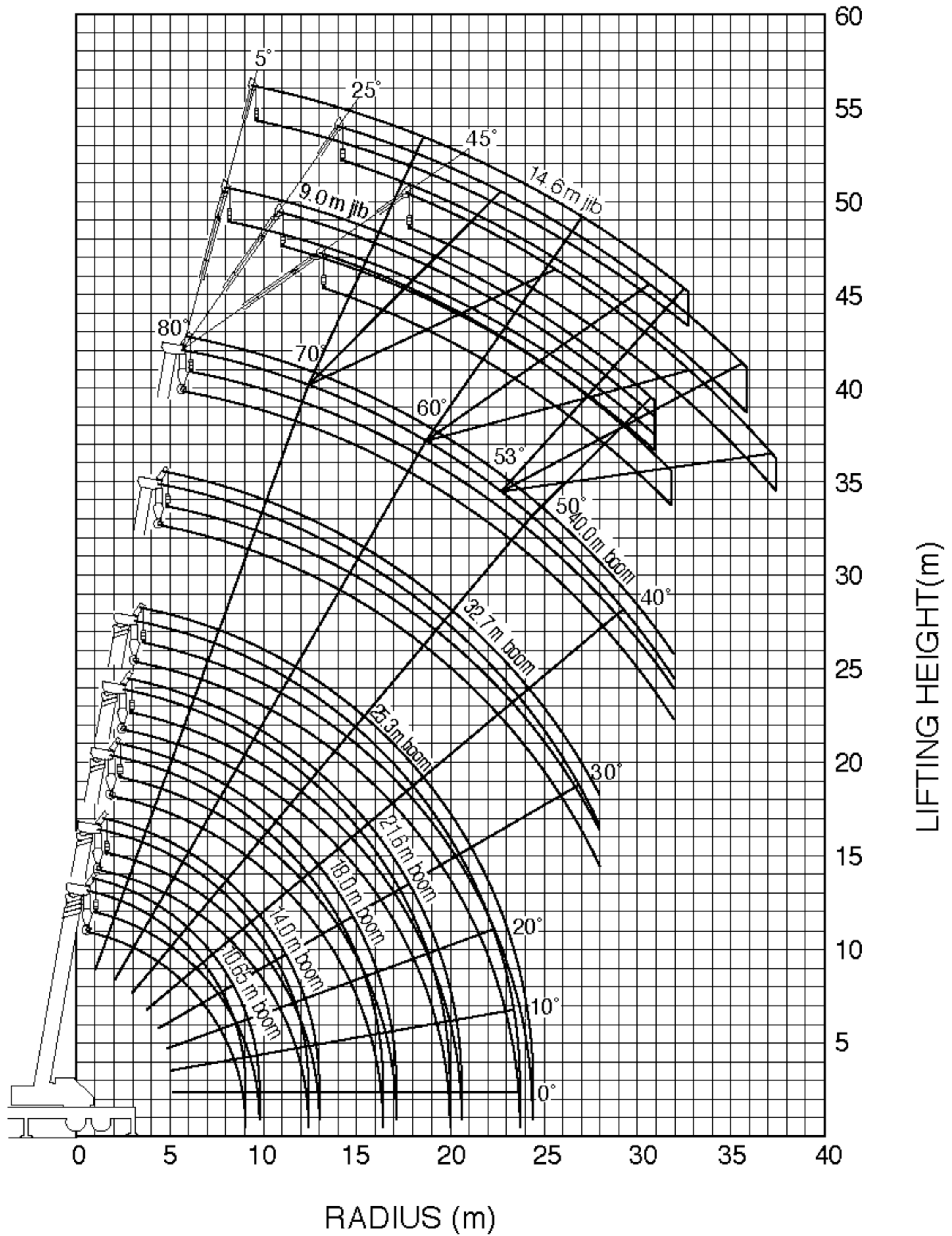
Sun visor
 Spare tire carrier with lock key
 Tool box with lock key
 Fuel tank cap with lock key
 Back-up light
 Back-up alarm
 Air filter warning light (Instrument cluster)
 Two towing hooks (Front and rear, Eye type)
 Ashtray
 Cigarette lighter
 Front fog lamp
 Owner's tool set
 Cab floor mat

OPTIONAL EQUIPMENT

Car cooler (Refrigerant : R134a)
 Tire inflator

WORKING RANGE

SPEC. SHEET No. TG-500E-3-10505/EX-152 (KG56TXL)
 SPEC. SHEET No. TG-500E-3-10605/EX-162 (KG56TXN)



NOTE :

The above lifting height and boom angle are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions.

RATED LIFTING CAPACITIES

SPEC. SHEET No. TG-500E-3-10505/EX-152 (KG56TXL)
 SPEC. SHEET No. TG-500E-3-10605/EX-162 (KG56TXN)

Unit : kg

| Outriggers fully extended 6.8 m | | | | | | | |
|---|---------|--------|--------|--------|--------|--------|--------|
| Front jack extended (360°) | | | | | | | |
| Front jack not extended (Over sides and rear) | | | | | | | |
| B \ A | 10.65 m | 14.0 m | 18.0 m | 21.6 m | 25.3 m | 32.7 m | 40.0 m |
| 3.0 m | 50,000 | 33,000 | 28,000 | 24,000 | | | |
| 3.5 m | 43,000 | 33,000 | 28,000 | 24,000 | | | |
| 4.0 m | 38,000 | 33,000 | 28,000 | 24,000 | 20,000 | | |
| 4.5 m | 34,000 | 30,500 | 28,000 | 24,000 | 20,000 | | |
| 5.0 m | 30,200 | 29,000 | 28,000 | 24,000 | 20,000 | | |
| 5.5 m | 27,500 | 26,500 | 25,600 | 23,200 | 20,000 | 14,000 | |
| 6.0 m | 25,000 | 24,000 | 23,500 | 21,500 | 20,000 | 14,000 | |
| 6.5 m | 22,700 | 22,300 | 21,800 | 19,900 | 18,600 | 14,000 | 8,000 |
| 7.0 m | 20,700 | 20,300 | 20,000 | 18,400 | 17,300 | 13,500 | 8,000 |
| 7.5 m | 18,900 | 18,600 | 18,500 | 17,100 | 16,200 | 13,000 | 8,000 |
| 8.0 m | 17,400 | 17,100 | 17,000 | 15,900 | 15,300 | 12,500 | 8,000 |
| 9.0 m | 14,400 | 14,200 | 14,100 | 13,600 | 13,600 | 11,300 | 8,000 |
| 10.0 m | | 11,700 | 11,600 | 11,450 | 11,400 | 10,300 | 7,500 |
| 11.0 m | | 9,800 | 9,600 | 9,500 | 9,450 | 9,400 | 6,950 |
| 12.0 m | | 8,200 | 8,100 | 8,000 | 8,000 | 8,600 | 6,450 |
| 14.0 m | | | 5,900 | 5,800 | 5,700 | 6,500 | 5,600 |
| 16.0 m | | | 4,250 | 4,200 | 4,100 | 5,000 | 4,850 |
| 18.0 m | | | | 3,000 | 2,950 | 3,750 | 4,250 |
| 20.0 m | | | | 2,100 | 2,050 | 2,850 | 3,300 |
| 22.0 m | | | | | 1,300 | 2,100 | 2,550 |
| 24.0 m | | | | | | 1,500 | 2,000 |
| 26.0 m | | | | | | 1,050 | 1,500 |
| 28.0 m | | | | | | 650 | 1,100 |
| 30.0 m | | | | | | | 750 |
| 32.0 m | | | | | | | 450 |

Unit : kg

| Outriggers fully extended 6.8m | | | | | | |
|---|-------|-------|-------|--------|-------|-----|
| Front jack extended (360°) | | | | | | |
| Front jack not extended (Over sides and rear) | | | | | | |
| E \ C \ D | 9.0 m | | | 14.6 m | | |
| | 5° | 25° | 45° | 5° | 25° | 45° |
| 80° | 3,500 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 79° | 3,500 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 78° | 3,500 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 77° | 3,400 | 2,300 | 1,280 | 2,350 | 1,170 | 690 |
| 76° | 3,250 | 2,240 | 1,260 | 2,220 | 1,140 | 680 |
| 75° | 3,100 | 2,160 | 1,240 | 2,100 | 1,120 | 670 |
| 73° | 2,840 | 2,020 | 1,200 | 1,890 | 1,070 | 650 |
| 70° | 2,430 | 1,850 | 1,150 | 1,640 | 1,000 | 630 |
| 68° | 2,200 | 1,730 | 1,120 | 1,500 | 950 | 620 |
| 65° | 1,950 | 1,580 | 1,070 | 1,330 | 910 | 590 |
| 63° | 1,780 | 1,450 | 1,030 | 1,220 | 850 | 580 |
| 60° | 1,550 | 1,280 | 1,000 | 1,080 | 800 | 570 |
| 58° | 1,300 | 1,200 | 980 | 1,000 | 770 | 560 |
| 55° | 900 | 850 | 800 | 700 | 650 | 550 |
| 53° | 700 | 650 | 600 | 550 | 500 | 500 |
| 50° | 400 | | | | | |

A : Boom length
 B : Load radius
 C : Jib length
 D : Jib offset
 E : Boom angle

RATED LIFTING CAPACITIES

SPEC. SHEET No. TG-500E-3-10505/EX-152 (KG56TXL)
 SPEC. SHEET No. TG-500E-3-10605/EX-162 (KG56TXN)

Unit : kg

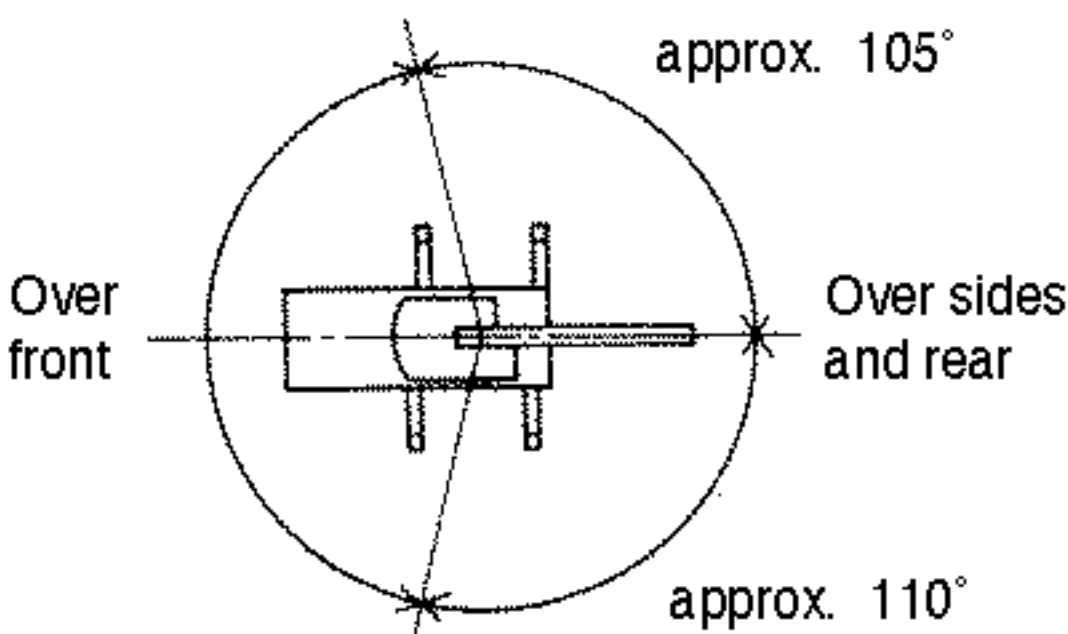
| Outriggers fully extended 6.8 m (Over front) Outriggers extended to middle 4.6 m (360β) | | | | | | | | Outriggers extended to minimum 2.39 m (360β) |
|--|---------|--------|--------|--------|--------|--------|--------|--|
| B \ A | 10.65 m | 14.0 m | 18.0 m | 21.6 m | 25.3 m | 32.7 m | 40.0 m | 10.65 m |
| 3.0 m | 40,000 | 33,000 | 28,000 | 24,000 | | | | 8,000 |
| 3.5 m | 34,000 | 31,000 | 28,000 | 24,000 | | | | 6,400 |
| 4.0 m | 28,600 | 28,300 | 28,000 | 24,000 | 20,000 | | | 5,100 |
| 4.5 m | 26,800 | 26,800 | 25,700 | 24,000 | 20,000 | | | 4,200 |
| 5.0 m | 20,600 | 20,500 | 20,400 | 19,200 | 18,000 | | | 3,400 |
| 5.5 m | 16,500 | 16,400 | 16,300 | 15,700 | 14,900 | 14,000 | | 2,800 |
| 6.0 m | 13,500 | 13,500 | 13,300 | 13,200 | 12,500 | 12,400 | | 2,300 |
| 6.5 m | 11,300 | 11,300 | 11,200 | 11,100 | 10,600 | 10,700 | 8,000 | 1,900 |
| 7.0 m | 9,600 | 9,600 | 9,500 | 9,400 | 9,100 | 9,300 | 8,000 | 1,600 |
| 7.5 m | 8,300 | 8,200 | 8,100 | 8,100 | 7,900 | 8,200 | 7,900 | 1,250 |
| 8.0 m | 7,200 | 7,100 | 7,000 | 7,000 | 6,800 | 7,200 | 7,100 | 1,000 |
| 9.0 m | 5,400 | 5,400 | 5,300 | 5,200 | 5,200 | 5,700 | 5,700 | |
| 10.0 m | | 4,100 | 4,000 | 3,900 | 3,900 | 4,500 | 4,600 | |
| 11.0 m | | 3,100 | 3,000 | 2,900 | 2,900 | 3,600 | 3,700 | |
| 12.0 m | | 2,300 | 2,200 | 2,100 | 2,100 | 2,900 | 3,000 | |
| 14.0 m | | | | | | 1,800 | 2,000 | |
| 16.0 m | | | | | | | 1,200 | |

Unit : kg

| Outriggers fully extended 6.8 m (Over front) Outriggers extended to middle 4.6 m (360β) | | | | | | |
|--|-------|-------|-------|--------|-------|-----|
| E \ C \ D | 9.0 m | | | 14.6 m | | |
| | 5β | 25β | 45β | 5β | 25β | 45β |
| 80β | 3,500 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 79β | 3,500 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 78β | 3,300 | 2,300 | 1,300 | 2,500 | 1,200 | 700 |
| 77β | 2,810 | 2,240 | 1,280 | 2,180 | 1,170 | 690 |
| 76β | 2,360 | 1,910 | 1,260 | 1,840 | 1,140 | 680 |
| 75β | 1,970 | 1,610 | 1,240 | 1,530 | 1,120 | |
| 73β | 1,340 | | | | | |

- A : Boom length
- B : Load radius
- C : Jib length
- D : Jib offset
- E : Boom angle

WORKING AREA



NOTES :

- Rated lifting capacities shown in the table are based on condition that the crane is set on firm ground horizontally.
 Those above bold lines are based on crane strength and those below, on its stability.
- Rated lifting capacities below bold lines do not exceed 75 % of tipping load.
- Each rated lifting capacity includes mass of the hook (460 kg for 50 ton capacity, *350 kg for 35 ton capacity, 340 kg for 20 ton capacity, 100kg for 4 ton capacity) and slings.
- Without front jack extended, when the boom is within the Over-front, rated lifting capacities are different from those for the boom in the Over-side and Over-rear.
- Standard number of part line for each boom length is as shown below. Load per line should not surpass 41.2 kN {4,200 kgf} for main winch and 39.2 kN {4,000 kgf} for auxiliary winch.

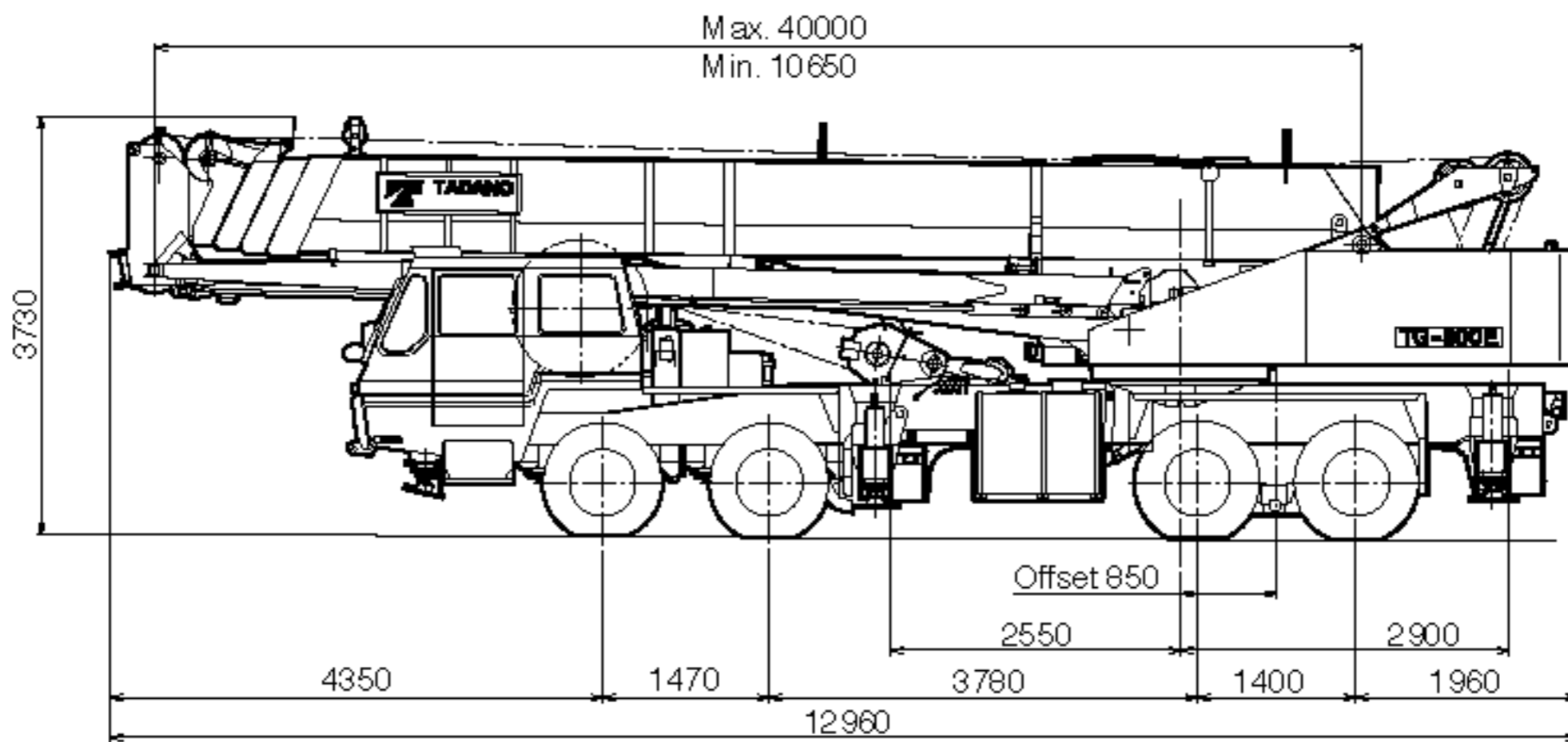
| | | | | | | | | |
|------------------|--------|-------|-------|-------|-------|-------|-------|----------------|
| Boom length | 10.65m | 14.0m | 18.0m | 21.6m | 25.3m | 32.7m | 40.0m | Jib/Single top |
| No. of part line | 12 | 8 | 7 | 6 | 5 | 4 | 4 | 1 |

- For rated lifting capacity of single top, subtract the main hook mass from the relevant boom rated lifting capacity. Rated lifting capacity of single top should not exceed 4,000 kg.
- Free-fall operation should be performed without any load on the hook.

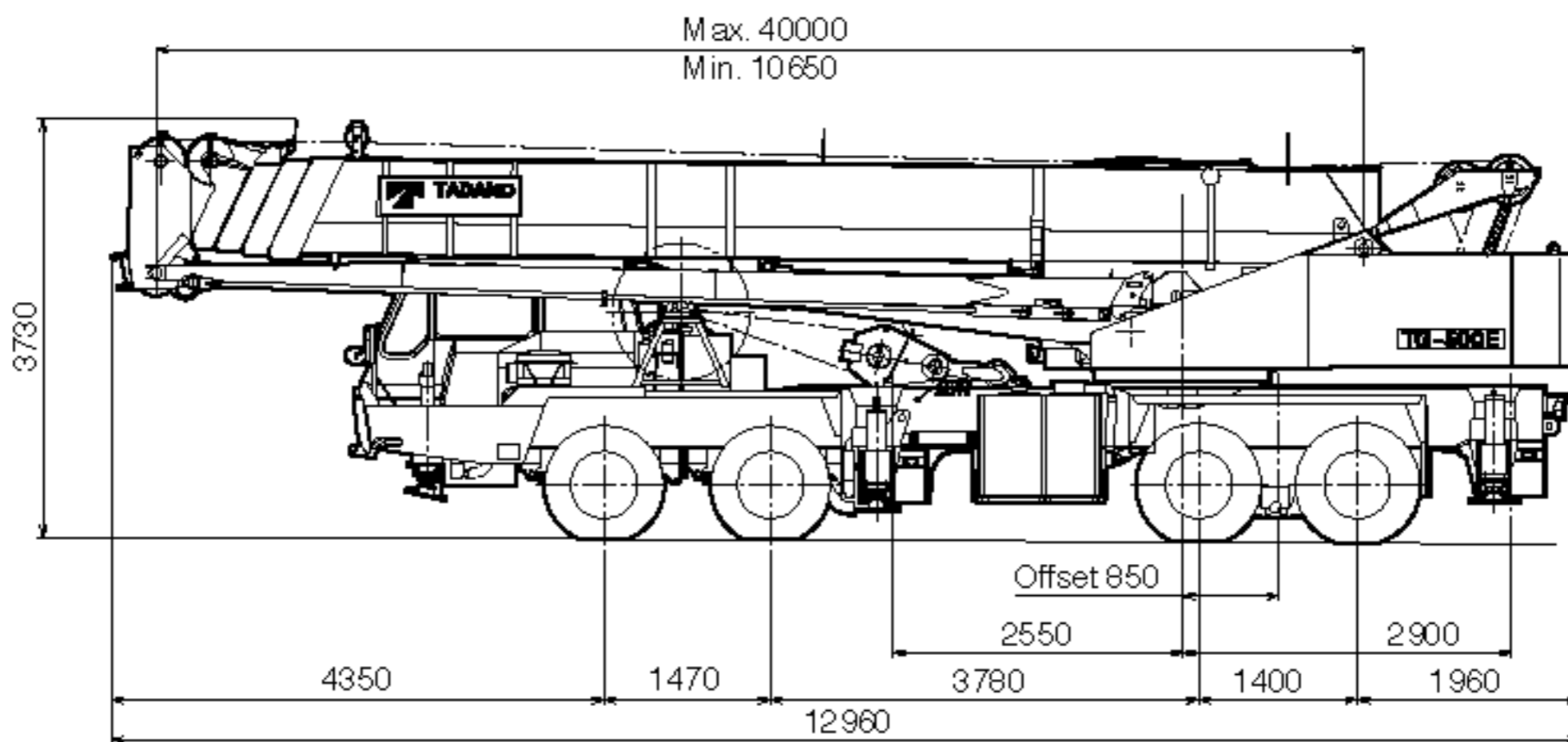
*Optional

DIMENSIONS

KG56TXL (LEFT HAND STEERING)



KG56TXL (RIGHT HAND STEERING)



Overall width 2,820 mm Tread (track) -Front 2,050 mm
 Tail swing radius 3,580 mm -Rear 1,860 mm

Specifications are subject to change without notice.



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