

TADANO CARGO CRANE

MODEL : **TM-ZE293HRS**

CRANE SPECIFICATIONS

CRANE CAPACITY 3,030 kg at 1.5 m (4-part lines)

BOOM Three-sectioned, fully hydraulic telescoping boom of pentagonal box construction

Retracted length ----- 2.85 m

Extended length ----- 6.6 m

Extending speed ----- 3.75 m / 10.5 s

Elevation ----- Elevated by a double-acting hydraulic cylinder

Elevating speed ----- 1° to 76° / 6 s

Boom point ----- 2 sheaves

WINCH Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake

Single line pull ----- 7.45 kN {760 kgf}

Single line speed ----- 68 m/min (at 4th layer)

Wire rope

Diameter x length ----- 8 mm x 45 m

Breaking strength ----- 43.1 kN {4.39 tf}

Construction ----- 7 x 7 + 6 x WS(26)

Hook block ----- 2 sheaves

HOOK STOWING DEVICE Mechanically stowed beneath boom top portion

SWING

Hydraulic motor driven Worm gear speed reduction
 Continuous 360° full circle swing on ball bearing slew ring
 Automatic swing lock
 Swing speed ----- 2.5 min⁻¹ {rpm}

OUTRIGGERS

Manually extended sliders and hydraulically extended jacks
 Integral with crane frame Power up and down
 Extension width ----- Min. 1,720 mm
 Mid. 2,900 mm, 2,400 mm
 Full 3,400 mm

HYDRAULICS

Hydraulic pump ----- Single gear pump
 Hydraulic motors ----- Axial piston type for winch
 Axial piston type for swing
 Control valves ----- Multiple control valves with integral safety
 Valve
 Oil tank capacity ----- approx. 22 L

RADIO CONTROLLER

Model : RCS-F
 Control functions of boom telescoping, hoisting up and down,
 boom elevating, swing, acceleration, speed mode selection,
 working height limiting, Hook-in, Hook-out, horn and
 emergency stop
 Frequency ----- 40 frequencies in 433 MHz band
 Operating power supply
 Transmitter ----- 6V DC, Dry battery R6P(SUM-3) x 4
 Control unit ----- 24V DC, Vehicle battery
 Transmitter mass ---- Approx. 576 g (includes batteries)

SAFETY DEVICES

AML(Automatic Moment Limiter)
 Load indication
 Load moment ratio to rated load indication
 Warning alarm
 Over load limiter
 WHL(Working Height Limiter)
 Load meter
 Radius indicator
 Emergency stop switch on radio controller
 Terminal for emergency stop switch
 Over-winding alarm
 Hoisting limiter
 Jack interlock
 P.T.O indicator lamp
 Hook safety latch
 Hydraulic safety valves, check valves and holding valves
 Level gauge

CRANE MASS

Approx. 945 kg (includes standardized mounting parts)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump delivery is 53 L /min.

RATED LIFTING CAPACITIES IN KILOGRAMS

Crane Strength Rated Capacities

Load Radius	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
	Extension width of outriggers			Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,330	980	2.5 m	1,680
2.5 m	1,880	680	3.0 m	1,430
3.0 m	1,500	480	3.5 m	1,230
3.5 m	1,250	380	4.0 m	1,080
4.0 m	1,080	330	4.5 m	950
4.54m	980	280	5.0 m	830
			5.5 m	730
			6.0 m	650
			6.4 m	580

- NOTES : 1. The mass of hook block (30kg), slings and all similarly used load handling devices must be added to the mass of load.
2. The above numerical values of total rated loads are based on crane strength only. The total rated loads based on stability may lower than those in the above table depending on the loading conditions and the types of the chassis.

Empty Chassis Rated Capacities

Table A

Load Radius	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
	Extension width of outriggers			Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,280	980	2.5 m	1,630
2.5 m	1,730	680	3.0 m	1,230
3.0 m	1,230	480	3.5 m	930
3.5 m	930	380	4.0 m	730
4.0 m	730	330	4.5 m	580
4.54m	630	280	5.0 m	480
			5.5 m	430
			6.0 m	380
			6.4 m	350

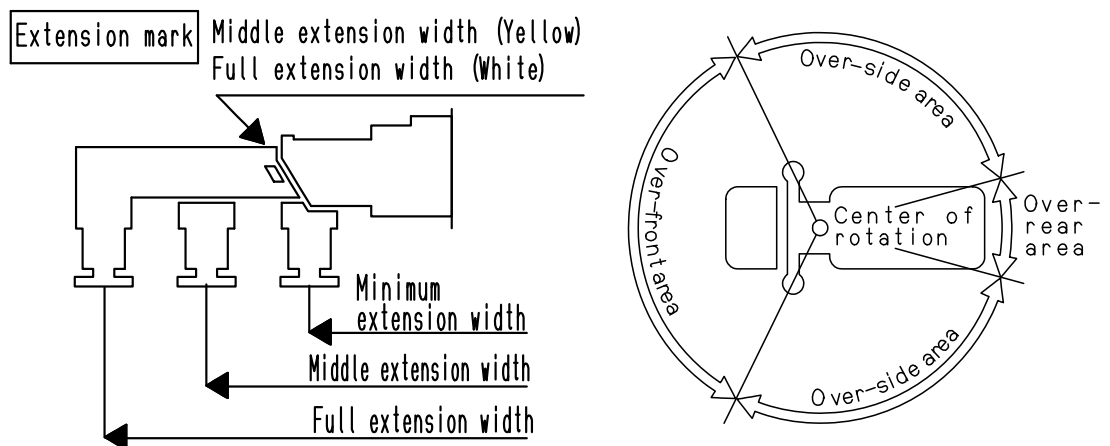
Table C

Load Radius	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
	Extension width of outriggers			Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,280	980	2.5 m	1,630
2.5 m	1,830	680	3.0 m	1,330
3.0 m	1,430	480	3.5 m	1,030
3.5 m	1,080	380	4.0 m	830
4.0 m	830	330	4.5 m	680
4.54m	730	280	5.0 m	580
			5.5 m	530
			6.0 m	480
			6.4 m	430

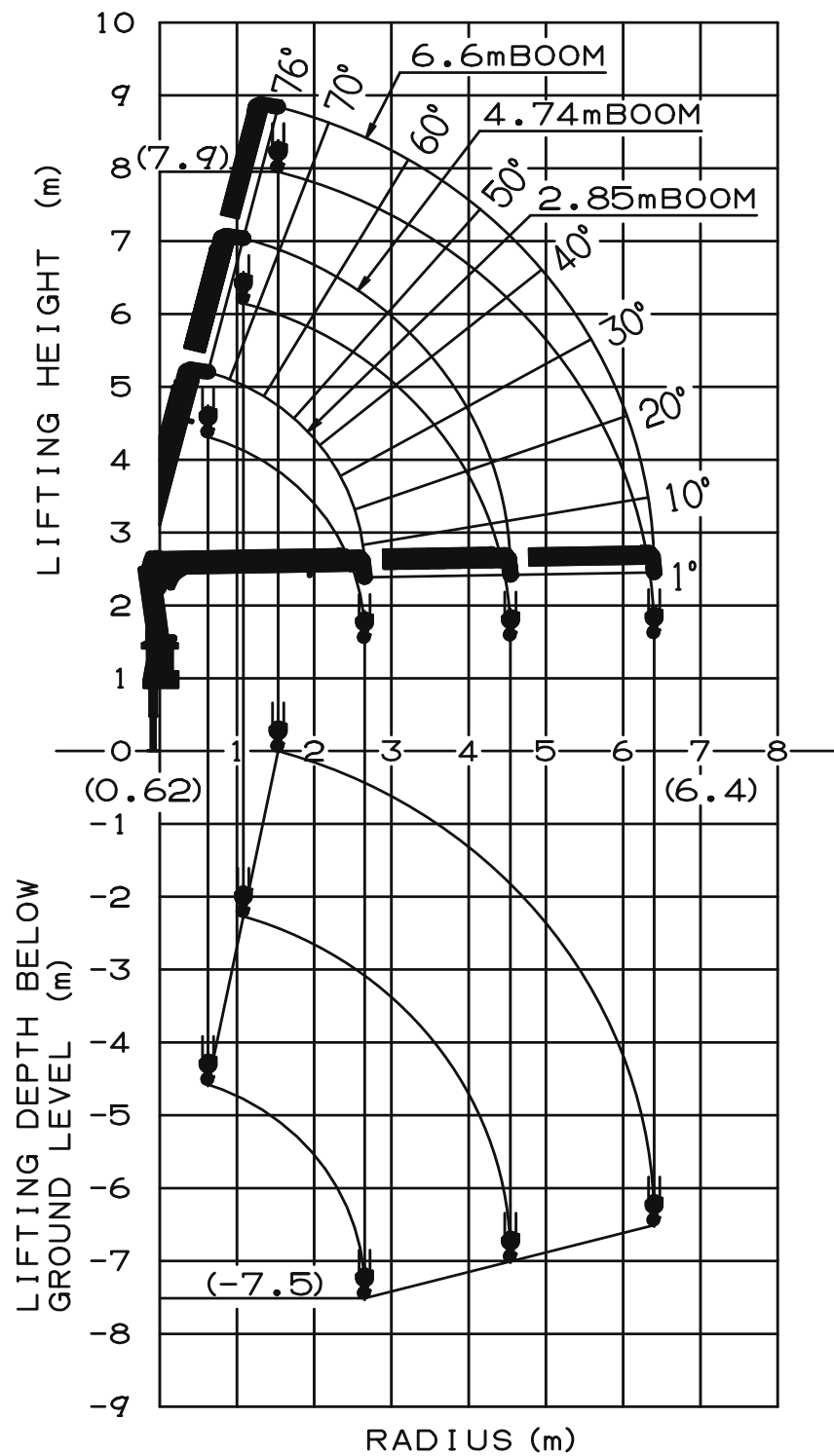
Table D

Load Radius	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
	Extension width of outriggers			Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,330	980	2.5 m	1,680
2.5 m	1,880	680	3.0 m	1,430
3.0 m	1,500	480	3.5 m	1,230
3.5 m	1,250	380	4.0 m	1,080
4.0 m	1,080	330	4.5 m	950
4.54m	980	280	5.0 m	830
			5.5 m	730
			6.0 m	650
			6.4 m	580

- NOTES :
1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
 2. The mass of hook block (30 kg), slings and all similarly used load handling devices must be added to the mass of load.
 3. For boom lengths not shown, use the rated lifting capacity of next longer boom.
 4. When outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width.
 5. For boom lengths longer than 4.74m, extend outriggers to full extension width.
 6. Empty Chassis Rated Capacities table A , C and D depend on the types of chassis.
 7. Empty Chassis Rated Capacities are shown for over-side areas and over-rear area. These capacities for over-front area may be lowered depending on the types of chassis.

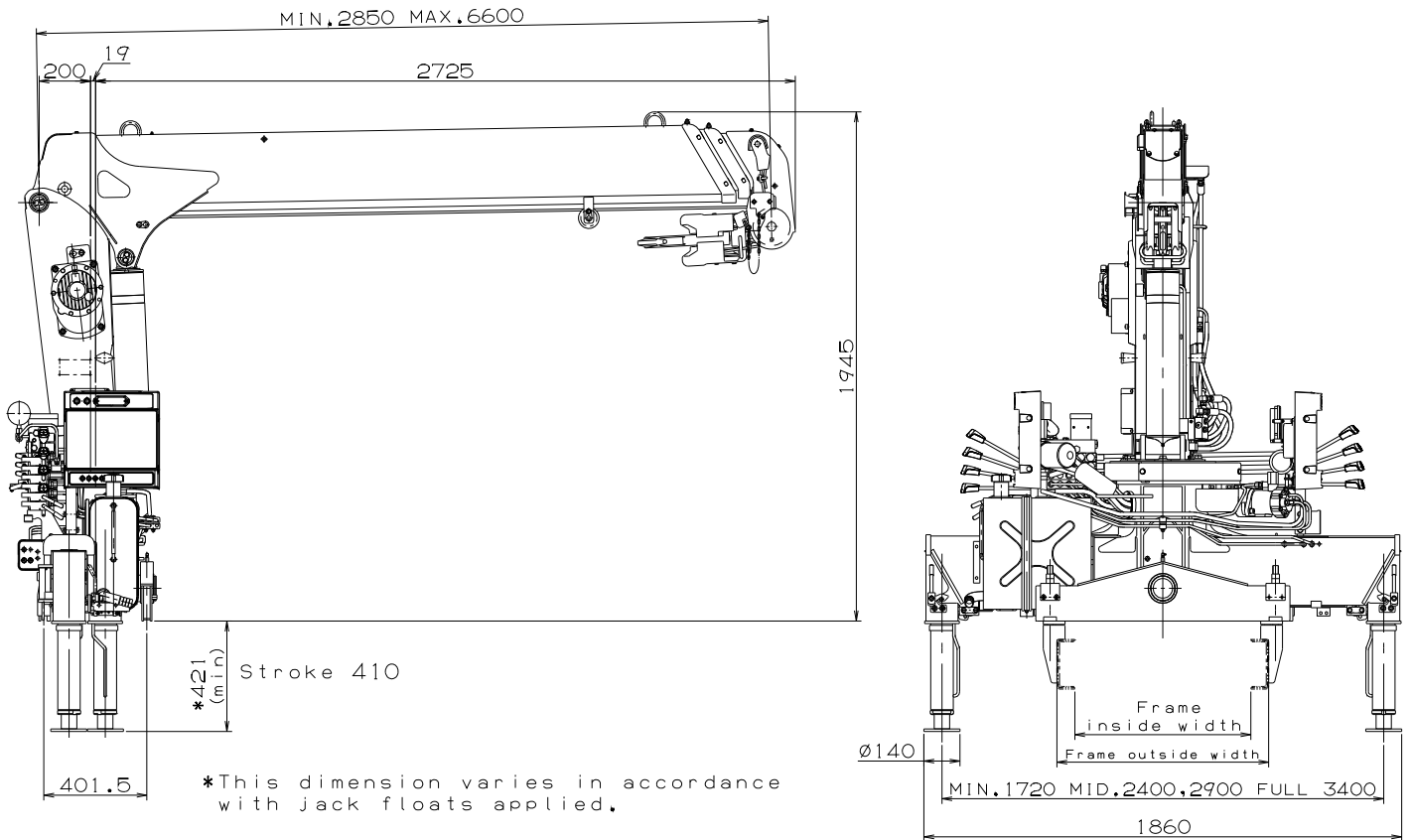


WORKING RANGE



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

DIMENSIONS



GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle mass (including crane mass) ----- 4,500 to 8,000 kg

P.T.O. torque -----140 N-m {14.3 kgf-m} min.

P.T.O. revolution ----- Approx. 300 to 1,700 min⁻¹ {rpm}

Width for crane mounting ----- Approx. 605 mm min.

Frame ----- Weight distribution and frame strength
should be calculated for each truck

Frame width range (inside to outside) ----- Approx. 680 to 860 mm

Frame height (ground to frame top) ----- Approx. 1,010 mm max.

(Height of crane mounting base can be changed by combination of jack floats and crane bases)