



TADANO
HYDRAULIC TRUCK CRANE
TS-75ML
8.8 ton capacity (8 metric tons)



TADANO

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Better Work Results in Less Time and with Less Effort

Built with Tadano's proven technology, the TS-75ML hydraulic truck crane is unmatched in its class for mobility and maneuverability. Mounted on the standard chassis of a 4x2 medium-size truck, the TS-75ML can be easily moved from one worksite to another, giving you the profitable advantage of time-saving mobility. And thanks to its compact design and dimensions, tight tail and turning radii, and ample road clearance even on rough terrain, the TS-75ML pro-

vides you with optimum maneuverability which translates into maximum work efficiency. Like every TADANO crane, the TS-75ML is equipped with the most advanced features and specifications, including a 4-section fully synchronized power boom, a wide elevation range from -7° to 80°, a 2-speed winching capability and fully independent hydraulics. No matter what the job, you can count on the TS-75ML for top-class performance, safety and reliability.

4-SECTION FULL POWER BOOM

At a touch of a lever, the 4-section fully synchronized power boom telescopes to its maximum length of 21.3m in only 32 seconds. Constructed with high-tensile steel, the boom is lightweight yet sturdy enough to handle extra-heavy

loads. Lifting capacity goes all the way to 8t at 2.3m working radius. Maximum lifting performance at maximum boom length is 2t at 5m radius. Contributing further to work efficiency, the truck carrier features a fast and powerful traveling performance.



SINGLE TOP (AUXILIARY BOOM SHEAVE) FOR LIGHT LOADS

The boom head can be mounted with a swing-around type single top for lifting light loads at high speed. The single top can be used with an auxiliary winch, separately from the main hook, saving you the trouble of having to re-reeve the hoist ropes.



WIDE 87° ELEVATION RANGE

Fitted with a counterbalance valve for smoother boom lowering, the double-acting hydraulic elevation cylinder offers an elevation range of -7° to 80° — wide enough to meet practically any requirement at any worksite. The negative boom angle permits reeving at ground level and contributes to easier maintenance.



SIMULTANEOUS CRANE OPERATIONS MAKE WORK EASY

A triple tandem gear pump enables the TS-75ML to carry out different crane functions simultaneously. Each of the three sections of the pump delivers the required hydraulic pressure to winch, swing and boom individually and free from fluctuations.



POWERFUL 2-SPEED WINCHING

For easier and smoother winching, a high-torque axial piston motor is used to drive both main and auxiliary winch drums. A 2-speed booster doubles line speed. Hoisting, lowering and speed are all controlled by the same single lever. Clutch levers conveniently located inside the cab enable the operator to quickly shift from main to auxiliary winch and vice versa. Both drums can be set to free fall for fast cycle work and increased fuel economy when operating over tall buildings. Hoist drums are wide and grooved to improve spooling and extend rope service lifespan.



SMOOTH 360° CONTINUOUS SWING

The crane can swing continuously through 360° with remarkable stability, without being influenced by any other operational hydraulic circuit — thanks to the triple-tandem gear pump. Disc-type automatic neutral swing brake permits easy and safe operation.



CRANE SPECIFICATIONS

CAPACITY	8,000kg at 2.3m
BOOM	4-section full power synchronized telescoping boom of box construction with 3 sheaves at boom head. The synchronization system consists of a telescope cylinder, extension cables and retraction cables. Hydraulic cylinder fitted with holding valve. Fully retracted length 6.6m Fully extended length 21.3m Extension speed 14.7m in 32sec
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 -7° to +80° in 26sec
HOIST MAIN AND AUXILIARY WINCH	2-speed type with grooved drum driven by hydraulic axial piston motor through 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. Main winch Single line pull 1,230kg Single line speed High range 100m/min (at the 4th layer) Normal range 50m/min (at the 4th layer) Wire rope Spin resistant type Diameter x length 10mm x 115m Auxiliary winch Single line pull 1,300kg Single line speed High range 84m/min (at the 2nd layer) Normal range 42m/min (at the 2nd layer) Wire rope Spin resistant type Diameter x length 10mm x 50m
HOOK BLOCK	8 ton capacity 3 sheaves, swivel type hook with safety latch. 1.3 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. Swing speed 2.7rpm
HYDRAULIC SYSTEM	Pump Triple gear pump Control valves Multiple valves actuated by hand levers with integral pressure relief valves. Hydraulic oil tank capacity Approx. 115 liters. Filters Return line filter.
TADANO AUTOMATIC MOMENT LIMITER (AML-M)	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. Digital liquid crystal display: Boom angle Actual load lifted Boom length Permissible load Actual working radius Potential hook height Color bar graphical display: Moment as percentage
CRANE CAB	Steel construction with one door access and safety glass windows opening at sides and rear. A cab heater * available.
SAFETY DEVICE	Boom angle indicator Pilot check valves Pendant type Holding valves overwinding cutout Counterbalance valve Winch automatic brake Hydraulic pressure relief valves Hook safety latch Front jack overload alarm
OUTRIGGERS	4 hydraulically operated outriggers. Rear extended in "X" configuration and front in "H". Each outrigger controlled simultaneously or independently. Equipped with sight level gauge. Floats mounted integrally with the jacks retract to within vehicle width. All cylinders fitted with pilot check valves. Extended width 4,400mm
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.

Note: 1. Each crane motion speed is based on unladen condition.
2. An asterisk (*) denotes optional equipment.

GENERAL DATA

DIMENSIONS	Overall length approx. 7,680mm Overall width approx. 2,180mm Overall height approx. 3,310mm
WEIGHTS	Gross vehicle weight approx. 8,210kg Front approx. 2,660kg Rear approx. 5,550kg
PERFORMANCE	Max. travelling speed computed 100 km/h Gradeability (tan θ) computed 41%

TOTAL RATED LOADS

Unit: kg

		Outriggers fully extended							
		Front Jack extended (360°) Front jack not extended (Over sides and rear)				Front jack not extended (Over front)			
B	A	6.6m	11.5m	16.4m	21.3m	6.6m	11.5m	16.4m	21.3m
2.3m	8,000					8,000			
2.5m	7,000					7,000			
3.0m	6,100	4,900				5,200	4,900		
3.5m	5,300	4,600	3,500			3,800	3,900	3,500	
4.0m	4,350	4,300	3,200			2,700	2,800	2,800	
4.5m	3,600	3,700	3,000	2,000		1,900	2,100	2,100	2,000
5.0m	3,000	3,100	2,800	2,000	1,500	1,600	1,600	1,700	
5.5m	2,550	2,650	2,600	1,850	1,200	1,300	1,300	1,350	
6.0m	2,250	2,350	2,400	1,700	900	1,050	1,050	1,100	
7.0m		1,800	1,850	1,450		750	750	800	
8.0m		1,450	1,500	1,250		500	500	550	
9.0m		1,200	1,250	1,100		350	350	400	
10.0m		1,000	1,050	950		250	250	300	
10.9m		850	850	850		150	150	200	
12.0m			700	750					
13.0m				600	650				
14.0m				500	550				
15.0m				400	450				
15.8m				350	400				
17.0m					350				
18.0m					280				
19.0m					230				
20.0m					180				
20.5m					150				

A: Boom length
B: Working radius

Notes

- Total rated loads shown in the table are based on the condition that the crane is set on firm ground horizontally. Those above bold lines are based on the crane strength and those below, on its stability.
- Total rated loads below the bold lines do not exceed 75% of tipping load.
- Each total rated load includes weight of the hooks (65kg for 8 ton capacity, 20kg for 1.3 ton capacity), and slings.
- 50kg shall be subtracted from the rated lifting loads of the main boom, when single top is attached to main boom head.
- Standard number of part lines for each boom length is as shown below. Load per line should not surpass 1,230kg for main winch and 1,300kg for auxiliary winch.

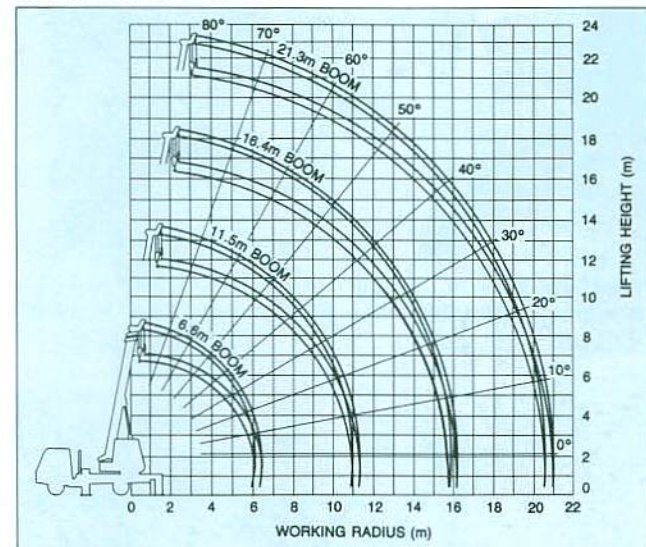
Boom length (m)	6.6m	11.5m	16.4m	21.3m	Single top
No. of part lines	7*/6	4	4	4	1

- *This is the case in which the single top is made use of together with the main hoist reeving system.
6. For total rated load of single top, reduce load shown in following table from relevant total rated load. Total rated loads of single top should not exceed 1,300kg

Boom length (m)	6.6m	11.5m	16.4m	21.3m
Load reduction	0kg	30kg	40kg	50kg

- Free-fall operation should be performed without any load on the hook.

WORKING RANGES



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.

COMFORTABLE CAB ENHANCES OPERATIONAL EFFICIENCY

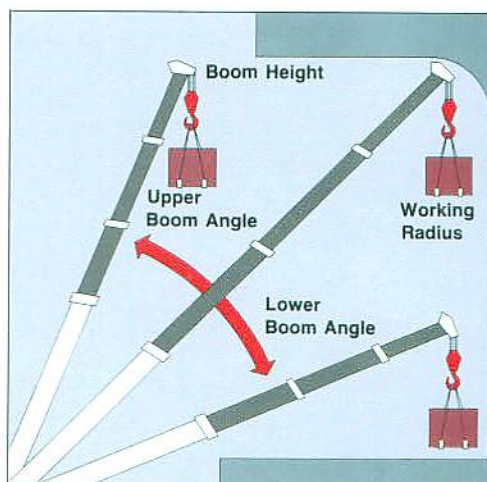
At a glance you can instantly tell the spacious, full-vision cab is designed for maximum operational comfort. All instruments are clustered together on the left-hand side of the cab for easier operation and an enhanced front view. Adjustable, full-length crane control levers are complemented by an adjustable, reclining headrest-equipped seat. Crane control levers automatically return to the neutral position when released. Electric front and roof window wipers, interior lighting, an optional adjustable heater and an optional radio add further to operational comfort and efficiency.



TADANO'S AML REPRESENTS ADVANCED ELECTRONIC TECHNOLOGY

With Tadano's electronic Automatic Moment Limiter (AML), moment input is electrically taken directly at the boom elevation support point. The boom angle and boom length are also detected. Combined with the outrigger configuration, this enables the AML to monitor and control stepless lifting capacity changes. The Automatic Moment Limiter provides a continuous display of moment ratio through a color bar graph, along with LCD readouts of the following data:

- either boom length or potential hook height
- boom angle
- actual working radius
- actual load lifted
- permissible load



As shown in the illustration, the Automatic Moment Limiter can also be used to limit boom height, upper and lower boom angles and working radius.



OUTRIGGERS FOR ADDED STABILITY AND SAFETY

Rigid front outriggers of box-construction with a wide 4.4m span provide extra support for stabler and safer operations. Both outriggers can be simultaneously operated with a simple lever control, while both slide beams and jacks can be independently controlled. The rear "X" type outriggers are located low, allowing unobstructed operation over the rear.

FRONT JACK

To allow full capacities through a 360° swing, a fifth hydraulically operated jack is mounted on the front frame of truck carrier. An overload sensor and alarm is fitted to prevent damage to the truck chassis.

