



# TRUCK CRANE

TS-70M

TS-70ML

## *JAPANESE SPECIFICATIONS*

TS

OUTLINE	SPEC. NO.
Max. total rated load 4.9 ton	TS-70M-3-00004
Max. total rated load 7.0 ton	TS-70M-3-00001

Control No. JA-03



TS-70M-3-00004

TS-70M-3-00001

## TS-70ML, TS-70M

### CRANE SPECIFICATIONS

#### CRANE CAPACITY

6.5m Boom	7,000kg	at 2.5m ( 6 part-line)	... TS-70ML
	4,900kg	at 3.5m ( 4 part-line)	... TS-70M
11.1m Boom	4,900kg	at 3.5m ( 6 part-line)	... TS-70ML
	4,900kg	at 3.5m ( 4 part-line)	... TS-70M
15.7m Boom	3,900kg	at 3.5m ( 6 part-line)	... TS-70ML
	3,900kg	at 3.5m ( 4 part-line)	... TS-70M
6.0m Jib	1,300kg	at 75° ( 1 part-line)	
Single top	1,300kg	( 1 part-line)	

#### MAX. LIFTING HEIGHT

Boom	15.8m
Jib	21.9m

#### MAX. WORKING RADIUS

Boom	15.0m
Jib	21.1m

#### BOOM LENGTH

6.5m - 15.7m

#### BOOM EXTENSION

9.2m

#### BOOM EXTENSION SPEED

9.2m / 22s

#### MAIN WINCH SINGLE LINE SPEED

High range:	100m/min	(4th layer)
Low range:	50m/min	(4th layer)

#### MAIN WINCH HOOK SPEED

(TS-70ML)

High range:	16.7m/min	(6 part-line)
Low range:	8.3m/min	(6 part-line)

(TS-70M)

High range:	25m/min	(4 part-line)
Low range:	12.5m/min	(4 part-line)

#### AUXILIARY WINCH SINGLE LINE SPEED

High range:	84m/min	(2nd layer)
Low range:	42m/min	(2nd layer)

#### AUXILIARY WINCH HOOK SPEED

High range:	84m/min	(1 part-line)
Low range:	42m/min	(1 part-line)

#### BOOM ELEVATION ANGLE

-7° - 80°

#### BOOM ELEVATION SPEED

-7° - 80° / 26s

#### SWING ANGLE

360° continue

#### SWING SPEED

3.0rpm

#### WIRE ROPE

Main Winch

10mm × 125m (Diameter × Length)	... TS-70ML
10mm × 90m (Diameter × Length)	... TS-70M
7 × 7 + 6 × Fi(29) Class B ordinary · Z twist	
Spin-resistant wire rope	
Breaking strength 6.89t	

Auxiliary Winch

10mm × 50m (Diameter × Length)	
7 × 7 + 6 × Fi(29) Class B ordinary · Z twist	
Spin-resistant wire rope	
Breaking strength 6.89t	

#### BOOM

3-section fully hydraulically synchronized telescoping boom of box construction.

#### BOOM EXTENSION

1 double-acting hydraulic cylinder  
1 wire rope type telescoping device

#### JIB

Stored within boom  
Dual (0°, 30°) offset

#### SINGLE TOP

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

#### HOIST

Driven by hydraulic motor and via spur gear speed reducer.  
With free-fall device.  
Automatic brake (with foot brake for free-fall device)  
1-motor 2-axle 2-drum winch

#### BOOM ELEVATION

1 double-acting hydraulic cylinders

#### SWING

Hydraulic motor driven planetary gear reducer  
Swing bearing  
Automatic brake

#### OUTRIGGERS

Fully hydraulic type; front: H-type; rear: X-type  
Full extended width 4.4m  
Middle extended width 3.0m

#### MAX. OUTRIGGER LOAD

9.0t

#### FRONT JACK

Hydraulic operated type

#### HYDRAULIC PUMPS

3 gear pumps

#### HYDRAULIC OIL TANK CAPACITY

115 liters

#### SAFETY DEVICES

Automatic moment limiter (AML)  
With working range limiting function  
Working area control device  
Over-winding cutout  
Level gauge  
Hook safety latch  
Hydraulic safety valve  
Telescopic counterbalance valve  
Elevation counterbalance valve  
Jack pilot check valve  
Front jack over load alarm

#### EQUIPMENTS

Crane cab heater  
Radio  
Fan  
Boom angle indicator



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GENERAL DATA

**MOUNTING CARRIERS**  
**(representative examples)**

NISSAN	P-CM87B
MITSUBISHI	P-FK415ED
HINO	P-FD161CD
ISUZU	P-FRR12DA

**DIMENSIONS**  
**(may differ according to type of mounting carrier)**

Overall length	Approx. 7,660mm
Overall width	Approx. 2,200mm
Overall height	Approx. 3,250mm

**WEIGHT**  
Gross vehicle weight      Approx. 7,850kg



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**TOTAL RATED LOADS**

Unit : ton

• Outriggers fully extended + Front jack (360°) • Outriggers fully extended (Over rear · Over sides)						
B (m)	A			E (°)	C	
	6.5 m	11.1 m	15.7 m		D	
					6.0 m	
					0°	30°
2.0	(4.90) 7.00			80	1.30	0.80
				75	1.30	0.80
2.5	(4.90) 7.00			70	1.20	0.75
				65	1.00	0.70
3.0	(4.90) 6.10	4.90		60	0.85	0.65
				55	0.75	0.60
3.5	(4.90) 5.30	4.90	3.90	50	0.60	0.52
4.0	4.55	4.40	3.45	45	0.50	0.43
4.5	3.75	3.80	3.10	40	0.42	0.37
5.0	3.15	3.25	2.80	35	0.35	0.32
5.5	2.70	2.80	2.60	30	0.30	0.27
5.9	2.40	2.50	2.45	20	0.22	
7.0		1.90	1.95	10	0.18	
8.0		1.55	1.55	0	0.17	
9.0		1.25	1.30			
10.0		1.05	1.05			
10.5		0.95	0.95			
12.0			0.75			
13.0			0.65			
14.0			0.55			
15.0			0.45			

A = Boom length

B = Working radius

C = Jib length

D = Jib offset

E = Boom angle



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Unit : ton

• Outriggers middle extended (360°) • Outriggers fully extended (Over front)						
<div> <div>A</div> <div>B (m)</div> </div>	6.5 m	11.1 m	15.7 m	<div> <div>C</div> <div>D</div> <div>E (°)</div> </div>	6.0 m	
					0°	30°
2.0	(4.90) 7.00			80	1.30	0.80
				75	1.25	0.70
2.5	(4.90) 7.00			70	0.73	0.50
3.0	(4.90) 5.20	4.90		65	0.45	0.32
				60	0.28	0.20
3.5	3.75	3.90	3.50			
4.0	2.85	3.00	2.80			
4.5	2.15	2.30	2.30			
5.0	1.65	1.80	1.80			
5.5	1.30	1.45	1.45			
5.9	1.10	1.20	1.25			
7.0		0.80	0.80			
8.0		0.55	0.55			
9.0		0.40	0.40			
10.0		0.25	0.28			
10.5		0.20	0.23			

A = Boom length  
B = Working radius  
C = Jib length  
D = Jib offset  
E = Boom angle



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**NOTES:**

- 1. Values within ( ) are for the TS-70M type.
- 2. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values are based on the crane strength.
- 3. The weights of the slings and hooks (main winch hook: 65kg, auxiliary winch hook: 20kg) are included in the total rated loads shown.
- 4. The total rated load is based on the actual working radius including the deflection of the boom.
- 5. Subtract 50kg from the value in the chart for the total rated load of the boom with a single top set.
- 6. The chart below shows the standard number of part lines for each boom length. The load per line should not exceed 1.23t for the main winch and 1.30t for the auxiliary winch.

A	6.5m	11.1m	15.7m	J
H	6 (4)	6 (4)	6 (4)	1

A = Boom length    H = No. of part-line    J = Jib / Single top

Values within ( ) are for TS-70M.

- 7. As a rule, free-fall operations should be performed only when lowering the hook alone. If a hoisted load must be lowered by free-fall operation, the load must be kept below 1/5th of the total rated load (the load per line must be 0.26t) and sudden braking operations must be avoided.
- 8. The total rated loads for the single top are obtained by subtracting the corresponding values below from the total rated load of the boom and must not exceed 1.30t.

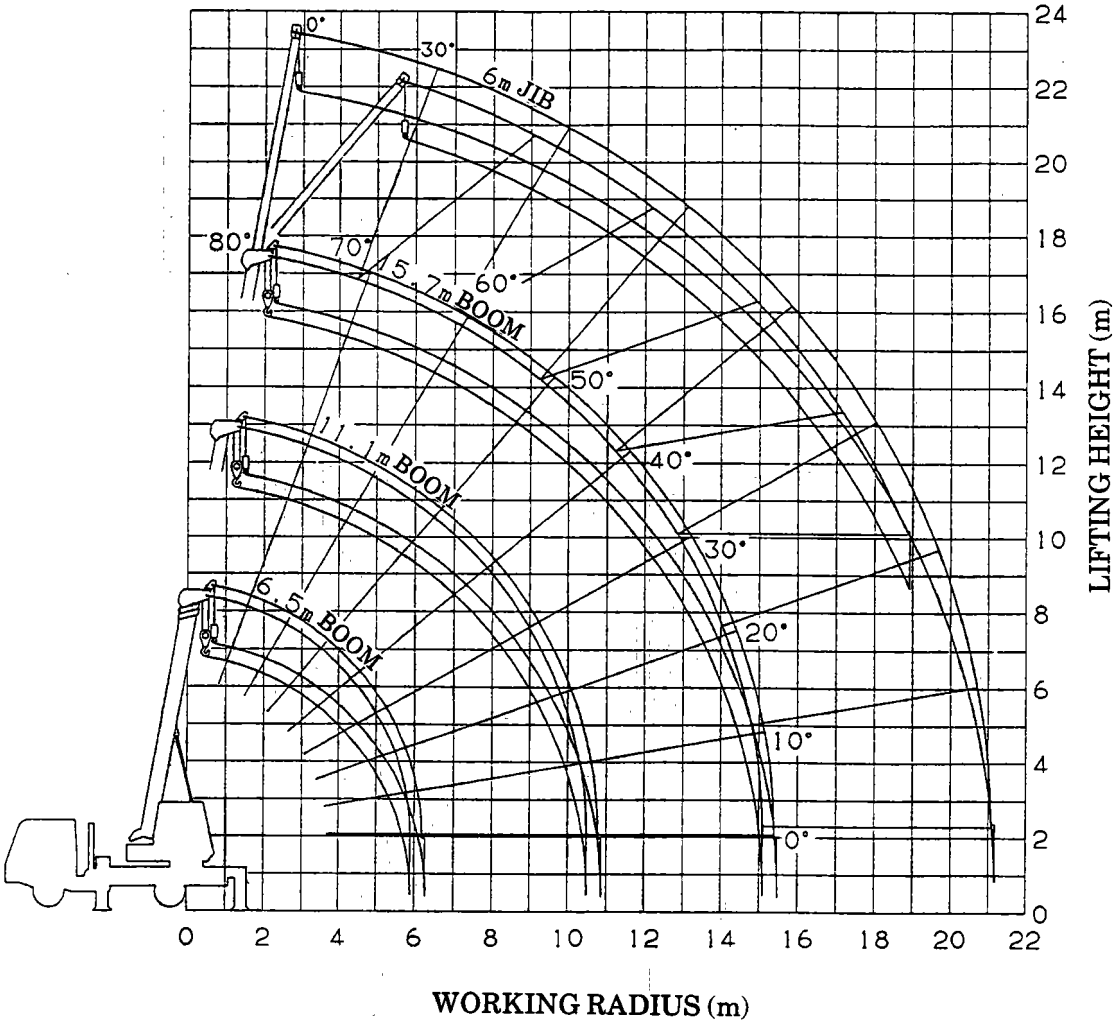
A	6.5m	11.1m	15.7m
Q	0 kg	30 kg	50 kg

A = Boom length    Q = Subtracted load



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**WORKING RADIUS - LIFTING HEIGHT**



- NOTES:**
1. The deflection of the boom is not incorporated in the figure above.
  2. The above chart is for the case where the outriggers are fully extended and where the front jack are used (over 360°).



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**DIMENSIONS (1/100)**

May differ according to type of mounting carrier.

