

# *SPECIFICATIONS*

SPEC. No. CC-1211  
DATE Nov.2019

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## **SPECIFICATIONS HYDRAULIC CRANE**

**MODEL: UNIC URW295WB2ER**

Specifications are subject to change without notice.

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**FURUKAWA UNIC CORPORATION**

## UNIC CRANE PERFORMANCE

MODEL : URW295WB2ER

### CRANE CAPACITY:

LIFTING CAPACITY	: Max. 2.93t at 1.4m
HOOK HEIGHT	
ABOVE GROUND LEVEL	: Max. 8.9m
BELOW GROUND LEVEL	: Max. 11.6m with 4-part line
WORKING RADIUS	: Min 0.45m, Max. 8.41m

### BOOM:

5-section box beam type telescoping boom

Boom Length	
Retracted boom:	2.53m
Extended boom:	8.65m
Boom Extending Speed:	6.12m/31 s           (Standard)
	6.12m/23s           (High speed)
Boom Raising Speed:	0° to 78°/17s       (Standard)
	0° to 78°/12s       (High speed)

### WINCH:

Hydraulic motor driven, spur gear reduction, with automatic mechanical brake and wire rope retaining roller.

Hoisting Speed	
Single line speed:	28.0m/min.           (Standard)
	36.4m/min.           (High speed)
Hook speed:	7.0m/min.           (Standard)
	9.1m/min.           (High speed)
Hook Block;	2.9t capacity, 2 sheaves with safety latch
Wire Rope	
Construction (JIS):	IWRC 6 x WS(26) GRADE B
Diameter x Length:	8mm x 54.0m
Breaking strength:	42.4kN {4320kgf}

### SLEWING:

Trochoid motor, worm gear reduction, spur gear reduction, and worm self-locking brake (supported by ball bearings)

Slewing Range:	360° continuous rotation on a ball bearing race
Slewing Speed:	1.0 rpm           (Standard)
	1.5 rpm           (High speed)

### OUTRIGGERS:

2-section (with damper) for bend and 5-section (Front) / 4-section (Rear) extension.  
Double acting hydraulic cylinders with pilot-operated check valves, direct pushing type.  
(Directly connected with hydraulic automatic lock device)

### HYDRAULIC SYSTEM:

Hydraulic Pump(when using engine)

Type:	Gear pump
Rated pressure:	21.6MPa {220kgf/cm <sup>2</sup> }
Rated delivery:	18.2 ℓ/min. (Standard) 26.8 ℓ/min. (High speed)
Rated revolution:	1800rpm (Standard) 2650rpm (High speed)

Hydraulic oil tank: 27 ℓ capacity

Hydraulic Valves

Control valve:	Multiple control valve, spring centered, spool-type, with pressure relief valve
Pressure relief valve setting:	For traveling: 21.6MPa {220kgf/cm <sup>2</sup> } For crane: 20.6MPa {210kgf/cm <sup>2</sup> } For steering: Ext. 6.4MPa {65kgf/cm <sup>2</sup> } Ret. 12.7MPa {130kgf/cm <sup>2</sup> }
Counterbalance valve:	Boom raising and boom telescoping cylinders
Pilot-operated check valve:	Outrigger cylinders

Hydraulic Actuators

Hydraulic motors:	Hoisting: Axial plunger type Slewing: Trochoid type
Hydraulic cylinders:	Double acting type 1 x Boom raising cylinder 3 x Boom telescoping cylinder 4 x Outrigger cylinder 1 x Steering cylinder

### DRIVING GEAR:

Driving type:	Wheel
Size of tire:	FRONT : 4.00-8 {Wheel rim 3.00D-8} REAR : 3.50-5 {Wheel rim 3.00SP-5}
Tread length:	1050mm
Ground contact pressure:	FRONT : 671kPa {6.84kgf / cm <sup>2</sup> } REAR : 637kPa {6.50kgf / cm <sup>2</sup> }
Steering angle:	L 50° , R 50°
Minimum turn radius:	outside 1990mm × inside 510mm
Traveling speed:	0~1.7km/h, forward/backward (Standard) 0~2.6km/h, forward/backward (High speed)
Hill climbing ability:	15°(10°) (It is followed to an operation manual at the time of operation)
Motor:	Rated output: 4.0kW/1800rpm (Standard) 6.0kW/2650rpm (High speed)
	Model: IA180-100B3 (Toyota Industries Co.,Ltd)
Steering:	Hydraulic drive independent of left/right

### BATTERY:

Model:	VCi225(DC48V-225Ah) (DC2V × 24cell)
Consecutive operating time	Approx. 270min (Standard) Approx. 240min (High speed)

### BATTERY CHARGER:

Model:	NG3(ZIVAN)
Input voltage:	AC200V(50~60Hz) ,Single-phase
Input current:	16A
Output voltage:	DC48V
Output current:	36A
Charging time 80%:	Approx. 5hour
100%:	Approx. 10hour

Note: The figures in relation to the speed are on the basis of no-load running at rated oil flow condition.

**SAFETY DEVICES:**

1. Pressure relief valve for hydraulic circuit
2. Counterbalance valves for boom raising and boom telescoping cylinders
3. Double pilot-operated check valves for outrigger cylinders
4. Boom angle indicator with load indicator
5. Hook safety latch
6. Automatic mechanical brake for winch
7. Automatic stop for overwinding
8. Overwinding alarm
9. Emergency stop button
10. Inter-lock device of crane and traveling levers
11. Level
12. Slewing restriction limit switch
13. Inter-lock device of crane and outriggers (with Outrigger ground contact detector)
14. Automatic stop for leaving minimum wire rope
15. Three colored lamp
16. Headlight

**VOICE MESSAGE:**

[Remote control active]  
[Stop winch up]  
[Secure lifting hook]  
[Low transmitter battery]  
[Service remote control]  
[Reset main switch]  
[Change control mode]  
[Crane mode]  
[Outrigger mode Outriggers moving]  
[Check error code]  
[Control system error]

**DIMENSIONS OF CRANE:**

2730mm(L) × 750mm(W) × 1570mm(H))

**MASS OF CRANE:**

2380kg

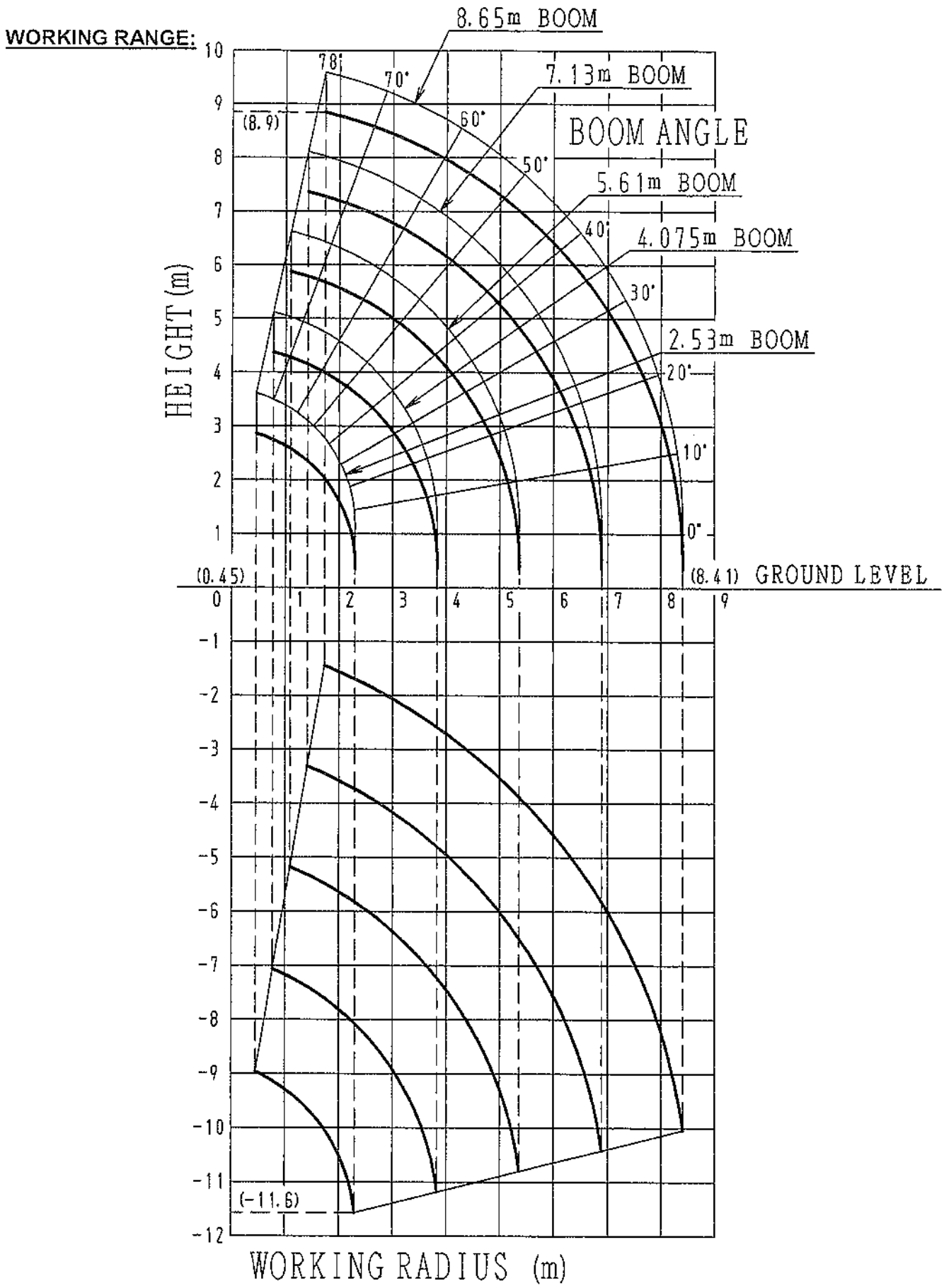
## RADIO REMOTE CONTROL DEVICE:

Model:	RC-500HA-AUS		
System:	Manual/remote control combined system		
Control:	1. Selective control	Boom	Raise / Lower (Crane / Outrigger) Outrigger <sup>④</sup> Ret / Ext
		Hook	Hoist / Lower (Shock-less ON / OFF) Outrigger <sup>③</sup> Ret / Ext
		Boom	Extend / Retract Outrigger <sup>②</sup> Ret / Ext
		Slewing	C.W / C.C.W Outrigger <sup>①</sup> Ret / Ext
	2. Store hook	Hook storage	
	3. Start/Warning horn	Start radio remote control and recovered emergency stop/ Horn	
	4. Speed control lever	Hydraulic control and motor speed control	
	5. Mode select	Shock-less ON / OFF	
	6. Speed mode select	High speed mode(normal mode)/ Medium speed mode/Low speed mode	
	7. Key switch	Transmitter power on-off	
	8. Emergency-stop switch	Stop function of crane	
Power supply:	Controller	DC/DC Converter(DC12V)	
	Transmitter	Four R03 dry cells (DC6V)	
Power consumption:	Approx. 50 W		
	(Single selective operation at maximum operating speed)		
Transmitter:	Battery life more than 20 hours (of transmitter operation)		
Transmitter weight:	700g (with batteries)		
Ambient temperature:	-20 °C ~ +60 °C		
Storage temperature:	-30 °C ~ +75 °C		

### RADIO: (Radio remote controller model)

Radio frequency:	433-434 MHz Band
Transmitted output power:	10mW
Operating range:	Approx. 100m
Unit address:	Special address combining a frequency and ID code is assigned to each unit.

**CAUTION:** In accordance with our policy of constant product improvement,  
all specifications are subject to change without notice or obligations.



**Note:** The above figures are based on no-load condition and do not include the deflection of the boom.

**NET RATED LOADS:**

Boom-sections extended: ①, ①+②

Working radius (m)		1.0	1.4	1.5	1.8	2.0	2.5	3.0	3.5	3.835
Net rated load ( t )	Outriggers extended to maximum	2.9	2.9	2.65	2.25	2.05	1.65	1.3	1.0	0.9
	Outriggers extended not to maximum	2.0	2.0	2.0	1.45	1.1	0.65	0.49	0.35	0.25

Boom-sections extended: ①+②+③

Working radius (m)		2.2	2.5	2.9	3.0	3.5	4.0	4.5	5.0	5.37
Net rated load ( t )	Outriggers extended to maximum	1.35	1.35	1.35	1.25	1.0	0.8	0.65	0.52	0.43
	Outriggers extended not to maximum	0.8	0.65	0.53	0.5	0.38	0.28	0.22	0.16	0.12

Boom-sections extended: ①+②+③+④

Working radius (m)		3.4	3.8	4.0	4.5	5.0	5.5	6.0	6.5	6.89
Net rated load ( t )	Outriggers extended to maximum	0.85	0.85	0.75	0.6	0.5	0.42	0.36	0.32	0.27
	Outriggers extended not to maximum	0.42	0.34	0.3	0.25	0.19	0.14	0.1	0.08	0.06

Boom-sections extended: ①+②+③+④+⑤

Working radius (m)		3.8	4.1	4.5	5.0	5.5	6.0	6.5	7.0	8.0	8.41
Net rated load ( t )	Outriggers extended to maximum	0.55	0.55	0.45	0.37	0.31	0.27	0.23	0.2	0.15	0.13
	Outriggers extended not to maximum	0.35	0.29	0.25	0.2	0.16	0.13	0.1	0.07	0.04	0.03

**CAUTION**

1. Net rated loads are performance when the crane is placed level and is based on an actual working radius including boom deflection under load.  
Net rated loads are also based on strength and stability of the crane.
2. Net rated loads must be reduced in accordance with wind, ground condition and operating speed.
3. Net rated loads are the lifting capacities excepted for the mass of the hook.
4. When the outriggers are set without extending to their maximum, stability of the crane deteriorates remarkably.  
Pay attention that the net rated loads are changed according to how far the outriggers are extended.
5. If any one of the four outriggers is not fully extended, operate with performance of not maximum extension.
6. In order to make correct operation, read the instruction manual carefully before crane operation.



**FLY JIB:(OPTION)**

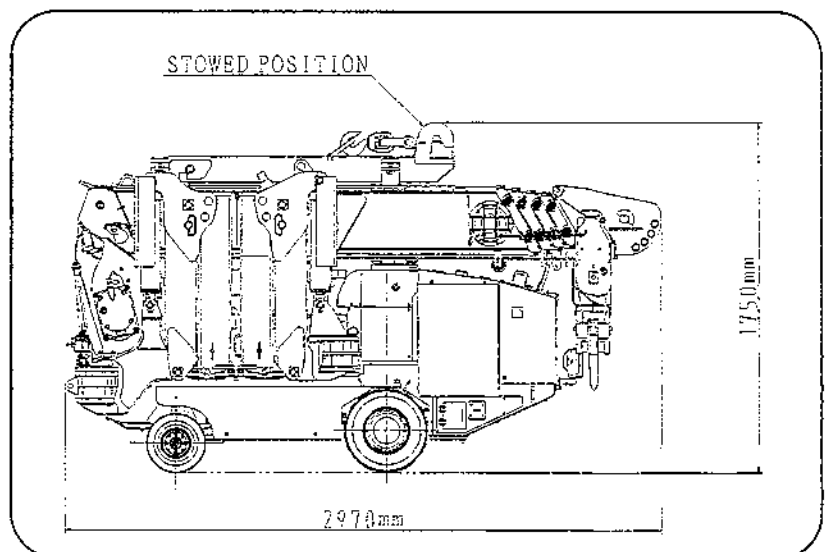
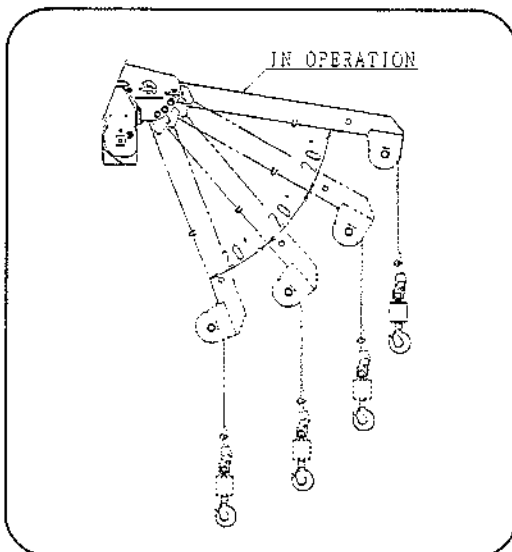
LIFTING CAPACITY: 700kg  
 JIB LENGTH: 1.5m  
 TILT ANGLE: 0° ,20° ,40° ,60°  
 MASS OF FLY JIB: 70kg

**NET RATED LOADS:(FOR FLY JIB)**

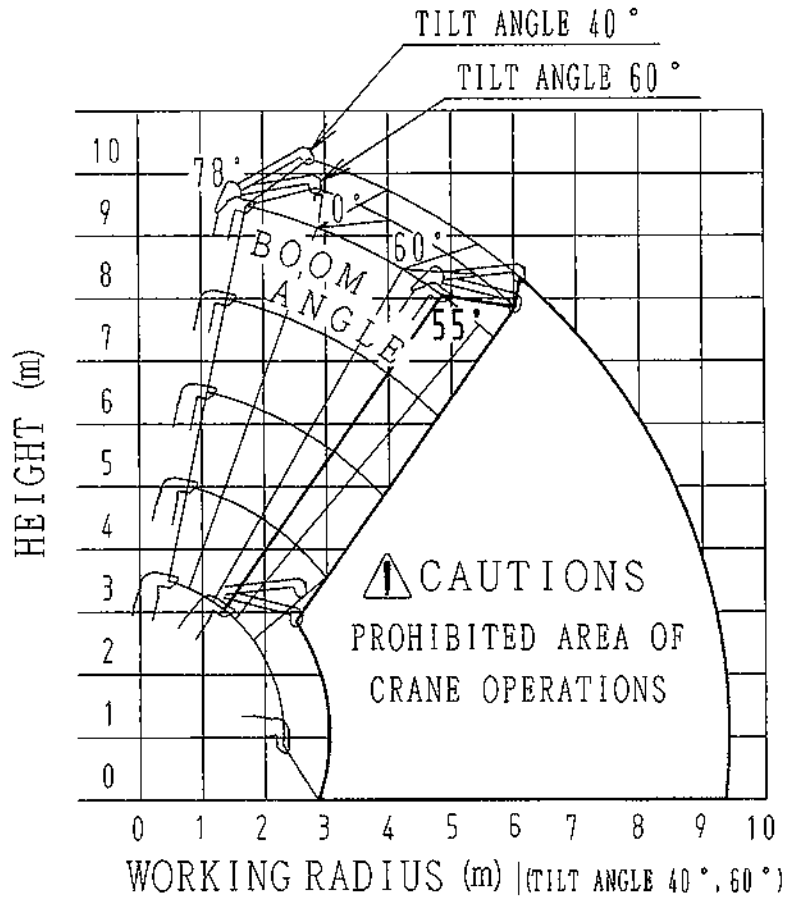
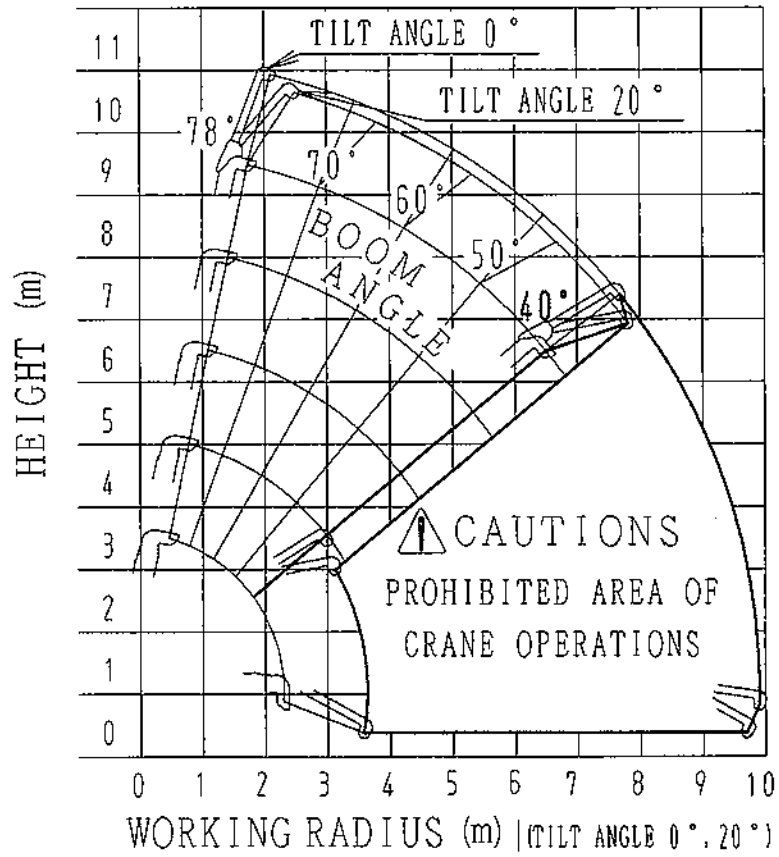
BOOM ANGLE	TILT ANGLE							
	1st TO 4th BOOM SECTIONS				ONLY 5th BOOM SECTION			
	0°	20°	40°	60°	0°	20°	40°	60°
78°	700	700	700	700	400	400	400	400
75°	700	700	700	700	400	400	400	400
70°	700	700	700	700	400	400	400	400
65°	500	500	500	500	250	250	250	250
60°	350	350	350	350	200	200	200	200
55°	250	250	PROHIBITED AREA OF CRANE OPERATIONS	PROHIBITED AREA OF CRANE OPERATIONS	150	150	PROHIBITED AREA OF CRANE OPERATIONS	PROHIBITED AREA OF CRANE OPERATIONS
50°	200	200			100	100		
40°	PROHIBITED AREA OF CRANE OPERATIONS		PROHIBITED AREA OF CRANE OPERATIONS	PROHIBITED AREA OF CRANE OPERATIONS	PROHIBITED AREA OF CRANE OPERATIONS		PROHIBITED AREA OF CRANE OPERATIONS	PROHIBITED AREA OF CRANE OPERATIONS
30°	PROHIBITED AREA OF CRANE OPERATIONS							
20°	PROHIBITED AREA OF CRANE OPERATIONS							
10°	PROHIBITED AREA OF CRANE OPERATIONS							
0°	PROHIBITED AREA OF CRANE OPERATIONS							

**CAUTION**

1. Net rated loads are performance when outriggers extended to maximum.
2. Net rated loads are performance when the crane is placed level and is based on an actual working radius including boom deflection under loaded.  
 Net rated loads are also based on strength and stability of the crane.
3. Net rated loads must be reduced in accordance with wind, ground condition and operating speed.
4. Net rated loads are the lifting capacities except for the mass of hook.
5. The mass of the slings and any accessories attached to the boom or load line must be deducted from the above net rated loads in the chart.
6. In order to make correct operation, read the instruction manual carefully before crane operation.



**WORKING RANGE:**  
(FOR FLY JIB)



**Note:** The above figures are based on no-load condition and do not include the deflection of the boom.

**FLY JIB-SEARCHER HOOK:(OPTION)**

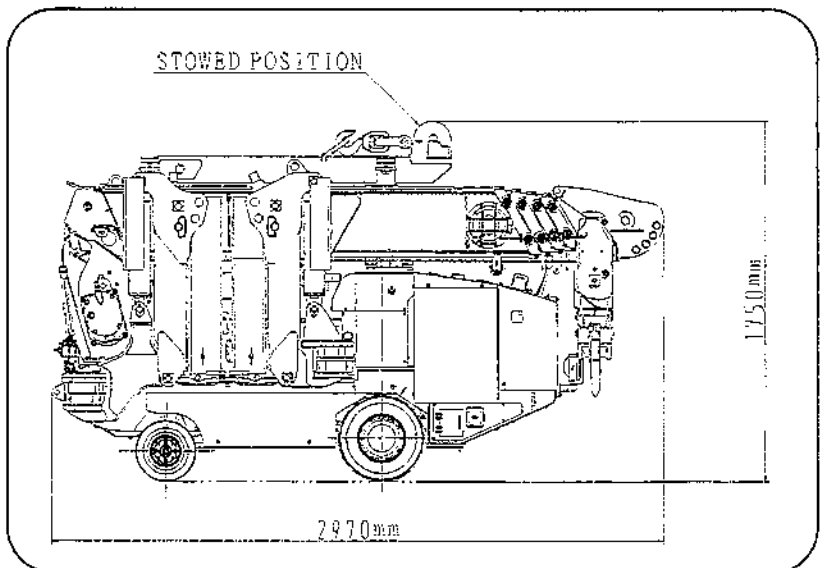
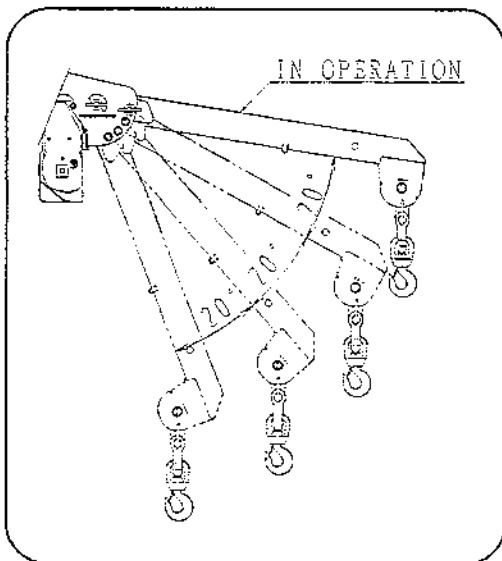
LIFTING CAPACITY: 700kg  
 SEARCHER HOOK LENGTH: 1.5m  
 TILT ANGLE: 0° ,20° ,40° ,60°  
 MASS OF SEARCHER HOOK 8kg (Bracket and jib are excepted)

**NET RATED LOADS: (FOR FLY JIB-SEARCHER HOOK)**

1st TO 4th BOOM SECTIONS			ONLY 5th BOOM SECTION		
WORKING RADIUS (m)	NET RATED LOAD (kg)		WORKING RADIUS (m)	NET RATED LOAD (kg)	
	OUTRIGGERS MAX EXT.	OUTRIGGERS NOT MAX EXT.		OUTRIGGERS MAX EXT.	OUTRIGGERS NOT MAX EXT.
3.8	700	250	3.8	500	250
4.0	700	200	4.0	450	200
4.5	500	150	4.5	400	150
5.0	400	110	5.0	320	110
5.5	330	80	5.5	300	80
6.0	260	50	6.0	260	50
6.5	220	40	6.5	220	40
7.0	180	PROHIBITED AREA OF CRANE OPERATIONS	7.0	180	PROHIBITED AREA OF CRANE OPERATIONS
8.0	130		8.0	130	
8.39	100		9.0	100	
			9.91	50	

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**SEARCHER HOOK:(OPTION)**

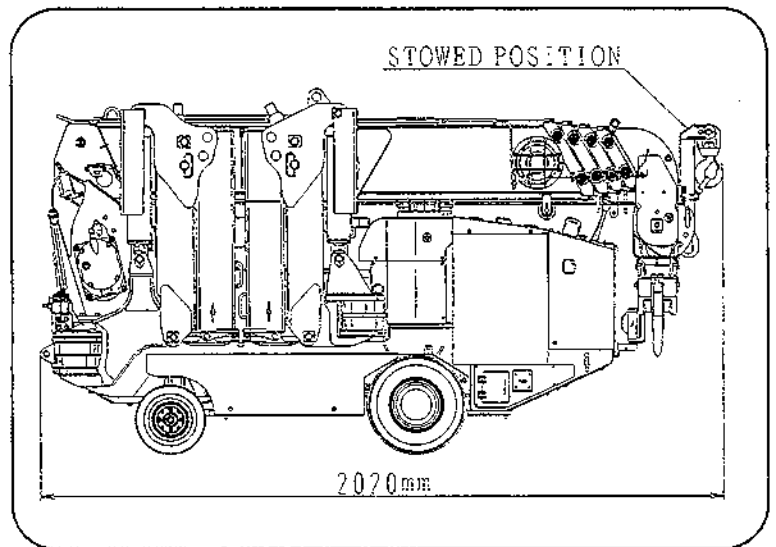
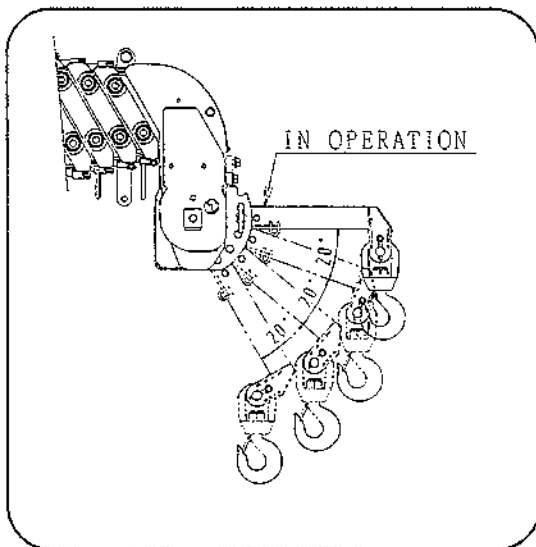
LIFTING CAPACITY: 300kg  
 SEARCHER HOOK LENGTH: 0.5m  
 TILT ANGLE: 0° ,20° ,40° ,60°  
 MASS OF SEARCHER HOOK: 15kg

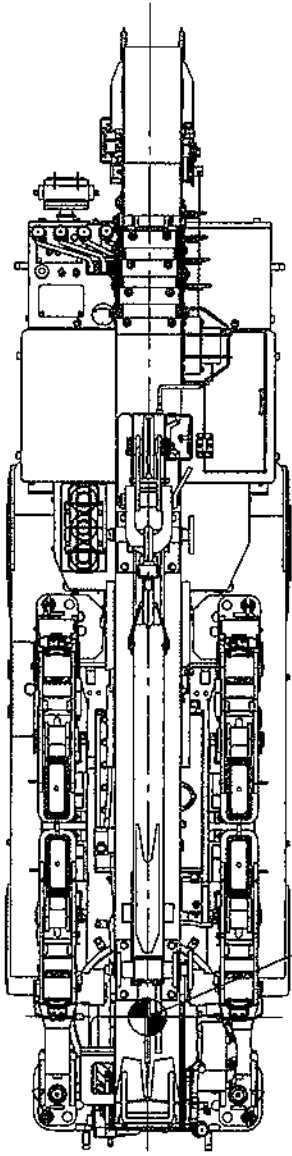
**NET RATED LOADS: (FOR SEARCHER HOOK)**

WORKING RADIUS (m)	NET RATED LOAD (kg)	
	OUTRIGGERS MAX EXT.	OUTRIGGERS NOT MAX EXT.
3.5	300	300
4.0	300	220
4.5	300	170
5.0	300	120
5.5	300	90
6.0	260	60
6.5	220	50
7.0	180	PROHIBITED AREA OF CRANE OPERATIONS
8.0	130	
8.91	100	

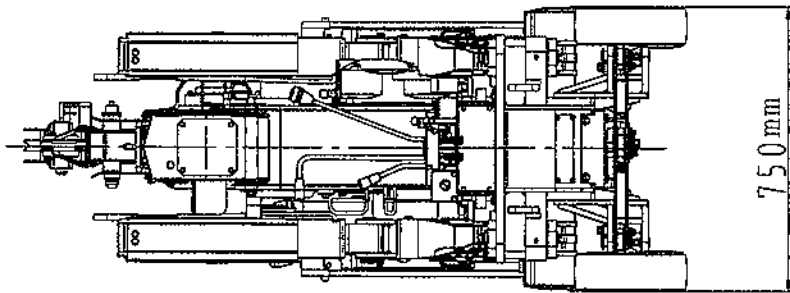
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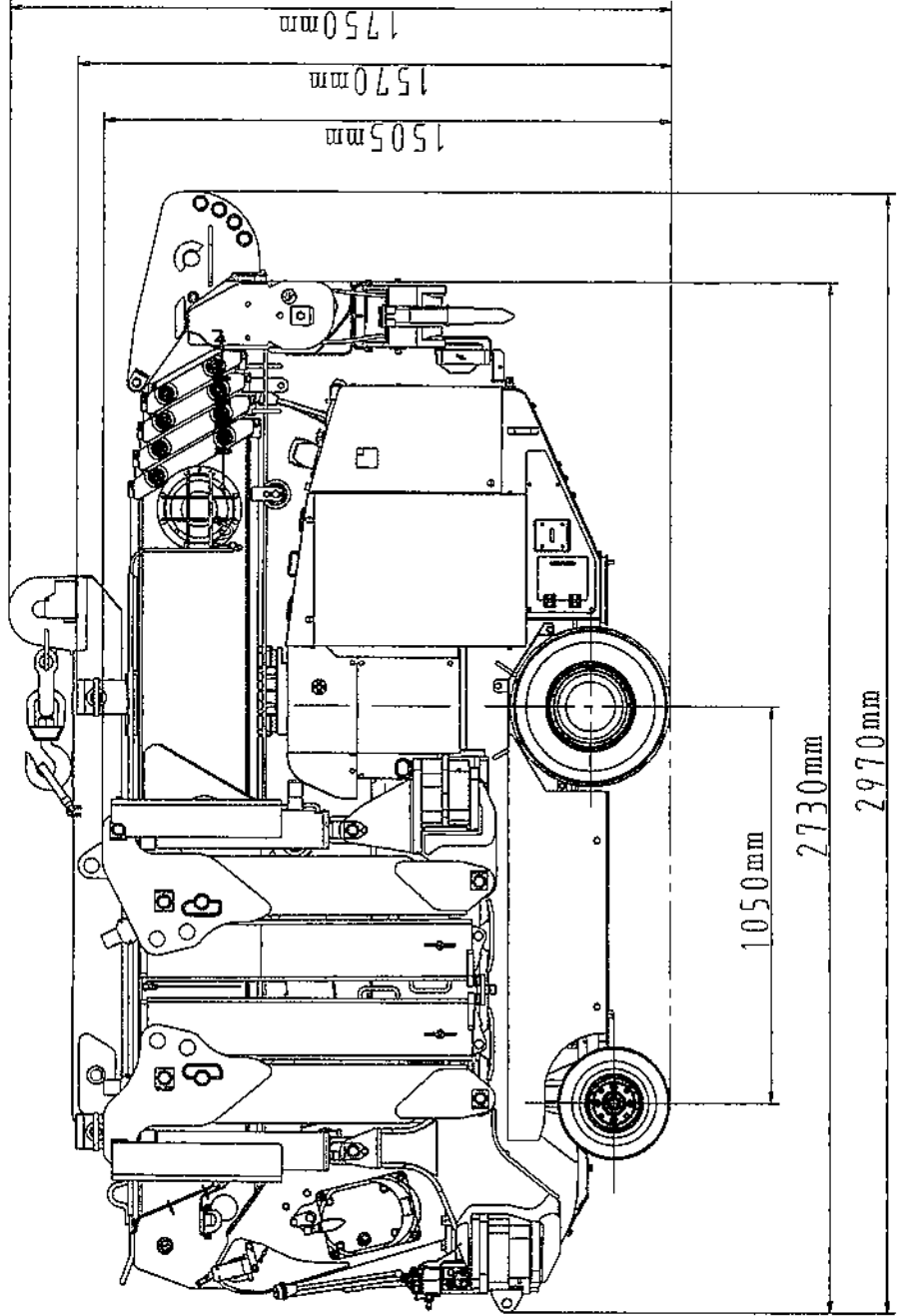




CENTER OF SLEWING



750 mm



1750 mm

1570 mm

1505 mm

1050 mm

2730 mm

2970 mm

