

SPECIFICATIONS

SPEC. No. CC-1161
DATE APR. 2018

**SPECIFICATIONS
HYDRAULIC CRANE**

MODEL: UNIC URW376C4EMR

Specifications are subject to change without notice.

FURUKAWA UNIC CORPORATION
*EXPORT TECHNICAL DEPT
TOKYO JAPAN*

UNIC CRANE PERFORMANCE
MODEL: URW376C4EMR

CRANE CAPACITY:

LIFTING CAPACITY : Max 2.93t at 2.5m

HOOK HEIGHT

ABOVE GROUND LEVEL : Max 14.9m

BELOW GROUND LEVEL : Max 18.7m with 4-part line

WORKING RADIUS : Min 0.62m, Max 14.45m

BOOM: 6-section box beam type telescoping boom

Boom Length

Retracted boom: 3.63m

Extended boom: 14.61m

Boom Extending Speed: 10.98m / 23 s

Boom Raising Speed: 0° to 80° / 10 s

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

Hoisting Speed

Single line speed: 68.0m / min at 4th layer

Hook speed: 17.0m / min at 4th layer with 4-part line

Hook Block: 2.9t capacity, 2 sheaves with safety latch

Wire Rope

Construction (JIS): IWRC 6 × WS (26) GRADE B

Diameter X Length: 8mm × 85m

Breaking strength: 42.4kN (4320kgf)

SLEWING: Hydraulic motor driven, 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: 2.5 rpm

OUTRIGGERS:

Horizontal: A double acting hydraulic cylinder, direct pushing type (directly connected with hydraulic automatic lock device)

Vertical: A double acting hydraulic cylinder, direct pushing type (directly connected with hydraulic automatic lock device)

HYDRAULIC SYSTEM:

Hydraulic Pump

Type:	Variable delivery piston pump
Rated pressure:	21.6MPa (220kgf/cm ²)
Rated delivery:	60 ℓ/min.
Rated revolution:	2500rpm
Hydraulic oil tank:	75 ℓ capacity

Hydraulic Valves

Control valve:	Multiple control valve, spring centered, spool-type, with pressure relief valve
Pressure relief valve setting:	For crawling:21.6MPa (220kgf/cm ²) For crane: 20.6MPa (210kgf/cm ²)
Counterbalance valve: Pilot-operated check valve:	Boom raising and boom telescoping cylinders Outrigger cylinders (Horizontal)
Double pilot-operated check valve:	Outrigger cylinders (Vertical)

Hydraulic Actuators

Hydraulic motors:	Hoisting: Axial plunger type Slewing: Axial plunger type
Hydraulic cylinders:	Double acting type 1 × Boom raising cylinder 1 × Boom telescoping cylinder 4 × Outrigger cylinder (Horizontal) 4 × Outrigger cylinder (Vertical)

CRAWLING GEAR:

Crawling:	Endless rubber crawler
Crawler:	300 × 52.5 × 88
Tread length:	1750mm
Ground contact pressure:	37.3kPa (0.38kgf/cm ²)
Crawling speed:	0~3km/h, forward/reverse
Hill climbing ability:	23°
Engine:	Rated output: 15.2kW (20.7ps)/2500rpm Model: 3TNV80F-SNFK (YANMAR Co., Ltd) Displacement: 1266 cm ³ Fuel Type: Diesel Oil
Steering:	Hydraulic drive independent of left/right
Parking brake:	Disc brake with hydraulic motor built-in
Starter:	Starter motor
Fuel tank:	40 ℓ capacity

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

MAJOR SPECIFICATION OF ELECTRIC POWER UNIT

Power unit

Hydraulic pump Type Variable delivery piston pump
 Rated pressure 21.6MPa (220kgf/cm²)

Frequency (Hz)	50			60		
Voltage (V)	380	400	415	400	440	460
Rated revolution (rpm)	1460	1460	1465	1755	1760	1765
Rated delivery (litters/min)	Approx.27			Approx.32		

Motor Rated output 7.5kW (3-phase 4 poles)

Rated Frequency (Hz)	50			60		
Rated Voltage (V)	380	400	415	400	440	460

Allowable range: 50/60Hz±5%

AC380,400,415/400-460V±10%

Control box

Rated Frequency (Hz)	50			60		
Rated Voltage (V)	380	400	415	400	440	460

Allowable range: 50/60Hz±5%

AC380,400,415/400-460V±10%

Starting-up Direct start-up
 Crane power supply DC12V (120W) output
 With AC/DC converter built-in

Power cable

Power connector Cord connector body made by American Electric Work (accessory)
 Type: 4364R
 Part number: 750501228
 Power cable Vinyl cab-tire cable of 4-core cable (To be prepared by customer)
 Type: VCT4X5.5mm² (Outside diameter of cable is up to ϕ 16.)
 Part number: 750604057
 (Cable length is to be specified by customer. It is up to 50m.)
 Crimp terminal Type: R5.5-5(To be prepared by customer)
 Part number: 750509058(Nitifu TGV5.5-5)

Specified speed when using electric power unit

		<50Hz>	<60Hz>
Hoisting Speed	Single line speed	34m/min	40 m/min (at 4th layer)
	Hook speed	8.5m/min	10 m/min (at 4th layer with 4-part line)
Boom extending Speed		10.98m/40s	10.98m/33.5s
Boom Raising Speed		0° to 80° / 18s	0° to 80° / 15s
Slewing Speed		2.1rpm	2.5rpm
Crawling Speed (forward/reverse)		0-1.3km/h	0-1.5km/h

Caution

Do not use engine and electric power unit together.
 Be sure to confirm before stating the electric power unit that the engine has been stopped.
 Please specify when ordering specification of 380V/50Hz or 415V/50Hz, if you want to request them.

SAFETY DEVICES:

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

4375mm (L) × 1300mm (W) × 1805mm (H)

MASS OF CRANE:

4020kg

REMOTE CONTROLLER: (Radio controller model or Cable remote controller model)

Model:	RC-500HA-AUS		
System:	Manual/remote control combined system		
Control:	1. Selective control	Boom	Raise / Lower (Crane mode/Outrigger mode) Outrigger④ Ret / Ext
		Hook	Hoist / Lower (Shock-less ON / OFF) Outrigger③ Ret / Ext
		Boom	Extend / Retract (Outrigger Horizontal /Vertical) Outrigger② Ret / Ext
		Slewing	C.W / C.C.W (Eng. start / stop) Outrigger① 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 engine speed control	
	5. Mode select	Crane mode/Outrigger mode (Shock-less ON/OFF) Outrigger horizontal/vertical (Engine Start / Stop)	
	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	Crawler battery (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		

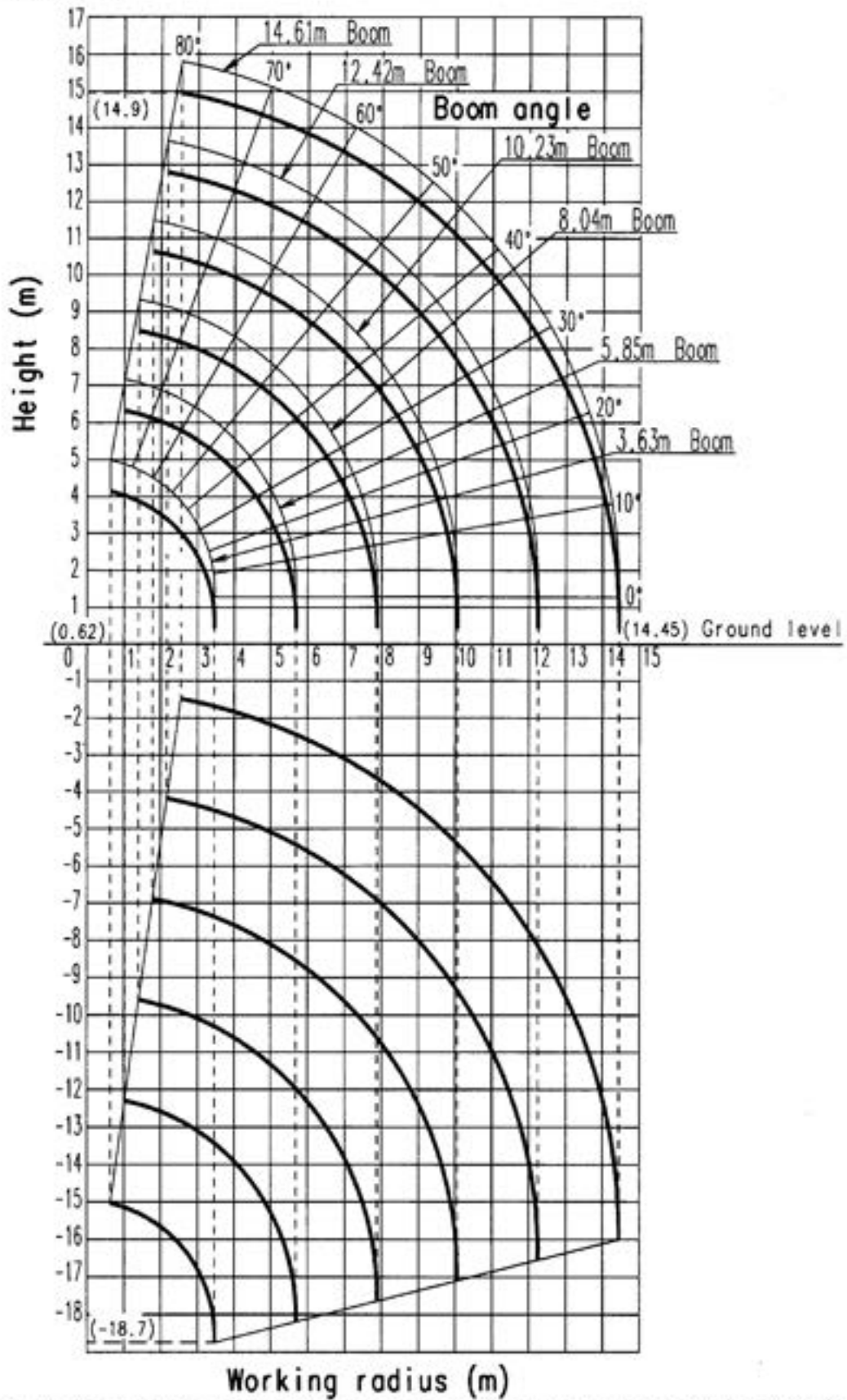
RADIO: (Radio remote controller model)

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.

WORKING RANGE:



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)		2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.69
Net Rated load (t)	Outriggers extended to maximum	2.9	2.9	2.35	1.95	1.67	1.45	1.3	1.07
	Outriggers extended to halfway	2.9	2.9	2.32	1.92	1.57	1.25	0.99	0.77
	Outriggers extended to minimum	2.9	2.9	2.17	1.5	1.12	0.9	0.72	0.47

Boom-sections extended: ①+②+③

Working radius (m)		2.7	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0	7.88
Net Rated load (t)	Outriggers extended to maximum	2.24	2.09	1.65	1.4	1.22	1.07	0.95	0.84	0.69	0.59
	Outriggers extended to halfway	2.24	2.06	1.65	1.39	1.17	1.0	0.82	0.64	0.45	0.37
	Outriggers extended to minimum	2.24	2.06	1.57	1.22	1.02	0.83	0.65	0.51	0.3	0.19

Boom-sections extended: ①+②+③+④

Working radius (m)		4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.07
Net Rated load (t)	Outriggers extended to maximum	1.04	0.93	0.84	0.73	0.62	0.52	0.47	0.38
	Outriggers extended to halfway	1.03	0.92	0.83	0.67	0.5	0.38	0.28	0.2
	Outriggers extended to minimum	1.03	0.82	0.64	0.47	0.31	0.22	0.13	0.09

Boom-sections extended: ①+②+③+④+⑤

Working radius (m)		4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.26
Net Rated load (t)	Outriggers extended to maximum	0.75	0.62	0.48	0.39	0.34	0.3	0.27	0.24	0.23
	Outriggers extended to halfway	0.75	0.62	0.48	0.39	0.32	0.27	0.22	0.17	0.13
	Outriggers extended to minimum	0.75	0.62	0.4	0.25	0.18	0.13	0.09	0.06	0.01

Boom-sections extended: ①+②+③+④+⑤+⑥

Working radius (m)		4.9	5.5	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.45
Net Rated load (t)	Outriggers extended to maximum	0.3	0.27	0.25	0.22	0.2	0.18	0.16	0.14	0.13	0.11	0.1
	Outriggers extended to halfway	0.3	0.27	0.25	0.22	0.2	0.18	0.16	0.12	0.09	0.06	0.04
	Outriggers extended to minimum	0.3	0.27	0.25	0.22	0.17	0.11	0.08	0.05	0.03	0.02	0.01

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.
Rated loads are also based on the strength of the crane and the stability of the crawler.
2. Rated loads must be reduced in accordance with wind, ground condition and operating speed.
3. The mass of hook, slings, and any accessories to the boom or load line must be deducted from the rated load in the chart.
4. When the outriggers are set without extending to their maximum, stability of the crane deteriorates remarkably.
Pay attention that the 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)

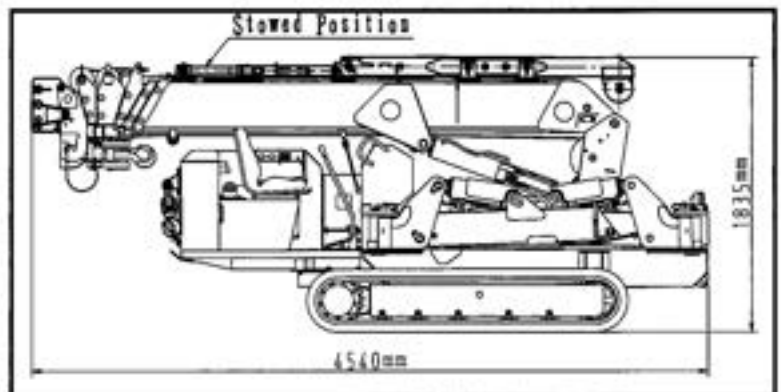
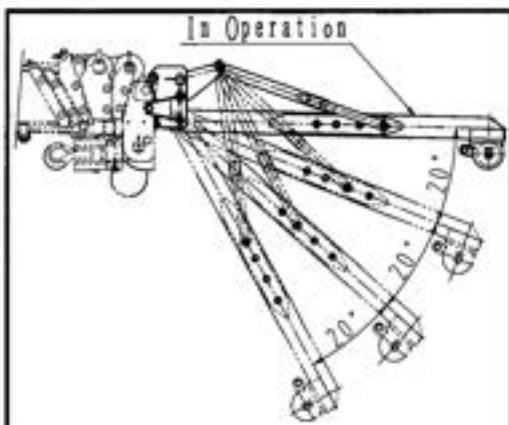
LIFTING CAPACITY: 710kg
 JIB LENGTH: 2.0m
 TILT ANGLE: 0° ,20° ,40° ,60°
 MASS OF FLY JIB: 95kg

NET RATED LOADS:(FOR FLY JIB)

BOOM ANGLE	TILT ANGLE											
	1st TO 4th BOOM SECTIONS				ONLY 5th BOOM SECTION				ONLY 6th BOOM SECTION			
	0°	20°	40°	60°	0°	20°	40°	60°	0°	20°	40°	60°
80°	700	700	700	700	450	450	450	450	150	150	150	150
75°	700	700	700	700	450	450	400	400	150	150	150	150
70°	500	500	400	400	300	300	200	200	100	100	100	100
65°	350	350	200	200	150	150	PROHIBITED AREA OF CRANE OPERATIONS		PROHIBITED AREA OF CRANE OPERATIONS			
60°	200	200	100	100	PROHIBITED AREA OF CRANE OPERATIONS							
55°	100	100	PROHIBITED AREA OF CRANE OPERATIONS									
50°	PROHIBITED AREA OF CRANE OPERATIONS											
40°												
30°												
20°												
10°												
0°												

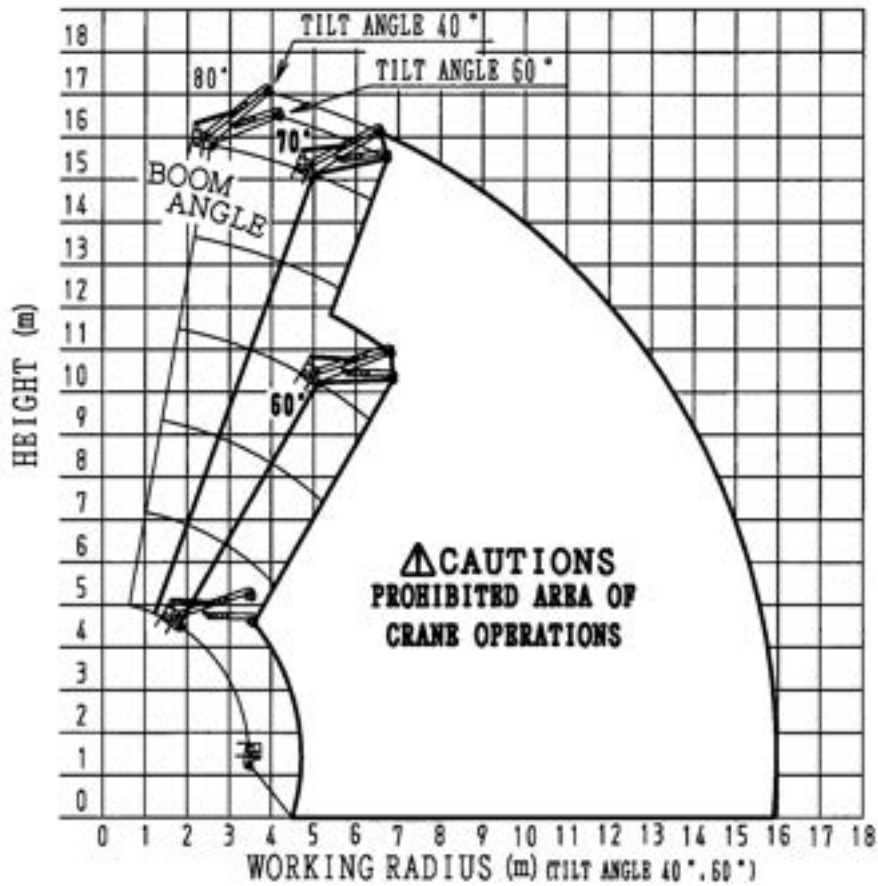
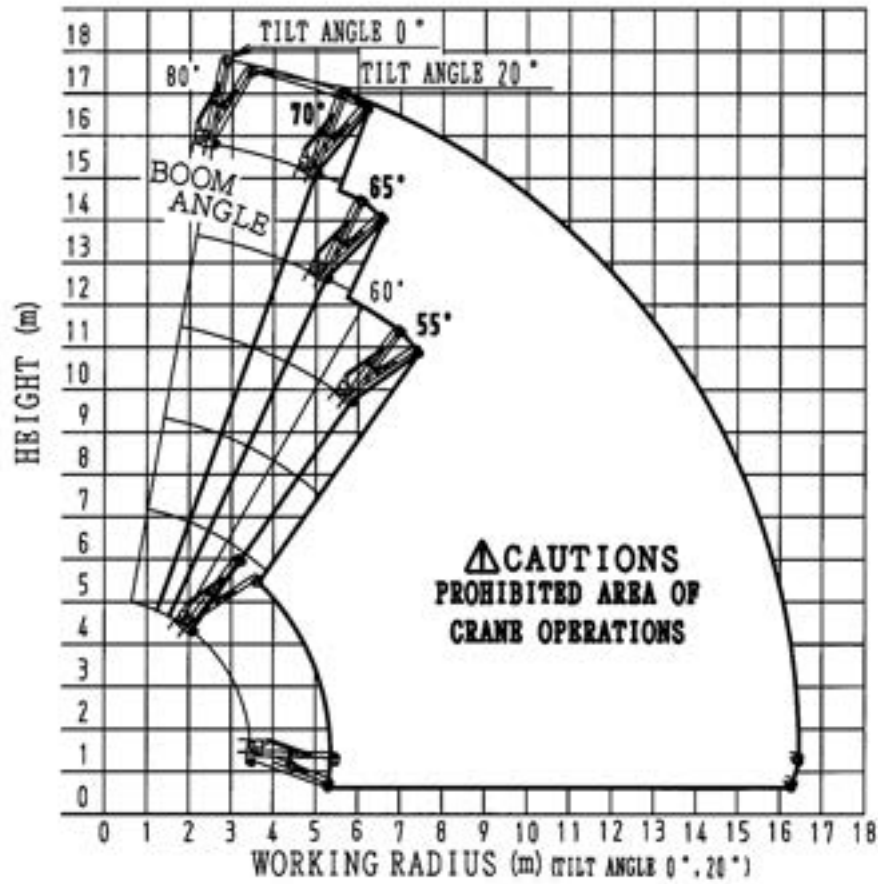
CAUTION

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.
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.



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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)

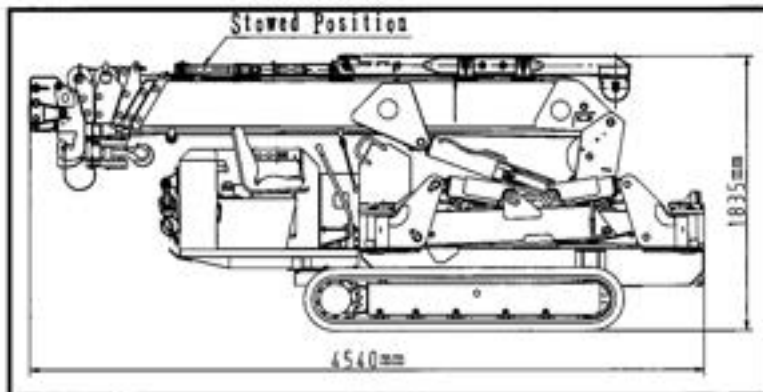
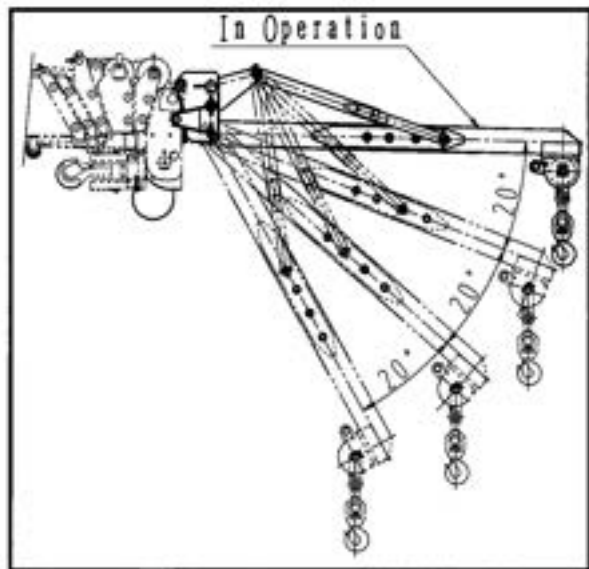
LIFTING CAPACITY: 700kg
 SEARCHER HOOK LENGTH: 2.0m
 TILT ANGLE: 0° ,20° ,40° ,60°
 MASS OF SEARCHER HOOK 8kg (Bracket and jib are excepted)

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

1st TO 4th BOOM SECTIONS				ONLY 5th BOOM SECTION				ONLY 6th BOOM SECTION			
WORKING RADIUS (m)	NET RATED LOAD(kg)			WORKING RADIUS (m)	NET RATED LOAD(kg)			WORKING RADIUS (m)	NET RATED LOAD(kg)		
	OUTRIG. EXT. TO MAX.	OUTRIG. EXT. TO HALF.	OUTRIG. EXT. TO MIN.		OUTRIG. EXT. TO MAX.	OUTRIG. EXT. TO HALF.	OUTRIG. EXT. TO HALF.		OUTRIG. EXT. TO MAX.	OUTRIG. EXT. TO HALF.	OUTRIG. EXT. TO MIN.
4.5	700	700	700	4.0	450	450	450	5.0	150	150	150
5.0	500	500	450	5.0	400	400	400	5.5	150	150	150
6.0	400	400	300	6.0	300	300	200	6.0	130	130	130
7.0	350	300	100	7.0	250	250	100	7.0	100	100	100
8.0	300	200	PROHIBITED AREA OF CRANE OPERATION	8.0	200	200	PROHIBITED AREA OF CRANE OPERATION	8.0	PROHIBITED AREA OF CRANE OPERATION		
9.0	250	100		9.0	150	150		9.0			
10.0	150	PROHIBITED AREA OF CRANE OPERATION	10.0	130	100	10.0					
11.0	100		11.0	100	11.0						
12.1	PROHIBITED AREA	12.0	PROHIBITED AREA OF CRANE OPERATION	12.0	PROHIBITED AREA OF CRANE OPERATION	12.0					
		13.0	PROHIBITED AREA OF CRANE OPERATION	13.0	PROHIBITED AREA OF CRANE OPERATION	13.0					
		14.2	PROHIBITED AREA OF CRANE OPERATION	14.0	PROHIBITED AREA OF CRANE OPERATION	14.0					
				15.0	PROHIBITED AREA OF CRANE OPERATION	15.0					
				16.4	PROHIBITED AREA OF CRANE OPERATION	16.4					

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 loaded.
 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. 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.
4. In order to make correct operation, read the instruction manual carefully before crane operation.
5. Do not use the main hook when using the searcher hook.



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SEARCHER HOOK:(OPTION)

LIFTING CAPACITY: 500kg
 SEARCHER HOOK LENGTH: 0.8m
 TILT ANGLE: 0° ,20° ,40° ,60°
 MASS OF SEARCHER HOOK: 20kg

NET RATED LOADS: (FOR SEARCHER HOOK)

1st TO 5th BOOM SECTIONS				ONLY 6th BOOM SECTION			
	NET RATED LOAD (kg)				NET RATED LOAD (kg)		
WORKING RADIUS (m)	OUTRIG. EXT. TO MAX.	OUTRIG. EXT. TO HALF.	OUTRIG. EXT. TO MIN.	WORKING RADIUS (m)	OUTRIG. EXT. TO MAX.	OUTRIG. EXT. TO HALF.	OUTRIG. EXT. TO MIN.
2.0	500	500	500	2.0	280	280	280
3.0	500	500	500	3.0	280	280	280
4.0	500	500	500	4.0	280	280	280
5.0	500	500	500	5.0	250	250	250
6.0	420	420	350	6.0	220	220	220
7.0	340	340	200	7.0	190	190	170
8.0	290	270	130	8.0	170	150	120
9.0	250	200	80	9.0	150	120	80
10.0	220	150	50	10.0	130	100	50
11.0	200	110	PROHIBITED AREA OF CRANE OPERATION	11.0	110	70	PROHIBITED AREA OF CRANE OPERATION
12.0	180	80		12.0	100	50	
13.06	160	60		13.0	80	PROHIBITED AREA OF CRANE OPERATION	
				14.0	70		
				15.25	50		

CAUTION

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4. In order to make correct operation, read the instruction manual carefully before crane operation.
5. Do not use the main hook when using the searcher hook.

