

SPECIFICATIONS

SPEC. No. CC – 1226

DATE APR. 2020

SPECIFICATIONS HYDRAULIC CRANE

MODEL: UNIC URW706C4EMR

Specifications are subject to change without notice.

FURUKAWA UNIC CORPORATION

UNIC CRANE PERFORMANCE
MODEL: URW706C4EMR

CRANE CAPACITY:

LIFTING CAPACITY	: Max. 6.05t at 3.0m
HOOK HEIGHT	
ABOVE GROUND LEVEL	: Max. 19.5m with 4-part line
BELOW GROUND LEVEL	: Max. 23.0m with 4-part line
WORKING RADIUS	: Min. 0.51m, Max. 18.6m

BOOM: 6-section box beam type telescoping boom

Boom Length	
Retracted boom:	4.8m
Extended boom:	19.2m
Boom Extending Speed:	14.4m / 52sec.
Boom Raising Speed:	0° to 80° / 16sec.

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

Hoisting Speed	
Single line speed:	52.0m / min. at 4th layer
Hook speed:	13.0m / min. at 4th layer with 4-part line
Hook Block;	6.0t capacity, 2 sheaves with safety latch
Wire Rope	
Construction (JIS):	IWRC 6 X Fi(29)
Diameter X Length:	10mm X 111m
Breaking strength:	78.5kN (8000kgf)

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:	24.5MPa (250kgf/cm ²)
Rated delivery:	81 ℓ/min.
Rated revolution:	2200rpm
Hydraulic oil tank:	125.7 ℓ capacity
Hydraulic Valves	
Control valve:	Multiple control valve, spring centered, spool-type, with pressure relief valve
Pressure relief valve setting:	For crawling: 24.5MPa (250kgf/cm ²) For crane: 20.6MPa (210kgf/cm ²)
Counterbalance valve:	Boom raising and boom telescoping cylinders
Pilot-operated check valve:	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 X Boom raising cylinder 3 X Boom telescoping cylinder 4 X Outrigger cylinder (Horizontal) 4 X Outrigger cylinder (Vertical)

CRAWLING GEAR:

Crawling:	Endless rubber crawler
Crawler:	400 mm(W) X 72.5 mm(P) X 82(Link)
Tread length:	2275mm
Ground contact pressure:	44.1kPa (0.45kgf/cm ²)
Crawling speed:	0~2.9km/h, forward/backward
Hill climbing ability:	23°(20°) (It is followed to an operation manual at the time of operation)
Engine:	Rated output: 18.5kW (25.2ps)/2200rpm Model: D1703-M-DI-E4B-CNFK1(Kubota Co.,Ltd) Displacement: 1647 cm ³ Fuel Type: Diesel Oil Starter: Starter motor
Steering:	Hydraulic drive independent of left/right
Parking brake:	Disc brake with hydraulic motor built-in
Fuel tank:	60 ℓ capacity
Alternator	12V – 40 A
Battery	12V 56Ah (85D23R)

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 24.5MPa {250kgf/cm²}

Frequency (Hz)	50			60
Voltage (V)	380	400	415	400
Rated revolution (rpm)	1460	1460	1465	1755
Rated delivery (litters/min)	Approx.29			Approx.35

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

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

Allowable range: 50/60Hz±5%
 AC380/400/415V±10%

Control box

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

Allowable range: 50/60Hz±5%
 AC380/400/415±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	18.4m/min.	22.4m/min.(at 4th layer)
Hook speed	4.6m/min.	5.6m/min.(at 4th layer with 4-part line)
Boom extending speed	14.4m/110sec.	14.4m/90sec.
Boom raising speed	0°to 80°/45sec.	0°to 80°/37sec.
Slewing speed	1.8 rpm	1.8 rpm
Crawling speed (forward / backward)	0-1.0km/h	0-1.2km/h

Note: 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 over winding
9. Over winding 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 (Outrigger ground contact detector)
14. Level
15. Three colored lamp
16. Head light
17. Safe load indicator

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:

(OPTION : Hydraulic extension jib)

5610mm (L) X 1670mm (W) X 2190mm (H)
5610mm (L) X 1670mm (W) X 2220mm (H)

MASS OF CRANE:

8160 kg ("Extension jib" and "Outrigger ground contact detector" are excepted.)

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

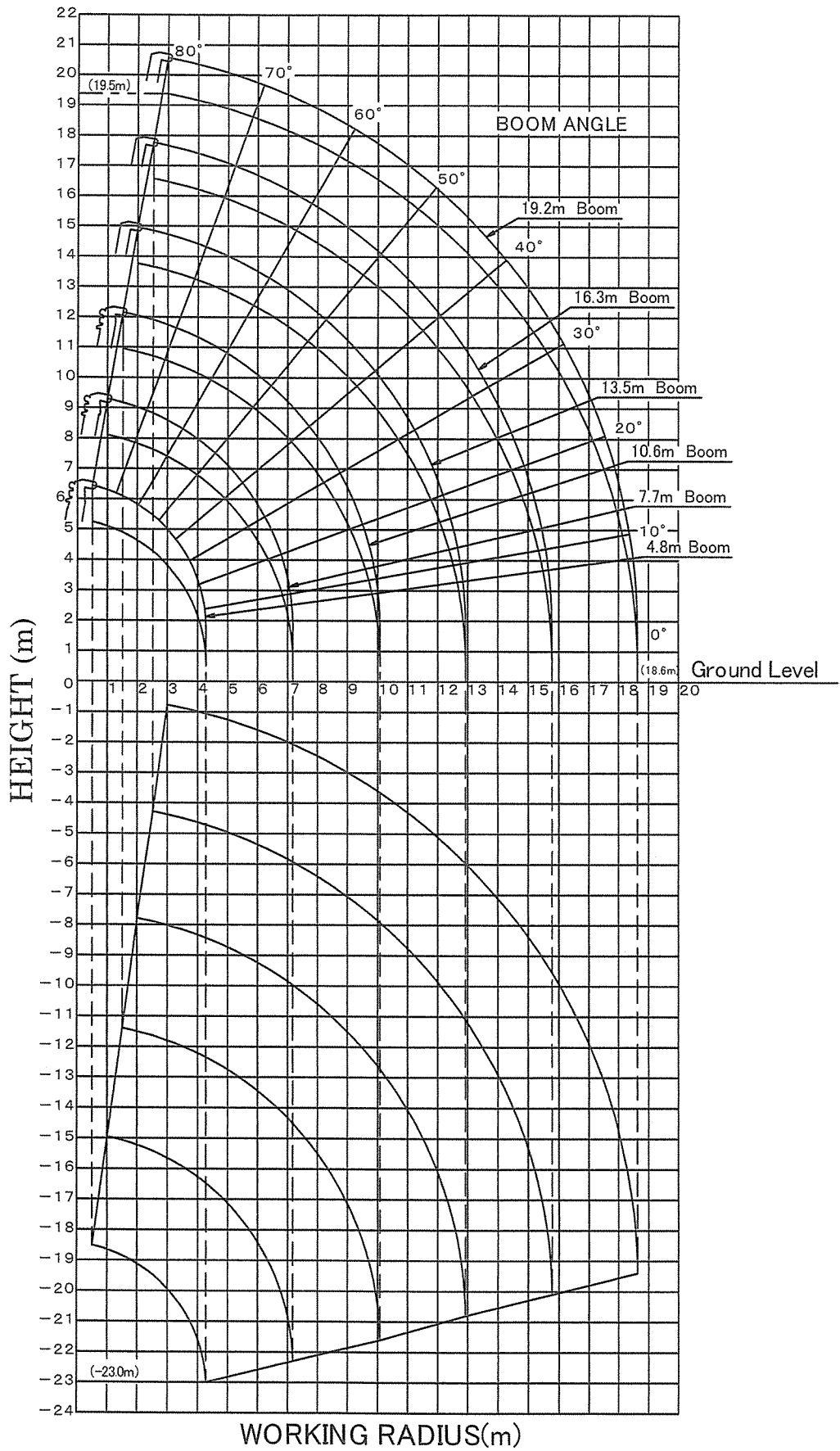
Model:	RC-500HA-AUS		
System:	Manual/remote control combined system		
Control:	1. Selective control	Boom	Raise / Lower (Crane mode/Outrigger mode) Outrigger④ Ret / Ext
		Hook	Hoist / Lower (Shock-less ON/OFF) Outrigger③ Ret / Ext
		Boom	Extend / Retract (Outrigger Horizontal /Vertical) Outrigger② Ret / Ext
		Slewing	C.W / C.C.W (Eng. start / stop) Outrigger① Ret / Ext
		2. Store hook	Hook storage (Shock-less ON/OFF)
		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
Power supply:	Controller	Transmitter	Stop function of crane
			Crawler battery (DC12V) 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)

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.

Note: 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

WORKING RADIUS (m)		2.7	3.0	3.5	4.0	4.3
NET RATED LOAD (t)	Outriggers extended to maximum	6.0	6.0	5.45	4.85	3.95
	Outriggers extended to halfway	6.0	6.0	5.45	4.85	3.95
	Outriggers extended to minimum	6.0	6.0	5.45	4.55	3.75

Boom-sections extended: ①+②

WORKING RADIUS (m)		2.0	3.0	3.5	4.0	5.0	6.0	7.0	7.2
NET RATED LOAD (t)	Outriggers extended to maximum	6.0	6.0	5.35	4.75	3.75	2.95	2.25	2.0
	Outriggers extended to halfway	6.0	6.0	5.35	4.75	3.75	2.45	1.7	1.55
	Outriggers extended to minimum	6.0	6.0	5.35	4.65	2.55	1.65	1.15	1.05

Boom-sections extended: ①+②+③

WORKING RADIUS (m)		2.7	4.0	5.0	6.0	7.0	8.0	9.0	10.0	10.1
NET RATED LOAD (t)	Outriggers extended to maximum	4.55	4.55	3.65	2.95	2.4	1.8	1.35	0.95	0.95
	Outriggers extended to halfway	4.55	4.55	3.65	2.55	1.75	1.3	0.95	0.7	0.7
	Outriggers extended to minimum	4.55	4.55	2.65	1.7	1.2	0.85	0.65	0.45	0.4

Boom-sections extended: ①+②+③+④

WORKING RADIUS (m)		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	12.9
NET RATED LOAD (t)	Outriggers extended to maximum	2.95	2.55	2.15	1.85	1.5	1.2	0.95	0.8	0.45
	Outriggers extended to halfway	2.95	2.55	1.85	1.4	1.1	0.85	0.65	0.55	0.4
	Outriggers extended to minimum	2.75	1.85	1.3	1.0	0.75	0.55	0.43	0.33	0.24

Boom-sections extended: ①+②+③+④+⑤

WORKING RADIUS (m)		6.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	15.8
NET RATED LOAD (t)	Outriggers extended to maximum	2.35	1.7	1.4	1.2	1.0	0.85	0.7	0.6	0.5	0.4
	Outriggers extended to halfway	2.35	1.5	1.15	0.95	0.75	0.6	0.5	0.4	0.3	0.25
	Outriggers extended to minimum	1.95	1.05	0.8	0.65	0.5	0.4	0.3	0.23	0.17	0.13

Boom-sections extended: ①+②+③+④+⑤+⑥

WORKING RADIUS (m)		8.0	10.0	12.0	14.0	16.0	18.0	18.6
NET RATED LOAD (t)	Outriggers extended to maximum	1.35	1.0	0.8	0.6	0.4	0.25	0.2
	Outriggers extended to halfway	1.35	1.0	0.65	0.45	0.3	0.2	0.15
	Outriggers extended to minimum	1.1	0.7	0.45	0.28	0.17	0.09	0.06

CAUTIONS

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. Net rated loads are the lifting capacities except for the mass of hook block. (4-part line: 50kg)
(Single line: 20kg)
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. 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.
7. When operating the crane, keep the boom angle falling within the range of 0° to 80°.
8. In order to make correct operation, read the instruction manual carefully before crane operation.

MANUAL EXTENSION JIB: (OPTION)

LIFTING CAPACITY:	820kg
EXTENSION JIB LENGTH	
Retracted jib:	2.11m
Extended jib:	3.11m
TILT ANGLE:	0° ,20° ,40° ,60°
MASS OF EXTENSION JIB	205kg

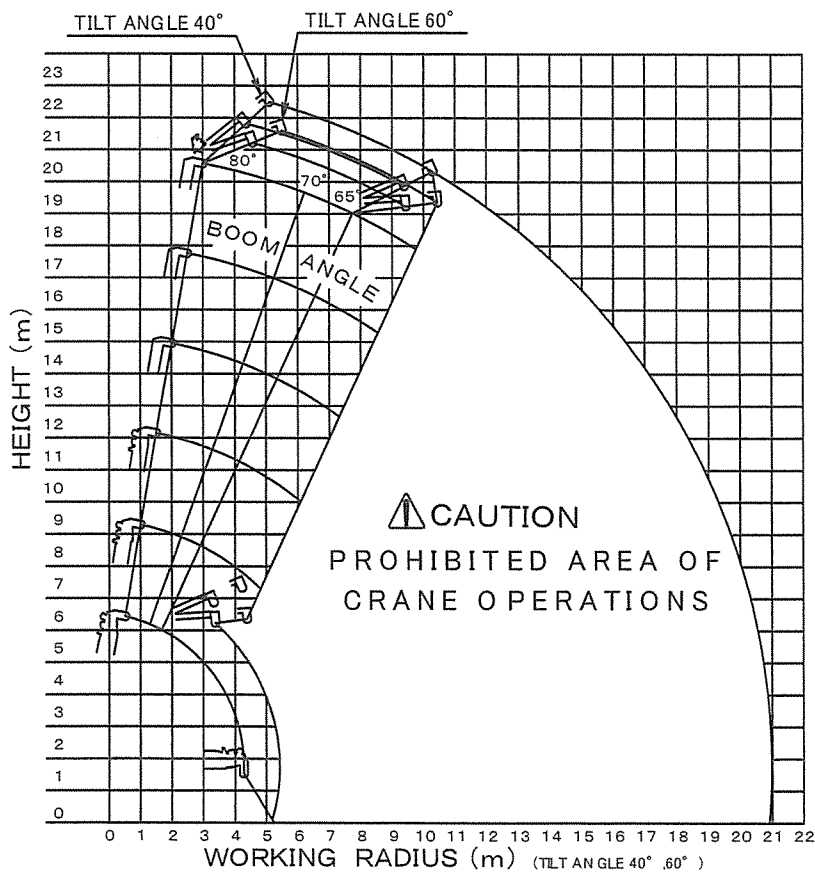
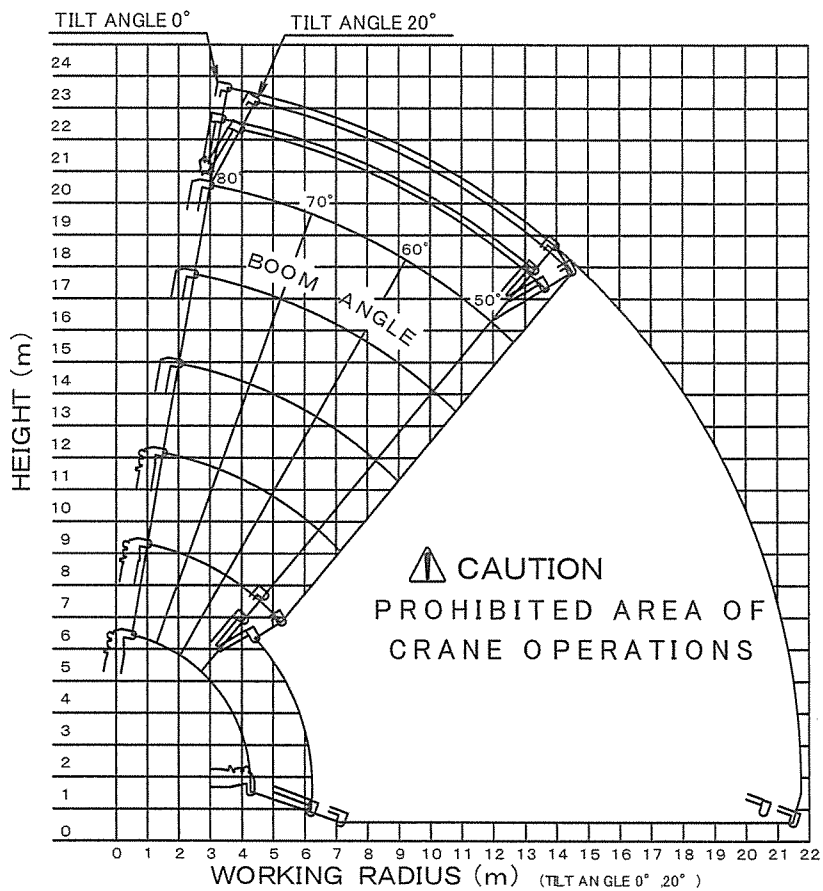
NET RATED LOADS: (FOR MANUAL EXTENSION JIB)

BOOM ANGLE	TILT ANGLE			
	0°	20°	40°	60°
80°	800	800	600	600
75°	800	800	600	600
70°	700	700	500	500
65°	600	600	400	400
60°	500	500	PROHIBITED AREA OF CRANE OPERATION	
55°	400	400		
50°	300	300		
40°	PROHIBITED AREA OF CRANE OPERATION			
30°				
20°				
10°				
0°				

CAUTIONS

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. Net rated loads are the lifting capacities except for the mass of hook blocks (single line: 20kg).
4. 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.
5. In order to make correct operation, read the instruction manual carefully before crane operation.
6. The net rated loads of manual extension jib does not depend on the outriggers being in an extended state.

WORKING RANGE: (FOR MANUAL EXTENSION JIB)



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

MANUAL EXTENSION JIB - SEARCHER HOOK: (OPTION)

LIFTING CAPACITY: 800kg

SEARCHER HOOK LENGTH: 2.21m

TILT ANGLE: 0° (Prohibited area of boom angle:40° ~80°)
20° (Prohibited area of boom angle:60° ~80°)
40° , 60° (Possible operation in all boom angle)

MASS OF SEARCHER HOOK 25kg (Bracket and jib (1) are excepted)

NET RATED LOADS: (FOR MANUAL EXTENSION JIB - SEARCHER HOOK)

	NET RATED LOAD (kg)		
WORKING RADIUS (m)	OUTRIGGERS EXTENDED TO MAXIMUM	OUTRIGGERS EXTENDED TO HALFWAY	OUTRIGGERS EXTENDED TO MINIMUM
7.0	800	800	800
8.0	800	800	610
9.0	800	700	420
10.0	800	550	250
10.5	800	490	200
11.0	650	430	160
11.5	550	370	120
12.0	470	310	100
13.0	330	230	PROHIBITED AREA OF CRANE OPERATION
14.0	260	150	
15.0	210	100	
16.0	170		
17.0	130		
18.0	100		
20.8			

CAUTIONS

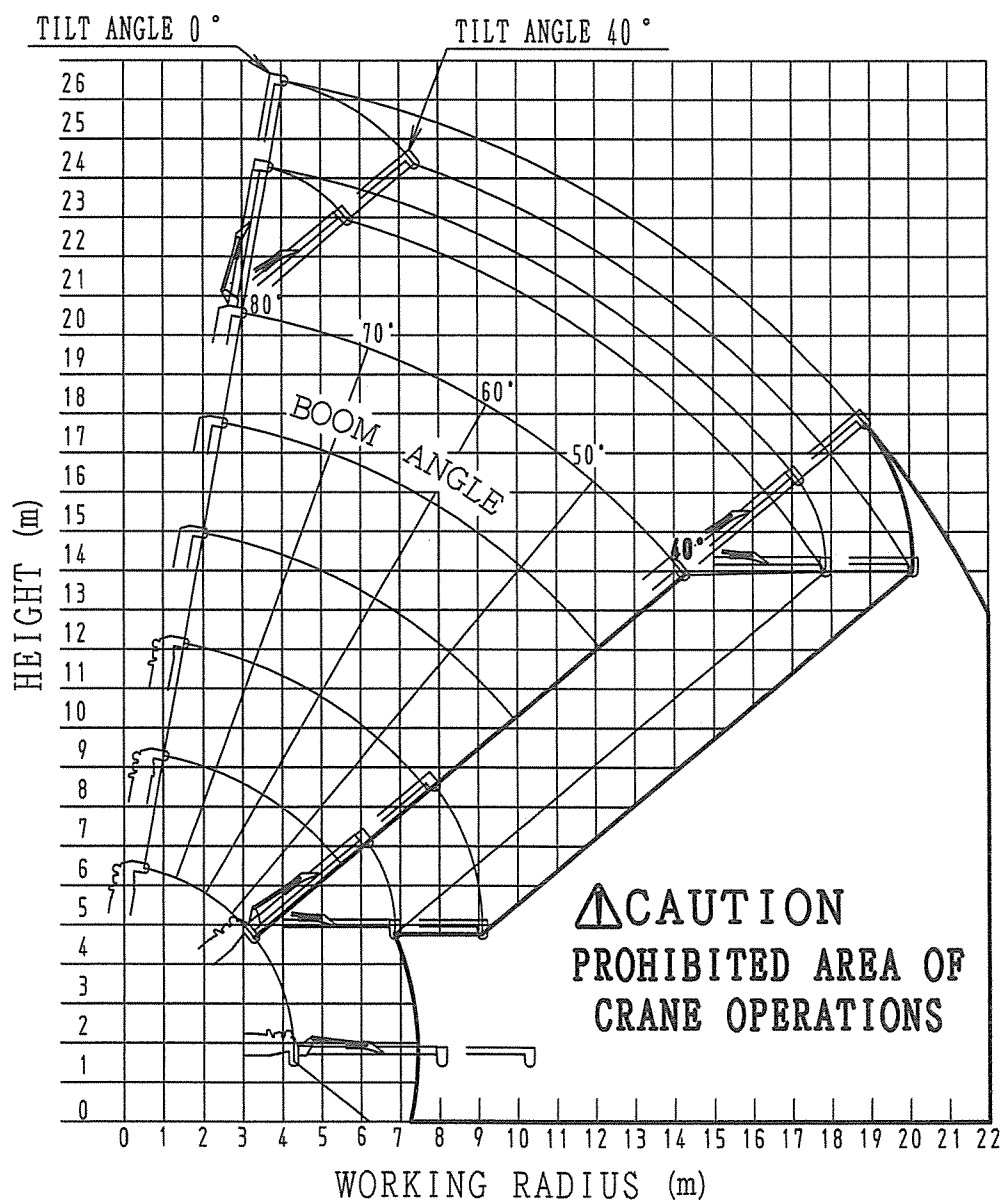
1. Net rated loads are performance when the crane is placed level and is based on an actual working radius including boom deflection under loaded.
Net rated loads are also based on strength and stability of the crane.
2. Net rated loads must be reduced in accordance with wind, ground condition and operating speed.
3. Net rated loads are the lifting capacities except for the mass of hook and slings.
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.

HYDRAULIC EXTENSION JIB: (OPTION)

LIFTING CAPACITY:	820kg
EXTENSION JIB LENGTH	
Retracted jib:	3.8m
Extended jib:	6.0m
TILT ANGLE:	0° ~ 60°
MASS OF EXTENSION JIB	
Total:	480kg
Jib and tilt cylinder:	270kg
Hook:	20kg

WORKING RANGE: (FOR HYDRAULIC EXTENSION JIB)

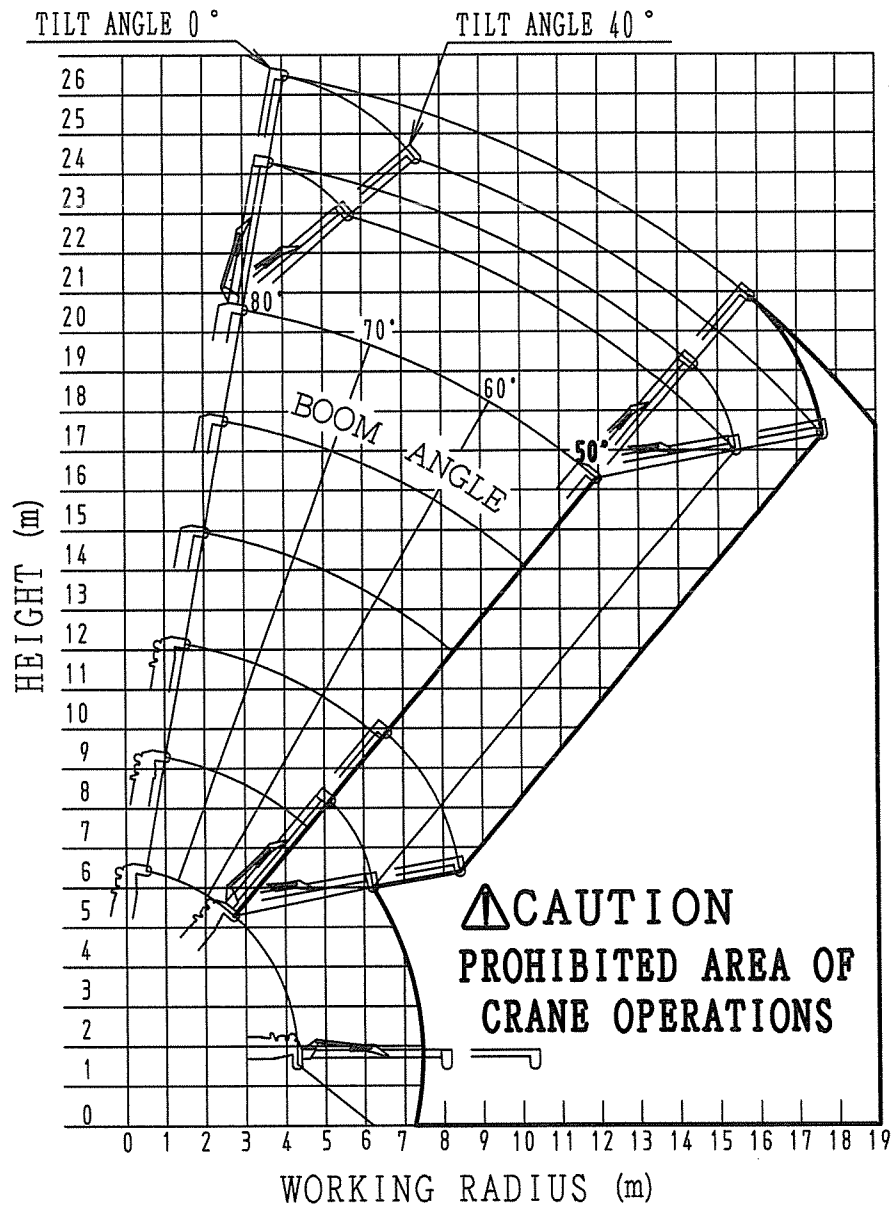
Jib , Tilt Angle 0—40° , Outriggers extended to maximum and halfway



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

WORKING RANGE: (FOR HYDRAULIC EXTENSION JIB)

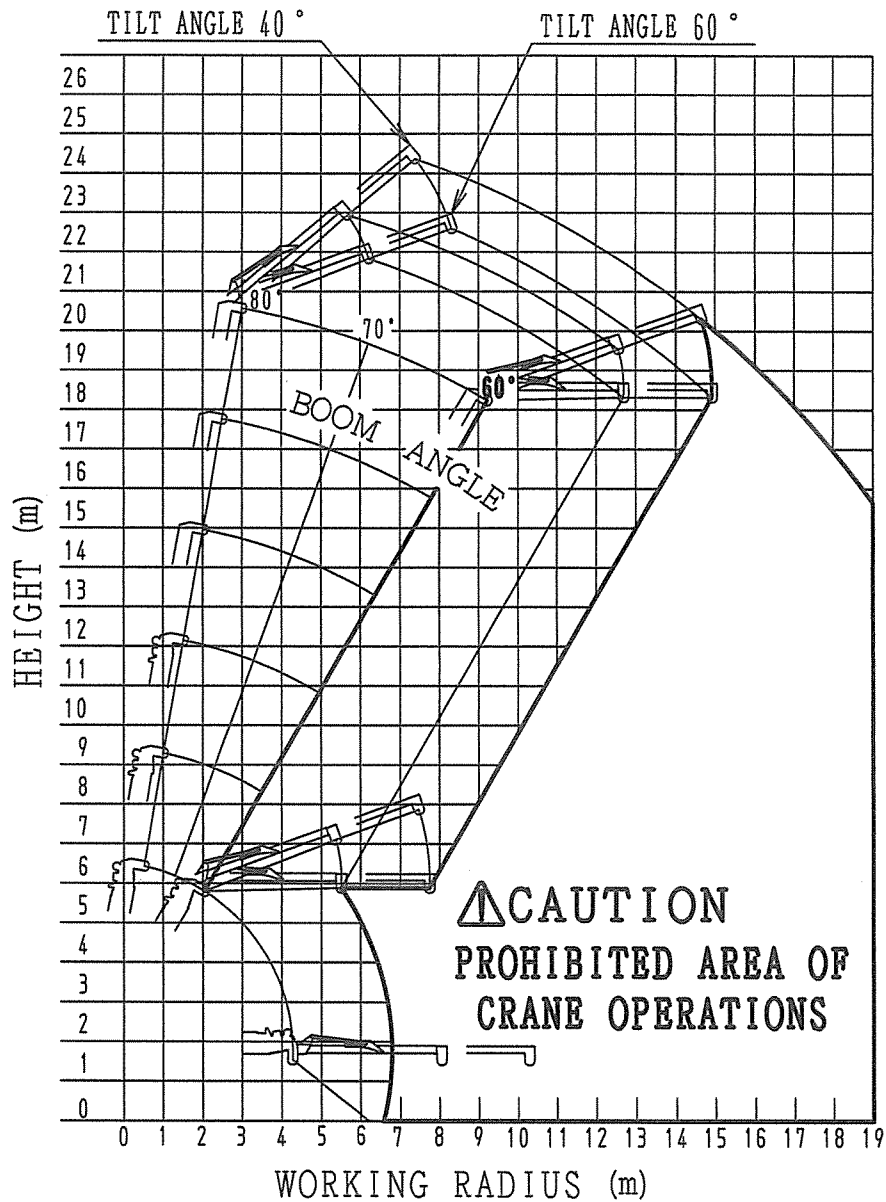
Jib , Tilt Angle 0—40° , Outriggers extended to minimum



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

WORKING RANGE: (FOR HYDRAULIC EXTENSION JIB)

Jib , Tilt Angle 40—60° ,Outriggers extended to maximum, halfway and minimum



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

NET RATED LOADS: (FOR HYDRAULIC EXTENSION JIB)

Outriggers extended to maximum

MAIN BOOM ANGLE [°]	JIB① (3.77m)				JIB①+② (6.00m)			
	TILT ANGLE [°]				TILT ANGLE [°]			
	0	20	40	60	0	20	40	60
80	800	800	560	360	800	550	310	170
70	800	620	480	330	800	390	260	150
60	620	490	390	330	540	310	230	150
50	400	330	290		340	260	210	
40	270	230	210		230	180	150	
30	PROHIBITED AREA OF CRANE OPERATION				PROHIBITED AREA OF CRANE OPERATION			
20								
10								
0								

Outriggers extended to halfway

MAIN BOOM ANGLE [°]	JIB① (3.77m)				JIB①+② (6.00m)			
	TILT ANGLE [°]				TILT ANGLE [°]			
	0	20	40	60	0	20	40	60
80	800	800	560	360	800	550	310	170
70	800	620	480	330	800	390	260	150
60	620	490	390	330	540	310	230	150
50	350	310	290		300	260	210	
40	180	170	160		160	130	120	
30	PROHIBITED AREA OF CRANE OPERATION				PROHIBITED AREA OF CRANE OPERATION			
20								
10								
0								

Outriggers extended to minimum

MAIN BOOM ANGLE [°]	JIB① (3.77m)				JIB①+② (6.00m)			
	TILT ANGLE [°]				TILT ANGLE [°]			
	0	20	40	60	0	20	40	60
80	800	800	560	360	800	550	310	170
70	800	620	480	330	800	390	260	150
60	470	410	390	330	430	310	230	150
50	200	190	180	PROHIBITED AREA OF CRANE OPERATION	180	160	150	PROHIBITED AREA OF CRANE OPERATION
40								
30								
20								
10								
0								

CAUTIONS

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. Net rated loads are the lifting capacities except for the mass of hook.
4. 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.
5. In order to make correct operation, read the instruction manual carefully before crane operation.

HYDRAULIC EXTENSION JIB - SEARCHER HOOK: (OPTION)

LIFTING CAPACITY:	800kg
EXTENSION JIB LENGTH	
Retracted jib:	3.8m
Extended jib:	6.0m
TILT ANGLE:	0° ~ 60°
MASS OF EXTENSION JIB	
Total:	480kg
Jib and tilt cylinder:	270kg
Hook:	10kg

NET RATED LOADS: (FOR HYDRAULIC EXTENSION JIB - SEARCHER HOOK)

JIB① (3.8m)

WORKING RADIUS (m)		OUTRIGGERS EXTENDED TO MAXIMUM				OUTRIGGERS EXTENDED TO HALFWAY				OUTRIGGERS EXTENDED TO MINIMUM			
13 or less	MAIN BOOM ANGLE [°]	TILT ANGLE [°]				TILT ANGLE [°]				TILT ANGLE [°]			
		0	20	40	60	0	20	40	60	0	20	40	60
	80	800	800	620	410	800	800	620	410	800	800	620	410
	70	800	750	550	390	800	750	550	390	800	750	550	390
	60	580	580	500	390	580	580	500	390	470	430	400	390
	50	580	550	480	390	420	460	470	390	260	310	310	320
	40	530	500	480	390	370	420	430	390	220	270	280	280
	30	520	500	480	390	360	370	370	370	210	220	220	220
	20	500	480	480	390	360	370	320	320	210	220	170	170
	10	480	480	480	390	350	350	320	280	200	200	170	140
	0	480	480	430	390	340	340	270	270	190	190	130	120
14		380	380	380	380	240	240	230	230	110	110	110	
15		340	330	330	270	210	200	200	150				
16		300	290	240	240	180	180	130	120				
17		220	220	210	210	110	110	110	110				
18		190	190	190	140								
19		170	170	130	120								
20		110	110	110	110								
21						PROHIBITED AREA OF CRANE OPERATION							
22													
22.3													

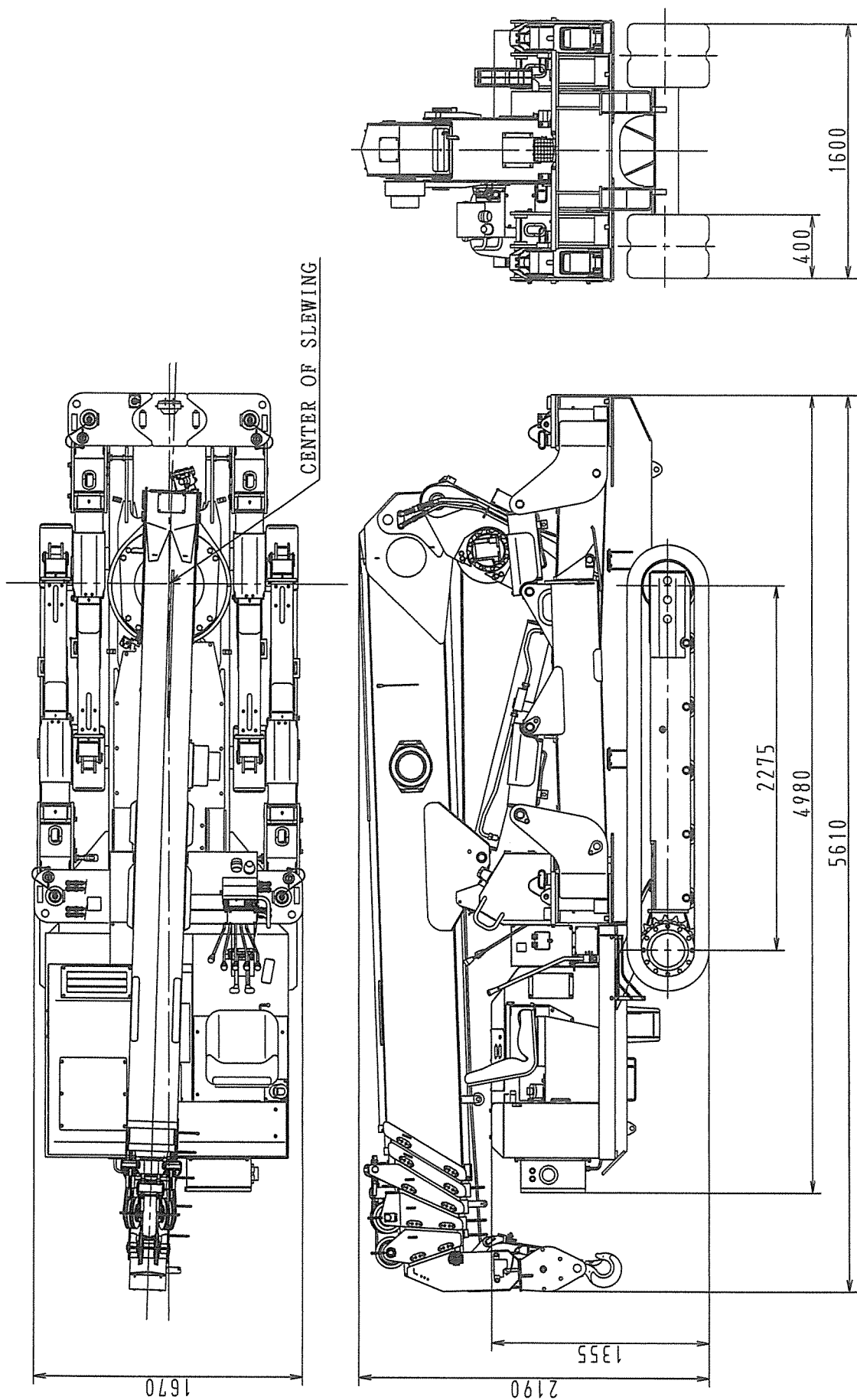
NET RATED LOADS: (FOR HYDRAULIC EXTENSION JIB - SEARCHER HOOK)

JIB①+② (6.0m)

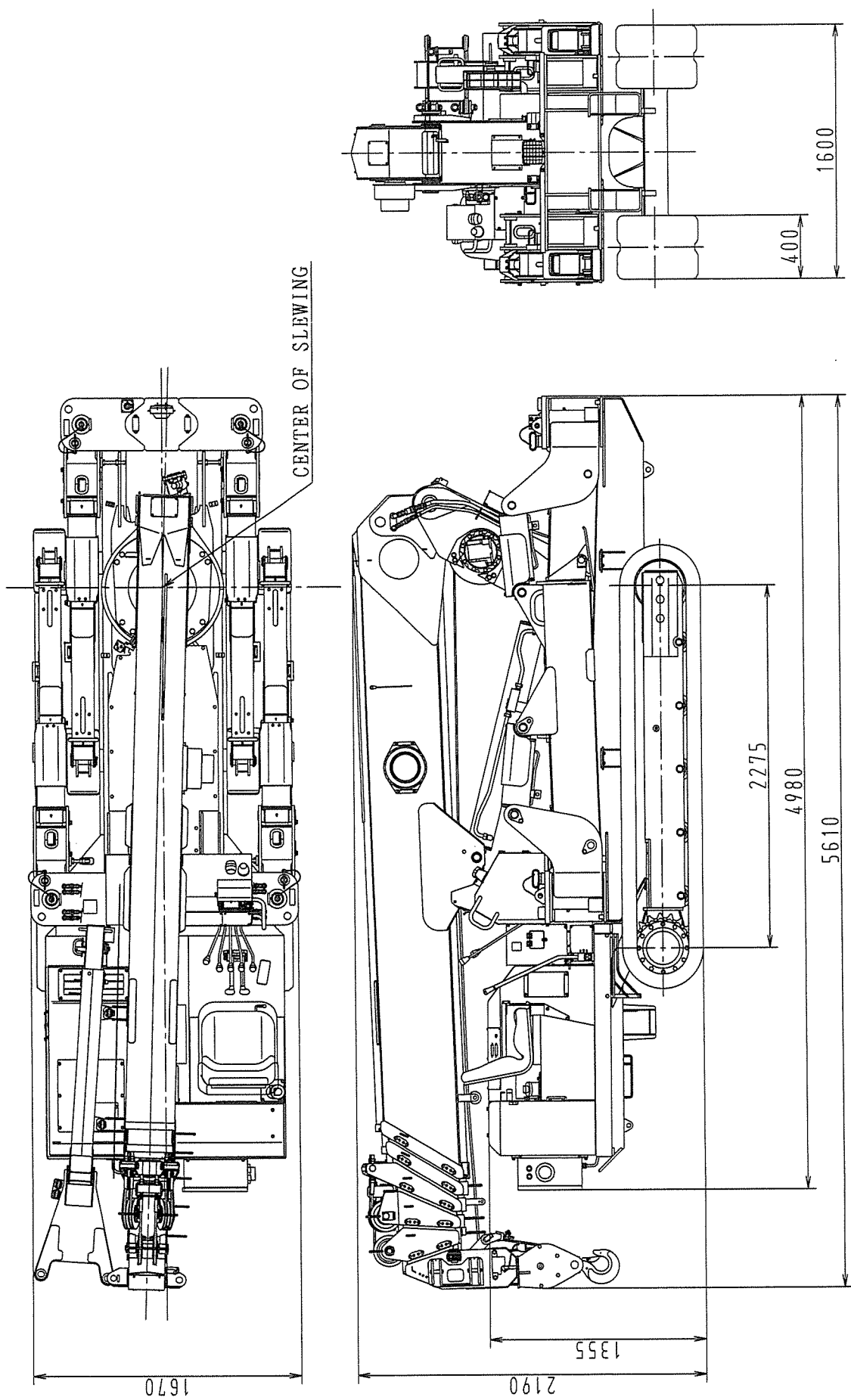
WORKING RADIUS (m)		OUTRIGGERS EXTENDED TO MAXIMUM				OUTRIGGERS EXTENDED TO HALFWAY				OUTRIGGERS EXTENDED TO MINIMUM			
14 or less	MAIN BOOM ANGLE [°]	TILT ANGLE [°]				TILT ANGLE [°]				TILT ANGLE [°]			
		0	20	40	60	0	20	40	60	0	20	40	60
	80	800	600	370	220	800	600	370	220	800	600	370	220
	70	800	450	320	200	800	450	320	200	800	450	320	200
	60	500	370	290	200	500	370	290	200	410	350	290	200
	50	450	320	270	200	370	320	270	200	240	280	270	200
	40	370	290	270	200	370	290	270	200	240	250	260	200
	30	320	270	270	200	320	270	270	200	190	240	250	200
	20	290	270	270	200	290	270	270	200	190	210	210	150
	10	270	270	270	200	270	270	270	200	180	180	180	120
	0	270	270	270	200	270	270	270	200	170	170	160	100
15		270	270	270	200	270	270	210	200	150	140	PROHIBITED AREA OF CRANE OPERATION	
16		270	270	270	200	240	190	180	130	120			
17		270	270	270	200	170	160	160	110				
18		250	240	200	190	140	140	100					
19		180	180	170	130								
20		160	160	150	110								
21		140	140	100									
22													
23													
24.6													

CAUTIONS

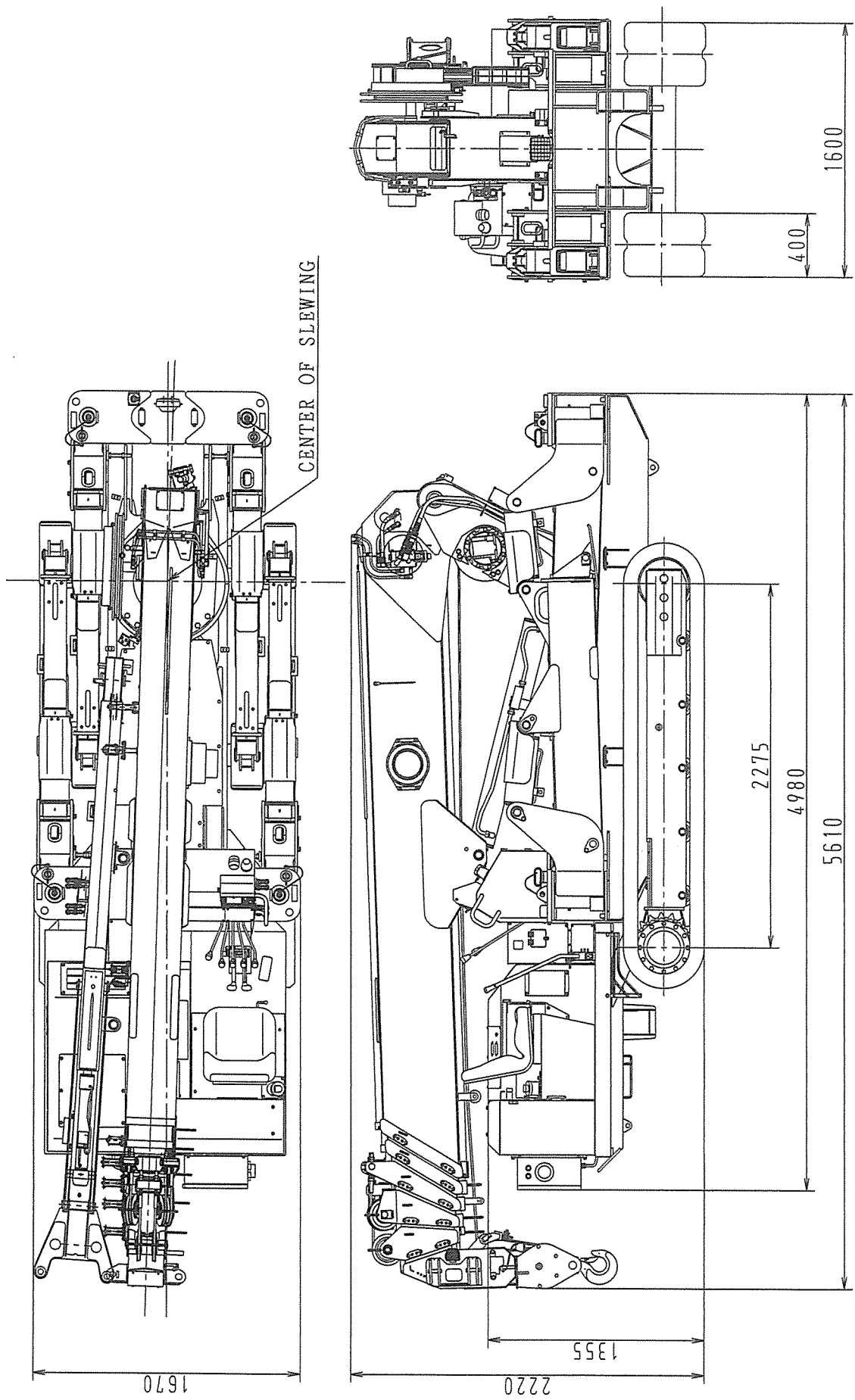
1. Net rated loads are performance when the crane is placed level and is based on an actual working radius including boom deflection under loaded.
Net rated loads are also based on strength and stability of the crane.
2. Net rated loads must be reduced in accordance with wind, ground condition and operating 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.



W706C4EMR



W706C4EMR(Manual Extension Jib)



W706C4EMR(Hydraulic Extension Jib)

