

Hydraulic Crawler Crane SCX900-2



Engine					
Crane ID	OCS-E&M-CRA-00	Engine Manufacturer	Isuzu 6HK1X		
Brand	HITACHI SUMITOMO	Engine Power	184Kw		
Model	SCX900-2	Engine Type	Diesel Driven		
Type	Crawler Crane	No of Cylinders	6		
Year of Manufacture	2011	Cylinder Bore & Stroke	115 mm x 125 mm		
Serial Number	SC 090-7363	Displacement	7,790cc		
Max Capacity	90 Ton	Fuel Tank	415 litres		
Boom					
Boom connections	In-line pin connections at 1.55m deep and 1.55m wide				
Basic boom	2 piece, 12m basic length; 6m base and tapered top sections				
Min Standard Boom	12m				
Max boom length	60m for lift crane application/24m for clamshell application/27m for dragline application				
Max fly jib length	28m				
At Reach	4m				
Load Torque	3351kNm				
Total Counter Weight	29.7Ton				
Auxiliary Counter Weight	2Ton				
Hook Blocks	90Ton four sheaves with duplex type hook				
Drum					
Drum Wire(Front)	200m				
Drum Wire(Rear)	170m				
Drum Data					
Drum	Root dia.	Type	Line speed	Cable	Max line pull
Front	554mm	Parallel grooved	110 ~ 2 mpm	26mm	196kN <20t>
Rear	554mm	Parallel grooved	111 ~ 2 mpm	26mm	196kN <20t>
Boom hoist	463.6mm	Parallel grooved	46 ~ 2 mpm	22.4mm	152kN <15.5t>
optional 3rd	554mm	Parallel grooved	73 ~ 2 mpm	26mm	196kN <20t>

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OCS owned Hitachi Sumitomo lattice boom SCX 900-2 Crawler Crane is one of the main key support equipment especially for our UB01 operations.

It has an engine performance of 184kW or 246 horse power & a maximum carrying capacity of 90tonnes. With a maximum boom length of 60m, this model is constructed to deliver a load torque of 3531kNm.

The Crawler crane consists of an upper carriage mounted on a crawler type undercarriage. The upper deck and attachments rotate 360°

They are ideal for materials handling and dredging work. The main advantage of these cranes is, it is easy to lift and move the heavy loads from one end to another end while in operation.

To top it up, the crawler is actively certified by Singapore Ministry of Manpower for use in Singapore Refinery sectors

On safety aspects, the crawler is equipped with a **Load Moment Indicator** (LMI), also known as Rated Capacity Indicators (RCI), or a Safe Load Indicator (SLI) or an Automatic Safe Load Indicator (ASLI) is a device which is installed on Lattice or Crawler cranes to alert the operator if the lift is exceeding the safe operating range of the crane. In some cases, the device will physically lock the equipment in circumstances it determines to be unsafe. LMI systems are usually composed of a microprocessor connected to various sensors on the crane itself. The LMI measures the angle and extension of the boom along with the load weight and compares this with the manufacturer's specifications to determine if the lift is safe. A **safe load indicator** has the capability of detecting the angle, weight of load lifted, and ground radius of any lifting device. It controls the lifting equipment to the level that it tries to keep the crane functioning as per the manufacturer's suggested safety charts. The crane is fitted with multiple sensors, for each of the measured parameters, which are then further displayed in the operator's cabin for his benefit.

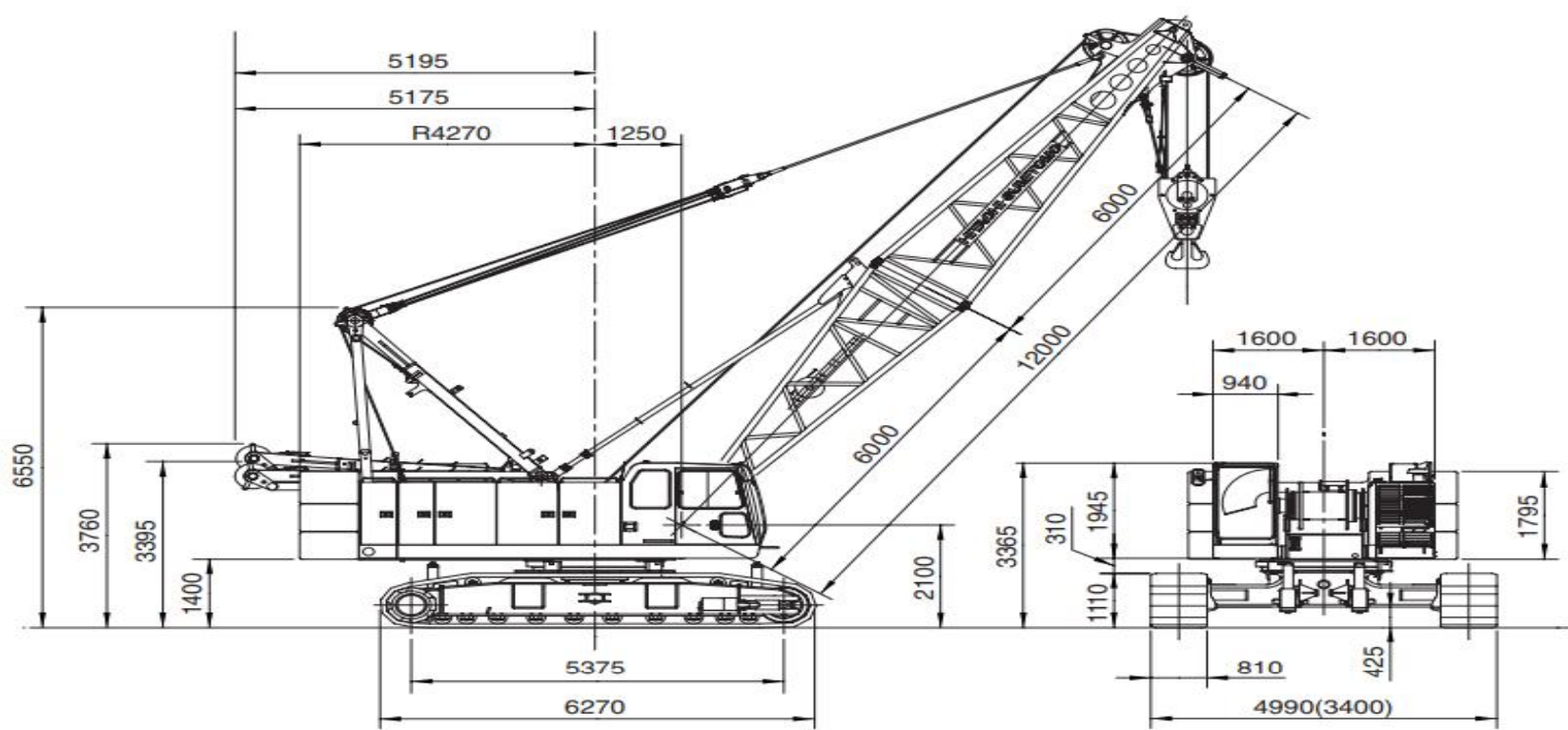
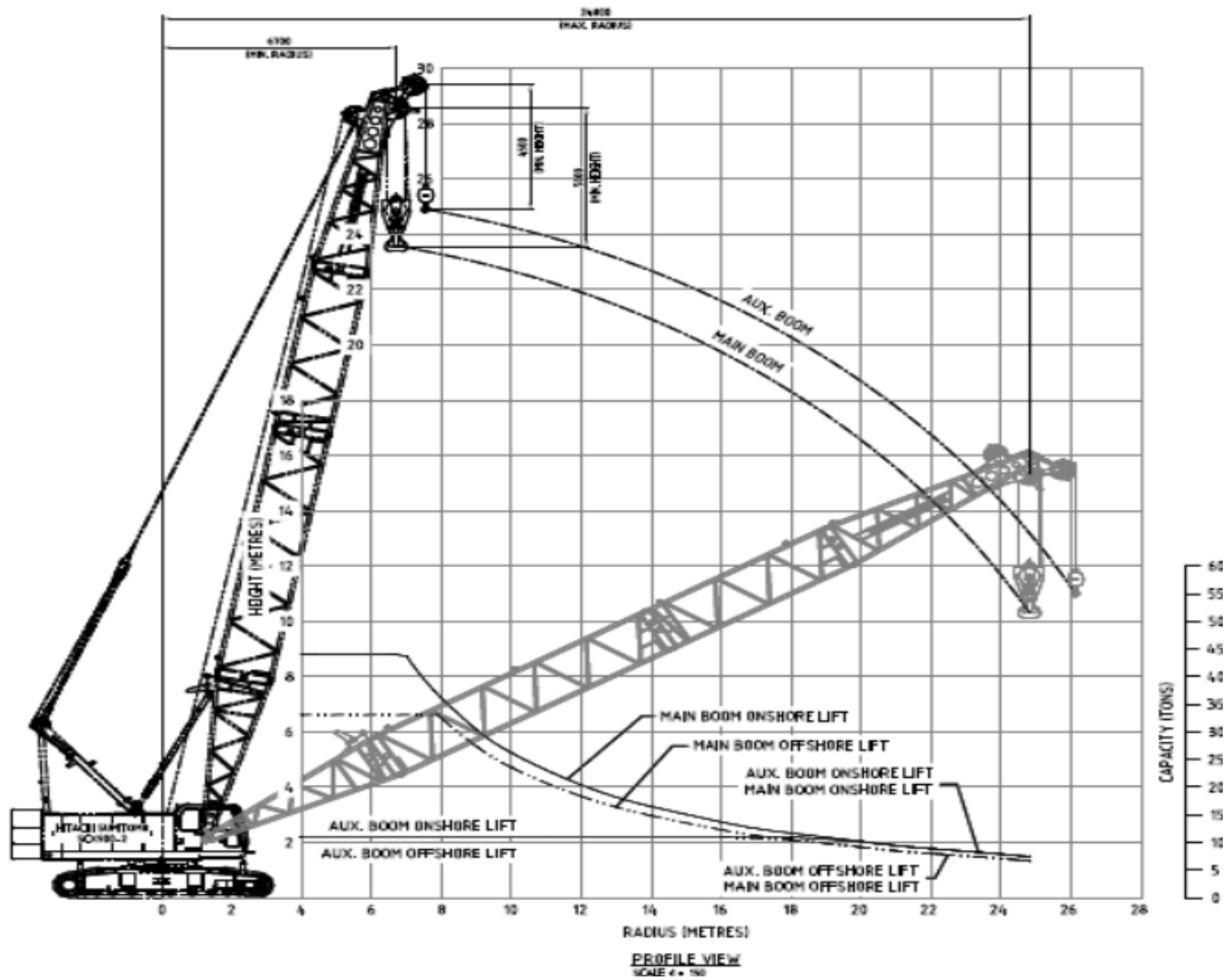
It is important to regularly review the list of critical spare parts of the equipment before each project.

Critical problems occur in these units during the operation include:

- Seals and hoses relating to the hydraulics
- Fuel Injection tools adjustor

Where failures occur during operations Equipment bulletins will be issued to document the problem and the remediation solutions applied. The equipment bulletin will be circulated to all field engineers to be informed about the possible failure that can occur during the operation and thereby avoid future failure.

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(in mm)

Hitachi Sumitomo Heavy Industries Construction Crane Co.,Ltd.

9-3,Higashi Ueno 6-chome,Taito-ku,Tokyo 110-0015 Japan, Phone:81-3-3845-1450, Fax:81-3-3845-1450

(P-1/1)

SCX900-2 CRAWLER CRANE RATED LOAD LIFTING CAPACITY CHARTS FOR MAIN BOOM

(All capacity are rated for 360 deg. swing)



Document No. 9966391



Condition : Floating crane (on the pontoon), without short jib

The total counterweight 29.7 ton (A 9.9ton + B 9.9ton + C 9.9ton) and 2.0ton aux.weight are required for all capacities on this chart.

(Unit:Ton)

Working Radius (m)	Main Boom Length (m)											Working Radius (m)	
	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0	39.0	42.0		
4.5	72.00												4.5
5.0	63.70	5.2m X 59.50t											5.0
5.5	56.15	55.40	5.8m X 51.50t										5.5
6.0	49.50	49.50	49.50										6.0
6.5	43.90	43.90	43.90	43.85									6.5
7.0	39.60	39.60	39.60	39.60	7.2m x 38.00t	7.9m x 33.10t							7.0
8.0	32.75	32.75	32.65	32.55	32.45	32.45	8.5m x 29.80t						8.0
9.0	27.80	27.70	27.60	27.50	27.45	27.35	27.25	9.2m x 26.30t	9.9m x 23.60t				9.0
10.0	24.00	23.90	23.85	23.75	23.65	23.55	23.45	23.30	23.20	10.6m x 21.50t	11.2m x 19.80t		10.0
12.0	11.8m x 19.35t	18.70	18.50	18.45	18.35	18.35	18.15	18.00	17.90	17.80	17.70		12.0
14.0		15.20	15.10	15.00	14.85	14.85	14.65	14.45	14.40	14.30	14.20		14.0
16.0		14.4m x 14.65t	12.75	12.60	12.50	12.30	12.15	12.05	11.95	11.75	11.70		16.0
18.0			17.0m x 11.70t	10.80	10.70	10.50	10.35	10.25	10.15	9.95	9.90		18.0
20.0				19.6m x 9.75t	9.25	9.15	9.00	8.80	8.70	8.60	8.45		20.0
22.0					8.10	8.00	7.80	7.70	7.65	7.45	7.35		22.0
24.0					22.2m x 7.95t	7.10	6.90	6.80	6.75	6.55	6.35		24.0
26.0						24.8m x 6.70t	6.20	6.00	5.90	5.75	5.65		26.0
28.0							27.4m x 5.75t	5.40	5.30	5.10	5.00		28.0
30.0								4.85	4.75	4.55	4.40		30.0
32.0									4.30	4.10	3.95		32.0
34.0									32.6m x 4.15t	3.65	3.50		34.0
36.0										35.2m x 3.45t	3.15		36.0
38.0											37.80m x 2.80t		38.0
40.0													40.0
42.0													42.0
Falls	7	6	5	4	4	4	3	3	3	2	2		Falls

The pontoon specification

To be assigned

Dimensions : Height -- m, Width --m, Depth --m

Weight : --ton (With fixed equipment)

Notes

- 1.The capacity are based on machine lashing condition to the pontoon.
- 2.Please hold firm crane position from the pontoon center of length direction within the back and forth 10m.
- 3.To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as boom hook from figures shown above,
- 4.All rated load are based on machine structural limitation factors other than those which would cause a tipping condition, allowable maximum slant ship angle become 1.5deg. in a longitudinal direction and 3.0deg. in short-distance direction.
- 5.The lifting capacity change by the pontoon specification.
- 6.Please hold firm shipboard luggage balance from center to all circumference direction.

FORM B

MINISTRY OF MANPOWER, SINGAPORE
 WORKPLACE SAFETY AND HEALTH ACT 2006
 WORKPLACE SAFETY AND HEALTH (REGISTRATION AND OTHER
 SERVICES FEES AND FORMS) REGULATIONS
**CERTIFICATE OF TEST/THOROUGH VISUAL EXAMINATION
 OF LIFTING EQUIPMENT (LE)***

LE Registration No. : LM966005B
UEN of Owner. : 200720801G
Workplace No. :

Owner of Lifting Equipment	Factory Occupier and Location of Lifting Equipment
OFFSHORE CONSTRUCTION SPECIALISTS PTE. LTD. 36 KIAN TECK ROAD SINGAPORE 628781	At various locations

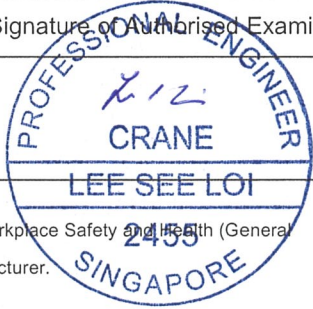
Particulars of Lifting Equipment			
Type and Description of Lifting Equipment	612 Mobile Crane - Crawler Mounted Fixed Boom Length Type	Classification Code : 612	
Brand Name	: H. SUMITOMO SCX900-2	Distinctive No. **	: SC090-7363
Country of Origin	: JAPAN	Date of Manufacture	: 2012
Source of Power	: Diesel Engine	First Registration Date	: 23/12/2021
Max. Safe Working Load	: 35700 kg	Max. Boom Length/Span	: 27.00 m
Owners' Reference/Vehicle Registration No.	:	Length of Fly Jib/Extension	:

Particulars of Last Load Test						
Date of Load Test	: 21/12/2021			Max Test Load	: 44600 kg	
	(1)	(2)	(3)	(4)	(5)	(6)
Radius (m) :	8.0	22.0				
Test Load (kg) :	44600	10700				
Safe Working Load (kg) :	35700	8500				

Comments/Observations
<p>1. Mobile Crane inspected off shore on: BARGE Name: OCS UB01 " MISS PENNIE".</p> <p>2. Main 4- part line Hook Block, SWL:35.7 ton @ 8 M RAD and 8.5 ton @ 22 M radius. and Aux 1-part line Lifting Hook SWL: 11 ton @ 8 M RAD, Load Test 13.75 ton; and 8.7 ton @ 22 M. Load Test 10.9 ton.</p> <p>3. Datalogger WTAU/A700 functioned with load radius limits checked.</p> <p>4. Stakeholders to ensure proper maintenance and safe use. (New Registration)</p>

I certify that on **21/12/2021** the lifting equipment described in this certificate was examined thoroughly by me, as far as its construction permits, and this is a true report of my examinations.

I further certify that the lifting equipment complies in all respects with the requirements pertaining to lifting equipment as stipulated in the Workplace Safety and Health (General Provisions) Regulations, and all other regulations made thereunder and is safe for use.

Expiry Date of Certificate	Date of Print of Certificate	Authorised Examiner's Name	Signature of Authorised Examiner
20/12/2022	23/12/2021	LEE SEE LOI	

* Lifting Equipment means Lifting Gear, Lifting Appliance, Lifting Machine, Lift and Hoist as defined under the Workplace Safety and Health (General Provisions) Regulations.

** Distinctive Number refers to the Identification Number/Serial Number assigned to the equipment by the manufacturer.



CHECK LIST FOR MOBILE CRANE ANNUAL INSPECTION

Owner: Offshore Construction Specialist Pte Date/time of Inspection: 21/12/21
 LE No.: LM 966005B Brand: H. Sumitomo SCX 900-2
 Type of LE: 612 Crawler SC-090-7363
 Inspection Location: Barge: OCS 4 B01 "Miss Pennie"

S/n	Items	Pass (P)/Fail (F)	Remarks
1	Wire ropes, rope guards, or chains	✓	
2	Lifting hooks/safety latch, associated attachments	✓	
3	Shackles	✓	
4	Rope drum/winches, rope properly reeved	✓	
5	Brake, ratchet, pawl	✓	
6	Pulleys, pins, safety pins, lock pins, fasteners	✓	
7	Boom section and/or fly-jib, extensions	✓	
8	Boom stops free from defects or corrosion	✓	
9	Safety devices including load radius indicator, boom angle indicator, load chart	✓	Data logger
10	Welding or other fastening devices on structure	✓	
11	Ballast/counterweights properly secured	✓	
12	Anti-two block device, end stops, limit switches	✓	
13	Slew ring (visible part), slew system	✓	
14	Shafts and axles	✓	
15	Base portion	✓	
16	Hydraulic system	✓	
17	Hydraulic cylinders	✓	
18	Cabin is in serviceable condition	✓	
19	Operator's protection	✓	
20	Controls are checked for correct identification and function	✓	



AE's Name: LEE SEE LOI..... AE's stamp and signature: