

HITACHI SUMITOMO

SCX900-2

The New World Standard Crawler Crane

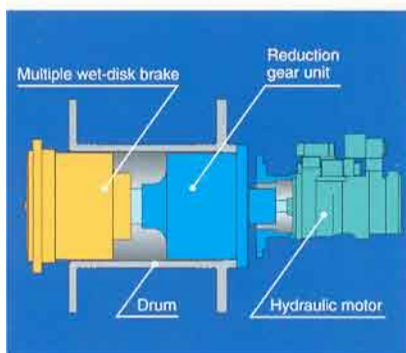


HSG
2nd Edition

Setting New Standards of Crane Productivity and Profitability

Hitachi and Sumitomo have blended the best of their technologies to create the New World Standard Crane. Developed along the concept themes of "simple, refined and reliable", the SCX900-2 offers new levels of safety, operability, durability and ease of maintenance.

Advanced clutchless multiple wet-disc brake is well designed, and ensures continuous heavy-duty operation.



The winch uses a multiple wet-disc brake, and a forced-oil cooling system is designed to sustain brake performance even in continuous heavy-duty operations, such as hammer grabbing. This brake system is designed to provide reliability while requiring no maintenance. Also, a newly developed mechanism is used on this brake design to reduce drag resistance and it realizes a smooth friction-off between discs while a high-viscosity hydraulic oil is utilized as standard, contributing to longer hydraulic pump and motor life.

Powerful winch drum with bigger line pull.

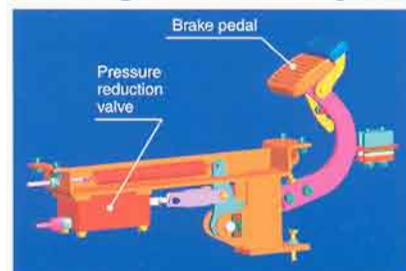


The SCX900-2 is really versatile machine, and certainly performs not only liftcrane/luffing towercrane works but also duty cycle works under clamshell, hammer grab and dragline applications with bigger line pull of 196kN <20t> as maximum with 26 mm dia. cable. In addition, by employing a specially-tailored power increase control, the engine always maximizes its output under any load condition in whole range of engine rpm.

Optional third drum.

A third drum is optionally available under the same specifications as that of two main operating drums, and it accordingly enables to efficiently perform heavy duty works under an 196kN <20t> line pull.

New negative brake system much reduces operator fatigue and enhances safety.



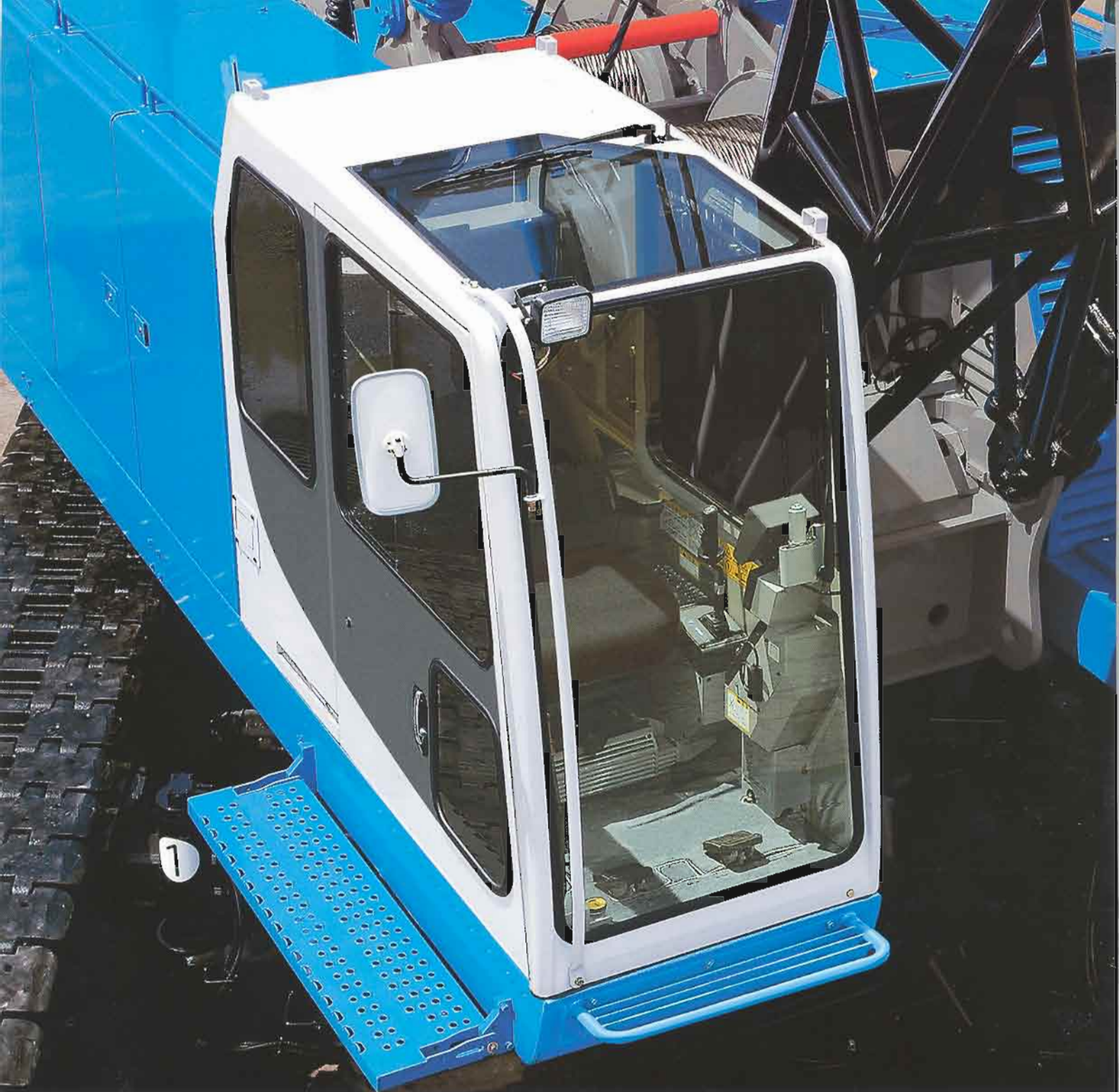
With a new negative brake of spring-applied/power hydraulically-released type applying dynamic hydraulic pressure for its release control, an effective braking can be done under an extreme light foot pedaling, and it accordingly results in greatly reducing operator fatigue, especially when winch free-fall operation under duty cycle applications. Further, the use of negative brake system maintains a high level of brake safety even if a hydraulic pressure drop in the circuit happens.

An aluminum-make oil cooler.

For not only a good rustproof but also a high cooling efficiency, an aluminum-make oil cooler is provided in front of engine radiator.







The New World Standard **SCX900-2**

Job-Proven Controllability and Operator Comfort

A newly designed operator's cab.

In consideration of operator comfort, a new operator's cab much improves the visibility thru front and both side windows of the cab with simplified layout of control station. In addition, a reinforced light green-tinted safety glass is adopted in front window to protect operator from ultraviolet rays and airborne debris.





A high operation ease with specially-tailored EPC system.

Thanks to unique EPC system, an easy-precise-minute control of engine rpm and pump discharge from min. thru max is really possible at the same time by simply twisting the grip fitted on swing control lever.



Armchair control station with drum rotation sensors.

An armchair control station is provided for a good, easy and comfortable operation. In addition, armchair control levers of two main and boom hoist drums each fit the drum rotation sensor to let operator sense a drum rotation speed decrease gradually according to the extent of the load applied to the hoist cable, and it results in more safety lifting work, especially in blind condition.

Simplified and easy-to-read panel.

A large LCD graphic display panel of Load Moment Indicator is provided with a reflection-less design on display panel. And, the switches, meters/gauges and controllers are functionally grouped for operator control convenience.

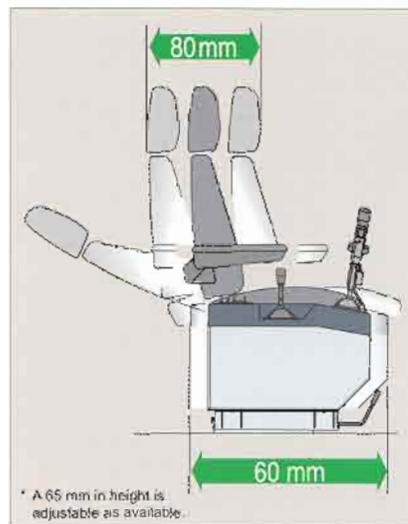


Cab large sliding door with a swing-link design.

For easy entry and exit to and from the cab, and smooth door opening and closing, a swing-link type large sliding door is well designed. And, a swing-link door design certainly eliminates a troublesome occurrence like a gathering the mud into rail groove, rail-rust and so on unlike rail-slide door.

Optional outside-airintake type air-conditioner.

For good air-conditioning with fresh air, an outside-air intake type air-conditioner is optionally available.



Slidable control station and operator seat.

To set most of suitable operator position, both right- and left-hand control stations are designed to simultaneously slide 60 mm back and forth together with operator seat, and operator seat is able to slide 80 mm independently too.

A good swing & boom hoisting/lowering speed control design.

Boom hoist drum rotation speed can be freely controlled thru knob dialing independently for more precise combined operation of hook and boom motions. In addition, max. swing speed can be freely controlled thru knob dialing too, and, as an example, it realizes a precise combined operation under higher hook hoisting and lower swing speed in high lift work. Further, more smoother swing can be realized in any kinds operations and works too because, as a main reason, a variable displacement axial piston pump is designed in swing circuit.



Safety



Newly-designed Load Moment Indicator.

An easy-to-read LCD graphic display panel is well designed and a reflection-less display panel is provided on a new Load Moment Indicator (LMI) with setting ease of viewing angle. In addition, no zero-point adjustment, and data input thru interface counter-indication/message on display panel are available for easier and certain setting of operating conditions and LMI functions. Of course, "present lifting load", "rated load", "load ratio", "working radius", "boom angle", "engine rpm" and so on are indicated on the LMI display panel. Further, displayed picture and menu selection can be easily set up by panel switch in accordance with operation situation and condition.

LMI automatically sets front-end att. erection mode with letter message.

In the range out of crane working area, the LMI display panel automatically indicates "Now, out of crane working range" with a rigging instruction, and it is available to lift front-end att. off ground without the influence of M/L safety functions, and, after front-end att. is lifted over the range of crane working area, LMI safety function gets back automatically for safe erection work.



Boom speed slowdown function.

This function is available just before automatic stopping at both upper and lower side limits of boom angle to prevent a shock even though control lever is still at hoisting/lowering position. This function is also available when over-loading.

Independent lever lock.

Each lever can be locked independently to prevent absent-minded misoperation.



Optional lifting height indication function.

For more safe lifting work, especially in blind condition, it is optionally available to indicate the lifting height above ground or depth below ground on display panel of LMI.

Automatic drum pawl locking device.

On boom hoist drum, it is designed to automatically lock and release drum pawl when control lever just returns to neutral position, and just actuates.



Fool proof shut-off system.

To insure safety when the operator leaves the cab, a main hydraulic shut-off switch is located in the cab exit to deactivate and lock the hydraulic system.



Emergency machine stop buttons.

In the case of an emergency, the operator can stop the machine by the pressing buttons, located at left front and right rear.



Swing/travel alarms.

These alarms alert work crew around the machine when swinging and/or traveling to keep clear for safety.

The New World Standard **SCX900-2**

**Pays a keen attention to safety,
transport and environment too.**



Mobility & Transportability

Counterweight with horizontally-split design.



It is able to load boom extension(s) onto counterweight when transport. And, the reversible stack is possible to reduce the time for disassembling/assembling works.

Easy pull-out and -down of beam-end pins.



It is able to easily pull out and down the carbody axle beam-end pins because of an outer pinning design.

Environment

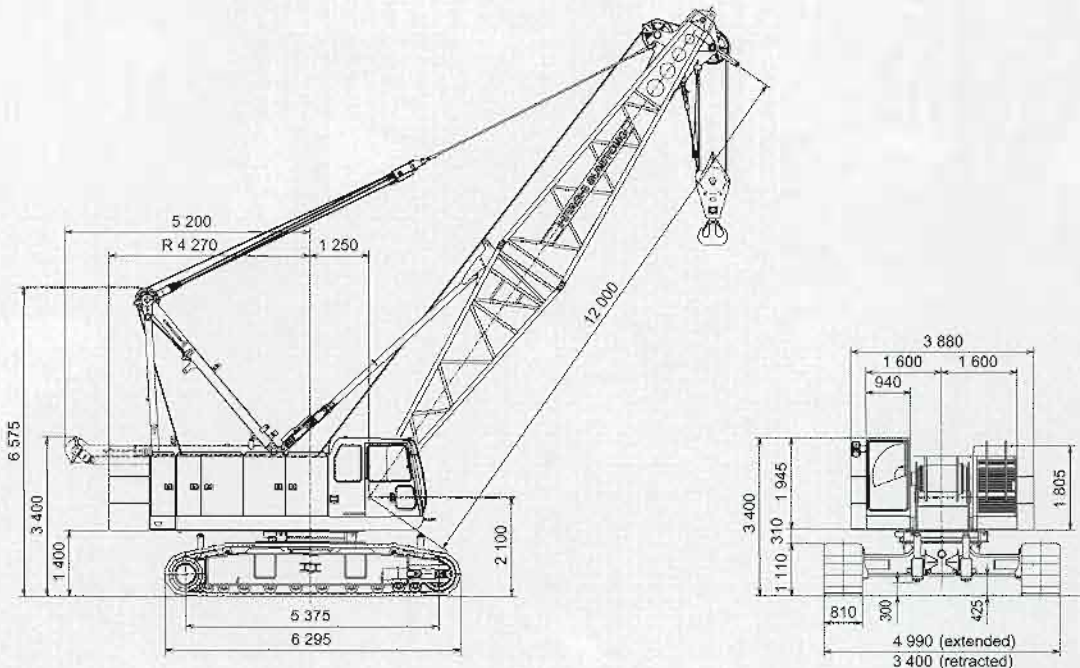
Clean and low noise engine.

The engine meets current EU Emission Regulations for Off-Road Diesel Engine-Stage 2, and Japanese Emission Standard for Diesel Construction Equipment-Stage 2, and the SCX900-2 clears low noise levels as defined by Ministry of Land, Infrastructure and Transport of Japan under the new noise measuring methods regulated by ISO.

SCX900-2

DIMENSIONS

Unit : mm



SPECIFICATIONS

		Liftcrane application	Luffing towercrane application
Max. lifting capacity		t × m	90 × 4.0
Basic boom length		m	12
Max. boom length		m	60
Fly jib length		m	10 ~ 28
Boom + fly jib length		m	48 + 28
Tower length		m	—
Tower jib length		m	26.5 ~ 44.5
Tower + jib length		m	—
Tower + jib length		m	44.5 + 37.0
Rope line speeds ^(*)	Front main drum	m / min	110
	Rear main drum	m / min	110
	Boom hoist drum	m / min	47
Swing speed		min ⁻¹	2.6
Travel speed high/low ^(**3)		km/h	2.0 / 1.1
Gradeability		% ^(*)	30 (17)
Engine	Make & model		Mitsubishi 6D24-TL
	Rated output	kW / min ⁻¹	184 / 2 000
Ground contact pressure		kPa	96
Operating weight		t	85 (w / basic boom and 90t hook block) / 96 (w / 44.5m tower, 37.0m jib and 15t hook block)

Notes : 1. These figures are based on drum first layer and rated engine rpm with no load, and vary under load and operating conditions (*1).
 2. This figure is applicable to tower jib hoisting (*2).
 3. Travel speed is based on flat, level and firm supporting surface and under the conditions that no load must be applied and front-end att. must be 12.0m basic boom (*3).

STANDARD ACCESSORIES

Basic Machine

- Standard tools and tool box ;
- Window shield wipers w/washers ,
- Working lights , ● Rear view mirrors (R/H & L/H) ,
- Crawler side steps , ● A-frame gantry cylinders ,
- EPC system ; ● Side frame removal cylinders ,
- Swing speed control dial ; ● Cab side step ;
- Forward direction indication arrow on shoes ,

Operator's Cab

- Radio (AM/FM with clock) ;
- Sunshade , ● Sunvisor ; ● Cup holder ;
- Floor mat ; ● Ashtray & cigar lighter , ● Book holder ,

Safety Device

- Load moment indicator ; ● Level gauge ;
- Swing/travel alarms ;
- Foot proof shut-off system ,
- Dual boom over-hoist limiting device ;
- Control lever locks , ● Engine monitoring lamps ,
- Emergency machine stop buttons ,
- Speed slowdown device , ● Drum pawl locks ,
- Automatic pawl locking device , available on boom hoist drum , ● Swing lock ,
- Hook over-hoist limiting device ;
- Boom over-hoist and -lowering device ,
- Free-fall interlocking device ,
- Non-drum brake preventing device ;
- Swing brake safety circuit ,
- LMI safety function release switch with key ,

*We are constantly improving our products and therefore reserve the right to change designs and specifications without notice
 -Units in this catalog are shown under International System of Unit
 -Illustrations may include optional equipment and accessories, and may not include all standard equipment

Specifications subject to change without notice

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