SCX800HD-2

**GENERAL DIMENSIONS**

Unit: mm

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Liftcrane application</th>
<th>Clamshell application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. lifting capacity</td>
<td>80 t</td>
<td>-</td>
</tr>
<tr>
<td>Basic boom length m</td>
<td>9.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Max. boom length m</td>
<td>34.5</td>
<td>21.5</td>
</tr>
<tr>
<td>Pyybo length m</td>
<td>9.0 to 16.0</td>
<td>-</td>
</tr>
<tr>
<td>Boom + fly jib length m</td>
<td>48.5 to 9.0</td>
<td>-</td>
</tr>
<tr>
<td>Rope line speeds (m/min)</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Main boom drum m</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Boom hoist drum m</td>
<td>68</td>
<td>-</td>
</tr>
<tr>
<td>Slewing speed min−1</td>
<td>5.1</td>
<td>-</td>
</tr>
<tr>
<td>Travel speed high/low (km/h)</td>
<td>1.8 / 1.3</td>
<td>1.8 / 1.3</td>
</tr>
<tr>
<td>Gradeability</td>
<td>30 (17)</td>
<td>30 (17)</td>
</tr>
<tr>
<td>Engine</td>
<td>Isuzu 6HK1X</td>
<td>-</td>
</tr>
<tr>
<td>Rated output kW m²</td>
<td>212 / 2,000</td>
<td>-</td>
</tr>
<tr>
<td>Ground contact pressure MPa</td>
<td>96</td>
<td>-</td>
</tr>
</tbody>
</table>

**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. Travel speed is based on flat, level and firm supporting surface, and under the conditions that no load must be applied and front-end attachment must be 5 m (basic boom)(*2).

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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; the figures in parenthesis are under Gravitational System of Units as old one.

Illustrations may include optional equipment and accessories, and may not include all standard equipment.

“HSC” throughout this catalog. “HSC CRANES” is a brand of Sumitomo Heavy Industries Construction Cranes Co., Ltd.

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Advanced clutchless multiple wet-disc brake is well designed, and ensures continuous heavy-duty operation. The front/rear main winch drums and optional 3rd winch drum use a multiple wet-disc brake, and a forced-oil cooling system is designed to sustain brake performance even in continuous operations such as hammer grabbing.

The clutchless multiple wet-disc brake requires no maintenance. This brake system requires no maintenance unlike a conventional drum brake with linings. Accordingly, it results in reducing the machine maintenance cost greatly.

A high viscosity hydraulic oil is standardized. A newly developed mechanism is used on the brake design to reduce drag resistance and it realizes a smooth friction-off between discs even though the standardized high viscosity hydraulic oil is utilized, contributing to longer life of hydraulic pumps and motors.

An aluminium-make oil cooler. For not only corrosion-resistance but also high cooling efficiency, an aluminium-make oil cooler is provided in front of engine radiator.

Bigger drum horse power at widely used rope line speed range. A bigger drum horse power (line pull by line speed) is realized under a new winch drum design with a specially-tailored power increase control system that maximizes engine output under any load condition in whole range of engine rpm.

Wider drum is designed. In consideration of an efficient bucket work, front and rear main operating drums are able to wind up approx. 36m long cable at drum first layer with 20 windings, it accordingly results in longer cable life under a right cable winding into drum.

Optional third drum. A third drum is optionally available.

The New World Standard SCX800HD-2

Take a closer look. The SCX800HD-2.
A new standard of 80ton class versatile machine crawler crane throughout the world.

Durable machine with bigger winches. The SCX800HD-2 matches with digging and excavating works. "High lifting performance", "job-proven controllability", "operator comfort", "superior safety", "transport easy", and "good environment". These features of mother machine of SCX800-2 are of course taken into its design. No doubt. The SCX800HD-2 surely provides superior duty cycle operation feature more than ever.
A good slewing & boom hoisting/lowering speed control design.

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

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

With a new negative brake of spring-applied/power hydraulically-released design applying dynamic hydraulic pressure for its release control, an effective braking can be done under an extreme light foot pedalling, and it accordingly results in greatly reducing operator fatigue especially during winch free-fall operations 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 occurs.

Drum rotation speed is easily synchronized.

Under a series hydraulic circuit on two main operating drums, the SCX800HD-2 allows the inexperienced operator to synchronize rope line speed of front and rear drums ranging all the way even a high speed range so that clamshell/Japanese MHL diaphragm wall excavating bucket operation can be easily and precisely performed.

Job-proven certain controllability

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 slewing control lever.

Armchair control station with drum rotation sensors.

An armchair control station is provided for a good, easy and comfortable operation. In addition, drum operation sensors are fitted on the armchair control levers of two main drums to let operator sense a drum rotation speed decrease/increase by a knob vibration per 11 mm cable winding/rewinding movement at 1st drum layer, and it results in performing more safety lifting work, especially in blind condition.

Armchair control station with drum rotation sensors.

A series hydraulic circuit on front and rear drum winch motor hydraulic lines. Accordingly, oil flow capacity to each motor is equal, and as a fixed displacement axial piston motor is used on each drum, the drum rotation speed gets equal regardless of the difference of the load between front and rear drums.

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

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

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 under 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.

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

Outside-air intake type air-conditioner.
For good air-conditioning with fresh air, an outside-air intake type air-conditioner is available.
Our own designed new Load Moment Indicator.
The Load Moment Indicator (LMI) is reliable computerized safety device developed under our own accumulated technique in the past. An easy-to-read LCD graphic display panel is well designed and a reflection-less display panel is provided on a new 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.

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

Boom speed slowdown function.
This function is available just before automatic stopping of boom motion 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 in the case that working radius exceeds the specified one.

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 LMI 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.

Secondary boom over-hoist limiting device.
Further to boom over-hoist limiting function by the limit switch and LMI safety circuit, an additional limit switch is located on boom backstops for redundant boom protection.

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.

Slewing and travel alarms.
These alarms alert work crew around the machine when slewing and/or travelling to keep clear for safety.

Optional 3-color percentage indicator.
To let work crew around the machine know operating conditions of "safety" or "marginal" or "over-loading" with a 3-color of "green" or "yellow" or "red". As a further function, red lamp comes on automatically whenever operator cuts off LMI safety circuit absentmindedly.

Independent lever lock.
Control lever can each be mechanically locked to prevent absent-minded misoperation.

Standardized safety devices other than the above
- Main hook over-hoist limiting device;
- LMI safety circuit-off switch;
- Slewing brake safety circuit;
- Non-drum brake preventing device;
- Free-fall interlocking device;
- Lock lever (Foot proof shut-off system);
- Drum pawl locks;
Faster assembling/disassembling of tread members and a good transportability

Optional counterweight self-removal device.
It is able to raise and lower each counterweight by a gantry with two power hyd. cylinders.

Optional lower frame jack-up device.
Lower frame jack-up device gets faster assembling/disassembling of two tread members, and it is allowed to transport basic machine with boom base section in 28t weight thereafter.

A Keen Attention to Environment
The prime mover is from ISUZU, a reliable diesel engine manufacturer, and meets current EU Emission Regulations for Off-Road Diesel Engine - Stage 3.