

What is SUMITOMO?

The SUMITOMO Group traces its origins to the copper ore mining and smelting business established 430 years ago during the Edo period when Japan was ruled by the Samurai. Over the centuries, it has evolved into a multi-industry group, with diverse divisions offering various opportunities for skilled craftsmen and craftswomen.



SUMITOMO Construction Machinery, a proud member of the SUMITOMO Group with over 400 years of history, entered the construction equipment industry nearly half a century ago.

1964 LS78

In 1963, SUMITOMO partnered with Link-Belt, a prominent American construction equipment company, to enter the hydraulic excavator manufacturing sector.

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We are constantly improving our products and therefore reserve the right to change designs and specifications without notice. Illustrations may include optional equipment and accessories and may not include all standard equipment.



SUMITOMO

SH145X-7
SH145XLC-7

MINIMUM SWING RADIUS

Operating Weight
14,100-14,800 kg

Bucket Capacity
0.5-0.65 m³

Engine Rated Power
76.4 kW



HYDRAULIC EXCAVATOR FOR REAL PERFORMANCE
LEGEST



EU Stage V

Advances Abound. Innovation Infinite.

Setting a new bar for worksite proficiencies.

Sumitomo excavator "MINIMUM SWING RADIUS".

The DASH 7 series from Sumitomo has been developed to exceed its own capabilities in every regard, with performance benchmarks that will stand the test of time and innovation to tackle any job. Created for more seamless operations in an extensive range of worksite surroundings, both businesses and operators will come to treasure the performance Sumitomo excavator is capable of providing. Unleash the potential on your worksite with capabilities never before seen.



Advanced Energy Efficiency and Eco-friendly Operation

The combination of the advanced clean engine "SPACE 5 α" and SUMITOMO's proprietary hydraulic system "SIH:S α" achieves much higher operating efficiency and superior fuel economy. These features also mean the excavator is even easier on the environment and worksites.



Faster Operations and Excellent Fuel Economy!

Clean and Fuel-efficient Engine "SPACE 5 α"

The SH145X-7 is powered by a new engine designed for significantly improved combustion efficiency and much lower fuel consumption. In addition to a common rail fuel injection system designed for optimum fuel injection, a cooled EGR and VG turbocharger help to achieve cleaner exhaust gas emissions as well as superior power and response.

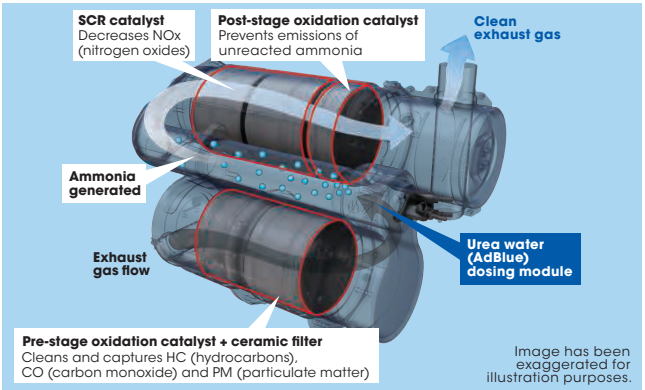
Meets EU Stage V standards

PM: **40%** reduction NOx: **88%** reduction
(compared to SH145X-6)

Exhaust After Treatment System (ATS)

An advanced exhaust after treatment system has been used, featuring a combination of a ceramic filter and SCR. The pre-stage ceramic filter removes PM through collection and combustion, while the post-stage SCR injects AdBlue® (urea water) into the exhaust gas, cleaning the NOx into harmless nitrogen and water through chemical reaction. Post treatment of NOx allows for high-efficiency combustion at the engine, achieving superior clean running as well as powerful and low fuel consumption operation.

AdBlue® is a registered trademark of the German Association of the Automotive Industry.



SCR System Design

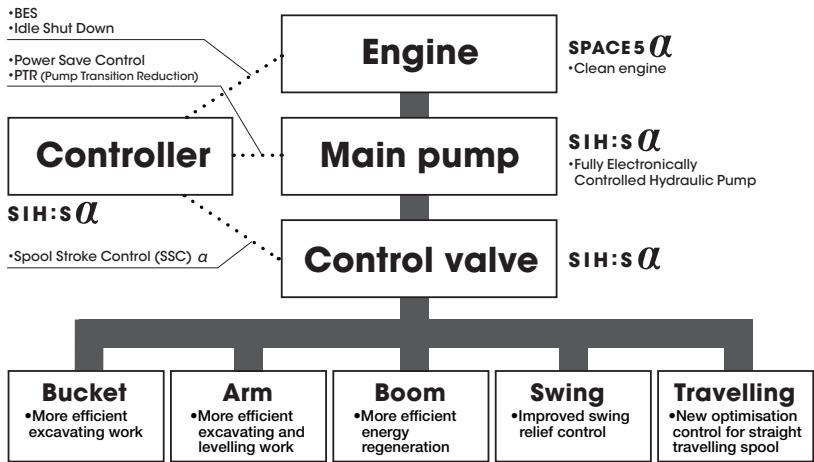
The SCR system comprises an oxidation catalyst, SCR catalyst and urea water dosing module. The urea water is injected into the exhaust gas, where the NOx is reduced by the SCR catalyst and ammonia generated from the urea water and broken down into harmless nitrogen and water, resulting in clean exhaust gases.

SCR: Selective Catalytic Reduction

Advanced Energy Efficiency and Eco-friendly Operation

Innovative Hydraulic System “SIH:S α”

An innovative hydraulic system has been used to reduce fuel consumption, while a fully electronically controlled hydraulic pump ensures precision flow control. Further enhancements have also been made to SUMITOMO’s proprietary Spool Stroke Control for optimum hydraulic control to suit job conditions, thus achieving even more efficient operations and significantly lower fuel consumption.



Three Working Modes for Economic Operation or Work Efficiency

Three working modes are available: SP (Super Power) for faster operations, H (Heavy) for heavy duty applications, and A (Auto) for fuel efficiency across a wide range of operations. Six levels are shown for A mode, making it easier to select the right mode for any jobsite.



Integrated Throttle Mode Selector
The throttle mode can be selected by simply turning the knob, so anyone can easily choose the optimum working mode.



Unprecedented Operating Performance

The Innovative Hydraulic System "SIH:S α" provides a stunning new level of performance on job sites. A fully electronically controlled hydraulic pump enhances engine and pump control, and when combined with SUMITOMO's proprietary Spool Stroke Control (SSC) α, ensures precision control across the entire operating range. The excavator responds exactly as the operator is expecting, with predictable speed, digging power and movement streamlining work on any job site.



Work Efficiency Drastically Increased SUMITOMO UNIQUE DESIGN

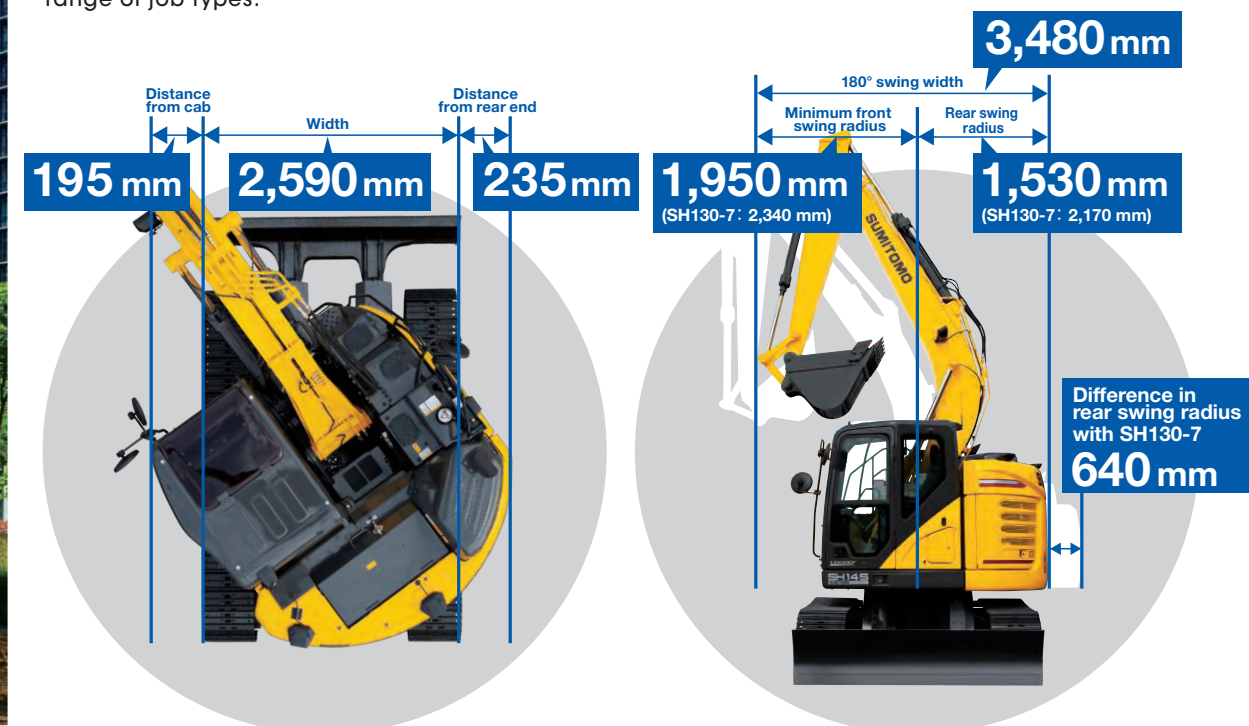
Spool Stroke Control (SSC) α provides precision optimal flow rate control to suit operating conditions. Speed, power, operations, and control are exactly as the operator expects, meaning work efficiency is increased dramatically. It now also covers a greater range, with more precise identification of operating type. These all help to achieve an even higher level of energy efficiency and smooth operations.

Superior Workload and Productivity

The hydraulic control system has been optimised for maximum productivity. The system prioritises controls when work calls for careful handling, thus achieving both high volume and delicate operations, resulting in even greater work site efficiency.

Small Rear Swing Suited to a Diverse Range of Jobs

The 3.48 m swing radius is among the smallest in its class, providing a compact solution for operations on tight urban job sites or working around obstacles. Work is safer and easier owing to the minimal chassis overhang in both the front and rear, while the superior mobility and agility with the minimum rear swing radius makes the SH145X-7 ideally suited to a broad range of job types.



Note: The figures shown above are achieved when standard counterweights are installed. The minimum rear swing will differ to these figures when heavier counterweights are installed.

Advanced Operator Comfort

A comfortable cabin has been designed to reduce operator fatigue, with the aim of relieving stress during work and ensuring greater relaxation during downtime. With features such as a spacious cabin interior, new high-definition monitor with smartphone-like usability, new air suspension seat, and unbelievably quiet operation, the cabin is both comfortable and intuitive to ensure a greater level of safety.



Spacious, Class-leading Cabin

Just like previous models, the cabin has been designed with features that are top of its class, all of which help to ensure a comfortable and stress-free space for the operator. Superior sound insulation throughout the cabin translates to top-class levels of silence within.

Automatic Air-conditioner

Fully automatic climate control maintains a comfortable temperature within the cabin. The optimal ducting layout and airtight cabin also help to boost air-conditioning efficiency.



New Air Suspension Seat

The operator's seat features air suspension as standard for outstanding ride comfort. A new high-performance reclining seat with higher seatback has been used to ensure premium comfort. A multitude of seat adjustments and ample seat cushion width all help to significantly lower operator fatigue. The high water-repellent seat material is also easier to keep clean.



Seat air suspension

Premium Comfort with Seat Heater (OPTION)

A seat heater function is now available as an optional extra for even greater comfort in cold seasons or working early mornings.



Seat heater switch

New Monitor-Even More Intuitive and User-friendly

A wide range of excavator operating and maintenance information, warnings and other data are displayed as text messages. Providing a way to view accurate and easy-to-understand information helps to boost operating efficiency and safety.



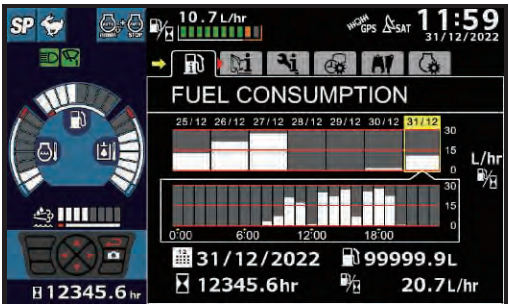
Indicators

- 1 Working modes
- 2 Icons
- 3 Warning messages
- 4 Engine coolant temperature
- 5 Fuel level
- 6 Urea water level
- 7 ATS warning
- 8 Camera view (rear camera)
- 9 Camera view (right side camera)

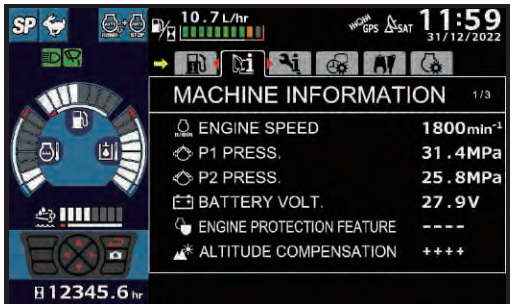
Switch Panel

- A Travel speed button
- B ATS purge
- C Aux. hydraulic settings
- D Window wiper
- E Window washer
- F Work lights
- G Auto idle/Idle stop
- H Display modes
- I Hour meter toggle (trip/total)

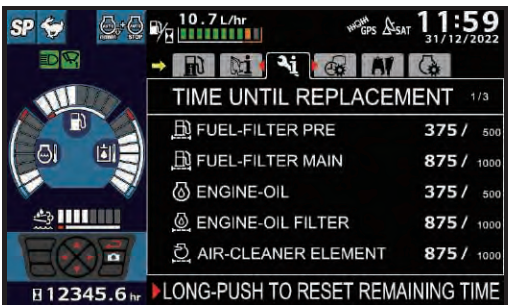
Illustrations of New Monitor Displays



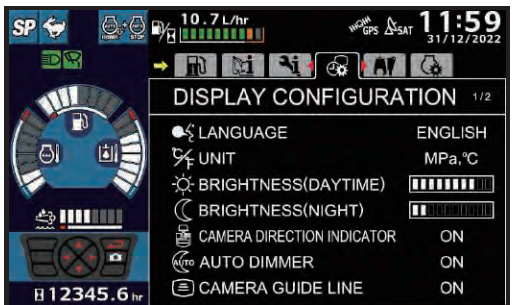
Fuel economy



Machine info



Maintenance info



Display settings

Equipment for Comfort and Safety



Magazine rack



Cup holder



Under-cab storage space



Anti-theft system



Emergency stop switch

Sophisticated Safety Features

The cabin provides excellent driving visibility, and features a high-strength design to better protect the operator. Every aspect has been designed for day-to-day safety, including excellent access in and out of the cabin, and steps and handrails to make inspections and maintenance easier. The use of a new rear camera and LED cabin top light* also helps to ensure operations remain safe.

*Option

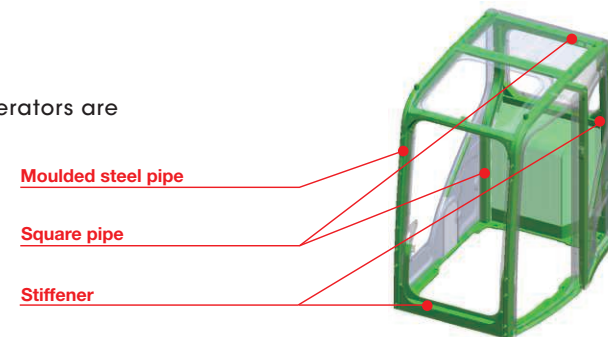
Wide View for Excellent Site Safety

In addition to the front of the excavator, the cabin design gives the operator a wide, unrestricted view to check upper and lower areas. Direct visibility for the operator means work can be performed safer.

Safe ROPS-compliant Cabin

A high-strength cabin design means operators are even better protected.

ROPS: Roll-Over Protective Structure



Rear and Right Side Cameras



Monitor videos



Rear camera



Right side camera

Better Access Around Body

Steps and handrails are in the optimal positions for easier access around the body during inspections and maintenance. Non-slip plates also ensure safety when it is raining.



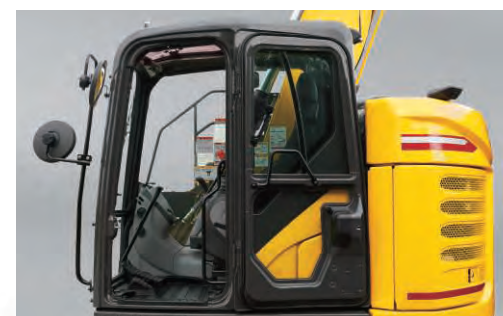
Handrails



Non-slip plates

Superb Access

The wide door opening and large handrails provide excellent access up to and down from the cabin. The spacious footwell also makes it easier to get in and out.



Large handrail and spacious footwell



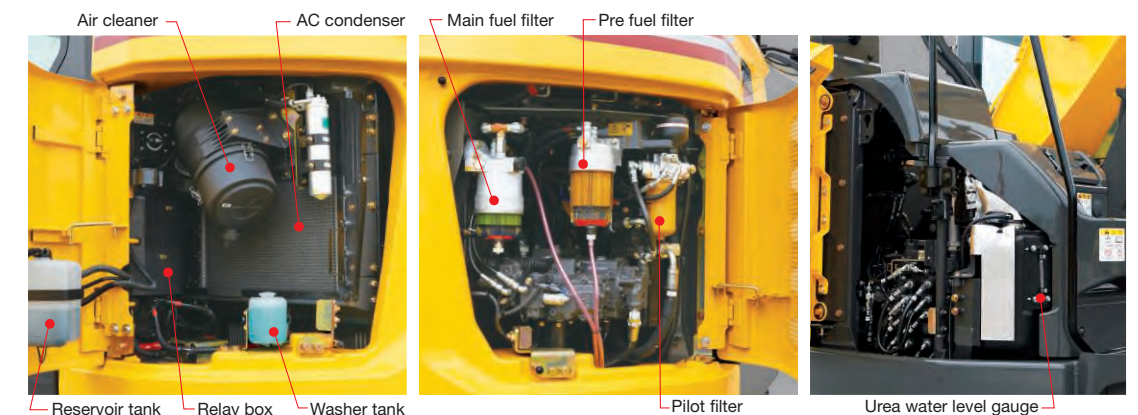
Superior Ease-of-maintenance and Durability

Easy maintenance and durability are the key to excavators that are called upon for ongoing work at job sites. With enhanced durability at every corner and proprietary EMS, outstanding reliability is standard with SUMITOMO excavators—they are designed to be easy to operate and maintain for customers, including features like ground level access and refilling AdBlue®.



Ground Level Access for Easy Inspections and Maintenance

Components requiring inspection are all in a central location, meaning inspections and refilling can be performed without having to climb up onto the excavator.



Dust-proof Net for Enhanced Ground Level Access

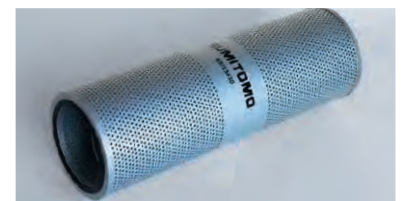
SUMITOMO
UNIQUE DESIGN

A dust-proof net mounted on the front of cooling package reduces the amount of dust adhesion, leading to a higher level of reliability. Ground level access means the dust-proof net can be quickly removed for easy cleaning.



High-Performance Return Filter

A long hydraulic oil change interval of 5,000 hours, and the use of a high-performance return filter ensures superior ease-of-maintenance.



Hydraulic oil change: **5,000** hours

Filter life: **2,000** hours

* The oil and filter change intervals vary depending on operating conditions.

Superior Ease-of-maintenance and Durability



EMS for Enhanced Maintenance of Joints



SUMITOMO's EMS (Easy Maintenance System) has been used to ensure the excavator is always at the forefront of any work site. Special bushes keep joints lubricated and prevent rattling, and help give parts like bushes and pins a longer operating life. This extends the greasing interval of joints like around the bucket and other sections, thereby reducing the amount of maintenance required.

Greasing interval for bucket: **250 hours**
Greasing interval for other sections: **1,000 hours**
* The greasing interval varies depending on operating conditions.



Attachment EMS bushing with self-lubricating capability



Bucket EMS bushing (steel) with excellent wear resistance

Easy-to-fill Urea Tank

The urea tank has been positioned near the front right for easy refilling, to suit the way the excavator is used. The tank capacity is designed to suit the excavator's operating conditions, reducing work required for refilling.



Urea Tank Capacity: **43 L**
Refilling frequency: **Once per 7 refuellings**
The tank needs to be refilled around once every seven times the fuel tank is filled (may vary depending on usage conditions).

Specifications

SH145X-7 Technical Data

The electronic-controlled engine of SPACE 5 α and SIH:S α with New Hydraulic System Includes: three working modes (SP, H and A), one-touch/automatic idling system, automatic power-boost, speed assistance system, power-swing system.

Engine

SH145X/145XLC-7	
Model	ISUZU VD-4JJ1X
Type	Water-cooled, 4-cycle diesel, 4-cylinder in line, high pressure common rail system (electric control), turbocharger with air cooled intercooler, ATS
Rated output	76.4 kW at 2,000 min ⁻¹
Maximum torque	348 N·m at 1,800 min ⁻¹
Piston displacement	2.999 ltr (2,999 cc)
Bore and stroke	95.4 mm x 104.9 mm
Starting system	24 V electric motor starting
Alternator	24 V, 90 A
Air filter	Double element

Hydraulic pumps

Two variable displacement axial piston pumps provide power for boom/arm/bucket, swing, and travel. One gear pump for pilot controls.

SH145X/145XLC-7	
Maximum oil flow	2 x 129 ltr/min
Pilot pump max.oil flow	20 ltr/min

Hydraulic motors

For travel: Two variable displacement axial piston motors.
For swing: One fixed displacement axial piston motor.

Working circuit pressure

Boom/arm/bucket34.3 MPa
Boom/arm/bucket36.3 MPa with auto power-up
Swing circuit27.9 MPa
Travel circuit34.3 MPa

Control valve

With boom/arm holding valve
One 4-spool valve for right track travel, bucket, boom and arm acceleration
One 5-spool valve for left track travel, auxiliary, swing, boom acceleration and arm

Oil filtration

Return filter6 microns
Pilot filter8 microns
Suction filter105 microns

Hydraulic cylinders

SH145X/145XLC-7		
Cylinder	Q'ty	Bore x Rod Diameter x Stroke
Boom	2	105 mm x 75 mm x 1,120 mm
Arm	1	115 mm x 80 mm x 1,108 mm
Bucket	1	95 mm x 65 mm x 881 mm
Blade	2	115 mm x 70 mm x 250 mm

Double-acting, bolt-up type cylinder tube-end; hardened steel bushings installed in cylinder tube and rods ends.

Cab & controls

The cabin is mounted on four fluid mountings. Features include safety glass front, rear and side windows, adjustable upholstered suspension seat with headrest and armrest, cigarette lighter, pop-up skylight window, and intermittent wiper with washer.
The front window slides upward for storage and the lower front window is removable. Built-in type full-colour monitor display. Membrane switch on monitor display.

Swing

Planetary reduction is powered by an axial piston motor. The internal ring gear has a grease cavity for pinion. The swing bearing is a single-row shear type ball bearing. Dual stage relief valves are used for smooth swing deceleration and stops. A mechanical disc swing brake is included.

SH145X/145XLC-7	
Swing speed	0 - 12.5 min ⁻¹
Tail swing radius	1,530 mm
Swing torque	37 kN·m

Undercarriage

An X-style carbody is integrally welded for strength and durability. The grease cylinder track adjusters have shock absorbing springs. The undercarriage has lubricated rollers and idlers.

Type of shoe: sealed link shoe

Upper rollers -

Heat treated, mounted on steel bushings with leaded tin bronze casting, sealed for lifetime lubrication.

Lower rollers -

Heat treated, mounted on steel bushings with leaded tin bronze casting, sealed for lifetime lubrication.

Track adjustment -

Idler axes adjusted with grease cylinder integral with each side frame; adjustment yoke mechanism fitted with heavy duty recoil spring.

Number of rollers and shoes on each side

	SH145X-7	SH145XLC-7
Upper rollers	1	2
Lower rollers	7	7
Track shoes	43	46

Travel system

Two-speed independent hydrostatic system with compact axial motors for increased performance. Hydraulic motor powered output shaft coupled to a planetary reduction unit and track sprocket. All hydraulic components mounted within the width of side frame.
Travel speed can be selected by the switch panel on the monitor display. Hydraulically released disc parking brake is built into each motor.

SH145X/145XLC-7		
Travel speed	High	5.6 km/h
	Low	3.4 km/h
Drawbar pull		116 kN

Lubricant & coolant capacity

SH145X/145XLC-7	
Hydraulic system	158 ltr
Hydraulic oil tank	75 ltr
Fuel tank	200 ltr
Cooling system	16.5 ltr
Final drive case (per side)	2.1 ltr
Swing drive case	2.2 ltr
Engine crank case	17 ltr
Urea water tank	43 ltr

Auxiliary hydraulic system

SH145X/145XLC-7			
Auxiliary piping type (option)	For Breaker	For Double (breaker & crusher) acting	For D/A + Second option line
Arm type	HD	HD	HD
Bucket linkage type	HD	HD	HD
Auxiliary hydraulic pump flow	129 ltr/min	258 ltr/min	258+65 ltr/min

Specifications

Principle Specifications

		SH145X-7 with blade STD Specifications	SH145XLC-7 STD Specifications
Base	Boom length	4.63 m	
	Arm length	2.50 m	
	Bucket capacity (ISO heaped)	0.5 m³	0.5 m³
	Std. operating weight	14,800 kg	14,100 kg
Engine	Make & model	ISUZU VD-4JJ1X	
	Rated output	76.4 kW/2,000 min ⁻¹	
	Displacement	2.999 ltr	
Hydraulic System	Main pump	2 variable displacement axial piston pumps with regulating system	
	Max. pressure	34.3 MPa	
	/with auto power boost	36.3 MPa	
	Travel motor	Variable displacement axial piston motor	
	Parking brake type	Mechanical disc brake	
	Swing motor	Fixed displacement axial piston motor	
Performance	Travel speed (high/low)	5.6/3.4 km/h	
	Drawbar pull	116 kN	
	Gradeability	70% <35°>	
	Ground pressure	40 kPa	35 kPa
	Swing speed	12.5 min ⁻¹	
	Bucket digging force	90 kN	
	/with power boost	95 kN	
	Arm digging force	62 kN	
Others	/with power boost	66 kN	
	Fuel tank	200 ltr	
	Hydraulic fluid tank	75 ltr	
	Urea water tank	43 ltr	

Standard Equipment

[Hydraulic system]

- SIH-S α hydraulic system
- Operation mode (SP, H and A mode)
- Automatic 2-speed travel
- Automatic power boost
- Boom/arm holding valve
- Arm/boom/bucket reactivation circuit
- Automatic swing parking system
- Auxiliary valve
- High-performance return filter

[Cabin/interior equipment]

- 4-point fluid mounts
- New full-colour LCD monitor
- Fresh-air intake pressurised full-automatic air conditioner
- Defroster
- High water-repellent seat
- Seat suspension
- Armrest & headrest
- Windscreen wiper (with intermittent operation function)
- Cup holder
- Magazine rack
- Accessory case
- Floor mat
- Ashtray & cigarette lighter
- Cab light (Auto-OFF function)
- Coat hook
- Operation lever with one-touch wiper switch
- Polycarbonate roof top window with sunshade

[Safety equipment]

- ROPS cab (FOPS level 1)
- Head guard (OPG Level 2)
- Rear/right side camera
- Rearview mirror (left/right)
- Emergency escape tool
- Retracting seat belt
- Gate lock lever (engine neutral start)
- Travel alarm
- Anti-theft alarm system
- Engine room firewall
- Fan guard
- Engine emergency stop switch

[Others]

- Auto/one-touch idling
- Auto idle shutdown system
- EMS
- Long-life hydraulic oil
- Four lights (chassis, boom, cab)
- Fuel filter (with water separator and clogging sensor)
- Fuel pre-filter (with water separator)
- Double-element air cleaner
- Grease-enclosed track link
- Large tool box
- A set of tools

Bucket

Options and specifications may differ depending on countries and regions

Model		SH145X/145XLC-7			
Bucket capacity (ISO/SAE/PCSA heaped)		0.5 m³	0.55 m³	0.55 m³	0.65 m³
Bucket type		STD Horizontal-pin	STD	Reinforced Horizontal-pin	STD
Number of teeth		4	5	5	5
Width	With side cutter	972 mm	1,057 mm	1,057 mm	1,192 mm
	Without side cutter	898 mm	983 mm	983 mm	1,118 mm
Weight		388 kg	411 kg	474 kg	441 kg
Combination	2.11 m arm	◎	●	○	○
	2.50 m arm	●	○	△	△
	3.01 m arm	●	×	×	×

- ◎ Suitable for materials with density up to 2,000 kg/m³ or less
- Standard bucket (suitable for materials with density up to 1,800 kg/m³ or less)

- Suitable for materials with density up to 1,600 kg/m³ or less
- △ Suitable for loading
- × Not available

Weight & Ground Pressure

Model		SH145X-7 with blade			
Shoe type		Shoe width	Overall width	Operating weight	Ground pressure
Triple grouser shoe		600 mm	2,590 mm	14,800 kg	40 kPa

Model		SH145XLC-7			
Shoe type		Shoe width	Overall width	Operating weight	Ground pressure
Triple grouser shoe		600 mm	2,590 mm	14,100 kg	35 kPa
		700 mm	2,690 mm	14,500 kg	31 kPa

Digging Force

Model		SH145X/145XLC-7		
Arm length		2.11 m	2.50 m	3.01 m
Bucket digging force <with power boost>	ISO 6015	90 kN <95 kN>	90 kN <95 kN>	90 kN <95 kN>
Arm digging force <with power boost>	ISO 6015	70 kN <74 kN>	62 kN <66 kN>	56 kN <60 kN>

Accessories (option)

■ Cab-top lights (LED)



■ Rain deflector



■ Sun visor



■ Camera lights (LED) (top: side, bottom: rear)



■ Front mesh guard (full)



■ Front guard (OPG level 1 or 2)



■ Refuel pump

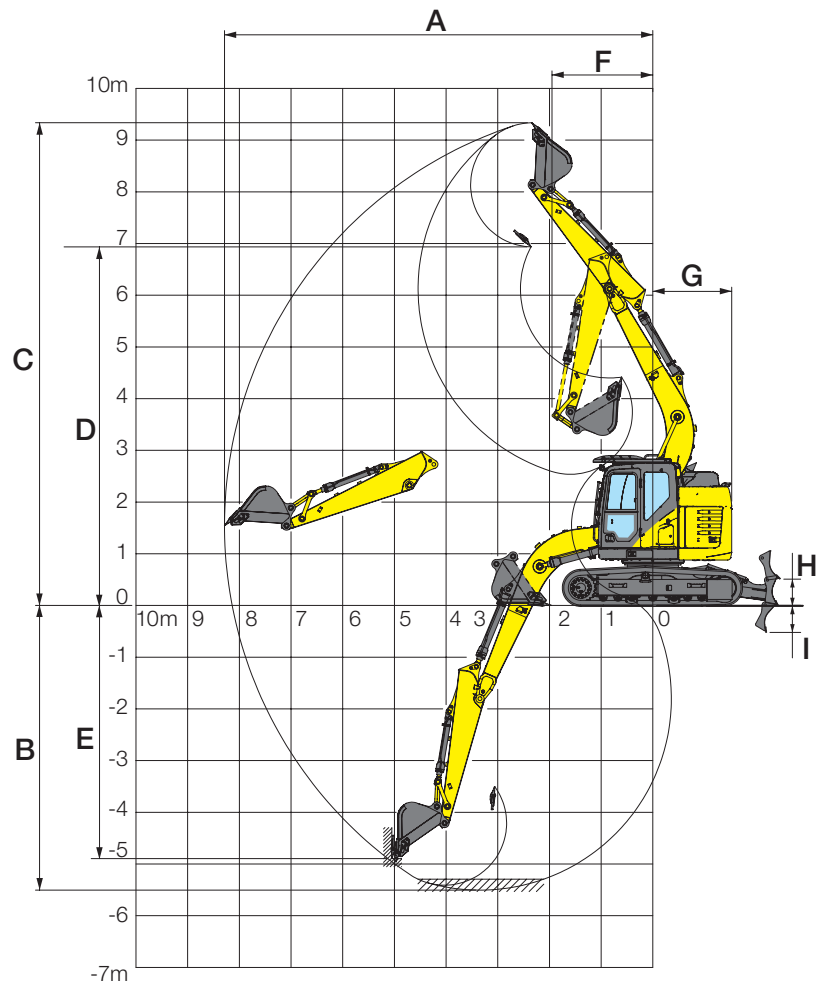
- Hose burst check valve (HBCV) for boom/arm cylinders

■ Double track guard

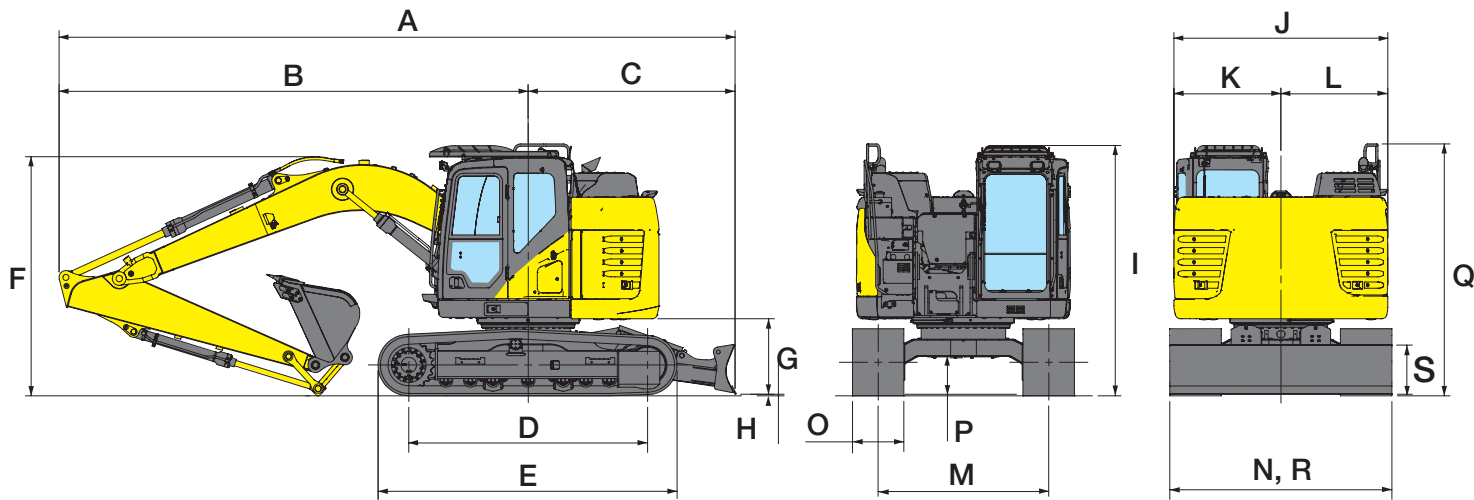
Accessories and specifications may differ depending on countries and regions.

Specifications

Working Range



Dimensions



	SH145X/145XLC-7		
Arm length	2.11 m (SHORT)	2.50 m (STD)	3.01 m (LONG)
Boom length	4.63 m		
A Max. digging radius	7,940 mm	8,290 mm	8,740 mm
B Max. digging depth	5,110 mm	5,500 mm	6,010 mm
C Max. digging height	9,060 mm	9,340 mm	9,690 mm
D Max. dumping height	6,660 mm	6,940 mm	7,290 mm
E Max. vertical wall cut depth	4,560 mm	4,900 mm	5,280 mm
F Min. front swing radius	1,890 mm	1,950 mm	2,330 mm
G Rear end swing radius	1,530 mm		
H Max. lift above ground	510 mm		
I Min. drop below ground	520 mm		

Model	SH145X-7 with blade			SH145XLC-7		
Arm length	2.11 m	2.50 m	3.01 m	2.11 m	2.50 m	3.01 m
A Overall length	7,870 mm	7,880 mm	7,890 mm	7,340 mm	7,350 mm	7,360 mm
B Length from centre of machine (to arm top)	5,460 mm	5,470 mm	5,480 mm	5,460 mm	5,470 mm	5,480 mm
C Length from centre of machine (to rear end)	2,410 mm			1,880 mm		
D Centre to centre of wheels	2,790 mm			3,040 mm		
E Overall track length	3,500 mm			3,760 mm		
F Overall height	2,700 mm	2,790 mm	2,740 mm	2,700 mm	2,790 mm	2,740 mm
G Clearance height under upper structure	880 mm			880 mm		
H Shoe lug height	20 mm			20 mm		
I Cab height	2,920 mm			2,920 mm		
J Upper structure overall width	2,500 mm			2,500 mm		
K Width from centre of machine (left side)	1,250 mm			1,250 mm		
L Width from centre of machine (right side)	1,250 mm			1,250 mm		
M Track gauge	1,990 mm			1,990 mm		
N Overall width	2,590 mm			2,590 mm		
O Std. shoe width	600 mm			600 mm		
P Minimum ground clearance	425 mm			425 mm		
Q Handrail height	2,940 mm			2,940 mm		
R Width of blade	2,590 mm			—		
S Height of blade	570 mm			—		