SUMITOMO

SH135X

MINIMUM SWING RADIUS

LEGEST

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MADE IN JAPAN

The world knows that Japanese design and manufacturing is the best especially for industrial products. The hydraulic excavator is not the exception when a total integration concept is required in design work involving key components, manufacturing engineering and product quality assurance in the factory.
All SUMITOMO hydraulic excavators are engineered and assembled in SUMITOMO's its one and only factory located in Chiba City, Japan, and distributed to each country in the world. This distinctive feature is unique to SUMITOMO, giving the SUMITOMO machine users total comfort and reliance on product quality.
(Note: Some of the items manufactured and sourced in other countries may be assembled in Japan.)

LEGEST

SH135X

Minimum Swing Radius

In addition to boasting top-class compact rotational capability for cramped areas, outstanding stability, and powerful digging and drive strength have been realized.
On various kinds of work-sites it can always be trusted to perform and maneuver exactly as the operator intends.

- **Performance capacity** 4% UP
  (As compared with SH130-5 in H-mode)
- **Standard output** 8% UP
  70.9kW/2000min^{-1}

Diversified operational field

Road works | Forest road works | Demolition works

Improvements to precision maneuverability

Precision maneuverability that functions exactly as the operator intends has been made possible through the employment of a new type of rotational bearing.

Rotational ABS

A rotation shock-absorber device has been installed to soften jolts that occur when the vehicle halts rotation. This is particularly useful for pinpointing position, and preventing spillages during manual operation.

Employment of speed assisted mechanics

Through employing an oil return system in the arm and boom, speed assisted operations for digging, as well as fuel consumption, have been improved.

High-level operational performance and environmental soundness have been simultaneously achieved.
The new-type "SPACE 5" engine system meets the newly enacted Japanese Off-road machinery regulation (Law on Regulation of Special Motor Vehicle Exhaust)

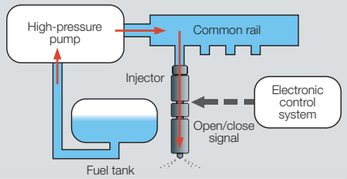
SPACE5
SUMITOMO Powerful And Clean Engine System
1 Powerful 2 Economy 3 Clean 4 Silent 5 Strong

Clearing the Non-road Special Motor Vehicle Exhaust Emission Standard

"Achieving an exceptionally high standard for the 5 major qualities required of construction machinery", that is the solution provided by the SPACE5 engine that will meet the demands of the next generation.

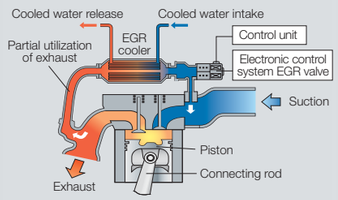
Common rail fuel injection system

The super-high-pressure common rail fuel injection system realizes super-high-pressure, high-precision multiple-injections. Timing and volume of fuel injection is controlled, which improves consumption efficiency, and PM (particulate matter) is greatly reduced.



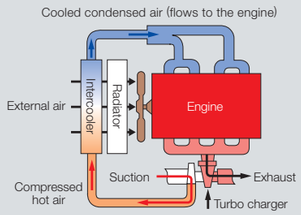
Cooled EGR system

Exhaust gas is re-circulated and combustion temperature lowered by the EGR (Exhaust Gas Recirculation) engine. In addition, a water-cooled EGR system has been employed, which further efficiently reduces NOx (nitrogen oxide).



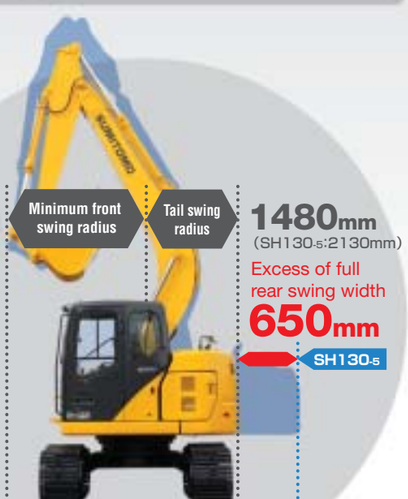
4-valve DOHC turbo engine with intercooler

Air intake efficiency is improved by the intercooler. It cools air taken in, which has been heated by the compression of the turbo charger. In addition to a great reduction of NOx and PM, high output and improved fuel consumption have been realized.



215mm Excess cab width
2490mm Track width
235mm Excess rear width

Precision movement and secure operational control, "front and back", with a rounded body-form that minimizes excess width



Maintenance

Diverse innovations designed to reduce running costs and make maintenance easy.
In terms of both cost and labor, you will really come to appreciate its efficiency the longer you use it.

Operation mode-change switch

The customer can easily switch between N Mode, which maximizes operational capacity, and E Mode, which prioritizes fuel economy, as required.

Fuel consumption rate
Improved by approximately **26%**
(when in E Mode)

Cycle time
Reduced by approximately **4%**
(when in N Mode)

Engine Oil Drain Coupler

The engine oil pan is provided with a drain coupler. This makes it easier to do drain work and prevents oil from spattering because of the attached drain hose.

Ground Level Access

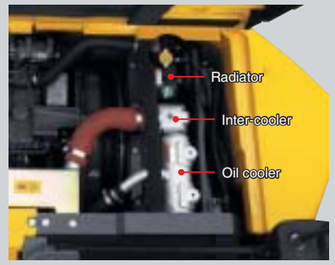
Various parts of the excavator can now be cleaned and changed from ground level without climbing onto the body of the vehicle. Maintenance is no longer troublesome.

❶ Double element air cleaner
❷ Fuel cooler
❸ Condenser
❹ Battery (maintenance free)
❺ Reserve tank

●Fuel, filter remote
Thanks to the installation of a fuel pre-filter as standard, breakdowns caused by fuel blockages are reduced. In addition, because the fuel filter is installed in a position that can be accessed from ground level, replacing it is made simple.

❶ Fuel pre-filter (with water separator)
❷ Fuel filter (with water separator)

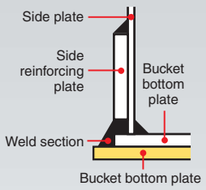
Ease of cleaning around radiator



Bucket

A one piece wear plate covers the weldment area to increase the wear life of the bucket.

■Cross section
Protection of weld bottom plate and flattening of bottom plate by changing the bottom plate weld structure.



High-Performance Return Filter

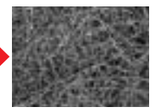
The hydraulic oil change interval is 5,000 hours, and the return filter change interval is 2,000 hours. One high performance return filter keeps the same level of filtering effect as a nephron.

●Hydraulic • oil change : 5,000 hours
●Life of filter : 2,000 hours

※The oil and filter change interval depends on the working conditions.

The High-Performance Return Filter is made more precisely to condense the Nephron filter function.


Conventional return filter

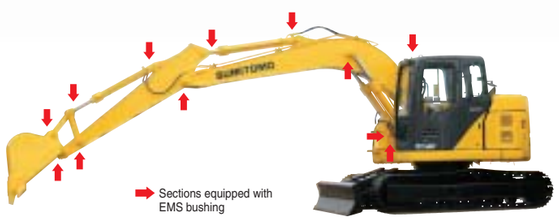

High-performance return filter

EMS (Easy Maintenance System) as Standard

SUMITOMO unique design

SUMITOMO's new improved EMS keeps the pins and bushes fully lubricated at all times and prevents rattling. This system significantly extends the service life of the pins and bushes.

The interval of greasing around the bucket is 250 hours, and the interval for the other sections is 1,000 hours, keeping the joints lubricated for a long time and extending the service life of parts by reducing abrasion and rattling.

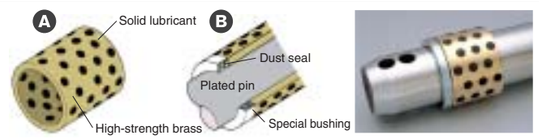


Sections equipped with EMS bushing

●Bucket greasing interval : 250 hours
●Greasing interval for other sections : 1,000 hours

※The greasing interval depends on the working conditions.

■EMS bushing



Ⓐ A solid lubricant embedded in high strength brass forms a layer on the bushing surface to prevent contact between metals, maintaining an excellent lubricated state to reduce the abrasion of joints.

Ⓑ The surface of the pin is plated to increase the surface hardness and to improve the wear resistance accordingly.

Precautionary use of EMS
① Grease is enclosed, however, greasing is necessary every 1000 hours or six months depending on the level of dusting conditions.
② Greasing is also necessary after any components have been submerged underwater for prolonged periods.
③ Greasing is also recommended after use with hydraulic breakers, crushers or other high impact attachments such as rock saws etc.
④ Bucket pins should be cleaned thoroughly when removing or attaching new buckets.

Operator Comfort and Safety

How safely, and in what level of comfort can the driver carry out daily operations?
We have extended every possible care and attention to ensure that both safety and comfort are provided.

Comfortable and spacious cab

Spacious foot space

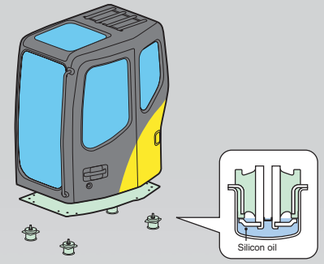
Travel pedals are optional equipment

Air conditioner installed as standard

An air conditioner is fitted as standard. Front facing airflow vents and a defrosting function allow a pleasant work environment to be maintained.

Employment of fluid-mount suspension to reduce fatigue

Impacts and vibrations on the cab are effectively absorbed, providing a pleasant and comfortable ride, as well as reducing noise levels inside the cab. Operator fatigue is reduced.



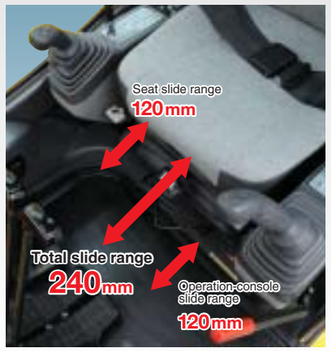
Floor design allows easy access to and from cab

Slide-door windows

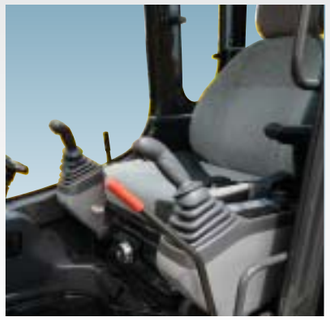
AM/FM radio

Stereo speakers

Full operation-console slide adjustment (Reclining seat)



Gate-type lock lever on the operation lever to prevent operational errors



Large hand rail on front right side

Emergency escape hammer

Reversing rear-view mirror

Cab roof window

Membrane switch

Emergency stop switch

Defroster/Cup holder

■Lifting Capacity

BLADE : UP
ARM : STD ARM
SHOE : 500G
BUCKET : 0.50BUCKET

ARM LENGTH = 2.39 (m)
MAXIMUM REACH = 7.12 (m)
TIPPING CAPACITY (MARK:) = 75.0 (%)
HYDRAULIC CAPACITY (MARK:*) = 87.0 (%)

Bucket Hook Height		Radius of Load									
		Max.Radius		7m	6m	5m	4m	3m	2m	Min.Radius	
6m	We	1920*	5.33			2460*	3160*			3260*	3.5
	Ws	1920*	5.33			2460*	3160*			3260*	3.5
5m	We	1470*	6.19		1970*	3210*	3540*			3520*	3.24
	Ws	1470*	6.19		1970*	2940	3540*			3520*	3.24
4m	We	1460*	6.66		2830	3870	4330*	4410*		4280*	2.41
	Ws	1460*	6.66		2090	2860	4150	4410*		4280*	2.41
3m	We	1500*	6.96		2760	3740	5300*	6750*	10210*	9580*	1.63
	Ws	1500*	6.96		2030	2750	3930	6300	10210*	9580*	1.63
2m	We	1580*	7.1	1990*	2680	3600	5180	8360*		3560*	2.17
	Ws	1470	7.1	1510	1960	2610	3690	5760		3560*	2.17
1m	We	1720*	7.1	2030	2600	3460	4940	8130		2610*	2.16
	Ws	1430	7.1	1470	1880	2490	3470	5370		2610*	2.16
0	We	1930*	6.95		2540	3360	4780	7900	3440*	3200*	1.64
	Ws	1450	6.95		1820	2400	3330	5170	3440*	3200*	1.64
-1m	We	2140	6.65		2500	3300	4690	7820	5130*	4180*	1.39
	Ws	1540	6.65		1790	2340	3250	5110	5130*	3970*	1.07
-2m	We	2390	6.18		2500	3280	4670	7830	7000*	5900*	1.39
	Ws	1710	6.18		1780	2320	3230	5120	7000*	5560*	1.07
-3m	We	2890	5.48			3310	4710	7000*	9030*	7810*	1.39
	Ws	2070	5.48			2350	3270	5180	9030*	7310*	1.07
-4m	We	3350*	4.46				3930*	5070*	6240*	6680*	1.65
	Ws	2880	4.46				3370	5070*	6240*	6680*	1.65

WE : OVER END WS : OVER SIDE

BLADE : DOWN
ARM : STD ARM
SHOE : 500G
BUCKET : 0.50BUCKET

ARM LENGTH = 2.39 (m)
MAXIMUM REACH = 7.12 (m)
TIPPING CAPACITY (MARK:) = 75.0 (%)
HYDRAULIC CAPACITY (MARK:*) = 87.0 (%)

Bucket Hook Height		Radius of Load									
		Max.Radius		7m	6m	5m	4m	3m		Min.Radius	
6m	We	1920*	5.33			2460*	3160*			3260*	3.5
	Ws	1920*	5.33			2460*	3160*			3260*	3.5
5m	We	1470*	6.19		1970*	3210*	3540*			3520*	3.24
	Ws	1470*	6.19		1970*	2940	3540*			3520*	3.24
4m	We	1460*	6.66		2940*	3910*	4330*	4410*		4280*	2.41
	Ws	1460*	6.66		2090	2860	4150	4410*		4280*	2.41
3m	We	1500*	6.96		3750*	4510*	5300*	6750*		8920*	2.26
	Ws	1500*	6.96		2030	2750	3930	6300		9580*	1.63
2m	We	1580*	7.1	1990*	4230*	4940*	6100*	8360*		4480*	2.26
	Ws	1470	7.1	1510	1960	2610	3690	5760		3560*	2.17
1m	We	1720*	7.1	2170*	4420*	5300*	6720*	8790*		3120*	2.26
	Ws	1430	7.1	1470	1880	2490	3470	5370		2610*	2.16
0	We	1930*	6.95		4500*	5480*	6990*	7910*		4200*	2.26
	Ws	1450	6.95		1820	2400	3330	5170		3200*	1.64
-1m	We	2260*	6.65		4390*	5420*	6880*	9000*		5780*	2.26
	Ws	1540	6.65		1790	2340	3250	5110		3970*	1.07
-2m	We	2840*	6.18		3980*	5070*	6410*	8280*		7710*	2.26
	Ws	1710	6.18		1780	2320	3230	5120		5560*	1.07
-3m	We	3690*	5.48			4280*	5510*	7000*		8430*	2.26
	Ws	2070	5.48			2350	3270	5180		7310*	1.07
-4m	We	3350*	4.46				3930*	5070*		5920*	2.26
	Ws	2880	4.46				3370	5070*		6680*	1.65

WE : OVER END WS : OVER SIDE

BLADE : UP
ARM : LONG ARM
SHOE : 500G
BUCKET : 0.37BUCKET

ARM LENGTH = 2.85 (m)
MAXIMUM REACH = 7.47 (m)
TIPPING CAPACITY (MARK:) = 75.0 (%)
HYDRAULIC CAPACITY (MARK:*) = 87.0 (%)

Bucket Hook Height		Radius of Load									
		Max.Radius		7m	6m	5m	4m	3m	2m	Min.Radius	
6m	We	1660*	5.95			2660*	2910*			2910*	3.96
	Ws	1660*	5.95			2660*	2910*			2910*	3.96
5m	We	1610*	6.59		2480*	3010*	3070*			3040*	3.74
	Ws	1610*	6.59		2180	3010	3070*			3040*	3.74
4m	We	1620*	7.04	1700*	2870	3460*	3540*			3360*	3.1
	Ws	1590	7.04	1600	2140	2920	3540*			3360*	3.1
3m	We	1660*	7.32	2140	2800	3800	4830*	5700*	7230*	8960*	1.56
	Ws	1440	7.32	1570	2060	2800	4030	5700*	7230*	8960*	1.56
2m	We	1750*	7.45	2090	2710	3640	5270	7610*		8000*	2.12
	Ws	1360	7.45	1520	1980	2660	3770	5960		8000*	2.12
1m	We	1840	7.45	2040	2620	3490	5000	8270		3710*	2.11
	Ws	1320	7.45	1470	1900	2520	3530	5480		3710*	2.11
0	We	1860	7.31	2000	2540	3370	4800	7940	3790*	2730*	1.53
	Ws	1330	7.31	1430	1820	2400	3350	5200	3790*	2730*	1.53
-1m	We	1960	7.03	1970	2490	3290	4680	7790	5010*	3930*	1.39
	Ws	1400	7.03	1400	1770	2330	3240	5080	5010*	3620*	1.07
-2m	We	2150	6.58		2460	3250	4630	7750	6540*	5400*	1.39
	Ws	1530	6.58		1750	2290	3200	5050	6540*	5030*	1.07
-3m	We	2530	5.93			3250	4640	7690*	8470*	7080*	1.39
	Ws	1800	5.93			2300	3210	5090	8470*	6590*	1.07
-4m	We	3320	5				4720	6080*	7920*	9130*	1.39
	Ws	2360	5				3270	5190	7920*	8430*	1.07
-5m	We	2950*	3.57					3510*		3760*	2.72
	Ws	2950*	3.57					3510*		3760*	2.72

WE : OVER END WS : OVER SIDE

BLADE : DOWN
ARM : LONG ARM
SHOE : 500G
BUCKET : 0.37BUCKET

ARM LENGTH = 2.85 (m)
MAXIMUM REACH = 7.47 (m)
TIPPING CAPACITY (MARK:) = 75.0 (%)
HYDRAULIC CAPACITY (MARK:*) = 87.0 (%)

Bucket Hook Height		Radius of Load									
		Max.Radius		7m	6m	5m	4m	3m		Min.Radius	
6m	We	1660*	5.95			2660*	2910*			2910*	3.96
	Ws	1660*	5.95			2660*	2910*			2910*	3.96
5m	We	1610*	6.59		2480*	3010*	3070*			3040*	3.74
	Ws	1610*	6.59		2180	3010	3070*			3040*	3.74
4m	We	1620*	7.04	1700*	3020*	3460*	3540*			3360*	3.1
	Ws	1590	7.04	1600	2140	2920	3540*			3360*	3.1
3m	We	1660*	7.32	2370*	3620*	4200*	4830*	5700*		6670*	2.26
	Ws	1440	7.32	1570	2060	2800	4030	5700*		8960*	1.56
2m	We	1750*	7.45	2850*	4050*	4680*	5690*	7610*		10660*	2.26
	Ws	1360	7.45	1520	1980	2660	3770	5960		8000*	2.12
1m	We	1890*	7.45	3200*	4290*	5110*	6430*	8930*		4540*	2.26
	Ws	1320	7.45	1470	1900	2520	3530	5480		3710*	2.11
0	We	2100*	7.31	3240*	4440*	5380*	6870*	8910*		4630*	2.26
	Ws	1330	7.31	1430	1820	2400	3350	5200		2730*	1.53
-1m	We	2440*	7.03	2560*	4440*	5450*	6930*	9140*		5710*	2.26
	Ws	1400	7.03	1400	1770	2330	3240	5080		3620*	1.07
-2m	We	2980*	6.58		4200*	5240*	6640*	8740*		7260*	2.26
	Ws	1530	6.58		1750	2290	3200	5050		5030*	1.07
-3m	We	3660*	5.93			4680*	5950*	7690*		9320*	2.26
	Ws	1800	5.93			2300	3210	5090		6590*	1.07
-4m	We	3530*	5				4730*	6080*		7360*	2.26
	Ws	2360	5				3270	5190		8430*	1.07
-5m	We	2950*	3.57					3510*		3760*	2.72
	Ws	2950*	3.57					3510*		3760*	2.72

WE : OVER END WS : OVER SIDE

■Standard equipment

●**Hydraulics system**
- High-performance return filter
- One-touch idle
- Changeable 2-speed-travel
- Rotational ABS

●**Safety equipment**
- Rear-view mirror
- Gate lock lever
- Emergency escape hammer
- Seat belt
- Large-size front right side hand-rail
- Cab-top headlight
- Travel alarm
- Theft prevention dog-chain
- Boom/arm holding valve
- Engine emergency stop switch

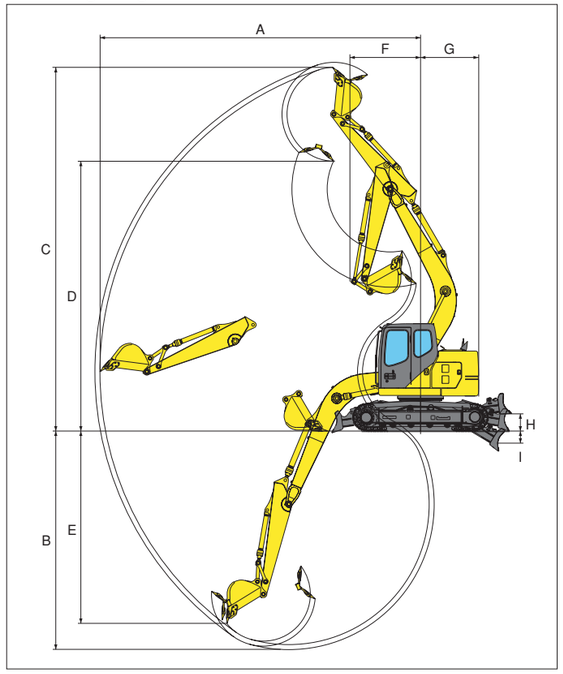
●**Cab/interior equipment**
- KAB seat
- Large-size rounded cab
- Fluid mount
- Air conditioner
- Defroster
- Automatic lock for front facing window
- Automatic point wiper connecter
- Intermittent wiper with washer
- Reclining seat
- Cup holder
- Ashtray
- Room lamp
- Hat hook
- AM/FM Radio

●**Others**
- Engine that complies with tear-3 exhaust emissions regulations
- EMS (Easy Maintenance System)
- Long life hydraulic fluid
- Front-face protective net for radiator
- Aluminum radiator
- Aluminum oil cooler
- Tool kit
- Grease gun
- Fuel filter (With water separator)
- Fuel pre-filter (With water separator)
- Double-element air cleaner

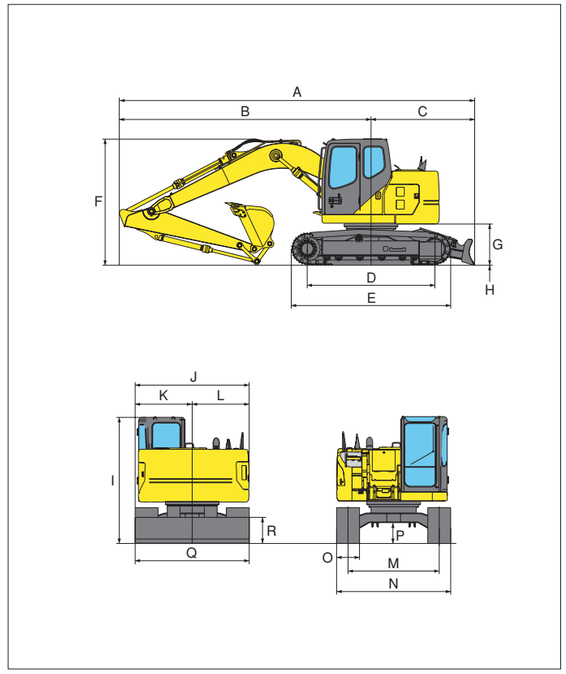
■Optional equipment

- Quick change 4way (Kit)
- Travel pedal

■Working Range



■Dimensions



■Working Range

		SH135X-3B	
Arm length		2.39m	2.85m
A	Max. digging radius	8205mm	8565mm
B	Max. digging depth	5470mm	5930mm
C	Max. digging height	9305mm	9520mm
D	Max. dumping height	6905mm	7125mm
E	Max. vertical wall cut depth	4845mm	5075mm
F	Min. front swing radius	1780mm	2225mm
G	Rear end swing radius	1480mm	
H	Max. lift above ground	440mm	
I	Min. drop below ground	520mm	

■Principal specifications

		SH135X-3B
		STD Specifications
	Arm length	2.39m
	Bucket capacity (ISO heaped)	0.50m^3
	Std. Operating weight	14200kg
Engine	Make & model	ISUZU AJ-4JJ1X
	Rated output	70.9kw/2000min^{-1}
	Displacement	2999ml(cc)
Hydraulic System	Main pump	2 variable displacement axial piston pumps with regulating system
	Max pressure	34.3Mpa
	Travel motor	Variable displacement axial piston motor
	Parking brake type	Mechanical disc brake
	Swing motor	Fixed displacement axial piston motor
Performance	Travel speed	5.0/3.1km/h
	Traction force	114kN
	Grade ability	70%<35°>
	Ground pressure	46kPa
	Swing speed	10.0min^{-1}
	Bucket	90kN
	Arm	64kN
Others	Fuel tank	165liter
	Hydraulic fluid tank	130liter

■Weight & Ground pressure

Model	SH135X-3B			
Shoe type	Shoe width	Overall width	Operating weight	Ground pressure
Triple grouser shoe	500mm	2490mm	14200kg	46kPa
	600mm	2590mm	14300kg	39kPa
	700mm	2690mm	14600kg	34kPa

■Dimensions

		SH135X-3B	
Arm length		2.39m	2.85m
A	Overall length	7755mm	7725mm
B	Length from center of machine (to arm top)	5490mm	5460mm
C	Length from center of machine (to blade top)	2265mm	
D	Center to center of wheels	2785mm	
E	Overall track length	3510mm	
F	Overall height	2750mm	2600mm
G	Clearance height under upper structure	880mm	
H	Shoe lug height	20mm	
I	Cab height	2750mm	
J	Upper structure overall width	2415mm	
K	Width from center of machine (left side)	1170mm	
L	Width from center of machine (right side)	1245mm	
M	Track gauge	1990mm	
N	Overall track width with 500mm	2490mm	
	600mm	2590mm	
	700mm	2690mm	
O	Std. Shoe width	500mm	
P	Minimum ground clearance	435mm	
Q	Width of blade	2490mm	
R	Height of blade	570mm	

■Bucket

Model		SH135X-3B				
Bucket capacity (ISO/SAE/PCSA heaped)		0.24m^3	0.30m^3	0.37m^3	0.45m^3	0.50m^3
Bucket capacity (CECE heaped)		0.21m^3	0.27m^3	0.31m^3	0.38m^3	0.43m^3
Bucket type		STD	STD	STD	STD	STD
No. of tooth		3	4	4	4	5
Width	With side cutter	582mm	692mm	772mm	907mm	972mm
	Without side cutter	508mm	618mm	698mm	833mm	898mm
Weight		281kg	317kg	334kg	363kg	390kg
	2.39m arm	◎	◎	◎	◎	●
	2.85m arm	◎	◎	●	○	△

◎:Suitable for materials with density up to 2000kg/m^3 or less
●:Standard bucket (Suitable for materials with density up to 1800kg/m^3 or less)
○:Suitable for materials with density up to 1600kg/m^3 or less
△:Suitable for materials with density up to 1200kg/m^3 or less