

# Specifications

## SH700LHD-5 Technical data

### Engine

SH700LHD-5	
Model	ISUZU AH-6WG1XYSS
Type	Electric control, water cooled, 4-cycle diesel, 6-cylinder in line, direct injection, turbocharged with air cooled inter-cooler
Rated output	345 kW/469 PS/1,800 min <sup>-1</sup>
Maximum torque	1,980 N·m at 1,500 min <sup>-1</sup>
Piston displacement	15,700 cc
Bore and stroke	147 mm x 154 mm
Starting system	24 V electric motor starting
Alternator	24 V, 50 A
Fuel tank	900 liters
Air filter	Double element

### SIH:S

Two variable displacement axial piston pumps, one gear pump for pilot controls and the electronic-controlled engine of SPACE5 and SIH:S(SUMITOMO Intelligent Hydraulic System) includes: three working mode(SP,H,A) one-touch/automatic idling system and automatic power-boost.

### Hydraulic pumps

Two variable displacement axial piston pumps provide power for boom, arm, bucket, swing and travel.

SH700LHD-5	
Maximum oil flow	2 x 440 liters/min
Pilot pump max.oil flow	27 liters/min

### Hydraulic motors

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

### Relief valve settings

Boom/arm/bucket ..... 27.5 Mpa(280 kgf/cm<sup>2</sup>)<Holding pressure(Boom down)>  
36.3 Mpa(370 kgf/cm<sup>2</sup>)<Holding pressure(Others)>  
Boom/arm/bucket ..... 31.4 Mpa(320 kgf/cm<sup>2</sup>)<Working pressure>  
Boom/arm/bucket ..... 34.3 Mpa(350 kgf/cm<sup>2</sup>)with Power-up<Working pressure>  
Swing circuit ..... 27.9 Mpa(285 kgf/cm<sup>2</sup>)  
Travel circuit ..... 34.3 Mpa(350 kgf/cm<sup>2</sup>)

### 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 filter ..... 6 microns  
Pilot filter ..... 8 microns  
Suction filter ..... 105 microns

### Hydraulic cylinders

SH700LHD-5		
Boom	2	190 mm x 130 mm x 1,805 mm
Arm	1	200 mm x 140 mm x 2,025 mm
Bucket	1	180 mm x 125 mm x 1,465 mm
Bucket (Mass)	1	200 mm x 140 mm x 1,450 mm

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

### Cab & controls

The cab is mounted on 4 fluid mountings. Features include safety glass front, rear and side windows, reclining/sliding cloth 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. Control levers are located in 4 positions with tilting control consoles. Reliable soft-touch switches are a standard feature. An easy-to-read full-dot LCD monitor keeps operation in touch with critical machine functions.

### Swing

Planetary reduction powered by an axial piston motor. Internal ring gear with grease cavity for pinion. Swing bearing is single-row shear type ball bearing. Dual stage relief valves for smooth swing deceleration and stops. Mechanical disc swing brake.

SH700LHD-5	
Swing speed	0~6.5 min <sup>-1</sup>
Tail swing radius	4,300 mm
Swing torque	241 kN·m · 24,600 kgf·m

### Undercarriage

X-style carbody is integrally welded for strength and durability. Grease cylinder track adjusters with shock absorbing springs. Undercarriage with lubricated rollers and idlers.

### Type of shoe:sealed link shoe

#### Upper rollers -

Heat treated, mounted on steel bushings with fluorine resin, sealed for lifetime lubrication.

#### Lower rollers -

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

#### Track adjustment -

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

### Number of rollers and shoes on each side

SH700LHD-5	
Upper rollers	3
Lower rollers	8
Track shoes	47

### 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 switch panel. Hydraulically released disc parking brake is built into each motor.

SH700LHD-5		
Travel speed	High	4.1 km/h
	Low	3.0 km/h
Maximum traction force	462 kN · 47,100 kgf	

### Lubricant & coolant capacity

SH700LHD-5	
Hydraulic system	650 liters
Hydraulic oil tank	310 liters
Fuel tank	900 liters
Cooling system	108 liters
Final drive case(per side)	15 liters
Swing drive case(per side)	13.5 liters
Engine crank case (with remote oil filter)	52 liters

### Auxiliary hydraulic system

SH700LHD-5		
Model	SH700LHD-5	
Auxiliary piping type (option)	For Breaker	For Double (breaker & crusher) acting
Arm type	STD	STD
Bucket linkage type	STD	STD
Auxiliary hydraulic pump flow	max.420 liters/min	max.890 liters/min

### Weight & ground pressure

SH700LHD-5 (Mass)			
Model	SH700LHD-5 (Mass)		
Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser shoe	650 mm	68 100 kg (68 200 kg)	100 kPa (101 kPa)
	750 mm	68 700 kg (68 900 kg)	88 kPa ( 88 kPa)

### Digging force

SH700LHD-5						SH700LHD-5 Mass
Model	SH700LHD-5					SH700LHD-5 Mass
Arm length	3.0 m	3.55 m	4.11 m	5.0 m	3.0 m	
Bucket digging force <with auto power up>	ISO 6015	290 kN <317 kN>				334 kN <365 kN>
	SAE: PCSA	256 kN <280 kN>				302 kN <330 kN>
Arm digging force <with auto power up>	ISO 6015	244 kN <267 kN>	224 kN <245 kN>	202 kN <221 kN>	175 kN <192 kN>	237 kN <259 kN>
	SAE: PCSA	235 kN <257 kN>	215 kN <235 kN>	195 kN <213 kN>	170 kN <186 kN>	229 kN <250 kN>

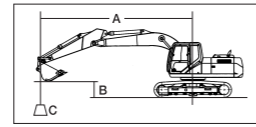
### Principal specifications & dimensions

Model		SH700LHD-5	SH700LHD-5 Mass
Base	Boom Length	7.7 m	6.58 m
	Arm Length	3.55 m	3.0 m
	Bucket capacity (ISO heaped)	2.9 m <sup>3</sup>	4.0 m <sup>3</sup>
	Operating weight	68 100 kg	68 200 kg
Engine	Make & model	ISUZU AH-6WG1XYSS	
	Rated output	345 kW(469 PS)/1 800 min <sup>-1</sup>	
	Displacement	15 700 ml(cc)	
Hydraulic System	Main pump	2 variable displacement axial piston pumps with regulating system	
	Max Pressure (with auto power up)	31.4 MPa 34.3 MPa	
	Travel motor	Variable displacement axial piston motor	
	Parking brake type	Mechanical disc brake	
	Swing motor	Fixed displacement axial piston motor	
	Travel speed	4.1/3.0 km/h	
Performance	Traction force	462 kN	
	Grade ability	70% <35°>	
	Ground pressure	100 kPa	101 kPa
	Swing speed	6.5 min <sup>-1</sup>	
	Bucket	317 kN	365 kN
Other	Arm	245 kN	259 kN
	Fuel tank	900 liter	
	Hydraulic fluid tank	310 liter	

## Lifting capacity

Notes: 1. Ratings are based on SAE J/ISO 10567.

- Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
- The load point is a hook (not standard equipment) located on the back of the bucket.
- \*Indicates load limited by hydraulic capacity.
- 0m = Ground.



A: Radius of load  
B: Bucket hook height  
C: Lifting capacity



Unit : kg

### SH700LHD-5

SHOE : 650 (mm)G  
BUCKET : SAE/PCSA 2.9 (m³)  
ARM LENGTH = 3.00 (m)  
MAXIMUM REACH = 11.02 (m)  
BOOM : 7.70 (m)

Bucket Hook Height	Radius of Load																										
	Max. Radius		12 m		11 m		10 m		9 m		8 m		7 m		6 m		5 m		4 m		3 m		Min. Radius				
	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋			
8 m	10 894*	9.2	10 894*	9.2																				12 737*	8.23	12 737*	8.23
7 m	8 853*	10.07	8 853*	10.07																							
6 m	9 915*	10.46	8 244	10.46																							
5 m	9 089*	10.74	7 660	10.74																							
4 m	9 378*	10.92	7 254	10.92																							
3 m	9 794*	11.01	6 994	11.01																							
2 m	10 358*	11	6 867	11																							
1 m	10 970*	10.9	6 867	10.9																							
0 m	11 212	10.71	7 003	10.71																							
-1 m	11 683	10.41	7 298	10.41																							
-2 m	12 451	10	7 795	10																							
-3 m	12 869*	9.47	8 573	9.47																							
-4 m	12 729*	8.79	9 791	8.79																							
-5 m	12 272*	7.92	11 790	7.92																							
-6 m	11 101*	6.79	11 101*	6.79																							

### SH700LHD-5

SHOE : 650 (mm)G  
BUCKET : SAE/PCSA 2.9 (m³)  
ARM LENGTH = 3.55 (m)  
MAXIMUM REACH = 11.14 (m)  
BOOM : 7.70 (m)

Bucket Hook Height	Radius of Load																										
	Max. Radius		12 m		11 m		10 m		9 m		8 m		7 m		6 m		5 m		4 m		3 m		Min. Radius				
	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋		
9 m	8 800*	8.81	8 800*	8.81																							
8 m	7 818*	9.69	7 818*	9.69																							
7 m	7 862*	10.2	7 862*	10.2																							
6 m	8 015*	10.59	8 015*	10.59																							
5 m	8 275*	10.87	7 568	10.87																							
4 m	8 649*	11.05	7 150	11.05																							
3 m	9 155*	11.13	6 874	11.13																							
2 m	9 824*	11.12	6 724	11.12																							
1 m	10 704*	11.03	6 698	11.03																							
0 m	10 939	10.83	6 802	10.83																							
-1 m	11 358	10.54	7 056	10.54																							
-2 m	12 056	10.14	7 498	10.14																							
-3 m	13 145	9.61	8 200	9.61																							
-4 m	13 337*	8.94	9 303	8.94																							
-5 m	13 325*	8.09	11 105	8.09																							
-6 m	12 901*	6.99	12 901*	6.99																							

### SH700LHD-5

SHOE : 650 (mm)G  
BUCKET : SAE/PCSA 2.3 (m³)  
ARM LENGTH = 4.11 (m)  
MAXIMUM REACH = 11.63 (m)  
BOOM : 7.70 (m)

Bucket Hook Height	Radius of Load																										
	Max. Radius		12 m		11 m		10 m		9 m		8 m		7 m		6 m		5 m		4 m		3 m		Min. Radius				
	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋		
9 m	6 777*	9.58	6 777*	9.58																							
8 m	6 450*	10.26	6 450*	10.26																							
7 m	6 473*	10.74	6 473*	10.74																							
6 m	6 582*	11.1	6 582*	11.1																							
5 m	6 774*	11.37	6 774*	11.37																							
4 m	7 055*	11.54	6 700	11.54																							
3 m	7 437*	11.63	6 448	11.63																							
2 m	7 940*	11.62	6 305	11.62																							
1 m	8 598*	11.53	6 269	11.53																							
0 m	9 462*	11.34	6 344	11.34																							
-1 m	10 552	11.06	6 545	11.06																							
-2 m	11 117	10.68	6 901	10.68																							
-3 m	11 990	10.18	7 465	10.18																							
-4 m	12 820*	9.55	8 333	9.55																							
-5 m	12 965*	8.76	9 699	8.76																							
-6 m	12 891*	7.76	12 016	7.76																							
-7 m	12 231*	6.44	12 231*	6.44																							

### SH700LHD-5

SHOE : 650 (mm)G  
BUCKET : SAE/PCSA 2.0 (m³)  
ARM LENGTH = 5.00 (m)  
MAXIMUM REACH = 12.63 (m)  
BOOM : 7.70 (m)

Bucket Hook Height	Radius of Load																										
	Max. Radius		12 m		11 m		10 m		9 m		8 m		7 m		6 m		5 m		4 m		3 m		Min. Radius				
	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋	⌋		
9 m	5 271*	10.68	5 271*	10.68																							
8 m	4 731*	11.38	4 731*	11.38																							
7 m	4 704*	11.81	4 704*	11.81																							
6 m	4 737*	12.14	4 737*	12.14																							
5 m	4 826*	12.39	4 826*	12.39																							
4 m	4 973*	12.55	4 973*	12.55																							
3 m	5 183*	12.62	5 183*	12.62																							
2 m	5 464*	12.62	5 345	12.62																							
1 m	5 831*	12.53	5 303	12.53																							
0 m	6 306*	12.36	5 345	12.36																							
-1 m	6 925*	12.1	5 479	12.1																							
-2 m	7 742*	11.76	5 723	11.76																							
-3 m	8 852*	11.31	6 105	11.31																							
-4 m	10 428*	10.75	6 678	10.75																							
-5 m	11 403*	10.05	7 533	10.05																							
-6 m	11 466*	9.2	8 854	9.2																							
-7 m	11 300*	8.12	11 066	8.12																							
-8 m	10 543*	6.72	10 543*	6.72																							

### SH700LHD-5 MASS