

# Specifications

## SH240-5 Technical Data

### Engine

Two variable displacement axial piston pumps, one gear pump for pilot controls and electronic-controlled engine of SPACE5 and SIH:S with New Hydraulic System Includes:three working modes(SP,H,A) one-touch/automatic idling system, automatic power-boost, speed assistance system, power-swing system.

SH240-5	
Model	ISUZU AH-4HK1X
Type	Water-cooled,4-cycle,overhead valve, 4-cylinder in line,Direct injection (electric control), turbo-charged diesel engine.
Rated output	132 kW (180 PS)/2,000 min <sup>-1</sup>
Maximum torque	636 N·m at 1,500 min <sup>-1</sup>
Piston displacement	5,193 cc
Bore and stroke	115 mm x 125 mm
Starting system	24 V electric motor starting
Alternator	24 V,50 A
Fuel tank	410-liters
Air filter	Double element

### Hydraulic pumps

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

SH240-5	
Maximum oil flow	2 x 234 liters/min
Pilot pump max.oil flow	20 liters/min

### Hydraulic motors

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

### Relief valve settings

Boom/arm/bucket .....38.7 Mpa(395 kgf/cm<sup>2</sup>)<Holding pressure>  
Boom/arm/bucket .....34.3 Mpa(350 kgf/cm<sup>2</sup>)<Working pressure>  
Boom/arm/bucket .....36.8 Mpa(375 kgf/cm<sup>2</sup>)with Power-up<Working pressure>  
Swing circuit .....28.9 Mpa(295 kgf/cm<sup>2</sup>)  
Travel circuit .....34.3 Mpa(350 kgf/cm<sup>2</sup>)

### Control valve

One 4-spool valve and one 5-spool valve with auxiliary spool.

### Oil filtration

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

### Hydraulic cylinders

Cylinder	Q'ty	Bore x Rod Diameter x Stroke
Boom	2	130 mm x 90 mm x 1335 mm
Arm	1	145 mm x 105 mm x 1660 mm
Bucket	1	130 mm x 90 mm x 1070 mm

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

### Cab & Controls

Cab 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. Front window slides upward for storage and the lower front window is removable. Control levers are located in a 4 position tilting control consoles. Reliable soft-touch switches. 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.

SH240-5	
Swing speed	0~10.7 rpm
Tail swing radius	2,950 mm
Swing torque	74.9 kN·m(7,640 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

SH240-5	
Upper rollers	2
Lower rollers	9
Track shoes	51

### Travel System

Two-speed independent hydrostatic system with compact axial motors for Increased performance. Hydraulic motor 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.

SH240-5	
Travel speed	High 5.5 km/h Low 3.5 km/h
Maximum traction force	216 kN(22,000 kgf)

### Lubricant & Coolant Capacity

SH240-5	
Hydraulic system	250 liters
Hydraulic oil tank	147 liters
Fuel tank	410 liters
Cooling system	25.2 liters
Final drive case(per side)	4.5 liters
Swing drive case	9.7 liters
Engine crank case (with remote oil filter)	23 liters

### Auxiliary hydraulic system

SH240-5			
Auxiliary piping type (option)	For Breaker	For Double (breaker & crusher) acting	For D/A + Second option line
Arm type	STD	HD	HD
Bucket linkage type	HD	HD	HD
Auxiliary hydraulic pump flow	234 liters/min by 1 pump	468 liters/min by 2 pumps	468+60 liters/min

## Bucket

Model	SH240-5				
Bucket capacity (ISO/SAE/PCSA heaped)	0.80 m <sup>3</sup>	1.00 m <sup>3</sup>	1.10 m <sup>3</sup>	1.10 m <sup>3</sup>	1.30 m <sup>3</sup>
Bucket capacity (CECE heaped)	0.70 m <sup>3</sup>	0.85 m <sup>3</sup>	0.90 m <sup>3</sup>	0.90 m <sup>3</sup>	1.10 m <sup>3</sup>
Bucket type	STD	STD	STD	Level-pin	STD
Number of teeth	4	5	5	5	5
Width unit:mm	With side cutter 1 086 Without side cutter 985	1 276 1 175	1 360 1 260	1 360 1 260	1 560 1 460
Weight unit:kg	754.2	853	883.8	871.4	956.5
Combination	2.50 m arm ● 3.00 m arm ● 3.52 m arm ●	● ● ◎	● ◎ ○	● ◎ ○	◎ ○ ○

◎ Standard bucket (Suitable for materials with density up to 1,800 kg/m<sup>3</sup> or less)  
● Suitable for materials with density up to 2,000 kg/m<sup>3</sup> or less

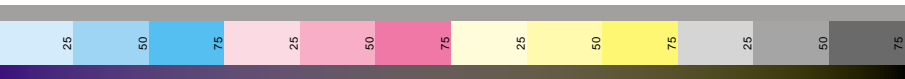
○ Suitable for materials with density up to 1,600 kg/m<sup>3</sup> or less  
△ Suitable for materials with density up to 1,200 kg/m<sup>3</sup> or less

## Weight & Ground Pressure

Model	SH240-5			
Shoe type	Shoe width	Overall width	Operating weight	Ground pressure
Triple grouser shoe	600 mm	3 190 mm	24 400 kg	48 kPa
	700 mm	3 290 mm	24 700 kg	49 kPa
	800 mm	3 390 mm	25 000 kg	50 kPa

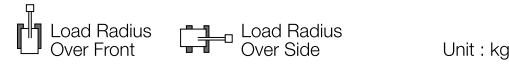
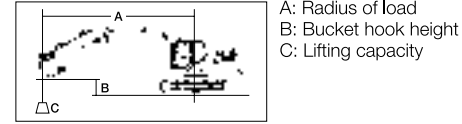
## Digging Force

Model	SH240-5			
Arm length		2.50 m	3.00 m	3.52 m
Bucket digging force	ISO 6015	162 kN (174 kN)	162 kN (174 kN)	162 kN (174 kN)
	SAE: PCSA	145 kN (155 kN)	145 kN (155 kN)	145 kN (155 kN)
Arm digging force	ISO 6015	141 kN (151 kN)	120 kN (129 kN)	107 kN (115 kN)
	SAE: PCSA	136 kN (146 kN)	116 kN (125 kN)	104 kN (112 kN)



## Lifting Capacity

- Notes: 1. Ratings are based on SAE J/ISO 10567  
 2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.  
 3. The load point is a hook (not standard equipment) located on the back of the bucket.  
 4. \*Indicates load limited by hydraulic capacity.  
 5. 0m = Ground.



Unit : kg

### SH240-5

SHOE : 800 (mm)G    ARM LENGTH = 3.52 (m)    BOOM : 5.85 (m)  
 BUCKET : SAE/PCSA 1.00 (m³)    MAXIMUM REACH = 9.30 (m)

Bucket Hook Height	Max. Radius		Radius of Load										Min. Radius			
	Over Front	Over Side	9 m	8 m	7 m	6 m	5 m	4 m	3 m	2 m	1 m	0 m	Over Front	Over Side		
8 m													2 682*	6.96	2 682*	6.96
7 m	2 482*	7.75	2 482*	7.75									3 913*	7.13	3 913*	7.13
6 m	2 416*	8.33	2 416*	8.33	3 402*	3 402*							4 816*	7.04	4 816*	7.04
5 m	2 403*	8.76	2 403*	8.76	4 404*	3 876	5 089*	4 945					5 115*	6.67	5 115*	6.67
4 m	2 436*	9.06	2 436*	9.06	2 665*	2 665*	5 218*	3 781	5 513*	4 791	5 844*	5 844*	5 884*	5.90	5 884*	5.90
3 m	2 514*	9.23	2 514*	9.23	3 470*	2 958	5 632*	3 667	6 032*	4 613	6 641*	5 954	7 590*	7 590*	9 197*	9 197*
2 m	2 640*	9.30	2 640*	9.30	3 958*	2 884	5 506	3 547	6 589*	4 430	7 479*	5 674	8 891*	7 560	11 357*	10 780
1 m	2 825*	9.25	2 825*	9.25	4 103*	2 814	5 383	3 433	6 683	4 261	8 258*	5 421	10 046*	7 172	13 113*	10 151
0 m	3 087*	9.10	2 709	9.10	3 680*	2 758	5 280	3 339	6 527	4 121	8 361	5 220	10 918*	6 885	14 248*	9 750
-1 m	3 462*	8.83	2 810	8.83			5 208	3 272	6 415	4 019	8 202	5 079	11 122	6 701	14 795*	9 535
-2 m	4 014*	8.43	3 004	8.43			5 177	3 244	6 354	3 963	8 114	5 001	11 014	6 609	14 846*	9 453
-3 m	4 885*	7.88	3 336	7.88					6 349	3 959	8 096	4 985	10 999	6 596	14 443*	9 469
-4 m	6 216	7.16	3 904	7.16					6 421	4 025	8 154	5 037	10 828*	6 659	13 541*	9 575
-5 m	7 290*	6.18	4 968	6.18							7 638*	5 183	9 582*	6 812	11 972*	9 779
-6 m	7 494*	4.81	7 494*	4.81											9 278*	9 278*

### SH240-5

SHOE : 800 (mm)G    ARM LENGTH = 3.00 (m)    BOOM : 5.85 (m)  
 BUCKET : SAE/PCSA 1.10 (m³)    MAXIMUM REACH = 8.77 (m)

Bucket Hook Height	Max. Radius		Radius of Load										Min. Radius			
	Over Front	Over Side	8 m	7 m	6 m	5 m	4 m	3 m	2 m	1 m	0 m	Over Front	Over Side			
7 m	3 137*	7.11	3 137*	7.11			3 526*	3 526*							4 498*	6.63
6 m	3 067*	7.74	3 067*	7.74			5 142*	4 990							5 356*	6.53
5 m	3 069*	8.20	3 069*	8.20	3 884*	3 836	5 608*	4 887							5 780*	6.09
4 m	3 132*	8.51	3 132*	8.51	5 173*	3 756	6 000*	4 743	6 445*	6 140					7 057*	5.10
3 m	3 256*	8.70	3 148	8.70	5 618	3 654	6 484*	4 577	7 208*	5 877	8 367*	7 856	10 400*	10 400*	14 708*	14 708*
2 m	3 448*	8.77	3 034	8.77	5 502	3 547	6 839	4 409	7 991*	5 616	9 590*	7 436	12 426*	10 514	10 029*	10 029*
1 m	3 728*	8.72	2 997	8.72	5 395	3 450	6 673	4 258	8 546	5 391	10 616*	7 095	13 911*	9 990	8 612*	8 612*
0 m	4 129*	8.56	3 038	8.56	5 312	3 373	6 541	4 139	8 352	5 219	11 296	6 859	14 726*	9 695	10 003*	10 003*
-1 m	4 716*	8.27	3 170	8.27	5 263	3 329	6 455	4 062	8 229	5 110	11 137	6 724	14 976*	9 563	12 364*	12 364*
-2 m	5 419	7.84	3 424	7.84			6 422	4 032	8 175	5 063	11 078	6 674	14 763*	9 541	15 362*	15 362*
-3 m	6 129	7.25	3 868	7.25			6 456	4 062	8 195	5 080	11 109	6 700	14 100*	9 606	18 292*	16 227
-4 m	7 424	6.45	4 669	6.45					8 302	5 175	10 389*	6 804	12 897*	9 758	16 474*	16 474*
-5 m	7 932*	5.35	6 352	5.35							8 660*	7 021	10 882*	10 023	13 736*	13 736*

### SH240-5

SHOE : 800 (mm)G    ARM LENGTH = 2.50 (m)    BOOM : 5.85 (m)  
 BUCKET : SAE/PCSA 1.30 (m³)    MAXIMUM REACH = 8.30 (m)

Bucket Hook Height	Max. Radius		Radius of Load										Min. Radius			
	Over Front	Over Side	8 m	7 m	6 m	5 m	4 m	3 m	2 m	1 m	0 m	Over Front	Over Side			
7 m	4 549*	6.52	4 549*	6.52											5 827*	6.15
6 m	4 468*	7.20	4 468*	7.20			5 370*	4 897							5 938*	6.02
5 m	4 497*	7.69	4 059	7.69			6 082*	4 816	6 360*	6 274					6 574*	5.49
4 m	4 619*	8.03	3 687	8.03	4 802*	3 712	6 434*	4 687	6 979*	6 051	7 869*	7 869*	9 402*	9 402*	15 598*	2.52
3 m	4 836*	8.23	3 454	8.23	5 586	3 628	6 878*	4 535	7 705*	5 802	9 059*	7 716	11 513*	10 958	11 109*	3.02
2 m	5 164*	8.30	3 327	8.30	5 488	3 538	6 808	4 384	8 429*	5 564	10 195*	7 330	13 373*	10 288	8 031*	3.22
1 m	5 143	8.25	3 292	8.25	5 401	3 458	6 663	4 253	8 512	5 365	11 081*	7 036	14 542*	9 875	6 852*	3.09
0 m	5 261	8.08	3 352	8.08	5 340	3 402	6 555	4 156	8 352	5 224	11 278	6 850	15 017*	9 680	9 277*	2.57
-1 m	5 550	7.77	3 525	7.77			6 495	4 102	8 262	5 145	11 171	6 759	14 977*	9 620	12 896*	12 896*
-2 m	6 085	7.32	3 856	7.32			6 495	4 101	8 244	5 128	11 159	6 748	14 514*	9 650	17 035*	16 301
-3 m	7 047	6.68	4 451	6.68			8 303	5 180	10 988*	6 811	13 600*	9 759	17 254*	16 501	16 837*	16 577*
-4 m	8 164*	5.80	5 597	5.80						9 767*	6 963	12 073*	15 112*	15 112*	19 710*	20 203*
-5 m	8 312*	4.53	8 312*	4.53									9 479*	9 479*	11 820*	11 820*