## **AVAITCE** series



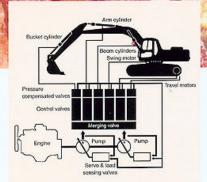


Model shown may include optional equipment.

KOMATSU

# Komatsu Avance assures maximum productivity with its exclusive HydrauMind

Powerful output and a host of convenient features make it the leader of its class!



In the HydrauMind system, the load sensing valves and pressure compen-sated valves automatically handle all adjustments for individual jobs based on the pressure and lever stroke detected.

#### What is Komatsu's HydrauMind?

It's a technologically complex yet mechani-cally simple system which supervises the work operations of the excavator

HydrauMind is not computer-dependent. It is not essentially electronic, but hydraulic. Its strength lies in its simplicity.

The system incorporates many major breakthroughs.

Komatsu has almost 200 patents on it.

## What are the benefits of the HydrauMind? Power, versatility, maneuverability, controlla-bility - you name it. Never has an excavator

been so easy to operate, so natural, so intuitive. In a sense, you don't really operate it at all,

For example, when the ground condition changes in digging..

You don't have to think about changing your lever strokes because the HydrauMind instantly, silently, automatically sends just the right amount of oil to the actuators at just the right pressure to accommodate the change.

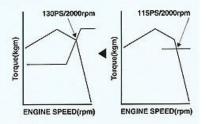
When you move the boom, arm and bucket at the same time...

All the equipment works organically with the optimum combination of speed and power-as if it were a human hand.

The HydrauMind also makes it easy to change or add valves and work equipment. Moreover, because the system is hydraulic and not electronic, it ensures the best service availability in the industry.

#### Engine-speed-sensor-equipped hydraulic system

The pump is controlled with the engine speed sensor, so the maximum horsepower is used at all times. This contributes to more production and shorten cycle times.



#### The HydrauMind Makes Everything Easy



Working through soft rock or pulling up boulders is easy because the system precisely controls boom raise, preventing the cutting edge from slip-



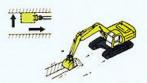
Switching attachments easy-even with such things as breakers or crushers, which require a different amount of oil-because the oil flow can be adjusted simply by adjusting the control pedal stroke for the attachment.



Fully-loading buckets is easy, because during simultaneous operations the work equipment can move slowly under maximum power.



Fine-control lifting is easy because the system keeps lever control at a steady constant no matter what size the



Digging along ditch walls is easy because the system delivers such powerful bucket side force, obtained from swing



Chassis-shake is reduced during simultaneous operations because the work load causes no change in the work equipment speed.

Comfortable operator environment helps keep work efficiency high hour after hour.



Simple Operation in an Easy Position

The seat is tiltable and can slide forward and backward together with the work equipment control levers to ensure the best operating position at all times.

## Features for reduced downtime

New hybrid filter element

The new hybrid element in the hydraulic circuit greatly extends the element changing interval to 500 hours and hydraulic oil changing interval to 5,000 hours.

#### Spacious cab interior

The cab interior is spacious (200 mm longer with 14% greater volume than Dash 5). Ergonomicallydesigned operator's seat and easy access to all control levers ensure maximum operator comfort and better concentration on the job.



#### Viscous damping mounts

The cab rests on viscous damping mounts to reduce vibration and noise from the machine body. Operator fatigue is reduced to the minimum.

#### Comfortable Cab Interior

The excavator cab is equipped with an open air-inlet type air conditioning unit (with a new refrigerant ). whose capacity is 30% larger than that of our conventional systems. Luggage space is also provided for portable





#### Field-Proven Features:

- · Centralized lubrication for work equipment.
- X-leg track frame for superior stability and durability.
  Double lock electric connectors for
- increased reliability.
- · Large undercarriage units for longer service life.
- I-beam structured revolving frame for increased durability.
- Thick plate structured work equipment.
- Swing holding brake for easier working on slopes.
- · Fuel-efficient Komatsu engine.

### **SPECIFICATIONS**



### **ENGINE**

Model	Komatsu S6D102E-1-A
Type4	cycle, water cooled, direct injection
Aspiration	Turbocharged
No. of cylinders	6
Bore	102 mm. 4.02"
Stroke	120 mm. 4.72"
Piston displacement	5.883 ltr. 359 cu.in
Flywheel horsepower:	
(SAE J1349)	98.6 kW 132 HP at 2000 RPM
(DIN 6270 NET)	98.6 kW 134 PS at 2000 RPM
Governor	All speed, mechanical



### HYDRAULIC SYSTEM

Туре	HydrauMind (Hydraulic Mechanical
	Intelligence New Design) system
	Closed-center system with load sensing
	valves and pressure compenstated valves

wain pump:	
Туре	Variable-displacement piston pumps
Pumps for	Boom, arm, bucket, swing and
	travel circuits
No. of pump	2
Hydraulic motors:	
Travel	2 x Axial piston motor with parking brake
Swing	1 x Axial piston motor with

Relief valve setting:		
Implement circuits325	kg/cm <sup>2</sup>	4620 PSI
Travel circuit 355	kg/cm <sup>2</sup>	5050 PSI
Swing circuit280	kg/cm <sup>2</sup>	3980 PSI
Pilot circuit33	kg/cm <sup>2</sup>	470 PSI
the state of the s		

Hydraulic	cylinders:	
-----------	------------	--

No. of cylinders - bore x stroke >	rod dia:	
Boom 2 - 120 mr	n x 1285 mm	x 85 mm
4.7"	x 50.6"	x 3.3"
Arm 1 - 135 mr	n x 1490 mm	x 95 mm
5.3"	x 58.7"	x 3.7"
Bucket 1 - 115 mr	n x 1120 mm	x 80 mm
4.5"	x 44.1"	x 3.2"



### SWING SYSTEM

Driven by	Hydraulic motor
Swing reduction	Planetary double reduction
Swing circle lubrication	Grease-bathed
Swing circle bearing	Single row shear
	type ball bearing
Swing lock	Oil disc brake
Swing speed	12.4 RPM

## DRIVES & BRAKES

Steering control	Two levers with pedals
Drive method	
Travel motor	Axial piston motor,
	in-shoe design
Reduction system	Planetary gear,
	double-reduction
Max. drawbar pull 17	700 kg 39020 lb/174 kN
Max. travel speed (High)	5.5 km/h 3.4 MPH
Max. travel speed (Low)	3.8 km/h 2.4 MPH
Service brake	Hydraulic lock type
Parking brake	Oil disc brake
Gradeability	70% (35 deg)



#### UNDERCARRIAGE

Type	Crawler tractor design
Center frame	
Track frame	Box section type
Seal of track	Sealed track
Track adjuster	Hydraulic type
Rollers seal type	Floating seal
No. of carrier rollers	
No. of track rollers	7 each side
No. of shoes	45 each side



# COOLANT & LUBRICANT CAPACITY (refilling)

Fuel tank	340 ltr. 89.8 U.S. gal
Radiator	22.2 ltr. 5.9 U.S. gal
Engine	24.0 ltr. 6.3 U.S. gal
	4.2 ltr. 1.1 U.S. gal
Swing drive	5.5 ltr. 1.5 U.S. gal
Hydraulic tank	166 ltr. 43.9 U.S. gal



#### **OPERATING WEIGHT (approximate)**

Operating weight, including 5700 mm 18'8" one piece boom, 2925 mm 9'7" arm, SAE heaped 0.80 M3 1.05 cu.yd. backhoe bucket, operator, lubricant, coolant and full fuel tank and standard equipment.

Triple grouser shoes	Operating weight	Ground pressure
600 mm	19180 kg	0.45 kg/cm²
24"	42280 lb	6.40 PSI/44.1 kPa
800 mm	19880 kg	0.35 kg/cm²
31.4"	43830 lb	5.0 PSI/34.3 kPa

All weather steel cab (with viscousmount, tinted safety glass windows, pull-up type front window with lock device, removable lower windshield, lockable door)

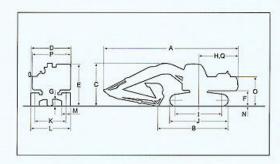
### Standard Equipment -

- · 24 V/4.5 kW electric starting motor.
- · 35 A alternator
- 12 V/100 Ah x 2 batteries
- · Automatic de-airation system for
- 800 mm 31.4" triple-grouser shoe
- Track guiding guards (center)
- · Hydraulic track adjusters
- · Boom lock valve

parking brake

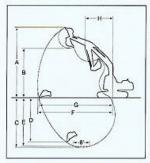
- · Hybrid filter element
- Rearview mirror (RH)
- Suction fan · Electric horn
- · Front light (1)
- · Dry type air cleaner

# **DIMENSIONS**



A :	Overall length	30'	11"
В:	Lenth on ground (transport) 4830 mm	15'	10"
C:	Overall height (to the top of boom) 2970 mm	9"	9"
D:	Overall width 3000 mm	9"	10"
E :	Overall height (to the top of cab) 2905 mm	9"	6"
F:	Ground clearance (to counterweight) . 1085 mm	3'	7"
G:	Min. ground clearance 440 mm	1'	5"
H:	Tail swing radius2740 mm	9'	0"
1:	Length of track on ground 3270 mm	10'	9"
J:	Track length 4080 mm	13'	5"
K:	Track gauge2200 mm	7'	3"
L:	Width of crawler width3000 mm	9'	10"
M:	Shoe width (STD.) 800 mm	2'	8"
	(OPT.) 600 mm		24"
N :	Grouser height 26 mm		1"
0:	Machine cab height2020 mm	6'	8"
P :	Machine cab width 2710 mm	8'	11"
Q:	Distance, swing center to rear end 2740 mm	9'	0"

## WORKING RANGE



Arm crowd force		9000	k
During algebra	25130 lb		COLUM
Bucket digging force		1400	1
H: Min. swing radius	3630 mm	11'	11
G: Max. digging reach at ground level	9700 mm	31'	10
F: Max. digging reach	9875 mm	32"	5
E: Max. digging depth of cut for 8' level	6435 mm	21'	1
D: Max. vertical wall digging depth		19"	7
C: Max. digging depth	6620 mm	21'	9
B : Max. dumping height	6475 mm	21'	3
A : Max. digging height	9305 mm	30	6

### Backhoe bucket and arm combination

Bucket capa	city (heaped)	Wid	dth	Weight	No. of	Arm	
SAE, PCSA	CECE	Without side cutters	With side cutters	(with side cutters) teeth		2.925 m 9'7"	
<b>0.50 m³</b> 0.65 cu.yd.	0.45 m <sup>3</sup> 0.59 cu.yd.	750 mm 29.5"	855 mm 33.7"	478 kg 1,050 lb	3	0	
0.80 m <sup>3</sup> 1.05 cu.yd.	0.70 m³ 0.92 cu.yd.	1045 mm 41.1"	1150 mm 45.3"	6 <b>45 kg</b> 1,420 lb	5	0	
0.93 m³ 1.22 cu.yd.	0.80 m <sup>3</sup> 1.05 cu.yd.	1200 mm 47.2"	1305 mm 51.4"	696 kg 1,530 lb	5		

- General purpose use, weight up to 1.8 t/m3 1.52 U.S. ton/cu.yd.
- △ General purpose use, weight up to 1.5 t/m3 1.26 U.S. ton/c □ Light duty work, weight up to 1.2 t/m3 1.01 U.S. ton/cu.yd. X Not usable General purpose use, weight up to 1.5 t/m3 1.26 U.S. ton/cu.yd.

### **OPTIONAL EQUIPMENT** -

- · Air conditioner
- Seat belt · Fuel supply pump
- Heater Boom holding valve
- Defroster
- · In line filter
- · Window washer
- · 600 mm 24" triple-grouser shoe

- Travel alarm
- Tool kit
- · Rearview mirror (LH)
- AM radio
- · Track frame underguard
- · Front cab guard
- · Self diagnostic monitor
- First service spare parts

Clamshell bucket for vertical deep digging

Super long front has extensive reach. Spike hammer for concrete surface chiseling work

Vibratory pile driver Hydraulic breaker

For demolition work:

Super long boom arm for demolishing the upper parts of tall buildings

Hydraulic crusher and cutter Hydraulic crusher

Power ripper Hydraulic smasher

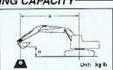
Fork grab for demolishing wooden houses. Rotary grab can rotate 360 degree with power.

Scrab grapple for boulders, rocks, large size scrab

Rotary log grapple for loading log

Reinforcements or modification (e.g. piping) to the base machine or work equipment may be necessary for the attachments. For details, contact the nearest Komatsu distributor.

#### LIFTING CAPACITY



Reach from swing center

В Bucket hook height C Lifting capacity Cf : Rating over front

Rating over side Cs: MAX: Rating at maximum reach

#### Conditions:

- 5700 mm 18'8" one-piece boom
- 2925 mm 9'7" arm
- 0.8 m³ 1.05 cu.yd. SAE heaped bucket
- · 800 mm 31.4" triple-grouser shoes

Conditions: Boom: 5700 mm (18'8"), Bucket (SAE): 0.80 m² (1.05cu.yd), Shoes: 800 mm (31.4")

unit: kg (lb)

A	MAX		7.5 m (25')		6.0 m (20')		4.5 m (15')		3.0 m (10')		1.5 m (5')	
В	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
Arm length 2925 mm (9°	7")						400					
7.5 m (25')	2650* (5800)	2650° (5800)										
6.0 m (20')	2550* (5600)	2550* (5600)										
4.5 m (15')	2550* (5600)	2250 (5000)	<b>4200</b> (9300)	2500 (5500)	4200* (9300)	3700 (8200)						
3.0m (10')	2650* (5800)	2000 (4400)	3950 (8700)	2400 (5300)	5100* (11200)	3450 (7600)	6450° (14200)	5450 (12000)	10050* (22200)	10050* (22200)		
1.5 m (5')	2950* (6500)	1850 (4100)	3800 (8400)	2300 (5100)	5500 (12100)	3250 (7200)	8350* (18400)	5000 (11000)	5700* (12600)	5700* (12600)		
0 m (0')	3100 (6800)	1950 (4300)	3700 (8200)	2250 (5000)	5300 (11700)	3150 (6900)	8300 (18300)	4700 (10400)	6550* 14400	6550* (14400)		
-1.5 m (-5')	3400 (7500)	2100 (4600)	3600 (7900)	2200 (4900)	5150 (11400)	3050 (6700)	8200 (18100)	4600 (10100)	9550* (21100)	9200 (20300)	5750* (12700)	5750° (12700)
-3.0 m (-10')	4050 (8900)	2450 (5400)			5100 (11200)	3050 (6700)	8150 (18000)	4650 (10300)	14100° (31100)	9400 (20700)	9250* (20400)	9250° (20400)
-4.5 m (-15')	5800 (12800)	3600 (7900)					8700 (19200)	4800 (10600)	13150° (29000)	9650 (21300)		

<sup>\*</sup> Load is limited by hydraulic capacity rather than tipping. Ratings are based on SAE Standard No. J 1097. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

### New Hybrid filter Element .

The new hybrid element in the hydraulic circuit greatly extends the element changing interval to 500 hours and hydraulic oil changing interval to 5,000 hours.

This specification sheet may contain attachments and optional equipment that are not available in 🛶 your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subjected to change without notice.



#### ENVIRONMENT MORE FRIENDLY ТΟ

In-Tune with the Environment

Mixed flow fan is used for the cooling fan to reduce its fan-stirring noise. Blowered air does not hit the engine body but flows smoothly, which enables to secure a certian air volume with little noise even at low fan RPM.



KOMATSU.....คิดท่วงใยในพื้นโลก

Clean Engine

The S6D 102E engine is designed to reduce emissions and to meet the regulation of the U.S.A. which is the reverent regulation in the world.

