

KOMATSU

Simulator



Wheel Loader

SIM600 Series

Convertible consoles
Full-motion seat type

SIM60 Series

Convertible consoles
Compact type

Simulator

Scenarios

13 scenarios in a real quarry environment

Operator Errors

50 common operation mistakes

Events

9 unexpected faults or events

Basics come first

- Safe training environment
- Train and prepare new and experienced operators
- Machine controls familiarization
- Step by step guidance
- Response to emergencies and faults
- Realistic hands-on experience
- Real-time feedback



Self-paced and guided learning anytime, anywhere.

Track and review performance

- Review operator's performance
- Easy to use tracking dashboard
- Each operator tracked for safety, productivity and utilization
- Safe operation emphasized

KOMATSU | Demonstration User | Return

User: Demonstration User
Date: 2022-11-09 01:40
Total runtime: 06:17
Machine: WA600
Scenario: Bucket Positioning & Digging

Score
100

Operator safety profile: Safe

Incident report
No incident events

Machine Usage Profile

Stats		
Fuel Consumed:		1.4l
Fuel Efficiency:		0.11%
Average Speed:		0.94km/h

Productivity Report Summary

Cycle Time [s]		Bucket Fill Factor [%]		
Avg	Max	Avg	Min	Max
229.2	354.2	81.0	72.5	89.6

Truck Loading Time [s]		Truck Fill Factor [%]			No. Passes to Fill Truck		
Avg	Max	Avg	Min	Max	Avg	Min	Max
458.4	458.4	33.5	33.5	33.5	2.0	2.0	2.0

Weight Distribution

KOMATSU | Demonstration User | Return

User: Demonstration User
Date: 2022-11-25 02:25
Total runtime: 07:37
Machine: WA600
Scenario: Production Course

Score
0

Operator safety profile: Careless

Safety violations

Operator's seatbelt was not fastened while the truck was in motion	23x
Operator was driving with the bucket too high (Above 50cm from ground to bucket pin)	23x
Operator attempted to shift to R without applying brakes	7x
Operator failed to engage the service brake before releasing the parking brake	2x
Operator attempted to shift to R without applying brakes	1x
Operator failed to sound a warning horn blast before moving forward	1x
Operator failed to sound a warning horn blast before engine start	1x
Parking brake switch was OFF while operator attempted to start the engine	1x

Operator faults

Operator dumped with the bucket too high causing excessive body shock	6x
Excessive distance travelled from the digging face to the truck being loaded	5x
Operator was digging into material face with a higher than 1st gear engaged	3x
Operator approached material face with accelerator pedal fully depressed	3x
Operator steered wheels while the machine was stationary	2x
Collision occurred between bucket and truck body	2x
Operator was digging while the body was articulated	1x
Rear wheels raised off the surface while operator was digging	1x
Operator spotted with too low bucket position	1x
Machine coasted in N gear while travelling over 4 meters per second	1x

Incident report
No incident events

Machine Usage Profile

Stats	
Fuel Consumed:	3.3l
Fuel Efficiency:	0.10%
Average Speed:	2.64km/h

Realistic training experience that improves safety and efficiency



Training courses

Basic Control and Operation Procedures

Fully guided scenario to familiarize basic wheel loader controls and its functions.

V-shape Loading Operation

Learn the basics of loading material into the truck.

Responding to Faults & Emergencies

Operate through a real site while events are simulated randomly through the load cycles. Instructions on how to rectify an events are given in a fully guided scenario. There is also a separate scenario without guidance.

Production Scenario

Run a full production cycle focusing on production target while focusing on safety and efficient operation.

Overview of operator errors

Safety critical

Collision with other vehicles and loading equipment, not stopping when loading equipment sounds the horn.

Equipment damage

Abrupt shifting of transmission gears, keeping parking brake engaged while driving, neutral coasting, gear shifting while the accelerator pedal is depressed and applying the parking brake when transmission gear is not in neutral

Potential accidents

Speeding, seatbelt not worn, not sounding the horn, shutting down the engine with the transmission gear not in neutral, driving with the body raised, not stopping at indicated STOP signs

Simulated events



Brake, Torque converter oil & coolant overheating



Loss of service brake & steering control



Engine and tire puncture



Engine shutdown while traveling

600 series Full motion seat type



12 in. multi-touch panel display

This touch screen displays offers a versatile and interactive user experience. With its responsive touch functionality, users can effortlessly navigate between different configurations and setups.

Multiple languages

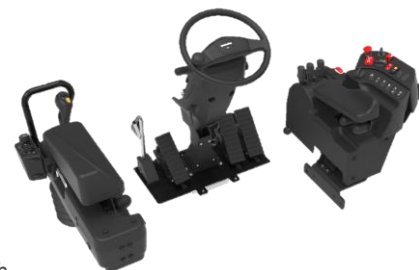
Users can select their preferred language from a list of available options. This feature enables content and user interfaces to be displayed in the chosen language, making it easier for individuals who are more comfortable in languages other than the default or primary language.

Full-motion seat

Capable of replicating movements and vibrations to simulate real-world scenarios, enhancing user engagement and immersion.

Convertible side consoles

Equipped with OEM pedals, standard switches and controls, it offers seamless flexibility to switch to another machine class whenever needed.



Flexibility and adaptability to maximize your investment

60 series Compact type



Computer unit

Compact yet packed with a powerful processor to retain simulation experience without compromising learning results.

LCD monitor

We give you the flexibility to use what is available. The graphic card supports full HD 1080p resolution display.

Non-slip foot controls

Slip-resistant mat which creates positive surface traction reducing risk of slipping.

OEM switches and controls

Installed with OEM standard switches and controls retaining the same real feel with the actual machine. Extra slots on 600 series are provided to keep you moving with the future.

Sturdy case

Conduct training classes and practice with ease where distance and space needs to be considered. Comes in three cases.



Space and distance matters

Specifications

Simulator

Model	600 Series
Operating temperature	10 °C to 35 °C (50 °F to 77 °F)
Operating humidity	20% to 80%, non-condensing
Storage temperature	-20 °C to 45 °C (-4 °F to 113 °F)
Storage humidity	5% to 95%, non-condensing

Computer

Operating vibration	0.26 G at 5-350 Hz for 2 minutes
Storage vibration	1.54 Grms random vibration at 10-250 Hz for 15 minutes
Operating shock	1 shock pulse of 41 G for up to 2 ms
Storage shock	6 shock pulses of 71 G for up to 2 ms
Operating altitude	-16m to 3,048m (-50 ft. to 10,000 ft.)
Storage altitude	-16m to 10,600m (-50 ft. to 35,000 ft.)
Maximum humidity gradient	10% per hour, operational and non-operational conditions

Power supply

Configuration	Single-phase
Voltage rating	115V AC, 50/60Hz, 20A 230V AC, 50/60HZ, 10A

Motion system

Maximum roll angle	±23°
Maximum roll velocity	46°/s (115VAC operation)
Maximum pitch angle	±15°
Maximum pitch velocity	30°/s (115VAC operation)

Unit weight

Base simulator, single screen variant	256 kg (564 lbs)
Base simulator, triple screen variant	210 kg (463 lbs)
Screen stands	208 kg (459 lbs)

Front and side consoles weight

Left console	28 kg (62 lbs)
Right console	28 kg (62 lbs)
Steering wheel assembly	40 kg (88 lbs)

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Unit weight

Simulator computer	12 kg
Consoles and steering wheel mounts	9.5 kg
Touch screen	1.5 kg
Peripherals & Cables	4 kg
Transport case (Empty)	14 kg

Front and side consoles weight

Left console + arm rest	12 kg
Right console	9.5 kg
Steering wheel	14 kg
Floor pedal	11.5 kg
Transport cases	30 kg

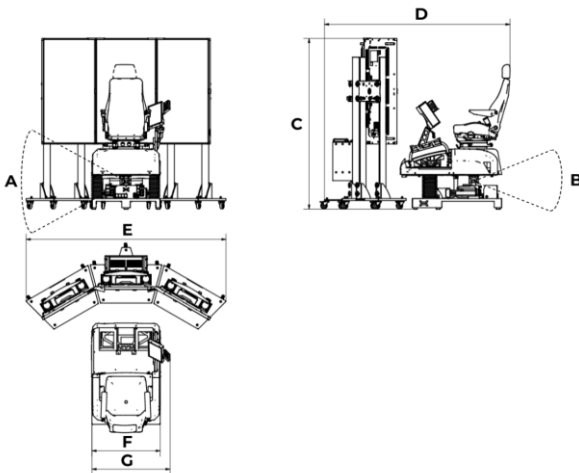
KCS600 dimensions and weights

Base Simulator

A	Maximum Roll angle:	$\pm 23^\circ$
	Maximum Roll velocity:	$46^\circ /s$ (115VAC operation)
B	Maximum Pitch angle:	$\pm 15^\circ$
	Maximum Roll velocity:	$30^\circ /s$ (115VAC operation)
F	Width (base)	800 mm
G	Width (assembled operator unit)	916 mm

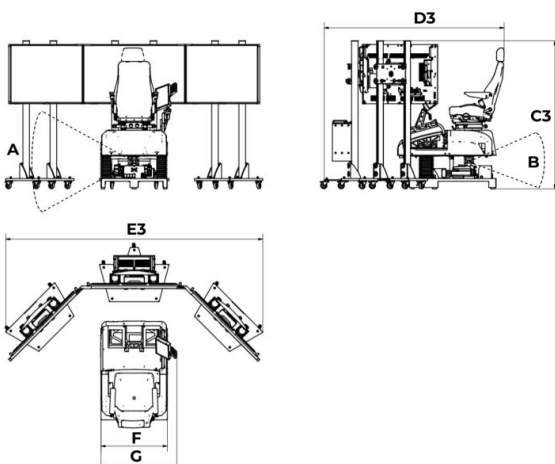
3 screen variant, portrait

C	Height	2005 mm
D	Length	2175 mm
E	Width	2342 mm



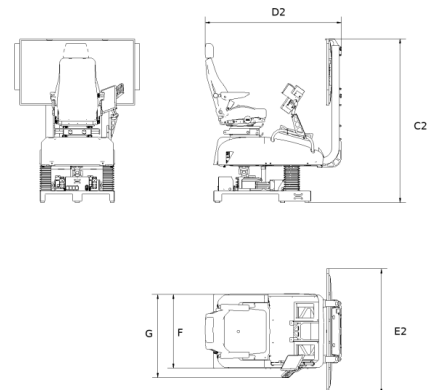
3 screen variant, landscape

C3	Height	1784 mm
D3	Length	2173 mm
E3	Width (screen standard)	3105 mm



1 screen variant, landscape

C2	Height	1767 mm
D2	Length	1473 mm
E2	Width (screen)	1348 mm



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