KOMATSU

Simulator

Bulldozer
for Construction and Quarry

KCS600 Series
Full-motion platform
No-motion platform
Simulator consoles

KCS60 Series
Compact type
Simulator consoles

Flexibility and adaptability to maximize your investment.

KCS600 series
Full motion seat type

Three (3) 55-inch industrial grade LED screen

12-inch multi-touch panel display

KCS600 Triple screen variant

Convertible pedal assembly

Convertible side consoles

KCS600 Single screen variant

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.

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

Multi-language support
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.

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

Space and **distance** matters

KCS60 series
Compact type

* Main screen and auxiliary screen are not included in the package

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

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

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

Auxiliary screen
Can be utilized as rear monitor. Reverse movement of the bulldozer requires confirming the path for safety. Aside from this, it can also be utilized for Teacher Camera, and Instructor Station features.

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.

Monopod Supports
Provide stability to the control levers by attaching the monopod supports on the RH and LH lever assembly

2-in-1 simulator

D71PXi-24 for construction simulation

D155AX-8 for quarry simulation

Scenarios

14 total scenarios in a realistic simulated environment

Operator Errors

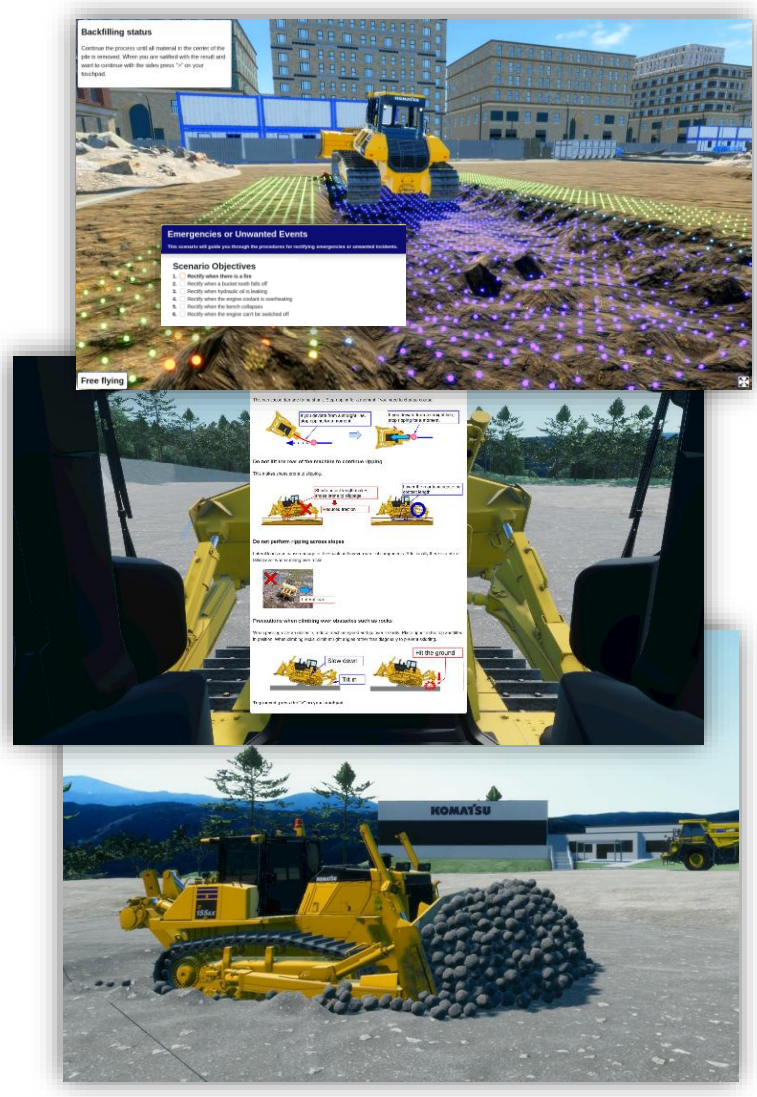
25 common operation mistakes

Events

6 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.

Scenario Report - Score

- The scenario report is segmented into different sections focusing on Safety, incident events, machine usage and productivity, and precision reports.

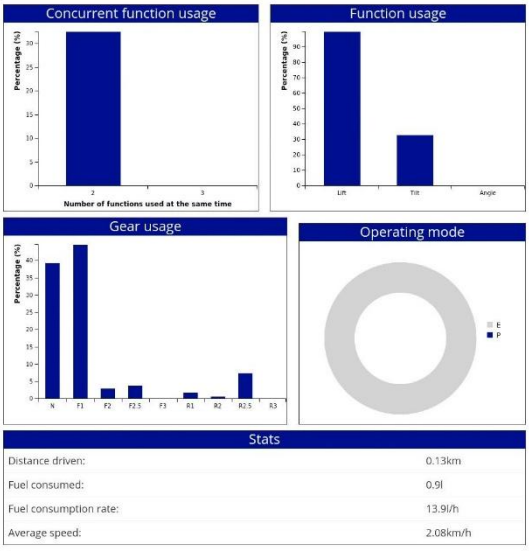
Safety Profile

- Judging by the safety violations committed by the operator, the safety profile gives a verdict of Safe, Careless or Dangerous, and a list of accumulated operator faults

Operator faults	
The operator changed direction without decelerating.	8x
The operator failed to sound the horn before starting the engine.	1x
Operated hydraulics to relief pressure.	1x

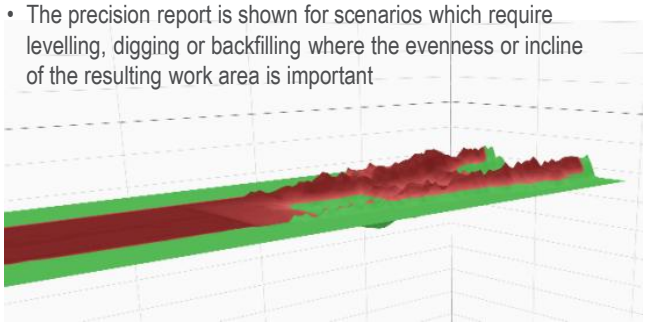
Productivity Report

- The productivity report part shows productivity stats concerning load cycles, such as each load cycle specifically and general statistics like production rate.



Precision Report

- The precision report is shown for scenarios which require levelling, digging or backfilling where the evenness or incline of the resulting work area is important



Training courses

Realistic training experience that

improves safety and efficiency

Basic Controls and Operation

Fully guided scenario to familiarize basic bulldozer controls including levers, pedals, and its functions (D71 and D155).

Basic Digging and Basic Levelling

Learn the basics of digging by practicing slot dozing and basic operation of levelling. (D71 and D155)

Basic Ripping

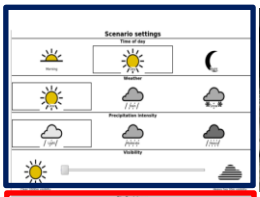
Perform proper ripping operation with D155AX in Techno Center environment

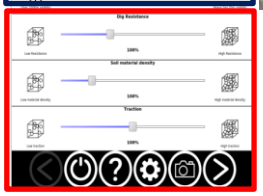
Emergency Scenarios

Realistic training for safety and preparedness needed for emergency situation

Environment Adjustment

Bucket collided with the vessel, Machine rolled over, Attachment collided with the machine body. .





Dig resistance, Traction

Sliders for the adjustment of digging resistance dig resistance, soil material density, and traction of digging material can be fine tuned according to user preference, and site requirement.

Responding to Emergencies and Unwanted Events

Operate through a real site with random simulated events. Instructions on how to rectify each emergency event are given in a fully guided scenario.

Engine Coolant Overheating

Machine fire situation

Bench collapse event

Hydraulic oil burst

Incident	Operator Response
Engine coolant overheating	✔ Correct
Correct operator response: 1. Check around using the arrow keys 4 and 6 on the numpad 2. Move to a safe location 3. Lower the work equipment to the ground 4. Run engine at medium speed until the engine coolant caution lamp turns	
Engine fire	✖ Incorrect
Correct operator response: 1. Turn off the engine 2. Turn the starting switch to ON position 3. Lower work equipment to the ground using the PPC accumulator 4. Activate the fire extinguisher	

New Scenarios Included:

Expo Scenario

Operate through a real site with random simulated events. Instructions on how to rectify each emergency event are given in a fully guided scenario.

Open Scenario

Operate through a real site with random simulated events. Instructions on how to rectify each emergency event are given in a fully guided scenario.

New Simulator Features

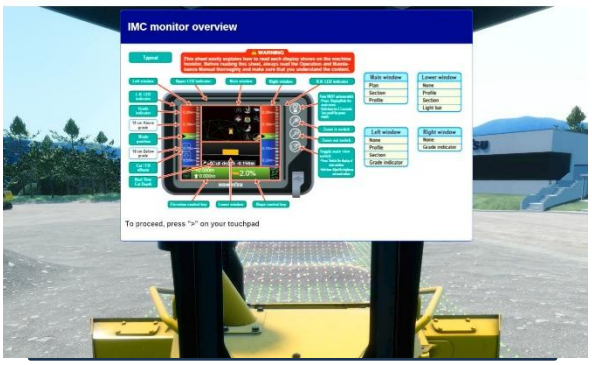
IMC 2.0 Basic Functions

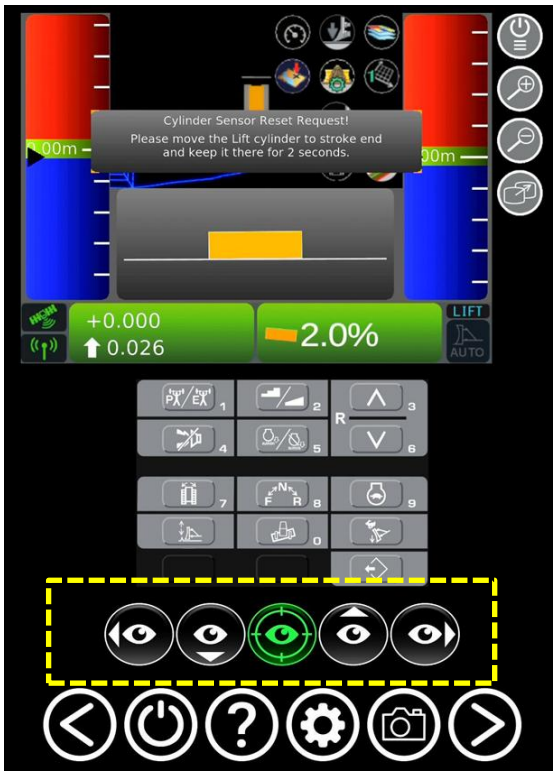
How to activate IMC?

Master the basics on how to operate the IMC switches and buttons from the machine. Each function is explained thoroughly. IMC monitor is integrated in the touchpad. This is best for beginner users which have little to no experience of IMC 2.0 machine.

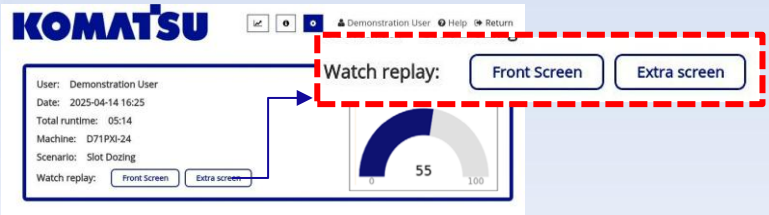
Surface Creation and Offsets

IMC 2.0 basic functions include creating design surfaces on working area, and how to use the offset functions. This is a walkthrough guide from start to finish that will equip user to operate the IMC 2.0 machine.



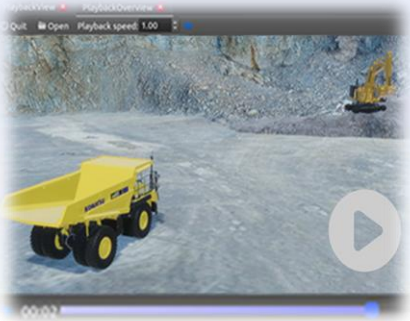


Replay function



Scenario Report – Replay button

The replay button is now available and can be immediately reviewed after each scenario. The recording feature, crafted to enhance teaching efficacy and simplify content evaluation processes, seamlessly captures sessions, preserving every instructional detail for future reference.



New Touchpad Interface

Machine surrounding confirmation (left, right, up, and down) is now integrated with the new touchpad update. This will replace the previous numpad hardware, which will not be utilized anymore.

The IMC monitor can be utilized on all scenarios, and complete guide is explained on “IMC 2.0 Basic Functions” scenario. Machine monitor switches such as: working mode selection, buzzer cancel switch, gearshift selection switch, auto deceleration switch is still available in touchpad.

Other Simulator Features

Instructor Station

Teacher Camera feature

Discover the Teacher Camera, offering both automatic and free-flying modes Toolbar functionalities like video recording.

Free-fly mode can be activated while in scenario, and also during replay mode. This function is controlled by keyboard, or a joystick controller. Navigating external view of machine gives a clearer perspective on how to improve machine operation.

Free-fly mode – camera view

Specifications

Simulator	KCS600 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, triple screen variant (no simulator module)	210 kg (463 lbs)
Base simulator, single screen variant (no simulator module)	256 kg (564 lbs)
Screen stands	208 kg (459 lbs)
Pedal and module weight	
Left simulator module	25 kg (55 lbs)
Right simulator module	25 kg (55 lbs)
Travel lever and pedal assembly	45 kg (99 lbs)

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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
Unit weight	
Simulator computer	12 kg (27 lbs)
Consoles	9.5 kg (21 lbs)
Touch screen	1.5 kg (3.3 lbs)
Peripherals & Cables	4 kg (8.8 lbs)
Front and side consoles weight	
Left simulator module + arm rest	TBD
Right simulator module	TBD
Travel pedal assembly	TBD
Transport cases	TBD

KCS600 Supported Configuration	
Triple screen	Portrait only
Single Screen	Landscape only
Auxiliary screen	Landscape only

KCS60 Supported Configuration	
Main Screen	Landscape only
Auxiliary screen	Landscape only

Please consult your local Komatsu distributor for any optional items you may require. Materials and specifications are subject to change without notice.

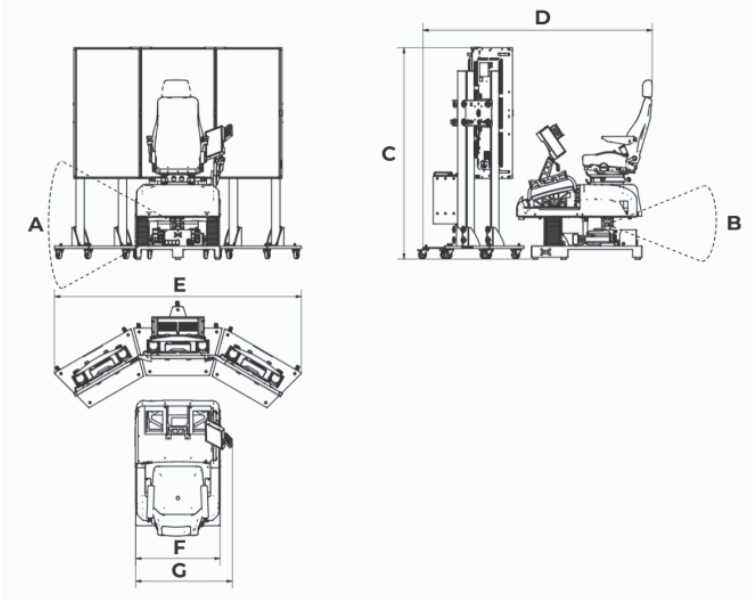
KCS600 dimensions and weights

Base Simulator

A	Maximum Roll angle:	±23°
	Maximum Roll velocity:	46° /s (115VAC operation)
B	Maximum Pitch angle:	±15°
	Maximum Roll velocity:	30° /s (115VAC operation)

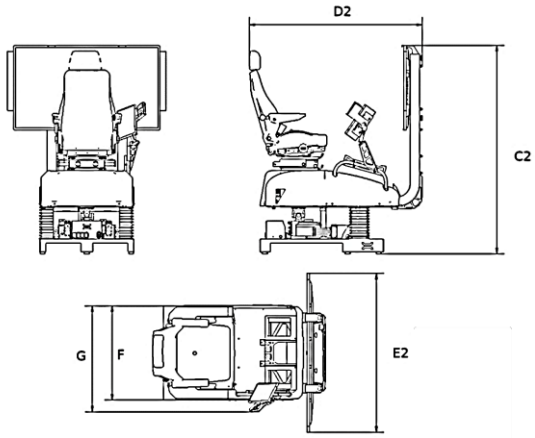
3 screen variant, portrait

C	Height	2059 mm
D	Length	2020 mm
E	Width	2263 mm
F	Width (base)	800 mm
G	Width (assembled operator unit)	901 mm



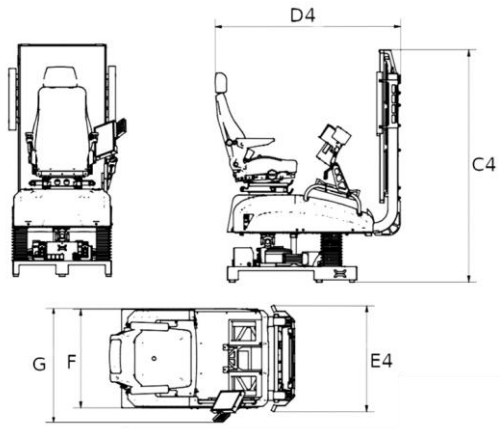
1 screen variant, landscape

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



1 screen variant, portrait

C4	Height	1883 mm
D4	Length	1500 mm
E4	Width (screen)	860 mm



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