# DIL SIMULATOR

DRIVER IN THE LOOP SIMULATOR

SANLAB combines deep know-how in robotics and simulation with a strong customer focus to deliver industry-leading motion platforms. From flight simulation to industrial training and beyond, SANLAB motion systems deliver exceptional responsiveness, precision, and reliability.

Driver in the Loop Simulators, integrates driver and vehicle dynamics to deliver a highly realistic driving experience. With advanced motion systems and customizable scenarios, it enables safe and efficient testing in R&D processes.

HARDWARE

- 6DOF motion platform
- Hardware real-time control
- UDP based PC communication
- IMU integrated measurement system
- Passive and active limitations
- Ergonomic driver's cabin
- 3 x Industrial Full HD LED panels
- Steering wheel and pedal system with force feedback
- 7 forward, 1 reverse manual gear
- 5+1 professional sound system
- Rack cabinet for system computers
- 17" touchscreen HMI
- 24" touch management screen
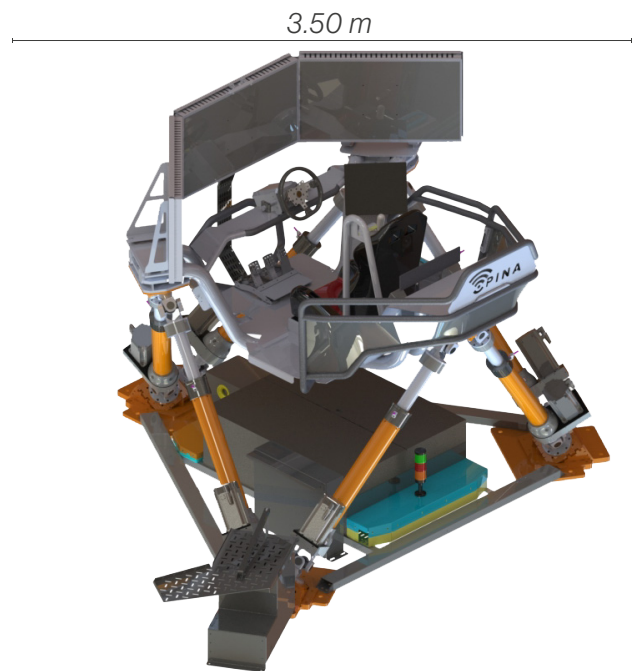
3.50 m

2.35 m

SOFTWARE

- System management software that works fully integrated into IPG Truckmaker software via APO library
- High Fidelity Simulation with motion control algorithms

DIMENSIONS	
Overall Dimensions (L-W-H)	3.50 m - 3.10 m - 2.35 m
Net Weight (product only)	1.500 kg
Shipping Dimensions (L-W-H)	5.90 m - 2.35 m - 2.39 m
Packaging Type	20 ft container

ADVANTAGES

- Advanced motion cueing and control algorithms deliver high-performance and realistic motion feedback
- Digital control loops ensure stable and reliable operation over time, with no drift or performance loss
- Simplified troubleshooting through simulation software featuring an intuitive graphical user interface (GUI) and deterministic error codes
- High-bandwidth frequency response
- Safety architecture encompassing both mechanical and software-level protections

- Integrated built-in test functionality
- Critical failure mode detection and protection mechanisms
- IPC based real time contoller
- Real-time system performance monitoring
- Easy integration with host systems
- Cost-effective design and operation
- Customizable structure
- User-friendly software designed for easy installation, operation, and maintenance
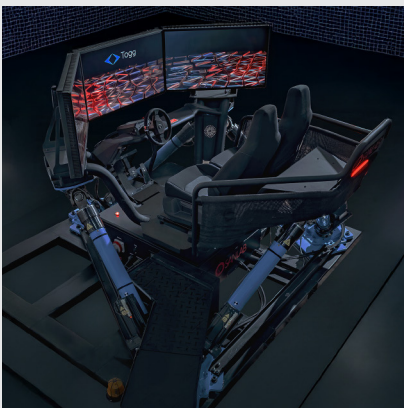- Real time simulation

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SPECIFICATIONS

Gross Moving Load up to	1.800 kg
Actuator Stroke	600 mm
Center of Gravity Above Top Platform	1.00 m (Max)
Settled Height (lowest position)	1.95 m
Neutral Height (center position)	2.35 m
Moment of Inertia About X-Y-Z axis	2.000 kg.m²
Power Supply	380VAC ±10%, 3ph , 50/60Hz
Operating Temperature Range	0ºC to +40ºC
Motor Type	Servo Motor
Ball Screw Type	Precision Ground Ball Screw
Control Interface	Ethernet, CAN, Serial Port

PERFORMANCE SPECIFICATIONS

	Velocity	Acceleration	Excursion *Single Axis*		Excursion *Multi Axis*	
Surge	± 0.80 m/s	±7 m/s²	-0.42 m -	0.53 m	-0.58 m -	0.57 m
Sway	± 0.80 m/s	± 7 m/s²	-0.43 m -	0.43 m	-0.62 m -	0.62 m
Heave	± 0.70 m/s	± 9 m/s²	-0.40 m -	0.35 m	-0.40 m -	0.35 m
Roll	± 50 º/s	± 300 º/s²	-20.60 º -	20.60 º	-26.41 º -	26.41 º
Pitch	± 50 º/s	± 300 º/s²	-20.20 º -	21.10 º	-29.70 º -	26.01 º
Yaw	± 55 º/s	± 400 º/s²	-24.00 º -	24.00 º	-26.56 º -	26.56 º

DIL Simulator

Autonomous Vehicle R&D

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