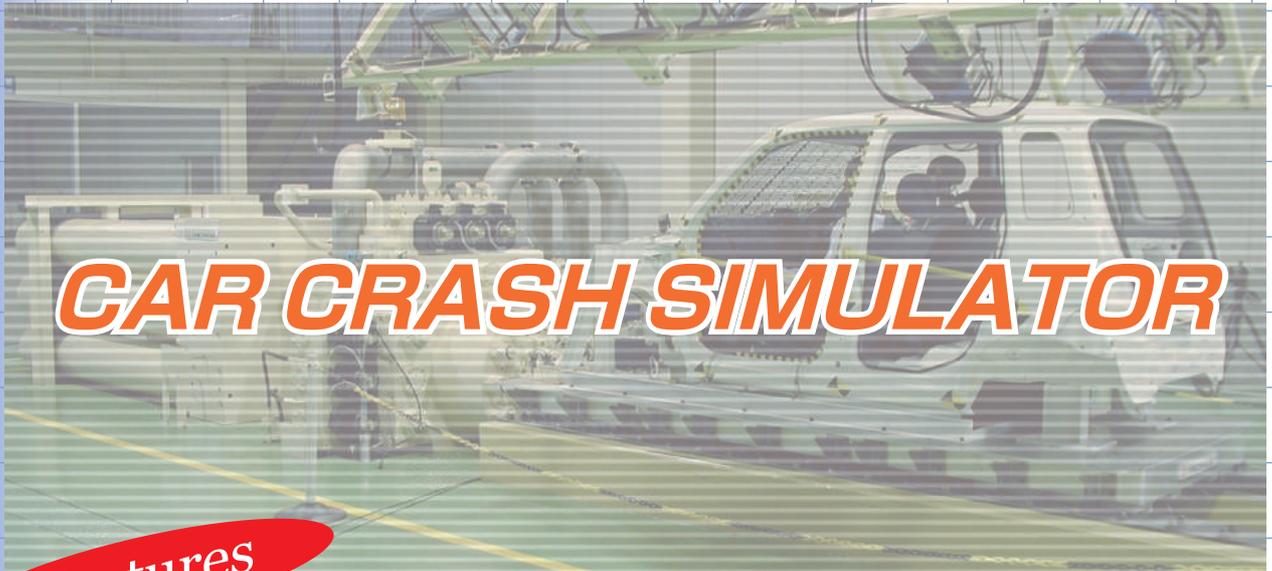


Best Solution for Crash Simulations



Features

- **No Iteration**
- **Excellent Reproduction Accuracy & Repeatability**
- **All Directional**
- **Wide G-Level & Frequency-Range (LOW SPEED REAR IMPACT)**
- **Automatic & Easy Computer-Control Software**
- **No Sled-Movement before Start & Reproduction of rebound phase**
- **Maintenance-Free Servo-Actuator**
- **Growing Options (PITCHING, YAWING, INTRUSION etc.)**



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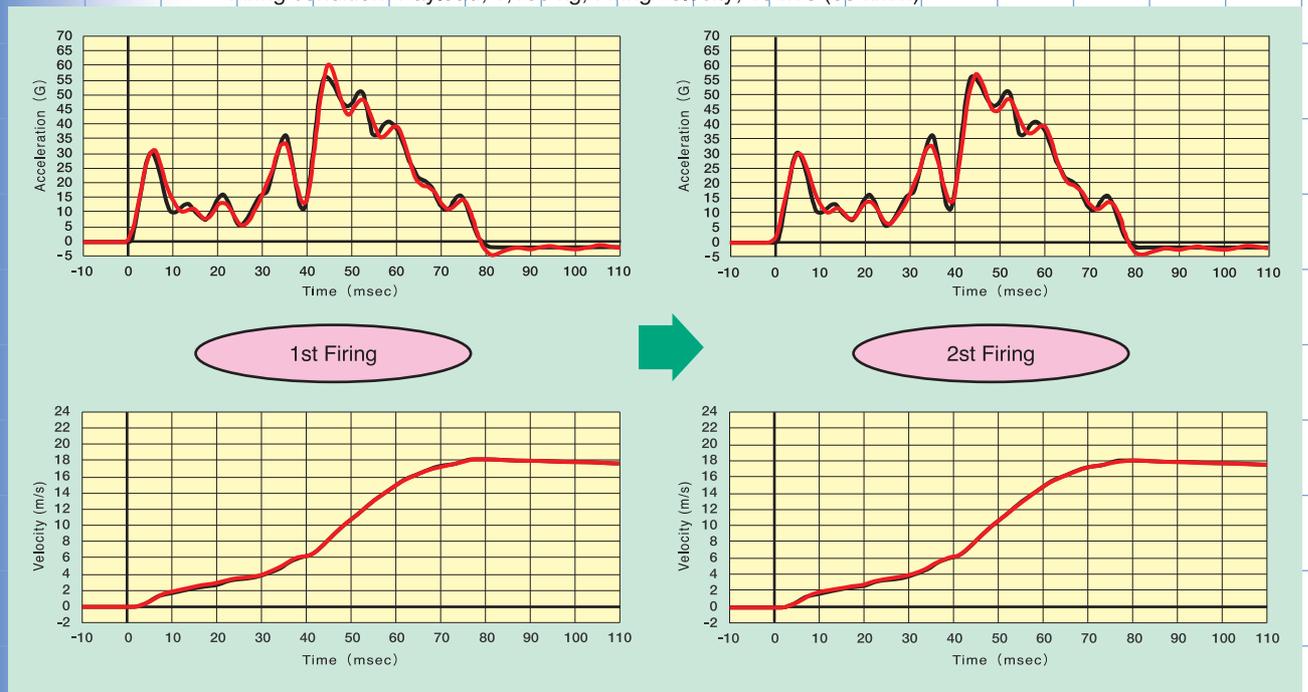
Performance Specification

Item		Performance	Remarks
Frontal (Rear) Impact simulation	Payload	Max. 2,000 kg	White Body, Table, Dummies, Measuring-Devices, etc.
	Firing acceleration	Max. 80 G	@ 1,500kg Payload
	Firing velocity	Max. 25 m/s	=90km/h
Simplified Side Impact simulation	Door firing acceleration	Min. -30G ~ Max. 85G	@ 750kg Payload
	Door firing velocity	Max. 16 m/s	
Side Impact simulation	Load weight	Max. 2,000 kg	Equivalent to MDB (FMVSS 214, ECE 95)
	Impact velocity	Max. 21 m/s	Velocity at a point with MDB displacement of 3,000 mm

Examples of Results

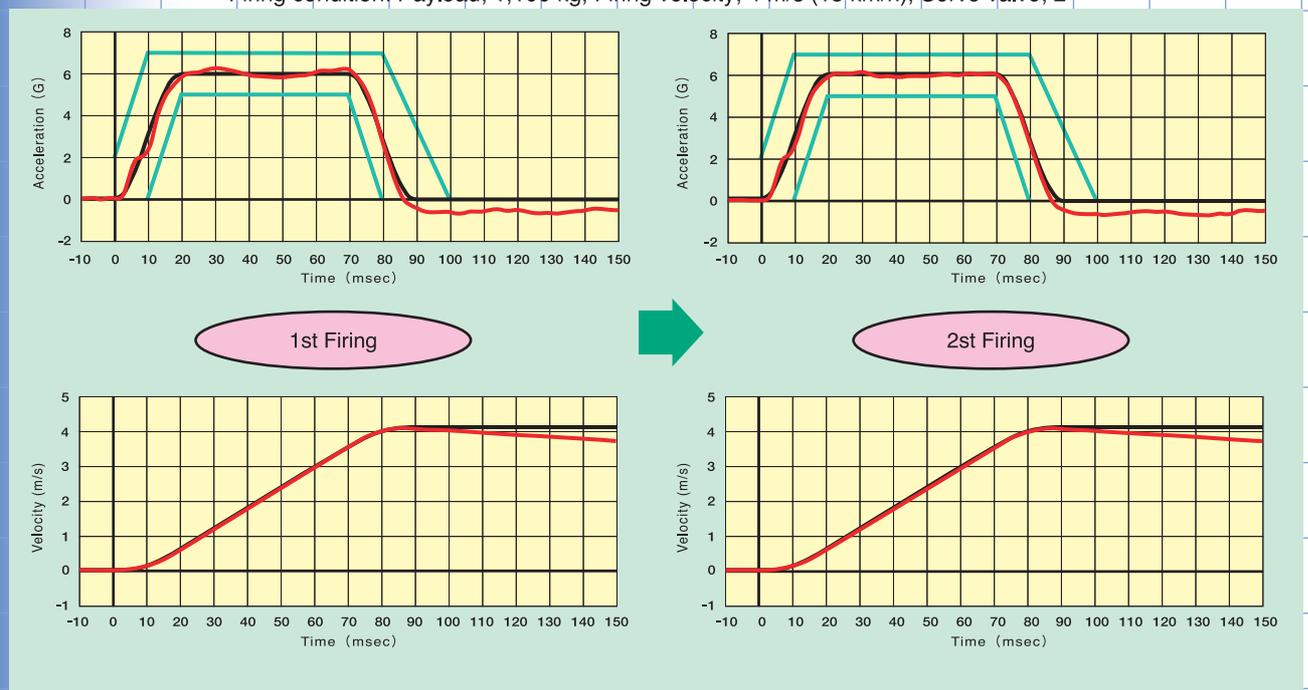
Example of Frontal impact firing
Firing condition: Payload; 1,100 kg, Firing velocity; 18 m/s (65 km/h)

— Target wave
— Sled response wave

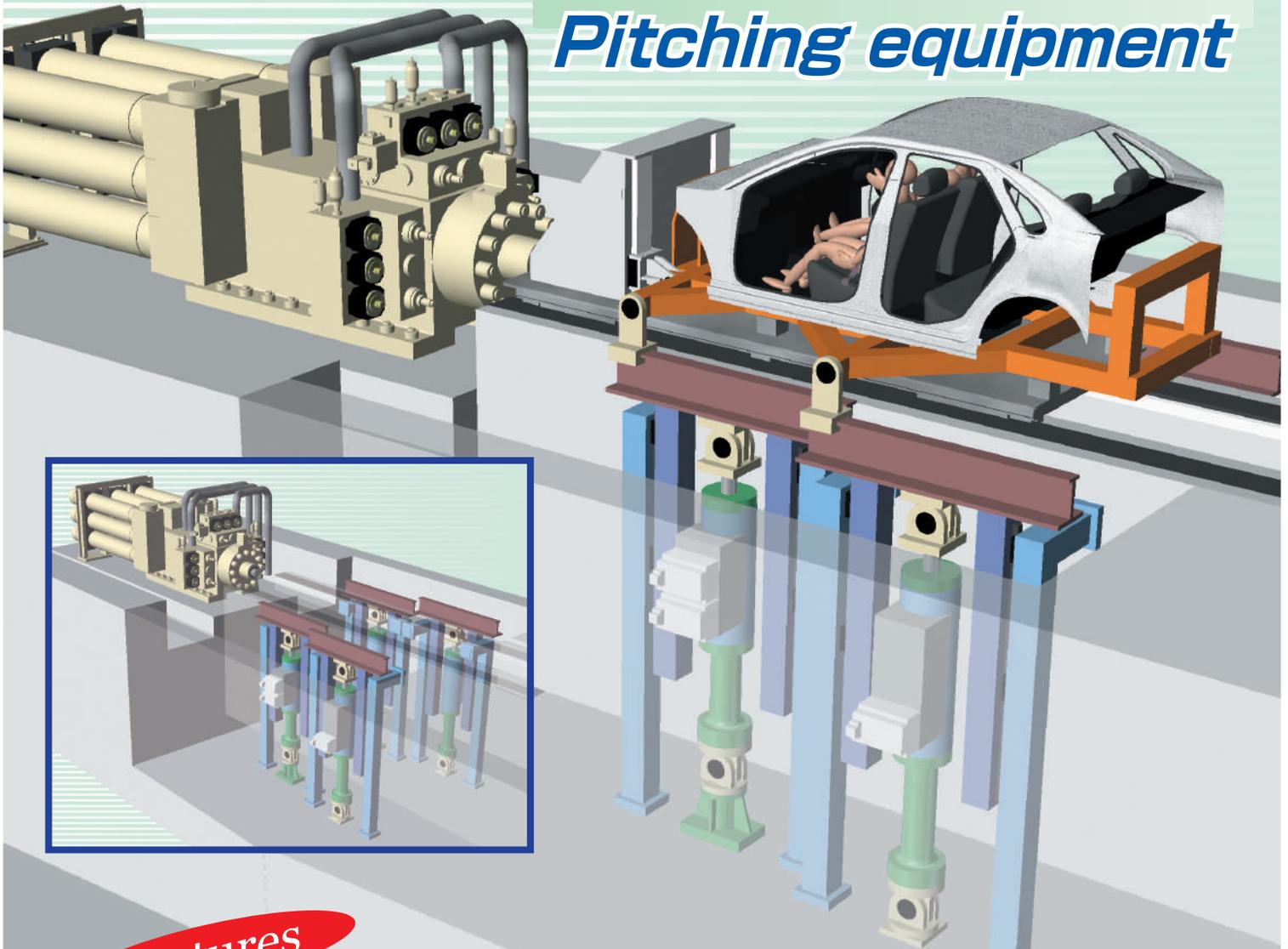


Example of Low speed Rear impact (ECE proposal) firing
Firing condition: Payload; 1,100 kg, Firing velocity; 4 m/s (15 km/h), Servo valve; 2

— Corridor
— Target wave
— Sled response wave



Car crash simulator Pitching equipment



Features

Realization of 3 D.O.F. synchronous control

A vertical servo actuator system carries out feedback control of double rod type piston and four-way servo valve similar to a seismic shaking table, and since it can control all the displacement, velocity and acceleration to a plus and a minus, 3 D.O.F. control of $[Gx-\theta-Z]$ is possible at an arbitrary waveform within specification.

Reliable control algorithm

Since the main part $[Gx]$ is Okayed in one or two time discharges, the digital system (control algorithm) by which a pitching control $[\theta-Z]$ is Okayed in one or two time discharges has been adopted.

Realization of a barrier-free floor

Since all equipments, such as four guide rails and servo actuators, are sat down and stored below a floor level and it is served as the usual barrier-free floor when the pitching equipment is not used, workability is not spoiled.

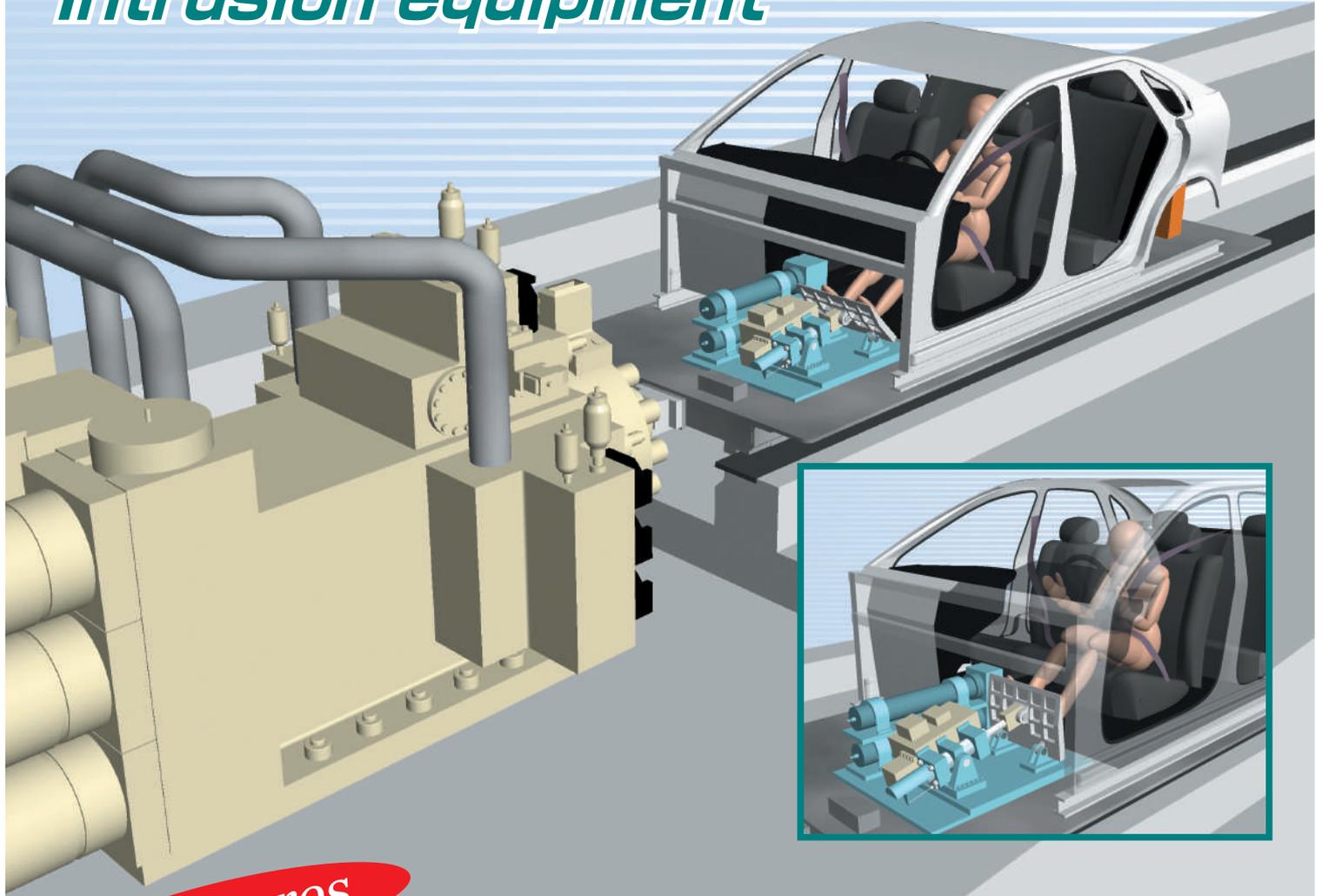
Quick and easy sled exchange

Irrespective of use or nonuse of pitching equipment, sled exchange can be performed quickly and easily like white-body exchange using air-pallettes.

Maintenance-free

Making a hardware design which aims at same maintenance-free Frontal crash simulator, and all standard parts policy is adopted to ensure readiness for an emergency trouble, and minimizing test stop period.

Car crash simulator *Intrusion equipment*



Features

A sled-mounted electro-hydraulic servo system which is compact and functions under high G

Sufficiently high power that guarantees the function of intrusion under the second collision of a dummy without seat belts

Pitching intrusion of a toe-board is computer-controlled synchronizing with crash simulator.

Safe with no change of a dummy posture under preparation thanks to adoption of a piston lock

Intrusion of a steering wheel is also attachable.

Main performance (per one set)

Item	Target performance
Power	Max. 1,000kgf × 3 m/s
Control stroke	Max. 100 mm
Control time	Max. 0.2 s
Weight	300 kg
Dimension	(L) 700mm × (W) 700mm × (H) 350mm



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