Thanks to the calculation module, the user selects a weight to be simulated and an impact speed or energy. The software then automatically indicates which flywheel to use. The automatic launcher system accelerates the flywheels to the right speed, the striker is automatically engaged on the flywheels motion. The system is self-protected by a detachable automatically triggered hydraulic stop.

Simulation of very heavy weights (up to 200 tons).

Weight Simulator Implantation Rate Security

With its capacity of 50,000 J and its 5 m length, the machine occupies very little floor space and has no civil-works component.

Adjustment, assembly and disassembly times are low.

Machine protected by a detachable hydraulic stop. Absence of suspended load thanks to its horizontal position.

Main Functions

The dynamic shock test bench allows to produce linear shocks with adjustable energy, speed and mass. Its revolutionary heavy weights simulation system makes it possible to carry out impact tests corresponding to a collision with a mass of 40 to 200,000 kg at a speed adjustable from 0.5 to 9 m/s thanks to flywheels of a mass of less than 200 kg. A high-frequency acquisition ensures the recording of the force/position curve at 100 kHz and the calculation of the absorbed and restored impact energies.

Applications

Horizontal Impact Drop Tester Dynamic shock test bench

Horizontal Impact Drop Tester

Main Functions

- Dampers: Dynamic behavior of viscoelastic dampers for the industry.
- Shock absorbers: Verification of shock absorbers operation for wagons.
- Bridge crane stop: Simulation of an impact of a bridge crane over its end stops.

Advantages

- Weight simulator: Simulation of very heavy weights (up to 200 tons).
- Implantation rate: With its capacity of 50,000 J and its 5 m length, the machine occupies very little floor space and has no civil-works component.
- Rate: Adjustment, assembly and disassembly times are low.
- Security: Machine protected by a detachable hydraulic stop. Absence of suspended load thanks to its horizontal position.

Operating Procedure

Thanks to the calculation module, the user selects a weight to be simulated and an impact speed or energy. The software then automatically indicates which flywheel to use. The automatic launcher system accelerates the flywheels to the right speed, the striker is automatically engaged on the flywheels motion. The system is self-protected by a detachable automatically triggered hydraulic stop.

Technical Characteristics

- Max energy: 50,000 J
- Simulated weight: 40 to 200,000 kg
- Impact speed: 0.5 to 9 m/s
- Max. impact force: 150,000 N
- Release force of self-protection: 10,000 to 150,000 N

Options

- Additional flywheels
- Automatic recognition of used flywheels
- Automatic reset of the safety stop

Tests According to Standards:

1. Product under test
2. Impactor
3. Flywheel
4. Sliding cover
5. Stop position regulation

Dampers Shock Absorbers Bridge Crane Stop