### Technical Specifications RIS

- **Nominal Thrust**: 0.3 MN
- **Maximum speed**: 48 km/h
- **Maximum payload**: 500 kg
- **Typical payload**: 300 kg
- **Typical acceleration**: 30 G
- **Maximum stroke**: 800 mm
- **Max jerk**: > 12 G/ms
- **Sled platform**: 2.2 mx 1.4 m (L x W)
- **Software**: CrashSoft®3 – RIS Workshop
- **Time between two tests**: < 10 min
- **Required floor space**: 12 m x 2 m x 1 m (L x W x H)
- **Required power input**: < 40 kVA

### Technical Specifications CIS

- **Nominal Thrust**: 0.5 MN
- **Maximum speed**: 56 km/h
- **Maximum payload**: 1000 kg
- **Typical payload**: 300 kg
- **Typical acceleration**: 45 G
- **Maximum stroke**: 1000 mm
- **Max jerk**: > 15 G/ms
- **Sled platform**: 2.2 mx 1.4 m (L x W)
- **Software**: CrashSoft®3 – CIS Workshop
- **Time between two tests**: < 10 min
- **Required floor space**: 18 m x 2 m x 1 m (L x W x H)
- **Required power input**: < 40 kVA

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For more information, please contact us:

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MESSRING’s new RIS and CIS (Rear Impact Simulator / Compact Impact Simulator) are accelerator systems specifically designed to handle the load level of low-speed and lightweight applications but shows all features, capabilities and precision of a MESSRING sled or crash-test facility.

Many applications - such as Whiplash tests, child-seat test, roof rack tests and similar - require low speed and lightweight test objects.

The test pulses are given by international standards or provided by internal R&D targets.

As made for significantly higher energies, classic systems perform like a sledgehammer cracking a nut and are hard to be controlled accurately at low-speed applications.

That’s the reason why we equipped our Accelerator Sled Systems with special skills for delicate test parameters.

Key features:

- Servo-hydraulic accelerator
- Non-destructive simulation of complex crash pulses
- High reproducibility
- High repeatability and test rates
- Allows rapid parameter variations between two tests
- Outstanding user software provides one-man operation
- Database-supported test preparation and evaluation
- Very low wear
- High reliability
- Very low space requirement
- Cost-efficient operation

**RIS Rear Impact Simulator**

- High power hydraulic cylinder
  - Full curve control with high speed PLC
  - RIS 0.3MN, 0.8m stroke
  - CIS 0.55MN, 1m stroke

**CIS Compact Impact Simulator**

- Energy chain® cable carrier for data transfer
- Huge sled clamping area 2.2 m x 1.4 m with M12 hole pattern
- Smooth sled braking distance 3m
- High precision sled guidance tolerances less than 1mm

The hydraulic sled consists of a sled platform, which is accelerated by means of a servo-valve-controlled hydraulic piston. The sled is moving on a rail-track that is mounted on top of an appropriate industrial floor and stopped by a brake system at the end of the track works as emergency brake. Both, the RIS and CIS can be used for simulating low speed vehicle tests, like Whiplash and component tests, e.g. baggage rack tests, bumper tests etc., and a whole range of different customerspecific low speed impact simulations.

**System Layout** (dimensions are in mm)

**Scope of Supply**

- Sled platform with M12 hole pattern 50 mm x 100 mm for attachment of test objects
- Track rails with linear guides
- High-dynamic, servo-hydraulic propulsion system
- Braking system and emergency brake system
- Energy chain for accelerometers, DAS-supply
- Cabinet with control components
- M=BUS Pro 8 channel Data Acquisition System
- Control PC with Windows 7/XP and CrashSoft®3 for test preparation, test execution and analysis

www.messring.de
### Technical Specifications CIS

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