Impact Testing Systems
Product Information

Introduction

Coesfeld is building Impact testing systems for more than 20 years. The systems have been continuously improved and adapted to modern machine standards. Common national and international standards as DIN EN ISO 6603, ISO 7765, ASTM 4272, ASTM D 1709, DIN 30 670, ASTM G 14, DIN 53 373 and many customer standards are covered by our product series.

Customized model

50 m/s high speed

Customized solutions and cooperation in research projects as for the 50 m/s high speed model drive our development. The development project for the high speed system inspired our pneumatic acceleration system for our topical drop testing series. The pneumatic acceleration replaces our spring powered systems and opens a new dimension for high speed drop testing.
Product Information

Impact Tester Series
Our drop tester series ranges from light weight to heavy weight, from free fall to high speed acceleration and from non-instrumented to instrumented systems. All our systems realize the concept of guided drop dart in a drop frame for a controlled drop.

PRIMUS – light weight
Drop tester built in an aluminium frame.

![Primus 1000](image)
![Primus 1700](image)

MAGNUS – heavy weight
Drop tester built in sturdy welded steel frame assuring an accurate measurement with high impact energies.

![Magnus 1000](image)
![Magnus 2000](image)

Non-instrumented
In non-instrumented tests the impact energy is calculated with the known drop height and falling weight. The specimen either fails or passes the drop test. However, user comfort does not have to come short. That is why all our systems can be automated. A PC is not required and the system is controlled via touch panel.

Instrumented
The variety ranges from partly instrumented to fully instrumented systems (impact force, weight, time, velocity). A full instrumented system enables a detailed analysis of the impact. Instrumented Systems are controlled from a PC with our comfortable Software package.
Product Information

PRIMUS

Equipment and optional Accessories

Various impact bodies and specimen grips. Conform to international standards or customized.

Motorized drop frame with additional drop weights and optional weight measurement.

Tempering chamber with heat exchanger for +250°C heating and -50°C cooling.

Pneumatic rebound system catching the impact body.

Stands.

Motorized drop frame.

Tempering chamber.

Stands.

Pneumatic rebound system.
Product Information

MAGNUS

Equipment and optional Accessories

- Various impact bodies and specimen grips. Conform to international standards or customized
- Pneumatic acceleration system for high speed applications up to 50 m/s
- Motorized drop frame with additional drop weights and optional weight measurement
- Pneumatic rebound system catching the impact body after first impact
- Tempering chamber with heat exchanger for +250 °C heating and -50 °C cooling
- Specimen feeder for automated application

Various impact bodies and specimen grips. Conform to international standards or customized.
Product Information

Special Systems

Impact Test for Pipes and Pipe segments
DIN 30 670 - ASTM G 14 - DIN 53 373
Mobile system

MAGNUS 9000 S – High Energy and High Weight Impact Test

Our MAGNUS 9000 S has a drop height of 9 meters and a falling weight of 1,000 kg. With a maximum velocity of up to 13.29 m/s the system releases an energy of up to 88,290 J.

The system is additionally equipped with a high power cooling unit able to cool down solid steel specimen to -70°C in its core in less than one minute.

Customized Impact tests

Fully instrumented and automated system with customized impact bodies, test chamber and clamping systems
Product Information

Software
Our comfortable software provides a user friendly machine operation. Current measurements can be displayed, data analysis can be conducted, all data are stored and can also be exported for user defined external analysis.

Front Panel and Parameterization

Data Administration

Data Analysis
- force over time
- displacement over time
- maximum force during the test
- force at the moment of damage
- energy consumption up to damaging force
- energy consumption up to maximum force
- total energy consumption

Data Export