508 Select with VDA module-M

***Modular system with removeable bombardment attachment (VDA / SAE)***

# MULTI GRIT TESTER 508 Select

508 Select with SAE module


***Optionally for VDA module:***

**Attachment for tests in accordance with PSA D24 1312**

**Attachment for tests in accordance with Daimler DBL 5416**

testing equipment for quality management

ERICHSEN
since 1910

**Technical Description**

**<u>508 Select (VDA module)</u>**
DIN EN ISO 20567-1
FORD FLTM BI 157-06
RENAULT D24 1702
PSA D24 1312
DAIMLER DBL 5416

**<u>508 Select (SAE module)</u>**
SAE J 400
ASTM D 3170

**Multi-Blow Test Instruments for reproducible Test Results**

## Purpose and Application

The **MULTI GRIT TESTER 508 Select** is a multi-blow test instrument, and its special feature is the good repeatability and comparability of the test results obtained. The instrument is used to assess the ability of single and multiple layers of paints and similar coating materials to stand with the impacts caused by small bodies of low mass hitting the specimen at high speed as experienced on road and rail vehicles and other equipment used in the transport field.

## Design and Mode of Operation

With the modular **MULTI GRIT TESTER 508 Select**, the user only needs a basic device which can be converted with little effort for bombardment tests "according to VDA" or "according to SAE".

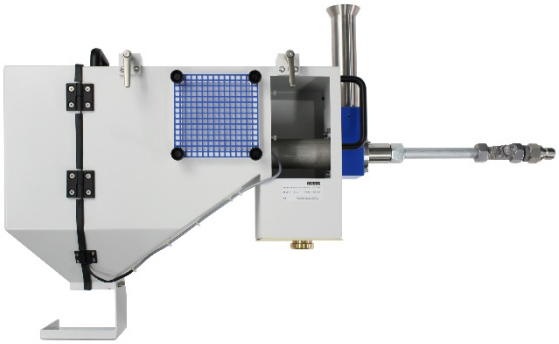
The clear arranged menu navigation via the touch panel has password-protected levels, which protect against unauthorized access (such as program changes).
Depending on the application, a **VDA module** (with manual or pneumatic specimen applying device) or a **SAE module** is selected. A change between the different modules designed as attachments is quick and easy, without spending lots of time.

**508 Select with pressure vessel**


**VDA-Module-Select-M (manual specimen applying device)**

**VDA-Module-Select-P (pneumatic specimen applying device)**

**SAE Module Select**



## Principle of the Test with VDA Module

The stone hammer blow tests according to VDA corresponds to the requirements of national and international standards.
The specimen is subjected to impacts by sharp-edged steel shot accelerated by compressed air. An air accumulator in the system eliminates effects of momentary pressure variations in the external compressed air supply. The shot is entered automatically using an adjustable vibratory feed.
To facilitate working, the VDA module is optionally available with a pneumatic specimen applying device.

## Principle of the Test with SAE Moduel

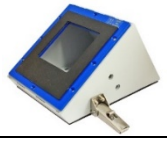
In contrast to the VDA module, work is not carried out with steel shot, but usually with river gravel “water-eroded gravel”.
A defined number of impact bodies of specified properties is made to impinge for a given period of time and with a defined energy at a determinate angle of impact onto the specimen.

The bombardment of the test panels is carried out with determinate grit (according to ASTM D 3170) which is accelerated by compressed air. Dependent of the specifications of further standards (mostly of car manufacturers) other shot materials can be used, too. The shot is entered automatically using an adjustable vibratory feeding device.

An upstream compressed air reservoir compensates for fluctuations in the external compressed air network.
The **SAE module** is equipped with a specimen holding device with an adjustable impact angle. The adjusting unit for the impact angle allows to adjust the orientation of the test panel relative to the direction of impact in the range from 30° to 90° in steps of 15°.

In contrast to the "VDA" version, the sample to be tested is located completely within the test room, during the whole bombardment process

### Accessories (optionally)

| | |
|---|---|
|  | Attachment for tests in accordance with **PSA D24 1312**, for vertical impact angle at 90°.<br>(optionally for VDA module Select) |
|  | Attachment for tests in accordance with **Daimler DBL 5416**, for vertical impact angle at 90°, with infinitely adjustable shoot distance.<br>(optionally for VDA module Select) |
|  | Impact attachment **MiniPac VDA** for stone impact simulation testing on three-dimensionally shaped test objects, small parts, up to sample sizes (HxWxD) max. 200 x 450 x 200 mm, under consideration of 54° impact angle prescribed by VDA, in connection with the correct shoot distance. |
|  | Impact attachment **MiniPac SAE** for stone impact simulation testing on three-dimensionally shaped test objects, small parts, up to sample sizes (HxWxD) max. 300 x 450 x 225 mm, under impact angle of 90° in connection with the correct shoot distance. |
|  | Impact cabinet **RIMpact II VDA** for stone impact simulation testing at rims/wheels up to 26“ dia. x 335 mm width (**under consideration of 54° impact angle prescibed by VDA, in connection with the correct shoot distance**).<br>The variable holding device allows an upright positioning as well as to tilt the sample’s position. |
|  | In the Impact Cabinet **RIMpact I VDA,** the wheel rim to be tested is turnably fixed, so **each single spoke** can be tested differently by choice with varying combinations of shot gravel, shoot cycles, shot gravel quantities, shoot periods and shoot pressures **(under an impact angle of 90°)**.<br>The attachment for tests in accordance with **PSA D24 1312** is necessary! |
|  | Impact Cabinet **RIMpact I SAE** enables the user to test complete rims respectively in principle also several other specimen, which up to now – due to their big sizes – would have to be previously segmented by cutting them.<br>The wheel rim to be tested is turnably fixed, so **each single spoke** can be tested differently by choice with varying combinations of shot gravel, shoot cycles, shot gravel quantities, shoot periods and shoot pressures (under an impact angle of 90°). |

## Technical Data

Dimensions (W x D x H)
Basic instrument approx. 1150 x 550 x 1350 mm

Net weight (approx.)

| | |
|---|---|
| Basic instrument | approx. 125 kg |
| VDA-Module-Select-M | approx. 19 kg |
| VDA-Module-Select-P | approx. 22 kg |
| SAE-Module-Select | approx. 34 kg |

Compressed air connection:
(VDA) min. 6 bar / max. 10 bar,
requires connecting hose with ID 13 mm

(SAE) min. 8 bar / max. 10 bar,
requires connecting hose with ID 19 mm
Volume flow: min. 3 $m^3$/min

Filling pressure control: approx. 5 bar (VDA), 7.8 bar overpressure (SAE), automatic switching depending on the module

Working pressure: (0 - 6) bar / adjustable

Time for feeding shot: adjustable

Display: Touch Panel

Power supply: 85-264 VAC / 47-63 Hz (control circuit volt. 24 V)

**Note:**
**For capture and analysis at impact images in accordance to VDA we recommend our new analysis system GRITSCAN. Please ask for our detailed leaflet and price list.**


| Order Information | |
|---|---|
| **Art.-No.** | **Product Description** |
| 29040131 | **Stone Hammer Blow Instrument MULTI GRIT TESTER 508 Select**<br>Basic instrument with pressure vessel |
| 29040431 | **Stone Hammer Blow Instrument MULTI GRIT TESTER 508 Select**<br>Basic instrument without pressure vessel |
| Supplied with:<br>♦ Operating Instructions | |

| Accessories (neccesary) | |
|---|---|
| 29060132 | **VDA-Module-Select-M**<br>with **manual** specimen applying device, 1 kg steel shot |
| 29060232 | **VDA-Module-Select-P**<br>with **pneumatic** specimen applying device, 1 kg steel shot |
| 29070132 | **SAE-Module-Select**<br>with adjusting unit for the impact angle , 1 kg shot (grit) |

| Accessories (optionally) | |
|---|---|
| 29630132 | Equipment of basic instrument for operation at low temperatures up to -30 °C (climatic cabinet/cooling chamber) |
| 30000132 | Remote initiation with cable (6 m) |
| 07060132 | Attachment for tests in accordance with PSA D24 1312 |
| 17060132 | Attachment for tests in accordance with Daimler DBL 5416 |
| 30420132 | Impact attachment **MiniPac VDA** |
| 30550132 | Impact attachment **MiniPac SAE** |
| 24080132 | Impact Cabinet **RIMpact II VDA** |
| 22710232 | Impact Cabinet **RIMpact I VDA** |
| 22710132 | Impact Cabinet **RIMpact I SAE** |
| 920002941 | Steel shot (2.0 - 2.8 mm) GH-K-Diamant (acc. to Daimler DBL 5416) |
| 920002741 | Steel Shot (3,55 – 5 mm) GH-K-Diamant, (acc. to VDA und DIN EN ISO 20567-1) |
| 920002841 | Grit (shot) – (in acc. with SAE J400/ASTM D 3170) |

Subject to technical modifications. Group 13 – TBE 508 Select – VII/2023

**ERICHSEN GmbH & Co. KG**
Postfach 1264 | 58652 Hemer | Germany | Tel. +49(0)2372-9683-0 | Fax +49(0)2372-6430 | www.erichsen.de | info@erichsen.de