



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



Technical Description

**508 Select (VDA module)**

DIN EN ISO 20567-1  
FORD FLTM BI 157-06  
RENAULT D24 1702  
PSA D24 1312  
DAIMLER DBL 5416

**508 Select (SAE module)**

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.

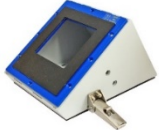






The bombardment of the test panels is carried out with determinate grit (according to ASTM D 3170) which is accelerated by compressed air. Dependent of the specifications of further standards (mostly of car manufacturers) other shot materials can be used, too. The shot is entered automatically using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

	<p>Attachment for tests in accordance with <b>PSA D24 1312</b>, for vertical impact angle at 90°. (optionally for VDA module Select)</p>
	<p>Attachment for tests in accordance with <b>Daimler DBL 5416</b>, for vertical impact angle at 90°, with infinitely adjustable shoot distance. (optionally for VDA module Select)</p>
	<p>Impact attachment <b>MiniPac VDA</b> 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.</p>
	<p>Impact attachment <b>MiniPac SAE</b> 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.</p>
	<p>Impact cabinet <b>RIMpact II VDA</b> for stone impact simulation testing at rims/wheels up to 26" dia. x 335 mm width (<b>under consideration of 54° impact angle prescribed by VDA, in connection with the correct shoot distance</b>). The variable holding device allows an upright positioning as well as to tilt the sample's position.</p>
	<p>In the Impact Cabinet <b>RIMpact I VDA</b>, the wheel rim to be tested is turnably fixed, so <b>each single spoke</b> can be tested differently by choice with varying combinations of shot gravel, shoot cycles, shot gravel quantities, shoot periods and shoot pressures (<b>under an impact angle of 90°</b>). The attachment for tests in accordance with <b>PSA D24 1312</b> is necessary!</p>
	<p>Impact Cabinet <b>RIMpact I SAE</b> 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. The wheel rim to be tested is turnably fixed, so <b>each single spoke</b> can be tested differently by choice with varying combinations of shot gravel, shoot cycles, shot gravel quantities, shoot periods and shoot pressures (<b>under an impact angle of 90°</b>).</p>

## 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<sup>3</sup>/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	<b>Stone Hammer Blow Instrument MULTI GRIT TESTER 508 Select</b> Basic instrument <u>with</u> pressure vessel
29040431	<b>Stone Hammer Blow Instrument MULTI GRIT TESTER 508 Select</b> Basic instrument <u>without</u> pressure vessel
Supplied with: ♦ Operating Instructions	

## Accessories (necessary)

29060132	<b>VDA-Module-Select-M</b> with <b>manual</b> specimen applying device, 1 kg steel shot
29060232	<b>VDA-Module-Select-P</b> with <b>pneumatic</b> specimen applying device, 1 kg steel shot
29070132	<b>SAE-Module-Select</b> 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 <b>MiniPac VDA</b>
30550132	Impact attachment <b>MiniPac SAE</b>
24080132	Impact Cabinet <b>RIMpact II VDA</b>
22710232	Impact Cabinet <b>RIMpact I VDA</b>
22710132	Impact Cabinet <b>RIMpact I SAE</b>
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  
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