

**MULTI GRIT  
TESTER  
508 SAE**

**MULTI GRIT  
TESTER  
508 VDA**



**Model 508 VDA**



**Model 508 SAE**

testing equipment for quality management

**ERICHSEN**

**Technical Description**

**508 VDA**  
DIN EN ISO 20567-1  
FORD FLTM BI 157-06  
RENAULT D24 1702  
PSA D24 1312

**508 SAE**  
SAE J 400  
ASTM D 3170

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

# VDA Stone Hammer Blow Test Instrument, MULTI GRIT TESTER 508 VDA



## Purpose and Application

The **MULTI GRIT TESTER 508 VDA** is a stone hammer blow testing instrument that at first was developed in co-operation with the "Verband der Automobilindustrie (VDA)" (Association of the Automotive Industry) but now also meets the specifications of national and international standards. The **MULTI GRIT TESTER 508 VDA** is used to assess the ability of single and multiple layers of paints and similar coating materials to stand up to 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.

## Principle of the Test

A defined number of impact bodies of specified shape, material and surface quality is made to impinge for a given period of time and with a defined energy at a determinate angle (54° in accordance with DIN/ISO) of impact onto the specimen.

## Design and Mode of Operation

The **MULTI GRIT TESTER 508 VDA** is a multi-blow test instrument of high precision, and its special feature is the good repeatability and comparability of the test results obtained. 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. On a multifunctional display the working pressure, the duration of the test, the setting of the vibratory feed and the number of tests conducted (total / temporary) can be read off alternatively.

To facilitate working with the **MULTI GRIT TESTER 508 VDA** the instrument is available - upon request - with a pneumatic specimen applying device.

Furthermore, it is possible to equip the **MULTI GRIT TESTER 508 VDA** within a few minutes with the conversion kit (offered as an accessory) for carrying out tests in accordance with the specifications of Peugeot-Citroën (vertical impact).

## Technical Data

Dimensions (W x D x H): 1750 x 500 x 1220 mm

Weight (net): approx. 100 kg

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

Filling pressure control: approx. 5 bar, factory set

Working pressure: (0 - 3) bar / quality class I

Time for feeding shot: (5 - 30) s / adjustable

Display: 8 digits, lighted LCD, height of digits 11.5 mm

Power supply: 230 V / 50 Hz  
other voltages on request

Shot (Steel shot acc. to VDA): GH Diamant 06302, sharp-edged (4 - 5) mm

Note: By now many users also apply further types of shot material, e. g. in accordance with the specifications of different international vehicle manufacturers or internal specifications based on experience in their own company.

# SAE Stone Hammer Blow Test Instrument, MULTI GRIT TESTER 508 SAE



## Purpose and Application

The new **MULTI GRIT TESTER 508 SAE** is a stone hammer blow testing instrument equipped with an adjustable impact angle, contrary to the execution of VDA.

## Principle of the Test

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.

## Design and Mode of Operation

The **MULTI GRIT TESTER 508 SAE** features, like the VDA version, a good repeatability and reproducibility of the test results. 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 feed.

On a multifunctional display the working pressure, the duration of the test, the setting of the vibratory feed and the number of tests conducted (total / temporary) can be read off alternatively.

An air accumulator in the system eliminates effects of momentary pressure variations in the external compressed air supply.

The specimen fixing device of the **MULTI GRIT TESTER 508 SAE** is provided 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°.

Contrary to the VDA version, the test panel in the **MULTI GRIT TESTER 508 SAE** is located completely within the testing room during the whole bombardment procedure.

Due to numerous technical differences between both versions (conditional on the standards), a test in accordance with VDA using the SAE version, is not intended and thus technically excluded.

## Technical Data

Dimensions (W x D x H):	1600 x 500 x 1250 mm
Weight (net):	approx. 100 kg
Compressed air connection:	min. 8 bar / max. 10 bar, <u>requires</u> connecting hose with ID 19 mm
Volume flow:	min. 3 m <sup>3</sup> /min
Filling pressure control:	7.8 bar overpressure, set by factory
Pressure sensor:	0 - 6 bar, accuracy 0.5% by end of value
Time for feeding shot:	(4 - 30) s
Display:	8 digits, lighted LCD, height of digits 11.5 mm
Power supply:	230 V / 50 Hz' other voltages upon request
Shot:	grit (in accordance with ASTM D 3170)

Order Informations	
Ord.-No.	Product-Description
0063.01.31	<b>VDA Stone Hammer Blow Instrument, MULTI GRIT TESTER 508 VDA,</b> with <b>manual</b> specimen applying device
0063.02.31	<b>VDA Stone Hammer Blow Instrument, MULTI GRIT TESTER 508 VDA,</b> with <b>pneumatic</b> specimen applying device
Supplied with:	
<ul style="list-style-type: none"> <li>◆ 1 kg Shot (Steel shot)</li> <li>◆ Operating Instructions</li> </ul>	

Accessories	
Ord.-No.	Product-Description
706.01.32	Conversion Kit for tests acc. to Peugeot-Citröen (Méthode d'essai D24 1312)

For further details please see our price list no. 508.

Order Informations	
Ord.-No.	Product-Description
0279.01.31	<b>SAE Stone Hammer Blow Instrument, MULTI GRIT TESTER 508 SAE,</b> with adjusting unit for the impact angle
Supplied with:	
<ul style="list-style-type: none"> <li>◆ 1 kg Shot (Grit)</li> <li>◆ Operating Instructions</li> </ul>	

For further details please see our price list no. 508.

For further quantities of shot for model 508 SAE please contact:

Pausch Messtechnik GmbH  
 Nordstraße 53  
 42781 Haan  
 eMail: [gpausch@pausch.com](mailto:gpausch@pausch.com)

Subject to rechnical modifications.  
 Group 13 – TBE 508- VI/2010