

**Grindometer
acc. to Hegman
Model 232**

**2 parallel
measuring channels**



testing equipment for quality management

ERICHSEN

Technical Description and Operating Instructions

**ISO 1524
EN 21 524
DIN 53 203
ASTM D 1210**

**The classical test
instrument to
measure the
fineness of grind**

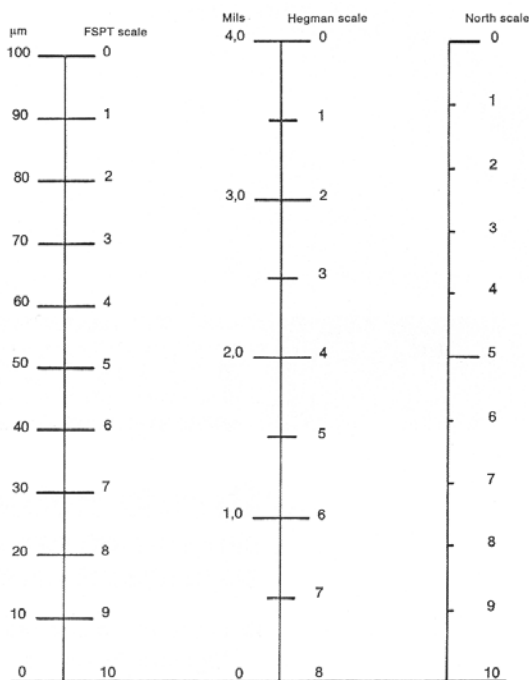
Testing principle

The **Grindometer acc. to Hegman, Model 232**, was developed to establish the fineness of grind of coating materials. The instrument is used to produce a liquid wedge-shaped specimen of the test substance. It can be easily ascertained by visual examination where the grain size is larger than the local dimensions of the wedge channel. A reading of the appropriate channel depth is taken at the boundary between the uneven and the smooth surface areas of the sample. This value determines the fineness of grind.

Design and function

The **Grindometer acc. to Hegman, Model 232**, consists of a block of hardened steel which has been specially treated to ensure dimensional stability. Two precisely defined, wedge-shaped channels are cut into the block. The depth of each channel can be read off on a μm scale engraved into one of the longitudinal sides (length 125 mm) of the block. The corresponding Hegman scale (HS) is shown on the opposite side. In addition to the standard version with scale combination Hegman/ μm , versions with other scale combinations (max. two – alternatively from Hegman/ μm /North/mils/FSPT) are available on request. The desired combination should be specified when ordering. The relationship between the most commonly used Grindometer scales is evident from the nomogram.

The standard version of the **Grindometer acc. to Hegman, Model 232**, is suitable for measuring ranges 15 / 25 / 50 and 100 μm . A straightedge scraper for applying the test material is included in the scope of delivery.



Test procedure

A sufficient quantity of the test material is poured into the deep end of the channels of the **Grindometer** taking care to avoid trapping air bubbles. The material is then spread in an even motion to the shallow end of the channels, holding the straightedge scraper vertical to the surface of the test instrument and also vertical to the channels, and allowing about 1 - 2 s for the stroke.

The evaluation should be conducted within 3 seconds of applying the material. To do this, the surface of the specimen is examined by viewing it at right angles to the channels by counter light coming at a flat angle ($20^\circ - 30^\circ$). A reading is taken of the point at which aggregated particles or scratch marks become visible. The corresponding channel depth at this point is then defined as the fineness of grind.

Maintenance

The **Grindometer** should be cleaned immediately after use by washing with solvent. The use of hard, sharp implements for scraping off residue paint should be avoided. The blades used as straightedges are subject to constant wear. The straightedge should always be applied with a minimum of pressure and checked at regular intervals. For this purpose, the blade edge is placed on a level surface (e.g. lengthwise on a runner of the test instrument) and examined by the light-slit method.

Technical Data

Dimensions (l x w x h) : 165 x 38 x 13 mm

Net weight (see scope of supply): 0.8 kg

Reference Class:

The Model 232 is supplied with a Manufacturer's Certificate M in accordance with DIN 55 350-18 that includes among others the following information:

Actual and setting comparison of groove depth, product identification, test equipments used with calibration status, date, name of inspector.

By means of a digital dial gauge the depth of the grooves is measured in each groove at 5 measuring points evenly spread over the groove. The deviation from the setting value should not exceed 2.5 μm .

Ordering Information	
Ord.- No.	Name of Product
0068.01.31	Grindometer acc. to Hegman, Model 232 , Standard version, measuring range 0 - 15 μm
0068.02.31	Grindometer acc. to Hegman, Model 232 , Standard version, measuring range 0 - 25 μm
0068.03.31	Grindometer acc. to Hegman, Model 232 , Standard version, measuring range 0 - 50 μm
0068.04.31	Grindometer acc. to Hegman, Model 232 , Standard version, measuring range 0 - 100 μm
	Grindometer acc. to Hegman, Model 232 , Versions with other scale combinations (max. <u>two</u> – alternatively from Hegman/ μm /North/mils/FSPT – please specify when ordering)
Included in scope of supply:	
<ul style="list-style-type: none"> • 1 straightedge blade • 1 plastic case 	

Subject to technical modifications.
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