

# Dry Abrasion Tester

## test method

Covers the determination of the resistance of metallic materials to scratching abrasion by means of the dry sand/ rubber wheel test.

## dry abrasion tester

- Compliant to ASTM G65
- Preset Revolution Counter
- Variable Speed
- Normal Load Calibration
- Frictional Force Measurement

The Koehler K93300 Dry Abrasion Tester uses a rubber-rimmed wheel as the bed for silica abrasive that is fed from a hopper by a nozzle between the sample and the wheel. The sample is pressed into the wheel by a dead weight loaded lever. The test is run for a set number of revolutions with automatic cutoff and the wear is measured by measuring the volume of material lost through mass loss and density measurements.

The flow of sand into the gap between the surfaces is controlled by the geometry of the nozzle that must be very carefully defined to obtain the required sand flow rate. The abrasive only passes through the wear interface once and is thrown away at the end of the test.

The uniform loading and uniform flow of abrasive into the gap between wheel and the specimen under controlled conditions give consistent results. The properties of the rubber lining of the wheel also have a major effect on the results and need to be carefully controlled.

## ordering information

### catalog no. description

<b>K93300</b>	Dry Abrasion Tester 230V 60Hz 3Ph
<b>K93390</b>	Dry Abrasion Tester 440V 50Hz 3Ph
<b>K93300-1</b>	Test Wheels, 9" diameter
<b>K93300-2</b>	Reference Specimen – AISI D-2
<b>K93300-3</b>	Reference Specimen – AISI H-13
<b>K93300-4</b>	Test Sand – AFS 50/70 (25 kg)
<b>K92800-4</b>	Dressing Tool
<b>K92800-5</b>	Replacement Nozzle



K93300 Dry Abrasion Tester

## specifications

Conforms to the specifications of:

ASTM G65

Abrasive: AFS 50 to 70 test sand (about 200 micron size)

Wheel Speed: 200 rpm

Abrasive Flow Rate: 300 to 400 gms/min

Test Load: 45 to 130 N

Wheel Diameter: 228 mm

Chlorobutyl Rubber Hardness: A 58 to 62 on a Shore Durometer

Revolution Controller: Microprocessor based digital preset counter 1 rev to 9999 revs

### Included Accessories

RPM Indicator

Specially designed s/s nozzle

Loading arm with lifting cam and easily changeable dead weights

Hoppers for abrasive feed and dust collection

Dust collection container

Chlorobutyl rubber rimmed wheels

(1 in mounted in machine and 1 given as a spare)

Reference Materials (5 of each type):

AISI D-2 Tool Steel (procedure A)

AISI H-13 Die Steel (procedure B)

AISI 4340 Steel (procedure B or E)