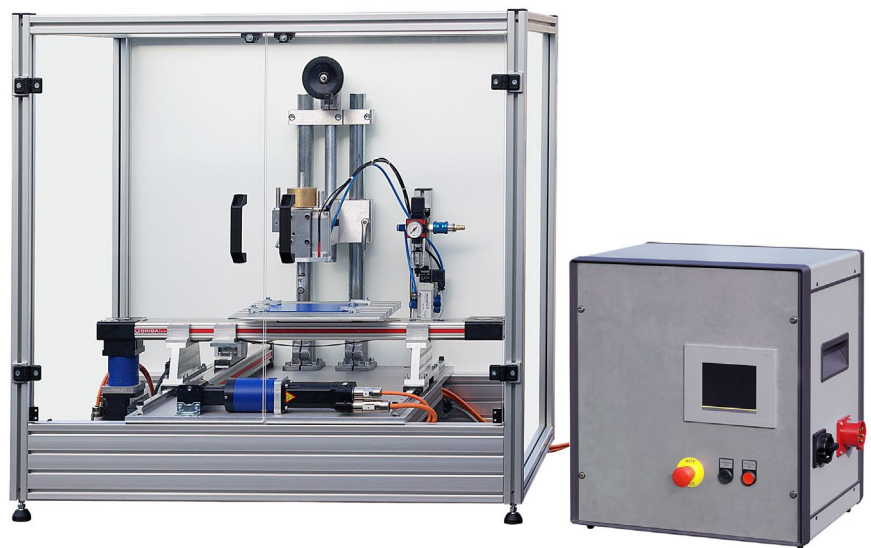


**Servomotor-driven
X-Y Specimen Table**

**Scratch Test Station
acc. to
BMW/ERICHSEN
Model 450**

**Wide Scope
of Test Possibilities**



**Touch-Screen
Control Panel**

testing equipment for quality management

ERICHSEN
since 1910

Technical Description

**BMW GS 97034-2
BMW GS 97034-3
BMW GS 97034-8
BMW GS 97034-9**

**Test Stand for
defined and
reproducible Testing
of Scratch Resistance**

Purpose and Application

The **Scratch Test Station acc. to BMW/ERICHSEN, Model 450**, is a PLC controlled test system for the execution of scratch resistance tests on lacquered and plastic surfaces.

Design and Function

The **Scratch Test Station acc. to BMW/ERICHSEN, Model 450**, comprises of a basic instrument and a control unit.

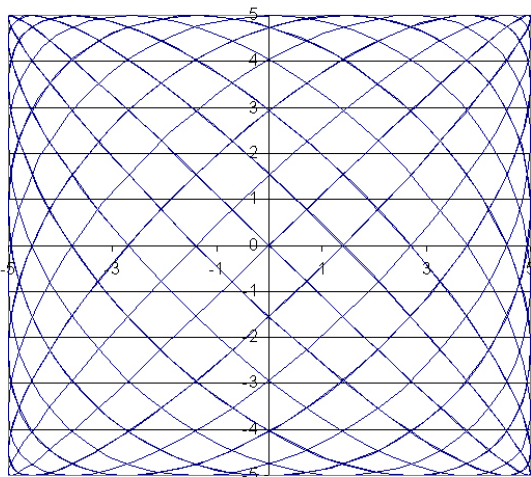
The basic instrument includes a motor-driven X-Y specimen table and a manual Z-type drive with universal tool holding fixture and pneumatic tool feed motion. The test load can be varied using slip-on weights.

The instrument is operated via a touch-screen control panel integrated in the control unit. This enables to preset the test modes (scratch strain by lines, curves or planiform stress) as well as the test parameters (scratch length, speed etc.).

Scratch Tests

The following scratch strains (test modes) are feasible:

- **Line scratching** = single linear movement
Parameters: length/ speed
- **Rubbing** = repeated linear movements at the same place
Parameters: length/ speed/ number
- **Matrix** = latticed linear movement
Parameters: x length/ y length/ mesh size/ speed
- **Circuit** = single circular motion
Parameters: circle diameter/ path speed
- **Lissajous figure** = superposition of two vertical sinusoidal movements with minor differences in frequency (see fig.)
Parameters: frequency/ amplitude/ number



Technical Data

Dimensions (W x D x H)

Basic instrument: approx. 1100 x 720 x 1000 mm
Control unit: approx. 600 x 450 x 570 mm

Net weight Basic unit: approx. 115 kg
Control unit: approx. 40 kg

Power supply 400 VAC, 50/60 Hz;
TN or TT net

Compressed air supply min. 5 bar, max. 10 bar

Test load range (3 - 30) N
(1-N grading)

Speed max. 1000 mm/s

Specimen size (L x W x H) max. 350 x 250 x 5 mm

Order Information

Ord.-No.	Product Description
02740131	Scratch Test Station acc. to BMW/ERICHSEN, Model 450 , comprising a basic unit and a control unit
The scope of supply includes: 1 Mains cable CEE 16A (5 m) 4 Clamping claws 1 Air hose (5 m) 1 Tool adapter for test tip 1 Test tip acc to. ISO (Ø 1 mm) 7 Load weights 2 Fork wrenches 2 Allan keys 1 Operating Manual	

Accessories / Spares

Ord.-No.	Product Description
08160332	Tool adapter for test tips
04280232	Test tip acc. to Bosch (Ø 0.75 mm) for scratch test acc. to BMW GS 97034-9
04280332	Test tip acc. to ISO and GME 60280 (Ø 1 mm)
04280532	Test tip (Ø 3 mm) for scratch inclination test acc. to BMW GS 97034-8
08160132	Tool adapter for PMMA test discs
08040132	PMMA Test discs for finger-nail test acc. to BMW GS 97034-2
08160232	Tool adapter for leather/rubber test discs
08180132	Leather test disc for shoe sole test acc. to BMW GS 97034-3 (24 test areas per test disc)
08330132	Rubber test disc for shoe sole test acc. to BMW GS 97034-3 (24 test areas per test disc)

Subject to technical modification.
Gr. 14 - TBE 450 – III/2024