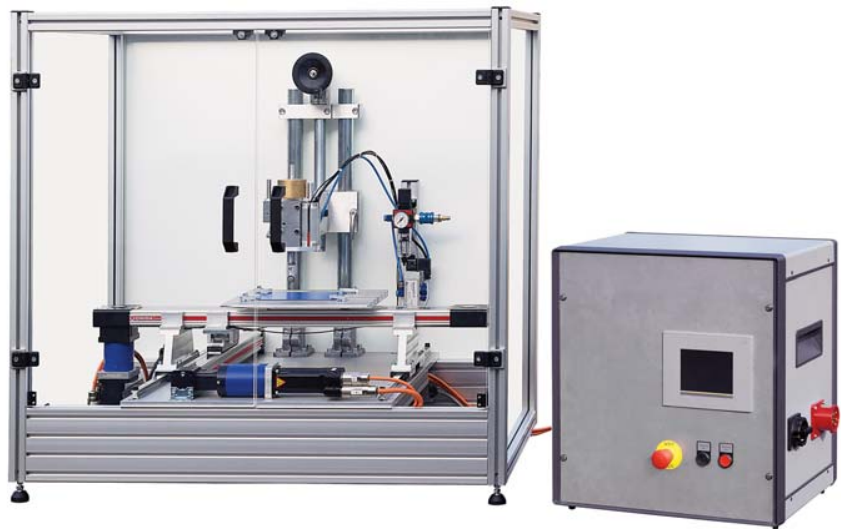


**Servomotor-driven  
X-Y Specimen Table**

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

**Wide Scope  
of Test Possibilities**

**Touch-Screen  
Control Panel**



testing equipment for quality management

**ERICHSEN**

**Technical Description**

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

**BMW GS 97034-10  
BMW GS 97034-11**

**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.

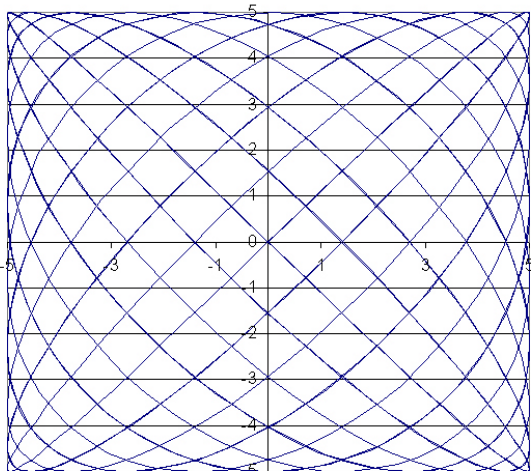
The basic instrument includes a motor-driven X-Y specimen table and a manual Z-type drive with universal tool holding fixture and pneumatic tool feed motion. The test load can be varied using slip-on weights.

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
0274.01.31	<b>Scratch Test Station acc. to BMW/ERICHSEN, Model 450</b> , 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
0816.03.32	Tool adapter for test tips
0428.02.32	Test tip acc. to Bosch (Ø 0.75 mm) for scratch test acc. to BMW GS 97034-9
0428.03.32	Test tip acc. to ISO and GME 60280 (Ø 1 mm)
0428.05.32	Test tip (Ø 3 mm) for scratch inclination test acc. to BMW GS 97034-8
0816.01.32	Tool adapter for PMMA test discs
0804.01.32	PMMA Test discs for finger-nail test acc. to BMW GS 97034-2
0816.02.32	Tool adapter for leather/rubber test discs
0818.01.32	Leather test disc for shoe sole test acc. to BMW GS 97034-3
0817.01.32	Rubber test disc for shoe sole test acc. to BMW GS 97034-3

Subject to technical modification.  
Gr. 14 - TBE 450 - XII/2008

