

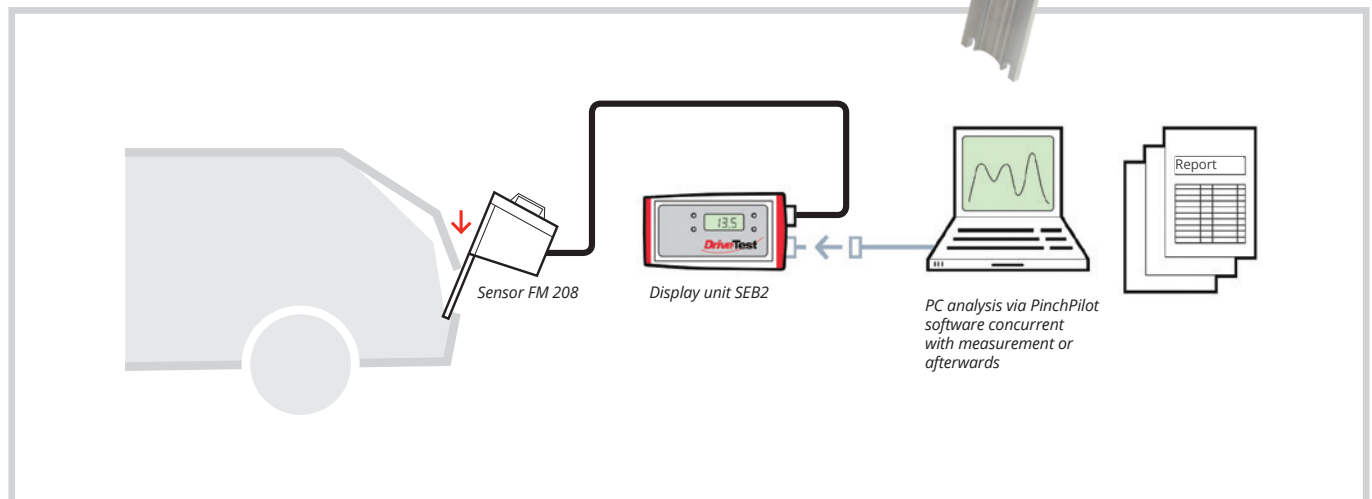


## Pinch Force Measurement System for Sunroofs, Powered Window Lifters and Tailgates

The FM 208 is an electronic pinch force measuring system for power driven automotive sunroofs, windows and tailgates. It is intended to be used as a supplementary measurement at very low spring stiffness (2 N/mm).

### Use cases

Typical use includes R+D and production testing in the automotive industry. The system tests pinch forces of soft parts in closing systems.



## Display unit SEB2

- Data logging module (Display unit SEB2) with LCD display, LED states, button and USB interface
- Optional PC controlled measurements
- Powered by 9 V bloc battery
- Onboard real time clock
- Storage for approx. 100 measurements
- Sensor and PC interfaces
- Display of peak force and effective force
- Instant feedback for test results

## Spacer set

- Complete set of spacers for all intended applications:
  - Tailgate, low gap
  - Tailgate high gap
  - Window
  - Sunroof
- Ease of use: fast mounting and dismounting, no extra tools required
- Robust construction: manufactured from durable aluminum/POM

## PC Software PinchPilot

- Graphical display of force vs. time
- Calculation of relevant parameters
- Assessment with respect to different standards
- Support for user defined standards
- Printed reports
- Data export (Excel, CSV, PDF)
- Available for Windows Vista, 7, 8 and 10
- USB connection

## Device properties at a glance

### Applicable for various power operated devices

- Tailgates
- Windows
- Sunroofs

### High precision measurement

Uses frictionless guides and a single point (platform) load cell.

### Applicable standards

2000/4 EG, US Standard FMVSS 118; supplemental measurement at low spring stiffness: 2 N/mm

### Robust construction

Manufactured from durable aluminium for long service life in industrial environment.

### Complete delivery

Includes all required components for tailgates, windows and sunroofs, packed in a high quality transportation case.

### Accessories for each application

- Spacer (200 mm)
- Force initiation, bracket
- Force initiation, platform
- Monopod
- Bumper bar support block
- Window support block
- Sunroof support block
- Sunroof spacer

## Technical specifications

Force initiation:	one-sided
Measurement range:	0–200 N
Accuracy:	+/- 3 N (0–100 N) or +/- 3 % (> 100 N)
Stiffness:	< 100 N: 2 N/mm, 5 % > 100 N: 2 N/mm, 10 %
Area:	20 x 20 mm
Measurement technique:	Strain Gauge Bridge
Size:	ca. 220 x 80 x 250 mm
Weight:	ca. 2.5 kg

## About us

**Drive Test GmbH** develops and produces test systems, control units and force sensors for the automotive industry for more than 20 years. Based on these experiences, the FM 208 has been developed.