

# Measuring instrument for degree of blackening

testo 338 – mobile, direct-display  
measuring instrument for proof of  
quality on site.

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Mobile, robust portable measuring instrument

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Automatic, direct display of the measurement results

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Quick, easy operation

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Data printout on site

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mg/m<sup>3</sup>

FSN

With the handy testo 338, it is possible to take measurements of the degree of blackening on industrial diesel engines easily on site. The testo 338 is the first mobile measuring instrument which calculates the degree of blackening automatically and without further analysis electronics, and shows it directly in the display as an FSN (Filter Smoke Number) or optionally as a Bosch number or as a soot concentration (mg/m<sup>3</sup>). Thanks to the wireless

data transfer via IrDA or Bluetooth®, the measurement results can be transferred to other instruments or printed out, and are thus immediately saved. The handy design and the easy operation make the testo 338 a practical one-hand measuring instrument for convenient and fast measurements in production, commissioning and maintenance of industrial diesel engines.

# Technical data / Accessories

## testo 338

testo 338, mobile measuring instrument for degree of blackening, including gas sampling probe, TopSafe, mains unit and instrument bag

Part no. 0632 3381



## testo 338



testo 338, mobile measuring instrument for degree of blackening with Bluetooth, including gas sampling probe, TopSafe, mains unit and instrument bag

Part no. 0632 3382

### Sensor types

Units	FSN / Bosch number / soot concentration (mg/m <sup>3</sup> )
Measuring range	FSN / Bosch number* 0 to 2.5 soot concentration 0 to 70 mg/m <sup>3</sup>
Resolution	FSN / Bosch number* 0.01 soot concentration 0.01 mg/m <sup>3</sup>
Repeatability	FSN / Bosch number*: < 0.08 FSN Soot concentration < 1.5 mg/m <sup>3</sup> (0 to 5 mg/m <sup>3</sup> ) < 1.25 mg/m <sup>3</sup> +5 % of m.v. (5 to 70 mg/m <sup>3</sup> )
Test sample volume	0.2 litres (range: 0.2 to 2 FSN) 0.4 litres (range: 0 to 0.3 FSN)
Flow-through measurement	Differential pressure sensor
Optical sensor	Opacity of the filter load in %

\*in reference conditions 1000 mbar, +25 °C

Included in set	Part no.	
Instrument bag for smoke tester	0516 0002	
International mains unit	0554 1096	
Gas sampling probe, penetration depth 240 - 285 mm, hose 1.6 m	0600 7570	
Spare parts	Part no.	
Spare battery 2600 mA	0515 5107	
Spare particle filter (10 pcs.)	0554 1101	
Spare filter paper	0554 0146	
Spare thermal paper for printer, permanent ink	0554 0568	

### General technical data

Rech. battery	Lithium ion
Battery life	approx. 4 h cont. operation
Memory	200 measurements
Measurement period	< 60 s per measurement cycle
Operating temperature	+5 to +45 °C
Protection class	IP 40, TopSafe
Flue gas temperature	Individual measurements up to +500 °C
Positive pressure	up to 300 mbar*
Data interfaces	IrDA / optional Bluetooth

\*a higher measurement inaccuracy occurs at higher pressures

Accessories	Part no.	
Charger for spare battery testo 308 / testo 338 / testo 330-1/-2 LL	0554 1103	
Heat protection for probe handle	0554 0208	
Heat protection shield for installation on probe shaft	0173 0147	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Software „easyEmission“, incl. USB connection cable instrument-PC	0554 3334	