

# Soot generator testo REXS – Reproducible EXhaust Simulator

testo REXS – for particle testing

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Stable, reproducible particle size distribution with high mass concentrations

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Combustion soot particles with similar mobility distribution to diesel emissions

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Soot volume concentration is largely unaffected by pressure increase

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Easy to use

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Built-in mobile 19-inch rack

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The testo REXS is a soot generator which was specially developed for the development and testing of particle filters. Unlike a diesel combustion engine, the testo REXS not only generates a reproducible, constant and stable exhaust gas flow, but also soot nanoparticles in particular. This is a key advantage for filter manufacturers for measuring the effectivity of particle filters for combustion engines of motor vehicles, ships, rail vehicles or cranes.

This also plays an important role in the calibration of test benches for engines. Moreover, the testo REXS is also ideal for testing and certifying air inlet filters, cab filters and dust extraction devices. This makes the testo REXS the perfect instrument for more precise, more efficient and more reliable particle generating.

## Technical data

Aerosol	Soot nano-particles produced in the combustion process
Particle mass produced	From 1.5 g/h at 80 nm particle diameter to 2.5 g/h at 110 nm.
Number concentration of particles	$10^7$ – $10^8$ particles/cm <sup>3</sup>
Particle size	Monomodal logarithmic distribution with a standard deviation of approx. 1.5 to 1.7 for particle sizes between 30 to 60 nm Monomodal distribution with a standard deviation of approx. 1.8 to 1.9 for particle sizes between 60 to 120 nm
Output flow testo aerosol	300 to 700 lN/min at different particle diameters, approx. 150 lN/min in standby mode
Counter-pressure	Up to 500 mbar over atmospheric pressure
Morphology	Similar to diesel soot
Calibration	Gravimetric analysis of aerosol filter samples SMPS size distribution analysis
Gas supply specifications	<ul style="list-style-type: none"> <li>• C<sub>3</sub>H<sub>8</sub> (propane), purity 99.95 % (Class 35), up to 2 lN/min at 5 bar</li> <li>• N<sub>2</sub> (nitrogen), purity 99.999 % (Class 50), up to 2 lN/min at 5 bar</li> <li>• Compressed air, dry (&lt; 2% rel. humidity at +23 °C, dewpoint ca. -28 °C)</li> </ul>
Installation	<ul style="list-style-type: none"> <li>• Mobile 19" rack</li> <li>• Lockable casters</li> <li>• Holding brackets for 3 compressed air cylinders (10 litres each)</li> <li>• Aerosol output position adjustable</li> <li>• Notebook and accessory compartments</li> </ul>

## Ordering data

Description	Order no.	
testo REXS – Reproducible EXhaust Simulator	366	
Annual servicing (without calibration) for testo REXS	2366	
<b>Accessories and spare parts</b>		
Filter set for testo REXS	2050	
Ignition electrode	1689	
MFC REXS 2 lN/min C <sub>3</sub> H <sub>8</sub>	R1304	
MFC REXS 2 lN/min N <sub>2</sub>	R1305	
MFC REXS 50 lN/min air	R1306	