

MICROTROL™ 5

The MICROTROL 5 is a high precision partial flow tunnel for measuring the mass of carbon particles from diesel exhaust gravimetrically. With versatile installation facilities and an excellent correlation with full flow tunnels the MICROTROL 5 is an unmatched appliance for engine research, development and certification as well as for fuel- and lubricant research.

Regulations

The MICROTROL 5 is in full compliance with:

2005/55/EG (Recast to 88/77/EWG) with extension 2005/78/EG and 2006/51/EG

2000/25/EG

ECE-R49

ECE-R96

ISO 8178

ISO 16183

2004/26/EG (Recast to 97/68/EG)

40 CFR Part 86 §1065 and §1310

The system can be used for certifying engines for steady state test cycles.

As the mass flow is very quickly controlled by a venturi with a response time <250 ms, the system is best suited for transient test cycles (ETC, US FTP, NRTC).

Filter temperature according to 2005/55 EC (formerly 88/77 EEC), ISO 16183, dir. 97/68 EC, US 2007

Filter holder diameter 70 mm, according to EEC 91/542 (in its current version), ISO 16183, dir. 97/68 EC or diameter 47 mm according to US 2007

Particulate pre-classifier according to 40 CFR part 1065 is available

To satisfy the request of many users in manufacturing, research and development for a further automation of test processes, NOVA Systems developed their own Automatic Filter Changer

Key features

compact system: designed in one rack on four turn able wheels with integrated particulate sampling line and integrated slew able tunnel

can be moved easily from one test cell to the other

the integrated heat exchanger and heated filter chamber are standard design and enable the conditioning of dilution air acc. ISO 1618/3 or US 2007 and best repeatability of the measuring results

3 identical filter units, which can be selected freely as measuring or bypass filters, ensure the same measuring conditions during the changeover from bypass to measuring filter for each step of the steady state test cycle

transient measuring conformal to CVS

a response time < 250 ms allows online-control measuring (optional controlling with look-ahead also possible)

sampling filter acc. to US 2007

separate temperature measuring on each sampling filter

wide variety of applications in research, development and testing of most different types of diesel engines

calculation of dilution with measuring of CO₂ concentration

RS 232 interfaces and separate analogue inputs for CO₂ analysers available

technical specifications

dimension W x D x H 500x600x1950mm

weight 250 kg

flow rate 60...100 l/min

power supply 220V, 50Hz, 16A

compressed air 6...8 bar, free of oil, dust and water

Please contact us for your individual quotation !

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