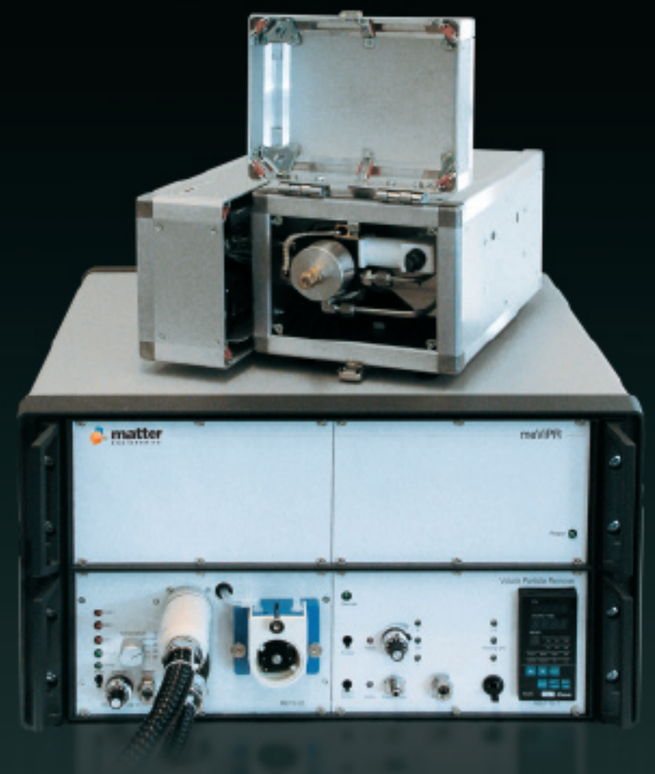
meViPR

meViPR is a complete, PMP-compliant particle counting system for future type approval of passenger cars. It is especially designed for the needs of the automotive industry, has a compact, rugged design, and is easy to operate.



Preliminary Technical Specifications

Sampling, Dilution	With rotating disk diluter type Matter Engineering MD19-2E
Dilution ratio	Adjustable Range 1:15 … 1:3000
Hot dilution	Heated dilution block and dilution air
Heating temperatures	80/120/150° C adjustable
Mechanical set up	Dilution on separate exhaust probe for connection to sampling probe
Air supply part Specification	With air supply Matter Engineering Type ASET-15
Air Supply primary dilution	1.5 normative liter per minute
Secondary dilution factor	1 - 11
Thermal Conditioner part	With Evaporation tube Matter Engineering Type ASET-15
Heating temperature	Ambient – 400° C/752° F
Particulate Measurement	
Number concentration	By CPC, any model with RS 232 serial interface
Accuracy, size range, response time Resolution	Depending on CPC model
System control	With digital control unit type Matter Engineering CU1-ET
Functionality	Control of dilution, thermal conditioning and sensor Measurement with real time data recording of connected analog and serial signals. Logging speed adjustable up to 2 data sets per second
Software	Standard software will be available for legal transient and constant load tests on vehicles and combustion engines
Remote PC-operation	Ethernet communication (TCP/IT)
Additional measuring signals	5 free analog inputs can be used to connect additional sensors and signals
Mechanical set up	All 19"-modules mounted in mobile 19" cabinet or rack
Dimensions	Standard type 55 (84 HP) x 30 (6U)x 60 cm (without pump & CPC)
Weight	Standard type 60 kg
Supply voltage	90 – 260 V AC, 50/60 Hz, power consumption max. 300 VA (without pump & CPC)

matter ENGINEERING

PMP-compliant particle counting system

meViPR

With Euro “5plus” to come in 2011, the European Commission will introduce new particle emission limits, based on the number concentration of solid particles. The instrumentation and protocol needed for this measuring task was developed in the UN Particle Measurement Programme, PMP.

meViPR represents a measuring system which is designed to be fully PMP-compliant. It is the latest generation of equipment based on the famous “Golden Instrument” – reference during the crucial phase of PMP – and uses the award-winning, patented “Volatile Particle Removal” technology, while more advanced in terms of operation, automation and ease of use.

It consists of several modules: a coarse particle pre-classifier; a volatile particle remover (VPR); a condensation particle counter (CPC); and a data acquisition unit for data recording and remote control. The VPR itself ensures that only solid particles arrive at the CPC, by means of two independent dilution stages with an evaporation tube in between. The data acquisistion unit is designed to communicate with a dedicated PC and is prepared for additional analog signal input and output in up to five independent channels, e.g. trigger and measuring signals from test benches or additional sensors.

meViPR supports automotive engineers in many other applications beyond type approval. Due to its versatile hardware design, it offers the flexibility needed in automotive research and development environment. meViPR is compact and easy to transport between locations; special configurations can be used in mobile applications. The same piece of equipment can be connected to a full-flow CVS tunnel or directly to the tailpipe of an engine under test, simply following the daily changing needs without further hardware adjustment. Absolute emission measurement is just one option - relative measurement, e.g. when characterising filters or other exhaust aftertreatment systems, is just a switch away.

meViPR – your test bench mechanics will like it, your service technicians out in the field can‘t go without, and your development engineers will love it!