

ExIS Newsletter, December 2012

Preamble

As Christmas is approaching, it is time to wrap up this year and to summarize the latest news from our partners and general news of general interest in the business. Our breaking news in this newsletter is the renewed interest in Dekati's DMM instrument and DEED dilution system.

(Tip: click on the headlines below to navigate to the section of interest in the document.)

Headlines

[Dekati DMM and DEED in automotive measurements](#)

Dekati's BOLAR™ instrument is the first commercial instrument that can separately detect negatively charged and positively charged particles.

[Pegasor update](#)

The new integrated measurement unit Mi2 and an air supply unit have been launched. Furthermore, a size-insensitive calibration and operation for particle mass is provided with new software.

[Altitude simulation at Control Sistem's Testing Center](#)

Control Sistem's Engine Altitude Conditions Simulator (EACS) is available for testing at Control Sistem's Testing Center. EACS is used both in the engine test cell and on the chassis dynamometer.

[New HEI diesel epidemiology project](#)

HEI is launching a new project to assess the health effects from diesel exhaust.

[Gasoline particle filter \(GPF\)?](#)

Do we need particle filters also on gasoline/petrol engines?

[Conferences, exhibitions and workshops](#)

An updated list of conferences, exhibitions and workshops where we will participate is provided.

[Merry Christmas & a Happy New Year](#)

ExIS office will be closed between Christmas and New Year's Eve but we will occasionally read our e-mails and may be available on phone during this period.

Dekati DMM and DEED in automotive measurements

Dekati's DMM-230a and DEED instruments have received renewed attention from the automotive industry during the last year. One example is that a major car manufacturer, which already has had 7 units in operation for some years, recently purchased 12 new units. For sampling and dilution, Dekati's DEED has been chosen.

There are several reasons for this choice. Probably the most important is the durability and reliability of the DMM instrument. Contemporary experience shows that the cost of annual parts and service is less than \$ 600. In direct comparison with competition, this is extremely low. Another reason is that DMM is better suited than any other instrument for measuring on GDI engines, since DMM measures effective particle density on line, which is crucial for PM measurements when particle size might vary significantly. Furthermore, most tailpipe PM from DPF-equipped vehicles is not soot but DMM has the advantage that it can measure any type of aerosol. In addition, DMM has almost one order of magnitude better sensitivity than the competition, which is crucial at low PM levels.

The DMM+DEED system has been integrated into the Horiba test cell system along with other test cell systems. With this upgrade, DMM+DEED can be utilized continuously without the need for specially trained operators.

Please [contact us](#) for more information.



[DMM brochure](#)

[DEED brochure](#)

Pegasor update

First deliveries of Pegasor Mi2

The first deliveries of the integrated Pegasor Mi2 units started in December 2012. We congratulate Pegasor to this achievement and appreciate all the efforts they have put down to make this happen! Further information is included below.



Pegasor Mi2 brochure is available

The new Pegasor Mi2 for measuring particle mass and number incorporates the stand-alone Pegasor M™ sensor to an integrated measurement system. In Mi2, all necessary auxiliary components are integrated to secure proper operation of the sensor in all conditions. Read more about the new Mi2 in the brochure and the corresponding presentation.

[Pegasor Mi2 brochure](#)

[Mi2 presentation](#)

New Pegasor software and manuals

The new Pegasor software has been released. Please [contact us](#) for information about downloading and any other matter.

New manuals and additional guiding information is included in the installation. The following documents are available:

- User manual, 2012-05-07
- New user manual, 2012-10-11
- PPS Troubleshooting, 2011
- Getting started, MS PowerPoint presentation, 2012-04-12

In addition to the manuals above, a special maintenance manual is separately available. Please [contact us](#) for access to this document.

Swedish brochure of Grimm EDM 180 & 365 instruments

For those of you who prefer Swedish, we have prepared a brochure of the popular Grimm EDM 180 and 365 in Swedish. For those of you who want more detailed information and /or prefer English, the more comprehensive English EDM catalogue is available.

[EDM 180 & 365 broschyr](#) (in Swedish)

[EDM Catalogue](#) (in English)



Altitude simulation at Control Sistem's Testing Center

Control Sistem's Engine Altitude Conditions Simulator (EACS) is available for testing at Control Sistem's Testing Center. Demonstrations can also be organized for interested customers.

EACS enables simulating various altitudes (-500 to 5 000 m), temperatures (from -30 to +50°C) and humidity. EACS is used both in the engine test cell (see previous news in [ExIS News June 2012](#)) and on the chassis dynamometer.

Please [contact us](#) for more information.



[Control Sistem press release](#)

[Test cell info](#)

[Testing center brochure](#)

[EACS info](#)

New HEI diesel epidemiology project

In our last newsletter we reported on the new IARC classification of diesel engine exhaust as carcinogenic to humans ([ExIS News June 2012](#)). Most data used in this classification came from very, very old engine types that may not be representative of modern engines/vehicles. Now the US Health Effects Institute (HEI) in Boston has announced the launch of a diesel epidemiology project to update its 1999 assessment of the risk of lung cancer in humans from exposure to diesel emissions.

As is often the case when epidemiologists attempt to estimate past exposures - according to the HEI - the question remains how useful these new studies would be in estimating risk to populations in everyday, nonwork environments, a question that is key to future risk-assessment decisions. In view of the recent studies and the continuing questions, as well as in response to requests from its government and industry sponsors, HEI is launching an effort to revisit and update its 1999 assessment. HEI has named a panel this autumn and will organize a workshop in the first half of 2013, with panel deliberations throughout 2013. The final report will be issued in 2014.

For interested readers we also recommend reading reports from the HEI Advanced Collaborative Emissions Study (ACES). The latest report from the ACES study is: "Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity". A link for downloading this report can be found below.

[HEI home page](#)

[Update fall 2012](#) (newsletter)

[ACES study](#)

Gasoline Particulate Filters (GPFs)?

Ever since the introduction of diesel particle filters (DPFs), now and then the debate about particles from petrol engines comes up on the agenda. A corresponding technology for petrol engines is sometimes referred to as GPF (gasoline particle filter, note that the denotation petrol particle filter, PPF, is not often used). The need for such filter is under debate as a recent contribution from DUH and VCD shows.

Deutsche Umwelthilfe (DUH) has published a new press statement headed "PM filter almost completely eliminates hazardous fine dust particles in direct-injection petrol engines". The statement says that DUH and the ecological transport club VCD request the quick market introduction of this health-protective and cost-effective technology - harmful particulate emissions must be avoided not only on the dyno, but also in real driving.

Testing on a BMW 116i at TÜV Nord has been commissioned by DUH and VCD. The vehicle was tested with and without a particle filter, where the filter was aged for 8 000 km on the road previous to testing. The particle number emissions dropped significantly with the filter, while fuel consumption and CO₂ was not affected. The cost in mass production was estimated to 50 € for the filter. Axel Friedrich, a renowned emission expert and former manager at German UBA said: "Particulate filters have the advantage that they act under all traffic conditions and temperatures". The transport spokesman for the VCD, Gerd Lottsiepen said "the filter is the cheapest and most effective technique, almost completely reducing particles in all modes." He called on the automotive industry to quickly solve the problem of ultrafine particles, instead of compromising the health of citizens and for a profit of a few Euros.

Sources:

[DUH](#)

[DUH press release](#)

[VDC](#)

Conferences, exhibitions and workshops

Grimm webinars 2013

We would like to hint you to Grimm's Web Seminars, or "webinars". That is a very cost-effective way to collect information as no travel costs are involved. You can register on the Grimm home page to participate in such a seminar and then you will get a note about when the next possible slot for such a seminar will be.

You will need to install Skype on your computer to follow a webinar. Registration at the Grimm home page is also required. Participation in Grimm webinars is free of charge.

[Grimm webinars, schedule](#)

We wish you a Merry Christmas and a Happy New Year

During the days between Christmas and New Year, the staff at ExIS will be on vacation. We will continuously follow e-mail and answer the phone most of the time during this period but we may not always be able to respond as promptly as we would wish.



You are always welcome with questions and we are happy to send you our newsletter.

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Best regards,

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ExIS AB

ExIS represents the Finnish company PEGASOR, the German company TOPAS, the Swiss company MATTER ENGINEERING, the Italian company CONTROL SISTEM and the French company ECOMESURE in the Scandinavian and/or Nordic countries. We also represent the Finnish company DEKATI in Sweden and Norway and the German company GRIMM AEROSOL TECHNIK in Sweden. Detailed information about these companies and their products can be found at our [home page](#).

ExIS provide equipment and instruments for sampling, dilution and measurement of particles in air, exhaust and other gases. Our customers are at universities, research institutes, municipalities, hospitals, automotive industry, shipping companies, combustion applications, electronic industry, mechanical industry, metallurgical industry, process industry, pharmaceutical industry and filter manufacturers.

[More information](#)

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