

# Feeling the Squeeze?



## Try the UpRight™ TM12

- Drives easily through a single doorway
- Easy step on, step off
- All steel, rental-tough chassis
- Ideal for construction & maintenance applications



the **UpRight**  
alternative

Visit  
**UpRight**  
at Bauma 2010  
Stand F11/1103/2  
Outdoor Area

[www.upright.com](http://www.upright.com)



Días de

# ELEVARTE

MADRID - 17 y 18 septiembre 2010

el SHOW de las PLATAFORMAS

## COME AND ENJOY the Art of Elevation in SPAIN!

September 17th & 18th  
Madrid



### WHAT IS EXHIBITED?

- All types of Mobile Elevating Work Platforms
- All types of Mast Climbing Work Platforms
- Medium Sized Mobile Cranes
- Telehandlers
- Mini Cranes
- Safety Equipment
- Services
- Spare Parts and Accessories



### WHO IS EXHIBITING?

- Manufacturers / Dealers
- Rental Companies
- Spare parts providers
- Service providers
- Insurance brokers
- Second hand sales companies
- Safety equipment providers
- Financial services
- Auction Companies
- Trade association

The best place  
to make business  
in Spain nowadays

### Do you want to participate?

Contact with the Elevarte Team:

[espana@ipaf.org](mailto:espana@ipaf.org)  
[macarenagarcia@gilusan.com](mailto:macarenagarcia@gilusan.com)

An initiative by:



[www.elevarte.es](http://www.elevarte.es)

# Innovative particulate and emission regulation solutions

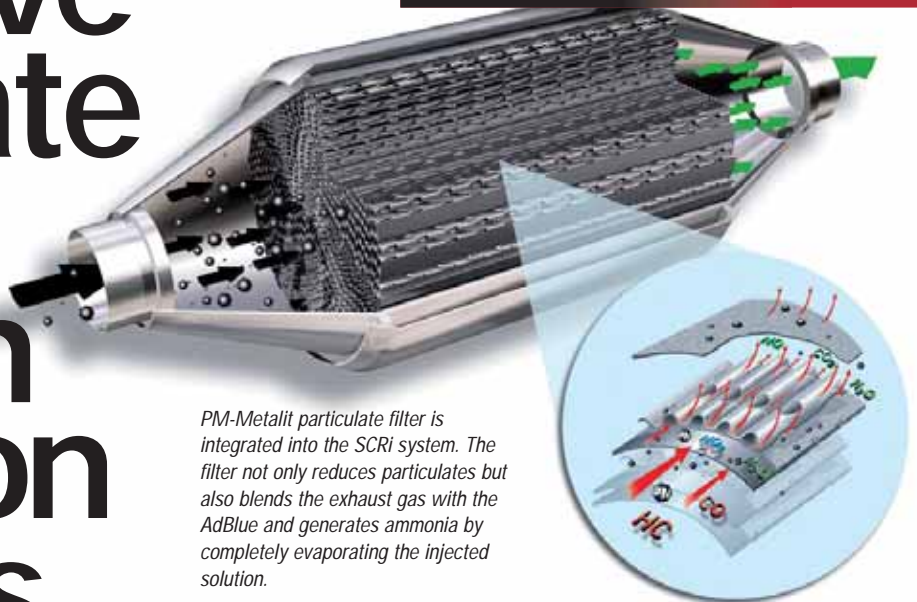
From 2011 construction machinery will have to meet a soot particle limit (PM) of 0.025 g/kWh as specified by EU stage IIIB. This represents a reduction of at least 87 percent compared to stage IIIA. At the same time nitrogen oxide (NOx) emissions will be limited to 3.3 g/kWh for engines up to 130 kWh and to 2.0 g/kWh for larger engines, a reduction of 50 percent compared to stage IIIA.

While it is possible to meet the requirements of stage IIIA with engine-based measures alone, technology for stage IIIB will need to include exhaust gas after treatment with catalysts and/or particulate filters. In engines up to 130 kW the nitrogen oxide limit can easily be met through engine-based measures. Particulate emissions from these engines typically have to be reduced by around 40 to 60 percent.

Emitec has developed the PM-Metalit, a continuously regenerating particulate filter, which has already proven itself in production cars and trucks. Thanks to its compact size it can be integrated in the silencer close to the engine. The all-metal filter has been designed to be maintenance-free for the service life of the machine.

It is also introducing the innovative SCRI system that reduces diesel

PM-Metalit particulate filter is integrated into the SCRI system. The filter not only reduces particulates but also blends the exhaust gas with the AdBlue and generates ammonia by completely evaporating the injected solution.



The AdBlue dosing system for SCR and SCRI applications, consists of an AdBlue tank, a delivery pump, control valve, injection unit and an electronic control system with associated sensors and pipes. The system can operate autonomously, that is, independently from the engine management system.

particulate and nitrogen oxide (NOx) emissions. The system combines the Metalit particulate filter with its selective catalytic reduction (SCR) process to reduce NOx emissions. Small, precisely adjusted quantities of an aqueous urea solution (AdBlue) are injected into the exhaust gas and converted to

ammonia, which is then used to convert the nitrogen oxides in the catalyst to form the natural components of air, that is, nitrogen, water and carbon dioxide. The company says that the system is 30 percent more compact than previous systems and can fit inside most engine bays.

## Torque control increases efficiency

Eaton has introduced a version of its 420 pump with hydro-mechanical torque control which automatically senses heavy loads and adjusts hydraulic fluid flow accordingly. The new pump is intended for moderate-flow, medium-pressure mobile applications such as telehandlers, rough terrain forklifts and telescopic booms which operate at up to 280 bar continuously. To accommodate

the new torque control, the pump housing was redesigned and a case-to-inlet check valve added to improve cold weather operation and provide added protection to the seals and rotating group. The new torque control works in parallel with the standard compensator, using a special mechanism to replace the control piston. Other design changes have decreased airborne noise to a typical 76 dBA at 1,800 rpm and 207 bar, providing an environmental benefit both to the operator and those working around the vehicle.

Eaton's new 420 pump with hydro-mechanical torque control.

Productivity is enhanced by increasing the speed with which the vehicle function is performed due to flow rate changes made by the torque control system. For example, raising a heavy load with a set of forks on a telehandler places a significant demand on the hydraulic pump and system. To prevent engine stalls without limiting the telehandler's lifting capacity, manufacturers not using torque control would be forced to use a smaller displacement pump that significantly slows the operation of the forks. Torque control automatically senses heavy loads and adjusts flow accordingly. Limiting the flow in high pressure situations limits the torque the pump can apply to the engine and, as a result, avoids the corner horsepower point and prevents the engine from stalling. It also allows for higher flow and quicker operation when the set of forks is empty, which means higher productivity."

enquiries

To contact any of these companies click on the 'Access & Lifting Directory' section of [www.vertikal.net](http://www.vertikal.net), where you will find direct links to the companies' web sites for up to 12 weeks after publication.

To have your company's new product or service featured in this section, please send in all information along with images via e-mail to: [editor@vertikal.net](mailto:editor@vertikal.net) with 'Innovations' typed in the subject box.