

Control and Regulation

Mechatronic solutions to reduce emissions.



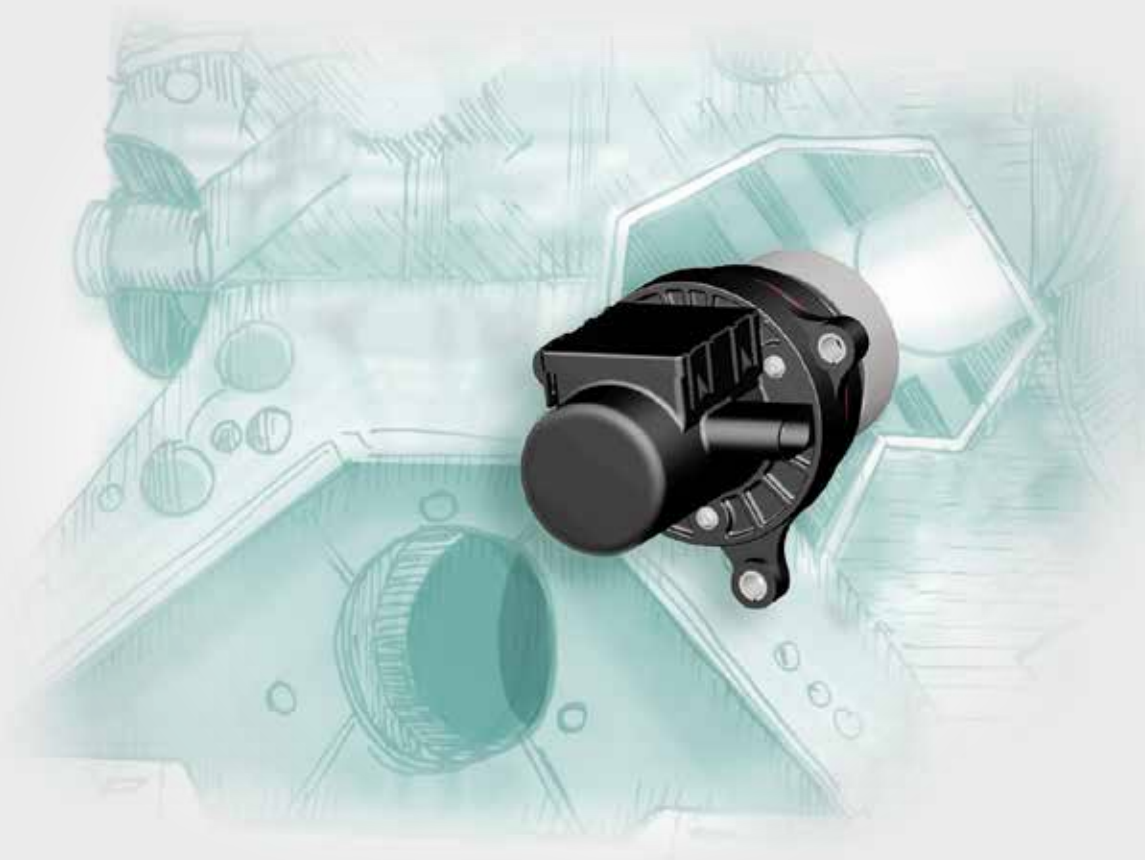
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The interaction of mechanical, electronic and IT elements is usually described by the generic term mechatronics. Woco also develops and produces product solutions for this category.

Specifically, the overriding topics in the areas of thermal and media management, in addition to electrical actuators with integrated sensors, require communications interfaces to basic

control devices of the vehicle architecture. Multifunctional, integral solutions already contribute to reducing CO₂ emissions with lower space requirements and use of materials.

At Woco, applications can be found in the control and regulation of turbochargers, air intake management and coolant supply, so-called thermal management.



Downsizing on combustion engines make little sense and is not effective without charging technology. Downsizing allows comparable engine performance and especially torques with reduced cylinder capacity and less cylinders.

Woco provides pneumatic control and regulation elements for turbochargers.



Electro-Pneumatic Pressure Transducers (EPT)

An electric PWM (pulse width-modulated) signal is translated into a proportional pneumatic pressure signal. This signal is required to control pneumatic actuators and thus continuously regulate displacement.

The main product characteristics are:

- Optimized temperature compensation from -20°C to $+125^{\circ}\text{C}$
- Standardized modular concept



Pneumatic Diverter Valve

In overrun mode, this valve opens a bypass connection between the discharge and suction sides of the turbocharger. The rapid reduction of the dynamic pressure diminishes the rapid deceleration of the compressor wheel, which means that a “turbo lag” is prevented on renewed acceleration.



Pneumatic Actuator with Sensor

The pneumatic part of the actuator converts a pressure difference to the atmosphere into a reciprocating movement of the control rod. In addition, the integrated sensor indicates the position of the control rod to the electronics by means of a voltage signal.

Woco Industrietechnik GmbH

Hanauer Landstrasse 16 | 63628 Bad Soden-Salmünster | Germany

Phone +49 6056 78-0 | Telefax +49 6056 78-7212

info@de.wocogroup.com | www.wocogroup.com



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Woco develops and produces future-oriented technologies based on innovative material, product and process solutions. We achieve our goals by continuously identifying and evaluating trends in markets and technology and through the consistent benchmarking of products, processes and materials. Through close cooperation with universities and research institutions and

continuous exchange and transfer of knowledge with our internal departments, the Woco Group develops market-oriented, future-proof functional solutions for automotive power train and vehicle body. The global presence of the Woco Group ensures proximity to our customers and markets and their specific requirements.