

**ECAD**

Electrically Controlled Air Dryer



**WABCO**

# Electrically Controlled Air Dryer



WABCO is well-known for its robust, highly developed air processing systems. The Electrically Controlled Air Dryer (ECAD) has been developed to meet the increased requirements for processed system air. ECAD shows one of the possibilities for future air processing.

ECAD is electrically controlled via the vehicle's electronic control unit VECU. It completes WABCO's range of market leading air dryers, which also includes electronic air dryers with integrated electronic control (Hybrid Air Processing Unit).

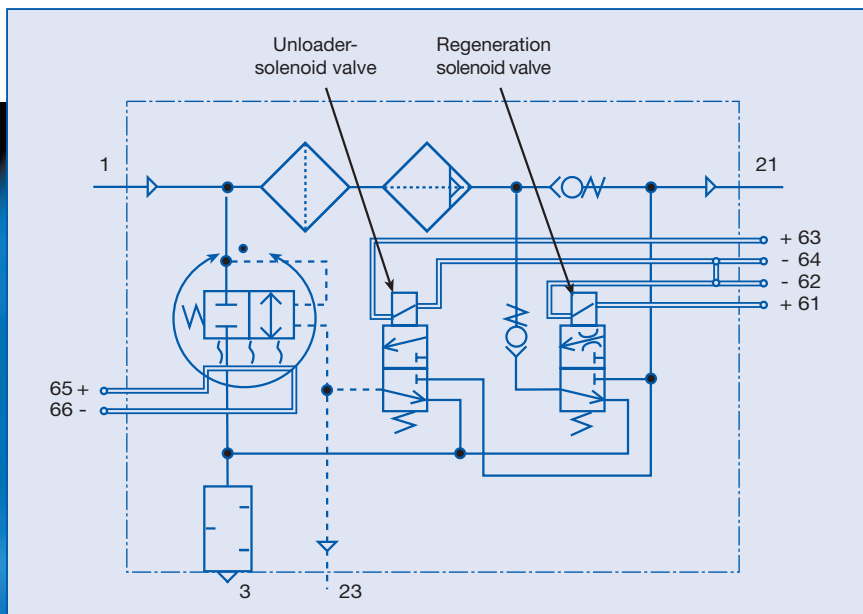
## Operation

The ECAD electric air dryer includes two solenoids, which take over the pressure control function and the regeneration function. Control takes place via the vehicle's electrical system, offering a number of advantages compared to conventional air dryer systems.

Important information for air drying, such as line pressure, engine speed, engine operating time, road speed and ambient temperature is collected by the vehicle's electrical system. Line pressure is adjustable individually via the vehicle electrical system in the range of 8.5 bar to 12.5 bar.

## Regeneration control

- Regeneration takes place out of the system reservoir volume, i.e. no regeneration reservoir is required.
- Intermediate regenerations take place during long delivery cycles, VECU recognises them and then initiates an intermediate regeneration in order to ensure optimal drying during the whole delivery cycle.
- Adapted, extended regeneration cycle or even multiple interval regenerations can be used to offset a long delivery cycle.
- Regeneration after engine stop is possible, thus minimising the danger of condensate freezing at the air dryer exhaust.



### Intelligent compressor control

- Delivery cycle takes place with free capacity, i.e. at zero or negative engine torque (e.g. push cycles).
- Line pressure can be adapted in order to achieve optimal compressor efficiency and critical work rates can be reduced.
- Operating hours and operating status of the compressor can be monitored.

### Intelligent drying

- Monitoring of the dryer's working cycles and flow rate
- Detection of necessary cartridge change and display e.g. on the control panel
- Cartridge change takes place only when it is necessary

The ECAD air dryer includes a 150-watt heater, which reliably avoids freezing of the exhaust valve. In combination with the new generation of air dryer cartridges, ECAD is a highly efficient air processing unit, which not only dries air. It also reliably prevents the braking system and components from damages by oil contamination. Result: Reduction of service costs.



WABCO, the vehicle control systems business of American Standard Companies, is the world's leading producer of electronic braking, stability, suspension and transmission control systems for heavy duty commercial vehicles. WABCO products are also increasingly used in luxury cars and sport utility vehicles (SUVs). Customers include the world's leading commercial truck, trailer, bus and passenger car manufacturers. Founded in the US 135 years

ago as Westinghouse Air Brake Company, WABCO was acquired by American Standard in 1968. Headquartered in Brussels, Belgium, the business today employs nearly 6500 people in 29 office and production facilities worldwide. In 2003, WABCO contributed US\$ 1.358 billion to American Standard's total sales of US\$ 8.568 billion.

**Website: [www.wabco-auto.com](http://www.wabco-auto.com)**

