

Engine

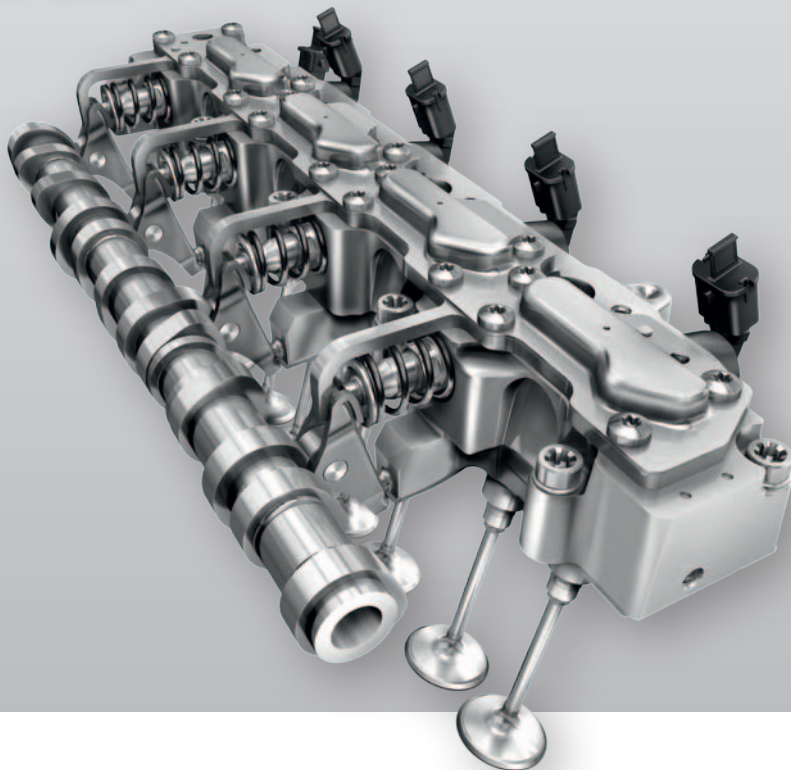
Chassis

Transmission

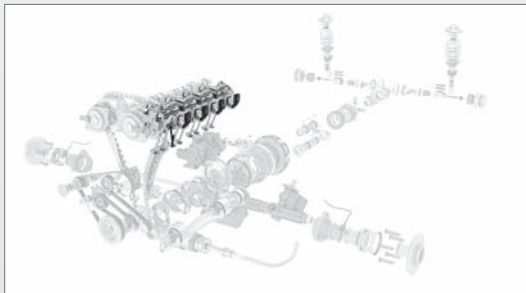
E-Mobility

SCHAEFFLER

UniAir



UniAir – Fully-variable Valve Train System



Description

- Fully-variable electro-hydraulically actuated valve train system
- Mechanical-hydraulic actuator driven by a camshaft
- Integrated electric-hydraulic switching valves
- Valve control software integrated into the entire engine control system

Functional advantages

- Valve lift and valve opening period are continuously variable
- Improved charge cycle, dethrottling and filling capacity
- Multiple valve lifts possible during one revolution (multi lift)
- Individual control of cylinders and valves possible

Customer benefits

- System can be adapted on the inlet side, exhaust side or combined on both sides
- Improvement in torque characteristics over the entire speed range of the engine
- Fastest fully-variable valve train system on the market
- Volume production applications for FIAT (FIRE, TwinAir) and Chrysler (Tigershark)
- Potential for reducing CO₂ and emissions compared to a conventional engine

Valve lift curves possible on the inlet side with UniAir

