

## Innovative Solutions for Large Engines

**Multi Charge Ignition  
for DI Gasoline Engines**

**The Valvetronic  
of BMW – Experience  
from Seven Years**

**Integrated Approach of  
Valvetrain Components**

**Reducing CO<sub>2</sub> by Using  
Rolling Bearings**

**Crank Angle-resolved  
Realtime Engine Simulation**

**Phenomenological  
Mean Value Soot Model**

**Alternative Fuels in  
Comparison with Diesel Fuel**

