

ENGINE EXPERTISE

INNOVATIONS & TECHNOLOGIES



OUTSTANDING DRIV™ TECHNOLOGY



CORIU SEAL™

Optimum sealing performance

Technology highlights

- Welded stopper for improved fatigue resistance
- Conforms to most surface finishes on rebuilt engines
- Enhanced initial gas sealing on start-up
- Easily disassembled

POPULAR APPLICATION

- **Part number** AF5402 / AC5032
OE 038103383DG / 0209X7, 9635967380
Audi A3, A4, A6 1.9 TDI / VW Golf V, Passat, Transporter 1.9TDI / Citroën Berlingo, Jumper 2.0 HDI / Peugeot 307, 807, Partner 2.0 HDI



OUTSTANDING DRiV™ TECHNOLOGY

Nival[®]
FITTED WITH  GOETZE[®] RINGS

DuraBowl[®]

Longer piston life circle

Features & benefits

- DRiV™ OE technology
- Re-melted combustion bowl strengthening design
- Endures temperatures > 400°C and cylinder pressure between 200 – 250 bar
- Increases piston life by several times under severe operating conditions
- Applicable if fitted as Original Equipment

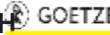
POPULAR APPLICATION

- **Part number** 87-427400-20 / 87-427400-30
OE A6420307617 / A6420307717
Mercedes-Benz E/S/CLS350CDI



OUTSTANDING DRiV™ TECHNOLOGY

Nival®

FITTED WITH  GOETZE® RINGS

ECOTOUGH

Reduced friction, wear and fuel consumption

Features & benefits

- DRiV™ OE technology
- Solid lubricant coating containing carbon fibre and graphite
- Up to 18% piston friction loss reduction
- 0.2 – 0.8% advantage in fuel consumption
- Up to 40% less wear
- Reduction in CO₂ emissions

POPULAR APPLICATIONS

- **Part number** 87-436900-00
OE 036 107 065 EQ
VW Polo, Golf 1.4 MPI 59-63kW 2005
- **Part number** 87-434600-00
OE 11257640166
BMW 1,3,5 series x20i, x28i 2011



OUTSTANDING DRiV™ TECHNOLOGY

ECOTOUGH™ NG NEW GENERATION COATING

Nival®
FITTED WITH  GOETZE® RINGS

Features & benefits

- DRiV™ OE technology
- Improves fatigue strength
- Increases fuel efficiency
- Up to 15% piston friction loss reduction
- Up to 40% less skirt wear
- Reduction in CO₂ emissions

POPULAR APPLICATIONS

- **Part number** 87-450900-00
OE 46336793
FIAT - GSE-T3 / GSE-T4 (Firefly)
- **Part number** 87-450500-00
OE 55267588
FIAT - Multijet II 1.3 JTD Euro 6



OUTSTANDING DRiV™ TECHNOLOGY



Improving the strength against wear

Features & benefits

- DRiV™ OE technology
- Ultra-fine diamond particle embedded chromium coating
- Improving the strength against wear & scuff resistance compared with conventional chromium coatings
- Increased service intervals
Self-lubrication under stress
- Consistently good sealing

POPULAR APPLICATION

- **Part number** 08-447500-00
OE 04L198151
All VW Audi Group 2.0 TDI EA288 2014 onwards



OUTSTANDING DRiV™ TECHNOLOGY

CARBOGLIDE

Increases fuel economy

Technology highlights

- DRiV™ OE technology optimized for highly rated gasoline engines
- Unique multi-layered surface contains tungsten and hydrogenated carbon mid layer with amorphous diamond-like carbon (DLC) top layer.
- 2-3 times the coating thickness of conventional DLC coatings
- Low coefficient of friction than other ring coatings for gasoline engines (nitride, PVD coatings)
- CARBOGLIDE provides very low friction in combination with high wear resistance and superior scuff resistance

POPULAR APPLICATION

- **Part number** 08-437400-00
OE 55571045
Opel Insignia, Astra, Zafira 1.4L Turbo 103kW



OUTSTANDING DRiV™ TECHNOLOGY



Up to 50% less oil consumption and 15% less friction

Technology highlights

- The DRiV™ piston ring range includes more than 60 Goetze LKZ® references.
- LKZ® oil rings unique stepped design provides consistent low oil consumption over the life of engine by reducing carbon build-up on critical parts of the piston.
- Now adopted by the variety of European OE Manufacturers as superior solution for reduced oil consumption and frictional losses.
- Goetze LKZ® rings are an excellent solution to return an OEM LKZ® equipped engine back to original performance.



POPULAR APPLICATION

- Part number 08-446100-00
OE 11257811793
BMW F10 530d, F30 330d

OUTSTANDING DRIV™ TECHNOLOGY



IROX®

Outstanding long life circle

Technology highlights

- Increases bearing shells and crankshaft life
- Reduces CO₂ emission and improves fuel economy
- Cuts friction up to 50% compared to metallic sliding layers
- Suitable for start-stop engines

POPULAR APPLICATIONS

- **Part number** H1328/5 STD
OE 03L 105561, 03L 105591, 03N 105561A, 03N 105591A
Audi Q5 2.0 TDI, VW transporter 2.0 TDI, Seat Leon 2.0 TDI, VW Golf VII 2.0 TDI
- **Part number** 71-5006/4
OE 23611-2F400, 23612-2F000
Hyundai Tucson 2.0L Diesel Turbo
- **Part number** 71-5007/4
OE 23611-2F100, 23611-2F500
Hyundai Santa Fe 2.2L Diesel



OUTSTANDING DRiV™ TECHNOLOGY



LEAD-FREE TECHNOLOGY

Environmentally-friendly engine solutions

Technology highlights

- Comprehensive range of new lead-free bearing materials
- PACE award for supplier innovation
- 18 patents granted globally



OUTSTANDING DRiV™ TECHNOLOGY



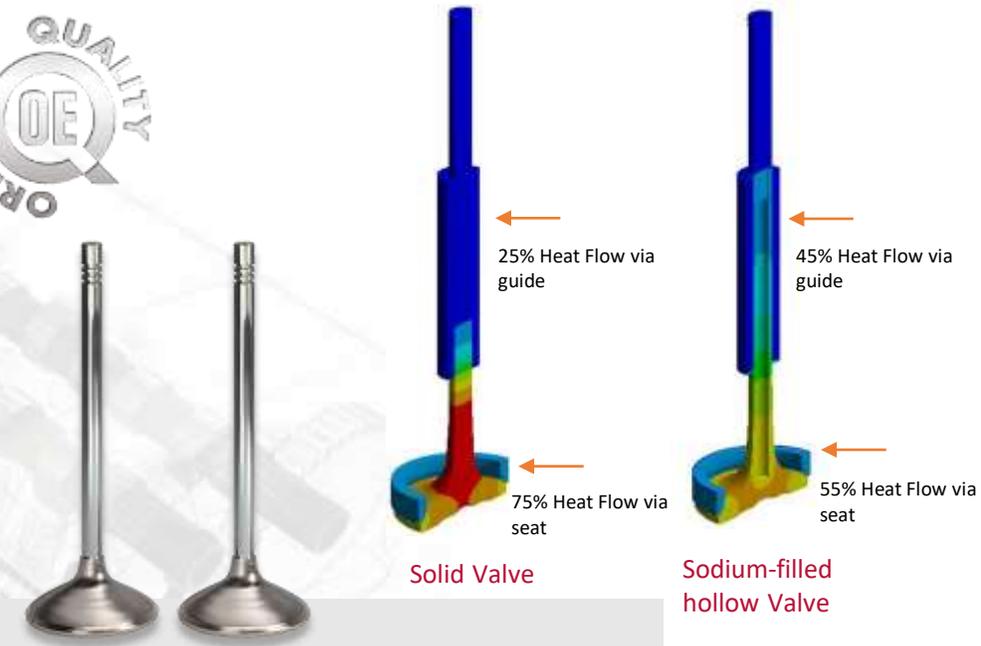
SODIUM-FILLED HOLLOW VALVES



Even distribution of heat

Technology highlights

- Temperature reduction in the under head region between 80°C to 150°C
- Weight reduction by up to 16% is achieved
- Heat dissipation reduced from the seat and transferred through the guide by 20%.



POPULAR SODIUM-FILLED APPLICATIONS

AE Valves	OE	Application
V80003	11347570164	BMW 4.4 V8 550i (F07 F10) 650i (F12 F13) 2007 onwards N63 B44A / B
V80005	2710501127	Mercedes-Benz 1.8 C/E CLASS (W204 W212 C204) M 271 2007 onwards
V80011	03C109611Q	Volkswagen Passat 1.4 TSI Ecofuel Euro 5 2009 onwards
V80021	9807645980	Citroen / Peugeot / Opel 1.2 THP 130 EB2DTS 2014 onwards