

LEVITEX® SEAL

The LEVITEX seal is a cost-optimized, dry gas seal, which can be assembled on the crankshaft of a combustion engine. This concept of dry gas sealing is already in mass production in many different applications, e.g., steam turbines, turbo chargers and compressors.

It operates with two interacting surfaces containing high precision micro-structures. This basic function generates a very stable gas film in the magnitude of a few micro meters, which also prevents oil leakage.

The low viscosity in the gas film leads to a friction close to zero. The high rigidity of this gas film guarantees a safe function under all conditions. Additionally, running in this mode without rigid body contact, the LEVITEX seal has virtually no wear.

Compared with friction-optimized radial shaft seals, there is a reduction potential of approximately 0,5 to 1,0 g CO₂/km emission. Considering future development in global emissions regulations, OEMs' can take a great step towards the specified aims.

VALUES TO THE CUSTOMER

CURRENT

Low friction Simmerring

€ 1,40



INCREASED BENEFITS WITH LEVITEX

Increased pressure stability

Increased cold test tightness

Increased durability

Reduced crankshaft machining

0,5–1,0 CO₂/km reduction

THE TRUE VALUE OF THE LEVITEX SEAL



Total value to OEM

€ 50,00

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FEATURES AND BENEFITS

- Dry gas seal for crankshaft diameters 85 mm and 90 mm
- Shaft speeds of 8.000 rpm and higher are possible
- Higher pressure stability and performance than the standard oil seal
- Coated sealing surfaces
- Operating temperatures -40°C to 150°C
- CO_2 emission reduction of between approximately 0,5 and 1,0 g CO_2/km at NEDC
- Minimized friction torque due to optimized design typically $< 5\text{W}$ friction power @ 2000 rpm
- Wear resistant (also with Start-Stop)
- No oil lubricant is needed
- Reduction of shaft surface finishing compared to a Simmerring

