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Voith BHS PerformanceLine
Integral gear unit
Tilting pad journal bearing

This tilting pad journal bearing has been developed and designed by Voith especially for high-efficiency integral gear units. It is able to significantly reduce power losses by as much as 25%. In addition, its exceptional damping properties expand the scope of potential applications to include integral gears with a demanding rotordynamic layout.

Not only does the tilting pad journal bearing reduce bearing oil consumption by up to 15%, its efficiency gains shrink its carbon footprint and deliver lower operating expenses (OPEX).

Your benefits

- Up to 25% lower power losses
- Up to 15% lower oil consumption
- Minimum carbon footprint
- Up to 130 m/s of circumferential speed
- Lower operating expenses (OPEX)
- Easy retrofit

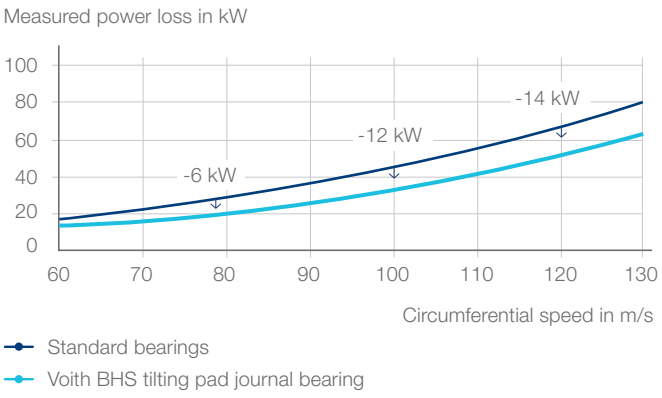
Smooth operation and easy to retrofit

The tilting pad journal bearing improves the overall efficiency of the drivetrain. Featuring the same nominal interface diameter as standard bearings, it ensures easier upgrades and retrofits without any need for gearbox adjustments. A rotor dynamics check is required prior to retrofit.

Ensure smooth and efficient equipment operation with minimized downtime and maintenance costs. A durable performer, the tilting pad journal bearing provides long-term benefits and savings.

Comparison of standard bearings and Voith tilting pad journal bearing with a nominal diameter of 100 mm

The new tilting pad journal bearing successfully reduces power losses. It was developed by Voith in collaboration with the Institute of Tribology at Clausthal University of Technology, a world leader in research on this topic.



Example for gearbox WGC4-170

Significant 22% reduction in power losses compared to standard tilting pad bearings (46 kW)

Oil savings of 15% compared to standard tilting pad bearings (59 l/min)

Annual reduction in CO_2 emissions: **~ 84.6 tons***

Annual electrical savings: **~ €55,200***

*Calculation based on 0.23 kg of CO_2/kWh, €150/MWh and 8,000 h

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