



Voith BHS PerformanceLine

Integral gear unit

Inner housing

Voith has developed a maintenance-free inner housing that is specifically optimized for the geometrical requirements of an integral gear. This robust solution supports circumferential gear speeds of up to 200 m/s and achieves a substantial reduction in power losses. Its purely passive operation means it is maintenance-free and there are no additional interfaces to the system operator.

The inner housing is optimally adapted to each project so as to achieve the best possible savings.

Your benefits

- Up to 30% reduction of ventilation losses
- Reduced carbon footprint
- Lower operating expenses (OPEX)
- Maintenance-free and easy to dismantle

Simple, compatible, accessible

The inner housing does not impair the availability of the gear or the system as a whole, preventing issues that could lead to expensive periods of downtime. Its lower section always remains present in the gear housing. Since only the upper section needs to be raised for disassembly, this reduces the corresponding workload.

Greater operational efficiency

Compared to a final drive unit without an inner housing, the inner housing can:



Reduce ventilation-related power losses by **30%**



At a circumferential speed of up to **200 m/s**

Example for inner housing WGC3-210

29% reduction in ventilation losses compared to gearbox without inner housing (31 kW)



Annual reduction in CO₂ emissions: ~ **57 tons***

*Calculation based on 0.23 kg of CO₂/kWh and €150/MWh



Annual electrical savings: ~ **€37,200***

*Calculation based on 0.23 kg of CO₂/kWh and €150/MWh



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