

More Than you Expect.
VoreconNX – Efficient Control
of Compressors and Pumps



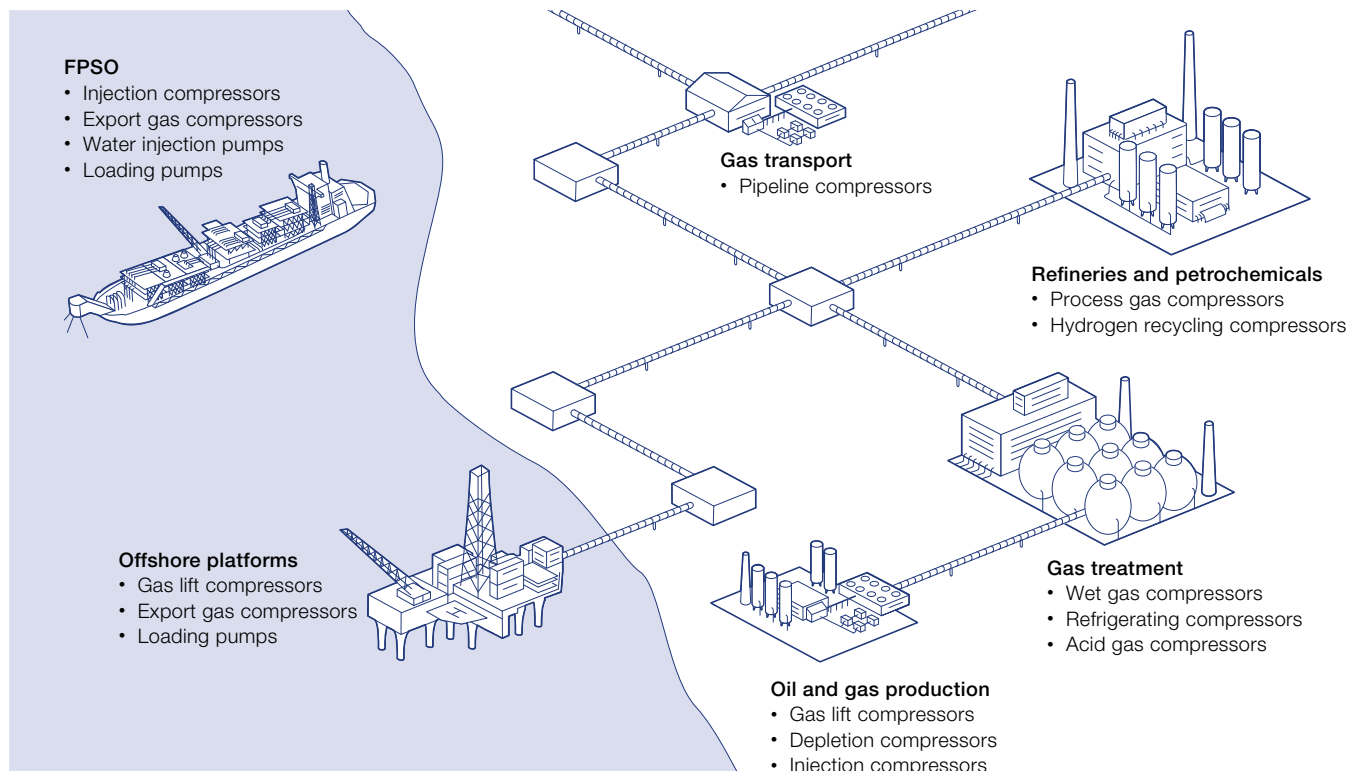
The Next Generation VoreconNX – Our Technology, Your Benefit

The VoreconNX is an advanced development of hydrodynamic power transmission in combination with a planetary gear. Thanks to the adjustable pump guide vanes in the torque converter, it offers an efficiency improvement of up to 8% at part load.

As a leader in hydrodynamic and mechanical power transmission technology, Voith provides you with the means to control the speed of your driven machine in a most efficient and reliable way. Your processes run at exactly the required speed, resulting in optimal efficiency and the benefit of substantial energy savings.

Voith is continually developing new solutions to meet your challenges, especially in the lower power range up to 10 MW. The latest generation VoreconNX is based upon our tried and tested components that have a MTBF of 48 years in long term operation. The modular design of the main components allows for a significantly shorter delivery time. The integrated oil system supplies operating oil for the torque converter while simultaneously providing the drive motor and the driven machine with lubricating oil.

The Vorecon in variable speed drives in the oil & gas industry



The Economic Solution for a
**Lower Power
Range** up to 10 MW

48 years

Mean Time Between
Failures (MTBF)

Up to

8%

Higher Efficiency
at Part Load



Our Technology, Your Output – Key Facts for Main Rotating Components.

1 Torque Converter

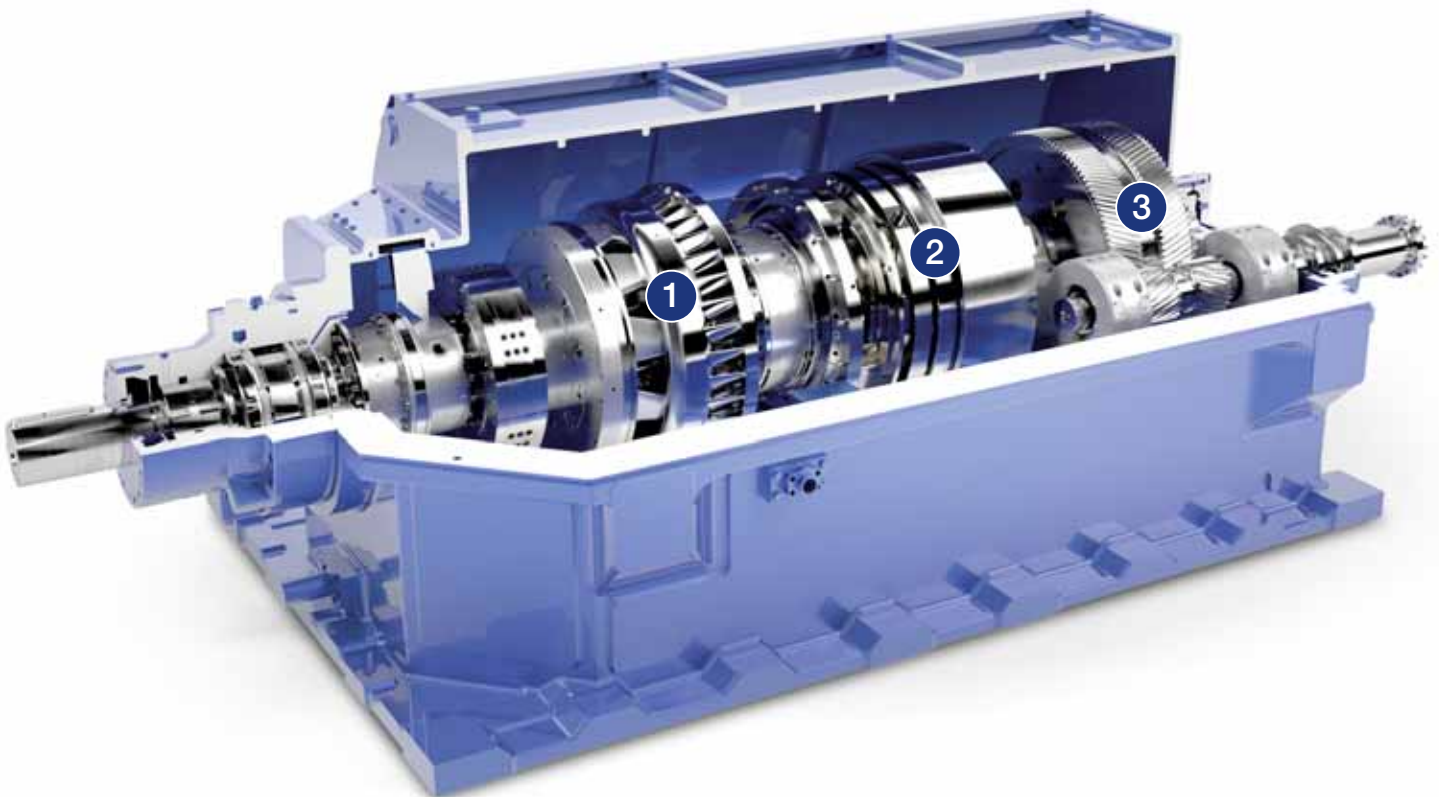
- Design uses adjustable pump vanes, resulting in improved efficiency in part load operation
- Counter rotational torque converter allows for a simpler design, meaning fewer rotating components and bearings with fast and precise speed control. This enables you to react fast to process changes

2 Planetary Gear

- Reduced cost and delivery time via standardized modular components
- Planetary gear uses the principle of power splitting, resulting in overall high efficiency

3 Parallel Shaft Gear

- Tailor-made gear ratios ensure ability to reach customer-specified output speeds
- Parallel shaft gear can be designed to DIN, AGMA or API standards



Functions

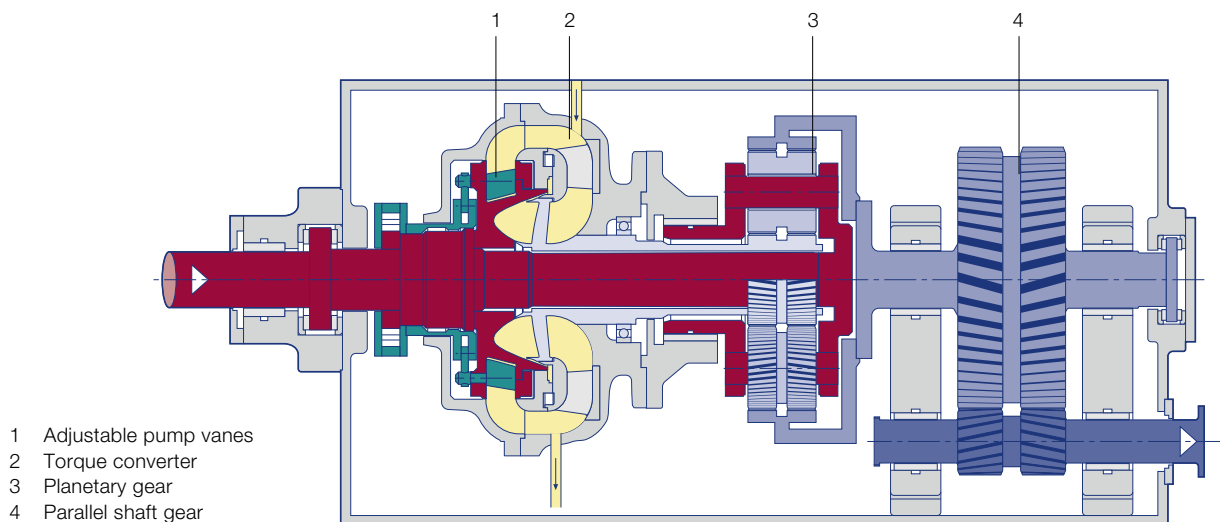
The VoreconNX is located in the driveline, between the drive motor and the driven machine. The input shaft is connected to the planet carrier of the planetary gear. This means that a large proportion of the input power is therefore transmitted to the planetary gear directly, mechanically and almost loss-free.

Additionally, the pump wheel of a hydrodynamic torque converter is coupled to the input shaft and diverts just a small portion of the input power. A liquid flow transmits this power from the pump wheel to the turbine wheel of the torque converter. The diverted power is transmitted to the sun gear

of the planetary gear. The power from the planet carrier and from the sun gear is combined in the planetary gear, where ring gear transmits the accumulated power to the output gear stage.

The required specified output speed is achieved by the gear ratio of the parallel shaft gear. Adjustable guide vanes at the pump wheel control the liquid flow in the torque converter and determine the speed of the turbine wheel. This allows the speed of the driven machine to be infinitely adjusted.

Basic components



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