

# Efficient, economical risk assessment Health Check



Our Service –  
Part of Your  
Business.



# Health Checks tailor-made for the:

- ▷ Power generation industry
- ▷ Oil & gas industry
- ▷ Mining & metals industry
- ▷ Mechanical engineering industry

Helping you make informed decisions with an instant overview of your machine, system or operation is highly valued. Voith Health Check empowers you to make decisions based on hard facts that benefit you and your operation in the long term.



# The cornerstone of a successful operation

A Health Check is a cost-effective examination of the machine, irrespective of the manufacturer or brand, resulting in a condition and risk assessment report. Likewise, spare parts and other areas relevant to maintenance can also be assessed. Please be aware that this doesn't replace regular maintenance; what it does is supply a detailed report on the current operating condition of the unit or system. Furthermore, the Health Check provides indications of the overall condition of the drivetrain.

## The Health Check can be conducted as follows:

- Type 1 At standstill: Visual inspection of machine and its interior, using a borescope, if necessary.
- Type 2 During operation: Evaluation of parameters such as temperature and vibration level.
- Type 3 Type 1 plus Type 2

## Benefits you can expect:

- Limited expenditure
- Minimal time investment
- Maintenance decision and strategy support
  - Reduced downtime
  - Reliable budgeting with minimal unanticipated costs
  - Previously unknown risk identified
- Increase understanding and awareness of different aspects of the machine/system
  - Improved operation and maintenance work
  - Increased machine/system longevity
  - Stronger environment protection
  - Enhanced safety

# Voith Service

## Our product portfolio

**Whether it is mining and metal production, power generation, oil and gas, chemicals, petrochemicals or mechanical engineering – Voith has been a trusted manufacturer and service provider for more than 150 years.**

### Product range

- Speed-controlled and fixed-speed drives
- Hydrodynamic couplings
- Connecting and safety couplings
- Universal joint shafts

### Fields of application

- Gen-sets
- Compressors
- Pumps
- Fans, blowers
- Conveyor belts
- Crushers & mills

Our network of trained service professionals offers conventional spare-parts delivery, engineering problem support, replacement advice, retrofit, performance improvement and, of course, maintenance, repairs and overhauls of equipment. Besides pure engineering, our portfolio also includes calculations, consulting services and turn-key solutions.

# Types of equipment covered:

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## Variable-speed power transmission machines

Voith Vorecon, Voith RK couplings, Voith torque converters and all machines irrespective of the brand.



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## Start-up components

Constant-fill and fill-controlled fluid couplings, irrespective of the brand.



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## Turbo gear units

Parallel shaft, planetary gear and integral designs, irrespective of the brand.



500 – 100 000 kW  
3 000 – 80 000 rpm

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# Health Check

## Scope and application area

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### Availability check

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General risk analysis /classification

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Assessment of machine in location /installation

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Verification of available spare parts

- Visual inspection
- Stock (target-actual comparison)

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Verification of special tools /equipment (if available)

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Check of machine specific know-how of on-site staff

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### Reliability/condition check

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Assessment of the maintenance history and philosophy

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Assessment of the oil maintenance and oil analysis intervals

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Implementation of an oil analysis (after consulting)

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Specific visual inspection of the machine /train condition

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Analysis and assessment of the operation condition

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Basic vibrational analysis during continuous operation / steady state (incl. measurement with portable equipment)

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Visual inspection (through inspection cover and /or endoscope – on-site situation decisive)

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### Additional

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Thermal image analysis

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Noise measurement

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Operation mode for Health Check			Products			
Type 1 (shut-down)	Type 2 (operation)	Type 3 (operation & shut-down)	Turbo gears	Vorecon	RK-coupling	Constant-fill couplings
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
	X	X	X	X	X	X
X		X	X	X	X	X
	X	X				X
	X	X				X

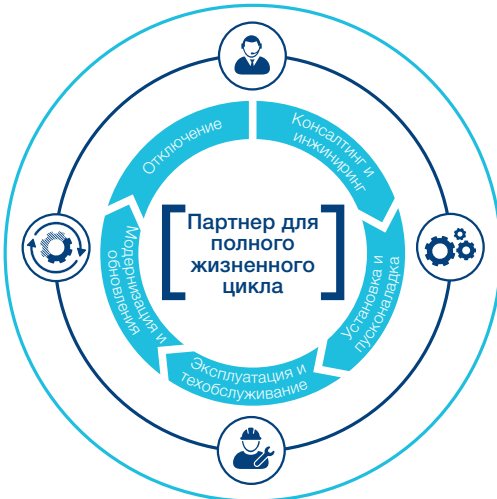
# Our philosophy

The Voith Service philosophy is to offer system operators a comprehensive and broad portfolio of services. This also includes condition and risk assessments for drive machines in industrial applications – both onshore and offshore – worldwide.

Voith provides its full range of services for its own brands of power transmission machines as well as for those of other manufacturers.

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## Service for the complete lifecycle of your systems and components





## Our service

A team of approximately 500 employees provides daily spare parts, maintenance, repair and overhaul support. In addition to this, expert support and solutions in the world of Industry 4.0, such as condition monitoring and on-line service collaboration are also available.



### Technical service & agreements

Our experts – prepared for every service call



### Spare parts & spare units

Reliable quality of an OEM



### Maintenance, repair & overhaul

Linked worldwide and always available



### Retrofit & modernization

Return to state of the art

#### Voith brands

#### Non-Voith brands

<b>BHS</b>	Allen Gears	Maag
<b>BHS Cincinnati</b>	BBC	NARA Liquid
<b>BHS Getriebe</b>	BPEG	Nelson Liquid
<b>Krupp</b>	Dalian	Philadelphia
<b>Voith BHS</b>	David Brown	Renk
	Ebara	Seisa
	Flender-Graffenstaden	Shinko
	Fluidrive	SPEM
	Hitachi	Tacke
	Howden	Twin Disc
	John Brown	Zamech
	Lufkin	etc.



# Voice of the customer

“We have completed a Health Check on a gear unit, Turbo Set #5, in cooperation with Voith. This has proven to be a very good investment.

We have started with this first unit but others are now in process. With service providers like Voith, we can assure a high availability for the plant. The Health Check is a procedure that allows both preventive and predictive maintenance.

It is an excellent method to isolate defects on any gear unit that can be measured against certain parameters before deciding on a repair, modification or complete overhaul [...] The execution of the Health Check appealed to us.

**We could draw important conclusions on the running behavior and current maintenance condition of a gear unit supported by clear data.**

The collaboration was excellent [...] We were totally pleased.”

**Markus Grundmann**

Manager Power Factory, Sappi, Germany

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