



SPINDLELINE

ONLY THE BEST FOR YOUR HIGH-PRECISION
SPINDLE SYSTEM

SPINDLELINE

FOR A PRODUCTIVE LIFE

The intensive research and development work carried out by MOTOREX is reflected in the comprehensive spindle products on offer. At least 10% of the investment into a machine tool is needed for the spindle itself.

Increasingly powerful spindle systems make up the heart of the latest machining centres. If the spindle rotates at a speed between 10 000 and > 45 000 rpm, the spindle bearing and cooling system are pushed to the limit. MOTOREX works closely with renowned spindle manufacturers around the world. They prescribe the use of various MOTOREX spindle products and in doing so guarantee users the highest level of quality.

MAXIMUM PROCESS SECURITY >>>



BEST PERFORMANCE

Nature shows us the way!

Hummingbirds are energy-efficient, can fly accurately at high speeds and can cover long distances easily:

- Can fly 800 km after consuming only 2 g of nectar
- Generate 200 wing beats per second
- Can reach a top speed of 95 kph

MAXIMUM PRODUCTIVITY

- Efficient heat dissipation
- Highly effective corrosion protection
- Excellent biostability
- Excellent compatibility with human and machines

UP TO 400% LONGER SPINDLE BEARING SERVICE LIFE

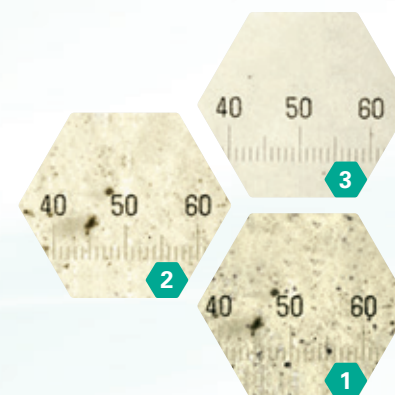
- Outstanding wear-reducing active agents
- Effective EP properties (EP = Extreme Pressure)
- High level of purity and optimal lubrication ensures a constant bearing temperature
- Available in the viscosity classes ISO VG 32 - 46 - 68



SPINDLE LUBE HYPERCLEAN

THE CLEANEST SPINDLE LUBRICATING OIL

MOTOREX SPINDLE LUBE are the most finely filtered spindle oils for lubricating bearings in high-frequency spindles. The cleanliness class has been established as 15/13/10 in accordance with the ISO 4406 standard. At speeds of up to 40,000 rpm and more, every dirt particle in the oil negatively impacts the bearing service life. Only laboratory tests show the effective number of particles contained in the oil as well as the corresponding cleanliness classes.



CLEANLINESS AND HIGH QUALITY IN THE FILTER TEST

1. Unfiltered standard spindle oil
2. Conventional spindle oil 20/18/15
3. MOTOREX SPINDLE LUBE HYPERCLEAN 15/13/10

KEEP A COOL HEAD

WITH MOTOREX SPINDLE COOLANT

The ready-to-use spindle coolant possesses an outstanding thermal capacity, renders various materials passive and provides optimal corrosion protection. These spindle coolants are suitable for cooling high-performance spindles, as well as the servo, torque and linear motors of machine tools.

- Efficient heat dissipation
- Guaranteed water quality
- Efficient protection against corrosion and electrolysis
- Easy to use and reliable application
- Excellent biostability

Optimal spindle cooling reduces warm-up times and increases thermal stability. This minimises the tribological stress by reducing the bearing temperature and thus extends the spindle service life **by 25%**.

➤ 45.000 RPM

The spindle temperature is **up to 5°C lower** than when conventional spindle coolants are used. The cooling of the motor and bearing ensures the best-possible performance and is used keep the entire spindle thermo-stable.



COOL-X

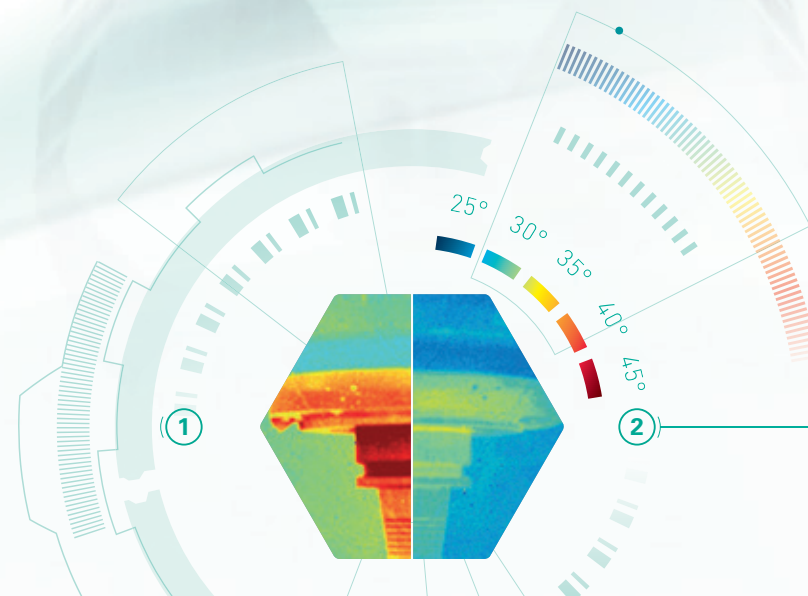
Very efficient, ready-to-use spindle coolant with almost the same thermal capacity as water (4.182 J/g-K). The low viscosity of the coolant ensures that the flow rate is increased and the pumps are conserved. **By reducing the temperature by 3–5°C, the spindle's service life is extended by up to 25%.**

COOL-PROTECT READY

Ready-to-use spindle coolant with a propylene glycol base and corrosion protection for high-performance spindles. The substances that make up the coolant render various materials passive and provide long-term corrosion protection. **Frost-proof up to -24°C.**

COOL-OIL

A spindle cooling oil with a very low viscosity, outstanding corrosion protection properties and excellent heat dissipation.

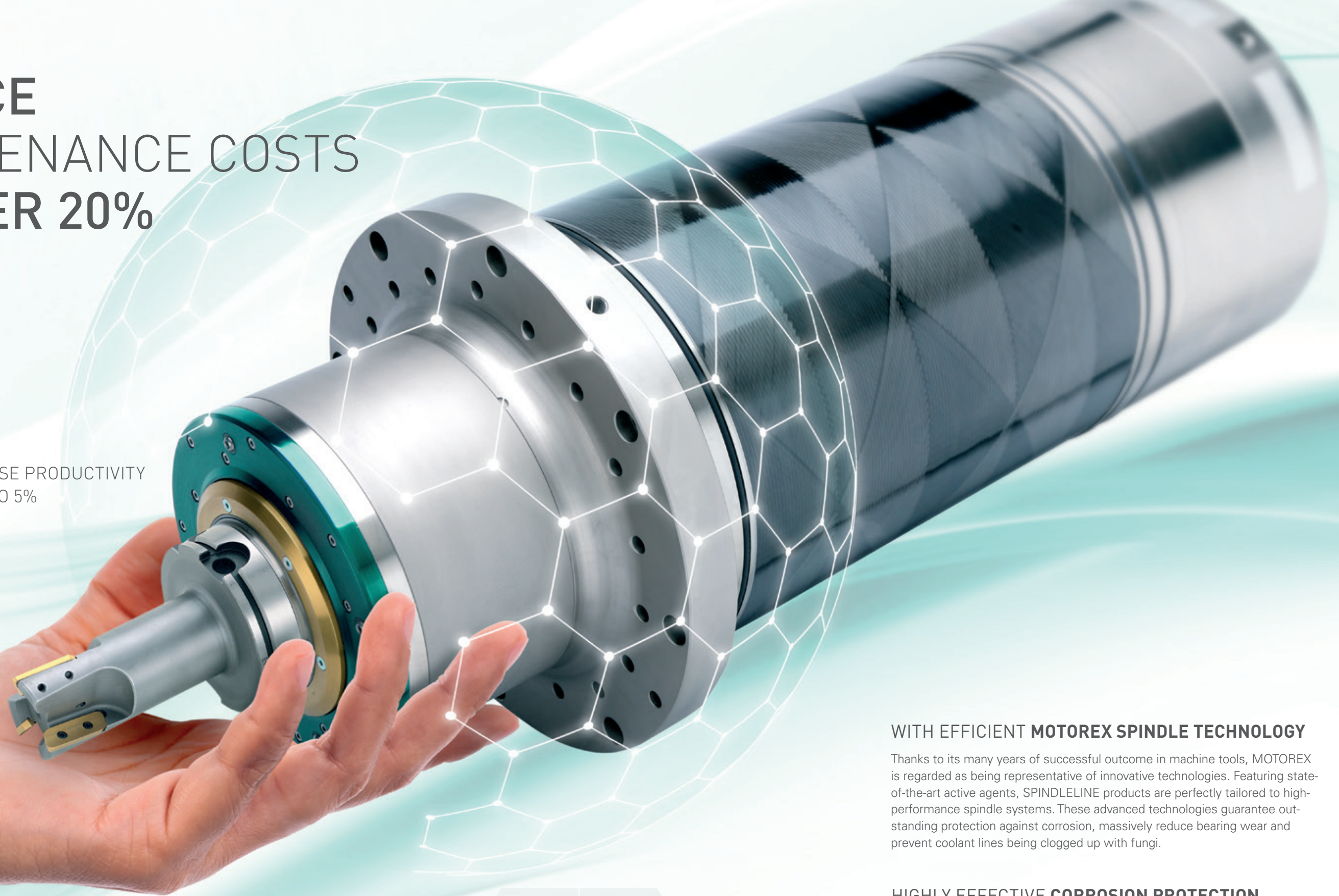


➤➤➤ Spindle thermal image: **1. Conventional spindle coolant**
2. MOTOREX spindle coolant

REDUCE MAINTENANCE COSTS BY OVER 20%



INCREASE PRODUCTIVITY
BY UP TO 5%



WITH EFFICIENT **MOTOREX SPINDLE TECHNOLOGY**

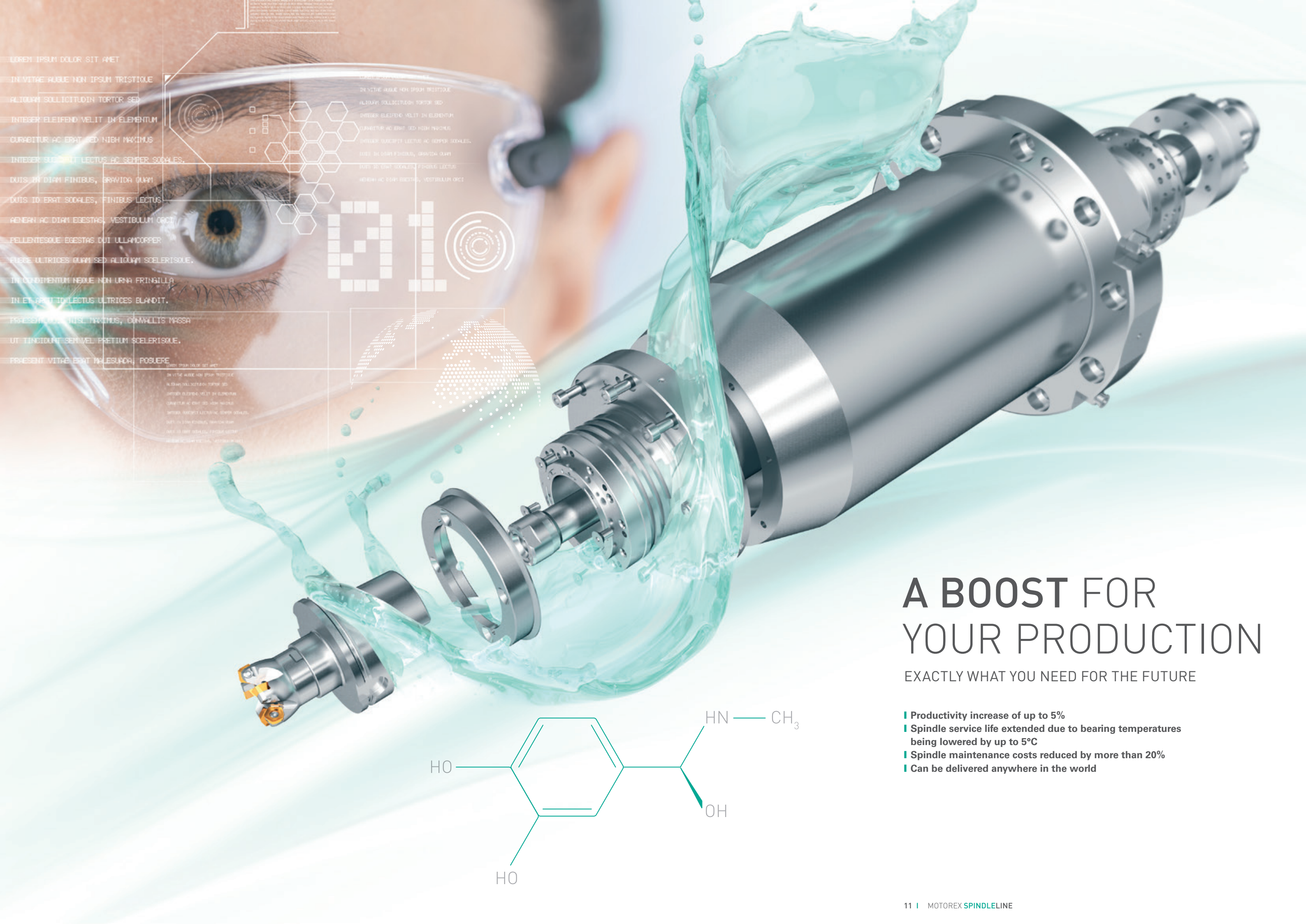
Thanks to its many years of successful outcome in machine tools, MOTOREX is regarded as being representative of innovative technologies. Featuring state-of-the-art active agents, SPINDLELINE products are perfectly tailored to high-performance spindle systems. These advanced technologies guarantee outstanding protection against corrosion, massively reduce bearing wear and prevent coolant lines being clogged up with fungi.

HIGHLY EFFECTIVE **CORROSION PROTECTION**

The ingredients passivate the various materials and protect them from corrosion in the long term.

1. With a coolant of insufficient quality
2. With MOTOREX spindle coolant





A BOOST FOR YOUR PRODUCTION

EXACTLY WHAT YOU NEED FOR THE FUTURE

- Productivity increase of up to 5%
- Spindle service life extended due to bearing temperatures being lowered by up to 5°C
- Spindle maintenance costs reduced by more than 20%
- Can be delivered anywhere in the world



INDUSTRIALLINE

LIQUID EFFICIENCY WITH MOTOREX!



EXPERIENCE SINCE 1917

INDUSTRIALLINE | A wide range of products

- | Spindle oils and coolants
- | Water-miscible cutting fluids
- | Cutting oils
- | Grinding fluids
- | Forming oils
- | EDM oils
- | Slideway oils
- | Anti-corrosion fluids
- | Cleaners
- | All-purpose sprays

SPINDLELINE
SWISSCOOL
SWISSCUT
SWISSGRIND
SWISSFORMING
SWISSFINISH
SWISSGLIDE
SWISSPROTECT
SWISSCLEAN
SPRAYLINE

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