WEISS Spindeltechnologie GmbH – A Siemens Company

# *SPINDLE WITH SIS+*

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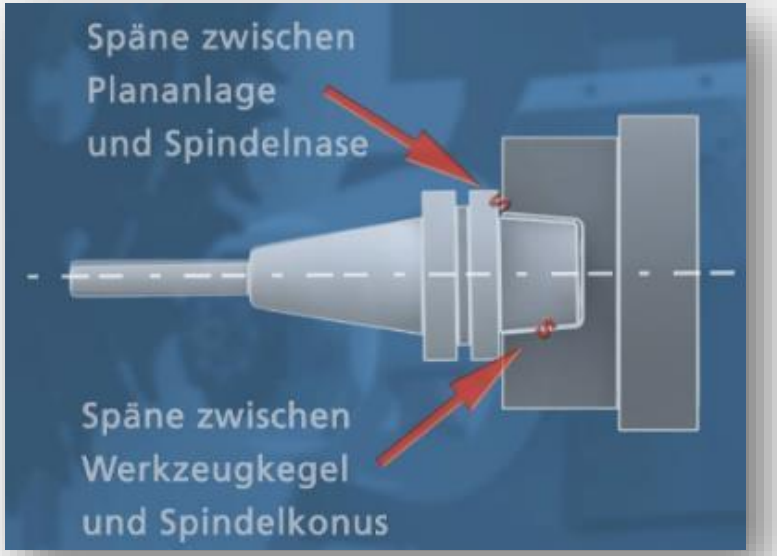
# SiS+

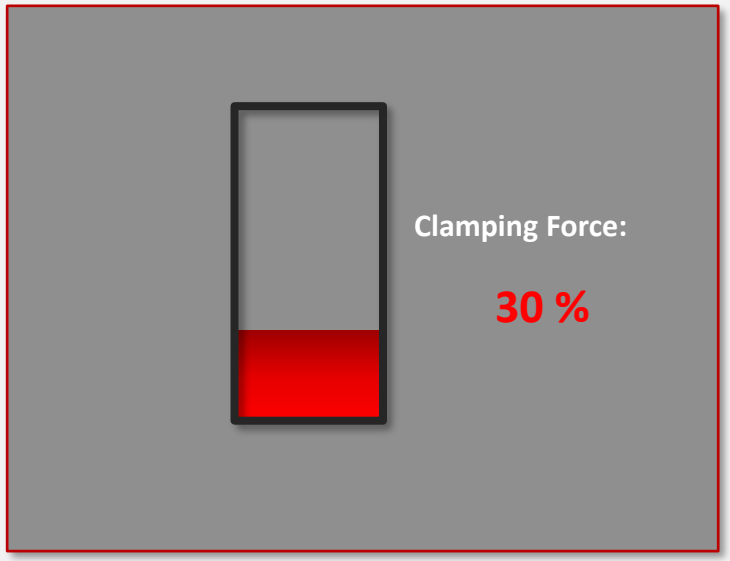
Detection chip in spindle
Automatic clamping force monitoring

# *SPINDLE WITH SIS+*

Chips on face and / or cone side



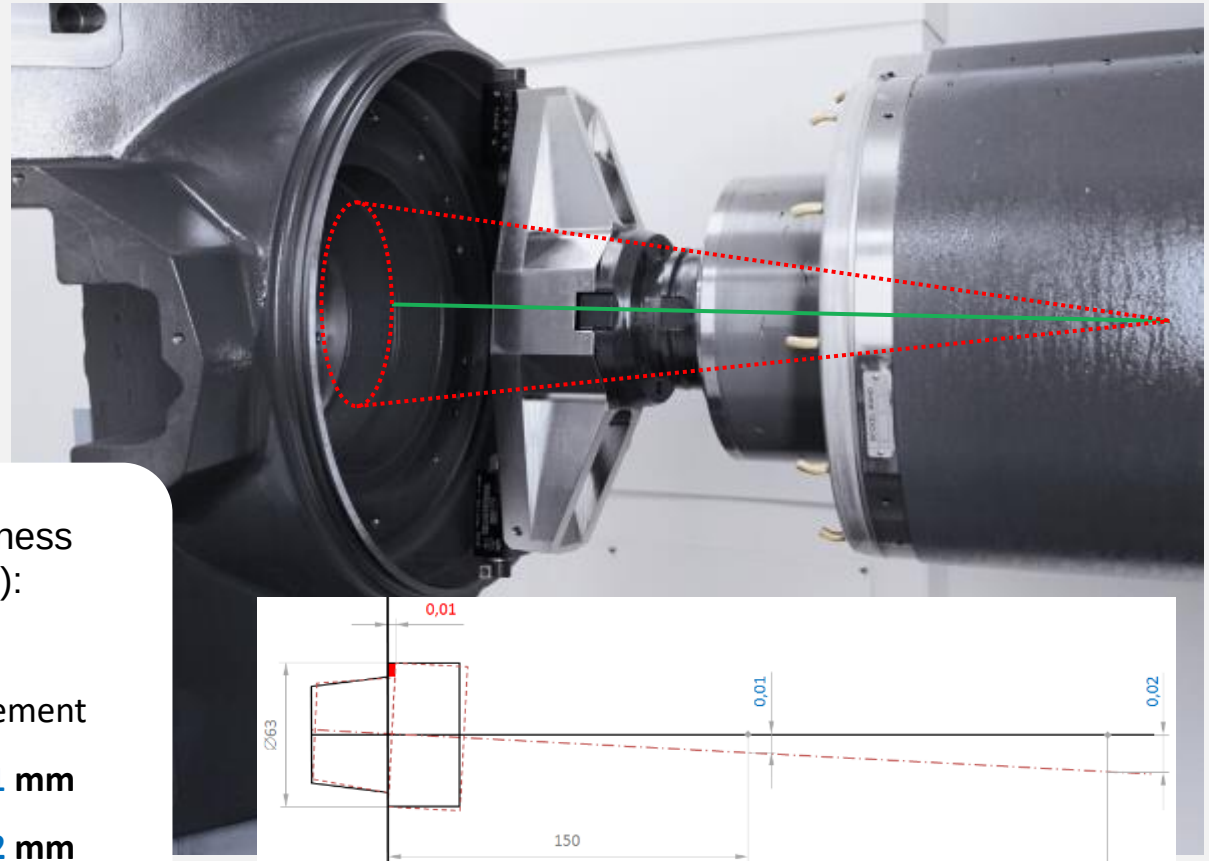

Less tool clamping force




**Results**

Unpredictable interruptions in the machining process and reduction of machining quality

# SPINDLE WITH SIS+
# DTECTION CHIP IN SPINDLE




Detectable chip thickness
Smooth surface(axial):

**Minimum 0,01 mm**

Result -> radial displacement

Distance 150 mm: **0,01 mm**

Distance 300 mm: **0,02 mm**

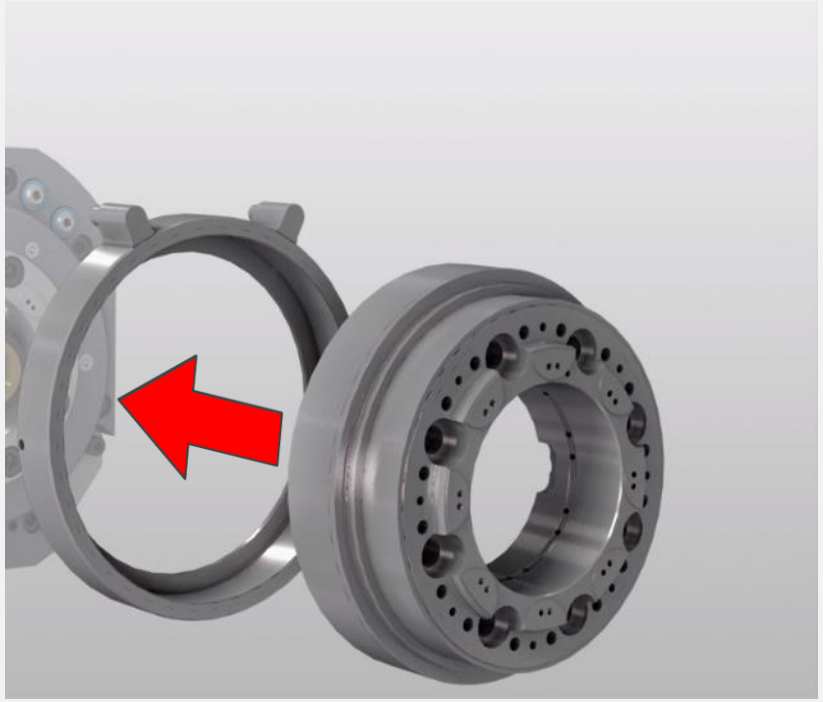
## Function

+ **Automatic detection** of chips at the HSK interface after tool change
+ At Both **PLAN-** & **tapered** surface

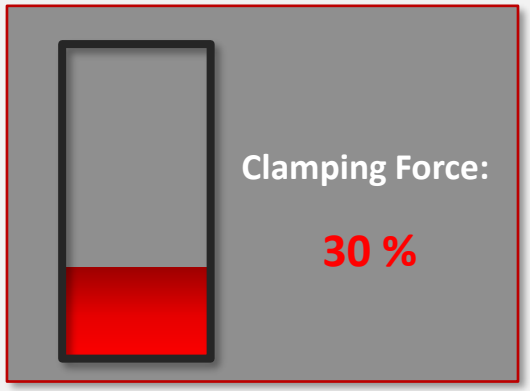
## Highlights

+ **Reduction of poor machining quality**
+ **Higher process reliability**
+ **Improved surface quality**
+ With existing tool cone cleaning, a new cone cleaning can be initiated when a chip is detected -> **avoidance of machine stop**

# *SPINDLE WITH SIS+*
# *AUTOMATIC CLAMPING FORCE MONITORING*



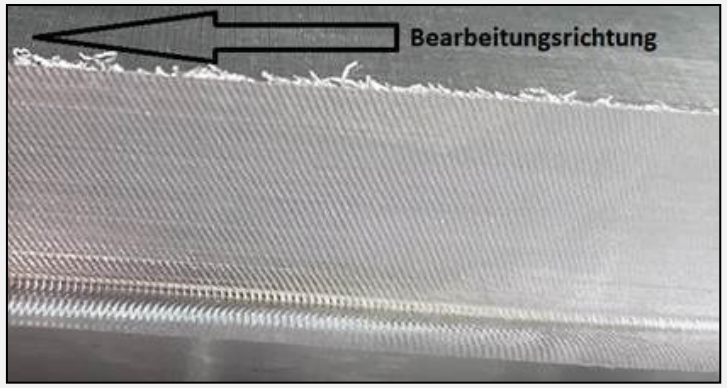
Reduced Clamping Force



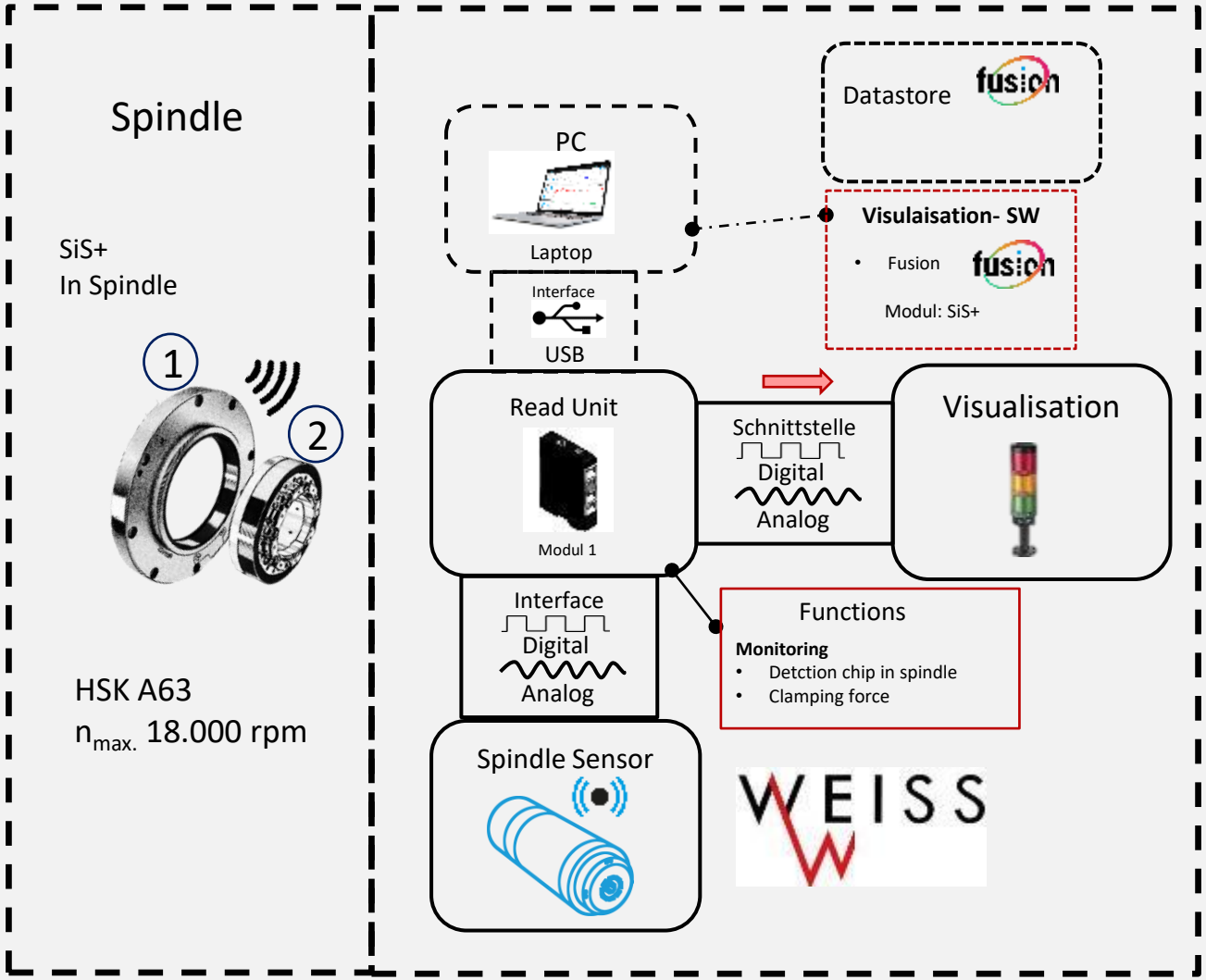


**Results**

- Vibrations
- Increased  tool wear
- Tool breakage



# SPINDLE WITH SIS+ INTEGRATION




## Visualisation and recording