Introducing the new CONTURA®

With added efficiency.
The new CONTURA. The reference machine in the compact class.

CONTURA® Series
The right machine for the job.

ZEISS

The entry class

CONTURA direkt
- Ideal for small parts
- Low measuring forces
- VAST XXT Sensor
- Star stylus system
- Small stylus (0.3 mm)

The flexible scanning solution

CONTURA RDS
- Scanning with VAST XXT
- Optical scanning with ViScan
- Laser scanning with LineScan
- Low measuring forces
- Small stylus (0.3 mm)
- High number of measuring positions with RDS

CONTURA aktiv
- High accuracy
- Long styli & star stylus
- Navigator Technology
- Fast scanning
- Precise self-centering
- High dynamic scanning with high accuracy

CONTURA® Series
The scanning platform.

- CONTURA is the doorway to ZEISS scanning, flexibility and performance, and the aktiv model also comes with VAST navigator

- CONTURA is competitive in its price class

- CONTURA is the platform for ZEISS scanning technology
  XT   aktiv   = active scanning
  XXT direkt = scanning
  XXT RDS = with articulating probe holder

→ **The application determines the sensor**

CONTURA® Series
The scanning platform.

Guideway made of ceramic for rigidity and stability Robust against moisture and temperature influences

ZEISS C99-L high speed scanning controller with fan cooled cabinet is mounted on the back reducing footprint.

Best selection of sensors VAST XT, VAST XTR, RDS/VAST XXT

Variable speed control changes or stops the speed of the CNC measuring program as an aid during verification
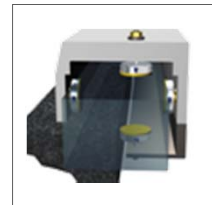
Air bearings in all three guideways 4-sided for rigidity and stability with maximum speeds and acceleration

Ergonomic design ensures large measuring range with a small footprint

Progressively stepped joysticks enable more precise control in three axes of motion
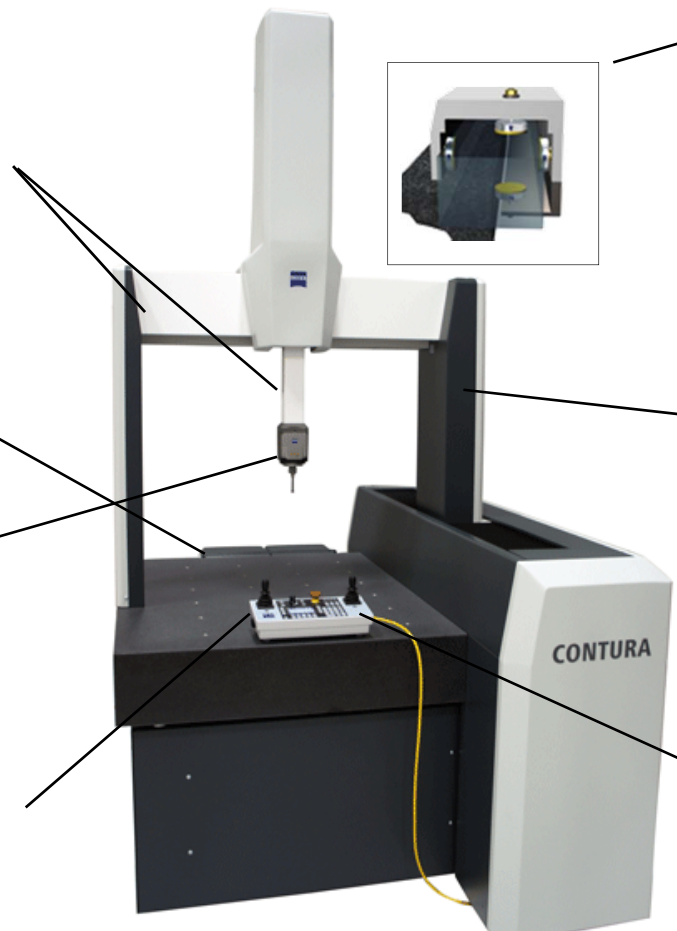
CONTURA® Series
The scanning platform.

CONTURA X 700
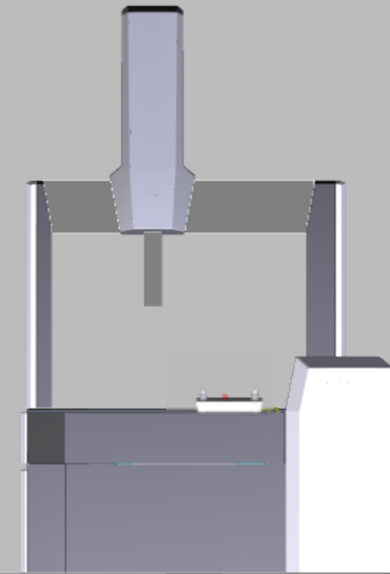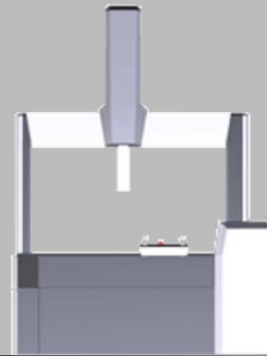
X= 700mm
Y= 700, 1000mm
Z= 600mm

CONTURA X 900
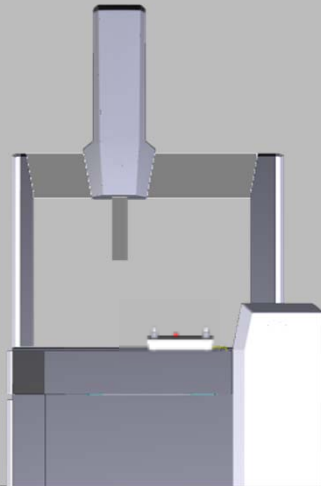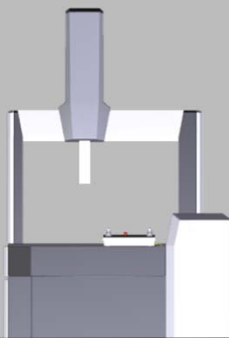
X= 900mm
Y= 1200, 1600mm
Z= 800mm

CONTURA X 1000

X= 1000mm
Y= 1200, 1600mm
Z= 600mm

CONTURA X 1200

X= 1200mm
Y= 1800, 2400mm
Z= 1000mm

CONTURA® RDS
The scanning platform.

- Contact scanning with VAST XXT
- Optical scanning with ViScan
- Laser scanning with LinScan
- Low measuring forces
- Small styli
- High number of measuring positions with RDS
- RDS-CAA for more flexibility

CONTURA® RDS / VAST XXT
The scanning platform.

- Ideal for small parts
- Low measuring forces
- VAST XXT
- Star stylus system
- Small stylus (0.3 mm)
→ Better user support, minimizes negative influences on the measurement results
- The most robust sensor in this class
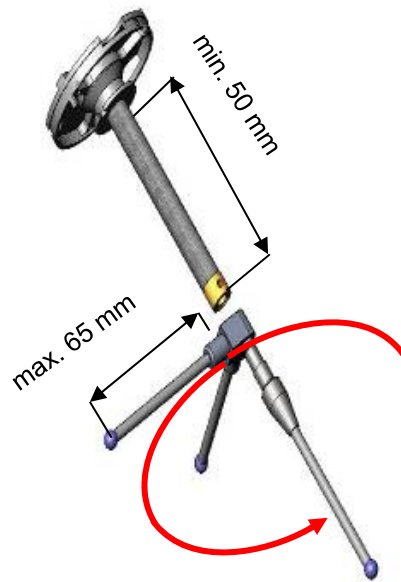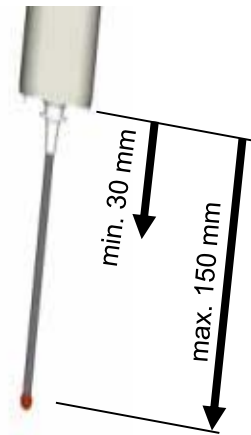
SP25   **VAST XXT**

XDT

CONTURA® RDS / VAST XXT
The scanning platform.

Specifications for VAST XXT TL3

min. 50 mm

max. 65 mm

min. 30 mm

max. 150 mm

Max. 15 g stylus weight

- Extremely low weight
- Extremely high rigidity
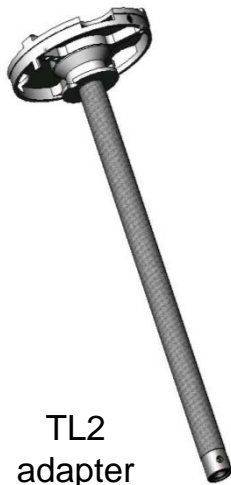- High flexibility for complex stylus systems

CONTURA® RDS / VAST XXT
The scanning platform.
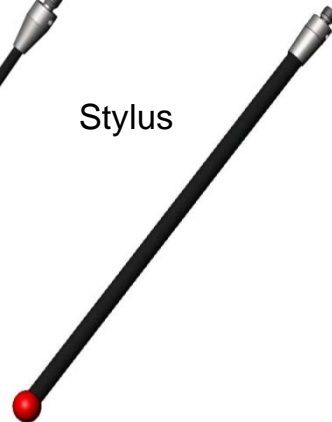
VAST XXT stylus and components

TL1&TL3
adapter

TL2
adapter

Stylus

Extensions

Small star stylus
system

L or T piece

CONTURA® RDS / VAST XXT
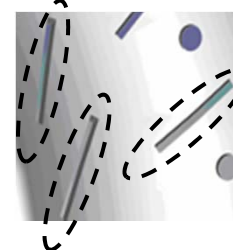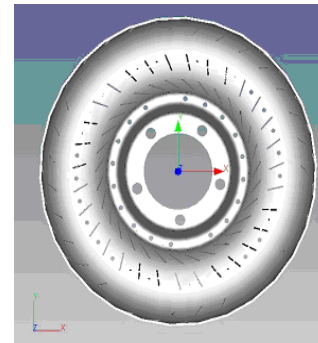## The scanning platform.

RDS / VAST XXT and its applications

Digitization and measurement of small impellers

Measurement of slits in many positions (position forms with scanning)

Measurement of clock housings (0.6 mm borehole diameter) using 0.3 mm stylus

CONTURA® RDS / ViScan
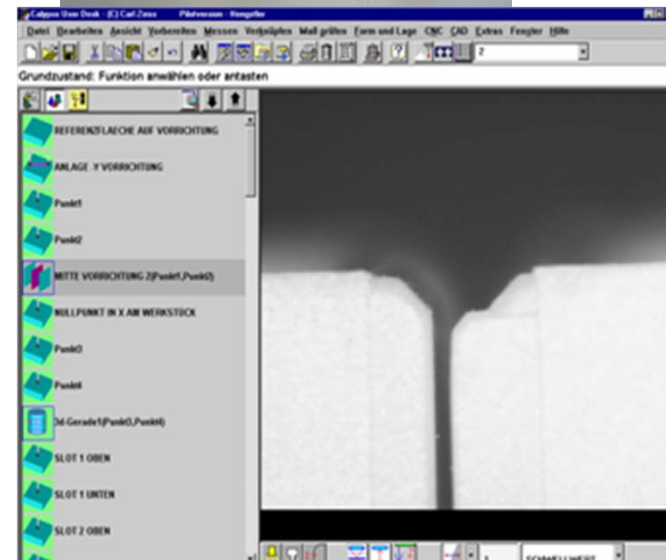## The scanning platform.

RDS ViScan and its applications

2D camera view of a
slit (0.16 mm wide)

Measuring job:
- Width
- Parallelism
- Distance

CONTURA® RDS / LineScan
The scanning platform.

LineScan

- Different orientation on RDS
- Integration trough WBScan
  (CALYPSO) as existing LineScan
- Only for machines with USS wiring
  No additional controller required
  (special cable sufficient)

LineScan comes with 3 variants:

LineScan 2-25: MPE(PF)=12um
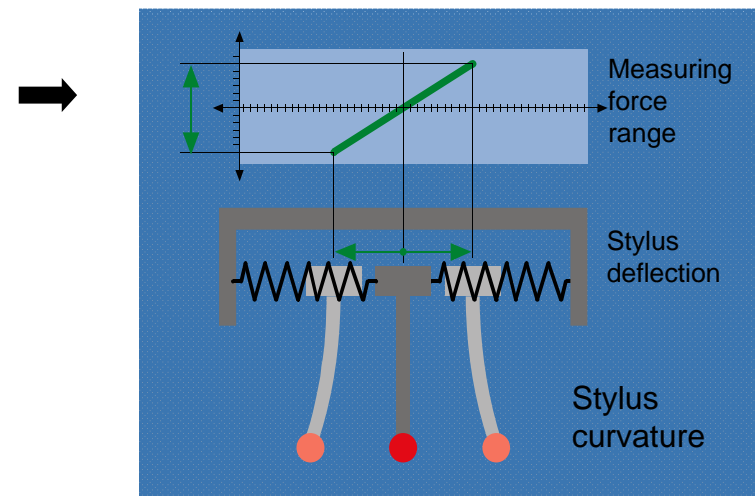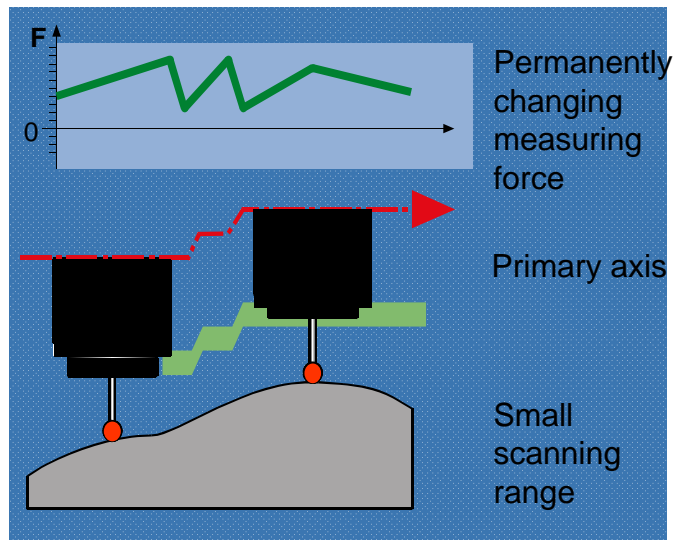
LineScan 2-50: MPE(PF)=20um

LineScan 2-100: MPE(PF)=35-50um

CONTURA® RDS / VAST XXT – Passive Scanning
The scanning platform.

Mechanical suspension is deflected. This results in varying measuring forces. The inconsistent stylus bending is difficult to compensate.

Measuring force range

Stylus deflection

Stylus curvature

Permanently changing measuring force
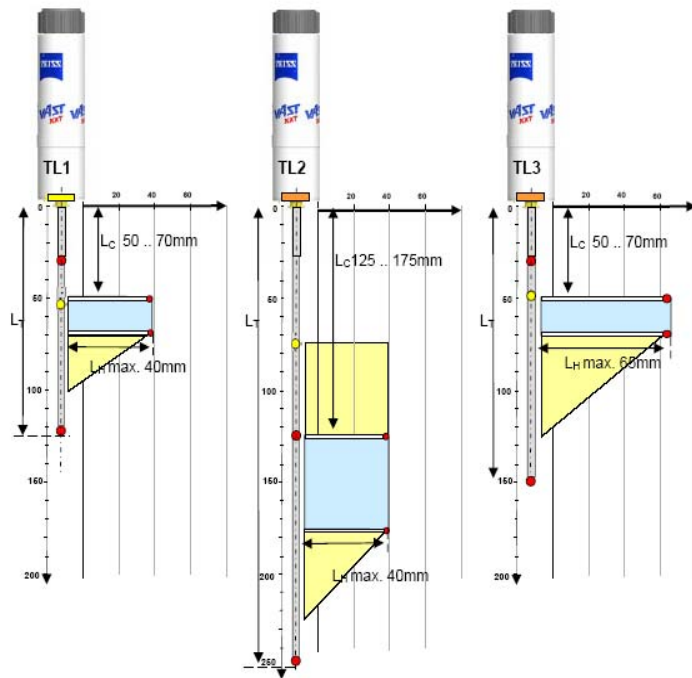
Primary axis

Small scanning range

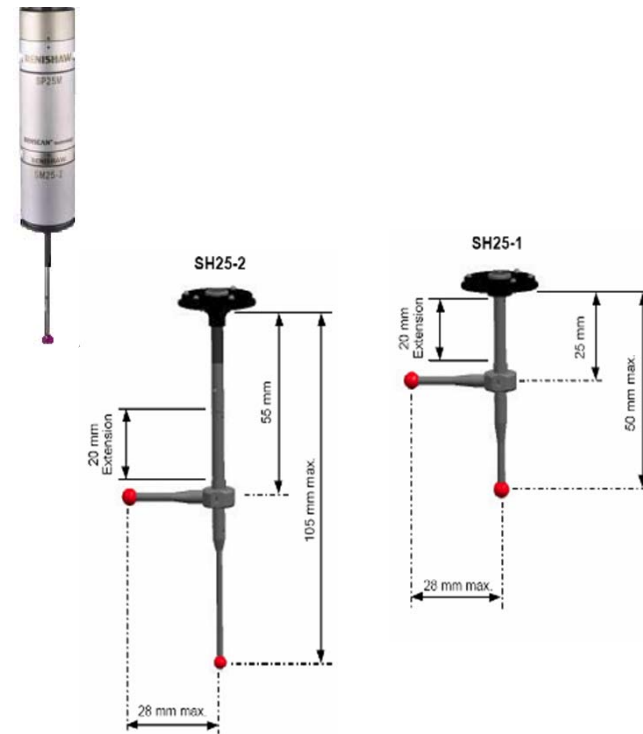The limited scanning range leads to more frequent tracking of the primary axis. This reduces the scanning speed.

CONTURA® RDS/ VAST XXT
SP 25 has less stringent specifications
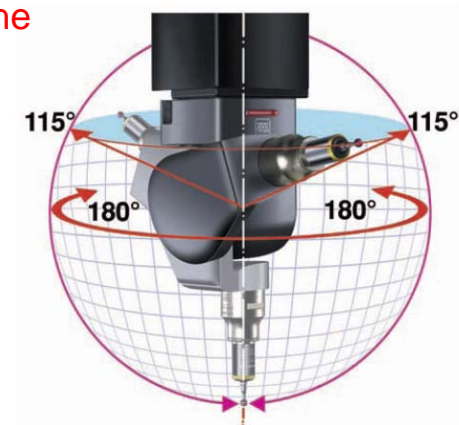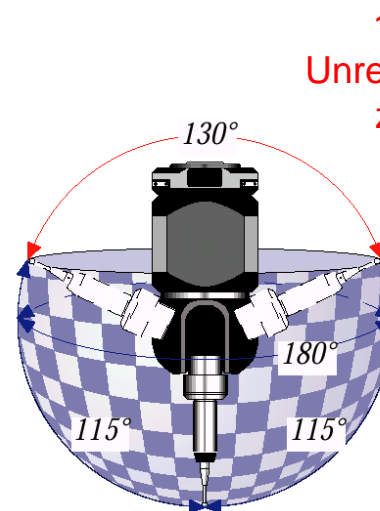
VAST XXT

SP 25

CONTURA® RDS / VAST XXT
The scanning platform.

150º
Unreachable
zone
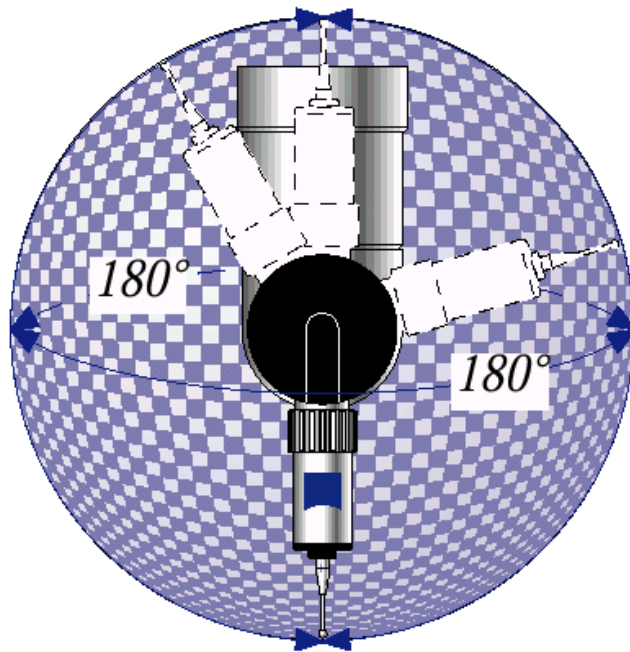
	RDS-CAA	PH10M	TESASTAR-m
Angle	2,5°	7,5°	5°
Number of positions	20736	720	2952

CONTURA® aktiv
The scanning platform.

CONTURA ® aktiv example applications

- Ball bearing
- Brake components
- Control cam
- Housing
- Crankshafts
- CV seals
- Cylinder blocks/heads
- Components for DVD drives
- EDM parts
- Electrical connections
- Form tools
- Medical implants
- Transmission components
- …
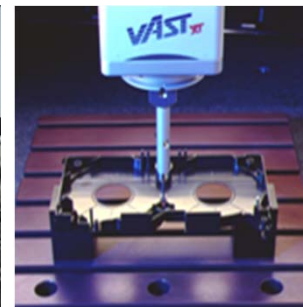
CONTURA® aktiv
The scanning platform.

- Active scanning with VAST XT gold
- Probes: 500 g/500 mm and minimal sphere diameter of 0.5 mm
- CONTURA aktiv from:
  $MPE_{E0} = 1.5 + L/350$
  $MPE_{THP} = 1.5, 40$ s
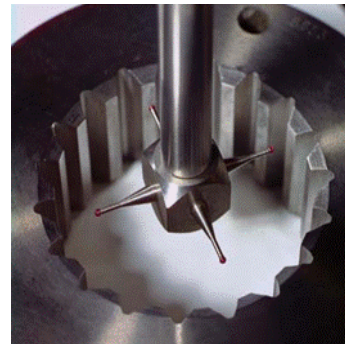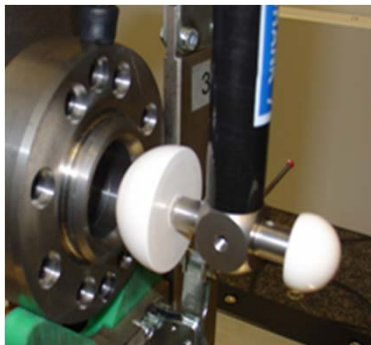
CONTURA® aktiv
The scanning platform.

VAST XT gold active scanning sensor

- Measuring principle
  - Active scanning and single-point measuring
  - Long styli and high stylus weight
  - 500 mm maximum stylus length
  - Enables stylus systems up to 500 g
- Application
  - In general, any application, including form inspection, curve scanning and free-form surfaces
  - Digitization for reverse engineering

CONTURA® aktiv
The scanning platform.

VAST XTR Gold – Productivity!

Better performance

- Up to 20% time reduction for the CNC run
- Up to 70% cost reduction(depending on the workpiece)

Higher throughput

- less changes of probe systems, less standstill period
- add-on of a rotational axis to the 3 linear axis
- less travel paths

More safety and flexibility

- 24 indexing positions (each 15°) enlarges
  the flexibility of the single probe systems
- adapter plates for VAST XT gold and
  VAST gold can be used (without rotation)
- correct angle detection of the adapter plate
  by 24 ID-chips
- collision protection during the "rotation"
  of the adapter plate

ZSH-70-R24

Standard adapter

CONTURA® aktiv
standard with VAST navigator technology

VAST® navigator technology

Reliably measure quickly and accurately:
- Compensation of dynamic bending of the stylus and machine independent of the feature ZEISS exclusive.
- Compensation of centrifugal force through the active generation of measuring force
  → Fast scanning with maximum speed
- Dynamic measuring strategies:
    - **Tangential approach and retraction**
    - **Helix scanning**
- Expert system to automatically determine the optimal scanning speed
- Easy import of navigator performance in existing measuring programs (activation with a single click of the mouse without additional requirements on the operator)
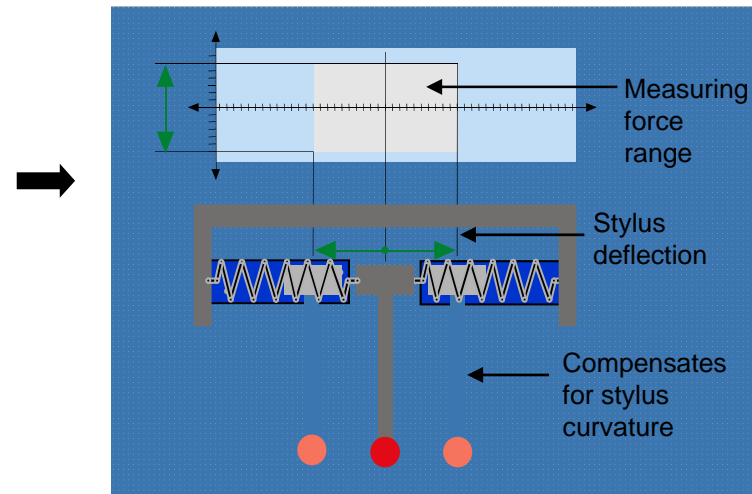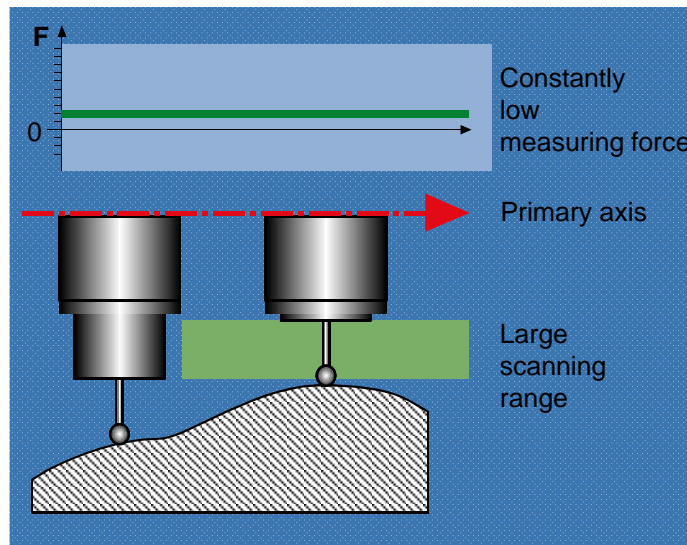
CONTURA® aktiv
VAST XT gold active scanning sensor

The electronic suspension delivers a constant measuring force to the surface. The resulting stylus curvature is minimal, constant and easy to compensate.
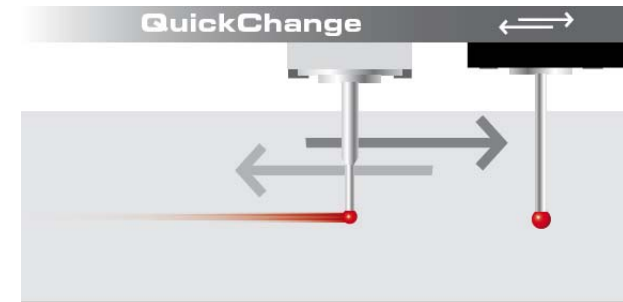
The large scanning range minimizes tracking of the primary axis and increases the accuracy and scanning speed.

CONTURA® – VAST Performance & HTG
Options

VAST® Quick Change technology

- optimized and much quicker exchange of probes with active sensors
- 33 seconds versus 13 seconds (-60%!)

HTG technology

- Temperature range in which the specified length-measuring uncertainty is guaranteed goes to 18..26°C
- temperature compensation module includes 1 machine and 1 workpiece temperature sensor

CONTURA® – AirSaver
Options

- **AirSaver** ZEISS' patented module that drastically reduces compressed air consumption it helps you save air when the machine is in stand-by.

- **AirSaver** is an module comprised of software that controls the shutdown of the measuring machine. AirSaver makes the decision for operators if it makes sense to shut down the measuring machine or not.

- **AirSaver** wizard "notices" how long the machine has not been used and automatically turns off the compressed air supply. The coordinate measuring machine is immediately operational as soon as a CNC measuring program begins or the joystick on the control panel is moved.