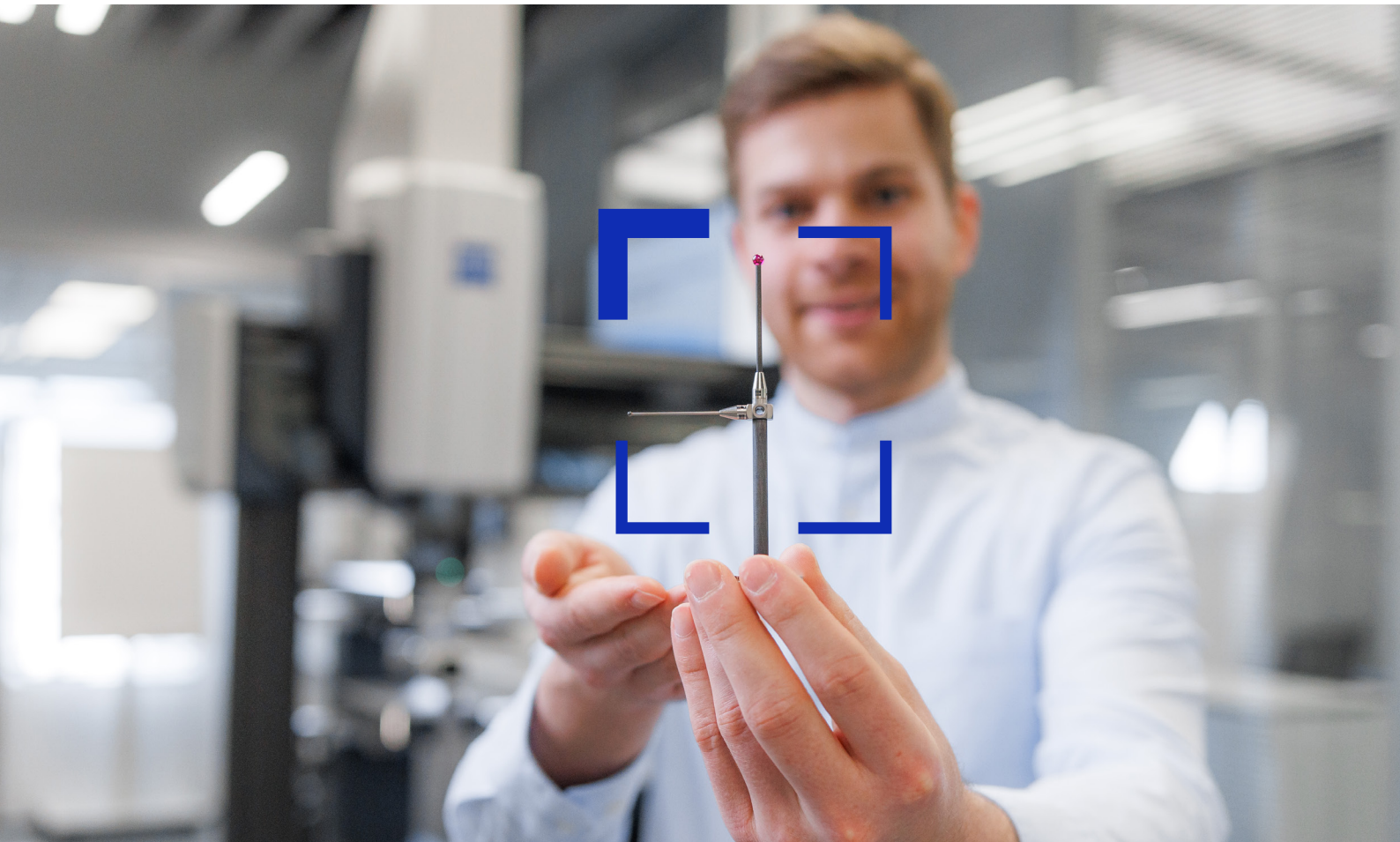




Seeing beyond

# ZEISS Metrology Expert Tip



**Limit Values of the ZEISS VAST XXT Probes.**

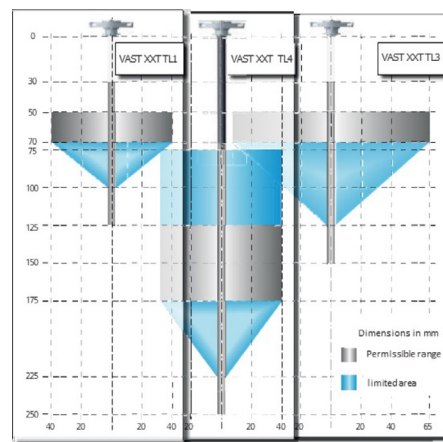
# Have You Ever Thought about Limit Values of the ZEISS VAST XXT Probes?

Limit values play an important role in the ZEISS VAST XXT stylus systems. In principle, an ideal stylus system has as few joints as possible: is as rigid as possible, is as temperature-resistant as possible and weighs as little as possible. The limit values for weight and length in particular must be ensured. Otherwise the measurement result will be affected. The weight limit value results from the fact that the stylus system is held magnetically on the probe head. In addition, the weight should be distributed as evenly as possible, as the limit values for the tilting moment must not be exceeded.

## Limit Values of the Lengths for ZEISS VAST XXT Stylus Systems

The graphic shows the permissible ranges in which styli may be configured for the ZEISS VAST XXT systems TL 1 to TL 4:

- The grey area is permissible. With the ZEISS VAST XXT TL3, for example, the grey area has a depth of 50 o 70 mm and a width of up to 65 mm.
- The light blue area is also possible with restrictions in the dynamics of the measuring device.
- The white area is not permitted.



## Limit Values of the Weight with ZEISS VAST XXT Stylus Systems

In the weight of the stylus systems you must also take careful account of the threshold values, since otherwise there may be a malfunction of the ZEISS VAST XXT probe head. The following threshold values are stipulated:

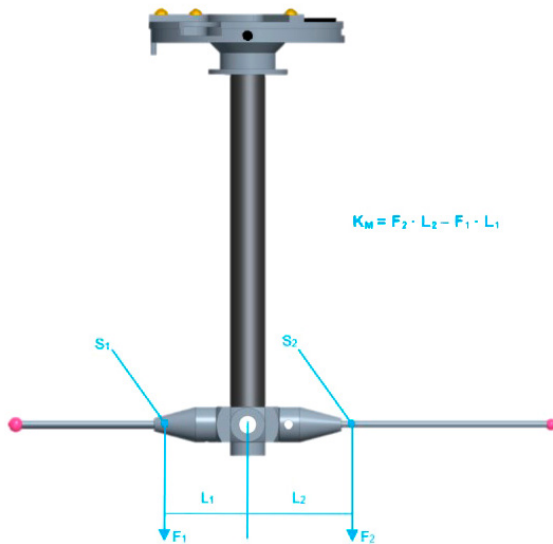
Stylus System	Maximum weight including adapter plate
TL 1	10 g
TL 2	10 g
TL 3	15 g
TL 4	10 g

## Tilt Torque

The tilt torque is created by an uneven weight distribution of the stylus system. This must be prevented by the use of suitable balance weights.



The tilt torque (KM) can be calculated as follows:



### Legende

**S** Center gravity of a stylus    **F** Force at the center of gravity    **L** Distance from center of gravity to line of symmetry



The weight distribution must be as symmetrical as possible so that the tilt torque does not exceed the specified limit value.

**ZEISS Original Accessories  
are available in the  
ZEISS Metrology Shop.**

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