



**TESA**  
TECHNOLOGY



**WILLRICH PRECISION  
INSTRUMENT**  
*THINK MEASUREMENT... THINK WILLRICH*  
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## TESA CLINOBEVEL 3 SQUARE Clinometer

Robust and easy to use, the TESA CLINOBEVEL 3 SQUARE is a top of the range portable precision inclinometer. It offers a wide range of applications (straightness, flatness controls, perpendicularity measurements) and it's available in cast iron in 2 different measuring ranges:  $\pm 1^\circ$  and  $\pm 60^\circ$ .

Designed with a very easy-to-read colour display and various display configurations, such as spirit levels or bar graphs that make the measuring process very clear and intuitive. With the high precision version, small inclinations of  $\pm 1^\circ$  can be measured. The high resolution of 0,001 mm/m allows the control of high-precision geometries such as the adjustment of three-dimensional measuring machines.

Using the free TESA CLINOBEVEL 3 App, a smartphone can be operated as a remote display.



### **Unique features:**

- *Measuring range up to  $\pm 60^\circ$*
- *Best readability thanks to the colour and high contrast LCD display*
- *4 measuring faces*
- *High-precision version with resolution 0,001 mm/m*
- *Remote measurement with a smartphone as remote display*

Features	
Display	4 different background colours Various display configurations, such as bar graph or spirit level
Units	DEG, mm/m, "/10", "/12", mRad, mm/REL, "/REL A%o, %o, GON
Absolute zero setting	Absolute zero represents a base for absolute inclination measurements. It is automatically calculated and set from the two values entered when conducting a reversal measurement (two measurements made at the same spot but in opposite directions)
Relative zero setting	Relative zero allows comparative inclination measurements
Calibration	It is possible to calibrate the instrument due to the built-in support software and supplied calibration pins (only available for the $\pm 60^\circ$ model)
HOLD function	HOLD function allows to position the instrument, freeze the results and read them in a second step
LIMIT function	Alarm displayed when the defined limits are exceeded
Remote display with the App CLINOBEVEL 3	By installing the CLINOBEVEL 3 App (available on Google Play – Android only), the measuring values can be displayed on a smartphone

Built-in cross vial for easy alignment of the vertical axis "twist errors"

Wooden thermal protection handle



High contrast colour display

2 prismatic measuring faces for the measurement on cylindrical surfaces

LED display

Models	Measuring range	SCS certificate included
05330220	$\pm 60^\circ$	✗
05330221	$\pm 1^\circ$	✗
05330222	$\pm 60^\circ$	✓
05330223	$\pm 1^\circ$	✓



The magnetic measuring faces stabilise the instrument and reduce any influence on the measurement.

## Application examples



### 1 Adjustment and alignment of a 3D coordinate measuring machine

As it is possible for smartphones to be used as a remote display, the TESA CLINOBEVEL 3 SQUARE offers a great level of flexibility. The instrument can be placed on the most difficult to reach or delicate pieces to be measured.

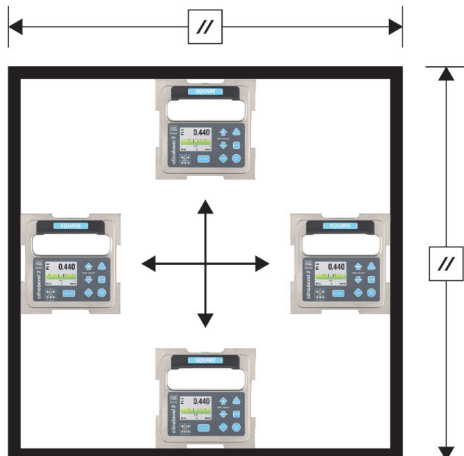
In this application the results of 2 TESA CLINOBEVEL 3 SQUARE can be viewed simultaneously on the smartphone screen without touching the instrument. The values can be saved in CSV format and sent to your analysis system.

### 2 High precision control of a granite plate

The large measuring range of  $\pm 60^\circ$  enables also to fulfil new measuring applications.

### 3 Checking the parallelism of a structure with two parallel faces

The upper measuring face allows, for example, checking the parallelism of a part with two parallel faces, without having to modify the orientation of the clinometer.



Quick and precise control of part parallelism due to the 4 measuring faces.



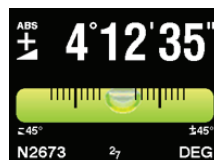
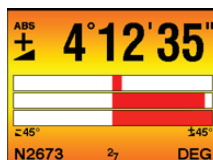
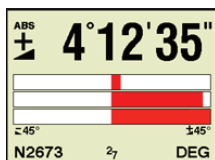
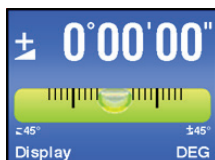
## Accessories included

TESA CLINOBEVEL 3 SQUARE electronic inclinometer 2 batteries size C, type LR14

Robust transport case

Instructions for use

2 calibration pins for quick calibration (only for/with  $\pm 60^\circ$  models)



## Technical specifications

Measuring range	$\pm 60^\circ$	$\pm 1^\circ (\pm 20 \text{ mm/m})$
Models	05330220 05330222 (SCS)	05330221 05330223 (SCS)
Resolution (Depends on display units set)	0,020 mm/m (5")	0,001 mm/m (0,2")
Max. permissible error (T = 20°C) $\alpha$ = measuring value	15" + (0,027% $\alpha$ )	1% $\alpha$ (min. 0,001 mm/m)
Setting time	< 5 sec	
Digital output	USB / RS 485, asynchronous, 7 DataBits, 2 Stopbits, No parity, 9600 Baud	
Batteries Battery life	Size C, type LR14 - 2 x 1,5 V (NiMH, NiCd, NiZn) 25 hours	
Material	Rust-treated cast iron instrument (nickel-plated) Ground measuring faces (Always clean and oil after use)	
Dimensions, weight	160 x 160 x 40 mm / 3,6 kg	
Operating temperature range Storage temperature range	0 to 40 °C -30 to 70 °C	
Two prismatic measuring bases Two faces of flat measurements	Ø 30 to 100 mm, on the left and bottom Right and upper vertical measuring face	
Countries for which the wireless transmitter is approved	EU, USA, Canada, Japan, China, Taiwan (China), United Kingdom For other countries, please contact us	



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