HEXAGON
MANUFACTURING INTELLIGENCE

TESA
TECHNOLOGY

PRODUCT INFO

TESA CLINOBEVEL 3 INCLINOMETER

Robust and easy to use, the TESA CLINOBEVEL 3 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 aluminium or cast iron and in 3 different measuring ranges: ±1°, ±10° and ±60°.

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.

The free TESA CLINOBEVEL 3 App allows one to use a smartphone as a remote display.

UNIQUE FEATURES:

- *MEASURING RANGE UP TO ±60°*
- *BEST READABILITY THANKS TO THE COLOUR AND HIGH CONTRAST LCD DISPLAY*
- *ALUMINIUM-BODY MODEL FOR LIGHT AND EASY HANDLING*
- *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‰, ‰, 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	Possibility to calibrate the instrument thanks to the built-in software support and supplied calibration pins (only available for the ±60° 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 TESA CLINOBEVEL 3	By installing the TESA CLINOBEVEL 3 App (available on Google Play – Android only), the measuring values can be displayed on a smartphone

CAST IRON MODEL RUST-PROTECTED

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

High contrast colour display

2 prismatic measuring faces for the measurement on cylindrical surfaces

ALUMINIUM MODEL BLACK ANODIZED

Wooden thermal protection handle

LED display

MODELS		
05330210	Cast iron body	±60°
05330211	Aluminium body	±60°
05330212	Cast iron body	±10°
05330213	Aluminium body	±10°
05330214	Cast iron body	±1° High Precision

On request versions integrating magnetic inserts in the measuring faces to stabilize the instrument and reduce any influence on the measurement.

EXAMPLES OF APPLICATIONS

Machining Industry - Inclination control of the position of a measuring arm on a large 3D coordinate measuring machine

With the help of the TESA CLINOBEVEL 3, the angular deviation in the respective position of the arm can be easily determined.
Results are then used for correction / compensation of the measuring system.

Machining Industry - Adjustment and alignment of a 3D coordinate measuring machine

Thanks to the possibility to use a smartphone as a remote display, the TESA CLINOBEVEL 3 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 can be viewed directly on the smartphone screen without touching the instrument.

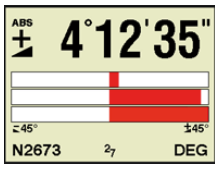
Hydraulic Engineering - Perpendicularity control of a stamping press system with the TESA CLINOBEVEL 3 prismatic measuring faces

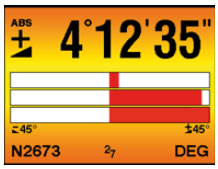
The instrument can be perfectly aligned thanks to the built-in cross vial that allows to avoid “twist errors” *(image on the left)*.

High precision control of a granite plate.
The big measuring range of ±60° enables also to fulfil new measuring applications *(image above)*.

ACCESSORIES INCLUDED

TESA CLINOBEVEL 3 electronic inclinometer	2 batteries size C, type LR14
2 calibration pins for quick calibration (only for ±60° models)	Robust Transport Case
Infrared remote control (only for ±1° model)	User Manual





TECHNICAL SPECIFICATIONS

Measuring range	± 1°(± 20 mm/m)	± 10°	± 60°
Models • Cast iron, rust protected • Aluminium, black anodized	 05330214 /	 05330212 05330213	 05330210 05330211
Resolution (Depends on display units set)	0,005 mm/m (1")	0,010 mm/m (2")	0,025 mm/m (5")
Max. permissible error (T = 20°C) atot = measuring range a = measuring value	a ≤ 0,5 atot: 1% a (min. 1 digit) a > 0,5 atot: 0,01 (2 | a | - 0,5 atot)	3,6"+ (0,06 % a)	12" + (0,027% a)
Setting time	< 5 sec		
Digital output	USB / RS 485, asynchr., 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		
Dimensions, weight • Cast iron, rust protected • Aluminium, black anodized	 150 x 150 x 40 mm / 3,45 kg 150 x 150 x 40 mm / 1,5 kg		
Operating temperature range Storage temperature range	0 to 40 °C -20 to 70 °C		
Two prismatic measuring bases Flat measuring base	Ø 19 to 108 mm, on the left and bottom Right		
Countries for which the wireless transmitter is approved	EU, Canada, Japan, and USA For other countries, please contact us		

About TESA

For more than 75 years, TESA has distinguished itself in the market through its excellent products, its unique expertise in micromechanics and precision machining as well as its proven experience in dimensional metrology. The TESA brand is the global market leader in the field of height gauges and a pioneer thanks to its wide range of instruments, including callipers, micrometers, dial gauges, lever-type dial test indicators and inductive probes. TESA is a true benchmark for the inspection of incoming goods, as well as for production workshops and quality assurance laboratories.

About Hexagon Manufacturing Intelligence

Hexagon Manufacturing Intelligence helps industrial manufacturers develop the disruptive technologies of today and the life-changing products of tomorrow. As a leading metrology and manufacturing solution specialist, our expertise in sensing, thinking and acting – the collection, analysis and active use of measurement data – gives our customers the confidence to increase production speed and accelerate productivity while enhancing product quality.

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