

# Height Gauges



# INSPECTION DURING THE COURSE OF THE MANUFACTURING PROCESS

Height gauges are single-axis handtools made to measure on a surface plate, preferably on granite. The TESA-μHITE version being offered in this section clearly shows that combining a surface plate with any height gauge can create a complete measuring system.

Providing the necessary versatility, they are well suited for dimensional inspection directly on a machine or a group of machines, usually during the various setting and sampling operations throughout the whole manufacturing process.

They are specially made for checking parts that are difficult to machine due to their critical sizes.

*TESA-HITE or TESA MICRO-HITE, whether manually operated or motor-driven, do not require any special skills. Nearly everyone working in the workshop can use them easily.*



## SCS Calibration Certificate

The newly implemented TESA-HITE and TESA MICRO-HITE production line now also includes its own temperature-controlled laboratory recently certified by the Swiss Accreditation Service (SCS), so that each height gauge comes with a SCS calibration certificate provided free of charge.

The negligible temperature variation along with the use of high-precision step gauges allow the lowest uncertainty of measurement to be achieved during the calibration process.

As a first step, all values needed for automatic compensation for the systematic errors of the finished height gauge through Computer Aided Accuracy (CAA) are captured.

Once conveniently calculated, each single compensation value is then stored in the tool memory so as to allow the automatic calculation of the measured values during calibration.

Finally, the relevant calibration certificate is issued based on the values obtained during a new series of measurements taken at another measuring station, also equipped with step gauges. The applied calibration procedure together with the SCS based certification ensure that every TESA height gauge is traceable to national standards.

## Height Gauges – One of TESA's Strengths

TESA offers the largest range of height gauges for reliable one or two-dimensional measurements. End users can choose the most suitable model not only according to the requirements of their metrology applications, but also according to their financial resources.

This wide range goes from the simple height and scribing gauge to the motorised vertical column suitable for high-precision measurements in two coordinate directions.
















|   |                                   |  |  |  | 1D |  |  |  | 2D |  | Motorized |
|---|-----------------------------------|---|---|---|----|---|--|---|----|---|-----------|
|   | Height Gauges                     | µm (L in m)   | Standard Accessory (mm)   | Special Accessory (mm)  |    |   |  |   |    |   |           |
|    | TESA-HITE Magna                   | 8   | 870   | 1095  | •  | •   |  |   |    |   |           |
|    | TESA-HITE                         | 2,5 + 4L  | 870   | 1095  | •  | •   | •  |   |    |   |           |
|    | TESA-HITE plus M                  | 2,5 + 3L  | 860   | 1085  | •  | •   | •  | •   | •  | •   | •         |
|    | TESA MICRO-HITE                   | 2 + 3L  | 1075  | 1300  | •  | •   | •  | •   | •  |   |           |
|   | TESA MICRO-HITE plus M            | 1,9 + 1,5L  | 1075  | 1300  | •  | •   | •  | •   | •  | •   | •         |
|  | TESA-µHITE                        | 1 or 2  | 160   | 360   | •  | •   |  |   |    |   | •         |
|   | TESA-µHITE + POWER PANEL plus M   | 1 or 2  | 160   | 360   | •  | •   |  | •   | •  | •   | •         |
|  | ETALON height and scribing gauges | 40  | 1000  | –   | •  |   |  |   |    |   |           |



## TESA-HITE Magna 400 and 700



Conceived using well-proven TESA technology, both the TESA-HITE magna 400 and 700 models are equipped with the TESA patented magna  $\mu$  measuring system and can be used in the harshest workshop conditions, especially where the gauges are exposed to splashing liquids of any kind and the penetration of dust particles. Their unique characteristics means that the gauges offer the most favourable price/performance ratio found in the market and constitute an essential tool in the workshop. Robust and reliable, their futuristic design guarantees maximum strength when used near production machines. Each height gauge is provided with a rechargeable battery and can be used to measure height or step dimensions as well as diameters, centre to centre distance of bores or grooves, the size of grooves and much more.


- Wide application range, two sizes available with measuring span to 415 mm/ 16 in or 715 mm/28 in, respectively.
- Electronics totally protected against oil and water splashing or dust particles (IP65).
- Control panel with numerical display to 0,001 / 0,005/0,01 mm or 0,0001/0.0002/ 0.001 in.
- Dynamic probing of the workpiece with a constant measuring force.
- Easiness, high reliability when checking bores or shafts using TESA's unique device for automatic detection of the culmination point – patented.
- Acoustic signal to acknowledge value capture, also conveniently programmable.
- Ability to measure parallelism errors.
- TESA's magnetic system, guaranteeing correct operating even in harsh workshop conditions – patented.
- Large LC display, also with symbols for the measuring functions.
- Zero-setting anywhere within the measuring range.
- PRESET function for entering any given value.
- Metric/inch conversion.
- RS 232 data output.
- SCS calibration certificate provided with each height gauge.

-  Factory standard
-  83 x 49 mm LC display, 7-decade plus minus sign. Also with graphical symbols for all active functions.
-  0,001 mm or 0.0001 in
-  12 mm
-  Magnetic scale, patented system
-  Metric/Inch conversion
-  1,5  $\pm$  0,5 N (at switch point)
-  500 mm/s 20 in/s
-  Probing head mounted on a ball-bearing, hand wheel for head displacement, fine setting. Head drive carriage can be locked.
-  RS232
-  Rechargeable batteries, 6V
-   $\approx$  60 h
-  Fixed zero
















Linear expansion  
 $(12 \pm 1,5) \times 10^{-6} \text{ K}^{-1}$ 

100 %


IP55 or IP65 for both  
electronics and  
measuring system  
(IEC 60529)

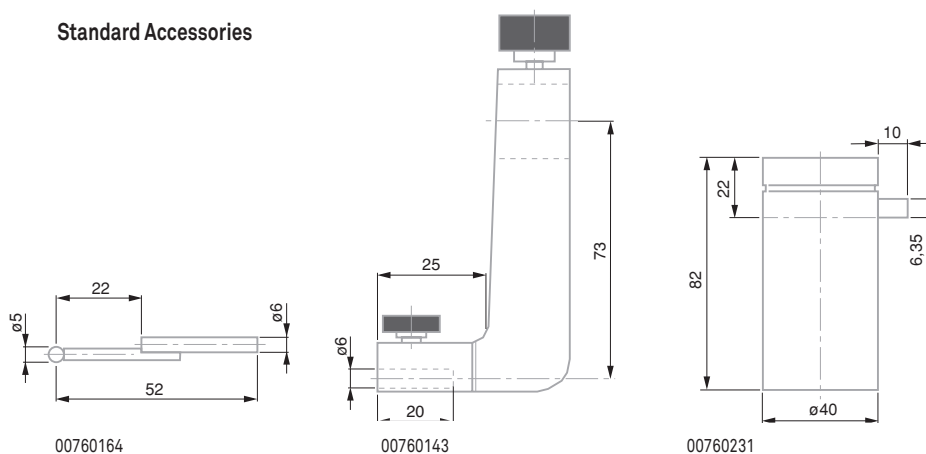

SCS calibration  
certificate

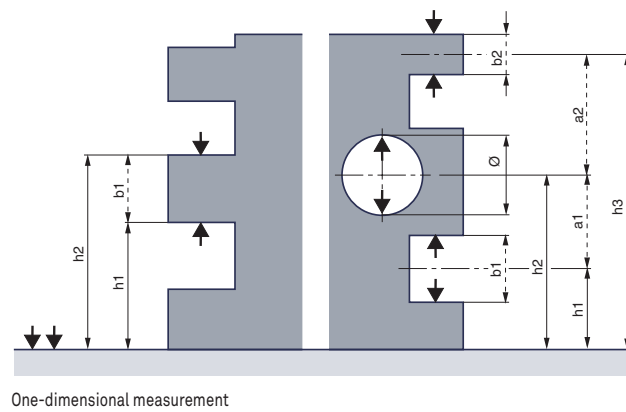
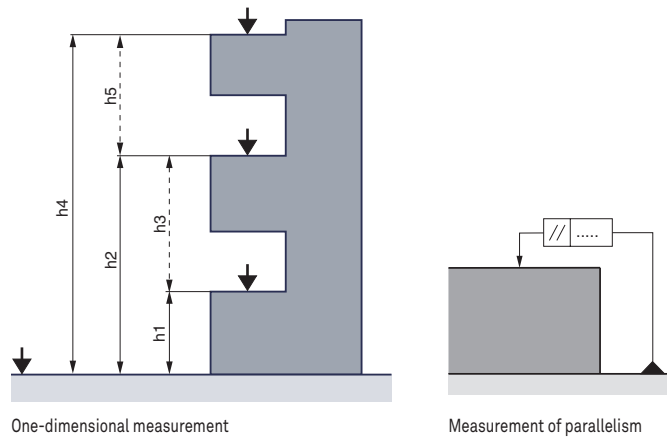
| No                    | =   |  |  |
|-----------------------|---|---|---|
| 00730047              | Height gauge TESA-HITE magna 400  | 415   | 16  |
| 00730059              | Height gauge TESA-HITE magna 700  | 715   | 28  |
| CONSISTING OF:        |   | 400   | 700   |
| 00760143              | Standard probe insert holder  | ●   | ●   |
| 00760157              | Rechargeable battery, 6V  | ●   | ●   |
| 00760164              | Standard probe insert with 5 mm dia. steel ball tip                                     | ●   | ●   |
| 00760231              | Master piece for establishing the probe constant, nominal dimension 6,350 mm / 0.250 in | ●   | ●   |
| 04761054              | Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz  | ●   | ●   |
| 04761055              | Cable EU for mains adapter  | ●   | ●   |
| 04761056              | Cable US for mains adapter  | ●   | ●   |
| OPTIONAL ACCESSORIES: |   |   |   |
| 04761052              | Extension cable, Sub-D 9p/f to 9p/m, 2 m  |   |   |
| 04761063              | Sub-D 9p/m to USB cable, 2 m  |   |   |















### Technical Data

|    | Models  | TESA-HITE magna 400  | TESA-HITE magna 700 |
|---|---|--|---------------------|
|    | mm<br>in  | 415<br>16  | 715<br>28           |
|   | With standard accessory mm<br>in                | 0 ÷ 570<br>0 ÷ 22  | 0 ÷ 870<br>0 ÷ 34   |
|  | With probe insert holder mm<br>No. 00760057 in  | 0 ÷ 625<br>0 ÷ 24  | 0 ÷ 925<br>0 ÷ 36   |
|  | With probe insert holder mm<br>No. S07001622 in | 0 ÷ 795<br>0 ÷ 31  | 0 ÷ 1095<br>0 ÷ 43  |
|  | With standard accessory µm<br>in                | < 8<br>< 0.0003  | < 8<br>< 0.0003     |
|  | With standard accessory                         | On flat surfaces:<br>2σ = < 3µm / < 0.00015 in<br>Into bores:<br>2σ = < 5µm / < 0.00020 in |                     |
|  | kg  | 15   | 18                  |

### Standard Accessories





-  Factory standard
-  83 x 49 mm LC display, 7-decade plus minus sign. Also with graphical symbols for all active functions.
-  0,0001 mm or 0.00001 in
-  12 mm
-  Incremental glass scale, opto-electronic
-  mm/in conversion
-  1,5 ± 0,5 N (at switch point)
-  500 mm/s 20 in/s
-  Air-cushion for easy displacement over the surface plate.
-  Probing head mounted on a ball-bearing, hand wheel for head displacement, fine setting. Head drive carriage can be locked.
-  RS232
-  Rechargeable batteries, 6V
-  ≈ 60 h
-  Fixed zero

## TESA-HITE 400 / 700

By their robustness and reliability, the TESA-HITE 400 and 700 provided with its optoelectronic incremental rule (TESA patented) measurement system are ideally suited for applications in the workshop.

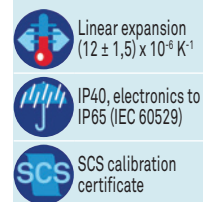
Their battery power gives them full autonomy.

Each version allows, among other things, the entry height dimensions or staged, the diameter, the distance between two grooves or two holes and groove width.

- Integrated air-bearing for easy displacement across the granite plate.
- Electronics totally protected against oil and water splashing, dust particles (IP65).
- Control panel with numerical display to 0,0001 / 0,001 / 0,01 mm or 0.00001 / 0.0001 / 0.001 in.
- Dynamic probing of the workpiece with a constant measuring force.
- Easiness, high reliability when checking bores or shafts using TESA's unique device for automatic detection of the culmination point – patented.
- Acoustic signal to acknowledge value capture, also conveniently programmable.
- Ability to measure any deviation in parallelism.
- Possible use of a digital sensor for determining perpendicularity errors with stated angle of the linear regression line.
- Patented TESA's opto-electronic system. Long-lasting stability of the glass scale for unbroken high accuracy.
- Large LC display with symbols for the measuring functions.
- Zero-setting anywhere within the measuring range.
- PRESET function for entering any given value.
- Metric/inch conversion.
- RS 232 data output.
- SCS calibration certificate provided with each height gauge.



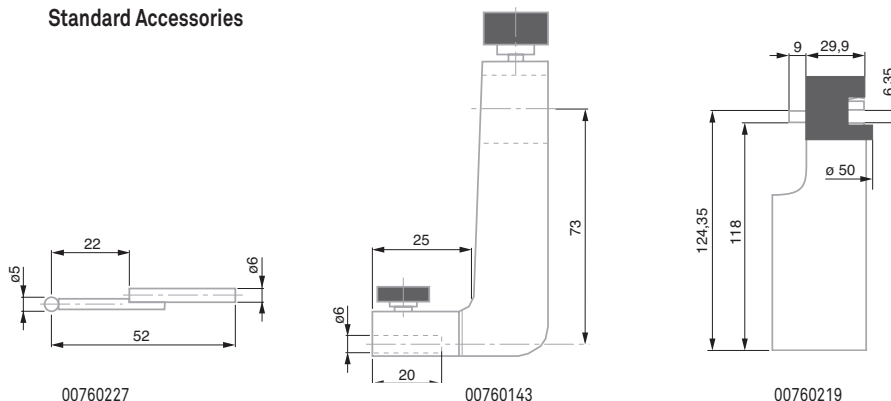
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|-----------------------|--|-----|-----|
|                       |  | mm  | in  |
| 00730043              | TESA-HITE 400  | 415 | 16  |
| 00730044              | TESA-HITE 700  | 715 | 28  |
| CONSISTING OF:        |  | 400 | 700 |
| 00760143              | Standard probe insert holder   | ●   | ●   |
| 00760157              | Rechargeable battery, 6V   | ●   | ●   |
| 00760219              | Master piece for establishing the probe constant, nominal dimension to 6,350 mm / 0.250 in | ●   | ●   |
| 00760226              | Electric pump for creating the air-cushion beneath the gauge base, already mounted         | ●   | ●   |
| 00760227              | Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide                | ●   | ●   |
| 04761054              | Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz   | ●   | ●   |
| 04761055              | Cable EU for mains adapter   | ●   | ●   |
| 04761056              | Cable US for mains adapter   | ●   | ●   |
| OPTIONAL ACCESSORIES: |  |     |     |
| 04761052              | Extension cable, Sub-D 9p/f to 9p/m, 2 m   |     |     |
| 04761063              | Sub-D 9p/m to USB cable, 2 m   |     |     |
| 04760070              | RS port, used to connect a digital sensor for perpendicularity measurement                 |     |     |



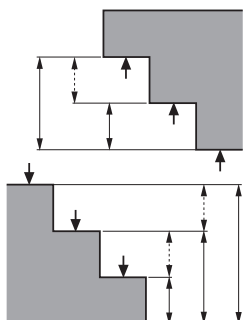
### Technical data

| Models                                 | TESA-HITE 400   | TESA-HITE 700  |
|--|---|----------------|
| mm                                     | 415   | 715            |
| in                                     | 16  | 28             |
| With standard accessory                | mm<br>0 ÷ 570   | mm<br>0 ÷ 870  |
|  | in<br>0 ÷ 22  | in<br>0 ÷ 34   |
| With probe insert holder No. 00760057  | mm<br>0 ÷ 625   | mm<br>0 ÷ 925  |
|  | in<br>0 ÷ 24  | in<br>0 ÷ 36   |
| With probe insert holder No. S07001622 | mm<br>0 ÷ 795   | mm<br>0 ÷ 1095 |
|  | in<br>0 ÷ 31  | in<br>0 ÷ 43   |
| With standard accessory                | (2,5 + 4 L) µm (L in m)<br>(0.0001 + 0.000004 L) in (L in in)                             |                |
| With standard accessory                | On flat surfaces:<br>2 σ < 2 µm / < 0.0001 in<br>Into bores:<br>2 σ < 3 µm / < 0.00015 in |                |
| Frontal, mechanical                    | µm<br>9   | µm<br>13       |
|  | in<br>0.00035   | in<br>0.0005   |
|  | kg<br>27  | kg<br>32       |

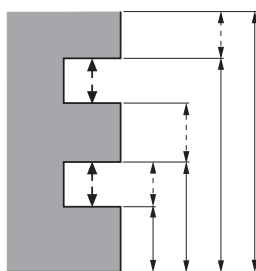
### Standard Accessories



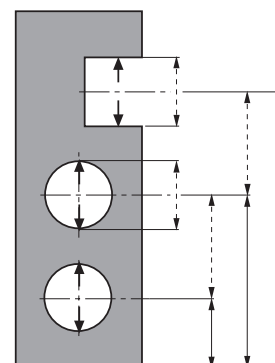




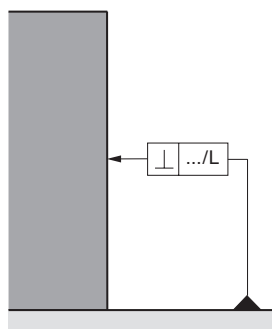
One-dimensional measurement



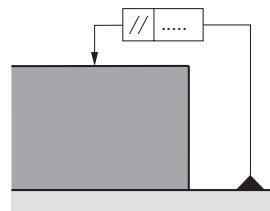
One-dimensional measurement



One-dimensional measurement



Perpendicularity measurement



Parallelism measurement



Squareness verification with inductive probe and TWIN-T10 display
















## TESA-HITE Plus M 400 / 700

The added value of the motorised TESA-HITE plus M 400 / 700 is not only noticeable in their technical features, but also in their ease of use. Combine with the programming function, this solution is ideal for recurrent measurements in the shop floor environment.

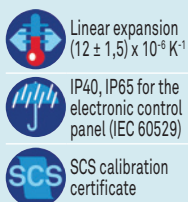
Advanced functions allow for complex calculations such as those required for two-axis or perpendicularity measurement. These height gauges with outstanding features offer the most attractive price/performance relationship, making them indispensable for the workshop.

- Wide application range.
- Electronics entirely protected from the penetration of liquids and dust particles.
- Integrated air cushion, mounted control panel.
- Easy, intuitive use of the rotary power control.
- Provide all the measuring functions of a dedicated motorised column, including height, diameter, distance, parallelism, perpendicularity, straightness, angle and 2D measurement besides programming, automatic probing cycles, statistical value processing.
- TESA's patented measuring system, opto-electronic.
- Probe insert holder and inserts compatible with those of TESA MICRO-HITE.
- SCS calibration certificate attached to each height gauge.



-  Factory standard
-  Dual LC display, 128 x 63 mm in size.
  - Upper display field for length values (7 segments/sign) also with symbols for the functions.
  - Lower full dot display field for perpendicularity and straightness along with symbols for all operator-controlled function keys.
  - 7 segment display plus minus sign for the measured values
-  0,0001 mm or 0.00001 in
-  Main display with a size to 12,7 x 6,4 mm or 6,3 x 4,2 mm for auxiliary display
-  Incremental glass scale, opto-electronic data capture
-  Mm/in conversion
-  1 N
-  Air bearing for easy displacement on the granite plate.
-  Measuring head mounted on a ball-bearing. Electro-motorised head displacement at varying speeds from 7,5 up to 40 mm/s. Manual displacement: ≤ 600 mm/s. Automatic value acquisition with a constant measuring force.
-  RS232
-  Rechargeable batteries, 6V
-  ≈ 60 h, full charging takes 8 hours
-  Fixed zero



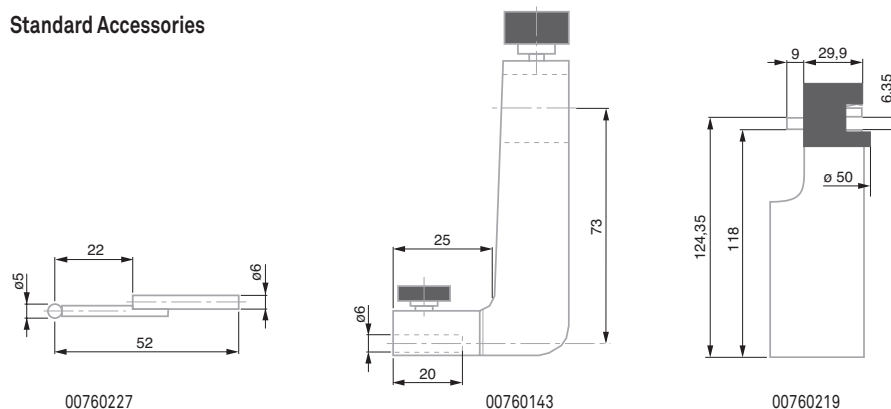


| No                    | =  |  |     |     |
|-----------------------|--|--|-----|-----|
| 00730045              | TESA-HITE plus M 400   |  | 405 | 16  |
| 00730046              | TESA-HITE plus M 700   |  | 705 | 27  |
| 00730057              | TESA-HITE plus M 400 + printer   |  | 405 | 16  |
| 00730058              | TESA-HITE plus M 700 + printer   |  | 705 | 27  |
| CONSISTING OF:        |  |  | 400 | 700 |
| 00760143              | Standard probe insert holder   |  | ●   | ●   |
| 00760157              | Rechargeable battery, 6V   |  | ●   | ●   |
| 00760219              | Master piece for establishing the probe constant, nominal dimension to 6,350 mm / 0.250 in |  | ●   | ●   |
| 00760226              | Electric pump for creating the air-cushion beneath the gauge base, already mounted         |  | ●   | ●   |
| 00760227              | Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide                |  | ●   | ●   |
| 04761054              | Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz   |  | ●   | ●   |
| 04761055              | Cable EU for mains adapter   |  | ●   | ●   |
| 04761056              | Cable US for mains adapter   |  | ●   | ●   |
| OPTIONAL ACCESSORIES: |  |  |     |     |
| 04760070              | RS port, used to connect a digital sensor for perpendicularity measurement                 |  |     |     |
| 04761052              | Extension cable, Sub-D 9p/f to 9p/m, 2 m   |  |     |     |
| 04761063              | Sub-D 9p/m to USB cable, 2 m   |  |     |     |
| 04765008              | Thermal paper 57 MM  |  |     |     |

#### Technical Data

|  | Models                                    |          | TESA-HITE plus M 400  | TESA-HITE plus M 700 |
|--|---|----------|---|----------------------|
|  |   | mm<br>in | 405<br>16   | 705<br>27            |
|  | With standard accessory                   | mm<br>in | 0 ÷ 560<br>0 ÷ 22   | 0 ÷ 860<br>0 ÷ 33    |
|  | With probe insert holder<br>No. 00760057  | mm<br>in | 0 ÷ 615<br>0 ÷ 24   | 0 ÷ 915<br>0 ÷ 35    |
|  | With probe insert holder<br>No. S07001622 | mm<br>in | 0 ÷ 785<br>0 ÷ 31   | 0 ÷ 1085<br>0 ÷ 42   |
|  | With standard accessory                   | μm<br>in | (2,5 + 3 L) μm (L in m)<br>(0.0001 + 0.000003 L) in (L in in)                                 |                      |
|  | With standard accessory                   |          | On flat surfaces:<br>2 σ = < 1 μm / < 0.00005 in<br>Into bores:<br>2 σ = < 2 μm / < 0.0001 in |                      |
|  | Frontal, mechanical                       | μm<br>in | 8<br>0.00031  | 12<br>0.00047        |
|  |   | kg       | 27  | 32                   |

#### Standard Accessories



## TESA MICRO-HITE 350 / 600 / 900

Autonomous instruments for measurement in one or two coordinate directions of inside dimensions, outside, step, height, depth and distance on geometric elements with flat, parallel or cylindrical surfaces.

The culmination point is automatically entered on the bores and shafts - With memory function "max.", "min." and "max.-min." as dynamic measurement. The use of digital probe TESA IG-13 can also capture perpendicularity, rectitude and parallelism differences, as well as errors of radial and axial runout. Operating results in accordance with ISO 1101.














- State-of-the-art concept associated with a high-quality design is the fruit of years of experience in the manufacture of electronic height gauges.
- Ideal for dimensional inspection close to the manufacturing cell. No cumbersome cables to clutter up the working area.
- Fast, simple and reliable probing of the workpiece or holes, especially.
- 3 main gauges available with either a 365, 615 or 920 mm measuring span.
- Numerical display to 0,0005, 0,001, 0,01 and 0,1 mm, or equivalent inch units.
- Extremely accurate measuring of deviations from length, straightness and perpendicularity due to the automatic correction of the bias errors through CAA (Computer Aided Accuracy).
- Coefficient of linear expansion identical to steel ( $11,5 \times 10^{-6} \text{ K}^{-1}$ ).
- POWER PANEL for value processing and output with interactive display to guide the operator.
- No manual calculation.
- 99 workpiece oriented measurement cycles, programmable. Each cycle includes a number of 64 features with related limits of size.
- Built-in printer for result output or possible use of an external printer unit to get a hard copy in A4 format.
- RS232 data output.
- Every height gauge comes with a SCS calibration certificate.







TESA IG-13

### TESA MICRO-HITE – Power and performance









-  Factory standard
-  Incremental glass scale with reference point, dividing period of 20  $\mu\text{m}$ . Opto-electronic value capture (TESA patent).
-  Fixed zero
-   $1,6 \pm 0,25 \text{ N}$
-  300 mm/s 12 in/s
-  Air cushion usable for easy move of the height gauge over the surface plate.
-  RS232, opto-electronic
-  Rechargeable batteries, 6 V, 3,0 Ah or mains adapter
-   $\approx 12$  hours for one battery pack;  $\approx 2$  hours for the pump used to form the air cushion
-  Linear expansion  $11,5 \times 10^{-6} \text{ K}^{-1}$
-  IP40 (IEC 60529)
-  Net weight (w/o panel nor battery pack) Main gauges  
350: 33 kg 600: 38 kg  
900: 45 kg
-  SCS calibration certificate

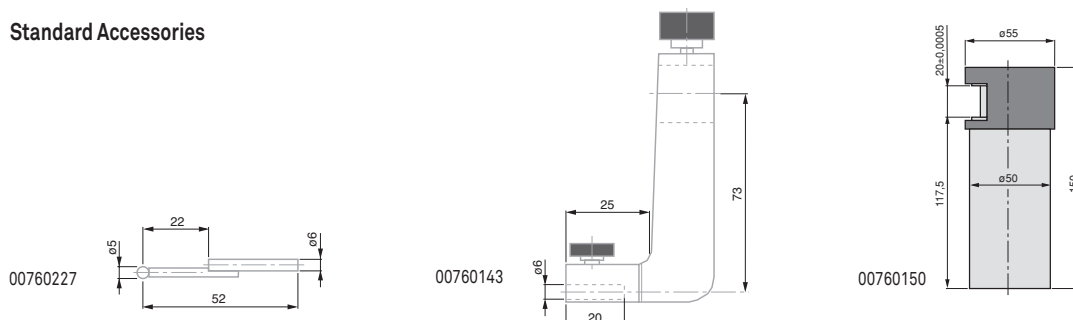


|                       |   |  |  |  |  |     |
|-----------------------|---|---|---|---|---|-----|
|                       |   |   |   | mm  | in  |     |
| 00730033              | SET MICRO-HITE 350  |   |   | 365   | 14  |     |
| 00730034              | SET MICRO-HITE 600  |   |   | 615   | 24  |     |
| 00730035              | SET MICRO-HITE 900  |   |   | 920   | 36  |     |
| CONSISTING OF:        |   |   |   | 350   | 600   | 900 |
| 00760141              | Rechargeable battery pack   |   |   | ●   | ●   | ●   |
| 00760142              | Electric pump for creating the air-cushion beneath the gauge base, already mounted            |   |   | ●   | ●   | ●   |
| 00760143              | Standard probe insert holder  |   |   | ●   | ●   | ●   |
| 00760150              | Master piece for establishing the probe constant, nominal dimension to 20,000 mm / 0.78740 in |   |   | ●   | ●   | ●   |
| 00760151              | Dust cover for TESA MICRO-HITE 350  |   |   | ●   |   |     |
| 00760152              | Dust cover for TESA MICRO-HITE 600  |   |   |   | ●   |     |
| 00760153              | Dust cover for TESA MICRO-HITE 900  |   |   |   |   | ●   |
| 00760227              | Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide                   |   |   | ●   | ●   | ●   |
| 04761054              | Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz  |   |   | ●   | ●   | ●   |
| 04761055              | Cable EU for mains adapter  |   |   | ●   | ●   | ●   |
| OPTIONAL ACCESSORIES: |   |   |   |   |   |     |
| 00760144              | Add-on fine adjust device for extra fine movement of the measuring head, complete             |   |   |   |   |     |
| 00760157              | Rechargeable battery, 6V  |   |   |   |   |     |
| 04761023              | Cable: miniDIN 8p/m to Sub-D 9p/f, 2m for TT10 and MICRO-HITE manual versions 10/11/12        |   |   |   |   |     |
| 04761056              | Cable US for mains adapter  |   |   |   |   |     |

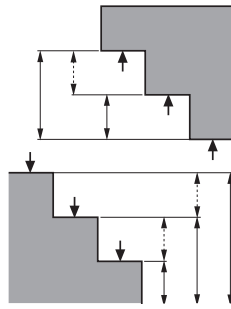
## Technical Data

|  | Models                                       |    | MICRO-HITE<br>350   | MICRO-HITE<br>600 | MICRO-HITE<br>900 |
|---|--|----|---|-------------------|-------------------|
|   |  |    |   |                   |                   |
|  |  | mm | 365   | 615               | 920               |
|   |  | in | 14  | 24                | 36                |
|  | With standard accessory                      | mm | 0 ÷ 520   | 0 ÷ 770           | 0 ÷ 1075          |
|   |  | in | 0 ÷ 20  | 0 ÷ 30            | 0 ÷ 42            |
|   | With probe holder No. 00760057               | mm | 0 ÷ 575   | 0 ÷ 825           | 0 ÷ 1130          |
|   |  | in | 0 ÷ 22  | 0 ÷ 32            | 0 ÷ 44            |
|   | With probe holder No. S07001622              | mm | 0 ÷ 745   | 0 ÷ 995           | 0 ÷ 1300          |
|   |  | in | 0 ÷ 29  | 0 ÷ 39            | 0 ÷ 51            |
|  | With standard accessory                      |    | (2 + 3 L) µm (L in m)<br>(0.0001 + 0.000003 L) in (L in in) |                   |                   |
|  | With standard accessory                      |    | 2 σ ≤ 1 µm / ≤ 0.00005 in                                   |                   |                   |
|  | Frontal, mechanical                          | µm | 7   | 9                 | 11                |
|   |  | in | 0.00028   | 0.00035           | 0.00043           |
|   | Frontal and lateral<br>with TESA IG-13 probe | µm | 6   | 8                 | 10                |
|   |  | in | 0.00024   | 0.00031           | 0.00039           |

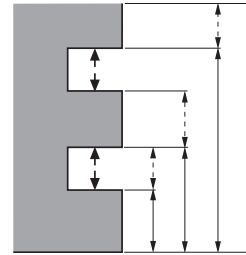
## Standard Accessories



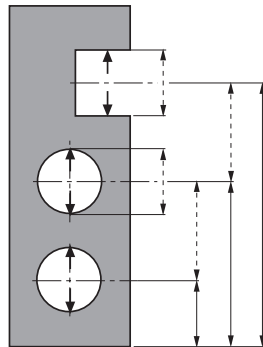




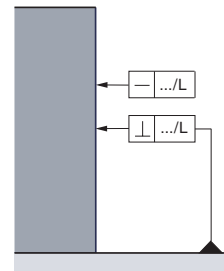
One-dimensional measurement



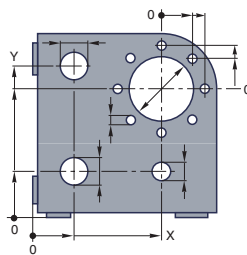
One-dimensional measurement



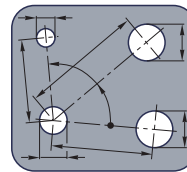
One-dimensional measurement



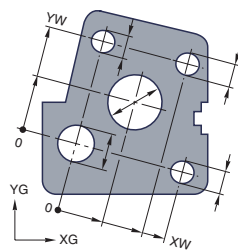
Programme functions for the detection of form and position errors.  
With use of a TESA IG-13 digital probe.



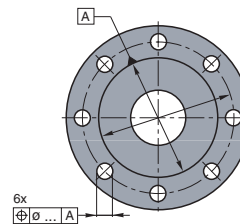
Two-Dimensional Measurement



Two-Dimensional Measurement




Two-Dimensional Measurement



Two-Dimensional Measurement





## Control Panel for TESA MICRO-HITE 350 / 600 / 900

 Main Display 12,7 x 6,4 mm, 6,3 x secondary display 4,2 mm.


 Conversion mm/in

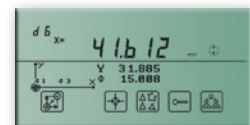
 Through TESA MICRO-HITE





 IP40 (CEI 60529)

 Dual LCD display size 128 x 63 mm.

- Measurement of lengths value display (7 segments / sign) and function symbols (top).
- Measurement of squareness / rectitude display values and symbols (function keys, control by the operator display (points))
- Measured: 7 decades Reduce sign.

 PRESET function for entering a given value. Continuous displaying. Manual or automatic triggering of data transfer. Output of pre-defined report with headers in 5 languages plus A4 format using an external printer unit.



|  |  |  |  |
|---|---|--|---|
| 00760163  | Power Panel   | mm<br>0,0005 / 0,001 / 0,01 / 0,1  | in<br>0,00002 / 0,0001 / 0,001 / 0,01 / 0,1   |
| OPTIONAL ACCESSORY:   |   |  |   |
| 04765008  | Thermal paper, 57 mm wide   |  |   |











## TESA MICRO-HITE Plus M 350 / 600 / 900

All TESA MICRO-HITE plus M height gauges are unique in that they have exceptional metrological capabilities and can be used intuitively with ease.

This method allows form and position error to be easily and quickly detected by means of a lever-type dial indicator – Check deviations from straightness or parallelism according to ISO 1101 when used in conjunction with TESA IG-13 linked to the Power panel plus M.

- Modular design descending from the successful TESA MICRO-HITE dynasty.
- Also equipped with the unique rotary power control located close to the rugged base. This feature serves for guiding the column that moves on an air cushion, commanding fast motion of the probe insert and triggering all main measuring functions. Its intuitive use allows accurate, easy handling of the column. A simple rotation causes the measuring head to move rapidly, approach the contact point quickly or slowly, probe up- or downward or execute bore measurement.
- Available in three different sizes with a measuring span of 365, 615 or 920 mm.
- Choice between two control panels for value processing and output.
- Metric and inch LC display with a resolution to 0,0001 and 0,001 mm, or inch equivalent.
- Autonomous run through batteries. No cumbersome cable.
- Built-in air bearing for easy displacement over the surface plate.
- Motorised measuring head for fast, accurate probing at each contact point with a constant measuring force.
- TESA  $\mu$  system for matchless reliability and simplicity.
- High precision through CAA (Computer Aided Accuracy). All correction values stored in the memory still add to the mechanical precision.
- Coefficient of linear expansion matching that of steel ( $11,5 \times 10^{-6} \text{ K}^{-1}$ ).
- RS232 data output.
- SCS calibration certificate delivered with every height gauge.

-  Factory standard
-  Incremental glass scale with opto-electronic data acquisition. Grating period: 20  $\mu\text{m}$ . Opto-electronic input (TESA Patent)
-  1 N
-  Built-in air-bearing for easy move of the column over the surface plate
-  Measuring head mounted on a ball-bearing. Motorised head displacement at a varying speed from 7,5 up to 40 mm/s. Manual displacement:  $\leq 600 \text{ mm/s}$ . Automatic value capture with a constant measuring force.
-  Rechargeable 6 V, 3,0 Ah or network adapter 100  $\div$  240 Vac/50  $\div$  60 Hz
-   $\approx 12 \text{ h}$  after 8 h of charging
-  Fixed zero


TESA  $\mu$  System


Perpendicularity using TESA IG-13



Perpendicularity using TESATAST





 Linear expansion  
11,5 x 10<sup>-6</sup> K<sup>-1</sup>







 IP40 (CEI 60529)

 Net weight without  
desks or block  
batteries. Basic  
instrument 350:  
33 kg, 600: 38 kg,  
900: 45 kg

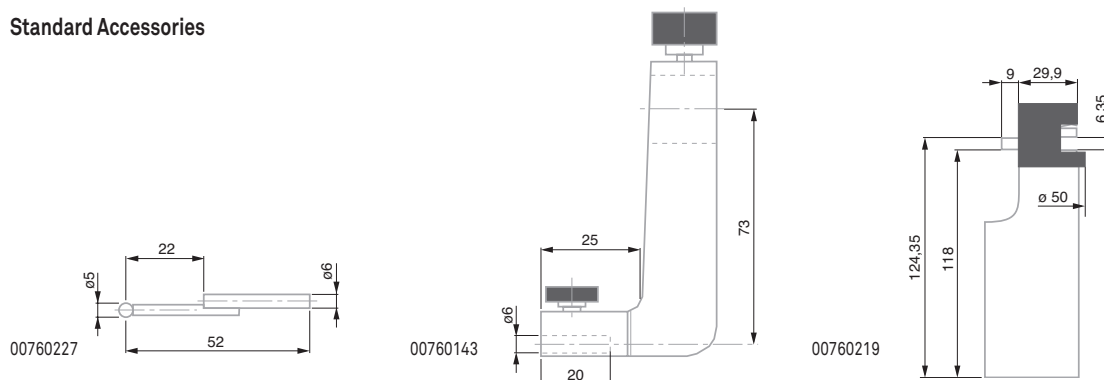
 Calibration  
certificate SCS

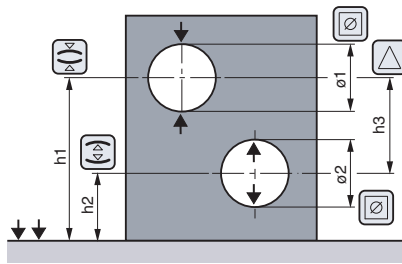
| No                  |  |  |     |  |  |
|---------------------|--|---|-----|---|--|
|                     |  | mm  |     | in  |  |
| 00730063            | Set MICRO-HITE plus M 350  | 365   |     | 14  |  |
| 00730064            | Set MICRO-HITE plus M 600  | 615   |     | 24  |  |
| 00730065            | Set MICRO-HITE plus M 900  | 920   |     | 36  |  |
| CONSISTING OF:      |  | 350   | 600 | 900   |  |
| 00760141            | Rechargeable battery pack  | ●   | ●   | ●   |  |
| 00760142            | Electric pump for creating the air-cushion beneath the gauge base, already mounted         | ●   | ●   | ●   |  |
| 00760143            | Standard probe insert holder   | ●   | ●   | ●   |  |
| 00760219            | Master piece for establishing the probe constant, nominal dimension to 6,350 mm / 0.250 in | ●   | ●   | ●   |  |
| 00760151            | Dust cover for TESA MICRO-HITE 350   | ●   |     |   |  |
| 00760152            | Dust cover for TESA MICRO-HITE 600   |   | ●   |   |  |
| 00760153            | Dust cover for TESA MICRO-HITE 900   |   |     | ●   |  |
| 00760227            | Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide                | ●   | ●   | ●   |  |
| 04761054            | Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz   | ●   | ●   | ●   |  |
| 04761055            | Cable EU for mains adapter   | ●   | ●   | ●   |  |
| 04761056            | Cable US for mains adapter   | ●   | ●   | ●   |  |
| OPTIONAL ACCESSORY: |  |   |     |   |  |
| 00760157            | Rechargeable battery, 6V   |   |     |   |  |

#### Technical data

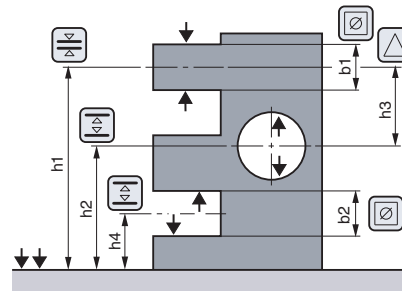
|   | Models                                    |    | MICRO-HITE<br>plus M 350   | MICRO-HITE<br>plus M 600 | MICRO-HITE<br>plus M 900 |
|---|---|----|--|--------------------------|--------------------------|
|  |   | mm | 365  | 615                      | 920                      |
|   |   | in | 14   | 24                       | 36                       |
|  | With standard accessory                   | mm | 0 ÷ 520  | 0 ÷ 770                  | 0 ÷ 1075                 |
|   |   | in | 0 ÷ 20   | 0 ÷ 30                   | 0 ÷ 42                   |
|   | With probe insert holder<br>No. 00760057  | mm | 0 ÷ 575  | 0 ÷ 825                  | 0 ÷ 1130                 |
|   |   | in | 0 ÷ 22   | 0 ÷ 32                   | 0 ÷ 44                   |
|   | With probe insert holder<br>No. S07001622 | mm | 0 ÷ 745  | 0 ÷ 995                  | 0 ÷ 1300                 |
|   |   | in | 0 ÷ 29   | 0 ÷ 39                   | 0 ÷ 51                   |
|  | With standard accessory                   |    | (1,9 + 1,5 L) µm (L in m)<br>(0.0001 + 0.0000015 L) in (L in in) |                          |                          |
|  | With standard accessory                   |    | On flat surfaces:<br>2 σ ≤ 0,5 µm / ≤ 0.000025 in                |                          |                          |
|   |   |    | Into bores:<br>2 σ ≤ 1 µm / ≤ 0.00005 in                         |                          |                          |
|  | Frontal, mechanical                       | µm | 5  | 7                        | 9                        |
|   | Frontal and lateral<br>using TESA IG-13   | in | 0,00020  | 0,00028                  | 0,00035                  |

#### Standard Accessories

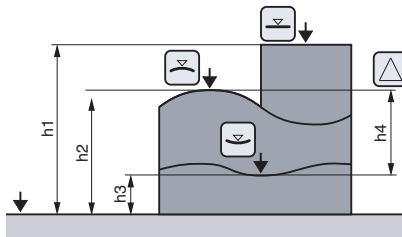




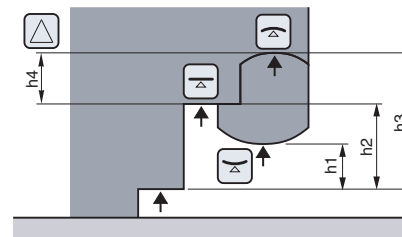
Measurement with change of the probe direction  
Probe constant included, considering the culmination point



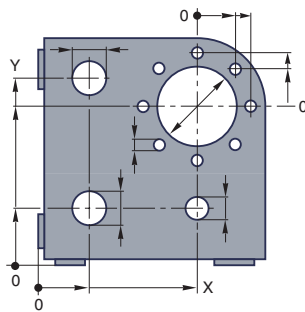
Measurement with change of the probe direction  
Probe constant included, disregarding the culmination point



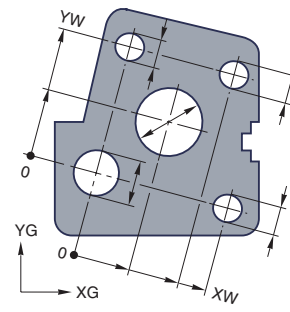
Measurement without change of the probe direction  
Probe constant excluded



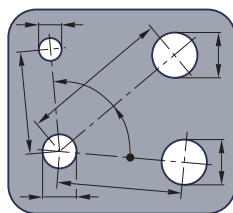
Measurement without change of the probe direction  
Probe constant excluded



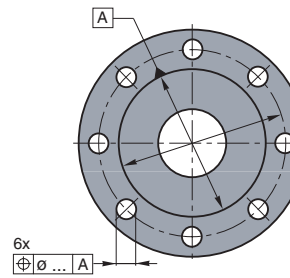
Two-Dimensional Measurement



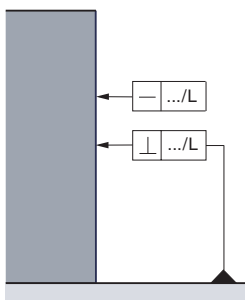
Two-Dimensional Measurement



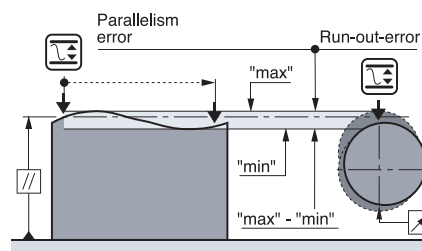
Two-Dimensional Measurement



Two-Dimensional Measurement




Measurement of form and position errors



Measurement of form and position errors







 12,7 x 6,4 mm main display, 6,3 x 4,2 or 3,8 x 2,9 mm auxiliary display

 mm/in conversion


 Via TESA MICRO-HITE plus M

 IP50 (IEC 60529)

 Bidirectional RS232, optoelectronic and Centronics





 LC dual display, 128 x 63 mm in size.

- Length measurement: 7-segment/digit upper display field for values plus symbols for the functions.
- Straightness or perpendicularity measurement: display field for values plus symbols (function keys).
- Operator controlled operations (full dot display).
- Measured values: 7-decade display plus minus sign.

 PRESET function for entering a given value. Acoustic signal. Manual or automatic triggering of data transfer. Output of predefined reports with headers in 5 languages (plus a programmable one) using an external printer unit (A4 format).

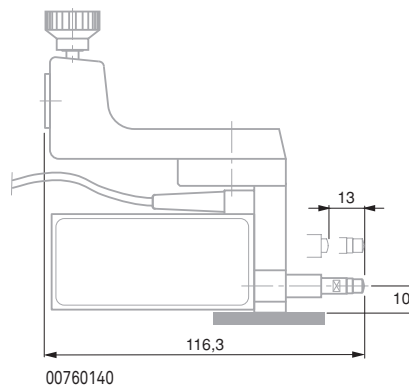
## Control Panels for TESA MICRO-HITE Plus M 350 / 600 / 900



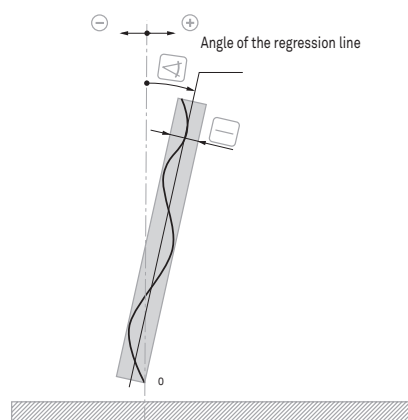
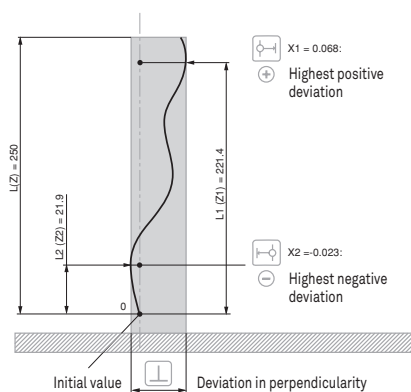
|  |  |  mm |  in |
|--|--|--|---|
| 00760220   | Power Panel for MICRO-HITE plus M with printer                                     | 0,0001 / 0,001 / 0,01  | 0.00001 / 0.0001 / 0.001  |
| 00760221   | Power Panel for MICRO-HITE plus M  | 0,0001 / 0,001 / 0,01  | 0.00001 / 0.0001 / 0.001  |
| <b>OPTIONAL ACCESSORIES:</b>   |  |  |   |
| 04765008   | Thermal paper, 57 mm wide  |  |   |
| 04761052   | Extension cable, Sub-D 9p/f to 9p/m, 2 m   |  |   |
| 04761063   | Sub-D 9p/m to USB cable, 2 m   |  |   |



## TESA IG-13 Probe Set for Perpendicularity Measurement



-  Factory standard
-  13 mm / 0.51 in
-  1 µm
-  0,45 N at zero  
0,75 N at stop



**00760140** TESA IG-13 Probe set

### CONSISTING OF:

**00760138** TESA IG-13 Attachment
















**00760139** TESA IG-13 Digital probe

### OPTIONAL ACCESSORIES:

**01960005** Retraction lever

**04761047** Connecting cable IG-13/Power Panel plus M 1 m (mini-DIN)






-  Factory standard
-  100 mm / 4 in
-  0 to 160 mm / 0 to 6.3 in
-  0.0001 mm or 0.00001 in
-  Incremental glass scale with opto-electronic data acquisition. Grating period: 20 µm.
-  Accuracy class according to DIN 876, Part 1
-  finely lapped
-  Measuring table (L x P x H) 200 x 300 x 50 mm, Ø column 50 x 300 mm.
-  Granite measuring table; dull-chrome plated steel column, hardened and ground.
-  0,63 ± 0,1 N and 1 ± 0,1 N, switchable. Electromotorised activation.
-  Numerical interval to 0,001 mm / 0,0001 in = 10 mm/s; to 0,0001 mm / 0,00001 in = 5 mm/s; fast displacement = 30 mm/s
-  Electro-motorised gauge head displacement; can also be moved manually.
-  Via the control panel
-  Linear expansion 11,5 x 10<sup>-6</sup> K<sup>-1</sup>
-  Fixed zero

## TESA-µHITE

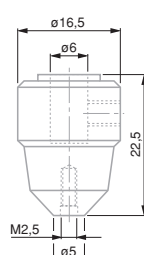
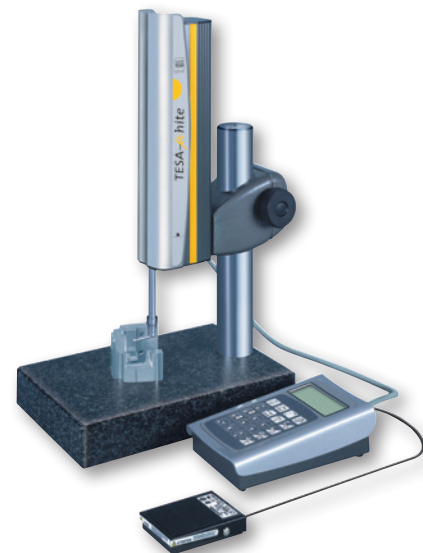
Compact design with measuring stand included – Sensor equipped with a system for coaxial measuring according to the Abbe principle or using an offset probe relative to the gauge axis. Measures internal, external, height, depth, step and distance dimensions on geometric elements having either a flat, parallel or cylindrical surface – Automatic detection of the culminating point on bores or shafts – Dynamic probing with memory functions "max.", "min." and "max.-min.". The whole system provides the best solution for measuring straightness, flatness and parallelism or inspecting axial and radial runouts depending on the chosen tool configuration.

- Ideal for workpiece inspection close to the production area.
- 100 mm measuring span.
- 0,001 mm and 0,0001 mm or 0.0001 in and 0.00001 in scales intervals.
- Max. perm. error as low as 2 µm (or 1 µm when checking coaxiality).
- Integrated temperature sensor so that the coefficient of linear expansion of each gauge unit matches that of steel ( $11,5 \times 10^{-6} \text{ K}^{-1}$ ).
- Motorised measuring head for fast probing at each point.
- Automatic value capture, controlled over the stability of the measuring force, but also all measured values.
- Constant measuring force through the motor-driven actuator. Switchable.
- No manual calculation needed.
- RS232 data output with direct connection to TESA PRINTER SPC.
- Memory capacity for 99 single values.

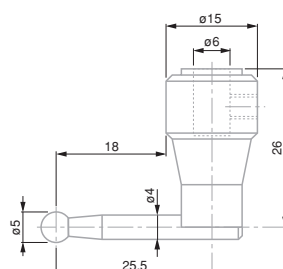
### Accuracy

|  |  |  |  |         |  |
|--|---|---|---|---------|--|
|  | µm  | in  | µm  | in      |  |
| Insert's position relative to the axis of the measuring bolt |   |   |   |         |  |
| Coaxial  | 1,0   | 0.00005   | 0,5   | 0.00002 |  |
| Offset   | 2,0   | 0.0001  | 1,0   | 0.00004 |  |

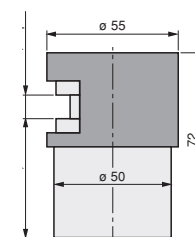
Applicable with used standard accessory



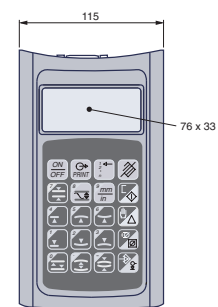
00760195



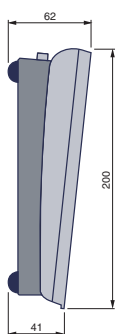
00760197







00760192



00760204



| No       | =          |  |  |  |  |
|----------|------------|---|---|---|---|
| 00730049 | TESA-µHITE | 0 ÷ 160   | 0 ÷ 6,3   | Coaxial tip: 1,0<br>off-centre tip 2,0  | Coaxial tip: 0,5 /<br>0.00002; off-centre tip<br>1,0 / 0,00004                      |

CONSISTING OF:

00760203 TESA measuring support, granite measuring table, size 200 x 300 x 50 mm

00730054 TESA-µHITE electronic measuring equipment

CONSISTING OF:

038407 1 plastic case

00730050 TESA-µHITE probe

00760191 Connecting cable Panel / TESA-µHITE

00760192 Master piece for establishing the probe constant, nominal dimension 10 mm / 0.39370 in

00760195 Axial insert holder M2,5

00760197 Probe insert with a 5 mm dia. tungsten carbide ball tip, offset

00760204 Control panel, to be connected to TESA-µHITE

03510002 Measuring insert TN10W

04761054 Mains adapter 100 ÷ 200 VAC / 50 ÷ 60 Hz

04761055 Cable EU for mains adapter

04761056 Cable US for mains adapter

OPTIONAL ACCESSORIES:

00760186 Set of probe inserts for TESA-µHITE

04761052 Extension cable, Sub-D 9p/f to 9p/m, 2 m

04761063 Sub-D 9p/m to USB cable, 2 m



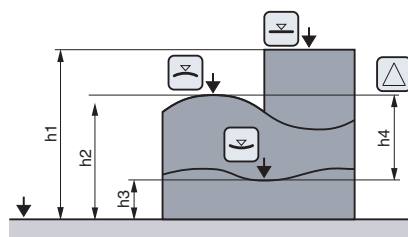
IP50 (IEC 60529)



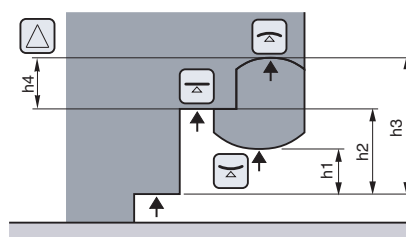
Net weight 16,2 kg  
(measuring support  
No. 00760203),  
net weight 2,6 kg  
(TESA-µHITE No.  
00730050), net  
weight 1,45 kg  
(control panel  
No. 00760204 with  
cable No. 00760191)



SCS calibration  
certificate

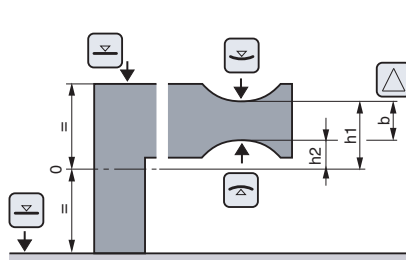
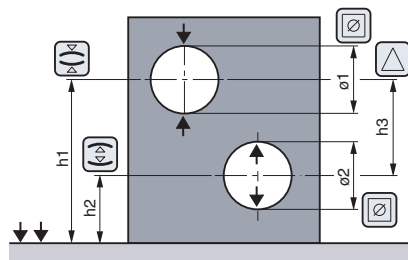


Measurement without change of the probe direction  
Probe constant excluded

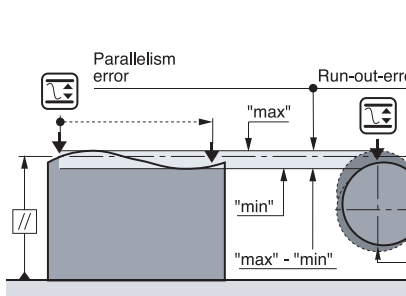
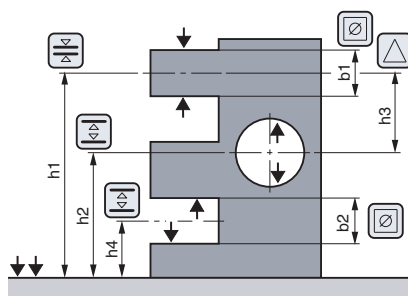


Measurement without change of the probe direction  
Probe constant excluded

Measurement with change  
of the probe direction  
Probe constant included,  
considering the culmina-  
tion point



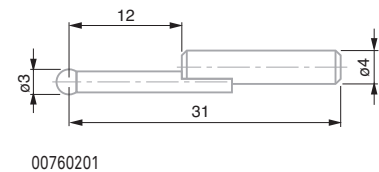
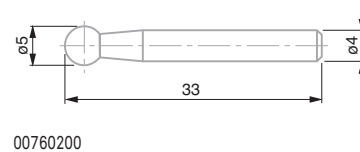
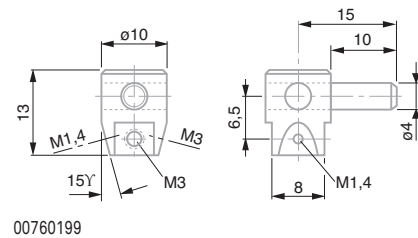
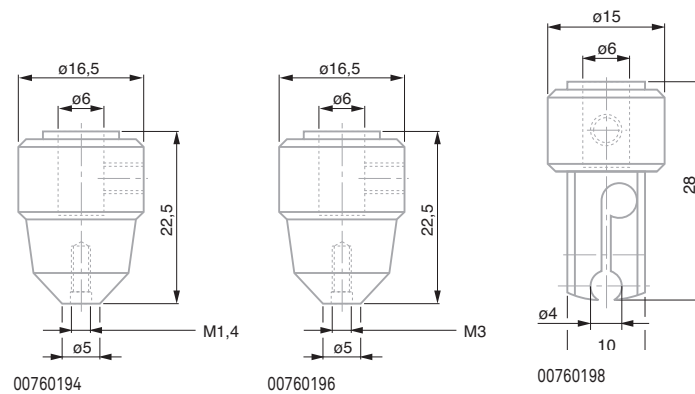
Measurement with change  
of the probe direction  
Probe constant included,  
disregarding the culmina-  
tion point



Parallelism error  
Run-out error  
"max"  
"min"  
"max" - "min"

## Optional Accessories for TESA-μHite

| No       | =   |
|----------|---|
| 00760194 | Axial probe holder for probe inserts with a M1,4 thread   |
| 00760196 | Axial probe holder for probe inserts with a M3 thread   |
| 00760198 | Radial probe holder with a 4 mm dia. mounting bore  |
| 00760199 | Universal probe insert holder with a 4 mm dia. clamping shank (used in conjunction with radial probe holder No. 00760198). M1,4 plus M3 threads (2 x 2) for the probe inserts |
| 00760200 | Probe insert with a 5 mm dia. tungsten carbide ball tip. Also with a 4 mm dia. fixing rod for use with radial probe holder insert No. 00760198.                               |
| 00760201 | Probe insert with a 3 mm dia. tungsten carbide ball tip. Also with a 4 mm dia. fixing rod for use with radial probe holder No. 00760198.                                      |
| 00760202 | Spare batteries for control panel No. 00760204, 6 Vdc/1,2 Ah.   |
| 00760207 | Swivel support for control panel  |





## Sets of Accessories for Height Gauges



**00760232** Starter accessory kit with 4 elements for TESA Height Gauges

CONSISTING OF:

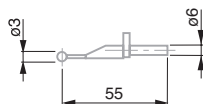
**00760061** Probe insert with a 3 mm dia. carbide ball tip

**00760075** Probe insert with a carbide disc tip  $E = 2 \text{ mm} / \varnothing 14 \text{ mm}$  for grooves, slots, centering shoulders etc.

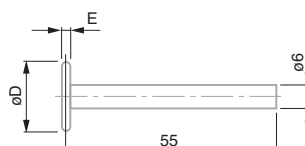
**00760082** 2 mm dia. probe insert with a small cyl. carbide face

**00760094** Probe inserts with a stainless steel shank, hardened. Also with one flat and one spherical carbide measuring face. Interchangeable shank.

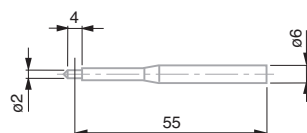
**059215** Plastic box



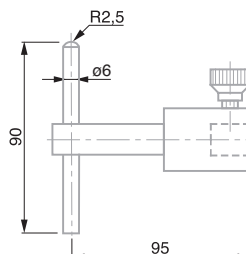
00760061



00760075



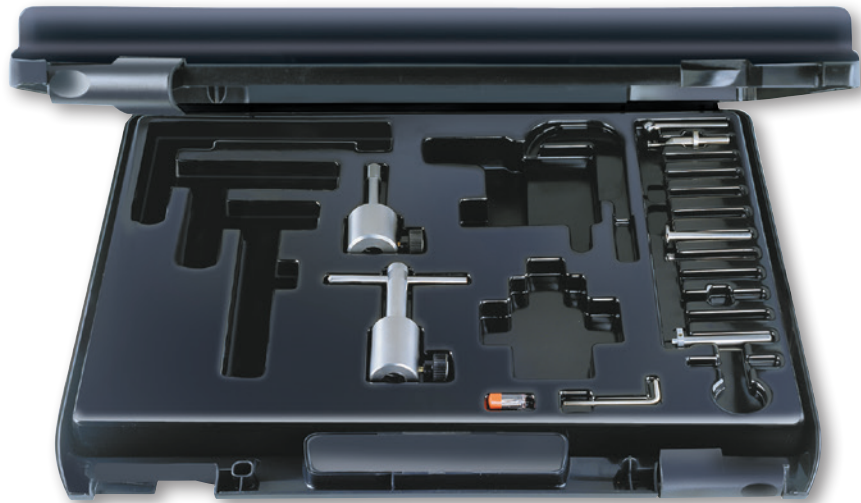
00760082



00760094



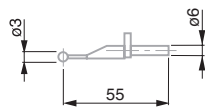
## Sets of Accessories for Height Gauges



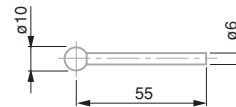
**00760173** Starter accessory kit with 8 elements for TESA Height Gauges

**CONSISTING OF:**

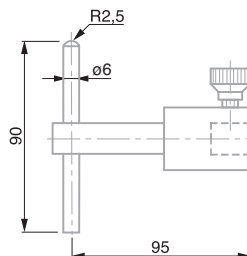
- 00760061** Probe insert with a 3 mm dia. carbide ball tip
- 00760060** Probe insert with a 10 mm dia. carbide ball tip
- 00760075** Probe insert with a carbide disc tip  $E = 2 \text{ mm}$  /  $\varnothing 14 \text{ mm}$  for grooves, slots, centering shoulders etc.
- 00760093** Probe insert with a cylindrical, tungsten carbide measuring face (10 mm dia., 12 mm long). Stainless steel body, hardened.
- 00760094** Probe inserts with a stainless steel shank, hardened. Also with one flat and one spherical carbide measuring face. Interchangeable shank.
- 00760228** Probe insert dia. 1 mm with shank and ball tip in tungsten carbide
- 00760229** Probe insert dia. 2 mm with shank and ball tip in tungsten carbide
- 00760230** Probe insert dia. 3 mm with shank and ball tip in tungsten carbide



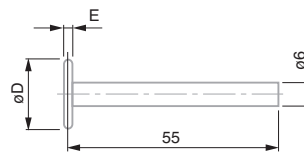
00760061



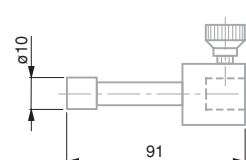
00760060



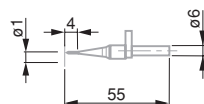
00760094



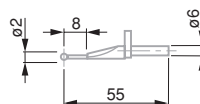
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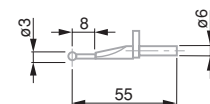
00760093



00760228



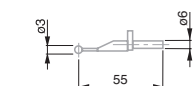
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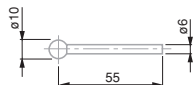
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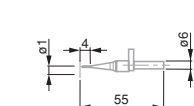
## Sets of Accessories for Height Gauges



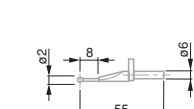
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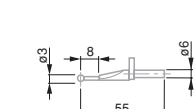
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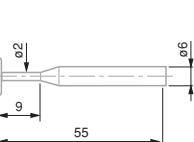
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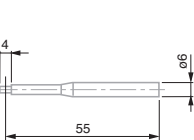
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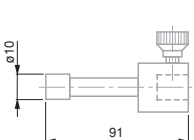
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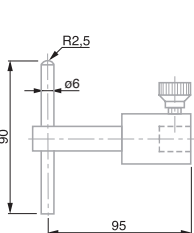
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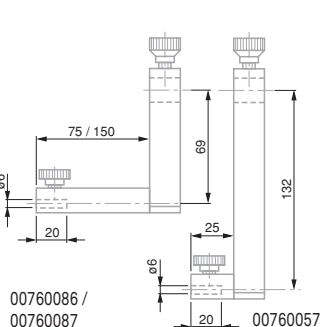
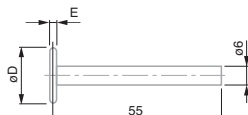
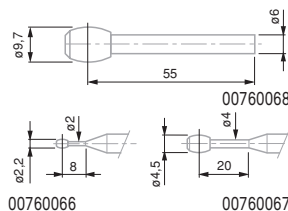
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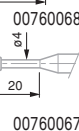
00760093



00760094


00760086 /  
00760087

00760075/  
00760076


00760066



00760067


**00760148** Full accessory set with 17 elements for TESA Height Gauges

CONSISTING OF:

**00760057** Probe insert holder for extending the application range

**00760060** Probe insert with a 10 mm dia. carbide ball tip

**00760061** Probe insert with a 3 mm dia. carbide ball tip

**00760066** Probe insert Ø 2,2 mm (for M3 to M16 threads) with carbide, barrel-shaped measuring faces for cylindrical bores as well as for determining the position of metric inside threads (or similar).

**00760067** Probe insert Ø 4,5 mm (for M6 to M48 threads) with carbide, barrel-shaped measuring faces for cylindrical bores as well as for determining the position of metric inside threads (or similar).

**00760068** Probe insert Ø 9,7 mm (for M12 to M150 threads) with carbide, barrel-shaped measuring faces for cylindrical bores as well as for determining the position of metric inside threads (or similar).

**00760074** Probe insert with a carbide disc tip E = 1 mm / Ø 4,5 mm for grooves, slots, centering shoulders etc.

**00760075** Probe insert with a carbide disc tip E = 2 mm / Ø 14 mm for grooves, slots, centering shoulders etc.

**00760076** Probe insert with a carbide disc tip E = 3 mm / Ø 19 mm for grooves, slots, centering shoulders etc.

**00760082** 2 mm dia. probe insert with a small cyl. carbide face

**00760086** Probe insert holder for depth up to 110 mm (L = 75 mm)

**00760087** Probe insert holder for depth up to 185 mm (L = 150 mm)

**00760093** Probe insert with a cylindrical, tungsten carbide measuring face (Ø 10 mm, length 12 mm); stainless steel body, hardened

**00760094** Probe inserts with a stainless steel shank, hardened. Also with one flat and one spherical carbide measuring face. Interchangeable shank.

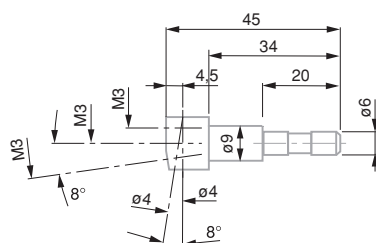
**00760228** Probe insert dia. 1 mm with shank and ball tip in tungsten carbide

**00760229** Probe insert dia. 2 mm with shank and ball tip in tungsten carbide

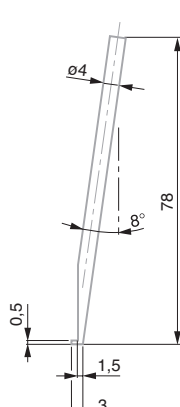
**00760230** Probe insert dia. 3 mm with shank and ball tip in tungsten carbide


## Sets of Accessories for Height Gauges

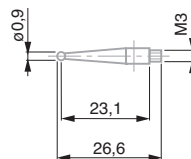
| No             | =   |
|----------------|---|
| 00760175       | Set of probe inserts for TESA-HITE, TESA-HITE plus M, TESA-HITE magna, MICRO-HITE and MICRO-HITE plus M |
| CONSISTING OF: |   |
| 00760177       | Probe insert holder   |
| 00760178       | Hardened steel rod for grooves, centring shoulders, blind bores etc, angled through 8°                  |
| 00760179       | Tungsten carbide cylindrical rod for depth measurement  |
| 00760180       | Probe inserts with a 0,9 mm dia. hardened steel ball tip  |
| 00760181       | Probe inserts with a 1,9 mm dia. hardened steel ball tip  |
| 00760182       | Probe inserts with a 1,9 mm dia. hardened steel ball tip  |
| 00760183       | Hardened steel probe insert with a cone-shaped measuring face, 8 mm dia.                                |
| 00760184       | Extension, 20 mm, with a M3 thread for inserts with M3 thread   |
| 00760185       | Extension, 20 mm, with a M3 thread for inserts with M2,5 thread   |



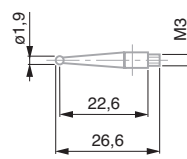
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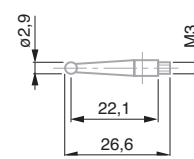
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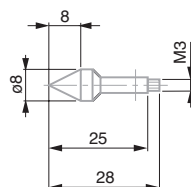
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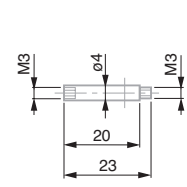
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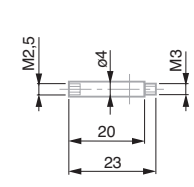
00760182



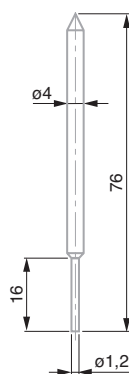
00760183



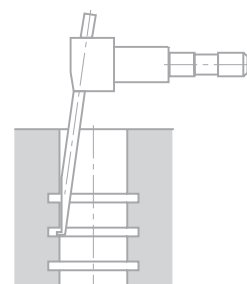
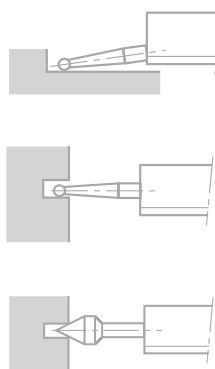
00760184



00760185



00760179



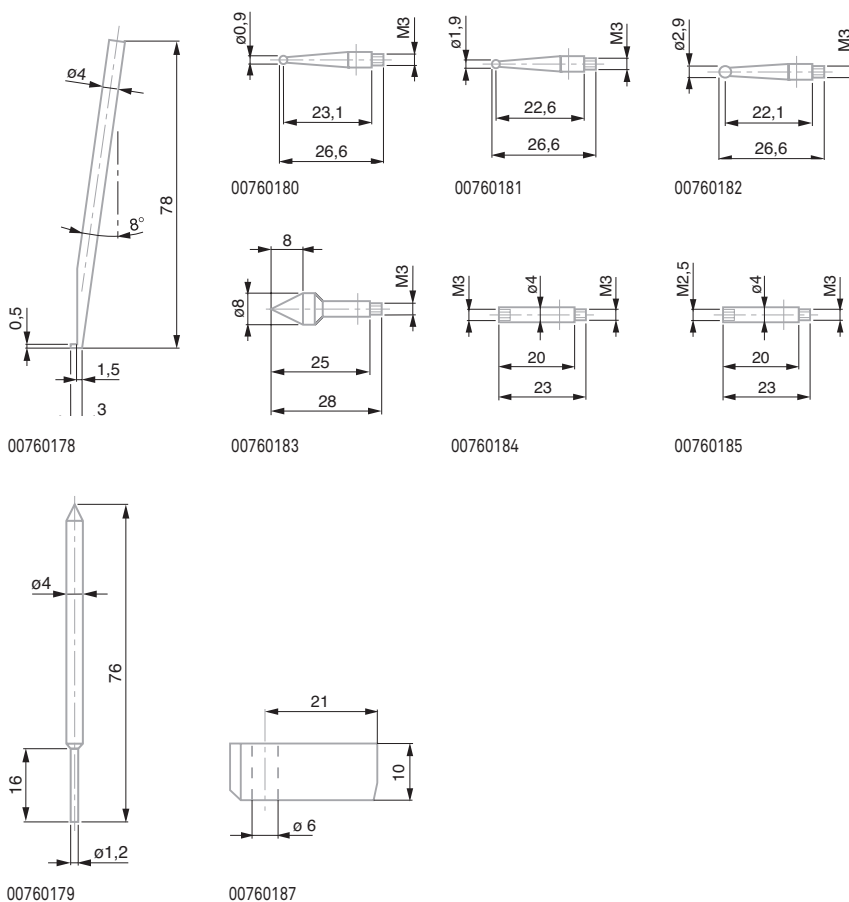
## Sets of Accessories for Height Gauges



**00760186** Set of probe inserts for TESA-μHITE

CONSISTING OF:

|                 |  |
|-----------------|--|
| <b>00760178</b> | Hardened steel rod for grooves, centring shoulders, blind bores etc, angled through 8° |
| <b>00760179</b> | Tungsten carbide cylindrical rod for depth measurement                                 |
| <b>00760180</b> | Probe inserts with a 0,9 mm dia. hardened steel ball tip                               |
| <b>00760181</b> | Probe inserts with a 1,9 mm dia. hardened steel ball tip                               |
| <b>00760182</b> | Probe inserts with a 2,9 mm dia. hardened steel ball tip                               |
| <b>00760183</b> | Hardened steel probe insert with a cone-shaped measuring face, 8 mm dia.               |
| <b>00760184</b> | Extension, 20 mm, with a M3 thread for inserts with M3 thread                          |
| <b>00760185</b> | Extension, 20 mm, with a M3 thread for inserts with M2,5 thread                        |
| <b>00760187</b> | Probe insert holder  |

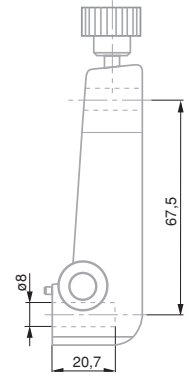




## Probe Holder No. 00760223 for Inserts with 8 mm Diameter



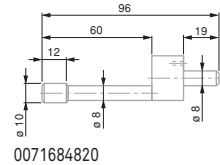
00760223 Probe holder for inserts with 8 mm diameter



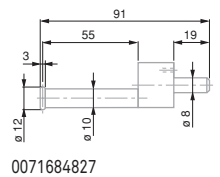
## Optional Accessories for Use with Insert Holder No. 00760223



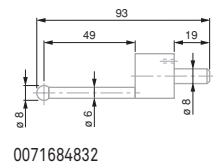
- 0071684815 Probe insert with a 4 mm dia. tungsten carbide ball tip
- 0071684816 Probe insert with a 6 mm dia. tungsten carbide ball tip
- 0071684817 Long probe insert with a 10 mm dia. tungsten carbide ball tip
- 0071684818 Probe insert with a 1 mm dia. steel tip, hardened. Also with adjustable shank for depth measurement.
- 0071684819 Probe insert with cone-shaped measuring face in hardened steel for  $\varnothing 5 \div 20$  mm
- 0071684820 Probe insert with cylindrical measuring face in hardened steel,  $\varnothing 10$  mm, 12 mm long
- 0071684822 Probe insert with cone-shaped measuring face in hardened steel,  $\varnothing 0,5 \div 5,5$  mm
- 0071684825 Probe insert with a 6 mm dia. tungsten carbide ball tip
- 0071684826 Attachment for interchangeable inserts with M1,4 thread. Supplied with 1 insert No. 01860201 having a 1 mm dia. carbide ball tip.
- 0071684827 Probe insert with disc-shaped face  $\varnothing 12$  mm, 3 mm wide
- 0071684828 Attachment for interchangeable insert with M1,4 thread. Supplied with 2 probe inserts No. 0186020 having a 2 mm dia. carbide ball tip
- 0071684829 Probe insert with a 10 mm dia. tungsten carbide ball tip
- 0071684832 Probe insert with a 8 mm dia. tungsten carbide ball tip



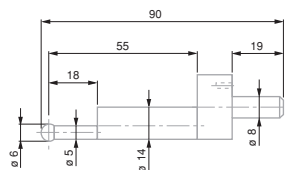
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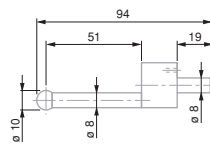
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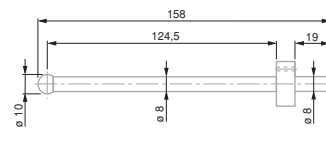
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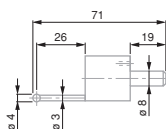
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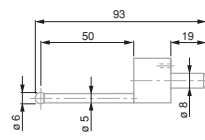
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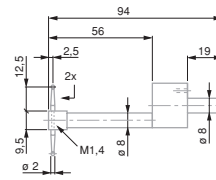
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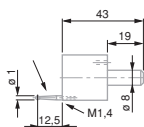
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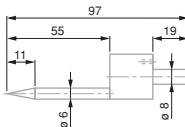
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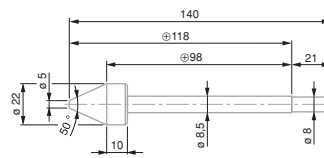
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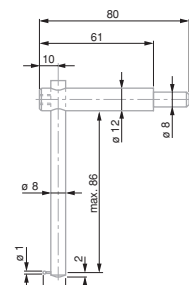
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0071684822



0071684819

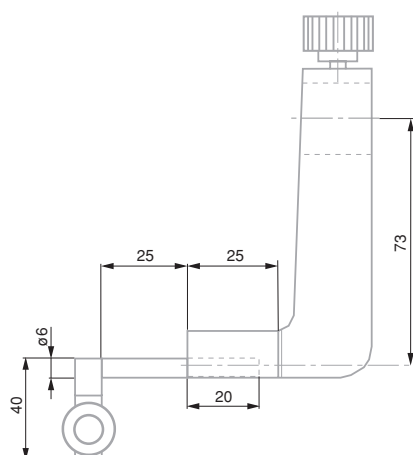


0071684818



## Accessories for Measuring Perpendicularity by Means of a Dial Test Indicator

Used with TESA MICRO-HITE plus M, TESA MICRO-HITE, TESA-HITE 400/ 700 and TESA-HITE plus M 400/ 700.



00760222 Probe insert holder for a dial test indicator (lever-type)



**N** Factory standard

**O** Floating zero

**DIN 862**  
For lengths up to  
600 mm = 30 µm  
1000 mm = 40 µm

**Steel base, hardened**

**A** Slider with inter-changeable scriber. Also with back mounted clamping holder having a 8 mm diameter. Slider with locking screw and fine adjust device. Base has a ground face with dust grooves. Top face also ground.

**Preset and Hold functions**



## ETALON Height and Scribing Gauges with Digital Display

Electronic height and scribing gauges

- Resolution to 0,01 mm/0.005 in
- RS232 interface

| No       | mm       | in     | Column, mm | Base (L x H x W) mm |
|----------|----------|--------|------------|---------------------|
| 07739001 | 0 ÷ 300  | 0 ÷ 12 | 25 x 6     | 60 x 40 x 100       |
| 07739002 | 0 ÷ 600  | 0 ÷ 24 | 30 x 12    | 110 x 50 x 160      |
| 07739003 | 0 ÷ 1000 | 0 ÷ 40 | 30 x 12    | 110 x 50 x 160      |





## Accessories for ETALON Height and Scribing Gauges with Digital Display



07769005



07769006

|  |  |  |  |
|---|---|---|---|
|   |   | Suitable for models   | Length, mm  |
| 07769001  | Scriber for 300 mm length 65 mm   | 300   | 65  |
| 07769003  | Scriber for 6 to 1000 mm, length 75 mm  | 600, 1000   | 75  |
| 07769005  | Holder to replace the scriber   |   |   |
| 07769006  | Rotating and tilting version with a 8 mm dia. shank. To be used with No. 07769005   |   |   |



