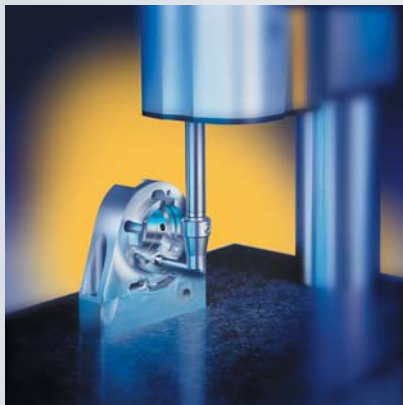


# TESA- $\mu$ HITE Height Gauge

The solution for the most varied metrology applications



Factory standard

100 mm/4 in

0 to 160 mm  
0 to 6.3 in

0,001 mm and  
0,0001 mm or  
0,0001 in and  
0,00001 in

Max. perm.  
error G: see  
table page M-21

Repeatability  
limit r: see  
table page M-21

**Support**

Granite measuring table; dull-chrome plated steel column, hardened and ground.

200x300x50 mm measuring table (L x D x H)  
50 x 300 mm dia. column.

Finish lapped

Accuracy grade 00 according to DIN 876, Part 1

**TESA- $\mu$ HITE value sensor**

Incremental glass scale with opto-electronic value capture.  
Grating period: 20  $\mu$ m

$11,5 \times 10^{-6} \text{ K}^{-1}$

Electro-motorised gauge head displacement; can also be moved manually.

0,001 mm or 0,0001 in numerical interval = 10 mm/s; 0,0001 mm or 0,00001 in = 5 mm/s, fast displacement = 30 mm/s

6 mm dia. x 10 mm long clamp for the meas. insert

0,63  $\pm$  0,1 N or 1  $\pm$  0,1 N, switchable.

Electromotorised activation.

Via control panel

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.

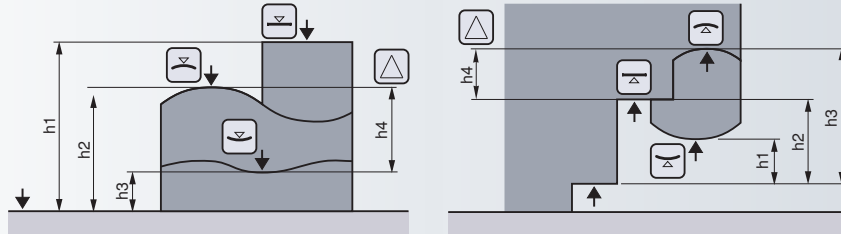
- Ideal for workpiece inspection close to the production area.
- 100 mm measuring span.
- 0,001 mm and 0,0001 mm or 0.0001 in and 0.00001 in scales intervals.
- Max. perm. error as low as 2  $\mu$ m (or 1  $\mu$ m when checking coaxiality).
- Integrated temperature sensor so that the coefficient of linear 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.
- RS 232 data output with direct connection to TESA PRINTER SPC.
- Memory capacity for 99 single values.



# TESA- $\mu$ HITE Capabilities

## Measurement without change of the probe direction

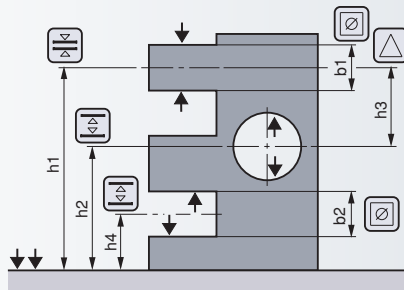
Probe constant excluded



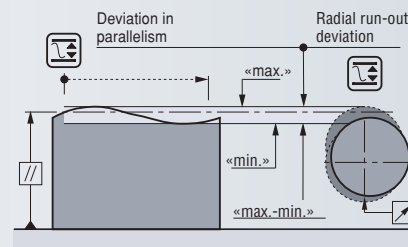
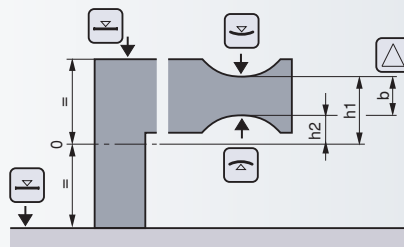
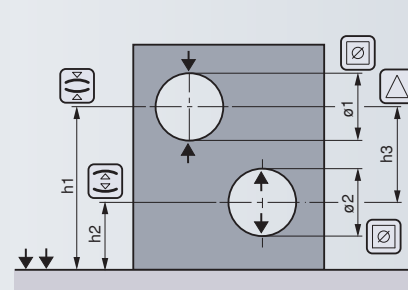
## Measurement with change of the probe direction

Probe constant included

– without storage of the culmination point



– with storage of the culmination point



### Control Panel

67 x 33 mm LC display.  
Alphanumerical display:  
3-line display 7segment/  
digit) plus symbols.  
Display for measured values:  
7-decade display plus minus  
sign.  
Auxiliary display 1 or 2:  
7 or 4 digits.

10 x 4,9 mm (value display),  
7,5 x 3,7 or  
5 x 2,5 mm (auxiliary  
display 1 or 2),

Metric/Inch  
Conversion

Keyboard with  
20 softkeys

PRESET  
function for  
entering any  
given value.  
Acoustic signal.  
7 languages available  
for report headings

RS 232,  
opto-electronic  
and bidirectional

Mains adapter  
110 to 240 Vac /  
50 to 60 Hz /  
6,6 Vdc / 750 mA  
(order N° 04761054)

### Additional Data

5°C to 40°C

-10°C to 60°C

80%  
non-condensing

See  
drawings

16,2 kg net  
(support  
N° 00760203).  
2,6 kg net (TESA- $\mu$ HITE  
N° 00730050).  
1,45 kg net (control panel  
N° 00760204 with cable  
N° 00760191)

IP50  
(IEC 60529)

EN 61326-1,  
Class B

Shipping  
packaging

Identification  
number

SCS calibration  
certificate

Declaration  
of conformity

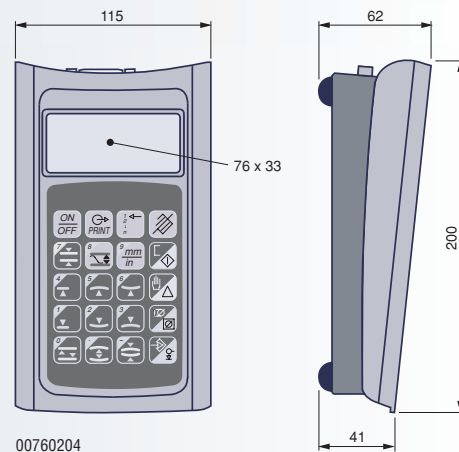
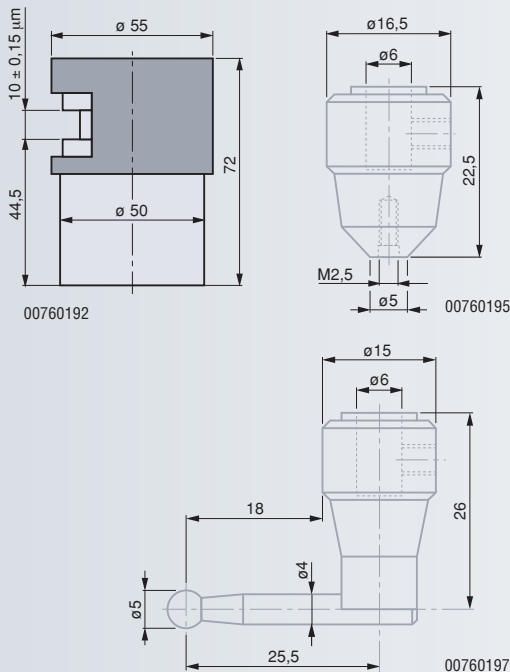
<b>00730049</b>	<b>TESA-μHITE height gauge</b>	0 ÷ 160	0 ÷ 6.3		
<i>Provided with the following components:</i>					
<b>00760203</b>	<b>1 TESA measuring support</b> , granite measuring table, size 200 x 300 x 50 mm				
<b>00730054</b>	<b>1 TESA-μHITE electronic length unit</b>				
<i>Also included:</i>					
<b>00730050</b>	1 TESA-μHITE value sensor	100		4	
<b>00760204</b>	1 Control panel. To be connected to TESA-μHITE.		0,001 0,0001		0.0001 0.00001
<b>00760191</b>	1 Connecting cable for TESA-μHITE to control panel				
<b>00760195</b>	1 Axial insert holder with M2,5 thread				
<b>03510002</b>	1 Insert with a 3 mm dia. tungsten carbide ball tip				
<b>00760197</b>	1 Insert with a 5 mm dia. tungsten carbide ball tip, offset				
<b>00760192</b>	1 Master piece for establishing probe constant, nominal dimension 10 mm/0.39370				
<b>04761054</b>	1 Mains adapter 110 to 240 Vac/50 to 60 Hz				
<b>04761055</b>	1 Cable EU for mains adapter				
<b>04761056</b>	1 Cable US for mains adapter				
<b>038407</b>	1 Suited plastic case				

For additional accessories, see page M-24.

## Accuracy

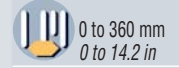
	μm	in	μm	in	μm	in
Insert position relative to the measuring bolt axis						
coaxial	1,0	0.00005	0,5	0.00002		
offset	2,0	0.0001	1,0	0.00004		

Applicable with used standard accessory.

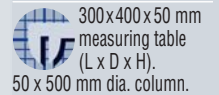


## TESA-μHITE

Extended application range from 0 up to 360 mm



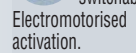
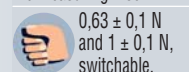
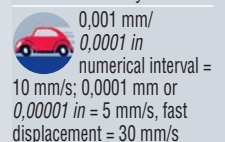
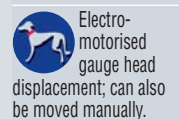
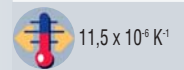
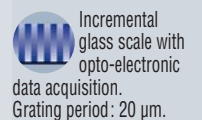
### Support



33 kg net (support N° S07600163)  
2,6 kg net (TESA-μHite N° 00730050)  
1,45 kg net (control panel N° 00760204 with cable N° 00760191)



### TESA-μHITE value sensor



N°



mm 0 ÷ 360 in 0 ÷ 14.2

### TESA-μHITE height gauge with extended application range

Provided with the following components (must be ordered under 2 positions)

- S07600163** 1 TESA measuring support, granite measuring table, size 300 x 400 x 50 mm, guiding column with a 50 x 500 mm diameter
- 00730054** 1 TESA-μHITE electronic length measuring unit

Also included:

N°



mm

mm

mm

in

in

<b>00730050</b>	1	TESA-μHITE value sensor	100		4	
<b>00760204</b>	1	Control panel. To be connected to TESA-μHITE.		0,001		0,0001
				0,0001		0,00001
<b>00760191</b>	1	Connecting cable for TESA-μHITE to control panel				
<b>00760195</b>	1	Axial insert holder with M2,5 thread				
<b>03510002</b>	1	Insert with a 3 mm dia. tungsten carbide ball tip				
<b>00760197</b>	1	Insert with a 5 mm dia. tungsten carbide ball tip, offset				
<b>00760192</b>	1	Master piece for establishing probe constant, nominal dimension 10 mm/0.39370				
<b>04761054</b>	1	Mains adapter 110 to 240 Vac/50 to 60 Hz				
<b>04761055</b>	1	Cable EU for mains adapter				
<b>04761056</b>	1	Cable US for mains adapter				
<b>038407</b>	1	Suited plastic case				

Additional accessories, see page M-24.

# TESA-μHITE

## Strong, user-friendly with Power Panel plus M

Capable to operate using all TESA POWER PANEL plus M measuring functions, those for perpendicularity measurement excepted (for more details, see both pages M-15 and M-17).



Factory standard

100 mm/4 in

0 to 160 mm/  
0 to 6.3 in

0,001 mm/  
0,0001 mm  
0,0001 in  
0,00001 in

Max. perm. error G: see table page M-21

Repeatability limit r: see table page M-21

### Support

Granite measuring table; dull-chrome plated steel column, hardened and ground.

200x300x50 mm measuring table (L x D x H). 50 x 300 mm dia. column.

Finish lapped

16,2 kg net (support N° 00760203)

2,6 kg net (TESA-μHite N° 00730050)

Accuracy grade 00 according to DIN 876, Part 1

### TESA-μHITE value sensor

Incremental glass scale with opto-electronic data acquisition. Grating period: 20 μm.

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

Electro-motorised gauge head displacement; can also be moved manually.

Numerical intervals to 0,0001 / 0,001 / 0,01 mm or 0,00001 / 0,0001 / 0,001 in

6 mm dia. x 10 mm long attachment for the measuring insert

0,63 ± 0,1 N and 1 ± 0,1 N, switchable.

Electromotorised activation.

Via control panel



### TESA-μHITE height gauge, plus M version



mm in  
0 ÷ 160 0 ÷ 6.3

Provided with the following components (must be ordered under 3 positions):

- 00760203** 1 TESA measuring support, granite table, 200 x 300 x 50 mm (large-size support No. S07600163 can alternately also be used)
- 00760221** 1 POWER PANEL plus M Related features listed on page M-17 (can alternately also be used with host printer No. 00760220)
- S07010288** 1 TESA-μHITE electronic length measuring unit, without control panel

Also included:



mm



mm in  
100 4

- 00730050** 1 TESA-μHITE value sensor
- 00760191** 1 Connecting cable for TESA-μHITE to control panel
- 00760195** 1 Axial insert holder for measuring inserts with a M2,5 thread
- 03510002** 1 Insert with a 3 mm dia. tungsten carbide ball tip
- 00760197** 1 Insert with a 5 mm dia. tungsten carbide ball tip, offset
- 00760192** 1 Master piece for establishing probe constant, nominal dimension 10 mm/0.39370
- 04761054** 1 Mains adapter 110 to 240 Vac/50 to 60 Hz
- 04761055** 1 Cable EU for mains adapter
- 04761056** 1 Cable US for mains adapter
- 038407** 1 Suited plastic case

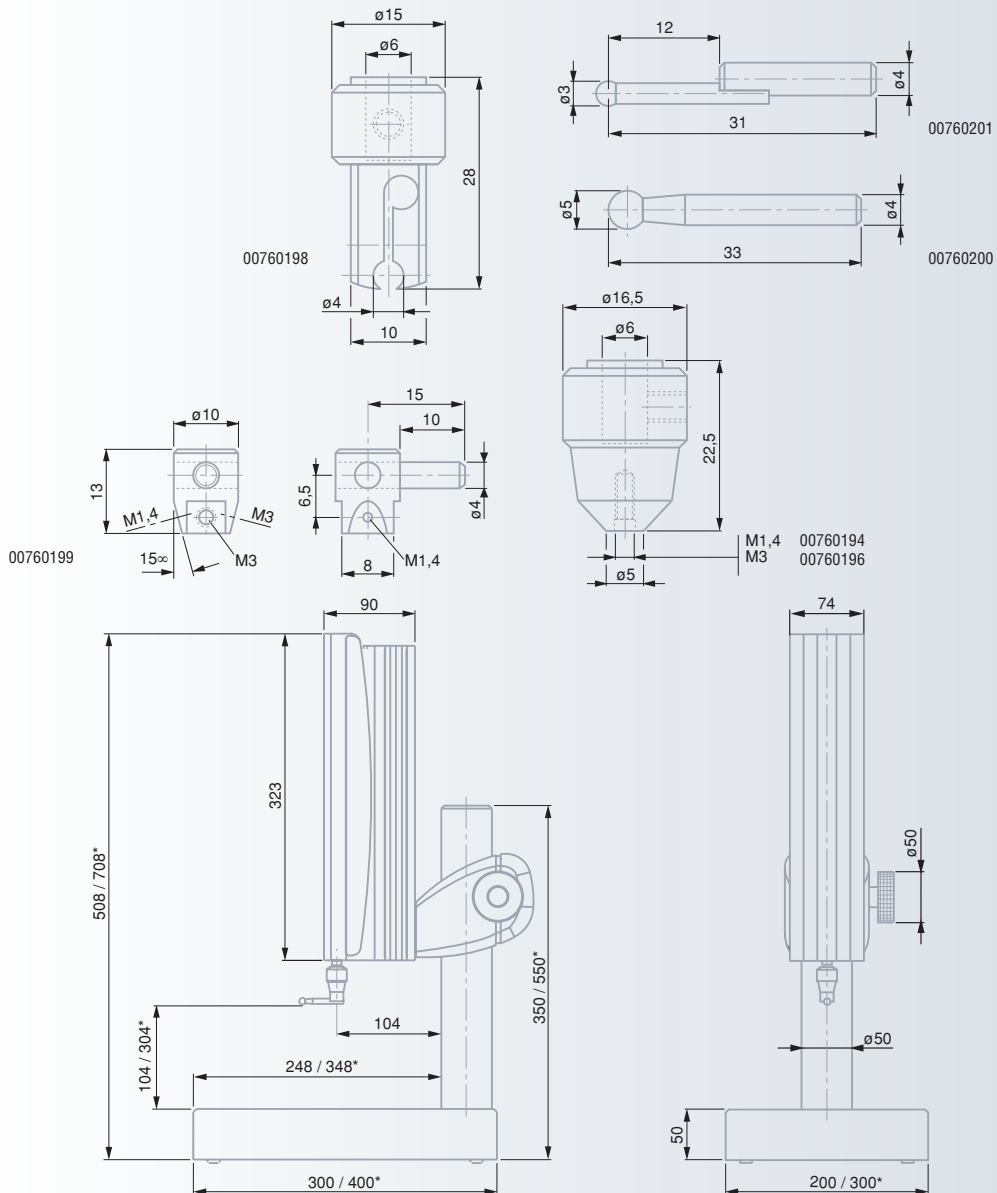
For additional accessories, see page M-24.  
For measuring applications, see page M-15.



## Optional Accessories



<b>00760186</b>	Set of special measuring inserts (see page M-27).
<b>00760194</b>	Axial probe holder for measuring inserts with a M1,4 thread.
<b>00760196</b>	Axial probe holder for measuring inserts with a M3 thread
<b>00760198</b>	Radial probe holder with a 4 mm dia. mounting bore.
<b>00760199</b>	Universal insert holder with a 4 mm dia. fixing shank (used together with radial probe holder No. 00760198). M1,4 and M2,5 threads (2 x 2) for the measuring inserts.
<b>00760200</b>	Measuring Insert with a 5 mm dia. tungsten carbide ball tip. Also with 4 mm dia. fixing shank for use with radial probe holder No. 00760198.
<b>00760201</b>	Measuring Insert with a 5 mm dia. tungsten carbide ball tip. Also with 4 mm dia. fixing shank for use with radial probe holder No. 00760198.
<b>00760193</b>	Practice piece
<b>04768001</b>	Foot switch for triggering data transfer or letting a measuring function be repeated.
<b>00760207</b>	Swivel support for control panel
<b>00760202</b>	Spare batteries for control panel N° 00760204, 6 Vdc/1,2 Ah. For TESA PRINTER SPC, connecting cables and the like, see section N.



\* With measuring support No. S07600163