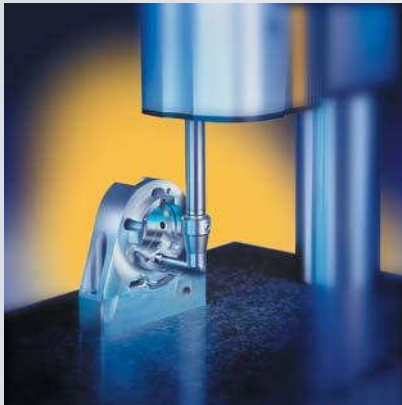


# TESA-uHITE Height Gauge

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 N-23

Repeatability limit r: see table page N-23

**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-uHITE value sensor**

Incremental glass scale with photo-electronic value capture.  
Grating period: 20 µm

$11.5 \times 10^{-6} \text{ K}^{-1}$

Electromotorised 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 ± 0.1 N or 1 ± 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.

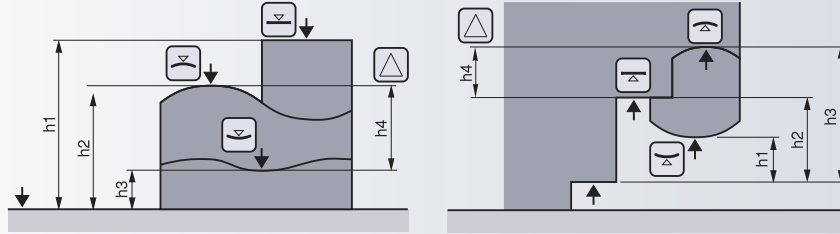
- Ideal for workpiece inspection close to the production area.
- 100 mm measuring span.
- 0.001 mm and 0.0001 mm or 0.0001 in and 0.00001 in scales intervals.
- Max. perm. error as low as 2 µm (or 1 µm when checking coaxiality).
- Integrated temperature sensor so that the coefficient of linear expansion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



# TESA-uHITE Capabilities

## Measurement without change of the probe direction

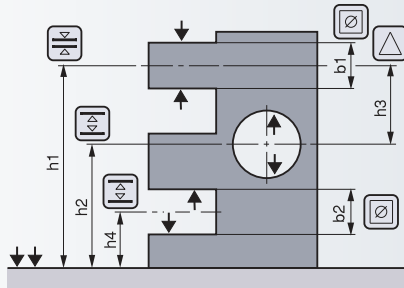
Probe constant excluded



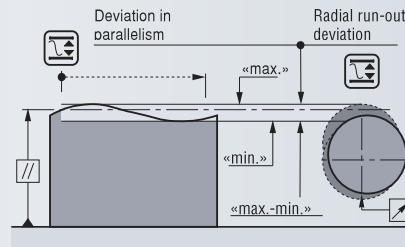
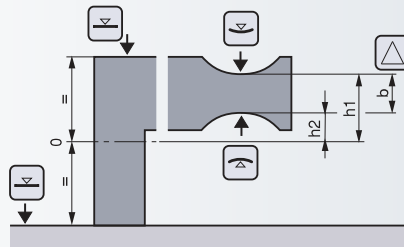
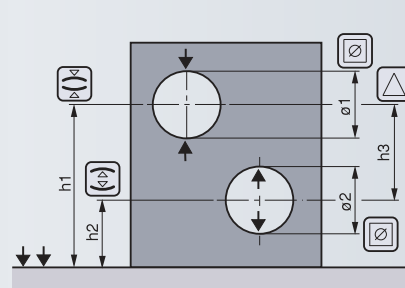
## Measurement with change of the probe direction

Probe constant included

- Disregarding the culmination point



- Considering the culmination point



### Control Panel

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

10 x 4.9 mm  
(value displav).  
7.5 x 3.7 or  
5 x 2.5 mm (auxiliary  
displav 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.  
Auto-electronic  
and bidirectional

Mains adapter  
100 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 ka net  
(support  
N° 00760203).  
2.6 ka net (TESA-uHITE  
N° 00730050).  
1.45 ka net (control panel  
N° 00760204 with cable  
N° 00760191)

IP50  
(IEC 60529)

EN 61326-1.  
Class B

Shipping  
packaging

Identification  
number

SCS calibration  
certificate

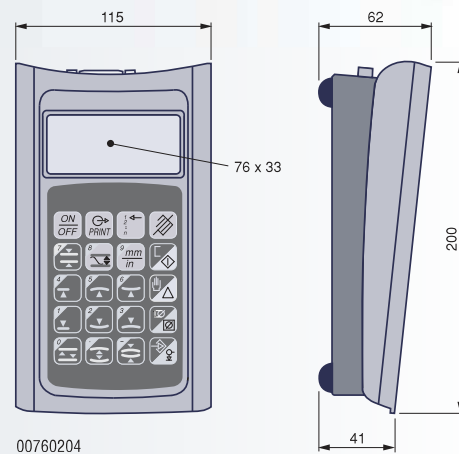
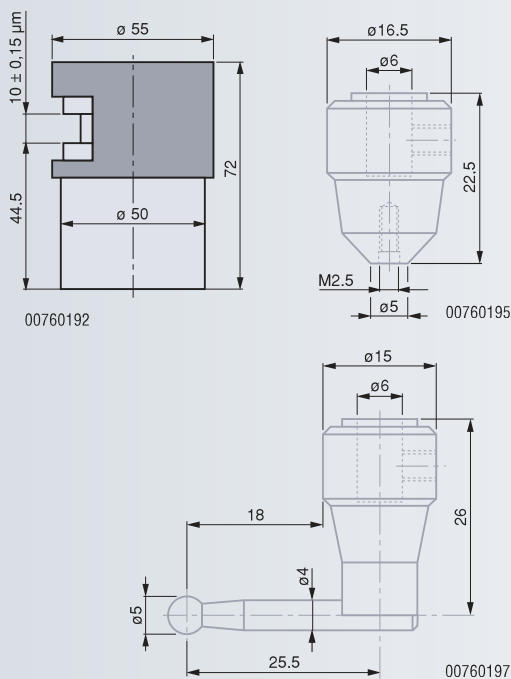
Declaration  
of conformity

№	=	mm		in	
		0 ÷ 160	0 ÷ 6.3		
<b>00730049</b>	<b>TESA-uHITE height gauge</b>				
<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-uHITE electronic length unit</b>				
<i>Also included:</i>					
№	=	mm		in	
		mm	mm	in	in
<b>00730050</b>	<b>1 TESA-uHITE value sensor</b>	100		4	
<b>00760204</b>	<b>1 Control panel.</b> To be connected to TESA-uHITE.		0.001 0.0001		0.0001 0.00001
<b>00760191</b>	<b>1 Connecting cable</b> for TESA-uHITE to control panel				
<b>00760195</b>	<b>1 Probe insert holder,</b> axial with a M2.5 thread				
<b>03510002</b>	<b>1 Probe insert</b> with a 3 mm dia. tungsten carbide ball tip				
<b>00760197</b>	<b>1 Probe insert</b> with a 5 mm dia. tungsten carbide ball tip, offset				
<b>00760192</b>	<b>1 Master piece</b> for establishing the probe constant, nominal dimension 10 mm/0.39370				
<b>04761054</b>	<b>1 Mains adapter.</b> 100 to 240 Vac/50 to 60 Hz				
<b>04761055</b>	<b>1 Cable EU</b> for mains adapter				
<b>04761056</b>	<b>1 Cable US</b> for mains adapter				
<b>038407</b>	<b>1 Suited plastic case</b>				
For additional accessories, see page N-26.					

## Accuracy

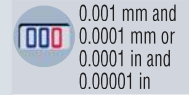
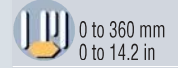
Insert's position relative to the axis of the measuring bolt	um		in	
	coaxial	offset	coaxial	offset
coaxial	1.0	2.0	0.00005	0.00004
offset	0.5	1.0	0.00002	0.00004

Applicable with used standard accessory.

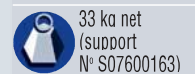
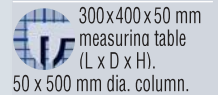


## TESA-uHITE

Extended application range up to 360 mm



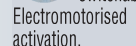
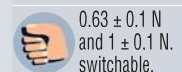
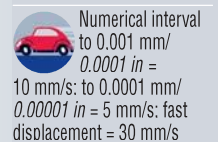
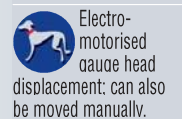
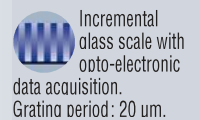
### Support



2.6 ka net (TESA-uHite N° 00730050)  
1.45 ka net (control panel N° 00760204 with cable N° 00760191)



### TESA-uHITE value sensor



N°

=

mm

in

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

0 ÷ 360 0 ÷ 14.2

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

**007600163** 1 TESA measuring support, granite measuring table, overall dimensions 300 x 400 x 50 mm. The guiding column has a 50 x 500 mm diameter.

**00730054** 1 TESA-uHITE electronic length measuring unit

Also included:

N°

=

mm

mm

in

in

<b>00730050</b>	1	TESA-uHITE value sensor	100		4	
<b>00760204</b>	1	Control panel, connected to TESA-uHITE.		0.001 0.0001		0.0001 0.00001
<b>00760191</b>	1	Cable for connecting TESA-uHITE to control panel				
<b>00760195</b>	1	Probe insert holder, axial with a M2.5 thread				
<b>03510002</b>	1	Probe insert with a 3 mm dia. tungsten carbide ball tip				
<b>00760197</b>	1	Probe insert with a 5 mm dia. tungsten carbide ball tip, offset				
<b>00760192</b>	1	Master piece for establishing the probe constant, nominal dimension 10 mm/0.39370				
<b>04761054</b>	1	Mains adapter, 100 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 N-26.



# TESA-uHITE

## 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 (more details on both pages N-17 and N-19).



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 N-23

Repeatability  
limit r: see  
table page N-23

**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 ka net (support N° 00760203)  
2.6 ka net (TESA-uHITE N° 00730050)

Accuracy grade 00 according to DIN 876, Part 1

**TESA-uHITE 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>

Electromotorised gauge head displacement: can also be moved manually.

0.001 mm/0.0001 in = 10 mm/s; to 0.0001 mm/0.00001 in = 5 mm/s; fast displacement = 30 mm/s

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-uHITE height gauge, plus M version**

mm 0 ÷ 160 in 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 N-19 (can alternately also be used with host printer No. 00760220)
- S07010288** 1 TESA-uHITE electronic length measuring unit, without control panel

Also included:



- 00730050** 1 TESA-uHITE value sensor
- 00760191** 1 Cable for connecting TESA-uHITE to control panel
- 00760195** 1 Probe insert holder, axial for probe inserts with a M2.5 thread
- 03510002** 1 Probe insert with a 3 mm dia. tungsten carbide ball tip
- 00760197** 1 Probe insert with a 5 mm dia. tungsten carbide ball tip, offset
- 00760192** 1 Master piece for establishing the probe constant, nominal dimension 10 mm/0.39370
- 04761054** 1 Mains adapter 100 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

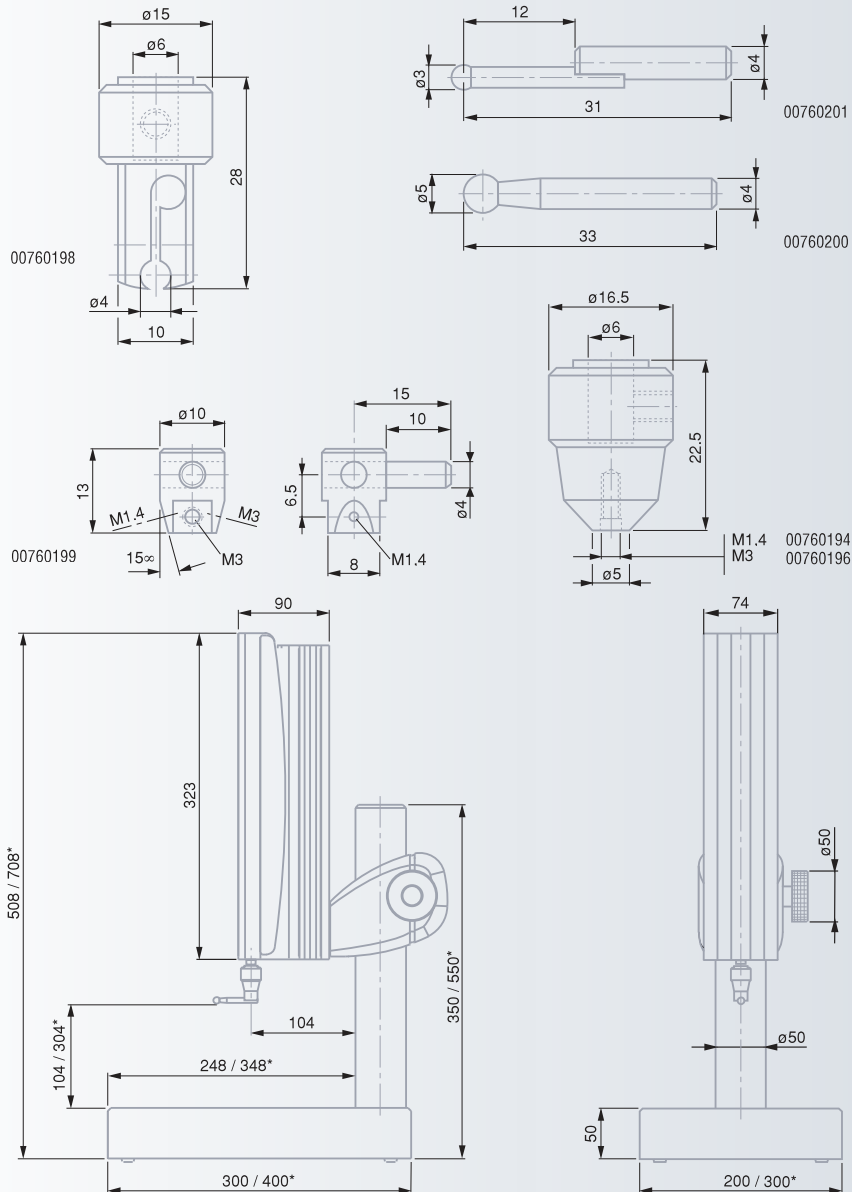
For additional accessories, see page N-26.  
For measuring applications, see page N-17.



## Optional Accessories



<b>00760186</b>	Set of special probe inserts (see page N-29).
<b>00760194</b>	Axial probe holder for probe inserts with a M1.4 thread.
<b>00760196</b>	Axial probe holder for probe inserts with a M3 thread
<b>00760198</b>	Radial probe holder with a 4 mm dia. mounting bore.
<b>00760199</b>	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.
<b>00760200</b>	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 No. 00760198.
<b>00760201</b>	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.
<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.
<b>00761052</b>	RS 232 connecting cable for PC and TESA PRINTER SPC
<b>00761063</b>	Sub-D connector 9-pin – USB type for PC



\* With measuring support No. S07600163