

TESA MICRO-HITE

THE QUICK AND ACCURATE MEASUREMENT



ONE SOLUTION FOR EACH USE

The range of TESA height gauges consists in different models intended for monitoring operations during manufacturing or directly for a processing machine. These gauges allow a reliable measurement during the setting or sampling when the machining and the dimensions of parts turn out to be critical and need accurate and immediate control.



TESA MICRO-HITE

These MANUAL gauges are universal workshop or laboratory machines which are reliable and robust to be integrated as close as possible to the user.

Multifunctional but always simple to use, they are a metrological multi-user asset, that replaces the most conventional measuring tools.

350 mm - 600 mm - 900 mm

Embedded patented technologies



opto

system



TESA MICRO-HITE+M

The MOTORIZATION of these height gauges makes them the most precise of the range.

They distinguish themselves primarily by their exclusive and patented handwheel for displacement (FEEL&MOVE), combining fast probe positioning with fluidity during the execution of a measurement sequence.

350 mm - 600 mm - 900 mm

Embedded patented technologies



opto

system

FEEL & MOVE

TESA reading system
(patented)

optousystem

Connector
for accessories

Measuring help
system (patented)



Spheroidal cast iron
base & frame

Large support faces

Adjustable
panel arm
(2 degrees of
freedom)

Touch-
screen

Refined-
backlit
keyboard

Ergonomic handling

Air cushion
activation

Manual displacement
wheel

Manual TESA MICRO-HITE

TESA reading system
(patented)

optousystem

Handle for manual
probe displacement

Connector
for accessories

Measuring help
system (patented)



Spheroidal cast iron
base & frame

Large support faces

Adjustable
panel arm
(2 degrees of
freedom)

Touch-
screen

Refined-
backlit
keyboard

Ergonomic handling

Air cushion
activation

Intelligent handwheel for
displacement

FEEL & MOVE

Motorised TESA MICRO-HITE+M



| | MICRO-HITE | MICRO-HITE+M |
|--|------------------|--------------|
| | Probing shortcut | |
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| | | MICRO-HITE | | | | | | MICRO-HITE+M | | |
|------------------|------------------------------|--------------|----------|----------|----------|----------|----------|--------------|----------|----------|
| Sales references | | 00730073 | 00730074 | 00730075 | 00730076 | 00730077 | 00730078 | 00730079 | 00730080 | 00730081 |
| TYPE | Manual displacement | ● | ● | ● | ● | ● | ● | | | |
| | Motorised displacement | | | | | | | ● | ● | ● |
| GAUGE | MICRO-HITE [mm] | 350 | 600 | 900 | 350 | 600 | 900 | | | |
| | MICRO-HITE+M [mm] | | | | | | | 350 | 600 | 900 |
| | Air cushion | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Fine adjustment device | | | | ● | ● | ● | | | |
| PANEL | MICRO-HITE panel | ● | ● | ● | ● | ● | ● | | | |
| | MICRO-HITE+M panel | | | | | | | ● | ● | ● |
| | USB printer | optional | | | | | | | | |
| | Adjustable panel support | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ACCESSORIES | Ø 6 mm probe holder | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Ø 5 mm probe, hard metal | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 12,7 mm / .5 in masterpiece | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Dust cover | optional | | | | | | | | |
| POWER SUPPLY | Removable/reloadable battery | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Power supply | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | EUR power cable | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | US power cable | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| OTHERS | SCS certificate | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 1 year warranty | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Maintenance contract | upon request | | | | | | | | |



MICRO-HITE



For workshops and laboratories



Manual displacements



Air cushion system



With or without fine adjust. device



Adjustable panel



Colour & touch screen



Included SCS certificate



1D & 2D measurement modes

| | MICRO-HITE 350 | MICRO-HITE 600 | MICRO-HITE 900 |
|---------------------------------------|--|--|--|
| Range of application [mm] | 520 | 770 | 1075 |
| Max. perm. error [μm], L [mm] | 2+2L/1000 | 2+2L/1000 | 2+2L/1000 |
| Repeatability (2σ) [μm] | on surface: ≤1 on arc: ≤1 | on surface: ≤1 on arc: ≤1 | on surface: ≤1 on arc: ≤1 |
| Max. perp. error with IG13 probe [μm] | frontal: 5 lateral: 5 | frontal: 7 lateral: 7 | frontal: 9 lateral: 9 |
| Max perp. error, mechanical [μm] | frontal: 7 | frontal: 9 | frontal: 11 |
| Autonomy [h] | 8 | 8 | 8 |
| Trigger force [N] | 1,6 ± 0,25 | 1,6 ± 0,25 | 1,6 ± 0,25 |
| Panel [mm] | screen, HxL: 84x152 keyboard: backlit | screen, HxL: 84x152 keyboard: backlit | screen, HxL: 84x152 keyboard: backlit |
| Resolution | 0,1 / 0,001 / 0,0001 | 0,1 / 0,001 / 0,0001 | 0,1 / 0,001 / 0,0001 |
| Weight (with panel) [kg] | 33 | 37 | 45 |



MICRO-HITE+M



For workshops and laboratories



Motorised displacements



Air cushion system



Adjustable panel



Colour & touch screen



Constant trigger force



Included SCS certificate



1D & 2D measurement modes

| | MICRO-HITE+M 350 | MICRO-HITE+M 600 | MICRO-HITE+M 900 |
|---------------------------------------|--|--|--|
| Range of application [mm] | 520 | 770 | 1075 |
| Max. perm. error [µm], L [mm] | 1,8+2L/1000 | 1,8+2L/1000 | 1,8+2L/1000 |
| Repeatability (2σ) [µm] | on surface: ≤0,5 on arc: ≤1 | on surface: ≤0,5 on arc: ≤1 | on surface: ≤0,5 on arc: ≤1 |
| Max. perp. error with IG13 probe [µm] | frontal: 5 lateral: 5 | frontal: 7 lateral: 7 | frontal: 9 lateral: 9 |
| Max perp. error, mechanical [µm] | frontal: 7 | frontal: 9 | frontal: 11 |
| Autonomy [h] | 8 | 8 | 8 |
| Trigger force [N] | 1,6 ± 0,25 | 1,6 ± 0,25 | 1,6 ± 0,25 |
| Panel [mm] | screen, HxL: 84x152 keyboard: backlit | screen, HxL: 84x152 keyboard: backlit | screen, HxL: 84x152 keyboard: backlit |
| Resolution | 0,1 / 0,001 / 0,0001 | 0,1 / 0,001 / 0,0001 | 0,1 / 0,001 / 0,0001 |
| Weight (with panel) [kg] | 33 | 37 | 45 |

ACCESSOIRES

The TESA height gauges are compatible with a wide range of accessories which allowing the instrument to be customised to meet your real needs.

Panels, printer & masterpiece

| | | |
|------------------------|----------|-----------------|
| Panel for MICRO-HITE | 00760233 | – |
| Panel for MICRO-HITE+M | 00760234 | – |
| USB Printer | 00760235 | – |
| Setting piece | 00760236 | 12,7 mm / .5 in |



00760233



00760234



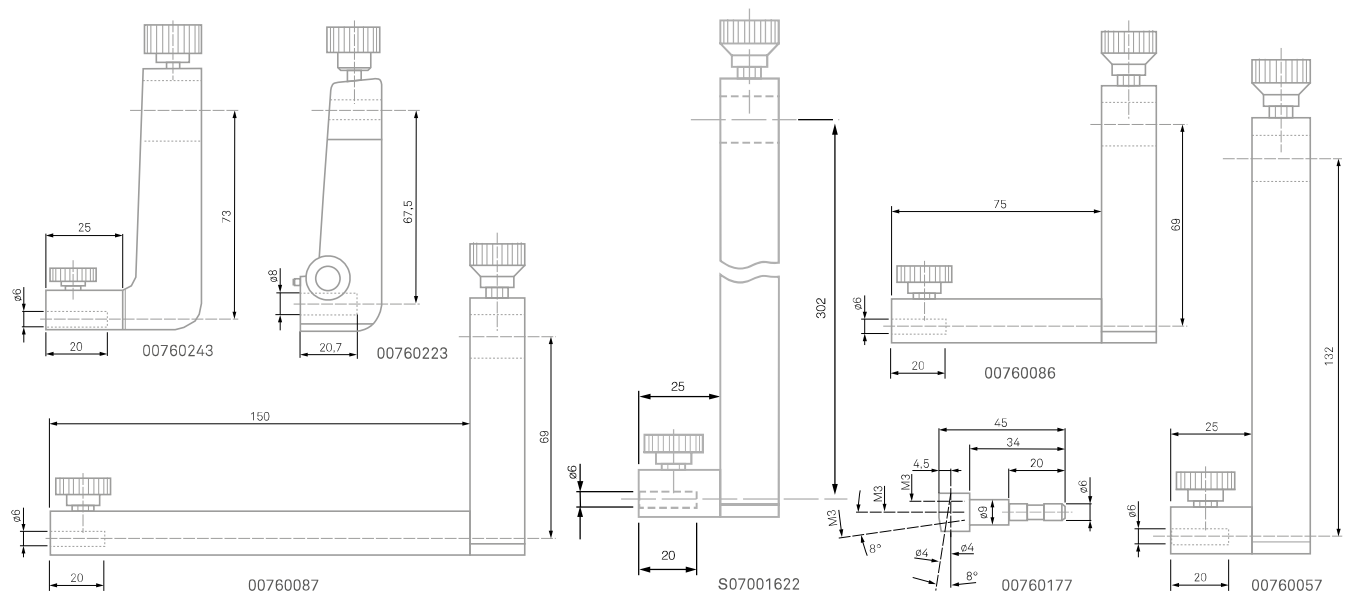
00760235



00760236

Probe holders

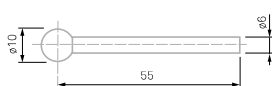
| | | |
|----------------------------------|-----------|-------------------------------------|
| Ø 6 mm standard probe holder | 00760243 | – |
| Ø 6 mm probe holder | 00760086 | For depth up to 110 mm |
| Ø 6 mm probe holder | 00760087 | For depth up to 185 mm |
| Ø 6 mm probe holder | 00760057 | Extend the scope of the application |
| Ø 6 mm probe holder | S07001622 | Extend the scope of the application |
| Ø 8 mm probe holder | 00760223 | – |
| Adapter for M3 probe and shaft | 00760177 | – |
| Adapter for M1,4 and M2,5 probes | 00760096 | 3 x M1,4 + 2 x M2,5 |



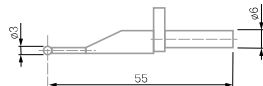
Ball probes

The ball probes are the easiest and most often used in combination with the height gauges which are furthermore delivered as standard with a probe of this type. Because of its form, these accessories are suitable for the majority of probing applications.

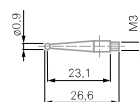
| | | | |
|---------------------|------------|-----------------|--|
| Ø 0,9 mm ball probe | 00760180 | M3 fixation | Hardened steel ball tip |
| Ø 1,9 mm ball probe | 00760181 | M3 fixation | Hardened steel ball tip |
| Ø 2,9 mm ball probe | 00760182 | M3 fixation | Hardened steel ball tip |
| Ø 1 mm ball probe | 00760228 | Ø 6 mm fixation | Shank and ball tip in hard metal |
| Ø 2 mm ball probe | 00760229 | Ø 6 mm fixation | Shank and ball tip in hard metal |
| Ø 3 mm ball probe | 00760230 | Ø 6 mm fixation | Shank and ball tip in hard metal |
| Ø 3 mm ball probe | 00760061 | Ø 6 mm fixation | Ball tip in hard metal |
| Ø 5 mm ball probe | 00760227 | Ø 6 mm fixation | Shank and ball tip in hard metal |
| Ø 10 mm ball probe | 00760060 | Ø 6 mm fixation | Ball tip in hard metal |
| Ø 1 mm ball probe | 0071684818 | Ø 8 mm fixation | Adjustable shank for depth measurement |
| Ø 4 mm ball probe | 0071684815 | Ø 8 mm fixation | Ball tip in hard metal |
| Ø 6 mm ball probe | 0071684825 | Ø 8 mm fixation | Ball tip in hard metal |
| Ø 6 mm ball probe | 0071684816 | Ø 8 mm fixation | Ball tip in hard metal |
| Ø 8 mm ball probe | 0071684832 | Ø 8 mm fixation | Ball tip in hard metal |
| Ø 10 mm ball probe | 0071684817 | Ø 8 mm fixation | Ball tip in hard metal |
| Ø 10 mm ball probe | 0071684829 | Ø 8 mm fixation | Ball tip in hard metal |



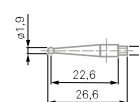
00760060



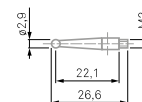
00760230



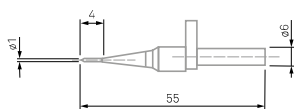
00760180



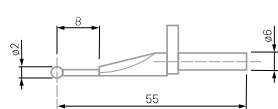
00760181



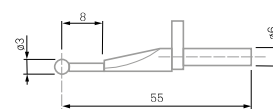
00760182



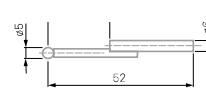
00760228



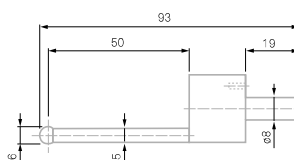
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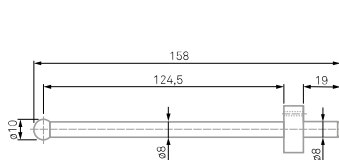
00760061



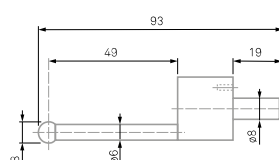
00760227



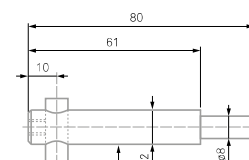
0071684816



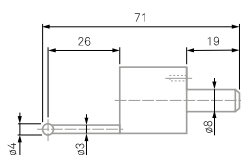
00761684817



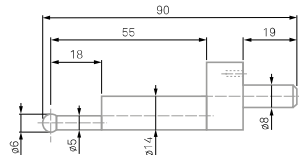
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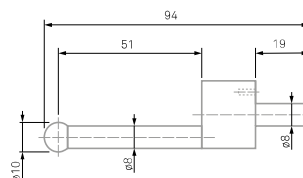
0071684818



0071684815



0071684825

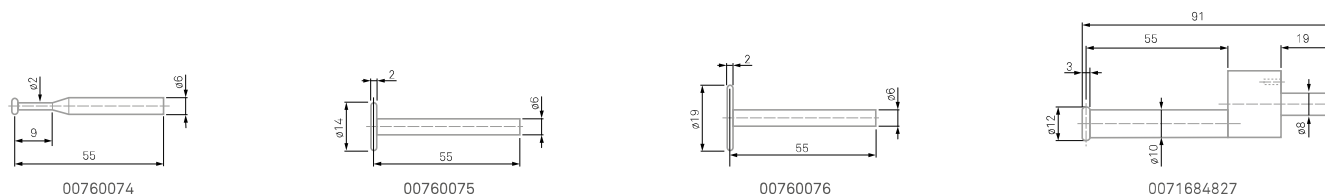


0071684829

Disc probes

These probes have the form of a disc with a variable thickness and diameter, allowing the probing of centring shoulders and grooves. These accessories are often used in internal bore measurements because they are a good replacement when the star-formed probes cannot be used.

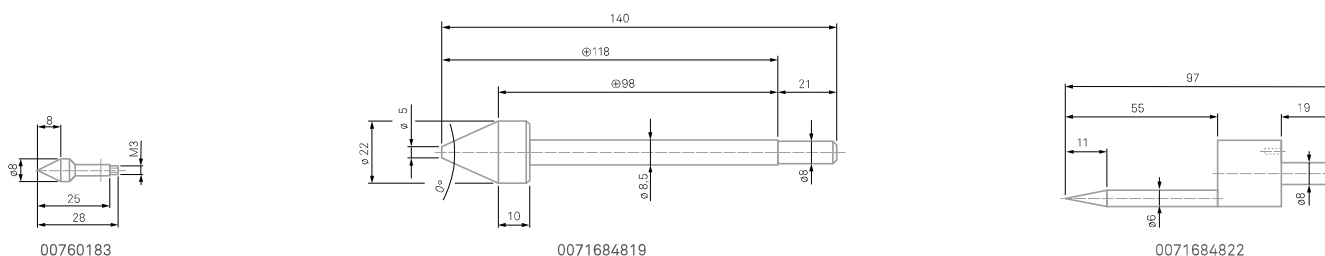
| | | |
|---------------------|------------|----------------------------------|
| Disc probe Ø 4,5 mm | 00760074 | Ø 6 mm fixation, hard metal disc |
| Disc probe Ø 14 mm | 00760075 | Ø 6 mm fixation, hard metal disc |
| Disc probe Ø 19 mm | 00760076 | Ø 6 mm fixation, hard metal disc |
| Disc probe Ø 12 mm | 0071684827 | Ø 8 mm fixation |



Cone probes

Cone probes are mainly used to determine the location of a bore since their form allows a quick positioning at the centre of these elements.

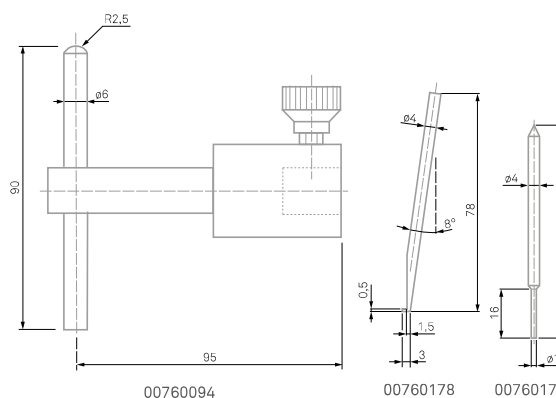
| | | |
|--------------------|------------|---------------------------------|
| Cone probe Ø 8 mm | 00760183 | M3 fixation, hardened steel |
| Cone probe Ø 6 mm | 0071684822 | Ø 8 mm fixation, hardened steel |
| Cone probe Ø 22 mm | 0071684819 | Ø 8 mm fixation, hardened steel |



Shaft probes

The shaft probes are mainly used to measure grooves, centring shoulders, blind bores, ...

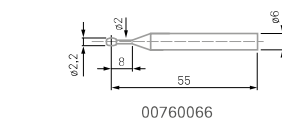
| | | |
|----------------------------|----------|----------------|
| Probe inserts with a shank | 00760094 | hardened steel |
| Rod, angle 8° | 00760178 | hardened steel |
| Cylindrical rod | 00760179 | hard metal |



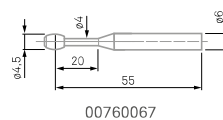
Cylindrical or barrel probes

The cylinder-shaped probes are often used to measure elements that cannot or hardly not easily be measured with a simple ball probe. In some instances, the contact between the accessory and the part to be measured cannot be guaranteed when the tip of the accessory is a ball. They are also used for the measurement of threads and often for the determination of the centre of tapped bores.

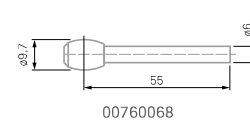
| | | |
|-------------------------------|------------|--|
| Barrel-shaped probe Ø 2,2 mm | 00760066 | Ø 6 mm fixation, hard metal measuring faces |
| Barrel-shaped probe Ø 4,5 mm | 00760067 | Ø 6 mm fixation, hard metal measuring faces |
| Barrel-shaped probe Ø 9,7 mm | 00760068 | Ø 6 mm fixation, hard metal measuring faces |
| Cylinder-shaped probe Ø 2 mm | 00760082 | Ø 6 mm fixation, hard metal measuring faces |
| Cylinder-shaped probe Ø 10 mm | 00760093 | Hardened steel housing, hard metal measuring faces |
| Cylinder-shaped probe Ø 10 mm | 0071684820 | Ø 8 mm fixation, steel |



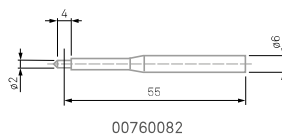
00760066



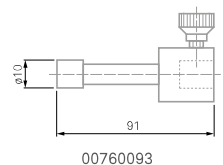
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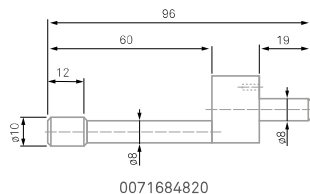
00760068



00760082



00760093

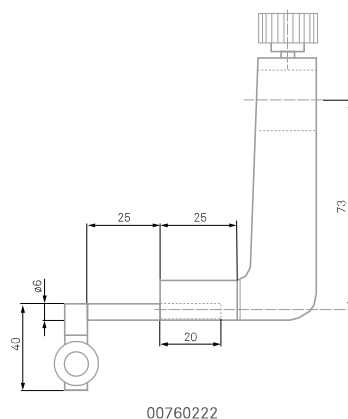


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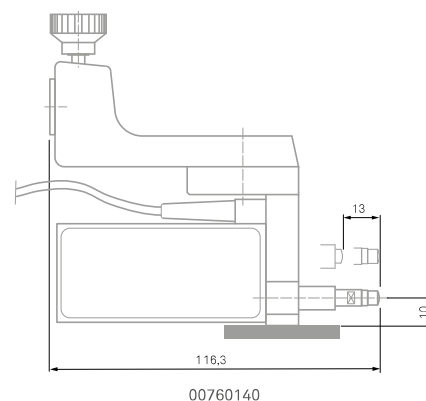
Accessories for squareness measurement

In addition to the standard measuring modes, the manual and motorized models of the MICRO-HITE range have been specially developed to allow the determination of perpendicularity or straightness errors. The measurements can be realized in two directions, as these gauges are the only ones on the market allowing this measurement as well frontally as laterally.

| | | |
|---|----------|---|
| Probe holder for a dial test indicator (lever-type) | 00760222 | – |
| IG13 probe | 00760139 | – |
| Attachment system for IG13 | 00760138 | – |
| IG13 probe set | 00760140 | = 00760139 + 00760138 |
| IG13/height gauge adapter | 00760247 | To use together with IG13 delivered before 2017 |



00760222



00760140