MICRO-HITE®350 / 600 / 900 Height Gages

Two-dimensional measurement operations are efficient and cost-effective with the MICRO-HITE Electronic Height Gage. The MICRO-HITE Electronic Height Gage measures in two dimensions in either rectangular or polar coordinates.

With powerful, built-in software in its 1D/2D control module, the MICRO-HITE® 1D/2D Electronic Height Gage can measure and automatically calculate external, internal and distance dimensions; angles; centerline-to-centerline distances; perpendicularity; flatness; straightness; parallelism; centers; diameters; deviations and feature relationships; geometric relationships expressed in rectangular or angular coordinates; minimum/maximum diameters of bolt hole circles; and concentricity. This control panel has its own printer that will generate results in either Cartesian or polar coordinates.

The optional Power Panel incorporates all of the measuring capabilities of the 1D and 1D/2D control panels plus has the ability to learn measuring programs and store them on memory cards.

The MICRO-HITE Electronic Height Gage moves on a cushion of air generated by a completely self-contained pneumatic system. For continuous operation without the clutter of power cords, the gage is powered by rechargeable battery pack.

MICRO-HITE main instruments 350 / 600 / 900

✓

Factory standard

Measuring span, application range and accuracy as shown on page K-17

Rust-inhibitor cast iron base with 3 ground circular faces in hardened stainless steel

Air cushion usable for easy movement of the height gage across the surface plate

Incremental glass scale with reference point, dividing period of 20 μm. Opto-electronic value capture (TESA patent)

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

Measuring head mounted on a ball-bearing and displaced by means of both the knurled wheel and crank. Drive system can be locked or tightened. Fine adjust can also be additionally mounted. Available as an option.

Automatic value capture with a constant measuring force. Visual and acoustic signal for acknowledgment

12 in / s
300 mm / s

1.6 ± 0.25 N (at switch point)

RS-232, opto-electronic

Rechargeable battery pack, 6V, 3.0 Ah or mains adapter

24 h with use of the battery pack and 2 h for the pump in use for creating the air-cushion

50 °F to 104 °F
10 °C to 40 °C

14 °F to 140 °F
-10 °C to 60 °C

80%, with no condensation

Protection IP 40 (IEC 60529)

EN 50081-1
EN 50081-2
EN 50082-1, EN 50082-2 (as long as the mains adapter is not used)

Net weights (without panel and battery pack)
Main   73 lbs
instrum. 84 lbs
              99 lbs

Transport packing

Identification number

SCS calibration certificate

- State-of-the-art concept associated with a high-quality design is the fruit of 20 years of experience in the manufacture of electronic height gages.
- Ideal for inspection job close to the production. No cumbersome cables to clutter up the working area.
- Fast, simple and reliable probing of the workpiece and the bores, especially.
- 3 main instruments available with either a 365, 615 or 920 mm measuring span.
- Numerical display to 0.0005, 0.001, 0.01 and 0.1 mm.
  0.000020" / 0.0005 mm
  .0001" / 0.001 mm
  .001" / 0.01 mm
  .01" / 0.1 mm
- 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 (11.5×10^{-6} 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 unit to get a hardcopy in A4 format.
- RS-232 data output.
- Every height gage comes with a SCS calibration certificate.
- Free Master Piece for determining probe constant included with every MICRO-HITE unit.

MICRO-HITE® – For the Most Challenging Measuring Applications

Measurements in one coordinate direction
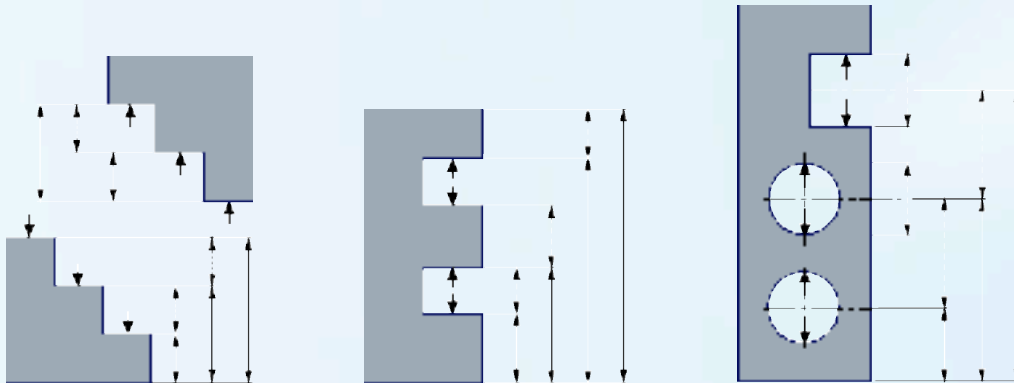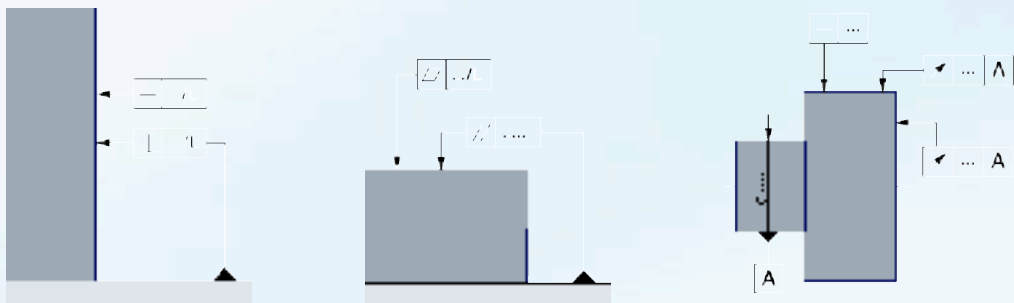
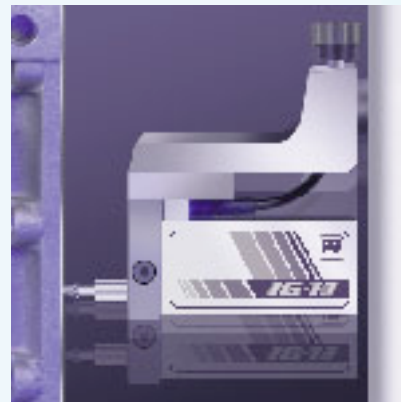**Measurements in two coordinate directions**
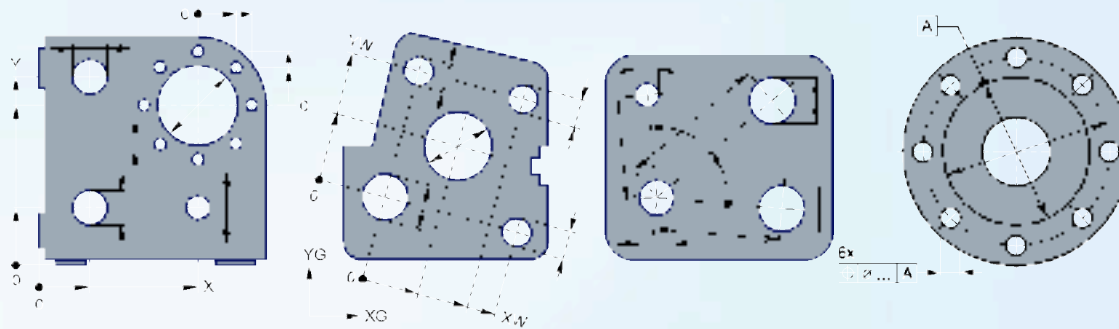
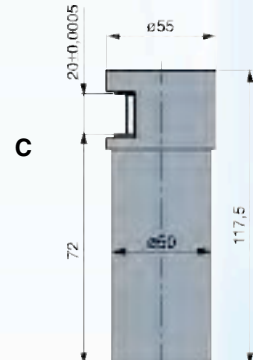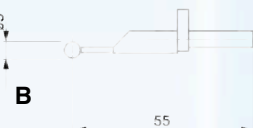**Dedicated program functions for form and shape, as well as positional errors**
Measurements using TESA IG-13 digital probe

We have changed the ordering structure for Micro-Hite Gages to reflect a component based ordering system rather than a kit. Please contact our customer service team at 800- 283-1883 for any assistance needed.

MICRO-HITE® 350 / 600 / 900 Height Gage Sets

00790033	29272	**TESA MICRO-HITE Height Gage Set**			**350/14**		
00790034	29273	**TESA MICRO-HITE Height Gage Set**				**600/24**	
00790035	29274	**TESA MICRO-HITE Height Gage Set**					**900/30**

Consisting of the following components, but without control panel:

00730021		1 TESA MICRO-HITE 350 main instrument			●		
00730022		1 TESA MICRO-HITE 600 main instrument				●	
00730023		1 TESA MICRO-HITE 900 main instrument					
07.60143	28148	1 Standard insert holder	A		●	●	●
00760062		1 Standard insert with a 5 mm dia. carbide ball tip	B		●	●	●
00760150		1 Master piece for determining the probe constant, 0.78740 in / 20.0000 mm	C		●	●	●
00760142	20176	1 Electric pump already mounted for creating the air-cushion beneath the gage base			●	●	●
00760141	20175	1 Battery pack			●	●	●
47.61054	88187	1 Mains adapter, 110 to 240 Vac/50 to 60 Hz			●	●	●
07.60151	86960	1 Dust cover for TESA MICRO-HITE 350			●		
07.60152	86959	1 Dust cover for TESA MICRO-HITE 600				●	
07.60153	86958	1 Dust cover for TESA MICRO-HITE 900					●

Optional accessories:

599-1011-275-2	87239	Simple Printer (for 1D Models Only)
64.90000	87359	TESA SPC Printer (for more details see page K-24)
599-1011-230	86522	IG13 Digital Probe with Mounting Adapter (for more details see page K-19)
599-1011-70	86731	TESA MEMOTAST- special Switchable Probe (for more details see page K-19)
47.61036	86551	Connecting Cable for SPC Printer
47.61023	41271	9-pin RS-232 Cable for Connecting MICRO-HITE to PC or Simple Printer (9 pin to 25 pin RS-232 adapter is also necessary to use this cable with the 599-1011-275-2 Simple Printer listed above).
599-1011-119-05	25088	Practice Piece for 2D Software
599-1011-200	51650	MICRO-HITE Accessory Set in fitted plastic case

Micro-Hite Accessory Set consists of the following components:

|		
599-1011-201	51616	5.3 in / 132mm Diameter Extended Range Probe Holder
599-1011-202	51617	4.4 in / 110mm Diameter Probe Holder with Extended Reach
599-1011-203	51618	7.4 in / 185mm Diameter Probe Holder with Extended Reach
599-1011-206	51621	.090 in / 2.2mm Diameter Barrel Tip Probe
599-1011-207	51622	.180 in / 4.5mm Diameter Barrel Tip Probe
599-1011-208	51623	.180 in / 4.5mm Diameter Disc Tip Probe
599-1011-209	51624	.560 in / 14mm Diameter Disc Tip Probe
599-1011-210	51625	.760 in / 19mm Diameter Disc Tip Probe
599-1011-211	51626	.080 in / 2 mm Diameter Cylindrical Tip Probe
599-1011-212	51627	Universal Probe Shank with Flange and Threaded Holes
599-1011-222	51637	.400 in / 10 mm Diameter Tungsten Carbide Ball Tip Probe
599-1011-223	51777	.120 in / 3 mm Diameter Ball Tip Offset Probe
599-7030-40	44827	.040 in / 1 mm Diameter Ball Tip Probe with Threaded End
599-7030-80	44828	.080 in / 2 mm Diameter Ball Tip Probe with Threaded End
599-7030-120	44829	.120 in / 3 mm Diameter Ball Tip Probe with Threaded End
599-1011-495	51745	Custom Fitted Plastic Case for Accessories

Individual Accessories, probes and holders are available through your local Brown & Sharpe distributor.
Additional Special Accessories are listed on page K-25
TESA Control Panel "Power Panel" sold separately (see details on page K-18).

Technical Data

Models		350	600	900
	in	14	24	36
	mm	365	615	920
with standard accessory	in	0 - 20	0 - 30	0 - 42
	mm	0 - 520	0 - 770	0 - 1075
No. 07.60057 with insert holder	in	0 - 22	0 - 32	0 - 44
	mm	0 - 575	0 - 825	0 - 1130
with standard accessory	in	0.00014	0.00018	0.0002
with standard accessory	in	0.0001	0.0001	0.0001
	µm	2	2	2
Frontal and sideways using TESA IG-13 digital probe	µm	6	8	10

Control Panel for MICRO-HITE® 350 / 600 / 900

Printer is built into 'Power Panel" Control Panel for fast, easy printouts of measured values.
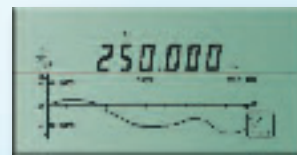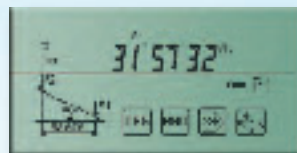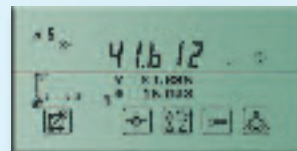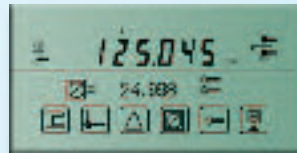
Control Panel "POWER PANEL"

Dual LC display 5 in x 2.5 in size.
- Upper display field for length values measured (7-segment / sign) and symbols for the functions.
- Lower full dot display field for perpendicularity and straightness measurements as well as symbols for the operator-controlled function keys.

Measured values (7-digit) plus minus sign

00760163	29280	**TESA Control Panel 'POWER PANEL"**
		With dedicated program for measuring in 1 and 2 coordinate directions with geometric combination of the measured values. Lets you also measure perpendicularity, straightness and squareness. Provides 99 workpiece-oriented measurement cycles, including 64 features with related limits of size, programmable. Memory capacity for 2500 measured values. Statistical value processing (SPC). Result output via the built-in matrix printer or in A4 format using an external unit. PCMCIA memory card reader enabling measurement cycles and results to be stored. Operator-controlled on-screen display.

0.00002 / 0.0001 / 0.001 / 0.01 and 0.1 in
0.0005 / 0.001 / 0.01 and 0.1 mm

Accessories for TESA "POWER PANEL":

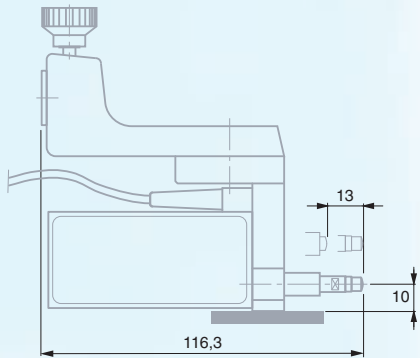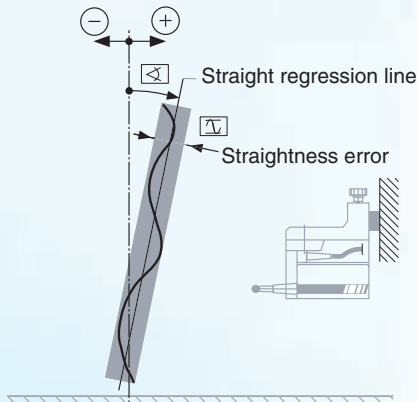| 47.66010	28303	Formatable memory card, type JEIDA SRAM, 128 k
47.65008	41289	Thermal paper roll, 57 mm wide

Optional Accessories

✓

Factory
standard

Optional Accessories for TESA MICRO-HITE®
M and MICRO-HITE® 350 / 600 / 900

Additional accessories are listed on page K-25.

599-1011-230	86552	**TESA IG-13 Probe Set**
consisting of:		
	00760139 1	TESA IG-13 digital probe with measuring span of 0.5 in / 13 mm
	00760138 1	Attachment for TESA IG-13 digital probe
Other Accessories		
19.60005	86331	Lift lever for the measuring arm
35.40501	42734	Extension .400 in / 10 mm for the measuring insert
04761047	28895	Extension cable needed to connect TESA IG-13 to MICRO-HITE M

599-1011-70	86731	**TESA MEMOTAST- special**
		Switchable probe. Technical data are valid for use of this probe in conjunction with TESA MICRO-HITE, model 10 or 11.

N		μm
0.5	$(3 + 3 \cdot L)$ μm $L = m$	3

13

10

116,3

⊖ ⊕

Straight regression line

Straightness error

Perpendicularity and Angles

Model	350	600	900
in	.00024	.00028	.00030

ø2

ø6