

Brown & Sharpe TESA Electronic Height Gages

TESA MICRO-HITE plus m



TESA MICRO-HITE



TESA-HITE plus m



TESA-HITE Magna



TESA-HITE 400/700



Made to Measure in a Manufacturing Environment

Brown & Sharpe offers a full line of height gages to meet any manufacturing requirement, from first piece and layout inspection to tool setup and incoming inspection. Each model offers a full range of measuring capability and, when combined with optional features and special accessories, can be custom designed to solve any shop floor measuring problem.

With powerful, built-in software, the MICROHITE® 2D Electronic Height Gage makes two dimensional measurement with a single axis height gage fast and easy. Two-dimensional measuring capability lets MICRO-HITE determine concentricity or express the relationship between holes, patterns or the features of a part in polar or rectangular coordinates. The easy-to-use keyboard and interactive LC display guides operators through measurement operations.

The MICRO-HITE plus M Motorized Electronic Height Gage with its exclusive rotary power feature adds a new level of measurement speed and accuracy to shop floor inspection applications. This advanced technology height gage can be switched between motorized and manual operation with no loss of accuracy.

TESA-HITE® Electronic Height Gages automatically calculate measurement dimensions and determine the gage head constant to eliminate time consuming setup. The new TESA-HITE 400 and 700 model height gages feature a built-in air cushion and fixed panel. TESA-HITE® Electronic Height Gages feature programmed routines for the most commonly used measurement functions, allowing faster, more efficient complex measurement tasks.

All Brown & Sharpe height gages are precision built for high reliability and accuracy in the shop floor conditions.

To learn more about how Brown & Sharpe height gages can add a new dimension to your measuring and inspection operations, contact your local distributor or log on to www.brownsandsharpe.com.



TESA-HITE PLUS M 400 and 700

The new motorized TESA-HITE Height Gages.

- Wide application range, two sizes available with measuring span of 16in/405mm or 27in/705mm, respectively.
- Integrated air-bearing for easy displacement across the granite plate.
- Electronics totally protected against oil and water splashing, dust particles (IP65).
- Easy-to-use, intuitive power control.
- New ergonomically designed control panel, available with built-in printer.
- Patented TESA's opto-electronic system. Long-lasting stability of the glass scale for unbroken high accuracy.
- Geometric functions for 1D or 2D measurement.
- Automatic programming and generation of measurement cycles.
- Statistical Data Processing.
- SCS calibration certificate provided with each height gage.
- Swiss Made quality and reliability

Technical Data	TESA-HITE Plus m			
	400		700	
Part No.	With printer 00730057	Without printer 00730045	With printer 00730058	Without printer 00730046
EDP No.	35362	35359	35363	35360
Measuring span	16in/405mm		27in/705mm	
Application range with standard insert holder 00760143	22in/560mm		33 in/860mm	
Application range with insert holder 00760057	0 - 24in /0 - 615mm		0 - 35in/0 - 915mm	
Application range with insert holder S07001622	0 - 24in /0 - 615mm		0 - 35in/0 - 915mm	
Max. perm. error	(2.5+3 L)µm (L in m)/ (0.0001+0.00003L)in (L in in)			
Repeatability	2s=<1µm/2s=<0.00005in (flat surfaces) 2s=<2µm/2s=<0.0001in (inside bores)			
Resolution	.00001 / .0001 / .001in .0.0001 / 0.001 / 0.01mm			
Max. deviation in perpendicularity (frontal)	8µm /0.00031in		12µm /0.00047in	
Displacement speed	600mm/s			
Measuring force	1.0 N ±0.5 N (acoustic signal)			
Autonomy	60 h			
Weight	60lb.		27lb.	
Air Cushion	Yes		Yes	
Battery pack	6 V battery, rechargeable (Part #47.68035)			
Digital output	RS-232			
Degree of Protection	IP40 for control panel / IP65 for electronic unit and measuring system			
Motorized	Yes			
Measuring head lock	No			
Fine adjustment	No			
Storage temperature range	-10°C to 60°C			
Operating temperature range	10°C to 40°C			
List Price	\$7,882.00	\$7,374.00	\$8,839.00	\$8,332.00

PLUS M



TESA-HITE 400/700

Precision in motion.

The two TESA-HITE 400 and 700 height gages are fitted with the patented, opto-electronic TESA's measuring system with incremental glass scale. Due to their robust and reliable construction, they are ideally suited for dimensional inspection on the shop floor. Full autonomy is ensured through battery power. Each model allows height or step dimensions, diameters, centre-to-centre distances, groove width and the like to be accurately measured. Excellent price/performance ratio.

- Wide application range, two sizes available with measuring span of 16in/415mm or 28in/715mm, respectively.
- 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 0.00001 / 0.0001 / 0.001 in or 0.0001 / 0.001 / 0.01 mm.
- Dynamic probing of the workpiece with a constant measuring force.
- Check bores or shafts with ease 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 gage.

400/700



Technical Data	TESA-HITE	
	400	700
Part No.	00730043	00730044
EDP No.	24675	24676
Measuring span	16in/415mm	28in/715mm
Application range with standard insert holder 00760143	22in/570mm	34in/870mm
Application range with insert holder 00760057	0 - 24in / 0 - 625mm	0 - 36in/0 - 925mm
Application range with insert holder S07001622	0 - 24in / 0 - 625mm	0 - 36in/0 - 925mm
Max. perm. error	(2.5+4 L)µm (L in m) / (0.0001+0.00004L)in (L in in)	
Repeatability	2s=<2µm/<0.0001in (flat surfaces) 2s=<3µm/<0.00015in (inside bores)	
Resolution	.00001 / .0001 / .001in .00001 / 0.001 / 0.01mm	
Max. deviation in perpendicularity (frontal)	9µm / 0.00035in	13µm / 0.0005in
Displacement speed	0.5m/s	
Measuring force	1.5N ±0.5N (acoustic signal)	
Autonomy	60h	
Weight	80lb.	71lb.
Air Cushion	Yes	Yes
Battery pack	6 V battery, rechargeable	
Digital output	RS-232	
Degree of Protection	IP55 or IP65 for electronic unit and measuring system	
Motorized	No	
Measuring head lock	Yes	
Fine adjustment	Yes	
Storage temperature range	-10°C to 60°C	
Operating temperature range	10°C to 40°C	
List Price	\$4,078.00	\$5,211.00

TESA-HITE Magna 400/700

Made to withstand severe workshop conditions.

Both TESA-HITE Magna 400 and 700 are designed to remain unaffected even in the toughest conditions (water and oil splashing, dust particles). They have exceptional features that make them indispensable for the workshop while also offering the most favorable price-performance relationship. Robust and dependable, their modern design provides the highest resistance for use close to the production area. Each height gage is battery-powered and serve to measure height or step dimensions, diameters, center-to-center distance of bores or grooves, width of nuts, and much more.

Wide application range, two sizes available with measuring span to 16 in/415 mm/16 in or 28 in / 715 mm, respectively.

- Electronics totally protected against oil and waters plashing or dust particles (IP65).
- Control panel with numerical display to 0.001/0.005/0.01mm or 0.0001/0.0002/0.001 in.
- Dynamic probing of the workpiece with a constant measuring force.
- Check bores and shafts with ease 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.
- Inch/metric conversion.
- RS 232 data output.
- SCS calibration certificate provided with each height gage.

MAGNA



Technical Data	TESA-HITE MAGNA	
	400	700
Part No.	00730047	00730059
EDP No.	28260	28261
Measuring span	16 in/415 mm	28 in/715 mm
Application range with standard insert holder 00760143	22 in/570 mm	34 in/870 mm
Application range with insert holder 00760057	0 - 24 in / 0 - 625 mm	0 - 36 in/0 - 925 mm
Application range with insert holder S07001622	0 - 24 in / 0 - 625 mm	0 - 36 in/0 - 925 mm
Max. perm. error	< 8 µm / < 0.0003 in	
Repeatability	2s=<3 µm / 2s=<0.00015 in (flat surfaces) 2s=<5 µm / 2s=<0.00020 in (inside bores)	
Resolution	.0001 / .0002 / .001 in 0.001 / 0.005 / 0,01 mm	
Max. deviation in perpendicularity (frontal)	—	
Displacement speed	0.5 m/s	
Measuring force	1.5 N ±0.5 N (acoustic signal)	
Autonomy	60 h	
Weight	14 kg	16 kg
Air Cushion	No	No
Battery pack	6 V battery, rechargeable	
Digital output	RS-232	
Degree of Protection	IP55 or IP65 for electronic unit and measuring system	
Motorized	No	
Measuring head lock	Yes	
Fine adjustment	Yes	
Storage temperature range	-10°C to 60°C	
Operating temperature range	10°C to 40°C	
List Price	\$3,305.00	\$4,217.00

TESA MICRO-HITE Motorized

The speed of a manual height gage combined with the precision of a motorized height gage.

Consisting of:

- Micro-Hite main instrument
- Standard insert holder
- Standard insert with 5mm carbide ball tip
- Master for determining probe constant
- Built-in air cushion
- 1 battery pack
- 1 power supply
- Dust cover
- Instruction manual
(control panel sold separately)

Power Panel Plus M (00760220 and 00760221)

- Single Axis and 2D Measurement
- Single Contact and 2 Probe Contact Measurement
- Polar and Rectangular Coordinates Measurement
- Chain Dimensioning with Single Probe or 2 Probes
- Angle Measurements in Two Points
- Bolt Hole Pattern Analysis
- Point Translation, Point Creation Capability
- Perpendicularity (using optional IG-13 Probe)
- 999 Feature Memory Capability
- Flexible Reporting of Measured Values and Adjustable Header Information
- SPC Capabilities
- Rotation of Alignment in X Axis
- Automatically Runs Parts Programs
- Adjustable Probe Retraction
- Plug in Calipers, Micrometers and Transfer Data
- Temperature Compensation Capability
- Greater External Printer Selection



00760220



00760221



PLUS M

TESA MICRO-HITE

The metrological standard for electronic height gages in the workshop.

Consisting of:

- Micro-Hite main instrument
- Standard insert holder
- Standard insert with 5mm carbide ball tip
- Master for determining probe constant
- Electric air pump for air cushion (installed in main instrument)
- 1 battery pack
- 1 main adaptor
- Dust cover
- Instruction manual
(control panel sold separately)

MICRO-HITE (Manual) Control Panels- Power Panel (00760163)

- Single Axis and 2D Measurement
- Single Contact and 2 Probe Contact Measurement
- Polar and Rectangular Coordinates Measurement
- Chain Dimensioning with Single Probe or 2 Probes
- Angle Measurements in Two Points
- Bolt Hole Pattern Analysis
- Point Translation, Point Creation Capability
- Perpendicularity (using optional IG-13 Probe)
- Go, No-Go Lights
- PCMCIA Memory Card Technology
- Programmable



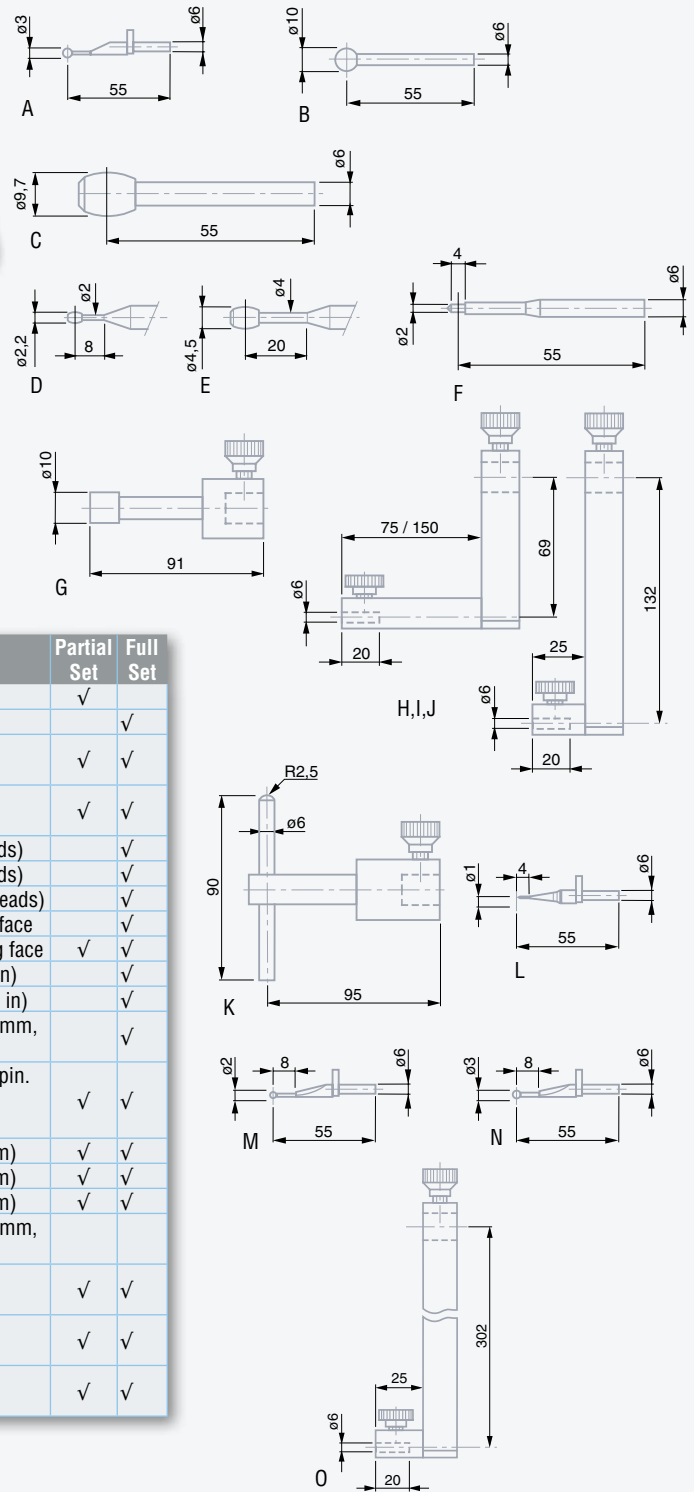
350/600/900



Part No.	EDP No.	MICRO-HITE Plus M Model	Measuring Span in/mm	Application range with standard accessory (in/mm)	Application range with S07001622 probe insert holder (in/mm)	Accuracy (L in in/m)	Repeatability on Flat Surface (2s in/ μ m)	Repeatability Within Bore (2s in/ μ m)	Perpendicularity error - mechanical, frontal (in/ μ m)	Price
00730063	29275	M-H Plus M 350	14 in/365 mm	20 in/520 mm	29 in/745 mm	0.0001 +0.0000015•L/2+1.5•L	0.000025 in/0.5 μ m	0.00005 in/1 μ m	0.0002 in/5 μ m	\$7,186.00
00730064	29276	M-H Plus M 600	24 in/615 mm	30 in/770 mm	39 in/995 mm	0.0001 +0.0000015•L/2+1.5•L	0.000025 in/0.5 μ m	0.00005 in/1 μ m	0.00028 in/7 μ m	\$8,157.00
00730065	29276	M-H Plus M 900	36 in/920 mm	42 in/1075 mm	51 in/1300 mm	0.0001 +0.0000015•L/2+1.5•L	0.000025 in/0.5 μ m	0.00005 in/1 μ m	0.00035 in/9 μ m	\$12,745.00
00760221	29283	Power Panel Plus M								\$1,564.00
00760220	29282	Power Panel Plus M with Built-in Printer								\$2,058.00

Part No.	EDP No.	Models Manual version	Measuring span in/mm	Application range with standard accessory (in/mm)	Application range with S07001622 probe insert holder (in/mm)	Accuracy (in/mm)	Repeatability (in/ μ m)	Perpendicularity error - mechanical, frontal (in/ μ m)	Price	
00790033	29272	M-H 350	14 in/365 mm	20 in/520 mm	29 in/745 mm	0.00014 in/0.0036 mm	0.0001 in/2 μ m	0.00028 in/7 μ m	\$7,183.00	
00790034	29273	M-H 600	24 in/615 mm	30 in/770 mm	39 in/995 mm	0.00018 in/0.0046 mm	0.0001 in/2 μ m	0.00035 in/9 μ m	\$8,157.00	
00790035	29274	M-H 900	36 in/920 mm	42 in/1075 mm	51 in/1300 mm	0.0002 in/0.005 mm	0.0001 in/2 μ m	0.00043 in/11 μ m	\$12,745.00	
00760163	29280	Power Panel								\$1,564.00

**Special Accessories for
MICRO-HITE 350/600/900
TESA-HITE 400/700**



Part Number	EDP Number	Image Reference	Full Description	Partial Set	Full Set
599-1011-305	27326			√	
599-1011-200	51650				√
599-1011-223	51777	A	1 Measuring insert with a .120 in/3 mm dia. tungsten carbide ball tip	√	√
599-1011-222	51637	B	1 Measuring insert with a .400 in/10 mm dia. tungsten carbide ball tip	√	√
599-1011-206	51621	C	1 Insert with a .090 in/2.2 mm dia. (for M3 - M16 threads)		√
599-1011-207	51622	D	1 Insert with a .180 in/4.5 mm dia. (for M6 - M48 threads)		√
599-1011-215	51629	E	1 Insert with a .390 in/9.7 mm dia. (for M12 - M150 threads)		√
599-1011-211	51626	F	1 Insert with a .080 in/2 mm dia. cylindrical measuring face		√
599-1011-218	51632	G	1 Insert with a .400 in/10 mm dia. cylindrical measuring face	√	√
599-1011-202	51617	H	1 Holder for measurement depths up to 4.4 in (L = 3.0 in)		√
599-1011-203	51618	I	1 Holder for measurement depths up to 7.25 in (L = 5.9 in)		√
599-1011-201	51616	J	Probe Holder with Extended Range: Depth = 2.36 in/60 mm, Range = 5.3 in/132 mm		√
599-1011-219	51633	K	1 Measuring insert with interchangeable stainless steel pin. Hardened with on flat and one spherical carbide measuring face.	√	√
00760228		L	Carbide probe insert with 1 mm tip diameter (L = 55 mm)	√	√
00760229	46970	M	Carbide probe insert with 2 mm tip diameter (L = 55 mm)	√	√
00760230	46972	N	Carbide probe insert with 3 mm tip diameter (L = 55 mm)	√	√
S07001622	28337	O	Probe Holder with Extended Range: Depth = 2.36 in/60 mm, Range = 11.89 in/302 mm		
599-7030-120	44829		Tungstun Carbide Contact Point: Diameter = .120 in, Length = .5 in	√	√
599-7030-40	44827		Tungstun Carbide Contact Point: Diameter = .040 in, Length = .5 in	√	√
599-7030-80	44828		Tungstun Carbide Contact Point: Diameter = .080 in, Length = .5 in	√	√



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As Brown & Sharpe is constantly improving the design of its products, the appearance, specifications, dimensions and weights are subject to change without notice.
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