

HEIDENHAIN-SPECTO Length Gauges

Accuracy $\pm 1 \mu\text{m}$



G. E. Van Wert Co Inc,
461 Boston St.,
Topsfield, Ma 01921
(978) 887-3389 gevanwert.com

Thanks to their very small dimensions, the HEIDENHAIN-SPECTO length gauges are the product of choice for multipoint inspection apparatus and testing equipment.

Plunger actuation

The length gauges of the **ST 12x8** and **ST 30x8** series feature a spring-tensioned plunger that is extended at rest.

In the pneumatic length gauges **ST 12x7** and **ST 30x7** the plunger is retracted in its rest position by the integral spring. It is extended to the measuring position by the application of compressed air.

Mounting

The HEIDENHAIN-SPECTO length gauges are fastened by their 8h6 standard clamping shank.



	Incremental			
	ST 1288 ST 1287	ST 1278 ST 1277	ST 3088 ST 3087	ST 3078 ST 3077
Measuring standard	DIADUR glass scale			
Incremental signals	$\sim 1 V_{PP}$	$\square \square T T L$	$\sim 1 V_{PP}$	$\square \square T T L$
Signal period	20 μm	4 μm or 2 μm	20 μm	4 μm or 2 μm
System accuracy	$\pm 1 \mu\text{m}$			
Recommended measuring step	1 μm to 0.2 μm			
Measuring range	12 mm		30 mm	
Plunger actuation	<i>ST 12x8/ST 30x8</i> : by measured object <i>ST 12x7/ST 30x7</i> : pneumatic			
Protection	IP 64			
Reference mark	One			



Gage-Chek®

The Gage-Chek is a multi-axis metrology display that accepts up to eight discrete inputs. It features intuitive visual displays, helpful audio cues and user-defined formulas. It also reports dynamic Min/Max measurements, provides SPC analyses from an integrated database and includes connectivity to PCs and other peripherals.



Specifications

LCD	5.9" Color
Resolution down to	0.000004" or 0.0001 mm
Operating temperature	0°C to 45°C
Enclosure (W x H x D)	11.5" x 7.5" x 2.75"
Base (W x H x D)	10" x 2" x 7.5"
Enclosure weight	3.5 lbs
Base weight	7 lbs
Power Voltage range	85 Vac to 264 Vac
Power frequency range	43 Hz to 63 Hz

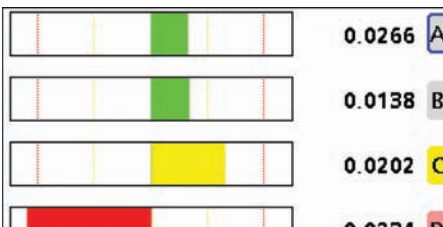
Inputs

1, 4, 8 or 16 input measurement channels

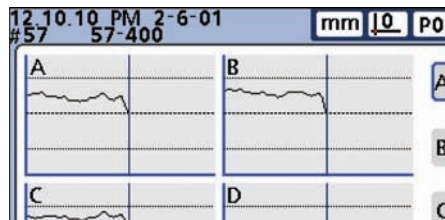
External connections:
Footswitch
Remote keypad
Touch probe
RS-232C serial port
USB port
Parallel data port

Outputs

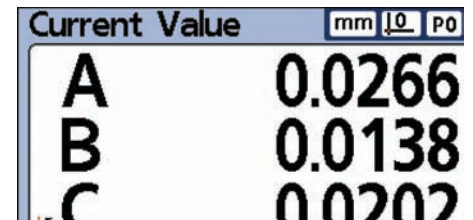
2 relay outputs
Parallel data port
RS-232C serial port
USB port



Visual feedback A highly visible, intuitive and familiar interface with standard color cues. Instantly informs operators of pass/fail performance details for critical part dimensions.



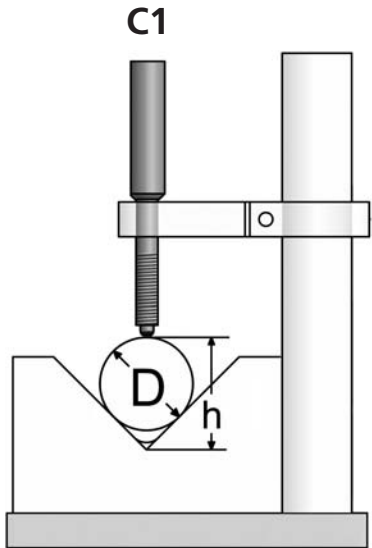
Integrated SPC database Store, retrieve and manage enormous amounts of measurement data on the shop floor. Check quality control of each gage. Share information locally and globally.



Formulas Up to 16 output channels apply mathematical formulas to measurement data for on-the-spot part analysis.

Powerful formulas

Create Gage-Chek formulas that transform simple measurements into the specific data you need for your unique applications; as shown in this example of a pin gage application.



Formulas mm | 0 | P0

About
Dimensions
Formats
Formulas
Tolerances
SPC
Header
Memory

Channels

Dimension **D**
(visible)
 $2 * C1 / (\sqrt{2} + 1)$

Current Value mm | 0 | P0

D **14.745**

View... in/mm Master Menu...

Encoder measurement (C1) → transformed by the formula → displays pin diameter (D)

$$Pin\ Diameter\ D = \frac{2(h)}{(\sqrt{2} + 1)}$$

Flexible data views

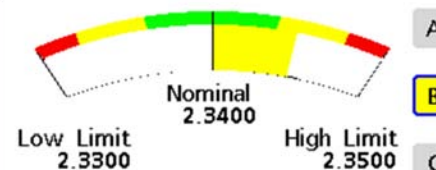
Change Gage-Chek data presentations at the touch of a button. Display simple numeric digital readouts, dial gages, bar graphs, database tables or statistical analyses.

Current Value mm | 0 | P0

A **1.8627**
B **2.3480**
C **-1.2127**
D **-1.3721**

View... in/mm Master Menu...

B mm | 0 | P0



Nominal **2.3400**
Low Limit **2.3300** High Limit **2.3500**

2.3480

View... r... Dial... Data... DRO...

Current Value mm | 0 | P0

A	B	C	D
1.8627	2.3480	-1.2127	-1.3721

View... r... Dial... Data... DRO...

Digital readouts, dials and bar graphs

Display numeric and graphical current value, nominal, limit and warning information.

9:29:42 AM 3-12-05 #210 1.8627 mm | 0 | P0

A	B	C	D
1.8627	2.3480	-1.2127	-1.3721
1.8627	2.3480	-1.2127	-1.3721
1.8608	2.3471	-1.2103	-1.3705
1.8608	2.3471	-1.2103	-1.3705
1.8616	2.3465	-1.2094	-1.3710
1.8616	2.3465	-1.2094	-1.3710
1.8616	2.3465	-1.2094	-1.3710
1.8613	2.3460	-1.2098	-1.3714
1.8613	2.3460	-1.2098	-1.3714
1.8600	2.3450	-1.2100	-1.3716

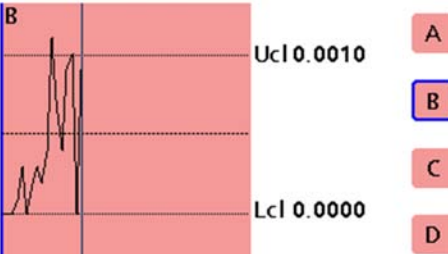
View... r... Dial... Data... DRO...

9:29:42 AM 3-12-05 #210 2.3480 mm | 0 | P0

Dimension	Value	Stat	Mean	Max	Min	r	σ(p)	σ	Pp	Ppk
B	2.3480	2.3474	2.3422	2.3480	2.3396	0.0009	0.0026	0.0084	1.2792	1.0123

View... r... Dial... Data... DRO...

9:29:42 AM 3-12-05 #210 2.3480 mm | 0 | P0



Ucl 0.0010
Lcl 0.0000

View... r... Dial... Data... DRO...

Database tables and graphs

Display raw measurement data, results of statistical analyses and data trends.

