

Intelligent Digital Pressure Modules

Measure pressure to 10,000 psi with $\pm 0.025\%$ full-scale accuracy

- Advanced temperature compensation
- Absolute pressure accuracy to $\pm 0.1\%$ full-scale accuracy
- Designed as external pressure modules for Additel 222A/223A multifunction process calibrators
- Full range of gauge, compound, and absolute models available; call for details

What's included: NIST-traceable calibration report with data supplied by the manufacturer.



Specifications

Accuracy: $\pm 0.025\%$ full-scale
Media compatibility: Gas or liquid compatible with 316L stainless steel
Burst pressure: 3X
Connection: $\frac{1}{4}$ " NPT(M)
Operating temperature: 14 to 122°F (-10 to 5°C)
Dimensions (L x dia): $4\frac{7}{8}$ " x $1\frac{3}{8}$ " (123 x 33 mm)

Model number	Range	Catalog number	Price
160-02-GP500-PSI-N	0 to 500 psi (35 bar)	GY-16106-11	
160-02-GP1K-PSI-N	0 to 1000 psi (0 to 70 bar)	GY-16106-12	
160-02-GP5K-PSI-N	0 to 5000 psi (350 bar)	GY-16106-13	
160-02-GP10K-PSI-N	0 to 10,000 psi (0 to 700 bar)	GY-16106-14	

Accessories

[GY-16106-84](#) Pressure module connection cable
 (required if calibrator does not have one)

[GY-17090-26](#) NIST-traceable recalibration with data
 (per pressure module)

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Handheld Multifunction Calibrators

Source, simulate, and measure pressure, temperature, and electrical signals

- Ultra-compact housing; 3.9" x 7.6" x 2" (100 x 192 x 52 mm)
- Smartphone-like multilingual user interface with $3\frac{1}{2}$ " TFT color dual display
- Rechargeable Li-ion battery provides 15 hours of uninterrupted use
- Unique internal cold junction compensation sensor can be recalibrated at ice point
- HART® communication capability (model 223A)



Model 220 is a highly integrated loop calibrator that measures loop current up to 30 mA with 0.1 μ A resolution and voltages up to 60 V. Other features include a built-in 24 V loop power supply and data logging memory capable of storing 20k records.

Models 221A, 222A, and 223A source and measure mV, mA, ohms, thermocouples, RTDs, frequency, and pulses. They simulate and measure 13 thermocouples and 11 RTDs for transmitter calibration. A unique built-in PRT element provides cold junction compensation and can be pulled out and recalibrated at ice point. Models 222A and 223A also measure and source pressure when used with the 160-series of intelligent digital pressure modules (sold separately below); cable 16106-84 is required.

What's included: Additel/Land and downloading software, test leads, short circuit cables, 110/220 VAC external power adapter, rechargeable Li-ion battery, and NIST-traceable calibration report supplied by the manufacturer.



Model number	Description	Catalog number	Price
220	Multifunction loop calibrator	GY-26072-05	
221A	Multifunction temperature calibrator	GY-26072-06	
222A	Multifunction process calibrator	GY-26072-03	
223A	Multifunction documenting process calibrator with HART® communication capability	GY-26072-04	

[GY-16106-80](#) Repl. external power adapter, 110/220 VAC

[GY-16106-81](#) Spare rechargeable Li-ion battery

[GY-16106-82](#) Additel/Cal task management software for temperature and pressure calibration. For use with models 221A, 222A, and 223A

[GY-16106-83](#) Cold junction compensation kit (includes T/C plug, compensation cable, J, K, T, E, R, S, B, N) for models 221A, 222A, and 223A

[GY-16106-84](#) Pressure module connection cable for models 222A and 223A

Current and Voltage Calibrator

Portable meter goes anywhere

- Provides an adjustable 0 to 24 mA and 0 to 10 V calibration source
- Five preset calibration values for faster calibrations

Calibrate process devices such as transducers, indicators, recorders, controllers, and more. Dual-function calibrator simulates (source mode) and displays (measure mode) current and voltage outputs. LCD displays readings in mA, as a percentage of the 0 to 24 mA range (4 to 20 mA = 100.0%), or as mV in voltage ranges.



What's included: calibration cable with spade lug terminals, universal VAC adapter, and 9 V battery.

Specifications

Function	Range	Resolution	Accuracy
Measure (input)			
VDC	0 to 19.99 V	1 mV	0.075% ± 1 digit
mA DC	0 to 50 mA	0.1 mA	0.075% ± 1 digit
Source (output)			
VDC	0 to 10 V	1 mV	0.075% ± 1 digit
mA DC	0 to 24 mA (loads up to 1000 Ω)	0.1 mA	0.075% ± 1 digit

Safety: EN55022 Class B;
EN61000-4-2, EN61000-4-3

Dimensions (W x H x D):
4" x 2" x 4 1/4" (10.2 x 5.1 x 10.8 cm)

Power: 110 to 240 VAC adapter
or one 9 V battery

Description	Catalog number	Price
Current and voltage calibrator	GY-16120-10	

Pneumatic Pressure and Pressure / Vacuum Hand Pumps

Lightweight for easy transport



- Large-volume fine adjustment piston provides precise control (± 0.01 psi), even at very low pressures
- Modular design makes field maintenance quick and easy
- Pressure range: 0 to 125 psi (0 to 7 bar)
- Pressure/vacuum models offer vacuum range of 0 to -25 in. Hg (-635 mm Hg)
- Pressure/vacuum hand pumps allow you to convert from pressure to vacuum by simply twisting a knob

What's included: Quick-test System™ outlet connection, 3-ft (0.9 m) Quick-test™ low-volume hose with brass hose ends and 1/4" NPT(M) brass hose adapter.

Model	Gauge adapter (incl)	Gauge included	Catalog number	Price
Pressure hand pumps				
DPOV-0000	—	—	GY-68976-60	
DPOV-2MBA	1/4" NPT(M)	—	GY-68976-62	
DPOV-30PSIG-D	1/4" NPT(F)	Digital, 30 psi, $\pm 0.25\%$ FS	GY-68976-65	
Pressure/vacuum hand pumps				
DPPV-0000	—	—	GY-68976-68	
DPPV-2MBA	1/4" NPT(M)	—	GY-68976-70	
DPPV-15PSIG-D	1/4" NPT(F)	Digital, ± 15 psi, $\pm 0.25\%$	GY-68976-72	

[GY-17040-12](#) NIST-traceable recalibration with data

Squeeze-Bulb Pressure Calibrators

Economical alternative

Test the output or differential pressure (flow) readings of a pneumatic instrument with one hand, allowing the other hand to make calibration adjustments on the instrument being tested. These lightweight pneumatic calibrators feature a sphygmomanometer-type gauge with squeeze bulb and a precision-machined, hand-adjusted valve to relieve the calibrating pressure. Easy-to-read, 1 3/4" (44 mm) diameter gauge offers 1% accuracy.

What's included: A 3/16" flexible hose with 1/4" NPT compression fitting and carrying case.

Model	Description	Catalog number	Price
44S369	0 to 160" H ₂ O calibrator	GY-68454-74	
44S390	0 to 18 psig calibrator	GY-68454-75	

Accessories

[GY-17040-12](#) NIST-traceable recalibration with data

Applications

- Pneumatic controllers
- Low pressure gauges
- Pneumatic transmitters
- Flow transmitters



Pneumatic Test Pumps

Simple hand operation—no tools or tape needed

- Precision screw press technology provides great stability and eliminates leakage
- Isothermal bellows chamber yields high pressure stability and is not affected by environmental temperature changes
- Quick-connect fittings tighten easily by hand
- Built-in gas-liquid isolator protects pump from moisture and dirt

What's included: 20 replacement O-rings.

Specifications

Resolution: 0.01 Pa (0.0001 mbar)

Media: Air

Materials: SST ram/adapters,
SST/aluminum body, Buna N seals

Connections: Hand-tight connectors for both test and reference gauges, 1/4" NPT(F)



16106-01

Model	Description	Range	Dimensions	Test pump		Carrying case for pump and 2 gauges	
				Catalog number	Price	Catalog number	Price
901	Low-pressure pneumatic test pump	–6 to 6 psi	9 5/8" x 6 1/2" x 5 3/4" (245 x 165 x 145 mm)	GY-16106-01		GY-16106-95	
912	Handheld pneumatic test pump	95% vacuum to 60 psi	10 3/4" x 10 1/8" x 5 1/2" (273 x 258 x 140 mm)	GY-16106-02		GY-16106-96	
914	Handheld pneumatic test pump	95% vacuum to 375 psi	9 1/2" x 4 3/4" x 5 1/8" (240 x 120 x 130 mm)	GY-16106-03		GY-16106-97	
916	Handheld pneumatic test pump	95% vacuum to 600 psi	12 3/8" x 7 7/8" x 5 1/2" (315 x 198 x 140 mm)	GY-16106-04		GY-16106-98	
917	Portable pneumatic test pump	95% vacuum to 1000 psi	12 3/8" x 7 13/16" x 5 1/2" (315 x 198 x 140 mm)	GY-16107-42		GY-16107-91	
918	Portable pneumatic test pump	95% vacuum to 1500 psi	12 3/8" x 7 13/16" x 5 1/2" (315 x 198 x 140 mm)	GY-16107-43		GY-16107-92	
919A	High-pressure pneumatic test pump	95% vacuum to 2000 psi	21 1/4" x 10 5/8" x 7" (540 x 270 x 178 mm)	GY-16107-44		GY-16106-99	
920	pneumatic test pump	95% vacuum to 3000 psi	21 1/4" x 10 5/8" x 7" (540 x 270 x 178 mm)	GY-16107-84		—	

Accessories

[GY-17040-12](#) NIST-traceable calibration with data

Hydraulic Test Pumps

Eliminate the need for built-in nonreturning valve

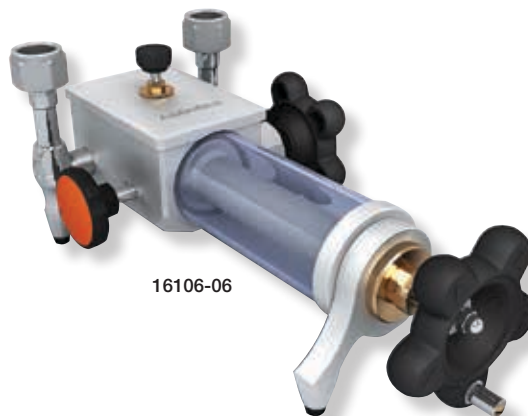
- Screw press for easy operation without leakage
- Quick-connect fittings tighten easily by hand without tools or tape
- High pressure generated easily and adjusted smoothly

What's included: 20 replacement O-rings.

Specifications

Materials: Stainless steel adapters, stainless steel/aluminum body, Buna N seals

Connections: Hand-tight connectors for both test and reference gauges, 1/4" NPT(F)



16106-06

Model	Description	Range	Media	Dimensions (L x W x H)	Catalog number	Price
925	Handheld hydraulic test pump	–12.5 to 6000 psi	Oil or deionized water	9 7/8" x 5 1/2" x 4 3/4" (250 x 140 x 120 mm)	GY-16106-06	
927	Portable hydraulic test pump	–12.5 to 10,000 psi	Oil or deionized water	11 1/2" x 7 7/8" x 5 5/8" (290 x 198 x 135 mm)	GY-16106-07	
936	Benchtop hydraulic test pump	–12.5 to 15,000 psi	Oil	20 1/2" x 14 1/4" x 9 1/8" (520 x 360 x 230 mm)	GY-16106-08	
938	Benchtop hydraulic test pump	–12.5 to 15,000 psi	Deionized water	20 1/2" x 14 1/4" x 9 1/8" (520 x 360 x 230 mm)	GY-16106-09	
949	Ultrahigh pressure hydraulic test pump	–12.5 to 37,500 psi	Oil	20 1/2" x 14 1/4" x 9 1/8" (520 x 360 x 230 mm)	GY-16106-10	

Accessories

[GY-16106-91](#) Carrying case for 925

[GY-16106-92](#) Carrying case for 927

[GY-16106-93](#) Carrying case for 936/938/949

[GY-16106-94](#) Oil, diethylhexyl sebacate, 1 quart (1 liter)

[GY-17040-12](#) NIST-traceable calibration with data

Calibration Equipment

Precision Deadweight Testers

Easily achieve accuracy of $\pm 0.1\%$ of reading

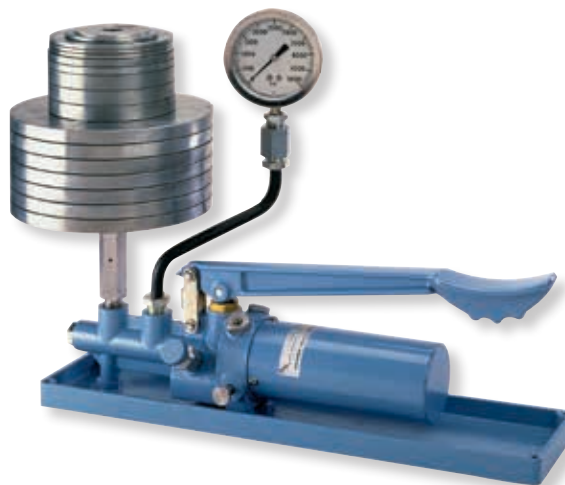
- Operating media: SAE 20 weight automotive or machine oil
- O-Ring material Buna N
- Stainless steel piston and cylinder material
- Non-magnetic die-cast zinc alloy weight material
- Reservoir volume approximately 1.5 pints (0.7 liter)

These testers are available for operating ranges up to 10,000 psi and ideal for calibrating, setting, testing, and repairing pressure measurement and control devices. Each unit is traceable to the National Institute of Standards and Technology assuring instrument accuracy. Ashcroft deadweight testers qualify as primary standards for pressure calibration.

These pressure systems are designed to be field-portable. A single carrying case holds the pressure generation pump as well as the necessary tools and accessories. A second box contains the weights used for pressure generation (10,000 units require 2 boxes of weights)

The pump is a two-stage hydraulic pressure generator. A built-in shuttle valve allows for rapid pressure increase at low pressures. The rate of increase, at pump cycle, can be reduced at higher pressures in order to minimize resistance. This is accomplished by simply repositioning the two-position shuttle valve. With the shuttle valve in the high pressure position, increasing pressure even when near the 10,000 psi upper limit can be quickly and easily accomplished. Final, precise adjustment is accomplished through the use of an integral vernier adjustment knob.

The unit is provided with two piston cylinder assemblies: A low-pressure piston for pressure ranges from 15 to 2000 psi and a high-pressure unit for pressures from 75 to 10,000 psi. The high-pressure piston has an area of $\frac{1}{80}$ th of a square inch, while



the low-pressure piston has an area of $\frac{1}{16}$ th of a square inch. Weights are provided for pressure increments of 5, 10, 20, 25, 40, 50, 100, 200, and 500 psi (depending on piston in use). Ashcroft testers can be used anywhere within their operational range without any change in accuracy. The same weights are used with both piston and cylinder assemblies.

What's included: Hand jack set (for removal of pointers on gauges being calibrated); spare O-rings; all tools, accessories, and fittings required for normal use; and an NIST-traceable calibration report supplied by the manufacturer.

Model	Pressure range		Catalog number	Price
	Low	High		
13050-10	15 to 200 psi	75 to 1000 psi	GY-68840-00	
13050-20	15 to 400 psi	75 to 2000 psi	GY-68840-10	
13050-30	15 to 600 psi	75 to 3000 psi	GY-68840-20	
13050-50	15 to 1000 psi	75 to 5000 psi	GY-68840-30	
13050-100	15 to 2000 psi	75 to 10,000 psi	GY-68840-40	

[GY-17101-09](#) NIST-traceable recalibration with data

Pressure Gauge Comparators

Field portable—everything fits in carrying case

- Operating pressure to 10,000 psi

Hydraulic two-stage pressure gauge comparator has a built-in shuttle valve that allows for rapid pressure increases at low pressures. Sturdy carrying case holds the pump as well as the 6" test gauge. The test gauge features temperature compensation to maintain a $\pm 0.1\%$ full-scale accuracy over an operating temperature range of -25 to 125°F (-32 to 52°C).

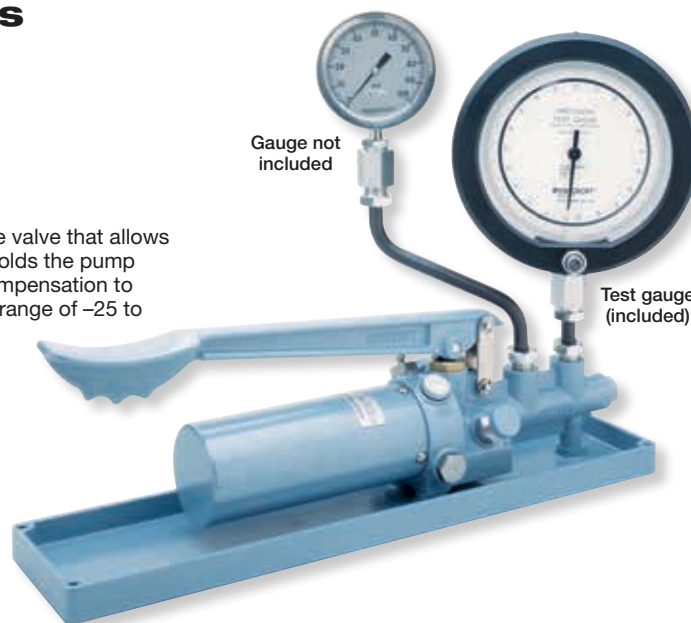
What's included: Pump, test gauge, carrying case, and NIST-traceable calibration report supplied by the manufacturer.

Specifications

Range: 0 to 10,000 psi
Accuracy: $\pm 0.1\%$ full-scale
Body material: aluminum alloy

Piston/cylinder material: 400-series stainless steel
O-ring material: Buna N
Operating fluid: standard SAE 20 weight automotive/machine oil

Model number	Maximum test pressure	Catalog number	Price
1327CM-S-A	30 psi	GY-68840-50	
1327CM-S-B	100 psi	GY-68840-52	
1327CM-S-C	500 psi	GY-68840-54	
1327CM-S-D	1000 psi	GY-68840-56	
1327CM-S-E	5000 psi	GY-68840-58	
1327CM-S-F	10,000 psi	GY-68840-60	



Accessories

[GY-07359-60](#) Hand jack set removes or reassembles pointers on gauges that need to be calibrated

[GY-17090-27](#) NIST-traceable recalibration with data

Pressure Hoses, Adapters, and Fittings

Convenient assortment for tool-free calibrations

Each kit contains an assortment of often-used adapters and fittings or hose—conveniently packaged in a case. Each component is precision machined so that leak-free connections can be made by hand with no tools or tape necessary.

Content list: Kit model 102 (16106-76)

1/4" NPT(M) to:	1/8" NPT(M)	1/8" NPT(F)
	1/4" NPT(M)	1/4" NPT(F)
	1/2" NPT(M)	1/2" NPT(F)
	3/8" NPT(M)	3/8" NPT(F)
	G 1/8" M	G 1/8" F
	G 1/4" M	G 1/4" F
	G 1/2" M	G 1/2" F
	G 3/8" M	G 3/8" F
	M10 x 1.0 M	M10 x 1.0 F
	M14 x 1.5 M	M14 x 1.5 F
	M20 x 1.5 M	M20 x 1.5 F
	Hose barb	
	Right-angle adapter, 1/4 NPT(F) hand-tight quick connector	
	5 ft (1.5 m) flexible hose (8000 psi) and 1/4" NPT(F) hand-tight quick connector	
	5 ft (1.5 m) flexible hose (1000 psi) and 1/4" NPT(F) hand-tight quick connector	

Content list: Kit model 103-NPT (16106-77)

1/4" NPT(M) to:	1/8" NPT(F)
	1/4" NPT(F)
	1/2" NPT(F)
	G 1/8" F
	G 1/4" F
	G 1/2" F
	G 3/8" F
	M10 x 1.0 F
	M14 x 1.5 F
	M20 x 1.5 F



Content list: Kit model 104-HP (16106-78)

1/4" HP(M) to:	1/4" HP(M), 3 pcs	—
	1/4" NPT(M)	1/4" NPT(F)
	1/2" NPT(M)	1/2" NPT(F)
	G 1/4" M	G 1/4" F
	G 1/2" M	G 1/2" F
	G 3/8" M	G 3/8" F
	M14 x 1.5 M	M14 x 1.5 F
	M20 x 1.5 M	M20 x 1.5 F

Model	Description	Catalog number	Price
100-HTK-2	Hose test kit. Includes 5 ft (1.5 m) flexible hose (8000 psi) and 1/4" NPT(M) to 1/2" NPT(F) hand-tight quick connector	GY-16106-73	
100-HTK-4	Hose test kit. Includes 5 ft (1.5 m) flexible hose (8000 psi) and 1/4" NPT(M) to 1/4" NPT(F) hand-tight quick connector	GY-16106-74	
100-HTK-8	Hose test kit. Includes 5 ft (1.5 m) flexible hose (8000 psi) and 1/4" NPT(M) to 1/8" NPT(F) hand-tight quick connector	GY-16106-75	
102	Adapter/fitting kit; 1/4" NPT(M) to various male and female connections, 26 pcs (see content list above)	GY-16106-76	
103-NPT	Adapter/fitting kit; 1/4" NPT(M) to various male and female hand-tight quick connectors, 10 pcs (see content list above)	GY-16106-77	
104-HP	Adapter/fitting kit; 1/4" HP male to various male and female connections, 17 pcs (see content list above)	GY-16106-78	

Pneumatic and Hydraulic Pressure Manifolds

Increase your productivity

- Hand-tightening quick connectors eliminate the need for wrenches and PTFE tape
- Built-in filter on pneumatic models prevents migration of contaminants

Additel 12X series pressure manifolds are designed to expand pressure test ports during calibration. Quickly change out devices under test, calibration pumps, dead weight testers, and pressure controllers with the hand-tightened quick connectors. Use the adjustable-arm models to alternate between a space-saving compact footprint for small gauges and transducers, and a more spread out orientation to accommodate larger gauges.

NEW



Model	121-N	123-N	125-N	126-N
Catalog number	GY-16107-93	GY-16107-94	GY-16107-95	GY-16107-96
Port positions	Fixed		Adjustable (two movable arms)	
Pressure medium	Pneumatic	Hydraulic	Pneumatic	Hydraulic
Pressure range	–15 to 3000 psi (–1 to 200 bar)	–15 to 15,000 psi (–1 to 1000 bar)	–15 to 3000 psi (–1 to 200 bar)	–15 to 10,000 psi (–1 to 700 bar)
Port connection	1/4" NPT(M) hose to four 1/4" NPT(F) hand-tight quick connectors		1/4" NPT(F) to four 1/4" NPT(F) hand-tight quick connectors	
Price				

Calibration Equipment

Dry Block Portable Temperature Calibrator

Case is cool to the touch—
even at maximum temperatures

- Maximum temperature of 806°F (430°C)
- Fast heat-up and cool-down
- Independent over-temperature cutout
- Temperature sensor burnout protection
- Built rugged to handle portable field use
- Lightweight, only 9 lb



What's included: One multi-well insert (1/8", 3/16", 1/4", 5/16" & 3/8" well sizes), manual, insert extractor, mains cable, and NIST-traceable calibration report supplied by the manufacturer.



Model	3028900	3028950
Catalog number	GY-16101-97	GY-16101-98
Minimum temperature	9°F / 5°C above ambient	
Maximum temperature	806°F / 430°C	
Cooling rate 400 to 100°C	21 min	
Heating rate, 20 to 400°C	12 min	
Independent over-temp. cutout	Approx. 842°F / 450°C	
Fan cooling	Automatic	
Display resolution	0.1°F / 0.1°C	
Insert immersion depth	4 1/2"	
Stability after 15 minutes	±0.03°C @ 200°C; ±0.05°C @ 400°C	
Display accuracy	±0.3°C @ 200°C; ±0.5°C @ 400°C	
Well-to-well uniformity	0.015°C @ 200°C; 0.025°C @ 400°C	
Dimensions (H x W x D)	8 3/4" x 8" x 8" (222 x 203 x 203 mm)	
Power	120 VAC, 50/60 Hz, 900 W	240 VAC, 50/60 Hz, 900 W
Price		

Optional Inserts

Model	Description	Catalog number	Price
7032533	Insert 5 x 1/4"	GY-08510-70	
7032534	Insert 3/8" x 5/16" + 1/4" + 3/16" + 1/8"	GY-16104-25	
7032535	Insert 2 x 3/8" + 2 x 1/4"	GY-16104-26	
7032536	Insert 2 x 1/2" + 2 x 1/4"	GY-16104-27	
7032537	Insert 1 x 1/4"	GY-16104-28	
7032538	Insert blank	GY-16104-29	
7032574	Insert 1 x 9/16" & 1 x 1/4"	GY-16104-39	
7032575	Insert 1 x 5/8" & 1 x 1/4"	GY-16104-40	
7032576	Insert 1 x 1/16" & 1 x 1/4"	GY-16104-41	
7032577	Insert 1 x 3/4" & 1 x 1/4"	GY-16104-42	

Accessories

[GY-16104-43](#) Soft-side carrying case

[GY-17002-16](#) NIST-traceable recalibration with data

Thermocouple Calibrator

Get a good grip with
palm-sized housing

- Ergonomic palm-sized double-molded housing
- Large, dot-matrix digital backlit LCD
- Displays output in mV or temperature based on thermocouple tables
- Standard banana I/O ports
- Large battery bank for extended work cycle or external power adapter for continuous use
- Up to five user-adjustable calibration presets



What's included: Thermocouple calibration cable with subminiature connectors, standard calibration cable with subminiature connectors, hard carrying case, universal adapter with four plugs, and six AA batteries.



Model	PRC20		
Catalog number	GY-16101-15		
Thermocouple	Range (source and measure)	Resolution	Accuracy
Type J	−58 to 1832°F (−50 to 1000°C)	0.1° (measure) or 1° (source)	±(0.05% rdg ± 0.8°F/1°C)
Type K	−58 to 2498°F (−50 to 1370°C)		
Type T	−184 to 752°F (−120 to 400°C)		
Type E	−58 to 1382°F (−50 to 750°C)		
Type R	32 to 3182°F (0 to 1750°C)		
Type S	32 to 3182°F (0 to 1750°C)		
Type N	−58 to 2372°F (−50 to 1300°C)		
Type C	32 to 3182°F (0 to 1750°C)	0.01 mV	±(0.01% + 1 digit)
Voltage	Measure: −10.00 to 60.00 mV Source: −5 mV to 55 mV		
Input impedance	10 MΩ		
Sampling time	4 times/second		
Display	Dot matrix LCD, backlight		
Operating conditions	41 to 104°F (5 to 40°C), max 80% RH		
Dimensions (L x W x H)	6 3⁄8" x 3 1⁄8" x 1 5⁄8" (159 x 80 x 44 mm)		
Power	Six AA batteries or 110 to 240 VAC adapter		
Price			

Accessories

[GY-09376-01](#) Replacement batteries, AA, Pack of 4

[GY-17101-07](#) NIST-traceable calibration with data

1°

Matters

Calibrate

to ensure accuracy

InnoCalSolutions.com

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INNOVATIVE CALIBRATION SOLUTIONS