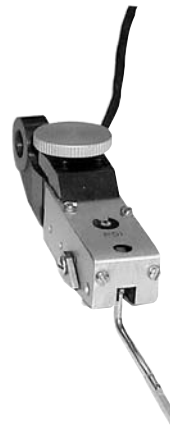
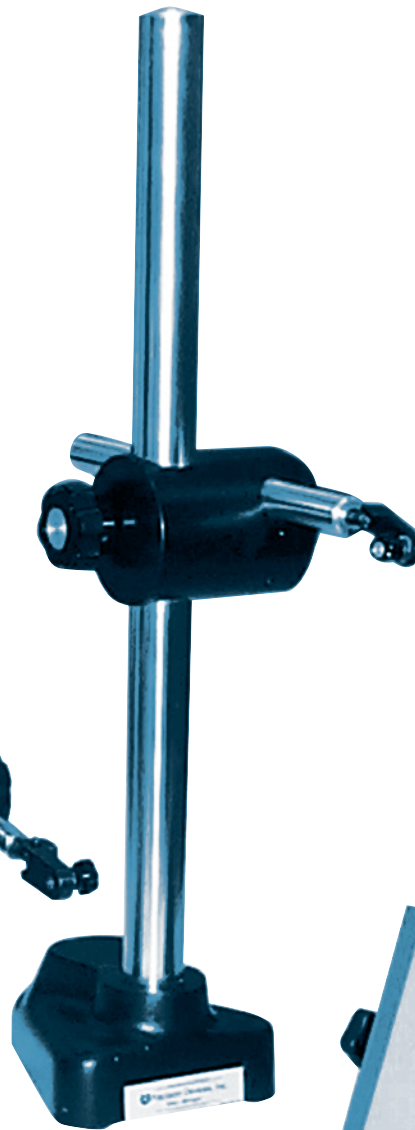
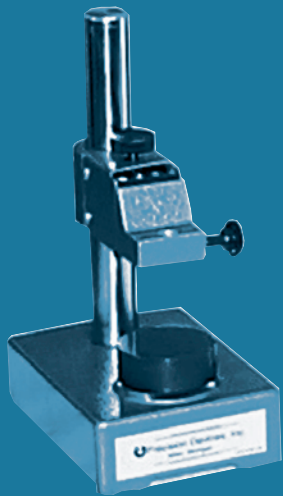


Indi-AC[®] Dimensional Gaging Components

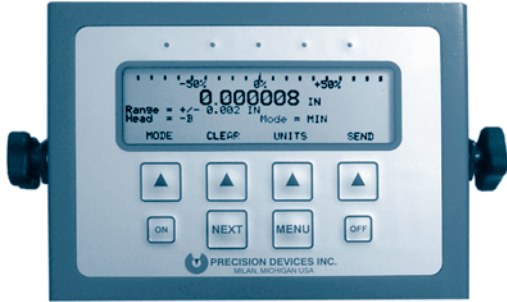


PRECISION DEVICES, INC.

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AMPLIFIER

DESCRIPTION



PGA-210 Single Channel and **PGA-220** Dual Channel solid state dimensional gaging amplifiers for use in: surface plate work, runout, height gage indicator, size variation and set-up verification.

Specifications on back page

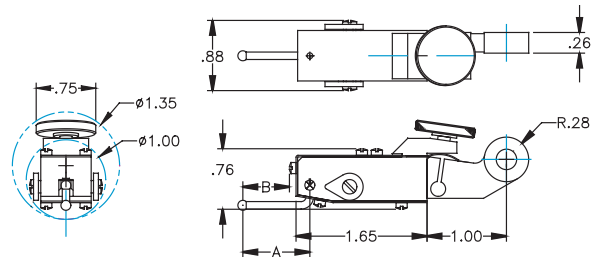
T-425 GAGE HEAD

DESCRIPTION



Tips sold separately. See below

T-425 Gage Head, lever type, breakaway feature to protect tips. Includes adjustment wrench. Has fine mechanical adjustment of 0.045" (1.14mm) for standard gage tips and 0.090" for 2X. Gaging force: 0 to 0.5g over a gaging range of ± 0.020 " for standard gage tip; with 2X tip: 0 to 0.3g force over a range of ± 0.040 ".



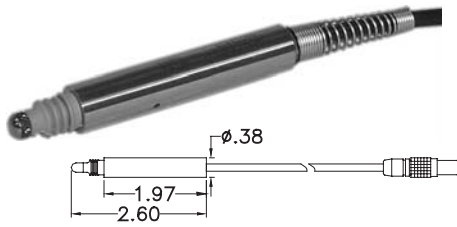
T-425 GAGE TIPS

PART NO.

DESCRIPTION

	CP-320 1/8" \varnothing Tip CP-321 1/16" \varnothing Tip CP-322 1/32" \varnothing Tip	Carbide Ball A = Tip Length: 0.840" B = Clearance Length: 0.590"
	CP-324 1/64" \varnothing Tip	Carbide Ball A = Tip Length: 0.840" B = Clearance Length: 0.590"
	CP-320-Z, 1/8" \varnothing Tip CP-321-Z, 1/16" \varnothing Tip CP-322-Z, 1/32" \varnothing Tip	Carbide Ball - Z Form A = Tip Length: 0.840" B = Clearance Length: 0.590"
	CP-320-2XA, 1/8" \varnothing Tip CP-321-2XA, 1/16" \varnothing Tip CP-322-2XA, 1/32" \varnothing Tip	Carbide Ball - Zx Length A = Tip Length: 1.680" B = Clearance Length: 1.436"
	CP-320-SA, 1/8" \varnothing Tip CP-321-SA, 1/16" \varnothing Tip CP-322-SA, 1/32" \varnothing Tip	Sapphire Ball A = Tip Length: 0.840" B = Clearance Length: 0.590"
<p><i>NOTE: Special tips are available</i></p>	CPTK-A	Tip Kit (includes (1) each of the following: CP-320, CP-321, CP-322, CP-321Z, CP-321-2XA and CP-321-SA)

T-504A CARTRIDGE GAGE HEAD	DESCRIPTION
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T-504A Cartridge Gage Head Assembly with Gage Tip: 5/32" diameter carbide tip with #4-48 male thread, Gaging Force: 51g (at null position), Gaging Range: 0.040"

HEIGHT STANDS	DESCRIPTION
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GS-1810 18" Height Stand
 Base dimensions: 6.2" x 5.0" x 2.5"
 (159mm x 127mm x 64mm)
 Vertical capacity: 18" (457mm)
 Crossarm type: Rotating
 Crossarm adjustment: 5.5" (140mm)
 Overall height: 19" (483mm)
 Weight: 14.5 lbs (6.6 kg)

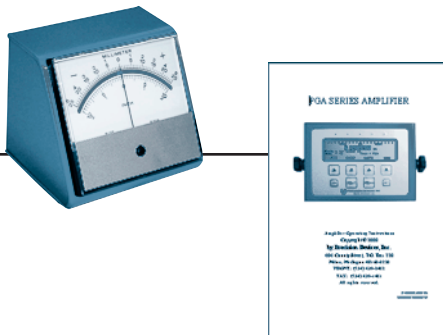
GS-P-2412 24" Height Stand
 Base dimensions: 7.0" x 6.0" x 3.0"
 (178mm x 152mm x 76mm)
 Vertical capacity: 24" (610mm)
 Crossarm type: Positive Drive
 Crossarm adjustment: 11.0" (279mm)
 Overall height: 25" (635mm)
 Weight: 30 lbs. (13.6 kg)

S-1311-S3 36" Height Stand
 Same specification as GS-P-2412 above and a height of 36"



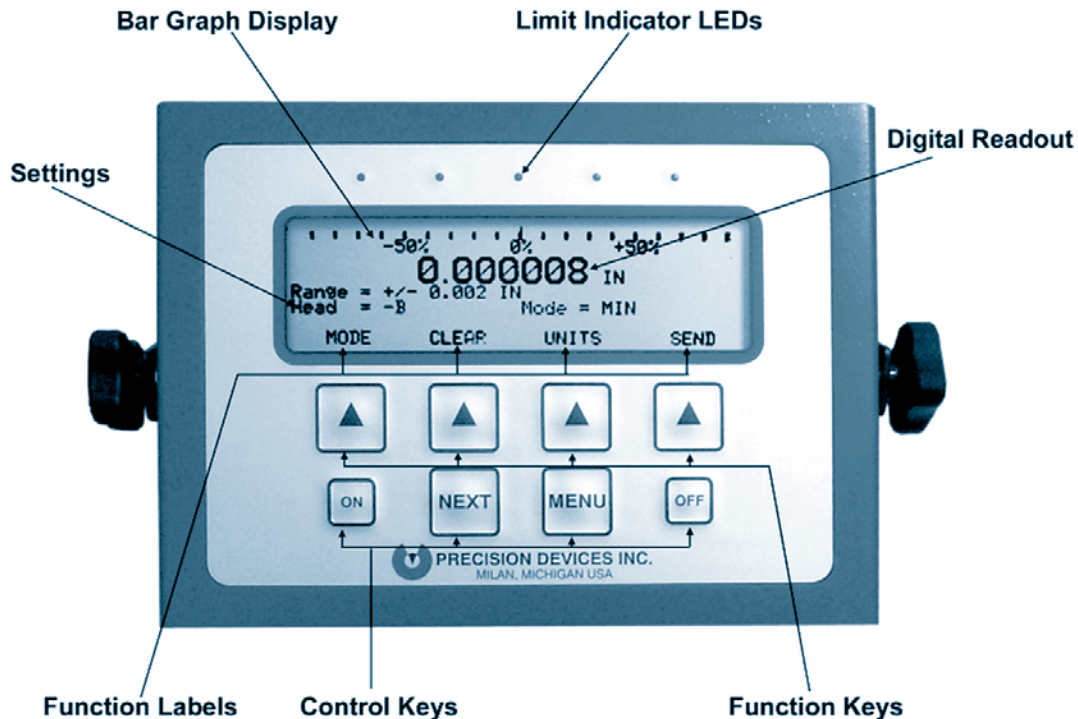
Comparator Stand Assembly, general purpose stand that accepts electronic gaging cartridge having a 3/8" (9.5mm) diameter. Consists of a heavy cast iron base, cylindrical steel column with saddle assembly adjustable vertically, and anvil, 2" (50.8mm) diameter. Height capacity and vertical adjustment 3.25" (82mm) throat depth, to front of column 2.43" (62mm) w/.094" (3.3mm) range fine vertical adjustment.

ANALOG METER	DESCRIPTION
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PAM-1 Analog Meter with metric and English full range scales. Includes 4 1/2" cable. Dimensions: 5" W x 4 1/4" D x 4 3/4" H
 Weight: 1 1/4 lb.

PGA Series Operating Manual



PGA SPECIFICATIONS

PARAMETER	SPECIFICATION		PARAMETER	SPECIFICATION	
Range Settings:	inches	mm	Performance (Update Rates):	1 Channel	2 Channel
Bar Graph and Analog Output	± 0.00002	± 0.0005	Transducer Data Collection	1.2 mS	2.9 mS
	± 0.0001	± 0.0025	Analog Output (Actual Mode)	1.2 mS	2.9 mS
	± 0.0002	± 0.005	Analog Output (All Other Modes)	200 mS	200 mS
	± 0.001	± 0.025	Calculated Reading (MIN., MAX., F.I.M., and AVERAGE)	4.8 mS	11.6 mS
	± 0.002	± 0.05	Display Update:	200 mS	200 mS
	± 0.01	± 0.25			
	± 0.02	± 0.5			
Numerical Display	up to ± 0.08	± 2.0	RS232 Port:		
Output Resolution:			Available Baud Rates	300, 600, 1200, 2400, 4800, 9600, 19200, or 38400	
Bar Graph Display (narrow)	0.83% of selected range		Parity Settings	NONE, EVEN, ODD	
(wide)	1.67% of selected range.		Primary Input	Single character command	
Analog Output	0.024% of the selected range		Primary Output	Displayed numerical value	
Numerical Display	0.000,001 inch (0.000,01 mm)		Supplemental Status Output(s)	UNITS, HEAD, MODE, Limit Status, or any combination	
Amplifier Accuracy:			Available Line Terminations	NONE, CR, LF, or CR + LF (CR = carriage return, LF = line feed)	
PGA-210 (Single Channel Unit)	< 1 µIN (0.025 µm)		Hardware Handshaking	ENABLE or DISABLE	
PGA-220 (Dual Channel Unit)	< 2 µIN (0.050 µm)				
System Accuracy:			Power Requirements:		
PGA-210 (Single Channel Unit)	< 4 µIN (0.100 µm)		Amplifier Input	5 volts DC at 2.0 amperes	
PGA-220 (Dual Channel Unit)	< 5 µIN (0.125 µm)		Power Pack Output	5 volts DC at 2.5 amperes	
Test Conditions: T-425 gage head held in calibration fixture on surface plate at 70° F. for five minutes duration.			Power Pack Input	100 - 250 volts AC at 0.4 amps, 47-63 Hz	
Bar Graph Display Output:	Nominal ± 100% proportional to reading in selected range.		Environmental:		
Analog Output:	Nominal ± 5 volt proportional to reading in selected range.		Operating Temp. Range	50° - 90° F (10° - 32° C)	
Limit Indicator Outputs:			Storage Temperature Range	30° - 110° F (-1° - 43° C)	
Indicators (LED)	Pass: Green Caution: + and - Yellow Fail: + and - Red		Relative Humidity	10% - 90% non-condensing	
Range Limit Settings	Independent + and -		Physical Size (L x W x D):		
Adjustable Cautionary Settings	Percent of range limit settings		Dimensions (excluding handle)	9.25" x 6.25" x 2.5" 23.5 cm x 15.9 cm x 6.4 cm Weight 4 lbs. (1.8Kg)	