

3D PRECISION TEST GAUGE



3D Instruments, Inc.
Direct Drive Difference

The Best Precision Test Gauge For Your High Accuracy Requirements

The 3D Precision Test Gauge is certified for industrial and laboratory pressure transfer measurement in the U.S. and worldwide.

Incorporating 3D Instruments' well known expertise in test gauge design and application, the Precision Test Gauge provides unsurpassed long-term accuracy. The dial face design comes directly from 3D experience with the practical use of high resolution pressure calibration in the laboratory and the field.

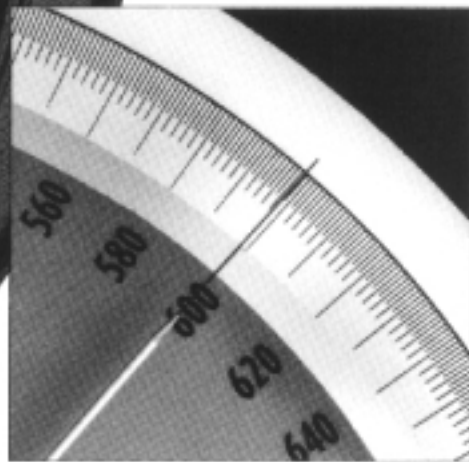
Utilizing a highly sensitive Ni-Span C Bourdon tube, the Precision Test Gauge is virtually unaffected by temperature variations. This obsoletes the need for an expensive add-on temperature compensation device. The Bourdon tube material offers a superior spring rate varying only 0.02% from -25°F (-32°C) to $+125^{\circ}\text{F}$ ($+52^{\circ}\text{C}$).

With the 3D Precision Test Gauge there is no need for preliminary pressure cycling. All materials used are selected to be corrosion resistant. All gauges are supplied with a bleed port, and Bronze bushings are used ensuring low friction and long term precision in extreme applications involving dust, vibration and temperature variation.

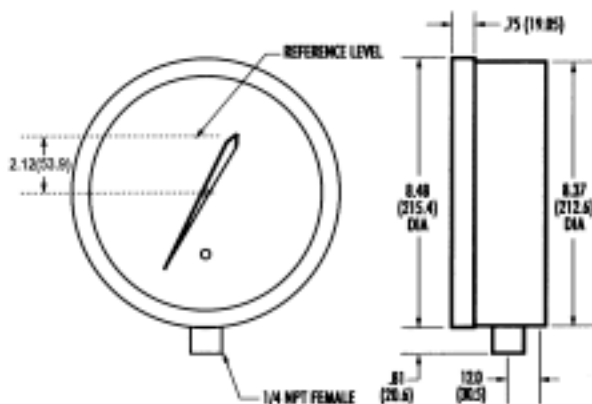
The gauge dial uses 3D Instruments well known anti-glare soft green with mirror anti-parallax band, and white outer ring for maximum user resolution. This system has proven practical advantages for technicians and engineers.

All Precision Test Gauge dials are linear and interchangeable in the field for the same pressure range. The advantage of using the Ni-Span C Bourdon tube and the resulting low hysteresis is that the Precision Test Gauges are not individually matched to a non-linear dial. This makes field repair and calibration not only a possibility but a relatively easy task performed with exactness and facility by instrument technicians in real world situations.

3D Instruments, already the major force in mechanical field test gauge pressure instruments, is proud to supply the best available Precision Test Gauge for your high accuracy applications.



Stem Mount



Precision Test Gauge Specifications

Precision Test Gauge Accuracy - 0.1% of span
 This accuracy statement includes repeatability, linearity and hysteresis, obtained by calibration with pressure standards traceable to NIST

Calibration Points - 12 points up scale and 12 down scale

Overpressure - 120% of span without calibration shift
 200% of span without damage

Repeatability - 0.02% of span

Hysteresis - .1% span or less

Measurand Fluid - gauges are calibrated with air (up to 1,000 psi) or distilled water (up to 10,000 psi), Other fluids compatible with Ni Span C, 300 series stainless steel and Buna-N may be used. Gauges may be oxygen cleaned.

Needle Movement - 310°

Temperature - 25°F (-32°C) to 125°F (+52°C)
 operating ambient

Warranty - 5 years

The lowest full scale pressure is 15 psi (1 bar), the highest full scale pressure is 10,000 psi (660 bar) or the equivalent in other pressure units. These ranges are available in PSIG, PSIA, INCHES OF MERCURY, and MILLIMETERS OF MERCURY. Other ranges and pressure units are available on request.

Gauge Diameter	Model Number	Standard Fittings (1)	Mounting	Net Weight (lbs.)	Shipping Weight (lbs.)
7	25X19	Bottom	*Stem	4 (1.8 kg)	11 (5.0 kg)
8.5	25X16	Lower Back	Panel	5 (2.2 kg)	12 (5.5 kg)
12	25X17	Lower Back	Panel	7 (3.2 kg)	14 (6.4 kg)
16	25X18	Lower Back	Panel	12 (5.5 kg)	20 (9.0 kg)

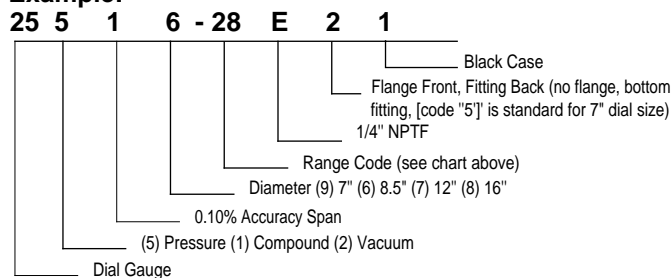
*Front flange available as an option. Consult factory

Code	Standard Range	Increments	Sub-divisions	Gauge Diameter
15	0-15 psi	750 1500	.02 .01	7, 8.5, 12 16
21	30 psi	600 1500	.05 .02	7, 8.5, 12 16
22	60 psi	600 1200	.10 .05	7, 8.5, 12 16
23	1 00 psi	1000	.1	All
24	150 psi	750 1500	.2 .1	7, 8.5, 12 16
25	200 psi	1000	.2	All
26	300 psi	600 1500	.5 .2	7, 8.5, 12 16
51	400 psi	800	.5	All
27	500 psi	1000	.5	All
28	600 psi	600 1200	1 .5	7, 8.5, 12 16
53	800 psi	800	1	All
29	1000 Psi	1000	1	All
31	1 500 psi	750 1500	2 1	7, 8.5, 12 16
32	2000 psi	1000	2	All
33	3000 psi	600 1500	5 2	7, 8.5, 12 16
34	4000 psi	800	5	All
35	5000 psi	1000	5	All
36	6000 psi	600 1200	10 5	7, 8.5, 12 16
37	8000 psi	800	10	All
38	10000 psi	1000	10	All
		VACUUM		
15 (AAU)	15-0 psi	750 1500	.02 .01	7, 8.5, 12 16
15	30-0 in / hg	600 1500	.05 .02	7, 8.5, 12 16
15 (AAQ)	800-0 mm / hg	800	1	All

Ordering Information

3D 1/10% Precision Test Gauges can be ordered by building a part number as follows:

Example:



NOTE: (1) Standard fittings are female 1/4" NPT Other fittings are optional.

An ISO 9000



Registered Company



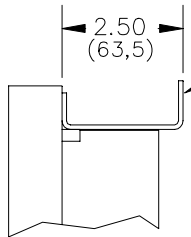
15542 Chemical Lane, Huntington Beach, CA 92649, USA 714/894-5351 - Fax: 714/895-4309

Web site: <http://www.3dinstruments.com> E-mail: info@3dinstruments-com

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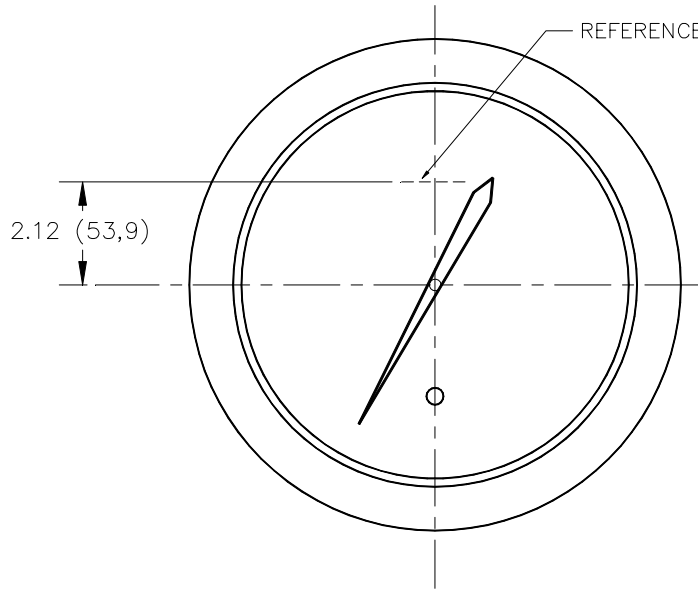
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REVISIONS				
REV.	DESCRIPTION	DATE	BY	APPROVED
A	DIM 3.0 (76,2) WAS 2.9 (73,7) 1/4-20 X 1/2 WAS 1/4-20 X 3/8	04-27-95	TDM	
B	REVISED PER DCN 00205	07-10-98	TDM	



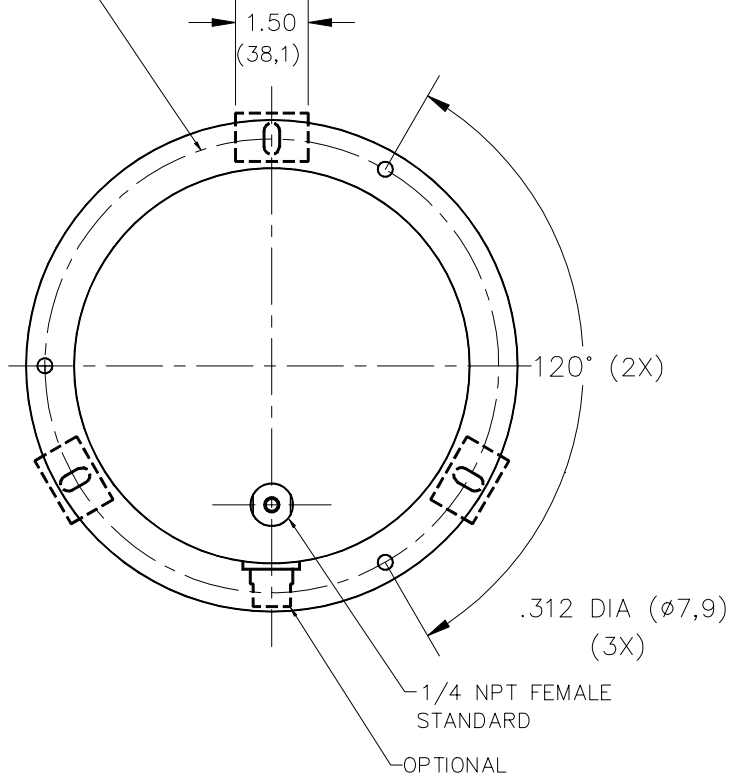
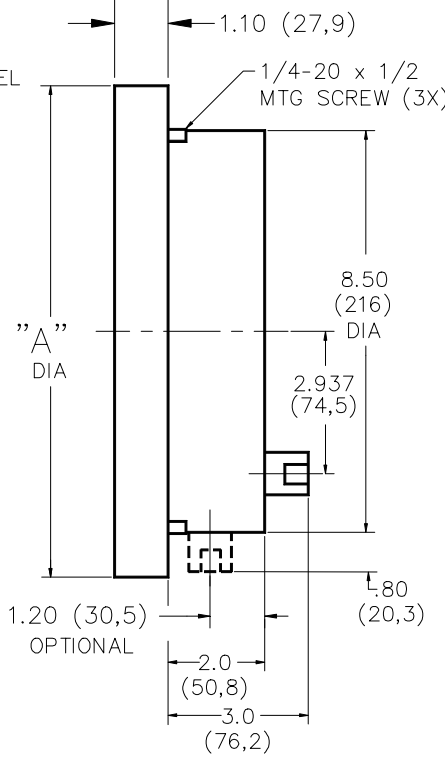
SURFACE MOUNT BRACKET
3 PLCS 120° APART
(OPTIONAL)

BOLT CIRCLE



REFERENCE LEVEL

2.12 (53,9)



MODEL	SIZE	"A" DIAMETER	BOLT CIRCLE DIAMETER
25X16	8.5 (216mm)	10.312 (261,9mm)	9.375 (238,2mm)
25X17	12 (305mm)	13.687 (347,7mm)	12.750 (323,9mm)
25X18	16 (406mm)	17.810 (452,4mm)	16.750 (425,4mm)

2. PANEL CUT DIMENSION IS 8.75 (222mm).
1. ALL DIMS ±.062

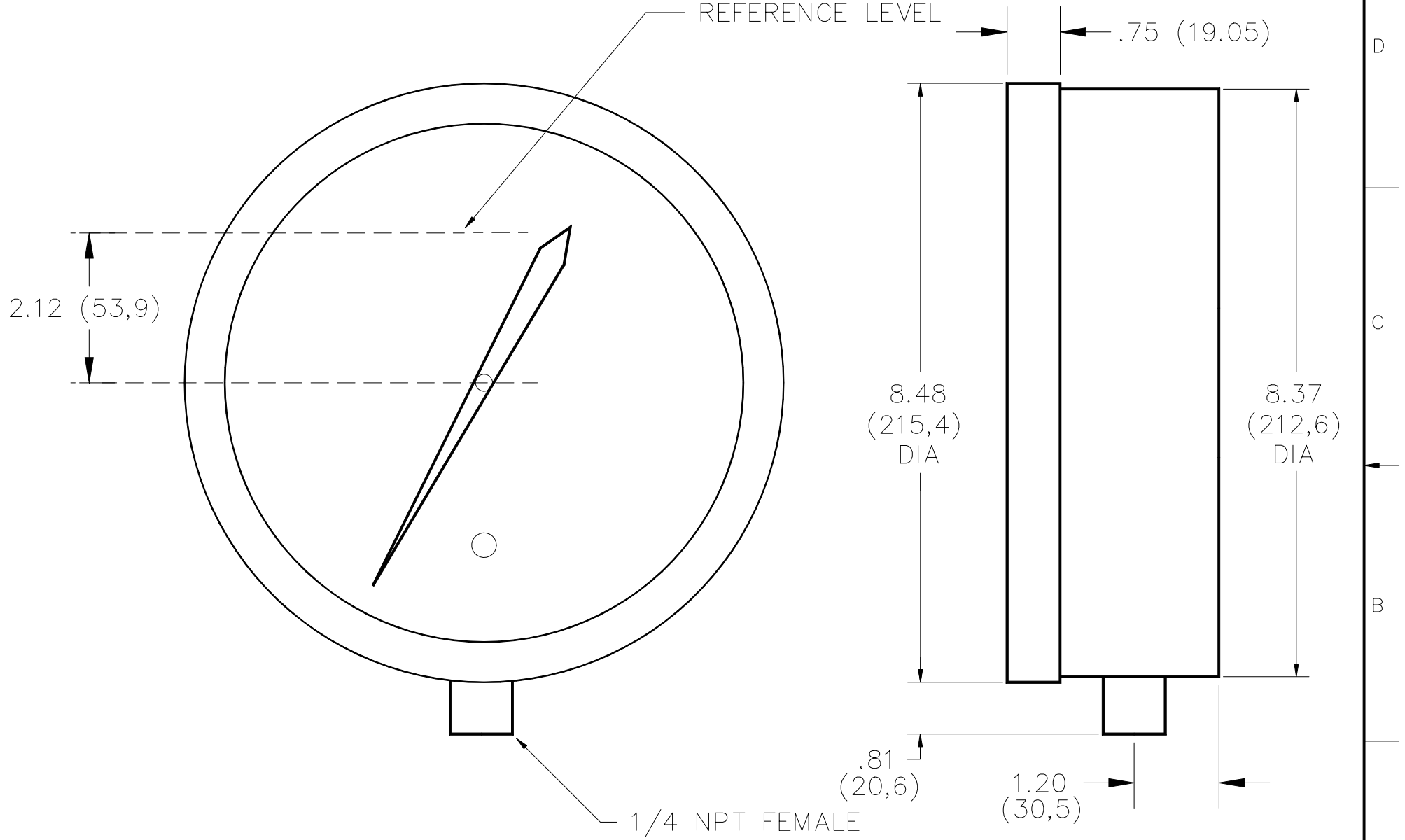
NOTES:

UNLESS OTHERWISE SPECIFIED: 1. DIMENSIONS ARE IN INCHES. 2. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 3. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 4. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 5. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 6. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 7. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 8. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 9. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE. 10. DIMS ARE TO CENTER UNLESS NOTED OTHERWISE.	APPROVALS	DATE	BY	APPROVED
	DESIGNED	3-3-94		
ENGINEERING				
PRODUCTION				
FILED				
3-D INSTRUMENTS, INC. 10000 CROSSLAND LANE MIRAMONTE BEACH, CA 92656 TEL: 714-886-1001 FAX: 714-886-1009	TITLE		SHEET	
	OUTLINE DRAWING PTG GAUGE - 8.5", 12", 16"		1 OF 1	
	SIZE	DWG NO.	REV.	
	D 52159	25X1X-500	B	
	SCALE	NONE		

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DWG. NO. 25X19 SHEET 1 REV.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



NOTE: ALL DIMS ±.062

UNLESS OTHERWISE SPECIFIED
 1. DIMENSIONS ARE IN INCHES.
 2. DWG INTERPRETATION, DIMENSIONING AND TOLERANCING PER MIL-STD-100 AND ANSI Y14.5.
 3. TOLERANCES:
 .XX = ±.010 .XXX = ±.005
 ANGLES = 1/2" CHAM. = 5°
 4. DIMENSIONS ARE SHOWN AFTER PLATING.
 5. SURFACE ROUGHNESS 125 / OR BETTER PER ANSI B46.1.
 6. REMOVE BURRS AND BREAK SHARP EDGES .005 - .015.
 7. MACHINED FILLET RADI .010 - .030.
 8. THREADS PER MIL-S-7742.
 9. GENERAL MFG. REQUIREMENTS PER EP-01-001.

APPROVALS	
DRAWN	J. OSBORNE 13 OCT 93
CHECKED	
ENGINEERING	
Q.C.	
PRODUCTION	
AUTOCAD FILE NAME:	25X19

3D Instruments, Inc.
Direct Drive Difference

15542 CHEMICAL LANE
 HUNTINGTON BEACH, CA 92649
 TEL: 714-894-5351
 FAX: 714-895-4309

TITLE: **OUTLINE VIEWS**
 7" PTG

SIZE: C CAGE CODE NO. 52159 DWG. NO. 25X19 REV.
 SCALE: FULL SHEET 1 OF 1