



INSTRUMENTS. LLC
Direct Drive Difference
SIERRA PRECISION

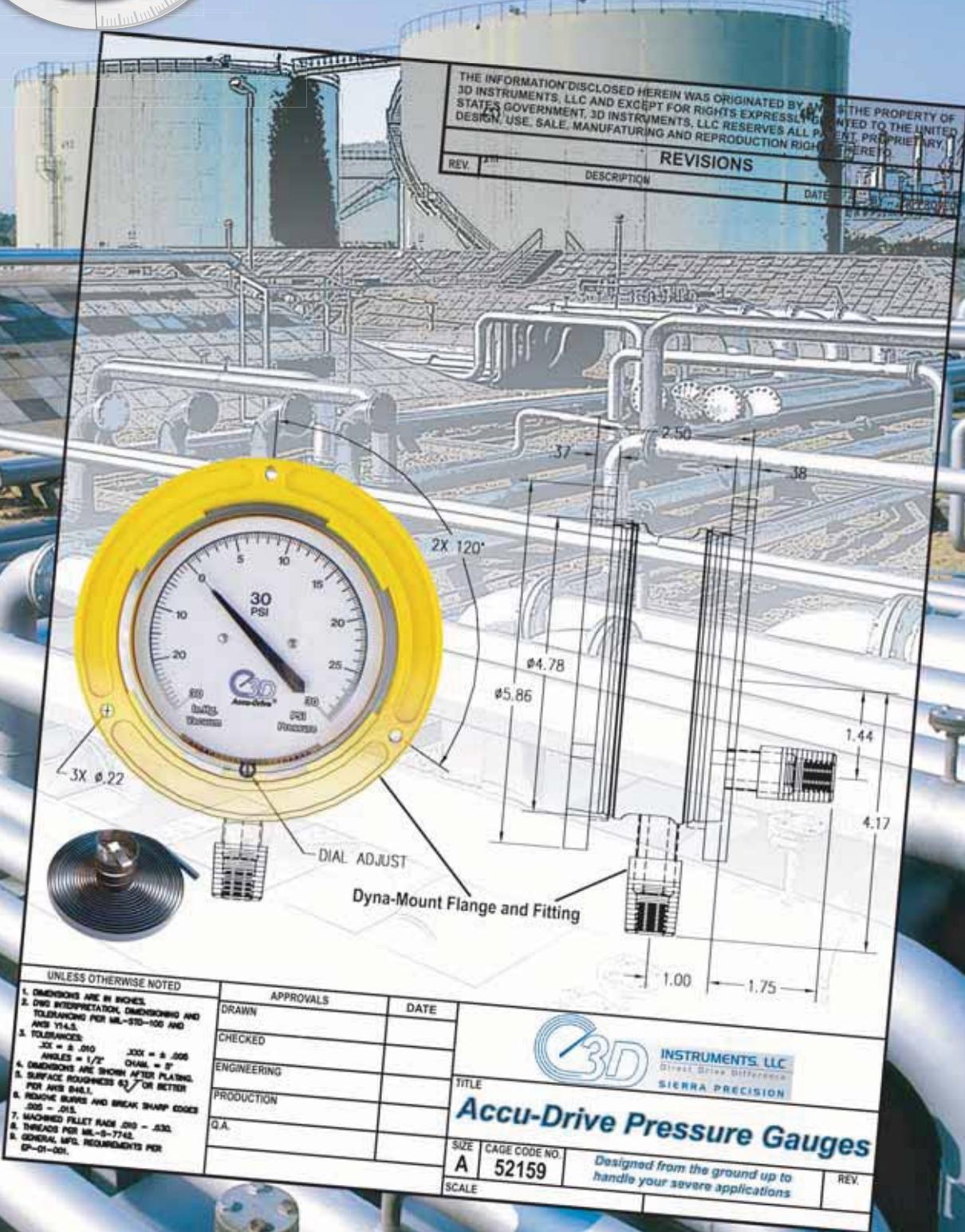
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REVISIONS

REV. A

DESCRIPTION

DATE 10/2007



- UNLESS OTHERWISE NOTED
1. DIMENSIONS ARE IN INCHES.
 2. DIAL INTERPRETATION, DIMENSIONING AND TOLERANCING PER MIL-STD-100 AND ANSI Y14.5.
 3. TOLERANCES:
JIG = ± .010 JIG = ± .005
WHEELS = 1/2" CHAM = 5°
4. DIMENSIONS ARE SHOWN AFTER PLATING.
 5. SURFACE ROUGHNESS 63 μ INCH OR BETTER PER ASME B4.1.
 6. REMOVE BURRS AND BREAK SHARP EDGES .005 - .015.
 7. MACHINED FILLET RADIUS 0.06 - .030.
 8. THREADS PER INCH = 7742.
 9. GENERAL MFG. REQUIREMENTS PER EP-01-001.

APPROVALS

DRAWN

CHECKED

ENGINEERING

PRODUCTION

Q.A.

DATE

TITLE



INSTRUMENTS. LLC
Direct Drive Difference
SIERRA PRECISION

Accu-Drive Pressure Gauges

SIZE A CAGE CODE NO.
SCALE 52159

Designed from the ground up to handle your severe applications

REV.

Accu-Drive Pressure Gauges

DIRECT DRIVE TECHNOLOGY

www.3Dinstruments.com

Direct Drive Concept

At 3D Instruments, we believe that simple is beautiful!! Replacing the antiquated "C-shaped" bourdon tube in our Accu-Drive gauges is a unique helically wound bourdon... this is what we call the Direct Drive Difference. Our bourdon is coupled directly to the shaft pointer, which is the only moving part. Fewer moving parts translates to fewer gauge problems!! Regular recalibration is eliminated because there are no complex, wear-prone parts... like linkages and sectors. Linearity is built-in; no span adjustment is necessary – ever! Accuracy is maintained throughout the life of the gauge, which is much longer than those "old fashioned" gauges. Overpressure is not an issue... even 150% of span will not result in a calibration shift and the robust bourdon tube will withstand spikes of 500% of span without bursting. All 3D gauges use the finest materials of construction. The bourdon tube is made of Inconel, which is a highly elastic material with excellent corrosion resistance. All other wetted parts are in 316SS to meet the rigors of your most challenging applications.

Features

- Helically Wound Inconel Bourdon Tube
- Field adjustable fitting and flange on 4 1/2" ABS case
- All Wetted Components are 316 SS or Inconel
- Precision Anti-Friction Sapphire Shaft Bearings
- Shock Resistant and UV Stabilized ABS and Valox cases
- Human Engineered Dial
- Adjustable Zero Set-Point
- One Moving Part

User Benefits

- Lower "Cost of Ownership"
- No Recalibration Required
- Longer Field Service Life
- Greater Reading Accuracy
- Maintenance-Free Design
- Safer Operation

Series-25 Dyna-Mount Field Adjustable Fitting/Flange



3D Helical Bourdon Tube Technology

The heart of the 3D Accu-Drive gauge is the helically wound Inconel bourdon tube. Inconel was chosen due to its excellent resistance to corrosion and its elasticity. There are two versions of helical bourdon tube: one being designed specifically for high pressures and the other designed for lower pressures. Each pressure range has subtle differences in bourdon tube design and manufacture. To the user the benefits of this painstaking high technology process are longer field life

with inherent accuracy and span. As an assembly in the Test or Process gauge, our coil provides lower cost of ownership and easier field use, simply because our gauges do not fail or require recalibration. In testing, some Accu-Drive gauges have been cycled over a million times with no appreciable wear or effect on accuracy. Some 3D gauges have been in constant service for more than 25 years, replacing traditional gauges which had failed in the same service within weeks.

Direct Drive Vs. Liquid Filled Gauges

In many severe applications "C-shaped" pressure gauge cases are filled with a silicone liquid to dampen their movements and increase service life. Besides adding cost to the gauge, the liquid fill causes other problems... loss of accuracy, discoloration and added maintenance difficulties. 3D applies a high viscosity silicone dampener, known as GAD, directly to the outer layers of the bourdon tube. This GAD dampens the pointer movement in severe vibration and/or pulsation based applications thereby eliminating the need for liquid fill. In most instances a standard 3D Accu-Drive Gauge will easily replace a traditional liquid filled gauge. The 3D gauge will provide longer service life and lower field maintenance costs. When compared to liquid filled gauges, 3D gauges can last as much as 10x longer in severe vibration and pulsation service. Using 3D Accu-Drive Gauges will have a dramatically favorable impact on your gauge **cost of ownership!!**

SIX YEAR WARRANTY

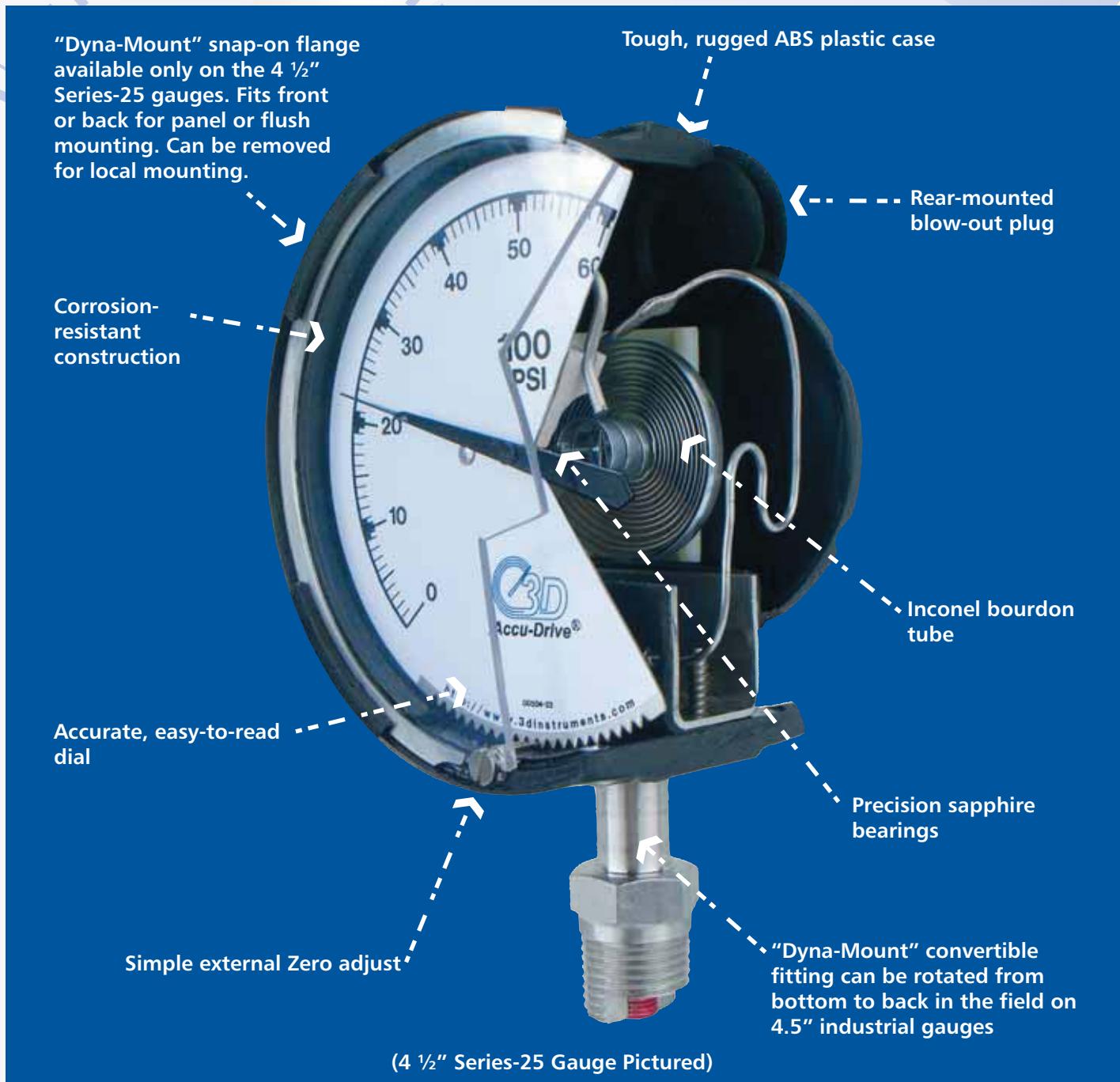
On the

Direct Drive Difference

3D Instruments LLC. warrants to the original purchaser of any 3D Instruments Accu-Drive Pressure Gauge that it will be free from defects in materials and workmanship for a period of six (6) years from the date of delivery to the purchaser. A copy of the full text of the 3D Instruments six year limited warranty is available online or upon request.



3D - The Direct Drive Difference



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Your Local Distributor

