



## HAVING ONLY ONE MOVING PART MINIMIZES THE EFFECTS OF SHOCK, VIBRATION PULSATION AND WEAR

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### **DIRECT DRIVE BOURDON TUBE**

The advantage of Perma-Cal® *direct drive* over conventional C-tube gauges is simple, there is only one moving part **No gears, linkages, or springs** to wear or break. Perma-Cal® gauges have a unique helical-wound elastic element that is attached directly to the pointer shaft. This eliminates the need for any movement-amplifying gears or linkages (the parts of a C-tube that fail most frequently). Perma-Cal® gauges maintain their structural integrity and accurate calibration in the most demanding environments, even during prolonged and rugged use. Perma-Cal® *direct drive* pressure gauges provide the lowest cost of ownership by giving the best value in durability, reliability, and accuracy.




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### **NO LIQUID FILL**

Perma-Cal® gauges have more **durability** and **longevity** than liquid-filled gauges, without the mess or problems of liquid fill. Perma-Cal® gauges do not have any of the problems filling solves. There are **no gears or linkages** to lubricate, and Perma-Cal® gauges are internally dampened with a small application of heavy (600,000 centistokes) silicone grease that eliminates pointer flutter. Perma-Cal® provides a longer life gauge than liquid filled gauges without the leaking or discoloring problems of liquid fill.

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### **SAFETY FEATURES**

Perma-Cal® gauges have a very **low volume** elastic element and **solid front** case that provide the safest gauge possible. C-tube gauges have a relatively large volume elastic element that in cases of catastrophic failure could spill large amounts of process. Not all direct drive gauges offer the industry standard **solid front** for case safety. The Perma-Cal® configuration of **solid front** and rear blowout features provides the customer with the safest possible case style. Perma-Cal® furnishes the safest, most durable gauge in the industry.

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### **CERTIFIED ACCURACY**

All Perma-Cal® gauges have a high repeatable accuracy, instantaneous action, and are available as Grade 3A ( $\pm 0.25\%$  full scale), Grade 2A ( $\pm 0.5\%$  full scale), or  $\pm 0.5\%$  mid-scale/  $\pm 1\%$  full scale. The full scale accuracy rating is applicable in both ascending and descending modes on all gauges, except for gauges rated 8,000 PSI and above, where the descending accuracy is  $\pm 1\%$  of full scale. Test gauges (Grade 3A) come with a calibration certificate traceable to the National Institute of Standards and Technology (NIST) included in the price. Perma-

Cal® provides the best in durability, reliability and accuracy.

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**Perma-Cal Industries, Inc.**  
1742 Orbit Way  
Minden, NV 89423-4114  
Phone: (775) 782-1026 FAX: (775) 782-1056