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**murphy**

*FWMurphy*

# The MURPHYGAGE®

## Not Just Another Pretty Gage!

Quality design, materials, and manufacturing make the MURPHYGAGE® a superior gage that will give long and reliable service.

### The MURPHYGAGE® vs. Other Gages



Most gages rely on the gage case to serve as a part of the sensing chamber. The MURPHYGAGE® does not. Our diaphragm expands and contracts constantly with changing pressures or temperatures. It is held precisely in place by the port and the mounting plate.

An almost non-distortable pressure chamber is formed by the port and mounting plate, protecting the sensitive beryllium copper diaphragm from damage. This is one of the prime differences between MURPHYGAGE® instruments and "other" gages.

In most gages the diaphragm and an expansion retarding plate are soldered directly into the case port and held in place by a locator ring. Should the case receive any damage in this area, the diaphragm operation could be affected. In the MURPHYGAGE®, however, the diaphragm is protected and securely locked in position. Another feature of the MURPHYGAGE® is the removable pulsation damper (pressure instruments only) which provides for periodic cleaning when being used with liquids which might cause clogging. Other gages are usually equipped with a non-removable damper.

MURPHYGAGE® pressure instruments, above 30 psi (200 kPa) and all temperature gages, are environmentally sealed and filled with an inert gas. This filling protects the mechanism and eliminates "clouding" of the lens from adverse atmospheres.

### Testing Proves It

We document our quality claims by noting vibration and overpressure cycle tests. After 400 hours of 50% overpressure every 2 seconds and a constant vibration of 130 G., 21 times per second, there was virtually no wear detected on any moving part and the MURPHYGAGE® still read within tolerance.

### Add a Switch and It Becomes a SWICHGAGE®

This highly accurate, industrial quality MURPHYGAGE® becomes a SWICHGAGE® when an electrical switch is added. The switch is set to trip when temperatures, pressures, or other variables measure above or below acceptable levels. When the switch trips it activates an alarm and/or a shut-down device thereby helping to protect your engines and equipment from damage. These electromechanical control devices offer easily adjustable, single-pole contacts or snap-acting SPDT switches.

MURPHYGAGE® and SWICHGAGE® models are available to monitor pressure, vacuum, temperature, level, vibration, and overspeed.



## The Inside Story on Quality Is Our PEOPLE

The inside story only begins with top quality materials and design; MURPHYGAGE® and SWICHGAGE® instruments are the result of years of human experience, skill and pride.

A strong Quality Program is the reason FWMurphy has received several quality certifications from major OEM's. We have also achieved ISO 9001 certification from BSI.

Aided by modern machinery, such as computerized

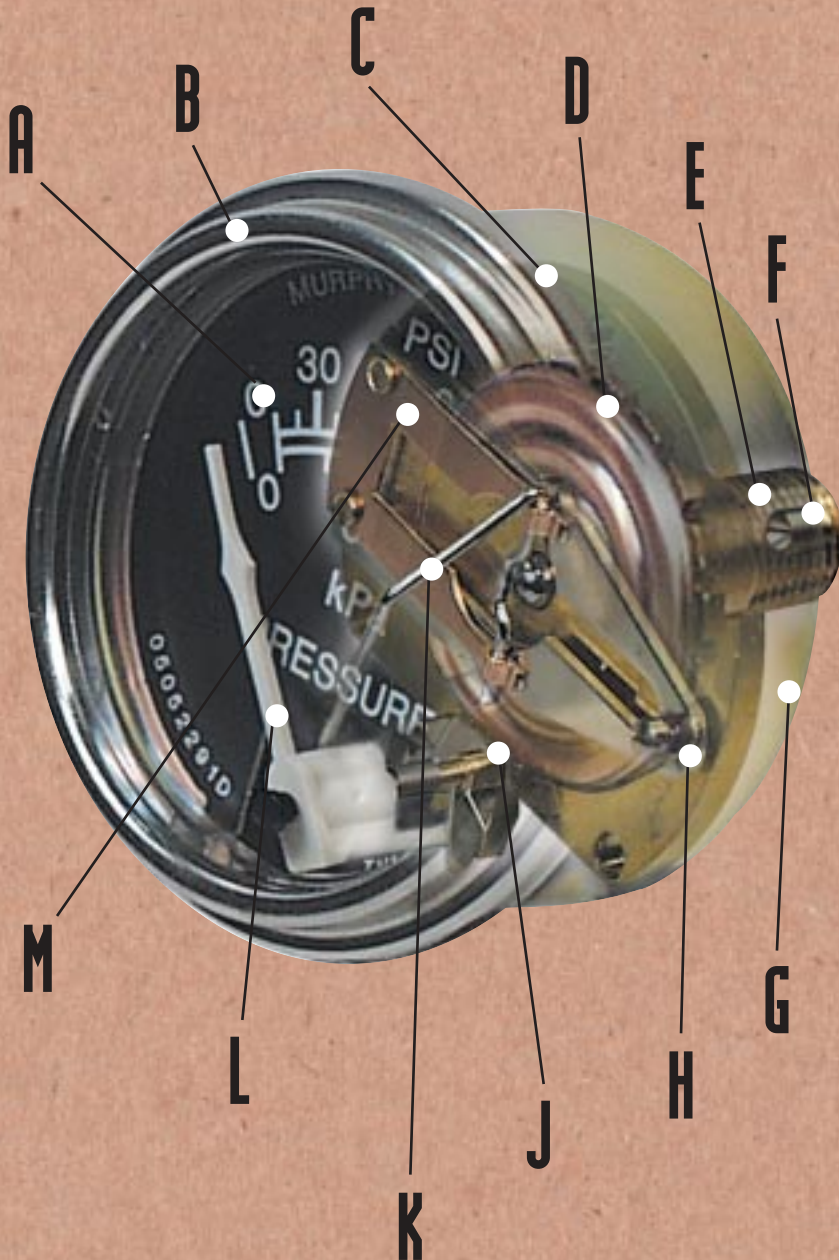
numerical controlled lathes and mills, and electronic gages directly coupled to computers for statistical process control (SPC), Murphy personnel manufacture more than half a million MURPHYGAGE® instruments each year.

From our sheet metal shops to final inspection and packaging, our skilled workers add the touch of experience and pride that makes for QUALITY and durability in manufactured goods.



# The Competition Hates Our Guts!

## And Here's Why



- **A. DIAL:** White letters on a black background, dual scale (ie. psi and kPa) standard; others available on request.
- **B. BEZEL:** Polished stainless steel standard, black bezel also available.
- **C. MOUNTING PLATE:** Machined from brass bar stock. The mounting plate performs a three fold function. It, together with the port, clamps the diaphragm in position. It provides a strong back stop for the diaphragm thereby preventing damage should the gage experience high over pressure. It also provides a stable platform which amplifies the diaphragm movement into pointer travel.
- **D. DIAPHRAGM:** Formed from beryllium copper. The material is die formed and close control heat treated. Each pressure range is designed to operate well below its maximum capability in order to maintain reliability.
- **E. PORT:** Machined from brass bar stock. It is accurately threaded for connection to the pressure line. Together with the diaphragm, it forms the pressure chamber.
- **F. PULSATION DAMPER:** A removable restricting orifice designed to minimize shock from pressure pulsations which can cause undesirable pointer flutter.
- **G. CASE:** Steel with zinc and iridite; mounting clamp included (except for direct mount models).
- **H. BRIDGE PLATE:** Nickel silverplate provides corrosion resistance and it is tempered for dimensional stability.
- **J. POINTER POST:** Riveted to the back plate and made of a corrosion resistant material.
- **K. CRANK ARM:** Monel crankarm senses and amplifies diaphragm movement and transmits it to the pointer.
- **L. POINTER:** Precision formed of tempered nickel silver or plastic depending on the model, with full sleeve bearing for smooth "floating" indication.
- **M. BEARING PLATE:** Tempered beryllium copper for corrosion resistance. Provides fulcrum for crank arm. It is free to lift off the bridge plate should the pointer become restrained. It returns to original position when strain is relieved. All add to long life and accuracy.



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