

Liquid-Filled vs Dry Pressure Gauges

Glycerine / silicone filling vs dry — selection guide by MANOGAUGE

Liquid-filled gauges have the case filled with glycerine or silicone oil; dry gauges have an air-filled case. Choosing correctly extends gauge life and keeps readings stable.

Comparison

Feature	Liquid-Filled	Dry
Vibration / pulsation	Dampens pointer, stays readable	Pointer flutters, wears fast
Service life	Longer (lubricated, protected)	Shorter under vibration
Condensation / icing	Prevented by fill fluid	Possible fogging
Cost	Slightly higher	Lower
Field zero-adjust	Less convenient	Easier
Best for	Compressors, pumps, hydraulics, outdoor	Static, low-vibration indoor

Fill Fluids

Fluid	Temperature	Use
Glycerine	≈ -20 ... +60 °C	General vibration damping (most common)
Silicone oil	Wider / low temperature	Cold climates, wide temp range
Halocarbon	Special	Oxygen / aggressive service (oil-free needs)

When to Choose Liquid-Filled

- Air compressors, pumps, hydraulic power packs, engines — high vibration/pulsation.
- Outdoor, transport, or where condensation/freezing occurs.

Tip: some liquid-filled gauges ship with a sealed vent plug — **open/clip it during use** to equalize pressure. MANOGAUGE supplies glycerine & silicone-filled gauges — www.manogauge.com.

About MANOGAUGE

MANOGAUGE (Zhejiang Xinzhongxin Instrument Technology Co., Ltd.) — a National High-Tech pressure gauge manufacturer in China: stainless steel, liquid-filled, digital, diaphragm, tire, medical and explosion-proof gauges, with CE/PED/ATEX/FDA and OEM/ODM service. More & quotes: www.manogauge.com | sales@manogauge.com. Free to share or cite — please keep the source link to www.manogauge.com.