

Long-term accuracy for high process reliability in life science applications

High-precision pressure gauges EM / EK / EP

Advantages in Aseptic Applications

High-precision monitoring of process pressure and reliable protection against contamination in the running process are critical in pharmaceutical and biotechnical applications.

The long-life technology of the EM, EK and MAN series pressure gauges considerably increases both measuring sensitivity and lifetime. The wear-free mechanical system ensures a measuring accuracy of up to $\pm 0.25\%$ of the full scale over many years. The efficient hydro-mechanical damping provides reliable protection even with pronounced pressure shocks.

In addition, the diaphragm has a multiple protections for a long service life, including high material quality in both the sensor and diaphragm, controlled welding in our own factory by specialists and a recessed position to prevent damage.

The two-point adjustment of zero point and span, which makes re-calibration easily possible at any time, avoids early replacement and increases the durability significantly. The already attractive purchase price combined with a prolonged product life leads to a very favorable cost of ownership.

The long-lasting usability is ensured by features such as the robust construction, autoclavability, CIP / SIP resistance, surface roughness of $Ra \leq 0,2 \mu m$, temperature resistance up to $165^\circ C$ ($330^\circ F$) with steam-stabilized membrane, all-round hygienic and easy-to-clean one-piece design, IP66 protection, and the very large and easy-to-read display.

Advantages over "Dry" Gauges

- No risk of contamination by diaphragm damage and resulting contact of the medium with non-sterile components due to the use of a USP Class VI compliant actuation fill
- Longer service life and significantly lower fracture risk, as the diaphragm is subject to significantly less mechanical stress
- Improved precision through more direct pressure transmission

Typical Customer Applications

- Hygienic process pressure control in tanks and pipes of pharmaceutical and biotechnological plants
- Permanent and reproducible high-precision monitoring of critical sterile processes
- For processes with high demands on components in contact with the product and on the avoidance of diaphragm damage



Technical Specifications At-a-Glance

- **High-precision pressure gauges**, measuring accuracy up to $\pm 0.25\%$ of full scale value
- **Individually adaptable to each application** through flexible configuration and optional equipment (e.g. actuation fill, diaphragm material, measuring range, temperature resistance, display damping...)
- **Two-point adjustment** of zero point and span at any time for easy re-calibration
- Pressure range **-1...+40 bar (0...600 psig)**, measuring range selectable in PSI, BAR or Dual scale
- **Hydro-mechanical damping** of strong pressure surges
- **Multiple diaphragm protection**: superior material quality, controlled welding and recessed position
- **Extremely robust one-piece design** for easy cleaning and long-term process reliability



EM Pressure Gauge

Order Information

EM <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 01 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 0	
RANGE 029 30" Hg/0/30 PSIG 082 0/600 PSIG 031 30" Hg/0/60 PSIG 055 -1/0/2 BAR 032 30" Hg/0/100 PSIG 057 0/2 BAR 033 30" Hg/0/160 PSIG 056 -1/0/4 BAR 034 30" Hg/0/300 PSIG 058 0/2.5 BAR 066 0/30 PSIG 060 0/6 BAR 069 0/60 PSIG 061 0/10 BAR 071 0/100 PSIG 064 0/16 BAR 074 0/160 PSIG 067 0/40 BAR 077 0/300 PSIG	
DUAL SCALE RANGES 241 -0.1/0/0.2 MPa/BAR 242 -0.1/0/0.4 MPa/BAR 367 -0.1/0/0.7 MPa/BAR 243 0/0.25 MPa/BAR 244 0/0.4 MPa/BAR 245 0/0.6 MPa/BAR 246 0/1 MPa/BAR 857 0/2 MPa/BAR 929 30" Hg/0/30 psig - -1/0/2 BAR 931 30" Hg/0/60 psig - -1/0/4 BAR 932 30" Hg/0/100 psig - -1/0/7 BAR 933 30" Hg/0/160 psig - -1/0/11 BAR 934 30" Hg/0/300 psig - -1/0/20 BAR 966 0/30 psig - 0/2 BAR 969 0/60 psig - 0/4 BAR 971 0/100 psig - 0/7 BAR 974 0/160 psig - 0/11 BAR 977 0/300 psig - 0/20 BAR 982 0/600 psig - 0/40 BAR	
NAME ON DIAL 01 Anderson Instrument Co.	
FITTING 004 1-1/2" Tri-Clamp® 177 2" Tri-Clamp® - Recessed ³ 005 2" Tri-Clamp® 016 1-1/2" Cherry "I" (male) 162 1-1/2" Tri-Clamp® - Recessed ³ 017 2" Cherry "I" (male) 027 1-1/2" G&H "H" Line (male) 028 2" G&H "H" Line (male) 123 AIC CPM Flush Mount ⁴ 099 2" Varivent	
0 FIXED CHARACTER SURFACE PREPARATION 0 Standard 1 Clean for oxygen service LENS 0 Standard 1 UV Stabilized TEMPERATURE 0 Standard 1 Hi temp to 330°F with steam stabilized diaphragm ¹ MATERIALS OF CONSTRUCTION A Standard B C22 diaphragm ¹ C C22 All product contact surface ² L Standard w/Custom markings M C22 Diaphragm w/Custom markings ¹ N C22 All contact surface w/Custom markings ² CAPILLARY FILL 1 Mineral Oil (Standard) 5 Propylene Glycol (Neobee-20) CALIBRATION ADJUSTMENT/STOP 1 w/Re-Zero (Standard) 2 w/Re-Zero & Re-Span 3 w/Re-Zero w/ max pointer stop 4 w/Re-Zero & Re-Span w/ max pointer stop DAMPENING 0 Standard Dampening 1 Glycerine Filled Case (OF) 2 Mechanical Dampening (MD) 3 Vented Case/Standard Dampening 4 Vented Case/Mechanical Dampening MOUNT 1 Bottom 5 Left 7 Top 4 Back 6 Right	

¹ 1-1/2" TC & 2" TC, other fittings available consult factory

² Available 1-1/2" TC & 2" TC only

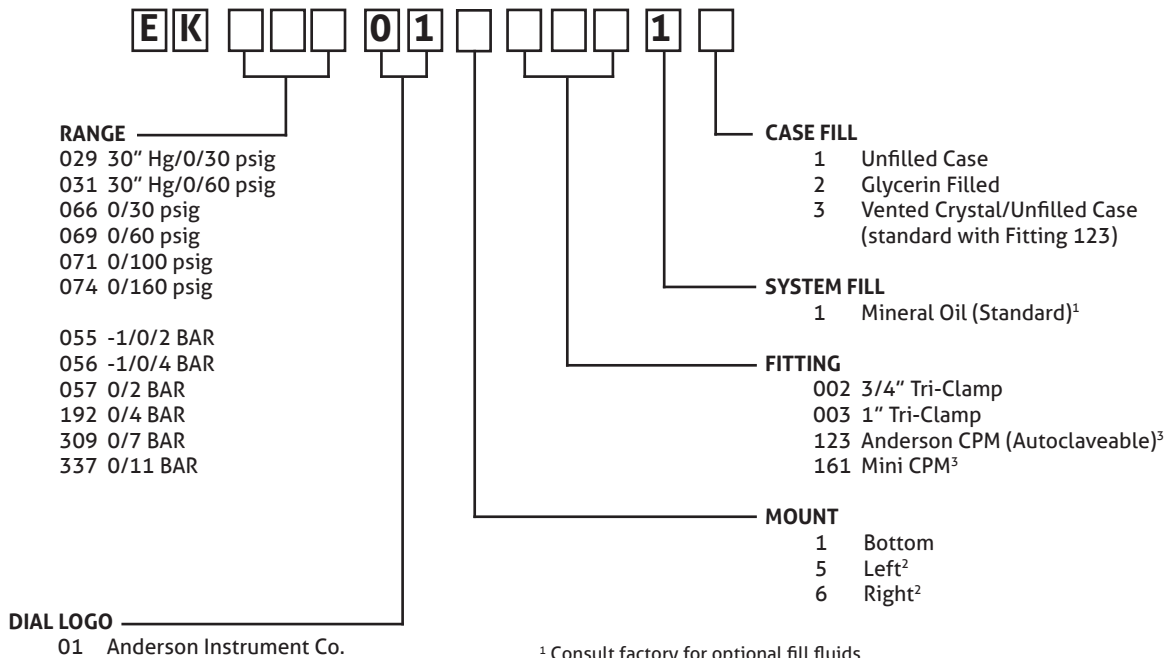
³ Not 3-A compliant

⁴ Sensor is 3A compliant when installed in a 3A compliant instrument tee



EK Pressure Gauge

Order Information



¹ Consult factory for optional fill fluids

² Not available with glycerin filled case

³ Sensor is 3A compliant when installed in a 3A compliant instrument tee



EP Pressure Gauge

Order Information

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RANGE (Available units/URL) 025 Full vacuum to 0 psi (M,B/30 psig) 028 Full vacuum to 0 to 15 psi (C,B/30 psig) 029 Full vacuum to 0 to 30 psi (C,B/30 psig) 031 Full vacuum to 0 to 60 psi (C,B/100 psig) 032 Full vacuum to 0 to 100 psi (C,B/100 psig) 059 0-5 psig (G,B,W/5 psig) 063 0-15 psi (G,B,W/30 psig; A/15 psia) 066 0-30 psi (G,A,B,W/30 psi) 068 0-50 psi (G,A,B,W/100 psi) 069 0-60 psi (G,A,B,W/100 psi) 071 0-100 psi (G,A,B,W/100 psi) 073 0-150 psi (G,A,B/200 psi) 074 0-160 psi (G,A,B/200 psi) 075 0-200 psi (G,A,B/200 psi) 077 0-300 psi (G,A,B/300 psi) 081 0-500 psi (G,B/500 psig)		DIAPHRAGM MATERIAL 1 316L Stainless Steel (std.) 2 Hastelloy	
ENGINEERING UNITS G PSIG M Hg(inches Mercury) A PSIA B BAR C Vacuum/Pressure("Hg&PSIG) W Inches WC		MOUNTING 1 Bottom 4 Back 5 Left 6 Right	
NAME ON DIAL 01 Anderson-Negele		FITTINGS/PROCESS CONNECTIONS 002 3/4 Tri-Clamp® 003 1" Tri-Clamp® 004 1-1/2" Tri-Clamp® 005 2" Tri-Clamp® 016 1-1/2" Cherry-Burrell I-line(male) 017 2" Cherry-Burrell I-line (male) 059 1-1/2" NPT male¹ 123 Anderson CPM Flushmount² 161 Mini CPM²	
SWITCHING/CONNECTOR 0 No Switching 1 Switching with 2 Normally Open Relays			

¹ Not 3-A compliant
 ² Sensor is 3A compliant when installed in a 3A compliant instrument tee