

Technical Bulletin

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AUTOCLAVEABLE "MINI" SANITARY PRESSURE GAUGES



- Application:** Sanitary pressure gauge for equipment to be autoclaved
- Issue:** Small, sanitary pressure gauges for fractional size lines don't withstand repeated autoclave cycles.
- Solution:** The "EK" series gauge is now available with a "CPM" fitting for use on 1/2" thru 2" line sizes. When ordered with this connection option, the gauge will withstand repeated autoclave cycles with Rezero required ONLY after first autoclave. Accuracy changes less than $\pm 0.5\%$ of span for subsequent autoclaves.

TABLE 1 Sample Autoclave Test Data

Range	Initial Accuracy	Accuracy Change due to first Autoclave	Accuracy Change due to fourth Autoclave
0-30 psig	+/-1.0%	+/-2.7%	+/-0.3%
0-60 psig	+/-0.83%	+/-0.7%	+/-0%

How to Specify: Order any standard "EK" gauge and specify fitting code "123". Then order the CPM in-line fitting to match your line size directly. This combination provides a cost effective solution, minimizes hold-up volume, and withstands repeated autoclaving.

Specifications

Typical Performance

Over-Range Capability:	at least 25% of full scale
Accuracy:	$\pm 1.5\%$ F.S. from 10-90% of scale (pressure ranges) $\pm 1.5\%$ F.S. from 10-90% of pressure range, $\pm 2.0''$ Hg from 0-25" Hg (compound ranges)
Stability:	Within specified accuracy for 6 months under normal operating conditions.
Process Temperature Limits:	-3° to 121°C (25° to 250°F)
Ambient Temperature Limits:	4° to 49°C (40° to 120°F)
In-line Steam Sterilization Limits:	Up to 149°C (300°F) for 1 hour
Temperature Effect:	Less than 0.5 psi per 5.5°C (10°F) change in process or ambient temperature
Autoclave Temperature Limit:	149°C (300°F)
Autoclave Cycle Limit:	One (1) hour max.

Construction/Finish

Diaphragm and Fitting:	Welded 316 "L" grade stainless steel, electropolished to max. R_a 8 micro-inches (0.2 microns)
Bourdon Tube/Socket:	304 stainless steel, welded
Movement:	Stainless steel
Case/Bezel:	304 stainless steel, satin finish to R_a max = 32 micro-inches
Lens/Crystal:	Polysulfone
Actuating Fill:	100% mineral oil. Meets FDA requirements (21CFR, 172.878 and 178.3620(a))

Dimensions

Case Diameter:	2.48" (63mm)
Overall Height:	3.20" (81mm)
Case Depth:	1.15" (31mm)

