

Clean Process Measurement

Zero Dead-Leg Instrument Fittings

Introduction

INSTALLS ON LINES AS SMALL AS 1/4 INCH

By incorporating Anderson-Negele's CPM Zero Dead-Leg Instruments Fittings, sanitary pressure gauges and transmitters can be installed on lines as small as 1/4" without the need for adaptors or reducers, without creating pockets or "dead-legs," and without sacrificing performance!

WHERE IT IS USED

Many sanitary fluid process systems in pharmaceutical and biotechnology plants are designed to reduce or eliminate "dead-legs," pockets, and hold-up volume. Measuring pressure accurately and repeatedly in such systems has been a challenge until now. By specifying CPM fittings for all pressure measurement applications, customers are assured of maximum sterility, cleanability, and performance. The CPM instrument connection places the sensing diaphragm virtually "flush" with the process flow!

HOW IT IS APPLIED

CPM fittings may be ordered in standard tubing sizes between 1/4" and 4" O.D. in sanitary clamp (Tri-Clamp®) configuration or in standard sizes between 1/4" and 4" O.D. in AWF (butt weld) styles. CPM fittings are as simple to specify and install as any standard sanitary "T". To make installation of the gauge or transmitter foolproof, all that's required is a standard 1 1/2" sanitary clamp. The internal o-ring is supplied with the instrument.

WHAT IT REPLACES

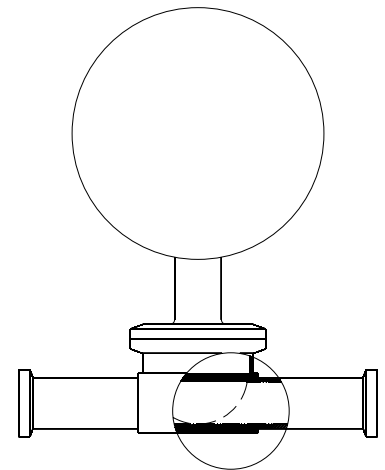
Gauges and transmitters in such applications are generally installed in one of three ways:

1. Using Standard "T"s on 1 1/2" or larger lines or inverted reducers on smaller lines. Performance is not an issue, but dead-legs or pockets are inevitable.
2. Using industrial instruments on special flow-through "isolators" with cylindrical diaphragms. Solves the dead-leg problem on all sizes but:
 - it's position sensitive
 - it's temperature sensitive
 - the entire process connection must be removed for service and calibration
 - it's expensive!

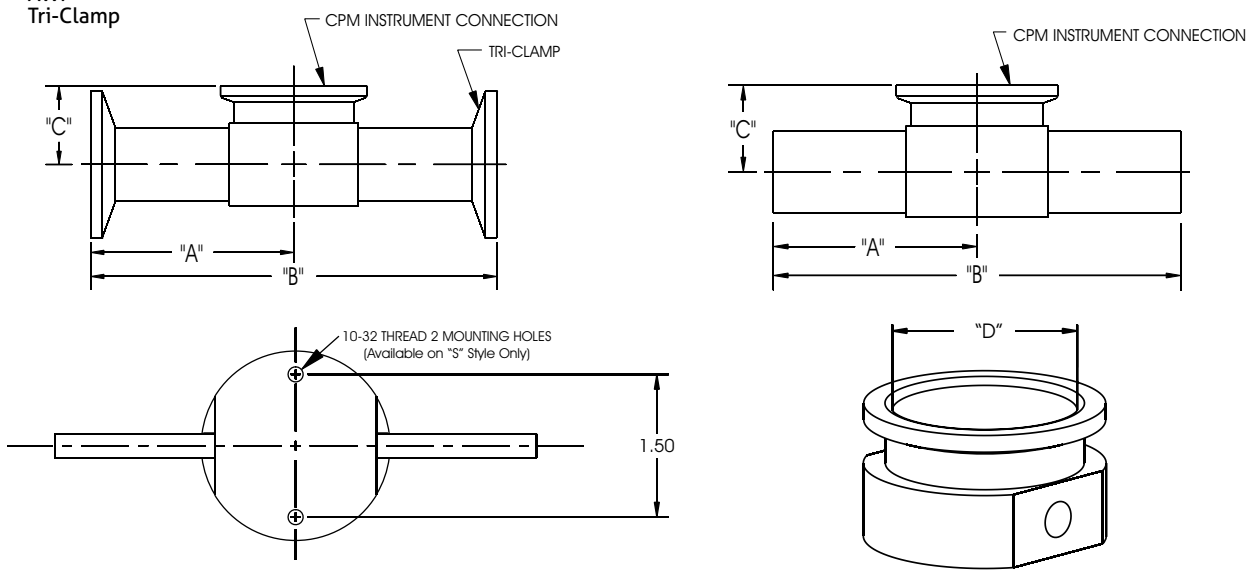
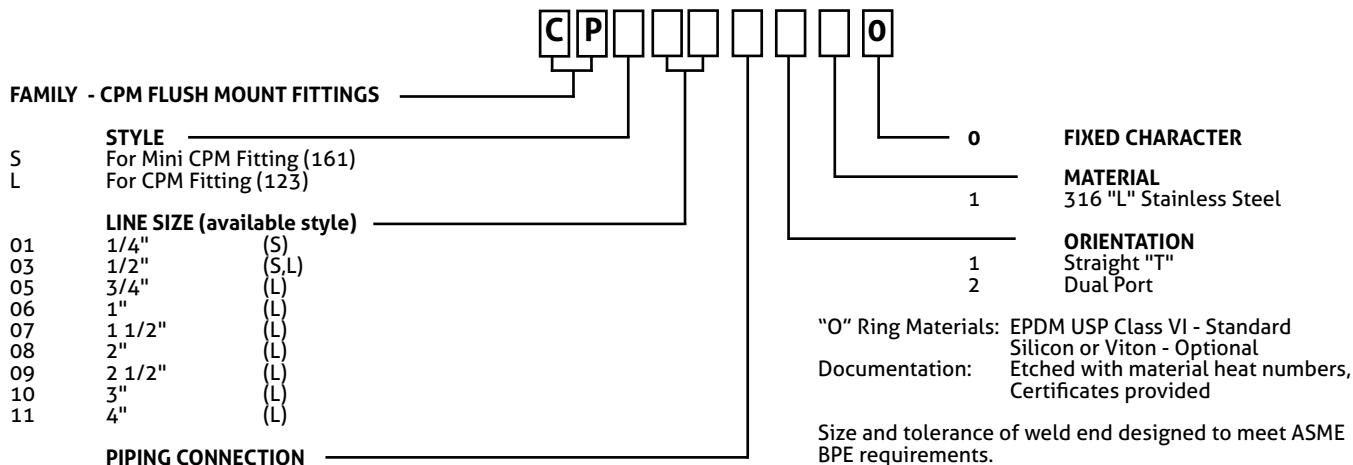
or

3. Using smaller diaphragms to reduce the hold-up volume. There's still a pocket, and a noticeable decrease in accuracy attributable to the small diaphragm.

The CPM System addresses all of the above! It's clean, flush, accurate, simple and hundreds of dollars less expensive than a comparable flow-through instrument fitting.



CPM Product Ordering Matrix



Standards: CSA B51-03

Standard Dimensions

| Line Size | Size Code | Piping Connection | Product Contact Finish* | "A" | "B" | "C" | "D" |
|-----------|-----------|-------------------|-------------------------|--------|--------|---------|----------|
| 1/4" | 01 (S) | AWF | SFT 5 | 2" | 4" | 3/4" | ≈ 7/8" |
| 1/2" | 03 (S) | AWF | SFT 4 | 2" | 4" | 13/16" | ≈ 7/8" |
| | 03 (S) | Tri-Clamp® | SFT 4 | 3" | 6" | 13/16" | ≈ 7/8" |
| 1/2" | 03 (L) | AWF | SFT 4 | 2-5/8" | 5-1/4" | 13/16" | ≈ 1-1/2" |
| | 03 (L) | Tri-Clamp® | SFT 4 | 2-1/4" | 4-1/2" | 13/16" | ≈ 1-1/2" |
| 3/4" | 05 (L) | AWF | SFT 4 | 2-5/8" | 5-1/4" | 15/16" | ≈ 1-1/2" |
| | 05 (L) | Tri-Clamp® | SFT 4 | 2-3/8" | 4-3/4" | 15/16" | ≈ 1-1/2" |
| 1" | 06 (L) | AWF | SFT 4 | 2-3/8" | 4-3/4" | 1-1/16" | ≈ 1-1/2" |
| | 06 (L) | Tri-Clamp® | SFT 4 | 2-5/8" | 5-1/4" | 1-1/16" | ≈ 1-1/2" |
| 1-1/2" | 07 (L) | AWF | SFT 4 | 2-3/4" | 5-1/2" | 1-5/16" | ≈ 1-1/2" |
| | 07 (L) | Tri-Clamp® | SFT 4 | 2-7/8" | 5-3/4" | 1-5/16" | ≈ 1-1/2" |
| 2" | 08 (L) | AWF | SFT 4 | 3-1/2" | 7" | 1-9/16" | ≈ 1-1/2" |
| | 08 (L) | Tri-Clamp® | SFT 4 | 3-3/8" | 6-3/4" | 1-9/16" | ≈ 1-1/2" |
| 2-1/2" | 09 (L) | AWF or Tri-Clamp® | SFT 2 | 3-5/8" | 7-1/4" | 2" | ≈ 1-1/2" |
| 3" | 10 (L) | AWF or Tri-Clamp® | SFT 2 | 3-7/8" | 7-3/4" | 2-1/4" | ≈ 1-1/2" |
| 4" | 11 (L) | AWF or Tri-Clamp® | SFT 2 | 4-3/4" | 9-1/2" | 2-3/4" | ≈ 1-1/2" |

| * Product Contact Finish Table | |
|--------------------------------|--|
| SFT 2 | R _a max = 25 microinch |
| SFT 4 | R _a max = 15 microinch Electropolished |
| SFT 5 | R _a max = 20 microinch Electropolished NOTE: Tube to body weld Electropolished as welded |

REPLACEMENT O-RINGS (1 supplied w/ each instrument, replacements supplied 6 per package)

| | Standard CPM(123) | Mini CPM(161) |
|------------------------------|-------------------|---------------|
| EPDM USP Class VI (Standard) | 56096A0001 | 56096B0001 |
| Silicone (clear) | 56096A0002 | 56096B0002 |
| Viton 3107 | 56096A0003 | 56096B0003 |

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