

# 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

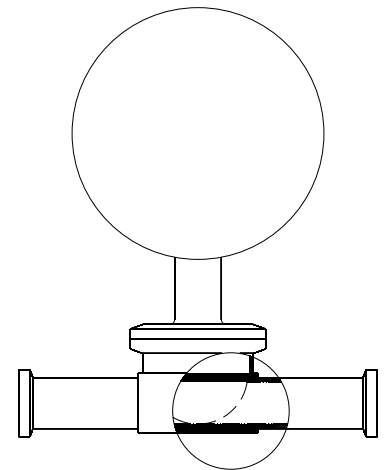
Gauges and transmitters in such applications are generally installed in one of three ways:

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

FAMILY - CPM FLUSH MOUNT FITTINGS		C P [ ] [ ] [ ] [ ] [ ] O	
S L	STYLE	0	
	For Mini CPM Fitting (161)	1	
	For CPM Fitting (123)	1	
	LINE SIZE (available style)	2	
01	1/4" (S)		
03	1/2" (S,L)		
05	3/4" (L)		
06	1" (L)		
07	1 1/2" (L)		
08	2" (L)		
09	2 1/2" (L)		
10	3" (L)		
11	4" (L)		
PIPING CONNECTION			
1	AWF		
2	Tri-Clamp		

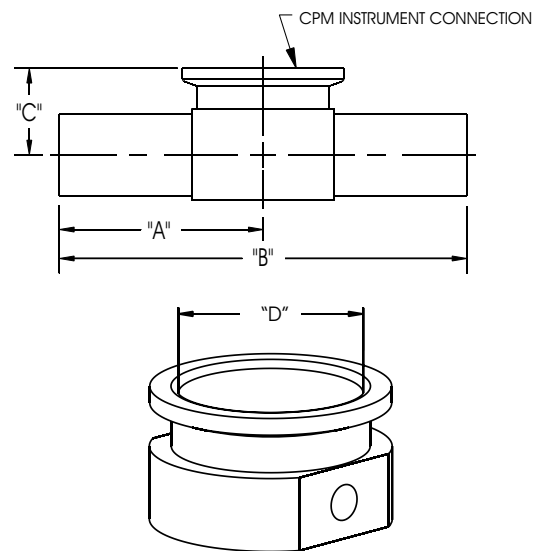
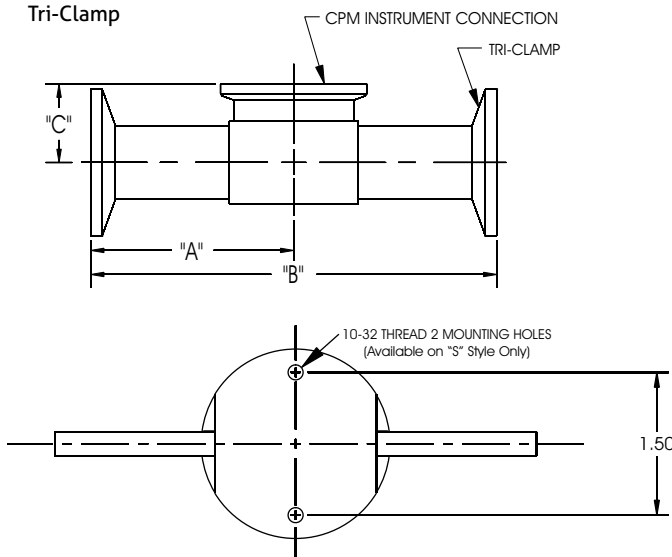
## FIXED CHARACTER

**MATERIAL**  
316 "L" Stainless Steel

**ORIENTATION**  
Straight "T"  
Dual Port

"O" Ring Materials: EPDM USP Class VI - Standard  
Silicon or Viton - Optional  
Documentation: Etched with material heat numbers, Certificates provided

Size and tolerance of weld end designed to meet ASME BPE requirements.



Standards: CSA B51-03, CRN# CSA0F9754.5C

## 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 <sub>a</sub> max = 25 microinch
SFT 4	R <sub>a</sub> max = 15 microinch Electropolished
SFT 5	R <sub>a</sub> 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)

EPDM USP Class VI (Standard)  
Silicone (clear)  
Viton 3107

Standard CPM(123)  
56096A0001  
56096A0002  
56096A0003

Mini CPM(161)  
56096B0001  
56096B0002  
56096B0003

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ANDERSON INSTRUMENT COMPANY  
156 Auriesville Road  
Fultonville, NY 12072

Phone 800-833-0081  
Fax 518-922-8997  
info@anderson-negele.com

Tech. Support:  
techservice@anderson-negele.com  
Phone 800-833-0081