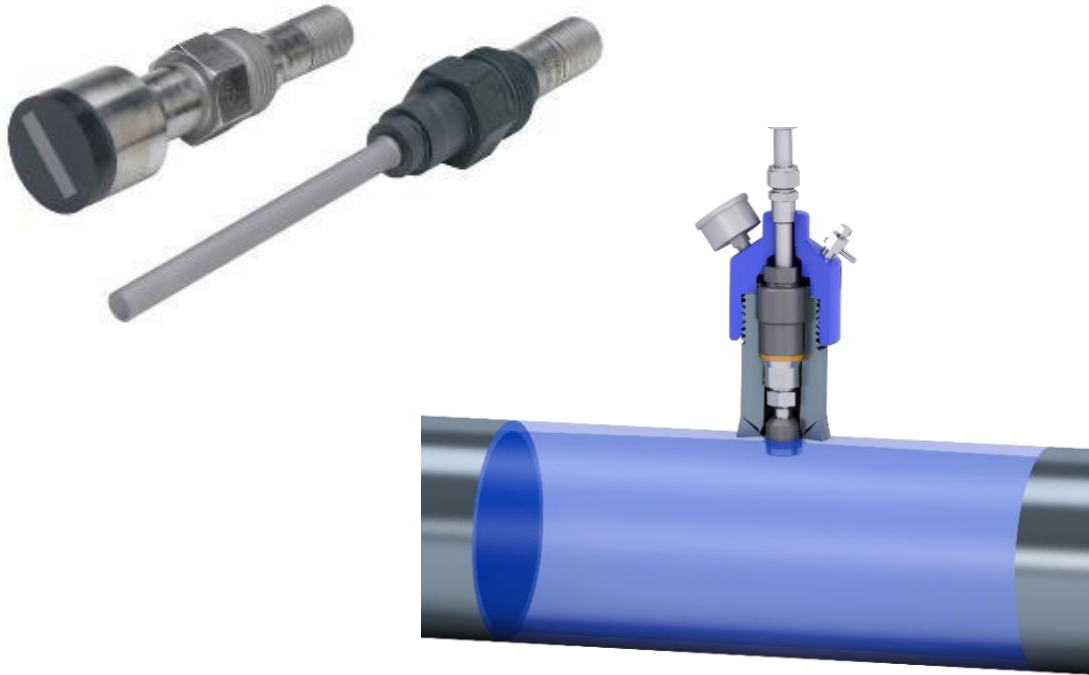


High Sensitivity Probe

COSASCO®

M4000, M3000, M2000 Series




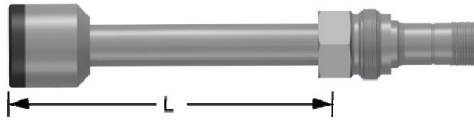
Faster response time for better decision making.

The high speed probe is an integral component of Microcor®. Two styles of probe elements are available – flush and cylindrical. Flush probes are optimal in high temperature and cylindrical probes are suited to more aggressive environments.

Microcor® High Sensitivity Probe Benefits:

- Patented probe design for real-time corrosion detection
- Up to 100 times more responsive than other metal loss methods
- Available in various configurations based on your needs
- Reliable operation in sour gas (H₂S) environment, high pressure, and high temperature

M4000 Series Retractable Probes - Mounts in Cosasco High Pressure Access Fitting, maximum operation

§ M4500		<p>0.25" Length Increments Optional Shields available</p> <p>Note: For high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
§M4700		<p>0.125" Length Increments</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>

§ Most popular configurations 6000 psi (413 bar) and 500°F (260°C), maximum retrieval 400°F (204°C)

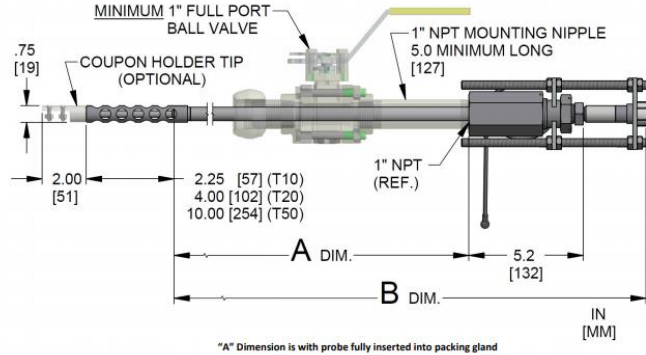
NOTE: Model 4000 Series Probe Connection During Installation

Microcor probe connectors must be kept clean for proper operation. To ensure this on Model 4000 series probe, an Overshot Adaptor should be fitted to the hollow plug during probe installation and retrieval. This seals the area of the probe connector from the process fluid.

M3000 Series Retractable Probes –

Mounts in Model 60 Access Valve 1" or 1.5" Assembly, Standard Probe Lengths 18", 24", 30", & 36". Safety Clamp Assembly required for pressures over 100 psi and/or temperatures over 150°F

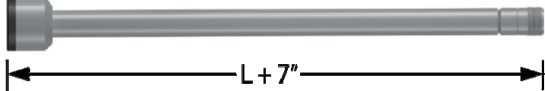
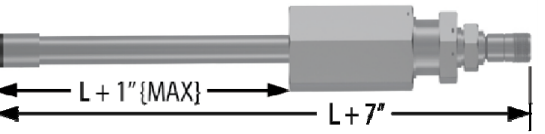

M3500 Series Probes



Order Length	"A" Dimension		"B" Dimension	
	Inches	mm	Inches	mm
18	14.4	366	22.25	565
24	20.4	518	28.25	718
30	26.4	670	34.25	870
36	32.4	823	40.25	1022




M3700 Series Probes

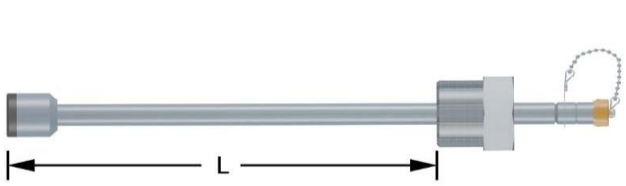
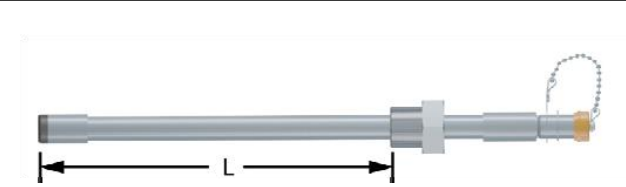
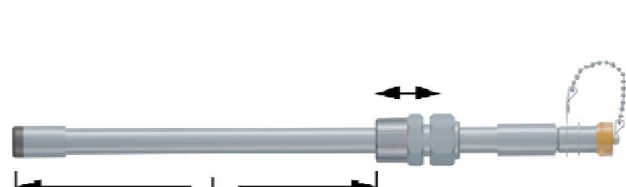
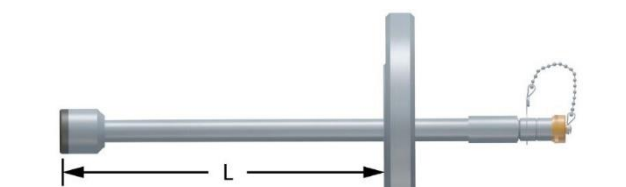
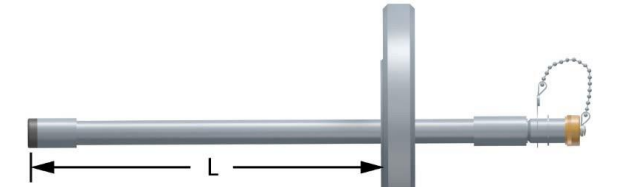
§ M3700		<p>1.25" Diameter Head Optional Safety Clamps Requires 1.5" ball or gate valve & 1" to 1.5" swaged nipple connection between valve & stuffing box.</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Drag Force Calculations be performed – please contact a Cosasco representative for further details.</p>
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<p>M3701</p>		<p>Model 3700 replacement insert</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Drag Force Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M3705</p>		<p>0.75" Diameter Head Optional Safety Clamps Requires 1" fullport ball valve</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Drag Force Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M3706</p>		<p>Model 3706 replacement insert</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Drag Force Calculations be performed – please contact a Cosasco representative for further details.</p>

§ Most popular configurations

M2000 Series Probes – Fixed. Maximum Pressures up to 4000 psi (276 bar) and 500°F (260°C)

<p>M2500</p>		<p>0.75" Welded NPT Mounting Standard length 5", specials in 0.25" increments. Optional Shields. Max 4000 psi (276 bar)</p> <p>Note: For high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2510</p>		<p>0.75" Swagelok® Adjustable Mounting Standard 5" length Optional Shields Max 500 psi (34 bar)</p> <p>Note: For high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2520</p>		<p>Flanged Mounting 1" minimum Optional Shields Max pressure - flange rating, to max 4000 psi (276 bar)</p> <p>Note: For high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>

<p>M2700</p>		<p>1.25" Diameter Head 1.50" Welded NPT Mounting, Standard 5" length, specials in 0.25" increments. Max 4000 psi (276 bar) Min. order length = 1.50"</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2705</p>		<p>0.75" Diameter Head 0.75" Welded NPT Mounting Max 4000 psi (276 bar) Min. order length = 1.50"</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2715</p>		<p>0.75" Diameter Head, 0.75" Swagelok® Adjustable Mounting Max 500 psi (34 bar) Min. order length = 1.50"</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Drag Force Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2720</p>		<p>1.25" Diameter Head Flanged Mounting 1.5" minimum Max pressure – flange rating, to max 4000 psi (276 bar)</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>
<p>M2725</p>		<p>0.75" Diameter Head Flanged Mounting 1" minimum Max pressure - flange rating, to max 4000 psi (276 bar)</p> <p>Note: For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.</p>

Ordering Information

Field 1: Probe Model Order Configuration									
	Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7		
Probe Model	Model #	Element Type	Element Alloy	Order Length L					
M3500/3500HT	All Probes			18", 24", 30", 36" Nominal	Safety Clamp	Element Shield	Stuffing Box		
M3501/3501HT									
M3700					Safety Clamp				
M3701					Safety Clamp				
M3705					Safety Clamp				
M3706									
M4500				1/4" Increments	Element Shield				
M4700				1/8" Increments					
M2000 Series				Specify Process Side, Probe Length, Mounting Type, Shield Requirements					

How to Order:

Model # -- Element Type -- Element Alloy -- Probe Length -- Safety Clamp -- Shields -- Stuffing Box Material

Field 1 - Field 2 - Field 3 - Field 4 - Field 5 - Field 6 - Field 7

Example: M3500 - T10 - K03005 - 18 - 1 - 1 - 0

Model # M3500 with T10-K03005 element, 18" length, with safety clamp, standard element shield, stuffing box carbon steel

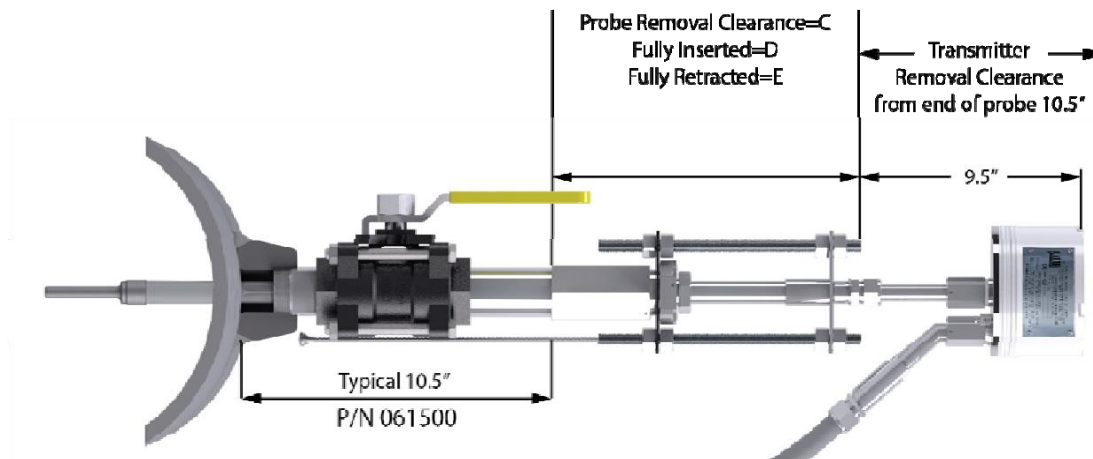
Field 2 - Element Type – see chart below	
Cylindrical Element Probes - (Models Mx500)	
T10	10 mils thickness (5 mils probe span)
T20	20 mils thickness (10 mils probe span)
Flush Element Probes - (Models Mx700, Mx701, Mx705, Mx706)	
F10	10 mils thickness (5 mils probe span)
F20	20 mils thickness (10 mils probe span)

Field 3 – Probe Element Alloy (UNS Number)	
K03005	Carbon Steel
S30403	304/304L Stainless Steel
S31603	316/316L Stainless Steel

Ordering Information

Field 4 - Order Length = L						
L	Model	Probe Length				
L	M4500	2.75" (T10) or 4.5" (T20) to 18" in 0.25" Increments. Consult Cosasco for over 15" and 25 ft/s liquid velocity		L = P + T + 1.25" rounded down, where, P = Penetration inside pipe or vessel T = Wall Thickness of pipe or vessel		
L	M4700	1.25" to 18" in 0.125" Increments. Consult Cosasco for over 15" and 25 ft/s liquid velocity		Formula is based on standard access fitting of 5.25" and 1/16" weld gap per ANSI B31.1		
L = 18 24 30 36	M3000 Series	M3500 Series			M3700/3705	
		DIM	T10	T20	DIM	
		A	L - 1.35"	L + 6.4"	A	L + 1"
		B	L + 6.5"	L + 8.25"	B	L + 7"
		C	L + 7.5"	L + 9.25"	C	L + 5"
		D	L - 10"		D	L - 12.63"
E	L + 5"		E	L + 8"		
L	M2000 Series	Probe tip to process side of mounting				

Dimensions (A-E) for M3000 Series



Ordering Information

Field 5 - Safety Clamp	
Model M3000 Series Only	
0	None
1	Safety Clamp over 100 psi and/or 150F

Skip to field 6 if not applicable

Field 6 - Shields	
Model Mx500 Only	
0	No Shield - Liquids up to 8ft/s, Gases 25ft/s
1	Standard Shield – liquids up to 25ft/s, Gases 75ft/s
2	High Velocity Shield – Liquids up to 50ft/s, Gases 150ft/s

Skip to field 7 if not applicable

Field 7 - Stuffing Box Material *		
Model M3000 Series Only		
0	M3500	Carbon Steel for cs, 316 ss, for alloys up to ss. For higher alloys use option 1 Hastelloy C-276
	M3500HT	316 ss for alloys up to ss. For higher alloys use option 1, Hastelloy C-276
1		Hastelloy C-276 Stuffing Box

Skip if not applicable

*Probe body alloy matches probe element alloy, except for carbon steel in M3500HT where probe body is stainless steel.

Example Order:

Example: M3706 – F10 – K03005 – 18 – 0

Model # M3706 with F10-K03005 element, 18" length, with no safety clamp