

# TRUEPROBE™ QUICK START MANUAL

**IMPORTANT: READ THIS PAGE BEFORE PROCEEDING!**

Universal Analyzers, Inc. designs, manufactures, and tests its products to meet or exceed national and international standards. Because these products are of a technical nature, you must properly install, use, and maintain them to insure they continue to operate within normal specifications. The following drawings and instructions must be adhered to and integrated into your safety program when installing, using, and maintaining Universal products. Failure to follow the proper instructions may cause any of the following conditions to occur: Loss of life; personal injury; property damage; damage to instrument; and voided warranty.

**CAUTION: SENSOR/PROCESS APPLICATION COMPATIBILITY**

Before installation verify that the wetted sensor materials are compatible with the process chemistry, operating pressure, and temperature. Application compatibility is entirely the responsibility of the user.

- Read and understand all drawings and instructions prior to installing, operating and servicing the product. Save this manual for future reference.
- If you do not understand the manual or instructions, contact your Universal Analyzers representative for clarification.
- Follow all warnings, cautions and instructions marked on and supplied with the product.
- Inform and educate your personnel in the proper installation, operation and maintenance of the product.
- When replacement parts are required, please select authorized parts from Universal Analyzers. Unauthorized parts and procedures can affect the product's performance and place the operation of your process and personnel at risk.

**NOTICE: CONTACT RESOURCES**

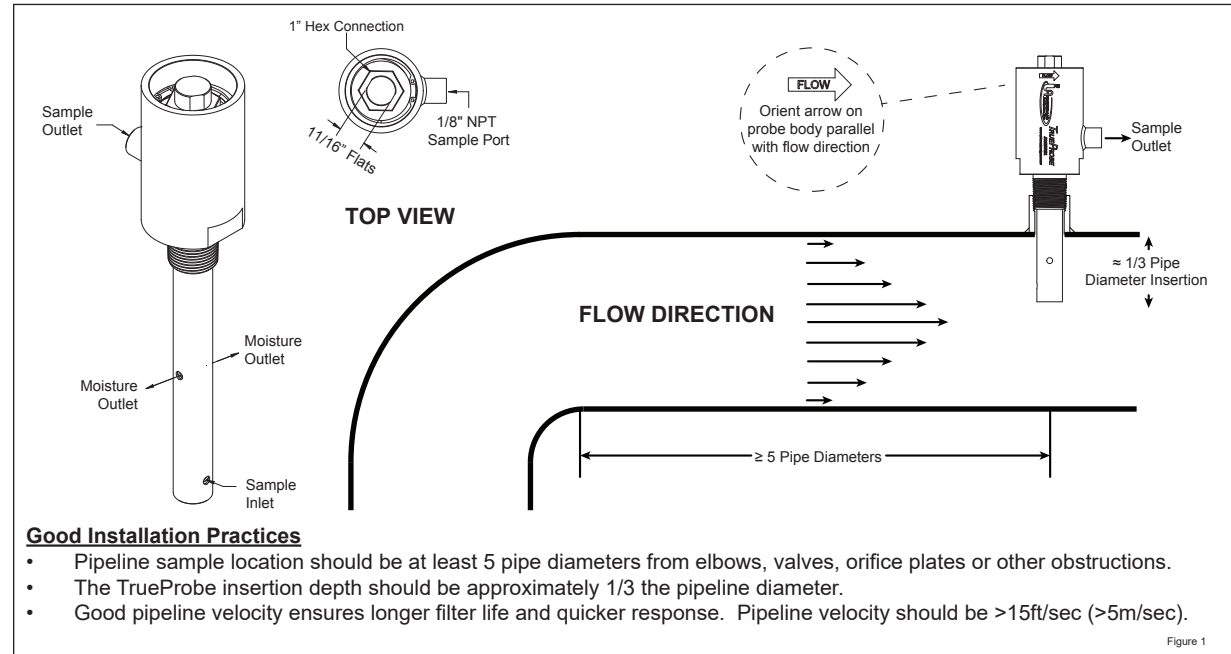
Looking for additional help? Please consult our website for the most up-to-date information. Additional contact information below.

- Website:** [www.UniversalAnalyzers.com](http://www.UniversalAnalyzers.com) (Manuals, Datasheets, Wiring Diagrams, Application Notes)
- Email:** [Sales.Universal@Ametek.com](mailto:Sales.Universal@Ametek.com) (Technical Support, Customer Service)
- Phone:** Toll Free +1(800)993-9309 Phone +1(775)883-2500
- Fax:** +1(775)297-4740

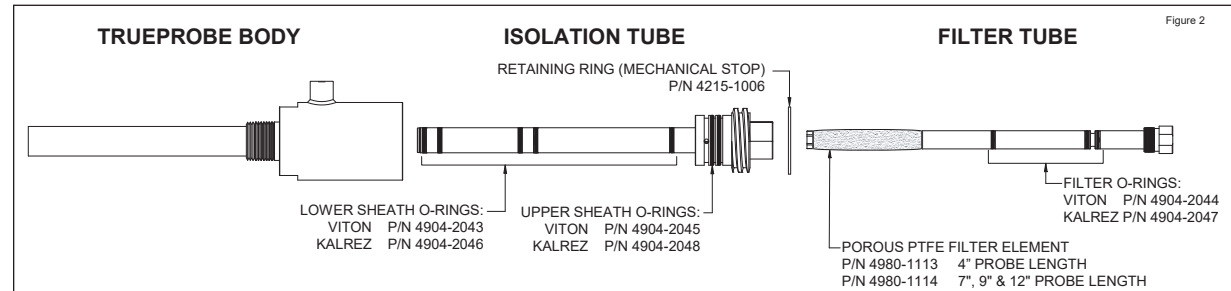


TrueProbe™ Product Specifications	
<b>Application</b>	
<b>Maximum Pressure Rating</b>	4000 PSIG (275 BAR)
<b>Temperature Range</b>	-20 to 200°F (-29 to 93°C)
<b>Physical</b>	
<b>Sensor Body Material</b>	316 / 316L Stainless Steel NACE MRO 175/ISO 15156
<b>Filter Material</b>	Expanded Teflon
<b>Filter Area</b>	1.18 in <sup>2</sup> (4" Sensor), 2.36 in <sup>2</sup> (7, 9, & 12" Sensor)
<b>Seal Options</b>	Viton Extreme ETP, FFKM (Kalrez)
<b>Insertion Lengths</b>	4" (101mm), 7" (178mm), 9" (229mm), 12" (305mm) - Refer to dimensions
<b>Process Connections</b>	3/4" Male NPT (Standard) or 1" Male NPT - <i>ANSI RF flanges available upon request</i>
<b>Outlet Connection</b>	(1) 1/8" Female NPT

## TRUEPROBE™ INSTALLATION DIAGRAM



## TRUEPROBE™ SPARE PARTS GUIDE



TrueProbe™ Spare Parts		
Description	Part Number	Qty Required
TRUEPROBE - O-Ring Kit - Viton ETP A90 (Complete Set) [QTY3 4904-2044, QTY2 4904-2045, QTY5 4904-2043]	9515-1035	1
TRUEPROBE - O-Ring Kit - FFKM A90 (Complete Set) [QTY3 4904-2047, QTY2 4904-2048, QTY5 4904-2046]	9515-1036	1
Retaining Ring	4215-1006	1
TrueProbe Filter Element (4" Only)	4980-1113	1
TrueProbe Filter Element (7", 9", 12" Only)	4980-1114	1

## INSTALLATION & MAINTENANCE INSTRUCTIONS



### PRECAUTIONS: REVIEW PRIOR TO WORK

1. TrueProbe will come preassembled and leak tested.
2. Ensure pipeline is isolated for installation. Pipeline should be depressurized and free of hazardous gases.
3. If a heated enclosure and sample line are present then power should be removed to prevent explosion risks.
4. Understand the direction of gas flow within the pipeline.

### INSTALLATION:

1. Tools Required: 1" Socket, 11/16" and 1-7/8" wrenches.
2. Review Fig 1. Best practices from API 14.1 recommend mounting the TrueProbe at least 5 pipe diameters from elbows, orifice plates, or other obstructions. Probe insertion depth should be approximately 1/3 of pipe diameter from inner wall to tip of probe.
3. Install the TrueProbe into the pipe using 1-7/8" wrench flats on exterior of probe body. Install to a minimum torque of 50 ft-lb. Ensure proper orientation by looking at the flow arrows on the side of the TrueProbe. The probe should be oriented so the 1/8" sample outlet tap is facing downstream parallel with the piping.
4. Once installed, rotate the isolation tube using the 1" hex connector counterclockwise 720° (2 full rotations) to the retracted position (Fig 3). The retaining ring (p/n 4215-1006) provides a mechanical stop for the isolation tube.
5. Repressurize the pipeline and check for leaks.
6. Rotate Isolation tube clockwise 720° to the sampling position to allow gas through the 1/8" sample outlet.

### MAINTENANCE:

1. Under normal operation, the TrueProbe has been designed to require little to no maintenance.
2. If maintenance is necessary, follow these steps below.

*Checking/ replacing the filter element* - The TrueProbe filter should be inspected and replaced at least once a year. This interval can be extended based on the process conditions and operator experience.

- Attach 1" hex socket to the top of the TrueProbe. Rotate isolation tube counterclockwise 720° until it reaches the mechanical stop. The filter is now isolated from the process by block and bleed seal. If a pressure gauge is installed at the sample outlet, isolation can be verified by zero pressure in the sample line.
- Remove the center filter tube from the probe using a 11/16" wrench.
- Unscrew the lower filter holder nut and replace the Teflon filter tubing. Take care to keep the filter dirt free.
- Evaluate and replace any o-rings if necessary (see notes below)
- Lubricate all o-rings on the center filter tube (We recommend Parker Super-O-Lube)
- Reinstall center filter tube and tighten using a 11/16" wrench
- Attach 1" hex head socket back to the top of the TrueProbe. Rotate the isolation tube clockwise 720° until it stops. The probe is now in service.
- Verify sample flow and pressure on the sample outlet tubing.

*Checking/ Replacing the O-Rings* – Universal Analyzers recommends that TrueProbe o-rings should be checked whenever a filter inspection occurs. Checking the O-rings requires the removal of the TrueProbe. Take necessary safety precautions before removing the probe. The operator should fully de-pressure the line before removal of the TrueProbe begins. We recommend a light coating of Parker Super-O-Lube silicone lubricant on all internal o-rings.

1. Repeat process above plus whatever else is needed.

If any other issues arise during the operation of the TrueProbe please contact Universal Analyzers directly for support/repair.



U.S. Patent 9,625,356. TrueProbe™ is a trademark of Universal Analyzers Inc.

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