



GENIE[®] 745

Preconditioning Assembly

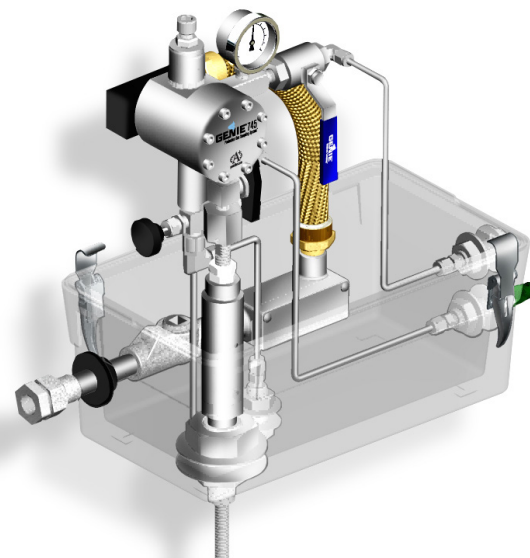
The best sample extraction and conditioning system for process control sampling of unprocessed, production quality natural gas streams!

The increased production of natural gas from unconventional sources (shale gas formations and deep-water offshore platforms) has created a need for more sampling points closer to the wellhead and gathering sites. Different types of contaminant analyses are being performed (H₂S, CO₂, O₂, H₂O) on these gas streams so processing plants can use the analysis data for optimal process control. Large quantities of free liquids are often continuously present at these sample points - hydrocarbons, water, corrosion inhibitors, methanol, and scavengers for example. This poses a challenge for traditional sampling equipment that was designed for transmission quality gas with a minimal amount of liquid entrained in the gas.

The Genie[®] 745 Preconditioning Assembly is intended for use when analysis for process control is being performed on a natural gas stream having large quantities of free liquids continuously present. The purpose of the 745 is to provide the analyzer with a liquid free, low pressure sample.

The 745 consists of a vertically mounted, non-membrane tip Direct-Drive™ probe for sample extraction, Genie[®] Membrane Separator™, Avenger™ Coalescing Filter for liquid removal, and Genie[®] Heated Regulator for pressure reduction without JT cooling effects. The membrane separator, coalescing filter and heated regulator have been designed into a compact single unit that mounts on top of the 745 probe, inside of an insulated enclosure.

Although the gas exiting the 745 is liquid free and at low pressure, heat trace tubing may be required depending on the dew point temperature of the gas. It is also recommended that a Genie[®] Membrane Separator™ with Liquid Block™ be installed as close to the analyzer as possible in case of heat trace failure or major process upsets.



Product Brief

Applications

- Continuous sampling of natural gas for contaminant analysis (H₂S, CO₂, O₂, H₂O) when large quantities of free liquids (hydrocarbons, water, corrosion inhibitors, methanol, scavengers) are continuously present

Note: This product is not intended for use at custody transfer points.

Benefits

- Allows contaminant analyses to be performed on natural gas streams where traditional sampling equipment cannot be used
- Protects the analyzer from liquid contamination, minimizing analyzer down time and maintenance
- No need to depressurize line for probe insertion/retraction
- Prevents regulator freeze-ups
- No cutting, drilling or additional mounting hardware required
- Directly mounts on pipeline
- Fits between pipe taps with 7" center to center spacing that are commonly found on meter runs

Features

- Patented Genie[®] Membrane Technology™
- Direct Drive™ style adjustable length insertion probe
- Heated pressure regulator
- Plug and Play compact design

Technical Specifications

Maximum pressure rating	1,685 psig (116.2 bar)
Temperature range	-15 °F (-26.1 °C) up to 185 °F (85 °C)
Port sizes	Outlet: 1/4" female NPT ball valve Drain Port: 1/4" male NPT needle valve
Probe lengths	L: 8", 12", 18", 24", 36" A: ~ 23, 27, 33, 39, 51 (refer to L & A dimensions on back) Note: L lengths will be ~2.5" less when mounted in optional enclosure
Outlet pressure range (psig)	0-10 (0-0.7 bar), 0-25 (0-1.7 bar), 0-50 (0-3.4 bar), 0-100 (0-6.9 bar), 0-250 (0-17.2 bar), 0-500 PSIG (34.5 bar)
Maximum recommended flow rate	5,000 cc/min
Conduit connection	1/2" NPT
Process connection requirement	3/4", 1" or 1.5" NPT full opening threaded or flanged valve* *Ball, gate and double block and bleed valves are all suitable for use as long as their inner diameter is not less than 3/4" 1" NPT or larger process connection required for seal welding.
Power requirements	110 to 265 VAC, 80W or 24 VDC, 25W
Electrical approval	CSA Certified Assembly: File # 235766 Protection Type: Class 1, Division 1, Groups C & D, Temp Code T3 ATEX/IECEx Certified Electrical Components: Protection Type: Zone 1, II 2 GD Ex d IIC, Temp Code T3
Wetted materials (for exotic materials of construction or Silcotek™ coatings, contact the factory)	Machined parts: 316/316L stainless steel /NACE compliant Kevlar® threaded bushing All other metal parts: stainless steel / NACE compliant Regulator seat material: PFA Sealing material: PTFE/fluoroelastomer Membrane: Type 6/BTU- Inert Filter element: 0.1 micron coalescer



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Analyzer Sampling Solutions > Moisture & Corrosion Control > Knowledgeware

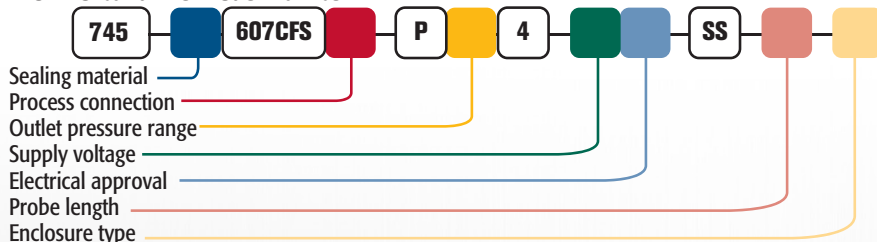
Model Numbering & Additional Part Numbers

Your model number is determined by your specific needs. Choose options below.

Sealing material	0 = PTFE/Fluoroelastomer	J = RGD resistant HNBR	(other materials available upon request)			
Process connection	3 = 3/4" NPT	4 = 1" NPT	6 = 1.5" NPT	(contact factory for flanged options)		
Outlet pressure range (psig)	0 = 0-25	1 = 0-50	2 = 0-100	3 = 0-250	4 = 0-500	9 = 0-10
Supply voltage	1 = 110 to 265 VAC, 80W		2 = 24 VDC, 25W			
Electrical approval	C = CSA		A = ATEX/IECEx			
Probe length (L)	8, 12, 18, 24, 36 inches					
Enclosure type	1 = KOZY flexible insulated jacket		2 = GRP rigid insulated enclosure*			

*recommended when the minimum ambient temperature will be at or below 45° F for extended periods of time

How to build the model number:



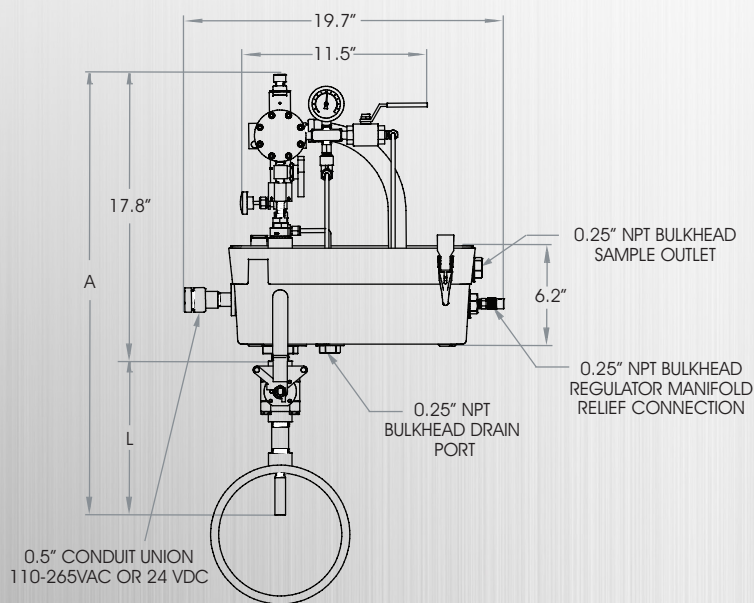
Spare Parts & Accessories (sold separately)

- Probe sealing material replacement - Part # 74X-5V0 (standard seals)
- Membrane, membrane o-ring kit, and filter element kit Part #745-506-07CFS

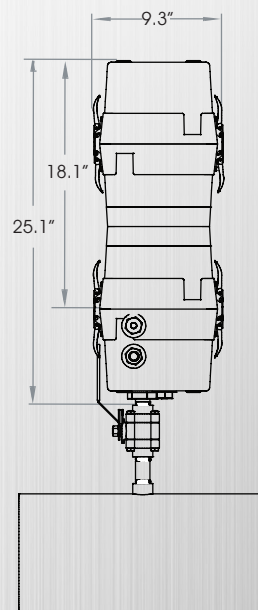
⚠ The sealing mechanism for this probe is a packing gland. Just like the packing gland on a valve, it may be required to tighten the sealing nut occasionally as the sealing material wears. When sampling gases containing toxic levels of H₂S or any other types of toxic gases, the technician should follow OSHA, state and local safety regulations while maintaining the packing gland seal and performing other maintenance on the probe.

Dimensions

Side View



Front View



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A+ Corporation is the leader in Analytically Correct™ Sample Extraction and Conditioning Systems.

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