

# The safest and most versatile probes available on the market!

Liquid carry over from the pipeline into the sample conditioning system should be prevented when sampling natural gas as it can directly impact the accuracy of the compositional analysis and also damage the analyzer. Industry standards state that equipment used to remove liquid from the sample must be operated at flowing temperature and pressure conditions. Genie<sup>®</sup> Probes<sup>™</sup> provide a means to insert Genie<sup>®</sup> Membrane Technology<sup>™</sup> directly into a pipeline for the purpose of separating unwanted liquid and particulate from the gas sample at flowing temperature and pressure conditions, in compliance with industry standards.

The GP2<sup>™</sup> probe consists of a housing and a membrane tip probe. The housing is installed in a depressurized pipeline through a vertically mounted thread-o-let or flange, and contains a "foot valve" in its lower end. Inserting the probe into the housing opens the "foot valve", allowing pipeline gas to flow freely through the membrane. Retracting the probe from the housing closes the foot valve, making it possible to perform probe maintenance without depressurizing the pipeline. This insertion/retraction method is considerably less expensive and complex than pneumatic or hydraulic methods.

An optional hex adapter is available to prevent liquids from being forced through the membrane, and should be selected when the probe is being used in spot and composite sampling applications.

### **Technical Specifications**

Maximum Pressure Rating	3,500 psig (241.3 barg)		
Temperature Ranges * Actual limit depends on sealing material chosen. Refer to Temperature Range Comparison Chart.	<b>Type 6 membranes:</b> -35°F (-37°C) to 185°F (85°C) <b>*Type 7 membrane:</b> -35°F (-37°C) to 300°F (149°C)		
Maximum Recommended Flow Rate Results in approx. 2 PSI pressure differential. For higher flow rates, contact the factory.	Type 6 Best Rejection: 4.1 LPM (8.7 CFH) (actual conditions)   Type 7 Highest Temps: 7.6 LPM (16.1 CFH) (actual conditions)		
Internal Volume	13.758 cc		
Outlet Port Size	<b>GP2 with Hex:</b> 1/4" FNPT <b>GPCSA:</b> 3/4" FNPT <b>GP2 without Hex:</b> 1/8" FNPT		
Process Connection	3/4" or 1" male NPT		
Thread-o-let Requirement	The inner diameter of all openings in pipe wall and thread-o-let must not be less than 0.910".		
Mounting Orientation	Vertical (Preferred), or 45° maximun angle relative to vertical required		
Wetted Materials	Machined parts: 316/316L stainless steel / ISO 15156-3 compliant All other metal parts: stainless steel / ISO 15156-3 compliant Foot Valve sealing material: Perfluoroelastomer Probe sealing material: User defined Membrane: inert		



### **Product Brief**

### **Applications**

- Extract a representative sample from a multi-phase gas source
- Spot, composite or continuous gas sampling
- Protection against liquids
- Online and portable analyzers
- BTU, H2S, Moisture, and others
- Gas sampling of mixtures containing less than 30% hydrogen

### **Benefits**

- API 14.1, GPA 2166 and ISO 10715 probe compliance
- Helps to preserve sample integrity
- Protects analyzers
- Helps to improve safety of personnel and equipment
- Does not require hydraulic fluid
- Probe maintenance without line depressurization

### **Features**

- Genie<sup>®</sup> Membrane Technology<sup>™</sup>
- Vibration resistant
- No dead volume
- Low internal volume
- J-slot safety
- Optional hex adapter with ¼" female NPT outlet and integrated outlet shut-off valve



# The Sampling Experts<sup>™</sup> | geniefilters.com

## **Model Numbering & Additional Part Numbers**

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

Model	GP2 = Probe w/ 1/8" FNPT outlet	GPCSA = Probe w/ adapter for YZ, PGI, & Welker Sampler		
Sealing material	0 = Neoprene	J = RGD resistant HNBR	(other materials available upon request)	
Membrane type	6 = Better Rejection; Rejects ALL types of liquids from vapor 7 = Highest Temps; Rejects ONLY high surface tension liquids			
Probe housing length	Blank = 4"	B = 7"		
Process connection	Blank = 3/4" NPT x 0.9 dia.	1 = 1" NPT x 0.9 dia.		
Outlet option	H= Hex adapter with 1/4" NPT Out	let Port	Blank= No option	
Membrane replacement	Part # GP-CMA-5_6 (contains	2 complete assemblies - sold separa	tely)	

### How to build the model number (probe and housing):



### **Dimensions**

#### Inserted Extracted 3/4" NPT x 0.9" DIAMETER HOUSING SHOWN 1" NPT x 0.9" DIAMETER HOUSING SHOWN 3/4" FNPT-1/8" FNPT-1/8" FNPT **GPCSA** GP2 0 GP2 INSERTION NUT-HOUSING INSERTION WASHER Ó 7.8″ FROM L1 3.10" 0 0 OVERALL LENGTH GPCSA=~10.2" GPCSA B=~13.2" OVERALL LENGTH 0.9" GP2=~9.4" GP2 B=~12.4" FLATS LOCKING Ů MECHANISM 1"NPT 3/4"NPT 3/4"NPT MEMBRANE-0.9' DIA PROBE LENGTH FROM L1 PROBE LENGTH FROM L1 GPR=4" GPR B=7" GPR=4" GPR B=7" HEX ADAPTER OPTION FOOT VALVE 1/4" FNPT OUTLET PORT-1.25" HEX ADAPTER OUTLET SHUTOFF VALVE

