



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

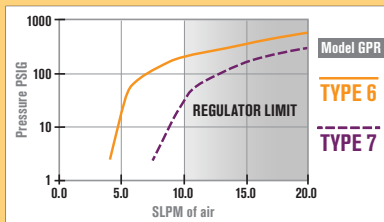
Liquid carry over from the pipeline into the sample conditioning system should be prevented when sampling natural gas as it can directly impact the accuracy of the compositional analysis and also damage the analyzer. Genie<sup>®</sup> Probes<sup>™</sup> provide a means to insert Genie<sup>®</sup> Membrane 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 two-piece GPR<sup>™</sup> consists of a housing containing a foot valve on its lower end, and a membrane tip probe regulator. The probe housing is installed in a depressurized pipeline through a vertically mounted thread-o-let or flange. Once the probe is inserted into the housing, the foot valve opens to allow pipeline gas to flow freely through the membrane. Sample pressure is then reduced immediately downstream of the membrane, inside of the pipeline. The heat then transfers from the pipeline to the regulator to prevent excessive Joule-Thomson cooling during pressure regulation. 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 less expensive and complex than pneumatic or hydraulic methods.

### Technical Specifications

<b>Maximum pressure rating</b>	3,500 psig (241.3 barg)
<b>Temperature ranges</b> <small>* Actual limit depends on sealing material chosen. Refer to Temperature Range Comparison Chart.</small>	<b>Type 6 membrane:</b> -35°F (-37°C) to 185°F (85°C) <b>*Type 7 membrane:</b> Up to 300°F (149°C)
<b>Internal volume</b>	13.758 cc
<b>Outlet port sizes</b>	1/4" female NPT
<b>Minimum pipeline size</b>	4"
<b>Outlet pressure range</b>	0-10 psig (0-0.7 barg), 0-25 psig (0-1.7 barg), 0-50 psig (0-3.4 barg), 0-100 psig (0-6.9 barg), 0-250 psig (0-17.2 barg), 0-500 psig (0-35.4 barg)
<b>Process connection</b>	3/4" or 1" male NPT
<b>Thread-o-let requirement</b>	The inner diameter of all openings in pipe wall and thread-o-let must not be less than 0.910".
<b>Mounting orientation</b>	Vertical (preferred), or 45° maximum angle relative to vertical
<b>Wetted materials</b>	<b>Machined parts:</b> 316/316L stainless steel / ISO 15156-3 compliant <b>All other metal parts:</b> stainless steel / ISO 15156-3 compliant <b>Foot Valve sealing material:</b> Perfluoroelastomer <b>Probe sealing material:</b> User defined <b>Regulator seat material:</b> PFA <b>Membrane:</b> inert

**Maximum Recommended Flow Rate**  
Dependant on source pressure. See chart.



### Product Brief

#### Applications

- Extract representative sample from a multi-phase gas source
- Pressure regulation
- Protection against liquids
  - Online and portable analyzers
  - BTU, H<sub>2</sub>S, Moisture, and others
- Gas sampling of mixtures containing less than 30% hydrogen

#### Benefits

- API 14.1, GPA 2166 and ISO 10715 probe compliance
- Flowing pipeline gas helps to offset temperature changes at regulation point
- Helps to preserve sample integrity
- 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>
- Pressure regulation at probe tip inside of pipeline
- Vibration resistant
- No dead volume
- Low internal volume
- J-slot safety
- Optional regulator manifold available with pressure gauge, ball valve, and relief valve attached.

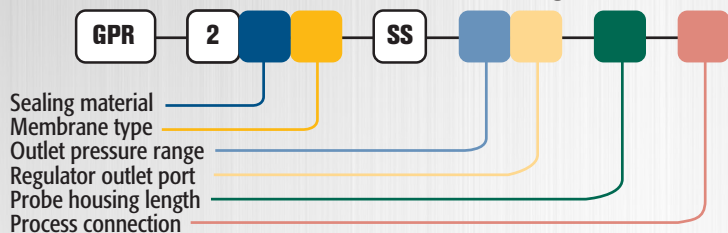


## Model Numbering & Additional Part Numbers

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

<b>Sealing material</b>	0 = Neoprene	J = RGD resistant HNBR	<i>(other materials available)</i>			
<b>Membrane type</b>	6 = Better Rejection; Rejects ALL types of liquids from vapor 7 = Highest Temps; Rejects ONLY high surface tension liquids					
<b>Outlet pressure range (psig)</b>	00 = 0-25	01 = 0-50	02 = 0-100	03 = 0-250	P4 = 0-500	09 = 0-10
<b>Regulator outlet port</b>	1 = 1/4" MNPT to 1/8" tube connector			4 = 1/4" FNPT		
<b>Probe housing length</b>	Blank = 4"		B = 7"			
<b>Process connection</b>	Blank = 3/4" NPT x 0.9 dia.		1 = 1" NPT x 0.9 dia.			
<b>Spare parts</b>	Part # GP-771-SS		<i>(contains one (1) complete regulator seat cartridge assembly)</i>			
	Part # GP-CMA-5_6		<i>(contains two (2) Type 6 complete assemblies)</i>			

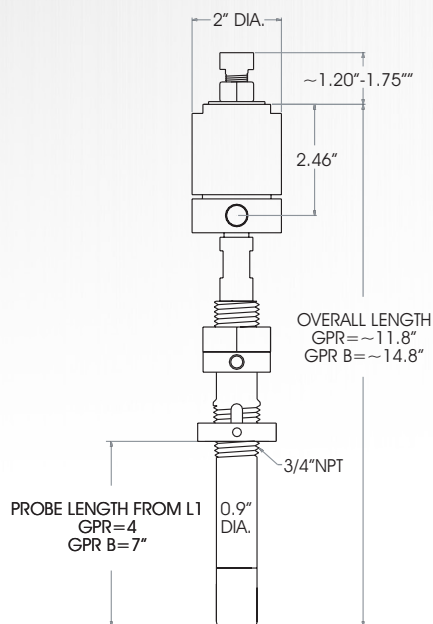
### How to build the model number (probe and housing):



## Dimensions

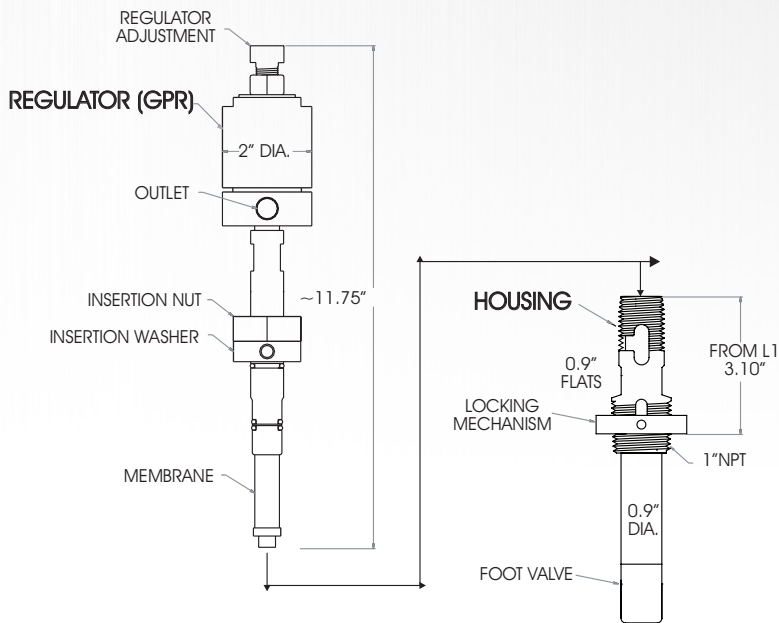
### Inserted

3/4" NPT x 0.9" DIAMETER HOUSING SHOWN



### Extracted

1" NPT x 0.9" DIAMETER HOUSING SHOWN



Analytically Correct™ sample systems, sample conditioning components, and revolutionary gas and liquid sampling technology.



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