

# GateKeeper® GPU Gas Purifiers Model GPUS500F

*Superior purity control*

Entegris' GateKeeper® GPU gas purifiers were designed to improve purity consistency, lifetime and final purity. Leveraging its expertise in material science, Entegris has developed a new generation of purification products that deliver unsurpassed value and performance. The model 500 is designed for peak flow rates up to 75 slpm.



## FEATURES & BENEFITS

### Process Control and Protection

- Purity control to ppt levels
- CE certified to the Pressure Equipment Directive (PED) and manufactured in an ISO® 9001:2000 facility
- Low pressure drop across the purifier

### Cost Effective

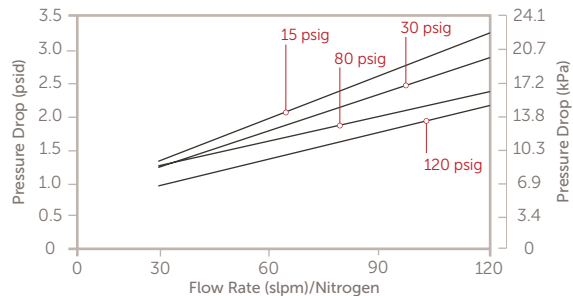
- Regenerable – eliminates disposal issues and costs
- Long lifetime – improved cost of ownership

### Safe and Simple to Use

- Use ambient temperature purification – no heat or power required to operate

## PERFORMANCE DATA

Pressure Drop vs. Gas Flow Rate\*



\* The flow rate displayed on this graph may exceed the maximum flow rate specification of the purifier model referenced on this datasheet. Please refer to **Maximum flow rate** in the Specifications section of this datasheet.

Note: Pressure drop may vary depending on media type.

## SPECIFICATIONS

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<b>Materials of construction (housing)</b>	316L stainless steel, electropolished
<b>Particle filtration type</b>	Wafergard® – 316L stainless steel membrane
<b>Particle retention</b>	Up to 3 LRV* for particles larger than 0.003 µm
<b>Filtration removal rating</b>	≥0.003 µm
<b>Maximum operating temperature</b>	65°C (149°F)
<b>Fitting size and type</b>	¼" gasket seal**
<b>Fitting configuration</b>	Male-to-male
<b>Maximum operating pressure</b>	3447 kPa (500 psig)
<b>Maximum flow rate</b>	75 slpm
<b>Leak rating</b>	1 × 10 <sup>-9</sup> atm cc/sec
<b>Dimensions</b>	201 mm (7.9") L × Ø76 mm (3")
<b>Approximate weight</b>	1.8 kg (4 lbs)

\*Referenced as most penetration particle size.

\*\*Also referred to as VCR® or face seal.

## AVAILABLE MEDIA

Media	Gases purified	Contaminants removed	Performance/validation technique
EX	H <sub>2</sub> , N <sub>2</sub> , Noble gases, H <sub>2</sub> /N <sub>2</sub> , H <sub>2</sub> /Noble gases	H <sub>2</sub> O, CO <sub>2</sub>	<100 ppt in H <sub>2</sub> and N <sub>2</sub> /APIMS
		O <sub>2</sub>	<250 ppt in H <sub>2</sub> and N <sub>2</sub> /APIMS
		CO	<1 ppb in H <sub>2</sub> and N <sub>2</sub> /APIMS
		C <sub>x</sub> H <sub>y</sub> (45–100 amu)	<10 ppt/GC-FID in N <sub>2</sub>
		C <sub>x</sub> H <sub>y</sub> (>100 amu)	<1 ppt/GC-FID in N <sub>2</sub>
		Refractory compounds (as HMDSO)	<1 ppt/GC-FID in N <sub>2</sub>
HX	H <sub>2</sub> , N <sub>2</sub> , Noble gases, H <sub>2</sub> /N <sub>2</sub> , H <sub>2</sub> /Noble gases	H <sub>2</sub> O, O <sub>2</sub> , CO, CO <sub>2</sub>	<100 ppt in H <sub>2</sub> and N <sub>2</sub> /APIMS
IX	N <sub>2</sub> , Noble gases	H <sub>2</sub> O, O <sub>2</sub> , CO, CO <sub>2</sub> , H <sub>2</sub>	<100 ppt in Ar and N <sub>2</sub> /APIMS
	Freon <sup>2</sup> 13, 14, 23, 41, 116, 218	H <sub>2</sub> O, O <sub>2</sub>	
TX	CDA, N <sub>2</sub> , Noble gases CO <sub>2</sub> , NH <sub>3</sub>	Condensable organics (as Toluene)	<1 ppt/GC-FID
		Non-condensable organics <sup>1</sup> (as Butane)	<5 ppt/GC-FID
		Refractory compounds (as HMDSO)	<1 ppt/GC-FID
WX	CDA, H <sub>2</sub> , N <sub>2</sub> , Noble gases, CO <sub>2</sub> , NH <sub>2</sub> , AsH <sub>3</sub> , PH <sub>3</sub> , GeH <sub>4</sub> , SiH <sub>4</sub>	H <sub>2</sub> O	<100 ppt in N <sub>2</sub> /APIMS
			<12 ppb in NH <sub>3</sub> /CRDS
OP	CDA, N <sub>2</sub> , Noble gases	H <sub>2</sub> O	<100 ppt in N <sub>2</sub> /APIMS
		Condensable organics (as Toluene)	<1 ppt/GC-FID
		Non-condensable organics <sup>1</sup> (as Butane)	<5 ppt/GC-FID
		Refractory compounds (as HMDSO)	<1 ppt/GC-FID
		Volatile acids (as SO <sub>2</sub> )	<1 ppt/GC-PFPD
		Volatile bases (as NH <sub>3</sub> )	<10 ppt/IC

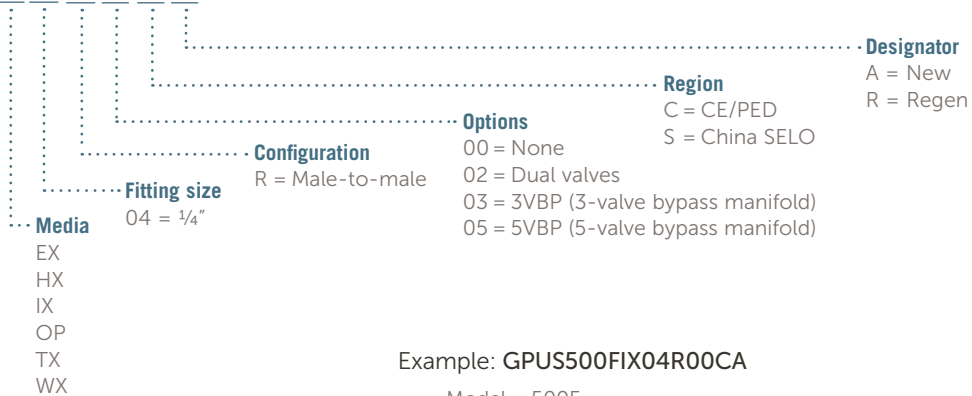
<sup>1</sup> Consult Entegris with specific non-condensable contaminants.

<sup>2</sup> Removal of H<sub>2</sub>O and O<sub>2</sub> only.

## ORDERING INFORMATION

GateKeeper GPU Gas Purifiers Model GPUS500F: part number

GPUS500F 04 R



Example: GPUS500FIX04R00CA

- Model = 500F
- Media = IX
- Fitting = 1/4"
- Configuration = Male-to-male
- Options = None
- Region = CE/PED
- Designator = New

## FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the Contact Us link to find the customer service center nearest you.

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