

GateKeeper® GPU 500 4R Gas Purifiers

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.

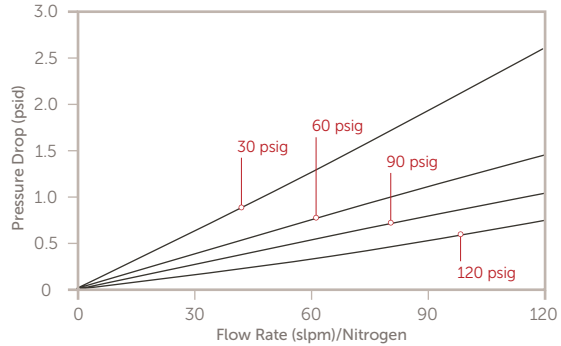


FEATURES & BENEFITS

Process control and protection	Purity control to ppt levels Low pressure drop across the purifier CE certified to the Pressure Equipment Directive (PED) and manufactured in an ISO® 9001:2000 facility
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 Insensitive to orientation (horizontal/vertical)

PERFORMANCE DATA

Pressure Drop vs. Gas Flow Rate*



*The flow rate displayed on this graph may exceed maximum flow rate specification of the purifier model referenced in this data sheet. Please refer to maximum flow rate in the specifications section of this data sheet.

Note: Pressure drop may vary depending on media type.

SPECIFICATIONS

Materials of construction (housing)	316L stainless steel, electropolished
Particle filtration type	Wafergard® – 316L stainless steel membrane
Particle retention	Up to 3 LRV* for particles larger than 0.003 µm
Filtration removal rating	≥0.003 µm
Operating temperature	0 – 65°C (32–149°F)
Fitting size and type	¼" gasket seal**
Fitting configuration	Male-to-male
Operating pressure	1.01 barg–41.3 barg (0 psig–600 psig)
Maximum flow rate	75 slpm
Leak rating	1 × 10 ⁻⁹ atm cc/sec
Dimensions	201.7 mm (7.94") × Ø76 mm (3")
Approximate weight	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	Outlet purity	Nominal flow rate ³
DZ	CO ₂	Volatile acids	<1 ppt	14 slpm
		Volatile bases	<1 ppt	
		Refractories	<1 ppt	
		Condensable organics	<1 ppt	
		H ₂ O	<1 ppb	
		O ₂	<200 ppt	
EX	H ₂ , N ₂ , Noble gases, H ₂ /N ₂ , H ₂ /Noble gases	H ₂ O, CO ₂	<100 ppt in H ₂ and N ₂	26 slpm
		O ₂	<250 ppt in H ₂ and N ₂	
		CO	<1 ppb in H ₂ and N ₂	
		C _x H _y (45–100 amu)	<10 ppt	
		C _x H _y (>100 amu)	<1 ppt	
		Refractory compounds (as HMDSO)	<1 ppt	

AVAILABLE MEDIA (CONTINUED)

Media	Gases purified	Contaminants removed	Outlet purity	Nominal flow rate ³
HX	H ₂ , N ₂ , Noble gases, H ₂ /N ₂ , H ₂ /Noble gases	H ₂ O, O ₂ , CO, CO ₂	<100 ppt in H ₂ and N ₂	26 slpm
IX	N ₂ , Noble gases	H ₂ O, O ₂ , CO, CO ₂ , H ₂	<100 ppt in Ar and N ₂	13 slpm
	Freon ¹ 13, 14, 23, 41, 116, 218	H ₂ O, O ₂		
NX	O ₂	CO ₂	<1 ppb	32 slpm
		H ₂ O	<1 ppb	
OP	CDA, N ₂ , Noble gases	H ₂ O	<100 ppt in N ₂	27 slpm
		Condensable organics (as Toluene)	<1 ppt	
		Non-condensable organics ² (as Butane)	<5 ppt	
		Refractory compounds (as HMDSO)	<1 ppt	
		Volatile acids (as SO ₂)	<1 ppt	
		Volatile bases (as NH ₃)	<10 ppt	
SX	NH ₃	H ₂ O	<2 ppb in NH ₃	10.4 slpm
		CO ₂	<1 ppb	
		O ₂	<1 ppb	
		Hydrocarbons	<1 ppt	
TX	CDA, N ₂ , Noble gases, CO ₂ , NH ₃	Condensable organics (as Toluene)	<1 ppt	36 slpm ⁴
		Non-condensable organics ² (as Butane)	<5 ppt	
		Refractory compounds (as HMDSO)	<1 ppt	
WX	CDA, H ₂ , N ₂ , Noble gases, CO ₂ , NH ₃ , AsH ₃ , PH ₃ , GeH ₄ , SiH ₄	H ₂ O	<100 ppt in N ₂	108 slpm ⁵
			<12 ppb in NH ₃	

¹ Removal of H₂O and O₂ only.

² Consult Entegris with specific non-condensable contaminants.

³ With a 1 ppm H₂O impurity inlet challenge

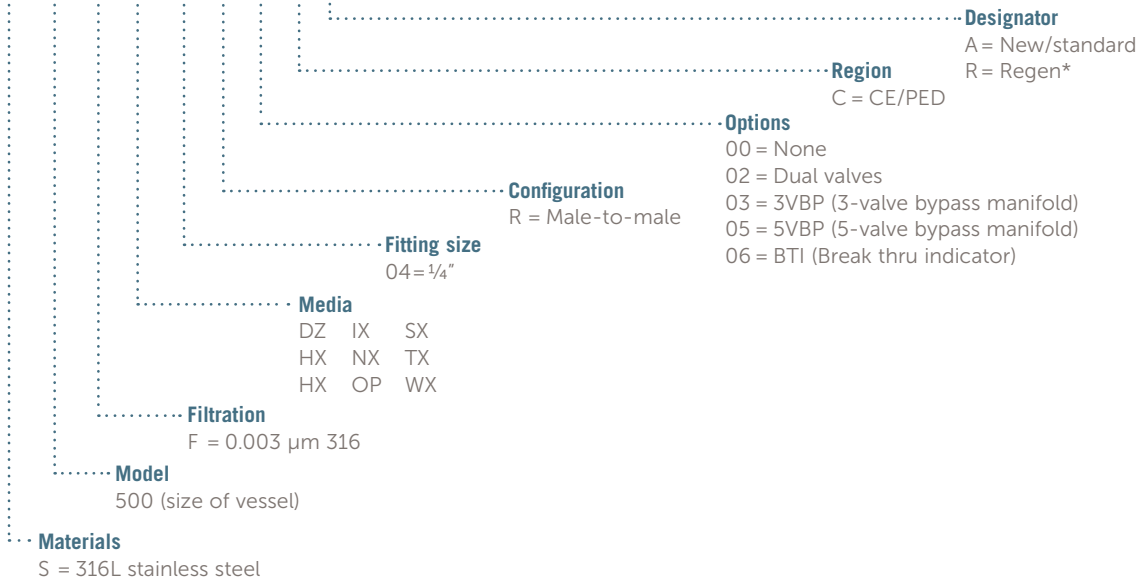
⁴ With a 1 ppm Toluene impurity inlet challenge over 1 year

⁵ Lifetime will exceed 1 year at its maximum flow rate

ORDERING INFORMATION

GateKeeper 500 4R Gas Purifiers: part number

GPU S 500 F 04 R



*Contact Entegris to determine if the purifier is designed for regeneration.

FOR MORE INFORMATION

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

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