

GateKeeper® GPU 13M 12R/16R 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. Models 13M-12R and 13M-16R are designed for peak flow rates up to 2000 and 2500 slpm, respectively.

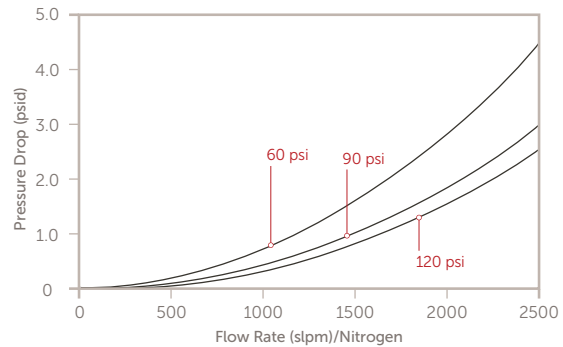


FEATURES & BENEFITS

Process control and protection	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Regenerable – eliminates disposal issues and costs Long lifetime – improved cost of ownership
Safe and simple to use	<ul style="list-style-type: none"> Use ambient temperature purification – no heat or power required to operate Insensitive to orientation (horizontal/vertical)

PERFORMANCE DATA

Pressure Drop vs. Gas Flow Rate



SPECIFICATIONS

	13M-12R	13M-16R
Materials of construction (housing)	316L stainless steel, electropolished	
Particle filtration type	316L stainless steel membrane	
Filtration removal rating	≥20 μm	
Operating temperature	0 – 65°C (32–149°F)	
Fitting size and type	¾" (12R) gasket seal*	1" (16R) gasket seal*
Fitting configuration	Male-to-male	
Operating pressure	1.01 barg – 25.5 barg (0 psig – 370 psig)	
Maximum flow rate	2000 slpm	2500 slpm
Leak rating	1 × 10 ⁻⁹ atm cc/sec	
Dimensions	892 mm (35.1") L x Ø152.4 mm (6")	898 mm (35.36") L x Ø152.4 mm (6")
Approximate weight	30 kg (66 lb)	32 kg (71 lb)

* 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	355 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	585 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	585 slpm
IX	N ₂ , Noble gases	H ₂ O, O ₂ , CO, CO ₂ , H ₂	<100 ppt in Ar and N ₂	292 slpm
	Freon ¹ 13, 14, 23, 41, 116, 218	H ₂ O, O ₂		
NX	O ₂	CO ₂	<1 ppb	804 slpm
		H ₂ O	<1 ppb	
OP	CDA, N ₂ , Noble gases	H ₂ O	<100 ppt in N ₂	615 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	263 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	820 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	2460 slpm ⁵
			<12 ppb in NH ₃	

¹ Removal of H₂O and O₂ only.

² Consult Entegris with specific non-condensable contaminants.

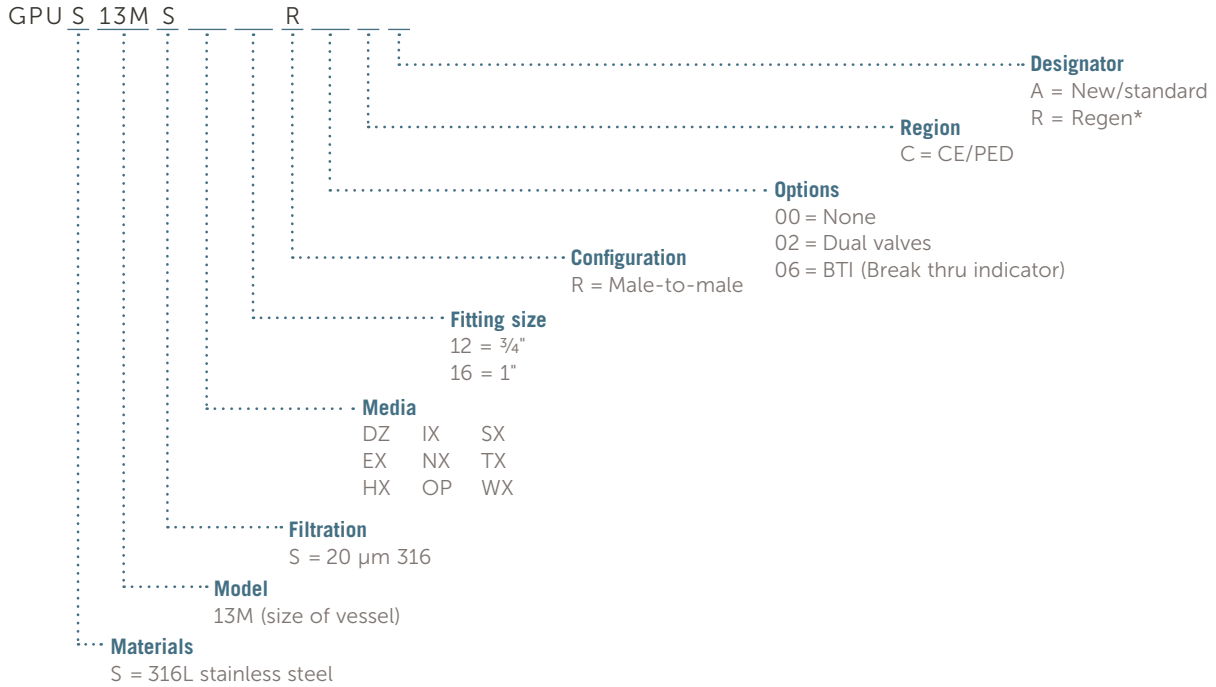
³ With a 1 ppm H₂O impurity inlet challenge

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 GPU 13M 12R/16R Gas Purifiers: part number



*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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