

GateKeeper® GPU 10M 8R/12R 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 10M-8R and 10M-12R are designed for peak flow rates up to 1000 slpm.

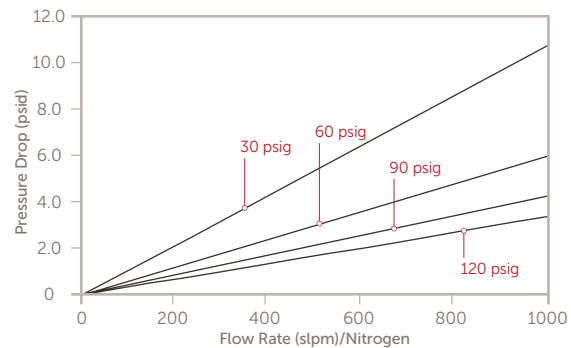


FEATURES & BENEFITS

Process control and protection	<p>Purity control to ppt levels</p> <p>Low pressure drop across the purifier</p> <p>CE certified to the Pressure Equipment Directive (PED) and manufactured in an ISO® 9001:2000 facility</p>
Cost effective	<p>Regenerable – eliminates disposal issues and costs</p> <p>Long lifetime – improved cost of ownership</p>
Safe and simple to use	<p>Use ambient temperature purification – no heat or power required to operate</p> <p>Insensitive to orientation (horizontal/vertical)</p>

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

	10M-8R	10M-12R
Materials of construction (housing)	316L stainless steel, electropolished	
Particle filtration type	Wafergard® 16L 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	½" (8R) gasket seal **	¾" (12R) gasket seal **
Fitting configuration	Male-to-male	
Operating pressure	1.01 barg – 25.5 barg (0 psig – 370 psig)	
Maximum flow rate	1000 slpm (8R)	1500 slpm (12R)
Leak rating	1 × 10 ⁻⁹ atm cc/sec	
Dimensions	737 mm (29.0") L × Ø152.4 mm (6")	748 mm (29.5") L × Ø152.4 mm (6")
Approximate weight	20 kg (44 lbs)	22 kg (49 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	291 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	460 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/GC-FID in N ₂	
		C _x H _y (>100 amu)	<1 ppt/GC-FID in N ₂	
		Refractory compounds (as HMDSO)	<1 ppt/GC-FID in N ₂	

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	460 slpm
IX	N ₂ , Noble gases	H ₂ O, O ₂ , CO, CO ₂ , H ₂	<100 ppt in Ar and N ₂	228 slpm
	Freon ¹ 13, 14, 23, 41, 116, 218	H ₂ O, O ₂		
NX	O ₂	CO ₂	<1 ppb	658 slpm
		H ₂ O	<1 ppb	
OP	CDA, N ₂ , Noble gases	H ₂ O	<100 ppt in N ₂	480 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	215 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	640 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 ₂ , AsH ₃ , PH ₃ , GeH ₄ , SiH ₄	H ₂ O	<100 ppt in N ₂	1920 slpm ⁵
			<12 ppb in NH ₃	

¹ Removal of H₂O and O₂ only.

² Consult Entegris with specific non-condensable contaminants.

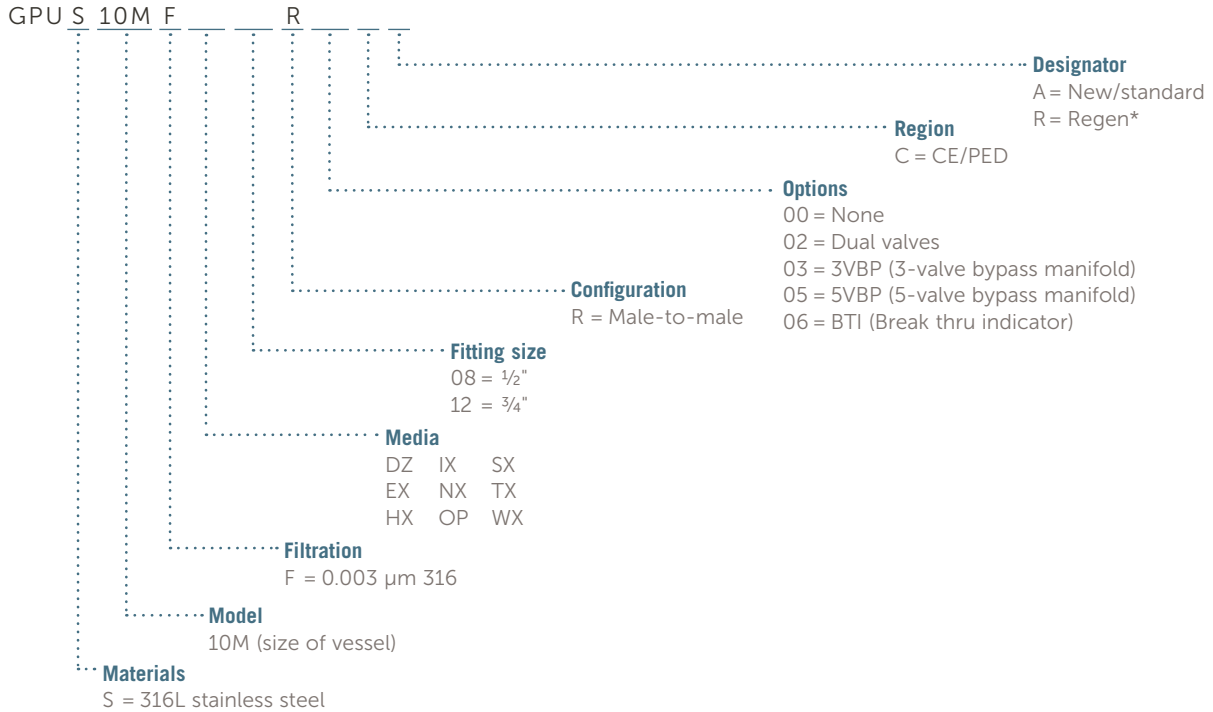
³ With a 1 ppm H₂O impurity inlet challenge

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 10M 8R/12R 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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