



GATEKEEPER® NONREACTIVE GAS PURIFIERS

Cost-effective, environmentally friendly gas purification



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Overview

Available for low- and high-flow point-of-use applications, GateKeeper® nonreactive gas purifiers are designed for use with SF₆, O₂, N₂O and O₂/inert gas mixtures. The purifiers remove CO₂ and H₂O to sub-ppb (parts-per-billion) levels; NMHCs to sub-ppt (parts-per-trillion) levels.

Features and Benefits

Cost-effective

- Regenerable for low cost of ownership
- Gas purification improves process consistency, increases product yields and lengthens tool life
- Transforms low-purity gas into UHP grade, reducing process costs

Environmentally Friendly

- Regenerable – eliminates disposal issues

Process Protection

- Consistently delivers ultrapure gas
- Guards against bulk gas purifier breakthrough, impurity spikes from liquid storage tanks, cylinder changeouts and unexpected contaminants in the process
- Does not release hydrocarbons that may contaminate the process
- Low pressure drop across purifiers
- CE certified to the Pressure Equipment Directive (PED) and manufactured in an ISO 9001:2000 facility
- Backed by global service and support staff

Safe and Simple to Use

- Easy to install
- Uses ambient temperature purification technology – no power or heat required
- No moving parts

General Specifications

Materials of construction:	316L stainless steel, electropolished 10 Ra	
Gases purified:	SF ₆ , CO ₂ , O ₂ , H ₂ O, O ₂ /inert gas mixtures	
Outlet purity:	<1 ppb CO ₂ , H ₂ O; only H ₂ O is removed from SF ₆ and CO ₂ <1 ppt nonmethane hydrocarbons	
Outlet particle filtration:	30KF to 75KF, 300KF to 10MH	0.003 µm 316L stainless steel
	100KF	0.003 µm nickel
Media:	Specialty inorganic oxides	
Maximum differential pressure:	1379 kPa (200 psid)	
Minimum operating pressure:	101 kPa (14.7 psia)	
Leak rating:	1 × 10 ⁻⁹ atm cc/sec	
Maximum inlet challenge of contaminant to maintain product efficiency:	10 ppm (parts-per-million)	
Lifetime:	One year at nominal flow rate with 1 ppm inlet challenge of moisture	
Maximum operating temperature:	65°C (149°F)	

Operating Specifications

Model	Maximum Flow Rate (SLPM)	Nominal Flow Rate (SLPM)	Maximum Operating Pressure Purifier Only ¹	Maximum Operating Pressure Purifier with Options ²	Pressure Drop ³
35KF	1	1	19995 kPa (2900 psig)	1724 kPa (250 psig)	3.4 kPa (0.5 psid)
70KF	3	2.7	19995 kPa (2900 psig)	1724 kPa (250 psig)	4.8 kPa (0.7 psid)
100KF	20	5.5	6895 kPa (1000 psig)	1724 kPa (250 psig)	27.6 kPa (4 psid)
300KF	50	16	4826 kPa (700 psig)	1724 kPa (250 psig)	34.5 kPa (5 psid)
500KF	60	32	4826 kPa (700 psig)	1724 kPa (250 psig)	48.3 kPa (7 psid)
700KF	120	43	4826 kPa (700 psig)	1724 kPa (250 psig)	48.3 kPa (7 psid)
2500KH	300	150	1724 kPa (250 psig)	1724 kPa (250 psig)	17.2 kPa (2.5 psid)
10MH	1000	560	1724 kPa (250 psig)	1724 kPa (250 psig)	1/2" – 62 kPa (9 psid) 3/4" – 36.5 kPa (5.3 psid)

Drop-in Replacements for Waferpure® Purifiers

30KF (Micro)	1	1	19995 kPa (2900 psig)	1724 kPa (250 psig)	3.4 kPa (0.5 psid)
75KF (Mini-XL)	5	2.7	19995 kPa (2900 psig)	1724 kPa (250 psig)	10.3 kPa (1.5 psid)
300KF (Megaline)	50	16	4826 kPa (700 psig)	1724 kPa (250 psig)	34.5 kPa (5 psid)

¹ Do not use under vacuum. Minimum pressure should be 1 atm (14.7 psia). ² Pressure limited by standard valves, higher pressures available; please consult your local sales representative. ³ Pressure drop at maximum flow rate and 620 kPa (90 psig) inlet pressure. For a detailed pressure drop curve and other pressures or flows, please consult your local sales representative or visit www.entegris.com. All product information is subject to change without notice.

Facility Specifications

Model	Fitting Sizes	Configuration (inlet/outlet)	Approximate Weight	Length	Diameter	Fitting Offset
35KF	1/4" face seal	male/male	0.3 kg (0.66 lb)	8.4 cm (3.31")	3.8 cm (1.5")	Centered
70KF	1/4" face seal	male/male	0.4 kg (0.88 lb)	11.4 cm (4.5")	3.8 cm (1.5")	Centered
100KF	1/4" face seal	male/male	0.5 kg (1.1 lb)	8.4 cm (3.31")	15.2 cm (6") ⁴	1.12 cm (0.44")
300KF	1/4" face seal	male/male	1.8 kg (4 lb)	20.8 cm (8.2")	5.1 cm (2")	Centered
500KF	1/4" face seal	male/male	1.6 kg (3.5 lb)	20.2 cm (7.94")	7.6 cm (3")	Centered
700KF	1/4" face seal	male/male	1.6 kg (3.5 lb)	25.4 cm (10")	7.6 cm (3")	Centered
2500KH	1/4" face seal	male/male	9.5 kg (20.9 lb)	43.9 cm (17.3")	10.2 cm (4")	Centered
	1/2" face seal	male/male	9.5 kg (20.9 lb)	44.7 cm (17.6")	10.2 cm (4")	Centered
10MH	1/2" face seal	female/male	27 kg (59.5 lb)	97.4 cm (38.36")	15.2 cm (6")	Centered
	3/4" face seal	female/female	41 kg (90.3 lb)	143.3 cm (56.4")	15.2 cm (6")	Centered

Drop-in Replacements for Waferpure Purifiers

30KF (Micro)	1/4" face seal	male/male	0.3 kg (0.66 lb)	8.4 cm (3.31")	3.8 cm (1.5")	0.97 cm (0.38")
75KF (Mini-XL)	1/4" face seal	male/male	0.4 kg (0.88 lb)	12.7 cm (5")	3.8 cm (1.5")	0.97 cm (0.38")
300KF (Megaline)	1/4" face seal	male/male	1.8 kg (4 lb)	20.8 cm (8.2")	5.1 cm (2")	Centered

⁴ Height

Options

Model	Isolation Valves	GC 300 Manifold	3 Valve Bypass Manifold	5 Valve Bypass Manifold	4 Valve Changeover Manifold ⁵	8 Valve Changeover Manifold ⁶	Moisture Breakthrough Indicator ⁷
70KF	Yes		Yes				Yes
300KF	Yes	Yes					Yes
500KF	Yes		Yes	Yes			Yes
700KF	Yes						Yes
2500KH	Yes		Yes	Yes		Yes	Yes
10MH	included		Yes		Yes		Yes
200MZ	included						

Drop-in Replacements for Waferpure Purifiers

75KF (Mini-XL)	Yes						Yes
300KF (Megaline)	Yes	Yes					Yes

⁵ 1/2" Purifier only.

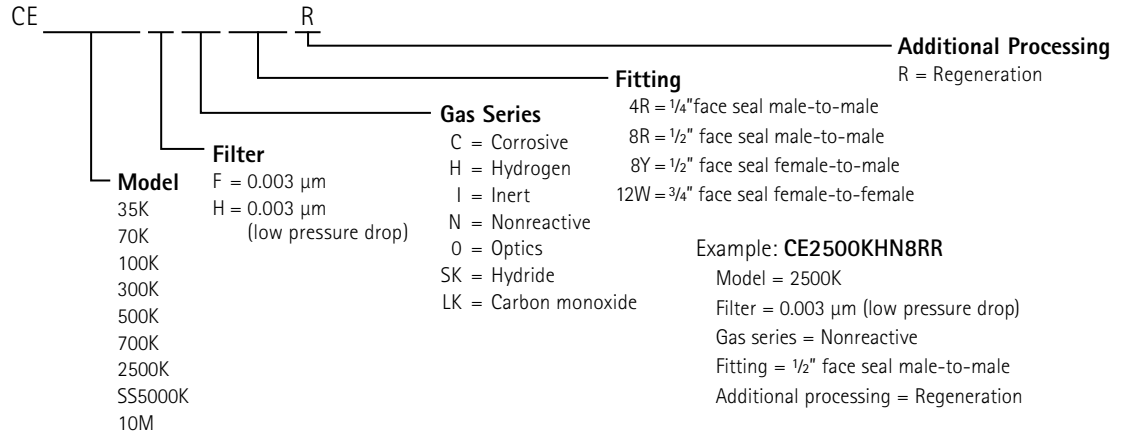
⁶ 1/4" Purifier only.

⁷ External to purifier for models 30KF–700KF.

Ordering Information

GateKeeper Gas Purifiers

Part Number



Note: Not all models are available with all gas series or fittings; contact your salesperson for more information.

Note: For Entegris replacement, specify 30K, 75K or 300K for model.

For detailed product information including dimension drawings, pressure drop curves, safety information, regeneration service and for help selecting a purifier and determining purifier lifetimes, please visit our website at www.entegris.com. Go to Products>Purification>Gas Purification

All products meet CE Directive 97/23/EC requirements.



Contact Customer Service to learn about our regeneration service.



For More Information

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

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ENTEGRIS, INC.

Corporate Headquarters | 129 Concord Road | Billerica, MA 01821 USA
Customer Service Tel. +1 952 556 4181 | Customer Service Fax +1 952 556 8022
In North America 800 394 4083 | www.entegris.com

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