



**GATEKEEPER® HYDRIDE GAS PURIFIERS**

*Cost-effective, environmentally friendly gas purification*



**Entegris GateKeeper Gas Purifier**

Model Number	Show Piece
Lot Number	xxxxxxxx 0003
Filtration	0.003 micron
Max Flow Rate	60slm
Max Pressure	48.2 barg(4.82 Mpa) (700 psig)
Max In. Pressure	13.8 bar(1.38 Mpa) (200 PSIG)
Max Temp	65° C (150° F)
Date Mfr	June 2006
Date Install	
Date Regeneration	

MINIMIZE EXPOSURE TO ATMOSPHERE  
 FOR USE WITH N<sub>2</sub>, He, Ne, Kr, Xe, Ar  
 HALOCARBONS, LIGHT HYDROCARBONS  
 DO NOT USE WITH O<sub>2</sub>, CDA (AIR), NF<sub>3</sub>, SF<sub>6</sub>

Made in USA  
 6975 Flanders Drive, San Diego, CA 92121

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# cost-effective, environmentally friendly gas purification

## Overview

Available for low- and high-flow point-of-use applications, GateKeeper® hydride gas purifiers are designed for use with NH<sub>3</sub>, AsH<sub>3</sub>, PH<sub>3</sub>, SiH<sub>4</sub> and GeH<sub>4</sub>. The purifiers remove O<sub>2</sub>, CO<sub>2</sub>, H<sub>2</sub>O and oxidation byproducts to sub-ppb (parts-per-billion) 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:	NH <sub>3</sub> , AsH <sub>3</sub> , PH <sub>3</sub> , SiH <sub>4</sub> , GeH <sub>4</sub>	
Outlet purity:	<1 ppb O <sub>2</sub> , CO <sub>2</sub> , H <sub>2</sub> O (<12 ppb in NH <sub>3</sub> )	
Outlet particle filtration:	30KF to 10MH	0.003 µm 316L stainless steel
Media:	Inorganic	
Maximum differential pressure:	1379 kPa (200 psid)	
Minimum operating pressure:	101 kPa (14.7 psia)	
Leak rating:	1 × 10 <sup>-9</sup> atm cc/sec	1 × 10 <sup>-9</sup> 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 <sup>1</sup>	Maximum Operating Pressure Purifier with Options <sup>2</sup>	Pressure Drop <sup>3</sup>
35KF	1	0.75	19995 kPa (2900 psig)	1724 kPa (250 psig)	3.4 kPa (0.5 psid)
70KF	3	1.35	19995 kPa (2900 psig)	1724 kPa (250 psig)	4.8 kPa (0.7 psid)
100KF	20	2.8	6895 kPa (1000 psig)	1724 kPa (250 psig)	27.6 kPa (4 psid)
300KF	50	8	4826 kPa (700 psig)	1724 kPa (250 psig)	34.5 kPa (5 psid)
500KF	60	15	4826 kPa (700 psig)	1724 kPa (250 psig)	48.3 kPa (7 psid)
700KF	120	20	4826 kPa (700 psig)	1724 kPa (250 psig)	48.3 kPa (7 psid)
2500KH	300 (1/4")	75	1724 kPa (250 psig)	1724 kPa (250 psig)	17.2 kPa (2.5 psid)
2500KH	500 (1/2")	75	1724 kPa (250 psig)	1724 kPa (250 psig)	17.2 kPa (2.5 psid)
10MH	1000	290	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	0.75	19995 kPa (2900 psig)	1724 kPa (250 psig)	3.4 kPa (0.5 psid)
75KF (Mini-XL)	5	1.35	19995 kPa (2900 psig)	1724 kPa (250 psig)	10.3 kPa (1.5 psid)
300KF (Megaline)	50	8	4826 kPa (700 psig)	1724 kPa (250 psig)	34.5 kPa (5 psid)

<sup>1</sup> Do not use under vacuum. Minimum pressure should be 1 atm (14.7 psia). <sup>2</sup> Pressure limited by standard valves, higher pressures available; please consult your local sales representative. <sup>3</sup> Pressure drop at maximum flow rate and 90 psig (620 kPa) inlet pressure. For a detailed pressure drop curve and other pressures or flows, please consult your local sales representative or visit [www.entegris.com](http://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") <sup>4</sup>	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

<sup>4</sup> Height

## Options

Model	Isolation Valves	GC 300 Manifold	3 Valve Bypass Manifold	5 Valve Bypass Manifold
35KF	Yes		Yes	Yes
70KF	Yes		Yes	
100KF				
300KF	Yes	Yes		
500KF	Yes		Yes	Yes
700KF	Yes			
2500KH	Yes		Yes	Yes
10MH	Included		Yes	

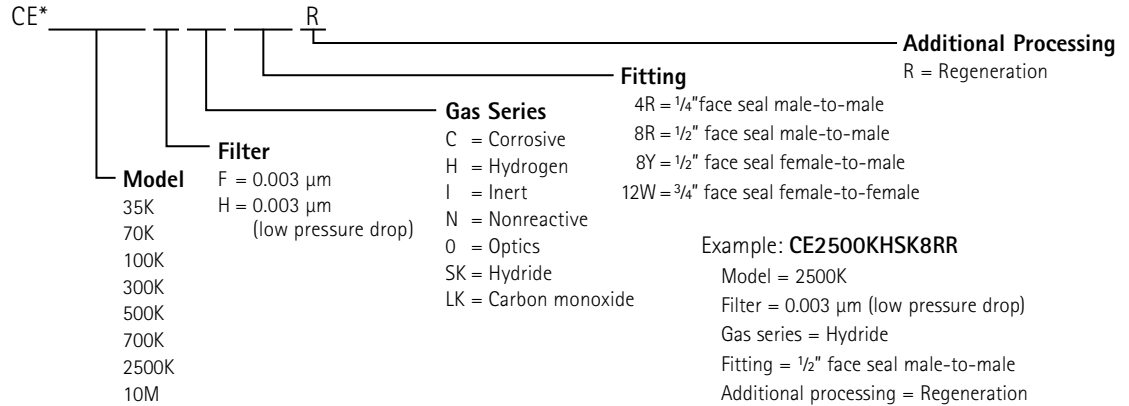
### Drop-in Replacements for Waferpure Purifiers

30KF (Micro)	Yes		Yes	Yes
75KF (Mini-XL)	Yes			
300KF (Megaline)	Yes	Yes		

# Ordering Information

## GateKeeper Hydride 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.*

*Note: This product is considered a dangerous good for shipping purposes under IATA/ICAO regulations.*

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](http://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](http://www.entegris.com) and select the Customer Service link for the center nearest you.

## Terms and Conditions of Sale

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