



GATEKEEPER® HX SERIES GAS PURIFIERS

Superior purity control



**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 Inlet Pressure	13.8 barg(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  
8978 Flanders Drive, San Diego, CA 92121

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www.entegris.com

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# superior purity control

## Overview

GateKeeper® HX series gas purification technology delivers exceptional purity consistency and increased lifetime. It was developed to remove molecular contaminants from hydrogen (H<sub>2</sub>), nitrogen (N<sub>2</sub>) and noble gases to parts-per-trillion levels.

- 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

## Features and Benefits

### Process Control and Protection

- Superior purity control at ppt levels
- Gas purification improves process consistency, increases product yields and lengthens tool life
- Does not release hydrocarbons that may contaminate the process

### Cost Effective

- Regenerable – eliminates disposal issues
- Longer lifetime – fewer changeouts reduce potential contamination events and cost-of-ownership

### 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:	Hydrogen (H <sub>2</sub> ), nitrogen (N <sub>2</sub> ) and noble gases	
Outlet purity:	<100 ppt H <sub>2</sub> O, O <sub>2</sub> , CO, CO <sub>2</sub> and H <sub>2</sub> *	
Outlet particle filtration:	70KF to 17MH	0.003 µm 316L stainless steel
	17M	20 µm 316L stainless steel
Minimum operating pressure:	13.3 kPa (2 psia)	
Leak rating:	1 × 10 <sup>-9</sup> atm cc/sec	
Maximum inlet challenge of contaminant to maintain product efficiency:	Contact Entegris. The maximum inlet challenge varies by contaminant.	
Lifetime:	One (1) year at nominal flow rate at 1 ppm H <sub>2</sub> O inlet challenge	
Maximum operating temperature:	65°C (149°F)	

\*H<sub>2</sub> is removed from N<sub>2</sub> and noble gases only.

## Operating Specifications

Model	Maximum Flow Rate (SLPM)	Nominal Flow Rate (SLPM)	Maximum Operating Pressure Purifier Only	Maximum Operating Pressure Purifier with Options <sup>1</sup>	Pressure Drop <sup>2</sup>
70KF	3	2.8	20096 kPa (2900 psig)	1828 kPa (250 psig)	4.8 kPa (0.7 psid)
80KF	10	3.3	20096 kPa (2900 psig)	1828 kPa (250 psig)	2.8 kPa (0.4 psid)
200KF	20	8.2	6996 kPa (1000 psig)	1828 kPa (250 psig)	2.8 kPa (0.4 psid)
300KF	50	13	4928 kPa (700 psig)	1828 kPa (250 psig)	48.3 kPa (7 psid)
500KF	60	26	4928 kPa (700 psig)	1828 kPa (250 psig)	48.3 kPa (7 psid)
700KF	120	36	4928 kPa (700 psig)	1828 kPa (250 psig)	48.3 kPa (7 psid)
2500KF	300	120	3583 kPa (505 psig)	1828 kPa (250 psig)	96.5 kPa (14 psid)
2500KH	300 (1/4") 500 (1/2")	120	3583 kPa (505 psig)	1828 kPa (250 psig)	27.6 kPa (4 psid) 20.7 kPa (3 psid)
10MH	1000 (1/2") 1500 (3/4")	450	3583 kPa (505 psig)	1828 kPa (250 psig)	62 kPa (9 psid) 35.5 kPa (5.3 psid)
13MH	2000	570	3135 kPa (440 psig)	1828 kPa (250 psig)	3/4"–37.9 kPa (5.5 psid)
17M/MH	2500	725	3135 kPa (440 psig)	1828 kPa (250 psig)	1"–37.9 kPa (5.5 psid)

<sup>1</sup> Pressure limited by standard valves. For higher pressure, please contact Entegris. <sup>2</sup> Pressure drop at maximum flow rate and 620 kPa (90 psig). For detailed pressure drop curves at different pressures and flow rates, please contact Entegris or go to [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 (end-to-end)	Diameter	Fitting Offset
70KF	1/4" face seal	male/male	0.4 kg (0.9 lb)	11.4 cm (4.5")	3.8 cm (1.5")	Centered
80KF	1/4" face seal	male/male	0.5 kg (1.1 lb)	12.7 cm (5.0")	3.8 cm (1.5")	Centered
200KF	1/4" face seal	male/male	0.5 kg (1.1 lb)	16.5 cm (6.5")	5.1 cm (2")	Centered
300KF	1/4" face seal	male/male	1.6 kg (3.5 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
2500KF	1/4" face seal	male/male	5.4 kg (12 lb)	43.9 cm (17.3")	10.2 cm (4")	Centered
2500KH	1/4" face seal 1/2" face seal	male/male	5.4 kg (12 lb)	43.9 cm (17.3") 44.7 cm (17.6")	10.2 cm (4")	Centered
10MH	1/2" face seal 3/4" face seal	female/male male/male	27 kg (59.5 lb) 41 kg (90.3 lb)	97.4 cm (38.36") 143.3 cm (56.4")	15.2 cm (6")	Centered
13MH	3/4" face seal	male/male	23.6 kg (52 lb)	89.6 cm (35.3")	15.2 cm (6")	Centered
17M/MH	1" face seal	male/male	45 kg (99.26 lb)	108.9 cm (42.9")	15.2 cm (6")	Centered

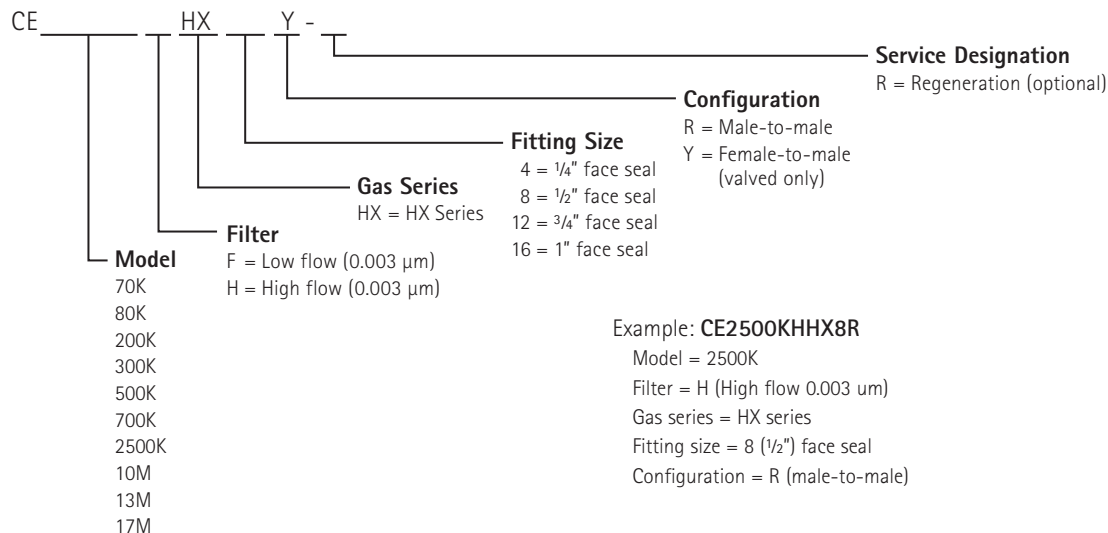
## Options

Model	Isolation Valves	GC 300 Manifold	3-Valve Bypass Manifold	5-Valve Bypass Manifold
70KF, 80KF	Yes		Yes	Yes
200KF	Yes		Yes	Yes
300KF	Yes	Yes		
500KF	Yes		Yes	Yes
700KF	Yes		Yes	
2500KF/KH	Yes		Yes	Yes
10MH	Included		Yes	
13MH	Yes			
17M/MH	Yes			

## Ordering Information

### GateKeeper Gas Purifiers

#### Part Number



Example: **CE2500KHHX8R**  
 Model = 2500K  
 Filter = H (High flow 0.003 μm)  
 Gas series = HX series  
 Fitting size = 8 (1/2") face seal  
 Configuration = R (male-to-male)

Notes: Not all models are available with all gas series or fittings; contact your salesperson for more information.  
 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 [gaspurifiers.entegris.com](http://gaspurifiers.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

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit [www.entegris.com](http://www.entegris.com) and select the Legal Notices link from the footer.

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