



## GATEKEEPER® OPTICS GAS PURIFIERS

*Cost-effective, environmentally friendly gas purification*



# cost-effective, environmentally friendly gas purification

## Overview

Available for low and high-flow applications, GateKeeper® optics gas purifiers are designed for use with CDA (air) and remove H<sub>2</sub>O, volatile bases, volatile acids, condensable organics and refractory compounds to 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 break-through, 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:	CDA (Clean Dry Air), nitrogen and noble gases	
Outlet purity:	<100 ppt H <sub>2</sub> O; <10 ppt volatile bases; <1 ppt volatile acids, condensable organics and refractory compounds	
Outlet particle filtration:	70KF to 10MH	0.003 µm 316L stainless steel
	200M 20 µm	316L stainless steel
Media:	Inorganic	
Maximum differential pressure:	1379 kPa (200 PSID)	
Minimum operating pressure:	101 kPa (14.7 PSIA)	
Leak rating:	70KF to 10M	1 × 10 <sup>-9</sup> atm cc/sec
	200M	4 × 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>
70KF	3	2.3	19995 kPa (2900 PSIG)	1724 kPa (250 PSIG)	4.8 kPa (0.7 PSID)
300KF	50	13.8	4826 kPa (700 PSIG)	1724 kPa (250 PSIG)	34.5 kPa (5 PSID)
500KF	60	27	4826 kPa (700 PSIG)	1724 kPa (250 PSIG)	48.3 kPa (7 PSID)
700KF	120	36	4826 kPa (700 PSIG)	1724 kPa (250 PSIG)	48.3 kPa (7 PSID)
2500KH	500	135	1724 kPa (250 PSIG)	1724 kPa (250 PSIG)	27.6 kPa (2.5 PSID)
10MH	1000	480	1724 kPa (250 PSIG)	1724 kPa (250 PSIG)	1/2" – 62 kPa (9 PSID)
	1000	480	1724 kPa (250 PSIG)	1724 kPa (250 PSIG)	3/4" – 36.5 kPa (5.3 PSID)
200MZ <sup>4,5</sup>	20000	3500	1379 kPa (200 PSIG)	1379 kPa (200 PSIG)	27.6 kPa (4 PSID)

### Drop-in Replacements for Waferpure® Purifiers

75KF (Mini-XL)	5	2.3	19995 kPa (2900 PSIG)	1724 kPa (250 PSIG)	10.3 kPa (1.5 PSID)
300KF (Megaline)	50	13.8	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). <sup>4</sup> This product uses "Z" media; the removal specifications are identical to the "O" media. <sup>5</sup> Model only available for countries that recognize ASTM US standards; not currently CE certified; contact Entegris if needed for EU application. **All product information is subject to change without notice.**

## Facility Specifications

Model	Fitting Sizes	Configuration (inlet/outlet)	Approximate Weight	Length	Diameter	Fitting Offset
70KF	1/4" face seal	male/male	0.4 kg (0.88 lb)	11.4 cm (4.5")	3.8 cm (1.5")	Centered
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
200MZ	2" tube stub	–	454 kg (1000 lb)	165.9 cm (65.3") <sup>6</sup>	111.8 cm (44") <sup>7</sup>	85.9 cm (33.2") <sup>8</sup>

### Drop-in Replacements for Waferpure Purifiers

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>6</sup> Height <sup>7</sup> Depth <sup>8</sup> Width

## Options

Model	Isolation Valves	GC 300 Manifold	3 Valve Bypass Manifold	5 Valve Bypass Manifold	4 Valve Changeover Manifold <sup>9</sup>	8 Valve Changeover Manifold <sup>10</sup>	Moisture Breakthrough Indicator <sup>11</sup>
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

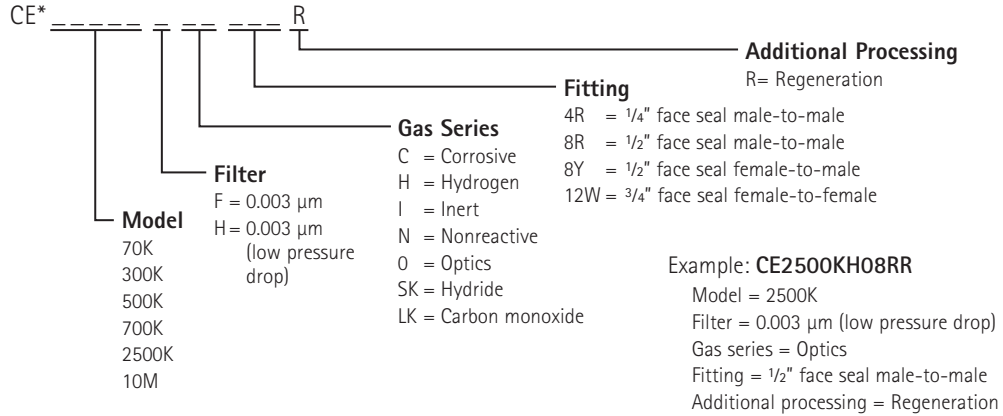
75KF (Mini-XL)	Yes						Yes
300KF (Megaline)	Yes	Yes					Yes

<sup>9</sup> 1/2" Purifier only. <sup>10</sup> 1/4" Purifier only. <sup>11</sup> External to purifier for models 70KF – 700KF.

# Ordering Information

## GateKeeper Gas Purifiers

### Part Number



\*For all models except 200M. To order 200M: SS200MZ

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

Note: If you have an older Mykrolis® Micro or Mini-XL purifier, specify drop-in replacement 300K or 75K.

For detailed product information including dimensional drawings, pressure drop curves, safety information 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 with the exception of model 200M 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.

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