



GATEKEEPER® OPTICS 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 Δ Pressure | 13.8 barg(1.38 Mpa) (200 PSID) |
| Max Temp | 65° C (150° F) |
| Date Mfr | June 2006 |
| Date Install | |
| Date Regeneration | |

MINIMIZE EXPOSURE TO ATMOSPHERE
FOR USE WITH N₂, He, Ne, Kr, Xe, Ar
HALOCARBONS, LIGHT HYDROCARBONS
DO NOT USE WITH O₂, CDA (AIR), NFS, SF₆

Made in USA
8715 Flanders Drive, San Diego, CA 92121

Flow ↓

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Overview

Available for low and high-flow applications, GateKeeper® optics gas purifiers are designed for use with CDA (air) and remove H₂O, 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 ₂ 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 ⁻⁹ atm cc/sec |
| | 200M | 4 × 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 |
|----------------------|--------------------------|--------------------------|---|---|----------------------------|
| 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 ^{4,5} | 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) |

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 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. ⁴ This product uses "Z" media; the removal specifications are identical to the "O" media. ⁵ 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") ⁶ | 111.8 cm (44") ⁷ | 85.9 cm (33.2") ⁸ |

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 |

⁶ Height ⁷ Depth ⁸ Width

Options

| Model | Isolation Valves | GC 300 Manifold | 3 Valve Bypass Manifold | 5 Valve Bypass Manifold | 4 Valve Changeover Manifold ⁹ | 8 Valve Changeover Manifold ¹⁰ | Moisture Breakthrough Indicator ¹¹ |
|--------|------------------|-----------------|-------------------------|-------------------------|--|---|---|
| 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

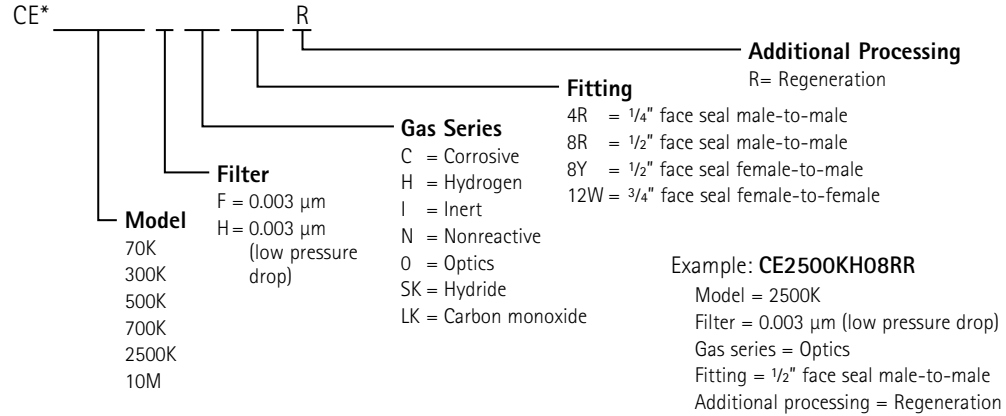
| | | | | | | | |
|------------------|-----|-----|--|--|--|--|-----|
| 75KF (Mini-XL) | Yes | | | | | | Yes |
| 300KF (Megaline) | Yes | Yes | | | | | Yes |

⁹ 1/2" Purifier only. ¹⁰ 1/4" Purifier only. ¹¹ 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. 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 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 and select the Legal Notices link from the footer.

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