

GateKeeper® GPU HX Media Gas Purifiers

Superior purity control

Entegris' GateKeeper® GPU gas purifiers were designed to improve purity consistency, lifetime, and final purity in microelectronics applications where high-purity gas is critical. Leveraging our expertise in material science, we have developed a new generation of HX gas purification products that deliver unsurpassed value and performance.



APPLICATIONS

- Semiconductor
- LED
- Data storage
- Solar
- Flat panel display

FEATURES & BENEFITS

| | |
|---------------------------------------|--|
| Process control and protection | Purity control below part-per-billion (ppb) levels Low pressure drop through the purifier CE certified to the Pressure Equipment Directive (PED) Manufactured in an ISO® 9001:2015 facility |
| Cost effective | Regenerable – eliminates disposal issues and costs Long lifetime – improves cost of ownership |
| Safe and simple to use | Uses ambient temperature purification – no heat or power required to operate Insensitive to orientation (horizontal/vertical) |

GENERAL SPECIFICATIONS

| | | |
|----------------------------------|--|----------------------|
| Gases purified | H ₂ , D ₂ , N ₂ , Ar, He, Ne, Kr, Xe, H ₂ /N ₂ , H ₂ /Noble gases | |
| Impurities removed | CONTAMINANTS | OUTLET PURITY |
| | H ₂ O | <100 pptV |
| | O ₂ | <100 pptV |
| | CO | <100 pptV |
| | CO ₂ | <100 pptV |
| Outlet particle filter | Wafergard® — 316 stainless steel membrane, 20 µm or 0.0015 µm | |
| Lifetime | <p>One year with inlet challenge of 1 ppm moisture, 1 ppm oxygen, with flow rates shown on the next page.</p> <p>The lifetime varies with the inlet impurities and flow rate. Contact Entegris for application specific lifetime calculations.</p> | |
| Regenerable | Yes | |
| Dangerous goods (DG) | Yes, UN3190, Class 4.2 | |
| Operating temperature | 0° – 65°C (32° – 149°F) | |
| Leak rating | 1 × 10 ⁻⁹ atm cc/sec of He | |
| Materials of construction | Housing: 316L stainless steel | |
| Certification | <p>CE certified to the Pressure Equipment Directive (PED)</p> <p>Designed in accordance with ASME®</p> | |

OPERATING SPECIFICATIONS

| Model | Maximum flow rate | Lifetime is 1 year at this flow rate, with 1 ppm moisture and 1 ppm oxygen | Maximum operating pressure – purifier only | Maximum operating pressure – purifier with options | Pressure drop, with 20 µm particle filter* | Pressure drop, with 0.0015 µm particle filter* |
|-------------|-------------------|--|--|--|--|--|
| GPU 35 | 1 slpm | 0.7 slpm | 1,400 psig | 250 psig | – | 0.3 psid |
| GPU 70 | 5 slpm | 1.0 slpm | 1,400 psig | 250 psig | – | 0.5 psid |
| GPU 80 | 10 slpm | 1.2 slpm | 1,400 psig | 250 psig | – | 1.0 psid |
| GPU 100 | 20 slpm | 1.7 slpm | 1,000 psig | 250 psig | – | 16.7 psid |
| GPU 200 | 20 slpm | 2.8 slpm | 800 psig | 250 psig | – | 0.7 psid |
| GPU 300 | 50 slpm | 4.2 slpm | 800 psig | 250 psig | – | 1.3 psid |
| GPU 500 | 75 slpm | 8.0 slpm | 600 psig | 250 psig | – | 1.3 psid |
| GPU 700 | 120 slpm | 12.0 slpm | 600 psig | 250 psig | – | 1.8 psid |
| GPU 2500 4R | 300 slpm | 45.0 slpm | 505 psig | 250 psig | – | 5.0 psid |
| GPU 2500 8R | 500 slpm | 45.0 slpm | 505 psig | 250 psig | – | 5.6 psid |
| GPU 3000 | 500 slpm | 52.5 slpm | 505 psig | 250 psig | – | 5.6 psid |
| GPU 5000 | 500 slpm | 85.0 slpm | 505 psig | 250 psig | – | 7.0 psid |
| GPU 10M 8R | 1,000 slpm | 170.0 slpm | 370 psig | 250 psig | – | 5.8 psid |
| GPU 10M 12R | 1,000 slpm | 170.0 slpm | 370 psig | 250 psig | – | 8.0 psid |
| GPU 13M 12R | 2,000 slpm | 210.0 slpm | 370 psig | 250 psig | 2.0 psid | – |
| GPU 13M 16R | 2,500 slpm | 210.0 slpm | 370 psig | 250 psig | 3.0 psid | – |
| GPU 17M 12R | 2,000 slpm | 270.0 slpm | 370 psig | 250 psig | 2.0 psid | – |
| GPU 17M 16R | 2,500 slpm | 270.0 slpm | 370 psig | 250 psig | 3.0 psid | – |
| GPU 20M 12R | 2,000 slpm | 320.0 slpm | 370 psig | 250 psig | – | 19.0 psid |
| GPU 20M 16R | 2,500 slpm | 320.0 slpm | 370 psig | 250 psig | – | 19.0 psid |

*Purifier only at maximum flow rating with 90 psig inlet pressure

FACILITY SPECIFICATIONS

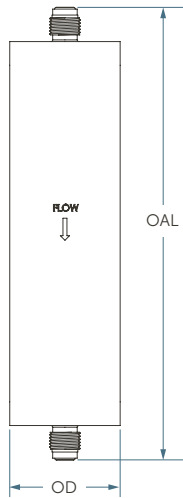
| GPU model | Connection size (VCR) | Inlet/outlet connection type (VCR) | Outside Diameter (OD) | Overall length (OAL) | Approximate weight |
|-------------|-----------------------|------------------------------------|-----------------------|----------------------|--------------------|
| GPU 35 | ¼" | Male/male | 38.1 mm (1.5") | 84 mm (3.3") | 0.3 kg (0.7 lbs) |
| GPU 70 | ¼" | Male/male | 38.1 mm (1.5") | 114 mm (4.5") | 0.3 kg (0.7 lbs) |
| GPU 80 | ¼" | Male/male | 38.1 mm (1.5") | 127 mm (5.0") | 0.3 kg (0.7 lbs) |
| GPU 100 | ¼" | Male/male | N/A | 84 mm (3.3") | 0.9 kg (2.0 lbs) |
| GPU 200 | ¼" | Male/male | 50.8 mm (2.0") | 157 mm (6.2") | 0.9 kg (2.0 lbs) |
| GPU 300 | ¼" | Male/male | 50.8 mm (2.0") | 208 mm (8.2") | 1.1 kg (2.5 lbs) |
| GPU 500 | ¼" | Male/male | 76.2 mm (3.0") | 201 mm (7.9") | 1.8 kg (4.0 lbs) |
| GPU 700 | ¼" | Male/male | 76.2 mm (3.0") | 254 mm (10.0") | 2.5 kg (5.5 lbs) |
| GPU 2500 4R | ¼" | Male/male | 101.6 mm (4.0") | 439 mm (17.3") | 6.8 kg (15 lbs) |
| GPU 2500 8R | ½" | Male/male | 101.6 mm (4.0") | 445 mm (17.5") | 6.8 kg (15 lbs) |
| GPU 3000 | ½" | Male/male | 101.6 mm (4.0") | 508 mm (20.0") | 7.3 kg (16 lbs) |
| GPU 5000 | ½" | Male/male | 101.6 mm (4.0") | 785 mm (30.9") | 10.0 kg (22 lbs) |
| GPU 10M 8R | ½" | Male/male | 152.4 mm (6.0") | 737 mm (29.0") | 20 kg (44 lbs) |
| GPU 10M 12R | ¾" | Male/male | 152.4 mm (6.0") | 749 mm (29.5") | 21.8 kg (48 lbs) |
| GPU 13M 12R | ¾" | Male/male | 152.4 mm (6.0") | 892 mm (35.1") | 24.9 kg (55 lbs) |
| GPU 13M 16R | 1" | Male/male | 152.4 mm (6.0") | 899 mm (35.4") | 24.9 kg (55 lbs) |
| GPU 17M 12R | ¾" | Male/male | 152.4 mm (6.0") | 1085 mm (42.7") | 29.5 kg (65 lbs) |
| GPU 17M 16R | 1" | Male/male | 152.4 mm (6.0") | 1090 mm (42.9") | 29.5 kg (65 lbs) |
| GPU 20M 12R | ¾" | Male/male | 152.4 mm (6.0") | 1290 mm (50.8") | 34 kg (75 lbs) |
| GPU 20M 16R | 1" | Male/male | 152.4 mm (6.0") | 1296 mm (51.0") | 34 kg (75 lbs) |

FACILITY SPECIFICATIONS, PURIFIERS WITH ISOLATION VALVES

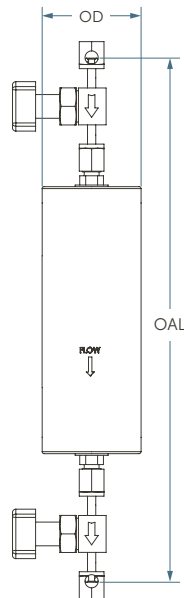
| GPU model | Connection size (VCR) | Inlet/outlet connection type (VCR) | Outside Diameter (OD) | Overall length (OAL) with valves | Approximate weight with valves |
|------------------|-----------------------|------------------------------------|-----------------------|----------------------------------|--------------------------------|
| GPU 35 | ¼" | Female/female | 38.1 mm (1.5") | 234 mm (9.2") | 1.2 kg (2.6 lbs) |
| GPU 70 | ¼" | Female/female | 38.1 mm (1.5") | 264 mm (10.4") | 1.3 kg (2.9 lbs) |
| GPU 80 | ¼" | Female/female | 38.1 mm (1.5") | 277 mm (10.9") | 1.3 kg (2.9 lbs) |
| GPU 100 | ¼" | Female/female | N/A | 234 mm (9.2") | 1.3 kg (2.9 lbs) |
| GPU 200 | ¼" | Female/female | 50.8 mm (2.0") | 307 mm (12.1") | 1.7 kg (3.7 lbs) |
| GPU 300 | ¼" | Female/female | 50.8 mm (2.0") | 358 mm (14.1") | 1.8 kg (3.8 lbs) |
| GPU 300 (GC 300) | ¼" | Female/male | 83.8 mm (3.3") | 401.3 mm (15.8") | 2.3 kg (5.1 lbs) |
| GPU 500 | ¼" | Female/female | 76.2 mm (3.0") | 351 mm (13.8") | 2.7 kg (6.0 lbs) |
| GPU 700 | ¼" | Female/female | 76.2 mm (3.0") | 404 mm (15.9") | 4.4 kg (9.6 lbs) |
| GPU 2500 4R | ¼" | Female/female | 101.6 mm (4.0") | 592 mm (23.3") | 6.8 kg (15 lbs) |
| GPU 2500 8R | ½" | Female/female | 101.6 mm (4.0") | 714 mm (28.1") | 8.0 kg (17.7 lbs) |
| GPU 3000 | ½" | Female/female | 101.6 mm (4.0") | 777 mm (30.6") | 8.5 kg (18.7 lbs) |
| GPU 5000 | ½" | Female/female | 101.6 mm (4.0") | 1054 mm (41.5") | 12.5 kg (27.6 lbs) |
| GPU 10M 8R | ½" | Female/male | 152.4 mm (6.0") | 970 mm (38.2") | 22.5 kg (49.6 lbs) |
| GPU 10M 12R | ¾" | Female/female | 152.4 mm (6.0") | 1125 mm (44.3") | 24.9 kg (55.0 lbs) |
| GPU 13M 12R | ¾" | Female/female | 152.4 mm (6.0") | 1270 mm (50.0") | 28.1 kg (62.0 lbs) |
| GPU 13M 16R | 1" | Female/female | 152.4 mm (6.0") | 1308 mm (51.5") | 29.5 kg (65.0 lbs) |
| GPU 17M 12R | ¾" | Female/female | 152.4 mm (6.0") | 1461 mm (57.5") | 32.7 kg (72.0 lbs) |
| GPU 17M 16R | 1" | Female/female | 152.4 mm (6.0") | 1499 mm (59.0") | 34.0 kg (75.0 lbs) |
| GPU 20M 12R | ¾" | Female/female | 152.4 mm (6.0") | 1666 mm (65.6") | 37.2 kg (82.0 lbs) |
| GPU 20M 16R | 1" | Female/female | 152.4 mm (6.0") | 1705 mm (67.1") | 38.6 kg (85.0 lbs) |

DIMENSIONS

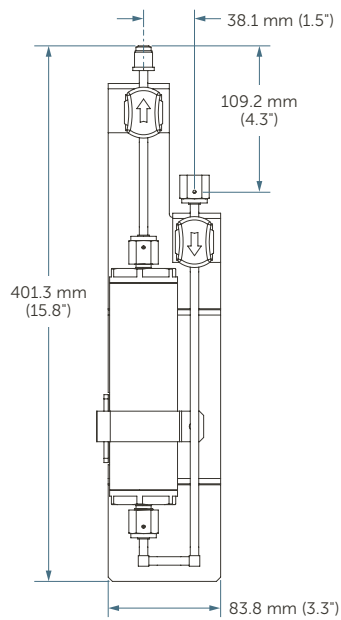
Purifier Only



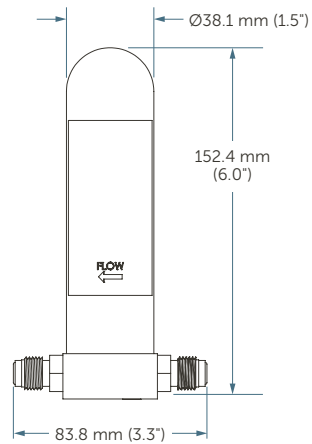
Purifier with Isolation Valves



GPU 300 with GC 300 Manifold

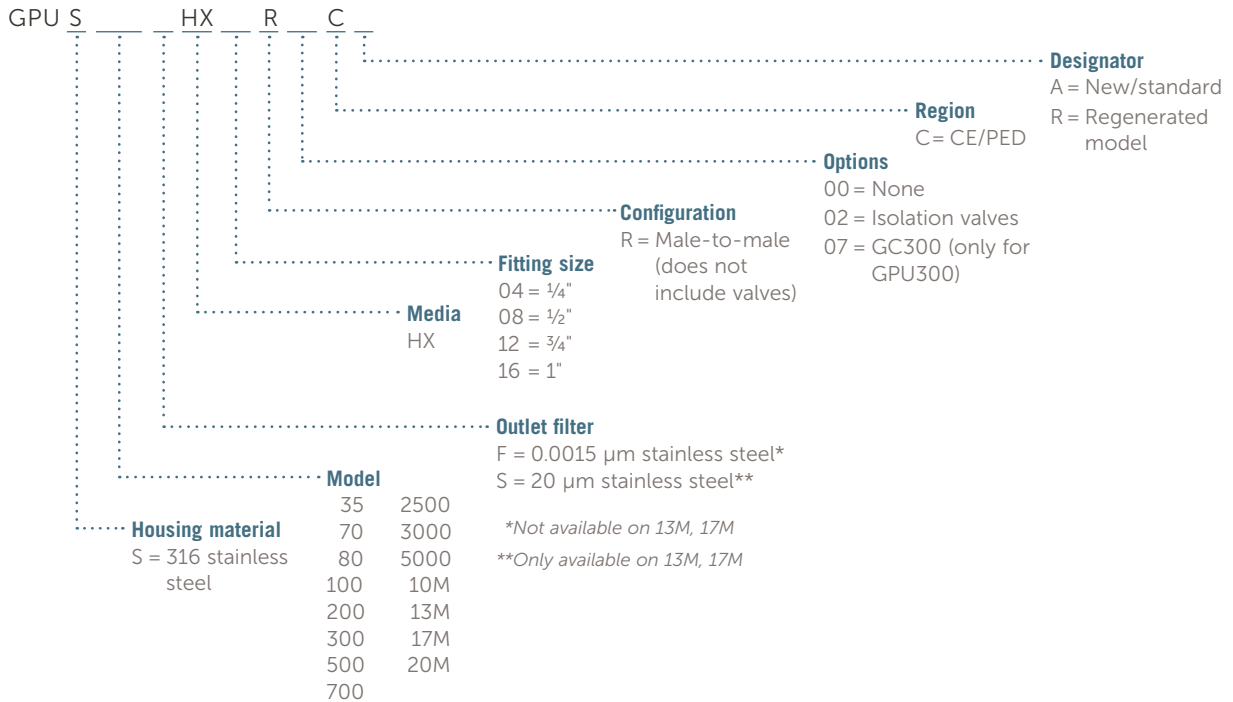


GPU 100



ORDERING INFORMATION

GateKeeper GPU HX Media Gas Purifiers: part number



REGENERATION



REGEN, REDUCE, REUSE

[Contact](#) your local regeneration center:

ADDITIONAL OPTIONS

BYPASS ASSEMBLIES: This assembly contains additional valves and piping so the process gas can bypass around the purifier. Entegris offers 3 and 5 valve bypass assemblies for many of our standard GPU Gas Purifiers (sold separately).

BREAK THRU INDICATOR (BTI): Detects moisture downstream of a purifier and notifies the customer that a replacement or regeneration is required.

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit entegris.com and select the [Contact Us](#) link to find the customer service center nearest you.

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