# Glass-Mate™ Cartridges

## Absolute and economical filtration with pleated microfiberglass cartridges

Parker's Glass-Mate™ cartridges offer an economical choice for absolute-rated efficiency, high flow rate capability and long service life. A wide variety of construction components, end fittings and seal options make this product line ideal for prefiltration and point-of-use filtration for many industrial applications.

Glass-Mate cartridges are available in 0.45, 1, 2, 3, 5, 10, 20 and 40µm absolute-rated pore sizes.

## Benefits

- Absolute-rated media provides reliable removal efficincy
- Thermal bonding eliminates particle bypass
- Laminated media/support layer maximizes flow capacity and media utilization and minimizes media migration
- Variety of construction/seal options for increased compatibility
- End fitting options provide competitive housing retrofit capability
- All FDA listed components biosafe per USP Class V1-121°C Plastic Tests allows filtration of edible and potable liquids
- High surface area yields high flow rate, low differential pressure
- Non-fiber-releasing media with minimal extractables provides high purity filtrate

## Applications

- Chemicals
- Coatings
- Water
- R.O. prefiltration

# Glass-Mate™ Cartridges

## SPECIFICATIONS

**Materials of Construction:**
Filter Medium: Borosilicate microfiber-glass with acrylic binder
Support/Drainage Layers: Spunbonded polyester; laminated on the down-stream side

**Recommended Operating Conditions:**
**Maximum Temperatures**
Glass Filled Polypropylene
200°F @ 35ΔP (93°C/2.4 bar)
Polyester
140°F @ 35ΔP (60°C/2.4 bar)
Stainless Steel
275°F @ 35ΔP (135°C/2.4 bar)
Changeout Differential Pressure
35 psi (2.4 bar)
Maximum Flow Rate
10 gpm per 10 in length
(38 lpm/254 mm)
Design Flow Rate
2.5 gpm per 10 in length
(9.5 lpm/254 mm)

**Effective Filtration Area:**
5 $ft^2$/10 in (0.46 $m^2$/254 mm) minimum

**Maximum Differential Pressure:**
Glass-Filled Polypropylene
90 psi @ 75°F (6.2 bar/24°C)
Polyester
70 psi @ 75°F (4.8 bar/24°C)

**Biological Safety/Product Purity:**
Meets USP XXIV Class VI safety requirements for plastics
All components FDA listed per CFR, Title 21
Non-fiber releasing per FDA

**Sterilization/Sanitization:**
Hot water ("F" construction):
180°F (82°C) for 30 minutes at maximum 15 psid (1 bar).
In-Line Steam/Autoclave
("F" construction with stainless steel sleeve) 60 minutes at 255°F (140°C) at 2 psid (0.14 bar) maximum pressure.

**GlassMate Flow Factor (psid/gpm @ 1 cks)**

| Rating (µm) | Flow Factor |
|---|---|
| *0.45* | *.108* |
| *1* | *.102* |
| *2* | *.095* |
| *3* | *.090* |
| *5* | *.072* |
| *10* | *.060* |
| *20* | *.042* |
| *40* | *.018* |

**Flow Rate and Pressure Drop Formulas**

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

**Notes:**

1. Clean ΔP is PSI differential at start.
2. Viscosity is centistokes. Use Conversion Tables for other units.
3. Flow Factor is ΔP/GPM at 1 cks for 10 in (or single).
4. Length Factors convert flow or ΔP from 10 in (single length) to required cartridge length.

■ **Liquid Particle Retention Ratings (µm)@ Removal Efficiency of:**

| Cartridge | ß = 5000 Absolute | ß = 1000 99.9% | ß = 100 99% | ß = 20 95% | ß = 10 90% |
|---|---|---|---|---|---|
| PMG004 | 0.45 | 0.3 | <0.1 | <0.1 | <0.1 |
| PMG010 | 1.0 | 0.6 | 0.2 | <0.1 | <0.1 |
| PMG020 | 2.0 | 1.2 | 0.4 | 0.2 | 0.1 |
| PMG030 | 3.0 | 1.8 | 0.6 | 0.3 | 0.2 |
| PMG050 | 5 | 3 | 1.3 | 0.5 | 0.4 |
| PMG100 | 10 | 7 | 3.5 | 1.6 | 1.2 |
| PMG200 | 20 | 16 | 8 | 4 | 2.5 |
| PMG400 | 40 | 32 | 20 | 11 | 8 |

# Glass-Mate™ Cartridges

## Ordering Information

**PMG** [ ] — [ ] [ ] [ ] — [ ] [ ]

**Particle Removal Rating**

| CODE | (µm) |
|---|---|
| 002 | 0.2 |
| 004 | 0.45 |
| 010 | 1.0 |
| 020 | 2.0 |
| 050 | 5.0 |
| 100 | 10 |
| 200 | 20 |
| 400 | 40 |

**Nominal Length**

| CODE | LENGTH (mm) |
|---|---|
| 9 | 9 5/8" (244) |
| 10 | 9 13/16" (249) |
| 19 | 19 5/8" (498) |
| 20 | 19 15/16" (506) |
| 29 | 29 1/4" (743) |
| 30 | 30 1/16" (764) |
| 39 | 39" (991) |
| 40 | 40" (1016) |

**Support Construction**

| CODE | DESCRIPTION |
|---|---|
| F | Glass Filled Polypropylene (core only) |
| P | Polyester |

**Seal Material**

| CODE | DESCRIPTION |
|---|---|
| P | Polyethylene Foam (DOE Gasket Only) |
| E | EPR |
| N | Buna-N |
| S | Silicone |
| V | Viton* |
| X | No Seal Material |

**End Cap Configuration**

| CODE | DESCRIPTION |
|---|---|
| AR | 020 O-ring/Recessed Cap |
| DO | Double Open End (DOE) |
| DX | DOE With Core Extender |
| LL** | 120 O-ring/Recessed Cap |
| LR** | 120 O-ring/Recessed Cap |
| OB | Std. open end / Polypro Spring Closed End |
| PR** | 213 O-ring/Recessed Cap |
| SC | 226 O-ring/Flat Cap |
| SF | 226 O-ring/Fin |
| TC | 222 O-ring/Flat Cap |
| TF | 222 O-ring/Fin |
| TX | 222 O-ring/Flex Fin |
| XB | Ext. core open end/ Polypro Spring Closed End |
| SSC | S.S. Inserted 226 O-ring/Closed |
| SSF | S.S. Inserted 226 O-ring/Fin |
| STC | S.S. Inserted 222 O-ring/Closed |
| STF | S.S. Inserted 226 O-ring/Fin |

** Available only in 9 5/8" (-9) and 19 5/8" (-19 lengths)

**Special Options**

| CODE | DESCRIPTION |
|---|---|
| Z6 | Individual Poly Bag only |
| Z15 | Individual Poly Bag 15/ctn. (20", 30", 40") (PXD only) |
| Z30 | Individual Poly bag 30/ctn. (10") |

Specifications are subject to change without notification.
*Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.


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ENGINEERING **YOUR** SUCCESS.