

Planargard[®] NMB Bulk CMP Filters

Advanced node CMP slurry filtration with leading-edge nanofiber continuous melt-blown technology

Entegris' extensive CMP process knowledge and product innovation focus enabled the development of Planargard[®] NMB filters to address bulk CMP filtration challenges. The Planargard NMB CMP slurry filter is constructed of an advanced polypropylene membrane technology that produces a nanofiber continuous melt-blown (NMB) fiber in-depth media structure. The NMB technology enables yield improvement in bulk chemical distribution system (BCDS) applications at advanced nodes.

To meet all your CMP application needs, our extensive product portfolio includes Planargard NMB filters with retention ratings from 0.03 up to 0.5 μm, and Planargard NMB Plus filters with retention ratings from 0.7 up to 20 μm. Both models are available in 10", 20", 30", and 40" cartridge lengths.

Nanofiber Continuous Melt-blown Technology

Planargard NMB filters contain nanofibers and multilayer NMB media for an improved flow path with high retention. The large gradient design can maximize particle-loading capacity and reduce face-velocity due to increased media porosity, providing long-lasting filter performance without compromising filter retention performance.

Target Application

- Ceria and colloidal silica bulk slurry filtration
- Sub-fab CDS filtration



FEATURES & BENEFITS

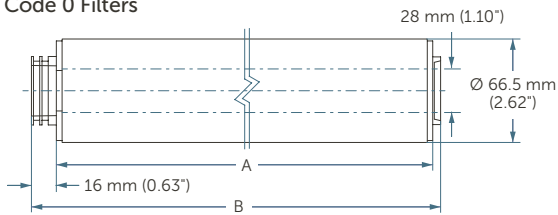
| | |
|--|--|
| Low shear filtration | <p>Enables high retention performance for bulk chemical distribution system (BCDS) applications at advanced nodes</p> <p>Prevents filtered slurry to re-agglomerate after aging</p> |
| Improved nanofiber continuous melt-blown technology | <p>Provides superior defect reduction performance in next-generation CMP slurry</p> <p>Reduces slurry large particle count (LPC), which in turn minimizes the probability of micro-scratching during polishing</p> |
| Optimized graded depth structure | <p>Longer-lasting filter performance</p> <p>Increased particle-holding capacity</p> <p>Lower face-velocity due to increased media porosity</p> |
| High-volume filter manufacturing | <p>Consistently high-quality performance</p> <p>More efficient process with shortened lead time to customers</p> |

SPECIFICATIONS

| | | |
|-------------------------------------|--|---|
| Materials | Membrane | Polypropylene |
| | Support | Polypropylene |
| | Cartridge O-ring | EPR, FKM, Silicone, 2-222 |
| Retention rating | Planargard NMB | 0.03, 0.05, 0.07, 0.1, 0.3, 0.5 μm |
| | Planargard NMB Plus | 0.7, 1, 3, 5, 7, 9, 10, 20 μm |
| Maximum operating conditions | Maximum temperature: | 80°C (176°F) |
| | Maximum forward differential pressure: | 0.48 MPa (4.8 bar, 70 psi) @ 25°C (77°F) |

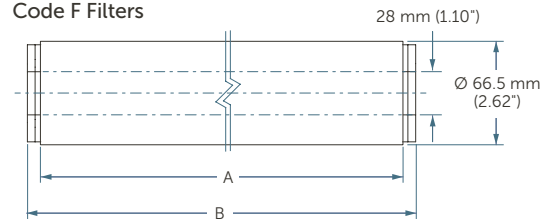
DIMENSIONS

Code O Filters



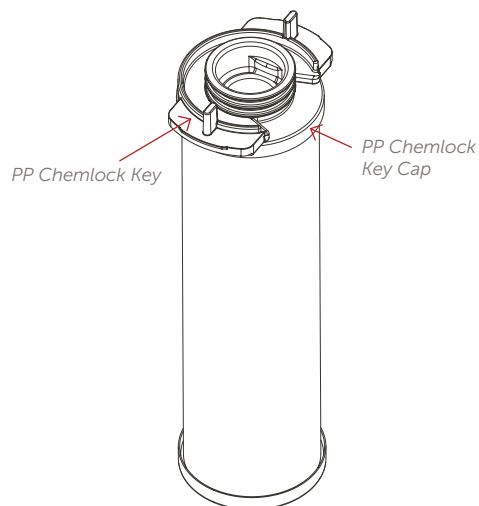
| Length | A | B |
|--------|--|--|
| 10" | 240 mm \pm 2 mm (9.45" \pm 0.08") | 263 mm \pm 2 mm (10.35" \pm 0.08") |
| 20" | 494 mm \pm 2 mm (19.45" \pm 0.08") | 517 mm \pm 2 mm (20.35" \pm 0.08") |
| 30" | 748 mm \pm 3 mm (29.45" \pm 0.12") | 771 mm \pm 3 mm (30.35" \pm 0.12") |
| 40" | 1002 mm \pm 3 mm (39.45" \pm 0.12") | 1024 mm \pm 3 mm (40.31" \pm 0.12") |

Code F Filters



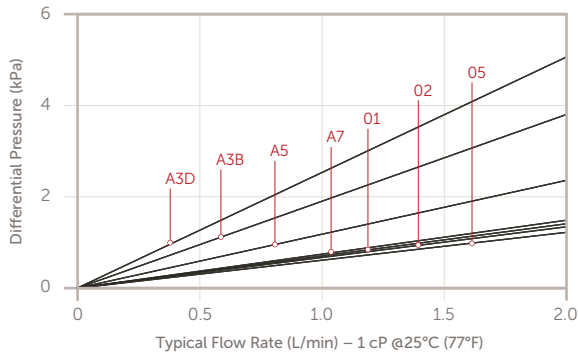
| Length | A | B |
|--------|--|--|
| 10" | 240 mm \pm 2 mm (9.45" \pm 0.08") | 251 mm \pm 2 mm (9.88" \pm 0.08") |
| 20" | 494 mm \pm 2 mm (19.45" \pm 0.08") | 505 mm \pm 2 mm (19.88" \pm 0.08") |
| 30" | 748 mm \pm 3 mm (29.45" \pm 0.12") | 758 mm \pm 3 mm (29.84" \pm 0.12") |
| 40" | 1002 mm \pm 3 mm (39.45" \pm 0.12") | 1013 mm \pm 3 mm (39.88" \pm 0.12") |

View of PP Chemlock® Key on Cartridge

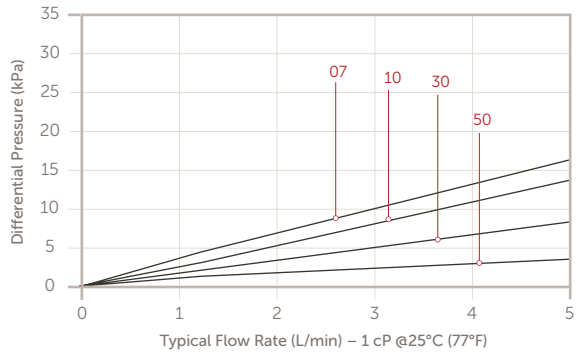


PERFORMANCE DATA

Planargard NMB 10" Cartridge Filters



Planargard NMB Plus 10" Cartridge Filters



Planargard NMB Plus II 10" Cartridge Filters

