Performance Engineered Air Filter Products

Columbus Industries, Inc.

50 YEARS Columbus Industries, Inc. 1965–2015

CI MICRO SHIELD® 4V-Cell Filters MERV 16/16A

Best in Class for Energy Savings

CI MICRO SHIELD® V-Cell Filters are engineered with superior performance criteria in all facets of filtration including efficiency, resistance and dust-holding capacity to address today's challenging HVAC system requirements. As a part of the most advanced and innovative line of HVAC filtration products, the CI MICRO SHIELD® V-Cell Filters combine an excellent initial and lifecycle resistance with a high dust-holding capacity. This combination provides optimum filter performance — creating the energy and operating cost savings desired in the demanding HVAC market. ***A low initial resistance allows the replacement of many MERV 16 and lower efficiency competitive filters.*** *Easier handling means less cost of installation and removal. The CI MICRO SHIELD® V-Cell Filters are backed by the outstanding customer service and on-time delivery that customers have come to expect from Columbus Industries.*

Description and Benefits

The CI MICRO SHIELD® V-Cell Filters are high-efficiency air filters designed to handle virtually any HVAC application. Each filter utilizes a technologically advanced dual density media that incorporates a dual-layer, gradient-density hybrid fiber structure that results in exceptionally low airflow resistance, at the highest efficiency levels – reducing both energy and operating costs.

The CI MICRO SHIELD® V-Cell Filters are engineered to protect both expensive HVAC equipment and people from dirty air and its damaging effects. The user-friendly filter is also lightweight, durable and easy to install. The new design also includes molded finger grips for easy installation and handling. The V-Cell Filters are available in both gasketed and non-gasketed versions.

Our specially engineered media is formed into a self-supporting pleat pack that employs glue bead separators for added strength. Each pleat pack is then sealed into an all-plastic, molded frame. This plastic frame utilizes a positive seal, interlocking design with heavy, molded-in lift handles. Also molded into each frame are spring type mounting clip holes, dedicated upstream pre-filter mounting clip locations and solid header surfaces for upstream, downstream and side-to-side gasket applications. Each stage of our assembly process is quality controlled to ensure the performance, consistency and durability of each filter. These design and construction features combine to produce the industry leading performance in airflow, efficiency and dust-loading uniformity.

Looking for LEED certification? The CI MICRO SHIELD® V-Cell Filters are the perfect solution if you want to specify or upgrade your current filtration to meet LEED certification requirements. With these high performance filters, your facility can gain points toward LEED certification — also there are tax incentives for LEED's program. The CI MICRO SHIELD® 16/16A Filters meet efficiency standards outlined in the LEED program for new construction and existing buildings.

Quick Facts

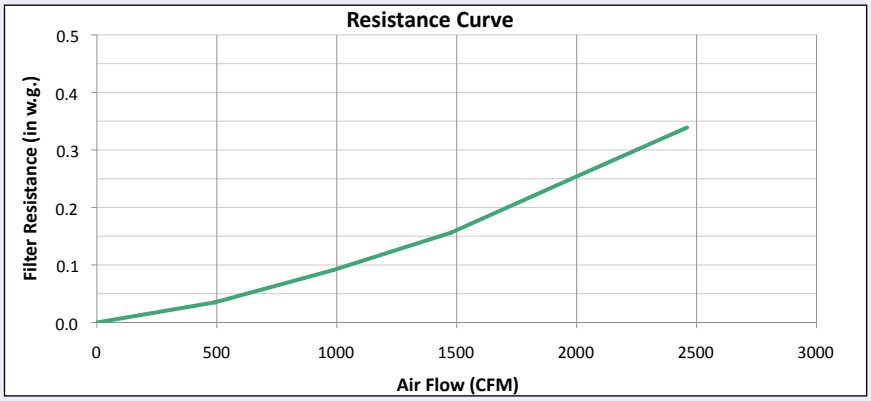
Features:
- Fully incinerable
- Provides lower energy consumption
- Provides lower operating cost especially in VAV systems
- Meets requirements for LEED certification
- Provides an economical and high efficiency upgrade with less energy consumption

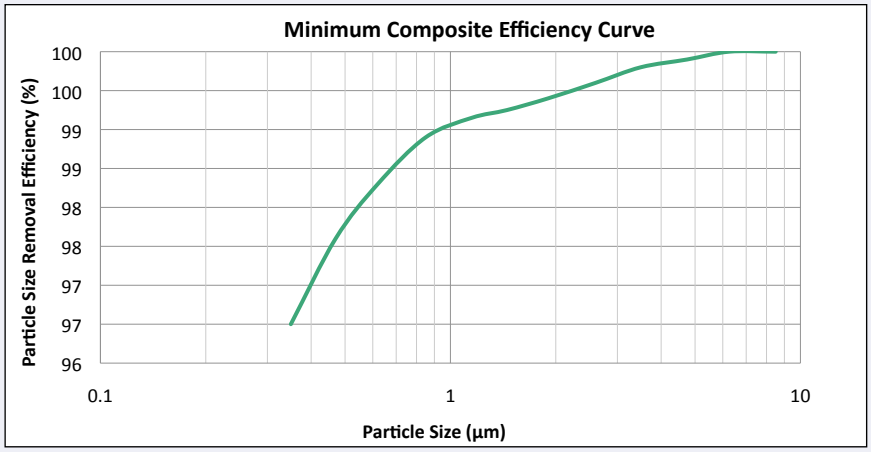
Applications:
- Commercial and industrial facilities
- Government and educational facilities
- Paint booth/finishing
- Hospitals, research labs and pharmaceuticals
- Airports
- Electrical manufacturing
- Power generators

Technical Information:
- Available in 12 X 24 X 12, 20 X 24 X 12 and 24 X 24 X 12
- Tested in accordance with ASHRAE Test Standard 52.2-2007
- Tested in accordance with ASHRAE Test Standard 52.2-2007 Appendix J conditioning step
- UL Standard 900 tested and approved
- Temperature rated up to 160˚F
- Newly designed all-plastic frame is fully incinerable and features:
  - Strong lift handles/finger grips
  - Downstream mounting clip holes
  - Upstream pre-filter clip locations
  - Solid header surfaces for gasket applications
  - Positive gasket seals
  - Available with and without gaskets

CI MICRO SHIELD®
4V-Cell Filters

Filter Size Nominal	Filter Size Exact	Rated Airflow Capacity (CFM)		Initial Airflow Resistance (in w.g.)		Media Area
		Med	High	Med	High	
12 X 24 X 12	11-3/8 X 23-3/8 X 11-1/2	1000	1250	0.28	0.38	60
20 X 24 X 12	19-3/8 X 23-3/8 X 11-1/2	1670	2080	0.28	0.38	110
24 X 24 X 12	23-3/8 X 23-3/8 X 11-1/2	2000	2500	0.28	0.38	135





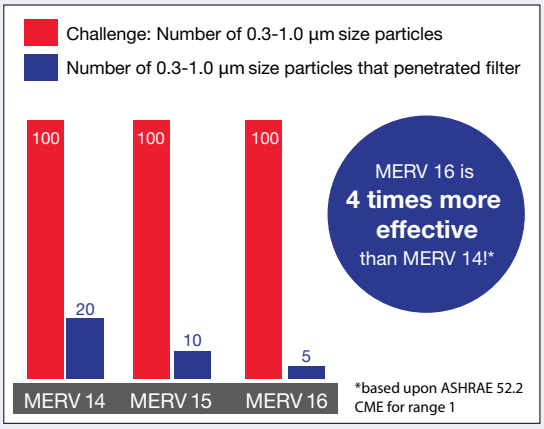
Slotted frames allow for easy pre-filter attachment to the V-cell

Mounting clip location and finger grips for ease of installation

Strong built-in handle for ease of installation

	CI Micro-Shield 4V V-cell	Industry Average 4V V-cell			
Media Type	**Synthetic**	**Synthetic**	**Glass**	**Glass**	**Glass**
MERV	16/16A	16	16	15	14
Lifecycle Months	12	12	12	12	12
Initial Resistance	0.28	0.31	0.60	0.50	0.34
Average Resistance	0.33	0.41	0.80	0.67	0.45
Final Resistance	0.56	0.62	1.20	1.00	0.68
Energy Cost	$85.00	$94.00	$182.00	$152.00	$103.00
Energy Savings using Columbus Industries Products	-	**$9.00**	**$97.00**	**$67.00**	**$18.00**

Based on double the initial static pressure for service life



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