



MICRO SHIELD® ZERO-BYPASS™

4V-Cell Mini-Pleat Filters



CI **MICRO SHIELD®** Mini-Pleated 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 CI's advanced and innovative line of HVAC filtration products, **MICRO SHIELD®** filters combine 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.

MERV
14/13A

.16"
w.g.
Initial Pressure Drop

MERV
15/14A

.21"
w.g.
Initial Pressure Drop

MERV
16/15A

.20"
w.g.
Initial Pressure Drop

MERV
16/16A

.33"
w.g.
Initial Pressure Drop

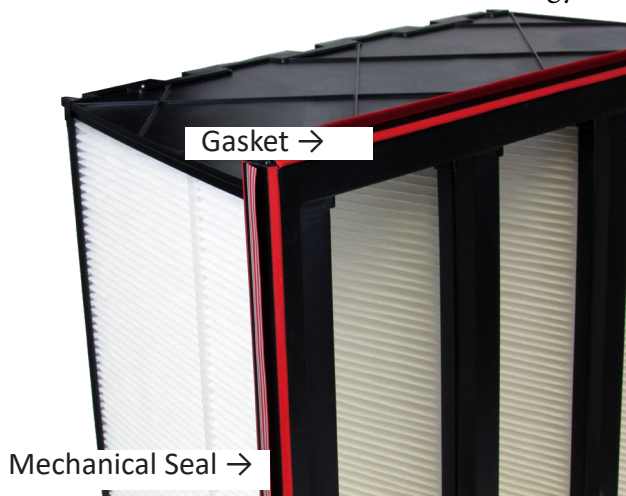
CI's PerformanceEngineered **MICRO SHIELD®** Mini Pleat Filters Just Got Better!

Our latest innovation -- **ZERO-BYPASS™** -- combines our Best In Class mini-pleated media with patented gasket technology originally developed by 3M.

This innovative combination creates a long-lasting, low pressure drop filtration system that virtually eliminates filter bypass with the inclusion of the **ZERO-BYPASS™** permanent gasket system.

Available in MERV 16/16A, 16/15A, 15/14A, and 14/13A these exceptional filters offer unparalleled filtration performance while providing energy, time, and labor savings.

ZERO-BYPASS™ Gasket Technology



Quick Facts

Features:

- Patented, permanent gasket system
- Positive mechanical seal eliminates air bypass
- Superior energy savings compared to other high-efficiency products
- Low initial resistance
- Lightweight
- Hassle free installation without additional filter hardware
- Fully incinerable

Applications:

- Commercial Buildings
- Industrial Facilities
- Pharmaceutical
- Government Institutions
- Universities/Schools
- Hotels and Entertainment Complexes

Technical Information:

- MERV 16/16A
 $\Delta P = .33'' \text{ w.g. at } 1968 \text{ cfm}$
- MERV 16/15A
 $\Delta P = .20'' \text{ w.g. at } 1968 \text{ cfm}$
- MERV 15/14A
 $\Delta P = .21'' \text{ w.g. at } 1968 \text{ cfm}$
- MERV 14/13A
 $\Delta P = .16'' \text{ w.g. at } 1968 \text{ cfm}$
- Available in a variety of standard sizes
- Tested in accordance with ASHRAE Test Standard 52.2-2017 appendix J
- UL Standard 900 approved
- 100% synthetic media



MICRO SHIELD® ZERO-BYPASS™ 4V-Cell Mini-Pleat Filters

	Filter Size (Nominal)	Rated Air Flow Capacity (CFM)			Initial Air Flow Resistance (w.g.)	Media Area (sqft)
		Low	Med	High		
MERV 16/16A 	12 x 24 x 12	722	963	1204	0.33	52
	20 x 24 x 12	1236	1648	2060	0.33	89
	24 x 24 x 12	1500	2000	2500	0.33	108
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CI MICRO SHIELD ZERO-BYPASS Energy Savings Calculator (4V-Cell Mini Pleat Filter)

			Competitive Alternatives			Competitive Alternative		Competitive Alternative
Media	Synthetic	Synthetic	Synthetic	Glass ₁	Synthetic	Glass ₂	Synthetic	Glass ₃
MERV Rating	16/16A	16/15A	16	16	15/14A	15	14/13A	14
Test Period	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months	12 Months
Initial Resistance (@500 FPM)	0.33" w.g.	0.20" w.g.	.31" w.g.	0.6" w.g.	0.21" w.g.	.50" w.g.	0.16" w.g.	0.34" w.g.
Average Resistance	0.44" w.g.	0.27" w.g.	.41" w.g.	0.8" w.g.	0.37" w.g.	.67" w.g.	0.21" w.g.	0.45" w.g.
Final Resistance	0.66" w.g.	0.40" w.g.	.62" w.g.	1.2" w.g.	0.42" w.g.	1.00" w.g.	0.32" w.g.	0.68" w.g.
Energy Cost	\$111.00	\$67.00	\$94.00	\$182.00	\$67.00	\$152.00	\$54.00	\$103.00
Additional Energy Cost	-	-	\$27.00	\$115.00	-	\$85.00	-	\$49.00