TRI-PLEAT XM10

TRI DIM
FILTER CORPORATION

# MERV 10

## SUSTAINABILITY

## Low Pressure Drop

## No Metal

DURABILITY

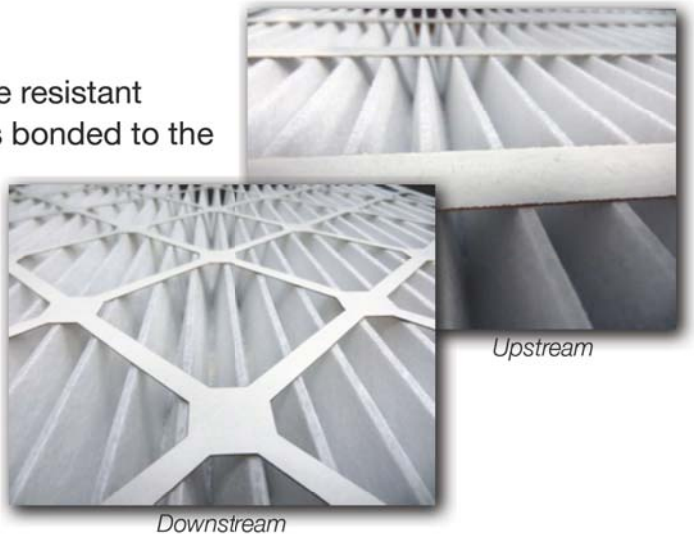
# TRI-PLEAT XM10

## No Metal
## MERV 10

## CONSTRUCTION

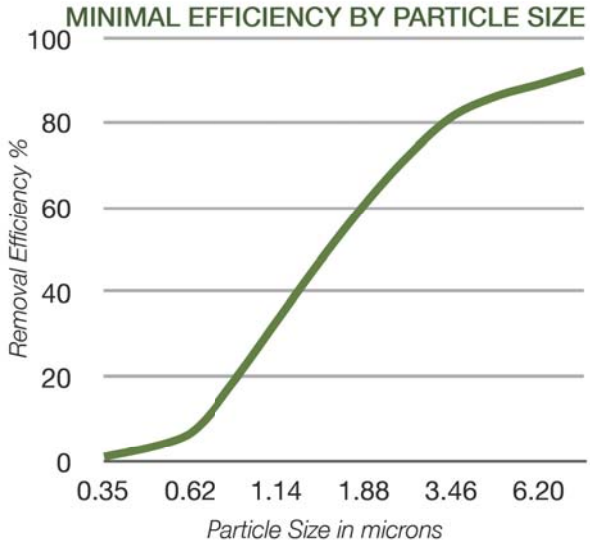
**TRI-PLEAT XM10** utilizes a moisture resistant frame with horizontal support straps bonded to the media pack on the upstream side and a die-cut with diagonal support bonded to the media pack on the downstream side for extra strength and providing durability against turbulent airflow.

The **TRI-PLEAT XM10** is extremely durable and will retain its shape and integrity when mishandled.



*Upstream*

*Downstream*



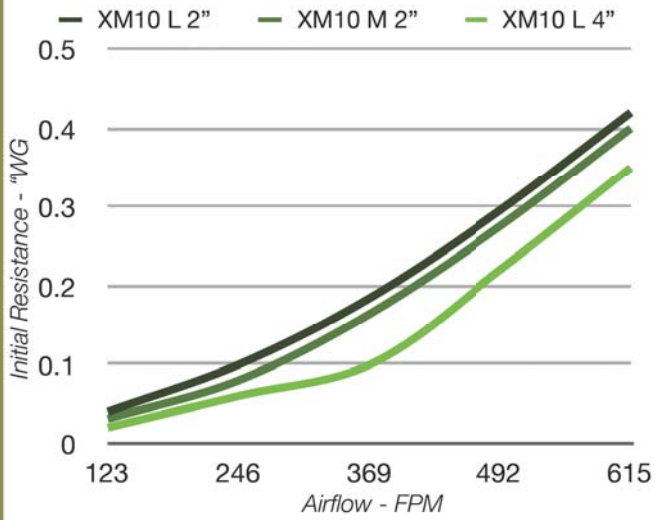

(right) shows the number of particles per 1,000 that penetrated through the filter - a MERV 8 will let 215% more and a MERV 7 will let 5 times more particles pass through than a MERV 10.

## HIGH EFFICIENCY

The **TRI-PLEAT XM10 L** Standard Capacity and **TRI-PLEAT XM10 M** High Capacity filters feature a mechanical MERV 10 media that offers high efficiency and low pressure drop. The MERV 10 is a new standard for wireless pleats and represents substantial increase in efficiency over a MERV 7 or MERV 8 pleat. The table

***Particle Penetration (per 1,000 particles)***

| Particle Size | XM10 Pleat | MERV 8 | MERV 7 |
|---|---|---|---|
| 4.0-5.5 µm | 140 | 284 | 500 |
| 7.0-10. µm | 80 | 252 | 480 |




## LOW PRESSURE DROP

The **TRI-PLEAT XM10** offers low pressure drop - see chart to left. The TRI-PLEAT XM10 M'S initial resistance at 2000 CFM for a 24x24x2 filter is 0.28" WG (70 PA) and 0.22" WG (55 PA) for a 24x24x4 TRI-PLEAT XM10 L- this is up to 50% lower than products with comparable efficiency. This equals a significant reduction in operating resistance which can equal energy savings.

## GREEN BENEFITS

The **TRI-PLEAT XM10** features many Green Benefits. First is the elimination of the wire backing found on traditional pleated filters - this is less metal headed to our landfills. Not using a metal backing also helps to lower the Carbon Footprint - using a conversion factor from the EPA this is a reduction in $CO_2$ emissions by over a third of a ton per 1000 filters.

Upgrading from a MERV 7 or 8 filter to the TRI-PLEAT XM10, as previously demonstrated on the particle penetration data on the previous page, is a significant efficiency increase. The particles that pass through the MERV 7 and 8 will likely end up on HVAC coils, even a thin layer of buildup on coils can have a significant effect on a coils efficiency - as little as 0.006" buildup can reduce heat transfer by 16% - dirty coils may use as much as 37% more energy than clean coils. Converting these percentages into dollars you can easily come up with a energy savings in the range $100 per filter range (energy savings of 193 kWh per ton, cost of $0.10 per kWh). Determining the exact dollar savings is difficult but there are real energy savings when you upgrade efficiency and do a better job protecting the coils. This energy savings also translates into a reduction in $CO_2$ emissions - again using a conversion factor from the EPA we can estimate the reduction to be 0.68 tons of $CO_2$ per filter per year.

# EFFICIENCY

# Specifications

PERFORMANCE

**MEDIA**

Synthetic, Mechanical

**FRAME**

Moisture Resistant Die-Cut with Horizontal Strips - NO METAL

**FINAL RESISTANCE**

1.0" WG *(249 PA)*

**RESISTANCE**

2" Deep TRI-PLEAT XM10 L Series = 0.29"WG *(72 PA)*
4" Deep TRI-PLEAT XM10 L Series = 0.22"WG *(55 PA)*

2" Deep TRI-PLEAT XM10 M Series = 0.28"WG *(70 PA)*

**APPROX. SQ. FT. OF MEDIA** *(per 1.0 Sq. Ft. of Filter Face Area)*

2" Deep TRI-PLEAT XM10 L Series Pleat = 3.0 Sq. Ft.
4" Deep TRI-PLEAT XM10 L Series Pleat = 5.9 Sq. Ft.

2" Deep TRI-PLEAT XM10 M Series Pleat = 4.3 Sq. Ft.

**EFFICIENCY**

MERV 10 per ASHRAE 52.2

**MEETS ANSI/UL-900 REQUIREMENTS**



TRI-DIM FILTER CORPORATION
P.O. BOX 466 • 93 INDUSTRIAL DRIVE
LOUISA, VA 23093
(540) 967-2600 • FAX: (540) 967-2835

American Owned and Operated

**Local Representation:**

FILTERSOURCE
LIQUID | AIR | HYDRAULIC | GAS

204 N. Link Lane #7
Fort Collins, CO 80524
Office: 970-204-4758 Fax: 970-204-4764
Brandon@IndustrialFilterSource.com
IndustrialFilterSource.com.

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NAFA National Air Filtration Association