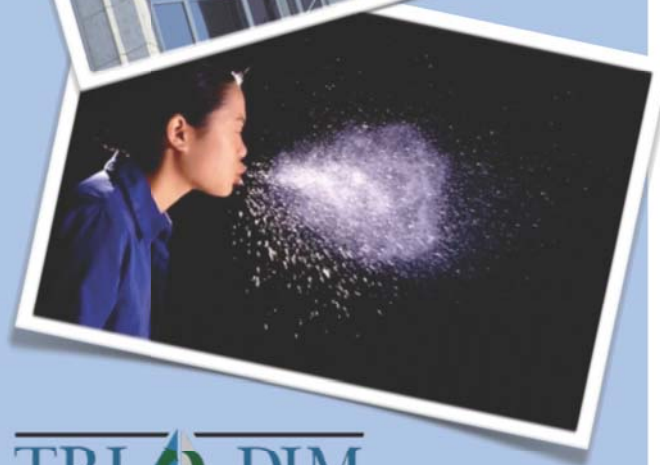
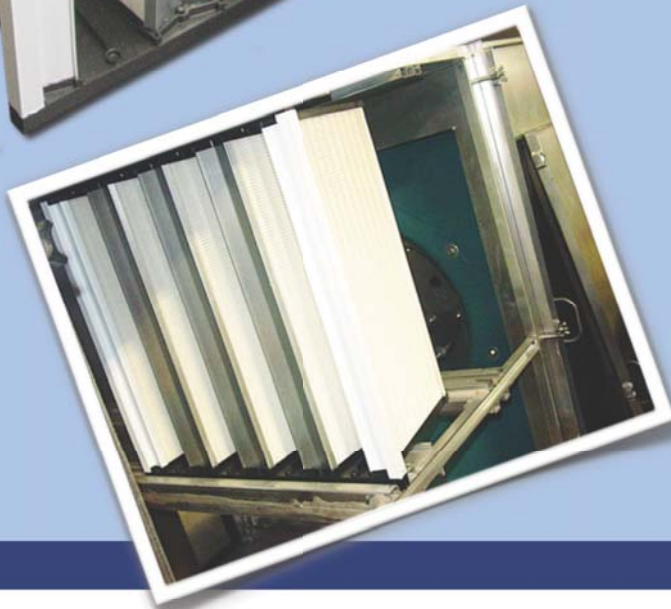




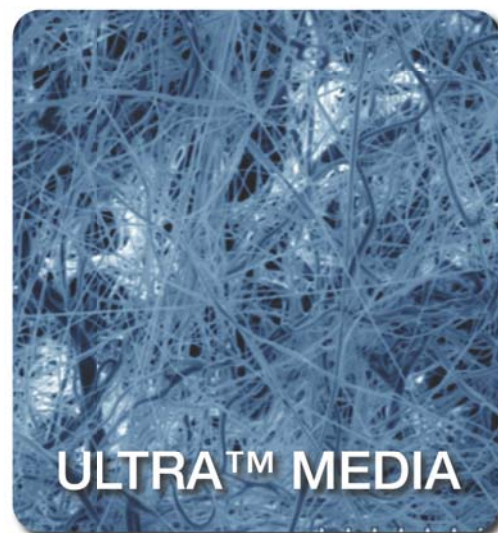
High Efficiency V-Cell Filter



# ULTRA™ MEDIA

ULTRA media is a new generation of media that offers unmatched and innovative performance with MERV 16+, MERV 15 and MERV 13 efficiency with ultra low resistance (0.31" WG on a MERV 15) - creating a new industry benchmark for efficiency and energy savings. ULTRA media has proven itself in testing utilizing the ASHRAE 52.2-2007 Appendix J test method.

ULTRA media has also been tested for resistance to UV light - since independent laboratories do not currently test filter media for UV light resistance, Tri-Dim has been testing various filter medias to direct UV dosages at a distance of 12" - at this distance the test is highly accelerated. Some competitive filter medias showed significant



deterioration in only a few months - some of the filter media turns to dust when touched. The ULTRA media was exposed for 6 months - this translates into 54 months of typical exposure and showed no noticeable degradation (see photos left).

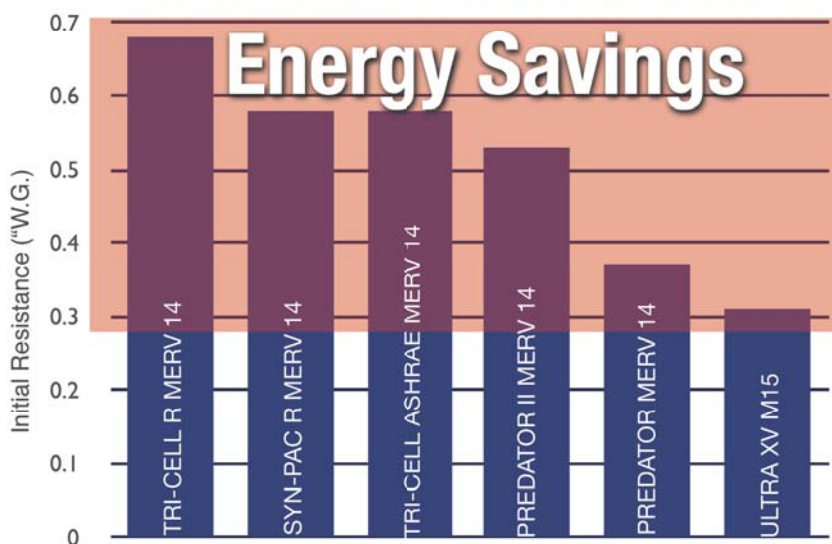
## GREEN / ENERGY SAVINGS

The ULTRA XV filter offers many features that will benefit a 'Green Initiative Program' - these include: Energy Savings, LEED® IEQ Credit, Longer Service Life, etc. Lower Resistance leads to energy savings in almost all applications - the chart (right) compares filters of similar efficiencies and shows the dramatic difference the ULTRA XV delivers. That is a reduction of up to 55% in resistance which translates into Energy Savings.

In a recent study actual energy savings of 40% was documented using this new media.

All ULTRA XV filters will help to achieve valuable LEED points under the Indoor Environmental Quality for reduction of particles in air distribution.

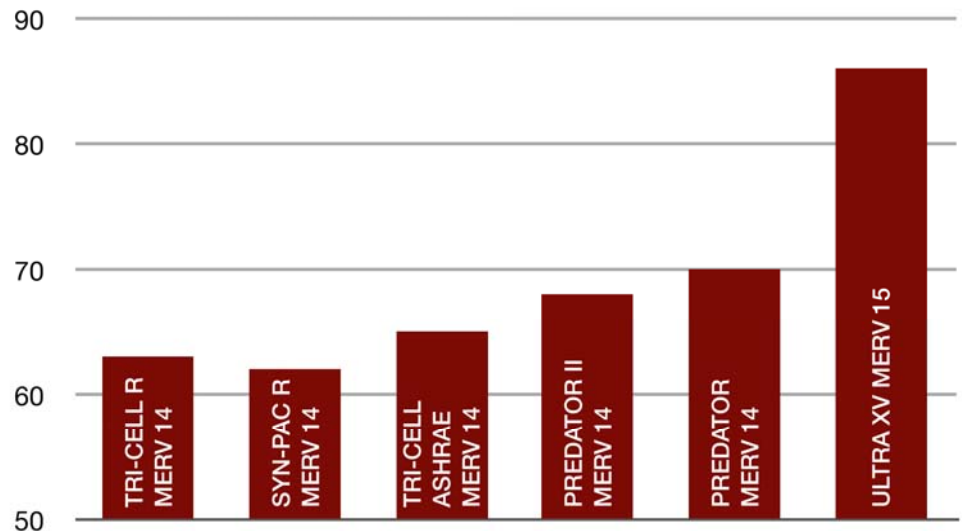
### INITIAL RESISTANCE





# EFFICIENCY

Tri-Dim's ULTRA media achieves and maintains a MERV 15 efficiency when tested under the new Appendix J of ASHRAE 52.2-2007. The chart lower right shows the initial efficiency on 0.3 micron particles on filters of similar efficiencies (these are the same filters in the Resistance Chart on the previous page). Again there is a dramatic difference. This difference can best be shown by particle penetration. A filter that is 70% efficient on 0.3 micron particles will let 30,000 particles pass through the filter for every 100,000 particles that challenge the filter. The ULTRA XV, that is 86% efficient on 0.3 micron particles, will reduce that amount by over 50% to only 14,000 particles. A little difference in efficiency can have a huge impact on the number of airborne particles.



**INITIAL EFFICIENCY @ 0.3 MICRON OF VARIOUS AIR FILTRATION PRODUCTS**


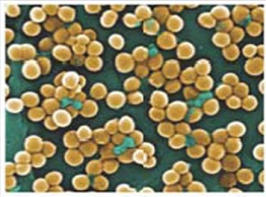
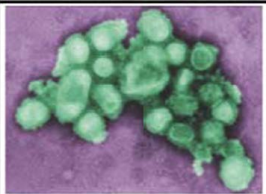
# STRENGTH



*ULTRA XV after test was suspended at 25" WG with NO air bypass.*

The strength and durability of a filter is a key performance characteristic because resistance and test performance have little value if the filter will not hold up under demanding applications.

Tri-Dim has extensively tested the ULTRA media for strength and durability. The ULTRA XV filter was subjected to a Breach or Burst Strength test - the test consists of the filter being challenged by a combination of water and test dust until air bypass can be detected - that is filter failure. Traditional V-Bank filters constructed with fiberglass media experience failure at 10" WG but the ULTRA media test was suspended after 25" WG with no air bypass /filter failure documenting the strength of the ULTRA XV.

Bio-aerosol	Photo (Courtesy of CDC)	Airborne Particle Size	ULTRA XV MERV 15 Efficiency Appendix J	ULTRA XV MERV 16+ Efficiency Appendix J
ANTHRAX		1-3 micron	94.4%	100%
MRSA		0.5 micron 3.3 micron airborne	0.5 = 87.3% 3.3 = 96.6%	0.5 = 99.984% 3.3 = 100%
SWINE FLU		1 micron	91.4%	99.998%

NOTE: The above efficiencies are the minimum efficiencies from independent ASHRAE 52.2-2007 Appendix J test - they represent the minimum efficiency on similar size particles - not on the bio-aerosols referenced above.

## ULTRA XV PRODUCT SPECIFICATION

### Media

*Hybrid*

### Frame

- Single Header, Plastic w/Metal Struts
- Double Header, Metal Wrap
- Tops/Bottoms 97% Recycled

### Efficiency - ASHRAE 52.2 (ASHRAE 52.1 Equivalent)

MERV 13 (80-85%)

MERV 15 (90-95%)

MERV 16+ (99%+)

### Initial Resistance @ 500 FPM (2.54 m/sec)

MERV 13 0.27" WG (67 PA)

MERV 15 0.31" WG (77 PA)

MERV 16 0.49" WG (122 PA)

### Final Resistance

1.5" WG (373 PA)

### Burst Strength

+ 25" WG (+ 6220 PA)

### Filters Meet ANSI/UL-900 Requirements

Tri-Dim Filter Corporation is committed to continual product development - all descriptions, specifications and performance data are subject to change without notice.  
Tri-Dim products are manufactured to exacting criteria - there can be a ±5% variance in filter performance. Tri-Dim® and Tri-Dek® are Registered Trademarks of Tri-Dim Filter Corporation.



**TRI-DIM**  
FILTER CORPORATION

**TRI-DIM FILTER CORPORATION**

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Brochure # 1900-8  
Revision: 04/2015

