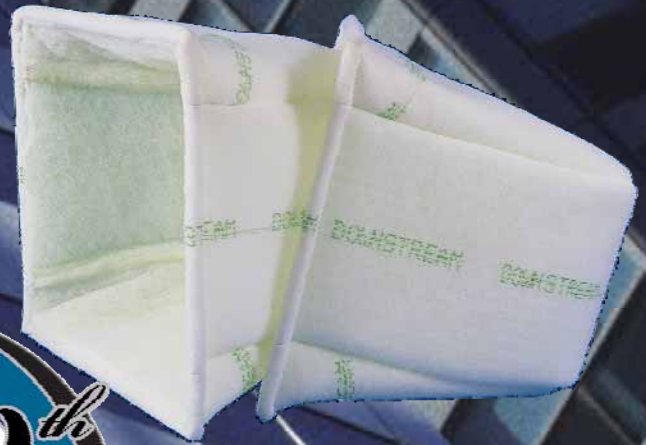
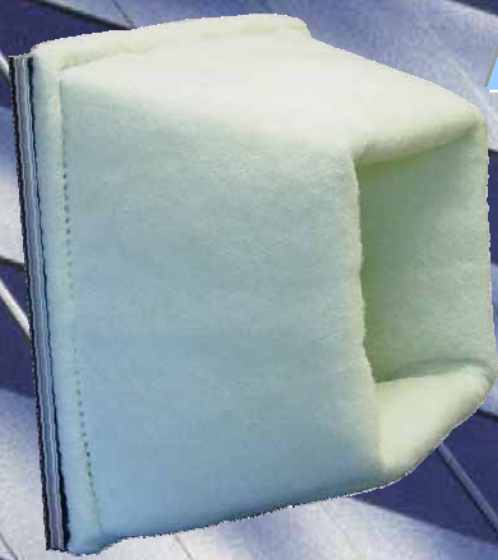


TRI  DIM  
FILTER CORPORATION

# TRI-DEK<sup>®</sup> FILTERS



**OVER 40 YEARS OF  
INNOVATION**



# THE TRI-DEK® CONCEPT



John Stanley – our Founder

TRI-DIM® Filter Corporation was founded in 1968 by John Stanley to develop, manufacture and market innovative air filtration products and services. Mr. Stanley utilizing various deniers of polyester media, structured these

medias into a depth loading, graduated density filtration media. This unique and innovative product was named 'TRI-DEK'. For the first time a synthetic filtration media was available that utilized three principles of filtration 'in harmony' – *Viscous Impingement, Straining and Interception*. This results in extraordinary service life, real world efficiency and offers cost-effective value.

'VALUE-IN-USE' is our heritage and is still our philosophy over 40 years later. 'Value-in-Use' simply stated is that the true value of a product should come from the products performance. This is accomplished by providing such benefits as longer service life, better efficiencies, energy savings, environmental responsibility and other benefits through innovative solutions and air filtration products.

The multifaceted responsibilities facing facility engineers in today's world of increased concerns about Indoor Air Quality (IAQ), bioterrorism and pandemic outbreaks of infectious diseases are to provide a healthy indoor environment and maintain control of rising maintenance costs. To that end TRI-DEK filters are the perfect solution. TRI-DEK filters offer up to 300% longer service life and increased removal efficiency over traditional HVAC filters.

## HOW TRI-DEK® WORKS

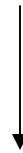
*Open weave, coarse denier fibers – capture large particulate*



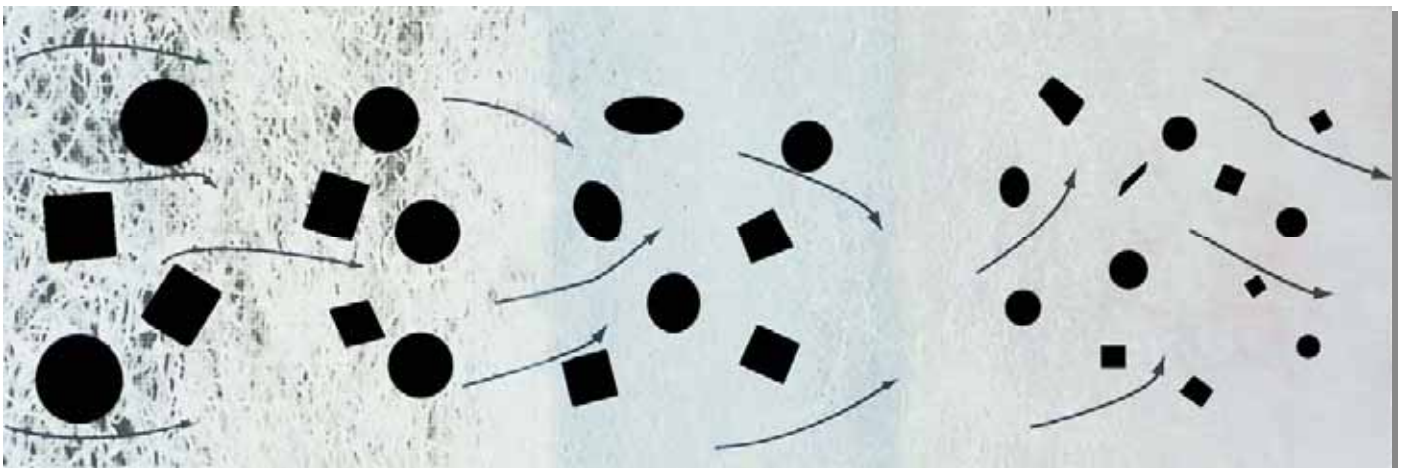
*Tighter weave, medium denier fibers – capture medium size particulate*



*Dense weave, small denier fibers – capture small particulate*



*Final layer – dense weave of tackified micro-denier fibers- prevents unloading of particulate and captures fine particulate*



# TRI-DEK® PANEL FILTERS



TRI-DEK 2-Ply Panel Filters are offered in two different versions. TRI-DEK 3/67 is our premium 2-ply panel that offers an exceptional combination of efficiency, service life and energy savings. The TRI-DEK 3/67 utilizes a unique combination of synthetic polyester fibers and tackifiers to maximize performance.

The TRI-DEK E 2-ply panel is our economy panel that offers outstanding value combined with efficiency and service life.

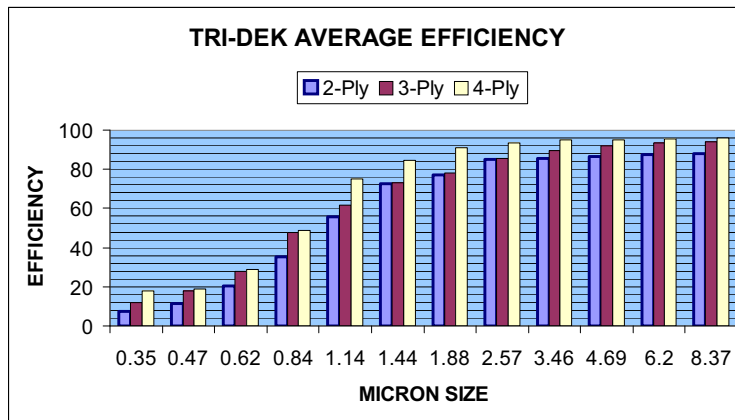


TRI-DEK 15/40 3-Ply is the 'original' depth loading panel – and has only improved with age. Variable denier fibers are permanently bonded together to offer an extremely strong and durable filter. This forms numerous surfaces for dirt retention and when combined with tackifiers it results in exceptional removal efficiency and capacity. The 15/40 panel filter also offers an extended service life and improved efficiency when compared to traditional pleated air filters.



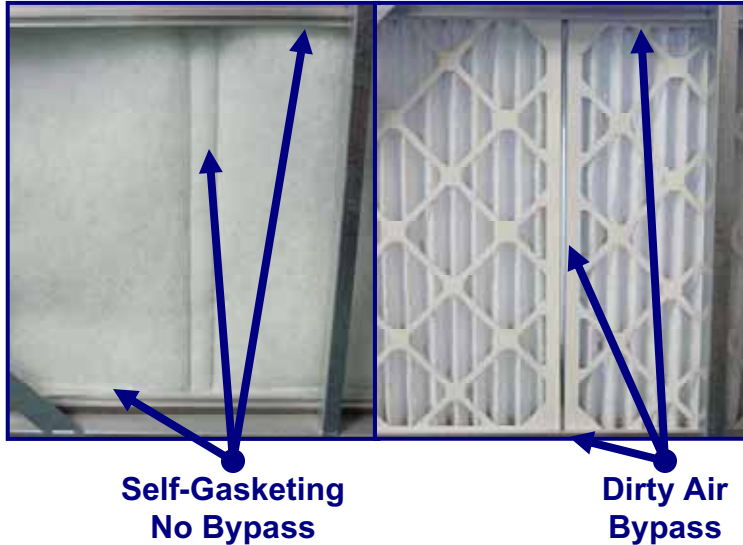
TRI-DEK XL 4-Ply is the 'premium' panel filter utilizing four layers of polyester media organized in a depth loading arrangement to maximize the dirt loading capacity, efficiency and service life. Variable denier fibers are permanently bonded together to offer an extremely strong and durable filter forming countless dust contamination traps – tackifiers keep the captured dust from migrating downstream through the filter resulting in efficiency that is real world.

## TECHNICAL DATA



Nominal Sizes	3/67 2-Ply Panel				15/40 3-Ply Panel				XL 4-Ply Panel			
	Capacity (in CFM) @ 400 FPM	Initial Resist. "W.G.	Capacity (in CFM) @ 500 FPM	Initial Resist. "W.G.	Capacity (in CFM) @ 400 FPM	Initial Resist. "W.G.	Capacity (in CFM) @ 500 FPM	Initial Resist. "W.G.	Capacity (in CFM) @ 400 FPM	Initial Resist. "W.G.	Capacity (in CFM) @ 500 FPM	Initial Resist. "W.G.
10x20	555	0.21	695	0.29	555	0.31	695	0.46	555	0.34	695	0.51
12x24	800	0.21	1000	0.29	800	0.31	1000	0.46	800	0.34	1000	0.51
15x20	835	0.21	1040	0.29	835	0.31	1040	0.46	835	0.34	1040	0.51
16x20	890	0.21	1110	0.29	890	0.31	1110	0.46	890	0.34	1110	0.51
16x25	1110	0.21	1390	0.29	1110	0.31	1390	0.46	1110	0.34	1390	0.51
18x24	1200	0.21	1500	0.29	1200	0.31	1500	0.46	1200	0.34	1500	0.51
20x20	1110	0.21	1390	0.29	1110	0.31	1390	0.46	1110	0.34	1390	0.51
20x24	1330	0.21	1665	0.29	1330	0.31	1665	0.46	1330	0.34	1665	0.51
20x25	1390	0.21	1735	0.29	1390	0.31	1735	0.46	1390	0.34	1735	0.51
24x24	1600	0.21	2000	0.29	1600	0.31	2000	0.46	1600	0.34	2000	0.51
25x25	1735	0.21	2170	0.29	1735	0.31	2170	0.46	1735	0.34	2170	0.51

# TRI-DEK® FEATURES AND BENEFITS



## ADVANTAGE TRI-DEK – BYPASS ELIMINATION

TRI-DEK eliminates the risk of unfiltered air bypass around or between filters or between the filters and the filter rack. TRI-DEK utilizes a selvedge edge to provide a self-gasket – unlike cardboard-framed filters that do not seal and therefore inherently allow unfiltered air to go around the filter.

Dirty air bypass is one of the leading causes of coil fouling and can also result in reduced service life of expensive final filters. If only one filter bank is utilized unfiltered air bypass results in no protection from biological agents and microbial contaminants – both are important concerns in today's world.

## ADVANTAGE TRI-DEK – MOISTURE AND MOLD RESISTANT

TRI-DEK media is resistant to moisture and microbial growth – unlike cardboard framed pleated filters. The pictures to the right show the effects of microbial growth and moisture on pleated filters. Cardboard inherently holds moisture regardless of what protective coatings are used. If pleated filters are subjected to moisture they will eventually deteriorate and blow out of the air handler. The presence of moisture is also one of the key components of microbial growth. TRI-DEK utilizes no cardboard or other materials that hold moisture – in fact synthetic media and a galvanized internal wire support frame are the only materials utilized.



*Moisture damage and microbial growth on pleated filters.*



## ADVANTAGE TRI-DEK – REDUCED SHIPPING/STORAGE



TRI-DEK panels are packed 24 per case, twice as many as pleats - this reduces shipping and storage cost by **50%**. And more importantly it reduces the number of trips to the air handler. TRI-DEK'S robust design also reduces shipping damage.

## ADVANTAGE TRI-DEK – GREEN

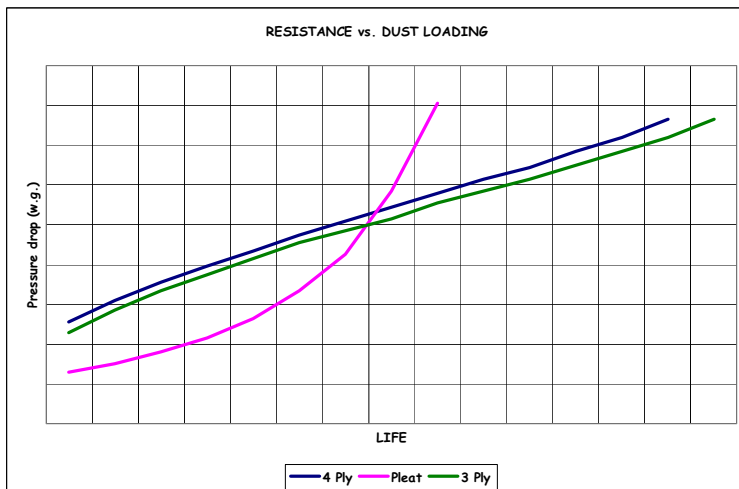
TRI-DEK filters can be utilized in achieving Green Building or for Environmental Responsibility initiatives. TRI-DEK filters (3 and 4-Ply) have more than 20%, by weight, of post-consumer recycled content. TRI-DEK'S high efficiency, elimination of dirty air bypass, longer service, reduced life-cycle cost all can be utilized to achieve points in LEED® or other Green Building certification programs.



# TRI-DEK® FEATURES AND BENEFITS

## ADVANTAGE TRI-DEK – EXTENDED SURFACE AREA

TRI-CUBE™ Cube filters offer more surface area than TRI-DEK Panel filters – this translates into lower operating resistance, enhanced dust loading capacity and extended service life with all the same great benefits as the TRI-DEK panel and link filters.

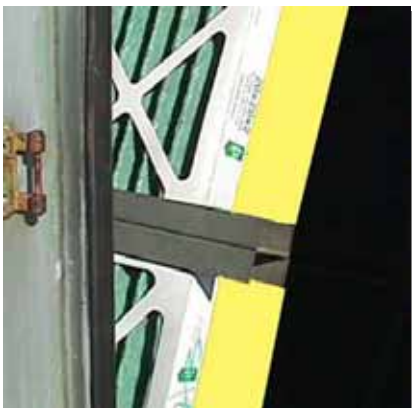


## ADVANTAGE TRI-DEK – EXTENDED SERVICE LIFE

The TRI-DEK media ‘manages’ the dirt by utilizing depth loading which allows for Tri-DeK panels to outperform surface-loading pleated filters. The graph to the left shows the results from a laboratory test for filter life. The results can be easily seen – TRI-DEK outlives a high capacity pleated filter by 75%, which is nearly twice the service life. There is dramatic savings in the extended service life – reduced filters to buy, shipping/storage cost, labor cost, disposal cost and more.

## ADVANTAGE TRI-DEK – EASY CHANGE-OUT

TRI-DEK Linked Panels simplify the change out in larger side access systems. In larger systems all of the filters cannot be reached without the aid of a makeshift tool. This makes the filter change-out a hassle. However the linked panels can be easily and simply removed by a gentle tug – no more reaching and straining for the last filter. The TRI-DEK filters can then be folded up for easy disposal.



## ADVANTAGE TRI-DEK – SYSTEM EFFICIENCY

How a filter performs in a test laboratory under controlled conditions is important but what is more important is how a filter performs in the unpredictable and uncontrolled ‘real world’. The real world picture (*left*) highlights a large amount of dirty air bypass around the filter, this dramatically lowers the ‘real world’ efficiency. Independent in-field tests have documented MERV 10-11 efficiencies from Tri-Dim’s TRI-DEK Panel filters in ‘Real World’ applications.

# TRI-CUBE™ EXTENDED SURFACE

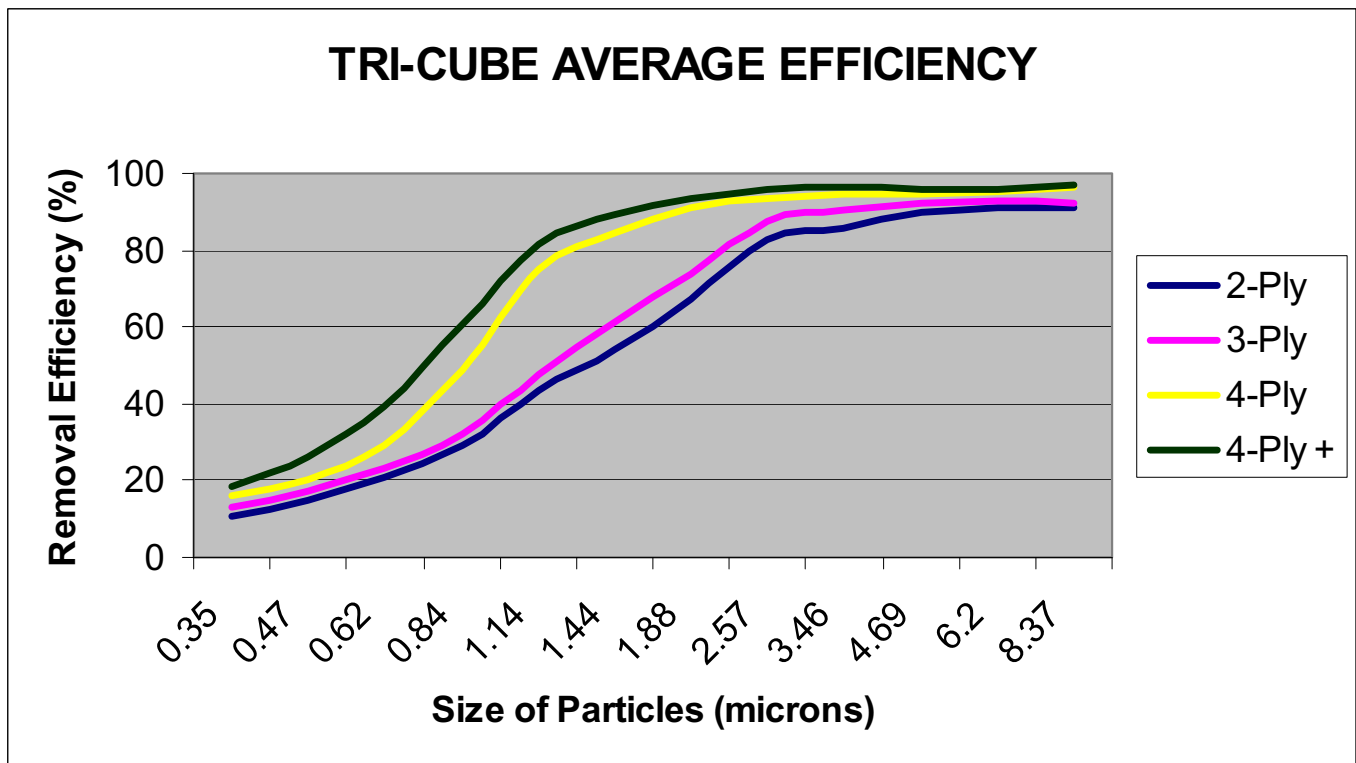
TRI-CUBE filters are an excellent choice when extended surface life over traditional filtration is needed or demanded. TRI-CUBE filters are offered with a wide range of available options. TRI-CUBE filters are offered in our 3/67 2-Ply, 15/40 3-Ply, XL 4-Ply and our premium XL Plus 4-Ply. This range of media construction offers a wide range of media efficiencies (see table at bottom of page). The engineered trapezoidal shape (see photo – right) offers total media utilization since the sides of the TRI-CUBE will not touch the filter beside them unlike competitive cube filters.



The TRI-CUBE is offered with several options - that include multiple pockets (see photo - left) for an even greater amount of surface area. Both two and three pocket cubes are offered as a standard option – custom filters are also available. Additionally TRI-CUBE filters are offered with a single metal peripheral header for side access applications.

The TRI-CUBE XL PLUS 4-Ply Cube offers greater than 95% removal efficiency\* on particles 3.0 micron and larger in size and greater than 90% removal efficiency\* of particles larger than one micron in size (see graph below).

\*Efficiency numbers are average efficiency based upon independent test results from ASHRAE 52.2-1999 test.

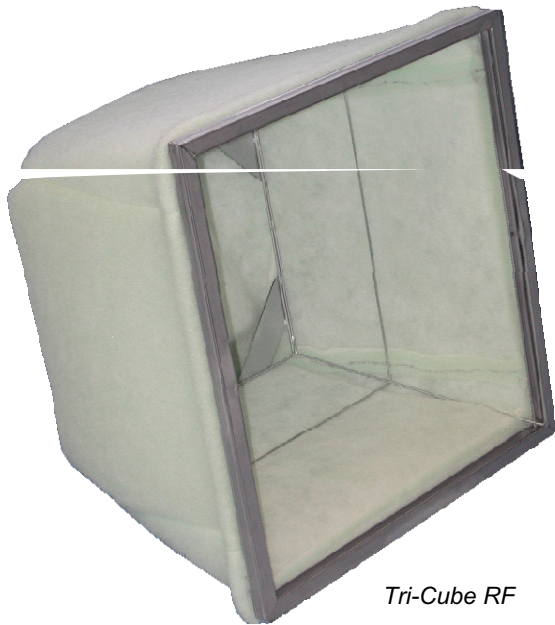


# INNOVATIVE SOLUTIONS

## TRI-DEK® ROLL-UP FILTERS

Ever experienced these common problems - HVAC Units mounted in the ceiling or pipes, walls or other obstacles next to the HVAC filter access door? TRI-DEK ROLLUP Filters are a unique and innovative solution to the common problem of limited access.

TRI-DEK ROLLUP is the same TRI-DEK product you have trusted for four decades – only the panels have been miniature-sized to take the work, frustration and the huge time commitment out of changing filters in confined spaces.



*Tri-Cube RF*

## TRI-CUBE™ REVERSE FLOW CUBE FILTERS

Another innovative solution from Tri-Dim, the TRI-CUBE RF and TRI-CUBE RFX Reverse Flow Cube filters. The Reverse Flow Cube filters offer the option of an extended surface filter where there is an obstacle immediately downstream of the filter bank. The patented permanent frame (*Patent #6,579,336 B1*) projects upstream from the filter bank. The TRI-CUBE RF and TRI-CUBE RFX are available in our #3/67 2-Ply, #15/40 3-Ply and XL 4-Ply in standard nominal depths of 10" (254mm), 15" (381mm) and 20" (508mm).

The TRI-CUBE RFX is a reverse flow cube with a center pocket to offer the maximum surface area. This added surface area results in low operating resistance – 0.24" W.G. (60 PA)\* for a 15/40 3-Ply and 0.26" W.G. (65 PA)\* for our XL 4-Ply Cube. Increased dust holding capacity is another benefit of extended surface area – the TRI-CUBE RFX holds over 2 pounds of dirt making the TRI-CUBE RFX the solution for applications with high levels of contaminant.

\*Resistance numbers are at 500 FPM (2.54 m/sec) for a 24x24x15 (610x610x381mm) nominally sized filter.



*Tri-Cube RFX with Center Pocket*

# TECHNICAL INFORMATION

## TRI-DEK® PANEL FILTERS

### SPECIFICATIONS:

**MEDIA** Synthetic, 2, 3 or 4 Deniers

**FRAME** Galvanized Wire

**SEAL** Thermally generated

### RESISTANCE

3/67 2-Ply  
0.21" W.G. @ 375 FPM (54 PA @ 1.91 m/sec)

15/40 3-Ply  
0.46" W.G. @ 500 FPM (114 PA @ 2.54 m/sec)

XL 4-Ply  
0.51" W.G. @ 500 FPM (127 PA @ 2.54 m/sec)

**UL CLASS 2** – per UL Standard 900

### PANEL OPTIONS:

**LINK** – Individual panels linked together to form a linked filter that will fit from 'door-to-door' and eliminates gaps and metal spacers.

**ALAP** – A case of twenty four linked panels.

**TRI-DEK ROLL-UP** – Panel filters are miniature sized to allow for use in tight spaces where a standard size filter cannot fit without being bent.

**ANTIMICROBIAL TREATMENT** – EPA approved treatment to control the growth of microbials within the filter.

**UL CLASS 1** – per UL Standard 900

## TRI-CUBE™ CUBE FILTERS

### SPECIFICATIONS

**MEDIA** Synthetic, 2, 3 or 4 Deniers

**FRAME** Galvanized Wire

**SEAL** Thermally generated and sewn

### RESISTANCE @ 500 FPM (2.54 m/sec) for 20" Deep Cube Filter

3/67 2-ply 0.19" W.G. (47 PA)

15/40 3-Ply 0.19" W.G. (47 PA)

XL 4-Ply 0.22" W.G. (55 PA)

XL PLUS 4-Ply 0.32" W.G. (80 PA)

### OPTIONS

**ANTIMICROBIAL TREATMENT** – EPA approved treatment to control the growth of microbials within the filter.

**UL CLASS 1** – per UL Standard 900, UL Class 2 is standard.

**REVERSE CUBE** – for applications that have space limitation behind the filter bank.

**MULTIPLE POCKETS** – available with either two or three pockets to offer more surface area.

**METAL HEADER** – peripheral metal header for side access applications.

Tri-Dim Filter Corporation is committed to continual product development – all descriptions, specifications and performance data are subject to change without notice.

Tri-Dim® and Tri-Dek® are Registered Trademarks of Tri-Dim Filter Corporation. Tri-Cube™ is a Trademark of Tri-Dim Filter Corporation.

LEED® is a Registered Trademark of the U.S. Green Building Council.



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