

TRI  DIM
FILTER CORPORATION

TRI-DEK[®] 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 utilized various deniers of polyester media, and 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 resulted in extraordinary service life, real world efficiency and 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.

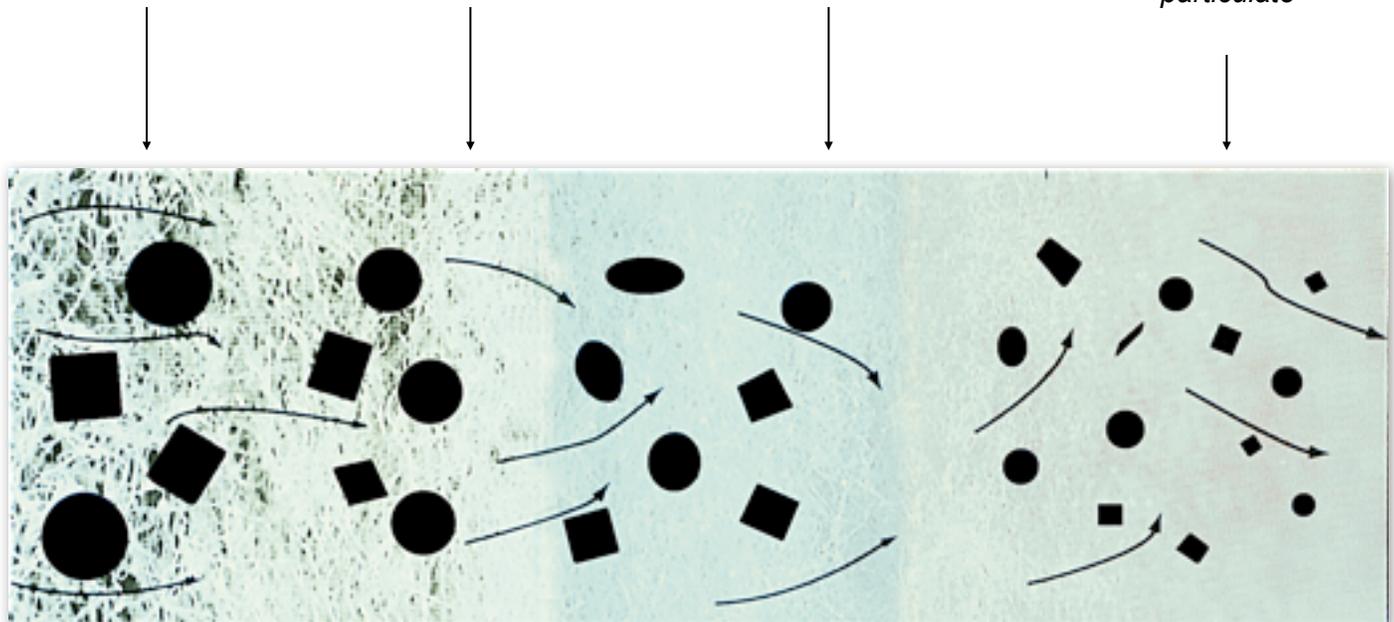
HOW TRI-DEK® WORKS

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® E SERIES panel filters - offer many 'Green' features including no metal components, the E2 offers recycled media, the E8 offers MERV 8 efficiency, both offer 70% savings in shipping & storage costs and all the benefits you would expect from TRI-DEK products.

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 is our economy panel that offers outstanding value 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. The 15/40 panel filter offers 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 – resulting in efficiency that is real world.

TECHNICAL DATA

Nominal Sizes	E2 Panel				E8 Panel				E 2-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.
12x24	800	0.24	1000	0.33	800	0.52	1000	0.70	800	0.30	1000	0.40
16x20	890	0.24	1110	0.33	890	0.52	1110	0.70	890	0.30	1110	0.40
16x25	1110	0.24	1390	0.33	1110	0.52	1390	0.70	1110	0.30	1390	0.40
20x20	1110	0.24	1390	0.33	1110	0.52	1390	0.70	1110	0.30	1390	0.40
20x25	1390	0.24	1735	0.33	1390	0.52	1735	0.70	1390	0.30	1735	0.40
24x24	1600	0.24	2000	0.33	1600	0.52	2000	0.70	1600	0.30	2000	0.40

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

TRI-DEK ADVANTAGE – BYPASS ELIMINATION

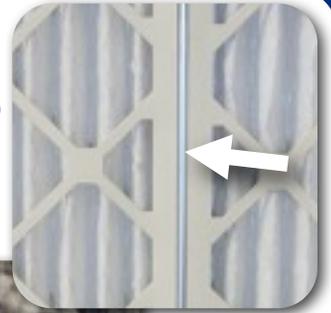


**TRI-DEK
Self-Gasketing
No Bypass**

TRI-DEK eliminates the bypass of unfiltered air around or between filters or between the filters and the filter rack. TRI-DEK utilizes a selvage 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 the reduced life of expensive final filters. Unfiltered air bypass results in reduced protection from biological agents and microbial contaminants – both are important concerns in today's world.

**PLEATED
Dirty Air
Bypass**



Filter Rack directly in front of coils - arrows point to dirty coils caused by bypass between pleated filters.

TRI-DEK ADVANTAGE – 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.



TRI-DEK ADVANTAGE – REDUCED SHIPPING/STORAGE

TRI-DEK panels are packed 24 per case, twice as many as pleats - this will substantially reduce shipping and storage cost by **50%**. Even more importantly it will reduce the number of trips to and from the air handler. TRI-DEK'S robust design compared to the fragile cardboard framed filter will also reduce shipping and handling damage.



TRI-DEK ADVANTAGE – GREEN

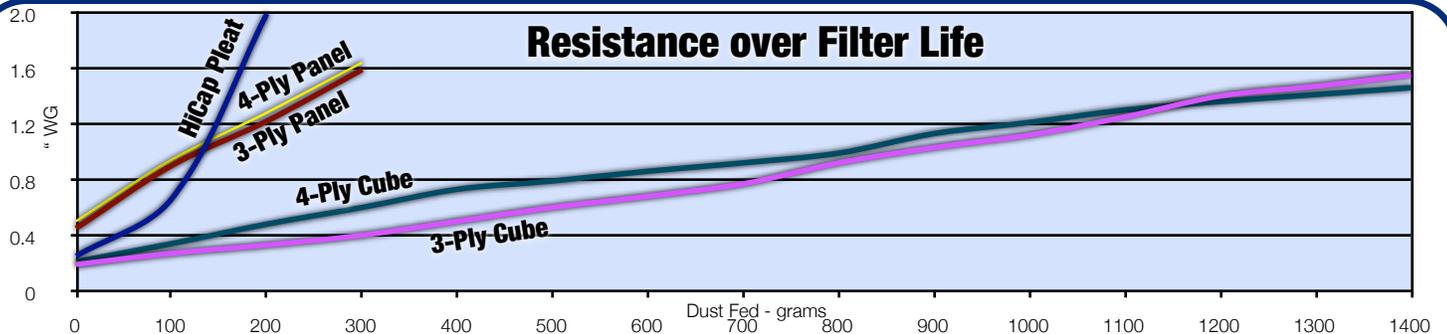
TRI-DEK filters can be utilized in achieving Green Building or other Green Initiatives. Many of the TRI-DEK filters have more than 20%, by weight, of post-consumer recycled content. TRI-DEK'S high efficiency, elimination of dirty air bypass, longer service, reduced life-cycle cost and can be utilized to achieve points in LEED® or other Green Building certification programs.



TRI-DEK® FEATURES AND BENEFITS

TRI-DEK ADVANTAGE – EXTENDED SURFACE AREA

TRI-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.



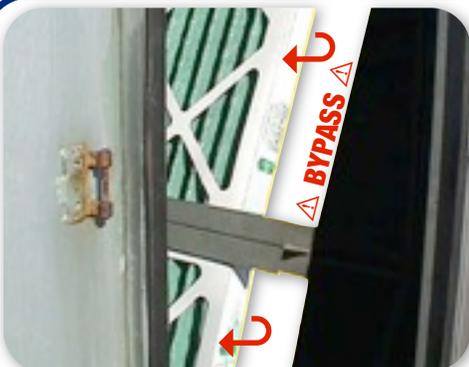
TRI-DEK ADVANTAGE – EXTENDED SERVICE LIFE

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 above shows the results from a laboratory test for filter life. The results can be easily seen – TRI-DEK out lives a high capacity pleated filter by a mile, which translates into a service life that is significantly longer than a pleat. There is dramatic savings in the extended service life – reduced filters to buy, shipping/storage cost, labor cost, disposal cost and more.



TRI-DEK ADVANTAGE –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.



TRI-DEK ADVANTAGE –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® FILTERS

TRI-CUBE 3/67 2-PLY offers exceptional value and efficiency, and by using a combination of two distinct depth-loading medias and tackifiers. The cubes extended surface design and depth-loading media allows for a greatly extended service life.

TRI-CUBE 15/40 3-PLY Filters offer high efficiency by combining three layers of variable denier fibers that are permanently bonded together. In laboratory testing the 15/40 Cube caught more than six times the dirt - this translates into a much longer service life when compared to pleated filters.

TRI-CUBE XL 4-PLY is offered in two variations - the conventional XL 4-Ply offers exceptional efficiency, long service life (up to 6 times longer than pleated filters based upon laboratory testing). The TRI-CUBE XL 4-PLY PLUS features a high efficiency backing for improved efficiency.

TRI-CUBE MERV 11 utilizes a unique combination of TRI-DEK® medias to provide a depth loading media that allows the filter to manage the dirt. Most filters are constructed of media that surface loads reducing their service life and causing dramatic increases in life cycle cost.

TRI-CUBE MERV 13 filter offers high efficiency and LEED® points with all the features and benefits of the conventional TRI-CUBE filters - those include depth-loading TRI-DEK media utilizes different layers or deniers of media arranged from coarsest to finest to create a depth loading arrangement.



TRI-CUBE OPTIONS



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 (see photo - right) for side access applications.



INNOVATIVE SOLUTIONS

TRI-DEK® ROLL-UP FILTERS

Ever experienced these common problems - HVAC Units mounted in the ceiling or where pipes, walls or other obstacles are next to the HVAC filter access door making it impossible to change-out filters? 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	RESISTANCE	TRI-DEK E2
FRAME	Galvanized or Plastic product specific	0.24" W.G. @ 400 FPM (60 PA @ 2.03 m/sec)	TRI-DEK E8
SEAL	Varies by Product	0.33" W.G. @ 300 FPM (82PA @ 1.5 m/sec)	TRI-DEK E
MEETS ANSI/UL-900 REQUIREMENTS		0.22" W.G. @ 300 FPM (55 PA @ 1.5 m/sec)	3/67 2-Ply
OPTIONS		0.21" W.G. @ 375 FPM (54 PA @ 1.91 m/sec)	15/40 3-Ply
Linked Panels		0.46" W.G. @ 500 FPM (114 PA @ 2.54 m/sec)	XL 4-Ply
ALAP - case of links		0.51" W.G. @ 500 FPM (127 PA @ 2.54 m/sec)	
Roll-Up Links			
Antimicrobial Treatment			
UL Class 1			

TRI-CUBE™ FILTERS

SPECIFICATIONS

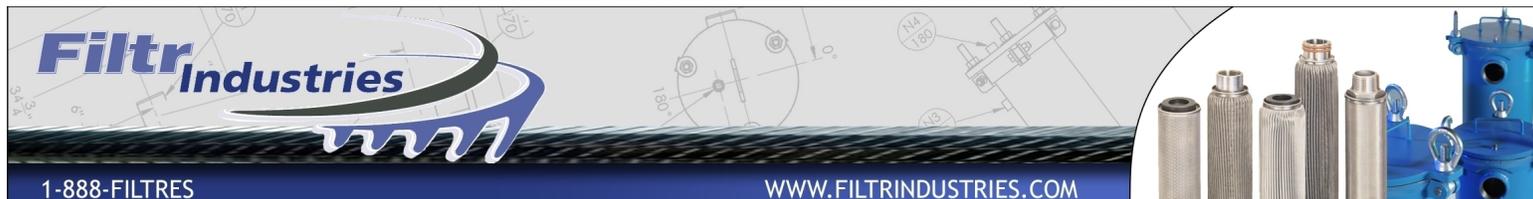
MEDIA	Synthetic, 2, 3 or 4 Deniers	RESISTANCE @ 500 FPM (2.54 m/sec) for 20" Deep Cube Filter	
FRAME	Galvanized Wire	3/67 2-ply	0.19" W.G. (47 PA)
SEAL	Thermally generated and sewn	15/40 3-Ply	0.19" W.G. (47 PA)
MEETS ANSI/UL-900 REQUIREMENTS		XL 4-Ply	0.22" W.G. (55 PA)
OPTIONS		XL PLUS 4-Ply	0.32" W.G. (80 PA)
Antimicrobial Treatment		MERV 11	0.37" W.G. (92 PA)
UL Class 1		MERV 13	0.57" W.G. (142 PA)
Reverse Cube			
Multiple Pockets			
Metal Header			

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-Cube™ is a Trademark of Tri-Dim Filter Corporation.

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

Local Representation:

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