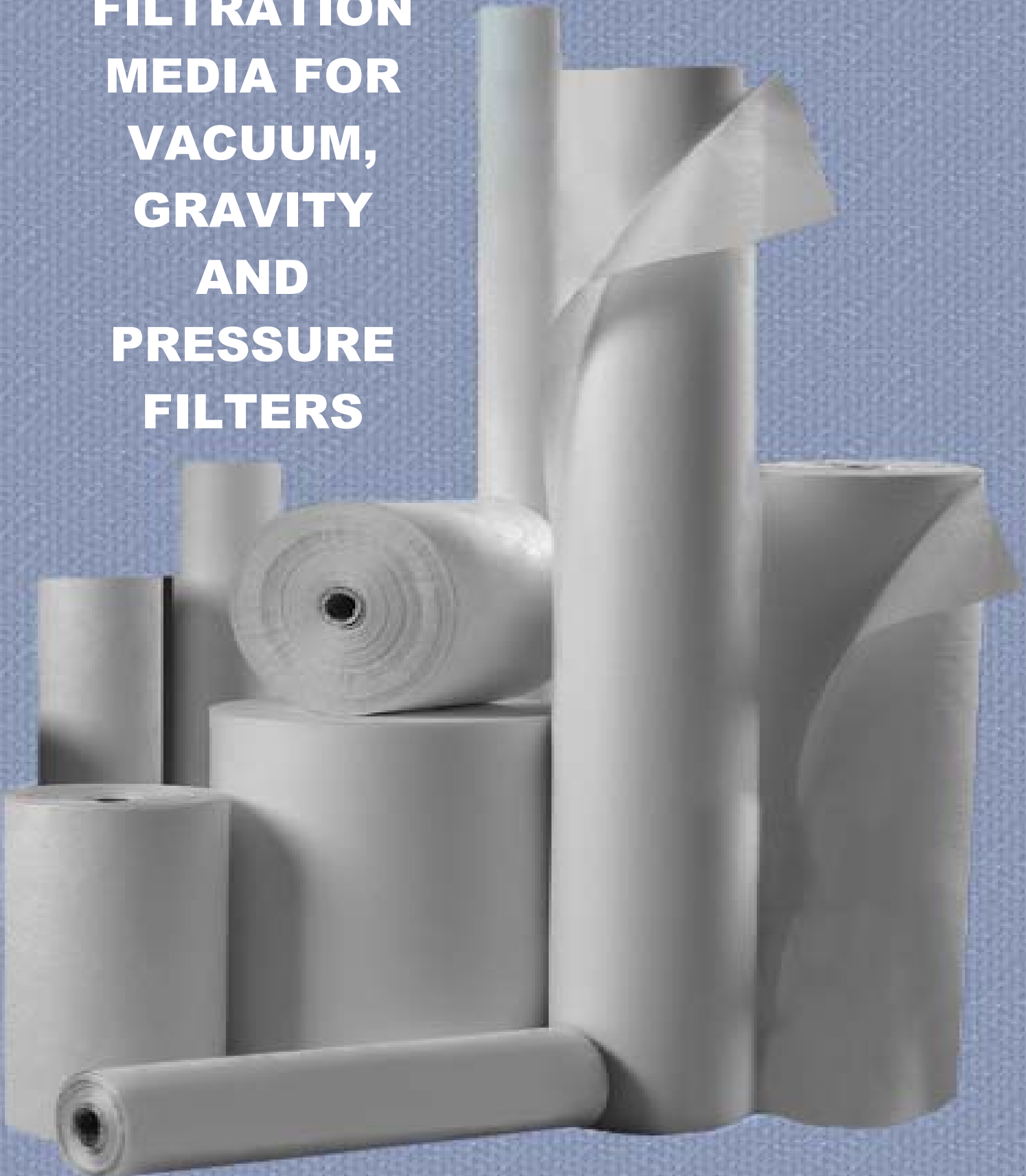
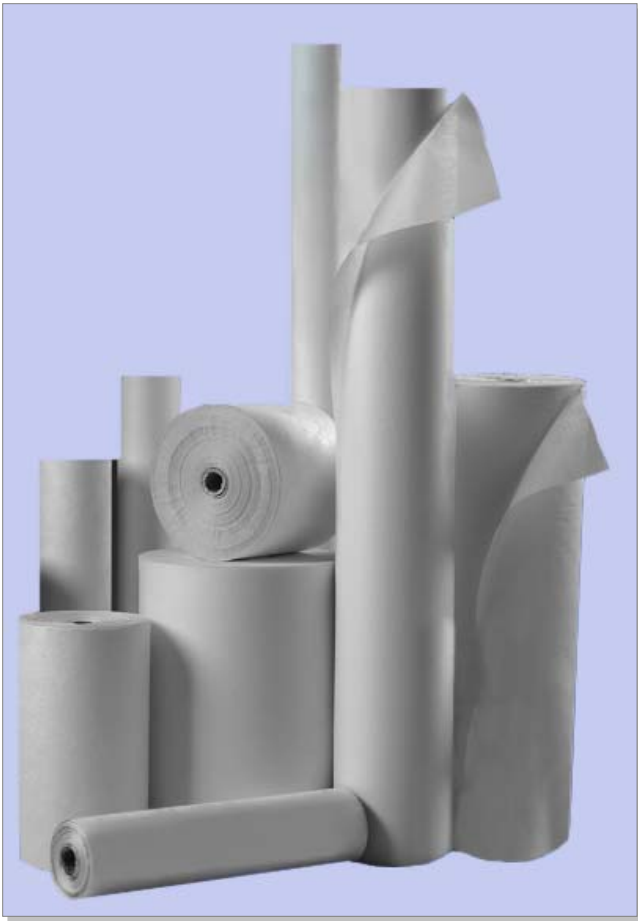


**FILTRATION  
MEDIA FOR  
VACUUM,  
GRAVITY  
AND  
PRESSURE  
FILTERS**



# LIQUID FILTER MEDIA

Tri-Dim Filter Corporation's LIQUID FILTER MEDIA is for use in Vacuum, Gravity and Pressure filtration systems. These systems are typically used in machine tool coolant filtration applications (i.e.: grinding, machining, honing, wire drawing, aluminum rolling, plating and coating). These filtration systems all utilize filter media rolls – like Tri-Dim's Liquid Filter Media. Tri-Dim offers this media in Wetlaid Polyester Cellulose, Flatbond Polyesters, Polypropylene Laminates, Spunbond Polypropylene, Carded Rayons and SMS Polypropylene.

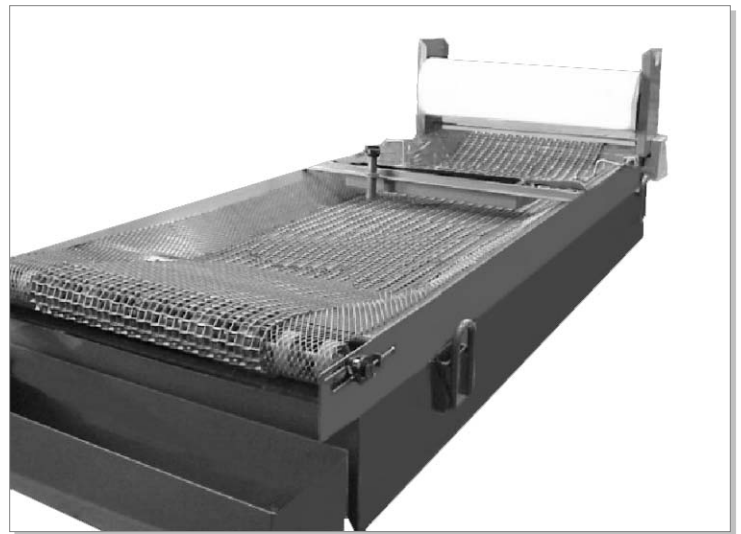


# GRAVITY FILTERS

Gravity filters are well suited to applications with moderate contaminant levels. The contaminated liquid flows through the Tri-Dim filter media which is supported by a conveyor belt. As the filtered contaminants restrict the liquid flow, the liquid level rises and actuates a float switch that runs the conveyor gear motor. Clean liquid collects in the tank and is returned to service by the pump.

Typical applications include grinding, tube mills and saws, tower water, plating, parts washers and paint booths. Typical coolants filtered are water soluble, synthetic, semi-synthetic, mineral seal and water.

Tri-Dim offers a variety of filter media options for use in gravity filtration systems. The recommended medias are Wetlaid Polyester Cellulose, Flatbond Polyesters and Carded Rayons. These medias are available in a variety of weights (*see back panel for available weights and specifications*), three roll lengths (*125, 250 and 500 yards*) and fourteen standard roll widths (*from 18" to 96"*).



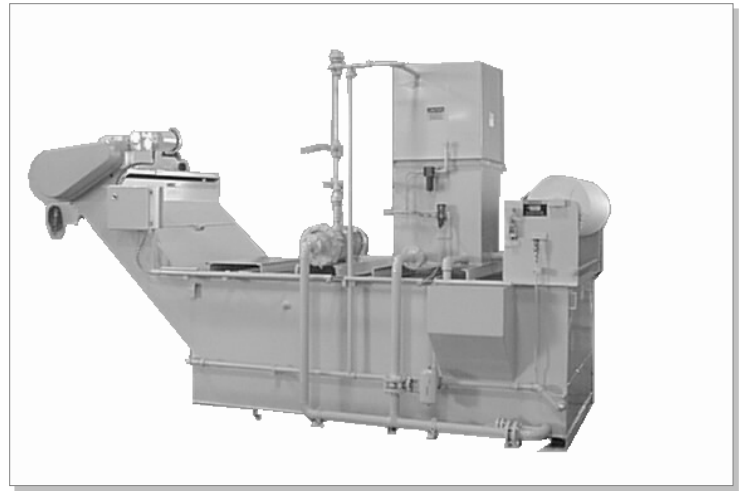
*Typical Gravity Filtration System*

# VACUUM FILTERS

Vacuum filters use atmospheric pressure to force coolant from the dirty coolant reservoir through the filter media to the vacuum chamber which has lower pressure due to system pump suction. This pressure differential permits coolant flow rates and contaminant loading per square foot far in excess of the abilities of gravity type filters.

Typical applications include grinding, tube mills and saws, chip applications (aluminum, steel and cast iron), plating, parts washers and central systems. Typical coolants filtered are water soluble, synthetic, semi-synthetic, mineral seal water, and straight oil.

Tri-Dim offers a variety of filter media options for use in vacuum filtration systems. The recommended medias are Wetlaid Polyester Cellulose, Flatbond Polyesters, Polypropylene Laminates and Spunbond Polypropylene. These medias are available in a variety of weights (*see back panel for available weights and specifications*), three roll lengths (*125, 250 and 500 yards*) and fourteen standard roll widths (*from 18" to 96"*).



*Typical Vacuum Filtration System*

# PRESSURE FILTERS

Pressure filters are utilized in highly specialized niche markets in the coolant filtration industry. Pressure filter benefits over other systems include dry sludge, superior coolant clarity and a small footprint.

Typical applications include grinding, tube mills and saws, saws, plating, phosphating, e-coat, central systems, D&I and aluminum foil. Typical coolants filtered are water soluble, synthetic, semi-synthetic, mineral seal water, and straight oil.

Tri-Dim offers a variety of filter media options for use in pressure filtration systems. The recommended medias are Wetlaid Polyester

Cellulose, Flatbond Polyesters, Polypropylene Laminates, Spunbond Polypropylene and SMS Polypropylene. These medias are available in a variety of weights (*see back panel for available weights and specifications*), three roll lengths (*125, 250 and 500 yards*) and fourteen standard roll widths (*from 18" to 96"*).



*Typical Pressure Filtration System*

# SPECIFICATIONS

MEDIA TYPE	WEIGHT (oz/yd)	THICKNESS (mils)	AIR PERM (cfm/ft)	Tensile Machine Direction (PSI)	Tensile Cross Direction (PSI)
<b>Wetlaid Polyester Cellulose</b>	1.00	7.0	506	10	5
	1.50	9.5	379	18	8
	1.80	11.0	390	23	7
	2.50	13.0	177	45	25
<b>Flatbond Polyesters</b>	0.50	5.0	900	9	7
	0.75	7.4	800	14	11
	1.00	8.8	600	19	16
	1.25	10.0	450	32	24
	1.50	11.0	300	36	29
	2.00	16.0	256	23	10
<b>Polypropylene Laminates</b>	3.00	20.0	347	100	80
	1.00	9.0	332	18	16
	1.50	18.0	257	16	7
	2.00	25.0	170	20	10
	2.50	22.0	132	58	42
<b>Spunbond Polypropylene</b>	3.00	26.0	127	24	13
	4.00	29.0	59	101	64
	0.50	5.0	707	8	8
	0.75	7.0	445	13	18
	1.00	9.0	284	20	19
<b>Carded Rayons</b>	1.25	13.0	226	24	25
	1.50	13.0	191	30	25
	2.00	17.0	147	38	36
	2.25	16.0	120	43	41
	2.50	19.0	84	47	45
	0.50	5.0	966	Not Rated	Not Rated
	0.60	6.0	782	9	3
	0.70	7.5	690	12	4
<b>SMS Polypropylene</b>	0.80	8.0	650	14	5
	1.00	9.0	535	18	7
	1.25	10.0	440	22	8
	1.50	10.0	406	27	10
	2.75	20.0	24	41	25

The above listed values are target values and are not considered exact specifications for finished product.

**Spunbond Polypropylene** - Polypropylene is a spunbonded nonwoven material that has uses in a wide range of applications. A particular value to this material is its ability to provide high permeability and good particulate capture in a variety of coolant types, synthetic, semi synthetic, mineral seal and water soluble. Use on gravity filters is limited but on vacuum and pressure based systems it is hard to match its cost per contaminate removed. A limitation in use is on straight oil applications due to polypropylene's affinity for oil, known as being oliophilic.

**Polypropylene Laminates** - Polypropylene Laminate media is designed to provide maximized filtration by bonding lighter layers of spunbonded polypropylene together. The lamination process adds depth characteristics to single sheet spunbond polypropylene and can be an added advantage in applications where ounce weight changes in small steps can improve filtration efficiency dramatically.

**Carded Rayon** - Rayon blends have a unidirectional construction with fibers are joined by an acrylic binder. Rayon blends provide acceptable filtration most typically for gravity based systems. This product has fair machine direction strength but is not designed for cross direction rigors. Long term submersion can break down binders and is not recommended for vacuum filters and on a very limited basis on small width pressure filtration systems.

**SMS Polypropylene** - SMS Polypropylene is a spunbonded nonwoven material that has a dusting of meltblown in the center layer of the product. SMS is designed to provide very tight filtration without the need for heavy weight media types. Most often this material is used on phosphating, can manufacturing or where higher pressures are used to achieve low PPM counts and small particulate removal. This material is not for use on gravity filters, rarely on vacuums filters and more widely seen on pressure filters, both singular and multi stack filter units.

Media Application Chart	Gravity Filters	Vacuum Filters	Pressure Filters
<b>Wetlaid Polyester Cellulose</b>	●	●	●
<b>Flatbond Polyesters</b>	●	●	●
<b>Spunbond Polypropylene</b>		●	●
<b>Polypropylene Laminates</b>		●	●
<b>Carded Rayons</b>	●		●
<b>SMS Polypropylene</b>			●

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.



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