



TRINITY Filtration

We optimize your process

An ISO 9001:2015 Certified Company



Welcome to Trinity Filtration Technologies!

A Glimpse into our Company

Who are we?

Established in 2009, Trinity is the market leader in the design, manufacture & marketing of Filtration & Separation systems. With a team of dedicated and experienced engineers led by an expert, our sole focus is on optimizing our customer's process by employing the latest filtration & separation technologies.

What do we do?

With a team of experienced engineers, we design & manufacture Filtration & Separation systems as per industry standards and also customize it according to customer requirements. Apart from products, we also offer design support, installation & commissioning support, testing & validation and customer training.

Whom do we serve?

Our products provide complete Filtration and Purification solution in the areas of pharmaceuticals, food and beverage, electronics, paints & inks, automotive coatings, general engineering, water treatment, petrochemicals, oil & gas, and metal processing fluids.

Why Us?

Being an expert in the field of Filtration & Separation systems, we deliver products in the market, which set a benchmark for Quality & Reliability in the Industry.

We are known for our

- ☞ Superior Quality Products
- ☞ Thorough knowledge of customer process & applications
- ☞ Technical support and training
- ☞ Timely delivery
- ☞ Help customers' optimize their process

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Micro-STRING Series Wound Filter Cartridges

Trinity *Micro-STRING* Wound Filters are designed and manufactured using the latest winding technology. The filter comprises a dense layer on the inner side and a coarse layer at the outer end. Due to this, it produces a superior depth filter with increased capacity, longer service life and high performance that reduce the effective cost. *Micro-STRING* filters have high structural integrity with huge void volume, giving a lower pressure drop. It has much improved dirt holding capacity and efficiency compared to conventional wound filters.



FILTER SPECIFICATIONS

Media	Polypropylene / Cotton / Glass Fibre
Core	Polypropylene / SS 304 / SS 316
End Caps	Polypropylene
Removal Ratings	0.5, 1, 3, 5, 10, 25, 50, 100 micron
O Rings / Gaskets (for SOE)	Silicone, Buna N, EPDM, Viton ®

DIMENSIONS

Inside Diameter	1.1" (28 mm)
Outside Diameter	2.5" (63 mm)
Nominal Length	9.75", 10", 20", 30", 40"

APPLICATIONS

- RO Pre filtration
- Petrochemicals
- Desalination
- D I water
- Plating Solutions
- Photographic Chemicals
- Edible Oils
- Paints & Inks
- Water treatment
- PCB manufacturing

OPERATING CONDITIONS

Maximum Operating Temperature	Polypropylene - 80 °C Cotton with SS core - 120 °C Heat purified Glass - 400 °C
Recommended Change Out Differential Pressure	35 PSID

Micro-STRING Series Blanket Media Filter Cartridges

Trinity *Micro-STRING* series BLANKET MEDIA Filter Cartridge is a major innovation in blanketed filter technology. It combines an enhanced open wind process with an internal media blanket. This provides superior flow rates, greater filtration efficiency, and consistent filter performance from batch to batch.

FILTER SPECIFICATIONS

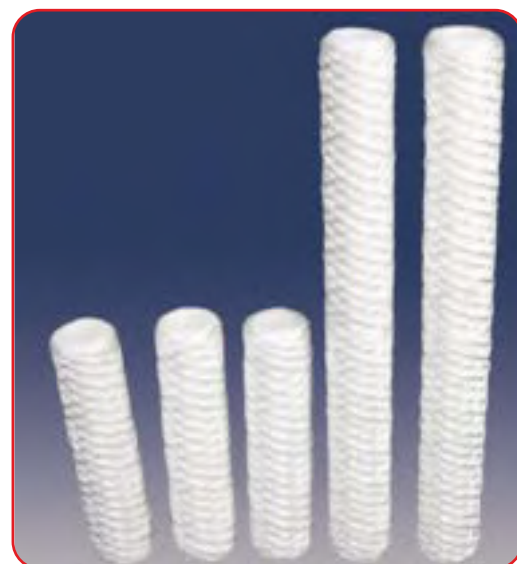
Filter Media	Polypropylene, Cotton media blanket
Core	Polypropylene, SS 304, SS 316
Micron Rating	0.5, 1, 3, 5, 10, 25, 50, 75, 100 micron

DIMENSIONS

Inner Diameter	1 inch (25 mm)
Outer Diameter	2.4 inch (61 mm)
Nominal Length	250, 500, 750, 1000 mm

OPERATING CONDITIONS

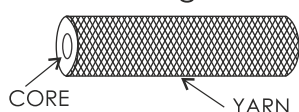
Max Operating Temperature	80°C (PP) , 120°C (Cotton)
Recommended Change out Differential pressure	35 PSID
Maximum Differential pressure	50 PSID



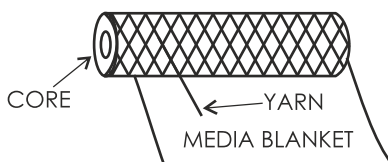
APPLICATIONS

- Pre RO filtration
- Electronics & Electroplating
- Paints & Inks
- Pharmaceutical Pre Filtration
- Photographic Chemicals
- Edible Oils

Normal String Wound



Blanket Media



Spun-BOND Depth Filter Cartridges

Spun-BOND Grooved Filter Cartridges

Trinity *Spun-BOND* Depth / Grooved filters are created from 100% Polypropylene with no additives or surfactants used that can cause foaming or other undesirable effects to the filtrate quality. With the true graded density construction, these filter cartridges are capable of high dirt loading capacity. The Grooved Construction *Spun-BOND* Grooved filters provide greater surface area. Hence, it can handle higher flow rates than the Conventional Depth filter Cartridges.



Spun-BOND
Depth Filter Cartridge



Spun-BOND
Grooved Filter Cartridge

APPLICATIONS

- RO Pre filtration
- Petrochemicals
- Desalination
- Pharmaceutical Pre filtration
- Photographic Chemicals
- Paints and Inks
- Water Treatment
- Waste Water Treatment

FILTER SPECIFICATIONS

Media	Polypropylene
End Caps	Polypropylene
Removal Ratings	0.5, 1,3, 5, 10, 25, 50, 100 micron
O ring / Gaskets (SOE)	Silicone, Buna N, EPDM, Viton ®

DIMENSIONS

Outside Diameter	2.5 " (63 mm)
Inside Diameter	1.1 " (28 mm)
Nominal Length	9.75, 10, 20, 30 & 40 inches

OPERATING CONDITIONS

Max Operating Temperature	80 °C
Recommended Change out differential Pressure	35 PSID
Max Differential pressure	50 PSID

Pure-BOND Resin Bonded Filter Cartridges

Trinity *Pure-BOND* Resin-Bonded Filter Cartridge feature an advanced manufacturing process that produces a rigid density structure that allows the filter to withstand extreme viscosity and temperatures without deformation or collapse. The grooved design increases the surface area of the filter hence reducing the clean differential pressure and increasing the dirt holding capacity of the filter. The rigid construction ensures consistency, reproducible performance free from bye-pass and unloading.

FILTER SPECIFICATIONS

Code	Fibre Material	Resin	Appearance	Applications
AP	Acrylic	Phenolic	Brown	Industrial
CM	Cellulose	Melamine	White	Pharma / F&B

DIMENSIONS

Outside Diameter	2.6" (66 mm)
Inside Diameter	1.1" (28 mm)
Nominal Length	9.75", 10", 19.5", 29.25" & 39"

OPERATING CONDITIONS

Maximum Operating Temperature	121°C
Maximum Differential Pressure	50 PSID
Recommended Change out Differential Pressure	35 PSID



CM



AP

APPLICATIONS

- Potable water
- Pharmaceutical Pre-Filtration
- Food & Beverages
- DI water
- Process water
- Fine Chemicals
- Hydraulic & Lube Oil
- Di electric Oil
- Transformer Oil
- Paints & Resins
- Machine Coolants
- Lacquers & Varnishes

Pure-GUARD Bi-Component Fibre Filter Cartridges

Trinity *Pure-GUARD* Bi-Component Thermally Bonded Filter Cartridges are manufactured using thermally bonded bi-component fibres resulting in a rigid complex filter matrix. The patented construction of this filter cartridge provides consistent filtration and eliminates pore size variability and media migration. The rigid construction also provides a 3-D fibre network that offers a high tolerance to differential pressures. This unique feature also prevents the changes in the fibre matrix throughout its life, providing precise filtration and eliminating filter unloading.



FILTER SPECIFICATIONS

Media	Fibres of Polypropylene & Polyethylene / Polyester & Co-polyester
End Caps (SOE)	Polypropylene
Removal Ratings	0.5, 1, 3, 5, 10, 25, 50, 75, 100, 150 & 200
Gaskets / 'O' rings	Silicone, EPDM, Buna N, EPR, Viton

DIMENSIONS

Inside Diameter	1.2" (30 mm)
Outside Diameter	2.6" (66 mm)
Nominal Length	9.75", 10", 20", 30" & 40"

APPLICATIONS

- Paints & Coatings
- Inks & Resins
- Pharmaceutical Pre-filtration
- Food & Beverages
- RO pre filtration
- DI water

OPERATING CONDITIONS

Max Operating Temperature	PP- 80 °C PE - 115 °C
Max Differential Pressure	60 PSID
Recommended Change out differential pressure	35 PSID

Flow-MAX Pleated Filter Cartridges

Trinity *Flow-MAX* Pleated Filter Cartridges are designed to optimize the surface area of the PP media for a higher flow rate, lower clean Delta P, and longer service life. The Filter provides more surface area due to its pleated design. All PP construction and gradient density micro-fibre media provide excellent removal efficiencies and high contaminant holding capacities. The materials used in these filter cartridges are CFR-21 compliant hence, safe to use for food contact purposes.

FILTER SPECIFICATIONS

Media	Polypropylene, Glass Fibre
Inner Core	Polypropylene, Glass Fibre
End Caps & Cage	Polypropylene
Gaskets & O rings	Buna N, EPDM, Silicne, Viton ®
Micron Ratings	0.2, 0.3, 0.45, 0.6, 1, 1.2, 2, 2.5, 4, 5, 6, 10, 20, 40 & 50

DIMENSIONS

Nominal Length	9.75", 10", 20", 30", 40"
Outside Diameter	2.7" (70 mm)
Inside Diameter	1.1" (28 mm)

OPERATING CONDITIONS

Maximum Operating Temperature	80 °C
Maximum Differential Pressure	75 PSID
Recommended Change out differential pressure	35 PSID



APPLICATIONS

- Pharmaceutical Pre filtration
- Solvents & Gas Pre filtration
- DI Water
- Process / Rinse water
- Fine Chemicals
- Process Water
- Lens Coatings
- DE Trap filters in Breweries
- Printed Circuit Boards

Steri-PRO PE Series PES Membrane Filters

Trinity Steri-PRO PE series Polyethersulfone Sterilizing grade filters are manufactured to conform with the stringent quality standards required by filters that come in contact with biological, pharmaceuticals and other critical processes. The filter cartridges conform to Toxicity tests, meet the requirement of the USP 29 Biological test for Plastics, and are manufactured using components that comply with CFR 21 regulations. The Filters are supported by a validation guide prepared specifically for manufacturers requiring product documentation as part of their qualification process.



FILTER SPECIFICATIONS

Membrane Media	Polyethersulfone - PES
Core	Polypropylene
Cage & Core	Polypropylene
O Rings / Gaskets (for SOE)	Silicone, Buna N, EPDM, Viton ®
Adapter Insert	SS 316

DIMENSIONS

Inside Diameter	1.3" (33 mm)
Outside Diameter	2.7" (68.5 mm)
Filtration Area	≥ 0.63 m ²

APPLICATIONS

- Pharmaceuticals
- Biological Fluids
- Solvents
- Ophthalmic Solutions
- Vaccines
- Wines

OPERATING CONDITIONS

Maximum Operating Temperature	80 °C
Recommended Change Out Differential Pressure	35 PSID

Autoclave 126 °C, 30 Min. Multiple Cycles

Steam In- Place 121 °C, 30 Min. Multiple Cycles

Steri-PRO PV Series PVDF Membrane Filters

Trinity Steri-PRO PV series PVDF sterilizing filters use high porosity PVDF membrane to meet applications for high flow rates. These membrane filters significantly remove bacteria and undesired particles with high efficiency. The PVDF membrane offers broad chemical compatibility with low extractable levels, low protein binding and high chemical inertness. These filters are best suited for application in bulk material filtration, can provide better performance when compared to similar products. The materials used in the filter are in CFR 21 and FDA hence, well suited for food and pharmaceutical applications.

FILTER SPECIFICATIONS

Membrane Media	Single layer / Double layer PVDF Membrane
Core	Polypropylene / Polysulfone
Cage, End Caps & Adaptor	Polypropylene
'O' Rings/ Gaskets	EPDM, Silicone

DIMENSIONS

Inner Diameter	1.3 inch (31 mm)
Outer Diameter	2.7 inch (68.5 mm)
Filtration area	≥ 0.55m ² (Double layer), ≥ 0.62m ² (Single Layer)

OPERATING CONDITIONS

Max Operating Temperature	80°C
Maximum Differential pressure	5.2 bar (forward) 2.1 bar (reverse)

Autoclave 126 °C, 30 Min. Multiple Cycles

Steam In- Place 121 °C, 30 Min. Multiple Cycles



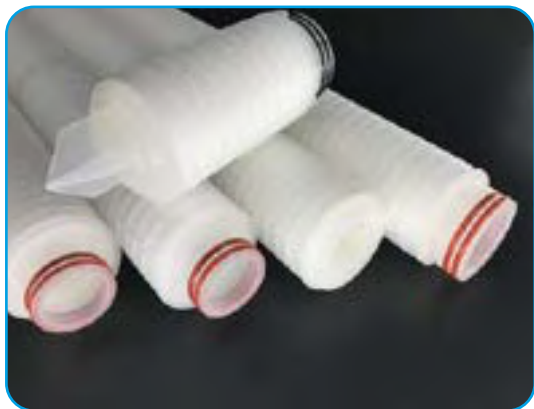
APPLICATIONS

- API - Solvents
- Biological Fluids & Oral Drugs
- Ophthalmic Liquids
- Sterile Venting
- Gas Filtration

Steri-PRO PT Series PTFE Membrane Filters

Trinity *Steri-PRO PT* series PTFE Sterilizing grade filters specially manufactured for the bio-pharma, beverage and fine chemical industries to provide reliable filtration. Its design, benefits in the complete removal of bacteria and other undesired particles even in the presence of humidity and moisture.

This filter is ideal for filtration of solvents in sterile API manufacture, fermenter inlet air and exhaust venting and sterile venting of tanks and autoclaves. The filters have a 0.2 micron PTFE membrane validated for absolute bacterial retention with the challenge data correlated to water intrusion testing.



FILTER SPECIFICATIONS

Membrane Media	Hydrophobic PTFE Membrane
Support Media & Core	Polypropylene
Internal Support Ring	SS
'O' Rings/ Gaskets	Buna N,, EPDM, Silicone, Viton

DIMENSIONS

Inner Diameter	1.3 inch (31 mm)
Outer Diameter	2.7 inch (69 mm)
Nominal Length	9.75", 10", 20", 30", 40"

APPLICATIONS

- Pharmaceuticals
- API - Solvents
- Fermenters
- Ophthalmic Solutions
- Vaccines/ Oral Drugs
- Wines & Alcohol

OPERATING CONDITIONS

Recommended Change Out Differential Pressure	2.5 bar
Max Operating Temperature	80°C

Autoclave 126 °C, 30 Min. Multiple Cycles

Steam In-Place 121 °C, 30 Min. Multiple Cycles

Charge-PLUS Lenticular Filter Cartridges

Trinity *Charge-PLUS* Lenticular filters are formulated to meet the performance demands of biopharmaceutical and biotech applications. The filter media utilizes mechanical and electro-kinetic adsorptive capture mechanisms to remove particulate matter, microorganisms, colloids and pyrogen from critical process streams.

Trinity can provide on-site trial assistance to validate the performance of these filters in new processes and applications. The Pharmaceutical Grade filter modules are manufactured to procedures described in a Drug Master File (DMF) on record at the National Center for Drugs and Biologics.

FILTER SPECIFICATIONS

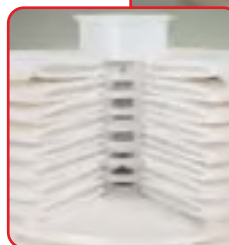
Material Of Construction	High Purity Cellulose Fibres & Filter Aids Activated Carbon (Charge Plus carbon); Proprietary charge modified Resin Stainless Steel Bands with PP cell separator.
Gasket material	Ethylene, Propylene, Silicone, Neoprene , Nitrile, Viton ®, Teflon ®

DIMENSIONS

Diameter	8", 12" & 16"
No. of Cells	8, 9, 12, 16 & 18 cells

OPERATING CONDITIONS

Maximum Differential Pressure	35 PSID (2.4 bar) - 60°C
Maximum Operating Temperature	80 °C
Recommended Flow rate	20 to 40 LPM/m ² (0.5 to 1 GPM/ft ²)



APPLICATIONS

- Antibiotics
- Blood Products
- Large Volume Parenterals
- Cough Syrups
- Pre filtration of Sterile membrane filters
- Chromatography Column protection
- Post Fermentation Clarification

High Flow Filter Cartridges

Trinity High Flow Cartridges address one of the critical needs of the industry for absolute filtration at high flow rates. These cartridges have a radial pleat that maximizes the effective surface area & supports high flow rates. Radial pleat design also provides absolute filtration even at high flow rates.



FILTER SPECIFICATIONS

Media	Polypropylene, Glass Micro Fiber
Support & Drainage layer	Polypropylene
Inner Core & End Caps	Polypropylene
Gaskets & 'O' rings	Silicone, Buna N, EPDM, Viton

DIMENSIONS

Length	10", 20", 40" & 60"
Outside Diameter	6.5" (165 mm)
Inside Diameter	3" (76 mm)

OPERATING CONDITIONS

Maximum Operating Temperature	80 °C
Recommended Change out differential pressure	35 PSID
Maximum Differential pressure	50 PSID

APPLICATIONS

- Amine Sweetening
- DI Water
- Coolant filtration
- Fine Chemicals
- Beverage Filtration
- RO Pre-filtration
- Pharmaceutical pre filtration
- Pre-filter for ultrapure water

Meta-PORE Stainless Steel Sintered Filter Cartridges

Trinity *Meta-PORE* Stainless Steel Filter Cartridges are the perfect choice for high temperature (230°C) & High viscosity applications. Produced with 304L or 316L sintered stainless steel mesh / Sintered Powder / pleated mesh cartridge offers excellent reliability for critical applications. The filters are produced in cylindrical or pleated media for extended cartridge life and more dirt holding capacity. All welded construction gives *Meta-PORE* cartridges the highest mechanical strength. An optional pleat protector is available to prevent denting and damage to the pleated surface.

FILTER SPECIFICATIONS

Type of Filter Media	Porous Sintered Powder Sintered Cylindrical Mesh Sintered Pleated Mesh
Media MOC	SS 304L SS 316L

DIMENSIONS

Inner Diameter	1 inch (25 mm)
Outer Diameter	2.6 inch (66 mm)
Nominal Length	9.75", 10", 20", 30" & 40"

OPERATING CONDITIONS

Max Operating Temperature	232 °C
Recommended Change out Differential pressure	35 PSID
Maximum Change out Differential pressure	60 PSID



APPLICATIONS

- Catalyst recovery in Petrochemical & Chemical
- Polymer Filtration
- Gas Filtration
- Steam filtration
- Compressed Air
- Oil Filtration
- Fuel & Hydraulic Oil
- Monomer Filtration

Flow-PURE Bag Filter Elements

Trinity *Flow-PURE* series Bag Filter Elements are manufactured using the advanced felt media meeting the most critical customer applications. Available in three different types of media and a wide range of removal ratings make *Flow-PURE* Bag Filters one of the most reliable products available in the marketplace today. Fully welded bags with an option of selecting three different performance grades like Standard Liquid Grade, Standard mesh Grade and High-efficiency Grade makes it an ideal choice for any filtration application.



FILTER SPECIFICATIONS

Media MOC	Polypropylene, Polyester, Nylon (NMO)
Collar MOC	Polypropylene, Polyester, SS
Felt Type	Standard Felt, Standard Mesh , High Efficiency

DIMENSIONS

Size	Size 1	Size 2	Size 3	Size 4	Size 5
Diameter	7"	7"	4"	4"	4"
Length	16"	32"	8"	14"	20"

APPLICATIONS

- Automotive Coatings - PT / CED
- Paints & Inks
- RO Pre filtration
- Desalination
- Water & Waste Water treatment
- Edible Oils
- Petrochemicals

OPERATING CONDITIONS

Maximum Operating Temperature	Polypropylene - 80°C Polyester - 115 °C Nylon - 115 °C
Maximum Forward Differential Pressure	20 PSID
Recommended Change out Differential Pressure	15 PSID

Max-FLO Series Bag Filter Housings

Trinity *Max-FLO* series Bag Filter Housings are designed and engineered to meet the critical needs of the manufacturing processes. These housings are manufactured for easy disassembly and fast bag element replacement. The *Max-FLO* bag filter housings are designed to meet the many requirements of these demanding applications. During the design process, critical features of the housing are optimized to ensure operator-friendly usage, low installation and maintenance costs.

FEATURES & BENEFITS

- GEP, ASME compliant Design for safety and durability
- Single, Multi Bag & Duplex units
- Permanently Piped Housings with swing bolt closure design allows easy disassembly and fast Bag Element replacement
- Pressure Ratings up to 40 Bar
- Rubber/GRP lined vessels
- Aqueous Flow rates up to 4500 GPM
- Large area, heavy duty basket internals

HOUSING SPECIFICATION

MOC of Housing	Carbon Steel, SS 304, SS 316, SS 316L, SS 904L, Duplex Steel, Monel ® Hastelloy ®
Gasket Material	EPDM, Viton ® , Nitrile, Silicone
Housing Type	Single Round / Multi Round
Design Code	GEP , ASME Sec VIII Div-1



Max-FLO Series Industrial Filter Housings

Trinity *Max-FLO* series Industrial Housings are designed and engineered to meet the critical needs of the manufacturing processes. Fine filtration of fluids is a crucial part of many manufacturing processes and the quality of the housing plays a significant role in ensuring the predetermined filtrate quality. Trinity *Max-FLO* housings are designed to meet the many requirements of these demanding applications. During the design process, critical features of the housing are optimized to ensure operator-friendly usage, low installation and maintenance costs.



FEATURES & BENEFITS

- Single, Multi round Cartridge design
- Duplex units are also available on request
- GEP & ASME compliant design
- Positive sealing with swing bolt closure design
- Quick assembly and disassembly
- Aqueous Flow rates up to 4500 GPM or more
- Unique cup design to accommodate both Double open end (DOE) and 222-'O' ring style SOE cartridges without modification in the housing



HOUSING SPECIFICATION

MOC of Housing	CS, SS 304, SS 316, SS 316L, SS 904L, GRP, Duplex Steel, Monel ® Hastelloy ®
Bolt for Top Body Cover	Swing bolts (standard), Studs (ASTM A193 Gr B7) & Nuts (ASTM AA 194 Gr 2H), Quick Closure Clamp with Hydraulically assisted Davit (optional)
Housing Type	Single Round / Multi Round
Design Code	GEP, ASME Sec VIII Div-1
Cartridge Length	9.75" to 40" Long

Max-FLO Series Sanitary Filter Housings

Trinity *Max-FLO* series Sanitary Housings are designed and engineered to meet the critical needs of the pharmaceutical industry. Materials used in these housings are safe to use for Food & Beverages as well as Pharmaceutical application. Fine filtration of fluids is a critical part of pharmaceutical processes and the quality of the housing plays a significant role in ensuring the predetermined filtrate quality. *Max-FLO* Sanitary housings are designed to meet the many requirements of these demanding applications. The housings are supplied with a surface finish measured in terms of Ra value, suitability for CIP and SIP, integrity testing etc.

FEATURES & BENEFITS

- Aseptic design
- Mirror finish surface with Ra < 0.8 micron
- Fully self-draining, Zero hold up volume
- No internal threaded parts
- Low hold-up volumes for maximum product recovery
- Easy to use low point sanitary drain valve
- Variety of connection styles
- Quick release clamp closure for easy disassembly.

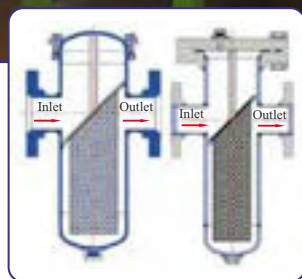
FILTER SPECIFICATIONS

MOC of Housing	SS 316 (standard), AISI SS 316L, SS 304
Clamp Type	Sanitary Quick Change Type
Steam Sterilizable	up to 136°C
Surface Finish	Mirror Polished with Ra value < 0.8 micron, Ra < 0.3 micron (available on request)



Fabricated Basket Strainer

Trinity Fabricated basket strainer are designed and manufactured according to client's application. The welded construction of the strainer, withstands various range of flow and pressure. Piping sizes available are 1.5" to 48" for 150# and 300#. The basket size is tailored to hold sufficient solid waste for enough time between cleanouts. Customized flange sizes are done to fit for exiting pipe. These strainers are installed upstream of equipment like pumps, control valves, and traps, keeping potentially corrosive or damaging debris from making its way down the line.



FEATURES & BENEFITS

- Welded Units designed to increase the capacity & maximum Pipe Size available
- Sizes Available to hold sufficient solids for the required time between clean-outs.
- The end connections are available with Flanges or Butt Weld Connections to fit existing piping to achieve the required clean pressure drop.
- Dimensional flexibility
- Design flexibility
- Varied flow rate handling capacity
- Davit Assembly can be optional

STRAINER SPECIFICATION

Size	40 NB to 1000 NB
Body	CS, MS, SS 304, SS 304L, SS 316, SS 316L
Element	SS 304/L , SS 316/L
Flow Design	Flow In to Out (FITO)
Design Code	GEP (standard), ASME (optional)

APPLICATIONS

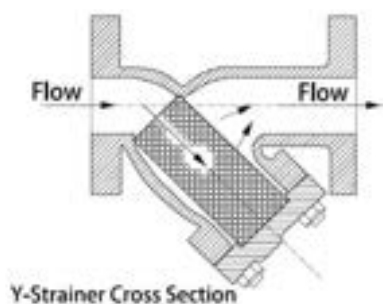
- Petrochemicals
- Oil
- Pharmaceuticals
- Paints
- Chemical industry
- Power Industries

Fabricated Y-type Strainer

Trinity Fabricated Y strainer is designed specific to application required. The pipe size for Fabricated Y Strainer ranges from 2" to 24" in Class 150 and Class 300. Screen size can be tailored to hold sufficient solids for required time between cleanouts. Customized flange sizes for perfect fit for exiting piping, also for required clean pressure drop. Hinge covers are used for quick opening (optional).

FEATURES & BENEFITS

- Sizes Available to hold sufficient solids for the required time between clean-outs.
- The end connections - Flanges or Butt Weld Connections to fit existing piping to achieve the required clean pressure drop.
- Dimensional flexibility
- Design flexibility
- Varied flow rate handling capacity



STRAINER SPECIFICATION

Body	CS, MS, SS 304, SS 304L, SS 316, SS 316L
Elements	SS 304/L , SS 316/L
End Connection	Butt Welded, Flanged
Design Code	GEP (standard), ASME (Optional)

APPLICATIONS

- Petrochemicals
- Paints
- Pharmaceuticals
- Oil
- Chemical industry
- Power industry

Self Cleaning Magnetic Separator

Trinity *Self-Cleaning Magnetic Separator* is designed and manufactured to remove ferrous particles of sub-micron size from the operating fluid. The system utilizes the concept of magnetic flux and fluid dynamics to remove magnetic particles from the application. The system is designed considering the Rare Earth Magnet is not in direct contact with the process fluid. The fluid is in contact with the sleeve which contains the Rare Earth Magnet rod. This design helps in quick and easy removal of dirt during the auto-clean process and is safe to use. The system is a PLC based system. Hence, there is no day to day operator involvement required.

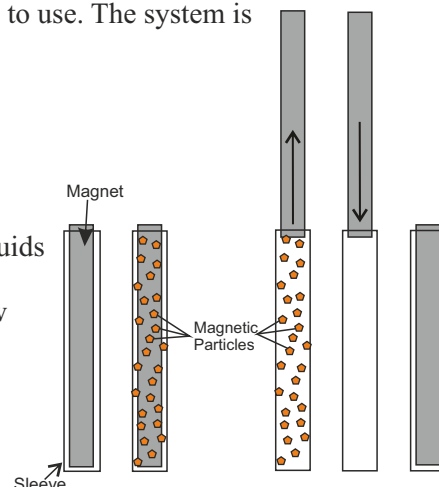


FEATURES & BENEFITS

- High flow rates up to 7200 LPM
- Pressure rating up to 9 bar
- Fully automated operation using PLC
- Applicable in aggressive and corrosive fluids
- Quick and complete internal cleaning
- Up to 80-85% separation rate at max flow
- Consistent and long lasting performance
- Fully automatic system with no operator involvement.

WORKING

Trinity Self cleaning Magnetic separator is a smartly designed self-cleaning system. Fluid starts flowing through the magnetic separator. The magnetic dirt in the fluid gets attracted to the sleeve that contains the Rare Earth Magnet. After some time, enough dirt gets accumulated on the sleeve. This triggers the magnet to move out of the sleeve, demagnetizing it. Due to this, loosely stuck magnetic dirt is washed off the sleeve with the help of a backwash pump. The water cleans the sleeve thoroughly, after cleaning the magnet is re-inserted into the sleeve & the dirty water is drained out. The flow of the fluid is resumed again completing the cycle.



Rare Earth Magnet with Bag Insert

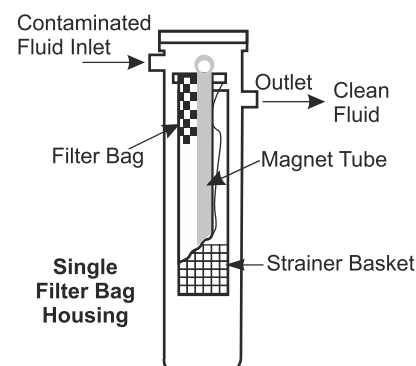
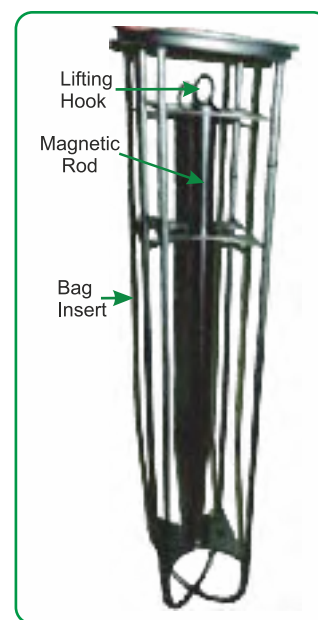
Trinity *Rare Earth Magnets* are ideal for removing ferrous, carbide fines from various process fluids. These Magnets are designed to remove ferrous particles in sub-micronic size, smaller than that can be extracted by traditional filters. The removal of these particles result in longer fluid life, improved surface finish of products, increased component accuracy and reduced wear & tear on machinery and tools. These rods are located inside the bag insert which support our bag filter (*Flow-PURE* bag filter element)

FEATURES & BENEFITS

- Lower Dust Count on Coated surface
- Longer fluid life
- Improved surface finish of products
- Increased component accuracy
- Reduced wear & tear on machine tools
- Increased Bag Filter Life

ELEMENT SPECIFICATION

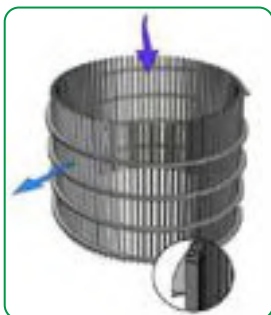
Type	Rare Earth (NdFeB)
Diameter	25 mm Standard
Length	Customised
Grade	N40 (Higher grades also available)
Surface Magnetic Induction	9300 to 10200 Gauss (At poles - when measured with Hall Probe of Gauss meter)
Sleeve Material	SS 304, SS 316 (optional)
Lifting Hook	SS 304, SS 316 (optional) - Hook provided at one end of 30 mm diameter
Locator pin	SS 304, SS 316 (optional) - Pin provided at another end of 8 mm diameter



Self Cleaning Filters



Trinity *Self Cleaning Filtration systems* are designed for a variety of liquid process applications. The filter system consists of a cylindrical, cleanable filter that rotates against the stationary cleaning knife trapping the particles larger than the opening to be retained and eventually scraped off the element (during cleaning). The retained particles are collected at the bottom and thrown out of the system from time to time.



FEATURES & BENEFITS

- Continuous, operator independent operation
- No need for disposable filter cartridges thereby reducing the cost of replacement elements, change-out labor, and downtime.
- No Operator exposure, hence no health hazards
- Unique welded wedge wire type mesh, strong, rugged and durable
- Higher percent of open area for significantly higher flow throughput, lower pressure drops.
- Removal Ratings: 15 to 500 Microns.
- Optional PLC based Panels
- Flame Proof Motor

APPLICATIONS

- Automotive Pre-Treatment
- Resins
- Inks And Coatings
- Water Treatment
- Automotive Shower testing line
- Chemical Processing
- Metal Finishing
- Effluent treatment

Oil Purification Systems

Trinity *OIL PURIFICATION SYSTEMS* can be used directly as an ON-LINE or OFF-LINE system depending on your shop-floor need. *Oil Purification Systems* allow filtration to take place independently of your equipment/machinery operation and there is no need for permanent installation per machine as one trolley/skid-mounted unit can service multiple machines.



Before After

FEATURES & BENEFITS

- Removes water and particle contamination, maintaining Oil in "CLEANER THAN NEW" condition.
- Oil filtered whilst the system runs - clean the entire system, not just the Oil in reserve.
- Improved machine reliability & availability
- Extended Oil Life
- Reduced waste Oil.
- Reduced component wear.

TYPE 1 - Particulate

Stage 1: <i>Pure-BOND</i> Resin Bonded Filter Cartridge 5 micron in Max-FLO Industrial Housing
Stage 2: <i>Pure-BOND</i> Resin Bonded Filter Cartridge 1 micron in Max-FLO Industrial Housing

TYPE 2 - NAS

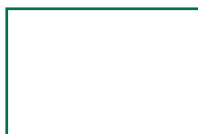
Stage 1: <i>Flow-PURE</i> High Efficiency Bag Element 1 Micron with Max-FLO series Bag Filter Housing
Stage 2: <i>Flow-MAX</i> Pleated Filter Cartridge 4 Micron with Max-FLO Industrial Housing
Stage 3: <i>Flow-MAX</i> Pleated Filter Cartridge 2 Micron with Max-FLO Industrial Housing

TYPE 3 - Moisture Removal

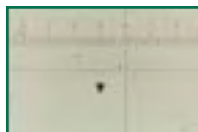
Stage 1: <i>Pure-BOND</i> Resin Bonded Filter Cartridge 5 micron in Max-FLO Industrial Housing OR <i>Flow-MAX</i> PP Pleated Filter Cartridge 5 Micron in Max-FLO Industrial Housing
Stage 2: Cardev ® Super Duty Filter Cartridge with Cardev ® Filter Housing



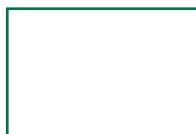
ISO 4406/1999 23/21/18
NAS 1638/1964 12



ISO 4406/1999 17/15/12
NAS 1638/1964 6



ISO 4406/1999 21/19/16
NAS 1638/1964 10



ISO 4406/1999 15/13/10
NAS 1638/1964 4



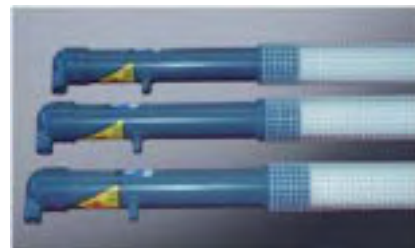
ISO Standards & NAS Standards Comparison



Anode Cells For Automotive E Coat

HYDROCELL TUBULAR ANODE CELLS

HydroCell Tubular cells provide the clients with maximum throw power, high efficiency and long life. Standard electrode material is 316L stainless steel seamless pipe. For special requirements, ruthenium coated titanium is used for longer life. There is outer mesh grill to protect the ion exchange membrane. The features are easy handle, power saving and low resistance. Hydrotech developed the ion exchange membrane welding technology. This update makes HydroCell –T performance and construction improved significantly.



Closed Head Cells

Closed Head Cells can be installed below the edge of ED tank and usually be used as flushable top/bottom cells to bring the paint film on floor pans and rocker panels to the desired thickness.

Open Head Cells

Open Head Cells are most regular type for E-coat process. The anolyte circulation water overflows from each cell. It gives low pressure inside cells to prevent from the damage or leakages due to water circulation pressure. The special top head design provide with clean looking and easy installation.

SPECIFICATIONS

Type	Diameter Of Anode	Diameter of Cell	Effective Area	Anolyte Circulation required per unit length	Current Per unit Length	Distance Between Cells
Hydrocell T-15	1.5" (48 mm)	3.94" (100 mm)	0.49 ft ² / ft (0.15 m ² /m)	0.1 gpm/ft (1.22 lpm/m)	2.4 Amp /ft (8 Amp/m)	Min: 200 mm Max :500 mm
Hydrocell T-20	2" (60 mm)	4.17" (106 mm)	0.63 ft ² /ft (0.19 m ² /m)	0.12 gpm/ft (1.52 lpm/m)	3 Amp/ft (9.5 Amp/m)	Min: 200 mm Max: 500 mm

HYDROCELL-C ANODE CELLS

HydroCell-C Cells provide larger effective area, reliable performances & easy replacement. The membrane can be replaced separately without any change on the whole anode cell. The standard electrode material is SS 316L . There is an outer mesh grill to protect the membrane. HydroCell-C Cells are ideal for all types of E-coating paint tanks. These Anode cells are light in weight, easy to maintain, economical & provide greater efficiency.



C - 13 Anode Cells

HydroCell-C15 is an updated model of anode cell from Hydrotech. The improvements made are cells lighter in weight and less thickness. It saves the installation spaces in the E-coat pain tank as well. The effective area of the C15 cell is taken as the front 110 degrees.

C - 15 Anode Cells

HydroCell-C13 Cells are the most popular anode cells for E- coat paint tanks. The electrode is one piece semi-circle with the bus bar welded across the top of the half-round anode for ease in lifting and connecting to the power cable. The effective area of the C13 cell is taken as the front effective 180 °C

SPECIFICATIONS

Type	Width Of Anode	Thickness of Cell	Effective Area	Membrane Area	Anolyte Circulation required per unit length	Current Per unit Length	Center to Center Distance
Hydrocell C-13	13" (325 mm)	7.25" (184 mm)	1.3 ft ² / ft (0.4 m ² /m)	1.3 ft ² /ft (0.4 m ² /m)	0.25 gpm/ft (3.1 lpm/m)	6.1 amp/ft (20 amp/m)	22.05" (560 mm)
Hydrocell C-15	20" (510 mm)	6.70" (170 mm)	1.5 ft ² /ft (0.46 m ² /m)	1.5 ft ² /ft (0.46 lpm/m)	0.3 gpm/ft (3.6 Amp/m)	7 amp/ft (23 amp/m)	24.40" (620 mm)

Ultrafiltration Membranes & Systems for Automotive E Coat

FAST (Filtration And Separation Systems, USA) Ultra Filtration Electro-coat Spiral Elements provide excellent operational life with separation efficiency required for effective operation of Electro-coat Paint Systems. When operated in accordance with the recommended operating parameters and the Electro-coat Paint within the manufacturer's recommendations, the FAST Electro-coat Spiral Element can provide a long service life and exceptional performance.

The neutrally charged membrane is effective in operating in either Cationic or Anionic Electro-coat Paints with no need to chemically refresh the membrane after cleaning. The nature of the PVDF membrane and the element's robust construction provide excellent chemical, temperature, and pressure resistance.

FEATURES & BENEFITS

- Market Proven PVDF Electro-coat Membrane
- Robust Spiral Element Design
- Designed to Fit Most Commercial Housings
- Lower energy consumption
- Ease of operation
- Lower Cost of operation

SPECIFICATIONS

Membrane Material	Polyvinylidene Fluoride (PVDF)
Support	Polyester
Permeate Tube	PVC
ATD	ABS
Brine Seal	EPDM
Preservative	Sodium Meta bi-sulphate

OPERATING CONDITIONS

Maximum Inlet Pressure	60 PSI (4.1 bar)
Recommended Operating Pressure	40-50 PSI (2.7 - 3.4 bar)
Recommended Differential Pressure	30 PSI (2.1 bar)
Maximum Operating Temperature	122°F (50°C)
Operating pH Range	2-10
Short Term Cleaning pH Range	2-11 at 122°F (50°C)



APPLICATIONS

- Anodic/Cathodic Paint
- Select Water Borne Paints
- Waste Water Recycle
- Alkaline Cleaner Recovery
- PVA Recovery





TRINITY Filtration

We optimize your process

An ISO 9001:2015 Certified Company

Trinity Filter Support
Group's mission is to optimize the customer's process by employing their products and services to reduce the overall cost of filtration.

Our Services Include:

- Design Support
- Value Engineering
- Manufacturing
- Quality Assurance & Control
- Installation Support
- Project Management
- Testing & Validation
- Plant / Process Audit
- Customer Training

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