

FLUID DYNAMICS®

METALLIC FILTER ELEMENTS

*Fluid Dynamics has been the world's leader in polymer filtration since 1959, offering a complete line of porous metal filter elements to serve the needs of the polymer processing industry. From intermediates and pre-polymers to high polymers and spin packs, Fluid Dynamics provides the solutions to your specific and exacting filtration needs. If your success is measured in microns, depend on filtration technology from Fluid Dynamics to deliver the precision your product and operation requires.*

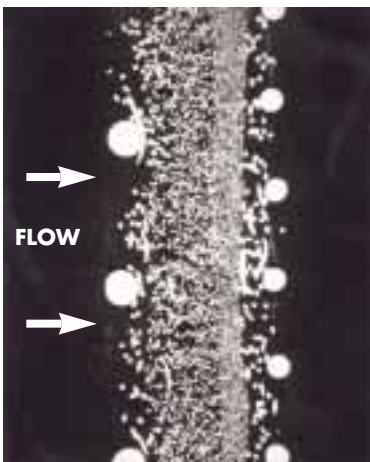
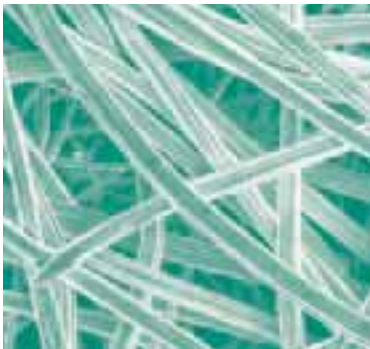




At Fluid Dynamics we can ensure the quality of our elements, because we handle every aspect of production ourselves. In fact, we are the only company that begins by drawing and processing our own microscopically-fine metal fiber, the sole ingredient in our sintered metal fiber media. With complete control over fiber geometry and media formulations, our scientists can custom-tailor media characteristics to meet the unique specifications of each application...applications that include:

- Acrylics
- Aramids
- Cellulosics
- Engineered resins
- Fluoropolymers
- Polyacrylonitrile
- Polyamides
- Polycarbonate
- Polyester
- Polyethylene
- Polypropylene
- Polystyrene
- Polysulfone
- Urethanes

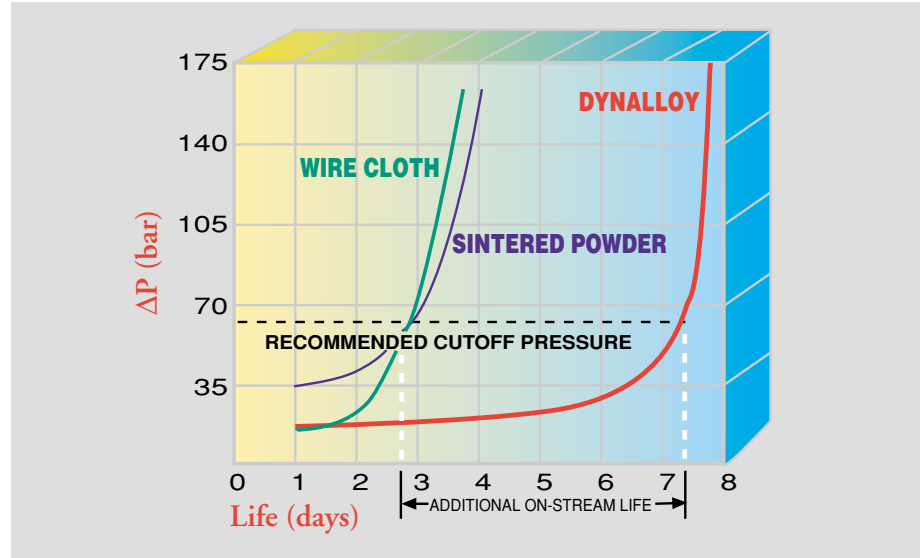
## DYNALLOY SINTERED METAL FIBER MEDIA



Our depth-type DYNALLOY sintered metal fiber media is highly effective in removing hard and deformable gel-type contaminants. With a porosity of up to 90%, it provides maximum dirt-holding capacity and longer on-stream life than any other porous metal media available.

DYNALLOY is engineered to withstand high differential pressures, high temperatures and repeated cleanings. DYNALLOY media are available in absolute ratings from 1 $\mu$ m to 100  $\mu$ m in 316L and a variety of high temperature, corrosion resistant alloys.

While DYNALLOY media can be custom-designed to your exact specifications, it is also available in two standard formulations. The X Series is a proven performer with high permeability and dirt-holding capacity, offering consistent and reliable filtration. Our advanced 1000 Series incorporates an “asymmetric” graded pore structure for applications requiring an even greater dirt-holding capacity and extended on-stream life.



DYNAMESH is our precision woven wire cloth, surface-type, filter media, specially suited for applications with adverse pressure conditions and low contaminant loading. It is available in a variety of formulations from 5 μm to 400 μm.

A Series - Wire cloth media, offering good permeability and narrow pore size distribution.

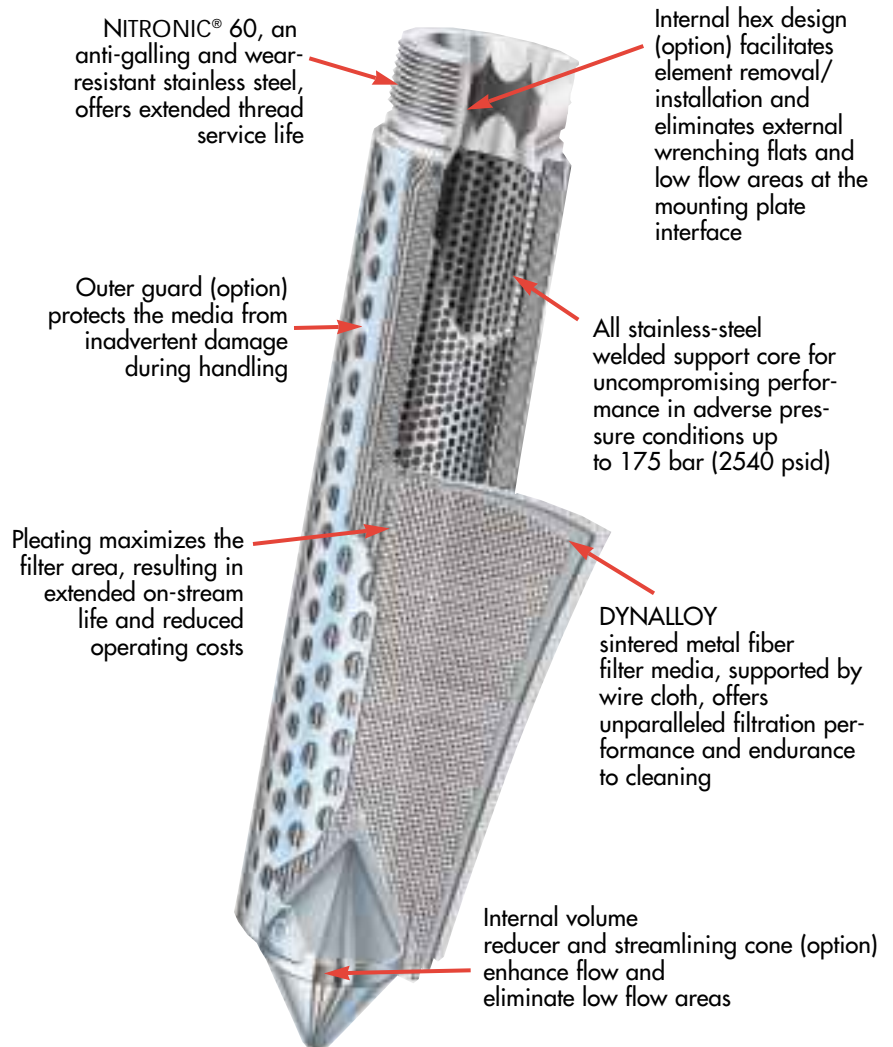
B Series - “A” Series media sintered for increased strength and resistance to punctures and fatigue.

L Series - Multiple layers of woven wire cloth sinter-bonded together for unsurpassed strength and performance.

The DYNAMESH line is available in a variety of weaves, including plain, square, twill, and dutch. It is also available in the full range of stainless steels, as well as Monel® 400, Inconel®, and Hastelloy® grades.

DEPTH MEDIA COMPARISON		
	DYNALLOY Metal Fiber	Sintered Powder Metal
Porosity (%)	74	45
Permeability (dm/min@200 pa)	138	19
Dirt Holding Capacity (mg/cm <sup>2</sup> )	12.	5.4 (est.)

Based on 15 μm media.



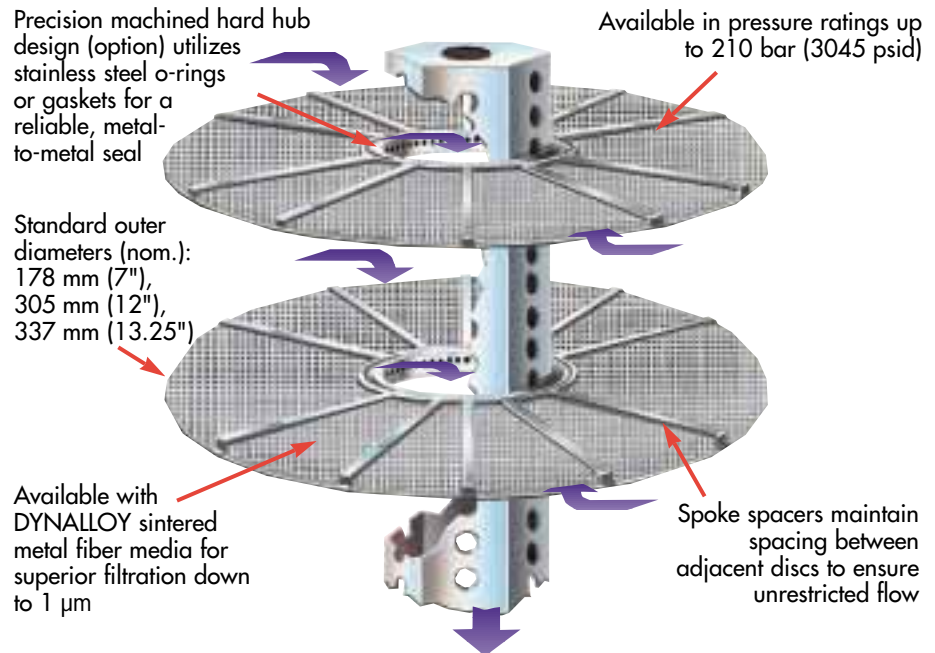
CANDLE FILTER ELEMENTS



At Fluid Dynamics, we design and manufacture porous metal filter elements in a variety of styles that include candle, leaf disc, cartridge and pack disc. Manufactured from stainless steel and a variety of high temperature, corrosion resistant alloys using patented and patent pending compositions and processes — our elements are built to withstand numerous cleaning cycles. And with our modern equipment and advanced welding techniques, our elements are consistently

corrosion-resistant, durable, cleanable and reusable.

Our candle filters are rugged, with all-welded construction, and are designed to withstand the rigors of polymer processing. They are highly effective in removing hard and gel-type contaminants in high-pressure, high-viscosity polymers. Using our DYNALLOY or DYNAMESH media, they are engineered to withstand repeated cleaning cycles for long service life.



Furthermore, most Fluid Dynamics candle elements are designed to accommodate an innovative “reclotting” process that allows the element core/adaptor assembly and protective outer guard to be reused after the filter media is no longer usable. Compared to the cost of replacing the entire element, the process of replacing the spent filter media and reusing

components can result in significant savings. And because we weld the new media pack permanently in place, the reclotted element retains all of the structural integrity and performance of a newly manufactured element — guaranteed!

Consult your local Fluid Dynamics representative for reclotting availability in your region.

## LEAF DISC ELEMENTS



Fluid Dynamics leaf disc filters are ideally suited for fine filtration of high-viscosity polymers and are highly efficient at removing hard and gel-type contaminants. Using DYNALLOY or DYNAMESH media, they are capable of withstanding repeated service and clean-

ing cycles. They are available in a wide range of sizes to optimize the performance of a new or existing system.

Our leaf disc elements are available in 178 mm, 305 mm and 337 mm outer diameters, with hard, semi-hard and soft center hub options.



#### PACK DISK FILTERS

Our pack disc filters are designed for point of use applications in spin pack and screen changers. Our pleated design increases filter area and significantly extends on-stream life. They are available with rolled or welded rims, in a wide range of standard shapes and sizes, and may be specially designed to meet your

specific requirements. Incorporating our DYNALLOY or DYNAMESH media, they are fully cleanable and reusable for long service life.

Choose from our wide variety of standard pack disc filters, or we can custom-design them to meet your specific needs.

#### CARTRIDGE FILTERS



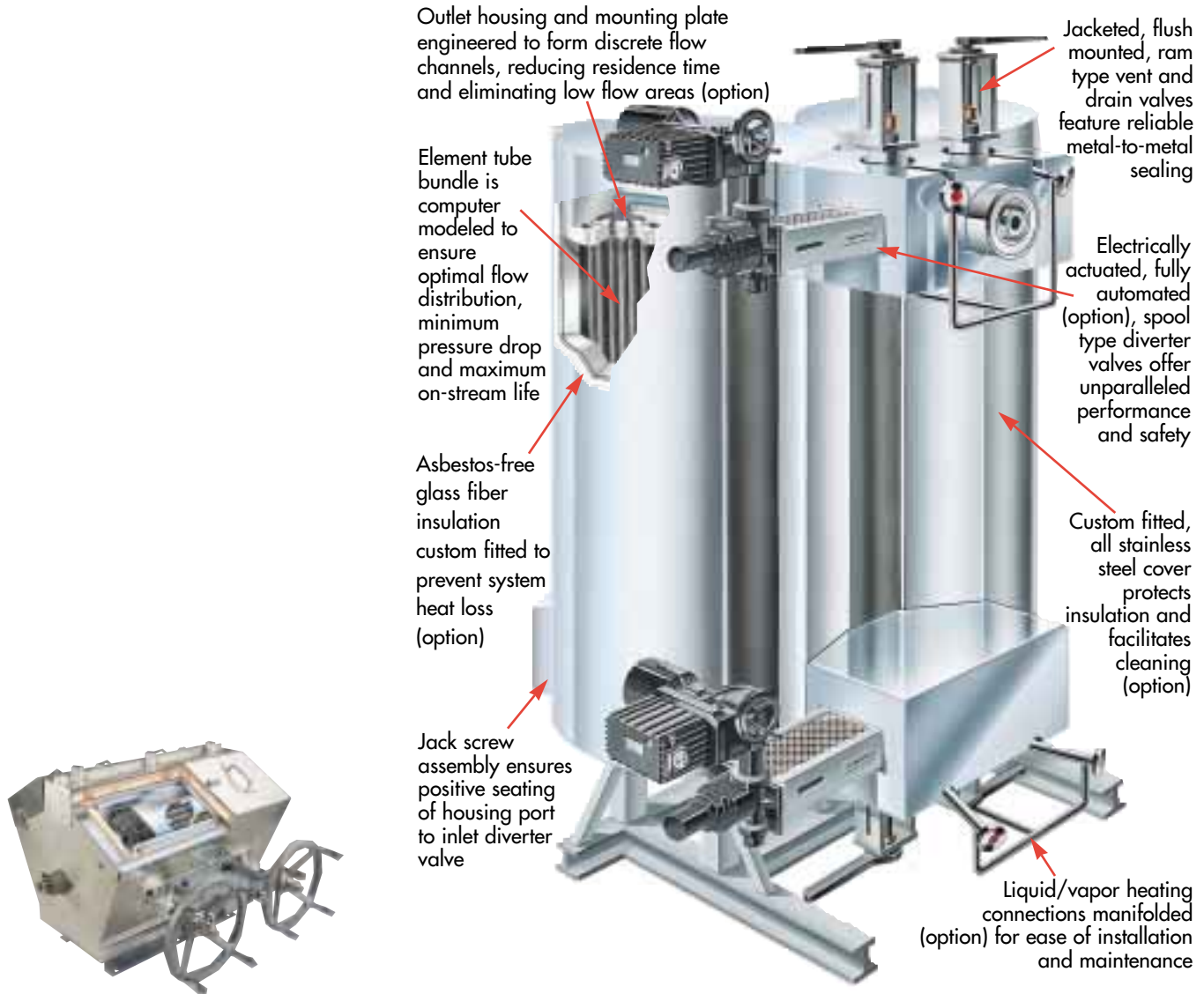
We offer a cost-effective line of low-pressure cartridge filters for a full range of applications, including the filtration of raw materials, additives, intermediates and pre-polymers. Incorporating our DYNALLOY or DYNAMESH media, they are cleanable and reusable and are available in standard lengths of 254 mm, 508 mm, and 762 mm (10", 20" and 30"

nom.) and are fully interchangeable with disposable cartridges. Manufactured under the same strict quality standards as our other filters, these standard cartridges fit easily within your budget, without compromising performance.

Our cleanable and reusable cartridge filters are rated for differential pressures of up to 10 bar (145 psid).



## SYSTEMS YOU CAN COUNT ON



In addition to fine fiber, media and elements, we also design and manufacture complete filter systems, including in-line systems for batch processing and duplex systems for continuous, uninterrupted service. Incorporating advances made through our unsurpassed flow modeling and CAD/CAM technologies, Fluid Dynamics filter systems are in service around the world, in critical

applications throughout the polymer processing industry.

Advanced computer modeling allows Fluid Dynamics engineers to optimize the flow field design of each element tube bundle, diverter valve and filter housing. The result is filter systems with minimum pressure drop, no low flow areas, and maximum on-stream life between filter changes.



Fluid Dynamics provides product material characterization and performance characterization using state-of-the-industry analytical techniques and instrumentation. These capabilities include:

- Metal fiber and fiber product bulk and surface chemical analysis
- Metal fiber and fiber product use environment materials compatibility analysis
- Tensile, compressive, and cyclic mechanical properties analysis
- Filtration property analysis focusing on permeability and removal efficiency

- In house lab trials using customer materials
- Simulated product life testing
- Materials selection
- Field performance analysis

The capabilities listed here, and more, are dedicated to supporting our customers in the optimization of their filtration equipment selection with assistance from our design and application engineering departments. They also support our research and development of new metal fiber alloys and products.



At Fluid Dynamics we believe the foundation for our success is a company wide commitment to achieve the highest levels of customer satisfaction. We accomplish this by systematically delivering the very best quality, the highest levels of product performance, and a totally responsive customer service philosophy — service which includes the support of the

worldwide Pall Corporation organization. When you need technical assistance or service, we can respond rapidly, no matter where in the world your plant is located. It also means that you can benefit from our extensive knowledge base and range of services worldwide.

**North America**

2118 Greenspring Drive  
Timonium, Maryland 21093  
United States of America  
Telephone: 1 410 252-0800  
Facsimile: 1 410 560-2857

**Latin America - S. Africa**

1320 South Dixie Highway,  
Suite 871  
Coral Gables, Florida 33146  
United States of America  
Telephone: 1 305 662-2557  
Facsimile: 1 305 662-2489

**France**

ZAC de Chassagne BP12  
69360 Ternay  
France  
Telephone: 33 472 248080  
Facsimile: 33 472 248181

**United Kingdom**

Bromyard Road Industrial Estate  
Ledbury  
Herefordshire  
HR8 1LG  
England  
Telephone: 44 1531 635228  
Facsimile: 44 1531 634207

**Italy**

Piazza De Angeli, 3  
20146 Milano  
Italy  
Telephone: 39 02 4381271  
Facsimile: 39 02 438127370

**Germany**

Planiger Straße 137  
D-55543 Bad Kreuznach  
Germany  
Telephone: 49 671 7962952  
Facsimile: 49 671 7962955

**Japan - Korea**

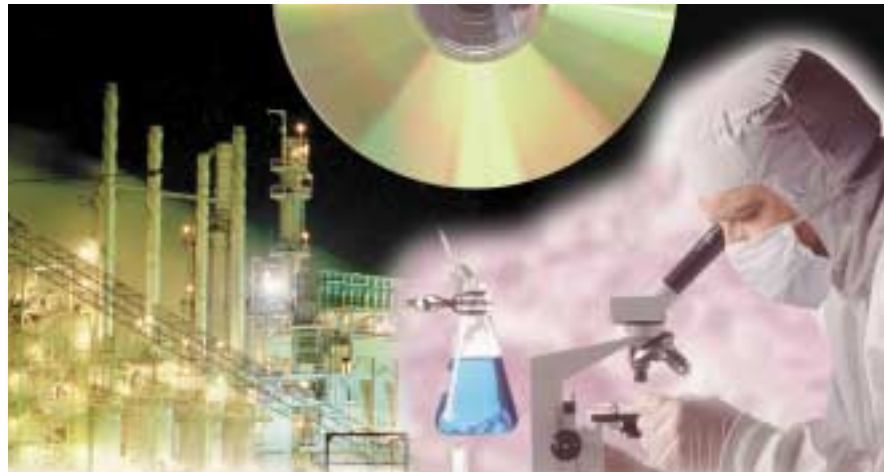
Miyamasu O.N. Building 5<sup>th</sup> Floor  
1-15-8 Shibuya Shibuya-ku  
Tokyo  
150-0002 Japan  
Telephone: 81 3 5485 6121  
Facsimile: 81 3 5485 5669

**Asia**

Menara Imperium, 20th Floor  
Metropolitan Kuningan  
Super Blok Kav. 1  
Jl. H.R. Rasuna Said, Kuningan  
Jakarta - 12980  
Indonesia  
Telephone: 62 21 8379 5442  
Facsimile: 62 21 8379 2549

YOUR NEXT STEP

Whether your application is in a new market, or one that we currently serve such as polymer, petrochemical, automotive, or electronics, we invite you to put our resources to work by sharing with us the challenges you face for improving your product or process.



US FILTER/FLUID DYNAMICS  
REGISTERED NO. JAH-0155



ISO 9001/25 9000  
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Pall Corporation

**Fluid Dynamics Division**

1750 Filter Drive  
Deland, FL 32724-2045

386.822.8000 phone  
386.822.8040 fax  
www.pall.com website

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