



## Dynalloy® Porous Metal Medium Particulate Removal from Gaseous Streams

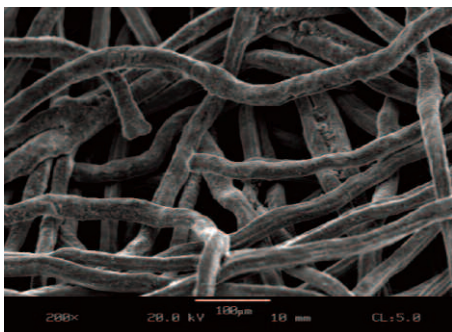
Pall Corporation's Dynalloy® porous metal fiber medium is specifically designed to optimize particulate capture via its asymmetrical graded pore structure. This structure exhibits the finest pores on the upstream side of the filter media, insuring the capture of particulates at the filters' first surface, where they are easily removed by in-situ, reverse flow operations.

Manufacturing is done completely in-house, including the production of the metal fibers, the formulation of the proprietary base medium, and the design of the element. The process concludes with Pall's scientifically controlled sintering process.

The sintering process fuses the structure of the filter media, insuring a "weld-bond" which utilizes no "binders" that might otherwise shed and contaminate downstream equipment and/or final product quality.

Produced from fine metal fibers ranging from 2 to 38  $\mu\text{m}$  in diameter, the resulting filtration medium exhibits high-efficiency particulate capture and low flow resistance characteristics.

Gaseous service filter cartridge configurations are available in point-of-use designs (i.e. cleaned off-line), or as self-cleaning elements (i.e. blowback filters).



Media Grade	Gaseous Removal Rating <sup>1</sup>	Thickness (in)	Thickness (mm)	Air Permeability <sup>2</sup> (psid-ft <sup>2</sup> /scfm)	Air Permeability <sup>3</sup> (bar[d]-m <sup>2</sup> /Nm <sup>3</sup> /hr)
XU4	1.3 µm	0.028	0.71	0.0056	2.3 x 10 <sup>-5</sup>
D215 & D034	2.6 µm	0.023	0.58	0.0027	1.1 x 10 <sup>-5</sup>
XT28	3.3 µm	0.035	0.89	0.0023	9.2 x 10 <sup>-6</sup>
XT89	10.0 µm	0.044	1.12	0.00018	7.3 x 10 <sup>-7</sup>

### Advantages of Dynalloy Medium:

- Resistant in high-temperature and/or corrosive environments
- Sintered medium design guarantees a fixed pore structure, resulting in quantitative solids separation and superior effluent quality
- Uniform pore distribution produces a barrier medium that exhibits low flow resistant characteristics and high void volume
- Flame-arresting characteristics provide a high level of safety in handling pyrophoric or explosion-prone powders

### Uses:

Refinery:	FCC TSS & FSS Flue Gas; Catalyst Hopper Vent Gas, etc.
Mineral Processing:	Off-Gas Solids Recovery from Calciners, Incinerators, Fluid Bed Dryers, and Storage Silos
Chemical:	Catalyst Recovery in Fluidized Bed & Slurry Loop Reactors (PP, HDPE, LDPE, Fumed Silica & Polycrystalline Silicon, Maleic Anhydride, etc.)
Alternative Energy:	Biomass & Coal Gasification Flue Gas, Fischer Tropsch Synthesis

### Materials of Construction:

316/316L SST; 310 SST; Inconel<sup>4</sup> 600; Hastelloy<sup>5</sup> X; Hastelloy<sup>5</sup> C-2000; Haynes<sup>5</sup> HR-160<sup>5</sup>

### Available Configurations<sup>6</sup>:

#### Blowback Elements:

Standard Diameters of 2" (50.8 mm), 2<sup>3</sup>/<sub>8</sub>" (60.3 mm), 3<sup>1</sup>/<sub>2</sub>" (88.9 mm), 4<sup>1</sup>/<sub>2</sub>" (114.3 mm)

Available in lengths up to 186" (4,724.4 mm).

#### Metal Blowback Bags:

Standard Diameters of 3<sup>1</sup>/<sub>2</sub>" (88.9 mm), 4<sup>1</sup>/<sub>2</sub>" (114.3 mm)

Available in lengths up to 186" (4,724.4 mm).

<sup>1</sup> The 98% (minimum) removal efficiencies are based on latex bead challenges (in liquid) per ASTM F 662-86. From these results, a liquid-to-gas removal efficiency ratio of 3:1 was determined based on results from field trials.

<sup>2</sup> Air permeability determined per ISO 4022. Pressure drop in psi obtained by multiplying value shown by actual gaseous flow rate desired (ACFM) and the ratio of viscosities (actual cP / 0.018 cP), all divided by total filtration area (ft<sup>2</sup>) of grade selected.

<sup>3</sup> "N" (normal) conditions assumed to be 32°F (0°C) and 1.0 atmosphere.

<sup>4</sup> Inconel is a registered trademark of Special Metals Corporation.

<sup>5</sup> Hastelloy, Haynes, and HR-160 are registered trademarks of Haynes International, Inc.

<sup>6</sup> Standard configurations shown. Please consult your Pall representative for other configuration availability.

