# **AmerShield**<sup>®</sup>

#### Performance enhancement for gas turbines

Advanced technology pre-filtration

# Description

Specifically designed for the rigorous environments of gas turbine inlet applications. AmerShield pre-filters, with integrated Impress<sup>®</sup> technology, offer an outstanding combination of advanced filtration technology and coalescing performance.

Thermal embossed-pleat technology and intermittent beads of adhesive create the ideal surface geometry for smooth and even airflow, while the entire perimeter of the filter media is bonded to the plastic frame to ensure a positive seal. AmerShield optimised pleat spacing technique allows the filter media to load evenly throughout its depth and maintain a low resistance to airflow, while also serving to maximise filter life.

In addition, the AmerShield's hydrophobic media allows airborne moisture to form large droplets on the air entry side of the media, which then fall out of the airstream to the bottom of the filter.

## Features and benefits

#### Impress<sup>®</sup> V-pleat geometry

The embossing pattern in Impress<sup>®</sup> Technology allows for wider pleat spacing, unsurpassed mechanical strength and reinforced V-pleats that won't collapse.

#### Low airflow resistance

Advanced pleating design and optimised media area deliver the lowest possible resistance, increasing turbine output.

#### Longer filter life

The ideal pleat geometry to facilitate full media utilisation, resulting in fewer filter change-outs and less downtime.

#### **Coalescing media**

The 100 % synthetic, proprietary media is hydrophobic, allowing moisture to coalesce out of the airstream to protect final filters.

#### Lightweight

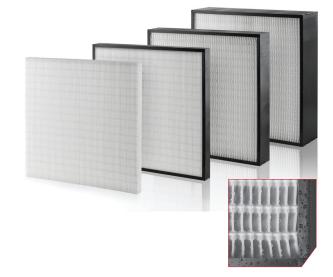
AmerShield is very lightweight, making removal and installation as easy as possible.

#### **Rugged construction**

The moisture-proof, high-impact plastic frame is designed for tough gas turbine intake environments.

#### **Corrosion proof**

AmerShield filters contain no metal components, preventing the corrosion that can add particulates to the airstream over time.



# Product highlights

- Ideal pleat geometry for maximum service life
- Very low airflow resistance for increased turbine output
- Moisture-proof, thermally bonded synthetic media
- Lightweight for easy removal and installation
- Versatile product suitable for coastal or high-moisture installations



# AmerShield<sup>™</sup> Pad

Performance specification data

## Overview

Efficiency class	G4   MERV 81
Rated airflow	4250 m <sup>3</sup> /h 2500 CFM
Recommended final resistance	450 Pa 1.8 in.WG
Temperature Range	-40 °C to + 65 °C -40 °F to + 149 °F
Humidity range	0 to 100 % relative humidity



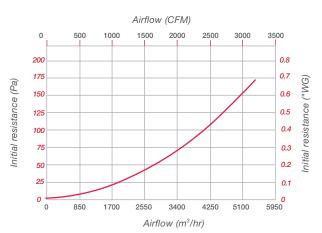
## Filter model details

Filter model	Part number	Initial pressure loss	Filter depth	Filter weight
AmerShield Pad	ED001-G4-C.0	115 Pa 0.46 in.WG	48 mm 1.89 in.	0.9 kg 2.0 lb

## Construction

Filter media	Specially formulated microfiberglass

### Resistance curve



### Dimensions

Height <sup>2</sup>	592 mm 23.375 in
Width <sup>2</sup>	592 mm 23.375 in
Depth	See table above
Weight	See table above

<sup>1</sup> According to EN779:2012, ASHRAE 52.2 - 2007

<sup>2</sup> Additional filter dimensions are available

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U.S. Patent No. 6,685,833 B2



# AmerShield<sup>™</sup> 50 & 75

Performance specification data

#### Overview

Efficiency class	G4   MERV 81
Rated airflow	4250 m <sup>3</sup> /h 2500 CFM
Recommended final resistance	450 Pa   1.8 in.WG
Temperature Range	-40 °C to + 65 °C -40 °F to + 149 °F
Humidity range	0 to 100 % relative humidity



## Filter model details

Filter model	Part number	Initial pressure loss	Filter depth	Filter weight
AmerShield 50	EP001-G4-C.0	115 Pa 0.46 in.WG	48 mm 1.89 in.	1.8 kg 4.0 lb
AmerShield 75 <sup>2</sup>	EP001-G4-D.0	115 Pa 0.46 in.WG	76 mm 2.99 in.	2.0 kg   4.4 lb

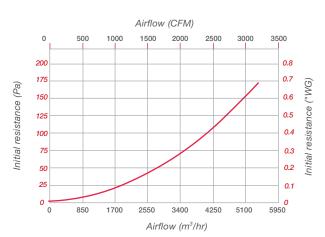
## Construction

Filter media	Specially formulated microfiberglass
Frame material	Plastic
Sealant	Polyurethane
Gasket	Optional

## Dimensions

Height <sup>3</sup>	592 mm 23.375 in
Width <sup>3</sup>	592 mm 23.375 in
Depth	See table above
Weight	See table above

## Resistance curve



<sup>1</sup> According to EN779:2012, ASHRAE 52.2 – 2007

 $^{2}\,\mathrm{2}$  in. (nominal) media pack in a 3 in. (nominal) frame

<sup>3</sup> Additional filter dimensions are available

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U.S. Patent No. 6,685,833 B2

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# AmerShield<sup>™</sup> 100 & 150

Performance specification data

## Overview

Efficiency class	G4   MERV 81
Rated airflow	4250 m <sup>3</sup> /h 2500 CFM
Recommended final resistance	450 Pa   1.8 in.WG
Temperature Range	-40 °C to + 65 °C -40 °F to + 149 °F
Humidity range	0 to 100 % relative humidity



## Filter model details

Filter model	Part number	Initial pressure loss	Filter depth	Filter weight
AmerShield 100	EP101-G4-E.0	70 Pa 0.28 in.WG	96 mm 3.78 in.	2.5 kg 5.5 lb
AmerShield 150 <sup>2</sup>	EP101-G4-F.0	70 Pa 0.28 in.WG	150 mm   5.91 in.	3.0 kg   6.6 lb

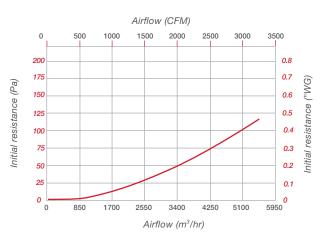
### Construction

Filter media	Specially formulated microfiberglass
Frame material	Plastic
Sealant	Polyurethane
Gasket	Optional

### Dimensions

Height <sup>3</sup>	592 mm 23.375 in
Width <sup>3</sup>	592 mm 23.375 in
Depth	See table above
Weight	See table above

#### Resistance curve



<sup>1</sup> According to EN779:2012, ASHRAE 52.2 – 2007

<sup>2</sup> 4 in. (nominal) media pack in a 6 in. (nominal) frame

<sup>3</sup> Additional filter dimensions are available

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