

Vyon® Battery Vents and Flame Arrestors

Porvair Filtration Group manufacture a wide range of battery vents and flame arrestors from our Vyon® sintered porous plastic media. Our range of Vyon® products, available in HDPE and PP, are supplied to world-leading lead-acid battery manufacturers as vents and flame arrestors.

The potential for explosion within a lead acid battery arises when hydrogen gas created during normal operation reaches a specific hydrogen/oxygen concentration.

Historically, ceramic battery vents have been used to vent excess gas from lead-acid batteries during operating cycles and prevent flame ingress into the battery. However these have several disadvantages including poor handling during automated assembly processes and a relatively high cost of manufacture.

Porvair's porous Vyon® materials also offer greater flexibility during the ever more demanding environment of automated battery assembly.

Manufactured from both sintered polyethylene and polypropylene materials allows the Vyon® vent, to be secured into the battery by a wide range of industry standard ultrasonic welding techniques. This ease of assembly, when combined with cost-effective vent manufacture, makes Vyon® an ideal choice for all lead-acid battery vent applications.

Our porous Vyon® battery vents and flame arrestors can be manufactured in a variety of formats, shapes and sizes, including complex 3D shapes, moulded or rotary-cut discs or plugs, moulded or seam-welded cylinders.



Features and Benefits

- Flame arrestor properties**
 The tortuous path within the Vyon® media prevents sparks propagating back inside the battery.
- Venting of battery gases**
 Prevents the build-up of explosive gases within the battery.
- Hydrophobic properties**
 Naturally hydrophobic, which reduces the risk of acid spillage.
- Separation**
 Separation of airborne acid droplets, preventing both corrosion and depletion of the battery's electrolyte.
- Temperature resistance**
 Polyethylene is temperature resistant from -70°C to 80°C (-94°F to 176°F).
 Polypropylene is temperature resistant from -10°C to 110°C (14°F to 230°F).
- Chemically inert**
 Resistant to many chemicals, making it suitable for many applications.
- Strong, lightweight and self-supporting**
 A versatile material that can be manufactured in a variety of shapes and sizes.
- High and even porosity**
 Low pressure drop and even flow.



Specifications

Materials of Manufacture

Produced in both sintered porous polyethylene (PE) and polypropylene (PP). An additional oleophobic treatment can be added for super hydrophobicity if required.

Formats

Our Yvon® battery vents and flame arrestors are available in the following formats:

- Cut shapes
- Moulded or rotary-cut discs or plugs
- Moulded or seam-welded cylinders
- Complex 3D shapes containing both threads and end caps.

Dimensions

Diameters*:	5mm (0.097in)
	6mm (0.236in)
	9.2mm (0.362in)
	7.75mm (0.305in)
	10mm (0.094in)
	12mm (0.472in)
	12.7mm (0.5in)
	16mm (0.63in)
	16.5mm (0.65in)
	18mm (0.709in)

* Standard sizes, other sizes (from 2.8mm to 80mm) are available on request.
Tolerances are +/- 0.1mm (+/- 0.039in).

Standard thicknesses*:	2mm (0.097in)
	2.25mm (0.098in)
	3.2mm (0.126in)
	4.75mm (0.187in)

* Tolerances are +/- 0.25mm (+/- 0.01in).

Quality Assurance

Quality is at the heart of every stage of our operation and a fundamental part of our culture. We are ISO9001 approved at all of our manufacturing facilities and hold many other accreditations for the various industries we serve.

Product Innovation, Manufacturing and Testing

We understand that product development involves building multidisciplinary teams, not only within the company, but often in partnership with our customers, improving project efficiency and ensuring complete customer satisfaction. This continuous development of products and materials is vital, to enable us to offer new and better solutions to applications. **Porvair** has implemented various methodologies to drive out waste and process variance across the company to achieve the ultimate goal of zero defects.

We have a dedicated team of scientists, engineers, production and quality professionals working towards the best possible filtration solutions for our customers. We have a fully equipped test house and laboratory, and our experienced design engineers use the latest AutoCAD® technology, with 3D solid modelling, integrated with a finite element analysis system to give full structural assurance capability.



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