

## Absorbent Glass Mat (AGM) Separator

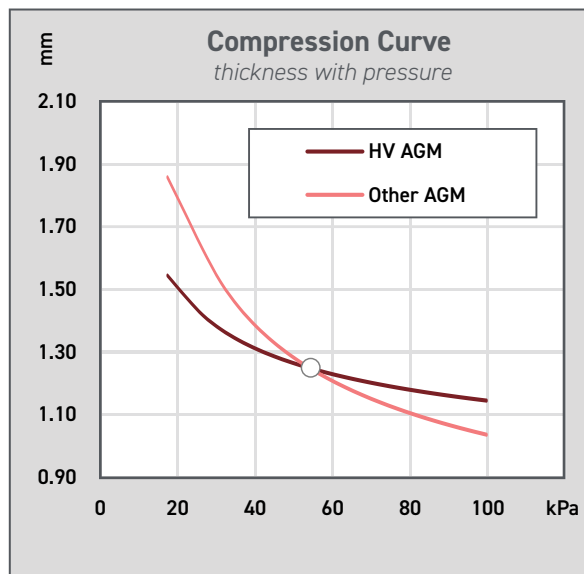
A separator's primary function is to keep the negative and positive electrodes apart to prevent short circuits while allowing the transfer of ionic charge carriers. Separators have an impact on a variety of battery control factors, including energy, cycle life, safety, and power density. Your experience with AGM separators is influenced by the quality of the product and provider you choose.

Absorbent Glass Mat (AGM) batteries are Valve Regulated Lead Acid (VRLA) batteries that employ specialty separator manufactured with glass fiber. AGM batteries provide enhanced benefits when compared to flooded lead batteries. Specifically, they differ in design and construction, making them better suited for demanding applications and processes.

H&V's AGM separators provide industry-leading pressure retention and extended battery life. The fiberglass sheets serve as a barrier in between plates absorbing and immobilizing the acid in the AGM batteries, eliminating the need for maintenance or electrolyte watering, and serving as protection against dendrites, reducing shorts. Our vertically integrated manufacturing capabilities and AGM battery recyclability allow for a reduced carbon impact/ footprint. We offer two unique separator product lines:

### EnergyGlass™

The all-glass AGM from H&V is the global standard for the automobile passenger vehicle market. It provides superior performance benefits such as capacity, cranking, and charge acceptance and has the highest acid capacity of our offerings due to its pure glass design.



1.25 insertion gap @ 50 kPa

### EnergyGuard®

EnergyGuard® is an excellent choice for advanced manufacturing batteries, motorbikes, and other high-demand applications and processes. The reinforced design of EnergyGuard makes it an ideal choice for industrial battery processing and battery assembly. Its robust design enhances processing properties and has been proven to reduce waste.

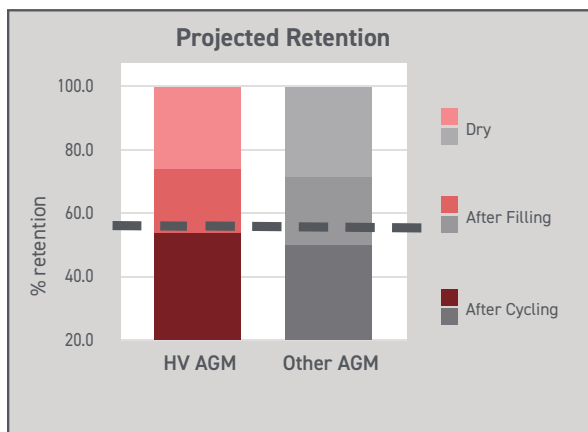
## Getting Started

H&V battery separators achieve your rigid battery assembly and performance requirements effectively. We create and fabricate our separators to exceed the highest efficiency standards available. Our separators are available in various layouts to ensure we adhere to your battery design. Learn more on our website:

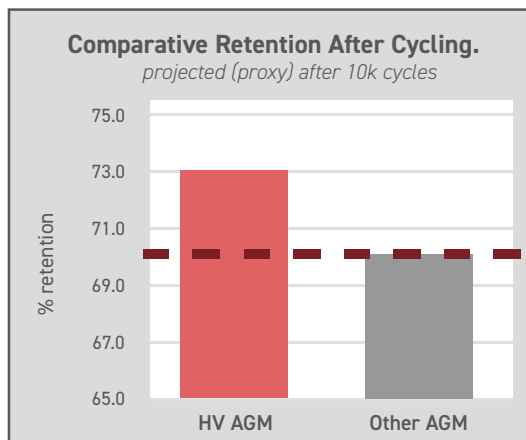
[www.Hollingsworth-Vose.com](http://www.Hollingsworth-Vose.com)

Typical AGM separators using a common 1.25mm gap @ 50kPa

AGM	Grade	Specific Surface Area m <sup>2</sup> /g	Thickness mm @ 10 kPa	Basis weight g/m <sup>2</sup>	Tensile MD kN/m	Elongation MD %	Max Pore Size µm
All-glass	CT	1.3	1.62	260	0.45	3.5	20.0
	TB	1.8	1.50	245	0.81	3.5	14.5
EnergyGuard (reinforced)	NB	0.9	1.86	300	0.90	6.0	26.5
	DB	1.3	1.76	270	0.65	4.0	21.5
	LB	1.7	1.55	240	0.92	5.0	15.0



*H&V Product delivers a higher final compression maximizing battery life.*



*What matters with AGM? The final level of thickness retention in the battery*

## About Hollingsworth & Vose

Hollingsworth & Vose is the global automotive AGM market leader, with local support and regional manufacturing. We are the only vertically integrated, international, AGM producer in the lead battery industry. For over three decades, we have been a trusted partner and solution provider who is dedicated to innovation and collaboration with our customers. We have a broad product line with specialized application support and electrochemical level testing in our state of the art battery testing lab.

## Contact H&V to Learn More

H&V battery separators meet your highest standards for performance and battery assembly. We offer separators in a wide-range of configurations to support your battery design.

Learn about H&V's solutions that can deliver value to you and your customers, [contact us](#) today.