# Portable Electronic Vents

Dust and Splash Competitive Comparison (Target IP64)

# **Improve Protection Efficiency and Acoustic Performance**

# PRODUCT INFORMATION: SERIES GAW111, GAW112, GAW113 AND GAW210 For Dust and Splash Applications

Within the realm of resistive acoustic venting, no product exists today that can meet IP64 standards without robust housing designs to block and manage water exposure. Gore has designed products that maximize dust and spray protection at your desired acoustic performance level. These materials can provide improved small particle dust protection and higher levels of water spray efficiency. What this means for you is a device with improved protection levels and improved design success for IP64 standards.

Material Performance	Series GAW111	45 Rayl Woven Mesh	Series GAW112	90 Rayl Woven Mesh	Series GAW113ª	260 Rayl Woven Mesh	Series GAW210ª	160 Rayl Woven Mesh
Average acoustic impedance (Impedance from 200-5000 Hz, per ASTM 1050, modified)	45 rayls MKS	45 rayls MKS	105 rayls MKS	90 rayls MKS	240 rayls MKS	260 rayls MKS	150 rayls MKS	160 rayls MKS
Comparative water spray efficiency <sup>b</sup>	60%	52%	75%	70%	90%	80%	90%	79%
7 – 10 um dust capture efficiency	33%	14%	72%	31%	79%	50%	82%	44%

a Patent issued: US2010270102A.

b Per Gore Water Spray-001: Direct stream at 70ml/min at 10psi; 0% efficiency represents open condition.

## **COMPARATIVE WATER SPRAY EFFICIENCY**

Because IPx4 tests are pass/fail, they do not allow for quantitative material comparisons. Gore developed a water spray test to evaluate materials' effectiveness of resisting water spray ingress. This test emulates a single water jet from the IPx4 test standard sprayed directly onto the material. Water ingress levels are measured and efficiency measurements are calculated.

#### TEST SETUP FOR SPRAY-RESISTANT MATERIALS



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# DUST CAPTURE EFFICIENCY FOR 7 - 10µm

IP6x test standards are limited to particulate sizes from 50µm to 75µm. Many portable electronic devices are required to operate in environments where particulate sizes are commonly much smaller. Gore has evaluated capture efficiencies of much smaller particles.

## MODIFIED ASHRAE 52.2 TEST RESULTS FOR WOVEN AND NON-WOVEN MATERIALS



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