



HPD III High Pressure Diffuser

Aerosol Monitoring Accessory



High Pressure Diffusers (HPDs) have been developed to address the challenge of sampling pressures of 5 – 100 psi, and the possible damage that can result from connecting pressurized air or gas to a particle counter. HPDs reduce the pressure of the gas to near atmospheric pressure by allowing some of the gas to diffuse out of the system, allowing the particle counter's flow-metering system to function as designed.

The HPD III Aerosol Monitoring Accessory is compatible with non-toxic, non-flammable gases such as Clean Dry Air (CDA), argon, nitrogen and carbon dioxide. The higher pressure gases are reduced to a level acceptable to particle counters designed to operate at atmospheric pressure.

BENEFITS

- Measures gases from 5 to 100 psi (range dependent on model)
- No external flow meters needed
- Low contamination, < 5% of ISO Class 5 cleanliness
- Economical monitoring of pressurized gases with atmospheric pressure particle counters
- Can be used with Clean Dry Air (CDA), argon, nitrogen, carbon dioxide or other non-toxic inert gases
- Seven different versions for 0.1 CFM, 1.0 CFM, 50 LPM, and 100 LPM flow rates

FEATURES

- No moving parts to wear
- Connects via male 4-VCR fitting
- Exhaust filter prevents possible room contamination
- Mounting clamps supplied
- Stainless steel construction

APPLICATIONS

- Nano-ID® NPC10 nanoparticle counter
- Lasair® III particle counter models 310B, 310C, 350C, and 5100
- Airnet® II particle sensor models 301, 501, 510, and 510XR
- IsoAir® 310P particle counter

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Specifications

Pressure	High Pressure 20 – 100 psi for 0.1 CFM, 1.0 CFM, 50 LPM flow rates 60 – 100 psi for 100 LPM flow rate	Low Pressure 5 – 25 psi for 1.0 CFM and 50 LPM flow rates 20 – 60 psi for 100 LPM flow rate
Flow rate	Options for 0.1 CFM, 1.0 CFM, 50 LPM, or 100 LPM	
Particle size range	0.3 – 25 µm	
Temperature range	Typical: 39 – 86 °F (4 – 30 °C)	
Humidity	0 – 85% RH non-condensing	
Material	Enclosure: 316L stainless steel body, exhaust filter Gaskets: 316 stainless steel, Buna-N O-rings	
Sample gas	Dry, inert, non-toxic, non-flammable gases (CDA, nitrogen, argon, carbon dioxide) NOTE: For carbon dioxide sampling, contact Particle Measuring Systems.	
Inlet fitting	Male 4-VCR fitting, #4 size, class 316L stainless steel with Ruby orifice	
Exhaust fitting	Barb fitting for 0.75" ID, 0.5" ID, 0.375" ID, or 0.125" ID dependent upon configuration	
ISO class	Less than 5% of ISO Class 5	
Tubing length	1 m (39.4 in) maximum	
Dimensions (h, w, d)	15 x 2.75 x 5.5 in (38 x 7 x 14 cm)	
Weight	2.7 lb (1.25 kg)	
Compatible instruments	Lasair® III particle counters: 310B, 310C, 350C, and 5100 IsoAir® PLUS particle sensors: 310 and 510 IsoAir® 310P particle counter Airnet® II particle sensors: 301, 310, 501, 510, and 510XR	

System components included: mounting brackets and exhaust tubing to particle counter

Not included: particle counter, ISPs sample tubing, communications cables, PC, FacilityNet or Pharmaceutical Net software

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