

DHPD

Dual-mode High Pressure Diffuser



- Dual-Mode-High-Pressure Diffuser (DHPD) is designed for pharmaceutical, food and beverage, cosmetic and medical device industries that require critical standards of cleanliness.
- DHPD can implement two sampling modes, which are used for microbial sampling and particle monitoring of compressed gasses.

Application

Classic Application 1: Microbiological detection for compressed gas



Mode 1: Sampling Before Decompression

After passing through the sampling/detecting device, the compressed gas flows through the DHPD and is decompressed into an atmospheric pressure for release.

Classic Application 2: Particle (airborne particle) detection for compressed gas



Mode 2: Sampling After Decompression

The compressed gas is decompressed into an atmospheric pressure when flowing through the DHPD, and then is output to the back-end sampling/detecting device for sampling or detection.

Features of Sampling Before Decompression

High likelihood that microorganism remain active

Sampling before decompression eliminates the possibility that the microbe will burst due to a sudden drop in pressure.

Automatic sampling

No need to monitor the pressure and sampling time, making sampling convenient and safe.

Sampling accuracy

Built in flow and pressure sensors ensure proper sampling speed and actual sampling volume.

Preset gas type: Air, N₂, CO₂, Ar and O₂

Covers the most common gases used in industry. The rotameter is not required.

* The influence of sampling speed and gas pressure on sampling time.

Sampling Volume(L)	Flow rate (with pressure) (LPM)	Gas pressure (relative) (bar)	Time (min)
1000	100	1	5
	100	3	2.5
	100	9	1
	50	1	10
	50	3	5

Specification Sheet

Specification	Dual-Mode High Pressure Diffuser I DHPD
Mode 1 (Sampling Before Decompression)	
Flow rate	10-100LPM (with pressure)±4%
Sampling volumes	20-9999L
Sampling head for high pressure dimensions	φ 5.50mm × 9.05 (H) inches; 140mm × 230 (H) mm
Sampling head for high pressure weight	1.5kg (3.3lbs)
Petri dish	φ 3.54-3.94inches; 90-100mm
Mode 2 (Sampling After Decompression)	
Flow rate	≥2LPM (atmospheric pressure)

Specification Sheet

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Common Parameter	
Gas type	Air, N ₂ , CO ₂ , Ar, O ₂ and other inert gases (only for non-flammable and non-explosive areas)
Inlet relative pressure	1-8bar
Inlet diameter	ID: 5mm, OD: 8mm
Outlet diameter	ID: 6mm, 8mm, 12mm, 14mm, 16mm, 20mm selectable or silencer
Dimensions	4.84(H) x 7.48(W) x 4.72(D) inches; 123(H) x 190(W) x 120(D) mm (with foot mat)
Weight	3.2kg (7.1lbs)
External surface	Anodized aluminum
Power	AC 100-240V, 50 Hz/60 Hz
Battery	10.8V, 6800mAh rechargeable lithium battery, battery life over 6 hours
Communication	USB
Date storage	40,000 sets (Mode 1: 20,000 sets, Mode 2: 20,000 sets)
Display	4.3" capacitive touch screen
Language	English, Chinese
Calibration frequency	Annual calibration is recommended
Operating conditions	Temperature: 5°C-30°C, relative humidity ≤80%
Storage conditions	Temperature: 0°C-40°C, relative humidity ≤80%
Safety	EN 61010-1:2010+A1:2019, EN 61326-1:2013, EN 61326-2-2:2013, EN 61000-6-1:2007, EN 61000-6-3:2007+A1
Warranty	24 months (calculated from the date of product activation or six months after the date of manufacture, whichever comes first)

Ordering Information

Name	Model	Order No.
Dual-Mode High Pressure Diffuser DHPD	D110	MACHD110