

# 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, N<sub>2</sub>, CO<sub>2</sub>, Ar and O<sub>2</sub>

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
<b>Mode 1 (Sampling Before Decompression)</b>	
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
<b>Mode 2 (Sampling After Decompression)</b>	
Flow rate	≥2LPM (atmospheric pressure)

## Specification Sheet

Specification	Dual-Mode High Pressure Diffuser I DHPD
Common Parameter	
Gas type	Air, N <sub>2</sub> , CO <sub>2</sub> , Ar, O <sub>2</sub> 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