PMPD 1000





The PMPD 1000 dilution system is according to the ejector principle specially developed for the PMP application or the PMP measurement chain. In the PMPD 1000, volatile particles are evaporated up to 200 $^{\circ}$ C using a thermodiluter. A dilution factor 1:1000 (see Figure 1) is achieved by cascading 3 x dilution factor 10.

工作原理

DILUTION SYSTEM EJECTOR WITH DILUTION FACTOR 1:1000

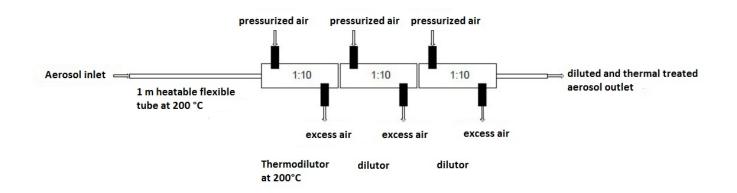


Fig. 1: PMPD 1000

The PMPD dilution systems offer all the advantages of the other Palas $^{(\!0)}$ product series of ejector diluters, e.g., a temporally constant dilution factor.

The suitability of the PMPD 100 for the PMP measurement chain was confirmed at the METAS Institute in Switzerland (see measurement report no. 235-10383). The PMPD 1000 cascades a further dilution step as compared with PMPD 100.

VDI report no. 1973 from 2007 proved metrologically that a reproducible aerosol dilution is possible with the Palas $^{\mathbb{R}}$ dilution systems down to V_F 100,000.

PMPD 1000 版本: 2025年10月05日



Туре	Dilution factor* V _F	Pressure - resistant up to 10 bar	Chemically resistant	Heatable up to °C	dp _{max} in μm	Compressed air 4 - 8 bar	Cascadable	Voltage
DC 100	10, 100				< 5			115 V / 230
DC 1000	10, 100, 1000				< 5			V 115 V / 230 V
DC 10000	10, 100, 1000, 10000				< 5			115 V / 230 V
KHG 10	10		x	150	< 20	x	x	115 V / 230
KHG 10 D	10	×	×	150	< 20	×	×	V 115 V / 230 V
PMPD 100	100		x	200	< 5	x		115 V / 230 V
PMPD 1000	1000		x	200	< 5	x		115 V / 230
VDD 10	1 - 10				< 10	×		V 115 V / 230 V
VKL 10	10				< 20	×	x	
VKL 10 E	10		×		< 20	×	x	
VKL 10 ED	10	×	×		< 20	×	x	
VKL 10 V	10				< 20	×	×	
VKL 27	27				< 10	×	x	
VKL 100	100				< 2	x	x	

Table 2: Characteristics dilution systems

Table 1: Technical characteristics of Palas[®] dilution systems



优势

- The dilution systems from Palas[®] are clearly characterized. This is proven by means of a calibration certificate for each individual device
- ullet The dilution steps of the PMPD series produce a temporally constant, representative dilution with factor 100 / 1000
- $\bullet \ \ Low \ compressed \ air \ consumption \ (e.g. \ only \ 96 \ L/min. \ for \ a \ dilution \ factor \ of \ 1000 \ with \ four \ VKL \ 10 \ systems)$
- The dilution steps can be combined with all common particle counters



技术数据

Volume flow (clean air)	54 – 135 l/min (heated to 200 °C)				
Volume flow (suction flow)	2 – 5 l/min				
电源	115 – 230 V, 50/60 Hz				
Isokinetic suction nozzles	2 – 5 l/min				
Maximum particle size	< 10 μm				
Thermodynamic conditions for di- lution	≤400°C				
Compressed air supply	4-8 bar				
Dilution factor	1:1,000				
Special features	Evaporation of volatile elements for exhaust emission measurements according to VPR Calibration Procedure AEA/ED 47382/Issue 5 (Volatile Particle Removal Efficiency), chemical resistant, heated to 200 $^{\circ}$ C				



应用领域

• Dilution system for PMP measurement chain



Mehr Informationen:

https://www.palas.de/zh/product/pmpd1000