PMPD 1000

Dilution system ejector for the PMP application with dilution factor 1:1000

Description

The PMPD 1000 dilution system is a dilution system according to the ejector principle that was especially developed for the PMP application or the PMP measurement chain. The PMPD 1000 achieves a dilution factor of 1:1000 (see Figure 1) by means of a thermodiluter up to 200°C.

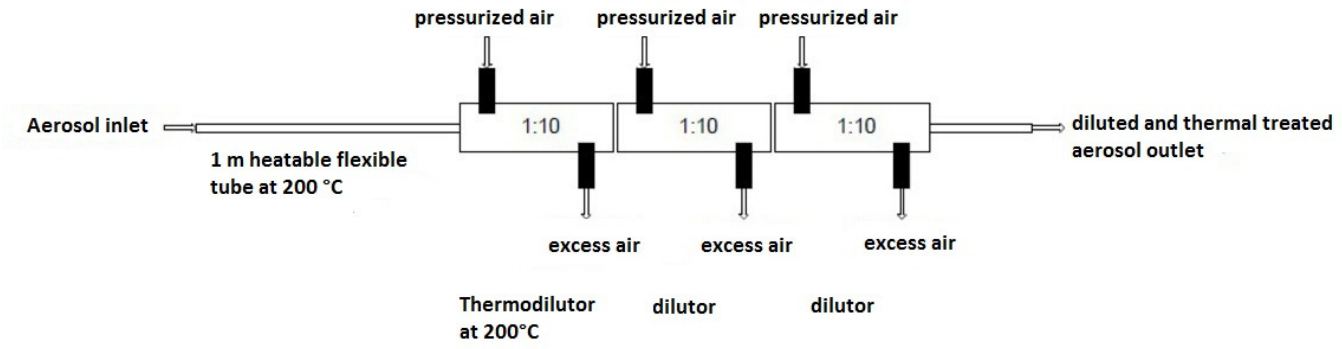

Fig. 1: PMPD 1000

The PMPD dilution systems offer all the advantages of the other Palas® 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. **Representative dilution of particle size distribution of the Palas® dilution systems by cascading** VDI report no. 1973 from 2007 proved metrologically that a reproducible aerosol dilution is possible with the Palas® dilution systems down to V_F 100,000.

PMPD 1000

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

*Other dilution factors on request

Table 1: Technical characteristics of Palas® dilution systems

PMPD 1000

Benefits

- The dilution systems from Palas® are clearly characterized. This is proven by means of a calibration certificate for each individual device.
- The dilution steps of the PMPD series produce a temporally constant, representative dilution with factor 100 / 1000.
- 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.

PMPD 1000

Datasheet

Parameter	*Description*
Power supply	115 – 230 V, 50 – 60 Hz
Dilution factor	1 : 1000
Isokinetic suction nozzles	2 – 5 l/min
Maximum particle size	< 10 µm
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 °C
Thermodynamic conditions for dilution	400°C
Volume flow (clean air)	54 – 135 l/min (heated to 200 °C)
Volume flow (suction flow)	2 – 5 l/min
Compressed air supply	4 – 8 bar

PMPD 1000

Applications

Dilution system for PMP measurement chain

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