



Pressure-resistant dilution system made of stainless steel for dilution at up to 10 bar counter-pressure, and for chemically aggressive aerosols with a dilution factor of 1:10.

Description

The VKL 10 ED model variant is a dilution system made of stainless steel which works according to the ejector principle for chemically aggressive aerosols. The dilution system can be used up to a temperature of 700 Kelvin. Isobaric aerosol dilution up to 10 bar overpressure is possible. The systems can be cascaded down to a dilution factor of 1:100,000.

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 The dilution system VKL 10 ED **has not got** integrated pneumatical elements like the standard version VKL 10. So the user of the equipment has to ensure himself that the definite amount of clean air is at disposal.

Benefits

- The dilution systems from Palas® are characterized unambiguously. This is documented with a calibration certificate for each individual device.
- The dilution steps deliver a temporally constant, representative dilution with the factors 10 and 100.
- The dilution systems can be cascaded with the factors 100, 1,000, 10,000 and 100,000
- **Low compressed air consumption** , e.g. just **128 l/min** with a dilution factor of 10,000 with four VKL 10 systems
- The dilution steps are combinable with all common particle counters.
- With a simple test set-up these cascaded dilution systems can be **checked by the users themselves**.
- **Isobaric dilution up to 10 bar overpressure / isothermal dilution up to 120°C with the VKL 10 E, VKL 10 ED, KHG 10 and KHG 10 D dilution systems**
- Simple functional test on-site

Datasheet

<i>Parameter</i>	<i>Description</i>
Dimensions	100 • 245 • 100 mm
Weight	approx. 4 kg
Dilution factor	1 : 10
Isokinetic suction nozzles	2 - 5 l/min
Maximum particle size	< 20 µm (for dusts)
Special features	Cascadable, chemical resistant
Volume flow (clean air)	18 - 45 l/min
Volume flow (suction flow)	2 - 5 l/min
Compressed air supply	13 bar

Applications

- Aerosol measurement technology: diesel exhaust gases, swarfs, coolant aerosols, weld smoke, oil droplets, test aerosols of filters and inertial separators
- Separation efficiency determination with counting measuring methods, e.g. with dust filters or HEPA/ULPA filters
- Leak test and acceptance measurements of clean rooms, isolators and safety work benches
- Inhalation toxicology
- Quality control of respirator masks and filter cartridges

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