KHG 10

The KHG 10 series of heatable dilution systems builds upon the VKL series ejector principle. In addition to the advantages of the VKL series, the KHG series dilution system is configured to be heatable to 150 °C (optionally up to 200 °C) and is additionally pressure-resistant up to 10 bar pressure. Isothermal and isobaric dilution can therefore be achieved. With the KHG system, both the compressed air supplied and the dilution system are self-heated.
The welas® KHG 10 series of dilution systems can reduce the concentration of aerosols by the dilution factor 1:10 under isothermal conditions, also of very highly concentrated aerosols, in a defined and reliable way.
Dilution factors of up to 1:100,000 are achieved by cascading several KHG 10 systems.

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

Applications

- Dilution of hot aerosols, e.g., engine oil, DEHS, etc.
- 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., oil mist separators
- Hot gas filtration
- Measurement of isolators under pressure conditions
- Toxicology, e.g., testing of medical nebulizers/inhalation studies, etc.

DATASHEET

Volume flow (clean air)	18 – 45 l/min (heatable until 150 °C)	Volume flow (suction flow)	2 – 5 l/min
Power supply	115 – 230 V, 50/60 Hz	Isokinetic suction nozzles	0,6 – 1,6 l/min, 2 – 5 l/min, 4 – 10 l/min, 8 – 16 l/min, 28 l/min => 15 – 37 l/min
Maximum particle size	< 20 μm (for dusts)	Thermodynamic conditions for dilution	400°C, 10 bar_g
Compressed air supply	4 – 8 bar	Dilution factor	1 : 10
Special features	Heatable until 150 °C, cascadable, chemical resistant		