KHG 10

KHG 10 系列可加热稀释系统基于VKL 系列引射器原理开发。该系列稀释系统不仅继承了VKL 系列的优势，还具备最高可加热至150 °C（可选配加热至200 °C）的功能，并且可承受高达10 bar 的压力。因此，该系统能够实现等温和等压稀释。KHG 系统可对供给的压缩空气及稀释系统自身进行加热。

welas® KHG 10 系列稀释系统能够在等温条件下，将气溶胶（包括高浓度气溶胶）的浓度按1 : 10 的稀释比进行可靠、精准地降低。

通过将多个KHG 10 系统级联，最高可实现1 : 100,000 的稀释比。

工作原理

稀释系统可加热且耐压高达10 BAR

VR VAn VR VF

KHG 10

2007 VDI 1973 Palas® VF 100,000

VKL

Palas®

2 1 2

1

2

VKL 100 OPC VKL 10

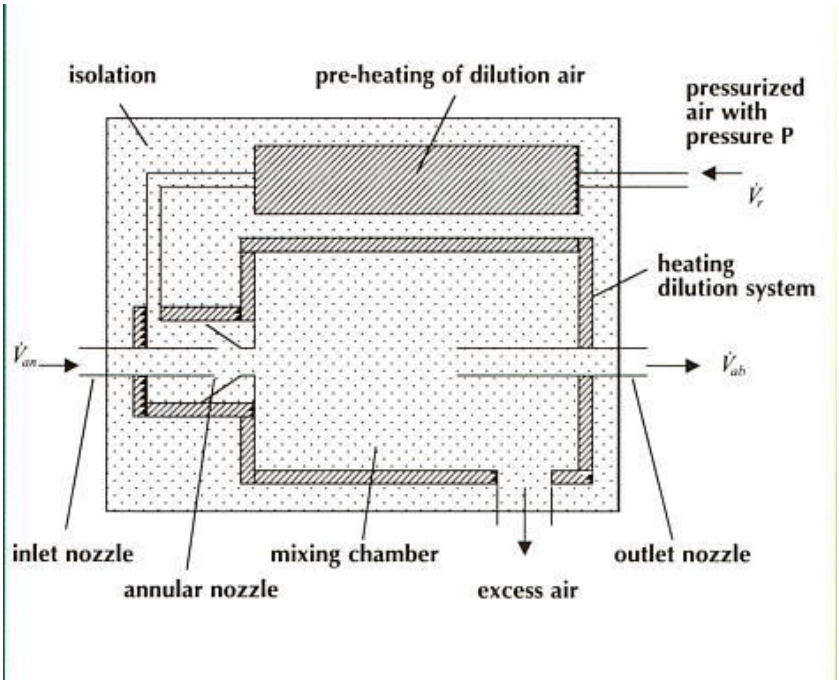

Figure 1: KHG Principle

KHG 10: Function principle

$$V_F = \frac{(\dot{V}_R + \dot{V}_{An})}{\dot{V}_{An}}$$

Figure 2: Dilution Systems

Verdünnungssysteme Formel

µm µm	1	10 bar 10 bar		... °C	µm dp_{max} / µm	4 - 8 bar 4 - 8 bar		
0.2	151648				< 5			
0.3	71604				< 5			
0.5	4305				< 5			

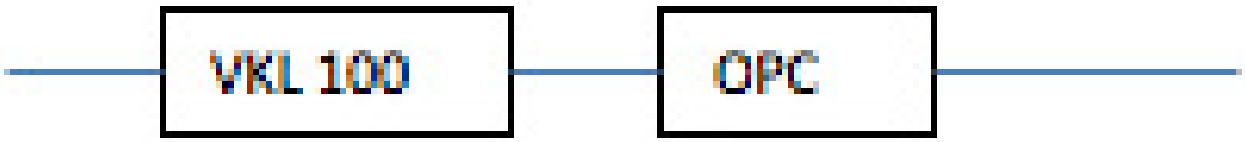

Figure 3: Experiment 1

Versuch1

Figure 4: Experiment 2

Versuch2

/ µm

1 10 bar ... °C

dp_{max}/ µm

4 - 8 bar

0.2 15166 < 5 115 V / 230 V

0.3 7290 < 5 115 V / 230 V

0.5 524 < 5 115 V / 230 V

0.7 65 x 150 < 20 x x 115 V / 230 V

1.0 21 x x 150 < 20 x x 115 V / 230 V

2.0 3 x 200 < 5 x 115 V / 230 V

3.0 x 200 < 5 x 115 V / 230 V

5.0 2 < 10 x 115 V / 230 V

Sum 23071 < 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

KHG 2

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/ µm	1	10 bar		... °C	dp_{max}/ µm	4 - 8 bar		
0.2	15166				< 5			115 V / 230 V
0.3	7290				< 5			115 V / 230 V
0.5	524				< 5			115 V / 230 V
0.7	65		x	150	< 20	x	x	115 V / 230 V
1.0	21	x	x	150	< 20	x	x	115 V / 230 V
2.0	3		x	200	< 5	x		115 V / 230 V
3.0			x	200	< 5	x		115 V / 230 V
5.0	2				< 10	x		115 V / 230 V
Sum	23071				< 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	

Table 4: KHG 2

10

$$V_F = \frac{\dot{N}_{GesPos1}}{\dot{N}_{GesPos2}} = 9{,}88$$

Figure 5: Formel (2)

Formel

	* V_F	10 bar		... °C	dp_{max} / µm	4 - 8 bar		
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			115 V / 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	

Table 6:

1Palas®

- Palas®
- 10 100
- 1001,00010,000 100,000
- VKL 10 10,000 128 /
-
-
- VKL 10 EVKL 10 EDKHG 10 KHG 10 D 10 bar / 120 °C
-

Volume flow (clean air)	18 – 45 l/min (heatable until 150 °C)
Volume flow (suction flow)	2 – 5 l/min
	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

- DEHS
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- /

Mehr Informationen:
https://www.palas.de/zh/product/khg10