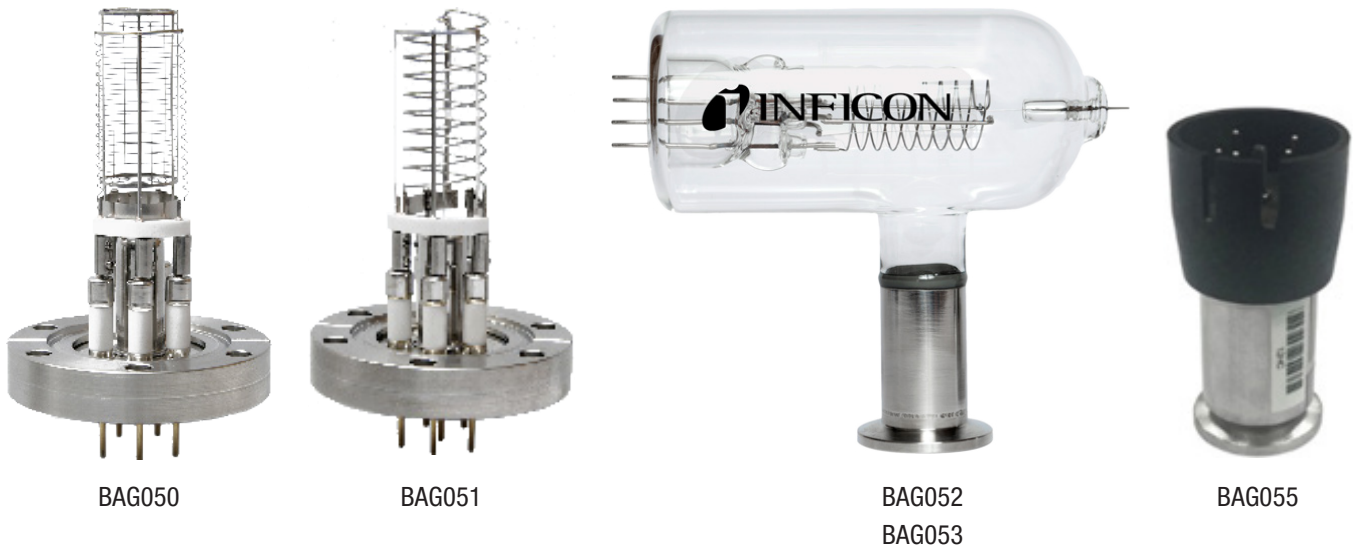


BAG050 / 051 / 052 / 053 / 055

Bayard Alpert Vacuum Gauge Heads – Passive



The INFICON Bayard-Alpert passive vacuum gauge heads BAG050, BAG051, BAG052, BAG053 and BAG055 are designed for use with the INFICON Vacuum Gauge Controller VGC083A & VGC083B. Yttria coated iridium filaments are offered for general vacuum applications in air and inert gases such as N_2 and argon. Select tungsten filaments for gases that are not compatible with yttria coated iridium filaments. BAG05x gauges may also be operated with compatible vacuum gauge controllers from other manufacturers. The INFICON passive Bayard-Alpert ionization vacuum gauges (BAG05x) are offered in three different configurations: BAG050 is a EB-degas UHV nude ionization vacuum gauge capable of pressure measurement as low as 2×10^{-11} Torr. BAG051 is a resistive degas (I^2R) nude ionization vacuum gauge capable of pressure measurement as low as 4×10^{-10} Torr. BAG052 and BAG053 are resistive degas (I^2R) glass enclosed ionization vacuum gauges capable of pressure measurement as low as 4×10^{-10} Torr. BAG055 is a EB-degas UHV nude ionization vacuum gauge capable of pressure measurement as low as 1×10^{-9} Torr.

ADVANTAGES

- Reliable and proven gauge head design
- Drop in for most nude hot ion gauge heads
- Wide range of emission currents (100 μ A to 10 mA)
- Available with single / dual yttria coated iridium and dual tungsten filament cathode assemblies
- Degas: All models can be degased using EB (electron bombardment).
BAG051, BAG052 and BAG053 can also be degased using resistive degas (I^2R)

ORDERING INFORMATION

BAG050

BA nude EB-degas, DN40CF, dual iridium filament (Ir)	399-720
BA nude EB-degas, DN40CF, dual tungsten filament (W)	399-721
Spare dual iridium filament (Ir)	399-730
Spare dual tungsten filament (W)	399-731



BAG051

BA nude I ² R, DN 40 ISO-CF, single iridium filament (Ir)	399-725
BA nude I ² R, DN 40 ISO-CF, dual iridium filament (Ir)	399-726
BA nude I ² R, DN 40 ISO-CF, dual tungsten filament (W)	399-727
Spare V-iridium filament (Ir)	399-735
Spare dual iridium filament (Ir)	399-736
Spare dual tungsten filament (W)	399-737



BAG052

BA glass I ² R, 3/4" Kovar metal inlet port , single iridium filament (Ir)	399-740
BA glass I ² R, 1" Kovar metal inlet port , single iridium filament (Ir)	399-741
BA glass I ² R, 3/4" glass inlet port , single iridium filament (Ir)	399-742
BA glass I ² R, 1" glass inlet port , single iridium filament (Ir)	399-743
BA glass I ² R, DN 25 ISO-KF , single iridium filament (Ir)	399-744
BA glass I ² R, DN 40 ISO-KF , single iridium filament (Ir)	399-745
BA glass I ² R, DN 16 ISO-CF , single iridium filament (Ir)	399-746
BA glass I ² R, DN 40 ISO-CF , single iridium filament (Ir)	399-747



BAG053

BA glass I ² R, 3/4 in. Kovar metal inlet port , dual tungsten filament (W)	399-750
BA glass I ² R, 1 in. Kovar metal inlet port , dual tungsten filament (W)	399-751
BA glass I ² R, 3/4 in. glass inlet port , dual tungsten filament (W)	399-752
BA glass I ² R, 1 in. glass inlet port , dual tungsten filament (W)	399-753
BA glass I ² R, DN 25 ISO-KF , dual tungsten filament (W)	399-754
BA glass I ² R, DN 40 ISO-KF , dual tungsten filament (W)	399-755
BA glass I ² R, DN 16 ISO-CF , dual tungsten filament (W)	399-756
BA glass I ² R, DN 40 ISO-CF , dual tungsten filament (W)	399-757



BAG055

BA EB-degas, 3/4" tube , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-760
BA EB-degas, DN 16 ISO-KF , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-761
BA EB-degas, DN 25 ISO-KF , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-762
BA EB-degas, DN 40 ISO-KF , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-763
BA EB-degas, DN 16 CF-R , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-764
BA EB-degas, DN 40 CF-R , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-765
BA EB-degas, 8 VCR female , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-766
BA EB-degas, DN 16 ISO-KF, 90° Elbow , Yt ₂ O ₃ coated dual iridium filament (Ir)	399-768

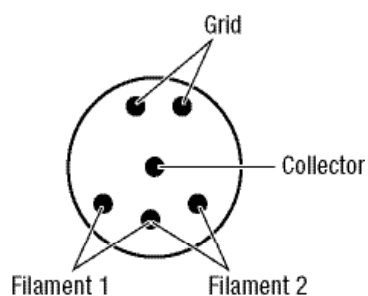


BAG055

ELECTRICAL CONNECTION

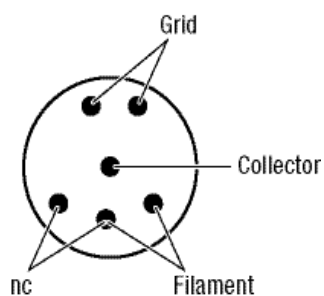
BAG050

dual filament

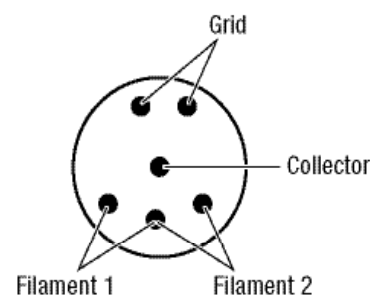


BAG051

single filament

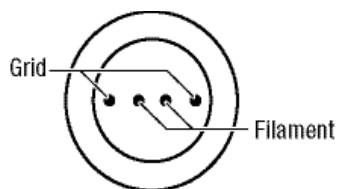


dual filament



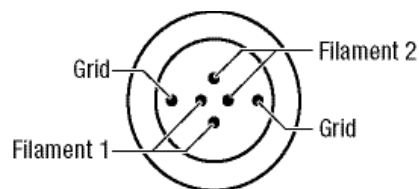
BAG052

single filament








BAG053

dual filament



SPECIFICATIONS

Type		BAG050	BAG051	BAG052	BAG053	BAG055
						
Measurement range	mbar Torr Pa	$2.7 \times 10^{-11} \dots 1.3 \times 10^{-3}$ $2 \times 10^{-11} \dots 1 \times 10^{-3}$ $2.7 \times 10^{-9} \dots 1.3 \times 10^{-1}$		$5.3 \times 10^{-10} \dots 1.3 \times 10^{-3}$ $4 \times 10^{-10} \dots 1 \times 10^{-3}$ $5.3 \times 10^{-8} \dots 1.3 \times 10^{-1}$		$1.3 \times 10^{-9} \dots 6.7 \times 10^{-2}$ $1 \times 10^{-9} \dots 5 \times 10^{-2}$ $1.3 \times 10^{-7} \dots 6.7 \times 10^{-2}$
Accuracy (N ₂) ¹⁾	%	±20		±20		±15 ²⁾
Repeatability (N ₂) ¹⁾	%	±5		±5		±5 ²⁾
X-ray limit	Torr	2×10^{-11}		4×10^{-10}		5×10^{-10}
Sensitivity (N ₂)	Torr	25 ⁻¹		10 ⁻¹		10 ⁻¹ nominal
Degas						
EB ¹⁾	W	≤40	70 nominal, ≤100	≤100	≤100	≤3
I ² R ²⁾	V (ac)	–		6.3 ... 7.5 at 10 A		–
Filament						
Current	A	2.5 ... 3.5		4 ... 6		2 ... 2.5
Voltage	V (dc)	3 ... 5		3 ... 5		1.5 ... 2
Potential	V (dc)	+30		+30		+30
Grid potential	V (dc)			+180		
Collector potential	V			0		
Bakeout temperature	°C	450		450		200
Collector		tungsten (W), ø0.005"		tungsten (W), ø0.010"		tungsten (W), ø0.010"
Filament		dual yttria coated iridium or dual tungsten	single/dual hairpin type yttria coated iridium or dual tungsten	single hairpin type yttria coated iridium	dual tungsten	dual yttria coated iridium
Grid		photo etched closed end SS ³⁾ cage grid	non-sag double helical, 0.025" tungsten grid			etched SS ³⁾
Insulator		ceramic	ceramic	glass to metal	glass to metal	glass
Glass envelope		–	–	ø2 ¼" × 5" long	ø2 ¼" × 5" long	–
Mounting orientation		any				
Length						
Overall	in.	4 1/8	4 1/8	6	6	2.7 ... 3.8 ⁴⁾
Insertion	in.	3	3	–	–	–
Flange material		SS 304 ³⁾	SS 304 ³⁾	glass Nonex 7720	glass Nonex 7720	SS 304 ³⁾
Compatible INFICON controller ⁵⁾		VGC083A (PN 399-700)	VGC083B (PN 399-701)	VGC083B (PN 399-701)	VGC083B (PN 399-701)	VGC083A (PN 399-700)

1) Typical

2) $1.3 \times 10^{-8} \dots 6.7 \times 10^{-2}$ mbar ($1 \times 10^{-8} \dots 5 \times 10^{-2}$ Torr)

3) Stainless steel

4) Depending on flange

5) For corresponding cables to connect gauge heads with the VGC083x controller please check VGC083x Data Sheet tiba59e1 or VGC083x Operating Manual tinb29e1.



www.inficon.com reachus@inficon.com

Due to our continuing program of product improvements, specifications are subject to change without notice.

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