

BAG050, BAG051, BAG052, BAG053

Bayard Alpert Vacuum Gauge Heads – Passive



BAG050



BAG051



BAG052
BAG053

The INFICON Bayard-Alpert passive vacuum gauge heads BAG050, BAG051, BAG052 and BAG053 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 N₂ 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 (I²R) nude ionization vacuum gauge capable of pressure measurement as low as 4×10^{-10} Torr.

BAG052 and BAG053 are resistive degas (I²R) glass enclosed ionization vacuum gauges capable of pressure measurement as low as 4×10^{-10} 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 (I²R)

ORDERING INFORMATION BAG050 HOT ION GAUGE

Type	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



ORDERING INFORMATION BAG051 HOT ION GAUGE

Type	BAG051
BA nude I ² R, DN40CF, single iridium filament (Ir)	399-725
BA nude I ² R, DN40CF, dual iridium filament (Ir)	399-726
BA nude I ² R, DN40CF, 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



ORDERING INFORMATION BAG052 HOT ION GAUGE

Type	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, DN25KF , single iridium filament (Ir)	399-744
BA glass I ² R, DN40KF , single iridium filament (Ir)	399-745
BA glass I ² R, DN16CF , single iridium filament (Ir)	399-746
BA glass I ² R, DN40CF , single iridium filament (Ir)	399-747



ORDERING INFORMATION BAG053 HOT ION GAUGE

Type	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, DN25KF , dual tungsten filament (W)	399-754
BA glass I ² R, DN40KF , dual tungsten filament (W)	399-755
BA glass I ² R, DN16CF , dual tungsten filament (W)	399-756
BA glass I ² R, DN40CF , dual tungsten filament (W)	399-757



SPECIFICATIONS

Type		BAG050	BAG051	BAG052	BAG053
Measurement range	mbar	$2.7 \times 10^{-11} \dots 1.3 \times 10^{-3}$		$5.3 \times 10^{-10} \dots 1.3 \times 10^{-3}$	
	Torr	$2 \times 10^{-11} \dots 1 \times 10^{-3}$		$4 \times 10^{-10} \dots 1 \times 10^{-3}$	
	Pa	$2.7 \times 10^{-9} \dots 1.3 \times 10^{-1}$		$5.3 \times 10^{-8} \dots 1.3 \times 10^{-1}$	
Accuracy – N ₂ (typical)	%	20		20	
X-ray limit	Torr	2×10^{-11}		4×10^{-10}	
Sensitivity – N ₂	Torr	25^{-1}		10^{-1}	
Degas					
EB (electr. bombardment) W		≤40	70 nominal, ≤100	≤100	
I ² R (resistance heated)		–		6.3 ... 7.5 V (ac) at 10 A	
Filament					
Current	A	2.5 ... 3.5		4 ... 6	
Voltage	V (dc)	3 ... 5		3 ... 5	
Potential	V (dc)	+30		+30	
Grid potential	V (dc)			+180	
Collector potential	V			0	
Bakeout temperature	°C			450	
Collector		tungsten (W), ø0.005"		tungsten (W), ø0.010"	
Filament		dual iridium (Ir), or dual tungsten (W)	single hairpin iridium (Ir), or dual hairpin iridium (Ir), or dual tungsten (W)	single hairpin iridium (Ir)	dual hairpin tungsten (W)
Grid		photo etched closed grid		non-sag double helical 0.025" tungsten (W) grid	
Insulator		ceramic		glass to metal	
Glass envelope		–		2 ¼" dia × 5" long	
Mounting orientation		any			
Length					
Overall	in.	4 1/8		6	
Insertion	in.	3		–	
Flange		2 ¾" CF / NW35CF Conflat		¾" Kovar metal port 1" Kovar metal port ¾" glass port 1" glass port NW25KF NW40KF 1 1/3" / NW16CF Mini-Conflat 2 ¾" CF / NW35CF Conflat	
Flange material		stainless steel 304		glass Nonex 7720	



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

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