# BAG055

## Mini Bayard-Alpert Gauge - Passive

The hot cathode ionization passive vacuum gauge head BAG055 is a miniature, metal enclosed Bayard-Alpert sensor designed for use with the Vacuum Gauge Controller VGC083A. BAG055 has an electron bombardment (EB) degas and is capable of pressure measurement down to $1 \times 10^{-9}$ mbar. Thanks to its compact size and a large selection of possible flanges and fittings, BAG055 can be installed in every vacuum system easily and with minimal footprint. BAG055 is offered with a dual yttrium oxide coated iridium filament and can be baked up to 200 °C. The high accuracy makes BAG055 a cost effective and robust choice for general vacuum industrial or R&D applications.


### ADVANTAGES

- Long standing, reliable and proven gauge head design
- Drop-in replacement thanks to its compact size, large choice of connection flanges and fittings
- Dual, yttrium oxide coated iridium filament
- Electron bombardment (EB) degassing

### APPLICATIONS

- General vacuum measurement and control in the low to high vacuum range
- Industrial and analytical applications

### OPERATING UNITS

- Vacuum Gauge Controller VGC083 A

# BAG055

## ORDERING INFORMATION

| BAG055 | |
|---|---|
| BA EB-degas, □'' tube, $Y_2O_3$ coated dual iridium filament (Ir) | **399-760** |
| BA EB-degas, DN 16 ISO-KF, $Y_2O_3$ coated dual iridium filament (Ir) | **399-761** |
| BA EB-degas, DN 25 ISO-KF, $Y_2O_3$ coated dual iridium filament (Ir) | **399-762** |
| BA EB-degas, DN 40 ISO-KF, $Y_2O_3$ coated dual iridium filament (Ir) | **399-763** |
| BA EB-degas, DN 16 CF-R, $Y_2O_3$ coated dual iridium filament (Ir) | **399-764** |
| BA EB-degas, DN 40 CF-R, $Y_2O_3$ coated dual iridium filament (Ir) | **399-765** |
| BA EB-degas, 8 VCR female, $Y_2O_3$ coated dual iridium filament (Ir) | **399-766** |

## SPECIFICATIONS

| Type | BAG055 |
|---|---|
| Measurement system | hot cathode ionization |
| Electrode system configuration | Bayard-Alpert |
| Measurement range ($N_2$) | $1.3 \times 10^{-9}$ … $6.7 \times 10^{-2}$ mbar<br>$1 \times 10^{-9}$ … $5 \times 10^{-2}$ Torr<br>$1.3 \times 10^{-7}$ … $6.7 \times 10^{-2}$ Pa |
| X-ray limit | $5 \times 10^{-10}$ Torr |
| Sensitivity ($N_2$, typical) | 10 $Torr^{-1}$ |
| Accuracy ($N_2$, typical) | ±15% |
| Repeatability ($N_2$, typical) | ±5% |
| Mounting orientation | any |
| Admissible temperature | |
| Bake-out | 200 °C[1)] |
| Degas | |
| Electron bombardment (EB) | ≤3 W |
| Standard operating characteristics with VGC083 controller | |
| Cathode (filament) | 2 … 2.5 A |
| Heating current | 1.5 … 2 V (dc) |
| Heating voltage | +30 V (dc) |
| Potential | +180 V (dc) |
| Anode (grid) potential | 0 V |
| Collector potential | |
| Materials exposed to vacuum | |
| Collector | tungsten (W), ø0.010'' |
| Cathode (filament) | dual yttria coated iridium |
| Anode (grid) | etched stainless steel |
| Insulator | glass |
| Flange | stainless steel AISI 304 |

1) With high temperature cable or without cable

2) Depending on flange

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

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| Type | BAG055 |
|---|---|
| Length | |
| Overall | 2.7 … 3.8 in. [2] |
| Compatible INFICON controller [3] | VGC083A (PN 399-700) |

[1] With high temperature cable or without cable

[2] Depending on flange

[3] For corresponding cables to connect gauge with the VGC083x controller please check VGC083x Data Sheet tiba59e1 or VGC083x Operating Manual tinb29e1





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