

Vacuum Gauges

- Different materials to match different ambient conditions
- Pirani for higher pressures, Bayard-Alpert for UHV
- Supplied with accessories (connectors, cables) to get a complete measurement function



Product introduction

Bayard Alpert gauges are workhorses' components in UHV measurements. Their technology enable very low-pressure measurement, down in the 10^{-12} Torr range.

Working principle is based on ionization of gas molecules, which are attracted by a collector; measurement of current intensity is directly linked to the gas molecule density, ie, the pressure.

There are two types of materials commonly used for filaments cathodes in Bayard Alpert gauges

(vacuum measurements), tungsten or iridium. Two types of coatings are also used on the filaments : thorium or yttrium.

Generally, filaments are thoria-coated iridium, and yttria-coated or uncoated tungsten. The most common style is coated iridium: it operates at lower temperature than tungsten and, therefore, is less reactive. Coated iridium filaments are also more burnout resistant when exposed to a harsh environment or to atmospheric pressure.

Riber recommendations are to install tungsten filaments in the growth chambers when no harsh environment and iridium filament in all other chambers like load lock chambers, buffer and degassing chambers.

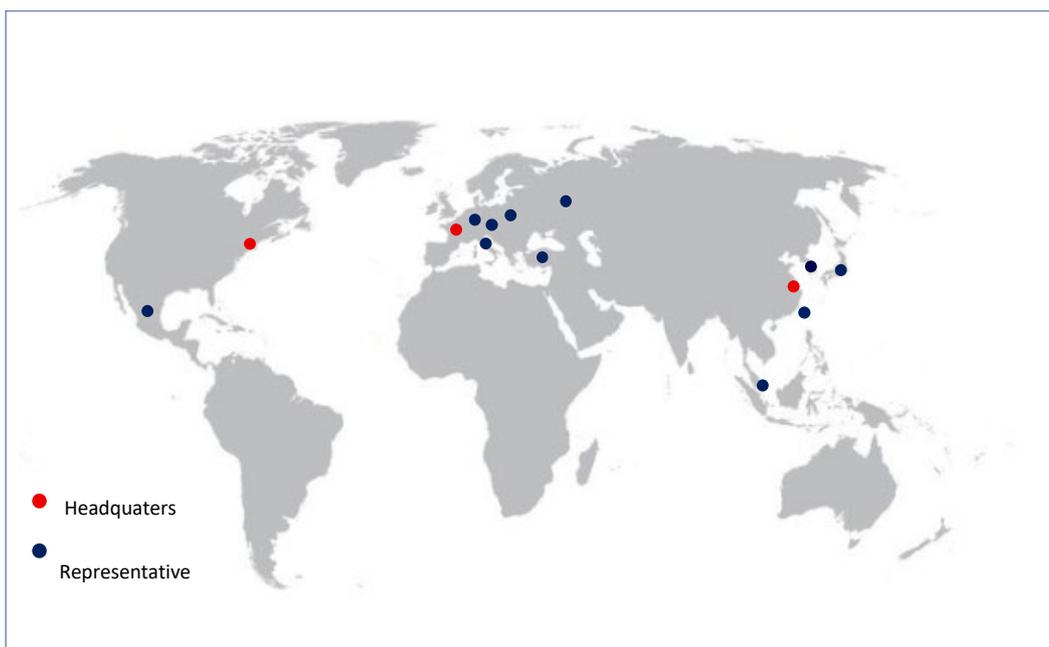
Another type of gauge which is traditionally used in vacuum measurement, for higher pressure (atmosphere down to $10^{-3}/10^{-4}$ Torr range) is the Pirani technology, It is linked to thermal loss measurement from a heated filament towards gas molecules; the higher the losses, the higher the pressure.

Specifications

Characteristics	Bayard Alpert gauge	Pirani-type gauge	Dual BA/Pirani gauge
Filament type	Tungsten (W) or Thoria-coated Iridium (Ir/Th)	Gold-plated Tungsten	Yttria-coated Iridium
Typical pressure range	10^{-3} to 2.10^{-11} Torr	Atm to 10^{-4} Torr	Atm to 10^{-9} Torr
Typically used in	Growth Chamber pumping well, buffer chamber, transfer shuttle, cluster, loading chamber	Growth Chamber pumping well, buffer chamber, transfer shuttle, cluster, loading chamber	Loading chamber, flip chamber, cold finger

RIBER SALES AND SERVICE NETWORK

For more information, please contact your local sales representative



FRANCE

RIBER
 31, Rue Casimir Périer
 95 873 Bezons Cedex
 France
 Tel : +33(0)1 3996 65 91
 Fax : +33(0)1 3947 4562
 Email : customerservice@riber.fr

USA/CANADA

RIBER Inc
 216, Route 206, Suite 17
 Hillsborough
 NJ 08844 USA
 Tel : +1 732 603 0680
 Fax : +1 732 603 8611
 Email : customerservice@riber-us.com

CHINA

RIBER China
 Room 1-8, Building A, Dart Tech Park
 #516 Wenchuan Road, Baoshan District
 Shanghai PR China
 Tel : +86 (21) 635 66 266
 Fax : +86 (21) 635 66 266
 Email : customerservice@riber.cn

OTHER COUNTRIES

RIBER
 31, Rue Casimir Périer
 95 873 Bezons Cedex
 France
 Tel : +33(0)1 3996 65 91
 Fax : +33(0)1 3947 4562
 Email : customerservice@riber.fr

Email: info@riber.com

Website: www.riber.com