

Manufacturer Cross-Reference for Bayard-Alpert Gauges

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Manufacturer Cross Reference Table

Glass Tubulated									
Connection Type	Diameter	Filament Material (count)	Pin Config	SRS (Stock#)	Granville-Phillips	ETI	Duniway Stockroom	Kurt J. Lesker	Varian
Glass Tube (Pyrex)	0.75 in.	ThO ₂ /Ir (single)	Fig. B-1	GR-075P (6-552)	274002	4336P	I-075-P	G075P	K2471304
		Tungsten (dual)	Fig. B-2	GW-075P (6-548)	274012	4336TP	T-075-P	G075TP	K7360303
	1 in.	ThO ₂ /Ir (single)	Fig. B-1	GR-100P (6-554)	274005	4336P/1	I-100-P	G100P	K2471301
		Tungsten (dual)	Fig. B-2	GW-100P (6-551)	274015	4336TP/1	T-100-P	G100TP	K7360301
Metal Tube (Kovar)	0.75 in	ThO ₂ /Ir (single)	Fig. B-1	GR-075K (6-547)	274003	4336K	I-075-K	G075K	K2471305
		Tungsten (dual)	Fig. B-2	GW-075K (6-550)	274013	4336TK	T-075-K	G075TK	K7360304
	1 in.	ThO ₂ /Ir (single)	Fig. B-1	GR-100K (6-549)	274006	4336K/1	I-100-K	G100K	K2471302
		Tungsten (dual)	Fig. B-2	GW-100K (6-553)	274016	4336TK/1	T-100-K	G100TK	K7360302
2.75" Conflat® Flange	1 in. side tube	ThO ₂ /Ir (single)	Fig. B-1	GR-100F (6-556)	274008	4336F/1	I-CFF-275	G100F	K2471303
		Tungsten (dual)	Fig. B-2	GW-100F (6-555)	274018	4336TF/1	T-CFF-275	G100TF	K7360307
Nude (2.75" CF flange)									
Range	Anode Grid	Filament Material (count)	Pin Config	SRS (Stock#)	Granville-Phillips	ETI	Duniway Stockroom	Kurt J. Lesker	Varian
Std.	Bi-filar Helix	ThO ₂ /Ir (single)	Fig. B-3	NR-F (6-559)	274028	8140	I-NUDE-BAC	G8140	L5150-302
UHV	closed end cage	ThO ₂ /Ir (dual)	Fig. B-4	NR-F-UHV (6-557)	274023	8130	I-NUDE-F	G8130	971-5007
UHV	closed end cage	Tungsten (dual)	Fig. B-4	NW-F-UHV (6-558)	274022	8130T	T-NUDE-F	G8130T	971-5008

Note

The IGC100 is also compatible with STABIL-ION® and MICRO-ION® gauges manufactured by Granville-Phillips (Helix Corp., Longmont, CO, USA). Consult the Vacuum Instruments application notes for more information on using these third party gauges.

Replacement Filament Assemblies for Nude Gauges		
SRS Model #	SRS Part #	Description
O100RFA-DR	6-581	Dual ThO ₂ /Ir Replacement Filament Assembly for NR-F-UHV Gauge
O100RFA-DW	6-582	Dual Tungsten Replacement Filament Assembly for NW-F-UHV Gauge
O100RFA-SR	6-583	Dual ThO ₂ /Ir Replacement Filament Assembly for NR-F Gauge

Bayard Alpert Gauge- Pin Connector Configuration- Cable Selector

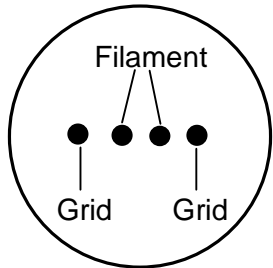


Figure B-1
 Glass Tubulated Gauge
 Single ThO₂/Ir filament
 IGC100 Cable: **O100C1**
 Default Setup: **GLASS**

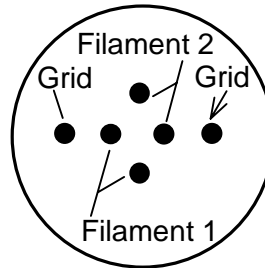


Figure B-2
 Glass Tubulated Gauge
 Dual Tungsten filaments
 IGC100 Cable: **O100C2**
 Default Setup: **GLASS**

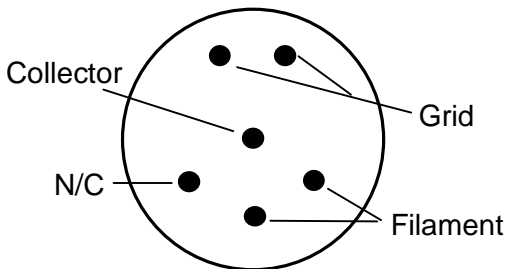


Figure B-3
 Nude Gauge
 Single ThO₂/Ir filament
Bi-filar helical anode grid
 IGC100 Cable: **O100C3**
 Default Setup: **NUDE**

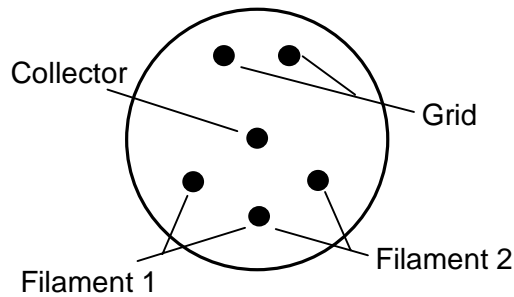


Figure B-4
 Nude Gauge-UHV
 Dual ThO₂/Ir or W filaments
Closed end anode grid cage
 IGC100 Cable: **O100C3**
 Default Setup: **NUDE-UHV**

Specifications of SRS Bayard-Alpert Ionization Gauges

	Glass Tubulated	Nude	Nude –UHV
Physical Data			
Appearance			
Connection	Side Tube or 2.75 in. Conflat® Flange	2.75 in. CF Flange	2.75 in. CF Flange
Side Tube diameter	0.75 in. (19.1 mm) or 1 in. (25.4 mm)	N.A.	N.A.
Side tube material	Pyrex or Kovar ¹	N.A.	N.A.
Envelope	Nonex 7720 Glass, 2.25 in. dia. (57 mm) x 5.25 in. (133 mm) long	Nude	Nude
Mounting Position	Any, vertical preferred ²	Any	
Collector	Tungsten, 0.005 in. diameter		
Filament	Single ⁶ ThO ₂ /Ir or dual tungsten	Single ⁶ ThO ₂ /Ir Replaceable.	Dual ThO ₂ /Ir or dual tungsten. Replaceable
Grid	Tungsten, bi-filar helix configuration	Tungsten, bi-filar helix configuration	Tantalum and Pt/Moly support, closed end (“squirrel cage”).
Overall Length, max	6.0 in. (152 mm)	4.13 in. (105 mm)	
Insertion Length, max.	N.A.	3.30 in. (84 mm)	3.00 in. (76 mm)
Operating Data			
Operating Pressure	2x10 ⁻¹⁰ to 10 ⁻³ Torr	4x10 ⁻¹⁰ to 10 ⁻³ Torr	2x10 ⁻¹¹ to 10 ⁻³ Torr
Sensitivity for N ₂ , nominal	10/Torr	10/Torr	25/Torr
X-ray limit	2x10 ⁻¹⁰ Torr	4x10 ⁻¹⁰ Torr	2x10 ⁻¹¹ Torr
Electron Bombardment Degas, Power @500V	70 Watts, nominal 100 Watts, max	70 Watts, nominal 100 Watts, max	40 Watts, max
Resistance Heated Degas	6.3 to 7.5 volts @ 10 amps	6.3 to 7.5 volts @ 10 amps	N.A.
Bakeout Temperature	250° C	450° C	450° C
Electrical Operating Parameters³			
Anode Grid Bias Voltage	180 V dc		
Collector Bias Voltage	0 V dc		
Filament Bias Voltage	30 V dc		
Emission Current (nom)	10 mA	10 mA	4 mA
Filament Supply Current	4 to 6 amps		
Filament supply Voltage	3 to 5 Volts		
SRS Cable # ⁴	O100C1 – one filament O100C2-dual filament	O100C3	O100C3
Default Setup File ⁵	GLASS	NUDE	NUDE-UHV

Notes

¹ Glass-to-metal transition.

² Vertical orientation provides strain relief for electrode structures increasing long term stability performance.

³ Direct current (dc) bias and supply voltages are recommended for all electrical connections.

⁴ O100C3 cable is compatible with all Bayard Alpert Gauges in this table.

⁵ Default Setup files are factory pre-loaded in the IGC100 controller and facilitate controller setup.

⁶ Single filaments are hair pin shaped and spring loaded to eliminate sagging.