

# Manufacturer Cross-Reference for Bayard-Alpert Gauges

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## Manufacturer Cross Reference Table

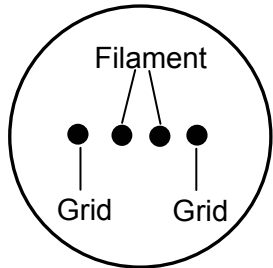
Glass Tubulated									
Connection Type	Diameter	Filament Material (count)	Pin Config	SRS (Stock#)	Granville-Phillips	ETI	Duniway Stockroom	Kurt J. Lesker	Varian
Glass Tube (Pyrex)	0.75 in.	ThO <sub>2</sub> /Ir (single)	Fig. B-1	GR-075P (6-552)	274002	4336P	I-075-P	G075P	K2471304
		Tungsten (dual)	Fig. B-2	GW-075P (6-548)	274012	4336TP	T-075-P	G075TP	K7360303
	1 in.	ThO <sub>2</sub> /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 <sub>2</sub> /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 <sub>2</sub> /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 <sub>2</sub> /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 <sub>2</sub> /Ir (single)	Fig. B-3	NR-F (6-559)	274028	8140	I-NUDE-BAC	G8140	L5150-302
UHV	closed end cage	ThO <sub>2</sub> /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

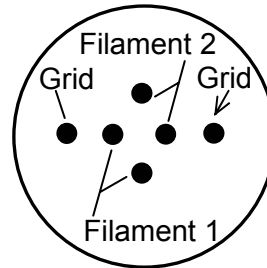
The IGC100 is also compatible with STABIL-ION<sup>®</sup> and MICRO-ION<sup>®</sup> gauges manufactured by Granville-Phillips (Helix Corp., Longmont, CO, USA). Consult the Vacuum Instruments application notes for more information on using these third party gauges.

Replacement Filament Assemblies for Nude Gauges		
SRS Model #	SRS Part #	Description
O100RFA-DR	6-581	Dual ThO <sub>2</sub> /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 <sub>2</sub> /Ir Replacement Filament Assembly for NR-F Gauge

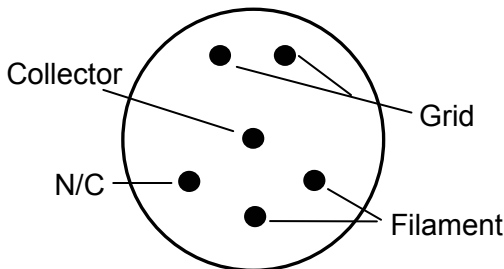
## Bayard Alpert Gauge- Pin Connector Configuration- Cable Selector



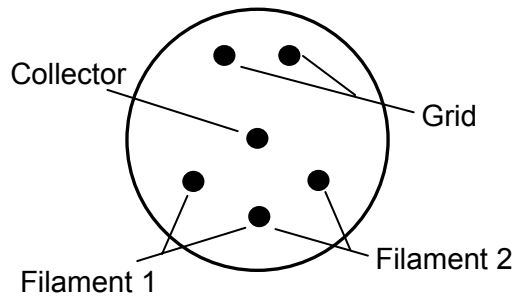
**Figure B-1**  
Glass Tubulated Gauge  
Single ThO<sub>2</sub>/Ir filament  
IGC100 Cable: **O100C1**  
Default Setup: **GLASS**



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



**Figure B-3**  
Nude Gauge  
Single ThO<sub>2</sub>/Ir filament  
**Bi-filar helical anode grid**  
IGC100 Cable: **O100C3**  
Default Setup: **NUDE**



**Figure B-4**  
Nude Gauge-UHV  
Dual ThO<sub>2</sub>/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
<b>Physical Data</b>			
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 <sup>1</sup>	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 <sup>2</sup>	Any	
Collector	Tungsten, 0.005 in. diameter		
Filament	Single <sup>6</sup> ThO <sub>2</sub> /Ir or dual tungsten	Single <sup>6</sup> ThO <sub>2</sub> /Ir Replaceable.	Dual ThO <sub>2</sub> /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)
<b>Operating Data</b>			
Operating Pressure	2x10 <sup>-10</sup> to 10 <sup>-3</sup> Torr	4x10 <sup>-10</sup> to 10 <sup>-3</sup> Torr	2x10 <sup>-11</sup> to 10 <sup>-3</sup> Torr
Sensitivity for N <sub>2</sub> , nominal	10/Torr	10/Torr	25/Torr
X-ray limit	2x10 <sup>-10</sup> Torr	4x10 <sup>-10</sup> Torr	2x10 <sup>-11</sup> 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
<b>Electrical Operating Parameters<sup>3</sup></b>			
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 # <sup>4</sup>	O100C1 – one filament O100C2-dual filament	O100C3	O100C3

(408)744-9040

[www.thinkSRS.com](http://www.thinkSRS.com)


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Default Setup File <sup>5</sup>	GLASS	NUDE	NUDE-UHV
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**Notes**

- <sup>1</sup> Glass-to-metal transition.
- <sup>2</sup> Vertical orientation provides strain relief for electrode structures increasing long term stability performance.
- <sup>3</sup> Direct current (dc) bias and supply voltages are recommended for all electrical connections.
- <sup>4</sup> O100C3 cable is compatible with all Bayard Alpert Gauges in this table.
- <sup>5</sup> Default Setup files are factory pre-loaded in the IGC100 controller and facilitate controller setup.
- <sup>6</sup> Single filaments are hair pin shaped and spring loaded to eliminate sagging.