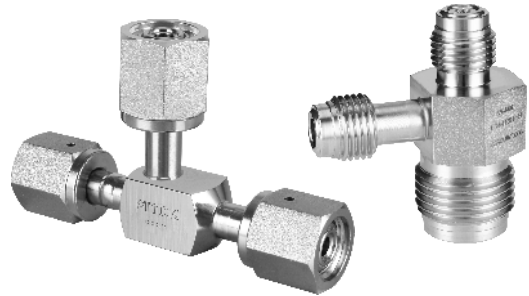


# Vacuum Generators

## VGB and VGM Series

### Introduction

VGB and VGM series vacuum generators are designed to create a vacuum and establish suction for purging piping systems, which are widely used in the semiconductor industry. The inlet and vent ports of the VGB series offer multiple options, while the VGM series specifies the sizes and types of inlet and vent ports.



### Features

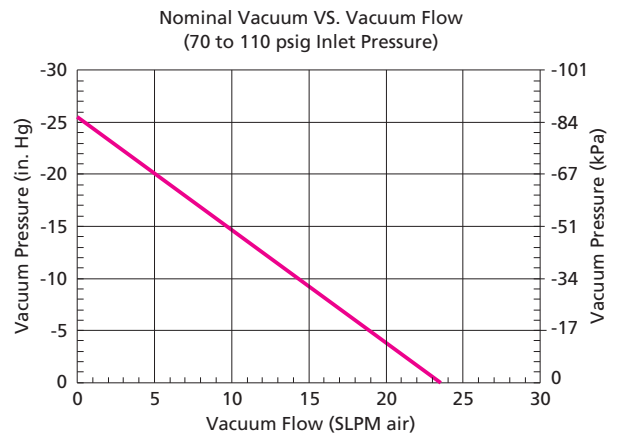
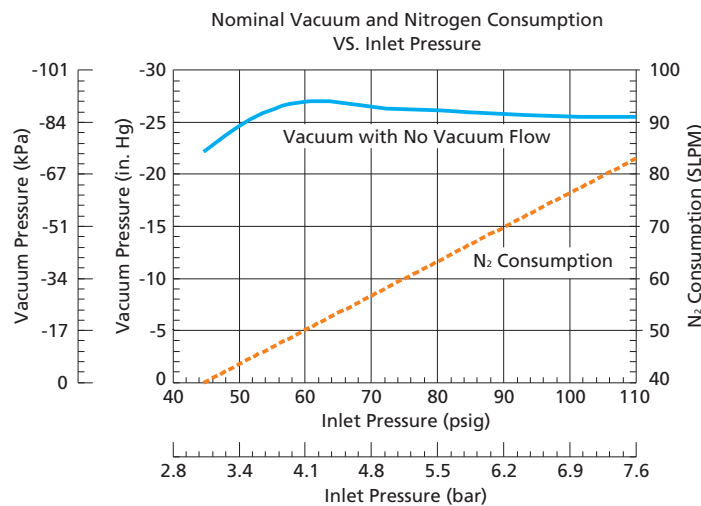
- ⦿ All welded construction improves sealing performance and service life
- ⦿ Wetted surface roughness machine finished to Ra 15 µin. (0.38 µm)
- ⦿ Ultrasonic and DI water cleaned for semiconductor ultra-high purity
- ⦿ Final packaging in ISO class 4 (FS 209E class 10 equivalent)

### Technical Data

<b>N<sub>2</sub> Inlet Pressure</b>	70 ~ 110 psig (4.8 ~ 7.6 bar)	
<b>Vacuum Maximum</b>	-26 in. Hg (-88 kPa)	
<b>Working Temperature</b>	-40 ~ 160 °F (-40 ~ 71 °C)	
<b>Vacuum Port Maximum Pressure</b>	3500 psig (241 bar)	
<b>Proof Pressure (Vacuum)</b>	5250 psig (345 bar)	
<b>Burst Pressure (Vacuum)</b>	10500 psig (690 bar)	
<b>Leak Rate (Helium)</b>	<b>Inboard</b>	≤2x10 <sup>-10</sup> std cm <sup>3</sup> /s
	<b>Outboard</b>	

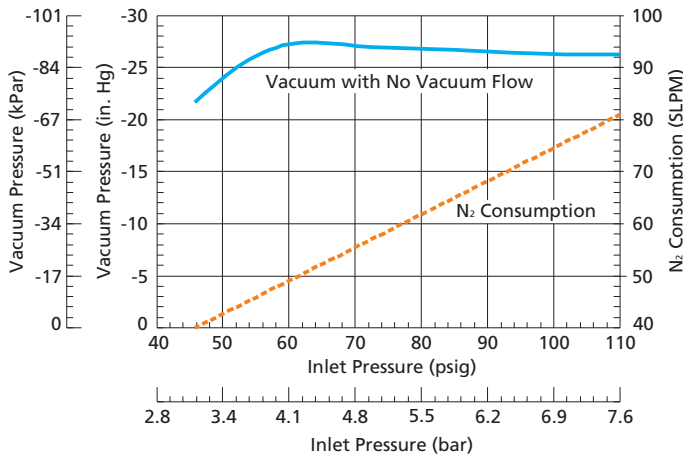
### Exhaust and Flow Specification

#### VGB Series

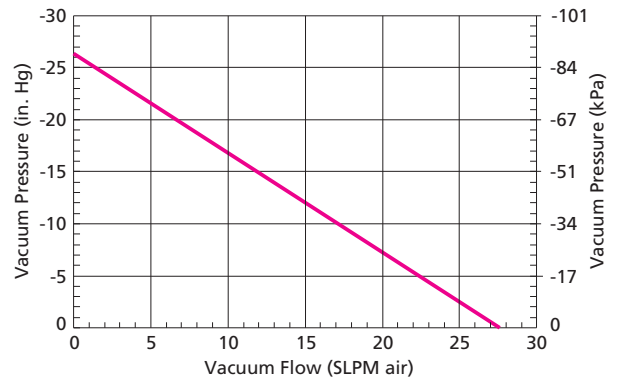


**VGM Series**

Nominal Vacuum and Nitrogen Consumption VS. Inlet Pressure



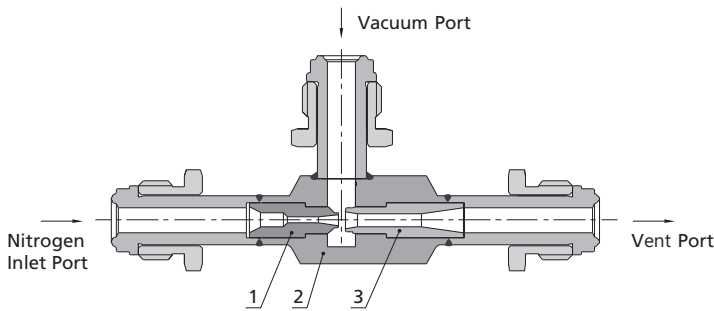
Nominal Vacuum VS. Vacuum Flow (70 to 110 psig Inlet Pressure)



Note: Achieved vacuum level with the characteristics described above produces abnormal noise (soft clicking sound) at supply pressure (around 4 bar) just before reaching the peak value. When this abnormal noise occurs, the characteristics become unstable and operation becomes louder. Increase the supply pressure within the specification range, as it may affect the sensor, etc., and cause trouble.

**Construction**

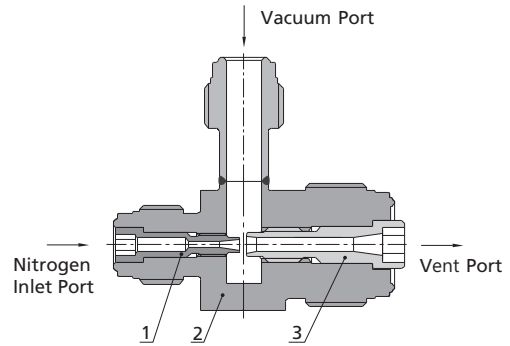
**VGB Series**



Item	Componet	Material/Specification
1	<i>Nozzle</i>	316L SS/SEMI F20
2	<i>Body</i>	
3	<i>Diffuser</i>	

Note: Components in contact with the media are listed in italics.

**VGM Series**

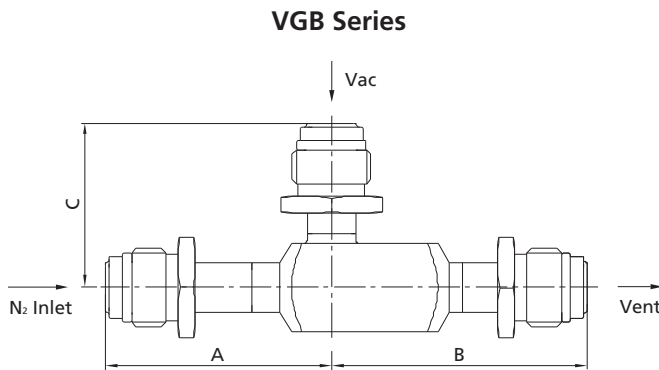


Item	Componet	Material/Specification
1	<i>Nozzle</i>	316L SS/SEMI F20
2	<i>Body</i>	
3	<i>Diffuser</i>	

Note: Components in contact with the media are listed in italics.

## Dimensions and Ordering Information

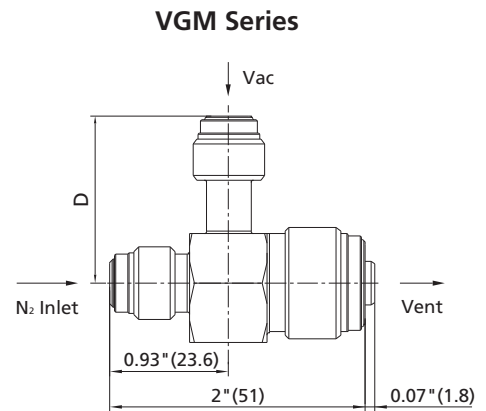
Dimensions in in. (mm) are for reference only and subject to change.



Connection	A in. (mm)	B in. (mm)	C in. (mm)
RFR4/FFR4	1.62 (41)	1.83 (46)	1.18 (30)
TB4	1.25 (32)	1.46 (37)	0.81 (21)
TB6	1.25 (32)	1.46 (37)	0.81 (21)
RFR8/FFR8	2.13 (54)	2.34 (59)	1.69 (43)

Notes:

- Optional connections and face to face dimensions available.
- All dimensions are for reference only and are subject to change.  
For dimensions not shown above, please contact FITOK Group or our authorized distributors.



Connection	D in. (mm)
FR4/FFR4/RFR4	1.31 (33)
TB4	0.97 (25)
TB6	0.97 (25)
FR8/FFR8/RFR8	1.85 (47)

Note:

VGM series is only available with FR4 inlet port and FR8 vent port.

## Ordering Number Description

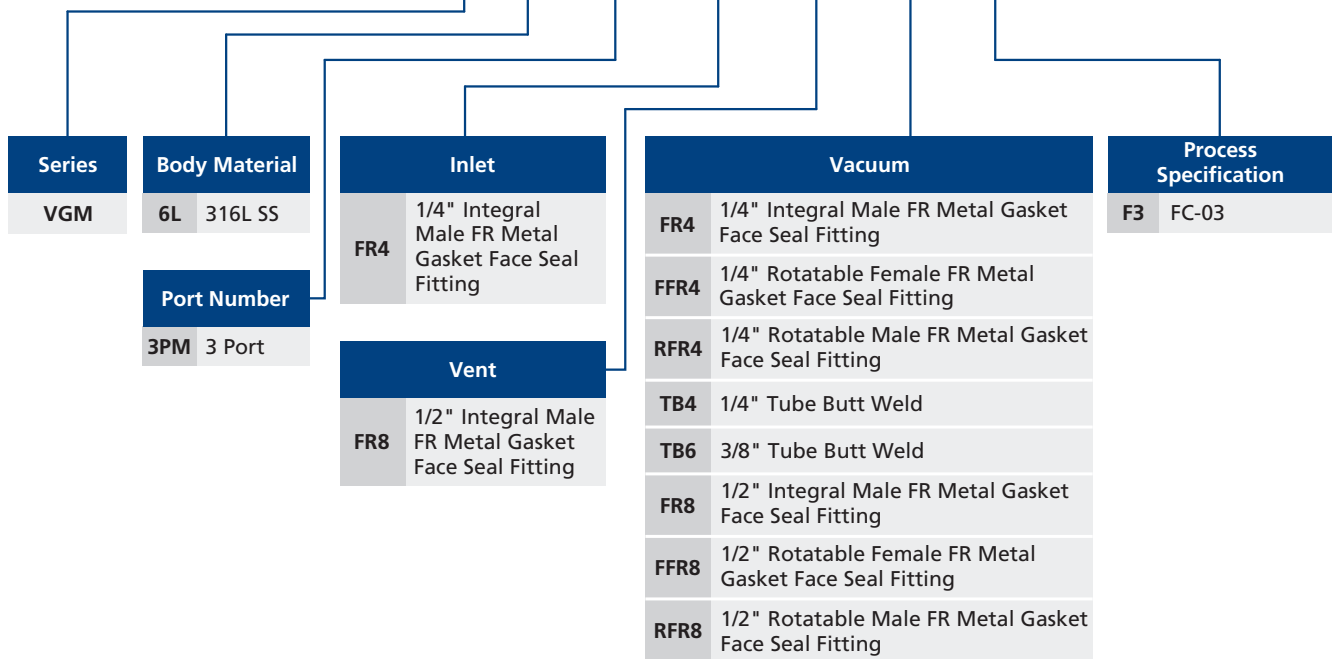
**VGB6L - 3PM - FFR4 - RFR4 - FFR4 - F3**

Series	Body Material	Port Number	Inlet	Vent	Vacuum	Process Specification
VGB	6L 316L SS	3PM 3 Port	FFR4 1/4" Rotatable Female FR Metal Gasket Face Seal Fitting	RFR4 1/4" Rotatable Male FR Metal Gasket Face Seal Fitting	FFR4 1/2" Rotatable Female FR Metal Gasket Face Seal Fitting	F3 FC-03
			TB4 1/4" Tube Butt Weld	TB6 3/8" Tube Butt Weld	RFR8 1/2" Rotatable Male FR Metal Gasket Face Seal Fitting	

Notes:

- Inlet, vent, and vacuum ports are separate selections and should be listed independently, even if they are the same port type and size.
- "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

**VGM6L - 3PM - FR4 - FR8 - FR4 - F3**



Note:  
 "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number.  
 Not all combinations are available.