

SERVICE UPGRADE: Zero Leak-by Valve

Upgrade Your GF1xx to Achieve 100X Reduction in Valve Leak-by

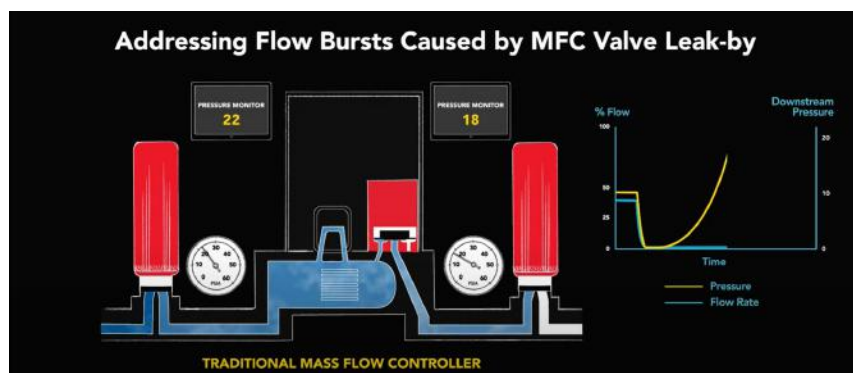


Addressing First Wafer Effect

In idle mode the volume between the MFC control valve and downstream pneumatic isolation valve can become pressurized with process gas due to normal small leakage past the MFC's control valve when in the closed position.

During the first process setpoint, this volume of unmetered gas can impact the first wafer.

Controlling internal MFC dead-volume after the valve and improving the valve shut-down by >100X virtually eliminates any potential process impact.



Solution: Zero Leak-by Valve

- Normally closed valve design enhanced with superior corrosion resistant sealing surface
- Ensures consistent flow during initial setpoint of recipe
- Helps reduce process variations
- Reduces chamber-to-chamber variability
- Full one-year manufacturer's warranty on upgraded device



Valve Leak-By Specifications		
Flow Range	Standard Valve	Zero Leak Valve
3-30 sccm	<1% F.S.	<0.02% F.S.
31 sccm – 55 slm	<1% F.S.	<0.005% F.S.

For Pricing Contact Your Account Manager



Test Results: Zero Leak-by Valve

N2 Leak-by %FS						
Bin Configuration Bin Size/ N2 Equivalent Flow Rate	15psig	30psig	40psig	45psig	60psig	75psig
Device 1 SH41 – 11-30 sccm	0.0000%	0.0057%	0.0083%	0.0093%	0.0127%	0.0147%
Device 2 SH41 – 11-30 sccm	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Device 1 SH42 – 31-92 sccm	0.0000%	0.0000%	0.0000%	0.0000%	0.0017%	0.0022%
Device 2 SH42 – 31-92 sccm	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0018%
Device 1 SH43 – 93-280 sccm	0.0000%	0.0013%	0.0018%	0.0020%	0.0026%	0.0031%
Device 2 SH43 – 93-280 sccm	0.0000%	0.0000%	0.0005%	0.0006%	0.0008%	0.0010%

He Leak-by %FS						
N2 Equivalent Flow Rate	15psig	30psig	40psig	45psig	60psig	75psig
Device 1 SH41 – 11-30 sccm	0.0000%	0.0060%	0.0087%	0.0093%	0.0133%	0.0180%
Device 2 SH41 – 11-30 sccm	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Device 1 SH42 – 31-92 sccm	0.0000%	0.0000%	0.0016%	0.0018%	0.0026%	0.0035%
Device 2 SH42 – 31-92 sccm	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0022%
Device 1 SH43 – 93-280 sccm	0.0000%	0.0014%	0.0018%	0.0021%	0.0027%	0.0033%
Device 2 SH43 – 93-280 sccm	0.0000%	0.0000%	0.0005%	0.0006%	0.0009%	0.0011%

Upgraded device with zero leak-by valve consistently exceeds design spec from 15-75 psig.

How to Order

1. On BrooksInstrument.com, log into **RMA Tracker** and **Create an RMA**
<https://www.brooksinstrument.com/en/service-support/rma-tracker>
2. Select **Semi Products Service & Repair**
3. Select **Level 3 Service**
4. Under **Additional Services**, select **Yes** for **Zero Leak-by Valve upgrade**

—ADDITIONAL SERVICES—

As Found /As Left Service	<input checked="" type="radio"/> No	<input type="radio"/> Yes - Add'l Cost	?
Formal Failure Evaluation Report	<input checked="" type="radio"/> No	<input type="radio"/> Yes - Add'l Cost	?
Expedite Service	<input checked="" type="radio"/> No	<input type="radio"/> Yes - Add'l Cost	?
FA and Scrap	<input checked="" type="radio"/> No	<input type="radio"/> Yes - Add'l Cost	
Zero Leak by Valve upgrade	<input type="radio"/> No	<input checked="" type="radio"/> Yes - Add'l Cost (\$250.00 & must be level 3)	?