

GF100 Series Standard Flow Ultra-High Purity Mass Flow Controller



Flow Ranges from 3 sccm to 55 slm

Process Gas Accuracy: $\pm 1\%$ of S.P.

MultiFlo™ gas and range programmability

Best in class performance:

Process gas accuracy

Flow response time

Pressure transient insensitivity

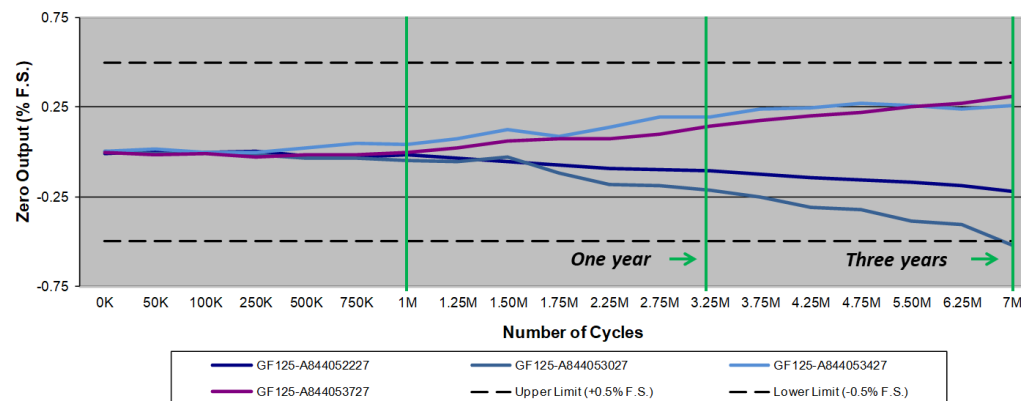
Semiconductor industries leading thermal MFC, over 500,000 in operation

Proven across all processes – Etch, CVD, MOCVD, PVD, Implant, Thermal, Epi, Diffusion, CMP, EUV-Lithography

GF1XX Series		Number of Platforms	Comp A, Model A		Number of Platforms	Comp B, Model A		Number of Platforms
Designator	Range		Designator	Range		Designator	Range	
SH40	3 - 10	1	#R01	10	1	FR-01	1 - 5	1
SH41	11 - 30	2	#R01.5	17.5	2	FR-02	6 - 14	2
SH42	31 - 92	3	#01	30	3	FR-03	15 - 27	3
SH43	93 - 280	4	#1.5	55	4	FR-04	28 - 38	4
SH44	94 - 860	5	#02	100	5	FR-05	39 - 71	5
SH45	861 - 2,600	6	#2.5	175	6	FR-06	72 - 103	6
SH46	2,601 - 7,200	7	#03	300	7	FR-07	104 - 192	7
SH47	7,201 - 15,000	8	#3.5	550	8	FR-08	193 - 279	8
SH48	15,001 - 30,000	9	#04	1,000	9	FR-09	280 - 754	9
SH49	30,001 - 40,000	10	#4.5	1,750	10	FR-10	755 - 2,037	10
SH50	40,001 - 55,000	11	#05	3,000	11	FR-11	2,038 - 5,500	11
			#5.5	5,500	12	Comp B, Model B		
			#6	10,000	13	FR-12	5,501 - 11,000	12
			Comp A, Model B		Comp B, Model C			
			#6.5	22,000	14	FR-13	11,001 - 30,000	13
			#07	30,000	15	Comp B, Model D		
			#08	50,000	16	FR-14	30,001 - 50,000	14

The Brooks Advantage

More flexibility, less spares and cost of ownership



Excellent long-term zero stability



GF100 Series High-Flow Ultra Compact High Flow MFC



Wide-Range: 56 sccm to 300 slpm (N2 Equiv)

- 700 slm H2 capability

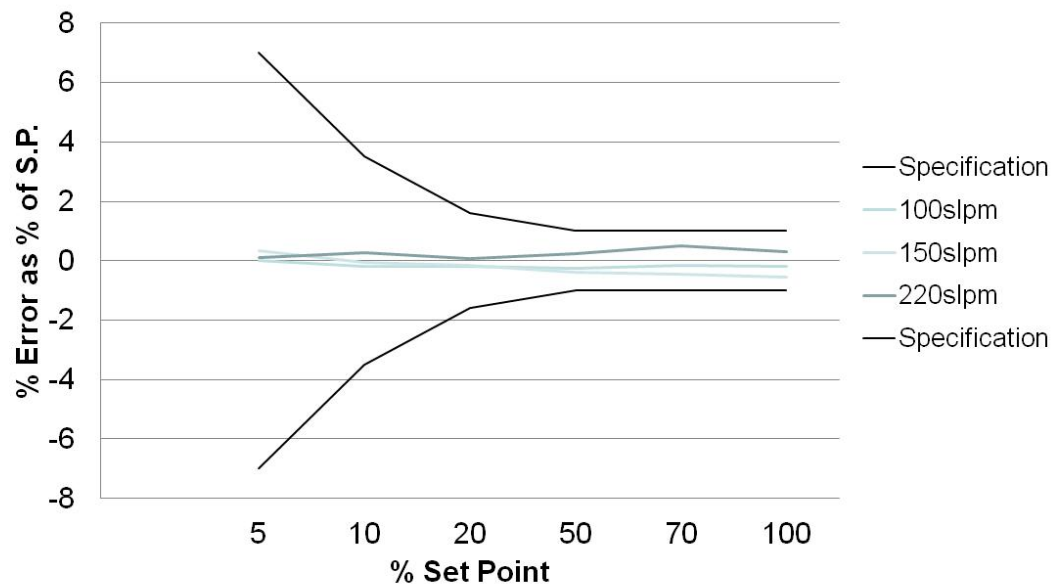
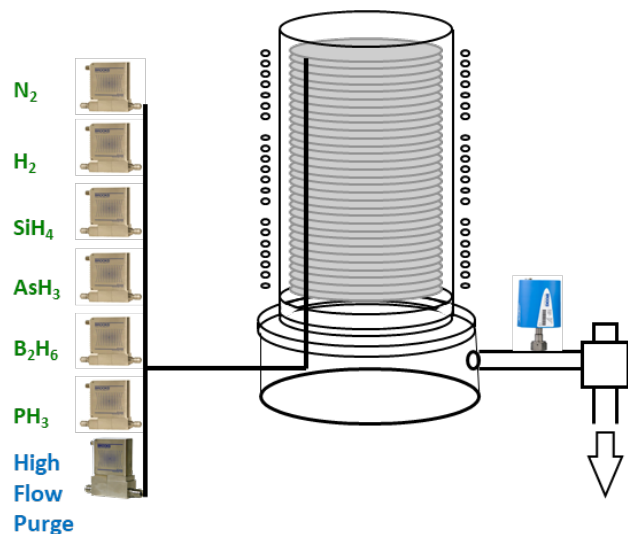
Process Gas Accuracy: $\pm 1\%$ of S.P.

Hydraulically balance valve for reduced inlet pressure sensitivity

Integrated pressure measurement (GF126)

High flow, low ΔP control

92mm high flow c-seal and 8 VCR configurations



VDM300

Ultra High Purity Water Vapor Delivery Sub-System



Direct water vapor measurement delivering 1% of S.P. accuracy

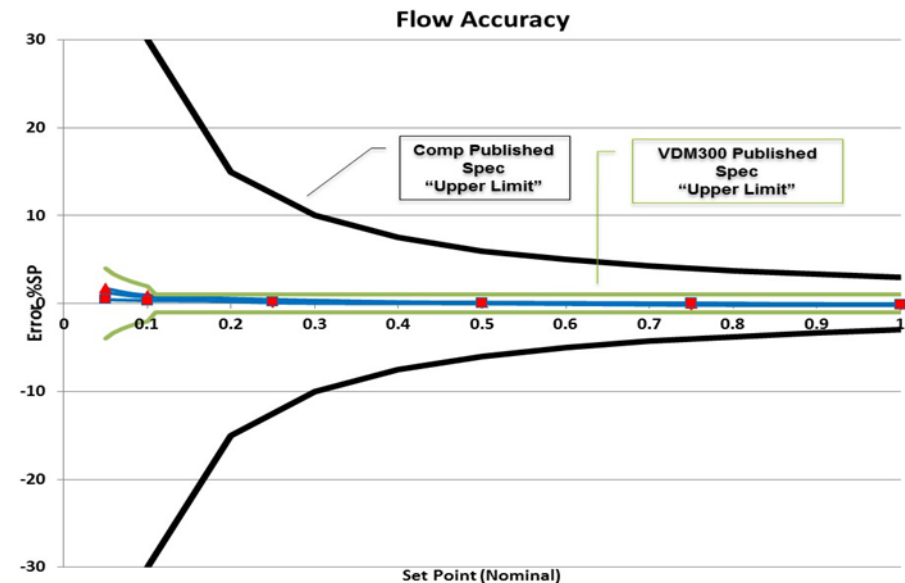
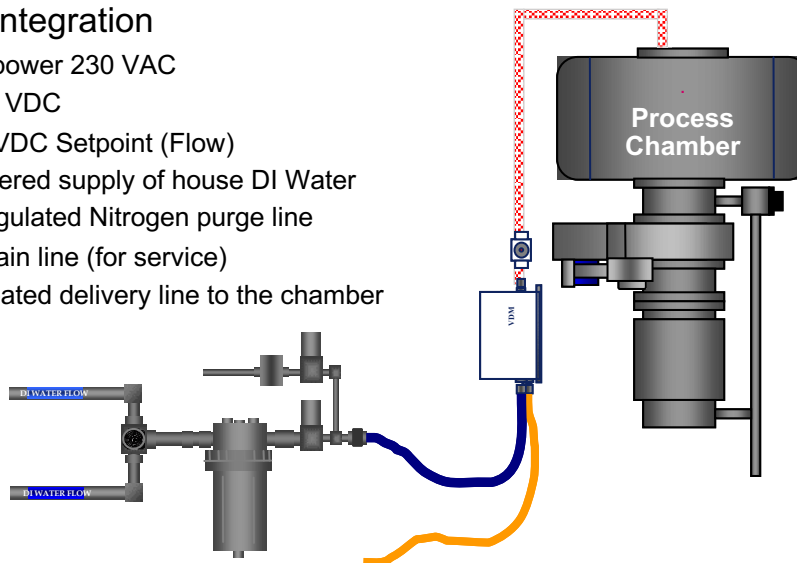
Operates at low temperatures (non-super heated state) for improved corrosion resistance

Small footprint for easy integration with process tool

Designed for advanced strip and post metal etch passivation processes

Simple tool integration

- AC power 230 VAC
- ± 15 VDC
- 0-5 VDC Setpoint (Flow)
- A filtered supply of house DI Water
- A regulated Nitrogen purge line
- A drain line (for service)
- A heated delivery line to the chamber



XacTorr™ - CMX Series

High Performance Digital Capacitance Manometer

Full scale ranges: 100mT to 1000 Torr

64 point calibration: $\pm 0.15\%$ of reading accuracy ($\pm 0.25\%$ <1 Torr)

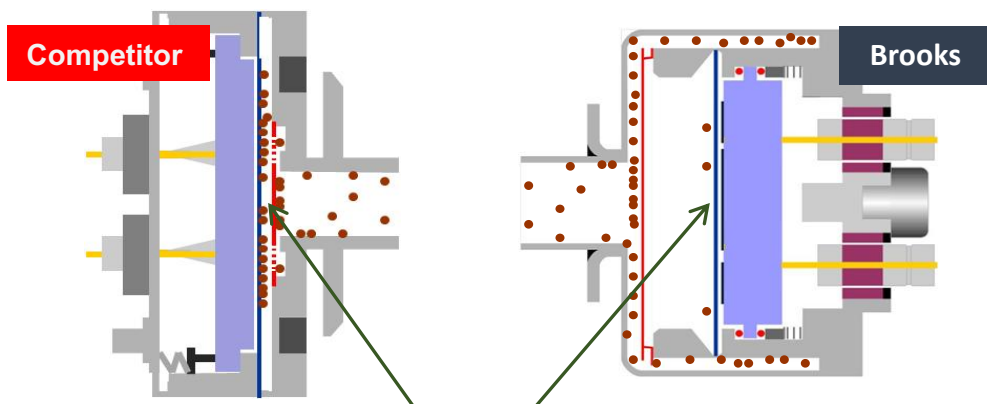
Optimum configurations for all processes: Unheated, 45,100 & 160°C

Contamination resistant sensor: longer life, lower cost of ownership

Industry standard 9-pin,15-pin Analog & DeviceNet interfaces

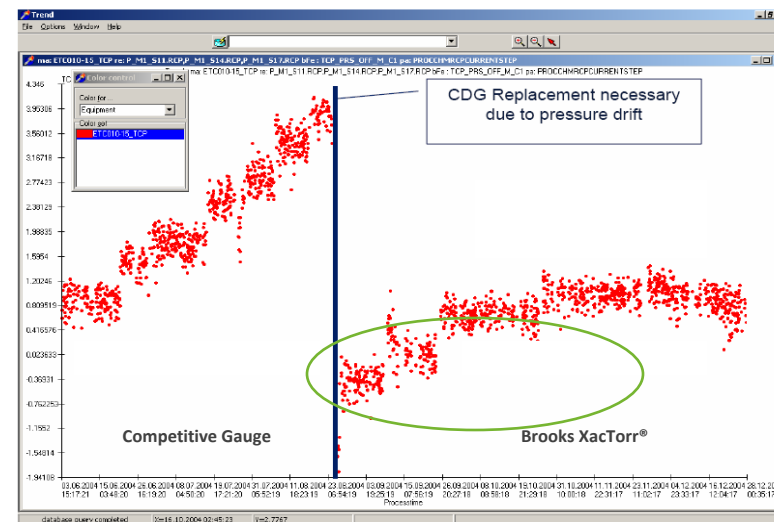
Programmable process relays

Unique independent diagnostic and service port



Process byproducts build up on diaphragm over time impacting accuracy and shortening the life of the instrument

Longer life, contamination tolerant sensor



Market leading measurement stability