



VDM100
Vapor Delivery Module

Vapor Delivery Module VDM100

Vapor Delivery

High Accuracy Water Vapor Delivery

Overview

The Brooks VDM100 vapor delivery module is a self contained module for the delivery of ultra high purity water vapor. The power efficient design allows for low temperature, ultra high purity vapor generation. The VDM100 utilizes proven vapor delivery technique and combines it with advanced digital control and integrated diagnostic features in a small, convenient package.

Product Description

Designed for advanced strip and post metal etch passivation processes, the VDM100 delivers improved accuracy, higher flow rates, wide control range and lower power consumption compared to flash evaporation systems.

Based on proven thermal mass flow measurement techniques, the VDM100 produces vapor in the non-super heated vapor stage, reducing the aggressive effects of deionized water, for improved reliability and cleaner operation.

The VDM100 provides user friendly data logging and diagnostic features via an independent service port and intuitive graphic user interface.

Features and Benefits

Features	Benefits
Direct water vapor measurement with superior flow accuracy	Based on proven, reliable thermal mass flow measurement and control technique
Connects directly to the house Deionized Water supply	Highly tolerant of varying water supply pressure
Operates at lower temperatures (non-super heated state)	Improved corrosion resistance
Optimized design for flushing and draining	Ensures cleaner operation

Product Specifications

Performance Specifications ¹	Description
Full Scale Ranges (H ₂ O)	3 slpm
Turndown Ratio	20:1
Step Response Time	2 seconds
Accuracy	±1.0% of setpoint (25% to 100%); ±1.0% of full scale, 5-25% full scale setpoint
Linearity	±0.5% of full scale
Repeatability	±0.2% of full scale
Temperature Coefficient	0.05% per °C zero and span
Valve Shutdown	Normally closed <0.5% full scale

Electrical

Communication	15-pin D sub
Input Signals	Flow setpoint (0 to 5 Vdc)
	Start up/drain - TTL
	RS485 (digital setpoint control and diagnostics)
Output Signals	Flow output (0 to 5 Vdc)
	Ready to use - TTL
Power	DC: ±15 Vdc @ 1 amp
	AC: 110 Vac, 260 watts nominal, 230 Vac, 290 watts nominal
Diagnostic Ports	RS485
	2 status LEDs, bi-color

Mechanical

Fittings	See Model Code for list
Weight	Dry: 15lbs Wet: 16lbs
Mounting Orientation	Vertical (inlet down)

Environmental

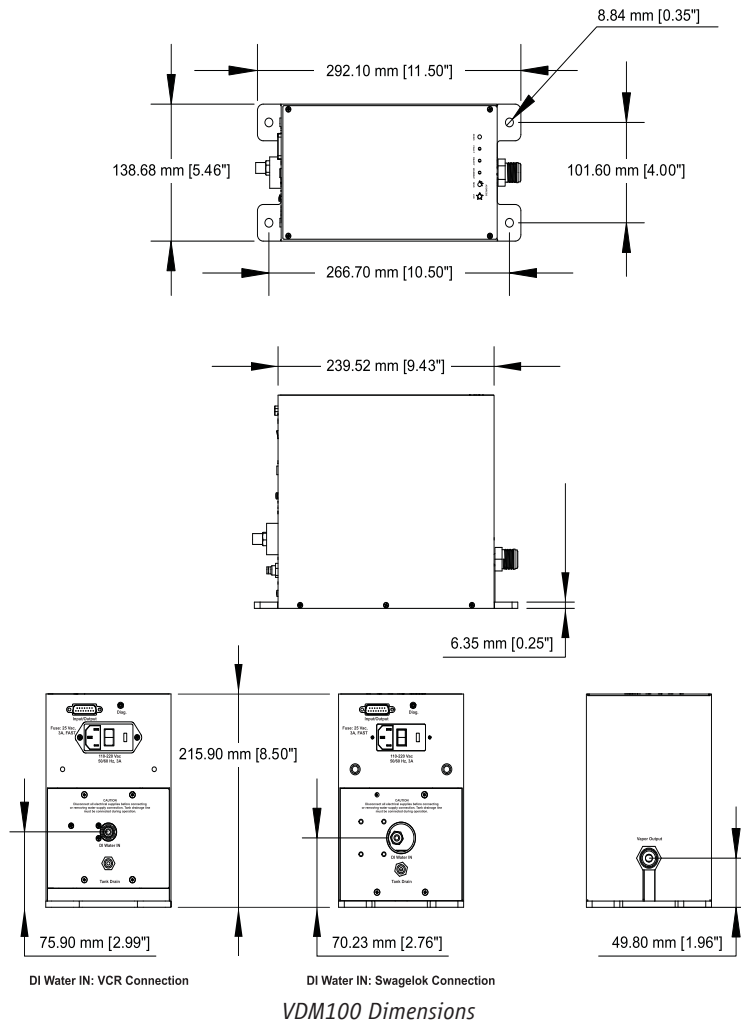
Maximum Outlet Pressure	200 Torr
Water Supply Pressure	10 to 40 psig
N ₂ Purge Pressure	10 to 40 psig
Over Pressure Max (Water/N ₂ Purge)	60 psig
Ambient Temperature Range	15°C to 45°C
Humidity	0 to 95% RH, non-condensing

Certifications

Electromagnetic Compatibility	Fully CE compliant to EMC directive 2004/108/EC
SEMI F47-0706	Specification for semiconductor processing equipment voltage immunity
SEMI S2-0703	Product safety assessment
SEMI S8-1103	Ergonomic assessment
SEMI S14-1103	Fire risk assessment
RoHS	Compliant to EU directive 2011/65/EU

1. All performance specifications apply only in the ready state, ready light on.

Product Dimensions



Model Code

Code	Description	Code	Description
I.	Base Model Code	VDM	Vapor Delivery Module
I.	Fluid	W	DI Water
III.	Flow Range	3000	3 slpm
IV.	AC Supply Voltage	1	110 Vac, 50 Hz
		2	230 Vac, 60 Hz
V.	Fittings	1	4 VCR M Inlet / 8 VCR M Outlet
		2	4 S M inlet / 8 VCR M Outlet (with leak containment collar)
VI.	Orientation	V	Vertical, Inlet Down
VII.	Reserved	(Blank)	None

Note: Devices will ship with embedded software Version 1.10 unless otherwise specified.
For additional flow ranges please contact Product Management.

Sample Model Code

I	II	III	IV	V	VI	VII
VDM	W	3000	1	1	V	

Brooks Service and Support

Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration and is certified by our local weights and measures authorities and traceable to the relevant international standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 quality certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

Brooks Instrument can provide customer seminars and dedicated training to engineers, end users and maintenance persons.

Please contact your nearest sales representative for more details.

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

TRADEMARKS

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