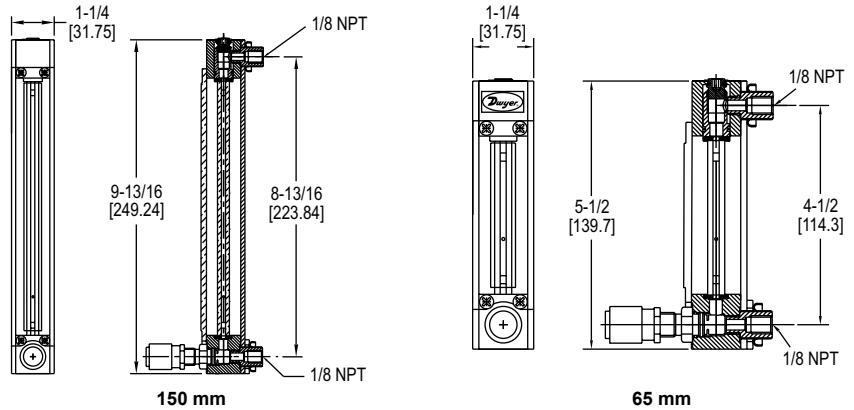


# VARIABLE AREA GLASS FLOWMETERS

65 mm and 150 mm, ±2% Full-Scale Accuracy, Interchangeable Flowtubes, PTFE Options, Universal mm Scale

CALIBRATION SERVICES AVAILABLE



Panel mounting: Drill two 5/8" dia. holes at 4.5" apart for 65 mm models and 8.812" apart for 150 mm models (center-to-center).

The Series VA Variable Area Glass Flowmeters are designed with easy to read universal mm scale and supplied with correlation charts containing calibration data for air and water.

### BENEFITS/FEATURES

- Permanently fused ceramic scale with vertical locator line reduces parallax and eye fatigue saving time
- Long operating life with thick polycarbonate front shield that protects tube from breakage and serves as a magnifying lens to enhance reading resolution
- Standard 6-turn needle valve for flow rate control eliminating the need for a separate valve reducing cost
- No additional installation required with optional acrylic tripod base which allows for self-standing bench mounting
- High precision metering valves with non-rising stems are available for high sensitivity control and resolution for very low flow rate

### APPLICATIONS

- Gas or liquid metering
- Chemical processing
- Semiconductor systems
- Water and air pollution analysis systems
- Laboratory systems

| MODEL CHART - METAL 65 MM SCALE |         |         |       |                   |                    |
|---------------------------------|---------|---------|-------|-------------------|--------------------|
| Model                           |         |         |       | Max. Flow Rate    |                    |
| Aluminum                        | SS      | Brass   | Float | Air SCFH (ml/min) | Water GPH (ml/min) |
| VA1043                          | VA1243  | VA1343  | Glass | 0.104 (49)        | 0.009 (0.55)       |
| VA1044                          | VA1244  | -       | SS    | 0.307 (145)       | 0.038 (2.38)       |
| VA1045                          | VA1245  | VA1345  | Glass | 0.220 (104)       | 0.028 (1.8)        |
| VA1046                          | VA1246  | -       | SS    | 0.633 (299)       | 0.122 (7.7)        |
| VA1047                          | VA1247  | VA1347  | Glass | 0.43 (202)        | 0.041 (2.6)        |
| VA1048                          | VA1248  | -       | SS    | 1.1 (522)         | 0.19 (12.0)        |
| VA10423                         | VA12423 | VA1349  | Glass | 2.29 (1081)       | 0.329 (20.8)       |
| VA10424                         | VA12424 | -       | SS    | 4.51 (2129)       | 0.930 (58.7)       |
| VA10411                         | VA12411 | VA13411 | Glass | 2.65 (1249)       | 0.428 (27)         |
| VA10412                         | VA12412 | -       | SS    | 5.34 (2520)       | 1.125 (71)         |
| VA10413                         | VA12413 | VA13413 | Glass | 4.32 (2040)       | 0.63 (40)          |
| VA10414                         | VA12414 | -       | SS    | 8.45 (3990)       | 1.71 (108)         |
| VA10417                         | VA12417 | VA13417 | Glass | 13.4 (6318)       | 2.33 (147)         |
| VA10418                         | VA12418 | -       | SS    | 25.5 (12058)      | 5.77 (364)         |
| VA10419                         | VA12419 | VA13419 | Glass | 27.9 (13153)      | 4.9 (309)          |
| VA10420                         | VA12420 | -       | SS    | 52.3 (24680)      | 11.81 (745)        |
| VA10421                         | VA12421 | VA13421 | Glass | 49.1 (23169)      | 8.27 (522)         |
| VA10422                         | VA12422 | -       | SS    | 89.2 (42094)      | 19.97 (1260)       |

| MODEL CHART - METAL 150 MM SCALE |         |         |       |                   |                    |
|----------------------------------|---------|---------|-------|-------------------|--------------------|
| Model                            |         |         |       | Max. Flow Rate    |                    |
| Aluminum                         | SS      | Brass   | Float | Air SCFH (ml/min) | Water GPH (ml/min) |
| VA20429                          | VA22429 | VA23429 | Glass | 0.792 (374)       | 0.087 (5.5)        |
| VA20430                          | VA22430 | -       | SS    | 1.725 (814)       | 0.323 (20.4)       |
| VA20433                          | VA22433 | VA23433 | Glass | 4.9 (2313)        | 0.848 (54)         |
| VA20434                          | VA22434 | -       | SS    | 9.67 (4562)       | 2.067 (130)        |
| VA20435                          | VA22435 | VA23435 | Glass | 8.07 (3807)       | 1.336 (84)         |
| VA20436                          | VA22436 | -       | SS    | 16.08 (7590)      | 3.34 (217)         |
| VA20437                          | VA22437 | VA23437 | Glass | 18.38 (8678)      | 3.32 (210)         |
| VA20438                          | VA22438 | -       | SS    | 35.5 (16737)      | 8.02 (506)         |
| VA20439                          | VA22439 | VA23439 | Glass | 49.9 (23564)      | 9.0 (568)          |
| VA20440                          | VA22440 | -       | SS    | 93.9 (44336)      | 21.7 (1370)        |

| OPTIONS         |  |
|-----------------|--|
| Use order code: | Description  |
| NISTCAL-FL1     | NIST traceable calibration certificate for variable air flowmeters   |
| NISTCAL-FL2     | NIST traceable calibration certificate for variable water flowmeters |

### SPECIFICATIONS

**Service:** Compatible gases or liquids.  
**Wetted Materials:** Flowtube: Borosilicate glass; Floats: Glass or SS (sapphire, Carbonyl and tantalum are optional); Float stops: PTFE; End fittings: Anodized aluminum, 316 SS, brass or PTFE; Packings: Fluoroelastomer, none on VAX5XX models; O-rings: Buna-N on aluminum models and brass models, fluoroelastomer on SS models, PTFE on VAX5XX models.  
**Temperature Limits:** 250°F (121°C); VAX5XX: -15 to 150°F (-26 to 65°C).  
**Pressure Limits:** 200 psig (13.8 bar); VAX5XX: 100 psig (6.7 bar).  
**Accuracy:** ±2% FS @ 70°F (21.1°C) and 14.7 psia (1 atm absolute); VA1043, VA1243, VA1343, VA25425, VA25025: ±5% FS @ 70°F (21.1°C) and 14.7 psia (1 @ absolute).  
**Repeatability:** ±0.25% FS.  
**Leak Rate:** 1 x 10<sup>-7</sup> sccs of helium.  
**Scales:** Universal 65 mm or 150 mm with correlation charts.  
**Turn-Down Ratio:** 10:1.  
**Connections:** Two 1/8" female NPT.  
**Mounting:** Vertical.  
**Valve:** 6-turn needle (standard), optional 16-turn high precision valve.  
**Valve Orifice:** Acetal on aluminum models and brass models, PCTFE on SS models, PTFE on VAX5XX models.

| MODEL CHART - PTFE 65 MM SCALE |               |       |                   |                    |
|--------------------------------|---------------|-------|-------------------|--------------------|
| Model                          |               |       | Max. Flow Rate    |                    |
| With Valve                     | Without Valve | Float | Air SCFH (ml/min) | Water GPH (ml/min) |
| VA1545                         | VA1505        | Glass | 0.220 (104)       | 0.028 (1.8)        |
| VA1547                         | VA1507        | Glass | 0.428 (202)       | 0.047 (2.95)       |
| VA15411                        | VA15011       | Glass | 2.646 (1249)      | 0.428 (27)         |
| VA15413                        | VA15013       | Glass | 4.322 (2040)      | 0.630 (39.7)       |
| VA15417                        | VA15017       | Glass | 13.39 (6318)      | 2.33 (147)         |
| VA15419                        | VA15019       | Glass | 27.9 (13153)      | 4.9 (309)          |
| VA15421                        | VA15021       | Glass | 49 (23169)        | 8.27 (522)         |

Note: VAX5XX models indicate PTFE units.

| MODEL CHART - PTFE 150 MM SCALE |               |       |                   |                    |
|---------------------------------|---------------|-------|-------------------|--------------------|
| Model                           |               |       | Max. Flow Rate    |                    |
| With Valve                      | Without Valve | Float | Air SCFH (ml/min) | Water GPH (ml/min) |
| VA25425                         | VA25025       | Glass | 0.104 (49)        | 0.01 (0.61)        |
| VA25429                         | VA25029       | Glass | 0.792 (374)       | 0.087 (5.5)        |
| VA25431                         | VA25031       | Glass | 1.75 (825)        | 0.262 (16.5)       |
| VA25435                         | VA25035       | Glass | 8.07 (3807)       | 1.34 (84.3)        |
| VA25437                         | VA25037       | Glass | 18.39 (8678)      | 3.32 (209)         |

Note: VAX5XX models indicate PTFE units.

| ACCESSORIES |   |
|-------------|---|
| Model       | Description                                       |
| VA7         | Acrylic tripod for single meter                   |
| VA81        | High precision valve, 316 SS, 0.42 SCFH capacity  |
| VA82        | High precision valve, 316 SS, 0.85 SCFH capacity  |
| VA83        | High precision valve, 316 SS, 2.12 SCFH capacity  |
| VA84        | High precision valve, 316 SS, 4.87 SCFH capacity  |
| VA85        | High precision valve, 316 SS, 13.14 SCFH capacity |
| VA86        | High precision valve, 316 SS, 45.55 SCFH capacity |

USA: California Proposition 65  
**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.