

# VARIABLE AREA ROTAMETERS

## With 65 mm and 150 mm Scales

FL-1341-G  
**\$134**



OMEGA® precision variable area rotameters can measure flows of air, water, and gases, with up to  $\pm 5\%$  of full scale accuracy and 0.25% of full scale repeatability. These units feature an easy-to-read millimeter scale and are supplied with correlation charts for air and water. Correlation data for other gases are also available. Please consult the Engineering Department for details. The scale is fused on the metering tube in 1 mm increments, which enables the user to read the flow rate with the highest accuracy.

### SHIELDED FOR PRESSURIZED SYSTEMS

These rotameters, have heavy wall, precision-bored borosilicate glass metering tubes and are fully shielded against breakage, with end fittings of brass or stainless steel and aluminum side plates. In front, a clear plastic shield keeps the scale clean and easy-to-read, while an opaque white rear shield provides a background to aid in discerning the float position for accurate readings.

### PANEL MOUNTING DESIGN

These rotameters are equipped with horizontal ports with NPT threads for easy panel mounting. The ports have external threads and are equipped with panel retaining nuts. No additional mounting hardware is required. Simply drill two holes 114.3 mm (4.5") apart (center to center) for 65 mm units or 223.8 mm (8 $\frac{7}{8}$ "") apart (center to center) for 150 mm units. Each hole should be 14.9 mm (0.59") in diameter. Also available is a flush mounting bezel, and other styles to meet specific applications. Please consult the Sales Department for pricing and delivery information.

### NON-RISING STEM NEEDLE VALVE

The 150 mm size flowmeters are also available with non-rising stem type needle valves for special

applications. This 15-turn metering valve has superior flow rate control and is particularly well suited for use in chromatography applications. The sliding tapered needle mechanism virtually eliminates sticking or buildup due to foreign matter in the fluid stream, without variations or sawtoothing of the flow rate.

### COMPACT 65 MM SCALE

These compact units feature  $\pm 10\%$  of full scale accuracy and  $\pm \frac{1}{2}\%$  of full scale repeatability. They are ideal for applications involving purging, seal oil systems, bearing lubrication, and cooling water flow indication.

### EASY-TO-READ 150 MM SCALE

OMEGA's larger units feature 5% accuracy and  $\frac{1}{4}\%$  repeatability. The scale has more divisions for higher accuracy, is easier to read, and causes less eye fatigue.

### APPLICATIONS

Variable area rotameters can be used in many applications, including industrial and laboratory situations. Some common uses include carrier gas flow and fuel flow in chromatography and coolant flow indication.

### FLOW CONTROL

Control the flow rate with the standard built-in control valve. Also available, as an option, is an integral flow controller. In addition, 150 mm scale units are available with the unique non-rising stem type needle valve.

### WETTED PARTS

Standard floats are 316 stainless steel, glass, and carboloy. Sapphire and tantalum are also available (consult Sales Department for specifications). Other wetted parts include the glass metering tube, PTFE float stops, brass, aluminum or 316 SS end fittings, and Buna-N (with brass or aluminum construction) or FKM-A (with 316 SS construction) O-rings.

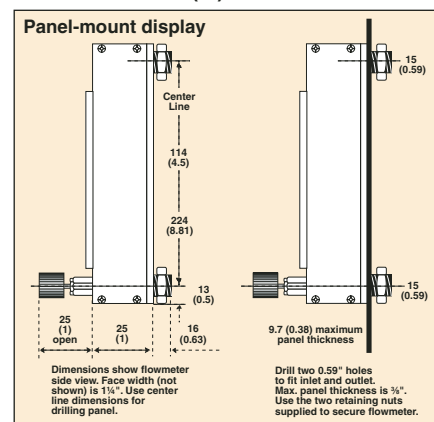
### RATINGS AND SPECIFICATIONS

The maximum operating pressure is 13.8 bar (200 psig), at temperatures up to 121°C (250°F). The minimum flow rate at the rated accuracy is 10% of the maximum flow rate. All connections are  $\frac{1}{8}$ " female NPT threaded.



FL-1341-S, \$134, shown smaller than actual size.

Dimensions: mm (in)





FL-1441-G, \$194, shown smaller than actual size.

Comes with correlation sheet for water and air.

NOTE: “-G” suffix denotes glass float; “-S” suffix denotes 316 SS float; “-C” suffix denotes carboly float.

1. Low-cost units with Kynar construction also available. See FL-1700/1800 Series on pages B-33 and B-34.
2. Minimum flow rate is 10% of the maximum rate shown.
3. Low-cost, stainless steel construction unit with 65 mm glass tube also available. See model FL-1900 on page B-43.

Rotameters with 65 mm Scale Flowtubes<sup>1</sup>  
(with 6-turn valve)

**MOST POPULAR**  
**MODELS HIGHLIGHTED!**

| To Order (Specify Model Number) |       |             |       |              |       |                            |              |                |
|---------------------------------|-------|-------------|-------|--------------|-------|----------------------------|--------------|----------------|
| Aluminum Frame                  |       | Brass Frame |       | 316 SS Frame |       | Max. Flowrate <sup>2</sup> |              |                |
| Model No.                       | Price | Model No.   | Price | Model No.    | Price | Air cc/min                 | Water cc/min | Float Material |
| FL-1341-G                       | \$134 | FL-1351-G   | \$152 | FL-1361-G    | \$281 | 56.6                       | 0.70         | Glass          |
| FL-1341-S                       | 134   | FL-1351-S   | 152   | FL-1361-S    | 281   | 150                        | 3.00         | 316SS          |
| FL-1342-G                       | 134   | FL-1352-G   | 152   | FL-1362-G    | 281   | 66.6                       | 0.80         | Glass          |
| FL-1342-S                       | 134   | FL-1352-S   | 152   | FL-1362-S    | 281   | 183.3                      | 3.67         | 316SS          |
| FL-1343-G                       | 134   | FL-1353-G   | 152   | FL-1363-G    | 281   | 400                        | 7.00         | Glass          |
| FL-1343-S                       | 134   | FL-1353-S   | 152   | FL-1363-S    | 281   | 833.3                      | 23.3         | 316SS          |
| FL-1344-G                       | 134   | FL-1354-G   | 152   | FL-1364-G    | 281   | 1666                       | 40.0         | Glass          |
| FL-1344-S                       | 134   | FL-1354-S   | 152   | FL-1364-S    | 281   | 3333                       | 100          | 316SS          |
| FL-1345-G                       | 134   | FL-1355-G   | 152   | FL-1365-G    | 281   | 5666                       | 142          | Glass          |
| FL-1345-S                       | 134   | FL-1355-S   | 152   | FL-1365-S    | 281   | 10,833                     | 333          | 316SS          |
| FL-1346-G                       | 134   | FL-1356-G   | 152   | FL-1366-G    | 281   | 18,333                     | 500          | Glass          |
| FL-1346-S                       | 134   | FL-1356-S   | 152   | FL-1366-S    | 281   | 183.3                      | 1166         | 316SS          |
| FL-1347-C                       | 134   | FL-1357-C   | 152   | FL-1367-C    | 281   | 56,666                     | 1666         | Carboly        |

Rotameters with 150 mm Scale Flowtubes<sup>1,3</sup> (with 6-turn valve)

| Aluminum Frame |       | Brass Frame |       | 316 SS Frame |       | Max. Flowrate <sup>2</sup> |              |                |
|----------------|-------|-------------|-------|--------------|-------|----------------------------|--------------|----------------|
| Model No.      | Price | Model No.   | Price | Model No.    | Price | Air cc/min                 | Water cc/min | Float Material |
| FL-1441-G      | \$194 | FL-1451-G   | \$212 | FL-1461-G    | \$341 | 49                         | 0.537        | Glass          |
| FL-1441-S      | 194   | FL-1451-S   | 212   | FL-1461-S    | 341   | 146                        | 2.49         | 316SS          |
| FL-1442-G      | 194   | FL-1452-G   | 212   | FL-1462-G    | 341   | 96                         | 1.11         | Glass          |
| FL-1442-S      | 194   | FL-1452-S   | 212   | FL-1462-S    | 341   | 265                        | 4.93         | 316SS          |
| FL-1443-G      | 194   | FL-1453-G   | 212   | FL-1463-G    | 341   | 370                        | 5.75         | Glass          |
| FL-1443-S      | 194   | FL-1453-S   | 212   | FL-1463-S    | 341   | 820                        | 20.6         | 316SS          |
| FL-1444-G      | 194   | FL-1454-G   | 212   | FL-1464-G    | 341   | 820                        | 16.6         | Glass          |
| FL-1444-S      | 194   | FL-1454-S   | 212   | FL-1464-S    | 341   | 1680                       | 46.2         | 316SS          |
| FL-1445-G      | 194   | FL-1455-G   | 212   | FL-1465-G    | 341   | 2350                       | 52.8         | Glass          |
| FL-1445-S      | 194   | FL-1455-S   | 212   | FL-1465-S    | 341   | 4600                       | 133          | 316SS          |
| FL-1446-G      | 194   | FL-1456-G   | 212   | FL-1466-G    | 341   | 3800                       | 84.6         | Glass          |
| FL-1446-S      | 194   | FL-1456-S   | 212   | FL-1466-S    | 341   | 7600                       | 218          | 316SS          |
| FL-1447-G      | 194   | FL-1457-G   | 212   | FL-1467-G    | 341   | 8600                       | 200          | Glass          |
| FL-1447-S      | 194   | FL-1457-S   | 212   | FL-1467-S    | 341   | 16,400                     | 493          | 316SS          |
| FL-1448-G      | 194   | FL-1458-G   | 212   | FL-1468-G    | 341   | 23,500                     | 573          | Glass          |
| FL-1448-S      | 194   | FL-1458-S   | 212   | FL-1468-S    | 341   | 43,000                     | 1350         | 316SS          |
| FL-1448-C      | 194   | FL-1458-C   | 212   | FL-1468-C    | 341   | 60,000                     | 2120         | Carboly        |

Rotameters with 150 mm Scale Flowtubes<sup>1</sup> (with 15-turn valve)

| Aluminum Frame |       | Brass Frame |       | 316 SS Frame |       | Max. Flowrate <sup>2</sup> |              |                |
|----------------|-------|-------------|-------|--------------|-------|----------------------------|--------------|----------------|
| Model No.      | Price | Model No.   | Price | Model No.    | Price | Air cc/min                 | Water cc/min | Float Material |
| FL-1471-G      | \$262 | FL-1481-G   | \$280 | FL-1491-G    | \$456 | 49                         | 0.537        | Glass          |
| FL-1471-S      | 262   | FL-1481-S   | 280   | FL-1491-S    | 456   | 146                        | 2.49         | 316SS          |
| FL-1472-G      | 262   | FL-1482-G   | 280   | FL-1492-G    | 456   | 96                         | 1.11         | Glass          |
| FL-1472-S      | 262   | FL-1482-S   | 280   | FL-1492-S    | 456   | 265                        | 4.93         | 316SS          |
| FL-1473-G      | 262   | FL-1483-G   | 280   | FL-1493-G    | 456   | 370                        | 5.75         | Glass          |
| FL-1473-S      | 262   | FL-1483-S   | 280   | FL-1493-S    | 456   | 820                        | 20.6         | 316SS          |
| FL-1474-G      | 262   | FL-1484-G   | 280   | FL-1494-G    | 456   | 820                        | 16.6         | Glass          |
| FL-1474-S      | 262   | FL-1484-S   | 280   | FL-1494-S    | 456   | 1680                       | 46.2         | 316SS          |
| FL-1475-G      | 262   | FL-1485-G   | 280   | FL-1495-G    | 456   | 2350                       | 52.8         | Glass          |
| FL-1475-S      | 262   | FL-1485-S   | 280   | FL-1495-S    | 456   | 4600                       | 133          | 316SS          |
| FL-1476-G      | 262   | FL-1486-G   | 280   | FL-1496-G    | 456   | 3800                       | 84.6         | Glass          |
| FL-1476-S      | 262   | FL-1486-S   | 280   | FL-1496-S    | 456   | 7600                       | 218          | 316SS          |
| FL-1477-G      | 262   | FL-1487-G   | 280   | FL-1497-G    | 456   | 8600                       | 200          | Glass          |
| FL-1477-S      | 262   | FL-1487-S   | 280   | FL-1497-S    | 456   | 16,400                     | 493          | 316SS          |
| FL-1478-G      | 262   | FL-1488-G   | 280   | FL-1498-G    | 456   | 23,500                     | 573          | Glass          |
| FL-1478-S      | 262   | FL-1488-S   | 280   | FL-1498-S    | 456   | 43,000                     | 1350         | 316SS          |
| FL-1478-C      | 262   | FL-1488-C   | 280   | FL-1498-C    | 456   | 60,000                     | 2120         | Carboly        |

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