



# Micromite® 1600 Series

Forged Metering Valves



## Typical Applications

- Chromatography
- Mass Spectroscopy
- Sampling and fine metering
- Pollution analyzing instrumentation

## Technical Data

|   |   |
|---|---|
| <b>BODY*</b>  | 316 stainless steel, brass  |
| <b>MAXIMUM OPERATING PRESSURE @ 70° F (21° C)**</b> | Brass <ul style="list-style-type: none"><li>• 3500 psig (242 bar)</li></ul> 316 stainless steel <ul style="list-style-type: none"><li>• 5000 psig (345 bar)</li></ul> |
| <b>OPERATING TEMPERATURE RANGE</b>                  | -20° to +250° F (-29° to +121° C)   |
| <b>ORIFICE</b>                                      | 0.031" (0.79 mm)  |
| <b>CV FACTOR</b>                                    | 0.0008  |

\* Consult factory for other materials

\*\* Valve is not designed for shut-off. Pressure ranges for metering only

## Features & Benefits

- 18 turn non-rotating stem
- Low internal volume provides low flow control
- Non-rotating stem minimizes unwanted variability of flow rate
- Unique thread design allows tapered needle portion of the stem to be withdrawn into the outer stem
- O-ring seals below the stem threads provide smooth operation and eliminate backlash
- Panel mounting is standard for all models
- Dial indicator provides repeatable positioning of stem in full turns and tenths of a turn from closed to fully open.
  - Position by finger tip rotating the knurled aluminum dial.
  - A position lock prevents accidental movement of the handle and resulting errors in flow data.
  - The size and design of the handle assembly provide an attractive appearance for equipment panels.
- Special High Tolerance NPT Thread

metering valves

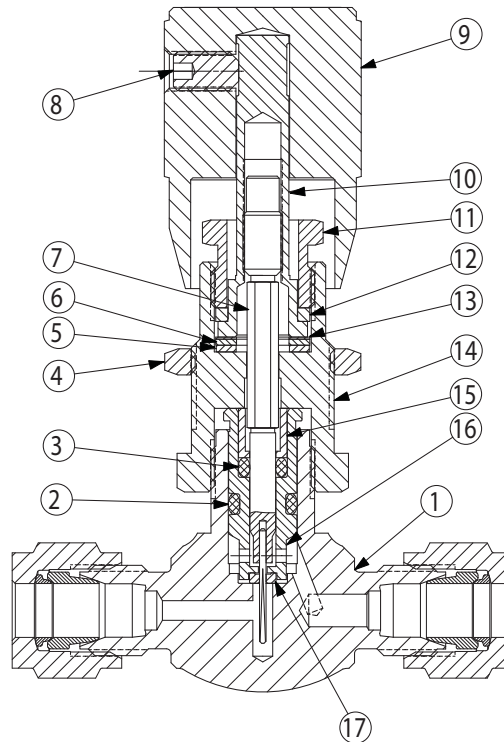
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# Micromite® 1600 Series

## Materials of Construction

|    | DESCRIPTION     | MATERIAL                 |
|----|-----------------|--------------------------|
| 1  | BODY            | 316 stainless or brass   |
| 2  | O-RING          | Fluorelastomer or Buna-N |
| 3  | O-RING          | Fluorelastomer or Buna-N |
| 4  | PANEL NUT       | Brass                    |
| 5  | WASHER          | Fluorelastomer           |
| 6  | WASHER          | 304 stainless            |
| 7  | STEM AND PIN    | 316 stainless            |
| 8  | SET SCREW       | Alloy steel              |
| 9  | HANDLE          | Aluminum                 |
| 10 | SPINDLE         | 316 stainless            |
| 11 | SCREW           | 316 stainless            |
| 12 | FRICTION WASHER | Delrin® AF               |
| 13 | FRICTION WASHER | Glass cloth              |
| 14 | BONNET          | 316 stainless            |
| 15 | RETAINER        | PCTFE                    |
| 16 | GLAND           | 316 stainless            |
| 17 | SEAT            | 316 stainless            |

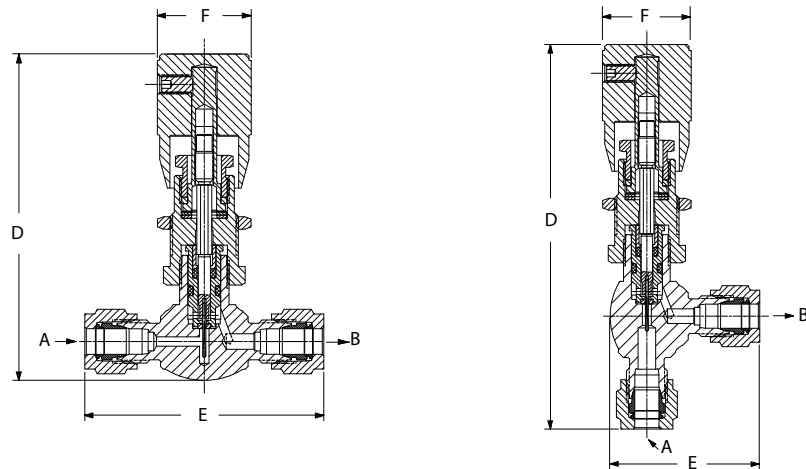


# Micromite® 1600 Series

## Dimensions

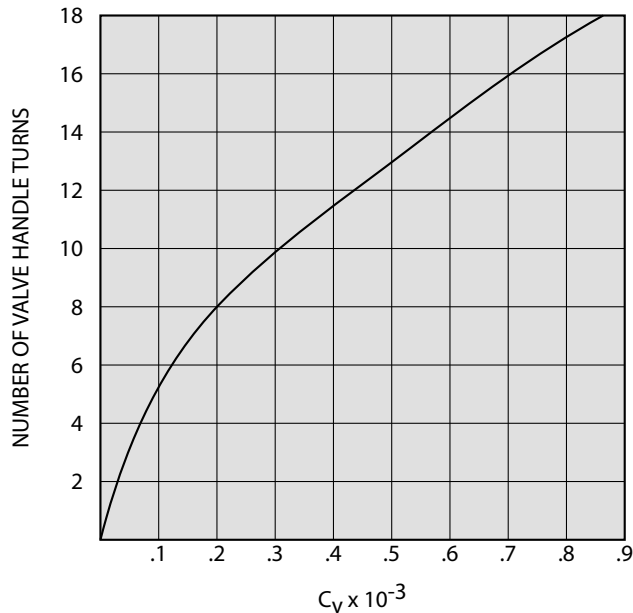
| FLOW PATTERN   | CONNECTIONS    |                | PART NUMBER | BODY MATERIAL  | O RING | DIMENSIONS |       |       | PANEL MOUNTING    |           |       |
|----------------|----------------|----------------|-------------|----------------|--------|------------|-------|-------|-------------------|-----------|-------|
|                | A INLET        | B OUTLET       |             |                |        | D          | E     | F     | MAXIMUM THICKNESS | HOLE SIZE |       |
| GLOBE          | 1/8" FNPT      | 1/8" FNPT      | 1654F2BA    | BRASS          | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/8" MNPT      | 1/8" MNPT      | 1654M2BA    | BRASS          | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/4" MNPT      | 1/4" MNPT      | 1654M4BA    | BRASS          | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/16" GYROLOK® | 1/16" GYROLOK® | 1654G1BA    | BRASS          | Buna-N | mm         | 83    | 60    | 73                | 6         | 18    |
|                |                |                |             |                |        | inch       | 2 1/4 | 1 3/8 | 49                | 1/3       | 45/63 |
|                | 1/8" GYROLOK®  | 1/8" GYROLOK®  | 1654G2BA    | BRASS          | Buna-N | mm         | 83    | 60    | 73                | 6         | 18    |
|                |                |                |             |                |        | inch       | 2 1/4 | 1 3/8 | 49                | 1/3       | 45/63 |
|                | 1/4" GYROLOK®  | 1/4" GYROLOK®  | 1654G4BA    | BRASS          | Buna-N | mm         | 83    | 60    | 73                | 6         | 18    |
|                |                |                |             |                |        | inch       | 2 1/4 | 1 3/8 | 49                | 1/3       | 45/63 |
|                | 1/8" FNPT      | 1/8" FNPT      | 1654F2YA    | 316 SS         | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/8" MNPT      | 1/8" MNPT      | 1654M2YA    | 316 SS         | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/4" MNPT      | 1/4" MNPT      | 1654M4YA    | 316 SS         | Buna-N | mm         | 83    | 45    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 1 3/4 | 1                 | 1/4       | 45/64 |
|                | 1/16" GYROLOK® | 1/16" GYROLOK® | 1654G1YA    | 316 SS         | Buna-N | mm         | 83    | 60    | 25                | 6         | 18    |
|                |                |                |             |                |        | inch       | 3 1/4 | 2 3/8 | 1                 | 1/4       | 45/64 |
| 1/8" GYROLOK®  | 1/8" GYROLOK®  | 1654G2YA       | 316 SS      | Buna-N         | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/4" GYROLOK®  | 1/4" GYROLOK®  | 1654G4YA       | 316 SS      | Buna-N         | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/16" GYROLOK® | 1/16" GYROLOK® | 1656G1YA       | 316 SS      | Fluorelastomer | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/8" GYROLOK®  | 1/8" GYROLOK®  | 1656G2YA       | 316 SS      | Fluorelastomer | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/4" GYROLOK®  | 1/4" GYROLOK®  | 1656G4YA       | 316 SS      | Fluorelastomer | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/16" GYROLOK® | 1/16" GYROLOK® | 1666G1YA       | 316 SS      | Fluorelastomer | mm     | 83         | 60    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 3 1/4      | 2 3/8 | 1     | 1/4               | 45/64     |       |
| 1/8" GYROLOK®  | 1/8" GYROLOK®  | 1666G2YA       | 316 SS      | Fluorelastomer | mm     | 102        | 41    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 4          | 1 5/8 | 1     | 1/4               | 45/64     |       |
| 1/4" GYROLOK®  | 1/4" GYROLOK®  | 1666G4YA       | 316 SS      | Fluorelastomer | mm     | 102        | 41    | 25    | 6                 | 18        |       |
|                |                |                |             |                | inch   | 4          | 1 5/8 | 1     | 1/4               | 45/64     |       |

Dimensions for reference only, subject to change.



# Micromite® 1600 Series

## Reference Flow Curve



Metering range is approximately 18 handle turns. Opening the valve beyond the metering range will increase the flow to full  $C_v$ .

## How to Order

| FLOW PATTERN | CONNECTIONS    |                | BRASS WITH BUNA-N | 316 STAINLESS STEEL WITH BUNA-N | 316 STAINLESS WITH FLUORELASTOMER |
|--------------|----------------|----------------|-------------------|---------------------------------|-----------------------------------|
|              | A Inlet        | B Outlet       |                   |                                 |                                   |
| GLOBE        | 1/8" FNPT      | 1/8" FNPT      | 1654F2BA          | 1654F2YA                        | —                                 |
|              | 1/8" MNPT      | 1/8" MNPT      | 1654M2BA          | 1654M2YA                        | —                                 |
|              | 1/4" MNPT      | 1/4" MNPT      | 1654M4BA          | 1654M4YA                        | —                                 |
|              | 1/16" GYROLOK® | 1/16" GYROLOK® | 1654G1BA          | 1654G1YA                        | 1656G1YA                          |
|              | 1/8" GYROLOK®  | 1/8" GYROLOK®  | 1654G2BA          | 1654G2YA                        | 1656G2YA                          |
|              | 1/4" GYROLOK®  | 1/4" GYROLOK®  | 1654G4BA          | 1654G4YA                        | 1656G4YA                          |
| ANGLE        | 1/16" GYROLOK® | 1/16" GYROLOK® | —                 | —                               | 1666G1YA                          |
|              | 1/8" GYROLOK®  | 1/8" GYROLOK®  | —                 | —                               | 1666G2YA                          |
|              | 1/4" GYROLOK®  | 1/4" GYROLOK®  | —                 | —                               | 1666G4YA                          |

To Order the Dial Indicator, order Kit 1600K4. If valve and kit are to be factory assembled, please note "Factory Assembled" on order

### FOR YOUR SAFETY

IT IS SOLELY THE RESPONSIBILITY OF THE SYSTEM DESIGNER AND USER TO SELECT PRODUCTS SUITABLE FOR THEIR SPECIFIC APPLICATION REQUIREMENTS AND TO ENSURE PROPER INSTALLATION, OPERATION AND MAINTENANCE OF THESE PRODUCTS. MATERIAL COMPATIBILITY, PRODUCT RATINGS AND APPLICATION DETAILS SHOULD BE CONSIDERED IN THE SELECTION. IMPROPER SELECTION OR USE OF PRODUCTS DESCRIBED HEREIN CAN CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.

## Ordering Options

### Spare Parts

Spare parts and repair kits are available for all needle valves. Please contact your distributor for specific information.

### Cleaning and Testing

When ordering, please specify if oxygen cleaning or helium leak testing is required.

### Additional Sizes

Additional sizes and options are available on special request. Please consult your local HOKE distributor.