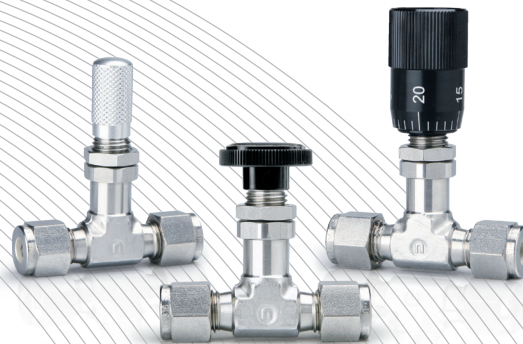




# METERING VALVES

## VMT Series

[www.unilok.com](http://www.unilok.com)



## Features

Pressure rating up to

VMTS series - 2000psig (137bar)

VMTL & VMTM series - 1000psig (69bar)

Temperature rating

from -23°C(-10°F) to 204°C (400°F) with standard Viton o-ring

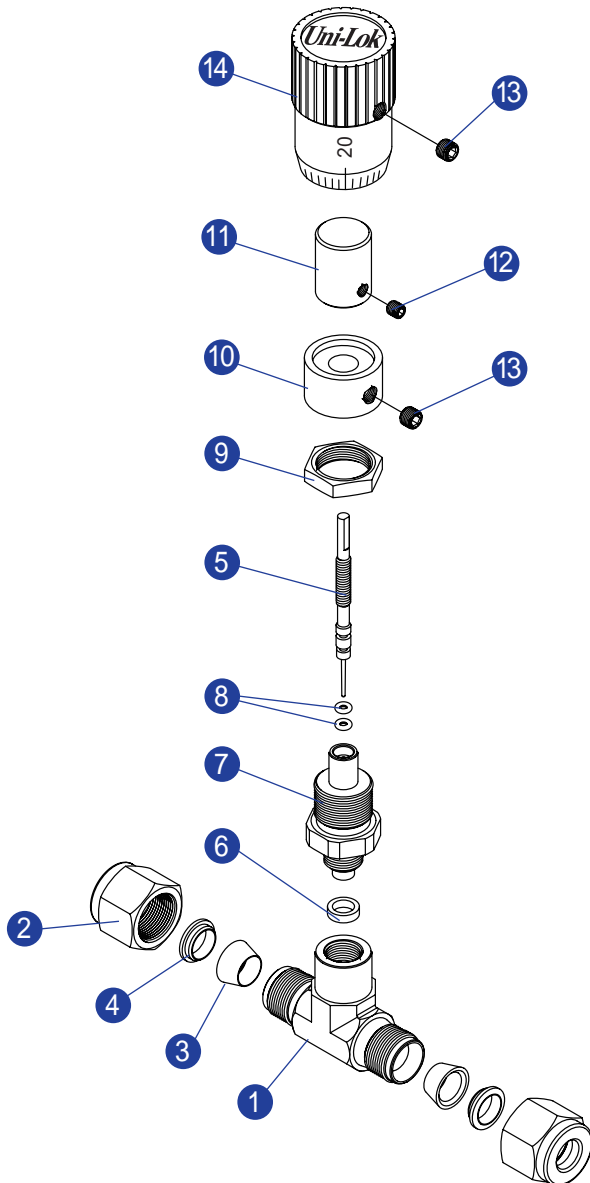
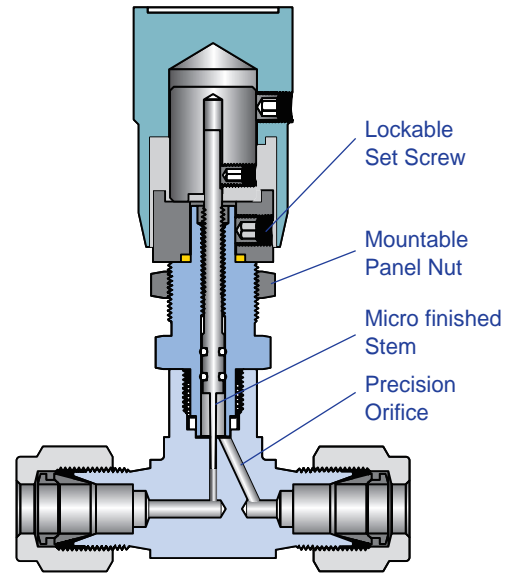
from -23°C(-10°F) to 148°C (300°F) with Buna-N o-ring

Compact designed body

Panel mounting for easy installation

Fine orifice and close thread tolerances offers accurate control

Various selection of handles



## Materials of Construction

No.	Description	Materials
1	Body	316SS
2	Nut	316SS
3	Back Ferrule	316SS
4	Front Ferrule	316SS
5	Stem	316SS
6	Sealing Seal	PTFE
7	Bonnet	316SS
8	Stem Seal	Viton
9	Panel Nut	304SS
10	Vernier Scale	Aluminum
11	Handle Gland	Brass
12	Handle Gland Screw	304SS
13	Handle Set Screw	304SS
14	Handle	Aluminum

## Specification

Valve Series	Orifice (mm)	Stem Taper incl. Angle	Shutoff Service	Temperature Rating		Pressure Rating	
				°C	°F	psig	bar
VMTS	0.81	1°	No	-23~204	-10~400	2000	137
VMTM	1.42	3°	Yes			1000	69
VMTL	3.25	5°	Yes				

## Application

Sampling and analyzing systems, accurate and fine metering applications

## Cleaning

Uni-Lok valves are free from machine oils, loose particles and grease throughout the close cleaning process.

The special cleaning for high purity application is available upon request.

## Testing

Every valve is 100% factory tested with air and nitrogen at 1000psig(69bar) for leakage at the seat and packing. Each test is performed to a maximum allowable leak rate of 0.1scc/min.

VMTL series is tested at 100psig(7bar) differential pressure.

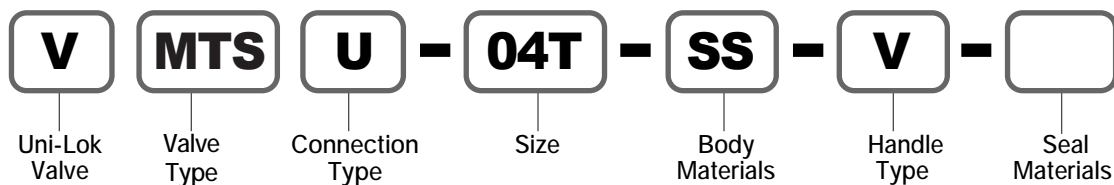
## Important Notification

Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

## How To Order

Uni-Lok VMT series metering valves are ordered by part number as shown as below.

**Example :** The following part number, **VMTSU-04T-SS-V** is designated for VMTS series metering valve with both 1/4" Uni-Lok tube fittings, 316SS, vernier handle.



Valve Type	
MTS	Stem Taper Angel - 1°
MTM	Stem Taper Angel - 3°
MTL	Stem Taper Angel - 5°

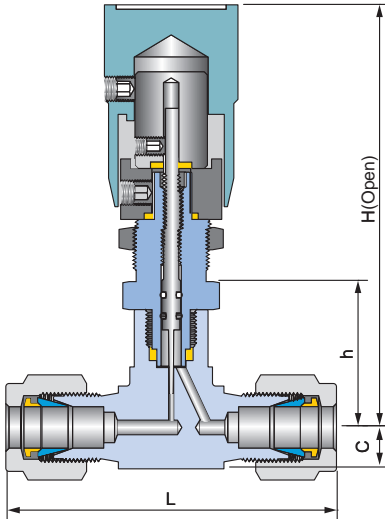
Connection Type	
U	Uni-Lok Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)
C	UCR-Metal Face Seal

Connection Type			
Fractional(Inch) Tube O.D. Designation			
Tube O.D.	inch	1/8	1/4
	mm	3.17	6.35
Designator		02T	04T
Metric Tube O.D. Designation			
Tube O.D.	mm	3	6
	Designator		M03T M06T
Pipe Size Designation (NPT or ISO7/1-PT)			
Pipe Size		1/8	1/4
Designator		02N/R	04N/R
UCR Size Designation			
Tube Size		1/4	
Designator		04C	

Seal Materials	
None	Viton
N	Buna-N
Handle Type	
V	Vernier Handle
R	Round Aluminum Handle
S	Slotted Handle

See the details in page 6.

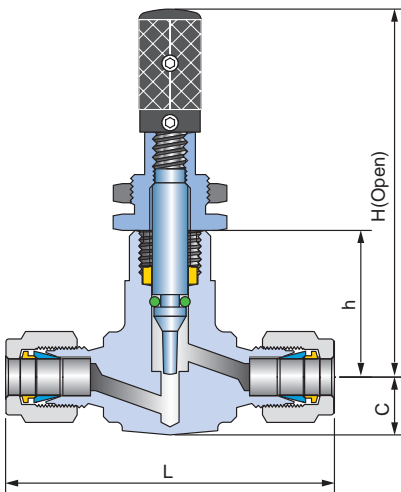
## VMTS series (Stem Angle 1°, Orifice 0.81mm)



### Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV (Max)	Dimensions (mm)				Panel Hole Drill Size
	Inlet	Outlet			L	C	h	H (Open)	
VMTS	U-02T-	1/8" Uni-Lok	0.81	0.005	48.3	6.8	22.9	65.0	11.5
	U-04T-	1/4" Uni-Lok			51.8				
	U-M03T-	3mm Uni-Lok			48.3				
	U-M06T-	6mm Uni-Lok			51.8				
	C-04M	1/4" Male UCR			52.3				

## VMTM series (Stem Angle 3°, Orifice 1.42mm)



### Ordering Information & Dimensions

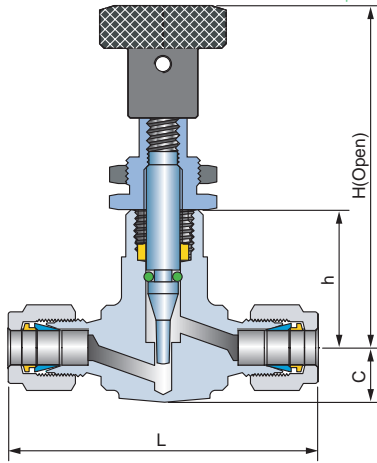
Part Number	End Connection		Orifice	CV (Max)	Dimensions (mm)				Panel Hole Drill Size
	Inlet	Outlet			L	C	h	H (Open)	
VMTM	U-02T-	1/8" Uni-Lok	1.42	0.033	52.3	9.7	26.0	67.0	15.0
	U-04T-	1/4" Uni-Lok			58.3				
	U-M03T-	3mm Uni-Lok			52.3				
	U-M06T-	6mm Uni-Lok			58.3				
	F-02N-	1/8" Female NPT			42.0				
	M-02N-	1/8" Male NPT			41.2				
	M-04N-	1/4" Male NPT			50.0				

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VMT series valves. Add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.

# VMTL series

(Stem Angle 5°, Orifice 3.25mm)



## Ordering Information & Dimensions

Part Number	End Connection		Orifice	CV (Max)	Dimensions (mm)				Panel Hole Drill Size
	Inlet	Outlet			L	C	h	H (Open)	
VMTL	U-04T-	1/4" Uni-Lok	3.25	0.155	58.3	9.7	26.0	67.0	15.0
	U-06T-	3/8" Uni-Lok			58.6				
	U-M06T-	6mm Uni-Lok			58.3				
	M-04N-	1/4" Male NPT			50.0				

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VMT series valves. Add "R" as a suffix instead of "N".

Dimensions are for reference only and are subject to change without prior notice.

## Handle Types

Handle materials

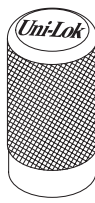
Vernier and Slotted handles - Aluminum with anodized color

Round handles - Nylon



**Vernier Handle**

Enhance accurate flow adjustments



**Slotted Handle**

Keep flow setting adjustments with set screw



**Round Handle**

Make flow adjustments easily

## Handle Options

Different types of aluminum handles are available depending on valve series.

Valve Series	Handle Types		
	Vernier	Slotted	Round
VMTS	O	O	X
VMTM	O	O	X
VMTL	O	X	O

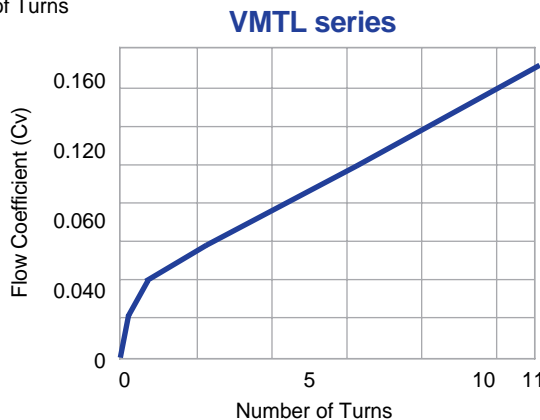
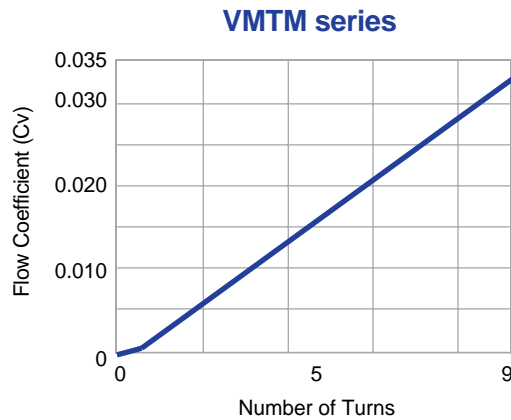
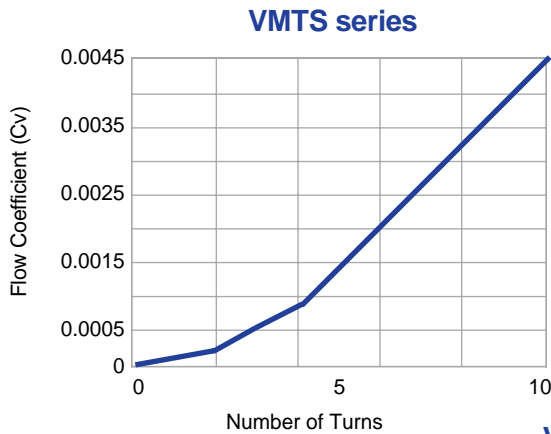
Standard color for all handles is black. Other colored are available upon request as option only with vernier and slotted handles.

To order, add color designator to the end of handle option.

**Example** : -VG shown as gold vernier handle

Color	Designator
Gold	G
Silver	S

## Number of Handle Turns - Flow Coefficient (Cv)



# Uni-Lok Line up

## Instrumentation

### Fittings



- Tube Fittings
- PTFE Fittings
- Hose & Push-On Connectors



- Precision Pipe Fittings
- Fusible Connectors
- Dielectric Fittings



### Valves



- VB1 series
- VB2 series
- VB3 series
- VB6B series
- VB6F series
- VB6T series
- VP series



- Precision & Clean Ball Valves
- Swing-Out Ball Valves
- Instrumentation Ball Valves
- High Pressure Bar Stock Ball Valves
- High Pressure Forged Ball Valves
- Trunnion Ball Valves
- Plug Valves



- VN5 series
- VN6 series
- VU6 series
- VMT series

- Integral Bonnet Forged Needle Valves
- High Pressure Bar Stock Needle Valves
- Union Bonnet Valves
- Metering Valves

- VM series
- VG series
- VL series

- Instrumentation Manifolds Valves
- Gauge & Gauge Root Valves
- Bleed Valves

- VD series

- Double Block and Bleed Valves

- VC series
- VR series
- VE series

- General & High Pressure Relief Valves
- Low & High Pressure Relief Valves
- Industrial Excess Flow Valves

- VF series
- VPR series
- VBR series

- T & In-Line Filters
- Pressure Reducing Valves
- Back Pressure Regulators

### Others

- Seamless & Welded Tubing
- Condensate Pots

## UHP(Ultra High Purity)

### Fittings



- Weld & Metal Face Seal Fittings
- Pipe & Tube Fittings
- Flanges



- Cylinder Connectors

### Valves



- VCD series
- VCB series
- VCC series



- Diaphragm Valves
- Bellows Valves
- Welded Check Valves



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WITH THE SAME ATTITUDE  
OF THE TIME OF BEGINNING*



**Uni-Lok<sup>®</sup> Uni-Lok corporation**

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