



*See What's Really There™*

**Silonite™**  
**MicroValves™**



**SILONITE™**  
**MicroValves™**

*High Performance, Chromatographic Grade Quick Connect Valves.*

## Tool Free, Leak Free - Micro-QT™

The Micro-QT is a next generation gas valve offering uncompromising leak-tight performance in an ergonomic design. The Micro-QT is also versatile, providing numerous connection options to cover a wide range of applications. Once connecting the valve to tubing using compression fittings, mating male and female valve ends is literally just a quick “snap”.

Originally designed for environmental air sampling and analysis, the Micro-QT has found a place in numerous other applications. Micro-QT's feature a distinctive bright and colorful Silonite coating that prevents gas phase compounds from interacting with the metal surface. The rugged, solid design stands up to thousands of connections, while maintaining leak tight operation. For scientists and professionals working with VOC and SVOCs, the Micro-QT's compact internal volume reduces exposure to potentially contaminated surfaces and allows for easy cleaning.

### MicroValve™ Features:

- **Fast Connection**
- **No Welds**
- **Very Light & Compact**
- **Inexpensive**
- **Lowest Inclusion Volume**
- **Ideal for Automation**
- **Easily Cleaned**
- **Clear Connection Indication**



The Micro-QT™ Valve is optimized for volatile and light semi-volatile compounds. MicroValves™ are compatible with existing Entech sampling devices by simply adding a female Micro-QT™ to ¼" adapter (PN MQT-400).

### Popular Applications:

- **Laboratory Gas Lines**
- **Canister Field Sampling**
- **Headspace & Chambers**
- **Instrument Inlets**
- **Sampling Equipment**
- **Gas Manifold Connections**

### Instructions for Field Sampling:

#### Micro-QT™ – as primary canister valve



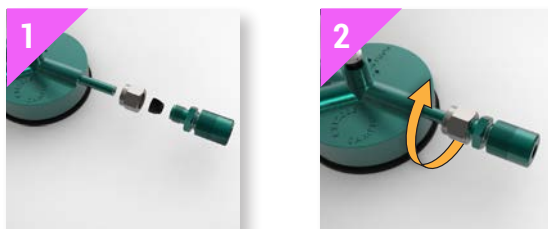
To attach your new Micro-QT™ Valve to your Entech Canister, simply tighten the valve onto the canister stem in place of the original valve.

#### Micro-QT™ – for use with packless valves



To attach your Micro-QT™ valve to an existing packless valve, just line up the nut, ferrule, and Micro-QT™ stem, place it on, and lightly wrench tighten.

#### Micro-QT™ – attach to sampling accessories



To Attach your new Female Micro-QT™ to your existing CS1200E™ or other sampling accessory is simple.

#### Micro-QT™ – connect sampling components



Now you are ready to sample with the world's most inert MicroValves™ with the added convenience of being completely tool-free.

# Micro-QT™ Valves (Male Fittings)

## Male to Compression



**MQT-100S**  
 Silonite™ Male Micro-QT™ Valve  
 to 1/16" Compression Fitting  
 (Use MQT-100 for uncoated fitting)



**MQT-T400S**  
 Silonite™ Male Micro-QT™ Valve  
 to 1/4" Tube Fitting  
 (Use MQT-T400 for uncoated fitting)



**MQT-200S**  
 Silonite™ Male Micro-QT™ Valve  
 to 1/8" Compression Fitting  
 (Use MQT-200 for uncoated fitting)



**MQT-ST400S**  
 Silonite™ Male Micro-QT™ Valve  
 Short – to 1/4" Tube Fitting  
 For 6L cans with existing valves  
 (Use MQT-ST400 for uncoated fitting)



**MQT-400S**  
 Silonite™ Male Micro-QT™ Valve  
 to 1/4" Compression Fitting  
 (Use MQT-400 for uncoated fitting)



**MQT-LUERS**  
 Silonite™ Male Micro-QT™  
 Valve to Luer-Lok® Fitting  
 (Use MQT-LUER for uncoated fitting)



**MQT-600S**  
 Silonite™ Male Micro-QT™ Valve  
 to 3/8" Compression Fitting  
 (Use MQT-600 for uncoated fitting)



**MQT-MP200S**  
 Silonite™ Male Micro-QT™  
 to 1/2" Male NPT Assembly  
 (Use MQT-MP200 for uncoated fitting)



**MQT-400LS**  
 Silonite™ Male Micro-QT™ Valve  
 Long – to 1/4" Compression Fitting  
 Recommended for 2.7, 3.2 & 6L Canisters  
 (Use MQT-400L for uncoated fitting)



**MQT-400L-GS**  
 Silonite™ Male Micro-QT™ Valve – Long  
 to 1/4" Compression Fitting and Gauge  
 (Use MQT-400L-G for uncoated fitting)



**MQT-400L-DS**  
 Silonite™ Male Micro-QT™ Valve –  
 Long to 1/4" Compression  
 Fitting / Capped Tube  
 (Use MQT-400L-DS for uncoated fitting)



**MQT-BH200S**  
 Silonite™ Male MQT to  
 1/8" Bulkhead  
 (Use MQT-BH200 for uncoated fitting)



**MQT-REPAIR**  
 Silonite™ Male Micro-QT™ Repair Kit

## Micro-QT™ Valves (Male Unions)



**MQT-2S**  
Male Double-Ended Valve Fitting  
(Use MQT-2 for uncoated fitting)



**MQT-3S**  
Male Tee Valve Fitting  
(Use MQT-3 for uncoated fitting)



**MQT-4S**  
Male Cross Valve Fitting  
(Use MQT-4 for uncoated fitting)

## Male Micro-QT™ Valves & Caps for Bottle-Vacs™



**MQT-BV24S**  
Silonite™ Male Micro-QT™  
to 24mm Bottle-Vac™ O-Ring Fitting  
(Use MQT-BV24 for uncoated fitting)



**30-22070**  
Micro-QT™ Valve  
External Cap Assembly (3/16" Hex)



**MQT-BV28S**  
Silonite™ Male Micro-QT™  
to 28mm Bottle-Vac™ O-Ring Fitting  
(Use MQT-BV28 for uncoated fitting)



**30-22056**  
1L Bottle-Vac™  
Finger-Tight External Cap Assembly



**MQT-BV28H2S**  
Silonite™ Male Micro-QT™  
28mm H<sub>2</sub>S Bottle-Vac™ O-Ring Fitting  
(Only available with Silonite™ coating)



**30-22060**  
Male Micro-QT™ Valve  
Finger-Tight External Cap Assembly



**39-76464**  
Valve Cap for 250mL, 500mL, & 1L bottles



**39-76044B**  
Valve Cap for 125mL bottles



**The Most Durable and Accurate  
Sample Collection Valves**  
for EPA Methods TO-14A and TO-15.

## Micro-QT™ Valves (Female Fittings)

### Female to Compression



**FQT-100S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/16" Compression Fitting  
 (Use FQT-100 for uncoated fitting)



**FQT-200S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/8" Compression Fitting  
 (Use FQT-200 for uncoated fitting)



**FQT-400S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/4" Compression Fitting  
 (Use FQT-400 for uncoated fitting)



**FQT-600S**  
 Silonite™ Female Micro-QT™ Valve  
 to 3/8" Compression Fitting  
 (Use FQT-600 for uncoated fitting)

### Other Female Connections



**FQT-T400S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/4" Tube Fitting  
 (Use FQT-T400 for uncoated fitting)



**FQT-MP200S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/8" Male NPT Assembly  
 (Use FQT-MP200 for uncoated fitting)



**FQT-FP200S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/8" Female NPT Connection Fitting  
 (Use FQT-FP200 for uncoated fitting)



**FQT-LUERS**  
 Silonite™ Female Micro-QT™ Valve  
 to Luer-Lok® Fitting  
 (Use FQT-LUER for uncoated fitting)

### Female to Bulkhead

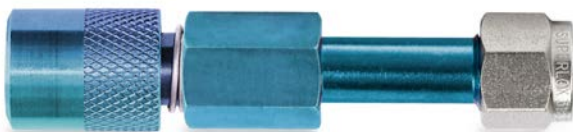


**FQT-BH200S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/8" Compression – Bulkhead Fitting  
 (Use FQT-BH200 for uncoated fitting)



**FQT-BH100S**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/16" Compression – Bulkhead Fitting  
 (Use FQT-BH100 for uncoated fitting)

### Female to 1/4" Compression – 5400B Thermal Transfer System



**FQT-400VLS**  
 Silonite™ Female Micro-QT™ Valve  
 to 1/4" Compression Fitting (5400B)  
 (Only available with Silonite™ coating)



Featured here being used on the  
 Entech 5400B Thermal Transfer System

## Micro-QT™ Test Gauges (Female Fittings)



**29-70010QT**  
30"0"Hg Vacuum Gauge  
to Female Micro-QT™ Valve Fitting





















**29-70020QT**  
30"Hg-0-40psi Compound Gauge  
to Female Micro-QT™ Valve Fitting

## Micro-QT™ Valve Kit (Male & Female Fittings)



**MQT-Kit**  
Complete set of coated Male & Female  
MQT's (See included part list below)

 <b>MQT-100S</b> 1/16" Compression Fitting	 <b>MQT-200S</b> 1/8" Compression Fitting	 <b>MQT-400S</b> 1/4" Compression Fitting	 <b>MQT-600S</b> 3/8" Compression Fitting	 <b>MQT-400LS</b> 1/4" Compression Fitting	 <b>MQT-400L-DS</b> 1/4" Compression Fitting
 <b>MQT-BH200S</b> 1/8" Compression Fitting	 <b>MQT-T400S</b> 1/4" Tube Fitting	 <b>MQT-ST400S</b> 1/4" Tube Fitting	 <b>MQT-2S</b> Valve Fitting	 <b>MQT-3S</b> Valve Fitting	 <b>MQT-4S</b> Valve Fitting
 <b>MQT-MP200S</b> 1/8" Male NPT Assembly	 <b>MQT-LUERS</b> Luer-Lok® Fitting	 <b>FQT-100S</b> 1/16" Compression Fitting	 <b>FQT-200S</b> 1/8" Compression Fitting	 <b>FQT-400S</b> 1/4" Compression Fitting	 <b>FQT-600S</b> 3/8" Compression Fitting
 <b>FQT-BH100S</b> 1/16" Compression Fitting	 <b>FQT-BH200S</b> 1/8" Compression Fitting	 <b>FQT-T400S</b> Tube Fitting	 <b>FQT-MP200S</b> 1/8" Male NPT Assembly	 <b>FQT-FP200S</b> 1/8" Female NPT Assembly	 <b>FQT-LUERS</b> Luer-Lok® Fitting

# Grab & Critical Orifice Sampling MicroValves™

There are several ways to fill a MicroValve™ canister or Bottle-Vac™ depending on sampling requirements. Here's a brief overview:

## Grab Sampling

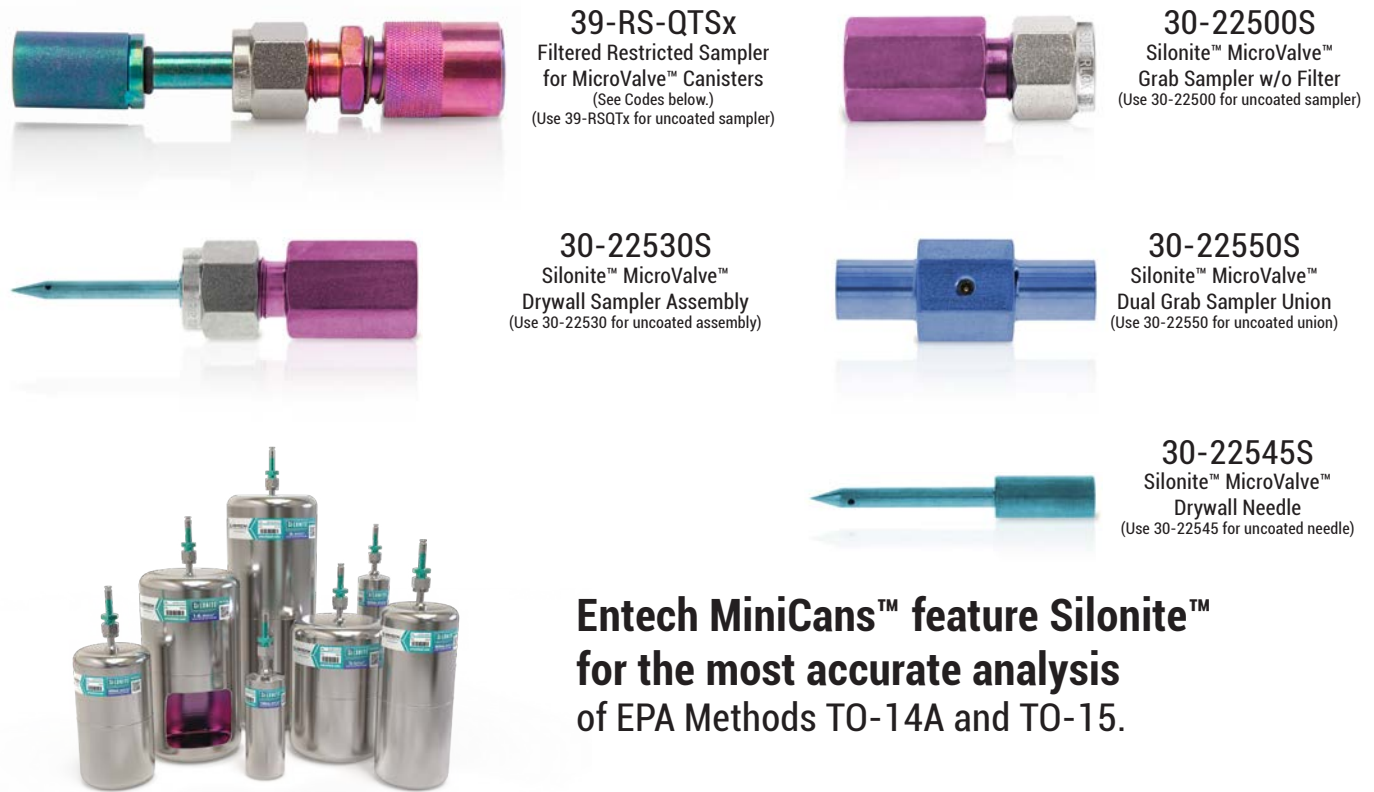
MiniCan™ or Bottle-Vac™ samplers are filled within 0.1–0.3 minutes using an unrestricted sampler with a Micro-QT™ valve.

## Restricted Critical Orifice Sampling

Sample collected using a filtered orifice restricted sampler. Fill rates are constant until the canister reaches ½ atmosphere.

## Time Integrated Sampling

Time integrated sampling is used for slow filling of canisters to determine average target compound concentrations. Fill times are 10–50 times longer than critical orifice restricted samplers. Use CS1200E and PN: MQT-400 adapter for Micro-QT™ Valve Samplers.



**39-RS-QTSx**  
Filtered Restricted Sampler  
for MicroValve™ Canisters  
(See Codes below.)  
(Use 39-RSQTx for uncoated sampler)

**30-22500S**  
Silonite™ MicroValve™  
Grab Sampler w/o Filter  
(Use 30-22500 for uncoated sampler)

**30-22530S**  
Silonite™ MicroValve™  
Drywall Sampler Assembly  
(Use 30-22530 for uncoated assembly)

**30-22550S**  
Silonite™ MicroValve™  
Dual Grab Sampler Union  
(Use 30-22550 for uncoated union)

**30-22545S**  
Silonite™ MicroValve™  
Drywall Needle  
(Use 30-22545 for uncoated needle)

**Entech MiniCans™ feature Silonite™ for the most accurate analysis of EPA Methods TO-14A and TO-15.**

### Time to Fill MiniCans™ – Fill to 50% and 95% of Atmospheric Pressure (in Minutes)

Part No.	Code	Approx. Flow Rate	450mL MiniCan™		600mL MiniCan™		1L MiniCan™		1.4L MiniCan™	
			50%	95%	50%	95%	50%	95%	50%	95%
30-22510	0	No Restrictor	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
39-RS-QT1	1	600cc/Min	*	*	*	*	1	3	1.3	4
39-RS-QT2	2	150cc/Min	1	3	2	6	3	10	5	15
39-RS-QT3	3	63cc/Min	3	10	5	15	8	25	10	30
39-RS-QT4	4	38cc/Min	5	15	8	25	12	40	15	45
39-RS-QT5	5	19cc/Min	10	30	15	50	25	75	35	100
39-RS-QT6	6	13cc/Min	15	45	25	70	40	120	60	170
39-RS-QTx Restricted Sampler for MiniCan™ with MicroValve™: (Replace x with desired flow code)										
39-RS-QTSx Restricted Sampler for MiniCan™ with Silonite™ MicroValve™: (Replace x with desired flow code)										
39-92150 Replacement Filter / O-Ring										

\* These canister / flow combinations are not recommended by Entech Instruments.



*MicroValves™ – The Highest Performing,  
Most Durable, Chromatographic Grade Quick  
Connect Valves in the World.*

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