Filtered Grab Sampler for TOV™ Canisters

Performing unfiltered sampling into your Silonite™ canister can lead to particulate contamination. This will eventually reduce volatile compound recovery, while making it more difficult to achieve EPA required blank levels. Entech's Grab Samplers are a great solution to keep your canisters clean. The external filter allows rapid equilibration with the local environment to reduce net loss due to adsorption, and the "thimble" geometry provides the surface area required to quickly fill large canisters. All filters are Silonite™ coated to maximize recovery of volatile chemicals.

Time to Fill Canisters (in Minutes)

Part No.	*Description*	2.7L Canister	6.0L Canister
39-RS-0	Grab Sampler	< 0.2	< 0.3

Filtered Restricted Samplers for TOV™ Canisters

Entech's Restricted Samplers are identical to the Grab Samplers listed above, but also include a sapphire orifice to slow down sampling rates. Fill rates remain constant until the canister is half full. Sampling can be stopped at this point for a true time weighted sample or allowed to continue if a time-weighted average is not required. Approximate times for filling to 50% and 95% of atmospheric pressure are listed in the table below.

Restricted Sampler for TOV™ Canisters
PN 39-RS-x

Replacement Silonite™ Filter
PN 39-92150

DESCRIPTION	PART #	UNIT
Grab Sampler for Silonite™ Canisters (No Restrictor)	39-RS-0	EA
Restricted Sampler for Silonite™ Canisters (600cc/min)	39-RS-1	EA
Restricted Sampler for Silonite™ Canisters (150cc/min)	39-RS-2	EA
Restricted Sampler for Silonite™ Canisters (63cc/min)	39-RS-3	EA
Restricted Sampler for Silonite™ Canisters (38cc/min)	39-RS-4	EA
Restricted Sampler for Silonite™ Canisters (19cc/min)	39-RS-5	EA
Restricted Sampler for Silonite™ Canisters (13cc/min)	39-RS-6	EA
Replacement Silonite™ Filter and O-Ring	39-92150	EA

Time to Fill Canisters – Fill to 50% and 95% of Atmospheric Pressure (in Minutes)

Part No.	*Code*	*Approx. Flow Rate*	1L Canister		1.4L Canister		2.7L Canister		3.2L Canister		6.0L Canister	
			50%	*95%*	*50%*	*95%*	*50%*	*95%*	*50%*	*95%*	*50%*	*95%*
39-RS-0	0	No Restrictor	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.3
39-RS-1	1	600cc/Min	1	3	1.3	4	3	8	4	10	5	15
39-RS-2	2	150cc/Min	3	8	4	15	10	30	10	35	15	45
39-RS-3	3	63cc/Min	7	20	10	30	20	60	25	70	45	130
39-RS-4	4	38cc/Min	10	30	14	45	30	90	40	100	*	*
39-RS-5	5	19cc/Min	25	75	35	100	75	200	90	250	*	*
39-RS-6	6	13cc/Min	40	100	50	130	*	*	*	*	*	*
39-RS-x	*Restricted Sampler for Silonite™ canisters:* (Replace x with desired flow code)											

* Canister/Flow combinations not recommended by Entech Instruments.

Filtered Grab Sampler for MicroValve™ Canisters PN 30-22510S

Filtered Restricted Sampler for MicroValve™ Canisters PN 39-RS-QTSx *(See Codes on p.70)*

Filterless Grab Sampler for MicroValve™ Canisters PN 30-22500

Replacement Filter PN 39-92150

Filterless Drywall Sampler for MicroValve™ Canisters PN 30-22530

Replacement Drywall Needles PN 30-22545

Finger-Tightened Cap PN 30-22060

30-0"Hg Vacuum Gauge 29-70010QT

Grab & Critical Orifice Sampling

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

Grab Sampling

MiniCan™ or Bottle-Vac™ samplers are filled within 0.1–0.3 minutes, by either removing the valve (around the valve sampling), or using an unrestricted sampler.

Restricted Critical Orifice Sampling

Sample is collected through the valve using a filtered orifice restricted sampler. Fill rates are constant until the canister reaches one-half atmosphere.

Time Integrated Sampling

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

Micro-QT™ Valve (Samplers & Accessories)*

DESCRIPTION	PART #	UNIT
Finger-Tightened Cap	30-22060	EA
Filterless MicroValve™ Grab Sampler	30-22500	EA
Filtered MicroValve™ Grab Sampler	30-22510	EA
Filterless Drywall Sampler (Mold MVOCs)	30-22530	EA
Replacement Drywall Needles	30-22545	EA
Filtered Restricted Sampler **	39-RS-QTx	EA
Silonite™ Filtered Restricted Sampler **	39-RS-QTSx	EA
Repl. Filter for Grab & Restricted Samplers	39-92150	EA
30-0"Hg Vacuum Gauge (w/Micro-QT)	29-70010QT	EA

* All listed part numbers are compatible with both QT and QT2 Valves.
** Replace "x" with code for desired fill time. See table below.

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

Part No.	Code	Approx. Flow Rate	450mL MiniCan™ 50%	450mL MiniCan™ 95%	600mL MiniCan™ 50%	600mL MiniCan™ 95%	1L MiniCan™ 50%	1L MiniCan™ 95%	1.4L MiniCan™ 50%	1.4L MiniCan™ 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.

Vacuum Sampling Approaches

Grab Sampling

Sampling with MiniCan™ and Bottle-Vac™ canisters could not be easier. Simply verify sufficient canister vacuum with a check gauge and start sample collection.

A grab sample can be collected by using a filtered or non-filtered sampler fitting. Place a sampler fitting onto the MicroValve™ and press down to activate sample collection. Adding a critical orifice to these samplers can increase the sampling time to up to 1 hour.

Filtered Grab Sampling

CS1200E Passive Canister Sampler and 1.4L MiniCan™ shown with 1L / 1.4L "star" stand. PN 29-1400STAND
(Sampler and Canister sold separately)

True Time Integrated Sampling

The CS1200E provides excellent stability at low fill rates for reliable TWA sampling and can be used with both Micro-QT™ or TOV™ canister valves for tool free operation in the field.

Sampling stands are available for field use with 1L and 1.4 MiniCans™ as well as our 1L Bottle-Vac™ samplers.

DESCRIPTION	PART #	UNIT
1L and 1.4L MiniCan™ Cap Stand	29-20404	EA
1L and 1.4L MiniCan™ Star Stand	29-1400STAND	EA
1L and 1.4L MiniCan™ Quad-Pod Stand	29-STAND-SAMPQT	EA

1L and 1.4L MiniCan™ cap stand. PN 29-20404

CS1200E Passive Canister Sampler and 1.4L MiniCan™ shown with our 1L / 1.4L collapsible Quad-Pod stand. PN 29-STAND-SAMPQT
(Sampler and Canister sold separately)

Collapsible!