



Restek Air

The RAVE Family of Air Sampling Valves: Excellence Is Our Standard

- Proven long life
- Leak-free performance
- Effortless operation
- Enhanced damage-resistance

NEW! RAVEqc
Quick-Connect
Air Valves



RESTEK

Pure Chromatography

www.restek.com



Available options:

- All RAVE, RAVEn, and RAVEqc valves are made in the U.S. from rugged stainless steel and are available with or without Siltek treatment for added inertness.
- RAVE and RAVEn diaphragm valves: choose from 2-port or 3-port (for optional gauge) models. Rebuild kits available.
- RAVEqc quick-connect valves: browse our rapidly expanding selection of valve and fitting options online.



Restek Air Valve Excellence (RAVE) valves feature proven long life, leak-free performance (helium leak tested to 1×10^{-6} mL/sec), and effortless operation. Restek's original RAVE diaphragm valves, designed for reliability and ease of use, are standard on our full line of SilcoCan, TO-Can, and miniature air sampling canisters. RAVEn diaphragm valves bring RAVE brand quality to your Entech air canisters. Now, the new line of RAVEqc quick-connect air valves offers an even faster, tool-free means of collecting your sample in the field or analyzing it the lab. RAVEqc quick-connect air valves are ideal for both Restek and Entech air cans.

RAVE Diaphragm Air Valves

- **Durable design**—diaphragm sealing mechanism engineered for long life.
- **Leak-free performance**—every valve is helium leak-tested to 1×10^{-6} mL/sec.
- **Effortless operation**—easily finger turn to achieve full valve closure (only 10 in-lb).
- **Enhanced damage-resistance**—W-type valve seats are work-hardened and wetted surfaces contain no moving parts.

UPGRADE YOUR ENTECH CANS: RAVEn valves for 3.2, 6, and 15 L air canisters bring RAVE family quality to your Entech cans. Replace your TOV, TOV-2, or TrueSeal valves without modification!

Turn to your trusted partner for air sampling and chromatography. Order Restek Air Valve Excellence for your Restek or Entech air sampling canisters today.

www.restek.com/air

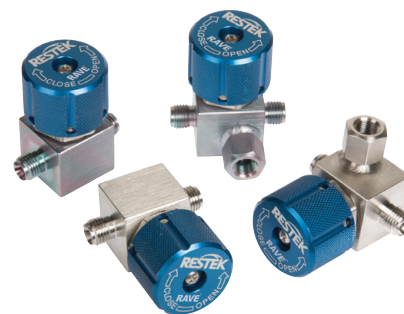
Excellence Is Our Standard – RAVE Diaphragm Valves Are Standard on All Restek Air Canisters

If you use a traditional diaphragm valve, RAVE valves are now standard on our full line of SilcoCan, TO-Can, and miniature air sampling canisters. Restek Air Valve Excellence (RAVE) valves are also available separately for upgrading existing air canisters to improve reliability and performance. Choose RAVE valves to upgrade your Restek canisters or RAVen valves to upgrade your Entech canisters.

RAVE Diaphragm Valves

For Restek air sampling canisters

Description	qty.	Siltek-treated	Stainless Steel
		cat.	cat.
1/4" Diaphragm Valve, RAVE (2-port)	ea.	26386	26385
1/4" Diaphragm Valve, RAVE (3-port)	ea.	26388	26387
RAVE and RAVen Diaphragm Rebuild Kit (includes: diaphragms (3))	kit	26390	26389



RAVen Diaphragm Valves

For Entech air sampling canisters

Description	qty.	Siltek-treated	Stainless Steel
		cat.#	cat.#
1/4" Diaphragm Valve, RAVen (2-Port)	ea.	27377	27376
1/4" Diaphragm Valve, RAVen (3-Port)	ea.	27379	27378
RAVE and RAVen Diaphragm Rebuild Kit (includes: diaphragms (3))	kit	26390	26389



SilcoCan Air Sampling Canisters with RAVE Valve

Ideal for low-level reactive sulfur (5–20 ppb), TO-14A, or TO-15 compounds
Siltek-treated canister offers unsurpassed inertness, even for sulfur-containing or brominated compounds.

Description	1 L Volume	3 L Volume	6 L Volume	15 L Volume
	cat.#	cat.#	cat.#	cat.#
2-Port RAVE Valve	27400	27404	27408	27412
2-Port Siltek-Treated RAVE Valve	27401	27405	27409	27413
3-Port RAVE Valve with Gauge*	27402	27406	27410	27414
3-Port Siltek-Treated RAVE Valve with Gauge*	27403	27407	27411	27415
Without Valve	22090	22091	22092	22093

*Range of standard gauge is –30" Hg to 60 psi.

Do not exceed canister maximum pressure of 40 psig (2.75 bar).

Note: If attaching any of Restek's passive sampling kits to a 3 L canister, use a Siltek-treated (cat.# 563646) or stainless steel (cat.# 563647) connector between the two components. Please contact Restek Customer Service or your local Restek representative to order.



Canisters are the gold standard for ambient VOC monitoring.

TO-Can Air Sampling Canisters with RAVE Valve

Optimized for Methods TO-14A, TO-15, IP-1A, ASTM D5466, OSHA PV 2120, and NJ DEP Low Level TO-15

SUMMA canister equivalent features proprietary electropolished surface that maintains compound stability.

Description	1 L Volume	3 L Volume	6 L Volume	15 L Volume
	cat.#	cat.#	cat.#	cat.#
2-Port RAVE Valve	27416	27418	27420	27422
3-Port RAVE Valve with Gauge*	27417	27419	27421	27423
Without Valve	22094	22095	22096	22097

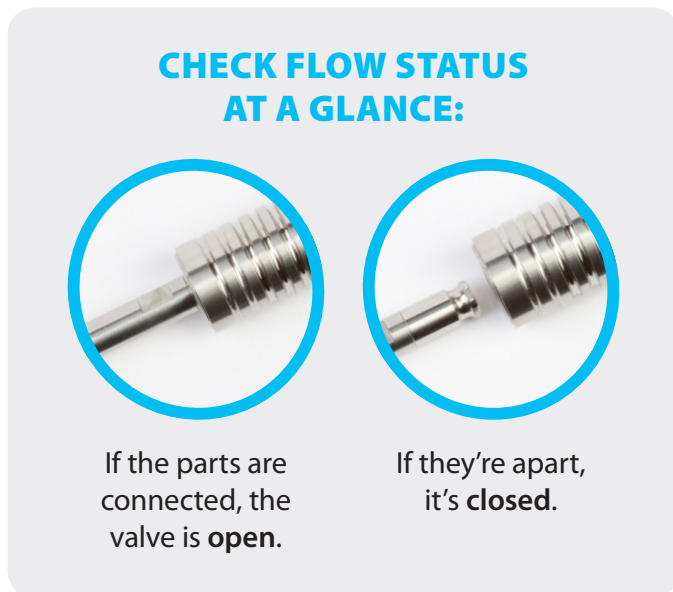
*Range of standard gauge is –30" Hg to 60 psi.

Do not exceed canister maximum pressure of 40 psig (2.75 bar).



RAVEqc Quick-Connect Air Valves

- **Simplify your workflow**—tool-free design makes it fast and easy for anyone to make consistent, quality connections.
- **Extend air canister and valve lifetime**—no wrenches means no overtightening or cross-threading damage.
- **Standalone or supporting roles**—use alone or pair with a bellows/diaphragm valve for the ultimate in sample security and convenience.
- Compatible with Entech Micro-QT valves.



Save Time with RAVEqc Quick-Connect Air Valves

In addition to being tool-free, easy to use, and reducing the risk of damage, RAVEqc quick-connect air valves make connecting and disconnecting to other devices faster than with compression fittings. As shown in Table I, a skilled user working confidently and quickly was able to attach 12 canisters with RAVE diaphragm valves to an oven in about 5 minutes. That same user was able to get 12 canisters with RAVEqc quick-connect air valves hooked up in half the time!

Table I: Connect and disconnect your air canisters in half the time with RAVEqc quick-connect air valves.

Valve	Attach (sec)	Detach (sec)	Total (sec)	x12 Canister (sec)	Oven Load/Unload (min)
RAVEqc 1	8.32	5.45	13.77	165.2	
RAVEqc 2	6.56	5.22	11.78	141.4	
RAVEqc 3	6.65	4.59	11.24	134.9	
RAVEqc Avg.	7.18	5.09	12.26	147.2	2.45
RAVE 1	13.70	14.18	27.88	334.6	
RAVE 2	12.63	12.25	24.88	298.6	
RAVE 3	13.03	10.63	23.66	283.9	
RAVE Avg.	13.12	12.35	25.47	305.7	5.09

Simplify Your Workflow with Tool-Free RAVEqc Quick-Connect Air Valves

Whether you need to replace your existing bellows/diaphragm valves or want the extra sample security of using two valves in tandem, RAVEqc quick-connect air valves are a tool-free, easy-to-use option that will make air sampling and analysis much easier. There's never any question about whether or not the valve is open because you can tell at a glance. If the male and female valves are connected, the flow path is open. If they aren't, it's closed.

RAVEqc Quick-Connect Air Valves

Description	Material	Similar to Entech Part #	qty.	cat.#
Male RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	MQT-400	ea.	27367
Male RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	MQT-400S	ea.	27368
Female RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	FQT-400	ea.	27369
Female RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	FQT-400S	ea.	27370
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-T400	ea.	27371
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-T400S	ea.	27372
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-ST400	ea.	27373
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-ST400S	ea.	27374

RAVEqc Valve Bracket

Required for use with Restek 1, 3, 6, and 15 L air sampling canisters when using the compression fitting mounted directly on the 1/4" canister tube stub (not for use with Restek miniature canisters or Entech canisters).

Description	qty.	cat.#
RAVEqc Valve Bracket, for Attaching to Restek Canister	ea.	27375



Which RAVEqc Quick-Connect Air Valves do I Need?

Use these guidelines to select the perfect RAVEqc quick-connect air valve for your application!

- Every RAVEqc quick-connect air valve has two halves (valve end and fitting end). Match each end to the opposite gender valve or fitting. For fittings, also be sure to match the connection dimension.

Examples:

- o To connect directly to a Restek air can with a tube stub 1/4" female compression fitting, use a bracket and any RAVEqc air valve with a 1/4" male compression fitting.



Bracket for Restek cans only.

- o To connect to the 1/4" male compression fitting on a diaphragm valve that is installed on an air canister, use a RAVEqc quick-connect air valve with a tube end fitting.



- For tube end fittings, choose length based on the clearances you need for installation.
- For reactive compounds, use Siltek-treated valves for a highly inert sample path.
- Male valves are less expensive than female valves, so use them on your most numerous devices (e.g., air canisters, not cleaning ovens).

Rely on Restek for Air Sampling Solutions



26379

Note: Ovens are built on demand; therefore, a ten-week lead time is required on all orders. A limited cancellation and return policy applies to TO-Clean ovens; contact Restek Customer Service for details.

TO-Clean Canister Cleaning System

High capacity, fully automated, easy-to-use canister cleaning oven dramatically increases lab efficiency.

- Oil-free pump lowers risk of contamination.
- EPA Method TO-14A/15 compliant.
- Powerful 6i pump can achieve 50 mTorr in <25 minutes for twelve 6-L canisters; higher power 10i option also available.
- Custom-built trays for different canister sizes.
- Humidifier provides humidified sweep gas to improve cleaning process.
- One-year limited warranty.
- Fully assembled and ready to use.

Description	Type	Voltage	Certification	qty.	cat.#
TO-Clean Oven w/Oil Free Pump	Edwards nXDS6i Dry Scroll Pump	120 V, 60 Hz	CE	ea.	26379
TO-Clean Oven w/Oil Free Pump	Edwards nXDS6i Dry Scroll Pump	220/230 V, 50/60 Hz	CE	ea.	26380
TO-Clean Oven w/Oil Free Pump	Edwards nXDS10i Dry Scroll Pump	120 V, 60 Hz	CE	ea.	26381
TO-Clean Oven w/Oil Free Pump	Edwards nXDS10i Dry Scroll Pump	220/230 V, 50/60 Hz	CE	ea.	26382

Optional Accessories (not included with TO-Clean Oven)

	qty.	cat.#
Oil-free Pump Silencer	ea.	26383
Oil-free Pump Exhaust Tubing for customer exhaust (20' PVC tubing, clamps, adapters, O-rings)	ea.	26384
Oven Cart, 12 gauge steel, push handle, and casters	ea.	22919
1 L Option: includes tubing, fittings, and inserts for twenty-four 1-L canisters	ea.	22920
3 L Option: includes tubing, fittings, and inserts for twelve 3-L canisters	ea.	22126
Mini-Can Option: includes tubing, fittings, and inserts for either twenty-four 400-cc or twenty-four 1,000-cc mini-canisters	ea.	22127

Shipping: FedEx Ground, unless otherwise requested. Costs vary depending on ship-to location.

Miniature Air Sampling Canisters (Electropolished Stainless Steel & Siltek Treated)

- Ideal for indoor air, personal, emergency response, or soil gas sampling.
- Available with quick-connect fitting that is compatible with sampling and analysis instruments.



Description	qty.	400 cc cat.#
Miniature Canister with RAVEqc Quick-Connect Fitting		
Electropolished Stainless-Steel Miniature Canister with male RAVEqc Quick-Connect Fitting (cat.#27367); A compatible female fitting, such as cat.# 27369 (sold separately) is required to complete the valve connection.	ea.	24188
Siltek-Treated Miniature Canister with male RAVEqc Quick-Connect Fitting (cat.#27367); A compatible female fitting, such as cat.# 27369 (sold separately) is required to complete the valve connection.	ea.	24189
Siltek-Treated Miniature Canister with male Siltek-Treated RAVEqc Quick-Connect Fitting (cat.# 27368); A compatible female fitting, such as cat.# 27370 (sold separately) is required to complete the valve connection.	ea.	24190
Miniature Canister with RAVE Valve		
Electropolished Stainless-Steel Miniature Canister with RAVE Valve	ea.	26456
Siltek-Treated Miniature Canister with RAVE Valve	ea.	26457
Siltek-Treated Miniature Canister with Siltek-Treated RAVE Valve	ea.	26458
Miniature Canister without Valve		
Electropolished Stainless-Steel Miniature Canister	ea.	24205
Siltek-Treated Miniature Canister	ea.	24207

Do not exceed canister maximum pressure of 40 psig (2.75 bar). Restek no longer offers 1,000 cc miniature air sampling canisters.

Passive Air Sampling Kits—Integrated (Stainless Steel & Siltek Treated)

Superior Performance—an Excellent Restek Value

- Provide accurate integrated sampling without a sampling pump.
- Siltek-treated components ensure accurate sampling of active components.
- Excellent for sampling times from 0.5 hour to 125 hours.

Canister Volume/Sampling Time					Flow	Orifice Size	Siltek-Treated cat.#	Stainless Steel cat.#
400 cc	1 Liter	3 Liter	6 Liter	15 Liter				
8 hour	24 hour	48 hour	125 hour	—	0.5–2 mL/min	0.0008"	24217	24216
2 hour	4 hour	12 hour	24 hour	60 hour	2–4 mL/min	0.0012"	24160	24165
1 hour	2 hour	6 hour	12 hour	30 hour	4–8 mL/min	0.0016"	24161	24166
—	1 hour	4 hour	8 hour	20 hour	8–15 mL/min	0.0020"	24162	24167
—	—	2 hour	3 hour	8 hour	15–30 mL/min	0.0030"	24163	24168
—	—	1 hour	1.5 hour	4 hour	30–80 mL/min	0.0060"	24164	24169
—	—	—	0.5 hour	1 hour	80–340 mL/min	0.0090"	22101	22100

*Vacuum/pressure gauge included in kit; air sampling canisters sold separately.



Canister Air Sampling Timer

- Program up to 12 timed events!
- Capable of both manual and automated operation.
- Perfect for either grab or time-integrated sampling.
- Long battery life; recharges conveniently using the USB port on any PC.
- All stainless steel sample flow path ensures inertness, improving accuracy.

Description	Certification	qty.	cat.#
Canister Air Sampling Timer	CE	ea.	24267



24267

Ashcroft Test Gauges

- Accurate measurement of vacuum to –30" Hg and pressure to 60 psi.
- Available in both analog and digital formats.
- Accuracy to +/- 0.25%.
- Gauge connector to canister valve available.

Description	qty.	cat.#
Analog Test Gauge, 6" diameter, 1/4" NPT	ea.	24285
Digital Test Gauge, 3" diameter, 1/4" NPT	ea.	24268
Ashcroft Gauge Connector to Canister Valve, stainless steel, connects 1/4" male NPT to 1/4" male compression fitting	ea.	22121



24285



24268

Rtx-VMS: The Go-To GC Column for VOCs in Water, Soil, or Air

Restek's Rtx-VMS GC column is always an excellent choice for analysis of volatile organic pollutants by GC-MS.

Learn more at www.restek.com/VMS



Find Restek Air Valve Excellence at
www.restek.com/air

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Lit. Cat.# EVSS2105C-UNV