



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! RAVE+**  
High-Performance  
Air Valves



**RESTEK**

Pure Chromatography

[www.restek.com](http://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 wide selection of valve and fitting options.



Our family of Restek Air Valve Excellence valves feature proven long life, leak-free performance (helium leak tested to  $1 \times 10^{-6}$  mL/sec), and effortless operation. New, high-performance RAVE+ diaphragm valves—redesigned with advanced features 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 the high quality of our original RAVE brand to your Entech air canisters. RAVEqc quick-connect air valves offer an even faster, tool-free means of collecting your sample in the field or analyzing it in the lab. RAVEqc quick-connect air valves are ideal for both Restek and Entech air cans.

## RAVE+ Diaphragm Air Valves

- Exclusive polymer-free construction means no sample contamination from off-gassing or target compound loss due to adsorption.
- Durable, roller-hardened valve port threads provide superior performance—and every valve is helium leak tested to  $1 \times 10^{-6}$  mL/sec.
- Rugged, work-hardened, proprietary, all-metal valve seats provide protection against particles that cause leaks.
- VOC-free, thread-locking adhesive keeps valve knob securely in place.
- Hard-stop design prevents users from overturning the valve and locking it open.
- Effortless operation—easily finger turn to achieve full valve closure (only 10 in-lb).
- Rugged, 100% stainless-steel construction ensures long service life.

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](http://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. 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 Air Valves

For Restek air sampling canisters

Description	qty.	Siltek-Treated cat.#	Stainless Steel cat.#
1/4" Diaphragm Valve, RAVE+ (2-port)	ea.	27326	27325
1/4" Diaphragm Valve, RAVE+ (3-port)	ea.	27328	27327
RAVE+, RAVE, and RAVEn Diaphragm Rebuild Kit [includes diaphragms (3)]	kit	26390	26389



### SilcoCan Air Sampling Canisters with RAVE+ Valves

Modification	Volume	qty.	cat.#	Modification	Volume	qty.	cat.#
2-Port RAVE+ Valve	1 L	ea.	27298	2-Port RAVE+ Valve	6 L	ea.	27306
2-Port, Siltek-Treated RAVE+ Valve	1 L	ea.	27299	2-Port, Siltek-Treated RAVE+ Valve	6 L	ea.	27307
3-Port RAVE+ Valve with Gauge*	1 L	ea.	27300	3-Port RAVE+ Valve with Gauge*	6 L	ea.	27308
3-Port Siltek-Treated RAVE+ Valve with Gauge*	1 L	ea.	27301	3-Port Siltek-Treated RAVE+ Valve with Gauge*	6 L	ea.	27309
without Valve	1 L	ea.	22090	without Valve	6 L	ea.	22092
2-Port RAVE+ Valve	3 L	ea.	27302	2-Port RAVE+ Valve	15 L	ea.	27310
2-Port, Siltek-Treated RAVE+ Valve	3 L	ea.	27303	2-Port, Siltek-Treated RAVE+ Valve	15 L	ea.	27311
3-Port RAVE+ Valve with Gauge*	3 L	ea.	27304	3-Port RAVE+ Valve with Gauge*	15 L	ea.	27312
3-Port Siltek-Treated RAVE+ Valve with Gauge*	3 L	ea.	27305	3-Port Siltek-Treated RAVE+ Valve with Gauge*	15 L	ea.	27313
without Valve	3 L	ea.	22091	without Valve	15 L	ea.	22093

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

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



27298

Canisters are the gold standard for ambient VOC monitoring.

### TO-Can Air Sampling Canisters with RAVE+ Valves

Modification	Volume	qty.	cat.#
2-Port RAVE+ Valve	1 L	ea.	27314
3-Port RAVE+ Valve with Gauge	1 L	ea.	27315
without Valve	1 L	ea.	22094
2-Port RAVE+ Valve	3 L	ea.	27316
3-Port RAVE+ Valve with Gauge	3 L	ea.	27317
without Valve	3 L	ea.	22095
2-Port RAVE+ Valve	6 L	ea.	27318
3-Port RAVE+ Valve with Gauge	6 L	ea.	27319
without Valve	6 L	ea.	22096
2-Port RAVE+ Valve	15 L	ea.	27320
3-Port RAVE+ Valve with Gauge	15 L	ea.	27321
without Valve	15 L	ea.	22097

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

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



27314

## RAVEn Diaphragm Air Valves

### RAVEn Diaphragm Valves

For Entech air sampling canisters

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



# 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.
- **Stand-alone 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.

## CHECK FLOW STATUS AT A GLANCE:



If the parts are connected, the valve is **open**.



If they're apart, it's **closed**.\*

\* Open-position valves also available.

## 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	<b>2.45</b>
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	<b>5.09</b>

# 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. Open-position valves also available.\*

## RAVEqc Quick-Connect Air

Description	Material	qty.	Note	cat.#
Female RAVEqc Valve to 1/16" Male Compression Fitting	Stainless Steel	ea.		27341
	Siltek Treated	ea.		27342
Female RAVEqc Valve to 1/8" Male Compression Fitting	Stainless Steel	ea.		27343
	Siltek Treated	ea.		27344
Female RAVEqc Valve to 1/4" Male Compression Fitting, High-Flow, Open-Position	Stainless Steel	ea.		27345
	Siltek Treated	ea.		27346
Female RAVEqc Valve to 1/4" Tube-End Fitting	Stainless Steel	ea.		27347
	Siltek Treated	ea.		27348
Male RAVEqc 3-Port Valve to 1/4" Male Compression Fitting without Gauge	Stainless Steel	ea.		27349
	Siltek Treated	ea.		27350
Male RAVEqc 3-Port Valve to 1/4" Male Compression Fitting with Gauge	Stainless Steel	ea.		27351
	Siltek Treated	ea.		27352
Male RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	ea.		27367
	Siltek Treated	ea.		27368
Female RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	ea.		27369
	Siltek Treated	ea.		27370
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58")	Stainless Steel	ea.	Requires a 1/4" nut and ferrule set, sold separately in 5-pks. as cat.# 23161.	27371
	Siltek Treated	ea.	Requires a 1/4" nut and ferrule set, sold separately in 5-pks. as cat.# 23161.	27372
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23")	Stainless Steel	ea.	Requires a 1/4" nut and ferrule set, sold separately in 5-pks. as cat.# 23161.	27373
	Siltek Treated	ea.	Requires a 1/4" nut and ferrule set, sold separately in 5-pks. as cat.# 23161.	27374
Female RAVEqc Valve to 1/4" NPT Fitting	Stainless Steel	ea.		27365
	Siltek Treated	ea.		27366

\* Open-position option available to prevent vacuum/pressure from being trapped by the valve when desired (e.g., when using a vacuum/pressure gauge). High flow facilitates use with canister-cleaning ovens.

## RAVEqc Caps

- Avoid the introduction of foreign material (e.g., dust) into male RAVEqc quick-connect air valves and protect them from physical damage.
- Choose premium caps for convenient, one-handed "quick-connect" operation.

Description	qty.	cat.#
Female RAVEqc Premium Quick-Connect Cap	ea.	27353
Female RAVEqc Standard Cap	ea.	27354

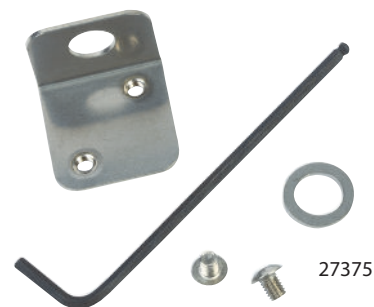




## RAVEqc Valve Bracket

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

## RAVE+ Guards

- Extend the lifetime of air canisters, flow controllers, and other accessories.
- Serve as a more economical sacrificial connection, protecting more valuable equipment from thread damage.
- Optional filter frit removes particulates that cause damage, leaks, and valve failure.
- Standard compression fitting for simple installation.
- Reusable and easy to clean.

Description	Material	qty.	cat.#
RAVE+ Guard: 2 µm Frit Filter & Holder	Stainless Steel	ea.	27292
	Siltek-Treated Stainless Steel	ea.	27293
RAVE+ Guard: 7 µm Frit Filter & Holder	Stainless Steel	ea.	27294
	Siltek-Treated Stainless Steel	ea.	27295
RAVE+ Guard: Holder without Frit Filter	Stainless Steel	ea.	27296
	Siltek-Treated Stainless Steel	ea.	27297



RAVE+ Guard: Stainless Steel

## 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.
- Compliant to most documented government and standard methods.
- 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.

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

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



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.

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

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

Description	Modification	Volume	qty.	cat.#
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.	400 cc	ea.	24188
	with RAVE+ Valve	400 cc	ea.	27322
	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.	400 cc	ea.	24189
Siltek-Treated Miniature Canister	with RAVE+ Valve	400 cc	ea.	27323
	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.	400 cc	ea.	24190
	with Siltek-Treated RAVE+ Valve	400 cc	ea.	27324
Electropolished Stainless-Steel Miniature Canister	without Valve	400 cc	ea.	24205
Siltek-Treated Miniature Canister	without Valve	400 cc	ea.	24207

Do not exceed canister maximum pressure of 40 psig (2.75 bar).  
Restek no longer offers 1000 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 Capacity	Orifice Size	qty.	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"	kit	24217	24216
2 hour	4 hour	12 hour	24 hour	60 hour					24165
1 hour	2 hour	6 hour	12 hour	30 hour	2–4 mL/min	0.0012"	kit	24160	24166
—	1 hour	4 hour	8 hour	20 hour					24167
—	—	2 hour	3 hour	8 hour	4–8 mL/min	0.0016"	kit	24161	24168
—	—	1 hour	1.5 hour	4 hour					24169
—	—	—	0.5 hour	1 hour					22100

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



24267

## Canister Air Sampling Timer

- Program 12 timed events up to 7 days in advance!
- 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/Compliance	qty.	cat.#
Canister Air Sampling Timer	CE	ea.	24267



24285



24268

## 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	Diameter	Fittings	qty.	cat.#
Test Gauge, Analog	6"	1/4" NPT	ea.	24285
Ashcroft 2074 Digital Pressure Gauge*			ea.	24268
Ashcroft Gauge Connector to Canister Valve, stainless steel, connects 1/4" male NPT to 1/4" male compression fitting			ea.	22121

\*Not CE approved.

Learn more at [www.restek.com/air](http://www.restek.com/air)

**RESTEK**  
Pure Chromatography

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