



Velocity XPT™ Sample Concentrator

Accelerated Purge and Trap
Technology for Maximum
Productivity In Your Laboratory

TEKMAR DOHRMANN

Accelerated Purge and Trap Technology

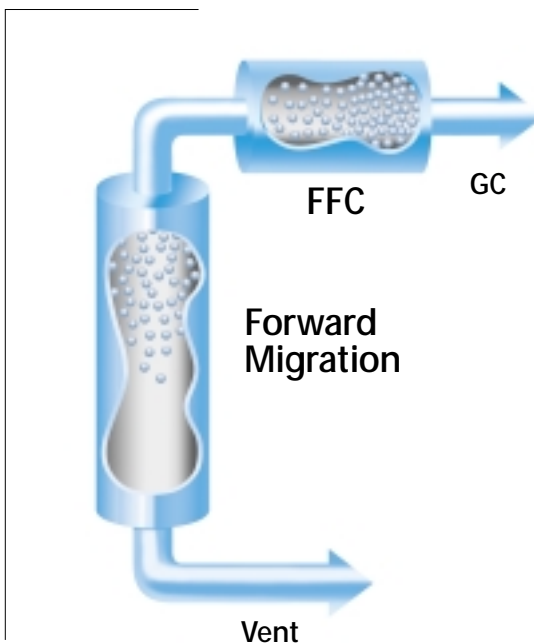
The Velocity XPT is more than a next-generation Purge and Trap system, it's a revolutionary leap in technology. We know that productivity demands have increased in the laboratory today. The Velocity XPT was designed to meet these high demands for productivity while providing superior analytical results.

A whole new set of advancements in the Velocity XPT ensure the highest throughput with the least amount of downtime. From cutting sample cycle time nearly in half, to built-in intelligent diagnostics, the Velocity XPT is the most productive purge and trap available today.

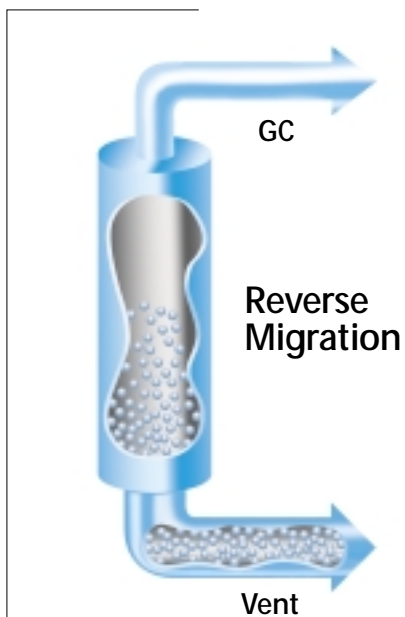
Velocity XPT increases your sample throughput up to 100%.

The Velocity XPT nearly doubles sample throughput, increasing the profitability of your VOC lab, without the cost of an additional GC system. Patent-pending Accelerated Purge and Trap technology in the Velocity XPT allows the analyst to independently control the flow rate during all modes, greatly reducing dry purge and bake times. In addition, the Velocity XPT provides a 25% reduction in trap cool down time after bake mode. This means Velocity is fast! And, this remarkable reduction in cycle time is compliant with USEPA methods.

Velocity XPT With Forward Focusing Chamber (FFC)



Conventional Purge and Trap Without Forward Focusing Chamber

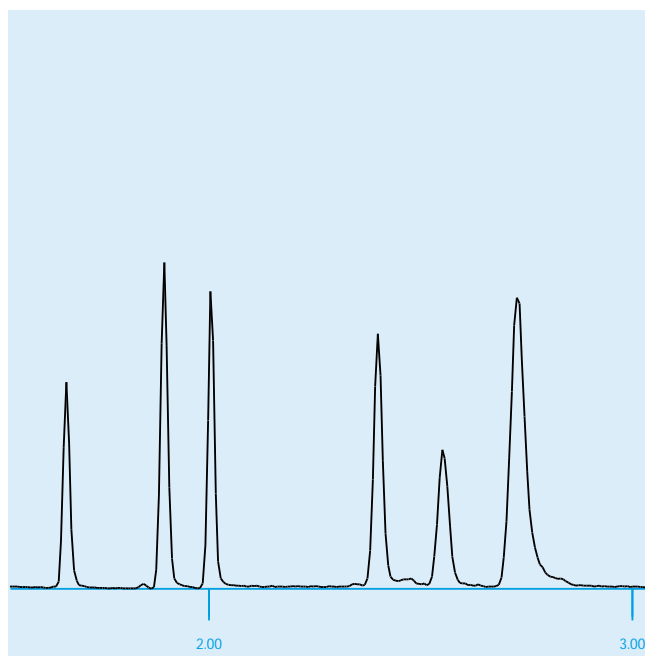


*Trap Desorb Pre-Heat Comparison
With and Without Forward Focusing Chamber*

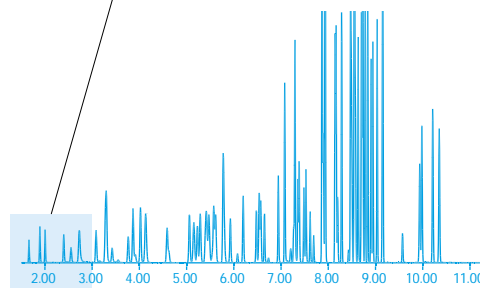
A conventional Purge and Trap cycle time is approximately 30 minutes, but with the new Velocity XPT, the sample cycle time is reduced to as little as 15 minutes.



Velocity XPT Sample Concentrator



Excellent Gas Resolution



Fast Volatiles Separation

Highest Resolution, Lowest Carryover

Forward Focusing Chamber™*

Patent-pending Forward Focusing Chamber technology provides the highest resolution chromatography and superior peak shape for the early eluting gases. By placing an expansion chamber after the trap during the desorption modes, analytes are focused into a tight band. This is in contrast to existing systems where analytes migrate back down the trap during desorb pre-heat, elongating the sample band. When analytes are tightly focused prior to desorption into the GC, the result is a dramatic improvement in chromatography resolution. The Forward Focusing Chamber also provides a much more efficient desorb, greatly reducing carryover from run to run.

Exceptional Inertness

Silcosteel® tubing and Silcosteel-treated fittings throughout the sample pathway prevent loss of active, polar, and high-boiling compounds, and provide corrosion resistance.

Simple Setup, Accurate Control

Electronic Flow Control

With Electronic Flow Control you save time by entering all parameters electronically. Once set, the parameters remain precisely the same. Setting purge flow is now as easy as entering the flow rate as a method parameter. There is no need to use a cumbersome bubble flow meter because flow and pressure are constantly monitored for accurate and reproducible results.

Intelligent Diagnostics

Automatic Leak Check and Electronic Pressure Monitor

The Velocity XPT has the ability to quickly and simply check itself for leaks. If a leak is detected, Velocity XPT can automatically enter a diagnostic mode to help you isolate and pinpoint the leak. An electronic monitor, with a pre-set over pressure limit, will identify a potential pressure build up in the system. If there is a blockage, Velocity XPT will shut itself down before a damaging flood occurs.

Eliminate Moisture Interference

If too much moisture is transferred to some GC/MS systems, problems can arise including loss in resolution, sensitivity, and reproducibility. Velocity XPT contains three new innovations that eliminate moisture interference in GC/MS.

High-Flow Dry Purge

High-flow dry purge capability in the Velocity XPT maximizes water removal without breakthrough of the early eluting "gases". An effective dry purge requires 320 ml of gas to maximize the removal of water. At a flow rate of 40ml/minute, dry purge takes eight minutes, but with Velocity XPT, dry purge flow rate can be set as high as 500 ml/minute, completing dry purge in as little as 30 seconds.

Dry Purge Temperature Programming

In addition to high-flow dry purge, Velocity XPT has the ability to control the adsorbent trap temperature during dry purge. For example, the trap temperature can be set to ambient during purge mode and 40°C during dry purge. Our research has shown that holding the trap temperature at 40°C during dry purge greatly increases the amount of water removed from the trap, without causing breakthrough of the early eluting gases.

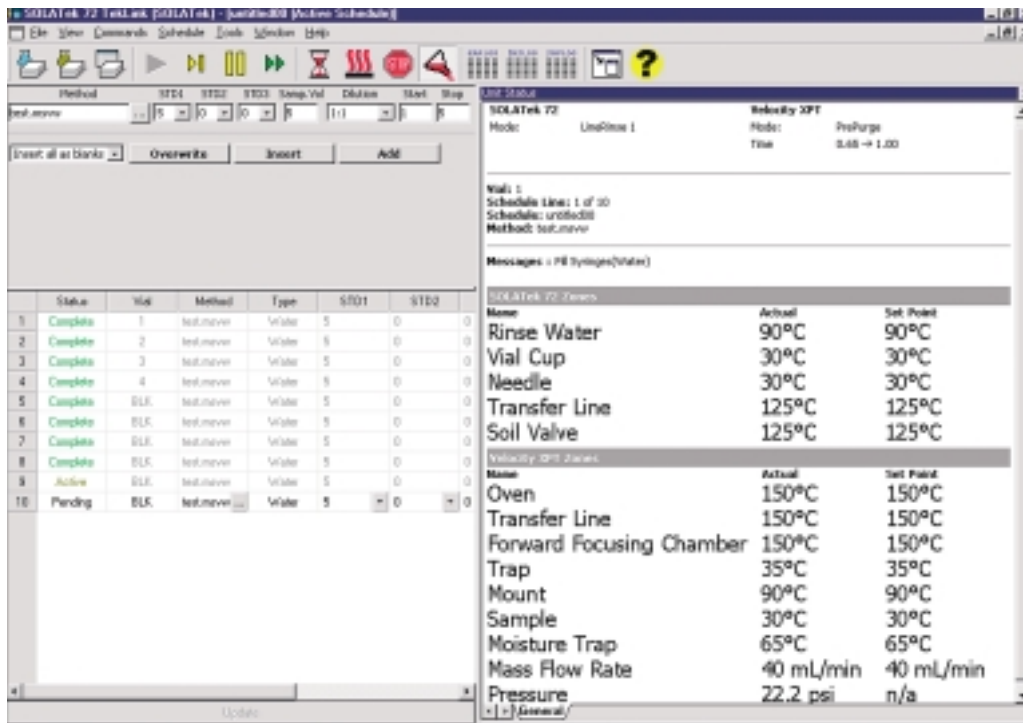
DryFlow™ Moisture Trap*

If your method does not allow the use of a dry purgeable trap, then the DryFlow™ moisture trap is your solution. In most applications this patent-pending, temperature-programmable trap removes virtually all water from the desorption gas prior to transfer to the GC, without compromising recovery of analytes.

Foam Sensing and Elimination

Guardian™ Foam Sensor

The Guardian Foam Sensor option for Velocity XPT is a set of photodiode-based sensors built into the purge and trap. These chemically-isolated sensors prevent a damaging foam event from even the worst foaming sample. In the event that foam or liquid is detected at the top of the glassware, the purge gas is immediately shut down, the vent valve closes, and the sample is drained. In addition, the Guardian Foam Sensor can be configured to automatically add an anti-foaming agent to the sample, allowing purge to continue and eliminating the manual labor associated with re-running the sample.* This process prevents foam from traveling further up the neck of the glassware and into the instrument, potentially resulting in a ruined adsorbent trap or irreversible contamination of the internal sample pathway. The Guardian Foam Sensor prevents losses in lab productivity due to downtime caused by foaming samples.



VOC TekLink Software.

Powerful and Intuitive Interface

VOC TekLink™ Software

Velocity XPT comes standard with TekLink™ software for the PC giving you the versatility needed to control both Velocity XPT and Tekmar-Dohrmann autosamplers in one easy-to-use package. Our built-in internet-based status alert system ensures that you will always know the status of your purge and trap system, even when you're not in the laboratory. TekLink software also offers important new features such as instrument and sample logs. As an added benefit, Velocity XPT comes standard with Pocket TekLink software for most hand-held computers running Microsoft® Pocket PC. The Velocity XPT is equipped to communicate with the hand-held device using wireless infrared technology or through an RS-232 cable.

In order to get the best performance from Velocity XPT and the new method parameters, a Method Development Wizard is included. The Wizard will prompt you through a series of questions about your method constraints and GC configuration. Based on your answers, the Wizard generates an optimized method for traditional EPA purge and trap protocols.

*patent pending



Wireless infrared handheld control



Velocity XPT and SOLATEk 72 Matrix Vial Autosampler



AQUATEk 70 Liquid Autosampler



Complete Volatiles Automation

Fastest Vial Autosamplers

The Velocity XPT comes with a free firmware upgrade for your Tekmar-Dohrmann vial autosamplers, the AQUATEk 70™ and SOLATEk 72™. This new firmware ensures that your autosampler fully leverages all of Velocity XPT's new features, including the productivity-boosting accelerated purge and trap cycle time.

Simple By Design

Accessibility and Simple Design Allow for Easy Maintenance and Troubleshooting

If an error occurs with your Velocity XPT you can run our Benchmark Test that automatically verifies all critical electrical and mechanical components of the system, allowing you to quickly find the source of the problem. An on-trap injection port, combined with powerful diagnostic modes, allows easy isolation of analytical problems, greatly simplifying troubleshooting. Other servicing enhancements include a new modular valve manifold system and power output LEDs that eliminate the need for a voltmeter.

Complete Service and Support

A True Partnership Throughout the Life of Your Instrument

Our job is to help laboratories be as productive and profitable as possible. That's why we pride ourselves on providing not only superior analytical instruments, but complete service and support – before and after the sale. We deliver a complete portfolio of maintenance and service capabilities to our customers who don't have time and money to waste should an instrument go down.

Comprehensive service and maintenance solutions are offered for a wide variety of manufacturers' instruments and include: Service Agreements, installation, incidental and factory repairs, personalized training, preventive maintenance, IQ/OQ Validation, applications development and loaner instruments.

Tekmar-Dohrmann is ISO 9001:2000 Certified

Because we're certified, you know our quality system is compliant with strict ISO 9001:2000 guidelines. Meeting these requirements means we deliver the highest quality products and services you need not only the first time, but every time.

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