

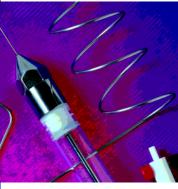






# **Precision Sampling** Catalog













SYRINGE FEATURES	AUTOSAMPLER AND OEM SYRINGES
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GAS/LIQUID SYRINGES	HIGH PRESSURE SYRINGES
Series A	Pressure-Flo®
With optional Chaney adapter	MININERT™ VALVES
Series D	General description
LIQUID SYRINGES	Replacement parts and accessories 29  Septa, tools, needle guides
Series C-16014  Basic PTFE plunger tipped microsyringe Series C-12015  Barrel extension for attaching a vacuum	Valves for syringes29  Add storage capability to a conventional syringe
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Series CG-13016  Reinforced plunger to prevent bending Series CGV-13017  Adds a side vent for filling and cleaning	Central Instruments30 PTA-30,WS, and DynaTrap Instruments31 Varian Archon Instruments31
Series D-14018	AUTOMATED LIQUID HANDLING
For small volume (1 - 10 µl) injections  Mini-injector	Micro valve for GC and LC <b>NEW</b> 32 Hollow plunger syringe <b>NEW</b> 33 Syringes for diluter/dispensers and automated instrumentation <b>NEW</b> 33
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# Australian Distributors III

# PTFE

Polytetrafluoroethylene is the generic name for the class of materials such as Teflon® sold by E.I. duPont de Nemours.

# **SAFETY NOTE**

To prevent possible injury, proper safety precautions should always be observed when pressurizing glass cylinders such as syringes.

# **Pressure-Lok® Syringe Features**

# **PTFE Plunger Tip**

Plunger tips are fabricated of PTFE, stress-formed by our own special process to insure a leak-tight seal. The self-lubricating plunger tip stays smooth for the life of the syringe, with none of the freezing up or residue build-up associated with conventional all-metal plungers.



# **PTFE-Sealed Needle**

Standard needle attachment includes a barrier sleeve or packing of PTFE on the rear of the needle at the zero point. This isolates the sample from the needle cement, preventing possible dissolution of the adhesive or contamination of the sample. Many models are also available in a luer-tip version.



# **Ultra-Smooth Bore**

Syringe barrels up to  $100 \, \mu l$  are hand-fabricated from high quality borosilicate glass, manufactured to our specifications. The extremely smooth bore prevents undue wear of the plunger tip and insures a smooth, durable seal.

# **Hand Calibration**

Each barrel undergoes a series of quality checks, including hand-calibration of consistent volume delivery. After final assembly of each lot, volume delivery is checked again with an electronic microbalance. These careful steps in quality control insure that every Pressure-Lok® microsyringe measures up to today's stringent requirements for precision and accuracy.

# **Easily Replaceable Parts**

Depending on the specific model, some or all of the wear parts can be easily replaced, optimizing your equipment investment.

# **Shaped Rear Flange**

All syringes have a rear flange to provide a secure grip and keep the syringe from rolling.

# **Low Dead Volume**

Every syringe design takes advantage of every opportunity to minimize or eliminate dead volume.

# **Crisp, Clean Graduations**

Our methods insure easy reading of the sampled amount.

# **Special Features of Select Models**

# **Pressurized Sample Storage**

Several of our syringes have a built-in valve to allow sample storage at up to 250 psi. This feature also allows pre-pressurization of the sample before injection so that the sample is flushed into the column instantaneously, providing better resolution. For conventional syringes, our Mininert syringe valve adds this capacity.

# **Removable Needles**

Many models offer a special pressure-tight, low dead volume connection to facilitate easy removal and replacement of needles.

# **Optional Luer Tip for Convenience**

Although our standard PTFE-sealed needle offers superior performance, we also offer the added convenience of luer-tip models.

# **Positive Rear Plunger Stop**

If plunger damage from accidental plunger removal has been a problem, select one of our syringes with this feature.

# **Reinforced Plunger**

If plunger-bending is a problem that contributes to excessive syringe repair bills in your lab, this feature offers a solution.

# Side Vent

VICI Precision Sampling offers a unique model with a side vent, allowing easy syringe filling and cleaning.

# **Custom Products**

At VICI Precision Sampling, we take great pride in being able to customize our products to fit your needs while maintaining our standards. Call us if you need custom length needles, special gauge needles, or custom syringes.

# PRODUCTS WITH THESE FEATURES

# Pressurized Sample Storage

Gas ...... pages 6 -7, 10 High pressure ...... 26-27

# Removable Needles Gas ...... 6-10

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Optional Luer Tip

# Gas ...... 7 -10 Liquid ...... 22

Positive Rear Plunger Stop

# Gas ....... 6-8,10 Liquid ....... 18, 19 High pressure ...... 26-27

# Reinforced Plunger Liquid ......16-19

# Side Vent

Liquid ..... 17

# **SAFETY NOTE**

To prevent possible injury, proper safety precautions should always be observed when pressurizing glass cylinders such as syringes.

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# **Syringe Features**

VICI Precision Sampling syringes have all the standard features noted below at left, with special features delineated in the charts below.

# **Gas/Liquid Syringes**

FEATURES	Pressure rating	Removable needle	Luer needle	Sample-Lok valve type	Plunger stop	Page
Series A	250 psi	•		twist-lock	•	6
Series A-2	250 psi			push-button		7
Series C	250 psi		-	*		8
Series D	250 psi		•	*		9
Magnum	30 psi		-	twist-lock		10

<sup>\*</sup> Order a Mininert syringe valve on page 9.

SAMPLE SIZES	25 µl	50 μΙ	100 µl	250 µl	500 μΙ	1 ml	2 ml	5 ml	10 ml	20 ml	50 ml	100 ml	250 ml	500 ml
Series A					_	•	-	-	-					
Series A-2	-					-			-					
Series C			-	-	-		-	-	-					
Series D						•	-							
Magnum										•	•	•		-

# PRESSURE-LOK® SYRINGE FEATURES

- PTFE plunger tip
- PTFE-sealed needle
- Ultra-smooth bore
- Hand calibration
- Easily replaceable parts
- Shaped rear flange
- Low dead volume
- Crisp, clean graduations

# **Liquid Syringes**

FEATURES	Pressure rating	Removable needle	Fixed needle	Reinforced plunger	Plunger stop	Side vent	Page
Series C-160	250 psi	•	•				14
Series C-120	250 psi		•				15
Series CG-130	250 psi	•	•				16
Series CGV-130	250 psi		-			-	17
Series D-140	30 psi						18
Mini injector			-		•		19
Purge and trap	250 psi	Luer lock					22

SAMPLE SIZES	.01 µl	.10 µl	1 µl	2 µl	5 µl	10 µl	25 µl	50 µl	100 µl	5 ml	10 ml
Series C-160					•			-	•		
Series C-120								-			
Series CG-130					-	-					
Series CGV-130						-	-	-	-		
Series D-140			-	-	-	-					
Mini injector	-	•									
Purge and trap											

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# Series A Pressure-Lok®

# **SPECS**

Removable needles Bevel, open end Removable needle size: .028" x .012" x 2" 250 psi max, gases and liquids



Twist-Lock valve Open (left) and closed (right)

### NOTE

Special replacement needles are available on request.

# **NEEDLE TIPS**



Bevel, open end



Side port, taper

# **Further reference**

Replacement components .. page 12



Series A, 250 µl

#010031

# **Series A**

- Integral sample storage valve
  Actuated by turning the nosepiece
- Positive rear flange plunger stop
   Prevents plunger from blowing out of barrel at elevated pressure
- Modular construction

All components may be quickly disassembled for easy cleaning or replacement

■ Leak-tight to 250 psi

Liquids and gases

Turn the nosepiece counterclockwise two turns and the valve is closed. Insert the needle through the septum, then start pushing the plunger as you turn the nosepiece clockwise. Carrier backflushing is eliminated, resulting in sharper peaks and better separations. When the plunger is fully depressed, the plunger face comes into firm, flush contact with the bottom of the front packing, forcing essentially all of the sample out – there is virtually no compressible dead volume remaining. The very small internal diameter of the needle also contributes to the dead volume minimization.

In addition to the characteristics which make it unique, the Series A gas syringe has all the standard Pressure-Lok® features such as a PTFE plunger tip, PTFE-sealed needle, and ultrasmooth bore.

# Series A syringes

Sample size	<b>Standard</b> <i>Prod No</i>	
100 µl	010025	
250 µl	010031	
500 μl	010032	
1 ml	010033	
2 ml	010034	
5 ml	010035	
10 ml	010036	

# Replacement needles

Package of 3:	Bevel, open end Prod No	Side port, taper Prod No
Standard Pressure-I	. <b>ok</b> ® 913050	913052







# **Series A-2**

All the advantages of the Series A syringe plus:

# ■ Push-button valve

Allows instantaneous injection

# ■ Smaller volumes

Great for small volatile samples

The A-2 features a push-button valve, which allows sample storage to 250 psi in syringes as small as 25  $\mu$ l. This is useful with small liquid samples containing low-boiling components which would be lost through evaporation using ordinary syringes.

The positive rear stop (in 250 µl and larger sizes) prevents plunger blowout at elevated pressures, protecting against sample loss or operator injury. Like the Series A gas syringe, the A-2 has all the standard Pressure-Lok® features such as a PTFE plunger tip, PTFE-sealed needle, and ultrasmooth bore. Replacement components are available for easy repair.

# Series A-2 syringes

	Standard	Luer
Sample size	Prod No	Prod No
25 µl	050023	050043
50 µl	050024	050044
100 µl	050025	050045
250 µl	050031	050051
500 µl	050032	050052
1 ml	050033	050053
2 ml	050034	050054
5 ml	050035	050055
10 ml	050036	050056

# Replacement needles

	Bevel,	Side port,
	open end	taper
Package of 3:	Prod No	Prod No
Standard Pressure-	Lok®	
.029" x .005" x 2"	943050	_
.029" x .012" x 2"	943051	943052
Luer		
.028" x .006" x 2"	943060	_
.028" x .012" x 2"	943061	943062



# SPECS

Removable needles
Bevel, open end
Needle size:
.029" x .005" x 2"
(25, 50, and 100 µl)
.029" x .012" x 2"
(all other sample sizes)
250 psi max,
gases and liquids







# **Further reference**

Replacement components .. page 12

**NEW** hollow plunger syringe .....page 33

# Series C Pressure-Lok®

# **SPECS**

Removable needles Bevel, open end Removable needle size: .029" x .005" x 2" .029" x .012" x 2" 250 psi max, gases and liquids





# **NEEDLE TIPS**



Bevel, open end



Side port, taper

# **Further reference**

Replacement components .. page 12



■ Optional Chaney adapter

Much lower dead volume than luer-style connectors

■ Perfect syringe for everyday use

All our standard features, but without a valve for pressurized sample storage

# Series C syringes

	Standard	Standard	Luer
		w/ Chaney adapte	r
Sample size	Prod No	Prod No	Prod No
100 µl	030025	101430	030045
250 µl	030031	101440	030051
500 µl	030032	101448	030052
1 ml	030033	101455	030053
2 ml	030034	101463	030054
5 ml	030035	101470	030055
10 ml	030036	101478	030056

# Replacement needles

Package of 3:	Bevel, open end Prod No	Side port, taper Prod No
Standard Pressure-I	Lok®	
.029" x .005" x 2"	943050	_
.029" x .012" x 2"	943051	_
Chaney adapter		
.018" x .008" x .75	" –	101935







# **Series D**

An economically priced high precision gas sampling syringe which offers more features than conventional gas-tight designs:

- Leak-tight, Pressure-Lok® plunger tip
- No dead volume barrel design
- Special low dead volume needle connector for accurate gas samples

# Series D syringes

Sample size	Standard Prod No	<b>Luer</b> Prod No
1 ml	040033	040053
2 ml	040034	040054

# Replacement needles

	Bevel, open end	Side port, taper
Package of 3:	Prod No	Prod No
Standard Pressure- .029" x .012" x 2"		943052
Luer .028" x .012" x 2"	943061	943062

# **Mininert Syringe Valves**

For Series C and D syringes or conventional luer-tip syringes

- Add sample storage capability
   Mount a Mininert syringe valve on a standard syringe
- **Push button operation**Green to open, red to close

# For a Series C or D syringe

These convenient add-on valves allow our Series C and D syringes to store samples at up to 250 psi. The valve body is all PTFE, with a stainless steel stem.

*Prod No* 654050

# For a Luer-tip syringe

This model is identical to the valve above, except that it is designed to fit Luer-tip syringes from any manufacturer and accept traditional Luer needles.

*Prod No* 654051





# **SPECS**

Removable needles Bevel, open end Needle size: .029" x .012" x 2" 250 psi max, gases and liquids



Series D Standard, 1 ml #040033



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# **Further reference**



# **Magnum Series**

# **SPECS**

Removable needles Bevel, open end Removable needle size: .035" x .023" x 2" 30 psi max, gases and liquids



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Magnum series Standard, 500 ml #060042

# **Magnum Series**

# ■ Built-in twist-lock valve

Seals the sample (up to 30 psi) during transportation to the analysis site

# ■ Up to 500 ml capacity

For sampling low concentration levels

# ■ Positive rear plunger stop

Prevents plunger from blowing out when contents are pressurized

The detection of low levels of various environmental contaminants can require extraordinarily large samples. Magnum syringes facilitate the trapping of such samples in remote locations. A built-in valve allows the sample to be sealed within the syringe, maintaining sample integrity during transportation to the analysis site.

Magnums have been successfully used to sample atmospheric contaminants such as sulfur dioxide and oxides of nitrogen at distant points of the earth. The positive displacement capability of the durable PTFE plunger seal permits use in a variety of subsequent procedures involving extraction or concentration of trace components. (With a cryogenic enrichment apparatus, for example.)

The standard termination is a female threaded fitting (1/4-28), which accepts a variety of Cheminert® connectors or adapters. Specially formed seals permit leak-tight operation to 30 psi (~ 2 atmospheres). Because of the obvious danger in overpressurizing any glass container, the internal pressure of a Magnum gas syringe should never exceed 2 atmospheres.

# Magnum syringes

20 ml 060037 060043 50 ml 060039 060044 100 ml 060040 060045 250 ml 060041 060046 500 ml 060042 060047	Sample size	<b>Standard</b> <i>Prod No</i>	<b>Luer</b> Prod No
100 ml 060040 060045 250 ml 060041 060046	==		

# Replacement needles

Package of 3:	Bevel, open end Prod No	Side port, taper Prod No
Standard Pressure-	Lok®	
.035" x .023" x 2"	953050	953052
Luer		
.035" x .023" x 2"	953061	953062

# **Further reference**

# **Replacement Needles for Gas/Liquid Syringes**

Slip-on needles for Series A-2, C, and D syringes feature a needle extension through the hub that fits inside the PTFE tip on the syringe. This design eliminates the dead volume inherent in conventional hubbed needles.

Needles are manufactured to exacting tolerances from high precision stainless steel tube stock. The point styles and lengths listed below are standard, but we are willing to supply others. Let us know your requirements.

# Replacement needles

Package o	f 3:	Bevel, open end	Side port, taper	
Series		Prod No	Prod No	
Α	Standard Pressure-Lok .029" x .012" x 2.25"	<sup>®</sup> 913050	913052	
A-2	Standard Pressure-Lok .029" x .005" x 2" .029" x .012" x 2" Luer .028" x .006" x 2" .028" x .012" x 2"	943050 943051 943060 943061	- 943052 - 943062	
С	Standard Pressure-Lok .029" x .005" x 2" .029" x .012" x 2" Chaney adapter .018" x .008" x .75"	943050 943051 –	- - 101935	
D	Standard Pressure-Lok .029" x .012" x 2" Luer .028" x .012" x 2"	943051 943061	943052 943062	
Magnum	Standard Pressure-Lok .035" x .023" x 2" Luer .035" x .023" x 2"	953050 953061	953052 953062	

**NEEDLE TIPS** 

Bevel, open end



Side port, taper

# Australian Distributors III

# Replacement Components - Series A, A-2, C, and D

# **Plunger tips**

Series:	Α	A-2	c	D
Sample size	Prod No	Prod No	Prod No	Prod No
100 µl	100017	100017	100017	_
250 µl	100029	100029	100029	_
500 μl	013932	013932	013932	-
1 ml	013933	013933	013933	013933
2 ml	013934	013934	013934	013934
5 ml	013935	013935	013935	_
10 ml	013936	013936	013933	_

# Front packing

Series:	Α
Sample size	Prod No
100 µl	100010
250 µl	100028
500 μl	100042
1 ml	100057
2 ml	100070
5 ml	100086
10 ml	100100

# **Plunger assemblies**

Series:	Α	A-2	c	D	
Sample size	Prod No	Prod No	Prod No	Prod No	
25 µl	_	054123	_	_	
50 µl	_	054124	-	-	
100 µl	014425	014425	014425	_	
250 µl	014431	014431	014431	_	
500 µl	014432	014432	014432	_	
1 ml	014433	014433	014433	044433	
2 ml	014434	014434	014434	044434	
5 ml	014435	014435	014435	_	
10 ml	014436	014436	014436	_	

# **Further reference**

Series A page 6	
Series A-2 7	
Series C 8	
Series D 9	

# **Replacement Components – Magnum Series**

Slee	eve, front	
d No Sa	ample size	Prod No
6637	20 ml	100288
639	50 ml	100312
640	100 ml	100333
641	250 ml	100352
5642	500 ml	100372
Slee	eve, rear	
d No So	ample size	Prod No
937	20 ml	100289
5939	50 ml	100313
5940	100 ml	100334
5941	250 ml	100353
5942	500 ml	100373
Ste	т сар	
d No Sa	ample size	Prod No
5037	20 ml	100298
5037	50 ml	100298
5037	100 ml	100343
5041	250 ml	100343
5041	500 ml	100343
Ste	m cap set scre	w
d No Sa	ample size	Prod No
5042	20 ml	500635
042	50 ml	500635
5042	100 ml	500635
5043	250 ml	500635
5043	500 ml	500635
<u>Val</u>	ve stem	
So	ample size	Prod No
d No	20 ml	100296
5437	50 ml	100320
	100 ml	100341
	250 ml	100360
	500 ml	100379
Val	ve stem guide	
d No Sa	ample size	Prod No
5537	20 ml	100297
		100321
		100342
		100361
5542	500 ml	100361
	Steel	Sieve, rear

**Further reference** 

Magnum series, page 10

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# Series C-160 Pressure-Lok®

# **SPECS**

Fixed and removable needles Bevel, open end Fixed needle size: .019" x .005" x 2" Removable needle size: .019" x .005" x 2.25" 250 psi max, gases and liquids



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Series C-160, 25 μl #160223

# Series C-160

# ■ PTFE needle seat at rear of needle

Prevents possible dissolution of needle cement or contamination of the sample

# ■ Replaceable needles

Complete with integral PTFE seal for a low dead volume connection and a leak-tight fit

# ■ Plunger tip of stress-formed virgin PTFE

Self-lubricating and durable

# ■ Leak-tight to 250 psi

Liquids and gases

The C-160 offers day-in, day-out dependability at an economical price. You also have the choice of fixed or removable needles.

# Series C-160 syringes

	Fixed needle	Removable needle
Sample size	Prod No	Prod No
5 µl	160021	160221
10 μΙ	160022	160222
25 µl	160023	160223
50 µl	160024	160224
100 µl	160025	160225

# Replacement needles

	Bevel,	
	open end	
Package of 3:	Prod No	
.019" x .005" x 2.25"	123050	

# **Further reference**

BARREL

**EXTENSION** 



# Series C-120

■ Fixed needle

Zero dead volume connection

■ Leak-tight to 250 psi

Liquids and gases

■ Extended syringe barrel

Attach a bulb or suction line for easier cleaning and filling

In addition to standard Pressure-Lok® features such as PTFE plunger tip and needle seat, the C-120 offers as standard equipment a barrel extension beyond the rear flange which permits attachment of a vacuum bulb or line for easier filling or cleaning.

# Series C-120 syringes

Fixed needle
Prod No
120021
120022
120023
120024
120025

**Series C-120, 100 μl** #120025

# **SPECS**

Fixed needles Bevel, open end Needle size: .019" x .005" x 2" 250 psi max, gases and liquids







# **Further reference**

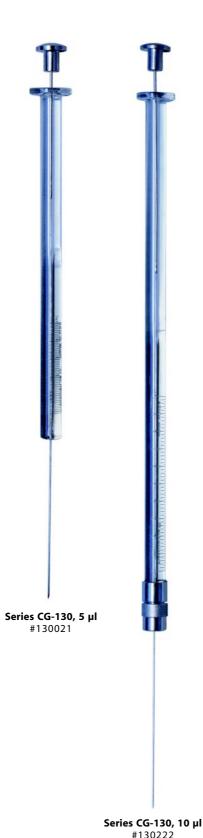
# Series CG-130 Pressure-Lok®

# **SPECS**

Fixed and removable needles Bevel, open end Fixed needle size: .019" x .005" x 2" Removable needle size: .019" x .005" x 2.25" 250 psi max, gases and liquids







# Series CG-130

- Reinforced plunger
   Eliminates plunger bending
- Plunger guide in barrel
   Smaller front section of plunger is confined within guide section
- Replaceable needles
   Low dead volume connection for a leak-tight fit
- Leak-tight to 250 psi Liquids and gases

A heavy, reinforced plunger within an enlarged plunger guide section of the CG-130 barrel virtually eliminates plunger bending. The smaller front section of the plunger is confined within the guide section even when the plunger is retracted, while the sturdy upper section absorbs the force of a rapid downstroke.

# Series CG-130 syringes

Sample size	Fixed needle Prod No	Removable needle  Prod No
5 μΙ	130021	130221
10 µl	130022	130222

# Replacement needles

	Bevel,
	open end
Package of 3:	Prod No
.019" x .005" x 2.25"	123050

# **Further reference**

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# Series CGV-130

■ Side vent

For easy cleaning and filling

■ Reinforced plunger

Eliminates plunger bending

■ Plunger guide in barrel

Smaller front section of plunger is confined within guide section

■ Leak-tight to 250 psi

Liquids and gases

The CGV-130 features the same rugged construction as the CG-130, with the addition of a side vent that can be used for filling or cleaning the syringe. A heavy, reinforced plunger within an enlarged plunger guide section of the barrel virtually eliminates plunger bending. The smaller front section of the plunger is confined within the guide section even when the plunger is retracted, while the sturdy upper section absorbs the force of a rapid downstroke.

# Series CGV-130 syringes

	.005" ID needle	.008" ID needle
Sample size	Prod No	Prod No
10 µl	139022	_
25 µl	139023	_
50 µl	139024	139124
100 µl	139025	139125



Fixed needles
Bevel, open end
Needle sizes:
.029" x .005" x 3.25"
.029" x .008" x 3.25"
250 psi max,
gases and liquids



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Series CGV-130 .005" ID needle 25 μl #139023

# Series D-140 Pressure-Lok®

# **SPECS**

Removable needles Size and style vary with syringe size 30 psi max, liquids only



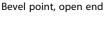
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# **NEEDLE TIPS**







**10 μl:** Side port, taper

# **Further reference**

Replacement components .. page 23



# Series D-140

# ■ Total sample displacement

The entire sample is contained in the needle, so it is totally injected when the plunger is depressed

# ■ Positive rear plunger stop

Eliminates accidental plunger removal and resultant damage

# ■ Modular construction

All parts are replaceable, with easy assembly and disassembly

The Series D-140 is designed for small volume injection into gas chromatographs. Since the sample is totally contained within the needle, it is totally displaced by the plunger. Any residual sample or variation in sample size is minimized. (This also means that each size syringe has a different needle design. When ordering extra needles, be careful to specify the correct one.)

The PTFE seals, needle, plunger, and barrel are all replaceable. (Replacement parts are on page 23.) Thanks to superior alignment, the D-140 can be assembled time after time without difficulty or damage.

# Series D-140 syringes

	Removable needle	
Sample size	Prod No	
1 µl	140011	
2 µl	140012	
5 μl	140021	
10 µl	140022	

# Replacement needles

Package	e of 3.			
		Blunt,	Bevel,	Side port,
		open end	open end	taper
Sample	size	Prod No	Prod No	Prod No
1 µl	.019" x .005" x 2.5"	923011	-	-
2 µl	.019" x .008" x 2.5"	923012	_	_
5 µl	.028" x .012" x 2.5"	_	923021	_
10 µl	.028" x .018" x 2.5"	-	_	923022

Series D-140 0 - 2 μl #140012

# **Mini Injector**

- Reproducible sample injections down to 0.01 µl Without a splitter
- Sample carried in the plunger itself

The groove containing the sample is machined on the plunger, insuring repeatable results

The Mini Injector is ideal for capillary GC work, allowing reproducible injection of small samples (down to 0.01 µl) without a splitter. This is possible through our unique use of a plunger-within-a-needle. The sample volume is carried in a precisely measurable groove ringing the wire plunger, with a durable PTFE packing to prevent leakage.

In use, the plunger is extended beyond the needle tip and dipped into the sample, where capillary action fills the groove. Then the plunger is drawn through a PTFE wiper and back into the needle for protection. When the needle is inserted into the inlet and the plunger is depressed, the sample carried on the plunger groove enters the heated zone, where it is flashvaporized and swept into the column.

# Mini injector

Sample size	Prod No
.01 µl	170091
.10 µl	170001

# Replacement wiper

Sample size	Prod No
.01 µl	100667
.10 µl	100667



Mini injector 0.01 µl #170091

# **SPECS**

Fixed needle Bevel, open end Needle size: .028" x .019"



# Pressure-Lok® Syringes for Valco, Cheminert®, and Rheodyne® Valves

# **SPECS**

Fixed and removable needles Blunt tip, open end Fixed needle size: 22 gauge x 2" Removable needle size: 22 gauge x 2" 250 psi max, gases and liquids





# Further reference

C-160 syringe ... page 14

# Syringes for Valco, Cheminert®, and Rheodyne® Valves



Syringes used to fill a loop on a sample injection valve have blunt smooth ends. The end of the needle must contact the bottom of the valve's fitting detail uniformly and seal on the outside of the tip to deliver sample with any repeatability. All VICI Precision Sampling syringes for valve injections have smooth, burr-free ends that fit the valve fitting details perfectly. The standard HPLC syringe is our basic C-160 with a 2" long 22 gauge needle.

# **Syringes**

Sample size	Fixed needle Prod No	Removable needle Prod No
5 µl	160021R	160221R
10 µl	160022R	160222R
25 µl	160023R	160223R
50 µl	160024R	160224R
100 µl	160025R	160225R

# Replacement needles

# Blunt tip, open end

 Package of 3:
 Prod No

 22 gauge x 2"
 123050R

# Special Syringes for Rheodyne® Valves

Many Rheodyne valves allow the syringe needle to rub across the sealing surfaces – a tradeoff in a valve design which avoids having to machine small concentric holes. To prolong the lifetime of these valves, VICI Precision Sampling offers a syringe with a PEEK tip which extends beyond the end of the needle so that only PEEK contacts the valve sealing surfaces.

# **Syringes**

	Fixed needle	Removable needle
Sample size	Prod No	Prod No
5 µl	160021RT	160221RT
10 µl	160022RT	160222RT
25 µl	160023RT	160223RT
50 µl	160024RT	160224RT
100 µl	160025RT	160225RT

# Replacement needles

# Blunt PEEK tip, open end

 Package of 3:
 Prod No

 22 gauge x 2"
 123050RT

# Syringes for Cheminert Nanovolume Injector and Waters U6K Loop Injector

These injectors require a 26 gauge, 5 cm long needle with a 90° blunt tip and open end. We recommend mounting the needle on our basic C-160 syringe. (The C-160 is described on page 14.)

# **Syringes**

Sample size	Fixed needle Prod No	Removable needle Prod No
5 µl	160021WB	160221WB
10 µl	160022WB	160222WB
25 µl	160023WB	160223WB
50 µl	160024WB	160224WB
100 µl	160025WB	160225WB

# Replacement needles

	Bevel, open end
Package of 3:	Prod No
26 gauge x 5 cm	123050WB

# **SPECS**

Fixed and removable needles Blunt PEEK tip, open end Fixed needle size: 22 gauge x 2" Removable needle size: 22 gauge x 2" 250 psi max, gases and liquids

# **SPECS**

Fixed and removable needles Blunt tip, open end Fixed needle size: 26 gauge x 5 cm Removable needle size: 26 gauge x 5 cm 250 psi max, gases and liquids

**Further reference** 

C-160 syringe ... page 14

# Purge and Trap Pressure-Lok® Syringes

# **SPECS**

Accepts standard Luer hub needles



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Purge and trap syringe 5 ml #030039

# **Purge and Trap Syringe**

■ Luer lock

For use with purge and trap analysis

■ Frosted glass on syringe barrel

Allows easy volume reading and accepts writing

■ Plunger tip of stress-formed virgin PTFE

Self-lubricating and durable

■ Heavy duty rear flange

Flat edges keep the syringe from rolling

The heavy duty construction of our purge and trap syringe helps eliminate costs of replacement and injuries due to breakage. All of our environmental syringes are repairable.

# **Syringes**

Sample size	Prod No
5 ml	030039
10 ml	030040

# Syringes with push-button valve

Sample size	Prod No
5 ml	050039
10 ml	050040

# **Replacement Components – Liquid Syringes**

# Replacement needles

Blunt,	Bevel,	Side port,
Prod No	Prod No	<b>taper</b> Prod No
_	123050	_
_	123050	_
923011	_	_
923012	_	
_	923021	_
_	_	923022
	open end Prod No 923011	open end         open end           Prod No         Prod No           -         123050           -         123050           923011         -           923012         -

# **Plunger assemblies**

Sample size	Series C-160 Prod No	Series C-120 Prod No	Series CG-130 Prod No	Series D-140 Prod No
1 µl	-	_	-	143711
2 μΙ	-	-	_	143712
5 µl	163721	123721	133721	143721
10 µl	163722	123722	133722	143722
25 µl	163723	054123	_	_
50 μl	163724	054124	_	_
100 µl	163725	054125	_	-

# Plunger Packings - D-140 series only

Sample Size	Prod No
1 µl	144011
2 µl	144012
5 μl	144021
10 µl	144022

# **NEEDLE TIPS**

Blunt tip, open end

Bevel point, open end

Side port, taper

# Further reference

	Series C-120 page	15	,
	Series C-160	14	ļ
	Series CG-130	16	,
ı	Series D-140	18	

# **Varian Autosampler Syringes**

# PRECISION SAMPLING CORP.

# **Autosampler Syringes**

All our autosampler syringes conform to specifications supplied by the manufacturer.

# **Varian**

We supply the syringes for the Varian GC 511, PTA30, PTA30WS, and Archon instruments.

For		Prod No	Description	Needle Size	Ga.
511	1.5 µl 5 µl 50 µl	102103 102100 102102	Taper, blunt, and open end needle	.028" x .008" x 2" .024" x .006" x 2" .024" x .006" x 2"	22 23 23
PTA PTA3 Dyna		030038 030038 030038	Luer fitting		
Arch	on	502968	26 ml barrel with decal		

Autosampler syringe for 511-5 µl #102100

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**Perkin Elmer and Central Instruments Autosampler Syringes** 

# Perkin Elmer

			Taper, blunt, & open end
For	Size	Ga.	Prod No
5 μl GC Autosystem	.024" x .006" x 70 mm	23	102052
	022" × 005" × 70 mm	2.4	101080



Autosampler syringe for 5 µl GC Autosystem #102052

# Central Instruments Co.

Replacement syringes and needles for models GC-311, GC-111, GC-411, and Perkin Elmer models AS100 and AS300.

<b>Syringes</b> Sample size	Standard Prod No	<b>Viscous</b> Prod No	<b>Megabore</b> <i>Prod No</i>
3 µl	500076	501071	503188
5 µl	500084	501072	_
10 µl	500090	501073	_



Standard, 3 μl #500076

<b>Needles</b> Sample size	<b>Standard</b> <i>Prod No</i>	<b>Viscous</b> <i>Prod No</i>	<b>Megabore</b> <i>Prod No</i>
3 µl	500081	500994	502743
5 µl	500088	501040	_
10 µl	501064	501092	_

**Standard, 3 μl** #500081

# Pressure-Flo® Syringes

# **SPECS**

Special integral calibrated plunger Needle size: 22 gauge 500 psi max, liquids only



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# **Pressure-Flo® Syringes**

■ Seals at 500 psi

Take high pressure samples from a cylinder or "bomb"

■ Sample contained in a calibrated needle

Injects directly through the GC septum inlet

Use with cylinder adapter

Lets syringe interface with gas cylinder

The Pressure-Flo high pressure syringe is a tried and true method of taking homogeneous high pressure samples from a cylinder or "bomb". It contains the sample in a calibrated needle with a wire plunger to displace it and PTFE packing to seal it in, permitting injection of the sample directly through the GC septum inlet for convenience and simplicity.

The body of the syringe is lightweight for easy handling. It houses a special crimped PTFE packing which seals firmly at pressures up to 500 psi even under severe operating conditions. Threads allow the syringe to make up on a cylinder via the special adapters listed below. Once the syringe is screwed tight, the cylinder valve is opened and the plunger is depressed, extending the needle into the liquid zone. Once sample is drawn into the syringe, it is stored pressure-tight while the cylinder valve is closed and the syringe is removed from the adapter.

To inject the sample, the nose of the syringe is pressed very firmly against the septum to form a pressure-tight seal. (This requires a minimum 1/8" hole in the septum cap.) As this is done, the pointed tip of the needle punctures the septum. When the large handle is pushed in, the needle containing the sample is inserted into the injection port without any loss of contents.

# **Pressure-Flo syringes**

Sample size	Prod No	
.5 µl 1 µl 2 µl	220005 220011 220012	
5 μl 10 μl	220021 220022	

Prod No

# **Bomb adapters**

Fitting (NPT)	
1/8" female	240040
1/4" female	240041
1/8" male	240042
1/4" male	240043



Bomb adapter 1/4" male #240043



#240041

# **Further reference**

# **Micro-Flo® Syringes**

- Metal-encased syringe with PTFE seals For hard-to-handle volatile liquids and liquified gases
- Special locking cylinder adapter and yoke assembly The syringe contacts the sample liquid in its pure, undisturbed state
- Sample Lok valve

Seals in volatile materials at pressures up to 500 psi

Variable volume

0.5 to 5.0 µl

The Micro-Flo high pressure syringe prevents evaporation of lighter components under normal laboratory temperatures at atmospheric pressure. The syringe is encased in metal, with positive PTFE seals and positive plunger stops. The front end houses a special micro-volume annular needle with less than .05 µl dead volume and a positive mechanical valve to seal in volatile materials (up to 500 psi).

# Micro-Flo syringes

	Prod No
Syringe	230051
Adapter	230250





Micro-Flo syringe #230051

# **Replacement Components for High Pressure Syringes**

# Pressure-Flo series

riessule-i lo selles					
Sample size:	<b>0.5 μl</b> Prod No	<b>1 μl</b> Prod No	<b>2 μl</b> Prod No	<b>5 μl</b> Prod No	<b>10 μl</b> Prod No
Plunger assembly	220315	220311	220312	220321	220322
Sample size:	<b>0.5 μl</b> Prod No	<b>1, 2, 5, and 10 μl</b> Prod No			
Needles	220351	220352			
Plunger packing	100800	220347			
Front packing assy	220344	220344			

# Micro-Flo series

# Cylinder adapter and yoke assembly

	Prod No		Prod No
Needle	100838	Syringe side packing	100844
Plunger assembly	100854	Plunger pin rod assembly	100846
Front packing	100828	Plunger pin side packing	100848
Barrel with decal	100827		
Rear washer	100826		
Spring	100830		

# **SPECS**

Annular needle Side port, tapered, open end Needle size: .028" x .006" x1.875" 500 psi max, gases and liquids





# **General Description**

# **SPECS**

#### **TEMPERATURE**

Mininert valves can be used at temperature up to 105°F. However, after use at high temperatures, the valve may leak slightly when cooled to room temperature.

#### **PRESSURE**

The sealing ability of Mininert valves is more than adequate to contain most volatile liquids and gases at low pressures. Mininert valves have been used as high as 120 psi without leakage, but this is NOT a recommendation for pressurizing glass containers to these levels. Such pressurization of glass containers can be extremely dangerous.

# CHEMICAL RESISTANCE

PTFE is highly inert and may be used with most common materials. It is particularly useful for working with most acids and organic solvents. However, problems may be encountered when used with organometallics and some strong bases. We recommend actual exposure test before use with any material.

# Mininert™ Valves

# ■ Leak-tight closure with syringe access

Take a sample with no exposure of vial contents to the atmosphere

# ■ Models for virtually any laboratory glassware

Screw-cap and crimp-top vials, test tubes, flasks, reaction chambers, 1/4-28 or pipe thread

# **■** Economical

Save time and money through conservation of reagents, etc.

# ■ Replaceable septum

Easily replaced with no exposure of contents to atmosphere

# **■** Simple installation

No tools required

Mininert push-button valves are highly dependable, leak-tight closures for screw-cap vials and other laboratory containers. When used with a glass vial, only PTFE and glass are in contact with the contents. Their unique features make Mininert valves the ideal closure for calibration standards, air- or moisture-sensitive fluids, derivatizing reagents, volatile chemicals, etc.

Operation is extremely simple – push the green button to open the valve, insert the needle through the septum and take a sample, withdraw the needle, and push the red button to close the valve.

# Valves for vials

The screw-cap Mininert is available in a variety of sizes. The crimp-top valve for 13 mm ID glassware slides into the neck of the vial and features a threaded flange which is turned to provide a leak-tight fit.



Cap / thread size	Prod No
13 mm-425	614158
15 mm-425	614160
18 mm-400	614161
20 mm-400	614170
24 mm-400	614163
Crimp top	614250

# Valves with standard tapers

The laboratory taper model brings Mininert convenience and ease to a variety of applications using standard laboratory glassware, such as reaction chambers, test tubes, and other glass systems.

Taper	Prod No
14/20	621102
19/22	621103

# Valves with threaded fittings

Our threaded designs offer positive on/off fluid control as an in-line valve or syringe access as a termination valve at a sample point. In-line valves are 1/4-28 male to male or 1/4-28 female to female. Termination valves are offered in 1/4-28 male or female and 1/8" NPT male or female.

In-line valves	Prod No	
1/4-28 male to male 1/4-28 female to female	631205 631206	
Termination valves		
1/4-28 male	631201	
1/4-28 female	631203	
1/8" NPT male	631202	•
1/8" NPT female	631204	

# Replacement septa and septum installation tool

These silicone septa fit all Mininert valves. The installation tool is a handy device for quickly removing and replacing needle seal septa.

	Prod No	
Septa, <i>pkg/50</i>	644350	
Installation tool	644850	

# Mininert syringe valves

These convenient add-on valves allow our Series C and D syringes to store samples at up to 250 psi. The valve body is all PTFE, with a stainless steel stem. Also available to fit luer-tip syringes from any manufacturer.

	Prod No
For C or D syringe	654050
For Luer-tip syringe	654051





# GC and LC Probes for Central Instruments Autosamplers

Probes are used to transfer liquid sample from a sample vial to the injection syringe by pressurizing the sample vial with helium.

# **GC** probes

	Prod No
GC-111H	500031
GC-111V	500100
GC-311V	500100
GC-411V	500100
GC-311H	500441
Perkin-Elmer	
AS-300	500523

# **LC** probes

		Prod No
LC-241	42 position	500335
LC-241	60 position	500301

# PTA-30, WS, and DynaTrap Instruments

	Prod No	Prod No
Syringe probe assembly	502971	-
	With fittings Prod No	<b>Without fittings</b> <i>Prod No</i>
Needle purge upper probe Upper soil probe assembly	505193 505032	505118 503840



Syringe probe assembly #502971

# **Varian Archon Instruments**

	With fittings Prod No	Without fittings Prod No
Water probe assembly	505739	505828
Water probe (old style)	505491	505831
Soil probe assembly	505490	505830
Needle purge probe assembly	505741	505829



# **SPECS**

200 psi .060" bore 1/4-28 fitting detail All polymer-based materials



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# NEW!

# Micro Valves for GC and LC

- 200 psi, .060" bore
- Compact 1" design
- Convenient panel mount
- Variety of configurations

Simplify your liquid or gas handling application with a VICI Precision Sampling Micro valve. The unique design of the fitting detail allows a leak-free seal with no potential for rotor damage from overtightening. Internal parts are PEEK® and PTFE.



(Fittings not included)

# Micro valves for GC and LC

1/4-28

	Prod No	3 PORT	4 PORT	
"T" flow path				
3 ports	660100			"T"
4 ports	660110			
		2 PORT	4 PORT	
180° flow path				
2 ports	660200			180°
4 ports	660210			100
90° flow path		2 PORT	3 PORT	4 PORT
2 ports	660300			
3 ports	660310			90°
4 ports	660320			

**SPECS** 

Multivalve selection, 2-way, 3-way

Removable needles 200 psi max,

gases and liquids

# **NEW!**

# **Hollow Plunger Syringe**

- Hollow, flow-through plunger with integrated 3-way valve
- Push button on/off valve at the front end
- For liquids and gases

The new VICI Precision Sampling hollow plunger syringe (patent pending) with two integrated valves opens a whole new world of application possibilities:

- Dispense a viscous sample more easily by introducing it into the rear of the syringe instead of drawing it up through the needle.
- Eliminate sample-to-sample cross contamination by giving the syringe a thorough cleaning with a rinse introduced through the plunger.
- Sample continuously without ever withdrawing the needle from the original
  point of entry. Just close the on/off valve after drawing sample through the
  needle, and the sample is redirected out the plunger valve as the plunger is
  depressed.

Using this syringe typically involves less plunger manipulation than doing the same operation with a standard syringe, so you get the additional benefits of saved time and reduced plunger wear.



**Further reference** 

Replacement needles ...... page 7

# Hollow plunger syringes

	Prod No
100 µl	020025
250 ul	020031

# NEW!

# Syringes for Diluter/Dispensers and Automated Instrumentation

- Plunger with 6/32 UNC female thread
- Accepts male end fitting on Hamilton Microlab® diluters

This plunger style works for the most common diluter/dispenser and automated robotic instrumentation. The end fitting termination is without slots.

# Instrumentation syringes

	Prod No	
0 ul	180031	

 $\begin{array}{cccc} 250 \; \mu I & & 180031 \\ 500 \; \mu I & & 180032 \\ 1 \; mI & & 180033 \end{array}$ 





250 µl - 1 ml

PTFE TIPPED

LUER LOCK TERMINATION



010025	page 6	054125	page 23	100800	page 27	160023	page 14
010031			10	100826		160023R	20
010032	6	060039	10	100827	27	160023RT	21
010033	6	060040	10	100828		160023WB	
010034	6	060041	10	100830	27	160024	
010035	6	060042	10	100838	27	160024R	20
010036		060043	10	100844	27	160024RT	21
013932	12		10	100846	27	160024WB	
013933	12	060045	10	100848	27	160025	
013934	12	060046	10	100854	27	160025R	
013935	12	060047	10	101430	8	160025RT	21
013936	12	065037	13	101440	8	160025WB	
014425			13	101448		160221	
014431	12	065042	13	101455	8	160221R	20
014432	12	065043	13	101463	8	160221RT	21
014433			13	101470		160221WB	
014434	12	065439	13	101478	8	160222	
014435	12	065440	13	101935	8, 11	160222R	
014436			13	101989		160222RT	21
020025		065442	13	102052	25	160222WB	
020031		065537	13	102100	24	160223	
030025	8		13	102102	24	160223R	
030031	8	065540	13	102103	24	160223RT	21
030032	8	065541	13	120021	15	160223WB	
030033			13	120022		160224	14
030034		065637	13	120023	15	160224R	
030035	8	065639	13	120024		160224RT	21
030036			13	120025	15	160224WB	
030038	24	065641	13	123050	14, 16, 23	160225	
030039	22	065642	13	123050R	20	160225R	20
030040			13	123050RT	21	160225RT	21
030045	8		13	123050WB	21	160225WB	
030051	8	065940	13	123721	23	163721	
030052	8		13	123722	23	163722	
030053	8	065942	13	130021	16	163723	23
030054	8	100010	12	130022	16	163724	
030055			12	130221		163725	
030056			12	130222		170001	19
040033		100029	12	133721		170091	
040034			12	133722	23	180031	
040053		100057	12	139022	17	180032	
040054		100070	12	139023	17	180033	
044433			12	139024		220005	
044434			12	139025		220011	
050023			13	139124		220012	
050024			13	139125		220021	
050025			13	140011		220022	
050031			13	140012		220311	
050032	7	100298	13	140021		220312	
050033			13	140022		220315	
050034			13	143711		220321	
050035			13	143712		220322	
050036			13	143721		220344	
050039			13	143722		220347	
050040			13	144011		220351	
050043			13	144012		220352	
050044			13	144021		230051	
050045			13	144022		230250	
050051			13	160021		240040	
050052			13	160021R		240041	
050053			13	160021RT		240042	
050054			13	160021WB		240043	
050055			13	160022		500031	
050056			13	160022R		500076	
054123			13	160022RT		500081	
054124	12, 23	100667	19	160022WB	21	500084	25

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505116		-
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F.O.B. shipping point, our factory, Baton Rouge, Louisiana.

We accept:



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Parkstrasse 2 CH-6214 Schenkon Switzerland

EXW shipping point, our factory, Schenkon, Switzerland.

We accept:



## **CANADA**

# **VICI VALCO INSTRUMENTS CANADA CORPORATION**

■ Phone: (866) 297-2626 (613) 342-2600 Fax: (613) 342-0111 ■ Email: canada@vici.com

26 Water Street East Brockville, Ontraio Canada K6V 1A1

F.O.B. shipping point, our factory, Brockville, Canada.

We accept:



# **Conditions of Sale**

Our terms are net 30 days. F.O.B. shipping, our factory, Baton Rouge, LA.

Prices subject to change without notice.

All prices are in U.S. dollars.

# **Repairs/Technical Support**

For information about factory refurbishment or for assistance with your technical questions and application needs, contact our Sales Department.

Phone: (225) 927-1128 Fax: (225) 926-4631 Email: precision@vici.com

# **Notice**

VICI reserves the right to correct errors and change prices, designs, or specifictions without notice or liability. The information in this catalog is correct to the best of our knowledge but is not guaranteed to be so. VICI assumes no responsibility with respect thereto.

# Returns

No returns will be accepted more than 90 days after shipment for any reason. Before 90 days, no returns will be accepted without prior authorization. If it is necessary to return material to us, please contact our Sales Department for a return authorization number and forwarding instructions. Inspect shipments upon receipt and report shortages or incorrect or damaged material to us immediately.

# Important!

Damaged shipments must remain with the original packaging for freight company inspection.

Returned material will be subject to a minimum restocking fee of 15% for catalog items. Special orders cannot be returned unless defective.

# Warranty

VICI Precision Sampling warrants all products we manufacture to be free from defects in material and/ or workmanship for thirty days from the time of receipt by the customer.

VICI Precision Sampling's liability for defects in material or workmanship shall be limited to replacement of the defective item at no charge to the customer, or refund of the purchase price paid. Bending, breakage, or other damage resulting from shipping is not a warranty issue; a claim should be filed with the shipping company. This warranty is in lieu of any other warranties, expressed or implied, including but not limited to any warranty of fitness for purpose or any warranty of merchantability. Copies of any written warranty pertaining to products shown in this catalog manufactured by a company other than VICI Precision Sampling can be obtained upon written request.







# **TRADEMARKS**

Valco Instruments Co. Inc. and VICI AG Cheminert

Hamilton

Hamilton Haynes International Valco Instruments Co. Inc. Hastelloy C Micro-Flo

Hamilton

Microlab Mininert PEEK Valco Instruments Co. Inc. Victrex

Perkin Elmer Pressure-Flo Pressure-Lok Perkin Elmer Inc. Valco Instruments Co. Inc. Valco Instruments Co. Inc.

Rheodyne

Rheodyne
Phillips Petroleum Co.
Varian Associates
Valco Instruments Co. Inc.
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Waters Waters Associates