WIG PRECISION SAMPLING

International Product Catalog

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Liquid Syringes

C-160, C-120, CG-130, D-140, Mini Injector, HPLC & Purge & Trap Series











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Europe, Africa, Middle East, and Asia	United States, Central & South America, Japan, Australia, & New Zealand	Canada
/ICIAG International Phone: Int+41-41-925-6200 Fax: Int+41-41-925-6201	VICI Precision Sampling Phone: (800) 828-1653 (225) 927-1128 Fax: (225) 926-4631 (225) 926-4631	VICIValco Canada Phone: (866) 297-2626 (613) 342-2600 Fax: (613) 342-0111
		Fax: (613) 342-0111
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Gas Syringe Features

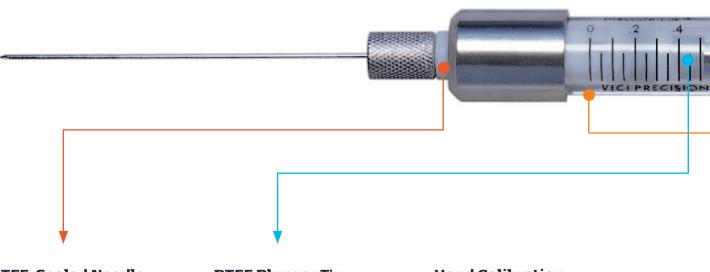
	Series A	Series A-2	Series C	Series D	Magnum
	р. 8	p. 10	p. 14	p. 16	р. 17
Removable Needle option	\checkmark	✓	\checkmark	\checkmark	\checkmark
Luer Lock Needle option		\checkmark	\checkmark		✓
Plunger stop	\checkmark	\checkmark	\checkmark		\checkmark
Sample Lock valve option	Twist-lock	Push-button	Mininert Syringe Valve (optional)	Mininert Syringe Valve (optional)	Twist-lock
Pressure Rating	250 psi	250 psi	250 psi	250 psi	30 psi
Sample size options	100 µl- 10 ml	25 µl- 10 ml	100 µl- 10 ml	1 ml-2 ml	20 ml - 500 ml

Liquid Syringe Features

	Series C-160	Series C-120	Series CG-130	Series D-140	Mini Injector	Purge & Trap
	p. 21	p. 22	р. 23	p. 24	p. 26	p. 29
Removable Needle option	\checkmark		\checkmark	 Image: A second s		
Fixed Needle option	\checkmark	~	\checkmark		\checkmark	
Plunger stop					\checkmark	
Reinforced plunger			\checkmark	\checkmark	\checkmark	
Pressure Rating	250 psi	250 psi	250 psi	30 psi		250 psi
Sample size options	5 µl- 100 µl	5 µl- 100 µl	5 µl- 10 µl	1 µl- 10 µl	.01 μl & .10 μl	5 ml - 10 ml
Side vent				\checkmark		

Pressure-Lok[®] Syringe Features

Easily replaceable parts. Individual parts can be easily replaced, optimizing equipment investment.



PTFE-Sealed Needle

Our syringes have a barrier sleeve or packing of PTFE on the rear of the needle at the zero point.

Benefit:

• Sample is isolated from needle cement, thus preventing adhesive from contaminating the sample.

PTFE Plunger Tip

- PTFE Plunger Tip
- Stress-formed with our unique process.
- Insures a leak-tight seal.
- Self-lubricating plunger tip.Stays smooth for the life of
- the syringe.
 Unlike conventional all metal plungers, there is no freezing up or unwanted residue.



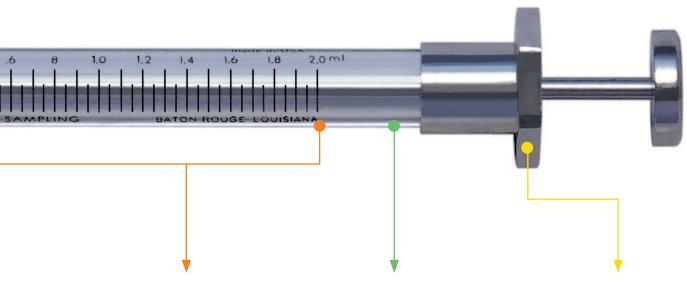
Pressurized Sample Storage. Built-in valve to allow sample storage at up to 250 psi.



Removable Needles. Pressure-tight, low dead volume connection allow easy needle removal.

Hand Calibration

- Hand-calibration verifies consistent volume delivery.
- Double checked volume delivery with an electronic microbalance.
- Careful quality control ensures precision and accuracy of Pressure-Lok[®] microsyringes.
 - Optional Luer Lock Tip. Luer Lock creates a leak free quick release option.



Crisp Clean Graduations

Our methods insure easy reading of the sampled amount.

Ultra-Smooth Bore

Syringe barrels up to 100 µl 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.

Shaped Rear Flange

- Provides a secure grip.
- Prevents the syringe from rolling.

Positive Rear Plunger Stop. Prevent plunger damage due to accidental plunger removal.



Reinforced Plunger. Prevent plunger bending and reduce syringe repairs costs.

A - Series Syringes

A-Series Syringes

The design of the A-Series syringe eliminates carrier backflushing achieving sharper peaks and better separations.

The plunger design, along with the very small internal diameter of the needle, helps to eliminate dead volume. The modular assembly allows quick disassembly for parts cleaning or replacement.

> MININA HAMAN VICI Precision Sampling

The A-Series gas syringe has all the standard pressure-lock features including:

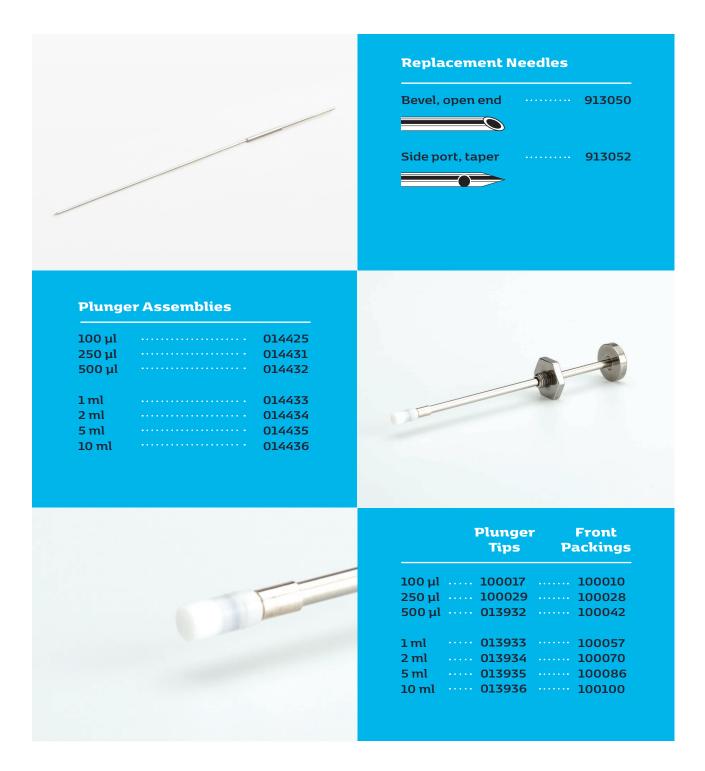
- PTFE plunger tip
- PTFE-sealed needle
- Ultra smooth bore

100 µl		010025
250 µl	•••••	010031
500 µl	•••••	010032
1 ml		010033
a 1		
2 ml	•••••	010034
2 ml 5 ml		010034 010035



A - Series

Prolong the life of our A-Series syringes with a wide variety of replacement parts including needles, plunger assemblies, plunger tips and front packings.





A-2 Series: Our Best Selling Syringe

All the advantages of the A series syringe plus a push button valve which allows instantaneous injection. Ideal for small liquid samples containing low-boiling components.

Allows sample storage in 25 µl syringes

Particularly useful when handling small liquid samples containing low-boiling components, usually lost through evaporation using ordinary syringes. In addition to sample storage capability, the push-button valve allows for pre-pressurization of samples prior to injection. By pre-pressurizing the sample gas to match or exceed the pressure in the chromatograph, the sample can be flushed instantaneously into the column as a 'slug'. The result is better resolution.

Always leak-tight

The A-2 uses a special needle and needle connector designed specifically for chromatography and other analytical sampling. Significantly lower dead volume than conventional style Luer connectors.

A-2 Series Syringes

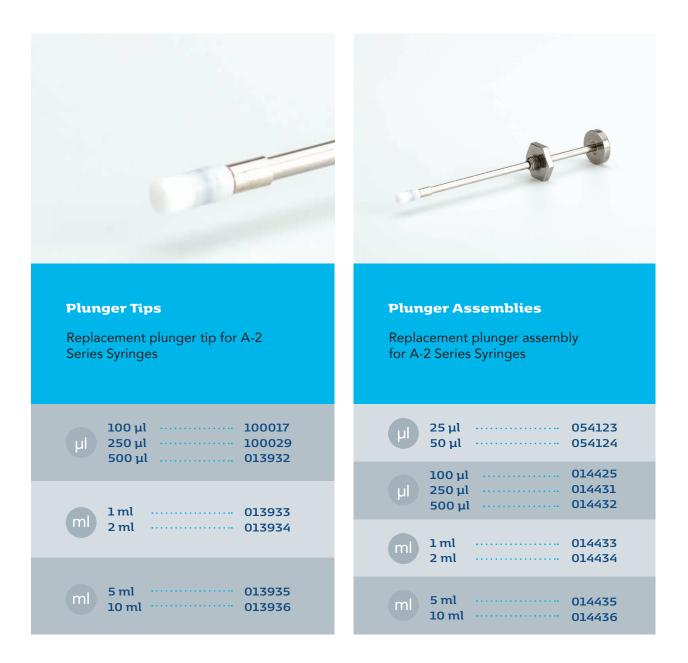
Features a push-button valve, which allows sample storage to 250 psi in syringes as small as 25 μl. Available for use in a variety of containers including tapered, internal and external threaded containers, and for use with vacuum bulb or line.



A-2 Series Replacement Parts

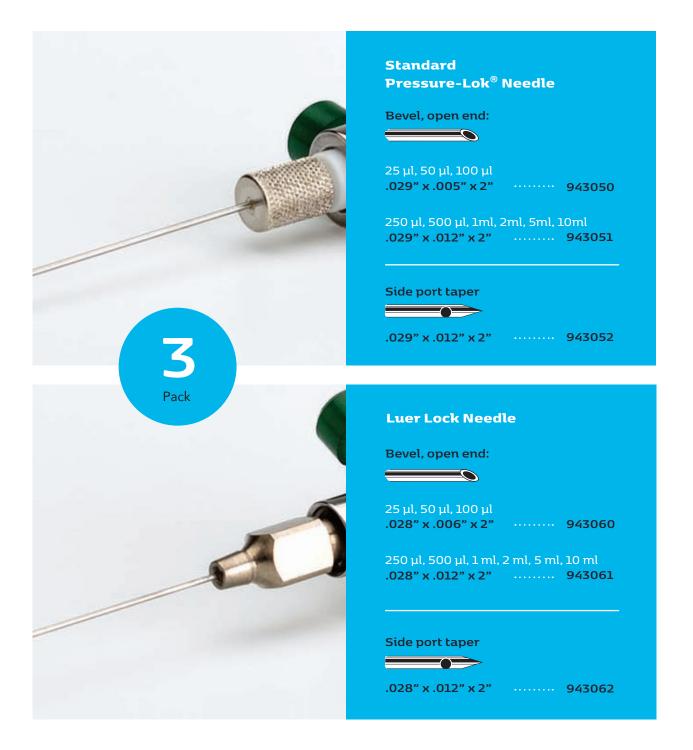


Prolong the life of our A-2 Series with plunger tips and plunger assemblies for all sample sizes.



A-2 Series & C-Series Replacement Parts

PTFE sealed needles are easily replaceable and are available in Standard Pressure-Lok[®] and new Luer Lock Needles.



C Series Syringes

The Series C syringe is perfect for everyday use, with all the standard Pressure-Lok® features such as a PTFE plunger tip, PTFE-sealed needle, and ultrasmooth bore, but without a valve for pressurized sample storage. Sample storage capability can be added with a Mininert syringe valve.

The optional Chaney adapter offers much lower dead volume than luer-style connectors.

	Syringes up to 1 ml100 101Standard Needle Luer Lock Needle030025 030045-LL250 101Standard Needle Luer Lock Needle030031 030051-LL500 101Standard Needle Luer Lock Needle030032 030052-LL11 11Standard Needle Luer Lock Needle030033 030053-LL
Syringes up to 10 ml2 mlStandard Needle Luer Lock Needle030034 030054-LL5 mlStandard Needle Luer Lock Needle030035 030055-LL10 mlStandard Needle Luer Lock Needle030036 030056-LL	
	Syringe w/ Standard Needle & Chaney Adapter .018" x .008" x .75" Side Port Image: standard standa

C Series Replacement Parts

Lengthen the life of your C Series syringes by purchasing replacement parts.

Plunger Tips	Plunger Assemblies
Replacement plunger tip for	Replacement plunger assembly for
C Series Syringes	C Series Syringes
μl 100 μl 100017	μl 100 μl 014425
250 μl 100029	250 μl 014431
μί 500 μι 013932	μί 500 μι 014432
1 ml 013933 2 ml 013934	1 ml 014433 2 ml 014434
ml 5 ml 013935	ml 5 ml 014435
10 ml 013936	10 ml 014436

Replacement Needles

Standard Pressure-Lok®	Standard Luer Lock	Chaney Adapter
.029"x.005"x2" ···· 943050 .029"x.012"x2" ···· 943051	.028"x.006"x2" ···· 943060 .028"x.012"x2" ···· 943061	.018"x.008"x.75" ···· 101935

D Series Pressure-Lok[®] Syringes

D Series Syringes

An economically priced high precision gas sampling syringe with more features than conventional gas-tight designs.



Mininert Syringe Valves - For Series C and D syringes or conventional luer-tip

- 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

For a Luer-tip syringe



Magnum Series Syringes



Specially formed seals permit leak-tight operation to 30 psi.

Built-in twist-lock valve and positive rear plunger stop

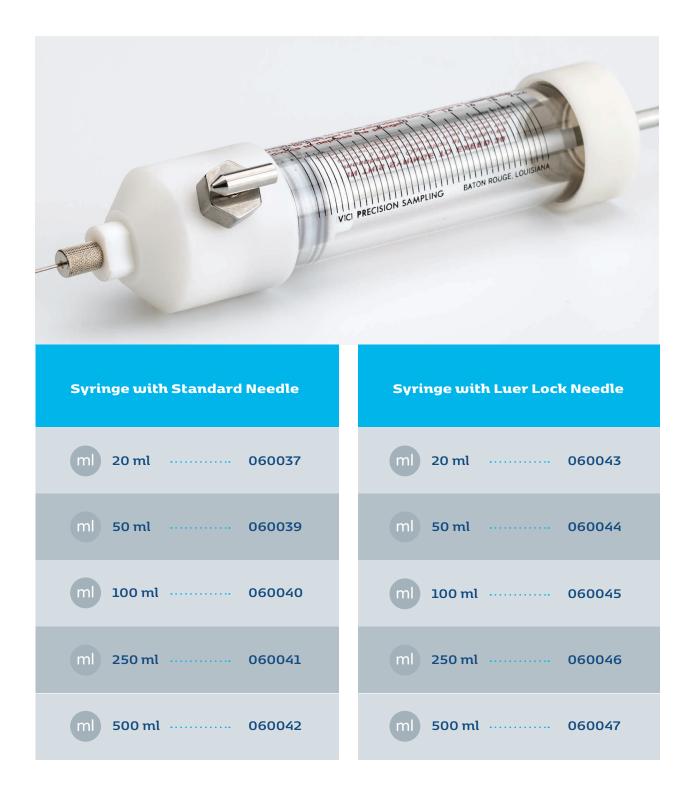
The detection of low levels of various environmental contaminants can require extraordinarily large samples. Magnum syringes facilitate the trapping of such samples in remote locations. A built-in valve allows the sample to be sealed within the syringe, maintaining sample integrity during transportation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

Up to 500 ml capacity

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).

Magnum Series Syringes

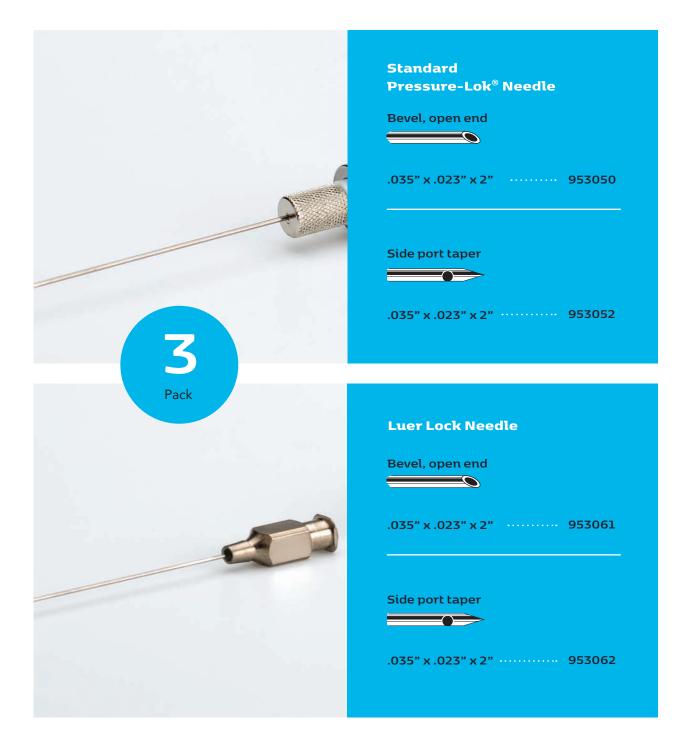
Seals to maintain sample integrity during transport to analysis site.



Magnum Replacement Needles



Needles are manufactured to exacting tolerances from high precision stainless steel tube stock.



Magnum Replacement Parts

Easily replaceable parts for our Magnum syringes.

1 Standard Nosepiece 20/50/100 ml 065037 250/500 ml 065041	2 Luer Lock Nosepiece 20/50/100 ml 065042 250/500 ml 065043	3 Stem cap set screw 20/50/100 ml 250/500 ml 500635
3 Barrel Assembly	5 Front Sleeve	6 Rear Sleeve
20 ml	20 ml	20 ml10028950 ml100313100 ml100334250 ml100353500 ml100373



Valve Stem 20 ml 100296 50 ml 100320 100 ml 100341 250 ml 100360 500 ml 100379	8 Stem cap 20/50 ml	9 Valve stem guide 20 ml 100297 50 ml 100321 100 ml 100342 250/500 ml 100361
Front Packing	Plunger Rod	D Plunger Tip
20 ml06593750 ml065939100 ml065940250 ml065941500 ml065942	20 ml06543750 ml065439100 ml065440250 ml065441500 ml065442	20 ml

C-160 Series Syringes

⁷ Dependability at an economical price. Plunger tip made of stress-formed virgin PTFE is self-lubricating and durable.



C-120 Series Syringes

No dead volume barrel design Special low dead volume needle connector plunger tip of stress-formed virgin PTFE.

VICI PRECISION SAMPLING

C-120 Series Syringes

Our fixed needle, extended barrel syringe is leak-tight to 250 psi for liquids and gases. Extended design permits attachment of vacuum bulb.

5 µl	•••••	120021	50 µl	•••••	120024
10 µl	•••••	120022	100 µl	•••••	120025
25 µl		120023			

Plunger Assembly

5 µl	•••••	123721	50 µl		054124	
10 µl	•••••	123722	100 µl	•••••	054125	
25 ul		054123				



03



CG-130 Series Syringes



Features include a reinforced plunger to eliminate bending with optional replaceable needles.

CG-130 Liquid Syringe

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.

Syringe - Fixed Needle	Syringe – Removable Needle	
5 µl 130021 10 µl 130022	5 μl ····· 130221 10 μl ····· 130222	
Replacement Needle - Bevel	Open End Replacement Plunger Assembly	
	5 μl ····· 133721	
019" x .005" x 2.25"	10 μl 133722 ·· 123050	

Series D-140 Syringes



The entire sample is contained in the needle, so it is totally injected when the plunger is depressed. The positive rear plunger stop eliminates accidental plunger removal and resultant damage.



D-140 Syringes

Designed for small volume injection into liquid chromatographs. Since the sample is totally contained within the needle, it is completely displaced by the plunger. The positive rear plunger stop eliminates accidental plunger removal and resultant damage. The PTFE seals, needle, plunger, and barrel are all replaceable.

Thanks to superior alignment, the D-140 can be assembled time after time without difficulty or damage.

1 µl Syringe	140011
2 µl Syringe	140012
5 µl Syringe	140021
10 µl Syringe	140022

Replacement Parts



All D-140 parts are replaceable, with easy assembly and disassembly.



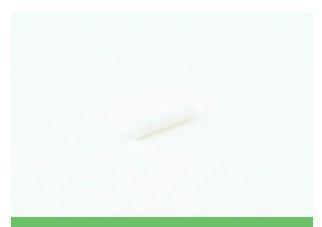


Blunt	
1μl .019" x .005" x 2.5"	923011
2 μl .019" x .008" x 2.5"	923012
Bevel	
5 μl .028" x .012" x 2.5"	923021
Sideport	
10 µl .028" x .019" x 2.5"	923022



Plunger Assembly

lμl	143711
2 µl	143712
5 µl	143721
10 µl	143722





Plunger Packing

lμl	144011
2 µl	144012
5 µl	144021
10 µl	144022

Barrel Assembly

lμl	143211
2 µl	143212
5 µl	143221
10 µl	143222

Mini Injector Series Syringes

Reproducible sample injections down to 0.01µl with sample carried in the plunger.

Mini Injector Syringes

Ideal for capillary GC work. No splitter is needed because of our unique plunger-within-a-needle. Sample volume is carried in a precisely measurable groove that surrounds the wire plunger.

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 flash-vaporized and swept into the column.

PRESSURE TOK® OT Boton Rouge Louisiana Mini-Injector

.01 μl 170091 .10 μl 170001

Replacement Wipers

.01 µl & .10 µl 100667



Syringes for Valco, Cheminert and Rheodyne/IDEX 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.

5 µl	•••••	160021R
10 µl	•••••	160022R
25 µl	•••••	160023R
50 µl	•••••	160024R
100 µl	•••••	160025R

Removable Needle Syringes

5 µl	•••••	160221R
10 µl	•••••	160222R
25 µl	•••••	160223R
50 µl	•••••	160224R
100 µl		160225R

Special Syringes for IDEX/Rheodyne valves



PEEK tip to prolong lifetime of valves. Available with fixed or removable needle.

Special Syringes

Many IDEX/Rheodyne valves allow the syringe needle to rub across the sealing surfaces- a trade off 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.

Syringe with Fixed Needle

Needle size 22 gauge x 2" long

5 µl	160021RT
10 µl	160022RT
25 µl	160023RT
50 µl	160024RT
100 µl	160025RT

Syringe with Removable Needle

BATON ROUGE, LOUISIANA

Leak-tight up to

15

psi

THE FRENJIVE PREFERENCE OF VER RUUGELUUIDE

Needle size 22 gauge x 2" long

5 µl	160221RT
10 µl	160222RT
25 µl	160223RT
50 µl	160224RT
100 µl	160225RT

Replacement Needles

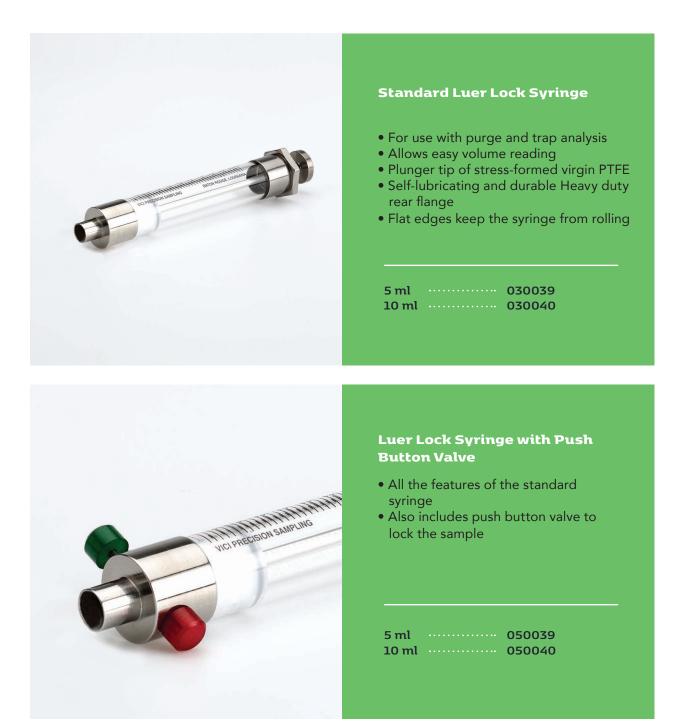
Needle size 22 gauge x 2" long

Blunt PEEK tip open end - Pkg./3 ····· 123050RT

Purge and Trap Syringe



The heavy duty construction of our purge and trap syringe helps eliminate cost of replacement and injuries due to breakage.





Micro-Flo® Syringes



The Micro-Flo[®] high pressure syringe prevents evaporation of lighter components under normal laboratory temperatures at atmospheric pressure.

Julili

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 0.5 μ l dead volume and a positive mechanical Sample Lock valve to seal in volatile materials (up to 500 psi).

A special locking cylinder adapter and yoke assembly ensures that the syringe contacts the sample liquid in its pure, undisturbed state. The syringe volume is variable from 0.5 μ l to 5.0 μ l.

Available replacement parts include plunger assembly, front packing, barrel and decal, rear washer, spring, and needle.

Micro-Flo[®] Accessories and Replacement Parts

Available replacement parts include plunger assembly, front packing, barrel and decal, rear washer, spring, and needle.



Micro-Flo[®] Adapter & Parts

A special locking cylinder adapter and yoke assembly ensures that the syringe contacts the sample liquid in its pure, undisturbed state.

Micro-Flo[®] Adapter with Yoke Assembly 230250

Syringe side packing		100844
Plunger pin rod assembl	y	100846
Plunger pin side packing		100848

Micro-Flo[®] Syringe Parts

Replaceable parts mean lengthening the life of the syringe.

·· 100827
100830
100854
·· 100828
· 100826

3

Micro-Flo[®] Syringe Parts

Needle: .028"x.006"x1.875" .5 µl - 5 µl Sideport 100838

Pressure-Flo® Syringes

A classic method of taking homogeneous high pressure samples from a cylinder or "bomb".



Lightweight syringe body for easy handling. The sample is contained within the calibrated needle which can be injected directly through the GC septum inlet. 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 bomb adapters (see image, below). When 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.

Pressure-Flo Syringes

.5 µl		220005
lμl	•••••	220011
2 µl	•••••	220012
5 µl	•••••	220021
10 µl	•••••	220022

To interface with a gas cylinder, use syringe with our bomb adapter



Bomb adapters

¹ / ₈ " NPT female	•••••	240040
¼" NPT female	•••••	240041
⅓" NPT male	•••••	240042
¹ /4" NPT male	•••••	240043

Needles

.5 μl	220351
1 μl, 2 μl, 5 μl, 10 μl	220352

Plunger packing

.5 μl	100800
1 μl, 2 μl, 5 μl, 10 μl	220347

Plunger Assembly

.5 µl		220315
1 µl	•••••	220311
2 µl	•••••	220312
5 µl	•••••	220321
10 µl	•••••	220322

Front packing Assembly

All Sample Sizes 220344

Specialty Syringes



Special syringes designed to make your processes more efficient.



Hollow Plunger Syringes

The hollow plunger syringe with two integrated valves opens up a new array 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 withdrawing the needle from the original point of entry. Just close the on/off valve after drawing sample through the needle; the sample is redirected out the plunger valve as the plunger is depressed.

 100 μl
 020025

 250 μl
 020031

Syringes for Diluter/Dispensers and Automated Instrumentation

The plunger of this syringe has a 6-32 UNC female thread so that it will accept the male end fitting on Hamilton Microlab[®] diluters. The PTFE tipped luer lock termination is without slots.

250 µl	180031
500 µl	180032
1 ml	180033



Mininert Valves

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.



Mininert Valves - Screw Caps

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 leaktight fit.

13mm - 425	•••••	614158
15mm - 425	•••••	614160
18mm - 400	•••••	614161
20mm - 400	•••••	614170
24mm - 400	•••••	614163
Crimp Top	•••••	614250



Mininert Valves

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 Valve

14/20	•••••	621102
19/22	•••••	621103

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.

Inline valve 1/4 - 28

Male to Male	631205
Female to Female	631206

Termination Valve

1/4 - 28 Male	631201
1/4 - 28 Female	631203
1/8 - NPT Male	631202
1/8 - NPT Female	631204

Syringe Valve

C or D Gas Syringe	654050
Luer-tip Syringe	654051



Septum Replacement



Prolong the life of your Mininert Valves with our easy to use septum replacement.

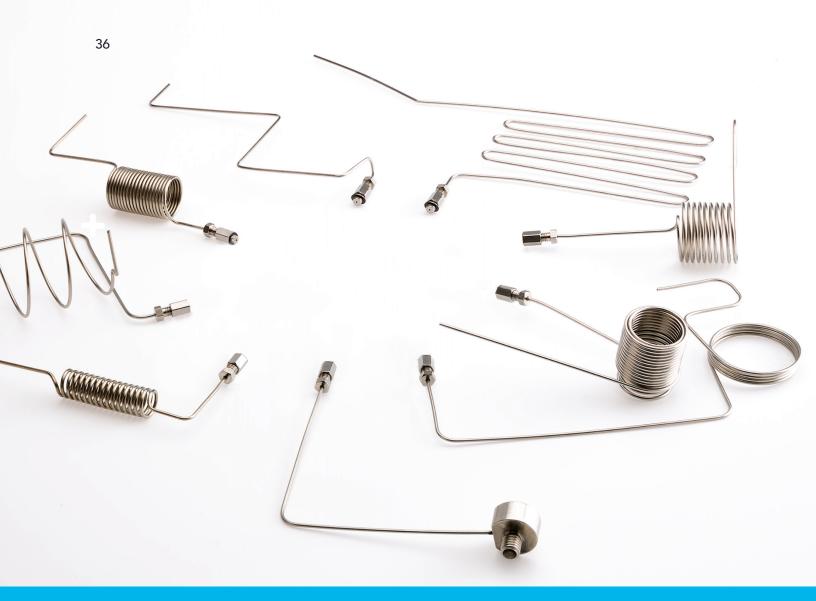
Mininert Septum Replacement

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





Septum set of 50 644350



Custom Formed Tubing

Material options for custom formed tubing

316L Stainless Steel, Titanium, Nickel, Hastelloy-C, Electroformed Nickel, and Nickel Cobalt.

Cleaning

All tubing is electrolytically cut and specially steam-cleaned with micro-filtered steam from deionized water, which removes both organic and inorganic contaminants. VICI Precision Sampling has extensive experience at custom tubing bending and shaping. Contact us to learn more about our custom tube bending service.

- Custom-formed to your specifications
- Streamlines instrument production
- Attractively priced

The Sky is the Limit



Why buy tubing in bulk and try to make it work? We have the expertise to custom form tubing to your exact specifications, so you can focus on your products.



Multiple Connections

We have access to the tubing and any fittings you might need. Give us a call to discuss your specific needs.

Unique Cleaning Processes

Precision, burr less cuts. OD and ID STEAM cleaned.





Bends of all Degrees

We can create bends to allow the tubing to navigate complex internal workings of your instruments.

Micro Valves for GC and LC

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 over-tightening. Internal parts are PEEK and PTFE. Compact 1" design with convenient panel mount and a variety of configurations.





GC & LC Probes



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

Agilent Archon Instruments





Needle purge probe assembly	
Hex Block	
Probe with fittings	505741
Probe without fittings	505829

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						/
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