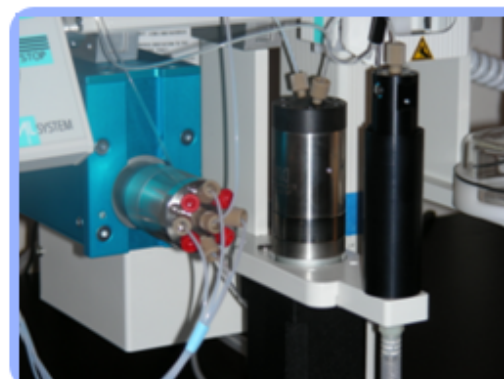


Large Volume Dispensing



Large Volume Dispensing

Application Type

SPECIAL

Application ID

Description

Accurate dispensing of solvents at high flow rates

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- 2 Common Uses
- 3 Typical applications
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Overview

[\[edit\]](#)

There are three options on the PAL for delivery of large volumes of solvent. Choice will depend on the requirements for delivery rate, delivery volume and accuracy. In each case these pumps can dispense liquid either through PAL side-port syringe, or using the LEAP "Dispense Tool" accessory. The advantage of the latter is that it permits larger flow rates and includes a venting channel to avoid over pressurization in the case of filling sealed vessels.

Common Uses

[\[edit\]](#)

- Dispense liquid prior sample injection and combines the "add liquid" and "inject" steps without user intervention or syringe change.

Typical applications

[\[edit\]](#)

- Dilutions
- Derivatisations
- Sample spiking
- Standard additions

For the latest up to date information and more photos and videos please visit:

<http://www.leapwiki.com>

CTC Dilutor Accessory

[\[edit\]](#)

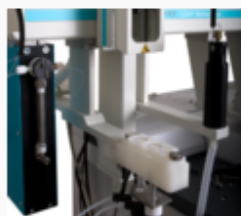
Syringe pump volume range of 0.25 ml to 2.5ml delivery per 2.5 ml syringe cycle. (Optional dilutor syringe 1ml or 5 ml)

Flow Rate Range: 10µl/min - 300µl/min

Wetted parts: All liquids compatible with borosilicate glass, PTFE, Kel-F, FEP

Notes

- Requires the addition of a custom macro or cycle to run the appropriate macro
- Limited to either a 20 or 80uL sample syringe size with a side port connection or DISPTool
- Requires an open AUX Port on the PAL
- Requires PAL firmware 2.3 or higher
- It can not be used on standalone PAL instruments



CTC Dilutor with DISPTool



CTC Dilutor on PAL

Valco M Series pump Accessory

[\[edit\]](#)

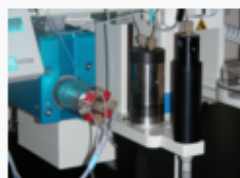
The patented* Cheminert® M Series liquid handling pump is a syringe-free pump capable of delivering a bidirectional flow to six orders of magnitude. The M Series is a positive displacement pump, which means that it is self-priming and tolerant of any gas which may find its way into the fluid lines. Since there is no separate fill cycle, the pump can be operated continuously, and volumetric capacity is limited only by time.

Notes

- Limited to integration with LEAP Shell Software
- Limited to either a 20 or 80uL sample syringe size with a side port connection or DISPTool
- It can not be used on standalone PAL instruments



Vici Valco Pump



Pump on PAL

Useful links:

Valco website - description of the pump: [\[1\]](#) [🔗](#)

Solvent Delivery System (SDS) Accessory

[\[edit\]](#)

Main Features

- 4 Solvents can be dispensed
- 9 Program Steps allow solvents to be added in any order
- Software Interface SDS Launchpad
- Save/Load Methods
- Easy Verification of Downloaded Method via the "Dashboard" feature in SDS Launchpad
- Contact Closure Triggered
- Runs stored dispense routine
- Can be used with Side Port Syringe or DISPTool
- May allow single rail to have functionality of dual rail system
- Limited to either a 20 or 80uL sample syringe size with a side port connection or LEAP DISPTool
- It can not be used on standalone PAL instruments
- Compatible with all PAL Drivers



Solvent Delivery Module



SDS on PAL

Performance Specifications

- Maximum flowrate 6mL/min in increments of 0.1mL/min
- Flowrate accuracy $\pm 10\%$
- Maximum dispensed volume 999mL
- Volumetric accuracy $\pm 5\%$
- Maximum pressure 50PSIG
- Typical wash time for 2 solvents (1mL each) @ 6mL/min is 45 seconds

Requirements/Limitations

- Lower dispense speeds needed for more viscous solvents, e.g. , i-Propanol @ 3-4mL/min
- Use of Polypropylene compatible solvents



Side Port Syringe Accessory

[\[edit\]](#)

Main Features

- Can be used to dispense liquid prior sample injection
- Combines the "add liquid" and "inject" steps without user intervention or syringe change
- Variety of sizes available: 20µl or 80µl for LC applications and 20µl or 80µl for GC applications



Side Port Syringe in action



Side Port on PAL



Side Port on PAL

DISPTool Accessory

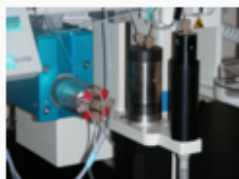
[\[edit\]](#)

Main Features

- Can be used to dispense bulk liquids without using the injection syringe
- The tool is magnetically picked up by the PAL and moved to the vial or plate only when needed
- Able to pierce a septa with an adjustable needle penetration
- 19ga needle with built in vent
- May allow single rail to have functionality of dual rail system
- Can be used with the Dilutor, Vici Pump, or LEAP SDS

Requirements/Limitations

- Requires some additional rail space for DISPTool parking location
- Requires custom firmware



Video

[\[edit\]](#)

- [Dispense Tool movement](#)

Dispense tool in action on youtube [\[2\]](#) [🔗](#)

For the latest up to date information and more photos and videos please visit:

<http://www.leapwiki.com>