

Solvent Purification Systems & Purification Grade Solvents

PURE-SOLV 溶剂净化系统



美国 INNOVATIVE TECHNOLOGY, INC

For SAFE Processing of **DRY, DEOXYGENATED SOLVENTS**

最安全快捷的方法，用于溶剂的除氧和脱水的净化处理



**Research
研究**

**Teaching
教育**

**Production
生产**

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SOLVENT PURIFICATION SYSTEMS
溶剂净化系统

The removal of water and oxygen from flammable solvents using low-pressure column technology is proven to be a safe and effective alternative to thermal distillation methods that can result in fire or exposure to vapors.

利用低压净化圆管技术以去除易燃溶剂内的水份及氧份，安全及更有效地取替传统燃烧蒸馏法。

The well-engineered systems from Innovative Technology allow for highly flexible, inherently safer solvent purification for research, teaching, and production. Specify up to **seven different solvents** in a single solvent purification system.

我们的系统设计非常弹性，适合各学院研究及教学用途，或企业的生产需要。

独立净化系统可处理**高于七种**不同溶剂。











Basic System Operation and Specifications:
系统技术规格：

A Purification Grade Solvent is pushed from its storage container under low nitrogen pressure through two stainless steel columns containing activated alumina and copper. Trace amounts of water and oxygen are removed producing dry, oxygenated solvent. The processed solvent is drained into in a storage flask where it can be dispensed, under nitrogen, using standard syringe techniques.

在低氮压力下，溶剂从贮存器被迫进两管分别包含活性铝（activated alumina）及铜（Copper）的净化圆管以进行除氧脱水过程。处理后的溶剂会排放到已抽真空及给氮洗涤的玻璃器皿。

Dual Solvent Column Design 双净化管设计	Two pressure tested stainless steel columns per solvent, 400L processing capacity until spent. Columns are supplied fully conditioned, ready for use. Spent columns are replaced with new columns. 每种溶剂包含两条净化管，不锈钢，经压力测试，可净化 400 升溶剂（再生程序需要之前）。耗尽的净化管可更换上新的圆管。	
Manifolds, vacuum and gas 歧管，真空及氮	Internal vacuum and gas manifolds are built into the extruded aluminum frame of the system. Includes a vacuum indicator and gas regulators and pressure relief valves dedicated to each of the solvent flasks to prevent over pressurization of glassware. 内置气体及真空歧管于外露铝质框框架内，包含真空显示表，调节器及泄压阀门，避免玻璃器皿过份受压。	
Gas Connection 气体连接	All solvents can be dispensed simultaneously using one main inert gas supply. 只需一个气体供应点，不需拆除再重新连接以供应不同溶剂，可同时分配给不同溶剂。	
Stainless Steel Tubing 不锈钢管道	All Solvent tubing is stainless steel. 全采用¼ 吋不锈钢溶剂流经管道。	

Check Valves 止回阀门	<p>Each solvent has its own in-line check valve to prevent back flow, thus eliminating cross contamination of solvents.</p> <p>每种溶剂都有其止回阀门防止倒流，避免交叉污染。</p>	
Directional valves 导何阀门	<p>Each solvent has both 2-way and 3-way Swagelok directional valves to control flow of solvents and inert gas.</p> <p>每种溶剂皆有 Swagelok 二通及三通阀门以控制溶剂及气体的流量。</p>	
Dispensing 溶剂配送线	<p>A Swagelok metering valve allows a controlled flow of solvent from a braided stainless steel flex line connected to a 24/40 joint. A glass solvent storage flask mounts to the joint for dispensing solvents using standard syringe techniques.</p> <p>利用 Swagelok 计量阀门来控制输出流量，不锈钢可屈曲管导，配合 24/40 喷嘴，方便连接玻璃器皿。</p>	
Grounding 接地及防静电	<p>The system is grounded and bonded against ESD, enabling the user to make a cold water pipe, or earth ground. Permits grounding a solvent reservoir while filling it away from the system.</p> <p>净化系统可接地及防避静电，操作员可将系统接口连接水管或地线。贮存器在注入溶剂时还需连接系统接地点，以确保安全。</p>	
In-line Particle Filter 微粒过滤	<p>0.2 micron, stainless steel particle filter to catch packing material particulates.</p> <p>配备 0.2 micron 不锈钢微粒过滤器。</p>	
Emergency Shut Off Valve 紧急切断	<p>A red colored 2-way Swagelok valve located on the main gas supply allows operator to shut off all pressure to system in an emergency.</p> <p>红色标示 Swagelok 二通阀门设于气体供应线，操作员可紧急切断系统压力。</p>	
Pressure Relief System 压力控制系统	<p>50 psi pressure relief valve with pressure gauge to safeguard over pressurization of system.</p> <p>50 psi 压力阀门及显示表以防止系统过份受压。</p>	
Flow Regulator 流量调节	<p>Dedicated regulator for each solvent with 7 psi pressure relief to safeguard against over pressurization of glassware.</p> <p>每种溶剂配备 7 psi 压力阀门调节器以防止玻璃器皿过份受压。</p>	

Specify a PURE SOLV SYSTEM in 4 Easy Steps:

四个步骤以决定你的 PURE SOLV 净化系统需要：

STEP 1: Select Solvents

步骤 1：选择溶剂

SIGMA-ALDRICH

PURIFICATION GRADE SOLVENTS

PG 溶剂

A new line of specially prepared and packaged solvents that enhance the performance, safety, and convenience of PURE SOLV systems. Specify up to **seven different solvents** in a single **PURE-SOLV** solvent purification system.

新推出专门适用于 **PURE-SOLV** 溶剂净化系统，贮存罐包装容易连接系统，一个独立净化系统可处理**高达七种不同溶剂**，特点如下：

- ✚ Low water and oxygen content 低水及氧含量
- ✚ Degassed* to save processing time 已排放气泡*使净化时间缩短
- ✚ Extends **PURE-SOLV** column life 较长净化管使用期
- ✚ Convenient pack sizes 包装规格齐全

* For 18L Pure-Pac container only *只适用于 18 公升 Pure-Pac 罐

Solvent Container Types

溶剂容器类型



5 Gallon **PURE-SOLV** refillable reservoir

5 加仑可再补充贮存器

Provided by Innovative Technology, including all quick disconnect valves. Perfect for refilling with Sigma Aldrich Glass disposable bottled solvent.

由美国 Innovative Technology 提供，包含可快速脱离接口，阀门等。

2 Gallon **PURE-SOLV** refillable reservoir

2 加仑可再补充贮存器

provided by Innovative Technology, including all quick disconnect valves. Perfect for refilling with Sigma Aldrich Glass disposable bottled solvent.

由美国 Innovative Technology 提供，包含可快速脱离接口，阀门等。

18 Liter Pure-Pac returnable container

18 公升 Pure-Pac 可回收容器

Stainless steel container attaches to **PURE-SOLV** systems with simple quick-connect fittings.

不锈钢容器快速接口连接 **PURE-SOLV** 净化系统。

4 L Glass disposable bottles

4 升玻璃可丢弃瓶

For manually filling 5 gallon (19L) **PURE-SOLV** solvent reservoirs. Bottled solvents are not degassed and must be degassed prior to use. Instructions are included with owner's manual.

用于补充 5 加仑 **PURE-SOLV** 贮存器，溶剂并未排放气泡，操作员需根据用户手册完成程序。



Specify Pure Solv Solvents

选择溶剂

Solvent Types 溶剂	Expected Titration Results 净化后纯度	Alumina	Sieves	De-Gas	Copper
Acetonitrile	15 ppm	*		+	
Benzene	4 ppm	*		+	#
Chloroform	2 ppm	*		+	
Dichloromethane	2 ppm	*		+	
DME	30 ppm	*		+	
DMF	30 ppm		*	+	
Ether- Inhibitor-free	8 ppm	*		+	
Heptane	2 ppm	*		+	#
Hexane	2 ppm	*		+	#
Hexanes	2 ppm	*		+	#
Methanol	40 ppm	*		+	
Pentane	2 ppm	*		+	#
Chlorobenzene	6 ppm	*		+	
THF-Inhibitor-free	7 ppm	*		+	
Toluene	2 ppm	*		+	#

*= Solvent will be dried using identified material. 利用指定物质去除溶剂水份。

+= All Solvents must be de-gassed for oxygen removal using inert gas. De-gas times are located in Manual. 有关溶剂必需经过排放气泡程序，排放时间已列于操作手册中。

#= Identified solvents may be passed through Copper Catalyst for optimum oxygen scrubbing. 利用铜来去除溶剂氧份。



STEP 2: Select Column Processing Capacity

步骤 2：选择净化管的处理能力

The processing capacity of PS-400 Systems is 400L per solvent. Spent columns maybe discarded and replaced with new fully conditioned columns.

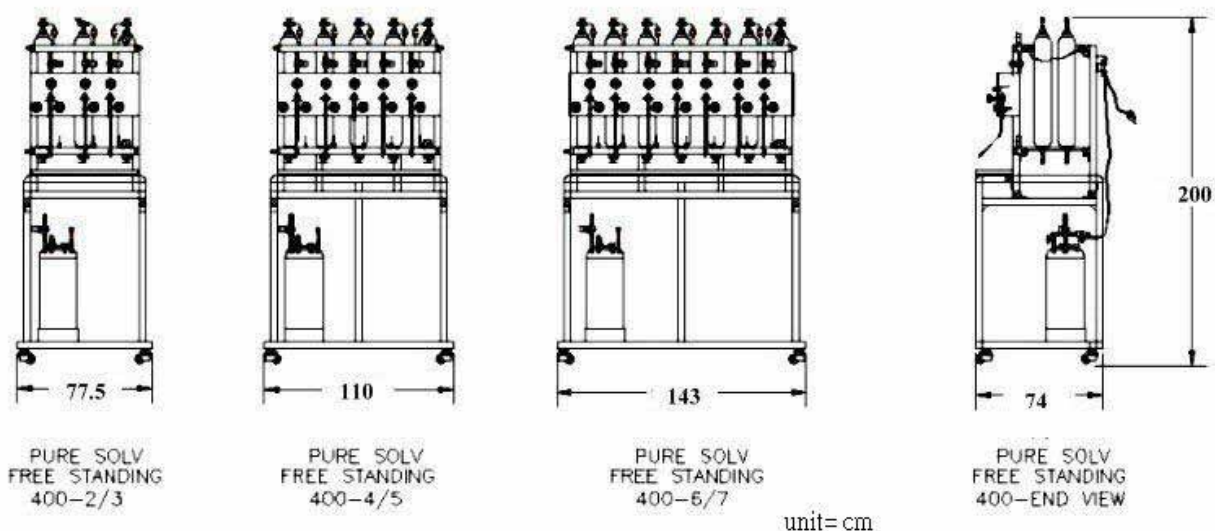
PS-400 净化系统可处理 400 升溶剂（再生程序需要之前），耗尽的净化管可更换上新的圆管。

Description 内容	PS-400 System PS-400 系统
One Solvent System 1 种溶剂	PS-400-1
Two Solvent System 2 种溶剂	PS-400-2
Three Solvent System 3 种溶剂	PS-400-3
Four Solvent System 4 种溶剂	PS-400-4
Five Solvent System 5 种溶剂	PS-400-5
Six Solvent System 6 种溶剂	PS-400-6
Seven Solvent System 7 种溶剂	PS-400-7

STEP 3: Select System Configuration

步骤 3：选择系统外型

Select a free standing or bench top system
可选择放置于工作台上或独立系统。



STEP4: Select System Accessories

步骤 4：选择系统配件

- Select a Diaphragm Pump for evacuation of Glassware prior to dispensing solvent
可考虑配备无油隔膜泵以用于玻璃器皿抽真空程序。
- Select a Flammable Safety Cabinet
可考虑配备易燃物储存柜以存放溶剂贮存器。



- Select Glove Box Integration
可考虑配备手套箱



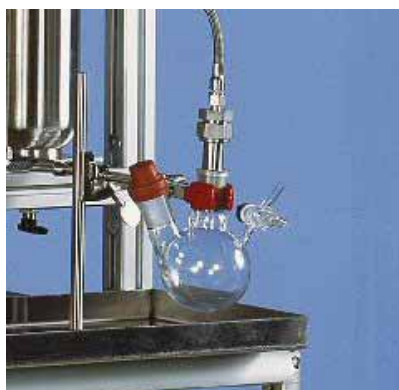
Dispensing Options 溶剂配送线选择

Please ask us about our custom air free dispensing solutions.
请联络我们以作查询。



Select Solvent Storage Flasks 选择储存器皿

For Storage and dispensing air-sensitive solvents. With 24/40 ground glass joints and septum inlet PTFE stopcock. Custom designs also available.
储存对空气敏感的溶剂，可放入有分流的储存器内，用户也可以自己设计。



PURE-SOLV 溶剂净化系统全球用户

United States Educational Facilities 美国教育学院

MIT
Indiana University
Harvard University
Boston College
NYU
Harvard University
Boston College
Wesleyan University
SUNY Stony Brook
Yale University
Johns Hopkins University
Stanford University
Rutgers University
University of New Hampshire
Wayne State University
Michigan University
Purdue University
Notre Dame University
Ohio State University
University of Akron
University of Utah
University of Oregon
University of Hawaii
University of South Carolina
University of North Carolina
North Carolina State University
Cal State University
University of California at Santa Barbara

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Aventis Pharmaceutical
Advantium Research
Degussa Metals
Proctor & Gamble
IBM

International Educational Facilities 全球教育学院

上海有机研究所
浙江大学
通用电器(中国)技术中心
香港大学
香港科技大学
星加坡大学
Imperial College - England
Sheffield University - England
Leicester University - England
York University - England
Durham University - England
St Andrews University - Scotland
University of Edinburgh - Scotland
LCMT - France
University of Augsburg - Germany
University of Lausanne - Switzerland
University of Graz - Austria
University of Eindhoven - Netherlands
University of Maquarie - Australia
Ben-Gurion University - Israel
University of Singapore - Singapore
ICIQ - Spain
University of Zaragosa - Spain
University of Tasmania - Australia



溶剂净化系统报价及技术查询

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