

Safely recover vapors after solvent evaporation

The recovery of solvents from samples after evaporation is complete is critical for safety. Without the aid of a trap, solvents would be released into the environment, exposing users to harmful vapors. Thermo Scientific offers two types of vapor recovery systems when using a modular vacuum concentrator system: Thermo Scientific™ Savant™ Refrigerated Vapor Traps and Thermo Scientific™ Savant™ Universal Vacuum Systems.

Choosing a solvent extraction system

If you are using an oil pump with your vacuum concentrator, a refrigerated vacuum trap will complete your vacuum system. Alternatively a universal vacuum system is ideal if you do not already have a refrigerated vacuum trap or prefer to use an oil-free pump.

Benefits

Savant Refrigerated Vacuum Trap

- Reliable, easy-to-use benchtop cold traps for solvent vapor condensation and collection
- A replacement for dry ice/methanol traps and helps protect high-vacuum rotary vane oil pumps in a vacuum system



Savant Refrigerated Vacuum Trap RVT5105 (front) and Savant Universal Vacuum System UVS450 (rear)

Savant Universal Vacuum System

- Low-maintenance vacuum system offers an alternative to systems based on an oil-filled vacuum pump, which require frequent maintenance and can be damaged by contaminating liquids
- Multi-purpose vacuum source and solvent recovery systems combined into a single, integrated unit
- Systems include a refrigerated vapor trap and an oil-free vacuum pump
- Thermo Scientific VaporNet™ technology allows increased control in the flow of molecules between the cold trap and vacuum in the UVS450A and UVS850 Vacuum Trap models

Savant Refrigerated Vapor Trap product specifications

	RVT5105	RVT450
Physical properties		
Dimensions (W x D x H)	24 x 24 x 18.3 in (61 x 61 x 47 cm)	14 x 24 x 12 in (35 x 31 x 60 cm)
Weight	150 lb (68 kg)	71 lb (32 kg)
Operational specifications		
Capacity	4 L	4 L
Temperature	-105°C	-50°C
Solvent types	High boiling point solvents Low boiling solvents (DMSO, DMF)	Aqueous, organic solvents MEOH, ACN
Operational requirements		
Electrical 115 V	50/60Hz	50/60Hz
Electrical 230 V	50/60Hz	50/60Hz
Plug 115 V	NEMA 5-15P	NEMA 5-15P
Plug 230 V	SCHUKO CEE 7-7 (European plug), IEC 60320 C13 (Chinese Plug), B1363W/13A (UK plug)	SCHUKO CEE 7-7 (European plug), IEC 60320 C13 (Chinese Plug), B1363W/13A (UK plug)
Compliance		
Certifications	UL Listed to US and Canadian requirements. CE marked.	
Included accessories		
Glass condensation flask	GCF400	GCF400
Flask cap	FC400	FC400
Recommended accessories		
Heat transfer fluid	CryoCool™ SCC1 Fluid 1L, or CryoCool SCC5 Fluid 5L	CryoCool SCC1 Fluid 1L, or CryoCool SCC5 Fluid 5L



Savant RVT5105 Refrigerated Vapor Trap, Glass Condensation Flask and Flask Cap, disassembled



Savant RVT450 Refrigerated Vapor Trap, Glass Condensation Flask and Flask Cap, assembled



Savant UVS450 Universal Vacuum System



Savant UVS850DDA Universal Vacuum System

Savant Universal Vacuum System product specifications

	UVS450 (115V)/UVS450A (230V)	UVS850DDA
Physical properties		
Dimensions (W x D x H)	14 x 18 x 24 in (25 x 45 x 60 cm)	14 x 18 x 24 in (25 x 45 x 60 cm)
Weight	113 lb (51 kg)	126 lb (57 kg)
Operational specifications		
Capacity	4 L	4 L
Temperature	-50°C	-50°C
Solvent types	Aqueous, organic solvents MEOH, ACN	High boiling point solvents using the vapor-net* feature; low boiling point solvents
Operational requirements		
Electrical 115 V	60Hz	60Hz
Electrical 230 V	50Hz	50Hz
Plug 115 V	NEMA 5-15P	NEMA 5-15P
Plug 230 V	SCHUKO CEE 7-7 (European plug), IEC 60320 C13 (Chinese Plug), B1363W/13A (UK plug)	SCHUKO CEE 7-7 (European plug), IEC 60320 C13 (Chinese Plug), B1363W/13A (UK plug)
Recommended accessories		
Ammonia neutralizing	Post-trap Assembly ANT100	Ammonia-neutralizing Solution ANS121/4
Heat transfer fluid	CryoCool SCC1 Fluid 1L, or CryoCool SCC5 Fluid 5L	CryoCool SCC1 Fluid 1L, or CryoCool SCC5 Fluid 5L

* Vapor-net: Vapor net prevents pump contamination and extends pump life by increasing the solvent vapor dwell time in the refrigerated vapor trap. It prevents volatile emissions. Vapor net can be used with aggressive high and low boiling point solvents.

Compatible pump options to use with SpeedVac Vacuum Concentrators

Description	Pump Displacement	Cat. No.
Oil-free FTE/PFA 4-headed vacuum pump	30 L/min throughput at 50 Hz	OFF400
Oil-free scroll pump	96.7 L/min throughput at 50 Hz	OFF5C
Oil vacuum pump for freeze drying	76 L/min throughput at 60 Hz	FDP80
Oil vacuum pump for freeze drying	195 L/min throughput at 60 Hz	FDP200
Oil vacuum pump for freeze drying	195 L/min throughput at 60 Hz	VLP195FD
Deep oil vacuum pump for freeze drying	116 L/min throughput at 60 Hz; 97 L/min throughput at 50 Hz	VLP120
Deep oil vacuum pump for freeze drying	195 L/min throughput at 60 Hz; 162 L/min throughput at 50 Hz	VLP200
Deep oil vacuum pump for freeze drying	283 L/min throughput at 60 Hz; 237 L/min throughput at 50 Hz	VLP285
Deep oil vacuum pump for freeze drying	76 L/min throughput at 60 Hz; 62 L/min throughput at 60 Hz	VLP80