



Thermo Scientific Savant SpeedVac  
Concentrators and SpeedVac Kits



**your samples**  
**our obsession**

**Thermo**  
SCIENTIFIC



|                                    |                      |                                       |  |                            |  |              |  |
|------------------------------------|----------------------|---------------------------------------|--|----------------------------|--|--------------|--|
| 4-5                                | 6-17                 | 18-21                                 | 22-23  | 24-27                      | 28-29  | 30           | 31   |
| <b>SpeedVac Kit Selector Guide</b> | <b>SpeedVac Kits</b> | <b>Explorer SpeedVac Concentrator</b> | <b>Concentrator Technical Specifications</b> | <b>Rotors and Carriers</b> | <b>Refrigerated Vapor Traps and Universal Vacuum Systems</b> | <b>Pumps</b> | <b>Chemical Traps, Tubing Kits and Accessories</b> |

# Quick and efficient sample evaporation

**We invented the centrifugal vacuum concentrator and decades after this breakthrough innovation, scientists around the world continue to use Thermo Scientific Savant SpeedVac concentrators to remove solvents from their samples.**

Our SpeedVac® systems use state-of-the-art centrifugation, vacuum and heat technologies for removing solvents and concentrating samples

while maintaining sample integrity. As a market leader who invented the centrifugal vacuum concentrator, we are able to offer a diverse product range, providing solutions for a wide variety of solvent applications. These applications range from the traditional drying down of DNA preparations in water and methanol, to the more complex and aggressive applications presented by the combinatorial chemistry and drug discovery sectors of the pharmaceutical industry.

## To make the selection of a SpeedVac system easier than ever, we now offer SpeedVac Kits.

SpeedVac kits are complete packages designed for your most popular applications. Now it is easier than ever to get the perfect SpeedVac system. Everything you need is under one part number. See pages 4 and 5 for details on selecting the right SpeedVac kit for your needs.

## Configure your own SpeedVac system

We offer the widest choice of vacuum concentrators in the industry. You can choose to configure your system by choosing a concentrator, pump, cold traps, rotor and accessories. See pages 22 and 23 for information on configuring your own SpeedVac system.



# Thermo Scientific Savant SpeedVac Kit Selector Guide:

There are several things to consider when choosing your SpeedVac system. Selecting the correct system is crucial for optimum performance and reliability. All of our SpeedVac kits are complete systems, containing everything you need under one part number – no guesswork, no hassle. Use the selection guide below to select the right system for your application.

## SpeedVac Kits include four main components:

- Concentrator
  - Trap
  - Rotor
  - Pump
- In addition, our SpeedVac kits have all the necessary components and accessories under one part number

## Choose the right SpeedVac Kit for your solvent or solvent combination

1. Look at the solvent and/or solvent combinations column in the left side of the chart below, and determine which you will be running.



| Model No.                               | DNA120                            | DNA120-OP                         | ISS110 P1                         | SPD1010 P1                        | SPD111V P1                       | SPD111V P2                       | SPD121P P1                        |         |
|---|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|---------|
| <b>Rotor Included with SpeedVac kit</b> | 36 X 1.5 ml microcentrifuge tubes | 36 X 1.5 ml microcentrifuge tubes | 64 X 1.5 ml microcentrifuge tubes | 40 X 1.5 ml microcentrifuge tubes | 40 X 1.5 m microcentrifuge tubes | 40 X 1.5 m microcentrifuge tubes | 64 X 1.5 ml microcentrifuge tubes |         |
|   | <b>Small Capacity</b>             |                                   | <b>Medium Capacity</b>            |                                   |                                  |                                  |                                   |         |
| <b>SOLVENT</b>                          |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Acetic Acid                             |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| Acetone                                 |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| Acetonitrile                            |                                   |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Ammonium Hydroxide                      |                                   | INTEGRATED*                       |                                   |                                   |                                  |                                  |                                   |         |
| Chloroform                              |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| DMSO                                    |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| DMF                                     |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Ethanol                                 |                                   |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Ethyl Acetate                           |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| Formic Acid                             |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Hexane                                  |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| Hydrochloric Acid                       |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Isopropanol                             |                                   | INTEGRATED*                       | INTEGRATED                        |                                   | MODULAR                          |                                  |                                   |         |
| Methanol                                |                                   |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Methylene Chloride                      |                                   |                                   |                                   | INTEGRATED                        |                                  |                                  |                                   | MODULAR |
| PCR Buffers (Aqueous)                   | INTEGRATED*                       |                                   | INTEGRATED                        |                                   |                                  |                                  |                                   |         |
| Toluene                                 |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| TFA                                     |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Water                                   | INTEGRATED*                       |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| <b>SOLVENT COMBINATIONS</b>             |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Acetonitrile and Water                  |                                   |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Methylene Chloride and TFA              |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Methanol and Chloroform                 |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| Ethanol and Water                       | INTEGRATED*                       |                                   | INTEGRATED                        |                                   | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Methanol and Water                      |                                   |                                   |                                   | INTEGRATED                        | MODULAR                          | LYOPHILLIZATION                  |                                   |         |
| Acetone and HCL                         |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Drug Metabolites in SPE/Urine           |                                   |                                   |                                   |                                   |                                  |                                  |                                   | MODULAR |
| DCM and Heptane                         |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| Methylene Chloride and MEOH             |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| THF/Pyridine (95:5)                     |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |
| DMSO and Methanol                       |                                   |                                   |                                   |                                   |                                  |                                  |                                   |         |

2. Scroll across the chart to determine which SpeedVac kit is right for you. For your convenience, the chart is separated by colors with small capacity models on the left, medium capacity in the middle and large capacity on the right.

Choosing a large capacity system may be necessary if you are handling large sample volumes, or need a high throughput of samples. Rotors included with the SpeedVac kit are noted just under the model number. If you need a different rotor/capacity, see our additional rotors on pages 24-27.

3. If a highlighted cell says INTEGRATED, that means this concentrator has a built-in pump and cold trap, requiring less set-up time and transport.

Cells with MODULAR include a pump and cold trap, separate from the concentrator unit, allowing for greater flexibility in set-up space and for use with other equipment such as a gel dryer.

Cells with LYOPHILLIZATION indicate SpeedVac kits designed for this application.

## Don't see your solvent, solvent combination, or capacity requirements on this chart?

You can still configure your own SpeedVac system. Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com)

## Accessories

Additional accessories are available to enhance the performance of your SpeedVac system. See pages 24-27 for a listing of additional rotors and accessories.



|                               | SPD131DDA P1       | SPD131DDA P2                         | SPD2010 P1                         | SC210 P1            | SC250EXP P1                              | SC250EXP P2                              |
|-------------------------------|--------------------|--------------------------------------|------------------------------------|---------------------|--|--|
|                               | 40 X 12x75mm tubes | 24 X 1 dram vials (15 x 45 mm) tubes | 200 X 1.5 ml microcentrifuge tubes | 200 X 12x75mm tubes | 4 shallow or 4 deepwell microwell plates | 4 shallow or 4 deepwell microwell plates |
|                               | Medium Capacity    |                                      | Large Capacity                     |                     |  |  |
| SOLVENT                       |                    |                                      |                                    |                     |  |  |
| Acetic Acid                   | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Acetone                       |                    |                                      |                                    |                     | MODULAR                                  |  |
| Acetonitrile                  |                    |                                      | INTEGRATED                         | MODULAR             |  |  |
| Ammonium Hydroxide            | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Chloroform                    |                    |                                      |                                    |                     |  | MODULAR                                  |
| DMSO                          |                    | MODULAR                              |                                    |                     |  | MODULAR                                  |
| DMF                           |                    | MODULAR                              |                                    |                     |  | MODULAR                                  |
| Ethanol                       |                    |                                      | INTEGRATED                         | MODULAR             |  |  |
| Ethyl Acetate                 |                    |                                      |                                    |                     | MODULAR                                  |  |
| Formic Acid                   | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Hexane                        |                    |                                      |                                    |                     | MODULAR                                  |  |
| Hydrochloric Acid             | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Isopropanol                   |                    |                                      |                                    |                     |  |  |
| Methanol                      |                    |                                      | INTEGRATED                         | MODULAR             |  |  |
| Methylene Chloride            |                    |                                      |                                    |                     | MODULAR                                  |  |
| PCR Buffers (Aqueous)         |                    |                                      | INTEGRATED                         |                     |  |  |
| Toluene                       |                    | MODULAR                              |                                    |                     |  | MODULAR                                  |
| TFA                           | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Water                         |                    |                                      | INTEGRATED                         | MODULAR             |  |  |
| SOLVENT COMBINATIONS          |                    |                                      |                                    |                     |  |  |
| Acetonitrile and Water        |                    |                                      | INTEGRATED                         | LYOPHILLIZATION     |  |  |
| Methylene Chloride and TFA    | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Methanol and Chloroform       |                    |                                      |                                    |                     |  | MODULAR                                  |
| Ethanol and Water             |                    |                                      | INTEGRATED                         | LYOPHILLIZATION     |  |  |
| Methanol and Water            |                    |                                      | INTEGRATED                         | LYOPHILLIZATION     |  |  |
| Acetone and HCL               | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| Drug Metabolites in SPE/Urine |                    |                                      |                                    |                     | MODULAR                                  |  |
| DCM and Heptane               |                    |                                      |                                    |                     | MODULAR                                  |  |
| Methylene Chloride and MEOH   | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |
| THF/Pyridine (95:5)           |                    |                                      |                                    |                     | MODULAR                                  |  |
| DMSO and Methanol             | MODULAR            |                                      |                                    |                     | MODULAR                                  |  |

# Thermo Scientific Savant DNA120, DNA120-OP and ISS110 SpeedVac Kits

Our easy-to-use, small capacity DNA120 and ISS110 SpeedVac kits are the ideal choice for nucleic acid applications.



Savant DNA120 SpeedVac Kit includes 36 x 1.5 mL rotor

## Savant™ DNA120

The Thermo Scientific Savant DNA120 high-performance DNA SpeedVac Concentrator offers rapid and efficient concentration, and drying of small-volume DNA/RNA samples.

## Savant DNA 120-OP

Designed for use with oligos, our Savant DNA 120-OP model features a glass cover that is chemically resistant to Ammonium Hydroxide. Also included is an ANT100 post trap with ammonia neutralizing solution ANS121.

### What's included in SpeedVac Kits?

#### Savant DNA120

- DNA concentrator with integrated pump
- RD36 rotor for 36 x 1.5mL microtubes

#### Savant DNA120-OP

- DNA concentrator with integrated pump and glass cover
- RD36 rotor for 36 x 1.5mL microtubes
- ANT100 chemical trap
- ANS121 ammonium neutralizing solution

### Product Features

- Corrosion resistant, PTFE coated chamber provides years of lasting service
- Built-in, oil free vacuum pump provides maintenance-free operation
- Integrated and compact design
- Extremely quiet operation
- Choice of three drying rates.
- Dual digital timers for independent control of heat and run times

### Solvents and Solvent Combinations - DNA120

- PCR buffers (aqueous)
- Water
- Ethanol and water

### Solvents and Solvent Combinations - DNA120-OP

- Ammonium hydroxide
- Isopropanol
- PCR buffers (aqueous)

### Typical Applications - DNA120

- DNA/RNA preparation prior to analysis by electrophoresis or microarrays
- Labeling cDNA with fluorescent dyes
- Drying PCR samples in aqueous buffers

### Typical Applications - DNA120-OP

- Drying synthetic oligonucleotides in ammonium hydroxide

For additional rotors and accessories see pages 24-27  
For detailed technical specification see page 22-23

Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com)  
for applications support.



ISS110 P1 SpeedVac Kit includes built-in cold trap, pump, 64 x 1.5 mL rotor and 1L bottle of Thermo Scientific CryoCool heat transfer fluid



### Savant ISS110

The Savant ISS110 high-capacity DNA SpeedVac vacuum concentrator is designed for efficient processing of large batches of DNA/RNA samples.

#### Product Features

- Built in ETFE coated vacuum pump provides years of lasting service
- Integrated, four liter -50°C refrigerated vapor trap
- Choice of three drying rates

#### Recommended Solvents and Solvent Combinations

- PCR buffers (aqueous)
- Ethanol and water
- Isopropanol

#### Typical Applications - ISS110

- DNA/RNA preparation prior to analysis by electrophoresis or microarrays
- Labeling cDNA with fluorescent dyes
- Drying PCR samples in aqueous buffers

#### What's included in Savant ISS110 P1 SpeedVac Kit?

- Basic integrated concentrator system with vacuum pump and -50°C cold trap
- 64 x 1.5mL rotor (RH64-11)
- CryoCool™ heat transfer fluid (1L)

### Savant DNA120, DNA120-OP and ISS110 SpeedVac Kit Ordering Information

| Model No.     | Description             | Voltage    | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|---------------|-------------------------|------------|---------------------------------------|--------------------------|
| DNA120-115    | DNA120 SpeedVac Kit     | 115V/60 Hz | 11 x 11 x 25 (290 x 290 x 630)        | 86 (39)                  |
| DNA120-230    | DNA120 SpeedVac Kit     | 230V/50 Hz | 11 x 11 x 25 (290 x 290 x 630)        | 86 (39)                  |
| DNA120-OP-115 | DNA 120-OP SpeedVac Kit | 115V/60 Hz | 11 x 11 x 25 (290 x 290 x 630)        | 86 (39)                  |
| DNA120-OP-230 | DNA 120-OP SpeedVac Kit | 230V/50 Hz | 11 x 11 x 25 (290 x 290 x 630)        | 86 (39)                  |
| ISS110P1-115  | ISS110 P1 SpeedVac Kit  | 115V/60 Hz | 25 x 16 x 26 (620 x 380 x 660)        | 152 (69)                 |
| ISS110P1-230  | ISS110 P1 SpeedVac Kit  | 230V/50 Hz | 25 x 16 x 26 (620 x 380 x 660)        | 152 (69)                 |

# Thermo Scientific Savant SPD1010 and SPD2010 SpeedVac Kits

Our integrated Savant SpeedVac concentrators feature a microprocessor control panel with digital display. Both models fully incorporate four individual components: concentrator bowl, refrigerated trap, vacuum gauge and a diaphragm pump.



SPD1010 P1 SpeedVac Kit includes 40 x 1.5 mL rotor and 1L bottle of CryoCool heat transfer fluid

## Savant SPD1010 and SPD2010 Product Features

- Easily programmable
- Integrated design for plug-in simplicity and control
- Digital display for viewing and setting parameters (time, temperature, vacuum)
- Vacuum control for vacuum ramping and ultimate level setting to optimize drying times and eliminate bumping of different solvent mixtures
- Choose the SPD1010 model for capacities up to 100mL; SPD2010 model for capacities up to 500mL
- All-in-one design makes setup and installation easy
- Dual timers for independent control of heater and run time

- Oil-free vacuum source eliminates the need to add/change oil
- Standard PTFE coated chamber
- Radiant cover for chemical resistance and added heat source (enhanced drying times)
- Standard glass safety lids

## Solvent and Solvent Combinations - SPD1010

- Acetonitrile
- Ethanol
- Methanol
- Methylene Chloride
- Water
- Acetonitrile and Water
- Methanol and Water

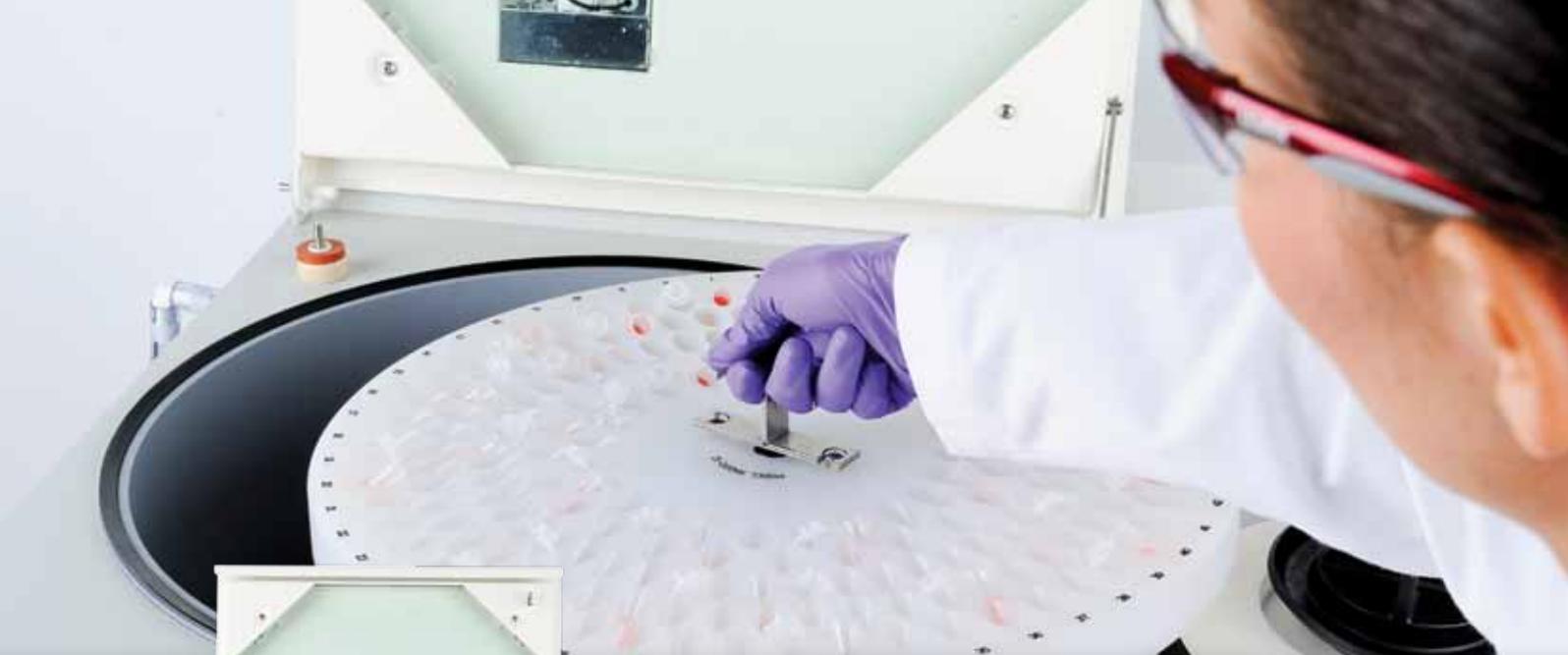
## Solvent and Solvent Combinations - SPD2010

- Acetonitrile
- Ethanol
- Methanol
- Water
- Acetonitrile and Water
- Ethanol and Water
- Methanol and Water

## Typical Applications - Both Models

- HPLC fractions with water/0.1% trifluoroacetic acid
- Reversed-phase SPE eluants

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.



SPD2010 P1 SpeedVac Kit includes 200 x 1.5 mL rotor and 1L bottle of CryoCool heat transfer fluid

### What's included in the following SpeedVac Kits?

#### Savant SPD1010 P1

- Integrated SpeedVac system including oil-free vacuum pump and -50°C cold trap
- 40 x 1.5mL rotor (RH40-11)
- CryoCool heat transfer fluid (1L)

#### Savant SPD2010 P1

- Integrated SpeedVac system including oil-free vacuum pump and -50°C cold trap
- 200 x 1.5mL rotor (RH200-12)
- CryoCool heat transfer fluid (1L)

Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com) for applications support.

### Savant SPD1010 and SPD2010 SpeedVac Kit Ordering Information

| Model No.     | Description             | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|---------------|-------------------------|-------------|---------------------------------------|--------------------------|
| SPD1010P1-115 | SPD1010 P1 SpeedVac Kit | 115 V/60 Hz | 32 x 40 x 35 (813 x 1016 x 889)       | 190 (86)                 |
| SPD1010P1-230 | SPD1010 P1 SpeedVac Kit | 230 V/50 Hz | 32 x 40 x 35 (813 x 1016 x 889)       | 190 (86)                 |
| SPD2010P1-220 | SPD2010 P1 SpeedVac Kit | 220 V/60 Hz | 32 x 40 x 33 (813 x 1016 x 838)       | 260 (118)                |
| SPD2010P1-230 | SPD2010 P1 SpeedVac Kit | 230 V/50 Hz | 32 x 40 x 33 (813 x 1016 x 838)       | 260 (118)                |

# Thermo Scientific Savant SPD111V P1 and P2 SpeedVac Kits

Our modular concentrators provide flexibility for your benchtop space. Perfect for evaporation, non-aggressive organics such as methanol, acetonitrile, water and HPLC fractions. Choose the SPD111V P1 SpeedVac kit for standard evaporation or the SPD111V P2 SpeedVac kit when you want to lyophilize.



## Savant SPD111V P1 and P2 Product Features

- Variable drying rate
- Time/temperature display incorporating membrane touch pad switches
- Safety coverlock
- Manual/auto timed run
- Choose the SPD111V P2 for lyophilization applications
- Deep aluminium PTFE coated chamber
- Standard glass safety lid

## Solvent and Solvent Combinations - SPD111V P1

- Acetonitrile
- Ethanol
- Isopropanol
- Methanol
- Water
- Acetonitrile and Water
- Ethanol and Water
- Methanol and Water

## Solvent and Solvent Combinations - SPD111V P2

- Acetonitrile
- Ethanol
- Methanol
- Water
- Acetonitrile and Water
- Ethanol and Water
- Methanol and Water

Savant SPD111V P1 SpeedVac kit includes universal vacuum system with oil free pump and -50°C cold trap, a 40x1.5ml tube rotor, glass flask, tubing and fitting kit, and 1L bottle of CryoCool heat transfer fluid





Savant SPD111V P2 SpeedVac kit includes ultra-low temperature vapor trap, vacuum pump and accessories pictured below.

### Typical Applications

- Drying biomolecules in HPLC fractions
- Evaporating purification solvents
- Drying extracts of natural products in drug assays
- Lyophilization for all the above (SPD111V P2)

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.

Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com) for applications support.

### What's included in SpeedVac Kits?

#### Savant SPD111V P1

- SpeedVac concentrator, molecular biology
- Universal vacuum system (UVS 400) including an oil-free vacuum pump and a -50°C refrigerated vapor trap
- Glass condensation flask
- 40 x 1.5mL rotor (RH40-11)
- Tubing package including 12' of thick-walled vacuum tubing, cutter, clamps and fittings, BV130 manual bleed valve and instructions
- CryoCool heat transfer fluid (1L)

#### Savant SPD111V P2

- SpeedVac concentrator, basic molecular biology
- -105°C, ultra-low temperature refrigerated vapor trap
- VPL120 high vacuum pump
- 40 x 1.5mL rotor (RH40-11)
- Universal tubing package
- Digital vacuum gauge
- Chemical trap kit for use with disposable cartridge
- Disposable cartridge with color indicator for trapping acids and water vapor
- Glass condensation flask
- Vacuum pump lubricating oil
- CryoCool heat transfer fluid (1L)



### Savant SPD111 V SpeedVac Kit Ordering Information

| Model No.     | Description             | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|---------------|-------------------------|-------------|---------------------------------------|--------------------------|
| SPD111VP1-115 | SPD111V P1 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 300 (136)                |
| SPD111VP1-230 | SPD111V P1 SpeedVac Kit | 230 V/50 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 300 (136)                |
| SPD111VP2-115 | SPD111V P2 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 360 (164)                |
| SPD111VP2-230 | SPD111V P2 SpeedVac Kit | 230 V/50 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 360 (164)                |

# Thermo Scientific Savant SPD121P, SPD131DDA SpeedVac Kits

Reliable and versatile our SPD121P and 131DDA SpeedVac Kits can be used with a wide variety of solvents. The SPD131DDA kits offer resistance to TFA, DMSO and other aggressive solvents used in combinatorial chemistry applications.

## Savant SPD121P

### Product Features

- Deep aluminum PTFE coated chamber
- Safety cover lock
- Radiant glass safety cover improves drying time by applying radiant IR heat to samples
- PTFE plumbing and tubing
- Two valve manifold with built-in automatic bleeder valve
- Time/temperature display incorporating membrane touch pad switches
- Time/vacuum run
- Variable drying times from 35°C to 80°C in 5 degree increments
- Manual/auto timed run
- Endpoint mode terminates run when pre-set vacuum level is reached
- Built-in vacuum gauge and vacuum display
- Standard glass safety lids

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.

Contact us at  
[speedvac@thermofisher.com](mailto:speedvac@thermofisher.com)  
for applications support.

### Solvents and Solvent

#### Combinations - SPD121P P1

- Acetone
- Chloroform
- Ethyl acetate
- Hexane
- Methylene chloride

### Typical Applications

- Removing ethyl acetate from samples for CAT assay
- Drug metabolites in solid phase extracts
- Analyte elution solvents for evaporation.



### What's included in the Savant SPD121P P1 SpeedVac Kit?

- SpeedVac concentrator
- -105°C, ultra-low temperature refrigerated vapor trap
- OFP400 oil free, ETFE/PFA four-headed pump
- 64 x 1.5mL rotor (RH64-11)
- Digital vacuum gauge
- Chemical trap kit for use with disposable cartridge
- Disposable cartridge with color indicator for trapping acids and water vapor
- Tubing and fitting kit including 4' of clear, thick-walled vacuum tubing, two clamps and a cutter
- Glass condensation flask
- CryoCool heat transfer fluid (1L)

## Savant SPD121 P SpeedVac Kit Ordering Information

| Model No.     | Description             | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|---------------|-------------------------|-------------|---------------------------------------|--------------------------|
| SPD121PP1-115 | SPD121P P1 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 355 (161)                |
| SPD121PP1-230 | SPD121P P1 SpeedVac Kit | 230V/50Hz   | 32 x 34 x 82 (813 x 864 x 2083)       | 355 (161)                |



## Savant SPD131DDA

### Product Features

- All the product features of the SPD121P plus:
- Radiant lamps within the chamber
- Heated lid for processing high boiling solvents (DMSO, DMF)
- Wider vapor port and tubing for enhanced vapor throughput – reducing drying times
- Adjustable vacuum level for preventing bumping of difficult solvent mixtures and optimizing drying times
- -5°C trap specifically designed for trapping high boiling point solvents
- Standard glass safety lids

### Solvents and Solvent Combinations - SPD131DDA P1

- Acetic acid
- Ammonium hydroxide
- Formic acid
- Hydrochloric acid
- TFA
- Methylene chloride and TFA
- Acetone and HCL
- Methylene chloride and MEOH
- DMSO and methanol

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.

### Solvents and Solvent Combinations - SPD131DDA P2

- DMSO
- DMF
- Toluene

### Typical Applications - SPD131DDA P1

- Solid phase extractions
- Drying lipid extracts
- Flash chromatography fractions
- Solid phase synthesis cleavage solutions such as protein hydrolyzates and evaporating synthesis solids



### Typical Applications - SPD131DDA P2

- Compound management
- Evaporating dissolution solvents

### What's included in the following SpeedVac Kits?

#### Savant SPD131DDA P1

- SpeedVac concentrator, acid resistant
- -105°C, ultra-low temperature refrigerated vapor trap
- OFP400 oil free, ETFE/PFA four-headed pump
- Rotor (RH40-12) for 40 12 x 75mm glass tubes
- Glass condensation flask
- CryoCool heat transfer fluid (1L)
- Tubing and fitting kit including 4' of clear, thick-walled vacuum tubing, two clamps and a cutter

#### Savant SPD131DDA P2

- SpeedVac concentrator, basic molecular biology
- -5°C refrigerated vapor trap
- Vacuum pump
- Rotor (RH24-15) for 15 15 x 45mm 1 dram vials
- Chemical trap kit for use with disposable cartridge
- Disposable cartridge with color indicator for trapping acids and water vapor
- Tubing and fitting kit including 4' of clear, thick-walled vacuum tubing, two clamps and a cutter
- Glass condensation flask
- CryoCool heat transfer fluid (1L)
- Vacuum pump lubricating oil

### Savant SPD131 DDA SpeedVac Kit Ordering Information

| Model No.       | Description               | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|-----------------|---------------------------|-------------|---------------------------------------|--------------------------|
| SPD131DDAP1-115 | SPD131DDA P1 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 355 (161)                |
| SPD131DDAP1-230 | SPD131DDA P1 SpeedVac Kit | 230 V/50 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 355 (161)                |
| SPD131DDAP2-115 | SPD131DDA P2 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 350 (159)                |
| SPD131DDAP2-230 | SPD131DDA P2 SpeedVac Kit | 230 V/50 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 350 (159)                |

# Thermo Scientific Savant SC210 P1 SpeedVac Kits

Our SC210 P1 SpeedVac kit features an easy-to-use, large capacity concentrator. Use the complete kit package for HPLC fraction and reversed-phase SPE eluant applications.

## Savant SC210

### Product Features

- PTFE coated chamber provides long lasting durability against harsh solvents
- Three selectable heating levels to optimize evaporation
- Automatic bleeder valve automatically provides vacuum at the beginning of a run and bleeds chamber to atmospheric pressure at the end of a run

### Recommended Solvents and Solvent Combinations

- Acetonitrile
- Methanol
- Ethanol
- Water

### Typical Applications

- HPLC fractions with water/0.1% trifluoroacetic acid
- Reversed-phase SPE eluants



Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com) for applications support.

Savant SC210 P1 SpeedVac kit includes ultra-low temperature vapor trap, vacuum pump and accessories pictured here.





#### What's included in the Savant SC210 P1 SpeedVac Kit?

- High-capacity SC210A SpeedVac concentrator
- -105°C, ultra-low temperature refrigerated vapor trap
- VLP120 vacuum pump
- 200 x 1.5mL rotor (RH200-12)
- Digital vacuum gauge
- Universal tubing package
- Chemical trap for use with disposable cartridge
- Disposable cartridge with color indicator for trapping acids and water vapor
- Glass condensation flask
- CryoCool heat transfer fluid (1L)

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.

#### Savant SC210 P1 SpeedVac Kit Ordering Information

| Model No.   | Description           | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|-------------|-----------------------|-------------|---------------------------------------|--------------------------|
| SC210P1-115 | SC210 P1 SpeedVac Kit | 115 V/60 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 450 (205)                |
| SC210P1-230 | SC210 P1 SpeedVac Kit | 230 V/50 Hz | 32 x 34 x 82 (813 x 864 x 2083)       | 450 (205)                |

# Thermo Scientific Savant SC250EXP SpeedVac Kits

Our SC250EXP large-capacity benchtop SpeedVac Kits have everything you need to effectively concentrate high boiling point solvents and strong acids and bases. Dual vacuum control provides flexibility to use many solvent types.



## Savant SC250EXP

### Product Features

- Four IR heat lamps for drying high-boiling point solvents such as DMSO and DMF
- Dual vacuum control of RAMP and LEVEL eliminates samples from bumping and/or freezing, provides optimization for various sample types
- Kalrez® and PTFE coated materials along the entire vapor path for maximum chemical resistance and durability
- Dual valve mechanism for improved durability and exhausting
- Comes complete with enlarged vacuum port, extra wide tubing and new extra large mouth glass condensation flask
- Heated glass lid reduces drying times and prevents condensation
- Digital display of parameters (time, temperature & vacuum)
- Standard glass safety lids

### Solvents and Solvent Combinations - SC250EXP P1

- Acetic acid
- Acetone
- Ammonium hydroxide
- Formic acid
- Hydrochloric acid
- TFA
- Methylene chloride and water
- Drug metabolites in SPE/urine
- DCM and heptane
- Methylene chloride and MEOH
- THF/Pyridine (95:5)
- DMSO and methanol

### Solvent and Solvent Combinations - SC250EXP P2

- Chloroform
- DMSO
- DMF
- Ethyl acetate
- Hexane
- Toluene
- Methanol and chloroform

### Typical Applications - SC250EXP P1

- Solid phase extractions
- Drying lipid extracts
- Flash chromatography fractions
- Solid phase synthesis cleavage solutions such as protein hydrolyzates and evaporating synthesis solids

### Typical Applications - SC250EXP P2

- Complete management of evaporating dissolution solvents

See pages 24-27 for additional rotors and accessories. For detailed technical specifications see page 22-23.

Contact us at  
[speedvac@thermofisher.com](mailto:speedvac@thermofisher.com)  
for applications support.

## Savant SPD250EXP SpeedVac Kit Ordering Information

| Model No.   | Description              | Voltage     | Shipping Dimensions W x H x D in (mm) | Shipping Weight lbs (kg) |
|-------------|--------------------------|-------------|---------------------------------------|--------------------------|
| SC250P1-115 | SC250EXP P1 SpeedVac Kit | 115 V/60 Hz | 18 x 18 x 25 (450 x 460 x 620)        | 127 (58)                 |
| SC250P1-230 | SC250EXP P1 SpeedVac Kit | 230 V/50 Hz | 18 x 18 x 25 (450 x 460 x 620)        | 127 (58)                 |
| SC250P2-115 | SC250EXP P2 SpeedVac Kit | 115 V/60 Hz | 18 x 18 x 25 (450 x 460 x 620)        | 127 (58)                 |
| SC250P2-230 | SC250EXP P2 SpeedVac Kit | 230 V/50 Hz | 18 x 18 x 25 (450 x 460 x 620)        | 127 (58)                 |



#### What's included in the Savant SC250EXP P1 SpeedVac Kit?

- SC250 express concentrator
- -105°C, ultra-low temperature refrigerated vapor trap
- VLP120 vacuum pump
- Model FPR4A rotor and a set of four UPC1 single shelf microplate carriers
- Glass condensation flask
- Tubing kit including 4' of clear, thick-walled vacuum tubing, two clamps and a cutter
- Vacuum pump lubricating oil
- CryoCool heat transfer fluid (1L)

#### What's included in the Savant SC250EXP P2 SpeedVac Kit?

- SC250 express concentrator
- -5°C refrigerated vapor trap
- VLP120 vacuum
- Model FPR4A rotor and a set of four UPC1 single shelf microplate carriers
- Glass condensation flask
- Tubing kit including 4' of clear, thick-walled vacuum tubing, two clamps and a cutter
- Vacuum pump lubricating oil
- CryoCool heat transfer fluid (1L)

With additional accessories, the SC250EXP large capacity concentrator can be used with up to 140 12x100mm tubes or 20 shallow well microwell plates. Simply use your FPR4A rotor and UPC-1 carriers with the optional Pro-Rotor block inserts and carriers. See page 24-25 for a configuration flow chart and list of blocks and carriers



# Thermo Scientific Savant Explorer SpeedVac Concentrator

**High-capacity, benchtop concentrator for production and development applications designed to withstand the rigors of the combinatorial chemistry environment**



## Savant Explorer SpeedVac Concentrator

### Product Features

- High capacity – accommodates a large number of samples in a wide variety of formats
- Unique “clam-shell” design for easy, safe access to samples
- Dual cold trap options including the direct-drain configuration or use of the convenient glass flask which can be inserted into the trap
- High efficiency cold trap reduces drying times
- Adjustable temperature range: 35° to 85°C
- Constructed of highly chemically resistant materials withstand constant use with solvents.
- Oil-free, maintenance-free vacuum pump
- Easy-to-use, intuitive control panel
- IntelliTemp™ temperature monitoring and control
- Five pre-programmed vacuum ramps are available to minimize or prevent sample “bumping”
- Power operated lid for convenience and safety
- Control software for PC operation and data-logging

### IntelliTemp Temperature Monitoring and Control

Accurate monitoring and control of the run by temperature is possible with the Explorer's IntelliTemp system. The IntelliTemp probe can be inserted directly into the sample or used to monitor the block or carrier temperature. The "Auto-Dry" function automatically ends the run when a pre-set temperature is reached.

### Advanced Controls for Enhanced Performance and Convenience

Frequently used protocols can be created to determine the primary controls which are:

- Vacuum level
- Temperature
- IntelliTemp
- Heat time
- Radiant lamp time
- Run time
- Vacuum ramp

These can be saved under a user defined alphanumeric file name and recalled at a later time for use.

Contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com) for applications support and custom configurations of your Explorer system.

## Savant Explorer SpeedVac Concentrator Ordering Information

| Model No.     | Description                           | Contains   | Voltage       | Vacuum Pump Capacity    |
|---------------|---------------------------------------|--|---------------|-------------------------|
| EXPLORER-220* | Explorer SpeedVac Vacuum Concentrator | 6-Position Rotor, Glass Flask, Exhaust Recovery Vessel | 220 V / 60 Hz | 36 liters/min. at 60 Hz |
| EXPLORER-230  | Explorer SpeedVac Vacuum Concentrator | 6-Position Rotor, Glass Flask, Exhaust Recovery Vessel | 230 V / 50 Hz | 32 liters/min. at 50 Hz |

\* CryoCool not included

# Advanced Controls for Enhanced Performance and Convenience



## Explorer SpeedVac Rotors and Accessories

| Model No.  | Description   |
|--|---|
| <b>Rotors</b>  |   |
| ESR6   | 6-position Snowflake Rotor. Includes 5 carriers and 1 block probe carrier. Fits tubes up to 150 mm.             |
| EXP-H200   | High Capacity H-Rotor. 8 block capacity. Fits up to 100 mm tube height.   |
| <b>Aluminum Rotor Blocks - Microcentrifuge Tubes</b>   |   |
| RBA25-11-39  | 1.5 mL (11 x 39 mm). Holds 150 tubes (ESRG), 200 tubes (EXP-H200)   |
| <b>Aluminum Rotor Blocks - Glass and Plastic Tubes</b> |   |
| RBA35-13-100   | 13 x 100 mm. Holds 210 tubes (ESRG), 280 tubes (EXP-H200)   |
| RBA24-16-100   | 16 x 100 mm. Holds 144 tubes (ESRG), 192 tubes (EXP-H200)   |
| RBA15-16-125   | 16 x 125 mm. Holds 90 tubes (ESRG)  |
| RBA24-17-60  | 17 x 60 mm. Holds 144 tubes (ESRG), 192 tubes (EXP-H200)  |
| <b>Aluminum Rotor Blocks - Centrifuge Tubes</b>        |   |
| RBA6-30-115  | 50 mL conical (30 x 115 mm). Holds 36 tubes (ESRG)  |
| RBA24-16-100   | 15 mL conical (17 x 120 mm). Holds 144 (ESRG)   |
| <b>Aluminum Rotor Blocks - Vials</b>                   |   |
| RBA54-12-32  | 12 x 32 mm. Holds 324 tubes (ESRG), 432 tubes (EXP-H200)  |
| RBA24-15-45  | 1 dram vials, 15 x 45 mm. Holds 144 tubes (ESRG), 192 tubes (EXP-H200)  |
| RBA12-28-58  | 20 mL scintillation vials, 28 x 58 mm. Holds 72 tubes (ESRG), 96 tubes (EXP-H200)                               |
| <b>Aluminum Rotor Blocks - Flasks</b>                  |   |
| RBA2-FLSK-100  | 100 mL round or flat bottom. Holds 12 tubes (ESRG)  |
| RBA1-FLSK-250  | 250 mL round or flat bottom. Holds 6 tubes (ESRG)   |
| <b>Aluminum Rotor Blocks - Breakers</b>                |   |
| RBA24-17-31  | 3 mL beakers (17 x 31 mm). Holds 144 tubes (ESRG), 192 tubes (EXP-H200)   |
| <b>Aluminum Rotor Blocks - Microplates</b>             |   |
| UPC2-EXP   | Deepwell, shallow well (double shelf carrier). Holds 12 tubes (ESRG)  |
| UPC5-EXP   | Shallow well (5-shelf carrier). Holds 30 tubes (ESRG)   |
| <b>Aluminum Rotor Blocks - Heat Sink Plates</b>        |   |
| HTSP-96V   | V bottom, 96-well microplate  |
| HTSP-96R   | Round bottom, 96-well microplate  |
| HTSP-24R   | Round bottom, 24-well microplate  |
| <b>Accessories for Explorer</b>                        |   |
| EXP-SOFT   | Software Suite for data logging   |
| GCF4-EXP   | Glass flask   |
| PROBE-EXP  | Temperature probes  |
| PTFE-SLV   | PTFE probe covers   |
| CC120/EXP  | Cart  |
| SCT120   | Chemical trap (order cartridges separately)   |
| DC120A   | Disposable cartridge for neutralizing acid  |
| DC120R   | Disposable cartridge for trapping volatile radioactivity  |
| DTK120R  | Chemical trap kit includes SCT120, DC120R and tubing  |
| ANT100   | Post-trap assembly (NSA300TF acid neutralizing and ANS 121/4 ammonia neutralizing solutions ordered separately) |
| ANS121   | Ammonia neutralizing solution   |
| NSA300TF   | Neutralizing solution for acid  |
| SCC1   | CryoCool heat transfer fluid (1L)   |

### Vacuum Display

### Adjustable Vacuum Setting

### Adjustable Vacuum Ramp

### Shipping Dimensions W x H x D in (mm)

### Shipping Weight (Concentrator, Cold Trap, Pump) lbs. (kg)

Atmosphere - 500 mtorr

200 - 0.7 torr, max.

1 to 4, OFF, custom

35.5 x 25 x 25.6 (902 x 635 x 651)

600 (273)

Atmosphere - 500 mtorr

200 - 0.7 torr, max.

1 to 4, OFF, custom

35.5 x 25 x 25.6 (902 x 635 x 651)

600 (273)

# Application Note: Sample temperature control during rapid solvent evaporation

Efficient vacuum concentration requires the use of heat to counteract the effects of evaporative cooling. However, excessive temperatures will compromise the viability of many pharmaceutical compounds, proteins and microorganisms. This application note describes the use of direct (in-sample) and indirect (rotor block) temperature measurement to control heating and protect sample viability during rapid vacuum concentration.



## Introduction

Many techniques in drug discovery, molecular biology and analytical chemistry require solvent removal at some point. Solvent removal often acts as the slowest step in a process and limits the overall throughput of a laboratory.

There are several methods one can employ to remove solvent. Vacuum centrifugal concentration is the method of choice. The combination of vacuum and heat results in solvent evaporation. Centrifugation minimizes violent boiling of the sample ("bumping") that may cause sample loss and cross contamination between vessels. Vacuum lowers the boiling point of the solvent. Evaporation of the solvent removes heat and causes sample temperatures to drop significantly. Application of heat to the system counteracts the effects of evaporative cooling and speeds the drying process.

Researchers are often reluctant to use heat in vacuum concentration because of concerns about viability of the product. Once evaporation is complete, continued heating will raise the temperature of the remaining sample and may cause thermal degradation.

The Thermo Scientific SpeedVac Explorer system incorporates IntelliTemp, a feature that enables active sample temperature monitoring and control during vacuum concentration. On-board software allows either unit to control sample conditions under two different modes:

- AutoDry—heating stops when the programmed sample temperature is achieved.
- Timed-plus—sample temperature is controlled at the programmed temperature for a period of time. Temperature can be monitored from four in-sample or rotor block probes at once.

## Materials

### Instruments:

- Explorer SpeedVac System
- Explorer Software Suite with computer
- Aluminum rotor blocks

### Reagents:

- Dichloromethane, ACS grade
- Methanol, laboratory grade
- Methylsulfoxide (DMSO), ACS grade
- N,N-Dimethylformamide (DMF), laboratory
- 8 ml glass sample vial, screw thread

### Key features utilized:

- Timed-Plus (+) Mode.
- The Explorer SpeedVac System monitors the sample temperature and regulates the heat to maintain that temperature during the entire run. This prevents samples from overheating during the run. Completion of the run is based upon the preset timer.

### Custom Vacuum Ramping.

The Explorer SpeedVac System slows the rate of vacuum change within a specified pressure range. The user will typically specify this range to bracket the vapor pressure of any solvents used in order to prevent "bumping" of the samples. Outside the specified range, the pressure decreases at full speed in order to minimize pull-down times.

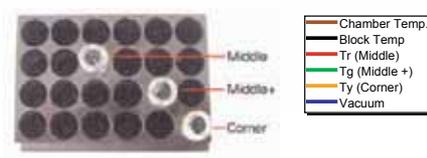
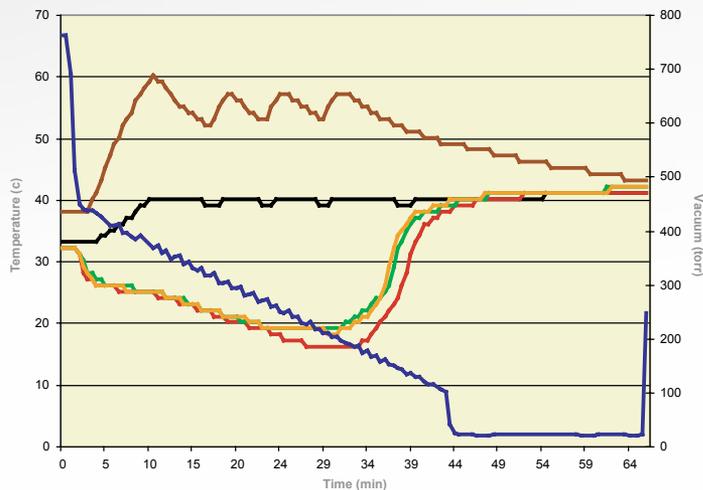
## Results

### Figure 1 Vial to vial reproducibility of DCM evaporation

Solvent: Dichloromethane (DCM)  
 Vessel: 8 ml glass vial  
 Volume: 4 ml per vial  
 Sample Temperature Tolerance:  
 < 45°C  
 Heat time: 30 min  
 Chamber temperature: 65°C  
 Block target temperature: 40°C  
 Vacuum: 20 torr  
 Ramp: rate 3, 450-100 torr  
 (60% of full)  
 Dry down time: 1 hr 5 min

#### Conclusion:

The data represents another example of drying a volatile solvent. Different vacuum ramping was selected because DCM has a higher vapor pressure value of 430 torr at 25°C. Three independent sample temperature probes were used to monitor the uniformity of heat applied at different locations. TR (sample temperature in the middle of the block) Tg (sample temperature in the middle of the block) Ty (sample temperature in the corner of the block)  
 The graph shows that the different locations of the block received equivalent heat and all samples dried at the same time.

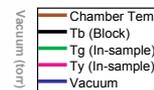
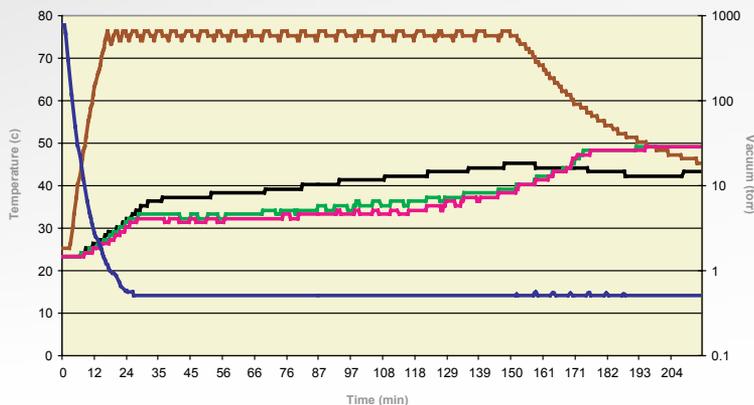


### Figure 2 Controlled sample temperature during evaporation of DMSO

Solvent: DMSO (dimethyl sulfoxide)  
 Vessel: 8 ml glass vial  
 Volume: 4 ml per vial  
 Sample Temperature Tolerance: <55°C  
 Heat time: 2 hours 30 minutes  
 Chamber temperature: 75°C  
 Block target temperature: 45°C  
 Vacuum: MAX  
 (less than 0.7 torr)  
 Ramp: full (limited by pump capacity, up to 320 torr/min)  
 Dry down time: 3 hours

#### Conclusion:

The evaporation of DMSO requires high heat for faster removal of the solvent. The Explorer system was able to maintain the pre-set sample temperature under the maximum limit of 55°C.



## Conclusions

Application of heat during vacuum concentration counteracts the effects of evaporative cooling and speeds evaporation. The IntelliTemp feature in the Thermo Scientific Explorer SpeedVac system allows accurate monitoring and control of sample temperature. It gives users the ability to employ heat for fast evaporation while still controlling sample temperature within specified limits.

# Configure Your Own SpeedVac System

## Build your own SpeedVac System

- Flexible custom configured systems
- The Ideal alternative to SpeedVac Kits for complex solvent evaporation applications
- Mix and match your concentrator, pump and cold trap to meet your specific needs

## Our technical experts are ready to help

Simply send an e-mail to [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com) with the answer to the following questions.

### Technical Specification for Integrated Concentrators

| Series                       | Savant DNA120, DNA120-OP and ISS110 SpeedVac Ordering Information |                        |   |                        |  |                        |
|------------------------------|---|------------------------|---|------------------------|--|------------------------|
| Model No.                    | DNA120-115  | DNA120-230             | DNA1200P-115  | DNA1200P-230           | ISS110A-115  | ISS110P1               |
| Description                  | DNA120 concentrator with integrated pump includes RD36 rotor      |                        | DNA120 concentrator with integrated pump for Oligos includes RD36 rotor |                        | ISS110 A concentrator with integrated pump and cold trap, includes RH200 rotor and 1L bottle of CryoCool |                        |
| Voltage                      | 115 V/60 Hz   | 230 V/50 Hz            | 115 V/60 Hz   | 230 V/50 Hz            | 115 V/60 Hz  | 230 V/50 Hz            |
| Vacuum Pump                  | Oil Free ETFE diaphragm   |                        | Oil Free ETFE diaphragm   |                        | Oil Free ETFE diaphragm  |                        |
| Max. Vacuum                  | >19 torr (9 mbar)   |                        | >19 torr (9 mbar)   |                        | >10 torr (9 mbar)  |                        |
| Displacement                 | 30 liters/min at 50 Hz  | 36 liters/min at 60 Hz | 36 liters/min at 60 Hz  | 30 liters/min at 50 Hz | 36 liters/min at 60 Hz   | 30 liters/min at 50 Hz |
| Vacuum Control Ramp Rate     | None  |                        | None  |                        | None   |                        |
| Vacuum Level Control Setting | N/A   |                        | N/A   |                        | N/A  |                        |
| Refrigerated Vapor Trap      | None  |                        | None  |                        | 4 liters/ -50°C  |                        |
| Heat Setting                 | 3 pre-sets: Ambient, Med (43°C), High (65°C)                      |                        | 3 pre-sets: Ambient, Med (43°C), High (65°C)                            |                        | 3 pre-sets: Ambient, Med (43°C), High (65°C)   |                        |
| Cover                        | Plexiglass®   |                        | Glass   |                        | Plexiglass   |                        |
| Timer Settings               | 1 min. to 10 hours  |                        | 1 min. to 10 hours  |                        | None   |                        |
| Dimensions W x H x D in (mm) | 11 x 11 x 25 (290 x 290 x 630)                                    |                        | 11 x 11 x 25 (290 x 290 x 630)  |                        | 25 x 15 x 26 (620 x 380 x 660)   |                        |
| Weight lbs (kg)              | 86 (39)   |                        | 86 (39)   |                        | 152 (69)   |                        |

### Technical Specification for Modular Concentrators

| Series                        | Savant SPD111, 121, 131 SpeedVac Ordering Information |             |  |             |  |               |
|-------------------------------|---|-------------|--|-------------|--|---------------|
| Model No.                     | SPD111V-115   | SPD111V-230 | SPD121P-115                                  | SPD121P-230 | SPD131DDA-115  | SPD131DDA-230 |
| Description                   | SPD111V concentrator                                  |             | SPD121P concentrator                         |             | SPD131DDA concentrator   |               |
| Voltage                       | 115 V/60 Hz   | 230 V/50 Hz | 115 V/60 Hz                                  | 230 V/50 Hz | 115 V/60 Hz  | 230 V/50 Hz   |
| Bleeder Valve                 | Automatic   |             | Automatic (Dual)                             |             | Automatic (Dual)   |               |
| Exhaust Port size             | Standard  |             | Standard                                     |             | Oversized  |               |
| No. of Infrared Chamber Lamps | None  |             | None   |             | 2  |               |
| Vacuum Control Ramp Rate      | None  |             | None   |             | 1 to 5   |               |
| Vacuum Level Control Setting  | None  |             | None   |             | 20 to 0.1 torr (26.6 to 0.1 mbar)                                    |               |
| Refrigerated Vapor Trap       | Order Separately                                      |             | Order Separately                             |             | Order Separately   |               |
| Heat Setting                  | off, 35 to 80°C in 5°C increments                     |             | off, 35 to 80°C in 5°C increments            |             | off, 35 to 80°C in 5°C increments                                    |               |
| Cover                         | Plexiglass  |             | Radiant Glass (on/off, slaved to heat timer) |             | Controlled Heat Glass Cover (Off/slave to heat temperature and time) |               |
| Timer Settings                | 1 min. to 10 hours                                    |             | 1 min. to 10 hours                           |             | 1 min. to 10 hours   |               |
| Dimensions W x H x D in (mm)  | 14 x 18 x 13 (in), 360 x 460 x 330 mm                 |             | 14 x 18 x 13 (in), 360 x 460 x 330 mm        |             | 14 x 18 x 13 (in), 360 x 460 x 330 mm                                |               |
| Weight lbs (kg)               | 37 (17)   |             | 44 (20)                                      |             | 44 (20)  |               |



## Thermo Scientific Manual and Automated Liquid Handling

We offer a broad range of handheld and automated pipetting systems with a reputation for combining simplicity, comfort and functionality with superior ergonomic design. For more information and to order, visit [www.thermoscientific.com/finnpipette](http://www.thermoscientific.com/finnpipette)

1. What is the material or solute that you are concentrating or drying? Is it Biological or Non-Biological?
  2. What is the solvent or mixture of solvents that your material will be prepared in?
  3. What types of vessels will be used, what will the sample volume and number of samples to be processed be?
  4. Will you be freeze drying your samples?
- Example:**
1. Non-Biological Solute
  2. Ethyl Ether, Phenol, DMSO single solvents at a time
  3. 13x100mm glass tubes, 30 at a time 2 mls in each tube
  4. I do not need to freeze dry my samples

**Our applications product specialists will recommend the optimum configuration for your application.**

| Series                       | Savant SPD1010 and SPD2010 SpeedVac Ordering Information                            |                        |   |                        |
|------------------------------|---|------------------------|---|------------------------|
| Model No.                    | SPD1010A-115  | SPD1010A-230           | SPD2010A-220  | SPD2010A-230           |
| Description                  | SPD1010A concentrator with integrated pump and cold trap, includes GCF400 glass jar |                        | SPD2010A concentrator with integrated pump and cold trap, includes GCF400 glass jar |                        |
| Voltage                      | 115 V/60 Hz   | 230 V/50 Hz            | 220 V/60 Hz   | 230 V/50 Hz            |
| Vacuum Pump                  | Oil-free ETFE diaphragm   |                        |   |                        |
| Max. Vacuum                  | > 10 torr (~9.3mbar)  |                        |   |                        |
| Displacement                 | 36 liters/min at 60 Hz  | 30 liters/min at 50 Hz | 36 liters/min at 60 Hz  | 30 liters/min at 50 Hz |
| Vacuum Control Ramp Rate     | 1 to 5  |                        | 1 to 5  |                        |
| Vacuum Level Control Setting | 30 to 5.1 torr (40 to 6.8 mbar)   |                        | 30 to 5.1 torr (40 to 6.8 mbar)   |                        |
| Refrigerated Vapor Trap      | 4 liters/ -50°C   |                        |   |                        |
| Heat Setting                 | Off: 45 to 80°C in 5°C increments   |                        | Off: 45 to 80°C in 5°C increments   |                        |
| Cover                        | Radiant Glass (On/Off slaved to heat timer)   |                        | Radiant Glass (On/Off slaved to heat timer)   |                        |
| Timer Settings               | 1 min. to 10 hours  |                        | 1 min. to 10 hours  |                        |
| Dimensions W x H x D in (mm) | 25 x 15 x 26 (620 x 380 x 660)  |                        | 31 x 19 x 27 (770 x 470 x 690)  |                        |
| Weight lbs (kg)              | 152 (60)  |                        | 182 (83)  |                        |

| Series                        | Savant SC210A and SPD250exp SpeedVac Ordering Information |             |   |              |
|-------------------------------|---|-------------|---|--------------|
| Model No.                     | SC210A-115  | SC210A-230  | SC250EXP-115  | SC250EXP-230 |
| Description                   | SC210A high-capacity concentrator                         |             | SC250EXP high-capacity concentrator for drug discovery, includes FPR-4A rotor, 1 set of UPC-1 carriers and 1 GF4000 glass jar |              |
| Voltage                       | 115 V/60 Hz   | 230 V/50 Hz | 115 V/60 Hz   | 230 V/50 Hz  |
| Bleeder Valve                 | Automatic   |             | Automatic (Dual)  |              |
| Exhaust Port size             | Standard  |             | Oversized   |              |
| No. of Infrared Chamber Lamps | None  |             | 4   |              |
| Vacuum Control Ramp Rate      | None  |             | 1 to 5  |              |
| Vacuum Level Control Setting  | None  |             | 20 to 0.1 torr (26.6 to 0.1 mbar)   |              |
| Refrigerated Vapor Trap       | Order Separately  |             | Order Separately  |              |
| Heat Setting                  | 3 presets – Ambient, med (43°C), high(65°C)               |             | off, 45 to 80°C in 5°C increments   |              |
| Cover                         | Plexiglass  |             | Controlled Heat Glass Cover (Off slaved to heat temp. and time)   |              |
| Timer Settings                | None  |             | 1 min. to 10 hours  |              |
| Dimensions W x H x D in (mm)  | 18 x 25 x 18 (in), 460 x 635 x 460 (mm)                   |             | 18 x 25 x 18 (in), 460 x 635 x 460 (mm)   |              |
| Weight lbs (kg)               | 102 (46)  |             | 127 (58)  |              |

## Thermo Scientific Plastic and Glass Labware

We offer a complete range tubes, microcentrifuge tubes, flasks, vials, bottles and microplates for all your SpeedVac applications. Our labware products are designed and manufactured for tough applications under rigorous laboratory conditions. For more information and to order, visit [www.thermoscientific.com](http://www.thermoscientific.com).





# Thermo Scientific

## Rotors, Rotor Carriers and Block Inserts

**Choose from two styles of rotors:  
Traditional or our PRO Rotor System**

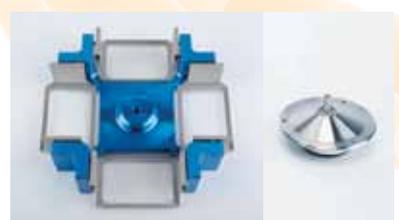
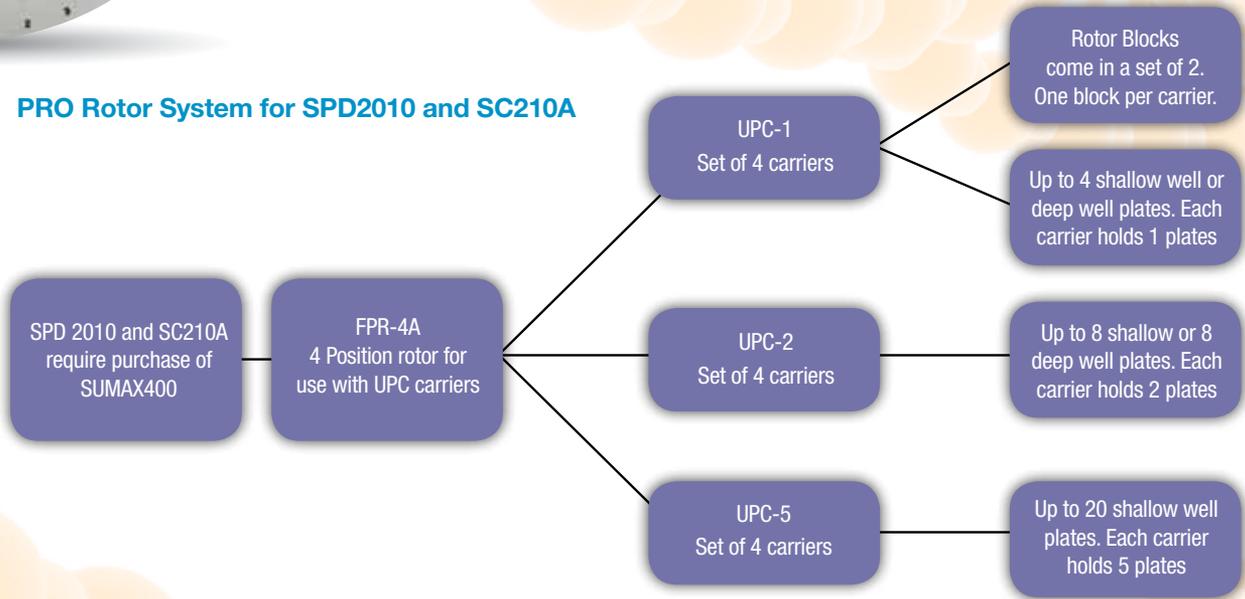
### Traditional Rotors

Traditional rotors are easy to use circular rotors that have many different tube hole sizes to accommodate different sample sizes. These rotors require no additional accessories and fit directly into your concentrator. You can identify these rotors as "traditional" in the rotor ordering information table on the far right of pages 26 and 27.

### PRO Rotor System

The alternative to traditional rotors is our PRO rotor system. This is a highly versatile rotor system consisting of a FPR-4A four position rotor along with mix and match carriers and blocks. This system can be used with SpeedVac models SC210A, the SPD2010 and the SPD250EXP. Use the flow charts below to configure your PRO rotor system. Blocks and carriers are listed in the rotor ordering information table as PR and can be identified as PRO Rotor in the rotor table on the far right. Unless otherwise indicated, all rotors, blocks and carriers are sold separately.

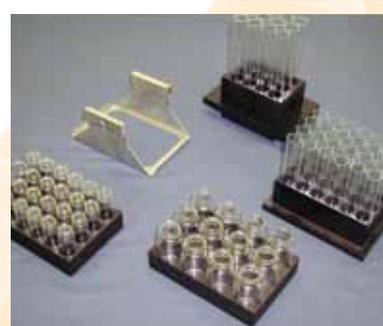
### PRO Rotor System for SPD2010 and SC210A



Complete PRO-10 Rotor kit showing SUMAX400 magnetic assembly and UPC-1 carrier

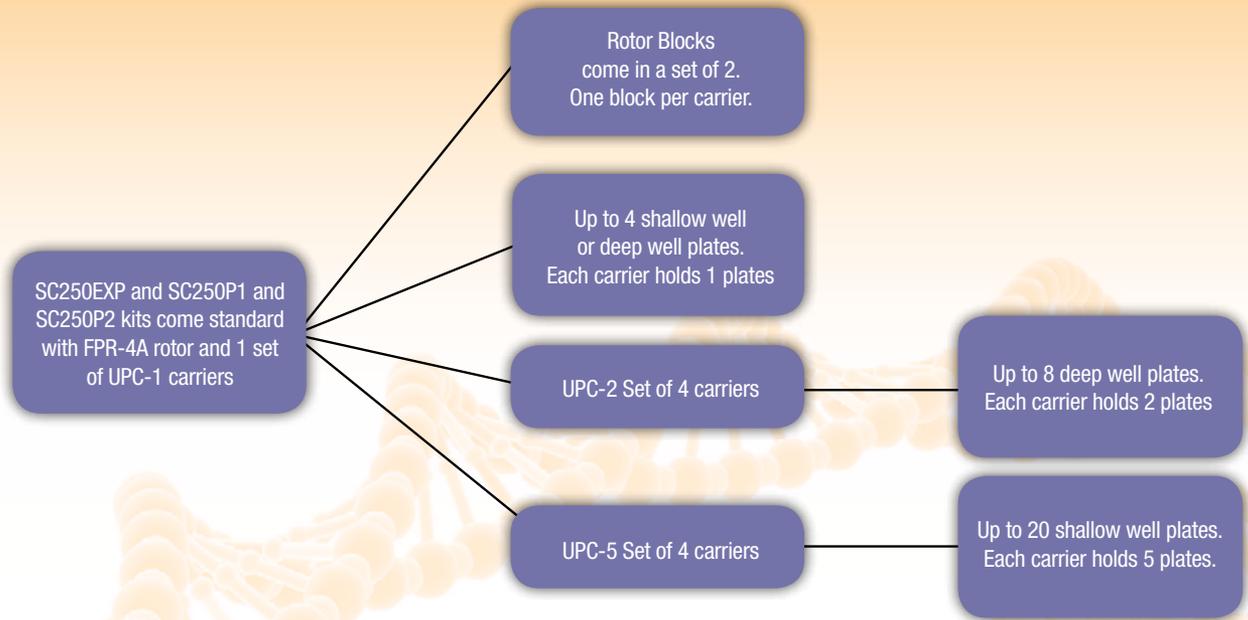


From L to R: UPC-1, UPC-2 and UPC-5 carriers

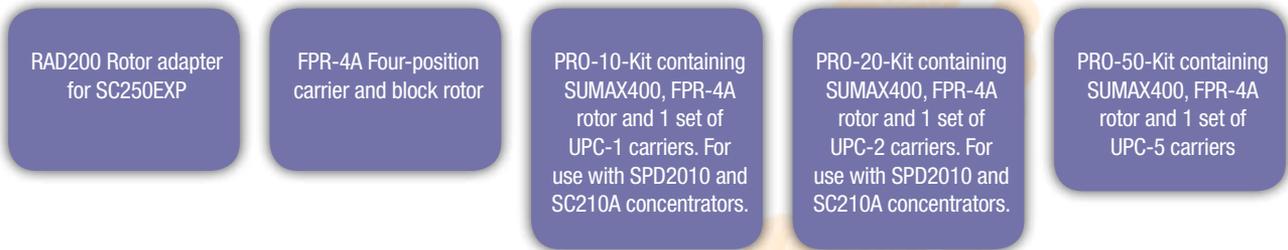


Blocks with glass tubes (sold separately)

## PRO Rotor System for SC250EXP, SC250P1 and SC250P2



## PRO Rotor System Components



FPR-4A rotor with one set of UPC-1 carriers



FPR-4A rotor with one set of UPC-2 carriers



FPR-4A rotor with one set of UPC-5 carriers

# Thermo Scientific

## Rotors, Rotor Carriers and Block Inserts



Model No. RH24-15



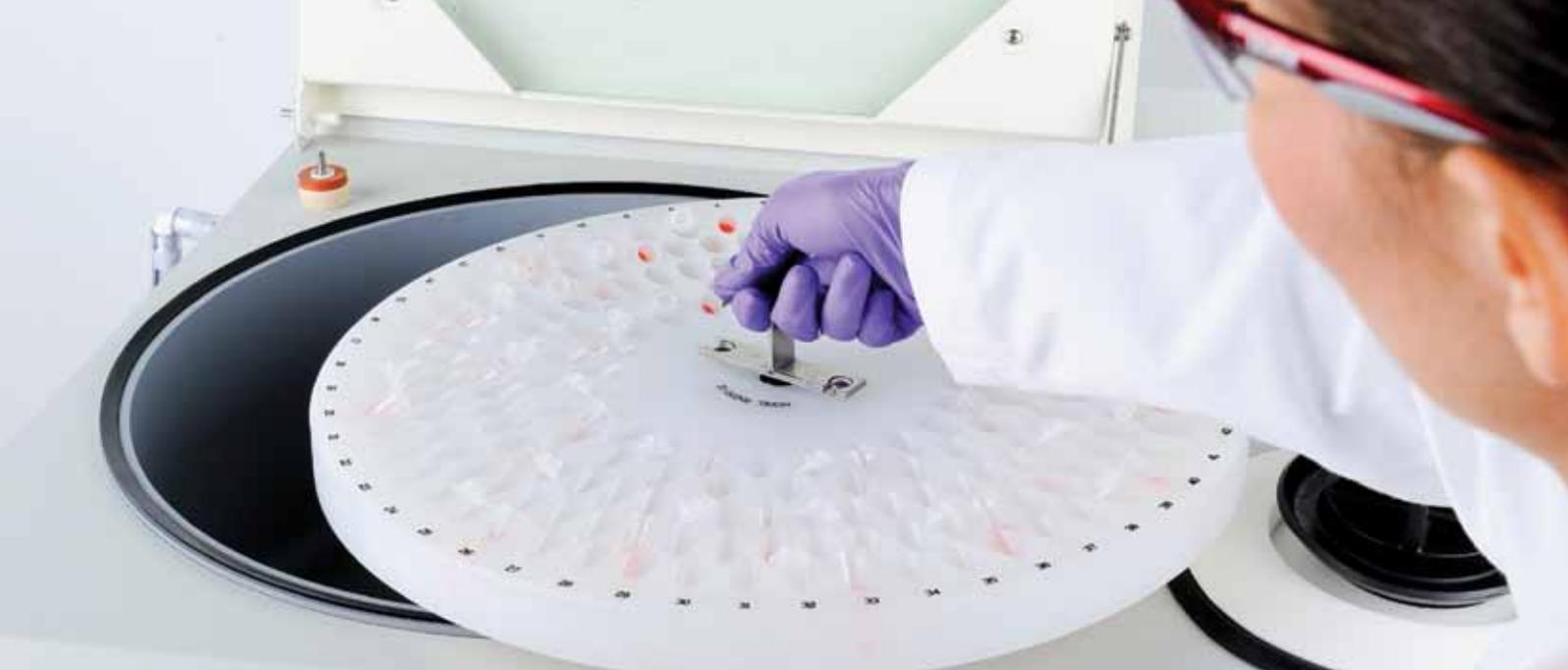
Model No. RH64-11



Model no. RH40-11

### Rotors and Carriers Ordering Information

| SpeedVac Models                |              | DNA 120        |                 | ISS110          |                | SPD111V        |                | SC210A         |                     | SC250EXP       |                | Rotor Part Number    | Rotor System             |
|--------------------------------|--------------|----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------------|--------------------------|
|                                |              | DNA 1200P      | SPD1010         | SPD121P         | SPD131DDA      | SPD2010        | SPD2010        | SPD2010        | SPD2010             |                |                |                      |                          |
| Microtubes                     | No. of Tubes | Small Capacity | Medium Capacity | Medium Capacity | Large Capacity      | Large Capacity | Large Capacity |                      |                          |
| 0.5ml                          | 48           | X              |                 |                 |                |                |                |                |                     |                |                | RD48                 | Traditional              |
| 0.5ml                          | 72           | X              |                 |                 |                |                |                |                |                     |                |                | RD72                 | Traditional              |
| 1.5ml                          | 24           | X              |                 |                 |                |                |                |                |                     |                |                | RD24                 | Traditional              |
| 1.5ml                          | 36           | X              |                 |                 |                |                |                |                |                     |                |                | RD36                 | Traditional              |
| 1.5ml                          | 40           |                | X               | X               |                |                |                |                |                     |                |                | RH40-11              | Traditional              |
| 1.5ml                          | 50           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA25-11-39          | Set of 2 blocks for PRO  |
| 1.5ml                          | 64           |                | X               | X               |                |                |                |                |                     |                |                | RH64-11              | Traditional Rotor System |
| 1.5ml                          | 100          |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA25-11-39 (qty 2)  | Set of 2 blocks for PRO  |
| 1.5ml                          | 120          |                | X               | X               |                |                |                |                |                     |                |                | RH120-11             | Traditional              |
| 1.5ml                          | 200          |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH200-12             | Traditional              |
| <b>Glass and Plastic Tubes</b> |              |                |                 |                 |                |                |                |                |                     |                |                |                      |                          |
| 6 x 32 mm                      | 252          |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA126-6-32          | Set of 2 blocks for PRO  |
| 6 x 32 mm                      | 504          |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA126-6-32 (qty 2)  | Set of 2 blocks for PRO  |
| 6 x 50 mm                      | 100          |                | X               | X               |                |                |                |                |                     |                |                | RH100-6              | Traditional              |
| 8 x 29 mm                      | 100          |                | X               | X               |                |                |                |                |                     |                |                | RH100-8              | Traditional              |
| 12 x 75 mm                     | 40           |                | X               | X               |                |                |                |                |                     |                |                | RH40-12              | Traditional              |
| 12 x 75 mm                     | 72           |                | X               | X               |                |                |                |                |                     |                |                | RH72-12              | Traditional              |
| 12 x 75 mm                     | 200          |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH200-12             | Traditional              |
| 13 x 100 mm                    | 32           |                | X               | X               |                |                |                |                |                     |                |                | RH32-13              | Traditional              |
| 13 x 100 mm                    | 70           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA35-13-100         | Set of 2 blocks for PRO  |
| 13 x 100 mm                    | 118          |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH200-12             | Traditional              |
| 13 x 100 mm                    | 140          |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA35-13-100 (qty 2) | Set of 2 blocks for PRO  |
| 16 x 100 mm                    | 48           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA24-16-100         | Set of 2 blocks for PRO  |
| 16 x 100 mm                    | 98           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA24-16-100 (qty 2) | Set of 2 blocks for PRO  |
| 16 x 125 mm                    | 48           |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH48-18-125          | Traditional              |
| 16 x 125 mm                    | 30           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA15-16-125         | Set of 2 blocks for PRO  |
| 17 x 60 mm                     | 48           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA24-17-60          | Set of 2 blocks for PRO  |
| 17 x 60 mm                     | 96           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA24-17-60 (qty 2)  | Set of 2 blocks for PRO  |
| 16 x 125 mm                    | 60           |                |                 |                 |                |                |                | PR*            | PR*                 |                |                | RBA15-16-125 (qty 2) | Set of 2 blocks for PRO  |
| 17.5x102 mm, 15 ml Corex®      | 8            |                | X               | X               |                |                |                |                |                     |                |                | RH8-17.5             | Traditional              |
| 18x100, 17x95, 16x100mm        | 8            |                | X               | X               |                |                |                |                |                     |                |                | RH8-18               | Traditional              |
| 18 x 125 mm                    | 48           |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH48-18-125          | Traditional              |
| 18 x 150 mm, 16 x 125 mm       | 32           |                |                 |                 |                |                |                | X              | X (requires RAD200) |                |                | RH32-18-150          | Traditional              |
| 28 x 150 mm                    | 12           |                |                 |                 |                |                |                | X              |                     |                |                | RH12-29              | Traditional              |



## Rotors and Carriers Ordering Information Continued

| SpeedVac Models                 | No. of Tubes | SPD111V              |                   |                      |                   | Rotor Part Number   | Rotor System          |                           |
|---------------------------------|--------------|----------------------|-------------------|----------------------|-------------------|---------------------|-----------------------|---------------------------|
|                                 |              | DNA 120<br>DNA 1200P | ISS110<br>SPD1010 | SPD121P<br>SPD131DDA | SC210A<br>SPD2010 |                     |                       | SC250EXP                  |
| Centrifuge Tubes                |              | Small Capacity       | Medium Capacity   | Large Capacity       |                   |                     |                       |                           |
| 15 ml conical                   | 10           |                      | X                 | X                    | X                 | RH10-15             | PR*                   |                           |
| 15 ml conical                   | 30           |                      |                   |                      | X                 | X (requires RAD200) | Traditional           |                           |
| 15 ml conical                   | 52           |                      |                   |                      | X                 | X (requires RAD200) | Traditional           |                           |
| 50 ml conical                   | 6            |                      | X                 | X                    |                   | RH6-50              | Traditional           |                           |
| 50 ml conical                   | 12           |                      |                   |                      | X                 | RH12-29             | Traditional           |                           |
| <b>Flasks</b>                   |              |                      |                   |                      |                   |                     |                       |                           |
| 100 ml round bottom flask       | 2            |                      |                   |                      | X                 | RBA2-FLSK-100       | Traditional           |                           |
| 100 ml pear-shaped flask        | 4            |                      | X                 | X                    |                   | RH4-100             | Traditional           |                           |
| 100 ml pear-shaped flask        | 8            |                      |                   |                      | X                 | RH8-200             | Traditional           |                           |
| 250 ml round bottom flask       | 1            |                      |                   |                      | X                 | RBA1-FLSK-250       | Traditional           |                           |
| <b>Vials</b>                    |              |                      |                   |                      |                   |                     |                       |                           |
| 12 x 32 mm                      | 60           |                      | X                 | X                    |                   | RH60-12-40          | Traditional           |                           |
| 1 dram (15 x 45 mm), 4 ml       | 24           |                      | X                 | X                    |                   | RH24-15             | Traditional           |                           |
| 1 dram (15 x 45 mm), 4 ml       | 192          |                      |                   |                      | X                 | X (requires RAD200) | Traditional           |                           |
| 12 x 40 mm                      | 60           |                      | X                 | X                    |                   | RH60-12-40          | Traditional           |                           |
| 20 x 47 mm                      | 12           |                      | X                 | X                    |                   | RH12-20             | Traditional           |                           |
| 20 x 60 mm                      | 12           |                      | X                 | X                    |                   | RH12-20             | Traditional           |                           |
| 18 x 52 mm mini-scintillation   | 24           |                      | X                 | X                    |                   | RH24-18             | Traditional           |                           |
| 28 x 58 mm, 20 ml scintillation | 24           |                      |                   |                      | PR*               | PR*                 | RBA12-28-58           | Set of 2 blocks for PRO   |
| 28 x 58 mm, 20 ml scintillation | 48           |                      |                   |                      | PR*               | PR*                 | RBA12-28-58 (qty 2)** | Set of 2 blocks for PRO   |
| 28 x 60 mm scintillation        | 12           |                      | X                 | X                    |                   |                     | RH12-28               | Traditional               |
| 28 x 60 mm scintillation        | 50           |                      |                   |                      | X                 | X (requires RAD200) | RH50-28-60            | Traditional               |
| 19 x 65 mm flat bottom          | 48           |                      |                   |                      | PR*               | PR*                 | RBA24-19-65           | Set of 2 blocks for PRO   |
| 19 x 65 mm flat bottom          | 98           |                      |                   |                      | PR*               | PR*                 | RBA24-19-65 (qty 2)** | Set of 2 blocks for PRO   |
| <b>Microwell Plates</b>         |              |                      |                   |                      |                   |                     |                       |                           |
| Shallow well plates             | 2            | X                    |                   |                      |                   |                     | RD2MP                 | Traditional               |
| Shallow well plates             | 12           |                      |                   |                      | X                 |                     | MPTR12-210            | Traditional               |
| Shallow well plates             | 4            |                      |                   |                      | PR*               | PR*                 | UPC-1                 | Set of 4 carriers for PRO |
| Shallow well plates             | 6            |                      |                   | X                    |                   |                     | RHSW6MP               | Traditional               |
| Shallow well plates             | 2            |                      | X                 | X                    |                   |                     | RH2MP                 | Traditional               |
| Shallow well plates             | 8            |                      |                   |                      | PR*               | PR*                 | UPC-2                 | Set of 4 carriers for PRO |
| Shallow well plates             | 20           |                      |                   |                      | PR*               | PR*                 | UPC-5                 | Set of 4 carriers for PRO |
| Deep well plates                | 2            |                      |                   | X                    |                   |                     | RHDW2MP               | Traditional               |
| Deep well plates                | 4            |                      |                   |                      | PR*               | PR*                 | UPC-1                 | Set of 4 carriers for PRO |
| Deep well plates                | 8            |                      |                   |                      | PR*               | PR*                 | UPC-2                 | Set of 4 carriers for PRO |
| Deep well plates                | 8            |                      |                   |                      | X                 |                     | MPTR8-210             | Traditional               |

\* For use with the PRO rotor system

\*\* To achieve the tube capacity listed, please order quantity 2 of the rotor blocks

# Thermo Scientific

## Savant Refrigerated Vapor Traps

Refrigerated vapor traps are available in three temperature ranges: **-105°C, -50°C and -5°C**

### Product Features

- Available in three temperature ranges -50°C, -105°C and -5°C
- CFC and HCFC free refrigerants
- -5°C specifically designed for trapping high-boiling solvents such as DMSO and DMF
- -105°C used for trapping low-boiling solvents such as Chloroform or Methylene Chloride
- Rapid cooling rate
- Includes one model GCF400 flask and model FC400 flask cap

**Note:** Additional glass condensation flask (model no. GCF400) is recommended for easy trap maintenance. CryoCool (model no. SCC1) and tubing kits are ordered separately.



Refrigerated Vapor Trap (Model No. RVT5105)

### Refrigerated Vapor Trap Ordering Information

| Model No.     | Description                                   | Voltage        | Capacity | Temperature | Shipping Dimensions<br>W x H x D in (mm) | Shipping Weight<br>lbs (kg) |
|---------------|---|----------------|----------|-------------|--|-----------------------------|
| RVT400-115    | Refrigerated vapor trap                       | 115 V/50/60 Hz | 4 liters | -50°C       | 14 x 12 x 24 (350 x 310 x 600)           | 55 (25)                     |
| RVT400-230    | Refrigerated vapor trap                       | 230 V/50/60 Hz | 4 liters | -50°C       | 14 x 12 x 24 (350 x 310 x 600)           | 55 (25)                     |
| RVT405DDA-115 | Refrigerated vapor trap                       | 115 V/50/60 Hz | 4 liters | -5°C        | 14 x 12 x 24 (350 x 310 x 600)           | 55 (25)                     |
| RVT405DDA-230 | Refrigerated vapor trap                       | 230 V/50/60 Hz | 4 liters | -5°C        | 14 x 12 x 24 (350 x 310 x 600)           | 55 (25)                     |
| RVT5105-115   | Ultra-low temperature refrigerated vapor trap | 115 V/60 Hz    | 4 liters | -105°C      | 24.1 x 24 x 18.3 (612 x 610 x 465)       | 150 (68)                    |
| RVT5105-230   | Ultra-low temperature refrigerated vapor trap | 230 V/60 Hz    | 4 liters | -105°C      | 24.1 x 24 x 18.3 (612 x 610 x 465)       | 150 (68)                    |
| GFC400        | Glass condensation flask                      | -              | -        | -           | -  | -                           |
| FC400         | Flask cap                                     | -              | -        | -           | -  | -                           |

# Thermo Scientific Savant Universal Speedvac Vacuum System

The Universal Vacuum System is a combined oil-free vacuum source and refrigerated vapor trap, in a single integrated unit. The easy-to-use, wide mouth glass condensation flask allows safe handling of recovery solvents. This unit can be connected to any of the concentrators to provide a complete Thermo Scientific Savant SpeedVac system.



Universal Vacuum System (Model No. UVS400SPD)

## Savant UVS400

### Product Features

- Low maintenance, oil-free and corrosion resistant system
- Wide mouth glass condensation flask with self-sealing cover
- Small foot print
- Single stage refrigeration system
- Efficient operation with all SpeedVac concentrators, gel dryers and other vacuum-dependant equipment
- Optional post trap (model no. ANT100) may be added to neutralize ammonia or acid
- Chemical trap (model no. DTK120R) may be added to absorb volatile radioactivity and residual vapors
- Max. vacuum <10 torr (13.3 mbar)
- Oil-free ETFE diaphragm pump
- 36 liters/minute displacement on 60 Hz; 30 liters/minute on 50 Hz models

## Savant US800DDA

### Product Features (Drug Discovery Models)

All the standard features as well as:

- 3-stage high efficiency oil free pump
- Max Vacuum <0.6 torr
- 36 liter/minute on 60 Hz; 20 liters/minute on 50 Hz models
- PTFE tubing and vapor path
- Post trap ANT100 included
- Order ANS121/4 ammonia neutralizing solution separately
- VaporNet<sup>®</sup> solvent recovery enhancement

**Note:** CryoCool heat transfer fluid (model no. SCC1) must be ordered for use with all refrigerated cold traps, and the universal vacuum source. Please order separately.

## Universal Vacuum System Ordering Information

| Model No.     | Description  | For Use With                                    | Voltage     | Capacity | Temperature | Shipping Dimensions<br>W x H x D in (mm) | Shipping Weight<br>lbs (kg) |
|---------------|--|---|-------------|----------|-------------|--|-----------------------------|
| UVS400-115    | Universal vacuum system with refrigerated vapor trap | SPD111V and SC210A                              | 115 V/60 Hz | 4 liters | -55°C       | 14 x 18 x 24 (250 x 450 x 600)           | 113 (51)                    |
| UVS400A-230   | Universal vacuum system with refrigerated vapor trap | SPD111V and SC210A                              | 230 V/50 Hz | 4 liters | -55°C       | 14 x 18 x 24 (250 x 450 x 600)           | 113 (51)                    |
| UVS400SPD-115 | Universal vacuum system with refrigerated vapor trap | SPD121P, SPD131DDA and SC250EXP                 | 115 V/60 Hz | 4 liters | -55°C       | 14 x 18 x 24 (250 x 450 x 600)           | 113 (51)                    |
| UVS400SPD-230 | Universal vacuum system with refrigerated vapor trap | SPD121P, SPD131DDA and SC250EXP                 | 230 V/50 Hz | 4 liters | -55°C       | 14 x 18 x 24 (250 x 450 x 600)           | 113 (51)                    |
| UVS800DDA-115 | Universal vacuum system for drug discovery           | SPD111V, SC210A SPD121P, SPD131DDA and SC250EXP | 115 V/60 Hz | 4 liters | -50°C       | 14 x 18 x 24 (250 x 450 x 600)           | 126 (57)                    |
| UVS800DDA-230 | Universal vacuum system for drug discovery           | SPD111V, SC210A SPD121P, SPD131DDA and SC250EXP | 230 V/50 Hz | 4 liters | -50°C       | 14 x 18 x 24 (250 x 450 x 600)           | 126 (57)                    |

# Thermo Scientific Pumps

**We offer both oil-free and deep vacuum pumps depending on your SpeedVac application.**



## Oil-Free Vacuum Pumps

### Product Features

- ETFE coated heads and ETFE/PFA diaphragms
- OFP400 recommended for evaporating samples in acidic environments such as HCl, TFA, acetic or formic acid, aggressive/volatile organics (methylene chloride, acetone, hexane) and strong bases (ammonium hydroxide)
- Quiet, efficient operation
- Attains vacuum level of below 1 torr
- Suitable for use with the refrigerated vapor trap models RVT5105 or RVT400
- Oil-free pumps eliminate maintenance associated with oil pumps

## Deep Vacuum Oil Pumps

### Product Features

- Four models to choose from to suit your application
- Available for use with acids or DMSO/DMF
- Low noise level, 48 dBA
- Three-position gas ballast control
- Standard oil drain kit simplifies oil change
- Two separate oil inlet ports
- Thermal overload switches with automatic reset
- Recommended for applications requiring high vacuum

## Oil-Free Low Vacuum Pump

### Product Features

- Hermetically sealed pump provides a clean and dry vacuum to prevent cross contamination
- Oil free pump eliminates maintenance associated with oil pumps
- Higher displacement than standard oil free pumps

## Oil-Free Vacuum Pump Ordering Information

| Model No.  | Description                             | Voltage       | Displacement                | Max. Vacuum                            | Shipping Dimensions<br>H x W x D in (mm) | Shipping Weight<br>lbs (kg) |
|------------|---|---------------|-----------------------------|--|--|-----------------------------|
| OFP400-115 | ETFE/PFA 4-headed diaphragm vacuum pump | 115V 50/60 Hz | 30 liters/minute at 50 Hz   | 0.6 torr (0.75 mbar)                   | 18 x 8 x 15<br>(460 x 210 x 390)         | 49.5 (22.5)                 |
| OFP400-230 | ETFE/PFA 4-headed vacuum pump           | 230V 50/60 Hz | 36 liters/minute at 60 Hz   | 0.6 torr (0.75 mbar)                   | 18 x 8 x 15<br>(460 x 210 x 390)         | 49.5 (22.5)                 |
| OFP5C-115  | Scroll Pump                             | 115/60 Hz     | 96.7 liters/minute at 60 Hz | 0.5 torr (0.06 x 10 <sup>2</sup> mbar) | 11.8 x 9.1 x 17.3<br>(300 x 230 x 440)   | 23 (51)                     |
| OFP5C-230  | Scroll Pump                             | 230/50 Hz     | 96.7 liters/minute at 60 Hz | 0.8 torr (0.07 x 10 <sup>2</sup> mbar) | 11.8 x 9.1 x 17.3<br>(300 x 230 x 440)   | 23 (51)                     |

## Deep Vacuum Pump Ordering Information

| Model No.    | Description  | Voltage       | Displacement               | Max. Vacuum                           | Shipping Dimensions<br>H x W x D in (mm) | Shipping Weight<br>lbs (kg) |
|--------------|--|---------------|----------------------------|---------------------------------------|--|-----------------------------|
| VLP120-115   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 115V 50/60 Hz | 97 liters/minute at 50 Hz  | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |
| VLP120-230   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 230V 50/60 Hz | 116 liters/minute at 60 Hz | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |
| VLP200-115   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 115V 50/60 Hz | 162 liters/minute at 50 Hz | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 11 x 6 x 19<br>(260 x 160 x 470)         | 57 (26)                     |
| VLP200-230   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 230V 50/60 Hz | 195 liters/minute at 60 Hz | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 11 x 6 x 19<br>(260 x 160 x 470)         | 57 (26)                     |
| VLP285-115   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 115V 50/60 Hz | 237 liters/minute at 50 Hz | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 11 x 6 x 19<br>(260 x 160 x 470)         | 58 (26)                     |
| VLP285-230   | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 230V 50/60 Hz | 283 liters/minute at 60 Hz | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 11 x 6 x 19<br>(260 x 160 x 470)         | 58 (26)                     |
| VLP80-115    | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 115V 50/60 Hz | 62 liters/minute at 50 Hz  | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |
| VLP80-230    | Vacuum pump, includes Oil Mist Eliminator, (OME190), 2 filters and line cord               | 230V 50/60 Hz | 76 liters/minute at 60 Hz  | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |
| VLP80DDA-115 | High-vacuum pump with VPOF110, includes Oil Mist Eliminator (OME190), 2 filters, line cord | 115V 50/60 Hz | 62 liters/minute at 50 Hz  | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |
| VLP80DDA-230 | High-vacuum pump with VPOF110, includes Oil Mist Eliminator (OME190), 2 filters, line cord | 230V 50/60 Hz | 76 liters/minute at 60 Hz  | 1.5 mtorr/1.95 x 10 <sup>3</sup> mbar | 9 x 6 x 17<br>(230 x 160 x 420)          | 48 (22)                     |

# Thermo Scientific Chemical Trap Kits

Chemical traps are highly recommended to absorb residual volatile vapors that may bypass the primary cold trap. Replaceable cartridges install easily inside the trap for quick changes once the trap become saturated. Our dry chemical traps (SCT120) are installed between the cold trap and the oil-filled high-vacuum pump to prevent pump damage. Our solution-based traps (ANT100) and dry chemical traps are used on the exhaust of oil-free pumps to reduce emissions.



## Chemical Trap Kit Ordering Information

| Model No. | Description  |
|-----------|--|
| DTK120R   | Chemical trap kit, for absorbing volatile radioactives, includes activated carbon cartridge and all fittings |
| DC120R    | Disposable chemical cartridge, for volatile radioactivity (use with DTK120R)                                 |
| DC120A    | Disposable cartridge with color indicator for trapping acids and residual water vapor                        |
| DC120R/4  | Disposable chemical cartridge, for volatile radioactivity, package of 4 (use with DTK120R)                   |
| ANS121/4  | Ammonia neutralizing solution, package of 4 bottles (use with ANT100 post-trap)                              |
| SCT120    | Chemical trap  |



Disposable cartridge for trapping acids and residual water vapor (Model No. DC120A)

# Thermo Scientific Tubing Kits

When ordering a refrigerated vapor trap or a universal vacuum system, you will require tubing depending on which concentrator bowl specified. Our tubing kits can be used with all Thermo Scientific pumps and cold traps.



## Tubing Kits Ordering Information

| Model No.    | Description  | SPD111V | SPD121P | SPD131DDA | SC210A | SC250EXP |
|--------------|--|---------|---------|-----------|--------|----------|
| UTP-TYG      | Universal tubing pack - TYGON  | YES     | –       | –         | YES    | –        |
| UTP-TEF 0.5  | PTFE tubing pack   | –       | YES     | –         | –      | –        |
| UTP-TEF 0.75 | PTFE tubing pack   | –       | –       | YES       | –      | –        |
| TFK100       | Tubing and flask kit to be used with UVS400, UVS400SPD, UVS800DDA universal vacuum sources | YES     | YES     | YES       | –      | –        |
| TFK200       | Tubing and flask kit to be used with UVS400, UVS400SPD, UVS800DDA universal vacuum sources | –       | –       | –         | YES    | YES      |
| VTK80        | Vacuum tubing kit to be used stand along with cold traps and stand alone with vacuum pumps | –       | YES     | YES       | YES    | YES      |

# Thermo Scientific Accessories

## Accessories Ordering Information

| Model No. | Description  |
|-----------|--|
| CC120/DX  | Deluxe convenience cart  |
| SCC1      | CryoCool heat transfer fluid, 1 liter                              |
| SCC5      | CryoCool heat transfer fluid, 5 liters                             |
| SP01-B    | Vacuum pump lubricating oil, 1 liter                               |
| SP01      | Vacuum pump lubricating oil, 1 liter, case of 12                   |
| SP01-SB   | Vacuum pump lubricating oil, synthetic, 1 liter                    |
| SP01-S    | Vacuum pump lubricating oil, synthetic, 1 liter, case of 12        |
| SFF1-B    | Vacuum pump flushing fluid, 1 liter                                |
| SFF1      | Vacuum pump flushing fluid, 1 liter, case of 12                    |
| VPOF110   | Vacuum pump oil filter for models VLP80, VLP120, VLP200 and VLP285 |
| MF190     | Mist filter replacement cartridge for OME190 oil mist eliminator   |



Model No. CC120/DX



## Worldwide Service and Support

We are committed to keeping your lab equipment working at peak performance levels. Our goal is to help you lower ownership costs, manage labs more effectively, and increase productivity. Contact your sales representative to learn more about our service offerings including service agreements, preventative maintenance, onsite field repair, repair depot, compliance services and educational services.

**For assistance with your vacuum concentrator applications, contact us at [speedvac@thermofisher.com](mailto:speedvac@thermofisher.com)**

© 2011 Thermo Fisher Scientific Inc. All rights reserved. Kalrez is a registered trademark of DuPont Performance Elastomers. Plexiglas is a registered trademark of Altuglas International. IntelliTemp is a trademark of Converge, Inc. All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

**North America:** USA/Canada +1 866 984 3766 (866-9-THERMO)

[www.thermoscientific.com/speedvac](http://www.thermoscientific.com/speedvac)

**Europe:** Austria +43 1 801 40 0, Belgium +32 53 73 42 41, France +33 2 2803 2180, Germany national toll free 08001-536 376, Germany international +49 6184 90 6940, Italy +39 02 95059 448, Netherlands +31 76 579 55 55, Nordic/Baltic/CIS countries +358 9 329 10200, Russia +7 812 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12, UK/Ireland +44 870 609 9203

**Asia:** Australia +61 39757 4300, China +86 21 6865 4588 or +86 10 8419 3588, India toll free 1800 22 8374, India +91 22 6716 2200, Japan +81 45 453 9220, New Zealand +64 9 980 6700, Other Asian countries +852 2885 4613 **Countries not listed:** +49 6184 90 6940

BRLESPDVC 0312

**Thermo**  
SCIENTIFIC

Part of Thermo Fisher Scientific