environment by JANIS

Lake Shore CRYOTRONICS
a DwyerOmega brand



SVT-100

Reservoir Cryostats

SVT Series
SuperVariTemp cryostats <2 K to 325 K

SVT Series SuperVariTemp cryostats are helium-cooled with the sample located in flowing vapor. By controlling the temperature of this flowing helium, both the sample and holder are simultaneously cooled to the same temperature, thereby eliminating the need for thermal anchoring. The helium flow rate and heater current are balanced to provide sample temperatures over the range of <2 K to 325 K.

Key features

- <2 K to 325 K
- Fast sample change
- Sample in flowing vapor

Featured components

- Built-in heater to for variable temperature control
- Optimized for two-loop temperature control
- Liquid nitrogen shielded liquid helium reservoir

SVT Series variants

- **SVT-100** standard
- **SVT-400** ultra-low cryogen consumption
- **SVT-400-MOSS** ultra-low cryogen consumption configured for Mössbauer spectroscopy

Specifications

	SVT-100	SVT-400	SVT-400-MOSS
Temperature range	<2 K to 325 K		
Typical temperature stability[1]	±50 mK		
LHe hold time	~12 h	36 h	
LN_2 hold time	~12 h	36 h	
LHe reservoir capacity	6 L		
LN_2 reservoir capacity	5 L		

Size

Height	1143 mm (45 in)		
Sample tube size	Up to 63.5 mm (2.5 in)	31.8 mm (1.25 in)	
Window block size/ configuration	Maximum 114 mm (4.5 in) square	102 mm (4 in) square	47.8 mm (1.88 in) OD
Weight (approximate)	38.6 kg (85 lb)		
Shipping weight (approximate)	Crate: 120 kg (265 lb); box: 11.3 kg (25 lb)		
Shipping dimensions (approximate)	Crate: 102 × 102 × 147 cm (40 × 40 × 58 in); box: 76 × 51 × 51 cm (30 × 20 × 20 in)		

[1] Measured with temperature controller



Complete your setup

Temperature control

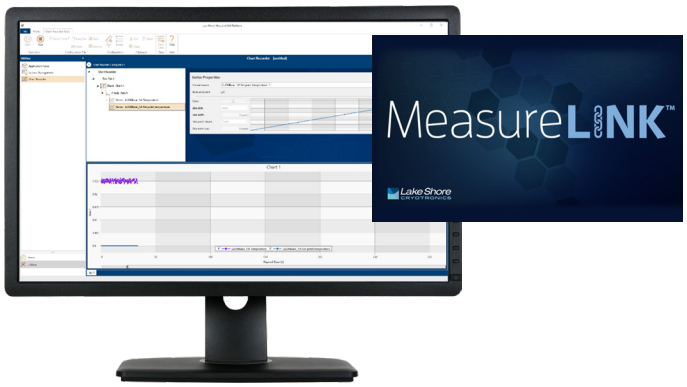
Included



Every cryostat includes a Lake Shore temperature controller and calibrated sensor.

MeasureLINK control software

Optional add-on



MeasureLINK software enables a wide range of capabilities including charting and logging, system monitoring with a cryostat-specific process view, and controlling Lake Shore equipment as well as third-party instrumentation. No programming required—drag-and-drop to create temperature sweeps, access measurements, and see real-time internal cryostat temperatures in process view.

Source + measure + lock-in

Optional add-on



The Lake Shore M81-SSM provides highly synchronized DC, 100 kHz AC, and mixed DC + AC sourcing and measuring—including both voltage and current lock-in measurement capabilities—for low-temperature material research performed in your cryostat. It supports up to three remote-mountable source and three measure modules per a single M81-SSM-6 instrument and, owing to its modularity, allows signal and source amplifiers to be located as close as possible to the sample being characterized. This minimizes the signal wiring to the sample, reduces noise, and increases measurement sensitivity.

Configure your cryostat

1. Select cryostat variant

SVT-100	Optical, <2 K to 325 K, calibrated temperature sensor
SVT-400	Optical, <2 K to 325 K, high-efficiency, calibrated temperature sensor
SVT-400-MOSS	Optical, <2 K to 325 K, high-efficiency, calibrated temperature sensor, configured for Mössbauer spectroscopy
CUSTOM	Custom configurations are available to fit your experiment needs—contact Sales for details

2. Select cryostat configurations

Sample holders

CONSULT	Optical
CONSULT	Blank
CONSULT	Resistivity
CONSULT	LCC
CONSULT	DIP
CONSULT	Cuvette

Windows

Contact us for SVT Series window options. See our cryostat window selection guide for additional information.

3. Select pump (optional)

Each cryostat requires a pump to operate. If you do not have an existing pump to use, select one of the pumps below.

10RVP	General-purpose mechanical pumping station
10DDP	General-purpose mechanical pumping station with LN_2 cold trap and isolation valve
TS-85-D	Turbopumping station

4. Select cryostat wiring

We offer a variety of both unwired and wired feedthroughs to complete your measurement setup. Please refer to the cryostat feedthroughs and wiring guide for more information.

5. Select optional setup configurations

Measurement instrumentation

Cryostats come standard with one temperature controller.

M81-SSM electronic synchronous source measure system

Contact us for cables and adapters for M81-SSM/cryostat integration.

M81-SSM-X	M81-SSM instrument with X = 2, 4, or 6 channels; half the channels are dedicated to sourcing and the other to measurement; see modules below
VM-10	AC/DC voltage measure module + lock-in
BCS-10	AC/DC balanced current source module
CM-10	AC/DC current measure module + lock-in
VS-10	AC/DC voltage source module

6. Select optional control software

ML-MCS	MeasureLINK-MCS software with scripting development license; includes lifetime activation for version purchased and full MeasureLINK capability on up to 5 computers with Lake Shore instrument drivers, chart recorder functionality, and drag-and-drop measurement sequences; some application packs sold separately

7. Select additional accessories

Cryostats come standard with two installed temperature sensors. Other sensors are available—contact us.

CX-1050-CU-HT-1.4M	Cernox® magnetic field independent, calibrated

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