

Low Temperature Tester



 LABTRON

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Low Temperature Tester



Solidifying Point Constant Temperature Water Bath LLTT-A10

Labtron LLTT-A10 is designed with two layers cylinder, electric stirrer it can keep temperature of 9 pieces of samples constant at a time. The instrument is designed and made as per requirements for constant temperature water bath stipulated "Test Methods for Solidifying Point of Petroleum Products".

Features

- High temperature controlling accuracy
- Digital temperature controller
- 7 pieces of solidifying point test tubes, 2 pieces of cold filter plugging point test tubes
- Table structure, newly designed, and accessible in operating

Applications

It can be widely used in petroleum, chemical industries, research and development laboratories. Ideal for critical applications requiring constant temperature accuracy and uniformity.

Specifications

Model No.		LLTT-A10
Measurement range		RT~100°C
Temperature controlling accuracy		±0.1°C
Constant temperature bath	Cubage	20L
	Types	Two layers cylinder
Temperature sensor		Industrial platinum; scale number is Pt100
Stirring motor	Power	6W
	Speed	1200RPM
Working environment	Ambient temperature	-10°C~35°C
	Relative humidity	<85%
Total power consumption		≤1800W
Outer Dimensions		610*560*760mm
Inner Dimensions		440*440*480mm
Heating power		1000W and 650 W
Power supply		AC 220V±10%, 50Hz±5%

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Freezing Point Tester LLTT-A11

Labtron LLTT-A11 is manufactured with stainless steel trough with two layer glass observation window and refrigeration compressor. It is designed and made as per ASTM D2386 - 15e1 "Test Methods for Freezing Point of Jet Fuels. It is multifunctional instrument.

Features

- ✦ Stainless steel cold tank, double vacuum glass observation window
- ✦ Accurate temperature control
- ✦ Lowest temperature up to -70°C , temperature control accuracy of $\pm 0.5^{\circ}\text{C}$
- ✦ Jet fuel, engine coolant and concentrate freezing point
- ✦ Multipurpose freezing point tester
- ✦ Automatic sample mixing and cooling rapidly
- ✦ Stainless steel countertops and sprayed plastic chassis

Applications

It can be used to determine freezing point of jet fuels, engine coolant and engine concentrate. It is multifunctional instrument.

Specifications

Model No.	LLTT-A11
Ambient temperature	$\leq 30^{\circ}\text{C}$
Relative humidity	$\leq 85\%$
Controlling temperature of cold trough	$+20^{\circ}\text{C} \sim -70^{\circ}\text{C}$
Temperature controlling accuracy	$\pm 0.5^{\circ}\text{C}$
Refrigeration system	New type of refrigeration compressor
Bath stirrer	6W, 1200RPM
Sample stirrer	By an electromagnetic stirrer; 0~120RPM
Cold trough	Stainless steel trough with two layer glass observation window
Dimensions	640*640*880mm
Total power consumption	$\leq 2000\text{W}$
Power supply	AC 220V $\pm 10\%$, 50Hz

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Distillate Fuel Cold Filter Plugging Point Filter LLTT-A12

Labtron LLTT-A12 is designed with cold filter plugging point test along with proper cooling bath. Equipped as per "Test Methods for Cold Filter Plugging Point of Distillate Fuels".

Features

- Relative low temperature tester
- Round glass cup with flat bottom sample cup
- Equipped with SH/T0248 "Test Methods for Cold Filter Plugging Point of Distillate Fuels"
- Advance Digital display
- Integrated structure

Applications

It can be widely used in petroleum, chemical industries and environmental studies.

Specifications

Model No.		LLTT-A12
Sample cup	Inner diameter	31.0~32.0mm
	Wall thickness	1.0~1.5mm
	Height	115~125mm
Ambient temperature		-10~+35°C
Relative humidity		≤85%
Pumping pressure		U type differential pressure meter 1961 Pa (200 mm H ₂ O)
Total power consumption		≤150W
Power supply		AC 220V±10%, 50Hz

Solidifying Point Tester LLTT-A13

Labtron LLTT-A13 is manufactured with stainless steel. It has two cooling baths in one chamber which has the same temperature. The instrument is newly designed and made as per ASTM D2386 Standard Test Method for Solidifying Point of Petroleum Oils. It is suitable to determine solidifying point of petroleum products.

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Features

- ✿ The temperature in cooling baths is uniform and it can reach -70°C
- ✿ Two cooling baths in one chamber with same temperature
- ✿ Design is simple and easy to use
- ✿ No need to use cooling liquid in cold chamber

Applications

It can be widely used in petroleum, chemical industries, research and development laboratories. It is suitable to determine solidifying point of petroleum products.

Specifications

Model No.	LLT-A13
Ambient temperature	$\leq 30^{\circ}\text{C}$
Relative humidity	$\leq 85\%$
Temperature control accuracy	$\pm 0.5^{\circ}\text{C}$
Cold trough	Two holes in one trough, and same temperature
Refrigeration	New-type refrigeration compressor
Dimension	620*460*355mm
Maximum power consumption	1000W
Power supply	AC 220V $\pm 10\%$, 50 Hz

Pour and Cloud Point Tester LLT-A14

Labtron LLT-A14 instrument adopts a new type compressor, advanced temperature controller and special refrigeration bath. It is designed and made as per ASTM D97 "Test Methods for Pour Point of Petroleum Products" and ASTM D2500 "Test Methods for Cloud Point of Petroleum Products".

Features

- ✿ Cooling rate is fast and efficiency is high
- ✿ No need to use coolant liquid in cold chamber
- ✿ Material of workbench is made up of stainless steel
- ✿ Two cold baths in one chamber. The cold baths are equal in temperature
- ✿ Design is simple and easy to use

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Applications

It can be widely used in petroleum (pour point and cloud point), chemical industries, research and development laboratories.

Specifications

Model No.		LLTT-A14
Cold trough	Cold trough I	RT~-51°C, ±1°C
	Cold trough II	RT~-70°C, ±1°C
Refrigeration system		New-type refrigeration compressor
Ambient temperature		≤30°C
Relative humidity		≤85%
Total power consumption		≤1500W
Dimensions		920*670*510mm

Solidifying Point and Cold Filter Plugging Point Tester LLTT-A15

Labtron LLTT- A15 is manufactured with two cold trough with same temperature. The instrument is designed and made as per ASTM D2386 “Test Methods for Solidifying Point of Petroleum Products”, and ASTM D6371 Test Methods for Cold Filter Plugging Point of Distillate Fuel.

Features

- ❖ Cold filter plugging point is provided
- ❖ No need to use cooling liquid in the chambers
- ❖ Composed of two chambers having same temperature
- ❖ Both solidifying point test and cold filter plugging point test provided

Applications

It can be widely used in petroleum (solidifying point and cold filter plugging point), chemical industries, research and development laboratories.

Specifications

Model No.		LLTT-A15
Cold trough	Cold trough I	Room temperature~-51°C, ±1°C
	Cold trough II	Room temperature~-80°C, ±1°C
Refrigeration system		New-type refrigeration compressor
Ambient temperature		≤30°C

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Relative humidity	≤85%
Outer Dimensions	920*670*510mm
Inner Dimensions	560*380*250mm
Total power consumption	≤1500W

Multifunctional Low Temperature Tester LLTT-A16

Labtron LLTT- A16 is a multifunctional instrument with LCD screen, four chambers, each chamber has two cooling bath. The instrument is designed and made as per ASTM D2386 “Test Methods for Solidifying Point of Petroleum Products”, ASTM D97 “Test Methods for Pour Point of Petroleum Products”, ASTM D2500 “Test Methods for Cloud Point of Petroleum Products”, and ASTM D6371 “Test Methods for Cold Filter Plugging Point of Distillate Fuels”.

Features

- ✿ LCD display
- ✿ Convenient to move
- ✿ No need to use cooling liquid
- ✿ Easy to use and high efficiency

Applications

It can be mainly used in petroleum, chemical industry and research field. It is suitable to determine solidifying point, pour point, cloud point and cold filter plugging point.

Specifications

Model No.		LLTT-A16
Cold trough	Cold trough I	0°C, ±0.5°C
	Cold trough II	0°C, -17°C, ±0.5°C
	Cold trough III	-17°C, -34°C, ±0.5°C
	Cold trough IV	Ambient temperature ~-70°C, ±0.5°C
Refrigeration system		New-type refrigeration compressor
Ambient temperature		≤30°C
Relative humidity		≤85%
Dimensions		930*570*108mm
Total power consumption		≤1700W
Power supply		AC 220V±10%, 50Hz

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Solidifying Point Tester LLTT-A20

Labtron LLTT-A20 is designed with solidifying point determination. Adopting new type of refrigeration compressor, advanced temperature controller and special refrigeration baths. The instrument is designed and made as per ASTM D2386 "Test Methods for Solidifying Point of Petroleum Products".

Features

- ✦ High temperature solidifying point test
- ✦ Two cooling baths in one chamber
- ✦ Advanced temperature controller and special cooling bath
- ✦ Simple and easy to use

Applications

It is widely used for oil exploiting, processing and using companies, relative colleges and universities, and R&D institutes. It is also suitable for determining the solidifying point of lubricating oil and dark petroleum products.

Specifications

Model No.	LLTT-A20
Cold trough	One trough with two baths, temperatures in two baths are equal
Ambient temperature	$\leq 30^{\circ}\text{C}$
Relative humidity	$\leq 85\%$
Controlling temperature in cold trough	Room temperature $\sim -70^{\circ}\text{C}$
Temperature controlling accuracy	$\pm 0.5^{\circ}\text{C}$
Refrigeration system	new type of refrigeration compressor
Dimensions	730*580*520mm
Total power consumption	$\leq 1000\text{ W}$
Power supply	AC 220V $\pm 10\%$, 50Hz

Solidifying Point Tester (Solidifying Point and Cold Filter Plugging Point) LLTT-A21

Labtron LLTT-A21 is manufactured with new-type compressor, advanced temperature controller and special cooling bath. The instrument is designed and made as per ASTM D2386 "Test Methods for Solidifying Point of Petroleum Products", and ASTM D6371 "Test Methods for Cold Filter Plugging Point of Distillate Fuels"

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Features

- ✦ New-type compressor and progressed temperature controller
- ✦ Workbench is made up of stainless steel to avoid corrosion
- ✦ Unique cooling bath
- ✦ Two cooling baths in one chamber with high efficiency and faster cooling rate
- ✦ High temperature solidifying point

Applications

It is widely used in petroleum, chemical and research industry. It is also suitable to determine solidifying point and cold filter plugging point of petroleum products.

Specifications

Model No.	LLTT-A21
Cold trough	One trough with two baths, temperatures in two baths are equal
Ambient temperature	$\leq 30^{\circ}\text{C}$
Relative humidity	$\leq 85\%$
Controlling temperature in cold trough	Room temperature $\sim -70^{\circ}\text{C}$
Temperature controlling accuracy	$\pm 0.5^{\circ}\text{C}$
Refrigeration system	New type of refrigeration compressor
Inner Dimension	560*380*250mm
Outer Dimension	730*580*520mm
Power supply	AC 220V $\pm 10\%$, 50Hz
Total power consumption	$\leq 1000\text{W}$

Solidifying Point Tester ($-20^{\circ}\text{C}\sim 80^{\circ}\text{C}$) LLTT-A22

Labtron LLTT-A22 is manufactured with new-type compressor and has two cooling baths in one chamber. The instrument is specially designed and made as per ASTM D2386 Standard Test Method for Solidifying Point of Petroleum Products.

Features

- ✦ Integrated design for low temperature tester
- ✦ Advance in design and reasonable in structure
- ✦ Special temperature controlling techniques
- ✦ Solidifying point determination from -20°C to 80°C

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- ❖ Digital temperature system
- ❖ High precision temperature sensor
- ❖ Spray plastics for instrument shell process

Applications

It is widely used in petroleum, chemical and research industry.

Specifications

Model No.	LLTT-A22
Cold trough	One trough with two baths, temperatures in two baths are equal
Temperature range	20°C~80°C
Controlling temperature in cold trough	Room temperature~-70°C
Temperature controlling accuracy	±0.5°C
Ambient temperature	≤30°C
Relative humidity	≤85%
Refrigeration system	New type of refrigeration compressor
Dimensions	730*580*520mm
Total power consumption	≤1000W
Power supply	AC 220V±10%, 50Hz

Automatic Pour Point Tester LLTT-A23

Labtron LLTT-A23 is manufactured with SCM as the core control system. It is also deliberately fabricated with colored touch screen, detecting sensor and semiconductor refrigeration technology. It is designed and made as per standards GB/T 510 Standard Test Method for Solidifying Point of Petroleum Products, GB/T3535 Standard Test Method for Pour Point of Petroleum Products.

Features

- ❖ Test procedures are fully automatic
- ❖ Data automation
- ❖ Semiconductor for refrigeration, makes determination rapid
- ❖ Solidifying point and pour point determination
- ❖ LCD and graphic display
- ❖ It can track and display the real-time temperature, and simulate the test status intelligently

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Applications

It can be widely used in oil refineries, oil stations and other relevant institutions. It can be mainly used to determine the solidifying point and pour point of light oils which have good flow ability and low viscosity.

Specifications

Model No.	LLT-A23
Ambient temperature	$\leq 30^{\circ}\text{C}$
Refrigeration speed	$> 40^{\circ}\text{C}/10\text{min}$
Repeatability for solidifying point	$\leq 2^{\circ}\text{C}$
Repeatability for pour point	$\leq 3^{\circ}\text{C}$
Reproducibility	$\pm 4^{\circ}\text{C}$
Pressure of cooling water	0.5kg/cm ²
The lowest temperature	-60°C
Dimensions	610*450*580mm
Power supply	AC 220V \pm 10%, 50Hz



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