… from development to implementation

Labor Tech®

Czech manufacturer of testing equipment and automation



Cooling chamber for cooling samples notched toughness LABCool 21

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Cooling chambers for cooling notched toughness samples

… ecology and performance come first …

In our offer you will find several types of cooling temperature chambers, which are designed for cooling samples intended for notch toughness tests for impact hammers, pad machines and automated systems with a robot - X RUNNER. Our development in this area is unlimited.

Mechanics and design

Robust stainless steel design designed for test rooms and laboratories with high mechanical resistance and durability, guaranteeing 100% and accurate cooling of samples. Integrated expansion feet for precise horizontal positioning. Protection of the cooling bath with a cover. Controlled integrated unit ensuring the homogeneity of the liquid bath.

Cooling chamber control and operation

High comfort of machine operation at a very high level thanks to the SIEMENS LCD touch system. This industrial system with integrated intuitive and simple LabCool software has independent cooling chamber control. It will help you increase the productivity and quality of testing in your test rooms and test labs by exporting data to superior systems.

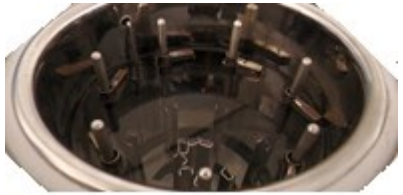
Ecology - you can rely on our know-how

Choosing the right refrigerant is not easy. The right choice of ecological refrigerant is always in the first place with us and has a fundamental influence on the effect, construction costs and energy consumption. Our refrigerant selection is R449A / R170 - complies with European legislation (EU) 517/2014.

Safety and declaration of conformity

Based on their concept and construction, LABORTECH machines and equipment comply with all the above-mentioned EC directives on machinery and equipment. Only state-of-the-art safety techniques and proven industrial components are used in accordance with the new safety functions according to ENB ISO 13850-SIL 1 / PL.





Every detail matters…

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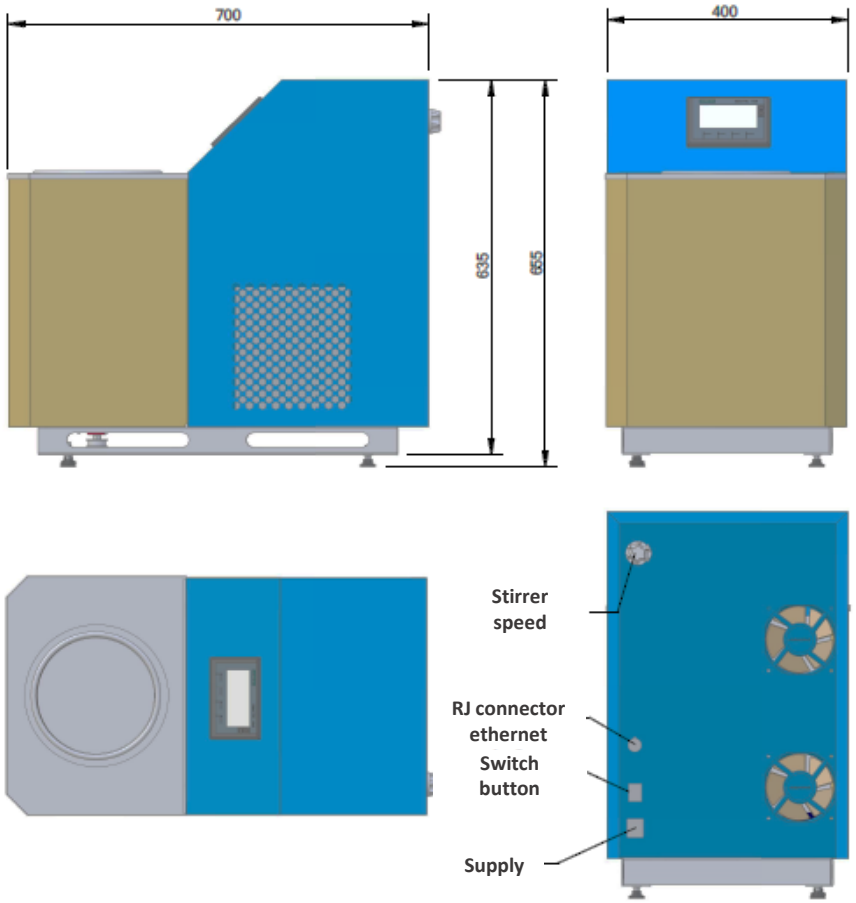

Expandable accessories	
Ergonomic workstation	2.3800221
Circular sample carrier - 7 carriers for 91 samples	2.3800121
Possibility of external control via PC	2.3800321

[1] Depending on the number of samples, [2] Depending on the required output, environment, type of test, number of samples, measured in an open environment according to DIN EN ISO 11205, [3] Fully environmentally friendly refrigerant meeting EU standards. [4] Circular sample carrier not in chamber standard.
Technical changes reserved during development, machine parameters at room temperature.

LABCool series

Technical data	Units	LABCool 21
Product code		2.3800021
Temperature range	°C	-80 to +20
Accuracy of cooling control	°C	± 0.1
Cooling stability	°C	± 0.5
Temperature control resolution	°C	0,02
Cooling rate [1] from +20 to -80 ° C	min	140 min
Noise 1 m from the edge of the device[2]	dB	58
Type of refrigerant used[3]		R449A/R170
Cooling bath parameters		
Internal dimension of the bath - diameter	mm	199
Internal dimension of the bath - depth	mm	330
Media volume	l	8
Maximum number of samples in the bath[4]		91
Ensuring media homogeneity		Magnetic
Measuring and control electronics		
Control system		SIMATIC
Export data		Ethernet
Environmental conditions		
Working environment temperature	°C	+10 … +35
Storage temperature	°C	-25 … +55
Humidity of the working environment	%	<90
Electrical connection		
Supply voltage / frequency	V/Hz	1Ph/N/PE 230/ 50-60
Power consumption	VA	450
Other parameters		
Machine weight	kg	44
Color combination	RAL	1015, 5015
Cover		IP54

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Software LABCool

Intuitive software for simple and efficient cooling operation



Functions of LABCool software

LABCool - intuitive and simple software integrated in LABORTECH cooling chambers will help you increase comfort and quality with cooling of samples for notched toughness tests in your test rooms and testing laboratories. You can streamline, refine and speed up the performance of your tests and adapt your testing environment to make it easy for operators to measure the mechanical properties of materials during impact tests.



- Touch control of all parameters via LCD
- Set Point - setting the desired temperature to 1 decimal place
- Process Value - check the current temperature to 1 decimal place
- Online display of a graph of the course of temperature over time
- Indication of cooling on and off
- Indication of error messages and messages about the continuous status of the machine
- Percentage display of cooling intensity in %



- Audible indication of reaching the desired temperature
- Cooling bath quality control - Precise setting of PID controllers and temperature corrections
- Setting user rights, operator login
- Possibility of cooperation with the X-RUNNER system
- Automatic data export
- Language mutations (Cz, En, De, Fr, Pl, It, Ru etc.)



Verze 1.04-2021- SW-LABCool

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Why buy LABCool 21 from LABORTECH?

Because we offer everything from A to Z, ie. from development to implementation …

- Engineering services

LABORTECH offers a complete set of professional engineering services, including systems engineering, consulting services and equipment design.

- Training and education

LABORTECH application technicians increase the professional competence of work on impact machines by regularly training operators and operating test equipment.

- Online service and maintenance

Our testing machines can work 24 hours a day, 7 days a week, 365 days a year. We provide you with On-line service at all times with our qualified application and service technicians on the telephone line +420 602 527 577.

- Calibration and adjustment

Testing laboratories must calibrate their testing equipment to ensure accuracy in accordance with the Metrology Act. LABORTECH provides top, calibration services associated with setting the temperature according to the caliber.

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LABORTECH in the world

Where to find our representation…



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