Leica
BIOSYSTEMS

Leica CM3050 S

The versatile cryostat for research and routine histology

Quality and reproducibility

Time is a decisive factor for both operational efficiency and economic performance in any routine and research laboratory. Thus, the Leica CM3050 S ensures efficient specimen processing by offering fast and reliable sectioning results. An innovative heat insulation system guarantees constant stable temperatures and less power consumption, therefore helping to keep running costs low. With its versatility and easy operation the Leica CM3050 S even meets the highest demands perfectly. The applied technology and ergonomics stand for Leica's extra ordinary know-how in the design of modern cryostats.

POWERFUL - QUICK FREEZING SHELF

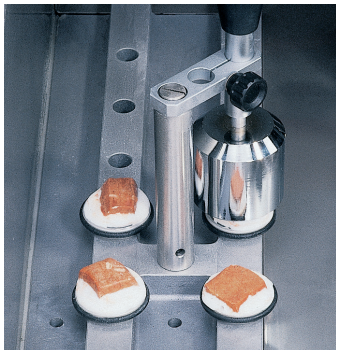
The actively cooled quick freezing shelf (-45 °C) with heat extractor allows extremely fast specimen freezing.

MULTIFUNCTIONAL - CABINET HEIGHT ADJUSTMENT*

The highly flexible hydraulic cabinet height adjustment gives the user freedom to work comfort ably while sitting or standing. All functional keys are easily accessible in any position.

INNOVATIVE - INSULATION SYSTEM

Highly efficient insulating materials used in the vacuum panels lead to power savings of approximately 10 % compared to regular heat insulation systems. This new feature enhances the durability of the refrigerating system and safeguard stable cryochamber temperatures, even when there are unfavorable environmental conditions at the installation site.



Leica CM3050 S – Main product features

› Cooling via two separate refrigeration systems in units with specimen cooling (optional)
› Actively cooled quick freezing shelf (-45 °C)
› Optional separate specimen cooling adjustable down to -50 °C
› Automatic hot gas defrost cycle, programmable
› Fast and accurate changing of specimen temperature
› Manual defrosting, independent operation for the cryochamber and the specimen head
› Usage of both standard and all Miles®-specimen discs possible
› Battery-powered electronic memory back-up
› Optional hydraulic height adjustment
› Indication of total section thickness
› Programmable reverse section counter
› Low-maintenance design due to convenient access to the cooling system from outside the cryostat housing
› Encapsulated microtome to support efficient spray disinfection

CLEARLY ARRANGED - CONTROL ELEMENTS

The most important settings such as cutting speed range, cryochamber and specimen temperature, defrost time and duration, coarse feed and object temperature can be conveniently and accurately preselected by simply pushing a button. A new feature that has been added is the section thickness selection from outside the cryochamber – now conveniently located at the control panel.

USER SAFETY - CENTERING THE HANDWHEEL HANDLE

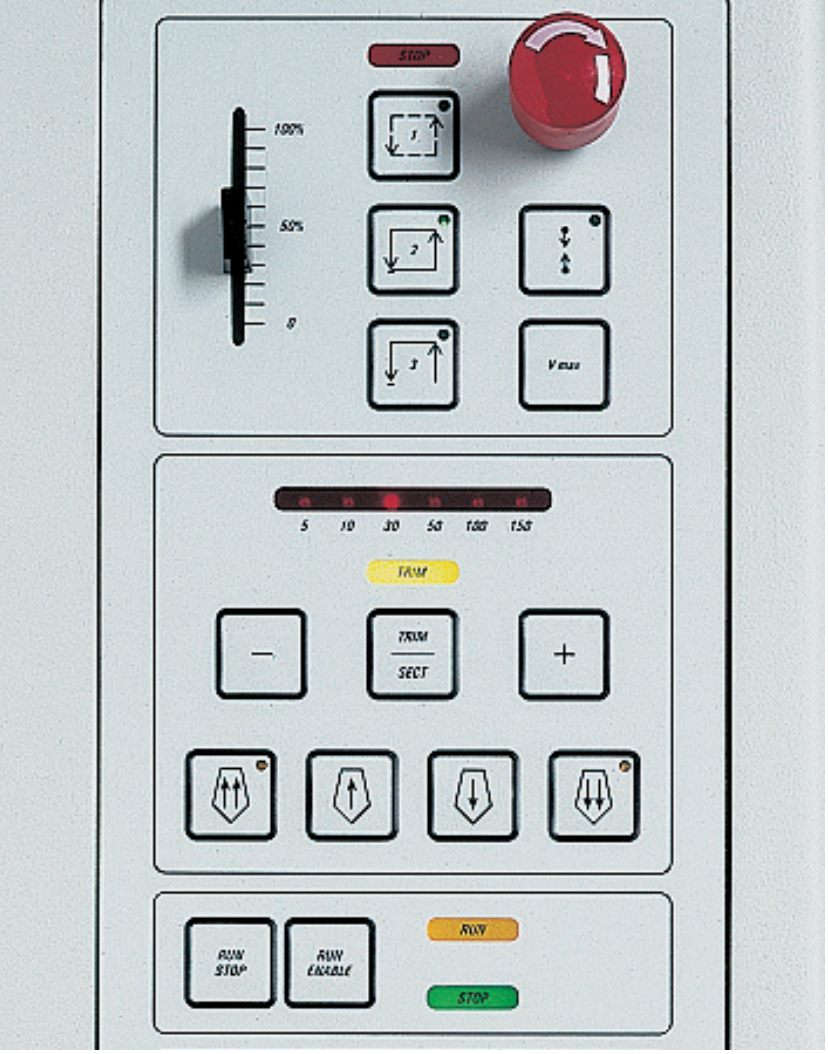
During motorized operation, the handle of the handwheel can be centered so that it spins in place instead of rotating in an outward motion.

PRECISE - SPECIMEN ORIENTATION AND SPECIMEN FEED

Particularly when working with large specimens – for example in neuroscience – the precise specimen orientation and the new specimen feed system via step motor guarantee reproducible thin sections of maximum quality.

CONVENIENT - PROGRAMMABLE REVERSE SECTION COUNTER

With the section counter a preselected number of sections can becarried out in both sectioning and trimming mode.



MICROTOME	
Section thickness setting	0.5 to 300 µm
Maximum specimen size	40 mm x 55 mm
Horizontal specimen feed	25 mm
Vertical specimen stroke	59 mm
Specimen retraction	50 µm
Specimen precision orientation	by 8° (x/y/z axis)
Trimming	5 to 150 µm ± 0,5 µm in steps of 5, 10, 30, 50, 100, and 150 µm
Motorized coarse feed at two speeds	500 µm/s 1.000 µm/s

CUTTING MOTOR	
Cutting speed ranges	0.1 mm/s to 170 mm/s 0.1 mm/s to 100 mm/s V_{max} 210 mm/s

CRYOCHAMBER COOLING	
Temperature setting range	0 °C to -40 °C
Defrosting	programmable, 1 automatic defrost cycle/24 h, duration: from 6 to 12 min; manual defrosting
Freezing shelf temperature	Approx. -45 °C at an ambient temperature of 22 °C

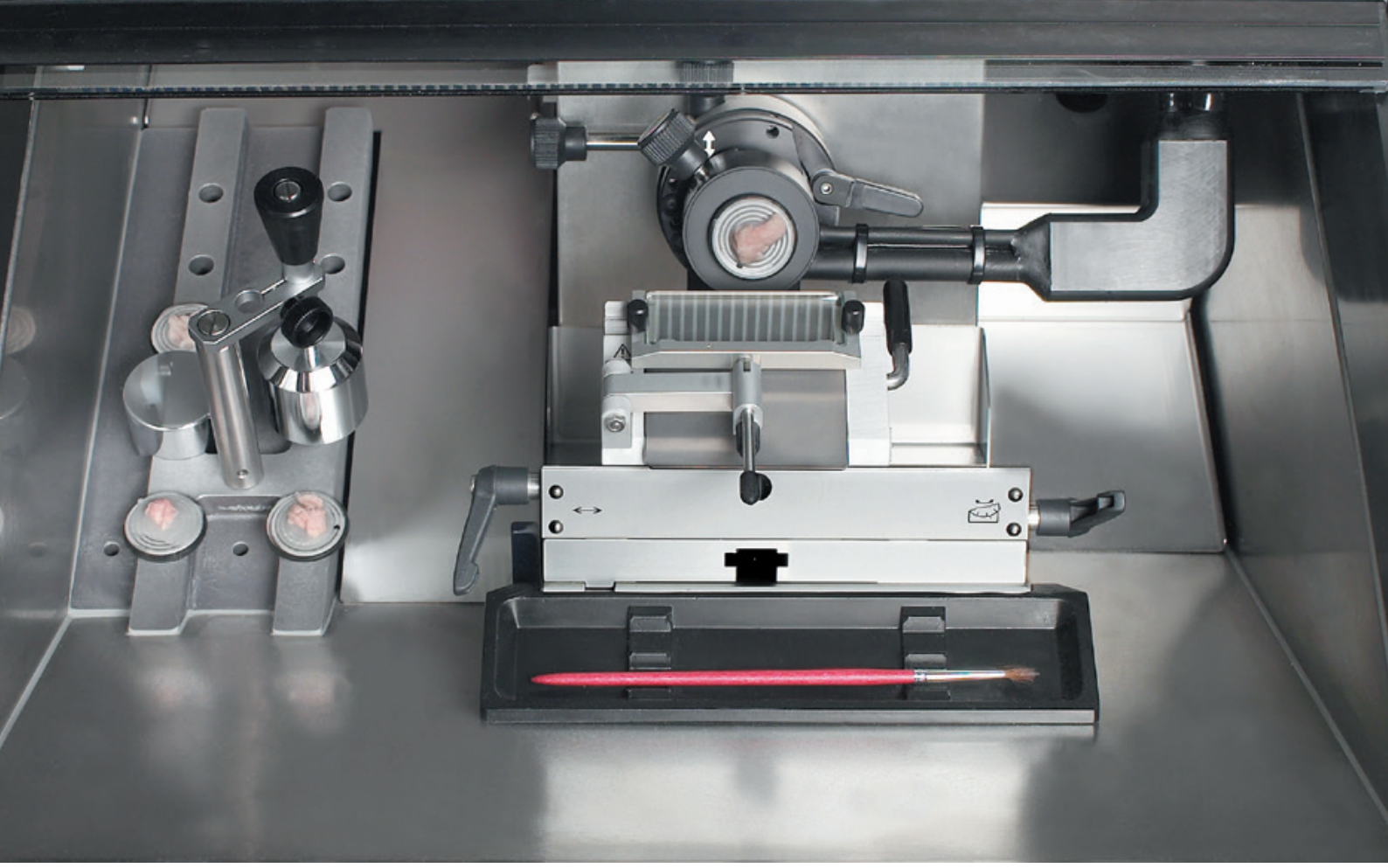
SPECIMEN COOLING (OPTIONAL)	
Temperature setting range	-10 °C to -50 °C (+/-3 K)
Defrosting	manual defrosting

CRYOCABINET	
Dimensions (w/h/d)	882 x 1040 x 766 mm
Weight (incl. microtome)	Approx. 180 kg
Power draw	1800 VA

The Leica CM3050 S cryostat is equipped with sectioning motor and available with and without object cooling.

All specifications related to temperature are valid for a room temperature of 22 °C and an air humidity of less than 60%.

As confirmed by the successful c-CSA-us certification, the Leica CM3050 S has been designed and manufactured in compliance with UL, CSA and IEC requirements. State-of-the-art development, manufacturing and quality control procedures – certified under DIN EN ISO 9001 – ensure highest quality and reliability. A wide range of accessories available on request. Technical specification subject to change without prior notice.



EFFICIENT - CHANGING THE SPECIMEN TEMPERATURE*

A high throughput and enhanced efficiency are guaranteed by the powerful specimen temperature control which ensures fast and precise changes of the specimen temperature at an extremely fast rate of cooling.

SPACIOUS - STAINLESS STEEL CRYOCHAMBER

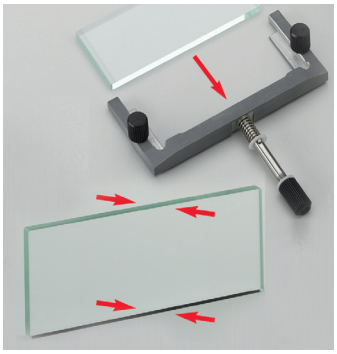
The easily accessible cryochamber provides large space for convenient handling and specimen storage.

FUNCTIONAL - THE KNIFE HOLDER CE*

The lateral displacement feature of the blade holder CE for disposable blades allows the use of the whole blade length without need to reposition the blade within the holder. When displacing the blade holder the integrated glass antiroll guide will automatically be carried along.

*Option

Anti-roll guide system with four usable glass insert edges for cryostat knife holders Leica CE and CN.



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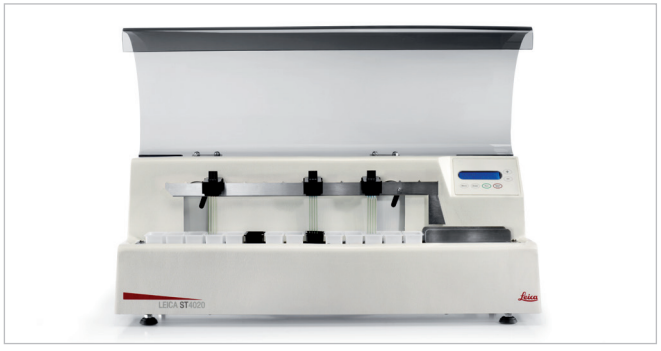

TOTAL CRYOSECTIONING SOLUTIONS

Leica ST4020 Linear Stainer
Quickly and easily stain surgical frozen sections with this small, fast stainer located near or on top of your cryostat.

Disposable Blades
Find just the blade you need from Leica Biosystems' diverse range of coated, uncoated, high- and low-profile blades.

Leica Surgipath Slides
With many color and adhesive options you're sure to find the ideal slide for your application.

Embedding Media
Leica Biosystems can supply a wide range of embedding media including Tissue Freezing Medium, FSC22™ and Cryo-Gel.

Dr. Peters Cryoembedding System
easily achieve proper specimen orientation and perfect embedding with the unique Precision Cryoembedding System.

LEICA BIOSYSTEMS

Leica Biosystems is a global leader in workflow solutions bringing histopathology laboratories and researchers the highest quality, most comprehensive product range in anatomical pathology. With complete histology systems featuring innovative automation, Novocastra™ reagents and Surgipath® consumables, Leica Biosystems offers the ideal product for each histology step and high-productivity workflow solutions for the entire laboratory.

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