Leica CM 3050 S

The new versatile cryostat

for research and routine histology

Leica

Quality and reproducibility

Time is a decisive factor for both operational efficiency and economic performance in any routine and research laboratory. Thus, the new Leica CM 3050 S ensures efficient specimen processing by offering fast and reliable sectioning results. Based on 125 years of experience and international acknowledgement, Leica now offers the new Leica CM 3050 S which features paramount user comfort and excellent safety standards. 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 CM 3050 S even meets the highest demands perfectly. The applied technology and ergonomics stand for Leica's extraordinary 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 *

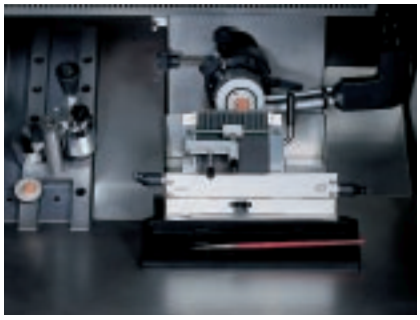
The highly flexible hydraulic cabinet height adjustment gives the user freedom to work comfortably while sitting or standing. All functional keys are easily accessible in any position.

Easy-to-use:
Spray disinfection

The new Leica Cryofect disinfectant spray ensures easy, fast and safe disinfection of the cryochamber at a temperature of -20 °C.

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.



Spacious:
Stainless steel cryochamber

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

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.

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.

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.

New and convenient:
Programmable reverse section counter

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

Additional features of the Leica CM 3050 S

NEW!

- Convenient section thickness selection from outside the cryochamber
- Indication of total section thickness
- Reproducible high-quality thin sections via step motor specimen feed
- Programmable reverse section counter
- Maximum section thickness: 300 µm
- Spacious cryochamber, easy to clean and disinfect
- Low-maintenance design due to convenient access to the cooling system from outside the cryostat housing
- Low-maintenance, durable refrigerating system
- Encapsulated microtome to support efficient spray disinfection

The Leica CM 3050 S cryostat is equipped with sectioning motor and available with and without object cooling.

* Option

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.

Functional:
The knife holder CE *

The lateral displacement feature of the knife 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 knife holder the integrated glass anti-roll guide will automatically be carried along.

Leica CM 3050 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 temperatures
- 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

Leica CM 3050 S – Technical specifications

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 to12 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: 1440 VA

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

Wide range of accessories on request.
Technical specification subject to change.

The Leica CM 3050 S is manufactured in compliance with the UL, CSA, IEC and VDE standards. Up-to-date development, production and quality control procedures certified under DIN EN ISO 9001 ensure highest quality and reliability.

For further information please contact your local Leica sales company

Australia:	North Ryde/NSW	Phone +61 2 9897 9700	Fax +61 2 9817 8358
Austria:	Vienna	Phone +43 1 495 44 160	Fax +43 1 495 44 1630
Canada:	Willowdale/Ontario	Phone +1 416 497 2860	Fax +1 416 497 8516
Denmark:	Herlev	Phone +45 4454 0101	Fax +45 4454 0111
France:	Rueil-Malmaison Cedex	Phone +33 1 473 285 85	Fax +33 1 473 285 86
Germany:	Bensheim	Phone +49 6251 136 0	Fax +49 6251 136 155
Italy:	Milan	Phone +39 0257 40 1955	Fax +39 0257 40 3273
Japan:	Tokyo	Phone +81 3 5435 9603	Fax +81 3 5435 9615
Korea:	Seoul	Phone +82 25 146 543	Fax +82 25 146 548
Netherlands:	Rijswijk	Phone +31 70 3198999	Fax +31 70 3905659
Portugal:	Lisbon	Phone +351 1 388 9112	Fax +351 1 385 4668
Republic of China:	Hong Kong	Phone +852 2 564 6699	Fax +852 2 564 4163
Singapore:	Singapore:	Phone +65 779 7823	Fax +65 773 0628
Spain:	Barcelona	Phone +34 93 494 9530	Fax +34 93 494 9532
Sweden:	Sollentuna	Phone +46 8 6254 545	Fax +46 8 6254 510
Switzerland:	Glattbrugg	Phone +41 1 809 34 34	Fax +41 1 809 34 44
United Kingdom:	Milton Keynes	Phone +44 1908 246246	Fax +44 1908 609992
USA:	Deerfield/Illinois	Phone +1 847 405 0123	Fax +1 847 405 0147

…and more than 100 national distributors.

Leica Microsystems Nussloch GmbH
Heidelberger Strasse 17-19
D-69226 Nussloch

Tel.: (06224) 143-0
Fax: (06224) 143 200
http: //www.leica-microsystems.com

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