



FAST CRYOSTAT

Fast Cryostat - ToronCryo™ 200

Cryostat ToronCryo™ 200 is a compact freezing accessory designed for use with a Cryostat Microtome workflow in hospitals, research labs, pathology departments, and other laboratories that need fast frozen section preparation. This Cryostat Machine works with ToronCryo™ MT paraffin microtomes and combines a cryo-clamp with a cryo-console to create a practical low-temperature sectioning setup.

ToronCryo™ 200 is intended to support rapid freezing before and during sectioning. The system keeps the tissue in a frozen state, limits temperature rise during cutting, and automatically restores the freezing condition after defrosting. That approach helps reduce tissue damage caused by uncontrolled temperature change during frozen section work.

Fast Cryostat - ToronCryo™ 200 is easy to operate, stable in use, and fast in freezing performance. A 45° angle between the cryo-console and cryo-clamp helps make it easier to handle tissue on the slicing stage. The console uses magnetic adsorption, which supports simple operation and disassembly.

APPLICATIONS

Fast Cryostat - ToronCryo™ 200 Applications

- Frozen section work in hospitals: ToronCryo™ 200 is designed for clinical frozen section preparation in hospital environments. It supports rapid tissue freezing for workflows that need quick sectioning before diagnosis or immediate laboratory review.
- Pathology and histology laboratories: This Cryostat is suitable for pathology and biological histology applications where tissue must be kept cold during preparation. Fast Cryostat - ToronCryo™ 200 is a useful product for both clinical pathology and biological histology.
- Research institutions and laboratory use: fast Cryostat - ToronCryo™ 200 is suitable for scientific research institutions among the intended users. That makes the unit a practical Cryostat Machine for academic and research settings that

need frozen tissue preparation with a compatible microtome.

- Agriculture, forestry, and epidemic prevention field: ToronCryo™ 200 is also positioned for agriculture, forestry, and epidemic prevention use. These environments may need rapid frozen sectioning for plant tissue, biological materials, or other temperature-sensitive specimens.



FEATURES

Fast Cryostat - ToronCryo™ 200 Key Features

- Designed for frozen section microtomy: ToronCryo™ 200 is built as a freezing accessory for microtome-based frozen section work. It is intended to pair with YIDI paraffin microtomes and extend them into a Cryostat Microtome setup.
- Cryo-clamp and cryo-console system: the product combines a cryo-clamp and cryo-console to create a controlled low-temperature sectioning environment. This layout supports tissue freezing at the specimen stage during sectioning.
- Simultaneous temperature display: the LCD display shows the temperature of both the cryo-clamp and the cryo-console at the same time. That gives the operator direct visual monitoring of the freezing conditions during use.
- Automatic recovery of freezing state after defrosting: after automatic defrost, the system returns to the set freezing condition. This helps reduce disruption during repeated sectioning work.
- Rapid freezing performance: the freezing system is fast, stable, and easy to operate. It is intended for rapid frozen section preparation in clinical and laboratory settings.
- 45° cryo-console to cryo-clamp angle: the angle between the cryo-console and cryo-clamp is 45 degrees. This layout is intended to make tissue attached to the slice easier to handle during the sectioning process.
- Magnetic adsorption design: the cryo-console uses magnetic adsorption, which helps simplify operation and disassembly. This can make setup and handling more convenient in routine laboratory work.
- Broad compatibility with paraffin microtomes: the rapid freezing system can be used with all paraffin microtomes from Torontech. This gives laboratories a flexible way to add frozen section capability to an existing compatible microtome platform.
- Suitable for clinical and conventional paraffin section work: the unit is suitable for clinical fast frozen section work and conventional paraffin section applications in biological histology and clinical pathology.

THEORY & METHOD

Theory and Method

A Cryostat Microtome workflow depends on keeping the specimen at a low and stable temperature so thin sections can be cut without the tissue softening during preparation. ToronCryo™ 200 supports that process through a freezing system made up of a cryo-clamp and cryo-console, which work together with a compatible microtome.

The freezing system stabilizes tissue temperature during sectioning and restores the freezing state automatically after defrosting. This helps reduce the risk of tissue cell damage that can happen when the cryo-clamp and cryo-console are not controlled at the same temperature.

A display on the unit shows the temperatures of the cryo-clamp and cryo-console at the same time. The system offers rapid freezing and that, after automatic defrost, it takes about 2 to 7 minutes to return to the set temperature. This supports practical daily use when repeated frozen sections are required.

TECHNICAL SPECIFICATIONS

Fast Cryostat - ToronCryo™ 200 Technical Specification

Parameter	ToronCryo™ 200
Product type	Fast Cryostat
Compatible use	Works with paraffin microtomes
Slice thickness range	0.5-600/999 µm (Fully Automatic Microtome - ToronCryo™ MT 550)
	0.25-600/999 µm (Semi Automatic Microtome - ToronCryo™ MT 530)
	0.5-500 µm (Semi Automatic Microtome - ToronCryo™ MT 520)
	0.5-60 µm (Repeatable Rotary Microtome - ToronCryo™ MT 450)

Parameter	ToronCryo™ 200
1-30 µm (Accurate Rotary Microtome - ToronCryo™ MT 400 / Stable Rotary Microtome - ToronCryo™ MT 350)	
1-25 µm (Precision Rotary Microtome - ToronCryo™ MT 300 / Basic Rotary Microtome - ToronCryo™ MT 200)	
Maximum cold storage area	40 × 40 mm
Temperature display	Simultaneous display of cryo-clamp and cryo-console temperatures
Maximum temperature difference between freezing stage	≥ 60°C
Maximum temperature difference of cooling knife	≥ 50°C
Defrost recovery	Automatic recovery of refrigeration working state after defrosting
Recovery time after automatic defrost	About 2-7 minutes to reach the set temperature
Maximum freezing temperature	-20°C



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