

Energy efficient  
-86° C freezers



# New Benchmark

New Brunswick sets the standard for extraordinary freezer quality, support, and energy savings

# Quality. Efficiency. World-class service.



For over 50 years, New Brunswick lab products have set new standards for design innovation, performance, and durability. The New Brunswick name is synonymous with exceptional quality and reliable performance that stand the test of time. And, for the past three decades, New Brunswick Ultra-Low Temperature (ULT) Freezers have continued that tradition. Offered in three lines to meet a variety of needs,

Premium and Innova Freezers have established a reputation for preserving outstanding sample quality while minimizing energy consumption; and the new HEF High Efficiency Freezers set new milestones in energy efficiency. Coupled with rapid delivery and service, New Brunswick freezers continue to raise the bar. **New Benchmark. New Brunswick.**

# New Brunswick Ultra-Low Temperature Freezers

## Uncompromising quality

From initial product design to final delivery, New Brunswick freezers meet the highest standards for quality. No other freezers offer the same combination of high performance, sample security, and convenience. Attention to every detail in manufacturing and the use of only the best components ensure consistent, reliable performance year after year. Every freezer is also individually tested and performance certified.

## Eco-friendly and highest energy efficiency

New Brunswick freezers are among the most energy-efficient ULT freezers on the market. Long-standing leaders in energy efficiency, Innova and Premium freezers feature an ultra-efficient compressor system that reduces energy consumption by up to 43 % when compared to competitive

models. New HEF High Efficiency Freezers are designed to further maximize energy efficiency and reduce energy consumption by up to 35 % compared to our Premium models.

## Unmatched service and support

We are dedicated to providing you world-class service and support. To start, our products are backed by a manufacturer's warranty. We also offer extended warranties, preventive maintenance and other services for those who need it (contact your local Eppendorf/New Brunswick office for details). Our service and support organization consists of highly trained customer service and technical representatives who are readily available to offer professional assistance when and where you need it.



New Brunswick Innova, Premium and HEF Freezers are available in upright and chest styles. With 15 models to choose from and capacities ranging from 101 - 725 liters, there is a New Brunswick freezer perfectly suited for every lab.

# Quality you can rely on

## Superior performance and reliability

The value of your samples can be considerable. That's why researchers worldwide turn to New Brunswick when selecting a freezer to store their precious samples. New Brunswick freezers are designed and built to preserve your samples using advanced technology and the highest quality construction.



Chest models include two insulated sub-lids

New Brunswick freezers provide outstanding insulation and temperature uniformity, plus many additional high performance features:

- > Heavy-duty, commercially-available compressor provides rapid temperature "pull down" and recovery after door opening
- > Multiple compartments (upright models) with insulated inner doors limit cold air loss during sample access
- > Flexible, high-quality gaskets on inner and outer doors ensure a proper seal; reduces icing, prevents cold air loss
- > Unique automatic reset protects the microprocessor controller from damage by electrical spikes
- > External voltage stabilizer option evens out voltage fluctuations; 60 Hz Innova freezers, excluding models U101 and U360, feature a built-in voltage stabilizer
- > Each freezer is extensively tested, including tests on pull-down times and long-term performance data
- > CE and UL certified



Two access ports allow CO<sub>2</sub>/LN<sub>2</sub> injection or addition of probes

Top-quality, stainless-steel interior prevents scratches, oxidation and rust; easily cleaned

Multiple compartments, adjustable-height shelves and optional racks, boxes and bins help maximize storage capacity



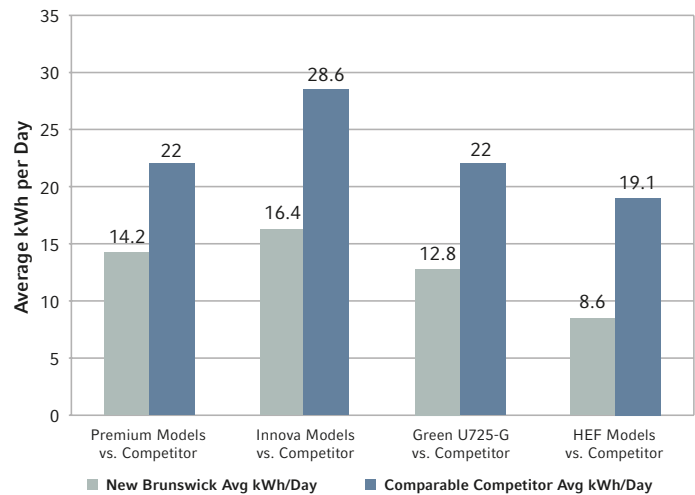
# The eco-logical choice™

## Environmentally friendly and energy efficient

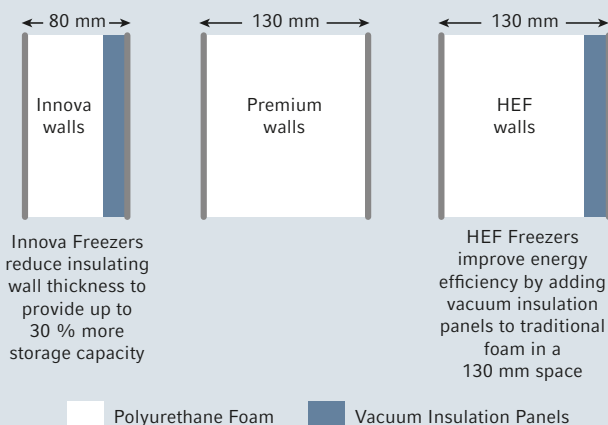
Ultra-low temperature freezers are traditionally high energy consumers as they maintain extremely low temperatures 24/7. With today's high energy costs and focus on the environment, energy conservation has become even more important in the lab. Eco-friendly New Brunswick ULT freezers are designed to help you save energy by minimizing cold air loss and by providing these added advanced features:

- > A highly efficient compressor control system reduces cycling times to lower energy consumption and increase freezer longevity
- > Environmentally safe, HFC-free\* and CFC-free refrigerants minimize greenhouse gases (\*Not available in the U.S.)
- > Biodegradable and commercially-available, high-performance, synthetic compressor lubricants prevent "oil-logging"
- > A single, quiet, condenser fan reduces energy consumption; most freezers require two
- > Built with 95 - 98 % recyclable materials (by weight)
- > Meet WEEE directives for disposal

Comparison of Energy Usage



New Brunswick freezers reduce energy consumption by thousands of kilowatt hours when compared to comparable competitor models. The net effect of using a New Brunswick freezer instead of a competitor model: A 10 metric ton reduction of CO<sub>2</sub> emissions on average, over the life of the freezer. That's equivalent to planting 65 earth-cooling, oxygen-replenishing trees. Plus, an average savings of up to 40 % in annual energy costs.



### Advanced vacuum insulation panel technology

New Brunswick Innova and HEF High Efficiency Freezers use vacuum insulation panel technology, an advanced thermal insulation technology that significantly outperforms traditional materials such as closed-cell foams (urethane), foam beads and fiber blankets. Vacuum insulation removes gasses within the insulating space to reduce heat transfer; as a result, thermal insulation performance far exceeds traditional materials. Other freezers use vacuum insulation panel technology, but none use Vacupor NT®. Vacupor panels not only provide exceptional thermal insulation, they have a metal-coated polymer film barrier seal to maintain vacuum and they are composed of biodegradable, CFC-free and HCFC-free materials.

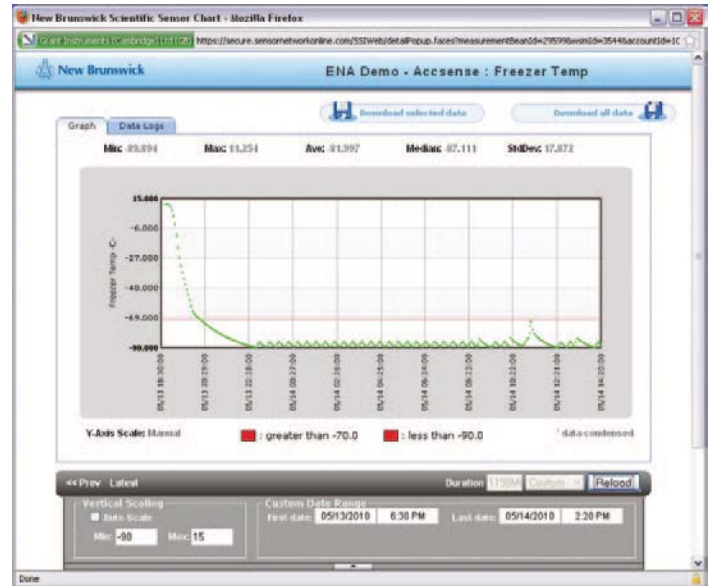


# Maximum sample protection

## Advanced monitoring and security

New Brunswick freezers safeguard your valuable samples with these advanced security features:

- > New TCA-3 Temperature Monitoring System (optional) offers added security; combines independent temperature monitor with alarm, electronic chart recorder, and an auto-dialer into one small pod
- > User-programmable, four-digit passwords for freezer setpoint and alarms
- > Battery back-up maintains temperature settings and activates alarms during a power outage
- > Optional CO<sub>2</sub> and LN<sub>2</sub> back-up, as well as a range of remote monitoring and data logging systems are available for complete peace of mind
- > Automatic restart with non-volatile memory after power interrupt
- > Audible and visual alarms indicate high/low temperature, power failure and alarm conditions; LED light indicates low battery, filter clean and fault analysis
- > Alarm socket enables testing of power-fail and low-battery alarms; connects to your building management system or optional auto-dialer



With the TCA-3 Temperature Monitoring System there is no software to download; record and view temperature probe, ambient temperature and alarm data from any web-based computer! (Inquire for availability)



TCA-3 pod with independent temperature probe, only 125 x 65 x 30 mm, easily mounts to the side of your freezer



Lockable security plate protects power and alarm on-off switches from accidental shut-off



Keyed, removable, door and lid locks prevent unauthorized access; optional padlock adapter (shown) offers even more protection

# Designed with you in mind

## Convenient, ergonomic design

New Brunswick freezers are designed with user convenience and comfort in mind. All models include ergonomically-positioned front-mounted control panels, easy-open doors and more:

- > Easy-open door, with molded handle, provides one-handed operation
- > Adjustable-height shelves provide storage flexibility
- > Low noise and low heat output
- > Hinged inner doors are easily removed for cleaning
- > Freezers fit through standard doorways/elevators; heavy-duty, lockable castors facilitate installation
- > A wide selection of freezer racks and other accessories are available to meet your needs; see our accessories brochure for more information



Bright LED control panel, mounted at eye level on uprights, is easy-to-read, and flush-mounted for easy wipe-down



Lightweight and durable anodized aluminum racks are available to accommodate 50, 75, 100 mm boxes. Racks for all other sample containers also available



Washable filter is front-mounted, easily accessed without tools, for low-maintenance



Heated air vent with ice-cleaning plunger prevents vacuum formation, allowing the door to be quickly opened throughout the day

# New Brunswick HEF<sup>®</sup> High Efficiency and Green Freezers

Most energy-efficient, eco-friendly freezers anywhere

New Brunswick developed the industry's first hydrocarbon-based freezers, setting a new benchmark in energy savings and eco-friendly design. Today, we continue to set new standards with our HEF and Green Freezers, among the most energy-efficient ultra-low temperature freezers on the market.

## **New HEF High Efficiency Freezers**

HEF Freezers minimize operating costs while providing superior protection for your critical samples. They reduce energy consumption by up to 59 % when compared to competitive models.

HEF Freezers provide all of the features of New Brunswick Premium models and more:

- > Vacuum insulation panels combined with traditional polyurethane foam form a 130 mm thick layer of insulation for exceptional energy efficiency
- > A high-efficiency, low-noise condenser fan and compressor system maximize energy efficiency
- > 50 Hz HEF models use environmentally-safe hydrocarbon-based refrigerants to further reduce energy consumption by 10 % (Not available in the United States)







**HEF Upright Model U410**

410 Liters

Holds up to 24,000 samples

External dimensions (H x W x D):

191.5 x 80 x 85.2 cm



**HEF Upright Model U570**

570 Liters

Holds up to 40,000 samples

External dimensions (H x W x D):

192.5 x 102.5 x 85.2 cm



**HEF Chest Model C660**

660 Liters

Holds up to 52,000 samples

External dimensions (H x W x D):

107.5 x 205 x 84 cm



**U725-G "Green" Freezer**

Ideal for large-capacity needs, Model U725-G is identical to the Innova U725 except that the U725-G replaces our standard refrigerants with hydrocarbon-based refrigerants and uses a superior fan design to further reduce greenhouse gases and energy consumption. A water-cooled model is available for even more energy and environmental savings (Not available in the United States)

**Green Upright U725-G**

725 Liters

Holds up to 50,400 samples

External dimensions (H x W x D):

195 x 102.5 x 86.7 cm

To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to depth of chest freezers. Open doors on upright freezers add up to 150 mm.

See pages 14-15 for ordering information, detailed technical specifications and performance data.

# New Brunswick Innova® Freezers

More capacity. Same freezer footprint.

When it comes to maximizing sample storage capacity, Innova freezers set the standard. They use advanced vacuum insulation panel technology to reduce freezer wall thickness. This provides up to 30 % more storage capacity than traditionally-insulated freezers without increasing the external dimensions.

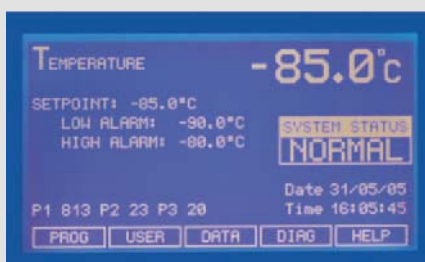
Upright Innova models have three separate interior compartments with gasketed, insulated doors for exceptional sample protection.

**Six models are offered, including two unique models:**

- > Ultra-slim Innova Upright Model U360 is just 67 cm wide, with handle, designed to fit in labs tight on space! It features our advanced new controller with extra-large display, data logging and graphing capability
- > For ultimate space savings, convenience, and security, upright Model U101 (shown below) fits under the bench, or can be stacked two high



Innova inner doors easily lift off hinges without tools to simplify cleaning



For total security the Innova U360 includes an advanced controller with user-programmable ID and passwords for up to eight users. Easy-to-read LCD screen provides a detailed record of alarms and alarm acknowledgements, door openings, and operating conditions with time-date stamp. Data is automatically stored for up to 30 days for on-screen graphing, and is downloadable to PC with optional communications ports for your strictest validation requirements. Built-in diagnostic screen enables a systems engineer to trouble-shoot most issues over the phone, saving you time and money. LCD measures 12 x 6.8 cm.



**Innova Upright Model U101**

101 Liters

Holds up to 6,000 samples

External dimensions (H x W x D):

83 x 90 x 56.6 cm



**Innova Upright Model U360**

360 Liters

Holds up to 25,200 samples

External dimensions (H x W x D):

195 x 67 x 86.7 cm



**Innova Upright Model U535**

535 Liters

Holds up to 33,600 samples

External dimensions (H x W x D):

195 x 80 x 86.7 cm



**Innova Upright Model U725**

725 Liters

Holds up to 50,400 samples

External dimensions (H x W x D):

195 x 102.5 x 86.7 cm



**Innova Chest Model C585**

585 Liters

Holds up to 41,600 samples

External dimensions (H x W x D):

109.2 x 169 x 78.5 cm



**Innova Chest Model C760**

760 Liters

Holds up to 57,200 samples

External dimensions (H x W x D):

109.2 x 205 x 78.5 cm

To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to depth of chest freezers. Open doors on upright freezers add up to 150 mm.

See pages 14-15 for ordering information, detailed technical specifications and performance data.

# New Brunswick Premium Freezers

Quality. Reliability. Value.

Over 30 years of innovation have gone into the design of New Brunswick Premium Freezers—the original benchmark for top quality ultra-low temperature freezers.

Premium Freezers are known for their worry-free, long-term reliability, sample preservation, and energy efficiency. They provide many of the same features as our Innova models, but are conventionally-insulated for a cost-effective alternative. Polyurethane insulation combined with a highly efficient cooling system achieve and maintain ultra-low temperatures of  $-86^{\circ}\text{C}$ .

Like all New Brunswick freezers, these models provide significant energy savings—up to 40 % less energy consumption compared to competitor models.

Five models are offered to meet your application requirements, including a new 700-liter large capacity upright.



Premium Freezers offer the advantage of five interior compartments to limit cold air loss during sample access



**Premium Upright Model U410**  
 410 Liters  
 Holds up to 24,000 samples  
 External dimensions (H x W x D):  
 191.5 x 80 x 85.2 cm



**Premium Upright Model U570**  
 570 Liters  
 Holds up to 40,000 samples  
 External dimensions (H x W x D):  
 192.5 x 102.5 x 85.2 cm



**Premium Upright Model U700**  
 700 Liters  
 Holds up to 48,000 samples  
 External dimensions (H x W x D):  
 195.9 x 112.1 x 87 cm



**Premium Chest Model C340**  
 340 Liters  
 Holds up to 26,000 samples  
 External dimensions (H x W x D):  
 107.5 x 134 x 84 cm



**Premium Chest Model C660**  
 660 Liters  
 Holds up to 52,000 samples  
 External dimensions (H x W x D):  
 107.5 x 205 x 84 cm

To allow for handles and hinges, add 80 mm to width of upright freezers and 110 mm to depth of chest freezers. Open doors on upright freezers add up to 150 mm.

See pages 14-15 for ordering information, detailed technical specifications and performance data.



## Ordering information, technical specifications and performance data

Line		HEF® High Efficiency and Green Freezers				
Style		Upright	Upright	Upright	Chest	
Model No.		U725-G	HEF U410	HEF U570	HEF C660	
Catalog No.	120V, 60 Hz	—	U9260-0007	U9270-0007	—	
	208 - 230V, 60 Hz	—	—	—	U9250-0009	
	230V, 50 Hz	U9440-0005 (Air-Cooled) U9440-0004 (Water-Cooled)	U9260-0008	U9270-0008	U9250-0008	
Power	Electric/Mains (A)	120V, 60 Hz	—	16.5	16.5	—
		208 - 230V, 60 Hz	—	—	—	8
		230V, 50 Hz	9.5	5	6	6
	kWh per day <sup>1</sup>	120V, 60 Hz	—	8.6	12.2	—
		208 - 230V, 60 Hz	—	—	—	11.5
		230V, 50 Hz	12.8 (Air-Cooled)	8.4	8.9	11.4
Capacity	Overall		725 L	410 L	570 L	660 L
	Compartments		3	5	5	—
	Racks per shelf		6	3	5	—
	Racks per freezer		18	15	25	40
	Box capacity per rack	2 in (50 mm) box (H)	28	16	16	13
		3 in (75 mm) box (H)	20	12	12	9
		4 in (100 mm) box (H)	12	8	8	6
	Box capacity per freezer	2 in (50 mm) box (H)	504	240	400	520
		3 in (75 mm) box (H)	360	180	300	360
		4 in (100 mm) box (H)	216	120	200	240
	Sample capacity per freezer	2 in (50 mm) box (H)	50,400	24,000	40,000	52,000
		3 in (75 mm) box (H)	36,000	18,000	30,000	36,000
		4 in (100 mm) box (H)	21,600	12,000	20,000	24,000
	Performance	Pull down to -85° C (Hours) <sup>2</sup>	120V, 60 Hz	—	5.8	6
208 - 230V, 60 Hz			—	—	—	6
230V, 50 Hz			4.8 (Air-Cooled)	4.7	4.7	5
Noise level (dB)		120V, 60 Hz	—	57	58.5	—
		208 - 230V, 60 Hz	—	—	—	61
		230V, 50 Hz	59	53	58	58.5
Heat output (Watts)		120V, 60 Hz	—	525	630	—
		208 - 230V, 60 Hz	—	—	—	580
		230V, 50 Hz	730 (Air-Cooled)	505	520	580
Refrigerant	60 Hz models	—	404A/508B	404A/508B	404A/508B	
	50 Hz models		R290/R170	R290/R170	R290/R170	
Dimensions <sup>3</sup>	External	Height (cm)	195	191.5	192.5	107.5
		Width (cm)	102.5	80	102.5	205
		Depth (cm)	86.7	85.2	85.2	84
	Internal	Height (cm)	136.5	126.5	126.5	76
		Width (cm)	86.5	55	76.5	147
		Depth (cm)	61.5	57.5	57.5	59
Weight	Net weight (Kg)		315	262	296	304
	Shipping weight (Kg)		365	310	327	352

<sup>1</sup> Empty freezer with shelves fitted (upright freezers only), set point -80° C, 22 - 26° C ambient conditions.

<sup>2</sup> Empty freezer with shelves fitted (upright freezers only), pull down from 22 - 26° C ambient conditions.

<sup>3</sup> Optional CO<sub>2</sub>/LN<sub>2</sub> back-up systems add 8.65 cm (3.4 in) to height.

**Innova® Freezers**

Upright	Upright	Upright	Upright	Chest	Chest
U101	U360	U535	U725	C585	C760
U9420-0000	U9425-0000	U9430-0000	—	U9400-0000	—
—	—	U9430-0002	U9440-0002	U9400-002	U9410-0002
U9420-0001	U9425-0001	U9430-0001	U9440-0001	U9400-0001	U9410-0001
13	16.5	16.5	—	16.5	—
—	—	9	10	9	10
5	6.5	5	9.5	5.5	9.5
6.4	11.7	13.2	—	13.9	—
—	—	13.2	16.4	13.9	16.8
8.8	10.7	13.2	15.8	13.6	16
101 L	360 L	535 L	725 L	585 L	760 L
2	3	3	3	—	—
3	3	4	6	—	—
6	9	12	18	32	44
10	28	28	28	13	13
6	20	20	20	9	9
4	12	12	12	6	6
60	252	336	504	416	572
36	180	240	360	288	396
24	108	144	216	192	264
6,000	25,200	33,600	50,400	41,600	57,200
3,600	18,000	24,000	36,000	28,800	39,600
2,400	10,800	14,400	21,600	19,200	26,400
3.5	5	5.3	—	4.3	—
—	—	5.3	5.2	4.3	5.8
3.7	5.6	5.3	5.6	4.5	5.8
54	54	56	—	56	—
—	—	56	59	56	58
54	54	56	59	56	58
344	623	720	—	700	—
—	—	720	750	700	750
440	590	720	750	700	750
404A/508B	404A/508B	404A/508B	404A/508B	404A/508B	404A/508B
404A/508B	404A/508B	404A/508B	404A/508B	404A/508B	404A/508B
83	195	195	195	109.2	109.2
90	67	80	102.5	169	205
56.6	86.7	86.7	86.7	78.5	78.5
64	136.5	136.5	136.5	78	78
48	44	64	86.5	120	156
33	61.5	61.5	61.5	62.5	62.5
116	230	250	315	240	285
141	240	298	363	298	333

**Premium Freezers**

Upright	Upright	Upright	Chest	Chest
U410	U570	U700	C340	C660
U9260-0000	U9270-0000	U9280-0000	U9230-0000	—
U9260-0002	U9270-0002	U9280-0002	—	U9250-0002
U9260-0001	U9270-0001	U9280-0003	U9230-0001	U9250-0001
16.5	16.5	13	16.5	—
8	9	8	—	8
5	6	7	4.5	6
13	14.2	15.9	10.3	—
13	14.2	15.9	—	15
10.8	11.8	15.9	8.8	14.3
410 L	570 L	700 L	340 L	660 L
5	5	5	—	—
3	5	6	—	—
15	25	30	20	40
16	16	16	13	13
12	12	12	9	9
8	8	8	6	6
240	400	480	260	520
180	300	360	180	360
120	200	240	120	240
24,000	40,000	48,000	26,000	52,000
18,000	30,000	36,000	18,000	36,000
12,000	20,000	24,000	12,000	24,000
4.1	5.3	5.9	3.4	—
4.1	5.3	4.8	—	6
5.3	5.2	6	3.8	5.8
57	58.5	61	58	—
57	58.5	61	—	58
55	56	59	56	57
600	700	755	580	—
600	700	755	—	650
650	700	755	580	650
404A/508B	404A/508B	404A/508B	404A/508B	404A/508B
404A/508B	404A/508B	404A/508B	404A/508B	404A/508B
191.5	192.5	195.9	107.5	107.5
80	102.5	112.1	134	205
85.2	85.2	87	84	84
126.5	126.5	131.6	76	76
55	76.5	86.7	76	147
57.5	57.5	61.3	59	59
235	265	279	205	280
283	313	372	248	328

# Backed by world-class service

## Service and support for your peace of mind

We are committed to providing not only the highest quality products, but also world-class service that delivers complete customer satisfaction. Like our products, our service and support sets the standard for excellence.

Our worldwide service and support organization is one of the largest and finest in the industry. We work hard to earn your loyalty by giving you personalized and professional service every day—before, during and after you purchase a New Brunswick product.

Our goal is to ensure that your New Brunswick equipment operates at peak performance. We offer services beyond essential maintenance and support, and can tailor a solution to best fit your specific needs.

- > Installation and operational qualification validation packages (IQ/OQ) available
- > Warranty on all freezers; extended warranties and customized preventive maintenance plans (contact your local Eppendorf/New Brunswick office for details)
- > Every freezer is equipped with unique S.M.A.R.T. Plus™ diagnostic software that allows system engineers to diagnose most issues over the phone at no cost—saving you time and money
- > In-stock parts and product
- > Multiple levels of personalized service and support:
  - Knowledgeable customer service representatives
  - Manufacturer trained field service technicians
  - Trained and qualified third-party network available for rapid response

After three decades, still setting the standard.  
New Benchmark. New Brunswick.



**Wolflabs**

# Wolf Laboratories Limited

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**Use the above details to contact us if this literature doesn't answer all your questions.**

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

