

VWR[®] -86 °C ultra-low temperature freezers



New freezers with enhanced features

BIG BENEFITS:

- Reduced/low peak variation to protect sample temperature¹
- Lower energy consumption and HVAC costs
- Low noise, like your home refrigerator²
- Fast door opening recovery
- Four capacities: 300, 400, 500, and 600, 2-inch boxes
- Environmentally friendly, water-blown foam insulation compliant with EPA SNAP and EU F-Gas regulations

USER INTERFACE AND ERGONOMIC DESIGN:

- Plug in and go, no set-up required
- 5,6" with bold temperature display and capacitive touch button
- Alarm settings, set point security passcode, and padlock-compatible doors
- Single-hand door operation, quick maintenance with easy access filter/grill assembly
- Four inner doors to reduce heat impact on samples during normal use

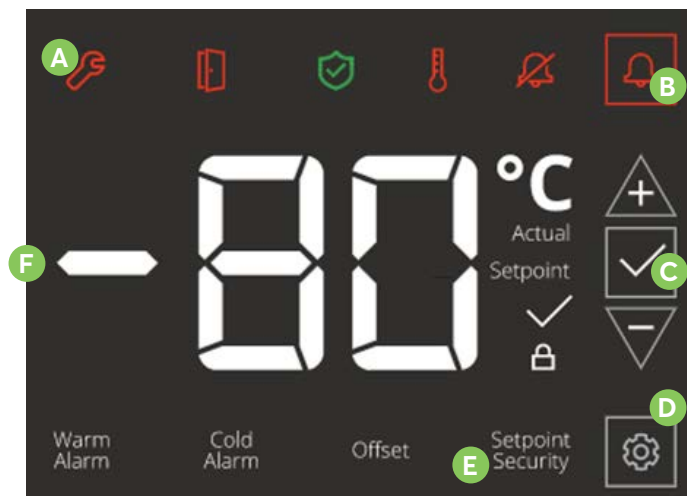


EYE LEVEL INFORMATION CENTRE FOR SIMPLIFIED OPERATION

Health Shield Indicator gives a quick visual indication of freezer status

1. Typical freezer data based on internal testing with freezer set point at -80 °C and ambient temperature at 20 °C. Performance data varies across freezer size and electrical specifications.

2. All data based on internal data unless otherwise noted.



- A** Audible and visual alarms (system, door, temperature visual alarm icons)
- B** Alarm snooze button to silence audible alarms
- C** Capacitive touch screen buttons to easily adjust and save freezer settings
- D** Settings menu button to access alarm and system settings (warm alarm, cold alarm, offset, set point security, and back-up system if installed)
- E** Set point security allows you to set a 3-digit numeric code required for any setting changes
- F** Bold, easy to read temperature display shows real time cabinet temperature
Optional field installed CO₂ or LN₂ back-up system provides additional sample protection in the event of a power or mechanical failure



- 1** High density water-blown polyurethane foam with vacuum insulation panel (VIP)
- 2** 1" access port (top) for use of independent probes
- 3** Heavy gauge, cold-rolled steel cabinet construction with a powder coat paint finish that resists chipping and rust
- 4** Heated vacuum relief port permits quick re-entry after door openings
- 5** Single-hand operation with ergonomic, padlock compatible door handle featuring an integrated key lock
- 6** Four insulated inner doors reduce cold air loss and improve temperature recovery after door opening
- 7** Easy to remove washable filter provides protection against dust on the condenser, increasing refrigeration performance
- 8** 2" locking castors for easy to roll installation
- 9** 1" access port (bottom right) for use of independent probes
- 10** Sturdy, stainless steel shelving
- 11** Painted galvanised interiors
- 12** Heated gaskets help to eliminate frost build-up while providing tight cabinet temperatures

Field installed options:

- CO₂ back-up system
- LN₂ back-up system
- Chart recorder (ink or inkless)



Front view showing battery and optional chart recorder space



Rear view with RS485/4-20mA output/ dry contacts

PRODUCT CONSTRUCTION SPECIFICATIONS

Capacity, (l)	2" Cryoboxes	Electrical	Amps/breaker	Max. shelf weight, (kg)	Interior dimensions, W x D x H, (cm)	Exterior dimensions, W x D x H, (cm)	Shipping weight, (kg)	Cat. No.
422	300	230V/50Hz	5.9/10	57	45.2x71.9x130	68.6x97.5x198.1	323	471-1228
549	400	230V/50Hz	5.3/10	75	58.7x71.9x130	82x97.5x198.1	312	471-1229
682	500	230V/50Hz	5.9/10	93	73.2x71.9x130	96.3x97.5x198.1	333	471-1230
816	600	230V/50Hz	6.1/10	111	87.4x71.9x130	110.5x97.5x198.1	372	471-1231

PRODUCT OPTIONS & ACCESSORIES

THESE OPTIONS MUST BE FIELD INSTALLED BY A QUALIFIED PROFESSIONAL TECHNICIANS

Description	Capacity, (l)			
	422	549	682	816
LN ₂ Back-up System Maintains temperature down to -80°C with liquid nitrogen (300 box models are stand-alone)	471-1234	471-1233		
CO ₂ Back-up System Maintains temperature down to -67°C with CO ₂ (300 box models are stand-alone)	471-1235	471-1232		

CO₂ or LN₂ back up system provides additional sample protection. LN₂ back up system maintains temperature down to -80 °C with liquid nitrogen. CO₂ back up system maintains temperature down to -67 °C with CO₂.



RACK SELECTIONS

Description	Dimensions H x W x D, (cm)	Capacity boxes per freezer	422 L 300	549 L 400	682 L 500	816 L 600	Cat. No.
Sliding Drawer Racks for 2" (5.08 cm) Boxes	30.2 x 14 x 68.3	Boxes Per Rack	25	25	25	25	479-0768
		Racks Per Shelf	3	4	5	6	
		Racks Per Freezer	12	16	20	24	
		Boxes Per Freezer	300	400	500	600	



DIGITAL THERMOMETER, PLATINUM, CLINICAL TRIALS, TRACEABLE® VWR, PART OF AVANTOR

These platinum, clinical trial thermometers are used to monitor the temperature in water baths, heating blocks and incubators. They display min./max. temperatures for the previous 24 hours (each hour) and previous 7 days (for each day); or previous 31 days (for each day).

- Smart alarm features a visual/audible alarm that continues to alarm even if the unit returns to non alarm conditions
- Triple-display simultaneously shows min./max. and current temperatures, °F/°C switchable
- Micro cable allows refrigerator doors to close on it
- Alarm is settable in 0,1° increments and signals with temperature falls below or goes above set points
- Low battery indicator displays when it's time to change the batteries

To ensure accuracy, all Traceable® thermometers are provided with a multi-point individually serial numbered Traceable® certificate provided by an ISO/IEC 17025 (1750.01) calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Supplied with four extra batteries and a full 2 year calibration certificate. Thermometer is delivered with a bullet probe (as shown in the picture).



Range (°C)	Accuracy (°C)	Resolution (°C)	Probe	Cable length (m)	WxDxH (mm)	Weight (g)	Pk	Cat. No.
-100...+70	±0,1	0,01	1 bullet	3	70x108x19	142	1	620-2424



DATA LOGGING ULT FREEZER THERMOMETERS, TRACEABLE®, EXCURSION TRAC VWR, PART OF AVANTOR

Data logging thermometers with user-defined timing intervals. Ideal for monitoring ultra-low temperature freezers.

- Simultaneously display minimum, maximum and current temperatures, °F/°C switchable
- Rolling memory structure, maintains the most recent 525 000 temperature observations and 10 unique alarm events
- Recorded data (CSV file) may be transferred from thermometer to PC or Mac using a USB flash drive - no additional software is needed
- Memory can be cleared on unit after downloading data to USB stick
- Smart alarm features a visual/audible alarm that continues to alarm even if the unit returns to non alarm conditions
- Status indicators - low battery, memory full, USB data transfer and active alarm state
- Includes 24,5 cm PTFE cable
- Hassle-free retrieval of data - unit can remain in use while downloading and analysing data

Thermometer is calibrated at multiple points (-80; -40; 0 and +100 °C) and comes as standard with an individually serialised and certified Traceable® calibration certificate from an ISO/IEC 17025 calibration laboratory accredited by A2LA. Supplied with stand, batteries, VELCRO®, magnetic strips, wall mount and Traceable® certificate.

Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Probe	WxDxH (mm)	Weight (g)	Pk	Cat. No.
Excursion trac data logging ULT freezer thermometer, 1 channel	-90...+105	±0,2	0,01	Platinum RTD sensor, stainless steel 316 probe (included)	70x20x107	140	1	620-2440
Excursion trac data logging ULT freezer thermometer, 2 channels	-90...+105	±0,2	0,01	Platinum RTD sensor, stainless steel316 probe (included)	70x20x107	140	1	620-2441
Excursion trac USB data logging refrigerator/freezer thermometer	-90...+105	±0,2	0,01	1 plastic bottle designed for refrigerator/freezer	70x20x107	140	1	620-2444
Excursion trac USB data logging refrigerator/freezer thermometer	-90...+105	±0,2	0,01	2 plastic bottles designed for refrigerator/freezer	70x20x107	140	1	620-2445



TRACEABLE® MEMORY LOC USB DATA LOGGING REFRIGERATOR/FREEZER THERMOMETERS VWR, PART OF AVANTOR

Data logging thermometer with user-defined time intervals. Ideal for monitoring temperatures in refrigerators, freezers, water baths, heating blocks and incubators.

- User-defined data logging interval of one observation/minute to one observation/24 hours
- Rolling memory structure, maintains most recent 1 000 000 temperature observations
- Smart alarm features a visual/audible alarm that continues to alarm even if the unit returns to non alarm conditions
- Stores up to 10 unique alarm events
- Memory can be cleared on unit after downloading data to USB stick
- Hassle-free retrieval of data - unit can remain in use while downloading and analysing data
- Status indicators: Low battery, memory full, USB data transfer and active alarm state
- Recorded data (CSV file) to be transferred from thermometer to PC or Mac using a USB flash drive (not included)
- High impact, chemical resistant ABS plastic case CE marked. Meets current CDC requirements for vaccine storage and monitoring. Certified and Traceable® to NIST

Delivered with platinum RTD sensors, stainless steel 316 probe(s), stand, VELCRO®, magnetic strips, wall mount, Traceable® certificate and batteries.

Range (°C)	Accuracy (°C)	Resolution (°C)	Probe	Cable length (m)	Weight (g)	Pk	Cat. No.
-90...-80	±0,1	0,01	Platinum RTD sensors, 1 stainless steel 316 probe	3	142	1	620-2442
-90...-80	±0,1	0,01	Platinum RTD sensors, 2 stainless steel 316 probes	3	142	1	620-2443

Equipment **Services**

Keep your laboratory in compliance
and in operation



Providing a carefree equipment lifecycle with Avantor Services

- Installation
- Preventive maintenance
- Warranty and repair
- Calibration
- Qualification, validation and certification (IQ/OQ/PQ)
- Equipment management
- Training

[VWR.COM/EIS](https://www.vwr.com/eis)

Intended Use Statement

The general purpose –86 °C freezers described here are high performance units for professional use. These products are intended for use as cold storage in research use and as a general purpose laboratory freezer, storing samples or inventory at operating temperatures between –50 °C and –80 °C. It is not considered a medical device and has therefore not been registered with a medical device regulatory body (e.g., FDA); that is, it has not been evaluated for the storage of samples for diagnostic use or for samples to be re-introduced to the body. This unit is not intended for use in classified hazardous locations, nor to be used for the storage of flammable inventory.



AUSTRIA

VWR International GmbH
Graumannsgasse 7
1150 Wien
Tel.: +43 1 97 002 0
info.at@vwr.com

BELGIUM

VWR International bvba
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 (0) 16 385 011
vwr.be@vwr.com

CZECH REPUBLIC

VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67 Stříbrná Skalice
Tel.: +420 321 570 321
info.cz@vwr.com

DENMARK

VWR International A/S
Tobaksvej 21
2860 Søborg
Tel.: +45 43 86 87 88
info.dk@vwr.com

FINLAND

VWR International Oy
Valimotie 9
00380 Helsinki
Tel.: +358 (0) 9 80 45 51
info.fi@vwr.com

FRANCE

VWR International S.A.S.
Le Périgares – Bâtiment B
201, rue Carnot
94126 Fontenay-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00
(international)
info.fr@vwr.com
* 0,18 € TTC/min + prix appel

GERMANY

VWR International GmbH
Hilpertstraße 20a
D - 64295 Darmstadt
Tel.: 0800 702 00 07* (national)
Tel.: +49 (0) 6151 3972 0 (international)
info.de@vwr.com
*Freecall

HUNGARY

VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 52 521130
info.hu@vwr.com

IRELAND / NORTHERN IRELAND

VWR International Ltd / VWR
International (Northern Ireland) Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 (0) 1 88 22 222
sales.ie@vwr.com

ITALY

VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02 3320311
info.it@vwr.com

THE NETHERLANDS

VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 (0) 20 4808 400
info.nl@vwr.com

NORWAY

VWR International AS
Brynsalleen 4,
0667 Oslo
Tel.: +47 22 90 00 00
info.no@vwr.com

POLAND

VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 58 32 38 200
info.pl@vwr.com

PORTUGAL

VWR International - Material de
Laboratório, Lda
Centro Empresarial de Alfragide
Rua da Indústria, nº 6
2610-088 Amadora
Tel.: +351 21 3600 770
info.pt@vwr.com

SPAIN

VWR International Eurolab S.L.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
info.es@vwr.com

SWEDEN

VWR International AB
Fagerstagatan 18a
163 94 Stockholm
Tel.: +46 (0) 8 621 34 00
kundservice.se@vwr.com

SWITZERLAND

VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 (0) 44 745 13 13
info.ch@vwr.com

UK

VWR International Ltd
Customer Service Centre
Hunter Boulevard - Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
uksales@vwr.com

CHINA

VWR (Shanghai) Co., Ltd
Bld.No.1, No.3728 Jinke Rd,
Pudong New District
Shanghai, 201203- China
Tel.: 400 821 8006
info_china@vwr.com

INDIA

VWR Lab Products Private Limited
No.139, BDA Industrial Suburb,
6th Main, Tumkur Road, Peenya Post,
Bangalore, India - 560058
Tel.: +91 80 28078400
vwr_india@vwr.com

MIDDLE EAST & AFRICA

VWR International FZ-LLC
DSP Laboratory Complex
125, Floor 01
Dubai, United Arab Emirates
Tel.: +971 4 5573271
info.mea@vwr.com

SINGAPORE

VWR Singapore Pte Ltd
18 Gul Drive
Singapore 629468
Tel.: +65 6505 0760
sales.sg@vwr.com

GO TO **VWR.COM** FOR THE LATEST NEWS, SPECIAL OFFERS AND DETAILS FROM YOUR LOCAL VWR SUPPORT TEAM