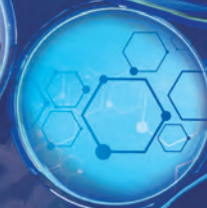
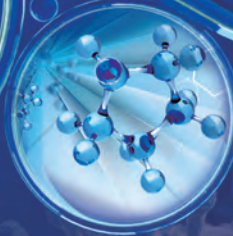


GENERAL CATALOGUE



ecological, efficient refrigerator
global environment protection



ULTRA-LOW TEMPERATURE FREEZER // $-85^{\circ}\text{C}/-90^{\circ}\text{C}$

(at an ambient temperature of 30°C)

Cooling performance and environmental adaptability have been improved totally with Nihon Freezer's new technology. Easy maintenance is ensured.

Double cooling system

Single compressor cooling system



CLN-32UD2
CLN-32UWD2



CLN-42UD2



CLN-52UD2
CLN-52UWD2



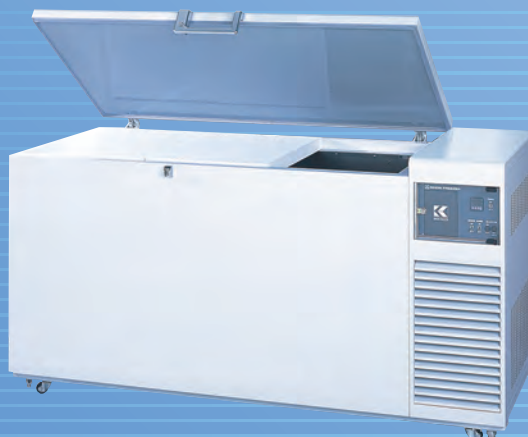
CLN-72UWD2



CLN-35CD2
CLN-35CWD2



CLN-50CD2
CLN-50CWD2



CLN-70CD2
CLN-70CWD2

First in the industry Improvement of safety and security with double cooling system

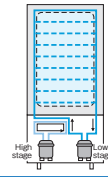
(Features)

- ① Single compressor cooling system.
[Models : CLN-32UD2, CLN-42UD2, CLN-52UD2, CLN-35CD2, CLN-50CD2, CLN-70CD2]
- ② Double cooling system with high reliability. (Refer to the drawing on the right.)
[Models : CLN-32UWD2, CLN-52UWD2, CLN-72UWD2, CLN-35CWD2, CLN-50CWD2, CLN-70CWD2]
- ③ No filters and no need of condenser cleaning.
- ④ Environmentally conscious and compliant with the Freon regulation, this product employs HFC-compliant refrigerant.
- ⑤ High temperature alarm, power failure alarm, and voltage free contact for remote alarm are standard.
- ⑥ To reduce frosting around the door and facilitate door opening/closing, various measures have been implemented on the door structure of the upright model.
- ⑦ Validation services for compatibility with GMP/GLP are available (as options).

Traditional cascade cooling system (Other manufacturers)

Normal Operation

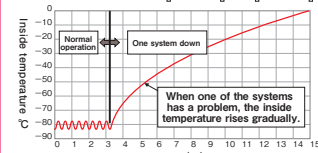
The cooling system consists of a high temperature stage and a low temperature stage. It maintains -80°C .



In case of trouble (One system down)

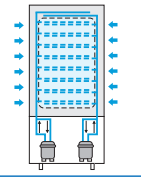
The whole system can not function properly. The inside temperature will rise.

Compression (liquefaction) of low-temperature side refrigerant is impossible.

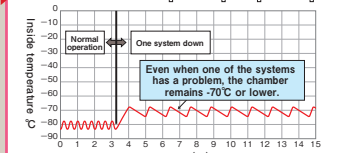
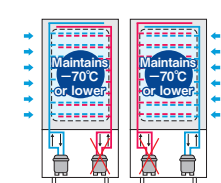


NEW Double cooling system (Nihon Freezer)

2 independent single compressor cooling systems work simultaneously. Each system is able to reach ultra-low temperature.



One of the systems can maintain -70°C or lower.



Specifications (Upright)

Model	CLN-32UD2	CLN-32UWD2	CLN-42UD2	CLN-52UD2	CLN-52UWD2	CLN-72UWD2
Temperature range	-70°C to -80°C (MAX -85°C)	-75°C to -85°C (MAX -90°C)	-70°C to -80°C (MAX -85°C)	-75°C to -85°C (MAX -90°C)	-75°C to -85°C (MAX -90°C)	-70°C to -80°C (MAX -85°C)
Capacity	Approx. 324ℓ		Approx. 430ℓ	Approx. 548ℓ		Approx. 710ℓ
External dimensions (mm)	W(715+68)×D(765+102)×H1975	W(715+68)×D(765+102)×H1985	W(870+68)×D(765+102)×H1975	W(870+68)×D(905+102)×H1975	W(870+68)×D(905+102)×H1985	W(1110+68)×D(930+102)×H1975
Internal dimensions (mm)	W475×D520×H1340		W630×D520×H1340	W630×D660×H1340		W870×D680×H1340
Exterior material	Electro-galvanized steel					
Interior material	Stainless steel					
Weight	Approx. 170kg	Approx. 250kg	Approx. 190kg	Approx. 210kg	Approx. 300kg	Approx. 340kg
Refrigerant	Specially mixed refrigerant (HFC)					
Power supply	Single phase 220V 50/60 Hz					
Alarm	A buzzer sounds when the temperature has risen by 15°C from the setting value or a power failure has occurred; 2.5 V battery charging type (operable for 48 hours)					
Accessories	Stainless steel shelf: 3, Key: 2 types (2 each), Caster: 4, Adjustable bolt: 2, Access port: one location on the back surface ($\phi 20\text{mm}$)					

Specifications (Chest)

Model	CLN-35CD2	CLN-35CWD2	CLN-50CD2	CLN-50CWD2	CLN-70CD2	CLN-70CWD2
Temperature range	-70°C to -80°C (MAX -85°C)	-75°C to -85°C (MAX -90°C)	-70°C to -80°C (MAX -85°C)	-75°C to -85°C (MAX -90°C)	(MAX -85°C) -70°C to -80°C	-75°C to -85°C (MAX -90°C)
Capacity	Approx. 354ℓ		Approx. 507ℓ		Approx. 710ℓ	
External dimensions (mm)	W1630×D(715+150)×H1030		W2080×D(715+150)×H1030		W2080×D(865+150)×H1075	
Internal dimensions (mm)	W1040×D490×H695		W1490×D490×H695		W1490×D640×H745	
Exterior material	Electro-galvanized steel					
Interior material	Stainless steel					
Weight	Approx. 180kg	Approx. 250kg	Approx. 200kg	Approx. 290kg	Approx. 220kg	Approx. 320kg
Refrigerant	Specially mixed refrigerant (HFC)					
Power supply	Single phase 220V 50/60 Hz					
Alarm	A buzzer sounds when the temperature has risen by 15°C from the setting value or a power failure has occurred; 2.5 V battery charging type (operable for 48 hours)					
Accessories	Key: 2 types (2 each), Caster: 4, Adjustable bolt: 2, Access port: one location on back surface ($\phi 20\text{mm}$)					

Options dedicated for ultra-low temperature freezers

Trays

Standard Rack

Tray model	External dimensions (mm)	Internal dimensions of single drawer (mm)	Compatible Model	Total number of trays
TN-30U	W440×D(470+10)×H280	W138×D464×H133	CLN-32UD2, 32UWD2	4 (W1×H4)
TN-42U	W600×D(470+10)×H280	W191×D464×H133	CLN-42UD2	4 (W1×H4)
TN-52U	W600×D(610+10)×H280	W191×D604×H133	CLN-52UD2, 52UWD2	4 (W1×H4)
TN-72U	W420×D(630+10)×H280	W201×D624×H133	CLN-72UWD2	8 (W2×H4)
TN-3550C	W200×D155×H(635+10)	W190×D149×H121	CLN-35CD2, 35CWD2	15 (W5×D3)
			CLN-50CD2, 50CWD2	21 (W7×D3)
TN-70C	W200×D155×H(685+10)	W190×D149×H121 (Lowermost shelf: H171)	CLN-70CD2, 70CWD2	28 (W7×D4)

Standard Rack



Freeze Box Rack (Capable of housing 81 freeze boxes)

Note: The CLN series is designed based on this tray.

Tray model	External dimensions (mm)	Number of boxes to be housed	Compatible Model	Total number of trays	Total number of boxes
TF-3040U	W140×D(424+10)×H281	15/tray (H5×D3)	CLN-32UD2, 32UWD2	12 (W3×H4)	180
			CLN-42UD2	16 (W4×H4)	240
TF-5070U	W140×D(565+10)×H281	20/tray (H5×D4)	CLN-52UD2, 52UWD2	16 (W4×H4)	320
			CLN-72UWD2	24 (W6×H4)	480
TF-3550C	W144×D144×H(618+10)	11/tray	CLN-35CD2, 35CWD2	21 (W7×D3)	231
			CLN-50CD2, 50CWD2	30 (W10×D3)	330
TF-70C	W144×D144×H(674+10)	12/tray	CLN-70CD2, 70CWD2	40 (W10×D4)	480

Freeze Box Rack



Note: The target freeze box size is IB-02081: W134×D134×H52mm.

Note: Trays are not equipped with freeze boxes.

ULTRA-LOW TEMPERATURE FREEZER

-150°C Normal freezing temperature:
-140°C to -150°C
(at an ambient temperature of 30°C)

Designed for long-term storage of cells (iPS/ES) and tissues.
Realizes vitrification temperatures (recrystallization point or below).

Double cooling system

《OPTION》

●Standard Rack

●Freeze Box Rack
(Capable of housing 81 freeze boxes)



TN-3550C

TF-3550C

Number of maximum boxes to be set

Compatible Model	TN-3550C	TF-3550C
CLN-1700CWE	6 boxes (W2×D3)	9 boxes (W3×D3)
CLN-2300CWE	9 boxes (W3×D3)	12 boxes (W4×D3)

●Automatic auxiliary cooling device (without cylinder)

- LCO₂ type (liquefied carbon dioxide gas)
- LN₂ type (liquefied nitrogen)



CLN-1700CWE

CLN-2300CWE

《Features》

- ①A "Double cooling system", which is our new proprietary technology, is employed. Even when an abnormality occurs in one of the systems, an ultra-low temperature can be retained. (With a setting of -150°C, it is possible to maintain the inside temperature at approx. -140°C or below.)
- ②The insulation is 1.5 times thicker (170 mm) than a standard ultra-low temperature freezer (120 mm for -80°C). Damage to specimens is alleviated in case of trouble.
- ③Burdensome filter (condenser) cleaning is eliminated.
- ④High temperature alarm, power failure alarm, and voltage free contact for remote alarm are standard.

●Specifications

Model	CLN-1700CWE	CLN-2300CWE
Temperature range	-140°C to -150°C	
Capacity	Approx.176ℓ	Approx.236ℓ
External dimensions (mm)	W1420×D(840+298)×H1090	W1600×D(840+298)×H1090
Internal dimensions (mm)	W500×D500×H705	W680×D500×H695
Exterior material	Electro-galvanized steel	
Interior material	Stainless steel	
Weight	Approx.323kg	Approx.340kg
Refrigerant	Specially mixed refrigerant (HFC)	
Power supply	3 phase 200V 50/60 Hz	

MY BIO

Non-Freon product

-80°C Normal freezing temperature:
-60°C to -80°C
(at an ambient temperature of 30°C)

One ultra-low temperature freezer for one researcher for his personal use Compact design

Single compressor cooling system



《OPTION》

●Standard Rack

●Freeze Box Rack



TN-78

TN-208S

TN-208

TF-78

TF-208A~F

(for VT-78HC)

(for VT-208HC)

(for VT-208HC)

(for VT-78HC)

(for VT-208HC)

Full set: 4

Full set: TN-208S:2, TN-208:6

Full set: 4



VT-78HC



VT-208HC

Compatible with RoHS

《Features》

- ①Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ②Low price, low energy consumption, and low noise have been realized with Single compressor cooling system, Nihon Freezer's original new technology.
- ③Space saving compact design.
- ④No filter cleaning is required. (Easy maintenance)
- ⑤High temperature alarm, power failure alarm, and voltage free contact for remote alarm are standard.

●Specifications

Model	VT-78HC	VT-208HC
Temperature range	-60°C to -80°C	
Capacity	Approx.70ℓ	Approx.191ℓ
External dimensions (mm)	W557×D(557+88)×H887	W925×D(605+88)×H845
Internal dimensions (mm)	W387×D387×H470(effective height: H425)	W755×D435×H650(effective height: H605)
Exterior material	Steel plate acrylic resin baking finish	
Interior material	Steel plate acrylic resin baking finish	
Weight	Approx.45kg	Approx.64kg
Refrigerant	Mixed refrigerant (HC non-Freon)	

MYBIO CUBE

-85°C Normal freezing temperature:
-70°C to -80°C
(at an ambient temperature of 30°C)

Ideal personal freezer for every researcher
Compact design / Dead space can be used effectively.

Single compressor
cooling system

《Features》

- ① A desktop-type but powerful compressor is employed.
- ② Nihon Freezer's original new technology, Single compressor cooling system is used. Vacuum insulation panels allow high-density storage. (30% more space-saving, compared with conventional insulation.)
- ③ No filter cleaning is required. (Easy maintenance)
- ④ Up to 20 freeze boxes (2ml x 100 tubes) can be stored.



DTF-35

●Specifications

Model	DTF-35
Temperature range	-70°C to -80°C (MAX-85°C)
Capacity	Approx.35ℓ
External dimensions (mm)	W(460+35)×D(620+40)×H680
Internal dimensions (mm)	W336×D356×H295
Exterior material	Electro-galvanized steel
Interior material	Stainless steel
Weight	Approx.65kg
Refrigerant	Specially mixed refrigerant (HFC)

《OPTION》



●Standard Rack (TN-35)



●Freeze Box Rack (TF-35)



●Freezer Stand (Stainless steel)

SUPER FREEZER

-55°C/-40°C
(at an ambient temperature of 30°C)

Suitable for storage of reagent, frozen plasma and various specimens for study,
This freezer creates an optimum low-temperature storage environment.

《Features》

- ① Thanks to the windless cooling system in which shelves and wall surfaces directly cool the interior, storage with no wind and little temperature change is possible.
- ② Burdensome filter (condenser) cleaning is eliminated.
- ③ As automatic defrost is not employed, this freezer is free from periodical temperature rises.
- ④ The shelves for SF-53U are multi-step adjustable shelves that can change the storable height according to the size of the objects.
- ⑤ The drawers of SF-3120F3 are convenient for putting in/taking out and organizing objects.



SF-53U



SF-3120HC

●Specifications

Model	SF-53U	SF-3120HC
Temperature range	-40°C to -55°C	-30°C to -40°C
Capacity	Approx.530ℓ	Approx.310ℓ
External dimensions (mm)	W(830+81)×D(820+102)×H1810	W660×D(675+35)×H1840
Exterior material	Electro-galvanized steel	Steel plate acrylic baking finish
Interior material	Stainless steel	Hard resin
Weight	Approx.185kg	Approx.75kg
Refrigerant	Specially mixed refrigerant (HFC)	R-290 (HC non-Freon)

BIO FREEZER

Non-Freon product

-28°C/-30°C Normal freezing temperature: -14°C to -28°C/-30°C (at an ambient temperature of 30°C)

Storage in order with drawers and easy putting in and out

Compatible with RoHS



《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② Static cooling provides better preservation condition than forced-air cooling, without heater defrost and a fan.
- ③ Drawers keep storage in order and provide easy putting in and out. Leakage of cooled air can be also minimized with drawers during door-opening.
- ④ As automatic defrost is not employed, this freezer is free from periodical temperature rises.
- ⑤ Ample alarm functions are equipped as standard.



GS-1376HC



GS-3120HC



GS-5210HC

●Specifications

Model	GS-1376HC	GS-3120HC	GS-5210HC
Temperature range	-14°C to -28°C	-14°C to -30°C	-14°C to -28°C
Capacity	Approx.104ℓ	Approx.310ℓ	Approx.513ℓ
External dimensions(mm)	W550×D(625+30)×H850	W660×D(675+35)×H1840	W750×D(750+42)×H1725
Exterior material	Steel plate acrylic resin baking finish		
Interior material	Aluminium	Hard resin	
Drawers	4	8	14
Weight	Approx.42kg	Approx.75kg	Approx.99kg
Refrigerant	R-600a (HC non-Freon)		

BIO MULTIPLE COOLER

Non-Freon product

Freezer **-28°C** Normal freezing temperature: -9°C to -28°C
Cooler **+4°C** Normal freezing temperature: +3°C to +16°C (at an ambient temperature of 30°C)

Cooler and freezer, suitable for storage of medicine and reagent



《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② Cooler and freezer have 2 independent cooling and control systems with 2 compressors. Designed for not affecting each other.
- ③ Drawers in the freezer compartment keep storage in order and provide easy putting in and out. Leakage of cooled air can be also minimized with drawers during door-opening.
- ④ In the freezer, thanks to the windless cooling system in which wall surfaces directly cool the interior, storage with no wind and little temperature change is possible.
- ⑤ Ample alarm functions and a lock are equipped as standard.

●Specifications

Model	KGT-4010HC
Temperature range	Freezer: -9°C to -28°C / Cooler: +3°C to +16°C
Capacity	Freezer: Approx.107ℓ / Cooler: Approx.254ℓ
External dimensions(mm)	W600×D(605+55)×H2000
Exterior material	Steel plate acrylic resin baking finish
Interior material	Hard resin
Drawers	3(Freezer)
Weight	Approx.87kg
Refrigerant	R-600a (HC non-Freon)



KGT-4010HC

Compatible with RoHS

BIO MEDICAL COOLER

+4°C Normal freezing temperature: +2°C to +15°C
(at an ambient temperature of 30°C)



Multi-purpose cooler
Make the best of its storage space effectively.

《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② The off-cycle defrost, which does not cause periodical temperature rises as seen with heater defrosting, is employed.
- ③ Digital setting and digital indicator/display.
- ④ Shelf position is adjustable. (Pitch: 30mm) Store from large things to small things effectually.
- ⑤ Ample alarm functions and a lock are equipped as standard.



UKS-3610DHC



UKS-5410DHC

● Specifications

Model	UKS-3610DHC	UKS-5410DHC
Temperature range	+2°C to +15°C	
Capacity	Approx.335ℓ	Approx.544ℓ
External dimensions(mm)	W600×D(610+50)×H1640	W750×D(730+50)×H1640
Exterior material	Steel plate acrylic resin baking finish	
Interior material	Hard resin	
Weight	Approx.64kg	Approx.79kg
Refrigerant	R-600a (HC non-Freon)	

Compatible with RoHS

MINI CUBE



Freezer **-28°C** Normal freezing temperature: -14°C to -28°C
Cooler **+4°C** Normal freezing temperature: +2°C to +10°C
(at an ambient temperature of 30°C)

Allows at-hand cooling/freezing storage of frequently used specimens.

《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② Thanks to the compact design with a height of approx. 630 mm, space can be effectively used.
Note: When installing this product below a laboratory table, etc., secure a clearance of 40 mm above the product.
- ③ Drawer-type storage, which prevents leakage of cool air during opening/closing of the door and facilitates putting in/taking out and organizing of objects, is employed. (KX-1021HC has 2 drawers in the bottom.)
- ④ The windless cooling system allows storage with no wind and little temperature change.
- ⑤ High temperature alarm and a key lock system (operation switch) are equipped as standard. (GX-823HC)

Note: In high-temperature, high-humidity seasons, dew condensation may form around the door.

● Specifications

Model	KX-1021HC	GX-823HC
Temperature range	+2°C to +10°C	-14°C to -28°C
Capacity	Approx.92ℓ	Approx.69ℓ
External dimensions(mm)	W550×D620×H630	W550×D620×H630
Exterior material	Steel plate acrylic resin baking finish	
Interior material	Hard resin	
Weight	Approx.32kg	Approx.33kg
Refrigerant	R-600a (HC non-Freon)	

Compatible with RoHS



KX-1021HC



GX-823HC

FREEZE

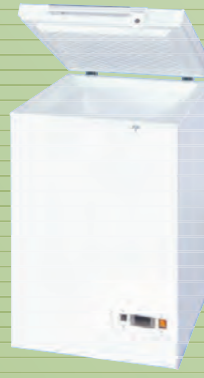
Non-Freon product

-60°C Normal freezing temperature:
-45°C to -60°C
(at an ambient temperature of 30°C)

Multipurpose freezers with excellent cooling performance



NF-400HC



NF-75HC



NF-140HC

Compatible with RoHS

《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② Chest type with little loss of cool air during lid opening.
- ③ Line-up of small to large, 6 models available.
- ④ No filter cleaning is required. (Easy maintenance)
- ⑤ Useful in various fields.

《OPTION》

● Dedicated aluminum tray



● Dedicated aluminum tray for NF series

Compatible model	Tray type	Maximum number of trays to be set
NF-75HC	TN-78	4 (W2×D2)
NF-140HC	TN-208	4 (W2×D2)
NF-200HC	TN-208	6 (W3×D2)
NF-300HC	TN-208	10 (W5×D2)
NF-400HC	TN-208	14 (W7×D2)
NF-500HC	TN-3550C	18 (W6×D3)

● Specifications

Model	NF-75HC	NF-140HC	NF-200HC	NF-300HC	NF-400HC	NF-500HC
Temperature range	-45°C to -60°C					
Capacity	Approx.70ℓ	Approx.134ℓ	Approx.191ℓ	Approx.287ℓ	Approx.372ℓ	Approx.477ℓ
External dimensions(mm)	W557×D(557+88)×H887	W725×D(605+88)×H845	W925×D(605+88)×H845	W1265×D(605+88)×H845	W1565×D(605+88)×H845	W1665×D(665+103)×H890
Internal dimensions(mm)	W387×D387×H470	W555×D435×H650	W755×D435×H650	W1095×D435×H650	W1395×D435×H650	W1495×D495×H680
Exterior material	Steel plate acrylic resin baking finish					
Interior material	Steel plate acrylic resin baking finish					
Weight	Approx.43kg	Approx.59kg	Approx.64kg	Approx.76kg	Approx.88kg	Approx.107kg
Refrigerant	Mixed refrigerant (HC non-freon)					

BIO FREEZER

Non-Freon product

-35°C Normal freezing temperature:
-15°C to -35°C
(at an ambient temperature of 30°C)

With a chest-type compact design and an inexpensive price, this product exercises a stable cooling function.



《Features》

- ① Environmentally friendly non-Freon refrigerant is used. (No ozone destruction and little effect on global warming.)
- ② Chest type with little loss of cool air during lid opening.
- ③ Burdensome filter (condenser) cleaning is eliminated.
- ④ Equipped with a housing baskets that is convenient for putting in and taking out objects.
- ⑤ High temperature alarm and a lock are equipped as standard.



D-201HC



D-396HC

Compatible with RoHS

● Specifications

Model	D-201HC	D-271HC	D-396HC
Temperature range	-15°C to -35°C		
Capacity	Approx.180ℓ	Approx.250ℓ	Approx.365ℓ
External dimensions(mm)	W720×D(605+85)×H840	W925×D(605+85)×H840	W1265×D(605+85)×H840
Internal dimensions(mm)	W620×D500×H680	W820×D500×H680	W1160×D500×H680
Exterior material	Steel plate acrylic resin baking finish		
Interior material	Steel plate acrylic resin baking finish		
Weight	Approx.42kg	Approx.50kg	Approx.62kg
Refrigerant	R-290 (HC non-Freon)		

BIO SHOWCASE

Non-Freon product

+4°C Normal freezing temperature:
+2°C to +15°C
(at an ambient temperature of 30°C)



General-purpose showcase that can make the best use of the housing space

《Features》

- ① Environmentally friendly non-Freon refrigerant is used.
(No ozone destruction and little effect on global warming.)
- ② The off-cycle defrost, which does not cause periodical temperature rises as seen with heater defrosting, is employed.
- ③ Shelves can be moved up and down by approx. 30-mm pitch, facilitating organization of stored objects.
- ④ Ample alarm functions and a lock are equipped as standard.

● Specifications

Model	LKUV-1613HC	FKVG-4110DHC
Temperature range	+2°C to +15°C	
Capacity	Approx.152ℓ	Approx.365ℓ
External dimensions (mm)	W600×D(615+50)×H820	W600×D(610+50)×H1800
Exterior material	Steel plate acrylic resin baking finish	
Interior material	Hard resin	
Weight	Approx.43kg	Approx.83kg
Refrigerant	R-600a (HC non-Freon)	



LKUV-1613HC

Compatible with RoHS



FKVG-4110DHC

MEDICAL REFRIGERATOR

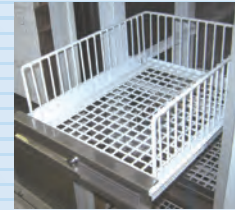
+4°C Normal freezing temperature:
+2°C to +14°C
(at an ambient temperature of 30°C)

With stable temperature management, this specialized refrigerator is ideal for the storage of medicine.

《Features》

- ① The cooling air circulation method uniformly retains the inside temperature.
- ② Employs automatic defrost.
- ③ Ample alarm functions are equipped as standard (high-temperature and low-temperature alarms, etc.).
- ④ NC-ME50EC [NC-ME50REC] and NC-ME100EC [NC-ME100REC] are energy-saving types employing inverter control.

NC-ME50REC and NC-ME100REC have convenient sliding racks.



The right half of the product has sliding racks.



NC-ME18HC

NC-ME15HC

NC-ME31HC

NC-ME50EC

NC-ME100EC

● Specifications

Model	NC-ME18HC	NC-ME15HC	NC-ME31HC	NC-ME50EC[NC-ME50REC]	NC-ME100EC[NC-ME100REC]
Temperature range	+2°C to +14°C				
Capacity	Approx.211ℓ	Approx.157ℓ	Approx.350ℓ	Approx.552ℓ	Approx.1198ℓ
External dimensions (mm)	W800×D(450+35)×H1360	W400×D(500+35)×H1900	W800×D(450+35)×H1900	W900×D(600+26)×H1865	W1800×D(600+26)×H1865
Internal dimensions (mm)	W708×D339×H875	W320×D360×H1200	W708×D339×H1415	W808×D488×H1447	W1708×D488×H1447
Exterior material	Painted steel / Galvanized steel				
Interior material	Painted steel			Stainless steel	
Weight	Approx.70kg	Approx.68kg	Approx.91kg	Approx.120kg [134kg]	Approx.200kg [224kg]
Refrigerant	R-600a (HC non-Freon)			R-134a (HFC)	

Note: Values in [] are slide rack specifications. For details, refer to the corresponding product catalog.

REFRIGERATOR & FREEZER

-25°C~+12°C
(at an ambient temperature of 30°C)

Energy-saving models employing inverter control
With refrigerator, freezer and refrigerator/freezer models in varying sizes,
this series caters to a variety of your application needs.



NDR-480EC
NDF-480EC



NDR-1080EC
NDF-1070EC
NDFR-1020EC



NDR-1670EC
NDF-1660EC
NDFR-1620EC

《Features》

- ① Energy-saving models employing the triple inverter control method (compressor, interior fan, condensing fan).
- ② Both the exterior and interior are made of stainless steel, which is resistant to corrosion.
- ③ Employs automatic defrost that periodically removes frost from the cooling unit.
- ④ Equipped with a lock that is convenient for management of stored objects.

● Specifications (refrigerators)

Model	NDR-480EC	NDR-630EC	NDR-780EC	NDR-1080EC	NDR-1380EC	NDR-1670EC
Temperature range	-7°C to +12°C					
Capacity	Approx.485ℓ	Approx.639ℓ	Approx.783ℓ	Approx.1085ℓ	Approx.1388ℓ	Approx.1684ℓ
External dimensions (mm)	W600×D800×H1905	W750×D800×H1905	W900×D800×H1905	W1200×D800×H1905	W1500×D800×H1905	W1800×D800×H1905
Internal dimensions (mm)	W498×D650×H1428	W648×D650×H1428	W798×D650×H1428	W1098×D650×H1428	W1398×D650×H1428	W1698×D650×H1428
Exterior material	Stainless steel / Galvanized steel					
Interior material	Stainless steel					
Door	Number of stainless steel plates: 2		Number of stainless steel plates: 4			Number of stainless steel plates: 6
Weight	Approx.86kg	Approx.95kg	Approx.106kg	Approx.125kg	Approx.140kg	Approx.161kg
Refrigerant	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)

● Specifications (freezers)

Model	NDF-480EC	NDF-630EC	NDF-780EC	NDF-1070EC	NDF-1360EC	NDF-1660EC
Temperature range	-8°C to -25°C					
Capacity	Approx.485ℓ	Approx.639ℓ	Approx.783ℓ	Approx.1074ℓ	Approx.1377ℓ	Approx.1673ℓ
External dimensions (mm)	W600×D800×H1905	W750×D800×H1905	W900×D800×H1905	W1200×D800×H1905	W1500×D800×H1905	W1800×D800×H1905
Internal dimensions (mm)	W498×D650×H1428	W648×D650×H1428	W798×D650×H1428	W1098×D650×H1428	W1398×D650×H1428	W1698×D650×H1428
Exterior material	Stainless steel / Galvanized steel					
Interior material	Stainless steel					
Door	Number of stainless steel plates: 2		Number of stainless steel plates: 4			Number of stainless steel plates: 6
Weight	Approx.87kg	Approx.95kg	Approx.117kg	Approx.142kg	Approx.177kg	Approx.207kg
Refrigerant	R-134a(HFC)	R-404A(HFC)	R-404A(HFC)	R-134a(HFC)	R-134a+R-404A(HFC)	R-134a+R-404A(HFC)

● Specifications (refrigerator / freezer combination models)

Model	NDFR-590EC	NDFR-700EC	NDFR-1020EC	NDFR-1320EC	NDFR-1620EC
Temperature range	F(Freezer):-8°C to -25°C/R(Cooler):-7°C to +12°C				
Capacity	F:Approx.300ℓ, R:Approx.296ℓ	F:Approx.354ℓ, R:Approx.354ℓ	F:Approx.510ℓ, R:Approx.510ℓ	F:Approx.664ℓ, R:Approx.664ℓ	F:Approx.510ℓ, R:Approx.1111ℓ
External dimensions (mm)	W750×D800×H1905	W900×D800×H1905	W1200×D800×H1905	W1500×D800×H1905	W1800×D800×H1905
Internal dimensions (mm)	F:W648×D650×H685 R:W648×D650×H689	F:W374×D650×H1428 R:W374×D650×H1428	F:W524×D650×H1428 R:W524×D650×H1428	F:W674×D650×H1428 R:W674×D650×H1428	F:W524×D650×H1428 R:W1124×D650×H1428
Exterior material	Stainless steel / Galvanized steel				
Interior material	Stainless steel				
Door	Number of stainless steel plates: 2		Number of stainless steel plates: 4		
Weight	Approx.106kg	Approx.130kg	Approx.151kg	Approx.165kg	Approx.195kg
Refrigerant	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)

REFRIGERATOR

+4°C Normal freezing temperature:
+0°C to +10°C
(at an ambient temperature of 30°C)

Energy-saving models employing inverter control
Wide glass door providing a clear view of the inside.



NDRG-1080EC



NDRG-1690EC



NDRG-490EC

(Features)

- ① Energy-saving models employing the triple inverter control method (compressor, interior fan, condensing fan).
- ② A wide glass door providing a clear view of the inside.
- ③ Exterior and interior are made of stainless steel, which is resistant to corrosion.
- ④ Employs automatic defrost that periodically removes frost on the cooling unit.

Note 1: In high-temperature high-humidity seasons, dew condensation may form on the glass doors.
Note 2: The NDRG series are not equipped with locks.

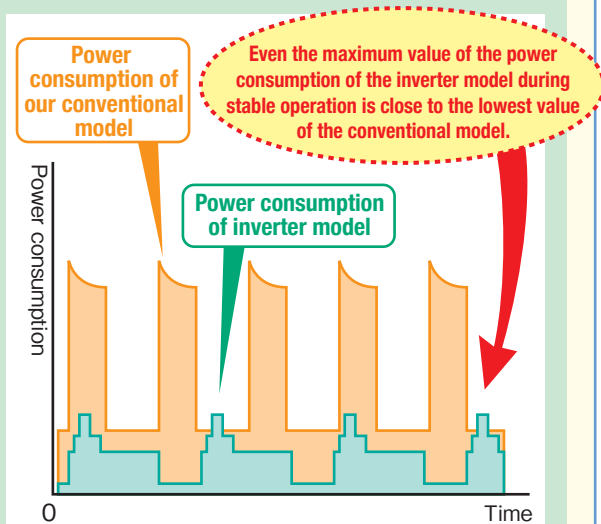
● Specifications (refrigerator type, glass door)

Model	NDRG-490EC	NDRG-1080EC	NDRG-1390EC	NDRG-1690EC
Temperature range	+0°C to +10°C			
Capacity	Approx. 491 ℓ	Approx. 1087 ℓ	Approx. 1396 ℓ	Approx. 1696 ℓ
External dimensions (mm)	W600×D800×H1905	W1200×D800×H1905	W1500×D800×H1905	W1800×D800×H1905
Internal dimensions (mm)	W498×D650×H1428	W1098×D650×H1428	W1398×D650×H1428	W1698×D650×H1428
Exterior material	Stainless steel / Galvanized steel			
Interior material	Stainless steel			
Door	Number of NH glasses: 2	Number of NH glasses: 4		Number of NH glasses: 6
Weight	Approx. 100kg	Approx. 165kg	Approx. 190kg	Approx. 235kg
Refrigerant	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)	R-134a(HFC)

Energy-saving type employing inverter control

Employs the triple inverter control method (compressor, interior fan, condensing fan). With an efficient operation conducted depending on the situation, this series exhibits excellent energy-saving and cost-saving effects.

Inverter control that suppresses unnecessary power consumption



Auto-close door

Safe and secure auto-close door that eliminates failure to close. A rise in internal temperature is thus prevented.



Air filter

The air filter that protects the condenser from dust can be easily removed, thereby facilitating cleaning.

※To operate the machine normally, clean the filter about twice a month.



Microcomputer control and digital indication

For temperature control, the microcomputer control that allows temperature setting in 1°C increments in accordance with the stored objects, is employed. This series is equipped with abundant functions, including a filter alarm lamp for notification of clogging and a forced defrosting switch. The set temperature is memorized even during a power failure. So, it returns to the normal operation automatically when power is back.



EXPLOSION-PROOF FREEZER/REFRIGERATOR

-20°C~+10°C
(at an ambient temperature of 30°C)

For refrigerated storage of flammable materials such as organic solvents

<Ministry of Health, Labour and Welfare Standard> Product that passed a test by Technology Institution of Industrial Safety

Explosion-proof performance of fd2G4

Explosion-proof performance of Expxed [ia] IIBT4X



EP-570



EP-180



EP-400

《Features》

- ① The products can be used in a Class 1 hazardous zone and a Class 2 hazardous zone among hazardous zones.
- ② There are no parts, producing any electric sparks, inside of products and also in the compressor compartment. Thus, flammable materials can be stored.
- ③ The refrigeration cycle is "Pressurized Apparatus" (f) and the control circuit has "Flame-proof Enclosure" (d).
- ④ A digital temperature controller and non-Freon refrigerant are employed in EP-570.
- ⑤ Temperature alarm and voltage free contact for remote alarm are standard.
- ⑥ Equipped with casters and adjustable bolts, making it convenient for relocation and installation.

Note: Never use the products for storage of gas-emitting substances such as water gas, hydrogen, acetylene, and carbon bisulfide, as well as for the storage of self-reactive substances and never use them under the gases mentioned above.

● Specifications

Model	EP-180	EP-400	EP-570
Test number	No. T51549	No. T51548	No. TC20841
Explosion-proof performance	fd2G4		Expxed [ia] IIBT4X
Temperature range	0°C to +10°C		-20°C to +10°C
Capacity	Approx.185ℓ	Approx.403ℓ	Approx.579ℓ
External dimensions (mm)	W610×D(615+40)×H1320	W750×D(665+40)×H1750	W850×D(900+120)×H1890
Internal dimensions (mm)	W510×D455×H800	W650×D505×H1230	W710×D680×H1200
exterior material	Stainless steel(SUS-430)		
interior material	Stainless steel(SUS-304)		
Weight	Approx.110kg	Approx.150kg	Approx.200kg
Refrigerant	R-134a(HFC)		R-600a (HC non-Freon) + R-290 (HC non-Freon)
High temperature alarm	Red lamp lights up when temperatures over +15°C continue for 2 hours.		Buzzer notification, lighting up of lamp (differential method with respect to setting temperature)
Power supply	Single phase 100V 50/60Hz		

Note: Although a plug for startup check is temporarily attached at the time of shipment, it is not an explosion-proof plug. When you actually use the product, be sure to replace the plug with the one suitable for the use condition.

EXPLOSION-PROOF FREEZER/REFRIGERATOR

Non-Freon product

Freezer: -9°C to -26°C
 Refrigerator: $+2^{\circ}\text{C}$ to $+15^{\circ}\text{C}$
 Freezer/refrigerator: -15°C or lower/ $+2^{\circ}\text{C}$ to $+9^{\circ}\text{C}$

For storage of flammable gas and/or liquid in laboratories

《Features》

- ① There are no parts, producing any electric sparks, inside. Thus, flammable materials can be stored. (Explosion-proof interior)
- ② Environmental-friendly Non Freon refrigerant is used. (No ozone destruction and little effect on Global warming)
- ③ Small-size articles can be stored on flat glass shelves. (LKEXV,CT)
- ④ Equipped with a lock that is convenient for management of stored objects.
- ⑤ The interior of the appliances is spark-free in compliance with ATEX Directive 94/9/EC zoneII.

Note: The products cannot be used is any hazardous zone.

●Specifications

Model	LGUEX-1500	LKEXV-1800	LKEXV-5400	CT-3316
Temperature range	-9°C to -26°C	$+2^{\circ}\text{C}$ to $+15^{\circ}\text{C}$		Freezer: Approx. -15°C or lower Cooler: $+2^{\circ}\text{C}$ to $+9^{\circ}\text{C}$
Capacity	Approx.139ℓ	Approx.180ℓ	Approx.554ℓ	Freezer:Approx.76ℓ Cooler:Approx.236ℓ
External dimensions (mm)	W600×D(614+47)×H820	W600×D(595+43)×H860	W750×D(740+50)×H1640	W(600+25)×D630×H1750
Internal dimensions (mm)	W470×D467×H663	W513×D441×H704	W600×D560×H1452	Freezer:W436×D435×H413 Cooler:W518×D452×H1045
exterior material	Steel plate acrylic resin baking finish			
interior material	Hard resin			
Weight	Approx.42kg	Approx.40kg	Approx.84kg	Approx.70kg
Refrigerant	R-600a (HC non-Freon)			



LKEXV-1800



LGUEX-1500



CT-3316

Compatible with RoHS

EXPLOSION-PROOF REFRIGERATOR (UNIT TYPE)

-20°C ~ $+10^{\circ}\text{C}$
 (at an ambient temperature of 30°C)

Capable of freezing/refrigerating storage of combustible substances, such as organic solvent
 Large type with cooling unit methods (1000L to 3000L)
 Passed explosion-proof test, digital type

《Features》

- ① The products can be used in a Class 1 hazardous zone and a Class 2 hazardous zone among hazardous zones.
- ② There are no parts, producing any electric sparks, inside of products and also in the compressor compartment. Thus, flammable materials can be stored.
- ③ The refrigeration cycle is "Pressurized Apparatus" (f) and the control circuit has "Flame-proof Enclosure" (d).
- ④ Digital setting/digital indicator
- ⑤ The cooling units allow size customization.
- ⑥ Equipped with high/low temperature alarms and a machine abnormality alarm (cooling circuit, compressor abnormality), voltage free contact for remote alarm, transmission output and leakage breaker as standard.
- ⑦ The door are equipped with door stopper and safety push rod as standard for prevention of lock-in.

●Specifications

Model	EPUT-A1-F1000	EPUT-A1-F1500	EPUT-B1-R3000
Temperature range	-20°C to $+10^{\circ}\text{C}$	-20°C to $+10^{\circ}\text{C}$	$+0^{\circ}\text{C}$ to $+10^{\circ}\text{C}$
Capacity	Approx.1028ℓ	Approx.1583ℓ	Approx.3008ℓ
External dimensions (mm)	W1204×D(1016+79)×H1984	W1844×D(1016+79)×H1894	W3154×D(1066+79)×H1994
Internal dimensions (mm)	W1040×D800×H1320	W1680×D800×H1230	W2990×D850×H1230
exterior material	Stainless steel (SUS-430)		
interior material	Stainless steel (SUS-304)		
Weight	Approx.315kg	Approx.395kg	Approx.600kg
Refrigerant	R-404A (HFC)		
Power supply	3 phase 200V 50/60Hz		



EPUT-A1-F1000



EPUT-A1-F1500



EPUT-B1-R3000

Note: We also offer other types of products. For details, please contact us.

INCUBATOR (with compressor)

-10°C~+50°C
(at an ambient temperature of 35°C)

With a 3-step program operation function, this model is available for a wide range of applications, including cultivation of microorganisms.

《Features》

- ① Capable of highly accurate control in a wide temperature range of -10°C to +50°C by means of PID control using microcomputer.
- ② Equipped with a built-in programming function. Up to 3 temperatures and times can be combined.
- ③ Equipped with an automatic alarm setting function. Even during programming operation, the alarm temperature can be automatically set (makes a notification when the temperature becomes setting temperature±3°C).
- ④ Equipped with a setting value protection function against power failure.
- ⑤ With sufficient cooling performance, this model allows installation of components such as a shaker inside. At the upper part on the left side (exterior), a receptacle is provided.

Note: We also offer an "LA type" that is equipped with lighting. For details, please contact us.



NRB-32A



NRB-14A



NRB-41A

●Specifications

Model	NRB-14A	NRB-32A	NRB-41A
Temperature setting range	-10°C to +50°C (when no specimen is contained)		
Capacity	Approx.130ℓ	Approx.287ℓ	Approx.411ℓ
External dimensions (mm)	W700×D(510+60)×H1090	W700×D(510+60)×H1800	W700×D(660+60)×H1800
Internal dimensions (mm)	W624×D355×H617	W624×D355×H1327	W624×D505×H1327
exterior material	Painted steel		
interior material	Stainless steel		
Weight	Approx.75kg	Approx.115kg	Approx.130kg
Refrigerant	R-134a(HFC)		

BICELL (BIO FREEZING VESSEL)

Heat-resistance range
-80°C~+40°C

Cryopreservation vessel for animal cells

《Features》

- ① Cells can be preserved by freezing without programmable freezers.
- ② BICELL offers high viability and retrieval of cells.
- ③ Usage of BICELL is easy. Keep BICELL at 4°C. Prepare specimen with your ordinary procedure for cryopreservation of cells. Insert sealed ampuls or serum tubes into BICELL. Place BICELL into a -80°C freezer. A freezing process is completed within approx. 3 hours.

●Specifications

Model	BICELL
Heat resistant range	-80°C to +40°C
External dimensions (mm)	φ88×H109 (Inclusive of lid)
Internal dimensions (mm)	φ50×H69
exterior material	Polyethylene
interior material	Polyethylene
Weight	Approx.190 to 200g
Freezing buffer	Approx.100mℓ
Capacity	Serum tube (1.8~2ml): Approx. 7 to 8 / Glass ampuls (1ml): Approx. 9 to 10
Package	6 pieces 1 set



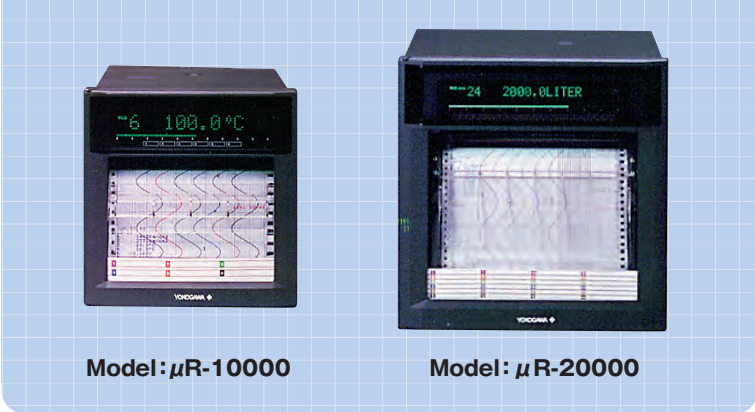
BICELL

Temperature recorder

● Temperature recorder from Yokogawa Electric Corporation

《Main specifications》

- Number of input points:
 μ R10000: 1, 2, 3, 4 pens, 6 points
 μ R20000: 1, 2, 3, 4 pens, 6, 12, 18, 24 points
- Input types:
 DC voltage, thermocouple, resistance bulb, operation record,
 DC ampere (addition of external shunt resistance)
- Alarm types:
 Upper/lower limits, display upper/lower limits,
 differential upper/lower limits, change rate upper/lower limit
- Additional specifications:
 alarm output, RS-422, Ethernet interface,
 mathematical function, remote control, header printout, etc.
- External dimensions:
 μ R10000: 144(W) \times 144(H) \times 220(D)mm
 μ R20000: 288(W) \times 288(H) \times 220(D)mm
- Weight:
 μ R10000: Approx. 2.1 to 2.5 kg, μ R20000: Approx. 7.5 to 9.0 kg



Model: μ R-10000

Model: μ R-20000

《Product features.》

Leading-edge technology offers high reliability, high quality, and excellent operability. Further equipped with various functions, such as a networking function, to meet customers' varying needs, this is the latest industrial recorder that uses 100 mm and 180 mm wide recording paper.

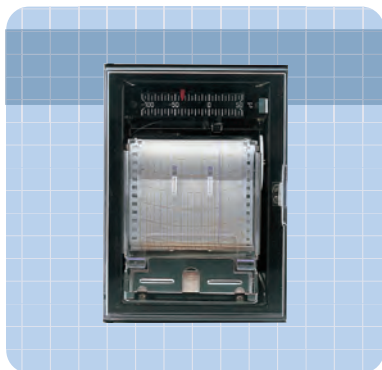
● Leading-edge technology offers high reliability and high quality.

- Leveraging contact-less technology
- Actuators reduced in size through high-precision manufacturing technology
- High degree of integration using custom ICs
- Dust and splash-proof front door (conforms to IP54)

● Offers excellent operability.

- Full-dot matrix display is employed. (μ R10000: 101 \times 16, μ R20000: 181 \times 16)
- Interactive setting through navigation display
- Equipped with the function to eject recording paper during recording.
- Interior lighting is equipped as standard. (high-luminance white LED is employed)

Note: For the price, contact us.



● 2-month temperature recorder

- ① Single-pen type
- ② Size: W110 \times D166 \times H154 mm
- ③ Sensor: liquid expansion type
- ④ Lead wire: temperature sensing part: SUS304
- ⑤ Power supply 1.5 V DC (one C-size battery)
- ⑥ Recording paper: folding type
 W73mm \times L4.2m (recording width: 60mm)
- ⑦ Recording paper feed rate: 2.5 mm/h
- ⑧ Recording period: 60 days (2 months)
- ⑨ Recording pen: cartridge pen (purple)
- ⑩ Alarm contacts
 (alarm setting temperature range: -80° to -20°C)

2-month temperature recorder
 (with one box of recording paper; for 1 year)
Recording paper
 (one box; for 1 year)

Note: Installation work fee is separately required.

● Temperature self-recorder

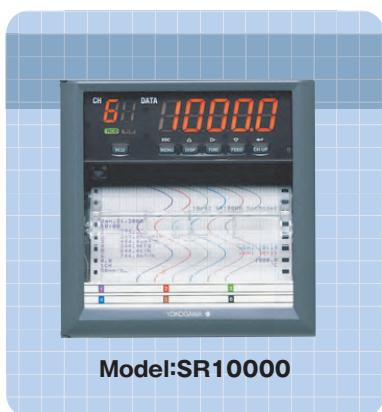
- ① Single-pen type continuous automatic recording
- ② Size: W149 \times D103 \times H174 mm
- ③ Sensor: gas expansion type
- ④ Power supply 1.5 V DC (one C-size battery)
- ⑤ Recording paper: pressure sensitive paper; ink not required (initial supply, 12 sets for 1 year)
- ⑥ Built-in contact for upper/lower limit alarm (AC power required)

Model: AKM-4014
 (recording range: -40°C to +14°C)
 (with recording paper : 12 sets for one year)

Model: AKM-0620
 (recording range: -6°C to +20°C)
 (with recording paper : 12 sets for one year)

Recording paper
 (12 sets for one year)

Note: Installation work fee is separately required.



Model: SR10000

● SR temperature recorder

- ① Large and vivid LED display (10 \times 18mm), Easy and interactive configuration
- ② Dust and splash-proof front door (Confirming to IP54)
- ③ The recorder has variety functions such as printing functions (Message and periodic printout), zone recording, and partial expanded recording.

《Main specifications》

- Measurement points : 6 dots
- Dimensions : W144 \times H144 \times D220mm
- Weight : 2.5Kg
- Sensor : Pt100 Ω
- Recording paper feed rate: 10 to 1500 mm/h (28 steps)
- Effective recording width: 100 mm
- Recording paper length: 16 mm (folding type)
- Rated voltage : 100~240VAC (Automatically selected)

SR temperature recorder (with recording paper: 1 box for 2 month)

Recording paper (set of 6 boxes for one year)

Note 1: The price includes the price for one sensor. For additional sensors, contact us. Note 2: Installation work fee is separately required.



Safety Precautions

- The products listed in this catalog are for indoor use only.
Please use it in the place where rain water does not go.
- Please read the "Instruction Manual" carefully before use and use it correctly.
- Installation work, electrical work, etc. may be required. Please consult your dealer or professional.
- Volatile and flammable items such as acetone, ethanol, benzene, etc. should be stored in explosion-proof products.
If stored in something other than explosion-proof products, there is a risk of explosion.



NIHON FREEZER CO., LTD.

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