

**Biomedical Equipment**  
2006 Update



***“Think GAIA”***



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SANYO EVOLUTION PROJECT



MDF-1156ATN

## SANYO MDF-1156ATN -152°C Cryogenic Chest Freezer

Freezing below the recrystallisation temperature of -130°C using the SANYO -152°C Freezer means you no longer need to worry about the stability of your samples. 128L (4.5 cu.ft.) capacity, these Cryogenic Freezers feature a specially designed compressor and a cascade refrigeration system for durable ultra-low temperature pull-down. This cutting edge technology also ensures that noise levels emitted are kept to a minimum.

MDF-1156, 128L. capacity.  
MDF-1156ATN, 128L. capacity.

## SANYO Ultra-Low Temperature VIP™ -86°C Laboratory Freezers

Storing your samples is even easier with the Evolution range of Vacuum Insulated Panel (VIP™) Laboratory Freezers from SANYO. These ULT -86°C Freezers have evolved to include new features such as added security and condition monitoring, comprehensive alarm system, easy-to-read control panel, optional multiple inner doors and new easy access Eagle door latch. Not to mention the fact that our VIP™ technology halves insulation thickness needed, giving up to 30% more storage space inside the Freezer without increasing the footprint. All models are currently available with vastly reduced footprints compared to traditionally insulated ULT Freezer models.

- Status alert (condition monitor) notifies of potential problems before they happen.
- Insulated inner doors preventing cool air leakage.
- Rugged outer door latch and padlock facility.  
Optional Circular recorder, CO<sub>2</sub> and N<sub>2</sub> back-up systems.

MDF-U32V, 333L. / MDF-U53V, 519L. / MDF-U73V, 728L.



MDF-U32V

## SANYO MDF -86°C Chest and Upright ULT Freezers

**NEW Models Available!**



SANYO E&E Europe BV offers a wide range of chest and upright -86°C Freezers to suit your individual storage needs. All our Freezers feature the usual high-quality accessories you would expect from SANYO. Manufactured by SANYO and using CFC-free refrigerants, all units feature comprehensive alarm systems to ensure your samples are well protected and secure.

SANYO Freezers utilise a cascade cooling system, enabling ultra-low Freezer temperatures to be reached quickly and quietly. Microprocessor control maintains these temperatures accurately and durably.

**Chest Models:** MDF-C8V, 86L. / MDF-192, 86L. / MDF-393, 309L. /  
MDF-593, 487L. / MDF-793, 701L.  
**Upright Models:** MDF-U3286S 333L. / MDF-U4086S, 382L. /  
MDF-U5386S, 518L. / MDF-U7386S, 668L.

## SANYO -30/-40°C Biomedical Freezers

SANYO's MDF Series Biomedical Freezers offer outstanding reliability and performance required in a wide variety of storage and research applications. In the Medical field, our Biomedical Freezers provide effective storage of life-saving fresh and frozen blood supplies and vaccines, as well as samples for diagnosis. In the Biotechnology field, they provide effective Freezer storage of enzymes for genetic research, as well as culture media, reagents and samples for testing. In the Industrial field, they are ideal for aging and temperature tests on electronic components, precision devices and compound resins. As a storage environment, with excellent safety features, easy operation and a host of other features, these Freezers offer unsurpassed reliability and functionality. Environmentally-friendly design, front mounted display/control panel. Wide range of safety features as standard. Temperature monitoring features. Optional Recording Features and other accessories.



**Chest Models -20°C to -35°C:** MDF-136,138L. /  
MDF-236, 221L. / MDF-436: 426L.  
**Upright Models -20°C to -30°C:** MDF-U537, 482L. /  
MDF-U537D, 452L. / MDF-U333, 274L.  
**Upright Model -15°C to -40°C:** MDF-U442, 426L.



## SANYO MDF -40°C Plasma Freezer

SANYO Plasma Freezers provide an ideal freezing environment for the preservation of vaccines, blood plasma, test samples and specimens. Designed to maintain a stable and uniform temperature of up to -40°C, with units capable of storing 280 x 300ml FFP (Fresh Frozen Plasma) bags.

The user-friendly design includes a built-in door latch for each of the double outer doors, and a simple temperature check is possible via the control panel. This, coupled with a visual and audible alarm system, ensures that your samples are both safe and secure, but also easy to access when you need them.

**MDF-U442:** 426L. capacity. Temp range -15°C to -40°C.  
**MDF-U5411:** 482L. capacity. Temp range -20°C to -40°C.

# Conservation



## SANYO Laboratory Refrigerators

If you are looking for a high-quality Refrigerator then no matter what your requirements, the chances are we will have a SANYO model to fulfill your needs. From Pharmaceutical Refrigerators combined with Freezers to large-capacity ENVIRO-CENTRES, our SANYO specialists are here to offer you advice on the most suitable equipment for your samples.

Manufactured and distributed by SANYO, all our units are designed to exceed the highest expectations of a laboratory Refrigerator. Effective, reliable temperature control, quiet operation, ease of use and ergonomic design are just a few of the features you can expect as standard from a SANYO Refrigerator.

Refrigerators :           MPR-161D, 158L. / MPR-311D, 340L. / MPR-513, 486L. /  
MPR-720, 684L. / MPR-1013, 1034L. / MPR-1410, 1370L.  
Refrigerator/ Freezer:   MPR-214F, Refrigerator 176L. - Freezer 39L.  
MPR-414F, Refrigerator 340L. - Freezer 82L.

## SANYO Blood Bank Refrigerators

Keep samples safe and secure in a SANYO Blood Bank Refrigerator. Designed to conform to AABB criteria, with ensured stable and reliable temperature control, utilising a special highly efficient compressor designed and developed by SANYO to provide rapid cooling and quiet performance for each model.

- Environmentally friendly design.
- Alarm and safety functions as standard.
- User-friendly design.
- Optional temperature monitoring features.

MBR-107D: 79L. capacity, eqv. 32 x 450ml bags.  
MBR-304: 302/304L. capacity, eqv. 120 x 450ml bags.  
MBR-506D: 425L capacity, eqv. 120 x 450ml bags.  
MBR-704: 625/617L. capacity, eqv. 360 x 450ml bags.  
MBR-1404: 1,287L. capacity, eqv. 720 x 450ml bags.



## CBS Isothermal -190°C Dry Storage Freezers

CBS Isothermal Freezers feature a patented liquid nitrogen jacket to provide uniform storage temperatures in the -190°C range, free from liquid nitrogen contact. This innovative design eliminates the risk of cross-contamination through liquid nitrogen and the need for additional packaging to protect valuable cells and tissue.

With a minimal temperature gradient, the full internal volume of each freezer is available for storing samples at liquid nitrogen temperatures making the most efficient use of available capacity. CBS Isothermal Freezers also provide added user safety by eliminating contact or splashing of liquid nitrogen. All models meet the Medical Device Directive 93/42/EEC: 1993 Class IIA and feature the Series 2300 Auto-fill and Monitor System providing sample security and ease of operation. A wide selection of inventory systems for vials and bags are also available. Installation, commissioning and calibration service available.

CBS V-1500A, 9,100 x 2ml Cryovials.  
CBS V-3000A, 22,100 x 2ml Cryovials.  
CBS V-5000A, 40,300 x 2ml Cryovials.





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*Contamination is less of a concern with the SANYO range of CO<sub>2</sub> and Multigas Incubators.*

All but one of the SANYO Incubators in this range feature InCuSaFe™ - a copper-enriched stainless steel interior which expresses a natural germicidal attribute, inhibiting growth of moulds, fungi, mycoplasma and bacteria. Decontamination therefore takes place all day, every day, automatically without disruption to your routine or your samples. For critical applications UV-Safe™ automatic decontamination systems are also available. This optional UV illuminated air duct automatically maintains contamination free air and humidity conditions in the chamber.

SANYO CO<sub>2</sub> Incubators range in capacity from 49L to 195L with a variety of options to suit most needs, including the recently introduced Multigas MCO-5M and MCO-18M models, providing precise CO<sub>2</sub> and O<sub>2</sub> levels.

**CO<sub>2</sub> models:**

- MCO-20AIC, 195L. capacity Direct Heat and Air Jacket (DHA), Infrared CO<sub>2</sub> sensor, UV Safe Cell
- MCO-18AIC, 170L. capacity DHA, Infrared CO<sub>2</sub> sensor.
- MCO-5AC, 49L. capacity DHA, Thermal Conductivity (TC) CO<sub>2</sub> sensor.
- MCO17/15AC, 164L. DHA, TC CO<sub>2</sub> sensor.
- MCO-175, 170L. Water Jacket, TC CO<sub>2</sub> sensor.

**Multigas models:**

- MCO-5M, 49L. capacity DHA, TC CO<sub>2</sub> sensor.
- MCO-18M, 170L. capacity DHA, Infrared CO<sub>2</sub> sensor.

**SANYO CO<sub>2</sub> and Multigas Incubators**

**MCO-5AC: Patient Specific, Space Saving, Triple Stackable, Compact Design**

*When placed in triple stackable configurations (pictured below), this unit meets GLP (Good Laboratory Practice) requirements by helping to avoid patient-to-patient cross contamination in individualized patient-specific clinical incubation applications, such as in vitro fertilization and regenerative medicine techniques.*



MCO-18M  
MCO-5AC

 <p>Decontamination via UV radiation</p>	 <p>Inner cabinet is made from Copper stainless steel alloy</p>	 <p>Infrared CO<sub>2</sub> sensor</p>
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# Incubation

## SANYO MLR Plant Growth Chambers

The wide variety of temperatures and lighting patterns that are essential in plant research can now be accurately reproduced and controlled with the updated range of MLR Plant Growth Chambers - and optional humidity control too!

Microprocessor PID control of temperature, lighting and humidity (0°C to +50°C, 0 to 20,000lux, and 55 to 90% RH resp.) create the optimum environment for meticulous plant culturing and rearing.

- Culture of plant cells, tissue and organs.
- Acclimatisation and rearing of plants.
- Incubation and rearing of insects.
- Electronic testing.
- Food testing.
- Plant growth.

MLR-351: Programmable temperature and illumination.

## Orbital Shaking Incubators

A new concept in Orbital Shaking Incubators designed around the safety of your samples, the ORBI-SAFE. Incorporating superior illumination, CFC free construction, accurate temperature control and the unique InCuSaFe™ interior lining with contamination control properties

These Orbital Incubators are designed to maximise the growth of microorganisms and cells under strict conditions of temperature, time, light and agitation. Three versions are available; the Heated Unit; the Refrigerated Unit; and the Illuminated Unit.

OTSHTD.EU1.C, Standard unit, ambient +5°C to +60°C.  
OTSRFG.EU1.C, Refrigerated unit, ambient -15°C to 60°C.  
OTSILL.EU1.C, Illuminated unit, ambient -15°C to 60°C



## SANYO MIR Heated and Cooled Incubators

The MIR series of Incubators have been recognised as exceptional units suitable for a wide range of applications, accommodating a temperature range of from -10°C to +50°C (cooled models only). In pursuit of temperature precision and enhanced operability, the MIR-153/253/553 series of Incubators make their debut.

Incorporating microcomputer control, these Incubators control the heater and compressor within a precise  $\pm 0.2^\circ\text{C}$  and  $\pm 1^\circ\text{C}$  range respectively. In addition, they can be applied to a wide variety of experimentation patterns with the aid of a 3-step microcomputer program. These cooled Incubators are designed to meet a variety of advanced experimental needs ranging from microorganism cultures and plant germination tests to various constant temperature experiments.

- Programmable 3-step operation with microcomputer control.
- Alarm and security system to protect your samples.
- Independent over-temperature protection device.
- Automatic Setting temperature alarm.
- Automatic return alarm buzzer switch.

Cooled models, -10°C to +50°C: MIR-153, 126L. capacity, MIR-253, 254L. capacity, MIR-553, 406L capacity  
Heated models, Ambient +5°C to +80°C: MIR-162, 93L. capacity, MIR-262, 153L. capacity.



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## SANYO Portable Laboratory Autoclaves

Accurate, efficient temperature control. Easy-to-use functions. Portability so these Autoclaves go with you, wherever that may be. Above all these Autoclaves feature a wealth of security features to ensure the safety of the user and the material inside. Want more could you want from an Autoclave! Two ranges of portable Autoclaves designed for the individual laboratory or user.

With generous capacities of up to 12 1000ml flasks (MLS-3780) and sterilisation temperature up to 135°C, see our brochures for more reasons why your next Autoclave should be a SANYO Autoclave.

<b>MLS-37 Series:</b>	<b>MLS-24 &amp; 30 Series:</b>
MLS-3750, 50L. capacity.	MLS-2420U, 20L. capacity.
MLS-3850, 75L. capacity.	MLS-3020U, 48L. capacity.

## SANYO MOV Laboratory Ovens

SANYO has always aimed to provide research support equipment that offers complete satisfaction to suit its users. Inspired by the search for even higher precision and greater flexibility of control, SANYO presents the MOV series of Laboratory Ovens; accurate, high-temperature equipment for scientific research.

MOV Ovens are economically priced, yet they offer sophisticated features often found on more expensive Ovens. All versions offer a timed function facility commencing either from when the samples are put into the oven or when the oven reaches the required temperature, with a buzzer to signal the end of the run.

The microprocessor PID temperature control system guarantees an accurate temperature environment, and the forced air circulation system ensures a stable temperature accurate to within +/-2.5°C.

- Sheathed heater ensuring durability and safety.
- Natural convection models available for drying small samples and fine particles which would be scattered by a fan.
- Fan forced air circulation models available for quicker drying.
- Microprocessor timer function.



**Gravity Convection:**  
 MOV-112, 97L. capacity, temp to 250°C.  
 MOV-212, 157L. capacity, temp to 250°C.

**Fan Convection:**  
 MOV-112F, 97L. capacity, temp to 200°C.

**Sterilising Ovens:**  
 MOV-112S, 97L. capacity, fan circulation, temp to 200°C.  
 MOV-212S, 150L. capacity, fan circulation, temp to 200°C.

**Programmable Ovens:**  
 MOV-212F, 150L. capacity, temp to 200°C.

GAIA stands for "the living Earth." SANYO will develop products that both mankind and GAIA will treasure by holding fast to the concepts of "sustainability" and "symbiotic evolution". Our aim, to restore a beautiful Earth for future generations by creating innovative solutions from our various resources. Let's **Think GAIA!**

The SANYO logo is rendered in a bold, red, sans-serif font. The letter 'A' is stylized with three vertical lines passing through its center.

**SANYO E&E Europe BV**  
**Medical Division**  
Biomedical Business Unit

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Nijverheidsweg 120  
4879 AZ ETTEN-LEUR  
Tel: +31(0)76-5433833

sales@SANYO-Biomedical.nl  
www.SANYO-Biomedical.com