

# laboratory incubators, CO<sub>2</sub>

## LABORATORY INCUBATORS, CO<sub>2</sub>

**Compact low-profile air jacket design with inCu saFe™ interior construction and optional SafeCell™ UV protection for contamination control, no culture downtime.**

SANYO Personal™ Series laboratory CO<sub>2</sub> incubators feature a small footprint that fits easily on a standard lab bench. Units can be stacked for double the capacity in the same floor space, and mounted on a roller base to move from lab to lab.

*SANYO ErgoStack™ low-profile design places top unit controls at eye level for convenience. Double chamber stacked Model MCO-36AIC(UV) shown mounted on optional roller base.*



| Feature                            | Benefit   |
|------------------------------------|---|
| Designed For Personal Use          | Uniform, independent systems with easy access door-mounted controls for single or low-profile dual (stacked) installations.   |
| SANYO ErgoStack™                   | Low-profile cabinet with door-mounted controls improve accessibility.   |
| CO <sub>2</sub> Control            | High precision infrared CO <sub>2</sub> sensor with P.I.D./R™ quick recovery system to prevent overshoot. (Thermal Conductivity (TC) sensor on Models MCO-17AC and MCO-34AC)                        |
| SafeCell™ UV Contamination Control | Patented narrow bandwidth UV sterilization <i>in situ</i> eliminates air and water pan contamination without culture downtime, saving time and money. (Models MCO-18AIC(UV) and MCO-36AIC(UV) only) |
| Direct Heat and Air™ Control       | Patented radiant wall heating of air jacket is microprocessor controlled in three zones to maintain uniformity and optimum humidity.  |
| inCu saFe™ Interior                | Copper-enriched stainless-steel interior surfaces provide inherent germicidal protection, saves decontamination time.   |
| Dimensions                         | Exterior 24.4"W x 28.0"D x 35.4"H<br>(double chamber stacked on roller base 74.5"H)   |

| Model Number                  | Volume      | Exterior Dimensions, Compact Footprint | Contamination Control  | CO <sub>2</sub> Control   | Voltage, Power Connection |
|-------------------------------|-------------|--|--|---|---------------------------|
| MCO-18AIC (UV) Single Chamber | 6.0 cu.ft.  | 24.4"W x 28.0"F-B 35.4"H               | inCu saFe™ copper-enriched stainless steel alloy interior, SafeCell™ UV with UV light            | Infrared with SANYO exclusive P.I.D./R™ for fast CO <sub>2</sub> recovery without overshoot | 115V NEMA 5-15            |
| MCO-36AIC (UV) Double Chamber | 12.0 cu.ft. | 24.4"W x 28.0"F-B 74.5"H               |  |   |                           |
| MCO-18AIC Single Chamber      | 6.0 cu.ft.  | 24.4"W x 28.0"F-B 35.4"H               | inCu saFe™ copper-enriched stainless steel alloy interior, (optional SafeCell™ UV with UV light) |   |                           |
| MCO-36AIC Double Chamber      | 12.0 cu.ft. | 24.4"W x 28.0"F-B 74.5"H               |  |   |                           |
| MCO-17AC Single Chamber       | 5.8 cu.ft.  | 24.4"W x 28.0"F-B 35.4"H               | inCu saFe™ copper-enriched stainless steel alloy interior  | Thermal Conductivity (TC) sensor  |                           |
| MCO-34AC Double Chamber       | 11.6 cu.ft. | 24.4"W x 28.0"F-B 74.5"H               |  |   |                           |

*SafeCell™ UV contamination control, SANYO U.S. Patent No. 6255103; Direct Heat and Air Jacket™ incubator heating technology, SANYO U.S. Patent No. 5519188. SANYO CO<sub>2</sub> incubators have received FDA clearance for *in vitro* fertilization, FDA K013701, October 30, 2001.*

## PERSONAL™ SERIES Saves Time • Saves Space • Saves Money

With the new SANYO line of full-featured Personal™ Laboratory Products, you can keep your work close at hand and still benefit from SANYO quality, reliability, accuracy, stability and dependability.



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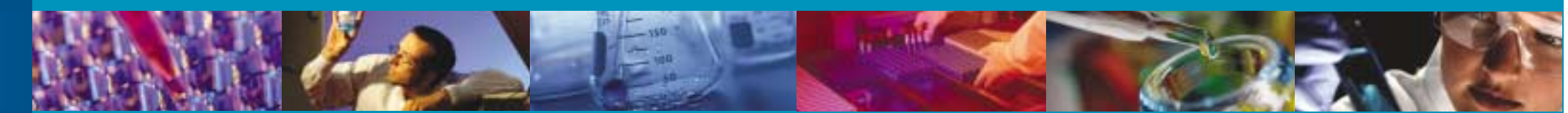
An ISO 9001 Company



SANYO Electric Biomedical Co., Ltd. is a member of the SANYO Electric Group. This received ISO14001 Certification for its environmental management system.

### SANYO PERSONAL™ SERIES BENEFITS

- Valuable samples are contained in the lab – where you work, where they're safe.
- Full-function controls and alarms provide the performance and safety you expect with the sophistication you need.
- Compact sizes minimize installation expenses and allow for more location options where lab space is restricted.
- Personal™ Series products minimize uncertainty and reduce the need to share storage or process space with someone else. Security features help assure privacy.
- Portable designs make for easy relocation lab to lab.
- SANYO state-of-the-art refrigeration and electronic systems are identical to larger volume models, permitting expansion or scale-up using existing protocols.



## PERSONAL™ SERIES LABORATORY PRODUCTS

Efficient Design, Sophisticated Performance, Time-Saving Access  
To Samples When You Need Them, Where You Need Them



# personal™ series

- CO<sub>2</sub> Incubators
- Ultra-Low Freezers
- Lab Refrigerators
- Autoclaves

-86°C ultra-low freezers

refrigerator with freezer combinations

autoclaves

**VP® SERIES SPACE-SAVING -86°C ULTRA-LOW FREEZERS**

**High-density ultra-low storage solutions for in-lab installations put samples close to your work area.**

SANYO Personal™ Series V.I.P.® ultra-low temperature freezers significantly increase storage volume to conserve valuable lab space. Installation of your freezer in your lab, close to your work improves efficiency, saves time and money.

| Feature                                  | Benefit   |
|--|---|
| Patented V.I.P.® Vacuum Insulation Panel | High-performance insulation achieves thin-wall profile for worry-free temperature stability, maximum interior volume in a compact footprint.                          |
| Insulated Inner Doors                    | Assure unparalleled temperature uniformity and sample protection.   |
| Microprocessor Controls                  | Comprehensive setpoint, alarm, monitoring and diagnostic functions based on SANYO-built microprocessor controller with digital display of all input/output functions. |
| SANYO Brand Compressors                  | Built by SANYO specifically for rugged ultra-low temperature applications in a laboratory environment.  |



Model MDF-U32V, 11.8 cu.ft. V.I.P.® -86°C freezer is only 26.4" wide, ideal for installations where space is restricted.

| Model Number        | MDF-U32V                   | MDF-U51VA                  | MDF-U50VC   |
|---------------------|----------------------------|----------------------------|-------------|
| Volume              | 11.8 cu.ft.                | 18.3 cu.ft.                | 18.3 cu.ft. |
| Voltage             | 115V                       | 115V                       | 208/230V    |
| Power Connection    | NEMA 5-15                  | NEMA 5-20                  | NEMA 6-15   |
| 2" Boxes            | 216                        | 352                        | 352         |
| 3" Boxes            | 168                        | 224                        | 224         |
| 2ml Vials in Boxes  | 21,600                     | 35,200                     | 35,200      |
| Exterior Dimensions | 26.4"W x 34.1"F-B x 73.2"H | 30.3"W x 34.4"F-B x 78.3"H |             |

V.I.P.® Vacuum Insulation Panel Freezers, SANYO U.S. Patent No. 6260377

Model MDF-U51VA

**BIOMEDICAL REFRIGERATOR WITH FREEZER COMBINATIONS**

**Cost effective, space-saving designs offer a laboratory-grade refrigerator with freezer for storage of vaccines and pharmaceuticals.**

When space is at a premium, SANYO Personal™ Series refrigerator with freezer combinations eliminate the need to purchase separate units. These high performance cabinets offer convenient, attractive and space-saving designs to save time and money.



Model MPR-414F is a 14.9 cu.ft. biomedical refrigerator/freezer combination with independent refrigeration systems for refrigerator and freezer chambers.

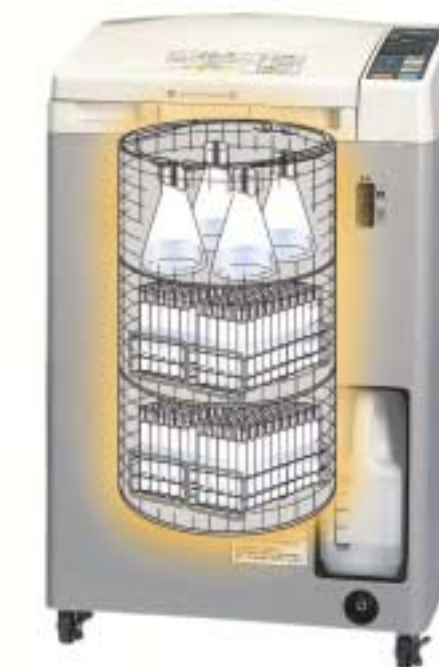
| Model Number | Exterior Dimensions        | Volume (Cu.Ft.) |         | Temperature Range         |                     | Voltage Power Connection |
|--------------|----------------------------|-----------------|---------|---------------------------|---------------------|--------------------------|
|              |                            | Refrigerator    | Freezer | Refrigerator (Forced Air) | Freezer (Cold Wall) |                          |
| MPR-214F     | 21.2"W x 21.9"F-B x 70.4"H | 6.2             | 1.4     | 2°C to 14°C               | -20°C to -30°C      | 115V<br>NEMA 5-15        |
| MPR-414F     | 31.5"W x 23.6"F-B x 71"H   | 12.0            | 2.9     |                           |                     |                          |

| Feature  | Benefit  |
|--|--|
| SANYO Cycle Refrigerator Defrost with Manual Defrost Freezer | Initiates refrigerator defrost on-demand, maintains internal temperature uniformity during process.            |
| SANYO Brand Refrigeration                                    | With SANYO-built compressors, allows differential control of individual refrigerator and freezer compartments. |
| Microprocessor Controls                                      | Comprehensive functions include setpoint, alarm, monitoring and diagnostics.                                   |
| Validatable Storage  | Laboratory grade, integrated systems are designed to assure stored product safety.                             |

**AUTOCLAVES, TOP-LOADING, PORTABLE**

**Low-profile, portable autoclaves, effective substitute for costly central autoclaves.**

With SANYO Personal™ Series portable autoclaves, you can sterilize your instruments when you want, where you want, saving precious time. Self-contained and easy to operate, both models feature a low-profile ergonomic design to simplify access, loading and unloading. The autoclave rolls out for sterilization when you need it; stores easily. No plumbing required.



Model MLS-3780, 75-liter volume

| Feature                             | Benefit   |
|-------------------------------------|---|
| Multiple Applications and Locations | Ideal for liquid culture media preparation, labware, waste sterilization to meet good laboratory practice criteria. |
| Microprocessor Controls             | Assure correct temperature is accurately maintained and easily operated with one-touch operation.                   |
| Programmable                        | Allows maximum flexibility in ramp up, dwell, ramp down and cool-off protocols for high pressure steam.             |
| Swing-Top Lid                       | Opens chamber to 100% access; eliminates side space requirement.  |
| Low-Profile, Large Chamber Diameter | Cross section of 14.5" (37 cm) holds a variety of vessels and containers.   |

| Model Number             | MLS-3750   | MLS-3780   |
|--------------------------|------------|------------|
| Effective Capacity       | 50 liters  | 75 liters  |
| Cross Section            | 14.6"      | 14.6"      |
| Voltage                  | 115V       | 208/230V   |
| Power Connection         | NEMA L5-30 | NEMA L6-30 |
| Maximum Temperature      | 135°C      |            |
| Baskets (Included)       | 2          | 3          |
| Flask Capacity (1 Liter) | 8          | 12         |