



Republic of the Philippines
NATIONAL POLICE COMMISSION
NATIONAL HEADQUARTERS, PHILIPPINE NATIONAL POLICE
OFFICE OF THE CHIEF, PNP
Camp BGen Rafael T Crame, Quezon City

MEMORANDUM CIRCULAR
NO.: 2021-022

27 FEB 2021

**PRESCRIBING THE MINIMUM TECHNICAL SPECIFICATIONS
FOR LABORATORY OR MEDICAL REFRIGERATOR**

1. REFERENCES:

- a. NAPOLCOM Resolution No. 2020-0877 entitled, "Prescribing the Minimum Standards for Laboratory or Medical Refrigerator" dated October 1, 2020;
- b. NAPOLCOM Memorandum Circular (MC) No. 2019-002 entitled, "Defining the Duty and Authority of the NAPOLCOM to Prescribe Minimum Standards for Uniforms, Arms, and Equipment to be Procured by the PNP" dated January 29, 2019;
- c. PNP MC No. 2019-016 entitled, "Implementing Guidelines of NAPOLCOM Resolution No. 2019-002 Defining the Commission's Function to Prescribe Minimum Standards for Uniforms, Arms and Equipment for the Philippine National Police and Delineation of Authority to the Chief, Philippine National Police and to Set Technical Specifications of PNP Uniforms, Arms and Equipment" dated April 4, 2019; and
- d. PNP UESB Resolution No. 2020-004 entitled, "Proposed Minimum Technical Specifications for Laboratory or Medical Refrigerator" January 22, 2021.

2. RATIONALE:

This MC sets forth the minimum technical specifications for Laboratory or Medical Refrigerator that will serve as reference in the procurement.

3. SITUATION:

Laboratory Refrigerator is an essential piece of equipment for PNP Health Service to provide safe and convenient storage of items and ensure freshness and integrity of stored items.

4. PURPOSE:

To provide and establish the minimum technical specifications for Laboratory or Medical Refrigerator that will serve as reference in the procurement of the said equipment.

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5. DEFINITION OF TERMS:

For purposes of this MC, the following terms shall mean:

- a. Ambient temperature – refers to an atmospheric temperature of the immediate surroundings.
- b. Biomedical – refers to a set of sciences applying portions of natural science or formal science, or both, to knowledge, interventions, or technology that are of use in healthcare or public health. Such disciplines as medical microbiology, clinical virology, clinical epidemiology, genetic epidemiology, and biomedical engineering are medical sciences. In explaining physiological mechanisms operating in pathological processes, however, pathophysiology can be regarded as basic science.
- c. Blood products – refer to blood components obtained from plasma using pharmaceutical processes. These are generally referred to as plasma derivatives. Examples of blood products are albumin and immunoglobulins.
- d. Compressor – refers to a mechanical device that increases the pressure of a gas by reducing its volume. An air compressor is a specific type of gas compressor. Compressors are similar to pumps: both increase the pressure on a fluid, and both can transport the fluid through a pipe.
- e. Condenser – refers to a device for reducing a gas or vapor to a liquid. Condensers are employed in power plants to condense exhaust steam from turbines and in refrigeration plants to condense refrigerant vapors, such as ammonia and fluorinated hydrocarbons.
- f. Defrost – to release from a frozen state.
- g. Electrical Safety Rating – to assess the safety of the equipment according to internationally accepted standards, for example in the prevention of electric shock.
- h. Evaporator – refers to a device in a process used to turn the liquid form of a chemical substance such as water into its gaseous-form/vapor.
- i. Fluorescence – refers to the one of many forms of luminescence, the emission of light not resulting from heat.
- j. Insulation – refers to the act of covering something to stop heat, sound, or electricity from escaping or entering, or the fact that something is covered in this way.
- k. Laboratory – refers to a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed. Laboratory services are provided in a

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variety of settings: physicians' offices, clinics, hospitals, and regional and national referral centers.

- l. Pharmaceutical – refers to a substance used in the diagnosis, treatment, or prevention of disease and for restoring, correcting, or modifying organic functions.
- m. Plenum – refers to an air-distribution box attached directly to the supply outlet of the HVAC equipment that heats or cools the air to make the house comfortable.
- n. Polyurethane – refers to a polymer composed of organic units joined by carbamate links.
- o. Potentiometer – refers to a three-terminal resistor with a sliding or rotating contact that forms an adjustable voltage divider. If only two terminals are used, one end and the wiper, it acts as a variable resistor or rheostat.
- p. Refrigerant – refers to a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle. In most cycles, it undergoes phase transitions from liquid to gas and back again. Many working fluids have been used for such purposes.
- q. Resistance Temperature Detector (RTD) – to measures the electrical conductivity as it varies with temperature. The electrical resistance generally increases with temperature, and the device is defined as having a positive temperature coefficient. The sensor is the combination of the transducer and electronics that measure the resistance.
- r. Temperature – refers to the degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch.

6. SPECIFICATIONS:

a. Description:

Laboratory or Medical Refrigerator is an electrically powered compressor with a condenser, a capillary tube or expansion valve, an evaporator, and interconnecting tubing. A thermostat regulates the refrigerator temperature. In many models, the compressor and motor are connected to the same shaft and sealed in a compact, airtight compartment, making more space available for storage. The system is either cylindrical with shelves or rectangular with pullout drawers or shelves. A temperature alarm is either included or optional. An emergency power system is necessary in the event of a power failure.

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b. Technical specifications:

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| 1) Power Supply | : | Philippine Standard |
| 2) Configuration type | : | Upright |
| 3) Shelve/Drawer or basket | : | 4 Shelves minimum |
| 4) Internal Dimensions | : | Manufacturer Standard |
| 5) External Dimensions | : | 77 x 27 x 27 inches (h x d x w) |
| 6) Exterior/Interior Material Construction | : | Galvanized steel Bacteria-resistant powder-coating |
| 7) Door Construction | : | 1, glass |
| 8) Doors Lock/Security system | : | Lockable with Key |
| 9) Temperature Control System: | : | Microprocessor |
| 10) Storage Capacities | : | 520 L |
| 11) Temperature Control range | : | 2 to 8°C |
| 12) Temperature Recorder | : | Temperature or other event |
| 13) Temperature display | : | LED or easy to read display |
| 14) Alarm | : | High /low temperature, door ajar, power failure |
| 15) Battery Back-up | : | With Rechargeable Battery backup |
| 16) Temperature sensor | : | Resistance Temperature Detector or other sensor System |
| 17) Defrost Capability | : | Automatic |
| 18) Caster/legs | : | Flexible |
| 19) Internal Light | : | Fluorescent or LED |

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7. REPEALING CLAUSE:

All other technical specifications contrary to or inconsistent with the provisions of this MC are hereby rescinded, modified or amended.

8. EFFECTIVITY:

This MC shall take effect immediately after 15 days from filing a copy thereof at the UP Law Center in consonance with Section 3, Chapter 2, Book VII of Executive Order 292 otherwise known as the "Revised Administrative Code of 1987," as amended.




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Police General
Chief, PNP

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