

### Energy Efficiency Certification – Latin America Programs for – Costa Rica, El Salvador, Panama and Peru -

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- Legal requirements to register the Company
- Certification Process
- Certification Schemes, Requirements and Technical Documentation Required by Regulation by scheme:
  - Costa Rica
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### > Accredited Regulations

#### COSTA RICA

**★** Technical Regulation from Costa Rica RTCR 482:2015, Electrical Products. Household Refrigerators and Freezers operated by hermetic motor compressor. Energy Efficiency Specifications.

#### EL SALVADOR

- Salvadoran Technical Regulation RTS 23.01.01:15, Energy Efficiency. Central, Package or Split Type Air Conditioners. Limits, Test Methods and Labeling.
- **Salvadoran Technical Regulation RTS 23.01.02:15**, Energy Efficiency. Room Type Air Conditioners. Limits, Test Methods and Labeling.
- Salvadoran Technical Regulation RTS 23.01.03:15, Energy Efficiency. Split Type Air Conditioners, Free Discharge and Air Ductless. Limits, Test Methods and Labeling.
- Salvadoran Technical Regulation RTS 97.01.01:15, Energy Efficiency. Household Appliance Refrigerators and Freezers. Limits, Test Methods and Labeling.
- ❖ <u>Salvadoran Technical Regulation RTS 97.02.01:15</u>, Energy Efficiency. Self-Contained Commercial Refrigeration Equipment. Limits, Test Methods and Labeling.



#### PANAMA

- ❖ <u>Panamanian Technical Regulation DGNTI-COPANIT 101:2017</u>, Energy Efficiency in Central, Package or Split Type Air Conditioners. Labeling.
- Panamanian Technical Regulation DGNTI-COPANIT 102:2017, Energy Efficiency in Room Type Air Conditioners. Labeling.
- Panamanian Technical Regulation DGNTI-COPANIT 103:2017, Energy Efficiency in Split Type Air Conditioners, Free Discharge and Free Air Ductless. Labeling.
- Panamanian Technical Regulation DGNTI-COPANIT 104:2017, Energy efficiency in split type air conditioners (Inverter) with variable refrigerant flow. Free discharge and ductless. Labeling.
- **Panamanian Technical Regulation DGNTI-COPANIT 105:2017**, Energy Efficiency of Household Appliance Refrigerators and Freezers. Labeling.

#### PERU

Supreme Decree No. 009-2017, Technical Regulation on Energy Efficiency Labelling.
Annex 1, Chapter IV y V: On the EEL for household lamps and similar uses for general lighting.

**Annex 3:** On the EEL or household refrigeration appliances.

**Annex 6:** On the EEL for household laundry washing machines

**Annex 7:** On the EEL for household tumble dryers

**Annex 8:** On the EEL for air-conditioning equipment.

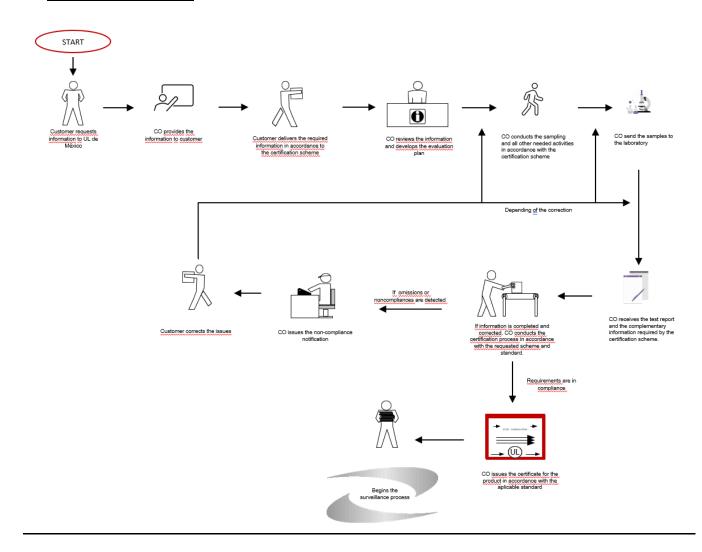
### > Legal requirements to Register the Company

**LEGAL DOCUMENTACIÓN** (Just the first time the Service is requested)

For all Energy Efficiency Regulations in Latin America, the Global Service Agreement, GSA, signed in the corresponding field, is required.



### > Certification Process



### > <u>Certification Schemes and Requirements by Technical Regulation</u>

### **COSTA RICA**

<u>Technical Regulation from Costa Rica RTCR 482:2015, Electrical Products. Household</u>
<u>Refrigerators and Freezers operated by hermetic motor compressor. Energy Efficiency</u>
Specifications.

Applies to appliance refrigerators up to 1104 liters (39 ft<sup>3</sup>) and self-contained appliance freezers up to 850 liters (30 ft<sup>3</sup>) operated with a hermetic motor compressor, as indicated in the table in section 2 of the Technical Regulation.



#### **Certification Schemes**

#### I. Model Four of Conformity Assessment.

- It is based on testing, evaluation and surveillance of the production process.
- An initial audit of the production process is carried out.
- ♣ The certificate is valid for 2 years from the date of issue.
- ♣ The certificate is subject to annual surveillance of the production process.
- The sample consists of three units and is randomly selected from the factory, the open market or both.
- The follow-up sample is taken once during the life of the certificate for full testing.
- For follow-up, the refrigeration unit model is alternated to ensure evaluation of all models in the family.

#### II. Model Five of Conformity Assessment.

- It is based on testing, evaluation, audit of the manufacturer's quality management system and surveillance of the production process.
- An initial audit of the production process and quality system is carried out.
- ♣ The certificate is valid for 3 years from the date of issue.
- The certificate is subject to annual surveillance of the production process and quality system.
- The sample consists of three units and is randomly selected from the factory, the open market or both.
- Follow-up sampling is performed once during the life of the certificate for full testing.
- For follow-up, the refrigeration unit model is alternated to ensure evaluation of all models in the family.

#### III. Model Seven of Conformity Assessment

- It is based on tests, and conformity is evaluated on samples of a specific batch of the product to be marketed.
- The certificate is valid only until the total lot is marketed.
- The sample is composed of three units and is randomly selected at the factory, in the open market or both, from a specific lot.

#### <u>Technical documentation required by Scheme</u>

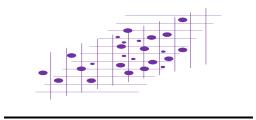
- A) The following is required for Model Four:
  - 1. Completed and signed service application.
  - 2. Operating and/or service instructions and/or manuals for all models.
  - 3. Brochures or photographs or printed images of each of the models of the product to be certified with a definition that allows them to be identified.
  - 4. Technical specification sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A).
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.



- 7. Copy of the certificate of compliance previously granted, if applicable.
- 8. Test report or document of results in accordance with the data declared in the request for services and with Decree 40077-MEIC-H-MICITT.
- 9. Product label with electrical data and product identification (brand, model, type, etc.).
- 10. Documentation supporting the initial production audit (if any).
- 11. Compressor data and specifications, mark, model and capacity.
- B) For Model five the following information is required:
  - 1. As indicated in Model Four above
  - 2. Current ISO 9001 certificate issued by a system certification body accredited by an IAF accreditation body and in IAF sector 19.

3.

- C) For Model Seven, the following is required:
  - 1. As indicated in Model Four above
  - 2. Serial numbers or other unique identification of all products comprising the lot.



### **EL SALVADOR**

### **Certification Schemes**

The Salvadoran Technical Regulations provide for three certification schemes, regardless of the type of product.

#### Certification by verification of batch.

- It is based on the execution of tests, and the compliance of one or more batches of product with respect to the requirements set out in the RTS is evaluated.
- Applies to new products.
- ♣ The certificate only covers the quantity of product that is manufactured, marketed, imported or exported.
- ♣ Certificates can be used directly by their holder.



The samples are selected randomly according to the classification of families, it can be taken in El Salvador or in the country of origin where the product is located.

#### Certification through the quality management assurance system of the production line

- Applies when the manufacturer of the product has an organizational structure that includes responsibilities, procedures, processes, and resources to ensure that the product complies with the requirements of this regulation.
- Applies to new products.
- The Management System should include manufacturing, product inspection, finishing, testing and shall be subject to CO supervision.
- The certification under this scheme, for the same product, cannot be requested to two different COs.
- Through this modality, the validity of the certificate is for 3 years.
- ♣ The certificate is subject to annual surveillance of the management system.
- The samples are selected randomly according to the classification of families, it can be taken in El Salvador or in the country of origin where the product is located.
- The sample is taken once during the validity of the certificate for complete testing.
- ♣ The certificate is valid only for the certificate requestor

#### > Through periodic testing of the product.

- It consists mainly of submitting your application and the current product test result report, along with the corresponding documentation.
- Applies to new products.
- The certificate is subject to surveillance, at least once during its validity, which is 1 year from the date of issue.
- The samples are selected randomly according to the classification of families, it can be taken in El Salvador or in the country of origin where the product is located.
- The sample is taken once during the validity of the certificate for complete testing.
- ♣ The certificate is valid only for the certificate requestor.

### <u>Salvadoran Technical Regulation RTS 23.01.01:15, Energy Efficiency. Central, Package or Split</u> Air Conditioners. Limits, Test Methods and Labeling.

Applies to central air conditioners, package or split type, operated with electric power with a frequency of 60Hz, in nominal cooling capacities from 8 800 W to 19 050 W that work by mechanical compression and that include an air cooler evaporator coil, a compressor and a condenser coil cooled by air or water imported and marketed in El Salvador.



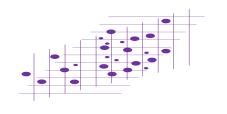
The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, can be taken in El Salvador or in the country of origin where the product is located.

#### Documentación Técnica Requerida Por Esquema

- A) For the Batch Scheme, clause 6.14.1.1 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Sample identification sheet duly required
  - 10. Affidavit stating that the product to be certified is new.
  - 11. The following information:
    - Description of all the families to be certified
    - Rated voltage in volts.
    - Rated frequency or frequency ranges in Hertz.
    - Symbol for the type of power supply.
    - Rated power in watts or rated current in amperes.
    - Compressor data and specifications, mark, model and capacity.
    - Installation specifications.
    - Technical Data
- B) For the Scheme through the quality management assurance system of the production line, clause 6.14.1.2 of the corresponding STR, the following information must be submitted:
  - 1. Same as in the previous Batch scheme
  - 2. Declaration that no evaluation has been requested from another CB.
  - 3. Copy of the current ISO 9001 certificate issued by a systems certification body accredited by an accreditation body belonging to IAF.
  - 4. Manufacturing procedures. Documentation of the quality system for manufacturing, product inspection, finishes and tests.
  - 5. Quality records, such as inspection reports, data on tests and calibrations, reports on the qualification of the personnel involved, among others.



- C) For the Scheme through periodic testing of the product, clause 6.14.1.3 of the corresponding STR, the following information must be provided:
  - 1. Same as in the previous Batch scheme
  - 2. Product label with electrical data and product identification (mare, model, type, etc.)
  - Sworn statement, stating that the product presented for testing is representative of the family to be certified.
  - 4. Affidavit stating that the product to be certified is new.



### Salvadoran Technical Regulation RTS 23.01.02:15, Enegy Efficiency. Room Type Air Conditioners. Limits, Test Methods and Labeling.

Applies to room-type air conditioners, with or without heating, with air-cooled condenser and cooling capacities up to 10 600 W, imported and marketed in El Salvador.

The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, can be taken in El Salvador or in the country of origin where the product is located.

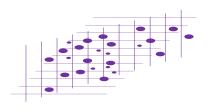
#### <u>Technical Documentation Required by Scheme</u>

- A) For the Batch Scheme, clause 6.6.1.1 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Sample identification sheet duly required



- 10. Affidavit stating that the product to be certified is new.
- 11. The following information:
  - Description of all the families to be certified
  - Rated voltage in volts.
  - Rated frequency or frequency ranges in Hertz.
  - Symbol for the type of power supply.
  - Rated power in watts or rated current in amperes.
  - Compressor data and specifications, mark, model and capacity.
  - Installation specifications.
  - Technical Data
- B) For the Scheme through the quality management assurance system of the production line, clause 6.6.1.2 in the corresponding STR, the following information must be provided:
  - 1. Same as in previous batch scheme
  - 2. Declaration that no evaluation has been requested from another CB.
  - 3. Copy of the current ISO 9001 certificate issued by a systems certification body accredited by an accreditation body belonging to IAF.
  - 4. Manufacturing procedures. Documentation of the quality system for manufacturing, product inspection, finishes and tests.
  - 5. Quality records, such as inspection reports, data on tests and calibrations, reports on the qualification of the personnel involved, among others.
- C) For the Scheme through periodic testing of the product, clause 6.6.1.3 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Photographs or graphic representation of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests performed by an Accredited Laboratory.
  - 9. Product label with electrical data and product identification (mark, model, type, etc.)
  - 10. Sworn statement, stating that the product presented for testing is representative of the family to be certified.
  - 11. Affidavit stating that the product to be certified is new





### Salvadoran Technical Regulation RTS 23.01.03:15, Energy Efficiency. Split Type Air Conditioners, Free Discharge and Air Ductless. Limits, Test Methods and Labeling.

Applies to Split Type air conditioners, free discharge and air ductless (known as minisplit or multisplit), single cycle (cold only) or with reversible cycle (heat pump), which use air-cooled condensers, operated with electric energy, in nominal cooling capacities from 1W to 19 050 W that work by mechanical compression. The regulation of this type of product is limited to systems that use one or more simple refrigeration circuits with evaporator and condenser, imported and/or marketed in El Salvador

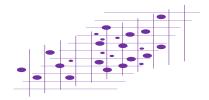
The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, can be taken in El Salvador or in the country of origin where the product is located.

#### <u>Technical documentation required by scheme</u>

- A) For the Batch Scheme, clause 6.6.1.1 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Sample identification sheet duly required
  - 10. Affidavit stating that the product to be certified is new.
  - 11. The following information:
    - i. Description of all the families to be certified
    - ii. Rated voltage in volts.
    - iii. Rated frequency or frequency ranges in Hertz.
    - iv. Symbol for the type of energy supply.
    - v. Rated power in watts or rated current in amperes.
    - vi. Compressor data and specifications, mark, model and capacity.



- vii. Installation specifications.
- viii. Technical Data
- B) For the Scheme through the quality management assurance system of the production line, clause 6.6.1.2 of the corresponding STR, the following information must be submitted:
  - 1. Same as in previous batch scheme
  - 2. Declaration that no evaluation has been requested from another CB.
  - 3. Copy of the current ISO 9001 certificate issued by a systems certification body accredited by an accreditation body belonging to IAF.
  - 4. Manufacturing procedures. Documentation of the quality system for manufacturing, product inspection, finishes and tests.
  - 5. Quality records, such as inspection reports, data on tests and calibrations, reports on the qualification of the personnel involved, among others.
- C) For the Scheme through periodic testing of the product, clause 6.6.1.3 of the corresponding STR, the following information must be provided:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Photographs or graphic representation of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests performed by an Accredited Laboratory.
  - 9. Product label with electrical data and product identification (mark, model, type, etc.)
  - 10. Sworn statement, stating that the product presented for testing is representative of the family to be certified.
  - 11. Affidavit stating that the product to be certified is new





### Salvadoran Technical Regulation RTS 97.01.01:15, Energy Efficiency. Household Refrigerators and Freezers. Limits, Test Method and Labeling.

Applies to household refrigerators up to 1104 liters (39 feet<sup>3</sup>) and self-contained household freezers up to 850 liters (30 feet<sup>3</sup>) operated with a hermetic motorcompressor, marketed in El Salvador.

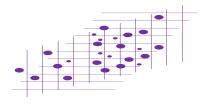
The sample, both for initial certification and for surveillance, consists of three production devices or representative of the production of the model or family, selected randomly according to the classification of families, can be taken in El Salvador or in the country of origin where the product is located.

#### <u>Technical Documentation required by Scheme</u>

- A) For the Batch Scheme, clause 6.6.1.1 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Affidavit stating that the product to be certified is new.
  - 10. The following information:
    - i. Description of all the families to be certified
    - ii. Rated voltage in volts.
    - iii. Rated frequency or frequency ranges in Hertz.
    - iv. Symbol for the type of power supply.
    - v. Rated power in watts or rated current in amperes.
    - vi. Compressor data and specifications, mark, model and capacity.
    - vii. Installation specifications of electrical devices.
- B) For the Scheme through the quality management assurance system of the production line, clause 6.6.1.2 of the corresponding STR, the following information must be submitted:
  - 1. Same as in previous batch scheme
  - 2. Declaration that no evaluation has been requested from another CB.
  - 3. Copy of the current ISO 9001 certificate issued by a systems certification body accredited by an accreditation body belonging to IAF.



- 4. Manufacturing procedures. Documentation of the quality system for manufacturing, product inspection, finishes and tests.
- 5. Quality records, such as inspection reports, data on tests and calibrations, reports on the qualification of the personnel involved, among others.
- C) For the Scheme through periodic testing of the product, clause 6.6.1.3 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Photographs or graphic representation of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Product label with electrical data and product identification (mark, model, type, etc.)
  - 10. Sworn statement, stating that the product presented for testing is representative of the family to be certified.
  - 11. Affidavit stating that the product to be certified is new



### <u>Salvadoran Technical Regulation RTS 97.02.01:15, Energy Efficiency. Self-contained</u> <u>Commercial Refrigeration Equipment. Limits, Test Methods and Labeling.</u>

Applies to commercial refrigeration appliances marketed in El Salvador, in accordance with the following:

Type of appliance	Minimum gross capacity (liters)
Vertical coolers with one or more doors	25
Horizontal coolers	50



Horizontal freezers	50
Vertical freezers	50
Closed showcases	100
Ice pack freezers	100

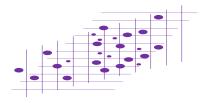
The sample, both for initial certification and for surveillance, consists of an apparatus representative of the production of the model or family, selected randomly according to the classification of families, can be taken in El Salvador or in the country of origin where the product is located, there is an option of a control sample.

#### **Technical Documentation required by Scheme**

- A) For the Batch Scheme, clause 6.6.1.1 of the corresponding STR, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. Affidavit stating that the product to be certified is new.
  - 10. The following information:
    - i. Description of all the families to be certified
    - ii. Rated voltage in volts.
    - iii. Rated frequency or frequency ranges in Hertz.
    - iv. Symbol for the type of feeding.
    - v. Rated power in watts or rated current in amperes.
    - vi. Compressor data and specifications, mark, model and capacity.
    - vii. Installation specifications of electrical devices.
- B) For the Scheme through the quality management assurance system of the production line, clause 6.6.1.2 of the corresponding STR, the following information must be submitted:
  - 1. Same as in previous batch scheme
  - 2. Declaration that no evaluation has been requested from another CB.
  - 3. Copy of the current ISO 9001 certificate issued by a systems certification body accredited by an accreditation body belonging to IAF.



- 4. Manufacturing procedures. Documentation of the quality system for manufacturing, product inspection, finishes and tests.
- 5. Quality records, such as inspection reports, data on tests and calibrations, reports on the qualification of the personnel involved, among others.
- C) For the Scheme through periodic testing of the product, clause 6.6.1.3 of the corresponding STR, the following information must be submitted:
  - 1. Same as in previous batch scheme
  - 2. Product label with electrical data and product identification (mark, model, type, etc.)
  - Sworn statement, stating that the product presented for testing is representative of the family to be certified.
  - 4. Affidavit stating that the product to be certified is new



#### PANAMA

#### **Certification Schemes**

The Panamanian Technical Regulations include a single certification scheme, regardless of the type of the product.

- > Certification based on tests and continuous surveillance of the manufacturing process.
  - It is based on testing and consists mainly of submitting the application and the current test result report of the product, together with the corresponding technical and legal documentation.
  - The certificate is valid for 2 years subject to the results of the surveillance process.
  - ♣ The certificate is subject to annual surveillance of the manufacturing process of certified products.
  - The follow-up should be carried out in a sample taken in the factory, warehouses or in places of commercialization, in a random way according to the classification of families.
  - 4 The sample for follow-up is taken once during the validity of the certificate for complete testing.



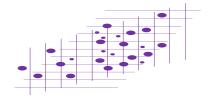
<u>Panamanian Technical Regulation DGNTI-COPANIT 101:2017, Energy Efficiency in Central,</u> Package or Split Air Conditioners. Labeling.

Applies to electrically operated central-type air conditioners, package type or split type, with rated cooling capacities from 8,800 W to 19,050 W, which operate by mechanical compression and include an air evaporator-cooler coil, a compressor, and an air- or water-cooled condenser coil, domestic or foreign, that are manufactured, imported, distributed and marketed in the Republic of Panama.

The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, in the factory, warehouses or in places of commercialization.

#### **Technical documentation required by Scheme**

- A) For the Certification of these products, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. For surveillance purposes, current document evidencing the evaluation of the production process.
  - 10. Compressor data and specifications, mark, model, and capacity.





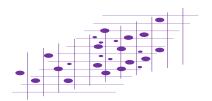
<u>Panamanian Technical Regulation DGNTI-COPANIT 102:2017, Energy Efficiency in Room Air</u> Conditioners. Labeling.

Applies to new room-type air conditioners, with or without heating, with air-cooled condenser and cooling capacities up to 10,600 W domestic or foreign, which are manufactured, imported, distributed, and marketed in the Republic of Panama.

The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, in the factory, warehouses or in places of commercialization.

#### Technical documentation required by Scheme

- A) For certification, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. For surveillance purposes, document evidencing the evaluation of the production process.
  - 10. Compressor data and specifications, mark, model, and capacity.





<u>Reglamento Técnico Panameño DGNTI-COPANIT 103:2017, Eficiencia Energética en</u>

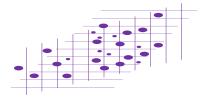
Acondicionadores de Aire Tipo Dividido, Descarga Libre y Sin Ductos de Aire Libre. Etiquetado.

Applies to single-cycle (cold-only) or reversible cycle (heat pump) split-type, free-discharge and air ductless air conditioners electrically powered (known as minisplit or multisplit), which use air-cooled condensers at rated cooling capacities from 1 W to 19,050 W operating with mechanical compression, limited to systems that use one or more simple refrigeration circuits with evaporator and condenser, domestic or foreign which are manufactured, imported, distributed and marketed in the Republic of Panama.

The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, in the factory, warehouses or in places of commercialization.

#### <u>Technical documentation required by Scheme</u>

- A) For the Certification, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. For surveillance purposes, document evidencing the evaluation of the production process.
  - 10. Compressor data and specifications, mark, model, and capacity.





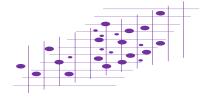
Reglamento Técnico Panameño DGNTI-COPANIT 104:2017, Eficiencia Energética en Acondicionadores de Aire Tipo Dividido (inverter) con flujo de refrigerante Variable, Descarga Libre y Sin Ductos de Aire. Etiquetado.

Applies to electrically powered, electrically operated, split-type (inverter), free-loading, ductless air conditioners in rated cooling capacities from 1 W to 19,050 W operating with mechanical compression and including an air evaporator-cooler coil, a variable frequency and/or variable refrigerant flow compressor and an air-cooled condenser coil; national or foreign, which are manufactured, imported, distributed, and marketed in the Republic of Panama

The sample, both for initial certification and for surveillance, consists of an apparatus, selected randomly according to the classification of families, in the factory, warehouses or in places of commercialization.

#### Technical documentation required by Scheme

- A) For the Certification, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Report of tests carried out by an Accredited Laboratory.
  - 9. For surveillance purposes, document evidencing the evaluation of the production process.
  - 10. Compressor data and specifications, mark, model, and capacity.





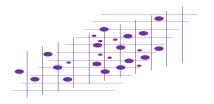
<u>Panamanian Technical Regulation DGNTI-COPANIT 105:2017, Energy Efficiency of Household</u>
Refrigerators and Freezers. Labeling.

Applies to household refrigerators up to 1104 liters (39 feet 3), and household freezers up to 850 liters (30 feet<sup>3</sup>) operated, in both cases, with a hermetic motor compressor; domestic or foreign, which are manufactured, imported, distributed, and marketed in the Republic of Panama.

The sample, both for initial certification and for surveillance, consists of three production devices or representative of the production of the model or family that needs to be tested, selected randomly.

#### Technical documentation required by Scheme

- A) For the Certification, the following information must be submitted:
  - 1. Completed and signed service request.
  - 2. Instructions and/or operation and/or service manuals for all models.
  - 3. Brochures or photographs of the product.
  - 4. Technical data sheet including voltage (V), frequency (Hz), rated power (W) or rated current (A)
  - 5. Electrical diagram.
  - 6. Energy efficiency label applicable to the product of all models to be certified and according to the design established in the applicable Technical Regulation.
  - 7. Copy of the certificate of compliance previously granted, if applicable.
  - 8. Original of the Test Report carried out by an Accredited Laboratory.
  - 9. For surveillance purposes, document evidencing the evaluation of the production process.
  - 10. Product label with electrical data and product identification (mark, model, type, etc.)
  - 11. Compressor data and specifications, mark, model, and capacity.





#### PERU

#### Supreme Decree No. 009-2017, Technical Regulation on Energy Efficiency Labeling.

It is focused on the following equipment and / or appliances:

- (i) lamps for domestic use and similar purposes for general lighting.
- (ii) ballasts for fluorescent lamps for domestic use and similar lamps for general lighting.
- (iii) household refrigeration appliances.
- iv) boilers.
- (v) three-phase asynchronous or induction electric motors with squirrel cage rotor.
- (vi) washing machines for domestic use.
- (vii) tumble dryers for domestic use.
- (viii) air conditioners, and
- (ix) water heaters for domestic use.

#### **Certification Schemes**

For this Decree, four certification schemes are contemplated, regardless of the type of product and annex.

- I. Type 2 scheme. Continuous certification, based on Type Testing followed by periodic market surveillance
  - It is based on type tests and regular market surveillance.
  - The certificate is valid for 3 years from the date of issue.
  - The certificate is subject to annual surveillance by taking samples of the product from the market.
- II. Type 3 scheme. With production line verification and sample evaluation from factory
  - It is based on the periodic evaluation of the production line and periodic evaluation of samples.
  - The certificate is valid for 2 years from the date of issue.
  - ♣ The certificate is subject to annual surveillance of the production line.
  - Sampling shall be carried out at least once during the term of the certificate by taking samples of the product randomly from the factory and fully tested.
- III. Type 4 scheme. With verification of the production line and evaluation of samples from factory or from the market or from both.
  - 4 It is based on the periodic evaluation of the production line and the periodic evaluation of samples.



- ♣ The certificate is valid for 2 years from the date of issue.
- The certificate is subject to annual surveillance of the production line.
- Sampling shall be carried out at least once during the term of the certificate, by taking samples of the product randomly from the factory and/or from the market or from both and fully tested.

### IV. Type 5 scheme. With verification using the Production Line Quality Management Assurance System and sample evaluation from the factory or from the market or from both

- Applies when the manufacturer of the product has an organizational structure that includes responsibilities, procedures, processes, and resources to ensure that the product complies with the requirements of this regulation.
- It is based on the periodic verification of the production line and the quality management assurance system of the production line and periodic evaluation of samples.
- The certificate is valid for 3 years from the date of issue.
- The certificate is subject to annual surveillance of the production line as well as the management system.
- Sampling shall be carried out at least once during the term of the certificate, by taking samples of the product randomly from the factory and/or from the market or from both and fully tested.

### ANNEX 1 ON ENERGY EFFICIENCY LABELLING FOR HOUSEHOLD LAMPS AND SIMILAR USES FOR GENERAL LIGHTING

This Annex applies to the manufacture or import of lamps for domestic use and similar use for general lighting, according to the specifications set out in the Annex which form part of this Regulation and the National Tariff Subheadings set out in Annex I to the EELTR

CHAPTER IV ENERGY EFFICIENCY LABELLING FOR COMPACT FLUORESCENT LAMPS: CLASSIFICATION, TECHNICAL REQUIREMENTS, TEST METHODS AND CONFORMITY ASSESSMENT.

Applies to compact fluorescent lamps, manufactured in Peru or abroad and having:

- A rated power less than or equal to 80 W;
- A nominal voltage of up to 250 V;
- A bush with E27 thread.

The sample, both for initial certification and for follow-up, consists of 25 units of the model or family that needs to be tested, selected randomly and according to the certification scheme.



CHAPTER V ENERGY EFFICIENCY LABELLING FOR SELF-BALLASTED LED LAMPS (INTEGRATED): CLASSIFICATION, TECHNICAL REQUIREMENTS, TEST METHODS AND CONFORMITY ASSESSMENT

Applies to LED lamps with their own ballast (integrated) that have:

- A rated power of less than 60 W;
- A rated voltage greater than 50 V a.c. up to 250 V a.c.;
- A lamp cap listed in IEC 62560 or its equivalent NTP at the time of the test.

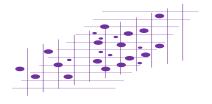
The sample, both for initial certification and for follow-up, consists of 25 units of the model or family that needs to be tested, selected randomly and according to the certification scheme.

#### Technical documentation required by Schemec

- A) For type 2 scheme, the following information must be provided
  - 1. Original of the Test report according to the applicable standard
  - 2. Brochures and photographs or graphic representation of each of the models of the products to be certified
  - 3. Manual or instructions of the product containing the models to be certified
  - 4. Copy of the energy efficiency label in compliance with the annex of the corresponding Technical Regulation according to the product
  - 5. Label of the product or container or packaging with the information for the measurements according to the technical annex applicable to the productor:
    - Mark
    - Model of the lamp or Manufacturer/importer's catalogue number
    - Energy efficiency class
    - Rated Power
    - Ratel Voltage
    - Rated luminous flux
    - Rated lamp life
  - 6. Duly signed service application
  - 7. Letter statement under protest of telling the truth that the sample was taken randomly, when applied
  - 8. Copy of previously granted certificate of compliance, if applicable
- B) For the type 3 and type 4 scheme, the following information must be provided
  - 1. The same as for scheme 2.
  - 2. Evidence that the production line has been evaluated, through one of the following:



- If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
- Copy of the CIG 023 format issued by UL.
- Current ISO 9001 standard certificate of conformity, which includes the production process of the
  product (s) to be certified, as well the evidence that Certification body of systems, who issued the
  certificate, is accredited in the sector applicable to the product to be certified.
- C) For type 5 scheme, the following information must be provided:
  - 1. The same as for scheme 2,
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified
  - 3. Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified and / or the production line(s), issued by a systems certification body accredited under IAF sector 19.



#### ANNEX 3 ON ENNERGY EFFICIENCY LABELING FOR HOUSEHOLD REFRIGERATION APPLIANCES

Applies to household refrigerators, connected to the mains, with a useful volume between 10 and 1500 liters. Which are classified as:



Category 1: Refrigerator with one or more fresh food preservation compartments

Category 2: Refrigerator-cellar, cellar, and wine storage cabinets

Category 3: Refrigerator-fridge and refrigerator with a star-free compartment

Category 4: Refrigerator with a one-star compartment

Category 5: Refrigerator with a two-star compartment

Category 6: Refrigerator with a three-star compartment

Category 7: Refrigerator-freezer

Category 8: Cabinet type freezer (vertical freezer)

Category 9: Top opening freezer (horizontal freezer)

Category 10: Multi-purpose and other refrigeration appliances

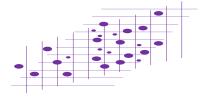
The sample, both for initial certification and for surveillance, consists of 1 unit of the model or family that needs to be tested, selected randomly and according to the certification scheme.

#### Technical documentation required by schematic

- A) For type 2 scheme, the following information must be provided
  - 1. Original of the Test report according to the applicable standard
  - 2. Brochures and photographs or graphic representation of each of the models of the products to be certified
  - 3. Manual or instructions of the product containing the models to be certified
  - 4. Copy of the energy efficiency label in compliance with the annex of the corresponding Technical Regulation according to the product
  - 5. Label of the product or container or packaging with the information for the measurements according to the technical annex applicable to the product:
    - Manufacturer's name or trademark
    - Model of the apparatus or No. Manufacturer's or importer's catalog
    - General description of the model of the refrigeration appliance, allowing it to be easily and unambiguously identified
    - Overall dimensions
    - Total space in service
    - Total gross volume(s)
    - Useful volume(s) and total useful volume
    - Number of stars in the frozen food storage compartment(s)
    - Type of defrosting
    - Storage temperature
    - Power consumption
    - Period of temperature rise
    - Freezing capacity
    - Airborne acoustic noise emissions
  - 6. Duly signed service application



- 7. Letter statement under protest of telling the truth that the sample was taken randomly, when applied
- 8. Copy of previously granted certificate of compliance, if applicable
- 9. Information about the compressor used in the refrigerator, mark, model, capacity, electrical specifications and class
- B) For the type 3 and type 4 scheme, the following information must be provided
  - 1. The same as for scheme 2.
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified.
- C) For type 5 scheme, the following information must be provided:
  - 1. The same as for scheme 2,
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified
  - 3. Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified and / or the production line(s), issued by a systems certification body accredited under IAF sector 19.





#### ANNEX 6 ON ENERGY EFFICIENCY LABELING FOR HOUSEHOLD CLOTHES WASHER MACHINES

Applies to washing machines for domestic use connected to the mains and which can also be battery operated, including built-in washers.

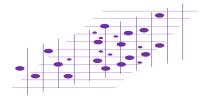
The sample, both for initial certification and for surveillance, consists of 1 unit of the model or family that needs to be tested, selected randomly and according to the certification scheme.

#### **Documentación Técnica Requerida Por Esquema**

- A) For type 2 scheme, the following information must be provided
  - 1. Original of the Test report according to the applicable standard
  - 2. Brochures and photographs or graphic representation of each of the models of the products to be certified
  - 3. Manual or instructions of the product containing the models to be certified
  - 4. Copy of the energy efficiency label in compliance with the annex of the corresponding Technical Regulation according to the product
  - 5. Label of the product or container or packaging with the information for the measurements according to the technical annex applicable to the product:
    - Manufacturer's name or trademark
    - Model of the apparatus or No. manufacturer's or importer's catalogue
    - General description of the washing machine model, allowing it to be easily and in equably identified
    - Power consumption
    - Power consumption in off mode
    - Power consumption in no shutdown mode
    - Duration of the program
    - Water consumption
    - Duration of mode without shutting down
    - Residual moisture content
    - Airborne acoustic noise emitted
    - Maximum spin speed
    - Rated capacity
  - 6. Duly signed service application
  - 7. Letter statement under protest of telling the truth that the sample was taken randomly, when applied
  - 8. Copy of previously granted certificate of compliance, if applicable
- B) For the type 3 and type 4 scheme, the following information must be provided
  - 1. The same as for scheme 2.
  - 2. Evidence that the production line has been evaluated, through one of the following:



- If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
- Copy of the CIG 023 format issued by UL.
- Current ISO 9001 standard certificate of conformity, which includes the production process of the
  product (s) to be certified, as well the evidence that Certification body of systems, who issued the
  certificate, is accredited in the sector applicable to the product to be certified.
- C) For type 5 scheme, the following information must be provided:
  - 1. The same as for scheme 2,
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified
  - 3. Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified and / or the production line(s), issued by a systems certification body accredited under IAF sector 19.



#### ANNEX 7 ON ENERGY EFFICIENCY FOR HOUSEHOLD TUMBLE DRYERS

Applies to tumble dryers for domestic use connected to the mains, automatic and non-automatic, with or without a cold-water supply and the incorporation of a heating device. Also included built-in tumble dryers.

The sample, both for initial certification and for monitoring, consists of 1 unit of the model or family that needs to be tested, selected randomly and according to the certification scheme.

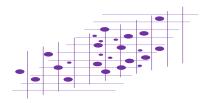


#### **Technical documentation required by Scheme**

- A) For type 2 scheme, the following information must be provided:
  - 1. Original of the Test report according to the applicable standard
  - Brochures and photographs or graphic representation of each of the models of the products to be certified
  - 3. Manual or instructions of the product containing the models to be certified
  - 4. Copy of the energy efficiency label in compliance with the annex of the corresponding Technical Regulation according to the product
  - 5. Label of the product or container or packaging with the information for the measurements according to the technical annex applicable to the product:
    - Manufacturer's name or trademark
    - Model of the appliance or catalogue number of the manufacturer or importer
    - General description of the tumble dryer model, allowing it to be easily and unambiguously identified, indicating the type of dryer, whether it is a ventilation tumble dryer or a condensing tumble dryer
    - Energy weighted consumption per cycle, in kWh/cotton cycle
    - Power consumption in "off mode" and power consumption in "no power off mode"
    - The duration of the "normal full-load cotton program" and the duration of the "normal half-load cotton program", expressed in minutes and rounded to the nearest minute
    - If the household tumble dryer is equipped with an electricity consumption management system, the duration of the "no power off" mode
    - If the dryer is a condensation tumble dryer, the condensation efficiency in the normal cotton program with full load and the average condensation efficiency in the normal cotton program with half load
    - Rated loading capacity of cotton, in kg
    - Sound power level
  - 6. Duly signed service application
  - 7. Letter statement under protest of telling the truth that the sample was taken randomly, when applied
  - 8. Copy of previously granted certificate of compliance, if applicable
- B) For the type 3 and type 4 scheme, the following information must be provided
  - 1. The same as for scheme 2.
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified, as well the evidence that Certification body of systems, who issued the certificate, is accredited in the sector applicable to the product to be certified.



- C) For type 5 scheme, the following information must be provided:
  - 1. The same as for scheme 2,
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified
  - 3. Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified and / or the production line(s), issued by a systems certification body accredited under IAF sector 19.



#### ANNEX 8 ON ENERGY EFFICIENCY LABELING FOR AIR CONDITIONERS

Applies to air conditioners connected to the mains with a rated cooling power, or heating if the productor does not have a cooling function, of 12 kW at most.

These can be:

Split air conditioners, for refrigeration only.

Split air conditioners, for refrigeration and heating.

Compact double or single duct air conditioners, for refrigeration only.

Compact double or single duct air conditioners for cooling and heating.

The sample, both for initial certification and for monitoring, consists of 1 unit of the model or family that needs to be tested, selected randomly and according to the certification scheme.

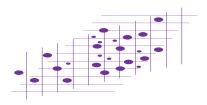


#### **Technical documentation required by Scheme**

- A) For type 2 scheme, the following information must be provided:
  - 1. Original of the Test report according to the applicable standard
  - Brochures and photographs or graphic representation of each of the models of the products to be certified
  - 3. Manual or instructions of the product containing the models to be certified
  - 4. Copy of the energy efficiency label in compliance with the annex of the corresponding Technical Regulation according to the product
  - 5. Label of the product or container or packaging with the information for the measurements according to the technical annex applicable to the product:
    - · Manufacturer's or importer's brand
    - Model of the apparatus or No. manufacturer's or importer's catalogue
    - General description of the model of the appliance, allowing it to be easily and unambiguously identified
    - Overall dimensions
    - Specification of the type of air conditioner
    - Specifying whether the appliance is for cooling function only or for cooling and heating function
    - Energy efficiency class of the model
    - Energy efficiency factor (EER Rated) and coefficient of performance (COP rated) for single duct and dual duct air conditioners, or seasonal air conditioners (SCOP), in the chaos of other air conditioners
    - Sound power levels, expressed in dB(A) rel pW
    - Name and global warming potential of the refrigerant used (GWP)
    - Installation and operating instructions
  - 6. Duly signed service request
  - 7. Letter statement under protest of telling the truth that the sample was taken randomly, when applied
  - 8. Copy of previously granted certificate of compliance, if applicable
- B) For the type 3 and type 4 scheme, the following information must be provided
  - 1. The same as for scheme 2.
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified, as well the evidence that Certification body of systems, who issued the certificate, is accredited in the sector applicable to the product to be certified.



- C) For type 5 scheme, the following information must be provided:
  - 1. The same as for scheme 2,
  - 2. Evidence that the production line has been evaluated, through one of the following:
    - If the product is UL listed, provide the File number, and copy of the last follow-up report made by the UL representative and involving the manufacturing process.
    - Copy of the CIG 023 format issued by UL.
    - Current ISO 9001 standard certificate of conformity, which includes the production process of the
      product (s) to be certified, as well the evidence that Certification body of systems, who issued the
      certificate, is accredited in the sector applicable to the product to be certified
  - 3. Current ISO 9001 standard certificate of conformity, which includes the production process of the product (s) to be certified and / or the production line(s), issued by a systems certification body accredited under IAF sector 19.



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