

The draft of Requirements on Minimum Energy Performance Standard and Energy Efficiency Rating Labelling and Inspection of water chilling packages using the vapor compression cycle

1. The water chilling packages using the vapor compression cycle (hereafter referred to as “chiller” or “product”) denoted in this announcement are those meeting the definition in CNS 12575-2007 or recognized by the Central Competent Authority (hereafter referred to as CCA).
2. The coefficient of performance (hereafter referred to as COP) of chillers shall be tested according to the CNS 12575-2007, and measured value shall not be lower than the minimum energy performance standard requirements for chillers (see Appendix 1).
3. While manufacturing or importing the chiller for domestic use, the product manufacturer or importer (hereafter referred to as “the dealer”) shall submit the following documentation to the CCA to apply for the registration account and password for the “Energy Efficiency Rating and Labelling Management System” (hereafter referred to as “Management System”) :
 - (1) Application for Management System Registration Account and Password (see Appendix 2).
 - (2) The dealer’s corporate registration certificate or commercial registration certificate.

4. After obtaining the Management System registration account and password, the dealer shall submit the following documentation to the CCA in order to apply for the approval of the energy efficiency rating and registration number:
 - (1) Application for registration of the chiller energy efficiency rating and labelling (see Appendix 3).
 - (2) An original of energy efficiency test report of the product stamped with the dealer official corporate seal.
 - (3) In case the model of the tested product in the energy efficiency test report differs from the one applied for energy efficiency grade labelling yet belongs to the product of the same basic model product, the application shall be accompanied with energy efficiency conformity declaration (see Appendix 4).

The energy efficiency test report under subsection 2 of the preceding paragraph shall be written down that conditions adjusted in accordance with the CNS 12575, and issued by the laboratory that was certified by the CCA or certification authorities. The certification authority is members to the mutual recognition agreement signed by the Taiwan Accreditation Foundation (TAF) or the International Laboratory Accreditation Cooperation (ILAC).

The product of the same basic model under subsection 3 of the Paragraph 1 shall be made up of the same key components referred to Appendix 3.

5. The CCA shall approve the energy efficiency grade and registration number of the product based on the chiller's energy efficiency grade table (see Appendix 5) according to the rated COP and refrigeration capacity value given in the energy efficiency test report.

6. When manufacturing or importing the chiller for domestic use, the dealer shall reapply for the registration for the energy efficiency rating and registration number in the following instances:
 - (1) The key components of the product have been changed
 - (2) The model of the product has been changed.
 - (3) The CCA had amend regulation for the minimum energy performance standard (see Appendix 1), the energy efficiency rating (see Appendix 5), the energy efficiency grade label (see Figure 1) or presentation (see Figure 2) of the chiller.

7. While manufacturing or importing the approved product for domestic use, the dealer shall register at the Management System and download the management serial number which shall be marked on the nameplate.

8. Before manufacturing or importing the product for domestic sale and use, the dealer shall mark the following items on a nameplate and fixed the front and visible position of the product.

- (1) Type of the product.
- (2) Name, telephone number and address of the manufacturer, and in the case of imported, the importer name, telephone number, address.
- (3) Model of the product.
- (4) Date of manufacture.
- (5) Serial number of manufacture.
- (6) Nominal voltage, phase, and frequency.
- (7) Registration number of the product.
- (8) Management serial number of the product.
- (9) Nominal refrigeration capacity at full load of the product (kW).
- (10) Nominal total input power at full load of the product (kW).
- (11) Nominal COP.
- (12) Energy efficiency grade.

The above items shall all be labeled in Mandarin Chinese, except for unit symbols or special characters, and cannot be concealed, destroyed or rendered otherwise unrecognized.

9. The dealer shall have the energy efficiency grade label (see Figure 1) attached to the front and visible position of the product or noted in the manual included with the product.

10. The dealer shall have graph of the product contained in catalog used for merchandising or selling it explicitly accompanied by its energy efficiency grade presentation (see Figure 2). Information of the product presented in text or table shall be added with COP rated value and energy efficiency grade.
11. The CCA may run random tests for energy efficiency checks before approve the energy efficiency grade or before the dealer obtains the management serial number. The dealer shall deliver products of specified by the CCA to given laboratories before given date, and the CCA may send staffs or professional institutions to inspect the procedure and method of test.

While failed the random test under the preceding paragraph, the CCA shall revoke the energy efficiency grade and registration number certification, and subject dealers to the Clause 21 and 24 of the Energy Administration Act.

The dealer shall pay the bill of the random test mentioned above.

12. While manufacturing or importing the product which meeting the definition in CNS 12575-2007 of the heat recovery chiller, the dealer shall submit the following documentation to the CCA in order to apply for the approval the heat recovery chiller, and obtain the registration number approved by the CCA:
 - (1) Application for registration of the chiller with heat recovery function (see Appendix 6).
 - (2) Stamped with the dealer official corporate seal of a document includes design drawings and technical specifications for heat recovery chiller.

13. For the approved product meeting the definition in CNS 12575-2007 of the heat recovery chiller by the CCA, and such products shall not be subject the restriction of section 2, 4, 6, 9, 10 and 11 in this announcement. Products also may be free from the Labeling item 9 to 12 of section 8 in this announcement.

Appendix 1

Minimum energy performance standard requirements of water chilling packages using the vapor compression cycle

| Type | | Nominal refrigeration capacity at full load | Minimum energy performance standard requirements |
|--------------|-----------------------|---|--|
| | | | COP |
| Water cooled | Positive displacement | < 528kW | 4.45 |
| | | $\geq 528\text{kW}$, <1758kW | 4.90 |
| | | $\geq 1758\text{kW}$ | 5.50 |
| | Centrifugal | <528kW | 5.00 |
| | | $\geq 528\text{kW}$, <1055kW | 5.55 |
| | | $\geq 1055\text{kW}$ | 6.10 |
| Air cooled | | All capacities | 2.79 |

Note:

1. The coefficient of performance (COP) of the chiller shall be tested according to the CNS 12575-2007 at fouling factor equal zero and full load conditions, and obtained by dividing the tested total input power into refrigeration capacity. Round the COP calculation to two decimal places, which shall be not lower than minimum energy performance standard requirements.
2. The value of nominal COP shall be not lower than minimum energy performance standard requirements.
3. The products meeting the definition in CNS 12575-2007 of the heat recovery chiller and approved by the CCA, which shall not be subject to this restriction.

Appendix 2

Energy efficiency rating and labelling management system account and password application form

Apply on :

Applied : _____

Contact : _____ Tel: _____ Fax: _____

Email : _____

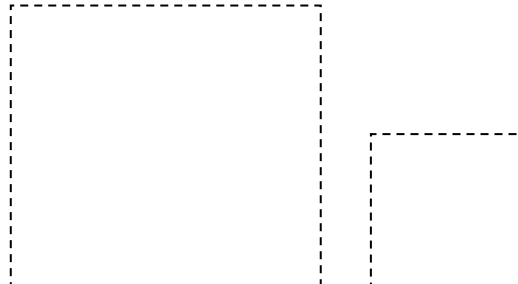
Category of the Product: _____

Account ID: _____

Password: _____

We hereby apply for accessing the Energy Efficiency Rating and Labelling Management System and agree to be held accountable for information provided here by us.

Stamp with official company and owner seal:



Two dashed rectangular boxes are provided for stamping. The first box is larger and positioned to the left, while the second box is smaller and positioned to the right.

Appendix 3

Application number :

Energy efficiency grade labelling registration application form of water chilling packages using the vapor compression cycle

Apply on :

1. Basic data of the applicant

Company name: _____

Company address: _____

Responsible person: _____ Tax ID: _____

Contact: _____ Department: _____ Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____

2. Manufacturer name and address

same as the applicant dealer

Manufacturer name: _____

Manufacturer address: _____

3. Contents of energy efficiency grade labelling

| | |
|--|--|
| Type of the product | |
| Model of the product | |
| Nominal refrigeration capacity at full load of the product (kW) | |
| Nominal COP | |
| Energy efficiency grade | |
| Year and document ID of the product's efficiency grade labelling standards | |

Note : Please make extra copies of this form for your application as required.

4. Key components

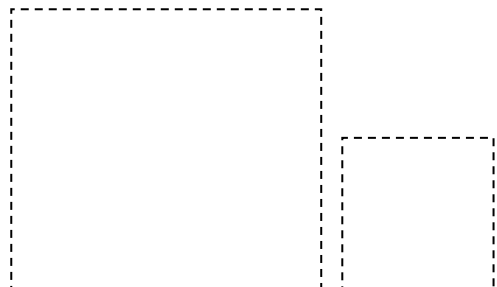
| Name of the Component | Model of the component | Manufacturer of the component |
|--------------------------------|------------------------|-------------------------------|
| Compressor | | |
| Evaporator | | |
| Condenser | | |
| Fan (only for Air Cooled Type) | | |

Note: Please make extra copies of this form for your application as required. The applicant shall submit the document of the chiller and key components (which include specification and drawing).

5. Application declaration and affidavit

We declare under our sole responsibility to the CCA that information provided here by us are all true and shall be liable to any legal responsibilities for errors made here. Contents of energy efficiency grade labelling contained in market available products are in conformity with data accompanied by this application. Should there be any false and/or untrue data we shall be subjected to registration revocation and penalties set forth in the Energy Administration Act unconditionally.

Stamp by the applicant :



(Official seal of the company and owner)

6. Mandate of delegated power (not needed for application by applicant itself)

The applicant delegated agent to registration application shall have the agent's a agreement in written.

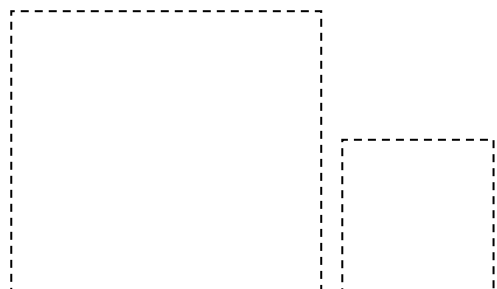
Company name of the Agent:

Owner:

Address:

Tax ID:

Tel:



(Company and owner seal of the agent)

Appendix 4

Energy efficiency type conformity declaration

This applicant hereby declares the product applied for energy efficiency grade labelling is in conformity with the model given cited energy efficiency test reports (including product structure, materials, components, and energy efficiency). See below for product information:

1. Name: Water chilling packages using the vapor compression cycle
2. Cited information of model for registration application:

| Test report number | Model tested in test report | Model number for this energy efficiency grade registration |
|--------------------|-----------------------------|--|
| | | |
| | | |
| | | |
| | | |

Note: Please make extra copies of this form for your application as required.

This applicant agrees to be held liable for any legal responsibility due breaching guarantees made by this declaration and be subjected to penalties set forth in the Energy Administration Act.

Attention to:

Bureau of Energy, Ministry Economic Affairs

Applicant: _____ (Official stamp of the company)

Owner: _____ (Official stamp of the owner)

Date:

Appendix 5

Energy efficiency grade standards of water chilling packages using the vapor compression cycle

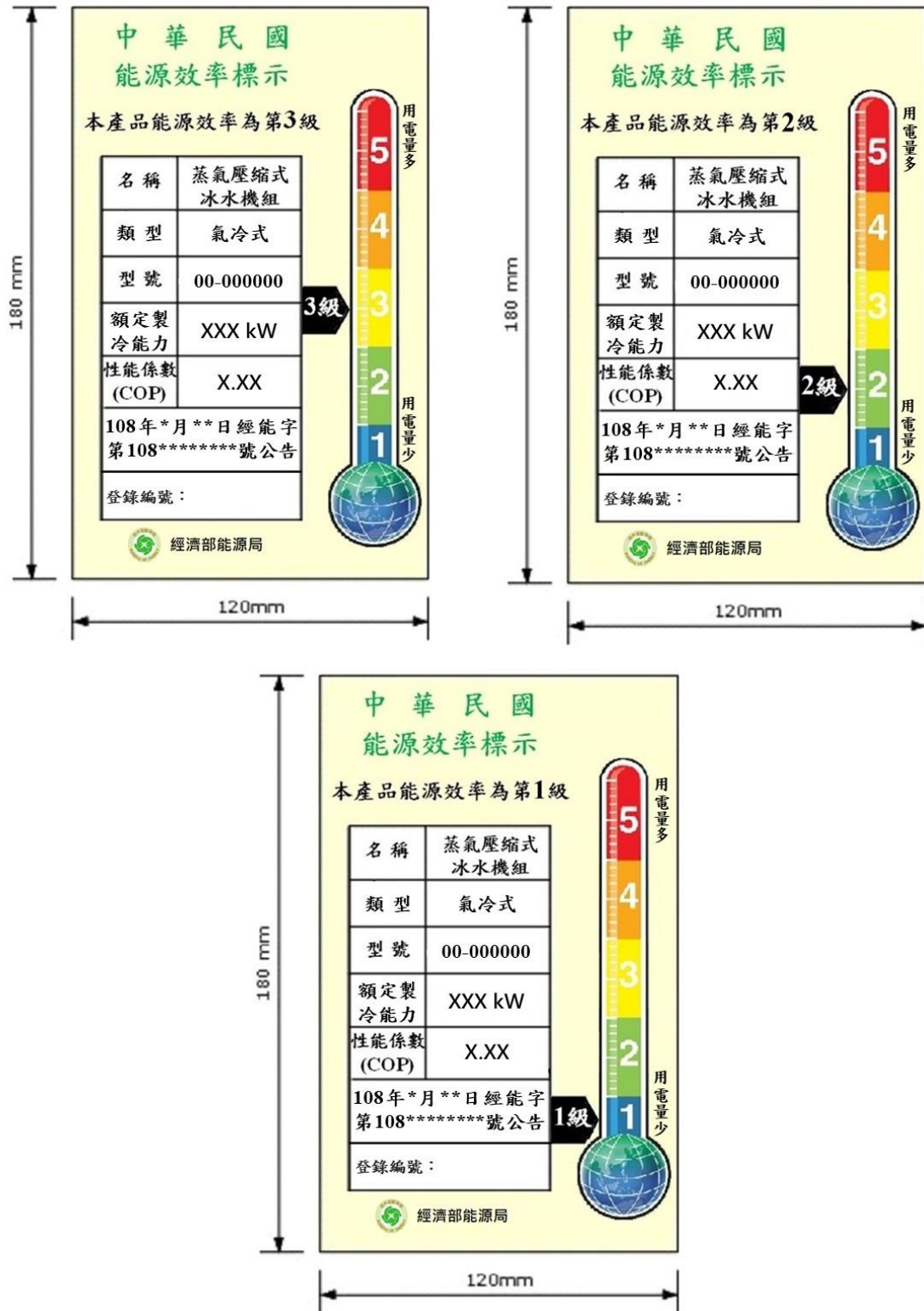
| Type | | Nominal refrigeration capacity at full load | Standards of individual grade | | |
|--------------|-----------------------|---|-------------------------------|---------|---------|
| | | | COP | | |
| | | | Grade 3 | Grade 2 | Grade 1 |
| Water cooled | Positive displacement | < 528kW | 4.45 | 4.80 | 5.15 |
| | | $\geq 528\text{kW}, < 1758\text{kW}$ | 4.90 | 5.30 | 5.70 |
| | | $\geq 1758\text{kW}$ | 5.50 | 5.90 | 6.35 |
| | Centrifugal | < 528kW | 5.00 | 5.40 | 5.80 |
| | | $\geq 528\text{kW}, < 1055\text{kW}$ | 5.55 | 5.95 | 6.40 |
| | | $\geq 1055\text{kW}$ | 6.10 | 6.60 | 7.10 |
| Air cooled | | All capacities | 2.79 | 3.00 | 3.20 |

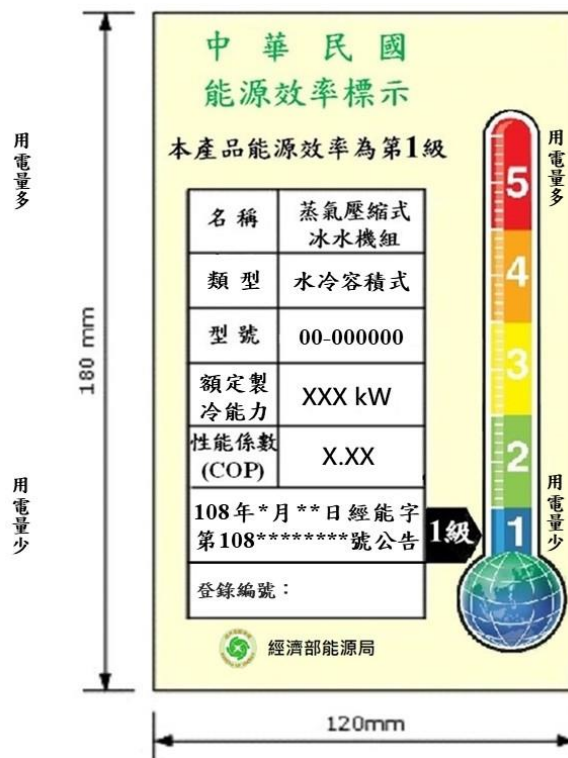
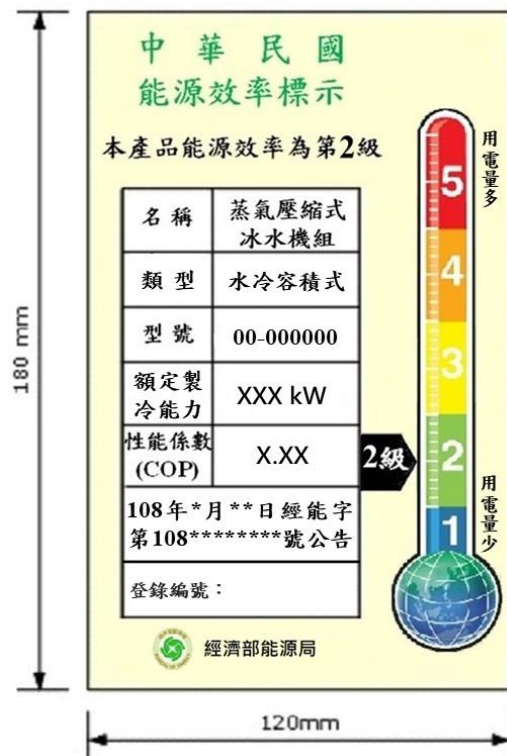
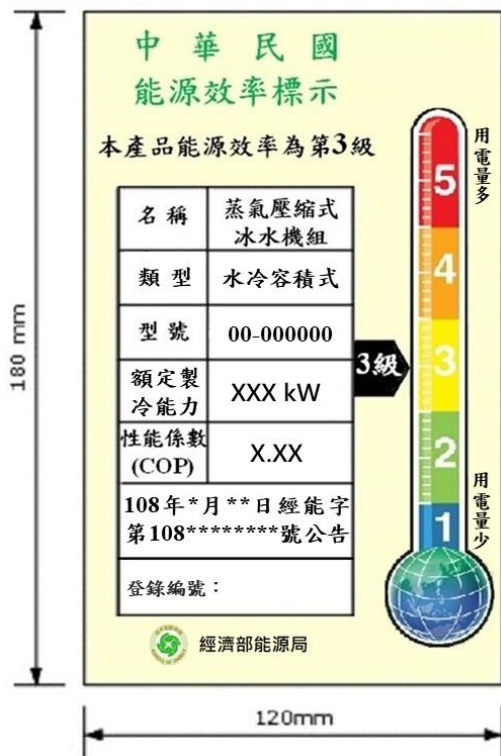
Note:

1. The coefficient of performance (COP) of the chiller shall be tested according to the CNS 12575-2007 at fouling factor equal zero and full load conditions, and obtained by dividing the tested total Input Power into refrigeration capacity. Round the COP calculation to two decimal places, which shall be conform to the minimal energy performance standard requirements of the chiller (as Appendix 1).
2. The refrigeration capacity and COP values of the test outcome shall be equal to or greater than 95% of the nominal value.
3. The products meeting the definition in CNS 12575-2007 of the heat recovery chiller and approved by the CCA, which shall not be available to this energy efficiency grade standards.

Figure 1

Energy efficiency grade label (included in the product user manual or attached to visible position in the front of product) :





中華民國
能源效率標示

本產品能源效率為第3級

| | |
|------------------------------|---------------|
| 名稱 | 蒸氣壓縮式 冰水機組 |
| 類型 | 水冷離心式 |
| 型號 | 00-000000 |
| 額定製 冷能力 | XXX kW |
| 性能係數 (COP) | X.XX |
| 108年*月**日經能字 第108*****號公告 | |
| 登錄編號： | |

用電量多

3級

用電量少

經濟部能源局

180 mm

120mm

中華民國
能源效率標示

本產品能源效率為第2級

| | |
|------------------------------|---------------|
| 名稱 | 蒸氣壓縮式 冰水機組 |
| 類型 | 水冷離心式 |
| 型號 | 00-000000 |
| 額定製 冷能力 | XXX kW |
| 性能係數 (COP) | X.XX |
| 108年*月**日經能字 第108*****號公告 | |
| 登錄編號： | |

用電量多

2級

用電量少

經濟部能源局

180 mm

120mm

中華民國
能源效率標示

本產品能源效率為第1級

| | |
|------------------------------|---------------|
| 名稱 | 蒸氣壓縮式 冰水機組 |
| 類型 | 水冷離心式 |
| 型號 | 00-000000 |
| 額定製 冷能力 | XXX kW |
| 性能係數 (COP) | X.XX |
| 108年*月**日經能字 第108*****號公告 | |
| 登錄編號： | |

用電量多

1級

用電量少

經濟部能源局

180 mm

120mm

Figure 2

Energy efficiency grade label (embedded in the product catalog):



Note: Color and font of the label may be edited as required. Size of the label may be enlarged proportionally and equal to or greater than 7mm×10mm.

Appendix 6

Application number :

Heat recovery function registration application form of water chilling packages using the vapor compression cycle

Apply on :

1. Basic data of the applicant

Company name: _____

Company address: _____

Responsible Person: _____ Tax ID: _____

Contact: _____ Department: _____ Title: _____

Tel: _____ Mobile: _____ Fax: _____

Email: _____

2. Manufacturer name and address

same as the applicant dealer

Manufacturer name: _____

Manufacturer address: _____

3. Key components

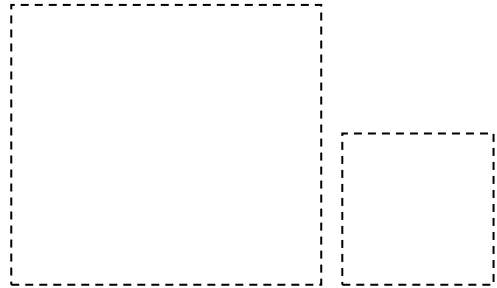
| Name of the Component | Model of the component | Manufacturer of the component |
|--------------------------------|------------------------|-------------------------------|
| Compressor | | |
| Evaporator | | |
| Condenser | | |
| Heat recovery Condenser | | |
| Fan (only for Air Cooled Type) | | |

Note: Please make extra copies of this form for your application as required. The applicant shall submit the document of the chiller and key components (which include specification and drawing). The heat recovery condenser column, if the heat recovery condenser was a portion of the condenser, fill in "same as condenser".

4. Application declaration and affidavit

We declare under our sole responsibility to the CCA that information provided here by us are all true and shall be liable to any legal responsibilities for errors made here. Contents of energy efficiency grade labelling contained in market available products are in conformity with data accompanied by this application. Should there be any false and/or untrue data we shall be subjected to registration revocation and penalties set forth in the Energy Administration Act unconditionally.

Stamp by the applicant :



(Official seal of the company and owner)

5. Mandate of delegated power (not needed for application by applicant itself)

The applicant delegated agent to registration application shall have the agent's a agreement in written.

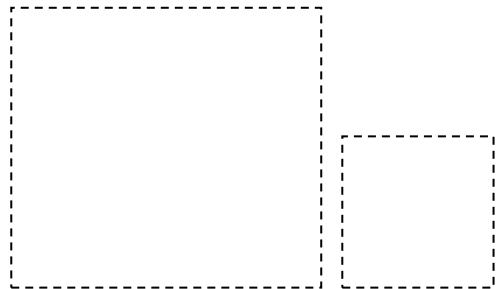
Company name of the Agent:

Owner:

Address:

Tax ID:

Tel:



(Company and owner seal of the agent)
