

Ref: NEA-LSD-CIRCULAR-ECA-00001-2021

Date: 29-Apr-21

Designated Company Representatives, Registered Air-Conditioner Suppliers under the Energy Conservation Act (ECA)

Dear Sir/Madam

CIRCULAR ON:

A) Mandatory Energy Labelling Scheme (MELS) & Minimum Energy Performance Standards (MEPS) for Three-Phase Variable Refrigerant Flow (VRF) Air-Conditioners

B) Revision of Test Standard For Energy Performance Testing Of Single Phase Air-Conditioners

Mandatory Energy Labelling Scheme (MELS) & Minimum Energy Performance Standards (MEPS) for Three-Phase Variable Refrigerant Flow (VRF) Air-Conditioners

- 1) With effect from 1 April 2021, all three-phase VRF air conditioners sold in Singapore shall comply with the following requirements:

Types of Air-conditioners Covered	Three-phase variable refrigerant flow (VRF) air-conditioners of all cooling capacities (base cooling units).
Requirements	Three-phase VRF air-conditioners are rated based on: 1) Minimum Energy Performance Standards (MEPS) level at Integrated Energy Efficiency Ratio (IEER1) of 4.35; and 2) The number of ticks (1-tick to 5-tick, with 5-tick being the most efficient) determined for the VRF air-conditioner model.

Registration of suppliers	<p>Importers and manufacturers (suppliers) of three-phase VRF air-conditioners that are covered under these requirements must register themselves and their VRF air-conditioner models with NEA.</p> <p>More information on the registration process is available at:</p> <ol style="list-style-type: none"> 1) Registration of suppliers 2) Registration of three-phase VRF air-conditioners (ELS online portal)
Registration Fees	<p>New registration: \$85 per VRF air-conditioner model Renewal: \$55 per VRF air-conditioner model</p> <p>Each registration is valid for 3 years.</p>
Test standards	<p>Three-phase VRF (base cooling units) shall be tested according to:</p> <ol style="list-style-type: none"> 1) ISO 15042:2017 (Air enthalpy Method, Calorimeter Method) <p>Test condition: T1 - Standard cooling capacity rating conditions for moderate climates to determine the efficiency at 100%, 75%, 50% and 25% cooling load. Only cassette type indoor units and minimum 2 number of indoor units are to be used during test.</p> <p>A test report from any one of the following laboratories is acceptable:</p> <ol style="list-style-type: none"> 1) Manufacturers' in-house test laboratories; 2) Test laboratories that have been accredited by the Singapore Accreditation Council (SAC) to carry out the test in accordance with the applicable test standards; or 3) Overseas test laboratories that have been accredited by their local accreditation bodies and have signed a Mutual Recognition Arrangement with SAC to carry out the test in accordance with the applicable test standards. <p>Test Report must be prepared in the format stipulated by NEA at https://www.nea.gov.sg/our-services/climate-change-energy-efficiency/energy-efficiency/household-sector/test-report</p>
Display of Energy Label	<p>A registered supplier is required to display the following information.</p> <ol style="list-style-type: none"> a) Energy label to be displayed on the three-phase VRF outdoor/condensing units. b) Energy label to be displayed in all locally circulated publicity materials (digital & non-digital) such as local websites, newspapers advertisements and promotional flyers.

Revision of Test Standard For Energy Performance Testing Of Single Phase Air-Conditioners

2) With effect from 1 April 2021, the following standards shall be adopted for energy performance testing of regulated single-phase air-conditioners:

Type	Test standard	Climate class
Window, Casement and Single split	ISO 5151:2017	T1
Multi-split	ISO 15042:2017	T1

3) The above test standards will supersede ISO 5151:2010 and ISO 15042:2011 and are applicable for the submission of new test reports on or after 1 Apr 2021.

4) No changes are made to the standby power test standards i.e. IEC 62301:2005 and IEC 62301:2011 and the test report template.

5) Should you require further clarifications, please contact Tel: 6731-9952 or Email: nea_energylabel@nea.gov.sg. Thank you.

Item	Description	Links
1	Energy Conservation (Regulated Goods and Registered Suppliers) Regulations 2017 (Amendment of First Schedule) Order 2021	https://sso.agc.gov.sg/SL-Supp/S199-2021/Published/20210331?DocDate=20210331
2	Test Standards	https://www.nea.gov.sg/our-services/climate-change-energy-efficiency/energy-efficiency/household-sector/test-report

Yours faithfully
(Transmitted via email)



Suresh K.
Director Carbon Mitigation Division
for Director-General Environmental Protection
National Environment Agency