

# SRI LANKA STANDARDS INSTITUTION



## Energy Efficiency Labelling Scheme for Electric Ceiling Fans

### GUIDELINES AND PROCEDURES

Doc. GL-ES-EL-04

Issue No. : 03

Date of Issue : 2021-02-01

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#### 1. INTRODUCTION:

The Sri Lanka Standards Institution (SLSI) the national standards body of Sri Lanka operates Energy Efficiency Labelling scheme for Electric Ceiling Fans based on **SLS 1600 Energy Efficiency Rating for Electric Ceiling Fans with Regulators**.

SLSI offers this scheme to the manufacturers and importers of Electric Ceiling Fans having two or more blades with sweep diameter 1400 mm (56") and associated with regulators having minimum of five speed settings, to join this Mandatory Scheme jointly implemented by the SLSI and Sri Lanka Sustainable Energy Authority (SLSEA). Permission to mark Energy Efficiency labels will be granted by the SLSI for brand and model basis of Electric Ceiling Fans, which conforms, to **SLS 1600**.

Initially this Labelling program is started with Ceiling Fans having two or more blades with sweep diameter 1400 mm (56") and it will be extended to other types of fans and other sizes of Ceiling fans as well.

#### 2. APPLICABLE STANDARDS:

- a) SLS 1600 Sri Lanka Standard for Energy Efficiency Rating for Electric Ceiling Fans with Regulators
- b) SLS 814: Part 2 Specification for Electric Fans and Regulators - Safety requirements

3. **EXEMPTIONS:** Decorative type Ceiling fans having sweep diameter 1400 mm are exempted from this scheme.

4. **LEGAL PROVISION:** Extra Ordinary Gazette Notification No. 1794/15 of January 22, 2013 published under SLSEA Act. No. 35 of 2007.

#### 5. APPLICATION:

5.1 The **brand owner** of Electric Ceiling Fans shall make an application for each model (brand/wattage) of the fan and regulator. If the same model is manufactured in factories at different locations separate applications shall be made in respect of each location and the model.

5.2 Duly completed application forms shall be forwarded to the Director (Engineering Standardization) of SLSI along with necessary documents.

#### 6. FEE INVOLVED:

6.1 Application & Processing fee: Application and processing fee shall be made by the applicant for each model separately as given in the fee structure. (GL-ES-FS-01)

6.2 Testing fee: Testing charges shall be borne by the applicant as per the laboratory concern.

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### 7. SAMPLING AND TESTING:

7.1 Sampling: Samples shall be drawn from each model randomly comprising 3 + 1 (three for Energy Efficiency Labelling & one for safety test) specimens from minimum 20 populations.

7.1.1 If fans manufactured locally, samples shall be drawn by the SLSI officers from factory.

7.1.2 If fans imported, samples shall be drawn randomly from the consignment imported.

7.1.3 If importer obtain test reports from a laboratory accredited in accordance with **SLS 1600** or equivalent. Samples shall be drawn by the laboratory personal or Independent Authority approved by SLSI randomly from a lot manufactured for export to Sri Lanka and it shall be specified clearly in the test report (The importer shall submit a copy of a certification and scope of accreditation).

7.1.4 The accreditation logo endorsed on the test report and the original test report shall be sent directly from the laboratory to the Director of Engineering, Sri Lanka Standards Institute or authenticity verification confirmed (validated digitally signed) pdf formatted test report shall be emailed directly from the laboratory to the de@slsi.lk or the project officer.

7.2 Testing: Sample shall be tested for safety initially and if safety requirements comply, test will be continued for energy labelling. Test methods for safety shall be as specified in **SLS 814 Part 2**. If particular model certified for SLS mark or recently tested for safety parameters from independent laboratory, testing of safety parameters may be exempted.

7.3 Air Velocity (in  $m^3/min$ ), Power consumption (in Watt) and Power factor of the fan shall be measured as per **SLS 1600**.

### 8. PERFORMANCE GRADING AND STAR RATING

8.1 Performance Grading is the parameter that reflects the Star rating of the product, and energy rating is the tool for making this efficiency value comparative. For each model of electric ceiling fan power consumption, air delivery and the power factor are measured for determination of the performance grading. Upon performance grading equal or greater than thirty (30), it is divided into five categories called star rating which is denoted by stars. The products with the highest performance grading shall be assigned with five stars and as the performance grading lowers, a lesser number of stars will be assigned in accordance with the details given in **SLS 1600**. The greater the number of stars the higher the energy efficiency of the electric ceiling fan.

### 9. TEST REPORT:

Test report issued for a particular model from a Testing Authority identified by the SLSI shall be used for calculation of Performance Grading. The test report should certify that the sampling and testing are in accordance with **SLS 1600** and should provide the test results for the below mentioned parameters in order to calculate the Performance Grading. (If the test report obtained from an accredited laboratory, lot size and sampling method shall be specified in the report).

- a) Volume flow rate of air at each regulator setting in  $m^3/minute$
- b) Power consumption at each regulator setting in Watt
- c) Service value in  $m^3/minute/W$
- d) Power factor
- e) Incremental flow rate in  $m^3/minute$

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#### 10. CERTIFICATION:

The Director General, SLSI or his/her nominee shall issue certificate to use star rating for a model of Electric Ceiling Fans subject to the following conditions.

- a) Certification fee shall be settled in advance before issuing the certificate.
- b) Before awarding the certificate, the applicant shall enter into an agreement with the SLSI.
- c) The Certificate shall be valid maximum period of three years from the date of issued unless otherwise specified.
- d) Maintenance of the star rating as per the certification.
- e) The label shall be stick or print on the container, fan or both.
- f) The applicant shall inform to the SLSI for renewal at least before 3 months.
- g) The details of certificate holders shall be forwarded to SLSEA by SLSI for continual monitoring.
- h) Detailed information, with respect to the number of labels, serial numbers of Fans on which the labels are used shall be made available to SLSEA, to prevent misuse of labels by any party.
- i) The period of warranty of the product shall be minimum of one year and the brand owner shall declare it.

#### 11. ENERGY LABELS:

**11.2** The label shall have the dimensions, format and all the information as prescribed in the standard. Maximum allowable tolerance limit for label sizing is 5%.

**11.3** Printing colours shall be in accordance with the below mentioned scheme, CYMK.

Dark Blue:	C: 87%,	M: 60%,	Y: 12%,	K: 1%
Light Blue:	C: 57%,	M: 37%,	Y: 6%,	K: 0%
Yellow:	C: 7%,	M: 0%,	Y: 89%,	K: 0%
Black:	C: 75%,	M: 68%,	Y: 67%,	K: 90%

#### 12. SURVEILLANCE INSPECTION:

**12.1** Surveillance inspection will be carried out at least once a year.

**12.2** In addition to the above, additional sampling and inspection will be carried out, if any complaint received on performance and malfunction. Such inspections will be carried out under close supervision of an operational committee formed by the senior management of SLSEA and SLSI.

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