

# Australian Standard 3302—1980

*Amend 1*

*2  
3*

## APPROVAL AND TEST SPECIFICATION FOR PARTICULAR REQUIREMENTS FOR ELECTRIC FANS

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OF AUSTRALIA



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**THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this specification:**

- Australian Chamber of Commerce**
- Australian Electrical and Electronics Manufacturers Association**
- Confederation of Australian Industry**
- Electrical Apparatus Approvals Authorities**
- Electrical Contractors Associations of Australia**
- Electrical Testing Laboratories**
- Electricity Supply Association of Australia**
- Electronics Importers Association**

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**This standard, prepared by Committee EL/2, Electrical Approvals Standards, was approved on behalf of the Council of the Standards Association of Australia on 10 October 1980, and was published on 31 December 1980.**

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## STANDARDS ASSOCIATION OF AUSTRALIA

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## Amendment No 3

to

## AS 3302—1980

Approval and Test Specification for  
PARTICULAR REQUIREMENTS FOR ELECTRIC FANS

## REVISED TEXT

The 1980 edition of AS 3302 is amended as follows; the amendments should be inserted in the appropriate place.

*SUMMARY:* The following sections of the standard are covered by this amendment; Clause 11.8, Clause 30.

Published on 11 October 1982.

**Page 5. Clause 11.8.**

Delete Clause 11.8 and substitute:

## REPLACEMENT.

**11.8 LIMITS OF TEMPERATURE RISE.**

Replace first paragraph with the following until 31 December 1985:

*During the test thermal cutouts shall not operate and the maximum temperature rise for windings when referred to an ambient of 37° C shall not exceed—*

- (b) for Class A material ..... 68° C;
- (c) for Class E material ..... 83° C;
- (d) for Class B material ..... 93° C;
- (e) for Class F material ..... 118° C;
- (f) for Class H material ..... 143° C; and
- (g) for Class C material .... no limit selected,  
limited by its own properties.

*The safety of the appliance shall not be impaired by the flow of any sealing or filling compound.*

This amendment forms part of the specification on publication and will apply until 31 December 1985.

On 1 January 1986, Clause 11.8 as previously specified will be applicable.

**CORRECTION (Amendment No 2).****Page 7. Clause 30.**

Add the following:

Clauses 30.1 and 30.2 are not applicable.

AMDT  
No 3  
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1982

**STANDARDS ASSOCIATION OF AUSTRALIA**

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**AMENDMENT No 2**

to

**AS 3302—1980**

**APPROVAL AND TEST SPECIFICATION**

**FOR**

**PARTICULAR REQUIREMENTS FOR ELECTRIC FANS**

**REVISED TEXT**

The 1980 edition of AS 3302 is amended as follows; the amendments should be inserted in the appropriate place.

*SUMMARY:* The following sections of the standard are covered by this amendment: Clauses 3 and 30.

Published on 7 June 1982.

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**Page 4. Clause 3.**

*Add* the following:

**REPLACEMENT.**

**3.101 D.C. FROM A.C. APPLIANCES.** Replace paragraph 5 and Notes 1 and 2 with the following:

*The permissible direct current on the equipment neutral shall not exceed 20 mA.*

This amendment forms part of the specification on 1 March 1983.

AMDT  
No 2  
JUNE  
1982

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**Page 7. Clause 30.**

*Delete* existing clause (as amended by Amendment No 1) and *substitute* the following:

**30 RESISTANCE TO HEAT, FIRE  
AND TRACKING**

This Clause of AS 3300 is applicable except as follows:

**REPLACEMENT.**

**30.101 DETERMINATION OF IGNITABILITY  
AND COMBUSTION PROPAGATION.**

Item (a)—*replace* 'and duration of test as specified in the individual approval and test specification' with 'of 850°C for 30 s'.

Item (b)—*replace* 'and duration of test as specified in the individual approval and test specification' with 'of 850°C for 30 s'.

This amendment forms part of the specification on 1 January 1983.

AMDT  
No 2  
JUNE  
1982

Amendment No 1  
August 1981

STANDARDS ASSOCIATION OF AUSTRALIA  
Incorporated by Royal Charter

AMENDMENT No 1  
to  
AS 3302—1980  
SAA Approval and Test Specification  
for  
PARTICULAR REQUIREMENTS FOR ELECTRIC FANS

The 1980 edition of AS 3302 is amended as follows; the amendment should be inserted in the appropriate place.

*SUMMARY:* The following sections of the standard are covered by this amendment: Clause 30 and Appendix AA.

Published on 1 September 1981.

**Page 7. Clause 30.**

*Delete existing clause and substitute:*

**30. RESISTANCE TO HEAT, FIRE AND TRACKING**

This Clause of AS 3300 is applicable except as follows:  
Clauses 30.1 and 30.2 are not applicable.

ADDITION. *Add* the following new Clause:

**30.101 DETERMINATION OF IGNITABILITY AND COMBUSTION PROPAGATION.** Solid insulating materials, non-metallic enclosures and all other insulating materials shall be subjected to the glow wire test as specified in AS 2420 and the results determined in accordance with the provisions thereof. The temperature of the glow wire tip and the duration of the test shall be as follows:

- (a) All insulating material retaining or supporting current-carrying parts shall be subjected to the glow wire test at a temperature of 850° C for 30 s.
- (b) Non-metallic enclosures shall be subjected to the glow wire test at a temperature of 850° C for 30 s.
- (c) All other insulating materials shall be subjected to the glow wire test at a temperature of 550° C for 30 s.

Any failure recorded during the test of (a) above shall require any non-metallic enclosure to be subjected to the needle flame test as specified in AS 2420 and the results determined in accordance with the provisions thereof. The needle flame shall be applied to areas where burning droplets would fall and within 50 mm of any flame produced.

NOTE: Components which have been found to comply with these tests when tested to individual approval and test specifications need not be retested.

This amendment forms part of the specification on 1 January 1983.

**Page 9. Appendix AA, Needle Flame Test.**

*Delete this Appendix.*

This amendment forms part of the specification on 1 January 1983.

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## PREFACE

This standard was prepared by the Association's Committee on Electrical Approvals Standards.

It contains specific requirements for electric fans and is a supplementary specification to AS 3300, General Requirements for Household and Similar Electrical Appliances (which closely follows IEC 335-1).

The clauses of this draft standard supplement or modify the corresponding clauses in AS 3300. Where the reference in the text of this draft indicates an 'addition' or 'replacement' of the relevant requirements, tests or explanatory notes of AS 3300, these changes are made to the relevant text which then become part of the specification. It will be observed that when no such change is necessary, the words 'this Clause of AS 3300 is applicable' are used. The

requirements of this standard will apply in parallel to the existing appropriate specification AS 3115, Motor-operated Appliances, for a period of 2 years from date of publication.

Preparation of this standard was undertaken following request from both industry and approvals authorities for approval and test requirements for electric fans.

During the preparation of this standard detailed consideration was given to the requirements contained in IEC 342, Safety Requirements for Electric Fans and Regulators.

This standard requires reference to AS 3300 and to the following Australian standard.

AS 3191 Electric Flexible Cords

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
**APPROVAL AND TEST SPECIFICATION**  
 for  
**PARTICULAR REQUIREMENTS FOR ELECTRIC FANS**

**1. SCOPE**

This Clause of AS 3300 is applicable except as follows:  
**REPLACEMENT.** Replace Clause 1.1 with the following:

**1.1 SCOPE AND APPLICATION.** This specification is applicable to electric fans for household and similar use for the purpose of moving air in the immediate vicinity. It shall include ventilating fans, and fans suitable for desk, table, wall, floor or ceiling mounting, together with ancillary equipment such as speed regulators, whether incorporated in or detached from the fan motor assembly, but shall not include fans incorporated in—

- (a) evaporative type coolers;
- (b) refrigerated type air conditioner units;
- (c) room heating appliances;
- (d) ducted ventilating systems; or
- (e) range hoods.

**2. DEFINITIONS**

This Clause of AS 3300 is applicable except as follows:  
**ADDITIONS.** Add the following:

**2.2.101 Rated speed** denotes the rotational speed assigned by the manufacturer at which the fan develops the specified output at the rated frequency or frequency range and at the rated voltage or voltage range.

**2.2.102 Support system** denotes the means of attaching the fan motor and blades to a base or support.

**2.2.103 Clamping device** denotes a means by which any positioning device, i.e. swivel, trunnion, oscillating mechanism, etc, may be held in the desired position.

**3. GENERAL REQUIREMENTS**

*Amend 2*  
 This Clause of AS 3300 is applicable except as follows:  
**ADDITION.**

**3.1 DESIGN AND CONSTRUCTION.** Add the following:

The support system of fans shall be of adequate mechanical strength to withstand all of the tests of this specification.

All clamping devices, where provided, shall be so arranged that they can be positively adjusted without undue risk of working loose during normal operation.

**4. GENERAL NOTES ON TESTS**

This Clause of AS 3300 is applicable except as follows:  
**ADDITION.**

**4.2 SAMPLING.** Add the following after the first paragraph:

*Fans shall be tested after installation of the accessories normally supplied with the apparatus according to any instructions supplied by the manufacturer.*

**ADDITION.**

**4.5 TEMPERATURE.** Add the following:

*The tests of clauses 11, 13 and 19 shall be carried out in an ambient temperature of  $37 \pm 3^\circ\text{C}$ .*

Clauses 4.7, 4.8 and 4.12 are not applicable.

**ADDITION.** Add the following:

**4.101 FANS SUPPLIED FROM TRANSFORMERS.** *Fans intended for operation by means of a transformer shall be tested with that transformer.*

**5. RATING**

This Clause of AS 3300 is applicable.

**6. CLASSIFICATION**

This Clause of AS 3300 is applicable.

**7. MARKING**

This Clause of AS 3300 is applicable except as follows:  
 Clause 7.3 is not applicable.

**8. PROTECTION AGAINST ELECTRIC SHOCK**

This Clause of AS 3300 is applicable except as follows:  
 Clauses 8.2, 8.4 and 8.7 are not applicable.

**ADDITION.** Add the following new clause:

**8.101 DEFORMATION.** External parts of insulating material, the deformation of which may cause the fan to fail to comply with this specification, shall be sufficiently resistant to heat.

*Compliance is checked by preconditioning the fan, which shall be assembled where practicable, for 6 h at  $70^\circ\text{C}$  and then after cooling to room temperature by the application of the test of Clause 8.1 of AS 3300.*