



Information Kit on Testing Fixed Height Chairs to AFRDI 151 (Rated Load)

1. Introduction

Most certified fixed height chairs in Australia and NZ are tested to the requirements of *AS/NZS 4688:2000–Furniture–Fixed height chairs*. It states that it is not appropriate when chairs are subject to "...more than occasional use by persons weighing more than 100 kg". This standard–AFRDI 151–is designed to cater for chairs intended to be certified as suitable for people much heavier than that.

Please read this Infokit before you ring to enquire about testing (especially the **Question and Answer** section (section 8) where most matters relating to this program are explained).

2. Options

AFRDI 151 is available in the four options listed below.

Options	Chairs for
135	people up to and including 135 kg .
160	people up to and including 160 kg .
185	people up to and including 185 kg .
300	for people up to and including 300 kg .

Compliance at 135, 160 or 185 means a product is rated as suitable for public space use for occupants **up to** that rated load i.e. 135 kg, 160 kg or 185 kg.

Compliance at 300 means that a product is rated as suitable for a bariatric population of users **up to** 300 kg in body mass.

There are no durability distinctions between options, or durability levels within each option i.e. there is no single shift (SS) or multi-shift (MS) option as there is with AFRDI 142. By way of comparison with more familiar standards, the durability common to each of the 135, 160 and 185 options exceeds level 6 of AS/NZS 4688.

AFRDI Blue Tick Rated Load certification is available for each option.

Please note you will need to nominate your desired testing option. It is your responsibility to determine the rated load appropriate to the environment in which your chair is intended to be used.

3. What's involved?

Evaluation includes:

- an initial inspection
- an examination and photographic record of construction details
- a labelling assessment
- ignitability tests (where applicable)
- foam density tests (where applicable)
- strength tests
- durability tests
- stability tests
- safety assessment (i.e. in relation to pinch points, sharp points and edges)

4. What's not involved?

- ergonomic assessment (there are, however, minimum seat width requirements for the bariatric option—see section 8 Question 13).

5. What does it mean?

When an AFRDI 151 chair is rated at 135 kg, 160 kg or 185 kg it means it has been designated suitable¹ for public space use by occupants **up to and including** the specified rated load i.e. 135 kg, 160 kg or 185 kg. ('Public space' is any place where items of furniture are accessible to a wide range of people without active discrimination on the basis of a person's size i.e. anyone may sit on the chair. For example, a restaurant or café, public auditorium, library or similar)

When an AFRDI 151 chair is rated at the 300 kg level, it means it has been designated as suitable for a bariatric population of users with a body mass **up to and including** 300 kg. ('Bariatric space' is any place where items of furniture are typically used by a specific population of users who are of much greater average mass than would be expected in the general population. For example, bariatric health clinics, specialist medical wards or similar)

It does not mean if someone above the Rated Load (RL) occasionally sits on the chair they are likely to break it. When tested to AFRDI 151, chairs are subject to loads much higher than 135 kg, 160 kg, 185 kg or 300 kg e.g. a **135** chair is subject to seat loads ranging from 136 kg to 330 kg for approximately 300,000 load cycles. The question could be asked "why then not rate it to a higher load?" The answer is

¹ By 'suitable' we principally mean sufficiently strong, durable and stable. Where applicable foams and meshes have also been assessed for resistance to ignition (the smouldering cigarette test). Upholstery fabrics have not been assessed and are not included in our certification (they should be specified with properties appropriate to their intended end use). Durability has been assessed assuming use in an indoor (or covered) environment only.

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impact, literally. When a person sits down heavily they momentarily produce impact forces that exceed their weight. For this reason AFRDI 'tests high' and 'claims low'.

It should be noted, however, that even a Rated Load chair will not last forever. It is not possible to predict absolute durability i.e. to make a statement like "this chair will give satisfactory service for 6 years 7 months 12 days and then fail".

However, to give a firmer fix on the durability concepts embodied in this standard, the 135 kg, 160 kg and 185 kg options each considerably exceed the number of durability cycles specified in the current Australian Standard for Fixed Height Chairs (AS/NZS 4688) at level 6. And at the bariatric level, AFRDI 151 applies only slightly fewer durability cycles than level 6. As each of these AFRDI 151 levels also applies considerably higher loads per durability cycle, it is fair to infer that any of the Rated Load testing options indicate a very high degree of proven durability.

However, AFRDI does not itself guarantee any particular Rated Load chair against failure. What it does do is test chairs to very rigorous standards. Those chairs that pass, may then be certified (endorsed) by AFRDI—if the company supplying them is prepared to enter into a certification agreement designed to ensure the maintenance of that quality (see section 12).

6. Costs

Please contact Furntech for a quotation.

These prices are subject to 10% GST and membership discount.

Charges include:

- freight for three fully assembled identical chairs from your nearest AFRDI freight forwarding depot to Furntech-AFRDI (see section 10).
- AFRDI Blue Tick Rated Load Product Certification for three years.

Charges will vary depending on the complexity of the chair. POA for any additional testing done in combination with Rated Load testing.

6.1. Adjustments

In the event that this product fails the assessment or the assessment is terminated at the owner's request, a credit towards future charges, available for a period of 3 years from the date of engagement, will be issued for the unused portion of the assessment fee. If tests have to be repeated further charges are also normally applicable.

6.2. Discounts

Furntech-AFRDI members receive discounts on testing and research fees. Information on membership is available from the Institute or our website.

A quantity discount is also available when three or more distinctive chairs are forwarded for testing to any of the RL standards at one time (33% discount on the third and all subsequent chairs tested at the same time).

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7. The Next Step

If you are interested in considering product testing, please:

- 1 Read our **Question and Answer** section (section 8). Most matters relating to the Rated Load certification programme are covered here – if you have any further questions please call or e-mail (03 6326 6155 or admin@furntech.org.au.)
- 2 Contact Furntech-AFRDI for a quotation. Include details of the product for which you are seeking certification.

If you wish to proceed with testing on the basis of our quotation, please follow these steps:

- 3 Copy the Testing Request Forms (see section 18) and complete for each distinct chair i.e. for each chair design for which certification is being sought. E-mail a copy of each to Furntech-AFRDI and attach a separate copy of the Company Information Sheet (section 18.1) to each of the chair samples sent.
- 4 Deliver the chairs to our Freight Forwarders or make alternative freight arrangements (see section 10).
- 5 Send your payment to Furntech-AFRDI (we accept cheque, EFT, Visa and MasterCard). Please phone 03 6326 6155 or e-mail admin@furntech.org.au to request an invoice if this will help to facilitate payment (see section 9)

8. Questions and Answers

1. **Question.** What do I need to send?
Answer. You have two options:

A: Send 3 structurally identical fully assembled and upholstered chair samples from current production. They should not be 'knocked-down' although backs may be removed to reduce packing volume. The only acceptable difference between samples is each may have a different fabric. If a chair incorporates mesh then all three samples must have the same type of mesh and have it in the same places on the chair), **or**

B: Send 3 structurally identical current production kit chairs. The kits must:

- be complete i.e. when assembled form a complete chair.
- include instructions for assembly. These instructions must:
 - be in English
 - be unambiguous
 - include clear diagrams

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- include torque settings for all nuts, bolts and screws
- include a comprehensive parts list (i.e. the components that should be present in the kit).

NB. Prototypes of either assembled or kit chairs can be tested and will receive a test report, but are not eligible for certification.

2. **Question.** What is certification?

Answer. See section 12.

3. **Question.** Is there anything else I need to send?

Answer. Yes. The *Testing Request Forms* need to be completed for each chair for which you are seeking certification i.e. for each set of 3 chairs as specified in Q1. See section 18.

4. **Question.** Will I get my chairs returned?

Answer. Your chairs will be mechanically tested, disassembled, cut up (to evaluate materials, wall thicknesses etc), attempted to be set alight, photographed, and then disposed of (or kept for our records). No fully tested chairs/parts will be returned except by special request (and then only if they are not required for our records). In the case of testing failures, where it may be desirable for the purpose of failure analysis to see a particular item, chairs or parts will be returned to our mainland freight forwarders. No additional freight charges will apply.

5. **Question.** What testing options are available?

Answer. See section 2.

6. **Question.** Can I get a chair certified that has alternative structural components e.g. uses different framing material, backrests, mesh, castors, armrests etc?

Answer. Except in the case of armrests the answer is no—unless you are prepared to pay for each different chair to be fully and individually tested. For a chair with two or more types of armrest it may be possible to evaluate them separately if the armrests are easily detachable and themselves make no significant contribution to the structural performance of the rest of the chair i.e. the chair will perform the same regardless of which arm is used. Whether or not this approach can be taken will be decided on the merits of each case.

7. **Question.** What if I want (or need) to change any of the structural components on my Rated Load certified chair after it has been certified?

Answer. You may not change the chair's components without voiding that chair's certification (unless we have tested the new components and proven their suitability).

8. **Question.** Are there any limits on what I can name the chair?

Answer. Most names are acceptable. Product names that claim, or

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strongly imply, attributes that fall outside the scope of the Rated Load program should be avoided unless they can be substantiated e.g. a chair with the name *The Eco-Friendly Chair* certified under this program would be problematic. *The Very Strong Chair* (or similar) would be acceptable. For the former to be considered an acceptable name, its 'name claim' would need to be substantiated by at least one of the following: (a) recognized and acceptable 'green' credentials (b) trademark registration. In either case we would note on the certificate that the 'claim' embodied in the product's name was not part of our endorsement under the Rated Load program.

It may be that the owner of a certificate for a 135, 160, or 185kg rated load chair wishes it to be named the "xyz *bariatric* chair". We would not act to prevent the inclusion of the word *bariatric* in its name, even though the chair had not been certified at the 300kg *bariatric* test level. We would, however, include a disclaimer on the chair's certificate to the effect that our certification was based on the load rating specified and was not necessarily an endorsement of that load rating's suitability for a bariatric population of users.

Names of other companies' products that have been trademarked or copyrighted cannot be used.

Chairs must have a single name which should not include, or imply, a range e.g. The ABC chair is acceptable; the ABC *range* would not be (this is simply because the Rated Load certificate only covers items essentially identical to that which was tested. The chair's name will be the one that appears on the final certificate. If the chair's name is an 'umbrella' term i.e. includes many sub-options, it will need to be specified in sufficient detail to clearly preclude all other non-tested sub-options (e.g. by inclusion of a model or part number on the certificate).

9. **Question.** Do my seat and back foams need to be prequalified?

Answer. Foams do not need to be prequalified.

However, foams specified for chairs tested at the 135, 160 or 185 kg level still need to meet or exceed the density and ignitability/flammability requirements of AS/NZS 4688 L6.

Foams specified for chairs tested at the 300 kg bariatric level need only to meet or exceed the ignitability/flammability requirements of AS/NZS 4688 L6.

10. **Question.** Do I need to send separate foam samples for assessment?

Answer. No. All testing will be undertaken on the chair specimens supplied.

11. **Question.** What if the chair is mesh upholstered? Do I need to send separate mesh samples for assessment?

Answer. No. All testing will be undertaken on the chair specimens supplied.

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12. **Question.** If successful will my certificates be published including a list of components and construction materials?

Answer. No. Certificates will specify that complying chairs have been tested for strength, durability, stability, ignitability/flammability and safety (pinch points, sharp edges etc). The appropriate user mass limit (rated load) will also be specified (135 kg, 160 kg, 185 kg or 300 kg bariatric). Certificates will reference the test report on which the chair's compliance is based. The test report itself will contain a comprehensive list of materials and components.

13. **Question.** What about ergonomics?

Answer. Although a chair's ergonomics are clearly important, chairs certified at the 135, 160 or 185 kg levels will not be assessed against a set of dimensional or ergonomic requirements. However, unless a sound argument can be made based on the specific purpose of a particular design, chairs certified at the 300 kg bariatric level must meet the following dimensional requirements:

- chairs without armrests; the seat width must be a minimum of 525 mm
- chairs with armrests; the clear width between armrests must be a minimum of 575 mm.

These dimensions are not design recommendations, rather minimums below which we are not prepared to certify a chair as appropriate for bariatric use. In practice many designs may substantially exceed these minimums.

14. **Question.** What if I want my chair assessed to the requirements of AS/NZS 4688 as well as AFRDI 151?

Answer. It can be done, but only if the chair has been successfully assessed against the requirements of the 135 kg, 160 kg or 185 kg Rated Load testing options. If yes, it can be granted the strength, durability, stability, safety and ignitability/flammability requirements of AS/NZS 4688 level 6. However to fully meet the requirements of AS/NZS 4688 it will also need to be assessed against other requirements of this standard. Additional charges will apply. This option is not available at the 300 kg bariatric level.

15. **Question.** What if my chair is already certified to AS/NZS 4688 and I want to have it tested to AFRDI 151?

Answer. This is possible. Your chair could be assessed to the requirements of any of the Rated Load testing options (135, 160, 185 or 300). Testing costs would be the same as those shown in section 6. If successfully tested a joint AFRDI 151/4688 compliance certificate would be issued.

16. **Question.** How will a chair be certified if it meets the requirements of both Rated Load and AS/NZS 4688?

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Answer. There will be a single joint AFRDI 151/4688 certificate. It will follow the format of the Rated Load certificates used for AFRDI 142.

17. **Question.** How much will it cost?

Answer. See Section 6.

18. **Question.** How long will testing take?

Answer. We estimate:

135/160/185/300; 8 weeks (once testing has begun, assuming no failures).

19. **Question.** What if I have test reports from another laboratory and wish to use them to substantiate the claim that the chair has been tested in a way that I consider is equivalent or better than AFRDI 151? Will you accept other reports in lieu of 151?

Answer. No. Test reports from other laboratories will not be accepted in lieu of testing to AFRDI 151 (or even accepted in contribution to it). There is only one way to obtain AFRDI Rated Load certification and that is to undertake full Rated Load testing and evaluation.

20. **Question.** Can I start testing at a lower level and then continue to a higher one if all is going well?

Answer. No, you must choose which level you wish to pursue prior to the commencement of testing. If successful, that is the level at which the chair will be certified.

21. **Question.** Can I start testing at a higher level and then be granted a lower one if the chair fails beyond a certain threshold?

Answer. No. If you are worried that your chair may not reach any particular level it may be better to aim a bit lower at the outset or to undertake some preliminary indicative testing. **NB** indicative tests are just that—indicative. It cannot be guaranteed that a chair which has passed a range of indicative tests will pass the entire standard.

22. **Question.** If, at the end of my 3 years of Rated Load certification I want to continue how does the certification renewal process work?

Answer. To continue with Rated load certification a product must be fully retested (see Question 23 below for charges).

23. **Question.** If a product must be fully retested to continue its certification beyond the initial three year term will certification renewal cost as much as initial testing?

Answer. No. The charge for certification renewal will be 50% of the current full standard price for that testing option i.e. the full price of 135 or 160 etc. It will be subject to GST and any applicable membership discounts. To be eligible for this reduced charge the chair will need to be substantially the same as was originally tested and certified.

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24. **Question.** Can a product be upgraded or downgraded at certification renewal time? (For example, upgraded from 135 to 160, or downgraded from 185 to 160)

Answer. Yes—providing the chair meets the renewal requirements outlined in Question 23 above. The charge will be 50% of the current full standard price for that testing point and subject to GST and any applicable membership discounts.

25. **Question.** Is the standard available for sale?

Answer. No.

9. Payment

Furntech-AFRDI policy is that **PAYMENT MUST BE MADE BEFORE TESTING COMMENCES**. Please phone 03 6326 6155 to request an invoice if this will help to facilitate payment. Facilities are available for payment by Visa and MasterCard.

10. Freight

Refer to the Institute's Information Kit on Freight to Furntech-AFRDI. Distribution of this Kit in hardcopy form will include the freight-related information as a supplementary sheet.

11. Timing

Freight normally takes between seven and fourteen days. The testing process for either the 135, 160, 185 or 300 options takes approximately 8 weeks.

When the chair, Testing Request Forms, and payment, are all received, the item will be placed on the testing schedule and testing will commence shortly thereafter.

12. Blue Tick Certification

AFRDI Blue Tick certification is granted to suppliers whose products and organisations meet the required standard. The concept is that for Furntech-AFRDI to endorse a product, the Institute needs to have an on-going contractual relationship with the supplier that ensures purchasers can rely on certificates of endorsement. Certification involves periodic audits and the investigation of complaints arising from the sale of endorsed products.

Under the AFRDI Blue Tick product certification program, suppliers must agree to:

- maintain quality of production to at least that of the sample tested;
- advise of changes in the product including changes in materials, components and means and place of manufacture **prior** to these changes taking place;

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- not use (nor permit its agents to use) the logos (certification marks) to promote goods which are not covered by the agreement or to misrepresent the nature of Furntech-AFRDI's endorsement;
- keep and make available a register of complaints arising from the sale of goods covered by the agreement;
- agree to random checks of the quality of products covered by the agreement;
- maintain an adequate product liability insurance cover; and
- pay a certification fee – three years' fee is included in the testing charge.

In return, Furntech-AFRDI agrees to:

- permit the use of the Furntech-AFRDI Rated Load logo (certification mark) to promote goods covered by the agreement; and
- commend to specifiers and purchasers the goods covered by the agreement in lists on the Institute's website.

A copy of the agreement and any further information is also available on request.

13. What You Get

Assuming that the product complies and that you sign an AFRDI Blue Tick product certification agreement, at the end of the process Furntech-AFRDI will:

- issue a Test Report and Rated Load product certificate;
- enter into a product certification agreement with the supplier of the chair, or add the chair to an existing agreement. Three years' certification fee is included in the testing charge; and
- add the product to the Furntech-AFRDI list of endorsed products under the AFRDI Blue Tick Rated Load Product Certification Scheme.

14. Information Required

The Testing Request Forms are to be completed for each chair to be tested (see sections 18).

15. Notes on Marking

The following information must be supplied on a chair for it to meet Rated Load certification requirements. (In the interest of avoiding possible certification delays, effort should be made to meet these requirements—as much as possible—**prior** to the submission of the chairs for assessment.)

NB The information must be **permanently** affixed to each chair sold. To achieve this, markings must be of high quality. If stickers are used, they must be of very high quality and demonstrate very good adhesion. Light-weight paper stickers, stickers with turned up edges, poor or faint printing, will not be considered

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acceptable. Stickers of a slightly lower quality may be accepted if they are stapled to the chair or otherwise attached by secondary means.

Alternatively 'permanence' may be achieved by gluing, stapling or sewing a label onto the chair, or by including appropriate words in a die so that they appear clearly formed in a moulded component of the chair.

Required labelling information

- a) *The certification holder's name i.e. the 'Name of Organization' as it appears on the Testing Request Forms, section 18; the certification holder's geographical address (an e-mail address is not sufficient); and the certification holder's phone number or e-mail address.*
- b) *The week (or month) and year of manufacture.*
- c) *AFRDI approved for users up to 135/160/185/300 kg [delete as applicable]*
- d) *Approved only when certification is current (see www.furntech.org.au for an up-to-date list of certified product) and when supplied in accordance with AFRDI Blue Tick agreement No. xxxx and Certificate No. yyyy. Insert for x and y as appropriate)*
- e) *A statement attesting that the chair's foam (or mesh as applicable) has met the ignitability/flammability requirements of AS/NZS 4088.1 e.g. "Foams on this chair comply with the ignitability/flammability requirements of AS/NZS 4088.1."*

16. Before Dispatch

PLEASE MARK THE PRODUCT NAME/NUMBER ON EACH CHAIR BEFORE DISPATCH.

The name should match that used on the Company Information Sheet and Product Information Sheet (sections 18.1 and 18.2). To assist with chair identification, please attach a copy of the Company Information Sheet to each chair.

17. Confidentiality

Testing conducted at Furntech-AFRDI is confidential. The Institute's procedures prohibit the disclosure of the fact that an item is being tested or the results of any such testing without the express permission (in writing) of the client concerned.

To assist us to preserve the confidentiality of other customers, we request three working days notice of an intended visit to the Institute's laboratory.

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18. Testing Request Forms (please complete 18.1, 18.2 and 18.3)

18.1. Company information sheet

Please complete for each chair to be tested (i.e. each group of three identical chairs) and e-mail one copy to admin@furntech.org.au and attach the other copies to each of the 3 chair samples before dispatch.

* Name of Organisation (one company name only).....

* Name of Contact (a):

* Address of Organisation (b):

.....Postcode.....

* Telephone Number:

Fax Number:

Email:

Website:

ABN Number:

* Product Name/Number (c) (one name only):

* Factory Name (d):

* Factory Address (d):

.....

* Test Option: 135 / 160 / 185 / 300 / (circle as appropriate)

AS/NZS 4688 at L6 (in combination with one of the above, also circle as appropriate)

* It is mandatory that information be entered in these fields.

Signature of Authorised Officer

Date

NOTES

- (a) Please insert the name of the person Furntech-AFRDI staff should contact, if necessary, concerning the tests.
- (b) Please insert street address.
- (c) Please print the name and/or number of the product you wish to appear on the test report and certificate.
- (d) Please specify the street address and name of the factory in which the product is made.

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18.2. Product information sheet

The following information is required for each group of chairs to be tested. Please e-mail to admin@furntech.org.au (only one form is required to be filled out per group of 3 identical chairs).

Company Name (one name only)..... Product Name/Number (one name only).....

Components (Continued overleaf)

Components ²	Material ⁵	Supplier Name	Unique identification (model/number)	Certificate No ⁴
Castors/Glides				
Frame				
Footring (if applicable)				
Seat pan structure				
Seat foam (if applicable)				

Components (Cont.)

² Not all chairs will have components that fit neatly into each of these categories. Fill out as you see appropriate (there are blank spaces overleaf if needed). We will contact you for further information if required.

³ General categorization only e.g. plywood, polymer, aluminium, steel etc.

⁴ Complete only if applicable. Certified components are not required as a prerequisite.

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Components	Material	Supplier Name	Unique identification (model/number)	Certificate No
Arms (if applicable)				
Back rest structure				
Back foam (if applicable)				

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18.3. Authorisations

Any significant issues pending/impending with product (e.g. field failures, claims, recalls)?

YES (if yes, please attach summary) NO

I warrant that the information above is accurate.

I hereby authorise Furntech-AFRDI or its agents to carry out the tests described above at the agreed price.

NB Should the product(s) described above be found to comply with the certification requirements, I understand this fact will be publicised on Furntech-AFRDI's website.

I also authorise Furntech-AFRDI to:

- publish a certificate of compliance on its website.
(*Optional – strike out where permission to publish the certificate is not given*)

Signature of
Authorised Officer.....Date.....

Name (print).....

Position in Company.....

[Cont.]

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19. Summary Checklist

Before you send us any chairs please make sure you have:

1. Filled out each of the Testing Request Forms (sections 18.1, 18.2 and 18.3) and emailed a copy of these to us.
2. Attached a copy of the Company Information Sheet (section 18.1) to each of your chairs.
3. Applied the appropriate markings to the chairs as required (see section 15 – Notes on Marking).

[END]