



# ***Information Kit on Testing Height Adjustable Swivel Chairs to AFRDI 142 (Rated Load)***

## **1. Introduction**

Most certified office swivel chairs in Australia and NZ are tested to the requirements of *AS/NZS 4438:1997-Height adjustable swivel chairs*. AS/NZS 4438 is regarded as appropriate for people up to about 110 kg. This standard - AFRDI 142 - is designed to cater for chairs intended to be certified as suitable for use by heavier people.

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 142 is available in the four options listed below.

<b>Options</b>	<b>Chairs for</b>
<b>135 SS</b>	People up to and including 135 kg for single 8 hr shift operations ( <b>i.e. approx 40 hrs use per week</b> )
<b>135 MS</b>	People up to and including 135 kg for multiple shift operations ( <b>i.e. significantly greater than 40 hrs use per week</b> )
<b>160 SS</b>	People up to and including 160 kg for single 8 hr shift operations. ( <b>i.e. approx 40 hrs use per week</b> )
<b>160 MS</b>	People up to and including 160 kg for multiple shift operations ( <b>i.e. significantly greater than 40 hrs use per week</b> )

Each of these options are suitable for commercial applications including all those as described in AS/NZS 4438 e.g. heavy industrial, office, general keyboard, executive, police stations, military installations, control rooms and similar. Rated Load Blue Tick certification is available for each.

Please note you will need to nominate your desired testing option. This decision should be based on the chair's construction and its intended use.

### 3. What's involved?

Evaluation includes:

- initial inspection
- examination and recording of components
- labelling
- ignitability tests
- foam density
- static load tests
- fatigue tests
- swivel test
- stability tests
- safety (i.e. in relation to pinch points, sharp points and edges)
- inspections.

For more information [AFRDI 142 A Guide for Specifiers and Product Designers](#) is available in the *Publications* section of our Website.

### 4. What's not involved?

- Component prequalification i.e. components such as castors, bases, gas springs and mechanisms are not required (at this time) to meet any prequalification standard.
- Ergonomic assessment. Please note: a range of dimensional and ergonomic requirements are planned to be added to the next release of AFRDI 142.

### 5. What does it mean?

When a chair is rated at 135kg or 160kg it means it is designed for ***continuous use*** by people up to those weight limits. It does not mean if someone well above the Rated Load occasionally sits on the chair they are likely to break it. When tested to AFRDI 142, chairs are subject to loads much higher than 135 kg or 160 kg e.g. a **135 SS** chair is subject to seat loads ranging from 140 kg to 185 kg for 260,000 load cycles. In addition it is proof loaded to over 400 kg. Why then not rate it to a higher load? The answer is 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 an MS Rated Load chair will not last forever. Concepts like 'Single shift' and 'Multi-shift' involve notions of relative durability i.e. the latter is demonstrated to be more durable, relative to the former. 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".

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However, to give a firmer fix on the durability concepts embodied in this standard, even the SS options have been designed to meet or exceed the levels of durability demonstrated in either the current Australian Standard for Office Swivel Chairs (AS/NZS 4438 level 6 – the highest level), or the International Standard for Office Chairs, ISO 21015.

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

Following are our standard charges for Rated Load testing only:

Per certified chair	<b>135 SS</b>	\$6,650
	<b>135 MS</b>	\$7,855
	<b>160 SS</b>	\$6,875
	<b>160 MS</b>	\$8,300

**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).
- Rated Load Blue Tick Product Certification for three years.

Charges may 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 of failure prior to the completion of testing a credit towards future charges is normally issued for any unexpended part of the testing 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).

### 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

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here – if you have any further questions please call or e-mail (03 63266155 or [info@furntech.org.au](mailto:info@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. Fax or 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 [info@furntech.org.au](mailto:info@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.** Send 3 structurally identical fully assembled (i.e. not knocked down; backs may be removed to reduce packing volume) and upholstered current production chair samples (they may have different fabrics only. 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). Prototypes 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.

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5. **Question.** What testing options are available?  
**Answer.** See section 2.
6. **Question.** Can I get a chair certified that has alternative components e.g. different bases, backrests, gas springs etc?  
**Answer.** No – unless you are prepared to pay for complete chair retesting for each component variation desired. The reason for this is that there are no separate component prequalification standards e.g. to add a component as seemingly trivial as a new castor would require full chair retesting as the castor is subject to loading – and therefore may fail – at every stage of testing undertaken in the standard. A separate castor standard would obviate the need for full retesting but such individual component standards have not yet been developed. In short, only the chair recipe/s fully tested will be the ones that can be certified.
7. **Question.** What if I want (or need) to change any of the components on my Rated Load certified chair?  
**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 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* 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. 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 certification program has been designed - at least in its initial phase - for single chair recipes only). 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 chair components need to be prequalified?  
**Answer.** No. Component prequalification is not required at this stage. However component identification is required. A list of chair components (including foam) - as outlined in this information kit (section 19) - does need to be filled out and sent with the chair or job initiation documentation.

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10. **Question.** What about foam?

**Answer.** Foam does not need to be prequalified but does need to meet or exceed the density and ignitability/flammability requirements of AS/NZS 4438 L6.

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

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

12. **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.

13. **Question.** If successful will my certificates be published with a components list?

**Answer.** No. Certificates will not include a components list. 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) and durability option will also be specified (SS or MS). Certificates will reference the test report on which the chair's compliance is based. The test report itself will contain a comprehensive list of components.

14. **Question.** What about ergonomics?

**Answer.** Although a chair's ergonomics are clearly important, for Rated Load certification chairs will not be assessed against a set of dimensional or ergonomic requirements. The reason for this is that at this stage no ergonomic or dimensional criteria for chairs for larger people have been developed. They are, however, planned for the next release of the AFRDI 142. Whether they will then form an element of the standard that must be met to gain certification or, alternatively, offered as an additional ergonomic certification option, has yet to be decided.

15. **Question.** What if I want my chair assessed to the requirements of AS/NZS 4438 as well as AFRDI 142?

**Answer.** It can be done. If a chair is successfully assessed against the requirements of any of the Rated Load testing options (135 SS, 160 MS etc) it can be granted the strength, durability, stability, safety and ignitability/flammability requirements of AS/NZS 4438 level 6. However to fully meet the requirements of AS/NZS 4438 it will also need to be assessed against both the dimensional and labelling requirements of this standard. Additional charges will apply.

16. **Question.** What if my chair is already certified to AS/NZS 4438 and I want to have it tested to AFRDI 142?

**Answer.** This is possible. However you would need to select a **single set** of component options (i.e. one chair 'recipe') and give the chair a separate name – or model number – to that which appears on its AS/NZS 4438

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certificate. It would be best to choose the components you thought were the strongest. Your 'new' chair could then be assessed to the requirements of any of the Rated Load testing options (135 SS, 160 MS etc). Testing costs would be the same as those shown in section 6. If successfully tested a joint AFRDI 142/4438 compliance certificate would be issued in the new chair's name or model number only. Your existing AS/NZS 4438 certificate and certification agreement would remain unchanged.

17. **Question.** How will a chair be certified if it meets the requirements of both Rated Load and AS/NZS 4438?  
**Answer.** There will be a single joint AFRDI 142/4438 certificate. It will follow the format of the Rated Load certificates and will not list the chair's components.
18. **Question.** How much will it cost?  
**Answer.** See Section 6.
19. **Question.** How long will testing take?  
**Answer.** We estimate:  
135/160 SS; 7 weeks (once testing has begun, assuming no failures)  
135/160 MS; 12 weeks (once testing has begun, assuming no failures).
20. **Question.** What if I have test reports from another laboratory and use them to substantiate the claim that the chair has been tested in a way that I consider is equivalent or better than AFRDI 142? Will you accept other reports in lieu of 142?  
**Answer.** No. Test reports from other laboratories will not be accepted in lieu of testing to AFRDI 142 (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.
21. **Question.** Can I start testing at a lower level and then continue to a higher one if all is going well?  
**Answer.** Yes but only *within* the 135kg or 160 kg categories *and* if done at the time of testing e.g. if a chair passes at 135 SS it can then progress to 135 MS (but not to 160 SS or 160 MS). Similarly if a chair passes at 160 SS it can progress to 160 MS. Additional charges will apply (over and above the difference between the cost of SS and MS).
22. **Question.** Can I start testing at a higher level and then be granted the lower one if the chair fails beyond a certain threshold?  
**Answer.** No. If you are worried that your chair may not reach the MS level it may be better to start at SS and then attempt to progress to MS after SS has been achieved. This approach will cost a little more (see Q. 21) but reduces the possibility of being left with nothing.
23. **Question.** If, at the end of my 3 years of Rated Load certification I want to continue how does the certification renewal process work?

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**Answer.** To continue with Rated load certification a product must be fully retested.

24. **Question.** If a product must be fully retested will renewal cost as much as initial testing?

**Answer.** The charge for renewal will be less than that for initial testing (as existing at the time of the renewal) but 'by how much?' has yet to be finalized.

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

**Answer.** No, but an abbreviated version of it in the form of a *Guide for Specifiers and Designers* will be available in the near future (see section 3).

### 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 SS option takes approximately 7 weeks; the MS options take approximately 12 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

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 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 logo 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 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 a 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 Rated Load Blue Tick 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 a chair for assessment.)

**NB** The information must be **permanently** affixed to the chair. 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 kg – Single shift/Multi-shift operations. [delete as applicable]
- d) Approved only when certification is current (see [www.furntech.org.au](http://www.furntech.org.au) for an up-to-date list of certified product) and when supplied in accordance with 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 group of chairs to be tested and fax or e-mail one copy to 03 6326 3090 or [info@furntech.org.au](mailto:info@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): .....

Reasons for Test: .....

\* Test Option: 135 SS / 135 MS / 160 SS / 160 MS / (circle as appropriate)

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

Signature of Authorised Officer .....

Date .....

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#### 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 fax or e-mail to 03 6326 3090 or [info@furntech.org.au](mailto:info@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 <sup>1</sup>	Material <sup>2</sup>	Supplier Name	Unique identification (model/number)	Certificate No <sup>3</sup>
Castors/Glides				
Base				
Gas spring				
Gas spring column				
Footring (if applicable)				
Mechanism				

<sup>1</sup> 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 in needed). We will contact you for further information if required.

<sup>2</sup> General categorization only e.g. plywood, polymer, aluminium, steel etc.

<sup>3</sup> Complete only if applicable. Certified components are not required as a prerequisite.

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### Components (Cont.)

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

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### 18.3. Authorisations

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.

Should the product(s) described above be found to comply with the relevant standard, I authorise Furntech-AFRDI to :

*(Optional – strike out where permission is not given)*

- publicise the fact.
- publish a certificate of compliance on the Furntech-AFRDI website.

Signature of

Authorised Officer.....Date.....

Name (print).....

Position in Company.....

### 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 faxed or 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).