A consumer guide from AFRDI*

How to choose the office chair that's right for you

One of the most common enquiries we receive at Furntech-AFRDI is how to determine which kind of office chair is most appropriate for a certain task. A seemingly simple choice is often complicated by the fact that you need to make a choice between a chair with either a single, or a two or three lever adjustment mechanism. Does complexity necessarily bring with it a better chair?

Above all, a chair needs to be comfortable, and ergonomists tend to agree that the best chair (for operator health) is one that encourages and supports small posture changes throughout the day as we do different tasks. Constant movement is recommended to maintain healthy circulation – it is even suggested that we stand if possible to take an incoming phone call so that circulation is restored.

How a chair works

It wasn't very long ago that a chair was considered sophisticated if it had a gas lift to facilitate height adjustment. Now it is common for a chair to have a control or adjustment^ for:

- reclining 'tension' – allows the operator to adjust the reclining resistance of the chair to their individual body mass
- seat tilt – allows the operator to set the seat to the correct angle for the task
- seat height – allows the operator to adjust the seat height according to their required leg length *(the aim is to sit with the feet flat on the floor*)
- lumbar support – a projection on the backrest that supports the lumbar region of the back. Can be adjusted up and down and sometimes can be increased in size. The compression resistance, and therefore degree of support, of some lumbar mechanisms can also be adjusted.
- armrest* height and width

^*chair adjustment mechanisms are many and varied* – ***choose one that you can adjust quickly and easily****: you don't really have to concern yourself about the widely differing technologies employed*

**armrests are useful in minimising wrist and forearm strain when keyboarding. Lack of support may lead to repetitive strain injury. <u>But always check that the chair you are considering has been tested and certified with arms – many are not.</u>*

*AFRDI is a not-for-profit technical organisation that writes standards, and tests and certifies a wide range of furnishings, consulting on the world market.

•Select a chair appropriate for your height and weight. Standard chairs should suit people who fall within a range from 151 cm to 192 cm (just under five feet to nearly six feet four inches). Some manufacturers offer chairs that can cater for people outside this range.

Chair mechanisms

1 Lever generally operates gas lift only, although sometimes may combine other functions – these can be tricky to use in a single lever

2 Lever first lever operates gas lift
second lever releases and locks both seat tilt and backrest tilt. Sometimes may only actuate a single function

3 Lever first lever operates gas lift
second lever operates independent seat tilt
third lever operates independent backrest tilt

There is another class of mechanism, referred to as **synchro**, in which the seat and backrest both tilt, but in a ratio where the backrest generally moves at twice the rate of the seat. In this type of chair, the first lever operates the gas lift, the second releases the seat and backrest to tilt in a pre-determined ratio to one another. There may also be a knob beneath the seat that varies **tension** – this creates resistance to the synchronized movement of the seat and backrest.

Chair shape

It is beyond the scope of this short discussion to talk about the shape of chairs, or their style – suffice to say that it is important to choose a chair where the leading edge of the seat has a so-called **waterfall edge**, an edge which rolls downwards, to avoid placing pressure on the legs behind the knees, and in so doing, restricting circulation.

Using the chair

If the chair's operating instructions are to hand, read them! Adjust the chair so that:

•both your feet are flat on the floor
•your arms are level with the desk top
•the backrest is adjusted in a way that places even pressure on your entire back
•if a lumbar adjustment is fitted, it is set for best support of the lower back region

•IMPORTANT: if more than one person uses the chair, it should be adjusted each time, unless it's being used for just a few minutes. The long-term health of your whole body depends on correct adjustment to avoid a strained posture.

Buying the best chair
Furntech-AFRDI tests and certifies chairs to a range of Australian, New Zealand and international standards. The tests – sometimes well in excess of 200-thousand duty cycles - are designed to identify potential design weaknesses or material flaws which could lead to early chair failure. The severity of the testing regime varies according to the intended use of the chair, from domestic duty through to normal commercial, up to 24/7 severe commercial duty. Chairs that pass the tests can be awarded the AFRDI Blue Tick for strength and durability, and may also be assessed for sustainability under the AFRDI Green Tick product certification process.

Not many chairs in the marketplace are submitted for testing. It costs money, and it's reflected in the price. You can be assured that those which are tested and certified are among the best you can buy: they are rated according to intended use, and they promise durability and longevity.

Chairs which are not tested and certified may also be of high quality and durable, but it's left to the customer to find out.
Always look for the Furntech-AFRDI swing tag on chairs – it's your assurance that they are the very best in the class.

The chair for heavy people
AFRDI has for some time adopted a nominal maximum loading of 110 kg for chairs tested to the severe commercial level. But gains in human sizing and weight mean that someone who falls outside this range is no longer unusual.
Under the new testing procedures contained in the draft AFRDI Standard 142 Office Chairs for Heavy People, AFRDI will soon be able to test at two additional testing points – 135 kilos (21 stone) and 160 kilos (25 stone). Another new standard, AFRDI Standard 151, covers fixed height chairs for heavy people.

AFRDI cautions, however, that the new standard should not be sought in every chair. Chairs tested and certified to the normal standards suit better than 90% of the population – a higher rated chair is possibly a waste of money if it's intended for normal use.

The after-life of the chair
While you do not necessarily buy a chair with recycling in mind, perhaps you should. As community expectations change, manufacturers will indicate how readily a chair may either be recycled into its base components, or refurbished to complete another life cycle. As consumers, we need to support the manufacturers who go to the trouble to indicate that they are trying to act responsibly towards the environment. Our aim should be to avoid used chairs simply becoming more wasteful landfill.

furntech
Australasian Furnishing Research & Development Institute

Australasian Furnishing Research & Development Institute Limited
ABN 44 009 579 908, trading as Furntech
School Road (University Campus) Newnham Drive PO Box 2042 Launceston Tasmania 7250 Australia
Tel (03) 6326 6155 Fax (03) 6326 3090
Website: www.furntech.org.au Email: info@furntech.org.au