

™™™ European standard for office chairs; EN 1335

## BS EN 1335-1:2000 Dimensions-Determination of dimensions

It is over 15 years since standardisation work began on office chairs. It is now complete and the standard BS EN 1335, Office Furniture-office work chairs will shortly be published in three parts.

Part 1 covers the dimensions, Part 2 includes safety requirements and Part 3 outlines safety test methods.

This article examines Part 1 of BS EN 1335-Dimensions, determination of dimensions. With the publication of the European standard, BS 5940 Part 1 will no longer be applicable to office work chairs which are height adjustable. Hence from now on, all office chairs have to comply with the dimensional requirements of BS EN 1335 Part 1.

The dimensions in BS EN1335-1 are similar to those in BS 5940 Part 1 and DIN 4551.

However, the European standard has two new dimensional requirements for the star base; one is anti-stumbling and the other is the stability dimension. These should not cause any problems for chairs already on the market as they are likely to be within the specified dimensions. Unfortunately, this does not mean complying with the standard is all plain sailing.

As work on the standard has been going over a long period, it is already behind the state of the art office chairs. Methods of measuring dimensions are not new and have the same problems we encountered with BS 5940 and DIN 4551. Hence the measurement techniques are still complicated and sometimes do not simulate real use of office chairs. FIRA Ergonomists have been pointing out these problems for the last six years, but to no avail.

There is an even bigger problem than the measurement techniques. The table containing dimensional requirements is unnecessarily complicated and difficult to understand. The matter is made worse by including requirements for three types of chair without any descriptions or guidelines.

The problem is deciding which type of office work chair is being tested. The fact that there are three types is also going to create confusion on the suitability of any of these chairs for use at display screen equipment (also referred to as VDU or computer) workstations.

There have already been rumours that only one type of chair specified in the standard will be acceptable for use at VDU workstations, which clearly is not the case. Hence FIRA has insisted that the British version of the standard have an informative annex to help manufactures and specifiers to understand it.

The annex has been produced and submitted to the BSI for inclusion in the Part 1 of BS EN 1335.

The informative annex incorporates the following statement on the display screen equipment regulations:-

'The European Display Screen Equipment Directive (90/270/EEC) has minimum requirements for adjustability of chairs. The HSE guidance document on the regulations (L26) includes the following statement in Annex A, clause 1.7: The schedule requires the seat to be adjustable in height (i.e. relative to the ground) and the seat back to be adjustable in height (also relative to the ground) and tilt. Provided that the chair meets these requirements and allows the user to achieve a comfortable posture, it is not necessary for the height or tilt of the seat back to be adjustable independently of the seat.

This European standard specifies three types of office chair but does not state which types of chair will comply with the European display screen equipment directive'

As it is very difficult to give precise descriptions of each type of chair, this information annex will include broad descriptions of each type of chair and the main differences between them. These broad descriptions are summarised below.

#### Type A office work chair

The type A chair is essentially the same as the type B chair with the following additional requirements:

Seat depth shall be adjustable. Chairs with non-adjustable seat depth can not be considered to be type A chairs.

Seat inclination shall be adjustable. Chairs with non-adjustable seat inclination can not be considered as type A chairs. The seat inclination must be adjustable by at least six degrees.

Seat height shall be 400mm minimum and the adjustment range should be at least 120mm.

For the type A chairs, adjustments to the backrest are independent of the seat surface.

#### Type B office work chair

This is the most common office chair. Type B chairs can have independent backrest adjustments in relation to the seat surface, but it is not compulsory.

Dimensionally, they are the same as type A chairs except for the minimum seat height, which is 420mm and the minimum seat height adjustment range, which is 100mm.

#### Type C office work chair

The type C chairs are dimensionally similar to the type A chairs, but can have:

Reduced seat height adjustment range (minimum adjustment range of 80mm instead of 100mm)

Extra long seat depth

No independent backrest tilt in relation to the seat

As you can see from the guidelines above, Type A chairs have many more adjustments and must have adjustable seat depths and angles. Type B, are those most commonly used in UK offices. Both types are likely to comply with DSE regulations. Type C are the very large chairs with bulky upholstery and limited adjustability. These chairs may or may not satisfy the minimum requirements of the DSE regulations.

FIRA Ergonomist Levent Çaglar is happy to receive your or your clients' comments so that we can clarify any misunderstandings and minimise the confusion created by the three types of chair in BS EN 1335-1.

The FIRA Ergonomics Unit is now testing to this standard and will certify chairs, which comply with it.