WHAT ARE THE NEW STANDARDS?

BS EN 1729:2006 Furniture: Chairs and tables for educational institutions.

This new European Standard for educational furniture, EN 1729:2006 was approved by the Comité Européen De Normalisation (CEN) on 12 June 2006.


BS EN 1729-1:2006 (Part 1) details the functional dimensions that educational furniture should adhere to.

BS EN 1729-2:2006 (Part 2) details the testing requirements for educational furniture, which FIRA (Furniture Industry Research Association) adhere to and test all furniture to, that is proposed for educational use.

Please note that these standards are a guideline at present and therefore are not enforceable by law.

BACK (TO) SCHOOL.

Q-LEARN IS ALL ABOUT HEALTHY LEARNING, TACKLING THE PROBLEM OF FUTURE BACK PAIN IN SCHOOL CHILDREN HEAD ON. NOW.

ARE YOU SITTING COMFORTABLY?
ARE YOU SITTING COMFORTABLY?

MEASURING UP

Q-Learn chairs are fully adjustable, making them the most flexible choice for all schools, covering all age ranges.

Recommended chair and desk heights (size marks)

BS EN 1729:1:2006 specifies eight size marks (0 to 7) of furniture, which covers the needs of all European children and educational systems. The dimensions of either size mark of chairs and tables are based on the latest anthropometric data from the UK, Netherlands, France, Italy and Germany.

The calculation of chair heights was based on the popliteal (lower leg) height of children. Once the seat heights had been decided upon the table sizes were determined by considering sitting elbow height and having sufficient legroom under tables. The values and figures for chair and table sizes are grouped in age bands for easy reference.

Size marks 1 to 6 are considered to be the most appropriate furniture for UK children and the UK educational system, ensuring that there are six chair and desk heights covering the growth of a child from 4 – 19 years.

Schools are therefore encouraged to provide a mix of various heights of desks and chairs, ensuring these are supplied in the right mix to guarantee the furniture is suitable for the users. Alternatively the school can provide height adjustable furniture that provides versatility and can be adjusted quickly to the individual’s stature.

Selection of appropriate furniture

A ruler or tape measure should be fixed to a wall which indicates the size marks by colour bands as stated within BS EN 1729:1:2006, from the floor upwards the size marks 1 to 6. To select the appropriately sized furniture for each individual student, the student should place themselves against the ruler/tape measure and select the size mark appropriate for them. This will then specify which chair or desk will best fit their dimensional requirements.

WARNING

Providing the inappropriate size mark of single height furniture, might have serious implications in schools as it can have an adverse effect on students’ posture and on their backs, which can lead to long-term deterioration in their health.

In the opinion of the BSI committee, adjustable chairs with the ability to tilt forward a few degrees combined with adjustable tables with tiltable tops can significantly improve students’ postures for many common activities, and thus avoiding back, neck and shoulder strain.

For all schools, Q-Learn chair and desk heights are easily adjustable to suit the specific needs of each child. For more information, please visit www.sogroup.co.uk.
A BETTER ENVIRONMENT FOR LEARNING.

Seating types
There are two seating types for chairs, those with a seat slope between -5° and +5° which is commonly known in the UK as right angle seating (90°/90°), and those with a seat slope between +5° and +15° on high seated chairs which are commonly known in the UK as open angle seating (120°).

An open angle seat consists of sitting on high forward sloping seats, with the angle between the torso and thigh (not 90° as in right angle seating, but around 120°). Dimensions of open angle seating chairs can be provided.

Adjustable furniture
As students’ heights are constantly changing, it must be stressed that furniture which is height adjustable can provide a superior fit for students.

NOTE
Multi-size furniture (height adjustable in discrete steps) and fixed height furniture entails compromises in fit. Fixed height furniture necessitates the greatest compromise.

Q-Learn furniture offers a simple and effective alternative to fixed height standard school seating.

Recommendations
In the opinion of the BSI committee, adjustable chairs with the ability to tilt forward a few degrees combined with adjustable tables with tiltable tops can significantly improve students’ postures for many common activities, thus avoiding back, neck and shoulder strain.

Additional Information
Open posture (120°) suggests that sitters should adopt a posture originally postulated by Dr. Christen Mandle, a Danish Surgeon. This is that, when seated, the thighs slope downwards by about 20° whilst the sitters’ feet are on the floor. Such a posture is achieved by a seat where the horizontal, (rear), part of the seat is set some 50-60mm above kneecap height and the front portion of the seat slopes downward at an angle appropriate to avoid under-thigh pressure. Adjustment of the sitting height to cater for different statures is followed by adjustment of the desk height, thus minimizing the need to crouch, such as would occur at a fixed height desk for most users.

The reduction in under thigh pressure, from that which would otherwise occur with a horizontal seat surface, together with the substantially increased angle between thigh and body, has several benefits.

Q-Learn ergonomic furniture meets all these requirements.

Blood flow to and from the legs is improved, allowing more blood to the brain aiding concentration. Compression in the abdominal region is reduced, allowing better breathing as well as less pressure on the digestive organs. Load on the lower spine is reduced as there is less flattening of the lumbar curve.

Seat and desk combinations which provide the above advantages result in less physical demands on the body, hence greater sitting comfort for students. A reduced risk of the development of lower back disorders and improvements in health are consequent on these lower postural and physiological loadings. The increased comfort, which can also reduce restive behaviour, allows more attention to be paid to school work thus better learning opportunities.
PROTECTING OUR CHILDREN’S FUTURE.

Health Information
The Health & Safety at Work Act 1974 covers furniture used in the office areas and within the ICT suite of schools with regard to preventing back injuries, but does not cover general classroom furniture used by students.

Physical Causes of LBP
(Lower Back Pain)
- Poor posture
- Carrying heavy loads
- Lack of exercise

Poor posture is due to inappropriately sized furniture. Various studies including the Taylour Ergonomist, for the NBPA Children’s working party, states that 86% of school furniture was considered unfit for use. The resultant effect is students sitting in a hunched position for long periodsputting unnecessary stress and strain on their lower backs.

Schools can overcome this issue by purchasing a mix of various heights of desks and chairs and ensuring these are supplied in the right mix to ensure the furniture is suitable for the user.

Another alternative to fixed height furniture is office style furniture, which many use within ICT, but its durability within the standard classroom is a major concern.

The solution is products which are both ergonomically designed for postural correctness and height adjustable furniture that provides versatility and can be adjusted quickly to the individual’s stature.

Ergonomically designed furniture helps achieve the correct posture, which has additional benefits beyond prevention of back problems. There is an obvious link between correct posture and comfort, but there is also a link between comfort and concentration, which affects pupils ability to learn and absorb information.

To obtain further information or a summary of clinical research, Telephone 01509 611021 or email info@qlearn.co.uk

The most up-to-date figures show that skeletal pain costs society £5.7 billion (HSC 1999), hence it would be advisable to provide children with appropriate furniture, which can prevent neck, shoulder and back pain now and in the future.