

**No. 7**

**THE HEALTH AND SAFETY AT WORK  
ORDINANCE 1999**  
(Ordinance 6 of 1999)

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**REGULATIONS MADE UNDER SECTION 38**

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In exercise of the powers vested in him by section 38 of the Health and Safety at Work Ordinance 1999<sup>(1)</sup>, the Administrator hereby makes the following Regulations:-

**Citation**

**1.** These Regulations may be cited as the Health and Safety (Display Screen Equipment) Regulations 2002.

**Interpretation**

**2.** – (1) In these Regulations, unless the context otherwise requires:-

“display screen equipment” means an alphanumeric or graphic display screen, regardless of the display process employed;

“examining doctor” means a medical practitioner who is appointed as an examining doctor under section 42(1) of the Ordinance;

“the Ordinance” means the Health and Safety at Work Ordinance 1999;

“user” means an employee who habitually uses display screen equipment as a significant part of his normal work;

“workstation” means an assembly, comprising display screen equipment, which may be provided with a keyboard or other input device or software determining the user/machine interface, optional accessories, peripherals, including the diskette drive, telephone, modem, printer, document holder, work chair and work desk or work surface and the immediate work environment.

(2) In these Regulations, unless the context otherwise requires:-

(a) any reference to a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule so numbered in these Regulations;

(b) any reference to a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which it appears.

**Application**

**3.** – (1) Subject to paragraph (2), these Regulations prescribe the minimum health and safety requirements for and in relation to work with display screen equipment.

(2) These Regulations shall not apply to or in relation to:-

(a) drivers’ cabs or control cabs for vehicles or machinery;

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<sup>1</sup> Ordinance 6 of 1999

- (b) computer systems on board a means of transport;
- (c) computer systems mainly intended for public use;
- (d) 'portable' systems not in prolonged use at a workstation;
- (e) calculators, cash registers and any equipment having a small data or measurement display required for direct use of the equipment;
- (f) typewriters of traditional design, of the type known as 'typewriter with window'.

### **Analysis of workstations**

4. – (1) Every employer shall perform an analysis of workstations used in his undertaking, for the purpose of assessing the health and safety risks to which they give rise for users, paying particular attention to any risks to eyesight, musculo-skeletal health and mental health, such as stress.

(2) The employer shall review any assessment made pursuant to paragraph (1) where:-

- (a) there is reason to suspect that it is no longer valid; or
- (b) there has been a significant change in any of the matters to which it relates,

and, where appropriate, make any necessary changes to the said assessment.

(3) Every employer shall take appropriate measures to reduce the risks to health and safety found, to the lowest extent reasonably practicable, on the basis of the assessment referred to in paragraph (1), or any changes made thereto pursuant to paragraph (2), taking account of the combined effects of the risks so found.

(4) Where the employer requires any information concerning the display screen equipment used at work, for the purposes of:-

- (a) assessing the health and safety risks to users pursuant to paragraph (1); or
- (b) reviewing such assessment pursuant to paragraph (2),

he shall request that information from the manufacturer, importer or supplier of the equipment, as appropriate.

### **Manufacturers, importers and suppliers' duty to provide information**

5. Every manufacturer, importer and supplier of display screen equipment shall provide any employer with the information referred to in regulation 4(4), upon request.

### **Workstations put into service for the first time**

6. – (1) Every employer shall take the appropriate measures to ensure that workstations first put into service on or after the date of commencement of these Regulations meet the minimum requirements for workstations specified in Schedule 1.

(2) Without prejudice to paragraph (1), the employer may take additional measures to ensure that the workstations referred to therein comply with the recommendations for workstations specified in Schedule 2.

### **Workstations already put into service**

7. Every employer shall take the appropriate measures to ensure that workstations already put into service prior to the date of commencement of these Regulations are adapted to comply with the minimum requirements for workstations specified in Schedule 1 by 1st January 2003.

### **Information and training for users**

8. – (1) Every employer shall:-

- (a) without prejudice to any other health and safety legislation concerning the provision of information to employees, provide users with information on all aspects of health and safety relating to their workstations and, in particular, information on such measures applicable to their workstations as are taken pursuant to regulations 4, 9 and 11; and
- (b) provide users or their representatives with information concerning any health and safety measures taken pursuant to these Regulations.

(2) Without prejudice to any other health and safety legislation concerning the training of employees, every employer shall provide users with training in the use of their workstations:-

- (a) before commencing this type of work; and
- (b) whenever the organisation of their workstations is substantially modified.

### **Daily work routine**

9. Every employer shall organise the activities of users in such a way that their daily work on display screens is periodically interrupted by breaks or changes of activity, thereby reducing their workload at the display screen.

### **Consultation and participation**

10. Every employer shall consult and permit the participation of users or their representatives or both in relation to the matters covered by these Regulations, in accordance with any provisions of the Ordinance and any Regulations made thereunder concerning the consultation and participation of employees.

### **Protection of users' health**

11. – (1) Every employer shall ensure that every employee:-

- (a) who is already a user on the coming into force of these Regulations; or
- (b) who is soon to become a user,

is provided with an appropriate eye and eyesight test and, an appropriate musculo-skeletal examination.

(2) Any test or examination provided pursuant to paragraph (1) shall be carried out:-

- (a) in the case of an employee referred to in paragraph (1)(a), as soon as is reasonably practicable;

- (b) in the case of an employee referred to in paragraph (1)(b), prior to commencing display screen work.

(3) Following the initial tests and examination carried out pursuant to paragraph (1), the employer shall ensure that:-

- (a) further eye and eyesight tests and musculo-skeletal examinations are provided to every user at such regular intervals thereafter as the examining doctor shall prescribe; and
- (b) further eye and eyesight tests are provided to any user who experiences visual difficulties which may be caused by display screen work.

(4) Where the results of any eye or eyesight test carried out pursuant to paragraph (1) or (3) show it to be necessary, the employer shall ensure that the user is provided with an ophthalmological examination.

(5) Where:-

- (a) the results of any eye or eyesight test carried out pursuant to paragraph (1) or (3) or of any ophthalmological examination carried out pursuant to paragraph (4) show it to be necessary; and
- (b) normal corrective appliances cannot be used,

the employer shall ensure that the employee concerned is provided with special corrective appliances which are appropriate for the work concerned.

(6) All eye and eyesight tests and musculo-skeletal examinations provided pursuant to this regulation shall be carried out by persons with the necessary capabilities.

(7) Measure taken pursuant to this regulation may in no circumstances involve employees in any additional financial cost.

(8) Nothing in this regulation shall require an employer to provide any employee with an eye or eyesight test or a musculo-skeletal examination against that employee's will.

**SCHEDULE 1**  
(Regulations 6(1) and 7)

**MINIMUM REQUIREMENTS FOR WORKSTATIONS**

**PRELIMINARY**

**1.** The minimum requirements for workstations laid down in this Schedule shall apply:-

- (a) for the purposes of securing the health and safety of users; and
- (b) to the extent that:-
  - (i) the components concerned are present in their workstations; and
  - (ii) the inherent requirements or characteristics of their tasks do not preclude it.

**PART I - EQUIPMENT**

**General**

**2.** - (1) The use as such of the display screen equipment must not be a source of risk to the health or safety of the user.

**Display screen**

**3.** - (1) The display screen must have the characteristics and features specified in subparagraphs (2) to (7) below.

(2) The characters on the screen must be:-

- (a) well defined and clearly formed;
- (b) of adequate size; and
- (c) adequately spaced from each other and from the lines.

(3) The image on the screen must be stable, with no flickering or other forms of instability.

(4) The brightness and the contrast between the characters and the background must be easily adjustable:-

- (a) by the user; and
- (b) to ambient conditions.

(5) The screen must be such that it can be swivelled and tilted easily and freely to suit the needs of the user.

(6) It must be possible to use a separate base for the screen or an adjustable table.

(7) The screen must be free of reflective glare and reflections liable to cause discomfort to the user.

**Keyboard**

**4.** - (1) The keyboard must have the characteristics and features specified in subparagraphs (2) to (6) below.

(3) The space in front of the keyboard must be sufficient to provide support for the hands and arms of the user.

(4) The keyboard must have a matt surface to avoid reflective glare.

(5) The arrangement of the keyboard and the characteristics of the keys must be such as to facilitate the use of the keyboard.

(6) The symbols on the keys must be adequately contrasted and legible from the design working position.

### **Work desk or work surface**

**5.** - (1) The work desk or work surface, as the case may be, must have the characteristics and features specified in subparagraphs (2) to (4) below.

(2) The work desk or work surface must have a sufficiently large, low-reflecting surface and be positioned at an appropriate height and allow a flexible arrangement of the screen, keyboard, document holder and related equipment.

(3) The document holder must be stable and adjustable and must be positioned so as to minimise the need for uncomfortable head and eye movements.

(4) There must be adequate space for the user to assume a comfortable position.

### **Work chair**

**6.** – (1) The work chair must have the characteristics and features specified in subparagraphs (2) to (5) below.

(2) The work chair must be stable and allow the user freedom of movement and a comfortable position.

(3) The seat must be adjustable in height.

(4) The seat back must be adjustable in both height and tilt.

(5) A footrest must be made available to any user who requests one.

## **PART II - ENVIRONMENT**

### **Space requirements**

**7.** The workstation must be dimensioned and designed so as to provide sufficient space for the user to change position and vary his movement.

### **Lighting**

**8.** - (1) Room lighting or spot lighting (work lamps) must ensure satisfactory lighting conditions and an appropriate contrast between the screen and the background environment, taking into account the type of work and the user's vision requirements.

(2) Possible disturbing glare and reflections on the screen or other equipment must be prevented by coordinating workplace and workstation layout with the positioning and technical characteristics of the artificial light sources.

### **Reflections and glare**

**9.** - (1) Workstations must be so designed that sources of light, such as windows and other openings, transparent or translucent walls and brightly coloured fixtures or walls cause no direct glare and, as far as possible, no reflections on the screen.

(2) Windows must be fitted with a suitable system of adjustable covering to attenuate the daylight that falls on the workstation.

### **Noise**

**10.** The noise emitted by equipment forming part of any workstation must be taken into account when a workstation is being equipped, in particular so as not to distract attention or disturb speech.

### **Heat**

**11.** Equipment forming part of any workstation must not produce excess heat which could cause discomfort to the user.

### **Humidity**

**12.** An adequate level of humidity must be established and maintained.

### **Radiation**

**13.** All radiation, with the exception of the visible part of the electromagnetic spectrum, must be reduced to negligible levels, so as to avoid any negative effects on the health and safety of users.

## **PART III - USER/COMPUTER INTERFACE**

**14.** – (1) When designing, selecting, commissioning and modifying software and in designing tasks using display screen equipment, every employer shall take into account the principles set out in sub-paragraphs (2) to (7) below.

(2) Software must be suitable for the task.

(3) Software must be easy to use and, where appropriate, adaptable to the user's level of knowledge or experience.

(4) No quantitative or qualitative checking facility may be used without the knowledge of the user.

(5) Systems must provide feedback to users on their performance.

(6) Systems must display information in a format and at a pace which are adapted to users and significant information must not appear at the sides of the screen.

(7) The principles of software ergonomics must be applied, in particular in relation to the processing of data by users.

**SCHEDULE 2**

(Regulation 6 (2))

**RECOMMENDATIONS FOR WORKSTATIONS****Screen**

1. - (1) It should be possible to select the size of characters displayed on the screen; a character size greater than 3,5 mm is recommended for a 50 cm distance between user and screen and a character size greater than 4,3 mm is recommended for a 70 cm distance between user and screen.

(2) The line spacing should be adjustable.

(3) The use of dark-coloured characters on a light-coloured screen is recommended.

**Lighting**

2. - (1) The lighting should be natural.

(2) Where fluorescent lamps are used, they should be of the two or three phase connection type.

(3) (a) The contrast in brightness between the surfaces in the central visual field of the user should be less than 3:1;

(b) the central visual field should be brighter than the space surrounding it;

(c) the contrast in brightness between the surface in the central visual field and the surrounding space should be less than 10:1;

(d) the contrast in brightness between the surfaces in the surrounding space should be less than 10:1;

(e) the contrast in brightness between the surface of illuminating bodies and the surrounding space should be less than 20:1;

(f) the greatest contrast in brightness ratio anywhere in the room should be less than 40:1;

(g) the angle of the straight line of illuminating bodies and the user's eyes to the horizontal level should be greater than 40°.

(4) The average lighting level should be the highest possible; the limits of brightness should not be exceeded; and glare should be avoided.

(5) The following observations should be taken into account:-

(a) a lighting level of 1000 lux may be achieved on a light-coloured screen and lighting levels should be greater than 500 to 700 lux;

(b) the lighting levels which may be achieved on a dark-coloured screen are necessarily limited but they should be greater than 300 lux;

(c) the average lighting level should be increased significantly as the average age of employees increases;



- (d) the lighting levels stated relate to the levels of lighting to be maintained throughout the period of daily use and not the level of lighting when the equipment is initially switched on.

### **Noise**

3. The background noise emanating from the equipment which forms part of the workstations should be less than 50 dB.

### **Temperature and humidity**

4. - (1) The relative humidity level should be between 50 % and 70 %.

(2) The indicative wind speed should be:-

(a) less than 0,1 m/s for a temperature = 20° C;

(b) less than 0,3 m/s for a temperature = 26° C.

(3) The temperature of a globe thermometer should be between 20° C and 26° C.

(4) Any variation in temperature within any part of the workplace should be less than 2° C.

(5) The lowest temperature is recommended for the cold days and the highest temperature for the hot days.

(6) (a) The lowest temperature may be combined with the highest level of relative humidity;

(b) the highest temperature may be combined with the lowest level of relative humidity.

(7) The combination of the relative humidity level and the temperature should principally be based on the feeling of the majority of users.

### **Static electricity**

5. - (1) Where static electricity is not eliminated by humidity, cleanliness of the workplace and use of anti-static surfaces, then earthed filters of conductive fibres with a low reflective surface may be placed in front of the screen.

(2) Particular attention should be paid to selecting the filter, which should remove the static electricity and improve or prevent any deterioration in the clearness of the screen.

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Dated this 3rd day of December 2002

By the Administrator's Command,  
 J.C.A. JARVIS CBE,  
 Chief Officer,  
 Sovereign Base Areas.

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