

Annex

MINIMUM REQUIREMENTS (Articles 4 and 5)

Preliminary remark

The obligations laid down in this Annex shall apply in order to achieve the objectives of this Directive and to the extent that, firstly, the components concerned are present at the workstation, and secondly, the inherent requirements or characteristics of the task do not preclude it.

1. EQUIPMENT

(a) **General comment**

The use as such of the equipment must not be a source of risk for workers.

(b) **Display screen**

The characters on the screen shall be well-defined and clearly formed, of adequate size and with adequate spacing between the characters and lines.

The image on the screen should be stable, with no flickering or other forms of instability.

The brightness and/or the contrast between the characters and the background shall be easily adjustable by the operator, and also be easily adjustable to ambient conditions.

The screen must swivel and tilt easily and freely to suit the needs of the operator.

It shall be possible to use a separate base for the screen or an adjustable table.

The screen shall be free of reflective glare and reflections liable to cause discomfort to the user.

(c) **Keyboard**

The keyboard shall be tiltable and separate from the screen so as to allow the worker to find a comfortable working position avoiding fatigue in the arms or hands.

The space in front of the keyboard shall be sufficient to provide support for the hands and arms of the operator.

The keyboard shall have a matt surface to avoid reflective glare.

The arrangement of the keyboard and the characteristics of the keys shall be such as to facilitate the use of the keyboard.

The symbols on the keys shall be adequately contrasted and legible from the design working position.

(d) **Work desk or work surface**

The work desk or work surface shall have a sufficiently large, low-reflectance surface and allow a flexible arrangement of the screen, keyboard, documents and related equipment.

The document holder shall be stable and adjustable and shall be positioned so as to minimize the need for uncomfortable head and eye movements.

There shall be adequate space for workers to find a comfortable position.

(e) **Work chair**

The work chair shall be stable and allow the operator easy freedom of movement and a comfortable position.

The seat shall be adjustable in height.

The seat back shall be adjustable in both height and tilt.

A footrest shall be made available to any one who wishes for one.

2. ENVIRONMENT

(a) **Space requirements**

The workstation shall be dimensioned and designed so as to provide sufficient space for the user to change position and vary movements.

(b) **Lighting**

Room lighting and/or spot lighting (work lamps) shall 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.

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

(c) **Reflections and glare**

Workstations shall 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.

Windows shall be fitted with a suitable system of adjustable covering to attenuate the daylight that falls on the workstation.

(d) **Noise**

Noise emitted by equipment belonging to workstation(s) shall be taken into account when a workstation is being equipped, in particular so as not to distract attention or disturb speech.

(e) **Heat**

Equipment belonging to workstation(s) shall not produce excess heat which could cause discomfort to workers.

(f) **Radiation**

All radiation with the exception of the visible part of the electromagnetic spectrum shall be reduced to negligible levels from the point of view of the protection of workers' safety and health.

(g) **Humidity**

An adequate level of humidity shall be established and maintained.

3. OPERATOR/COMPUTER INTERFACE

In designing, selecting, commissioning and modifying software, and in designing tasks using display screen equipment, the employer shall take into account the following principles:

- (a) software must be suitable for the task;
- (b) software must be easy to use and, where appropriate, adaptable to the operator's level of knowledge or experience; no quantitative or qualitative checking facility may be used without the knowledge of the workers;
- (c) systems must provide feedback to workers on their performance;
- (d) systems must display information in a format and at a pace which are adapted to operators;
- (e) the principles of software ergonomics must be applied, in particular to human data processing.