

The EU Directive 90/270 on VDU-Work:
a European State-of-the-Art Overview

Report over the situation in

Belgium

The EU Directive 90/270/EEC on the Minimum
Health and Safety Requirements for Work with
Display Screen Equipment

edited by

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The EU Directive on VDU-Work: a European State-of-the-Art Overview over the situation in Belgium

"The EU Directive on the Minimum Health and Safety Requirements for Work with Display Screen Equipment in Practice - a European Overview"

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Foreword

The EU Directive 90/270/EEC on the minimum health and safety requirements for work with display screen equipment gives general guidelines on responsibilities and identifies areas for legislation. It does not provide measurable ergonomic standards. These values are being identified in standards such as ISO 9241 and EN 29241.

The International Standards Organisation (ISO) has announced a set of standards called ISO 9241 which provide specific values on which legislation may be based. It also provides system manufacturers, employers and employees with a scientific basis for planning ergonomic working environments. The standard currently comprises 17 parts: Part 1 General Introduction, Part 2 Task design (the way jobs are designed for people working with display equipment), Parts 3-9 Hardware and physical environment, Parts 10-17 Software and usability.

The European Committee for Standardisation (CEN) has decided to issue its own standard, EN 29241, which will be virtually identical to ISO 9241. In this context EN standards are particularly relevant because CEN member countries, which include both EEC and EFTA, have jointly decided that EN standards will replace national standards (e.g. BS 7179) as soon as they are published. ISO-standards are not always introduced as national standards.

Of course, the Directive outlines minimum standards. Many countries will have existing legislation that already meets or exceeds the proposals.

Each member country will review the Directive and having interpreted it to suit local conditions, they will create new legislation. The new ergonomic laws should be in place as soon as possible. Local legislation will refer to local standards bodies' interpretation of ISO 9241 and EN 29241.

The principles behind ergonomic legislation are simple and founded in common sense. However, far reaching implications for manufacturers and employers ensure that their implementation is complex.

The aims of this book are threefold:

- (1) to present the actual state of the national legislation from a theoretical, political and a practical point of view,
- (2) to discuss the range of possible evaluation criteria,
- (3) to give a state of the art overview of the methods and tools in practice.

The author will give an overview of the national activities and forthcomings of the legislation process.

We hope that this report will help to harmonize the implementation and practice of the EU Directive 90/270/EEC in Europe.

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Belgium: EU Directive on VDU-Work – Regulation and Practice

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Abstract

The paper presents texts and bodies that should be competent in Belgium in order to define regulation on VDU-Work as well as agents who should check that labour protection is being respected. The Royal Decree dated of August 27 1993 aims to bring Belgian Ruling into line with the European Directive.

1 Introduction

Although Belgium introduced labour protection laws at an early stage (the first ones dating from 1888), there were very few regulations in existence for work stations with visual display units prior to the European Directive. Belgium clarified its position with regard to this directive in the Royal Decree dated 25.08.1993.

However it was met with a great deal of disappointment as the Decree proved to be quite vague. Until then, several companies had adopted the standards used by large manufacturers. Compliance with the Royal Decree falls short of the standards which have until now been respected de facto.

In paragraph 1, we present the various texts and bodies that should be competent in order to define regulations on this subject: RGPT, IBN, AWIPH.

In paragraph 2, we present agents who should check that labour protection is being respected: SHELTA, Medical Service and Inspection of the work place

2 Regulations

2.1 General ruling on labour protection (RGPT)

The General Ruling on Labour Protection was made on the 21.05.1946, incorporating all former laws. Since then it has been regularly amended and updated in order to cover all risks incurred by the worker in the workplace, especially any risks associated with electricity or radiation.

However, until 1993, no ruling had been made with regard to the use of a computerised work station.

On the 4 August 1993, a "Code of Well Being in the Workplace" was introduced, which should gradually cover all areas of the RGPT.

In particular chapter VI of the code concerns equipment and section 6.2.1 is devoted to visual display units. The contents of this section (many sections remain incomplete at this time) were supplied by the Royal Decree of the 25 August 1993. This Decree aims to bring RGPT into line with the European Directive. We have summarised the articles of the Decree below and we provide the contents of the annex in full, which describes the quite vague minimum standards on equipment.

21.1 Summary of the Royal Decree of August 27 1993

It must be noted that the RGPT takes precedence over all articles contained in the Royal Decree ("without detriment to article x of the RGPT"). This means that the obligations of RGPT remain valid despite the Decree.

Article 1

The Decree is applicable to employers and employees as defined in RGPT.

Article 2

It details which equipment is concerned and which is excluded.

The Decree is applicable to "work units with visual display screens (heretofore to be called VDU). It is not applicable to six different categories such as:

- the driving seats of vehicles or machines
- computer systems on other forms of transport
- computer systems designed primarily for public use
- portable units if not substantially used
- calculators
- cash registers
- traditional type writing machines

Article 3

Defines visual display screen and work unit with a visual display screen.

Article 4

Employers' obligations

1. To evaluate health and safety conditions of work units with VDUs, particularly risks to sight, physical problems and mental stress. On this basis, to take appropriate measures to prevent and remedy risks that have been thus observed, taking into account the addition or combination of these effects.
2. Following the advice of the company doctor and of the committee for Safety, Hygiene and Improvement of the Work place (SHELT committee, see 2.1 below), the employer should ensure that daily work should be interrupted periodically by breaks or by changes in activity.

Article 5

Training workers

Each worker must first receive basic training in the use of their visual display terminal, and this should be repeated each time the unit is modified substantially.

Article 6

Employers must take appropriate measures so that work units with VDUs, operational since 31 December 1992, meet the minimum requirements of the annex contained in the Decree.

21.2 Annex to Royal Decree of August 27 1993:

Minimum requirements for the equipment, environment and computer/employee interface in the work place.

The following minimum requirements are applicable to work stations with visual display units as outlined in Article 3, in so far as the elements under consideration exist in the work station and the demands or intrinsic characteristics of the task are not in conflict with these requirements.

1. Equipment

a) General remarks

The equipment must not in itself pose a risk to the user.

b) Screen

The characters on-screen must be well defined, clear and sufficiently large in size. Character and line spacing must be adequate. The image on-screen must be stable, not subject to flickering or other movement. The brightness and/or contrast between the characters and the background must be easily adjusted to surrounding conditions. The screen must be easy to rotate and to incline in order to suit the user. A separate level or an adjustable table can be used for the screen. There must be no reflections on the screen which are likely to disturb the user.

c) Keyboard

The keyboard must be separate from the screen, and easy to incline, to allow the user a comfortable posture which does not cause undue fatigue to the arms and hands. There must be enough space in front of the keyboard to allow support for the user's hands and arms. The keyboard must have a matt finish to avoid reflections. The layout of the keyboard and the characteristics of the keys must be favourable to their use. The symbols on the keys must be sufficiently contrasting and legible from a normal working position.

d) Table or working surface

Tables or working surface must have a surface with low reflectivity, be sufficiently large and allow a flexible arrangement of screen, keyboard, documents and

additional material. The document stand must be stable and adjustable and positioned in such a way that uncomfortable movements of the head and eyes are avoided as far as possible. The work area must be big enough to provide a comfortable working space for the employees.

e) Seats

Seats must be stable, giving the user freedom of movement and comfort. It must be possible to adjust the height of the seat and also to adjust the height and inclination of the back rest. A foot rest should be made available if requested.

2. Environment

a) Space

The size and fitting of the work station must be sufficiently large to allow for changes in position and normal working movement.

b) Lighting

General and/or individual lighting (desk lamps) must give sufficient light and appropriate contrast between the screen and the working environment, while taking into consideration the nature of the work and the visual needs of the user.

The risk of glare or reflections on the screen or on any other piece of equipment should be avoided by co-ordinating the set up of the office and the work station, with the installation and technical characteristics of artificial light sources.

c) Reflections and glare

The work station should be set up in such a way that light sources such as windows and other openings, transparent or translucent walls, as well as the equipment and walls of a bright colour do not cause direct glare or reflections on the screen. Windows should be fitted with an adequate system of covering, which can be adapted in accordance with the daylight.

d) Noise

The noise emitted by the equipment in the work station(s) should be taken into consideration when setting it up, taking special care not to affect the users' concentration or disrupt their conversation.

e) Heating

The equipment in the work station(s) should not generate a surplus of heat likely to cause discomfort to the workers.

f) Radiation

All radioactive emissions, with the exception of the visible part of the electromagnetic spectrum, should be of a negligible level in compliance with health and safety requirements.

g) Humidity

A satisfactory level of humidity should be established and maintained.

3. The computer/user interface

When developing, choosing, buying or modifying software or when defining tasks which need visual display units, the employer should take the following factors into account.

a) the software should be adapted to the task

b) the software should be user friendly, it should be possible to adapt the software if necessary to the users' level of experience and knowledge. No qualitative or quantitative check may be carried out, without the knowledge of the workers;

- c) the systems should provide the workers with instructions on their operation
- d) the systems should display information in a format and at a rhythm adapted to the operators;
- e) ergonomic principals should be applied especially to information processing by the user.

2.2 The Belgian Institute for Standardisation (IBN)

IBN is a semi-state body dependent on the Ministry for Economic Affairs. It decides on standards for production and operation in all areas. It is the only body authorised to do so in Belgium.

Very few of the Belgian standards are still enforced since European standards are now obligatory, the work of IBN is rather to keep up with standardisation on an international level. Standards are not rendered obligatory unless integrated into a legal text, but of course in case of accident or legal suit, liability is greater if the IBN standards have not been respected.

Standards are published by IBN and can be bought by companies. The standards related to computer science are presented in the chapter Z07: 'Technics related to Information'. Most of them concern data transfer on network, data coding, interconnection between systems.

There are also some standards on programming language and on data bases.

Concerning VDU-work, IBN has adopted the following norms: ISO 9241-1 : 1992 (1st ed), ISO 9241-2: 1992 (1st ed), ISO 9241-10 : 1996 (1st ed).

2.3 AWIPH the Walloon agency for the integration of the disabled

This body came into being following the decree of the 6 April 1995 relating to the Integration of the Disabled. It thereby replaced other existing bodies competent in this matter, in order to better implement the Région Wallonne's (Walloon Governing Authority) policy on the Disabled.

Article 8, paragraphs 4 and 5 of the decree foresee that the government implements programmes aimed at:

"4e : encouraging the adaptation of access to information to suit the functional characteristics of the disabled.

5e: encouraging research and developing new technologies in order to socially integrate the disabled."

With this objective a centre was established, where material could be tested, disabled users could be given advice, personnel could be trained and potential employers could be sensitised to the issues involved. However nothing has been achieved with regard to standards or regulations on access to material.

3 The Application of RGPT - General Ruling on Labour Protection

The RGPT established a number of agents in order to check that labour protection was being respected.

3.1 The service for safety, hygiene and improvement of the work place (SHELT)

Every non-family company is compelled by law to organise a SHELT which is supplemented by a Committee for Safety, Hygiene and Improvement of the Work place if the company employs over 50 people.

SHELT is supervised by a Head of Department, who is ultimately assisted by one or several deputy heads. The Head of Department is sufficiently familiar with RGPT legislation, s/he ensures that there are good safety precautions and hygienic conditions in the company, suggests and takes necessary measures to remedy any causes of risk or nuisance that s/he notices, reports on his/her findings to the SHELT committee, sees to, in co-operation with the company doctor, the familiarisation and education of the workers in the prevention of work related accidents and illnesses, is involved in the purchase of material, produces a monthly report...etc.

The HELT committee's most important mission is to carry out research and to suggest all possible methods of actively encouraging every action so that working conditions are optimal for safety, hygiene and health.

3.2 Medical service

Every employer is obliged to ensure itself with an examination of the "Medical Service", which is under the jurisdiction of the Ministry for Employment and Labour - Administration of Hygiene and Medicine in Work.

This service has a preventive role, its objective is to oversee the health of the workers, to contribute, as far as possible to the adaptation of the workers to their task as well as the adaptation of operations to standards of human physiology, to exclude no one from any work but in principle, the aim is to occupy everybody, despite any inadequacies they might have to accomplish the job of which they are capable. The Medical Service appoints a company doctor to a particular company in order to carry out this task. This doctor has the right to freely enter the company.

3.3 Inspection of the workplace

This administration reports to the Ministry of Employment and Labour. It is in charge of supervising the application of legislation on hygiene and medicine in work, labour protection, labour regulations and relations, social security and social welfare.

The civil servants responsible for this supervision are known as "social inspectors".

They have unlimited access to the work place, either on their own initiative or following a complaint, in order to assure itself that legal requirements have been observed.

In exercising their role, they are authorised to order any modifications deemed necessary to remedy threats to health and safety, defects or nuisances to the workers. If these modifications are not carried out or if the time limit prescribed by the inspectors is not respected, the employer may be subject to a fine or prison sentence.

3.4 Medical inspection of work

Medical Inspection of Work is a section of the administration for hygiene and work medicine, which in turn reports to the Ministry for Employment and Labour. Its agents are the medical inspectors of the workplace.

4 Conclusions

Belgium complies with European directives from a purely formal point of view. Legislation in accordance with these directives has been in force since 1993 and all the necessary dispositions are in place to support this legislation.

From a practical point of view however, it is to be regretted that

- a. to date the technical requirements are not precise enough
- b. there has been very little publicity within companies with regard to regulations on using VDU work stations.

The Belgian authorities have adopted a wait and see approach. No action will be taken before the European standards have been published. They will then probably be integrated by the Belgian Institute for Standardisation. When they are published companies will have the opportunity to buy copies of these standards. But again it will be necessary to adopt an active approach towards the Services for Safety, Hygiene and Improvement of the Work Place, so that workers and employers are made aware of these standards.

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Cap sur la personne - Decree of the 6 April 1995 with regard to the integration of the Disabled. Information leaflet, RW, ed. Resp. J.M. Berger Jambes.

Labour Protection (protection du travail), Samson quarterly documents, CED Samson, Diegem. Volume II : RGPT, Volume X: Codex.

Extrait du catalogue 95/96 des normes belges, Institut Belge de Normalisation, Bruxelles.

Appendix

French Version of the EU Directive 90/270/EEC

Le décret français n° 91-451 du 14 mai 1991 concernant les prescriptions minimales de sécurité relatives au travail sur des équipements à écran de visualisation.

Le premier ministre,

Sur le rapport du ministre de l'agriculture et de la forêt et du ministre du travail, de l'emploi et de la formation professionnelle.

Vu la directive du Conseil des communautés européennes n° 90-270 C.E.E. du 29 mai 1990 concernant les prescriptions minimales de sécurité relatives au travail sur des équipements à écran de visualisation (cinquième directive au sens de l'article 16, paragraphe 1er, de la directive n°89-391 C.E.E.);

Vu le code du travail, et notamment l'article L. 231-2;

Vu le décret n° 82-392 du 11 mai 1982 relatif à l'organisation et au fonctionnement des services médicaux du travail en agriculture;

Vu le décret n° 86-1103 du 2 octobre 1986 relatif à la protection des travailleurs contre les dangers des rayonnements ionisants;

Vu l'avis du Conseil supérieur de la prévention des risques professionnels en date du 26 septembre 1990;

Vu l'avis de la Commission nationale d'hygiène et de sécurité du travail en agriculture en date du 8 novembre 1990;

Le Conseil d'État (section sociale) entendu,

Décrète:

Chapitre Ier. Champ d'application

Article 1

Sont soumis aux dispositions du présent décret les établissements visés à l'article L. 231 du code du travail dans lesquels des travailleurs utilisent de façon habituelle et pendant une partie non négligeable du temps de travail des équipements à écran de visualisation. Toutefois le présent décret ne s'applique pas aux équipements suivants:

- a. Les postes de conduite de véhicules ou d'engins;
- b. Les systèmes informatiques à bord d'un moyen de transport;

- c. Les systèmes informatiques destinés à être utilisés en priorité par le public;
- d. Les systèmes portables dès lors qu'ils ne font pas l'objet d'une utilisation soutenue à un poste de travail;
- e. Les machines à calculer, les caisses enregistreuses et tout équipement possédant un petit dispositif de visualisation de données ou de mesures nécessaires à l'utilisation directe de cet équipement;
- f. Les machines à écriture de conception classique dites "<machines à fenêtre".

Article 2

Au sens du présent décret on entend par:

Écran de visualisation, un écran alphanumérique ou graphique quel que soit le procédé d'affichage utilisé;

Poste de travail l'ensemble comprenant un équipement à écran de visualisation, le cas échéant, d'un clavier ou d'un dispositif de saisie de données ou d'un logiciel déterminant l'interface homme/machine, d'accessoires optionnels, d'annexes, y compris l'unité de disquettes, d'un téléphone, d'un modem, d'une imprimante, d'un support-documents, d'un siège et d'une table ou d'une surface de travail, ainsi que d'environnement de travail immédiat.

Chapitre II. Analyse et organisation du travail sur écrans de visualisation

Article 3

L'employeur est tenu de procéder à une analyse des risques professionnels et des conditions de travail pour tous les postes comportant un écran de visualisation. L'employeur prend toutes les mesures qui s'imposent pour remédier aux risques constatés.

Il est tenu en outre, de concevoir l'activité du travailleur de telle sorte que son temps quotidien de travail sur écran soit périodiquement interrompu par des pauses ou par des changements d'activité réduisant la charge de travail sur écran.

Article 4

Pour l'élaboration, le choix, l'achat et la modification de logiciels ainsi que pour la définition des tâches impliquant l'utilisation d'écrans de visualisation, l'employeur tiendra compte des facteurs suivants, dans la mesure où les caractéristiques intrinsèques de la tâche ne s'y opposent pas:

- a. Le logiciel doit être adapté à la tâche à exécuter;
- b. Le logiciel doit être d'un usage facile et doit être adapté au niveau de connaissance et d'expérience de l'utilisateur; aucun dispositif de contrôle qualitatif ne peut être utilisé à l'insu des travailleurs;
- c. Les systèmes doivent afficher l'information dans un format et à un rythme adaptés aux opérateurs;

d. Les principes d'ergonomie doivent être appliqués en particulier au traitement de l'information par l'homme.

Chapitre III. Formation des travailleurs

Article 5

L'employeur est tenu d'assurer l'information et, dans les conditions de l'article 231-3-1 du code du travail, la formation des travailleurs sur tout ce qui concerné la sécurité et la santé liées à leur poste de travail et notamment sur les modalités d'utilisation de l'écran et de l'équipement dans lequel cet écran est intégré.

Chaque travailleur doit en bénéficier, avant sa première affectation à un travail sur écran de visualisation et chaque fois que l'organisation du poste de travail est modifiée de manière substantielle.

Chapitre IV. Surveillance médicale

Article 6

Un travailleur ne peut être affecté à des travaux sur écran de visualisation que s'il a fait l'objet d'un examen préalable et approprié des yeux et de la vue par le médecin du travail. Cet examen doit être renouvelé à intervalles réguliers et lors des visites médicales périodiques.

L'employeur est tenu de faire examiner par le médecin du travail tout travailleur se plaignant de troubles pouvant être dus au travail sur écran de visualisation.

Si les résultats des examens médicaux le rendent nécessaire un examen ophtalmologique est pratiqué.

Si les résultats de la surveillance médicale rendent nécessaires, une correction si des dispositifs de peuvent être utilisés les travailleurs sur écran doivent recevoir des dispositifs de correction spéciaux en rapport avec le travail concerné: ceux-ci ne doivent en aucun cas entraîner des charges financières additionnelles pour les travailleurs.

Chapitre V - Équipement

Article 7

Les caractères sur l'écran doivent être d'une bonne définition et formés d'une manière claire, d'une dimension suffisante et avec un espace adéquat entre les caractères et les lignes.

L'image sur l'écran doit être stable.

La luminance ou le contraste entre les caractères et le fond de l'écran doivent être facilement adaptables par l'utilisateur de terminaux à écrans et être également facilement adaptables aux conditions ambiantes.

L'écran doit être orientable et inclinable facilement pour s'adapter aux besoins de l'utilisateur.

Il peut être installé sur un pied séparé ou sur une table réglable.

L'écran doit être exempt de reflets et réverbérations susceptibles de gêner l'utilisateur.

Article 8

Le clavier être inclinable et dissocié de l'écran pour permettre au travailleur d'avoir une position confortable qui ne provoque pas de fatigue des avant-bras ou des mains.

L'espace devant le clavier et les caractéristique des touches doivent tendre à faciliter son utilisation.

Les symboles des touches doivent être suffisamment contrastés et lisibles à partir de la position de travail normale.

Article 9

Le plateau de la table ou de la surface de travail doit avoir une surface peu réfléchissant et de dimensions suffisantes pour permettre de modifier l'emplacement respectif de l'écran, du clavier, des documents et du matériel accessoire.

Le support de documents doit être stable et réglable et se sit

uer de telle façon que les mouvements inconfortables de la tête, du dos et des yeux soient évités au maximum.

L'espace de travail doit être suffisant pour permettre une position confortable pour les travailleurs.

Article 10

Sans préjudice des dispositions de l'article R. 232-4 du code travail, pour les travailleurs sur écran de visualisation, ses sièges doivent être, s'il y a lieu, adaptables en hauteur et en inclinaison. Un repose-pieds sera mis à la disposition des travailleurs qui en font la demande.

Article 11

Les dimensions et l'aménagement du poste de travail doivent assurer suffisamment de place pour permettre au travailleur de changer de position et de se déplacer.

Article 12

Les dispositions des articles 7 à 11 ci-dessus ne s'appliquent que dans la mesure où les éléments considérés existent dans le poste de travail et où les caractéristiques de la tâche en rendent l'application possible.

Chapitre VI. - Conditions d'ambiance

Article 13

Les équipements des postes de travail ne doivent pas produire un sursoit de chaleur susceptible de constituer une gêne pour les travailleurs.

II. Toutes radiations, à l'exception de la partie visible du spectre électromagnétique, doivent être réduites à des niveaux négligeables du point de vue de la protection de la sécurité et de la santé des travailleurs.

III. Une humidité satisfaisante doit être établie et maintenue dans les locaux affectés au travail sur écran de visualisation.

IV. Le bruit émis par les équipements du poste de travail doit être pris en compte lors de l'aménagement du poste de façon, en particulier, à ne pas perturber l'attention et l'audition.

V. En ce qui concerne l'éclairage, les dispositions des articles R. 237-7 à R 232-7-10 du code du travail sont applicables.

Chapitre VII - Dispositions finales

Article 14

Les dispositions du présent décret entrent en vigueur à compter du 1er janvier 1993; toutefois, pour les matériels mis en service avant cette date, les dispositions des articles 7 à 11 ne sont applicables qu'au 1er janvier 1997.

Article 15

Le ministre de l'agriculture et de la forêt et le ministre du travail, de l'emploi et de la formation professionnelle sont chargés, chacun en ce qui le concerne, de l'exécution du présent décret, qui sera publié au Journal officiel de la République française.

Fait à Paris, le 14 mai 1991

Michel Rocard