

Directive 2003/10/EC

**on the minimum health and safety
requirements regarding the exposure of
workers to the risks arising from
physical agents (noise)**



(Seventeenth individual directive)



Overview

- **Section I**
- Section II
- Section III
- Section IV



Aim and Scope

- minimum requirements to protect workers from the risks rising up from the exposure to noise
- minimum requirements to protect the hearing of the employees
- applies to all activities in which workers are exposed to risks from noise



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Definitions

- daily noise exposure level
time-weighted average of the noise exposure for a nominal eight-hour working day

→ **standard case**



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Limit and action values

- | | 2003/10/EC | (86/188/EEC) |
|--------------------------------|---------------------------------|--------------|
| • lower exposure action value: | $L_{EX, 8h} = 80 \text{ dB(A)}$ | (85 dB(A)) |
| • upper exposure action value: | $L_{EX, 8h} = 85 \text{ dB(A)}$ | (90 dB(A)) |
| • exposure limit value: | $L_{EX, 8h} = 87 \text{ dB(A)}$ | (---) |

- **exposure limit value:**

the exposure in dB(A) minus the attenuation from the hearing protectors have to be lower than 87 dB(A)



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Determination and assessment of risks

- the **Risk assessment** shall take into account (examples):
 - level, type and duration of exposure
 - limit and action values
 - effects between noise and warning signals
 - information of noise emissions from manufacturers of work equipment
 - extension of noise exposure beyond normal working under the employers responsibility
 - appropriate information from health surveillance
 - the availability of adequate hearing protectors
 - ...



Special

Determination and assessment of risks

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- the **Risk assessment** shall also take into account:
 - **effects on workers health from interactions between noise and ototoxic substances**
- in some studies toluene is mentioned as an ototoxic substance
- what will the member states in europe do in relation to this ?



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Provisions aimed at avoiding or reducing risks

- the risks arising from exposure to noise shall be eliminated at their source or reduced to a minimum using:
 - other working methods, other working equipment
 - appropriate workplace design and layout
 - information and training of workers
 - technical means like sound-absorbent coverings
 - maintenance programm
 - organisational measures like limitation of the exposure duration
 - establishing a noise reduction programm if necessary
 - sign/mark workplaces if the noise level is higher then 85 dB(A)



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Personal protection

- if the risks cannot be prevented by the mentioned means, hearing protection has to be used under the following conditions:
 - individual hearing protection shall be available if the noise level exceeds the lower action level
 - individual hearing protection shall be used if the noise level exceeds the upper action level
- the employer ensures the wearing of the hearing protectors
- the employer is responsible for the effectiveness of measures taken in compliance of this article



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Limitation of exposure

- under no circumstances the exposure of the worker shall exceed the exposure limit value (87 dB(A))
- if this is not the case, the employer have immediately
 - take actions to reduce the exposure
 - identify why the limit was exceeded
 - amend the measures in order to avoid any recurrence



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Worker information

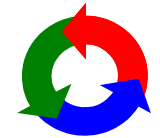
- information and training related to risks resulting from exposure to noise could be necessary, in particular:
 - nature of the risk
 - measures taken to minimize the risk
 - the exposure limit and action levels
 - results of the risk assessments
 - the correct use of hearing protection
 - health surveillance, results of the health surveillance
 - ...



Infosystem



EHS at bauer druck



hearing protection and noise

We all know, that excessive noise damages our hearing and we all know too, that the wearing of hearing protection in this area is obligatory.

This table is for orientation only. It shows you after which period of time the existing daily noise exposure limit value is exceeded and if you don't wear your hearing protectors in this areas or other signed your hearing will be damaged (slowly, over a longer period of time).

Value in dB(A)	exceed/reach 85 dB(A) in relation to a 8-h-shift after	Examples
85	8 h	Upper-action-value Hearing protection obligatory
88	4 h	Reelstand
91	2 h	0,5 m in front of the printing unit
97	30 Min.	Between printing units
100	15 Min.	Folder
106	3,75 Min.	Folder/zylinder

In signed areas hearing protection is compulsory.
To wear hearing protection is sensible !



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Miscellaneous Provisions

- Health surveillance
 - audiometric testing
 - hearing check by a doctor
 - individual health records including a summary of the results
 - records saved for later consultation (authorities, worker)
- - damaged hearing as a result → information of the worker, new risk assessment



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Final Provisions

- Section IV is dedicated only to the member states
 - reporting
 - Transposition → before 15.02.2006
 - Entry into force
 - Addressees





Overview of measures, Summary



Measures \ Action Levels	> 80 dB(A)	> 85 dB(A)	Article
Information and training	X	X	8
Hearing protection available	X	X	6 (1a)
Audiometric testing (offer)	X	(X)	10 (2)
Documentation of the tests	X	(X)	10 (3)
Hearing protection has to be used		X	10 (2)
Audiometric examination by a doctor (right)		X	6 (1b)
Documentation of the examinations		X	10 (3)
Noise reduction program		X	5 (1,2)
Appropriate working place signing		X	5 (3)
Restrictions to enter noise-areas		X	5 (3)





Summary



Take care of the new values in the future planning of workplaces

Develop your plant to a less noisier one

Generally prefer work equipment with lower noise-emissions

Rank your measures

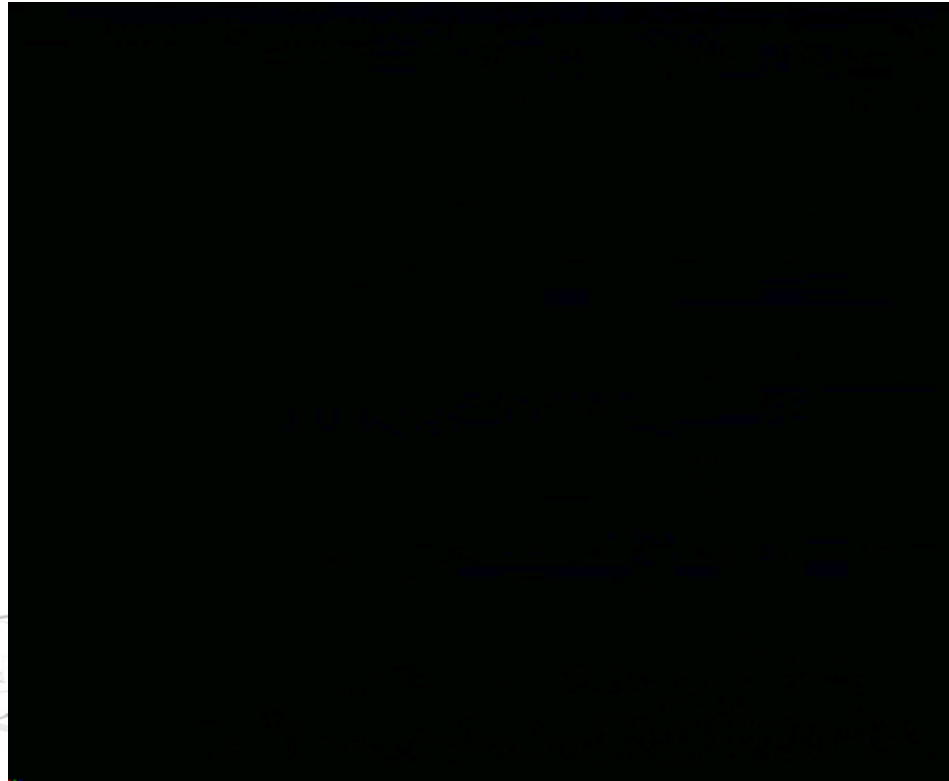
1. Technical measures
2. organisational measures
3. hearing protectors



To take care of the new values is more efficient than retro-fitting

Quite workplaces are more efficient than noisy workplaces





- Thanks for your attention

