Recommendation of the Committee for Hygiene, Construction and Technology

Requirements for construction or reconstruction of a Reprocessing Unit for Medical Devices (RUMED)

Part 19: Barrier-free building as well as ergonomic interior design and furnishing in a RUMED

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Introduction

Today, barrier-free building is standard practice, and is mandatory, in public buildings. It should also be taken into account when planning a RUMED. The **WORKPLACE DESIGN** for the deployment of persons with a disability must be considered even if no persons with a disability are employed in the establishment at the time of planning. Subsequent conversion would involve significant additional costs.

Barrier-free **WORKPLACE DESIGN** must be considered.

For new building or rebuilding RUMED projects ergonomic criteria are being applied increasingly more often.

OCCUPATIONAL DISEASES among employees can be avoided through preventive measures and technical/constructional aids, such as e.g. lifting aids. In the way staff absences and help counteract existing health deficits may be reduced.

OCCUPATIONAL DISEASES may be avoided.

Note: This publication is not a planning template.

Objectives

Employees must be protected against occupational diseases and injuries through appropriate constructional, organisational, furnishing and behavioural measures. Furthermore, the integration of persons with a disability into the primary labour market should be promoted through the aforementioned measures.

Fundamentals

The basic normative requirements for barrier-free building are enshrined especially in the **EMPLOYERS' LIABILITY INSURANCE ASSOCIATION REGULATIONS.** In Germany, these rules are set out, in particular, in the publication series Safe Hospital (Sicheres Krankenhaus) and in DIN EN 18040 "Barrier-free building Part 1: Public Building"

There are **EMPLOYERS' LIABILITY INSURANCE ASSOCIATION REGULATIONS** in place.

In Germany, the obligation to employ persons with a disability is stipulated by the German Code of Social Law (SGB IX § 154) for establishments with 20 or more employees. The representative of persons with a disability must be involved in the planning and can enforce the demands of persons with a disability, see SGB IX §177ff.

Procedure

There is a requirement to implement barrier-free building. First, the conditions for persons with a disability during the work processes must be analysed and the **HAZARDS** assessed in terms of their impact and probability of occurrence.

HAZARDS must be analysed and assessed.

The **WORK PROCESSES**, potential hazards and constructional challenges can be assessed, from the perspective of the users and with the input of as many of the department's employees as possible, for example by means of a virtual video tour based on 3D plans.

An assessment of the **WORK PROCESSES** is to be carried out.

If measures are needed, it is advisable to engage in **COLLABORATIVE PLANNING** involving the economic operator, RUMED management, representative of persons with a disability, hospital infection control team, engineering department and, as applicable, other departments.

COLLABORATIVE PLANNING is recommended.

In principle, statutory requirements must be taken into account, and there may be funding opportunities through the integration office or the integration specialist service.

Hazard assessment

In the RUMED the working conditions must be evaluated and optimized if necessary. Evaluation must include logistics and transport.

Example of **WORK-RELATED STRESS**: RUMED employees lift heavy loads, with each set involving at least 8 to 10 lifting operations throughout the entire reprocessing process. Often, the sets weigh around 10 kg. This adds up to a high stress level for each employee over the course of the day.

WORK-RELATED STRESS must be taken into account

The guiding characteristics method has become established for assessing individual stress limits in the workplace. This can be accessed on the homepage of the German Federal Instate for Occupational Safety and Health (BAuA) and carried out in collaboration with an experienced occupational safety and health (OSH) specialist.

Measures and options

Proceed according to the measures cascade. If a hazard cannot be eliminated, the next step is to proceed as follows:

1. **TECHNICAL** measures
2. **ORGANISATIONAL** measures
3. **PERSONAL** protection measures/behavioural measures

Provision must be made for **TECHNICAL, ORGANISATIONAL** and **PERSONAL** occupational protection measures.

Measures should be taken that are safe and effective without human intervention; of lesser priority are measures that must be implemented by the employee concerned.

Examples

PLANNING TRANSPORT ROUTES is a basic perquisite for operating a RUMED:

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- Threshold-free access for loading and unloading equipment (washer-disinfectors, endoscope washer-disinfectors, sterilizers, large-capacity washer-disinfectors, etc.)
- Avoidance of floor slopes/uneven floors
  - This also applies to the loading ramp
- Door/aisle widths
- Movement/storage areas, if necessary with colour coding
  - This must also be taken into account when planning recreational and changing rooms (wheelchair accessible)
- Automatic doors/sliding doors while taking account of organisational aspects of the establishment
- Bear in mind conveyor belt transport systems (automatic goods transport)

When planning **FURNISHINGS AND EQUIPMENT** in a RUMED, in addition to functional aspects, ergonomic considerations must also be kept in mind, such as e.g.

The **FURNISHINGS AND EQUIPMENT** in a RUMED must be of ergonomic design.

- Height-adjustable tables
- Height-adjustable wet station with aerosol extraction
- Display heights
- Seating facilities/standing aids
- Lifting aid(s)
- Weight of trolleys, loading racks, transport systems
- Ladders and steps
- Noise damping
  - e.g. installation of clean room-appropriate soundproofing elements
- Optical instead of acoustic signals
- and more

Conclusion

BARRIER-FREE BUILDING pays off not only when the first employee has a physical disability or sensory impairment but its preventive use contributes to occupational health management by reducing staff absences through health preservation.

Forward planning, **BARRIER-FREE BUILDING** pays off

It must be the goal to prevent an occupational disease and preserve the health of employees by means of an appropriate and modern workplace design and furnishings.

With forward planning of a barrier-free RUMED, it is possible to employ persons with a disability without any problems.

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19. SGB IX: Rehabilitation und Teilhabe von Menschen mit Behinderungen
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22. Further informationen:
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    - aknw.de: Architektenkammer Nordrhein-Westfalen NRW – Occupational health and safety: specialist information for architects
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