

# THE SMARTRACK®

## OCCUPATIONAL SAFETY AND ERGONOMICS

[www.Better-Basics-Laborbedarf.de](http://www.Better-Basics-Laborbedarf.de)



✓ **DIN EN 13150-2001 EN**

Work tables for laboratories -  
dimensions, safety requirements  
and test methods

✓ **DIN EN 14056-2003 EN**

Laboratory equipment - recommenda-  
tions for arrangement and assembly

✓ **TRGS-526**

Technical rules for  
hazardous substances in laboratories

✓ **GUV-I 850-0**

Safe working in laboratories  
Basics and practical guide

▶ **The SmartRack® meets all applicable specifications in the laboratory area according to DIN, DGUV and TRGS**



**Minimisation**  
of danger in activities



**Labour organisation**  
to comply with  
protection objectives



**Reduction**  
of psychological pressure  
due to proper clarity



**Optimisation**  
of hazardous substance storage



**Controllability**  
of multiple, complex processes



**Ergonomics**  
Relief of shoulders,  
neck and eyes



**The SmartRack® - The world's only laboratory organisation system as your guarantor for safety and ergonomics in the laboratory workplace**

**Safety in laboratories is mainly determined by their structural environment, the equipment used and the qualifications of the laboratory staff.**

- Risks for employees must be excluded in any case - the SmartRack® makes an important contribution here.
- By combining technical as well as organisational measures, these dangers are significantly minimised - the SmartRack® is indispensable for this.

# LABORATORY ORGANISATION SYSTEM FOR EMPLOYER AND EMPLOYEE OBLIGATIONS

The SmartRack® - your optimal choice to meet all regulatory requirements.

Employers are obliged to organise their laboratory workplace in such a way that hazards are avoided, or at least kept to a minimum. (GUV-I 850-0 pt. 4.3.1) Requirements are also placed upon laboratory employees – it is their duty to keep their workplace in order as much as possible. The SmartRack® supports both employers and employees in creating sufficiently safe and workplace-oriented storage space as well as storage facilities for laboratory glassware, for laboratory equipment, but also for samples and hazardous substances. Thanks to its adaptable module system and diverse, coordinated mounts and modules, the SmartRack® meets the requirements and secures the working environment in laboratories.



## Ergonomics

Relief of shoulders,  
Neck and eyes

Employers are obliged to take the ergonomic design of workplaces into account. For this purpose, the gripping area, the reach area and the stretching area must be optimally and individually configurable for employees.

- The SmartRack® allows the individual setup of the workplace and thus ensures **optimal working conditions**.
- With its **optionally available wall mount**, the SmartRack® can be permanently mounted on the wall.
- If necessary, optionally orderable, levelable feet can adjust the SmartRack® so that **all the components can be reached in grouped arrangements** in one plane, because the SmartRack® has an adjustment, height and locking device.



## Labour organisation

to comply with protection objectives

Especially with increasing flexibility in the use of laboratory facilities, for example in the context of mobile working methods, the protection goals for securing workplaces for laboratory employees must be adhered to permanently.

- The SmartRack® allows a **safe design of workstations even with mobile working methods**, which means that areas of effect in laboratories can be modelled, expanded and scaled to a much greater extent.



## Reduction

of psychological pressure  
due to proper clarity

The larger the laboratory rooms become, the more different combinations of hazards are possible in them.

- The SmartRack® supports laboratory employees in particular in mastering **unforeseen events**.
- Control options, such as the **mutual influence of workplaces**, are of particular importance in large-scale laboratories.



## Optimisation

of hazardous substance storage

In particular, hazardous substances may only be used in laboratories outside safety cabinets in the max. permissible quantities and only up to a height where they can still be safely removed and parked.

- Here, the **height and physical fitness of laboratory employees** must be taken into account
- Thanks to its system of height-adjustable, locked slot rails, the SmartRack® allows the **ergonomic and safe placement of containers with hazardous substances** in the gripping space or reach space.



## Controllability

of multiple, complex processes

Complex and related hazards are difficult to control in the laboratory.

- The SmartRack® **simplifies the work processes in the laboratory by individually organising and structuring** the work equipment and samples, which reduces the complexity of laboratory work and makes it easier to control hazards.

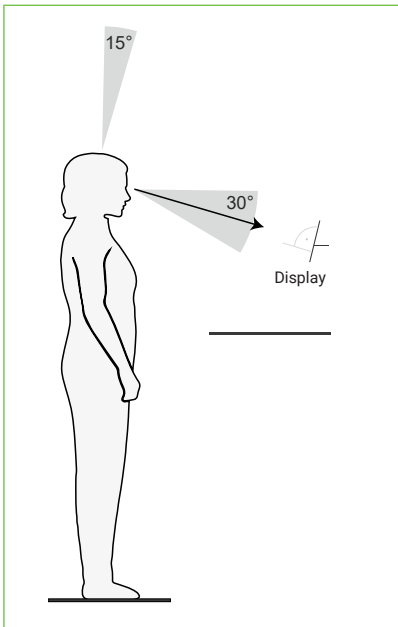


## Minimisation

of danger in activities

In order for technical and structural measures to have an optimal effect, the personal and psychological burden on laboratory employees must be reduced.

- Time pressure, high demands and **repetitive activities reduce attention** and hurt the ability to concentrate.
- The SmartRack® simplifies the work of laboratory staff through the **structured storage** of samples and laboratory equipment and helps to **reduce physical and mental stress** in the laboratory.

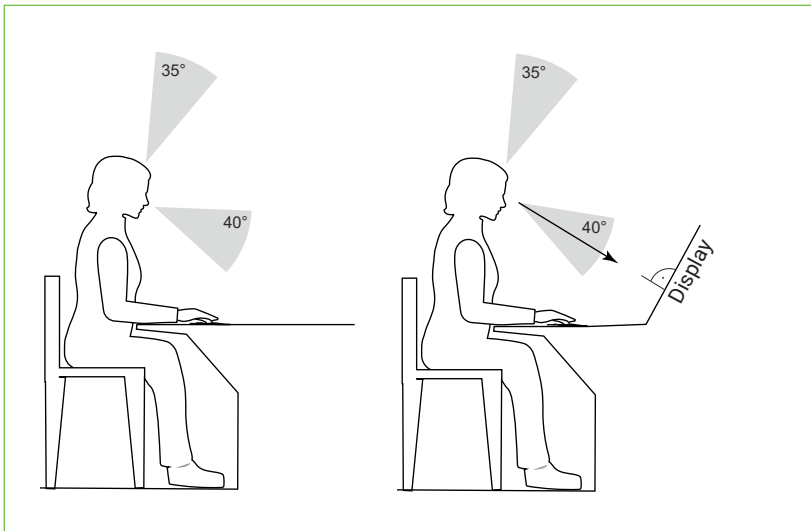


**Ergonomic design of computer workstations for standing activities by using the SmartRack®.**

**With an optimal inclination of the head of 15° during standing activities, a 90° angle to the screen surface should be maintained**

The SmartRack® also optimises the use of screens on laboratory work tables and on laboratory fume hoods. The SmartRack®'s optional tablet holder allows the individual adjustment of the viewing angle through the height positioning of the slot rails.

*Ergonomics for standing activities: When working, especially in the laboratory environment, the height of the worktable is usually not adjustable. Since it is important to ensure an optimal inclination of the head in relation to the work and/or the screens, only the SmartRack® with its tablet holder currently allows the optimal, ergonomic positioning of the screen.*

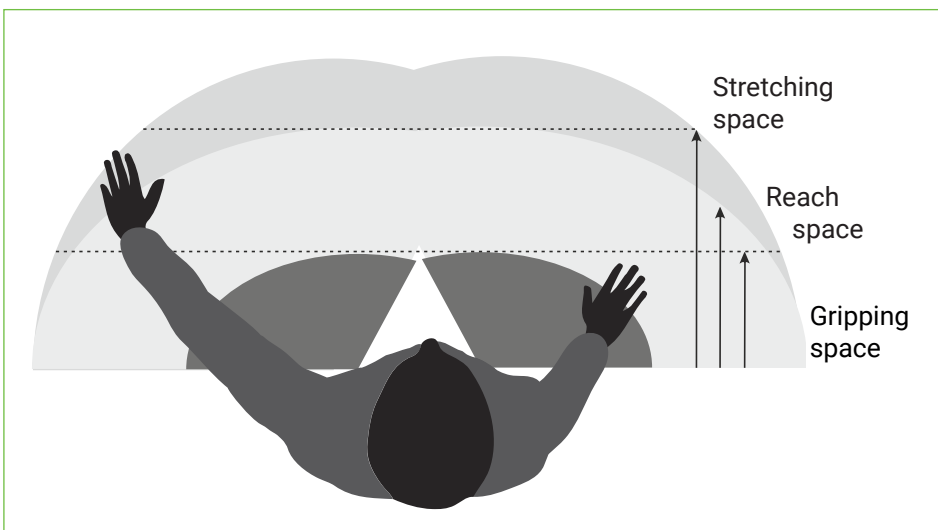


**Ergonomic design of computer workstations for sedentary work by using the SmartRack®**

**With an optimal inclination of the head of 35° during sedentary activities, a 90° angle to the screen surface should be maintained.**

The use of screens at the laboratory workstation is also optimised by the SmartRack®. The SmartRack®'s optional tablet holder allows the individual adjustment of the viewing angle through the height positioning of the slot rails.

*Ergonomics for sedentary work (left without, right with screen at the workplace): for sedentary work, it is important to ensure an optimal inclination of the head in relation to the work on laboratory tables, laboratory fume hoods and/or screens*



**Optimum use of gripping space, reach space, stretching space through the SmartRack®.**

An ergonomic optimisation of the workplace helps to relieve the shoulders, eyes and heads of users of the SmartRack®. This is achieved because all the work equipment can be optimally placed in the field of vision and within reach of the users.

*Three areas of the direct working environment: the gripping area for direct access in front of the laboratory assistant, the reach area next to it - it can be reached by stretching the arm, the stretching area requires a short-term displacement of the body's centre of gravity*

## How the SmartRack® saves you money.

Laboratory employees in Germany are paid an average monthly salary of EUR 3,375. Of course, significantly higher salaries are also possible and not uncommon.

### Value-based pricing approach

**Or: The SmartRack® is becoming more and more affordable and saves you money.**

An employee costs his employer about 4,000 EUR per month - in the example shown here (salary plus social security contributions)

- **Case 1 - Personal injury:** If a SmartRack® only prevented one single accident with personal injury during its entire service life, e.g. due to the spilling of an acid, which would lead to a downtime of at least 2 weeks, then the use of the SmartRack® would have avoided costs of about 2,000 EUR - far more than the SmartRack® itself costs.
- **Case 2 - Property damage:** If an accident caused damage to property, e.g. if acid was accidentally spilled over a scale which was in the outlet and it broke as a result, damage of several thousand euros would have quickly occurred.
- **Case 3 - Sample loss:** The loss of a sample due to its confusion or overturning would quickly also lead to a loss of work done of about 2 weeks. If only one such case would be avoided by using the SmartRack®, then this would correspond to a value of EUR 2,000, which is also significantly more than the purchase cost of a SmartRack®.
- **Case 4 - Work accident:** Did you know that every accident at work in the chemical industry costs an average of €25,000? In 2018 alone, more than 15,000 accidents at work were reported in this industry. The resulting costs and work downtime result in horrendous amounts and could be avoided by better occupational safety and better working conditions. The SmartRack® makes its contribution at this point by offering the highest level of safety thanks to its stable metal frame and the integrated anti-tipping protection for the entire SmartRack®. The modules are securely hooked into the slot rails of the SmartRack® by a click mechanism, so that all the samples and devices are securely fixed.

## Better Basics Laborbedarf - bespoke laboratory organisation - smart basics for laboratories



Photo: Building of the Better Basics Laborbedarf GmbH in Dresden

### YOU ARE INTERESTED IN OUR PRODUCTS OR YOU HAVE FURTHER QUESTIONS?

Get in touch with us:  
[contact@better-basics.de](mailto:contact@better-basics.de)

You can also find more information and news about our product innovations at  
[www.Better-Basics-Laborbedarf.de](http://www.Better-Basics-Laborbedarf.de)

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