

## **On the safe side with customized safety cabinets for modern laboratories**

The storage of flammable liquids and solids, hazardous substances and chemicals is part of everyday laboratory life across all industries. It is regulated in various laws such as the storage of flammable liquids in the Ordinance on Industrial Safety and Health (BetrSichV) or the Technical Rules for Hazardous Substances (TRGS). Passive storage refers to the storage of originally packaged or tightly sealed substances whose vapours do not normally escape into the atmosphere. Passive storage in safety cabinets is regulated in detail in the TRGS 510 regulation. In practice, however, active storage is usually a reality when substances are filled and decanted at the safety cabinet, substances are used or waste materials are produced that have to be disposed of. Active storage therefore includes the storage of flammable liquids in transportable containers which are used at the place of their storage as stationary collection containers or opened for other purposes. Beyond fire protection, more extensive safety measures are now required. In particular, the increased escape of vapours and the resulting higher risk of explosive atmospheres require appropriate solutions.

### **A cabinet series that meets all legal requirements and attaches particular importance to user-friendliness.**

With the TÜV-approved DISPOSAL UTS ergo line, DÜPERTHAL has created a special furnishing object for the laboratory. Special safety cabinets for active storage options in various designs have been developed to meet the most diverse requirements and work processes. In order to ensure safe filling and decanting, all models of the cabinet series for active storage are equipped with optimised ventilation and extended earthing in accordance with the current regulations TRGS 509 and TRGS 526 (Laboratory Directive). Ergonomic, comfortable handling and mobility are of course standard.

### **Explosion protection through efficient airflow and safe grounding**

The effectiveness as well as the control of the exhaust air are an important component for the adherence to the explosion protection concept. During active storage, safety cabinets must be connected to a technical ventilation system and monitored. The new safety cabinets have an efficient air duct with increased exhaust air volume flow, the threefold effect of which ensures safety. With the object extraction system, vapours and pollutants that can be produced during decanting at the collection container are safely absorbed directly at the point of origin. At the same time, the second stage of the safety package is the extraction of the entire interior of the cabinet. In addition, all bases are equipped with a permanent floor extraction system with frontal exhaust air slots. When the exhaust air is connected, vapours and pollutants that collect on the floor are automatically and safely collected and fed to the exhaust air. In addition, the ventilation function is monitored with the standard integrated exhaust air monitoring unit. In the event of a pressure drop or ventilation failure, an acoustic error message is issued. In order to maintain explosion protection, active storage requires continuity of earthing or equipotential bonding. Therefore all surface coatings of the safety cabinets inside and outside as well as the attachments and installations are designed to be electrically conductive in accordance with TRGS 727. The connection to the in-house earthing is made via equipotential bonding lugs.

### **Always the right impulse with sensors and the intelligent assistance system Smart Control**

The Smart Control intelligent assistance system integrated as standard monitors the functionality of the exhaust air and the current filling level of the collection containers in the safety cabinet. The pulse generator for determining the filling level can be either a capacitive sensor or float sensors with one to three measuring points. The information is displayed on a touch display with error display and logging function. The intelligent system warns in time of overfilling and gives a corresponding optical and acoustic alarm, which can also be forwarded via potential-free contacts.

### **Documentation provides security - not only in case of fire**

In the event of fire, the safety cabinets of the DISPOSAL UTS ergo line series tested according to DIN EN 14470-1 guarantee 90 minutes of fire resistance. In addition, the model series has been awarded the TÜV Süd High Quality Seal of Approval for superior design, user-friendliness and extended service life. Both the test certificate and the associated explosion protection document are important for a comprehensive hazard analysis. The Industrial Safety Ordinance obliges every employer to carry out a risk assessment for his work equipment. In addition to the Occupational Health and Safety Acts and

TRGS 526, a large number of additional regulations must be taken into account in the laboratory. Tested and certified facilities and products simplify the necessary documentation in sustainable quality and environmental management. Creating a safe workplace with individual design options is essential for sustainable laboratory work and for the social competence of the operators.

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### Images



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