



Experts in hazardous materials storage



***Integrating hazardous materials storage into the modern-day laboratory***



## THE LABORATORY IN TRANSITION

The past few decades have seen labs undergo a multitude of changes. While growing environmental awareness and sustainability-centred thinking have advanced, the development of fume hood technologies, the focus on making laboratory facilities flexible and adaptable has also intensified. This is because research projects and the demands they place on labs are changing at ever greater speed.

On top of this comes an increased diversity of chemicals and gases, many of which are classified as hazardous. We now have to combine safety with convenience and efficiency while retaining flexibility in order to minimise the need for structural changes to buildings.

It is precisely this challenge that asecos has been mastering since 1994, with the development of storage cabinets for the safe storage of hazardous materials in the workplace.

In close partnership with lab designers and lab furniture manufacturers, asecos develops individual solutions and provides support in the planning of hazardous material storage. Our brochure contains a wide range of design options as well as new trends to consider when it comes to the management of hazardous materials indoors.



## THE STORAGE ROOM BECOMES A PIECE OF LABORATORY FURNITURE

Real practice confirms that lab workers today are as exposed to significant safety risks from unprotected hazardous materials in the workplace as they have always been. To minimise these risks, hazardous material storage in the lab is restricted to the quantities for daily use. For a long time, there was no safe solution for the storage of larger quantities or rarely used chemicals in the laboratory. These materials were kept in centrally located, fire-protected store rooms. But for day-to-day handling this meant covering large distances and the time-consuming decanting of substances from one container to another.

Modern safety storage cabinets that comply with EN 14470-1/-2, however, with 90-minute fire resistance, provide a comparable level of protection – and are an inexpensive alternative to a central storage room. They make it possible to store hazardous materials close to the workplace and thus meet laboratory process requirements while also satisfying ergonomic and safety aspects. Thanks to the decentralised storage design, all lab workers have the materials they need directly on hand.

So, central storage facility for hazardous materials or safety storage cabinets?

Both solutions have their advantages. In tandem, they complement each other perfectly and guarantee safe working procedures.

**»»»** *In the past, balancing safety and flexibility was a daily struggle.*



### Storage in the Lab

- + flexible
- dangerously unsafe



### Central Storage Room

- + safe
- totally inflexible

# THE RIGHT CABINET FOR EVERY TYPE OF HAZARDOUS MATERIAL

The many different properties of hazardous materials place specific demands on the design of safety storage cabinets. For flammable materials, for example, a fire-resistant design is important in order to protect stored material from a critical temperature increase in the event of fire. For aggressive materials, however, the top priority is high corrosion resistance.

But special considerations also influence the choice of cabinet. Integrated storage solutions play an essential role in the modern lab. asecos safety storage cabinets can be perfectly integrated into lab benches, and become a natural part of the room structure. In a free-standing format they form a central storage point for all lab personnel.



## TALL CABINETS

offer maximum storage volume. Numerous door, interior and colour options create the right solution for every application. Full integration into the laboratory unit guarantees safe hazardous material storage directly in the workplace. Installing several tall storage cabinets in a separate room creates a central hazardous materials storage room – completely avoiding any structural change to the room.



**SAFETY STORAGE CABINETS WITH VERTICAL DRAWERS**

offer the same storage volume as 90 cm-wide standard units, but with a width of only 45 cm. The new cabinet depth of 86 cm makes full use of the space next to the fume hood. Thanks to the vertical drawer design, lab workers have a perfect overview of stored materials and can also access all stored containers from both sides.

**UNDER BENCH SAFETY STORAGE CABINETS**

fit perfectly under laboratory fume hoods and work benches, and guarantee efficient, ergonomic laboratory processes. They can be perfectly combined with supply and waste disposal systems.

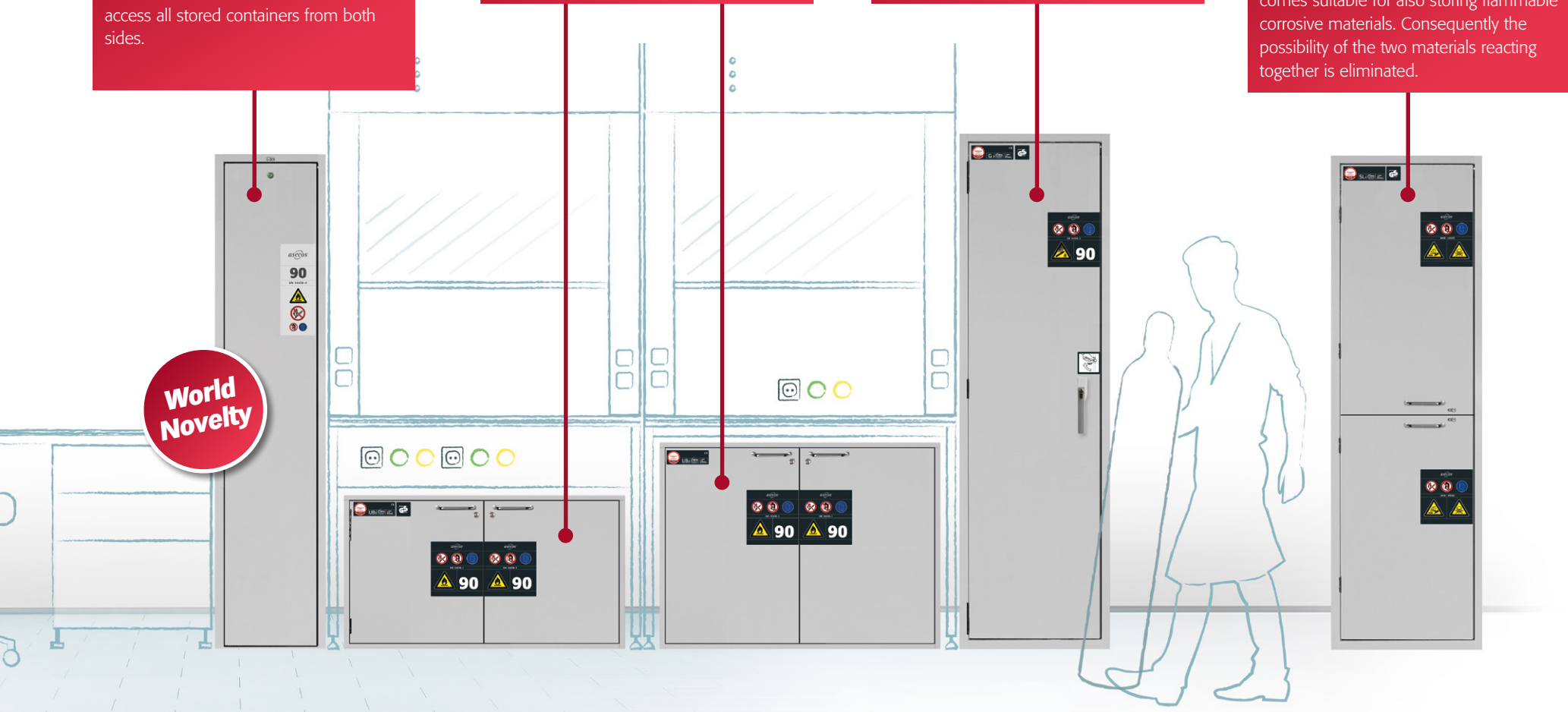
**GAS CYLINDER CABINETS**

are particularly suitable for safely housing gas cylinders indoors. There are numerous pipe lead-through possibilities on the top of the cabinet, which means the cabinet can work as a decentralised gas supply system.

**CABINETS FOR ACIDS AND ALKALIS**

are separated by a horizontal or vertical central wall. This creates two hermetically separated and highly corrosion-resistant storage chambers for the safe storage of acids and alkalis in just one cabinet. With the addition of a 90-minute fire resistant wall to create a combination cabinet, it becomes suitable for also storing flammable corrosive materials. Consequently the possibility of the two materials reacting together is eliminated.

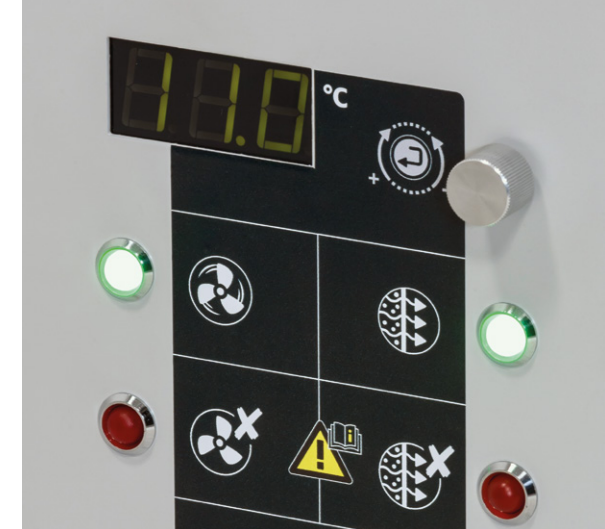
**World Novelty**



## SPECIAL SOLUTIONS TO MEET YOUR INDIVIDUAL NEEDS

Our standard range offers more than 250 different safety storage cabinets. And if you can't find the right solution for your laboratory, we will consult with your laboratory planner to design a cabinet that meets your project's specific needs. In the past, we have created numerous bespoke solutions for clients. Many of them have now become standard items in our range.

Special dimensions, different colours, individual interiors, or completely new solutions – our R&D team in Gründau, Germany, put clients' needs first. From the successful design of earthquake-proof cabinets, supply and disposal systems, to safety storage cabinets with a cooling function for temperature sensitive flammable materials, we have created unique solutions for applications all around the world.







## ONE CABINET – ENDLESS POSSIBILITIES

Thanks to a wide variety of interior configurations and accessories, asecos cabinets can be individually tailored to your needs. Together with the 250-plus type-tested standard cabinets which allow for only minor alterations to the exterior without re-testing, asecos offers over 4,800 different interior equipment options.

For example, to store large amounts of small containers in a well-ordered and space saving way, pull-out drawers are the best choice. Whilst shelves combined with bottom collecting sumps are particularly suitable for larger cylinders and canisters. Depending on the properties of the materials to be stored, interior fittings can be made from stainless steel or powder-coated sheet steel. Metal-free shelves with trays made of polypropylene and polyethylene are especially suitable for the storage of corrosive materials. We are happy to work with your lab designer to find the best solution for you.

Optimal integration into existing space is achieved with different cabinet sizes and door variants. Options include space-saving folding doors, smooth functioning wing doors and a motorised automatic door closing system.

You can decide whether you want a safety storage cabinet that stands out visually in the laboratory or one that blends in with the lab furniture. A wide choice of colour variations gives you greater planning scope.



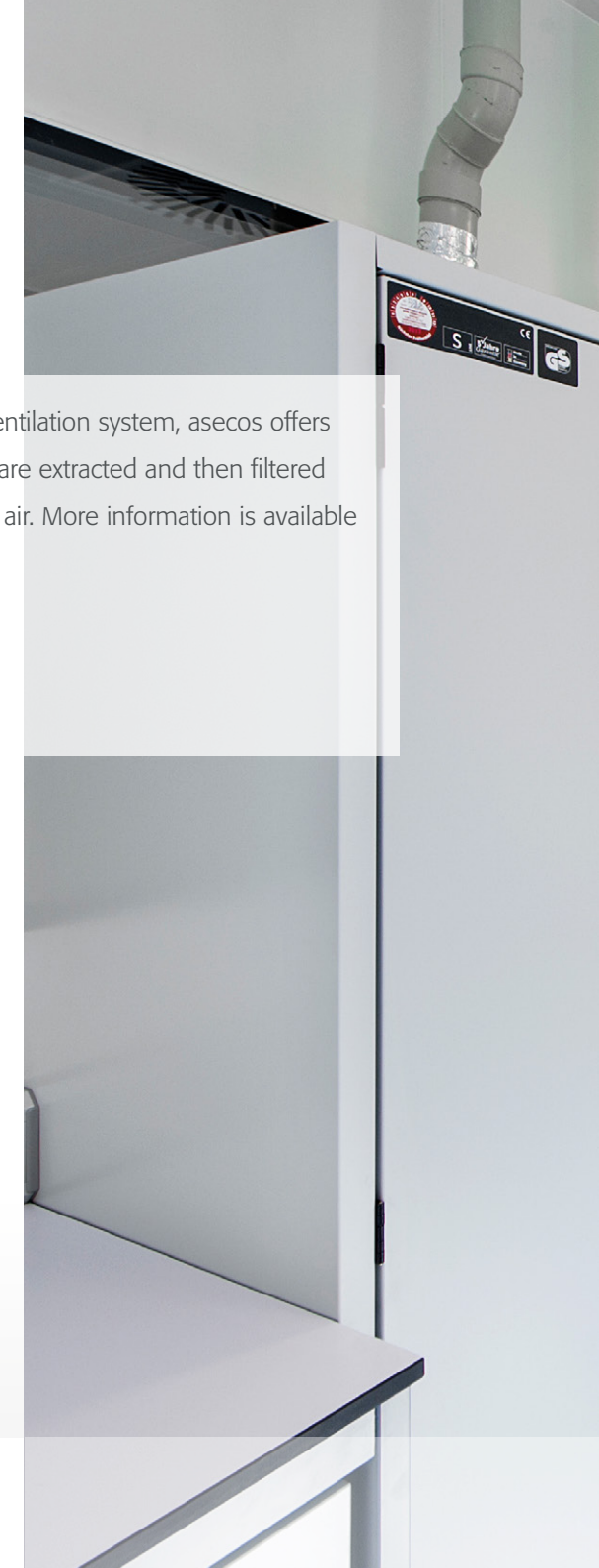


## TECHNICAL VENTILATION OF SAFETY STORAGE CABINETS

In many cases, the air inside the safety storage cabinets need to be extracted. This is why asecos cabinets are prepared for connection to a ventilation system as a standard. When we design our products, we always consider the best ventilation possibilities while also ensuring that cabinet construction incorporates energy efficiency, safety and spacial considerations. We also bear in mind the different properties of the hazardous materials to be stored and the cabinets are designed to minimise pressure drop.

The connection points are located on the ceiling of the free-standing tall cabinets which makes it possible to place several units side-by-side. Under bench cabinets have their connection points at the back for a convenient integration into the fume hood.

If it is not possible to connect to a central ventilation system, asecos offers plug-in filtration systems. Hazardous fumes are extracted and then filtered and released into the environment as clean air. More information is available from your asecos partner.





self-closing fire damper



integrated air ducts



filtration systems

## OUTSTANDING QUALITY MADE IN GERMANY

asecos hazardous materials storage cabinets are characterised by quality, reliability and, in the case of fire-tested cabinets, superior fire resistance. Fire resistance is tested at regular intervals in a fire test performed by an independent material testing Institute – in accordance with the strict requirements of EN 14470-1/-2. The classification into different Types indicate the level of protection, i.e. the duration of fire resistance.

The cabinets are also put through a mechanical endurance test consisting of 50,000 test cycles. They are GS-tested and comply with the requirements of the laboratory furniture standard EN 14727. Some units undergo additional international testing protocols such as the FM 6050 or UL 1275.

Compliance with national and international standards is not the only proof of our product quality. Our factory in Gründau, Germany, and our processes are also regularly inspected and monitored. Certifications in accordance with ISO 9001 and ISO 14001 including an annual environmental report on sustainability also highlight our excellent quality and environmental management throughout the entire organisation.



## OUR ONLINE SERVICE FOR YOU

At [www.asecos-specs.com](http://www.asecos-specs.com) we provide you with technical specifications, drawings, BIM data, product images, tender texts, operating manuals, certificates, test reports and much more. Take advantage of our convenient media service and access all relevant planning and design data.

To obtain your login data, contact your asecos partner or send an e-mail to [data@asecos.com](mailto:data@asecos.com).

With our cabinet configurator, you can create your own safety storage cabinet with just a few clicks. Take a look at our extensive asecos product range to find a cabinet that suits your individual needs. Try it yourself – it's easy!

[www.asecos-configurator.com](http://www.asecos-configurator.com)







# ASECOS – YOUR PARTNER FOR HAZARDOUS MATERIALS STORAGE

asecos, Europe's leading manufacturer of safety storage cabinets, has set itself the task – not only within Germany, but also internationally – of raising awareness about storing and handling hazardous materials. Since this topic still receives insufficient attention globally, it is crucial that we continue to make legislators as well as employers and workers aware of the importance of storing and handling hazardous materials safely.

In international and national working groups and committees such as SEFA, the DIN Standardization Committee and the European Committee for Standardization, we are committed to promoting the highest safety standards. Worldwide, asecos maintains partnerships with many laboratory furniture manufacturers and lab designers. Together we develop and design modern, functional and sustainable solutions that can be easily integrated into any laboratory setting and create safe laboratory environments.

**We look forward to being part of your lab.**



**With the kind support of:**

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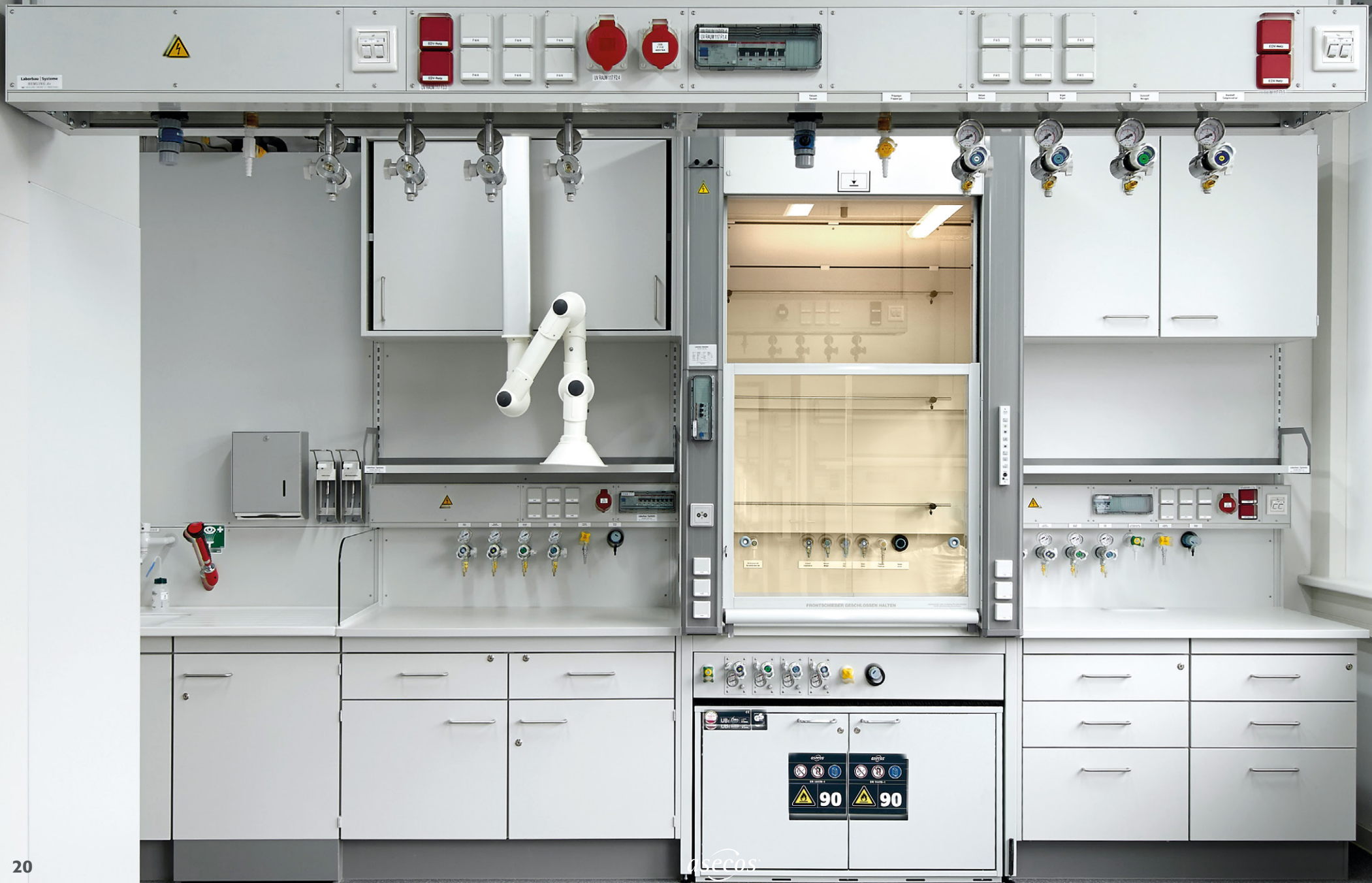
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# REFERENCES









P650-B  
INFLAMMABLES

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EN SÉRIE  
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