

Köttermann cabinets for hazardous substances.

Safe and convenient.



We protect –
with ease.

Highest fire resistance
and XXL storage space.



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Overview of cabinets for hazardous substances

Safe reduction of potential risks

When it comes to working in the laboratory, safety is our top priority. Every day, people deal with a large number of potentially hazardous fluids and solids. It is good to know that there is a laboratory system that makes working in the laboratory safer and even better. EXPLORIS® safety technology reduces the potential risk to a minimum.

Whether acids, bases, toxic chemicals or flammable liquids, EXPLORIS® offers a safe storage option for all hazardous substances.

Depending on the specific hazard of a chemical, EXPLORIS® includes a series of special cabinets.

Cabinets for hazardous substances are permanently ventilated, so that harmful fumes are continuously removed and do not pollute the laboratory air. This is done either with a connection to the in-house exhaust air system, a planned external fan or by means of a fan integrated in the cabinet.

◦ Certified

Safety cabinets for flammable liquids and gas cylinder cabinets carry the highest fire resistance

Cabinets belonging to the current range are regularly tested by an independent institute.

◦ Maximum volume

XXL underbench safety cabinets make optimum use of the existing storage space.

◦ Safe work environment

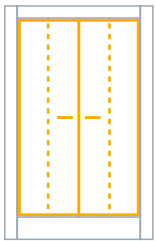
A suitable storage facility for all hazardous substances

◦ Ergonomic

One-hand operation, automatic closing, full-extension drawers

Benefits

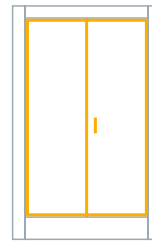
- The use of EXPLORIS® cabinets for hazardous substances reduces the following risks:
 - accumulation of volatile hazardous substances in the laboratory atmosphere
 - ignition of flammable hazardous substances
 - leakage of stored cylinders
 - easy access by unauthorized persons
 - bursting of pressurized gas cylinders
- Certified safety according to the highest standards
 - for safety cabinets:
 - EN 14470-1 for flammable liquids
 - EN 14470-2 for pressurized gas cylinders
- Storage of hazardous substances in compliance with the directives



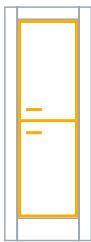
Safety cabinets
for the storage of
flammable liquids



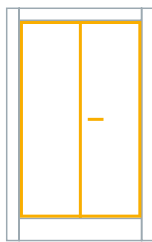
**Tall safety cabinets
with pull-out doors**
for the storage of
flammable liquids



**Safety cabinets for
pressurized gas cylinders**
for the storage of
pressurized gas cylinders



Acid and base cabinets
for the storage of corrosive
substances



Chemical storage cabinets
for the storage of non-corrosive,
non-flammable substances



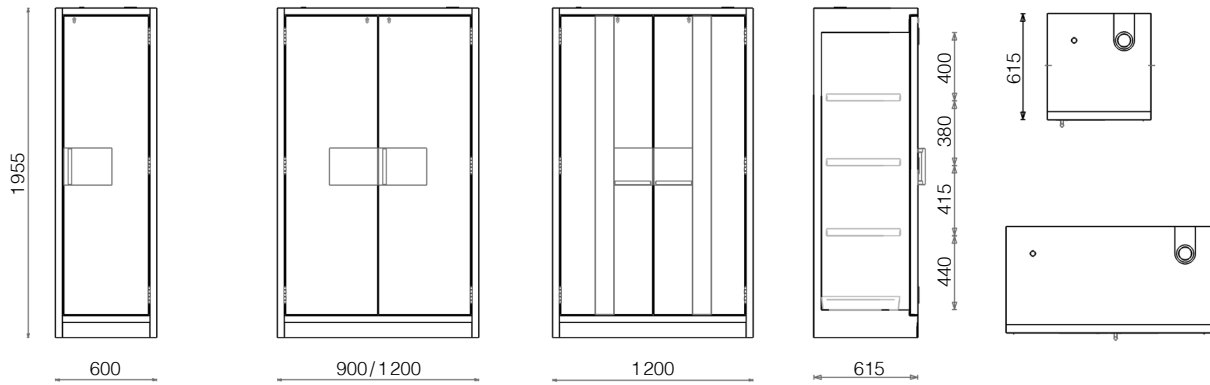
First aid / Fire protection
Close at hand in case
of an emergency

Safety cabinets

For flammable liquids according to EN 14470-1



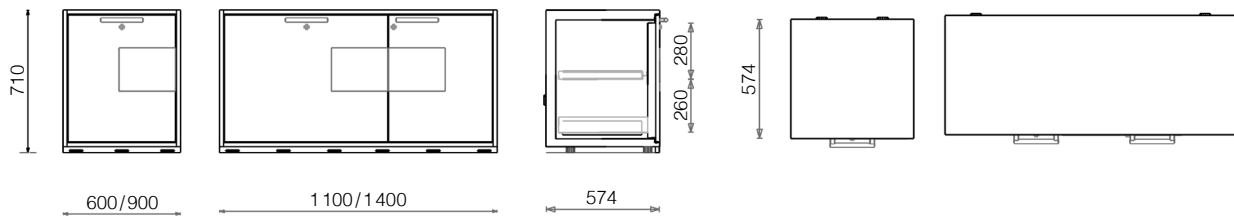
Dimensions EXPLORIS® Tall safety cabinets



Dimensions in mm | Technical data on page 21

	Closing	Width			Height	Depth
1 hinged door left or right	manual	600	–	–	1955	615
2 hinged doors	manual	–	900	1200	1955	615
1 hinged door left or right	automatic with delay	600	–	–	1955	615
2 hinged doors with one-hand operation	automatic with delay	–	900	1200	1955	615
2 folding doors	manual	–	–	1200	1955	615

Dimensions EXPLORIS® Underbench safety cabinets



Dimensions in mm | Technical data on page 21

	Width			Height	Depth	
1 pull-out	590	890	–	–	710	574
2 pull-outs	–	–	1100	1400	710	574
2 hinged doors	–	–	1100	–	710	574
2 hinged doors, 1 pull-out	–	–	–	1400	710	574

Design

- **Material**
 - doors and carcass are double-walled and thermally insulated
- **Colour**
 - outer panels in Arctic White (NCS S 0505 R80B), similar to RAL Design 260 90 05
- **Certificates**
 - GS-certified with tests according to EN 14470-1, Type 90 (fire resistance 90 minutes)
- **Doors**
 - automatic thermomechanical closing in case of fire
- **Lock**
 - safety lock with visual indicator
- **Adjustable feet**
 - integrated height adjusters for levelling on uneven surfaces
- **Tall safety cabinets**
 - with options for automatic, time-delayed closing
 - forklift accessible, transport rollers allow easy transport on site
- **Exhaust air connection**
 - tall safety cabinet: DN 75 with automatic thermomechanical closing
 - underbench safety cabinet: DN 50 with automatic thermomechanical closing
- **Ventilation**
 - for connection to an on-site exhaust air system

Equipment options

- **Tall cabinets**
 - with hinged or folding doors
 - widths 600, 900 and 1200 mm
 - with automatic door closing
 - with shelves and collection tray or self-closing drawers in the event of fire
- **Underbench cabinets**
 - with hinged doors and/or pull-outs
 - widths 590, 890, 1100 and 1400 mm
 - pull-outs with a second level
 - canister with fill level monitoring

Description

EXPLORIS® safety cabinets comply with the highest fire resistance class (Type 90), are tested according to EN 14470-1 and have a GS mark. They are the best solution for the storage of flammable liquids in the laboratory. The fire-proof, thermally insulated cabinets close automatically in the event of a fire; in this way, they give exposed persons sufficient time to leave the room.

Being connected to a permanently operated exhaust air system, they effectively prevent the accumulation of flammable gas mixtures.

Properties and benefits

- For the storage of flammable, non-corrosive liquids in compliance with the directives
- Tall and underbench cabinets perfect for the integration in cabinet and worktop assemblies of the EXPLORIS® product line
- Underbench cabinets for fume cupboards for the direct use of solvents in the workspace
- Various equipment options
- Safe and easy operation
- GS-certified
- Uniform colour in the entire laboratory (furniture, fume cupboards, cabinets for hazardous substances)
- Adjustable door damping ensures more comfort when filling or removing
- XXL two-level storage space in safety cabinets: double the storage capacity of 1 liter cylinders compared to conventional cabinets

The space-saving miracle

XXL two-level storage space

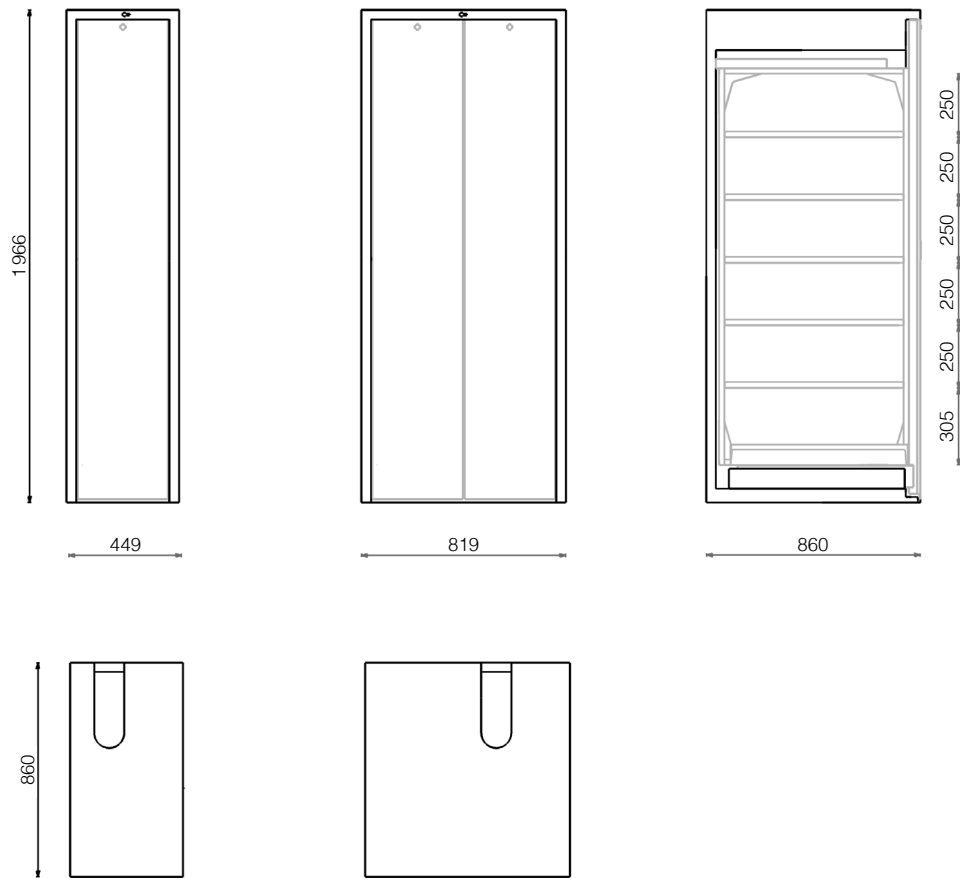


Tall safety cabinets with pull-out doors

Maximum ease of use and perfect visibility



Dimensions Tall safety cabinets with pull-out door



Tall safety cabinet with pull-out door

Dimensions in mm | Technical data on page 21

	Width		Height	Depth
Tall cabinet with pull-out door	449	819	1966	860

Design

- Material
 - doors and carcass are double-walled and thermally insulated
- Colour
 - outer panels in Arctic White (NCS S 0505 R80B), similar to RAL Design 260 90 05
- Certificates
 - GS-certified with tests according to EN 14470-2, G 90 (fire resistance 90 minutes)
- Doors
 - pull-out doors:
 - electromechanical operation
 - automatic, time-delayed closing
 - stop function when detecting any obstacles
 - automatic closing in case of fire
- Lock
 - safety lock with visual indicator
- Adjustable feet
 - integrated height adjusters for levelling on uneven surfaces
- Exhaust air connection
 - DN 75 with automatic thermomechanical closing
- Ventilation
 - for the connection to an on-site exhaust air system

Equipment options

- Four or five shelves per pull-out
- Two different widths
- Sump pan

Description

Due to its electromechanical technology, the new **EXPLORIS® tall safety cabinet with pull-out door** offers a safe and easy operation with its delayed closing and stop function for obstacles.

All stored substances can be directly accessed from two sides thanks to the automatic pull-out door. In addition to an optimized overview, the pull-out offers height-adjustable shelves that users can change as they wish.

Properties and benefits

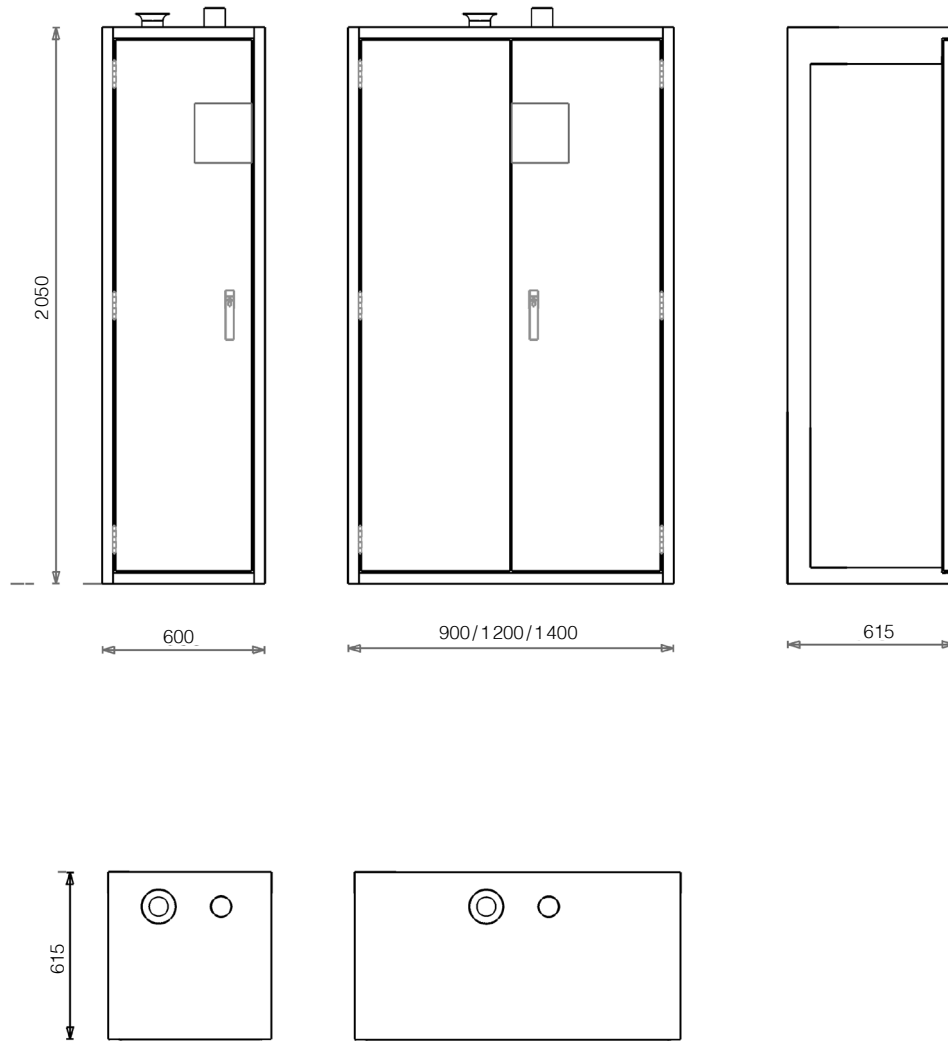
- For the storage of flammable, non-corrosive liquids in compliance with the directives
- Perfect for the installation next to fume cupboards and for the integration in bench assemblies of the EXPLORIS® product line
- Easy accessibility to stored cylinders for hazardous substances
- Safe and easy operation
- GS-certified
- Large storage volume with small width
- Variable positioning of shelves for containers of different heights

Safety cabinet for gas cylinders

Storage with highest fire resistance



Dimensions Safety cabinet for pressurized gas cylinders



Safety cabinet for pressurized gas cylinders

Dimensions in mm | Technical data on page 21

	Width				Height	Depth
Tall cabinet with hinged doors	600	900	1200	1400	2050	615
max. no. of cylinders	2	3	4	4	–	–

Design

- Material
 - doors and carcass are double-walled and thermally insulated
- Colour
 - outer panels in Arctic White (NCS S 0505 R80B), similar to RAL Design 260 90 05
- Certificates
 - GS-certified with tests according to EN 14470-2, G 90 (fire resistance 90 minutes)
- Doors
 - doors with manual opening/closing
- Lock
 - safety lock with visual indicator
- Adjustable feet
 - integrated height adjusters for levelling on uneven surfaces
- Exhaust air connection
 - DN 75 with automatic thermomechanical closing
- Ventilation
 - for the connection to an on-site exhaust air system
- Possible number of cylinders
 - cabinet width 600mm: up to 2 cylinders à 50l*
 - cabinet width 900mm: up to 3 cylinders à 50l*
 - cabinet width 1200mm: up to 4 cylinders à 50l* (very compact storage)
 - cabinet width 1400mm: up to 4 cylinders à 50l* (recommended for perfect handling)

Equipment options

- Hinged doors in different widths
- Mounting rails for cylinder stations
- Foldable ramp for easy storage of cylinders
- Cylinder retainers
- Fitting options for gas pipes in the ceiling area
- Choice of regulators

Description

Safety technology can save lives in the event of fire. **EXPLORIS® FWF 90 safety cabinets** for the storage of toxic or flammable gases are designed so as to protect the substances stored inside against fire from the outside.

The cabinet exterior and interior are thermally insulated from each other. A fire from the outside warms up the cabinet interior with a considerable time delay. Open doors close automatically in the event of a fire, as well as supply and exhaust air ducts. In addition, the door surrounds are sealed by special fire protection seals. The cabinet is thus hermetically insulated against a fire from the outside.

Properties and benefits

- Perfectly suitable for the storage of gas cylinders in compliance with the directives
- With proven fire resistance (Type G 90) according to EN 14470-2
- Meets all requirements according to TRGS 510
- GS-certified
- Safety lock with visual indicator
- Integrated connection to the exhaust air system

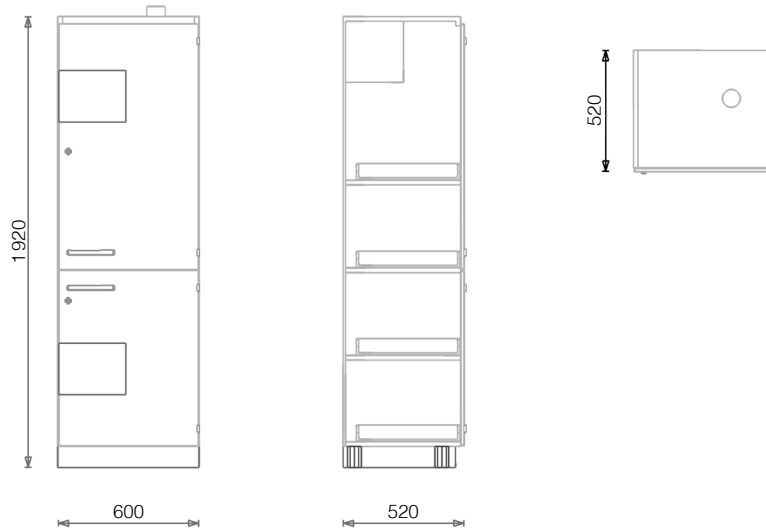
*gas cylinders with outer diameter 230mm

Acid and base cabinets

Well-protected against aggressive pollutants



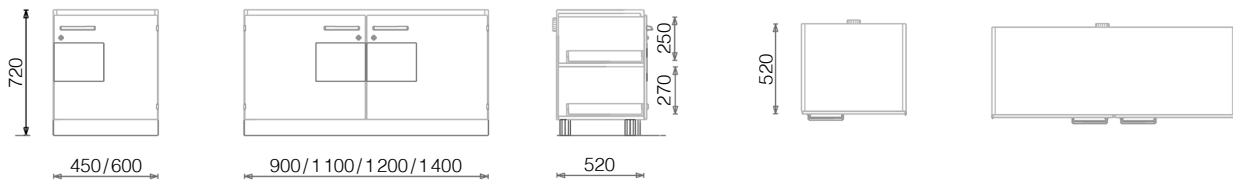
Dimensions Tall Acid and base cabinets



Dimensions in mm | Technical data on page 22

	Width						Height	Depth	Pull-outs
Tall cabinets, 1 door left/right	-	600	-	-	-	-	1920	520	4

Dimensions Underbench Acid and base cabinets



Dimensions in mm | Technical data on page 22

	Width						Height	Depth	Pull-outs
Underbench cabinets, 1 door left/right	450	600	-	-	-	-	720	520	2
Underbench cabinets, 2 doors	-	-	900	1100	1200	1400	720	520	3/4*
Underbench cabinets for canisters, 1 door left/right	450	600	-	-	-	-	720	520	1
Underbench cabinets for canisters, 2 doors	-	-	900	1100	1200	1400	720	520	3

*3 pull-outs for the versions with integrated fan

Design

- Material
 - solid polypropylene
- Colour
 - Arctic White (NCS S 0505 R80B), similar to RAL Design 260 90 05
- Pedestal colour
 - Anthracite / Arctic White depending on the installation situation
- Doors
 - pull handle:
 - zinc die-cast
 - matt chromium-plated
 - hinges, coated:
 - opening angle 270°
 - pull-outs:
 - made of solid polypropylene
 - liquid-tight
 - Canister pull-outs:
 - made of solid polypropylene
 - liquid-tight
- Lock
 - furniture lock made of plastic
- Adjustable feet
 - integrated height adjusters for levelling on uneven surfaces
- Exhaust air connection
 - for the connection to an on-site exhaust air system:
 - tall cabinets (with / without fan): DN 75
 - underbench cabinets (without fan): DN 50
 - underbench cabinets (with fan): DN 75

Equipment options

- Tall cabinets with option for integrated fan for active ventilation
- Optional ventilation with an external fan
- Underbench cabinets in various widths for fume cupboards and workbenches
- Liquid-tight pull-outs also for canisters

Description

Storing damaged containers of acids or bases usually results in the release of aggressive fumes that endanger the health of people working in the laboratory. **EXPLORIS® acid and base cabinets** are permanently extracted, thus minimizing the risk to health.

In addition, acid fumes, due to their corrosive properties, set very high demands on the material of cabinets. For this reason, cabinet carcasses and pull-out trays are all made of durable polypropylene, a material that has proven itself under the most aggressive conditions.

Acid and base cabinets are available as tall or underbench cabinets. Their liquid-tight pull-out trays allow easy access to the contents.

Properties and benefits

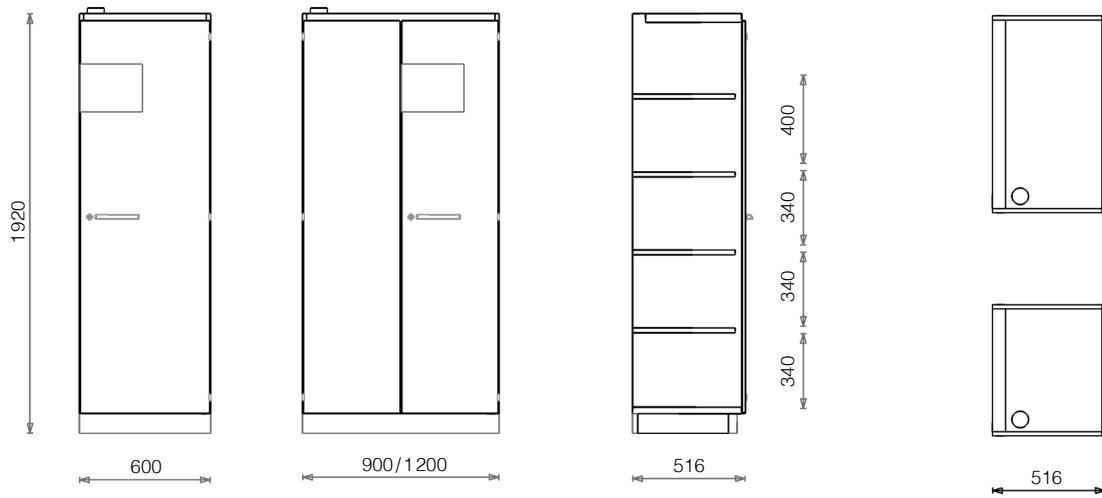
- For the storage of corrosive, non-flammable substances in compliance with the directives
- Suitable for the separate storage of acids and bases
- Can be connected to the exhaust air system to remove aggressive fumes
- Cabinets made of durable, acid-proof polypropylene
- Lockable by corrosion-resistant lock
- Perfect for the installation underneath high-performance fume cupboards
- Drawers on smooth running PTFE strips with end stop

Chemical storage cabinets

Storage without hazardous fumes



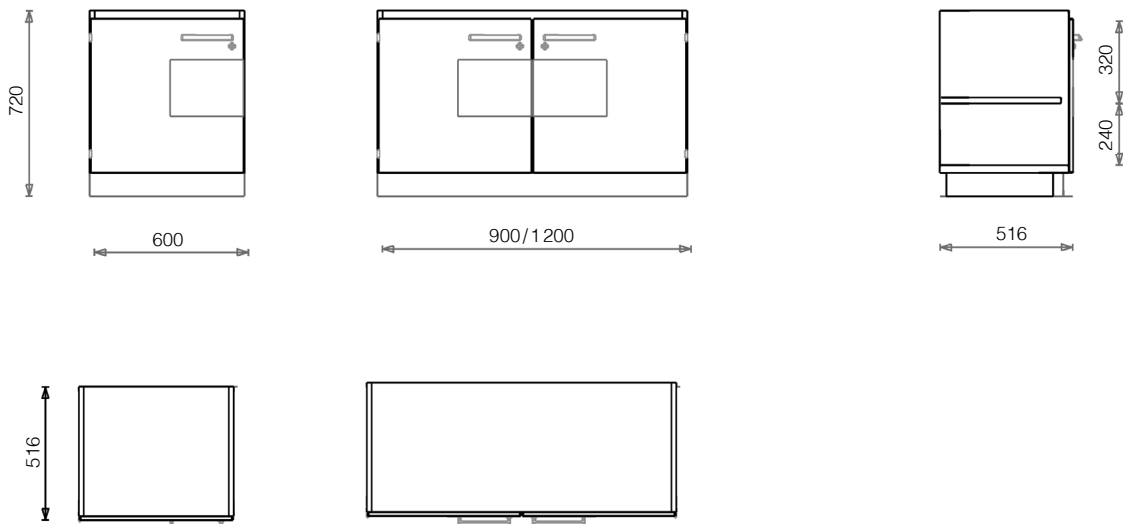
Dimensions Tall chemical storage cabinets



Dimensions in mm | Technical data on page 22

	Width			Height	Depth
Tall cabinets, 1 door left/right	600	-	-	1920	516
Tall cabinets, 2 doors	-	900	1200	1920	516

Dimensions Underbench chemical storage cabinets



Dimensions in mm | Technical data on page 22

	Width			Height	Depth
Underbench cabinets, 1 door left/right	600	-	-	720	516
Underbench cabinets, 2 doors	-	900	1200	720	516

Design

- Material
 - quality steel (1.0330)
 - electrolytically galvanized
 - powder-coated
- Colour
 - Arctic White (NCS S 0505 R80B), similar to RAL Design 260 90 05
- Pedestal colour
 - Anthracite (NCS S 8500N), similar to RAL Design 2000
- Doors
 - are noise-insulated and double-walled
- Pull handle
 - zinc die-cast, matt chromium-plated
- Hinge
 - flap hinge, opening angle 270°
- Lock
 - furniture lock with interchangeable cylinder
- Adjustable feet
 - integrated height adjusters for levelling on uneven surfaces
- Exhaust air connection
 - for the connection to an on-site exhaust air system:
 - tall cabinets (with / without fan): DN 75
 - underbench cabinets (without fan): DN 50

Equipment options

- Integrated fan for active ventilation
- Optional ventilation with an external fan
- Tall or underbench cabinets for fume cupboards and workbenches
- Shelves or ergonomic full-extension drawers
- Installation option for a separately lockable poison compartment for toxic chemicals

Description

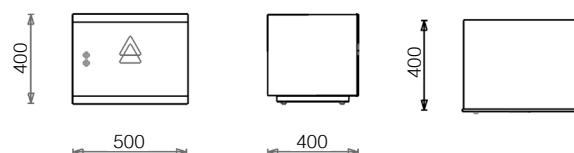
Many chemicals required in the laboratory release fumes during storage. These are not only unpleasant because of their smell, but may also be harmful to the health of the employees in the laboratory. With an **EXPLORIS® chemical storage cabinet**, such problems simply disappear because the fumes of the stored chemicals are efficiently extracted before reaching the laboratory air.

Toxic chemicals can be stored in a special poisons cabinet. It is equipped with a lock to protect the contents of the cabinet from unauthorized access providing increased safety against abusive access. Poisons cabinets can be used either as wall-mounted cabinets or installed in tall chemical storage cabinets.

Properties and benefits

- For the storage of non-corrosive, non-flammable substances in compliance with the directives
- Can be integrated in modular cabinet assemblies
- Lockable against unauthorized access
- The connection to the exhaust air system for permanent ventilation is possible
- Double-walled, noise-insulated doors

Poisons cabinet



- For wall mounting
 - width 500 mm, height 400 mm, depth 364 mm
- For the installation in chemical storage cabinets
 - width 500 mm, height 400 mm, depth 395 mm

First aid and fire protection

Close at hand in case of an emergency



Description

Even with the utmost caution, accidents or even small fires can occur while working in the laboratory.

With the **EXPLORIS® First Aid Kit and Fire Protection Equipment**, everything is at hand to quickly act and help others in case of an emergency. A wide range is available: from emergency and eye showers, first aid cabinets and kits – including DIN compliant filling – to fire extinguishers and fire blankets.

Properties and benefits

- First aid material directly at the place of use
- Protection as required by law
- Everything from one source

Emergency showers



- Eye showers can be perfectly integrated in work-tops and service columns
- Body emergency showers for wall mounting, over-door mounting, or free standing with permanently mounted eye shower and collection tray serve to protect people in the event of fire

First aid cabinets and first aid kits



- Due to their equipment, special first aid kits for laboratory and chemistry provide effective help with minor accidents in the laboratory

First aid and fire protection

Dimensions in mm

	Width x Height x Depth			Details
First aid kit for laboratory and chemistry	400 x 300 x 150	–	–	Filling according to EN 13157
Eye shower	–	–	–	according to EN 15154 Part 2
Body shower	–	–	–	according to EN 15154 Part 1

Technical Data

For safe operation, we recommend the continuous extraction of cabinets for hazardous substances. The required data is summarized on this page.

Tall safety cabinets

Technical data | Further information on page 4

Grid width		600 mm	900 mm	1 200 mm
Recommended extract volume	10-fold	4.1 m ³ /h	6.8 m ³ /h	9.5 m ³ /h
Pressure loss		< 5 Pa	< 5 Pa	< 5 Pa
Cabinet weight		265 kg	343 kg	424 kg

Underbench safety cabinets

Technical data | Further information on page 4

Grid width		590 mm	890 mm	1 100 mm	1 400 mm
Recommended extract volume	10-fold	1 m ³ /h	1.7 m ³ /h	2.2 m ³ /h	2.8 m ³ /h
Pressure loss		< 1 Pa	< 1 Pa	< 1 Pa	< 1 Pa
Cabinet weight		125 kg	145 kg	170/180 kg	230 kg

Tall safety cabinet with pull-out

Technical data | Further information on page 7

Grid width			449 mm	819 mm
Recommended extract volume	10-fold		5 m ³ /h	9 m ³ /h
Pressure loss			< 5 Pa	< 5 Pa
Cabinet weight			ca. 370 kg	ca. 500 kg

Safety cabinets for pressurized gas cylinders

Technical data | Further information on page 10

Grid width		600 mm	900 mm	1 200 mm	1 400 mm
Air exchange 10-fold					
For flammable and oxidizing gases		4 m ³ /h	6 m ³ /h	8 m ³ /h	9,5 m ³ /h
Pressure		< 5 Pa	< 5 Pa	< 5 Pa	< 5 Pa
Air exchange 120-fold					
For toxic gases		42 m ³ /h	71 m ³ /h	93 m ³ /h	111 m ³ /h
Differential pressure		85 Pa	147 Pa	103 Pa	143 Pa
Cabinet weight		365 kg	480 kg	615 kg	690 kg

Tall acid and base cabinets

Technical data | Further information on page 13

Grid width		600mm
Recommended extract volume	All cabinets	23m ³ /h
Pressure drop	Cabinets without fan	15 Pa
Residual pressure available for performance losses	Cabinets with fan	240Pa
Electrical connection	Cabinets with fan	230V / max. 16A
Cabinet weight		111kg

Underbench acid and base cabinets

Technical data | Further information on page 13

Grid width	450 mm	600 mm	900 mm	1 100 mm	1 200 mm	1 400 mm
Recommended extract volume	8 m ³ /h	9 m ³ /h	15 m ³ /h	18 m ³ /h	20 m ³ /h	23 m ³ /h
Pressure loss	< 5 Pa	< 5 Pa	< 5 Pa	< 5 Pa	6 Pa	7 Pa
Residual pressure available for performance losses	Cabinets with fan				240 Pa	
Electrical connection	Cabinets with fan				230 V / max. 16 A	
Cabinet weight	33 kg	44 kg	66 kg	85 kg	88 kg	94 kg

Tall chemical storage cabinets

Technical data | Further information on page 16

Grid width		600mm	900mm	1 200mm
Recommended extract volume	All cabinets	15 m ³ /h	20 m ³ /h	25 m ³ /h
Pressure drop	Cabinets without fan	< 5 Pa	< 5 Pa	10 Pa
Residual pressure available for performance losses	Cabinets with fan	205 Pa	200 Pa	195 Pa
Electrical connection	Cabinets with fan	230 V / max. 16 A		
Cabinet weight		80 kg	110 kg	130 kg

Chemical storage cabinets

Technical data | Further information on page 16

Grid width		600mm	900mm	1 200mm
Recommended extract volume		10 m ³ /h	15 m ³ /h	20 m ³ /h
Pressure drop		15 Pa	20 Pa	30 Pa
Cabinet weight		24 kg	31 kg	38 kg

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