



Technical Catalog  
SCALA laboratory furniture system

# SCALA



**WALDNER**



## Technical Catalog SCALA

The new design of our **SCALA** range of laboratory furniture will set the trend for future laboratory design.

But only if design and functionality work together effectively, real values will result that can contribute to enrich the laboratory environment.

We have redesigned our range of laboratory furniture based on innovative ideas, sophisticated detailed solutions and high-quality materials, thus meeting the requirements of our users with respect to ergonomics and profitability more than ever.

Our **SCALA** laboratory furniture system with its flexible application units can easily be adapted to new room situations. In this way we can provide a large number of different design and furniture variants for every functional area of the laboratory.

With our latest **SCALA** laboratory furniture we offer innovative, mature technology, maximum operational safety, ergonomic design and perfect service. Discover all details of our new furniture on the following pages.

Not without good reason have customers from all over the world relied on us and our service for more than 60 years.

With this technical catalogue, we are providing you with the basis for your future laboratory.

Contact us. Our specialists will always be pleased to talk to you.





## 1 Fume cupboards and extraction systems

Energy efficiency, maximum ergonomics and a larger internal workspace make working with our new fume cupboards even safer and more convenient.

A new design together with an enlarged product range characterise the fume cupboards of our new **SCALA** laboratory range.

Combined with grid lengths up to 2400 mm of our fume cupboards, we offer the most comprehensive product range available in the market. Almost all fume cupboards are also available with Secuflow technology.



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# 1 Fume cupboards and extraction systems

All laboratory work during which gases, fumes, particles or liquids are handled in dangerous quantities and concentrations must be performed in fume cupboards.

Our new fume cupboards ensure maximum safety, excellent ergonomics and maximum economy.

## Reduced energy consumption – increased profitability

The fluid mechanics have been further optimised which means considerably reduced energy consumption of our new fume cupboards while maintaining the high safety level. Our bench mounted fume cupboards with side installation which are tested in accordance with EN 14175, e.g., use 350 m<sup>3</sup>/h/lfm, all bench mounted fume cupboards with Secuflow technology require 270 m<sup>3</sup>/h/lfm.

As an important part of the overall laboratory ventilation scheme, our fume cupboards can be perfectly integrated into the building ventilation concept.

The fact that our Secuflow fume cupboard technology also reduces the investment and operating costs for the ventilation system is another commercial advantage that is made possible by the integrated supportive flow technology. You will find further information on this topic in our Secuflow brochure.

## Improved ergonomics with the inclined operating panel

The operating panel is inclined towards the user for easier handling and operation of all fittings and functions.



#### **Safety through the intake airflow profile on the front edge of the fume cupboard worktop**

It prevents turbulence that could carry pollutant emissions.

Air flowing into the fume cupboard is guided via the airfoil-like profile geometry (with low turbulence) over the worktop to the rear panel low level extraction which ensures the safe removal of heavy gases, e.g. solvent fumes, directly above the worktop.

#### **For more safety**

Maximum user safety is provided by our toothed belt sash mounting along with significantly reduced maintenance effort. The stainless steel reinforced toothed belts prove maximum resistance during endurance tests with more than 200,000 load cycles. The shape of the sash frame offers maximum protection from splashes and splinters.

#### **Anti-slip device for additional protection**

In the unlikely case that both sash mountings fail, the sash is stopped in fractions of a second.

#### **Largest possible access area**

The slender, patented side posts of our fume cupboards offer an increased nominal width of the internal workspace and due to their special shape ensure that there is little turbulence in the intake air.

#### **Larger capacity of the internal workspace**

The internal workspace is 10 % higher thus increasing the entire internal workspace. Useful when working with tall and wide items of experimental equipment.



# 1 Fume cupboards and extraction systems

## Clear view of all processes in the workspace

The high level glazed panel enables tall experimental equipment and processes to be clearly seen.

## The new scaffold points

Scaffold rods with diameters of 12 and 13 mm can be firmly secured.

## All functions at a glance

The Soft Touch control element integrated in the fume cupboard side post provides information on the operational state of the fume cupboard at eye level.

## Sash handle with air guiding function

Air is pushed into the workspace when the sash is opened and pollutant emissions due to the opening sash are prevented. The balanced and free-moving sash mechanism including the release for the sash stop can be operated with one hand.

## The automatic sash

The sash is closed automatically if there is nobody working on the fume cupboard. The photoelectric barrier stops the closing process if there are objects protruding from inside the workspace.

## New fume cupboard widths available

Our bench mounted fume cupboards are now also available with a width of 2100 mm, the side-installed fume cupboards with a width of 2400 mm. Of course also with Secuflow technology.

## New lighting for the internal workspace

Energy saving lamps that can be switched from the side post illuminate the entire internal workspace.

## The barrier-free sitting height fume cupboard

Fume cupboards with side installation are also available wheelchair accessible. The position of all control units provides for optimum ergonomics and freedom of movement when performing work at the fume cupboard while seated.





#### The best for equipment and variability

Along with the convenient basic equipment, our fume cupboards provide a wide range of variable equipment options. Depending on the application, the worktop is made of stoneware, epoxy resin, polypropylene or stainless steel. Our fume cupboards are mounted with self supporting under-bench units or on a steel support frame. You can install plinth mounted, mobile or solvent cabinets under the fume cupboard.

#### Service modules that can be equipped as desired

The replaceable service modules are integrated in the rear and side panels of our fume cupboards and ensure the mechanical and electrical services supply. The integrated sink module for water offers more freedom when using the internal workspace.

#### Our certified test laboratory for fume cupboard measurements

We established our new test laboratory for fume cupboards when the EN 14175 was published. The latest technical equipment and the GS certification by TÜV Product Service GmbH guarantee optimum measurement results with respect to accuracy and reproducibility.

We test fume cupboards in accordance with EN 14175. We can also carry out measurements in accordance with ASHRAE 110/1995.

With our ISO 9001:2000 certification and the GS mark for our entire product range, we have closed the circle in relation to fume cupboard tests and had our test laboratory tested and certified by TÜV Product Service GmbH according to the German law on equipment safety (Gerätesicherheitsgesetz).

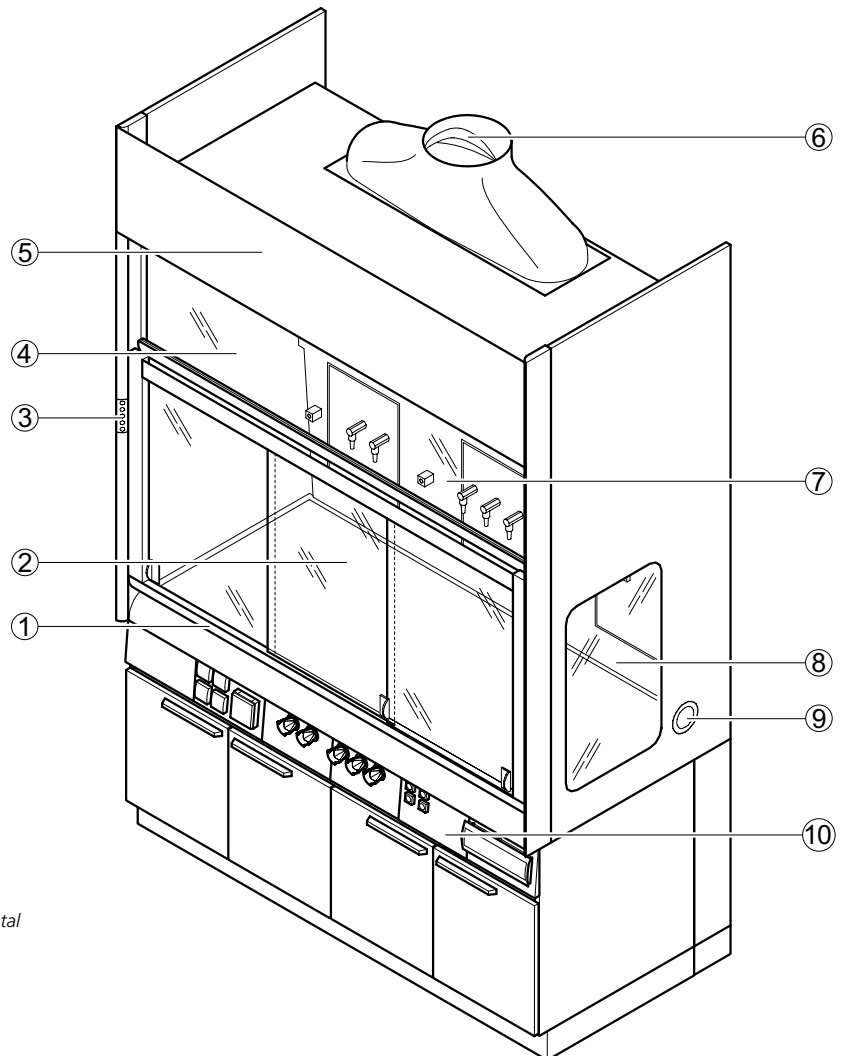
## Bench-mounted fume cupboards

### Bench-mounted fume cupboard

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Service outlets in the rear panel of the internal workspace
- Control units located externally at the support

#### Design

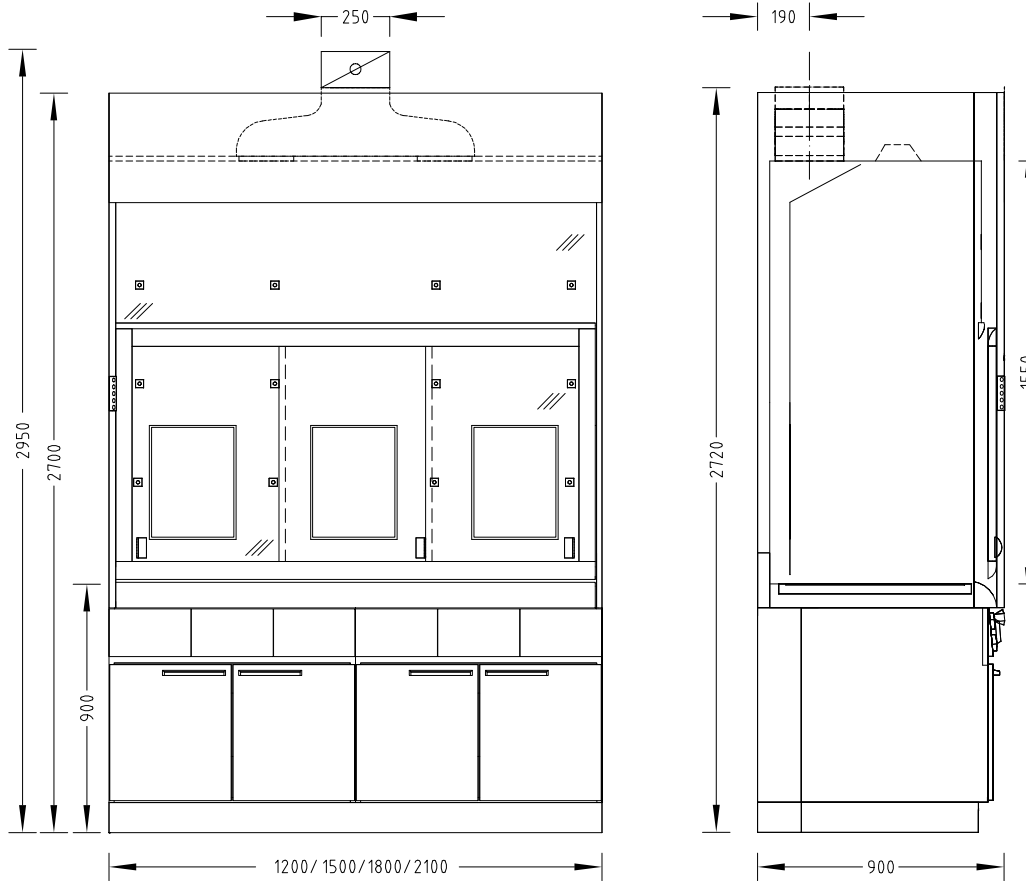


- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Upper sash window
- 5 Removable fascia panel
- 6 Extract manifold
- 7 Baffle with service modules
- 8 Glass pane in the side wall
- 9 Material lock
- 10 Self-supporting underbench unit with support and service panels

# Bench-mounted fume cupboards

## Bench-mounted fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100
Width [mm]	1200	1500	1800	2100
Depth [mm]	900			
Height [mm]	2700			
Clear width, internal workspace [mm]	1150	1450	1750	2050
Clear height, internal workspace [mm]	1550			
Working height [mm]	900			

Weight	1200	1500	1800	2100
Without installation [kg]	Approx. 250	Approx. 300	Approx. 350	Approx. 400

# Bench-mounted fume cupboards

## Bench-mounted fume cupboard

Design characteristics	1200	1500	1800	2100
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining			
Number of devices for scaffold points, $\varnothing$ 12 to 13 mm	9		12	
Service modules	2		3	

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800	2100
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	480	600	720	840
Extract air function display	FAZ			
Airflow damper, constant	Airflow-Controller AC			
Airflow damper, variable	Airflow-Controller AC			
Detector of sash position	Only variable with Airflow-Controller AC			
Connection height [mm] for FAZ with extract manifold $\varnothing$ 250 mm	2720			
Connection height [mm] for FAZ with extract manifold $\varnothing$ 315 mm <sup>2)</sup>	2830			
Connection height [mm] for AC with extract manifold $\varnothing$ 250 mm	2950			
Connection height [mm] for AC with extract manifold $\varnothing$ 315 mm <sup>2)</sup>	3070			
Underbench exhaust	As an option, depending on requirements and regulations			

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Melamine resin coating Solid (grade) laminate Stoneware

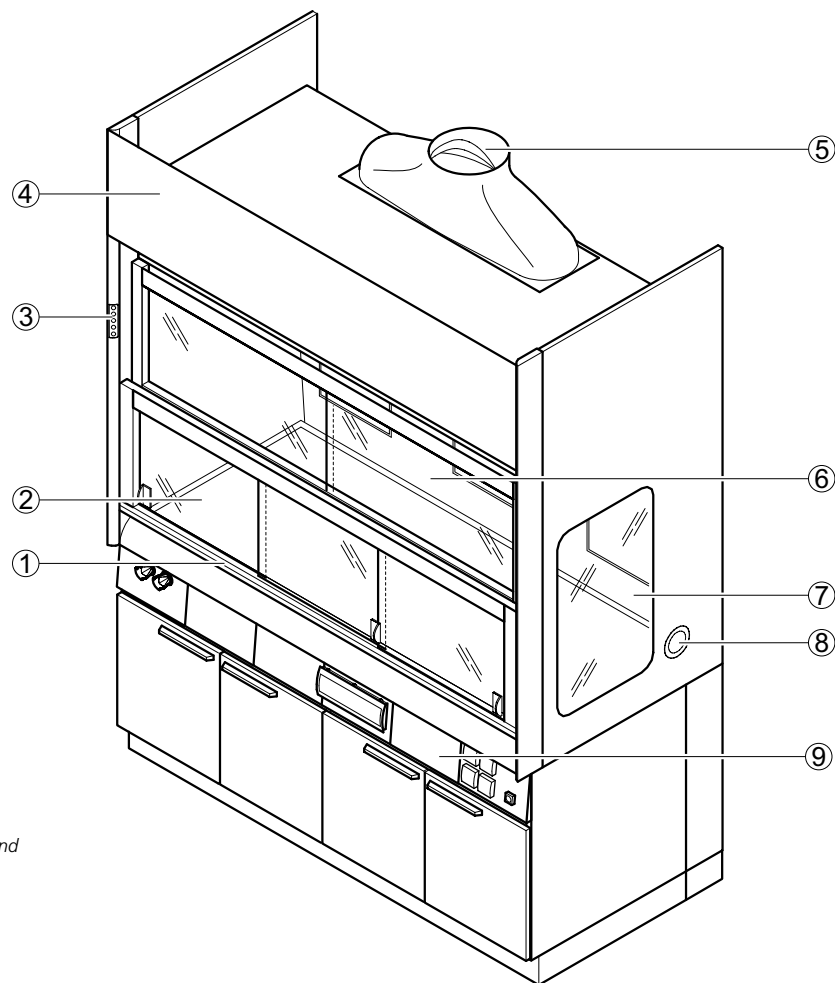
## Bench-mounted fume cupboards

### Low ceiling bench-mounted fume cupboard

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
  
- Service outlets in the rear panel of the internal workspace
- Control units located externally at the support
- Suitable for rooms with a low height

#### Design

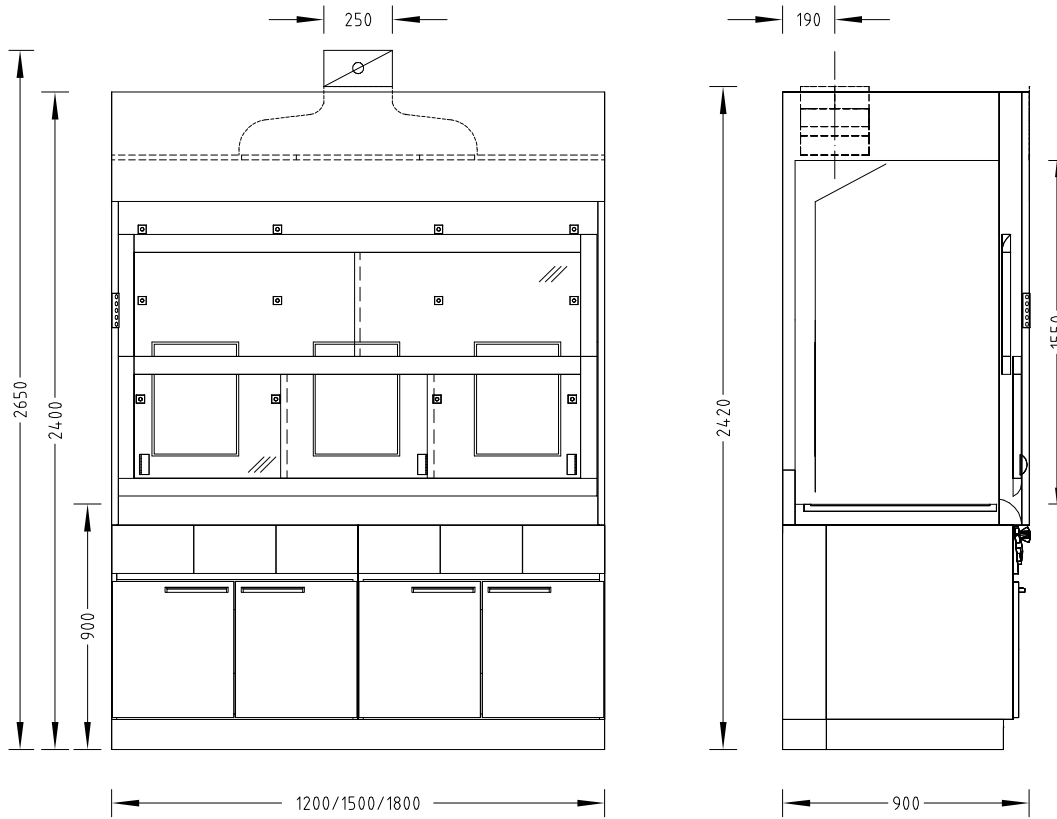


- 1 Two-piece sash with handle and horizontal sashes
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Removable fascia panel
- 5 Extract manifold
- 6 Baffle with service modules
- 7 Glass pane in the side wall
- 8 Material lock
- 9 Self-supporting underbench unit with support and service panels

# Bench-mounted fume cupboards

## Low ceiling bench-mounted fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2400		
Clear width, internal workspace [mm]	1150	1450	1750
Clear height, internal workspace [mm]	1550		
Working height [mm]	900		

Weight	1200	1500	1800
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300

Design characteristics	1200	1500	1800
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining		
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12
Service modules	2		3

# Bench-mounted fume cupboards

## Low ceiling bench-mounted fume cupboard

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	480	600	720
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420		
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2530		
Connection height [mm] for AC with extract manifold Ø 250 mm	2650		
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	2770		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Stainless steel Epoxy
Internal lining	Melamine resin coating Solid (grade) laminate Stoneware

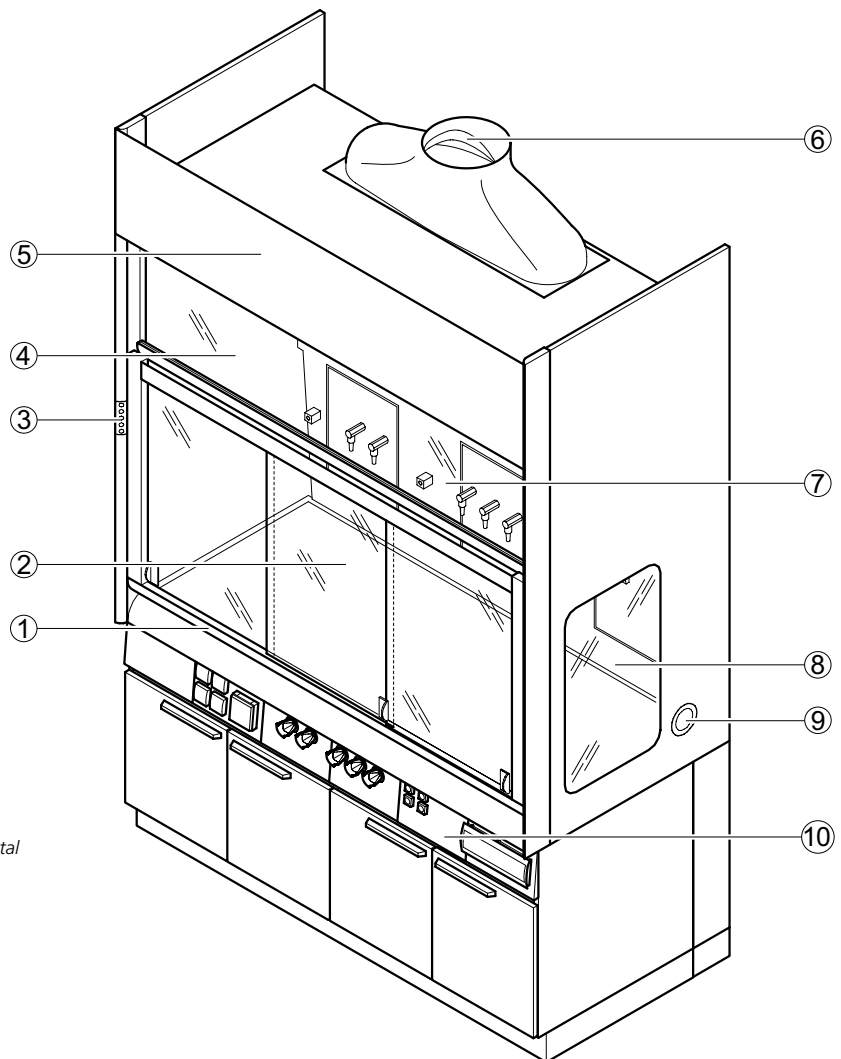
## Bench-mounted fume cupboards

### Secuflow bench-mounted fume cupboard

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Active supportive flow technology (Secuflow technology) reduces the energy consumption while regulations and standards are observed
- Service outlets in the rear panel of the internal workspace
- Control units located externally at the support

#### Design



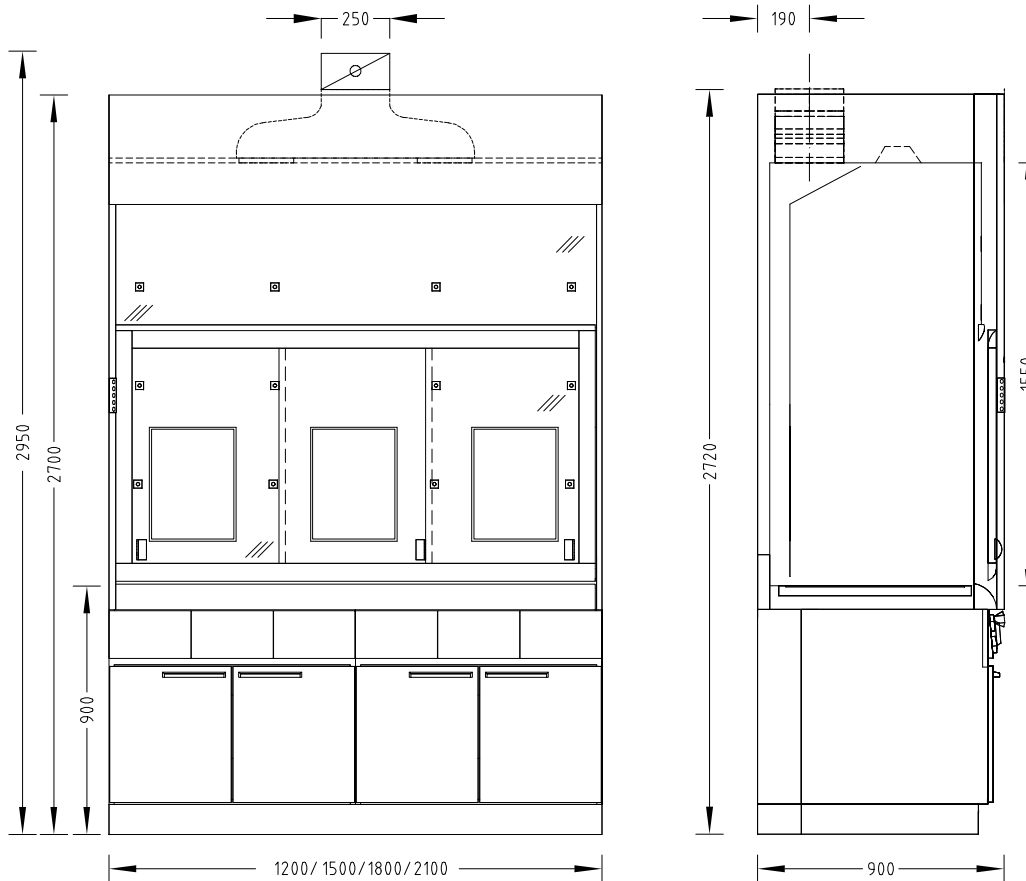
- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Upper sash window
- 5 Removable fascia panel
- 6 Extract manifold
- 7 Baffle with service modules
- 8 Glass pane in the side wall
- 9 Material lock
- 10 Self-supporting underbench unit with support and service panels



# Bench-mounted fume cupboards

## Secuflow bench-mounted fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100
Width [mm]	1200	1500	1800	2100
Depth [mm]	900			
Height [mm]	2700			
Clear width, internal workspace [mm]	1150	1450	1750	2050
Clear height, internal workspace [mm]	1550			
Working height [mm]	900			

Weight	1200	1500	1800	2100
Without installation [kg]	Approx. 250	Approx. 300	Approx. 350	Approx. 400

# Bench-mounted fume cupboards

## Secuflow bench-mounted fume cupboard

Design characteristics	1200	1500	1800	2100
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining			
Max. number of devices for scaffold points, ø 12 mm to 13 mm	9		12	
Service modules	2		3	

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800	2100
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	330	410	490	570
Extract air function display	FAZ			
Airflow damper, constant	Airflow-Controller AC			
Airflow damper, variable	Airflow-Controller AC			
Detector of sash position	Only variable with Airflow-Controller AC			
Connection height [mm] for FAZ with extract manifold ø 250 mm	2720			
Connection height [mm] for FAZ with extract manifold ø 315 mm <sup>2)</sup>	2830			
Connection height [mm] for AC with extract manifold ø 250 mm	2950			
Connection height [mm] for AC with extract manifold ø 315 mm <sup>2)</sup>	3070			
Underbench exhaust	As an option, depending on requirements and regulations			

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Stainless steel Epoxy
Internal lining	Melamine resin coating Solid (grade) laminate Stoneware

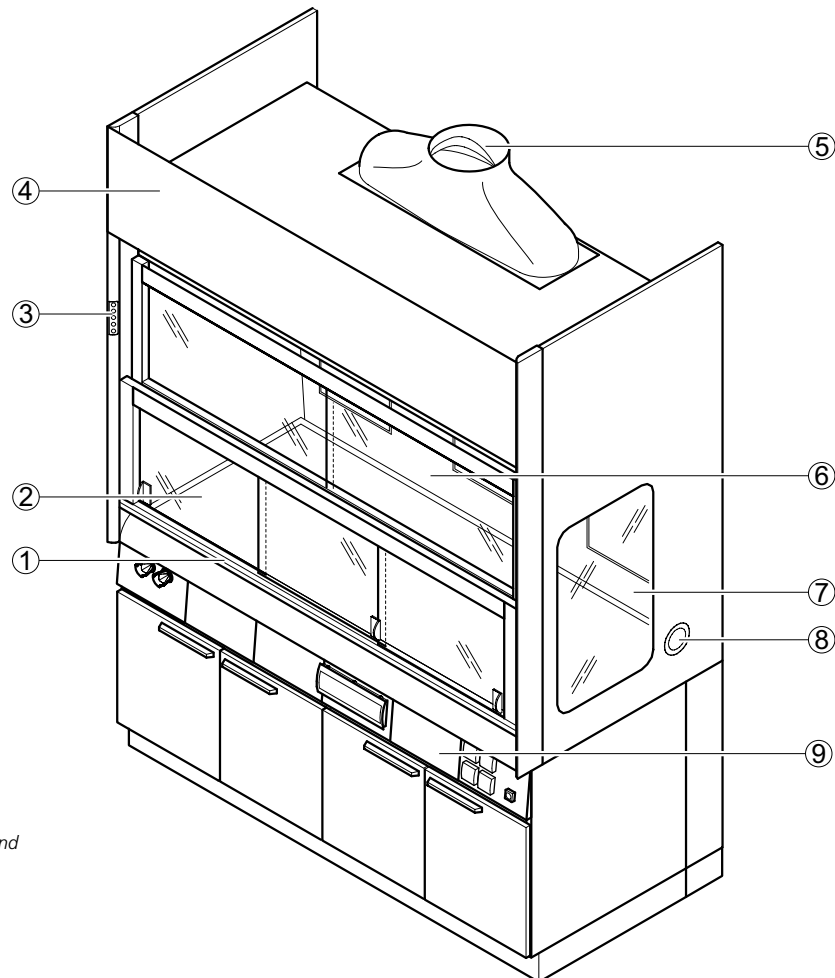
## Bench-mounted fume cupboards

# Secuflow low ceiling bench-mounted fume cupboard

### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
  
- Active supportive flow technology (Secuflow technology) reduces the energy consumption while regulations and standards are observed
- Service outlets in the rear panel of the internal workspace
- Control units located externally at the support
- Suitable for rooms with a low height

### Design

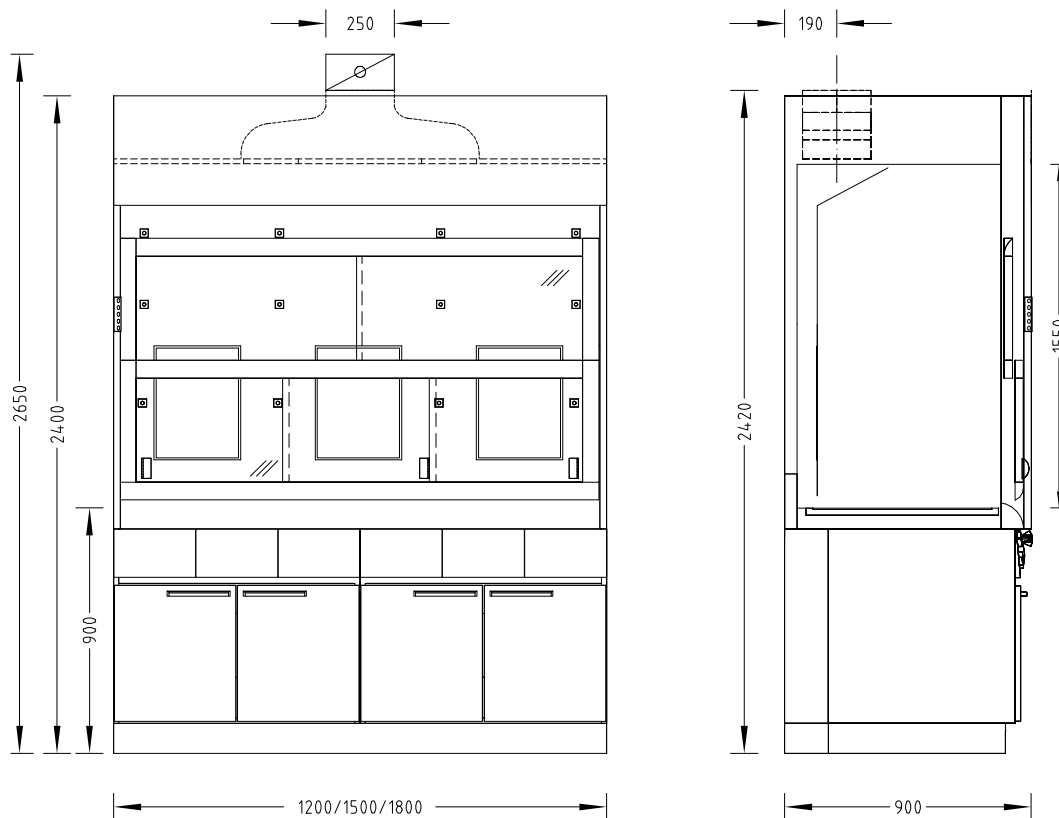


- 1 Two-piece sash with handle and horizontal sashes
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Removable fascia panel
- 5 Extract manifold
- 6 Baffle with service panel
- 7 Glass pane in the side wall
- 8 Material lock
- 9 Self-supporting underbench unit with support and service panels

# Bench-mounted fume cupboards

## Secuflow low ceiling bench-mounted fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2400		
Clear width, internal workspace [mm]	1150	1450	1750
Clear height, internal workspace [mm]	1550		
Working height [mm]	900		

Weight	1200	1500	1800
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300

Design characteristics	1200	1500	1800
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining		
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12
Service modules	2		3

# Bench-mounted fume cupboards

## Secuflow low ceiling bench-mounted fume cupboard

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	330	410	490
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420		
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2530		
Connection height [mm] for AC with extract manifold Ø 250 mm	2650		
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	2770		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Melamine resin coating Solid (grade) laminate Stoneware

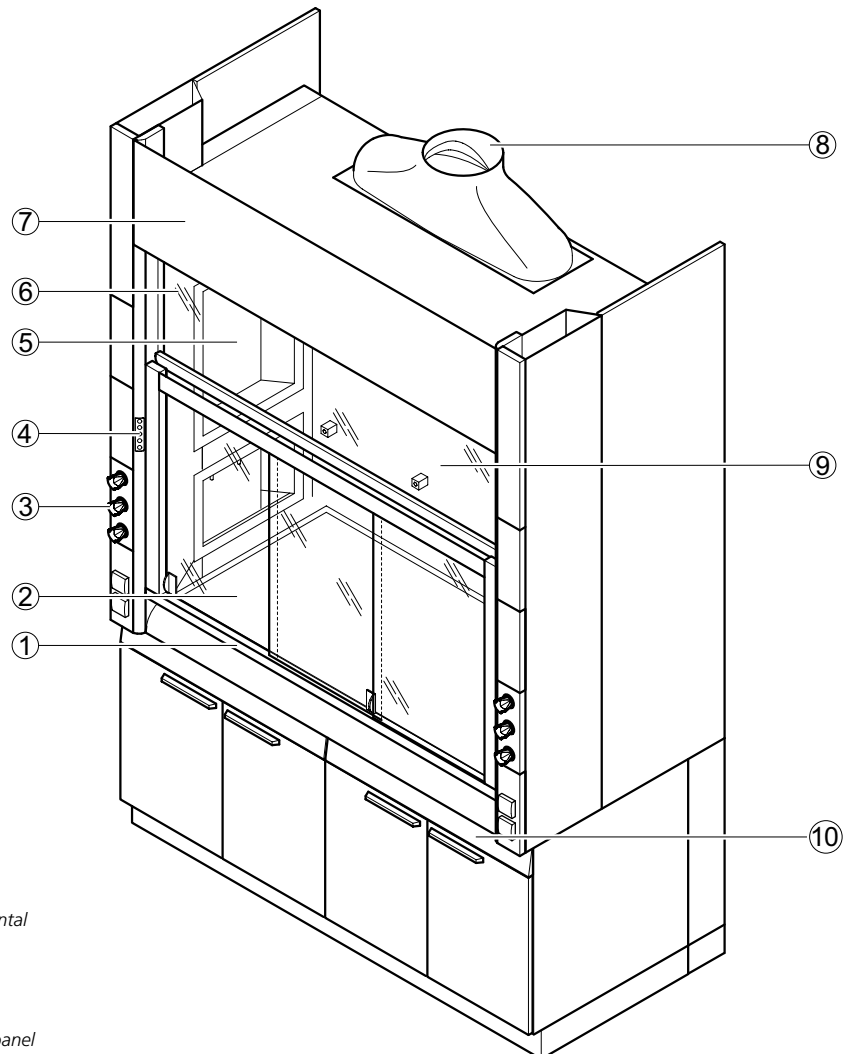
## Bench-mounted fume cupboards with side installation

### Bench-mounted fume cupboard with side installation

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels

#### Design

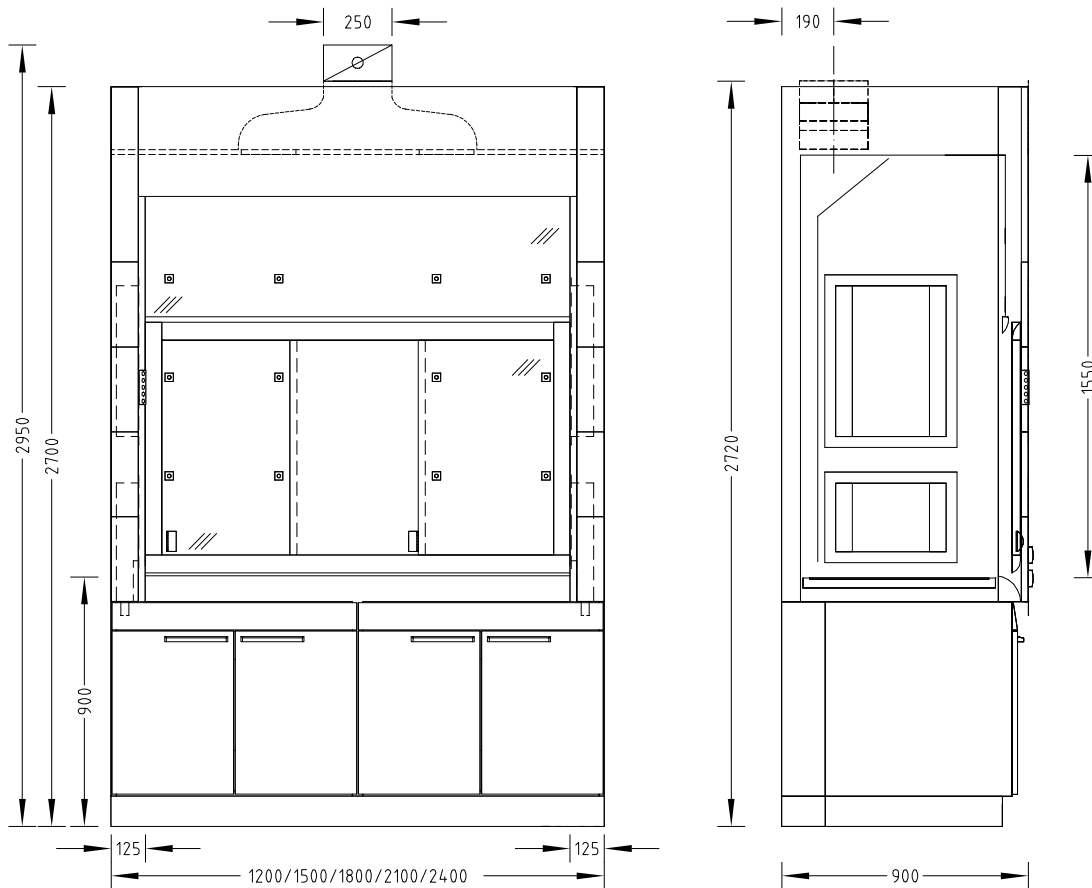


- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 FAZ or AC control panel
- 5 Service modules in the side panel of the fume cupboard
- 6 Upper sash window
- 7 Removable fascia panel
- 8 Extract air collection duct
- 9 Baffle with scaffold points
- 10 Self-supporting underbench unit

# Bench-mounted fume cupboards with side installation

## Bench-mounted fume cupboard with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100	2400
Width [mm]	1200	1500	1800	2100	2400
Depth [mm]	900				
Height [mm]	2700				
Clear width, internal workspace [mm]	950	1250	1550	1850	2150
Clear height, internal workspace [mm]	1550				
Working height [mm]	900				

Weight	1200	1500	1800	2100	2400
Without installation [kg]	Approx. 320	Approx. 390	Approx. 450	Approx. 510	Approx. 570

# Bench-mounted fume cupboards with side installation

## Bench-mounted fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units				
Sash	2 horizontal sashes		3 horizontal sashes		
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option				
Max. number of devices for scaffold points, ø 12 to 13 mm	9	12		15	
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement				

### Electrics

Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

### Sanitary technology

Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option
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Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	420	525	630	840	840
Extract air function display	FAZ				
Airflow damper, constant	Airflow-Controller AC				
Airflow damper, variable	Airflow-Controller AC				
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	3070				
Underbench exhaust	As an option, depending on requirements and regulations				

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

### Material/surface

Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate Stainless steel



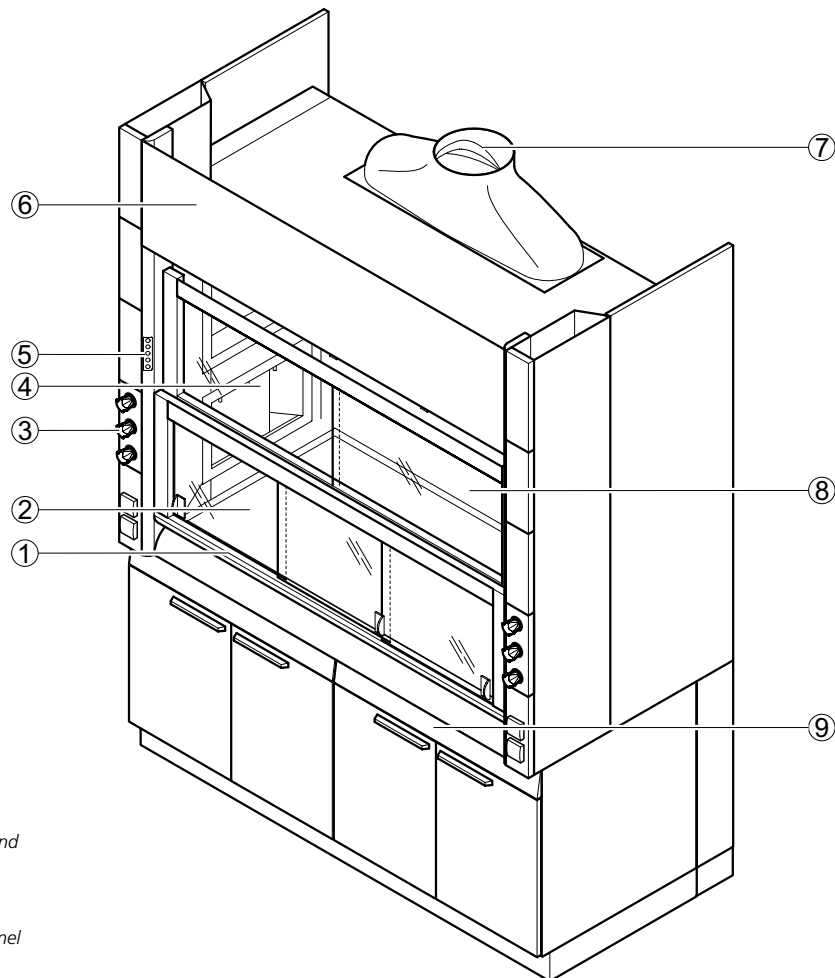
# Bench-mounted fume cupboards with side installation

## Low ceiling bench-mounted fume cupboard with side installation

### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
  
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels
- Suitable for rooms with a low height

### Design

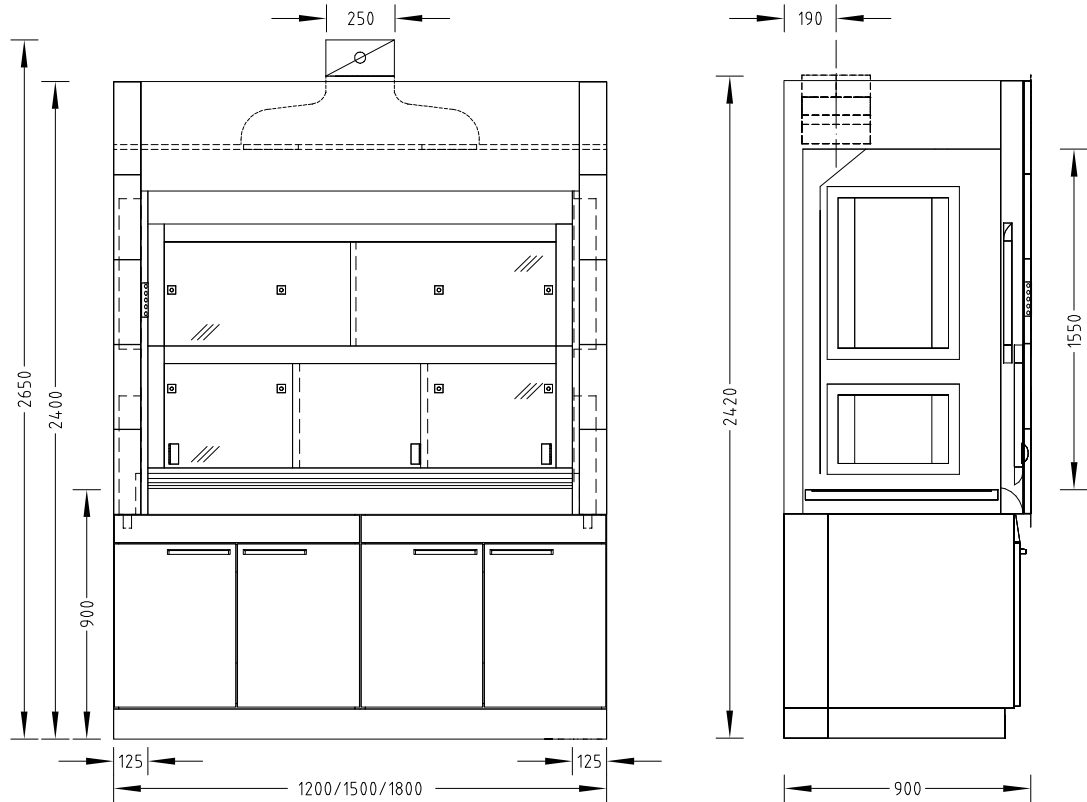


- 1 Two-piece sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 Service module in the side panel of the fume cupboard
- 5 FAZ or AC control panel
- 6 Removable fascia panel
- 7 Extract air collection duct
- 8 Baffle with scaffold points
- 9 Self-supporting underbench unit

# Bench-mounted fume cupboards with side installation

## Low ceiling bench-mounted fume cupboards with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2400		
Clear width, internal workspace [mm]	950	1250	1550
Clear height, internal workspace [mm]	1550		
Working height [mm]	900		

Weight	1200	1500	1800
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300

Design characteristics	1200	1500	1800
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units		
Two-piece sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard, not with stoneware internal lining Material lock on the left and/or right as an option		
Max. number of devices for scaffold points, ø 12 to 13 mm	6	8	
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement		

# Bench-mounted fume cupboards with side installation

## Low ceiling bench-mounted fume cupboard with side installation

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	420	530	630
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720		
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2830		
Connection height [mm] for AC with extract manifold Ø 250 mm	2950		
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	3070		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate Stainless steel

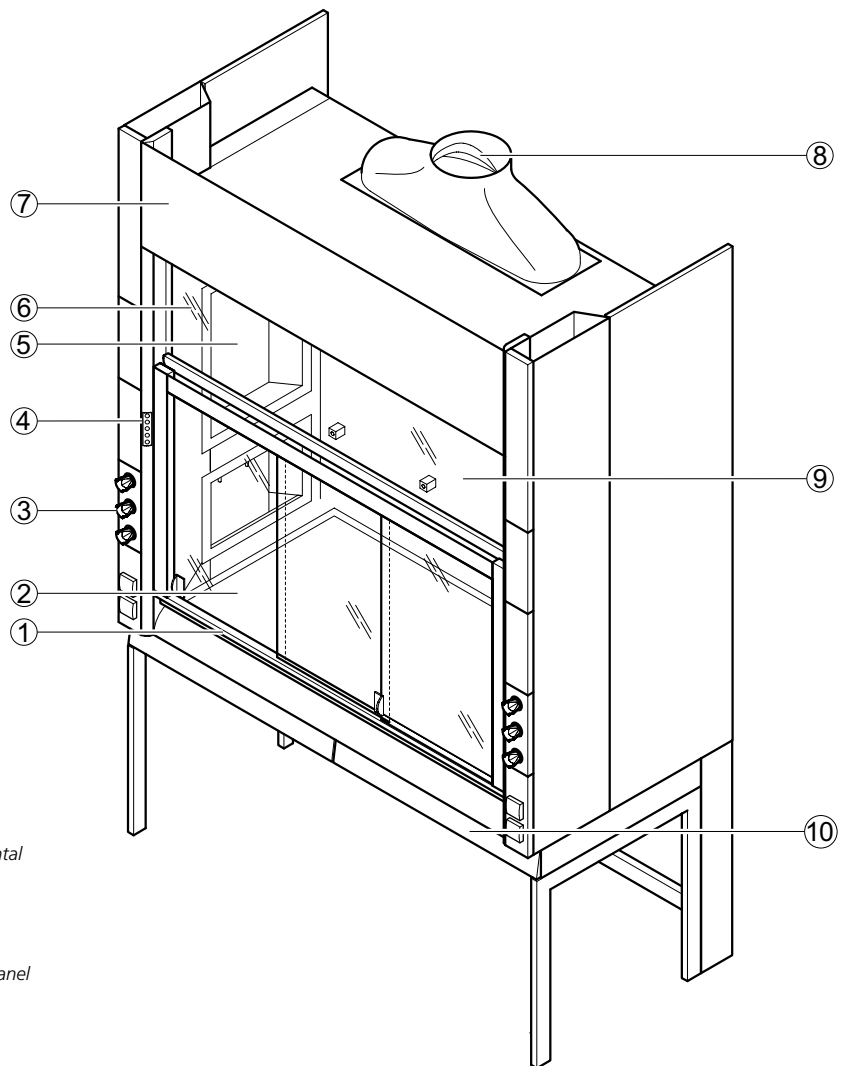
## Bench-mounted fume cupboards with side installation

### Secuflow bench-mounted fume cupboard with side installation

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Active supportive flow technology (Secuflow technology) reduces the energy consumption while regulations and standards are observed
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels

#### Design

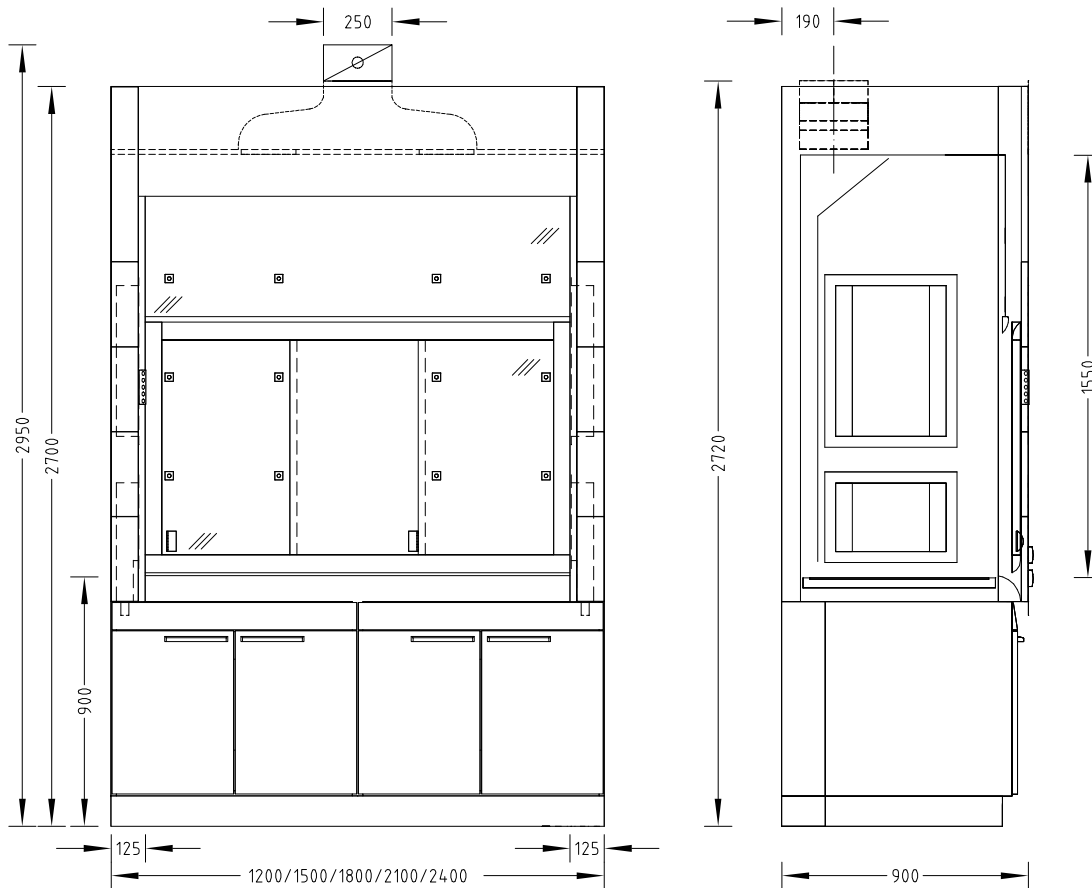


- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 FAZ or AC control panel
- 5 Service modules in the side panel of the fume cupboard
- 6 Upper sash window
- 7 Removable fascia panel
- 8 Extract air collection duct
- 9 Baffle with scaffold points
- 10 Support frame with pushed in underbench units as an option

# Bench-mounted fume cupboards with side installation

## Secuflow bench-mounted fume cupboard with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100	2400
Width [mm]	1200	1500	1800	2100	2400
Depth [mm]	900				
Height [mm]	2700				
Clear width, internal workspace [mm]	950	1250	1550	1850	2150
Clear height, internal workspace [mm]	1550				
Working height [mm]	900				

Weight	1200	1500	1800	2100	2400
Without installation [kg]	Approx. 320	Approx. 390	Approx. 450	Approx. 510	Approx. 570

# Bench-mounted fume cupboards with side installation

## Secuflow bench-mounted fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units				
Sash	2 horizontal sashes		3 horizontal sashes		
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option				
Max. number of devices for scaffold points, ø 12 to 13 mm	9	12		15	
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement				

### Electrics

Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

### Sanitary technology

Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option
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Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	330	410	490	570	650
Extract air function display	FAZ				
Airflow damper, constant	Airflow-Controller AC				
Airflow damper, variable	Airflow-Controller AC				
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	3070				
Underbench exhaust	As an option, depending on requirements and regulations				

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

### Material/surface

Worktop	Stoneware (not for bench-mounted fume cupboard with a width of 2400 mm) Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate Stainless steel

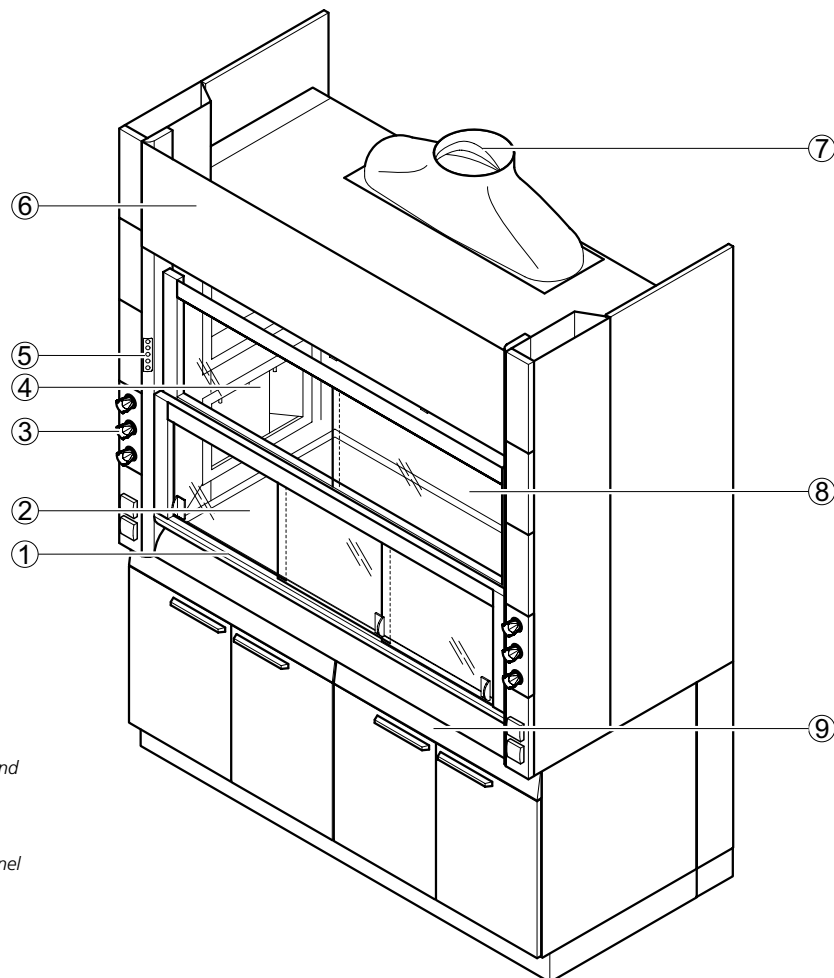
# Bench-mounted fume cupboards with side installation

## Secuflow low ceiling bench-mounted fume cupboard with side installation

### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Active supportive flow technology (Secuflow technology) reduces the energy consumption while regulations and standards are observed
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels
- Suitable for rooms with a low height

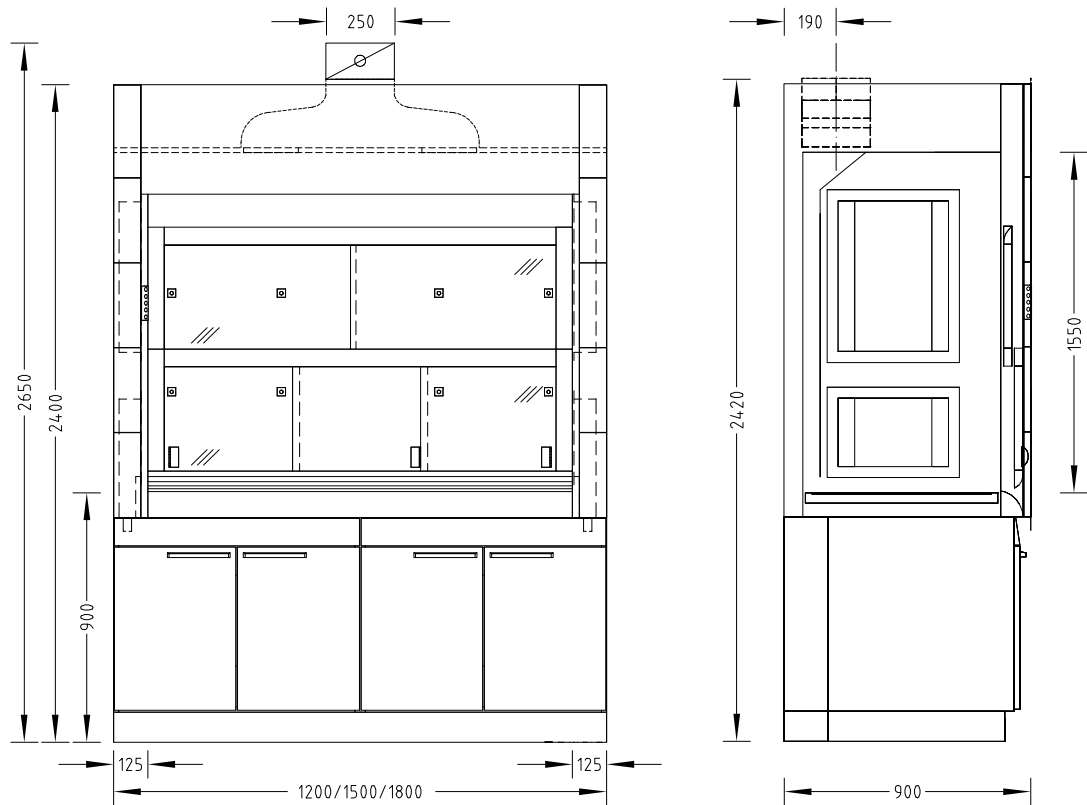
### Design



- 1 Two-piece sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 Service module in the side panel of the fume cupboard
- 5 FAZ or AC control panel
- 6 Removable fascia panel
- 7 Extract air collection duct
- 8 Baffle with scaffold points
- 9 Self-supporting underbench unit

## Bench-mounted fume cupboards with side installation Secuflow low ceiling bench-mounted fume cupboard with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2400		
Clear width, internal workspace [mm]	950	1250	1550
Clear height, internal workspace [mm]	1550		
Working height [mm]	900		

Weight	1200	1500	1800
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300



# Bench-mounted fume cupboards with side installation

## Secuflow low ceiling bench-mounted fume cupboard with side installation

Design characteristics	1200	1500	1800
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units		
Two-piece sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard, not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining		
Max. number of devices for scaffold points, ø 12 to 13 mm	6	9	
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement		

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	330	410	490
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ with extract manifold ø 250 mm	2420		
Connection height [mm] for FAZ with extract manifold ø 315 mm <sup>2)</sup>	2530		
Connection height [mm] for AC with extract manifold ø 250 mm	2650		
Connection height [mm] for AC with extract manifold ø 315 mm <sup>2)</sup>	2770		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate Stainless steel

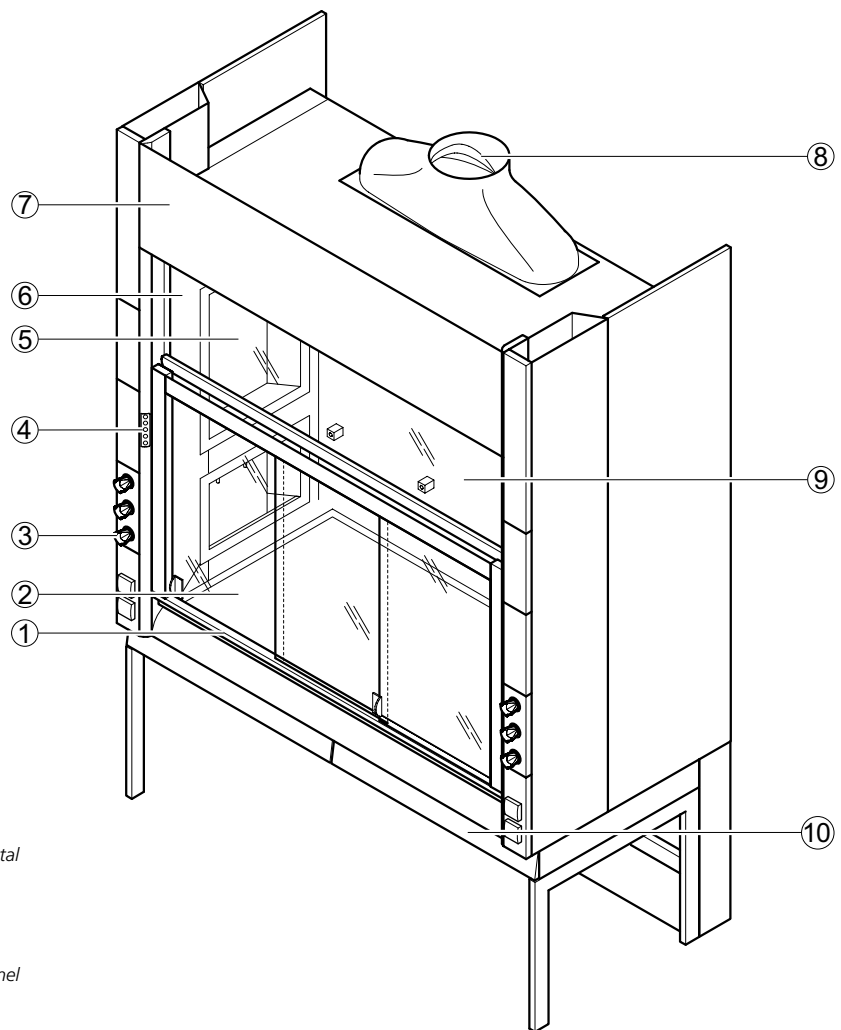
## Bench-mounted fume cupboards with side installation

### Bench-mounted fume cupboard with side installation for work performed while seated

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Suitable for work performed while seated
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels

#### Design

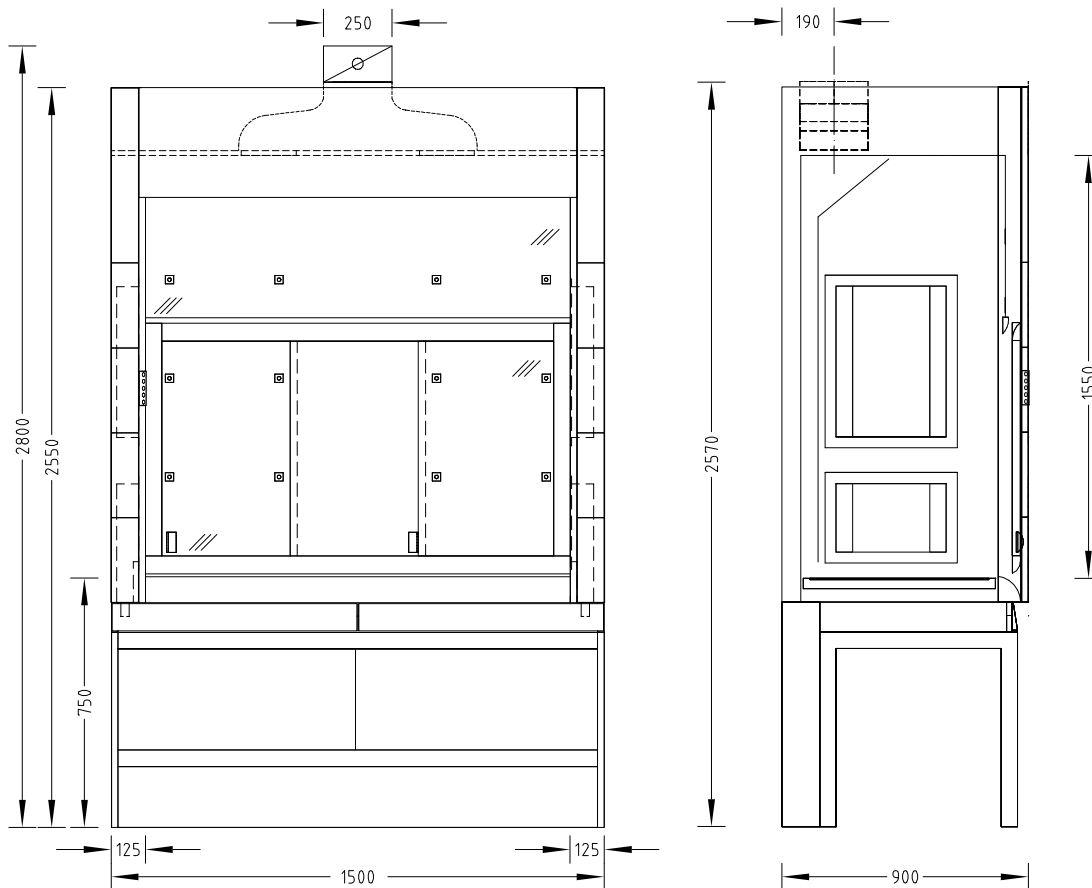


- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 FAZ or AC control panel
- 5 Service module in the side panel of the fume cupboard
- 6 Upper sash window
- 7 Removable fascia panel
- 8 Extract air collection duct
- 9 Baffle with scaffold points
- 10 Support frame with pushed in underbench units as an option

# Bench-mounted fume cupboards with side installation

## Bench-mounted fume cupboard with side installation for work performed while seated

### Dimensional drawing



### Technical data

Dimensions	
Width [mm]	1500
Depth [mm]	900
Height [mm]	2550
Clear width, internal workspace [mm]	1250
Clear height, internal workspace [mm]	1550
Working height [mm]	750

Weight	
Without installation [kg]	Approx. 390

# Bench-mounted fume cupboards with side installation

## Bench-mounted fume cupboard with side installation for work performed while seated

Design characteristics	
Supporting construction	H-frame
Sash	2 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option
Max. number of devices for scaffold points, ø 12 to 13 mm	12
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	530
Extract air function display	FAZ
Airflow damper, constant	Airflow-Controller AC
Airflow damper, variable	Airflow-Controller AC
Detector of sash position	Only variable with Airflow-Controller AC
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2570
Connection height [mm] for FAZ with extract manifold Ø 315 mm <sup>2)</sup>	2730
Connection height [mm] for AC with extract manifold Ø 250 mm	2800
Connection height [mm] for AC with extract manifold Ø 315 mm <sup>2)</sup>	2920
Underbench exhaust	As an option, depending on requirements and regulations

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate

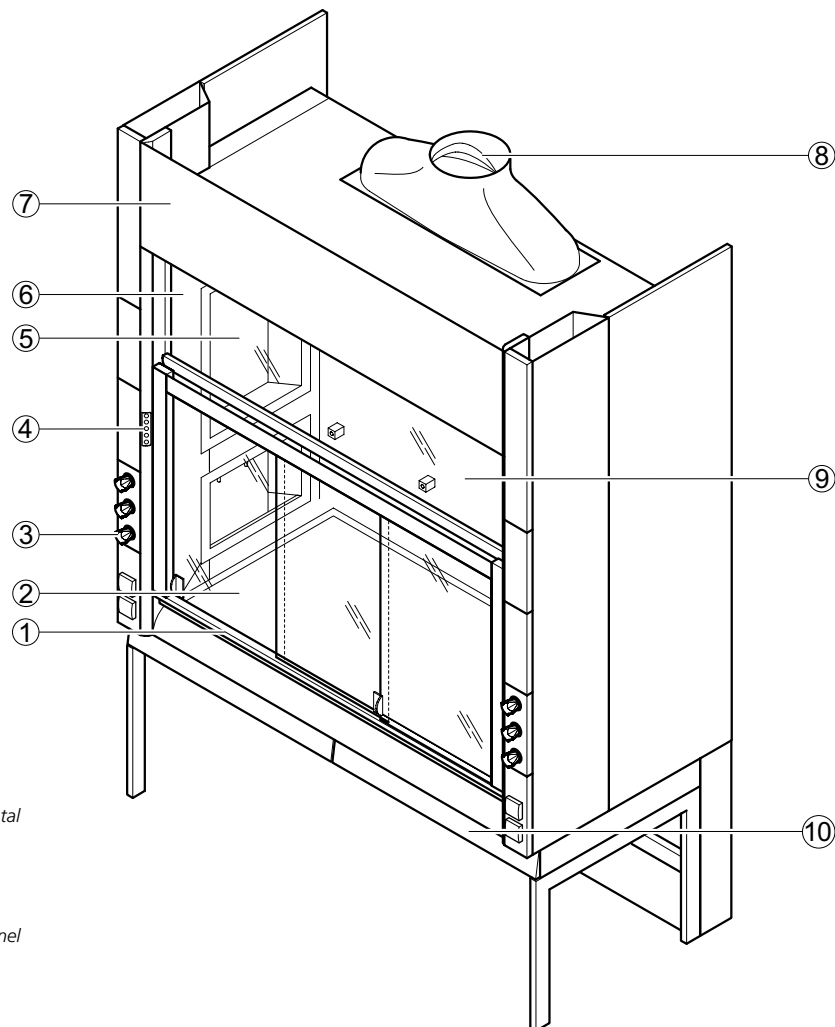
# Bench-mounted fume cupboards with side installation

## Secuflow bench-mounted fume cupboard with side installation for work performed while seated

### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
  
- Suitable for work performed while seated
- Active supportive flow technology (Secuflow technology) reduces the energy consumption while regulations and standards are observed
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels

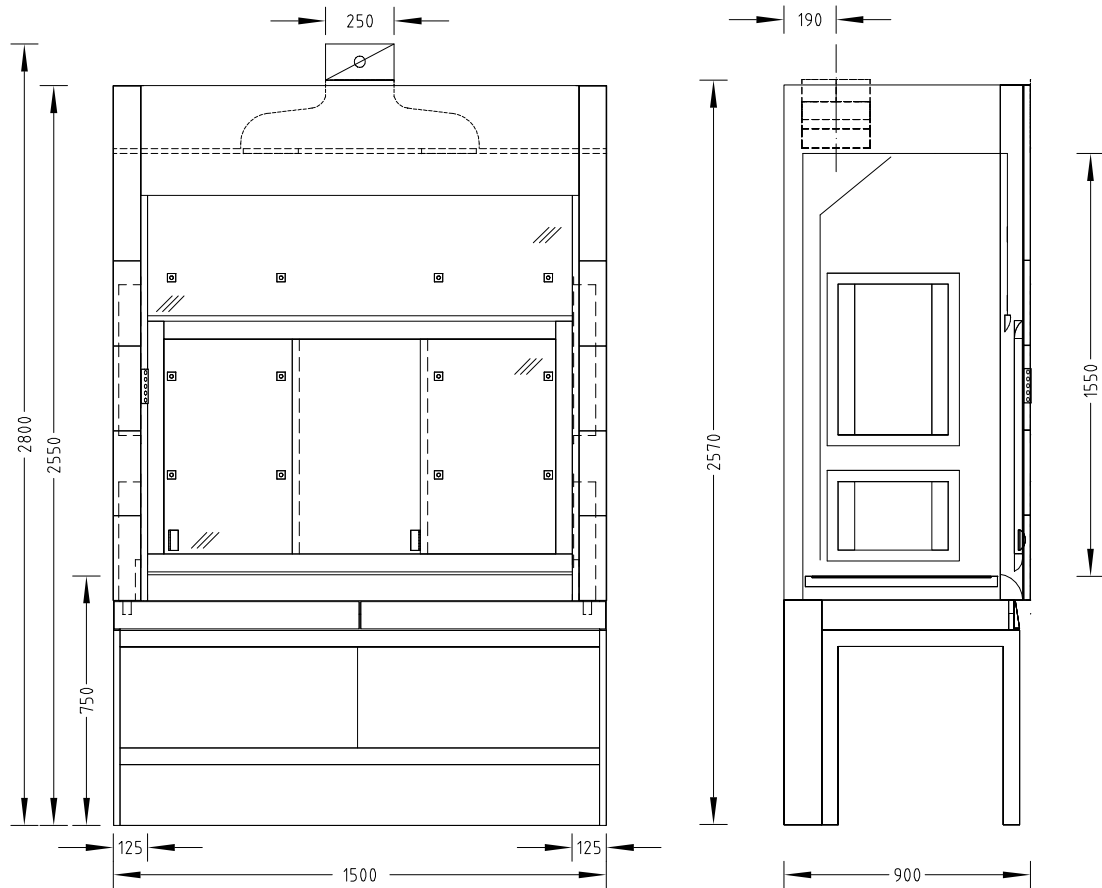
### Design



- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 Service panel
- 4 FAZ or AC control panel
- 5 Service module in the side panel of the fume cupboard
- 6 Upper sash window
- 7 Removable fascia panel
- 8 Extract air collection duct
- 9 Baffle with scaffold points
- 10 Support frame with pushed in underbench units as an option

## Bench-mounted fume cupboards with side installation Secuflow bench-mounted fume cupboard with side installation for work performed while seated

### Dimensional drawing



### Technical data

Dimensions	
Width [mm]	1500
Depth [mm]	900
Height [mm]	2550
Clear width, internal workspace [mm]	1250
Clear height, internal workspace [mm]	1550
Working height [mm]	750

Weight	
Without installation [kg]	Approx. 390

# Bench-mounted fume cupboards with side installation

## Secuflow bench-mounted fume cupboard with side installation for work performed while seated

Design characteristics	
Supporting construction	H-frame
Sash	2 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option
Max. number of devices for scaffold points, ø 12 to 13 mm	12
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	410
Extract air function display	FAZ
Airflow damper, constant	Airflow-Controller AC
Airflow damper, variable	Airflow-Controller AC
Detector of sash position	Only variable with Airflow-Controller AC
Connection height [mm] for FAZ with extract manifold ø 250 mm	2570
Connection height [mm] for FAZ with extract manifold ø 315 mm <sup>2)</sup>	2730
Connection height [mm] for AC with extract manifold ø 250 mm	2800
Connection height [mm] for AC with extract manifold ø 315 mm <sup>2)</sup>	2920
Underbench exhaust	As an option, depending on requirements and regulations

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid (grade) laminate

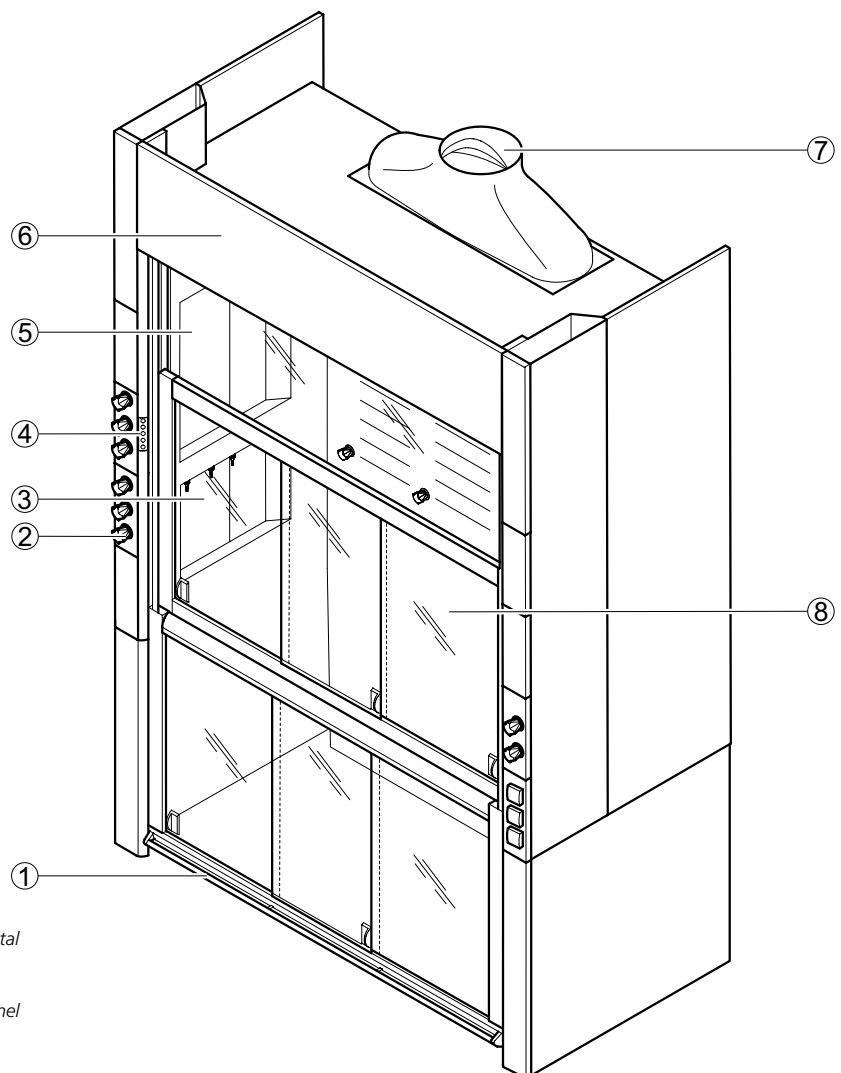
## Walk-in fume cupboards

### Walk-in fume cupboard with side installation

#### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Suitable for barrier-free entering of the internal workspace
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels
- Suitable for high experimental setups

#### Design



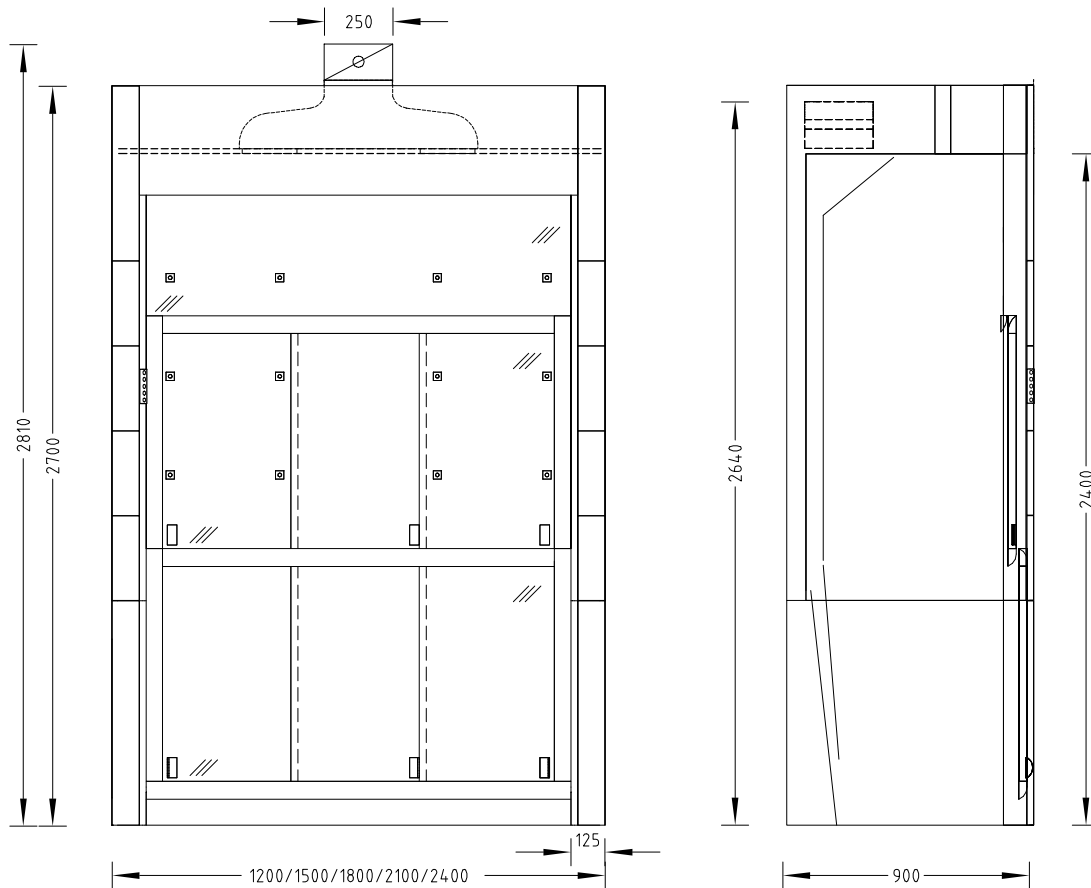
- 1 Sash with handle and horizontal sashes
- 2 Service panel
- 3 Service module in the side panel of the fume cupboard
- 4 FAZ or AC control panel
- 5 Upper sash window
- 6 Removable fascia panel
- 7 Extract air collection duct
- 8 Baffle with scaffold points



# Walk-in fume cupboards

## Walk-in fume cupboard with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100	2400
Width [mm]	1200	1500	1800	2100	2400
Depth [mm]	900				
Height [mm]	2700				
Clear width, internal workspace [mm]	950	1250	1550	1850	2150
Clear height, internal workspace [mm]	2400				

Weight	1200	1500	1800	2100	2400
Without installation [kg]	Approx. 320	Approx. 390	Approx. 450	Approx. 510	Approx. 570

# Walk-in fume cupboards

## Walk-in fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Two-piece sash	2 horizontal sashes at the top and bottom		3 horizontal sashes at the top and bottom		
Side of fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option				
Number of devices for scaffold points, ø 12 to 13 mm	9		12		15
Service modules	In the left and/or right side panel of the fume cupboard, depending on requirement				

### Electrics

Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

### Sanitary technology

Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option
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Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	720	900	1080	1260	1440
Extract air function display	FAZ				
Airflow damper, constant	Airflow-Controller AC				
Airflow damper, variable	Airflow-Controller AC				
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold ø 315 mm <sup>2)</sup>	2830				
Connection height [mm] for AC with extract manifold ø 250 mm	2950				
Connection height [mm] for AC with extract manifold ø 315 mm <sup>2)</sup>	3070				

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m<sup>3</sup>/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

### Material

Internal lining	Solid (grade) laminate
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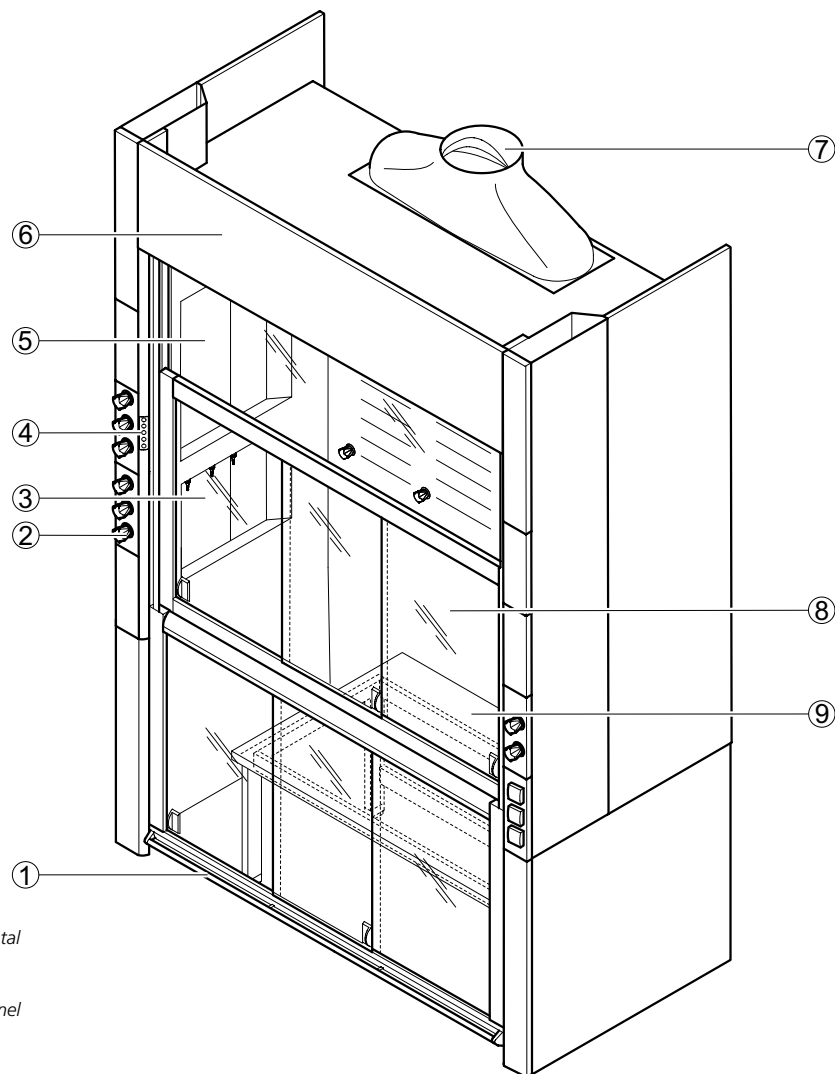
# Low level fume cupboards

## Low level fume cupboard with side installation

### Intended use

- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume cupboards constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms.
- Not suitable for openly breaking down chemicals
- Suitable for experimental setups on an add-on table
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located externally at the service panels

### Design

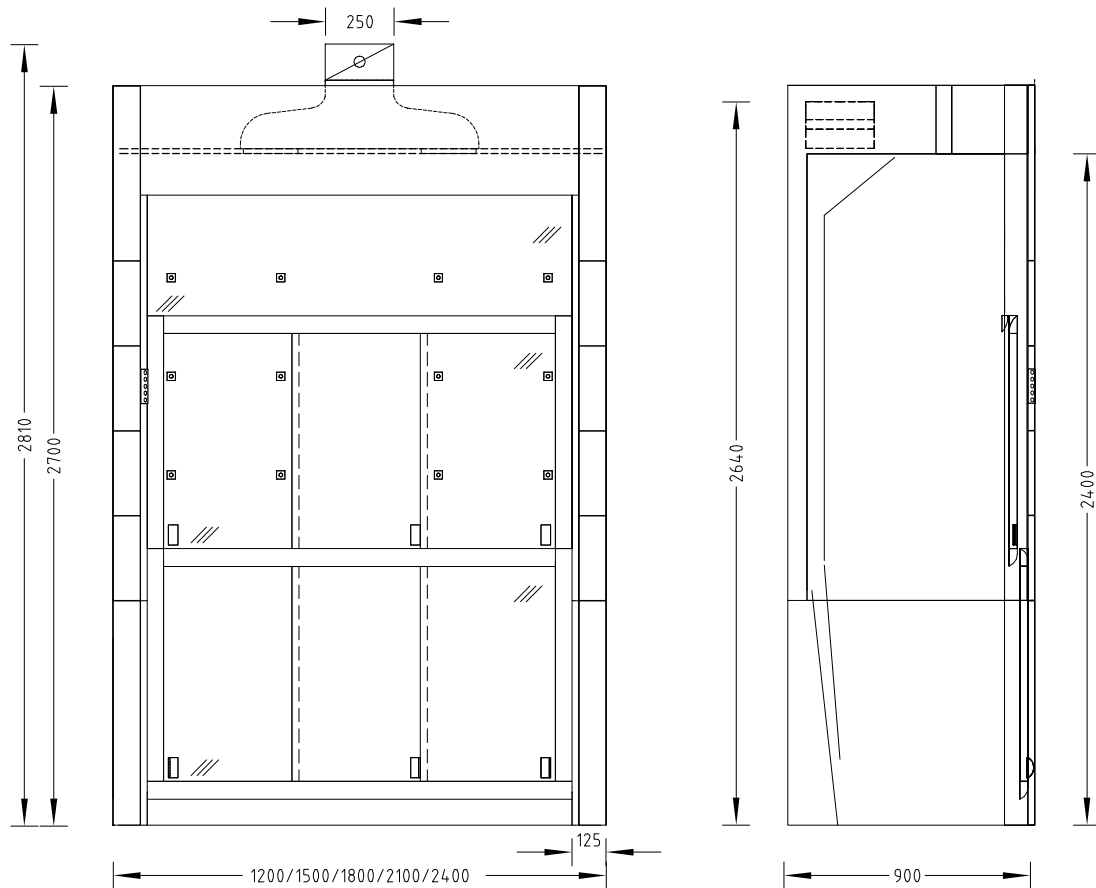


- 1 Sash with handle and horizontal sashes
- 2 Service panel
- 3 Service module in the side panel of the fume cupboard
- 4 FAZ or AC control panel
- 5 Upper sash window
- 6 Removable fascia panel
- 7 Extract air collection duct
- 8 Baffle with scaffold points
- 9 Add-on table

# Low level fume cupboards

## Low level fume cupboard with side installation

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800	2100	2400
Width [mm]	1200	1500	1800	2100	2400
Depth [mm]	900				
Height [mm]	2700				
Clear width, internal workspace [mm]	950	1250	1550	1850	2150
Clear height, internal workspace [mm]	1900				
Add-on table with H-frame [mm]	900 x 600	1200 x 600	1500 x 600	1800 x 600	2100 x 600
Working height [mm]	500				

Weight	1200	1500	1800	2100	2400
Without installation [kg]	Approx. 320	Approx. 390	Approx. 450	Approx. 510	Approx. 570

# Low level fume cupboards

## Low level fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Work surface	Add-on table H-frame with surrounding increased edge				
Sash	2 horizontal sashes at the top and bottom		3 horizontal sashes at the top and bottom		
Side of fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option				
Number of devices for scaffold points, ø 12 to 13 mm	9		12		15
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement				

Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option

Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m³/h] <sup>1)</sup>	720	900	1080	1260	1440
Extract air function display	FAZ				
Airflow damper, constant	Airflow-Controller AC				
Airflow damper, variable	Airflow-Controller AC				
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold ø 315 mm <sup>2)</sup>	2830				
Connection height [mm] for AC with extract manifold ø 250 mm	2950				
Connection height [mm] for AC with extract manifold ø 315 mm <sup>2)</sup>	3070				
Underbench exhaust	As an option, depending on requirements and regulations				

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using an extract manifold with a diameter of 315 mm.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material	
Worktop H-frame with surrounding increased edge	Polypropylene Epoxy Stoneware Stainless steel
Internal lining	Solid (grade) laminate

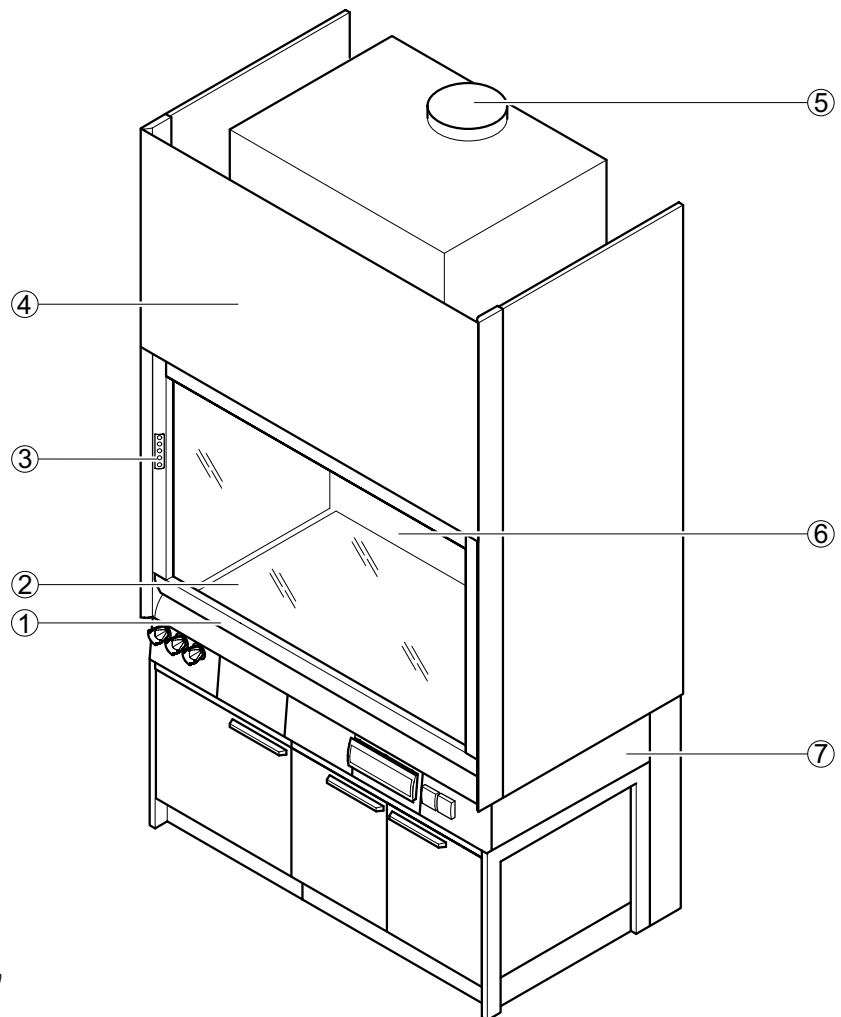
## Special fume cupboards

### Special application fume cupboard

#### Intended use

- Protective device for the user, tested in acc. with DIN 12924, part 2
- Suitable for open, thermal processes of breaking down chemicals with aggressive media such as e. g. sulphuric acid, perchloric acid, hydrofluoric acid or aqua regia
- The construction of the fume cupboard and the materials of the inner lining of the internal workspace determine which aggressive media the device can be used for
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances in the internal workspace
- Protection from flying particles, bodies or parts escaping from the internal workspace
- Fume cupboards constructed in acc. with DIN 12924, part 2, are normally not permitted for use with radioactive substances or microorganisms

#### Design

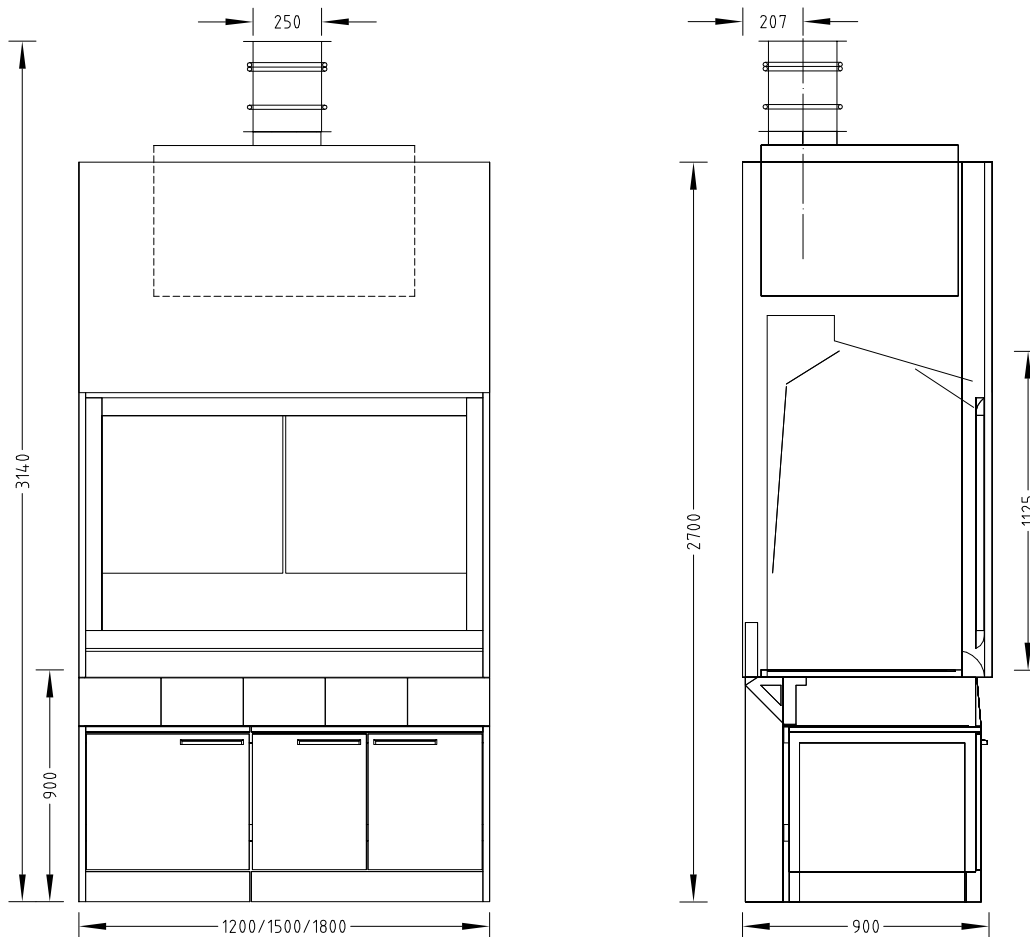


- 1 Sash with handle
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Removable fascia panel
- 5 Extract air spigot integrated in scrubber for harmful gases
- 6 Baffle
- 7 H-frame with pushed in under-bench unit with support and service panels

# Special fume cupboards

## Special application fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2700		
Clear width, internal workspace [mm]	1150	1450	1750
Clear height, internal workspace [mm]	1125		
Working height [mm]	900		

Weight	1200	1500	1800
Without installations and fume-scrubber [kg]	Approx. 250	Approx. 300	Approx. 350
Fume-scrubber without filling [kg]	90 (type C 54)		100 (type C 90)

## Special fume cupboards

### Special application fume cupboard

Design characteristics	
Supporting construction	H-frame with pushed in underbench units
Fume-scrubber	Optional
Extract manifold with condensate drain	Optional
Extract manifold with sprinkler	Optional
Neutralisation unit underbench unit	Optional

Electrics	
Electrical supply	External sockets
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	With take-off valves for vacuum, gases and/or waters and drip cup integrated in the worktop as an option

Ventilation technology	1200	1500	1800
Pressure loss		FAZ/AC	FAZ/AC
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	650	700	900
Extract manifold with condensate drain [Pa]	45/120	50/120	85/150
Extract manifold with FAZ/AC [Pa]	250/300	300/350	440/500
Fume cupboard with scrubber [Pa]	410/460	460/510	850/900
Scrubber type Friatec	C 54		C 90
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract manifold Ø 250 mm	3140		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

Material/surface	
Internal lining including worktop	Stoneware (when sulphuric acid, aqua regia, perchloric acid are used) Polypropylene (when hydrofluoric acid is used)



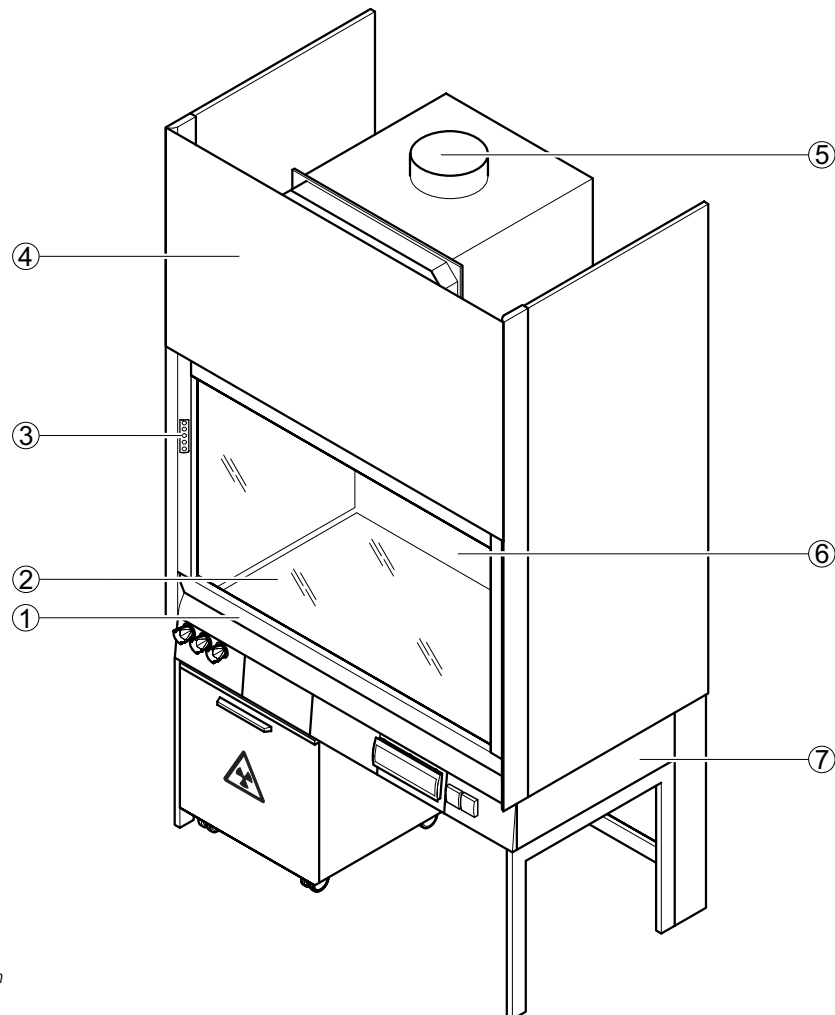
## Special fume cupboards

### Radio-isotope fume cupboard

#### Intended use

- Protective device for the user, tested in acc. with DIN 25466
- Extraction during work with radioactive substances if increased requirements for radiation protection apply
- Protection from incorporation, contamination and external radiation exposure
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances in the internal workspace
- Protection from flying particles, bodies or parts escaping from the internal workspace
- Fume cupboards constructed in acc. with DIN 25466 are normally not permitted for use with microorganisms
- Not suitable for openly breaking down chemicals

#### Design

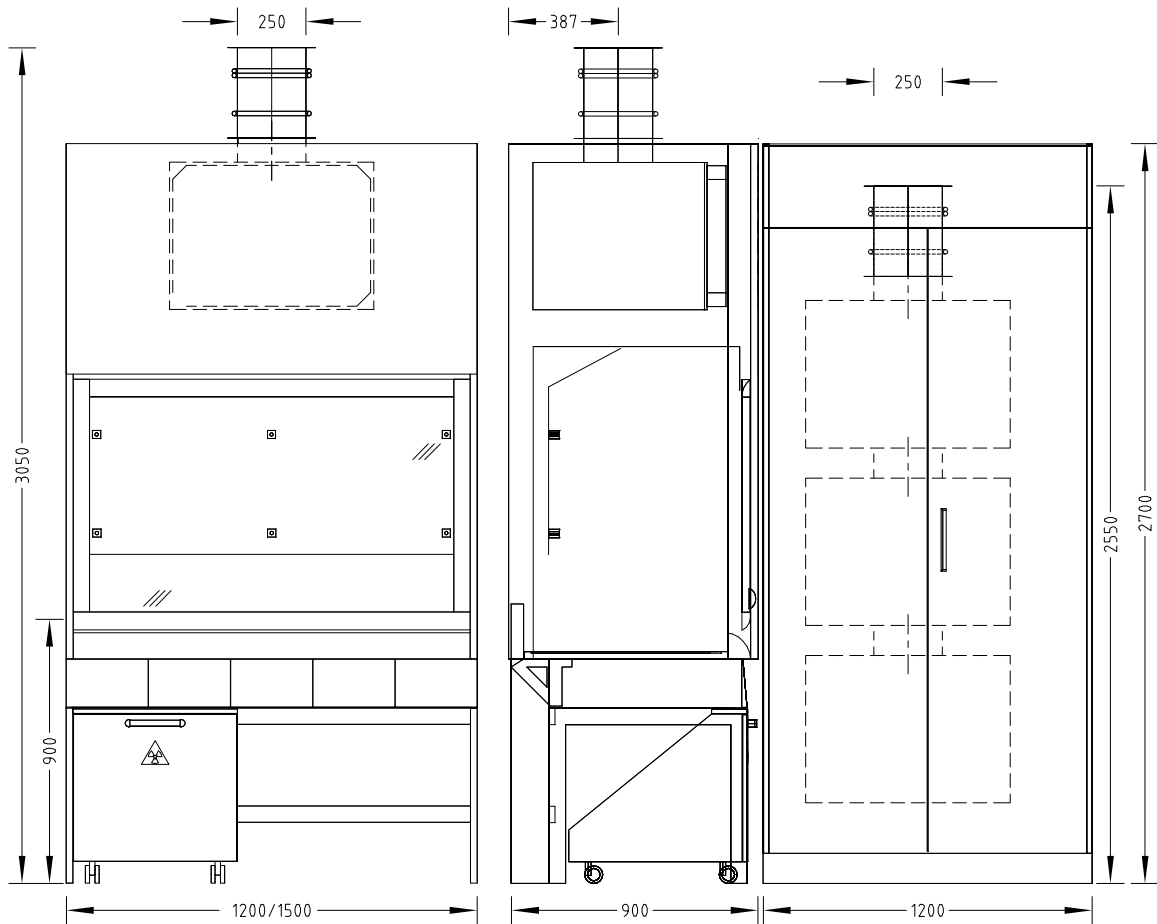


- 1 Sash with handle
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Removable fascia panel
- 5 Extract air spigot integrated in filter housing
- 6 Baffle with scaffold points
- 7 H-frame with pushed in under-bench unit with support and service panels

# Special fume cupboards

## Radio-isotope fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500
Width [mm]	1200	1500
Depth [mm]	900	
Height [mm]	2700	
Clear width, internal workspace [mm]	1150	1450
Clear height, internal workspace [mm]	1060	
Working height [mm]	900	
Filter housing, width x depth x height [mm]	820 x 775 x 674	

Weight	1200	1500
Without installations and lead insert [kg]	Approx. 250	Approx. 300
Filter housing [kg]	90	

# Special fume cupboards

## Radio-isotope fume cupboard

Design characteristics	
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units
Sash	One-piece
Number of devices for scaffold points, ø 12 to 13 mm	6
Filter, fume cupboard roof	Filter and particle filter Filter and activated carbon filter
Filter, lateral tall cupboard (max. 3 filter housings)	Filter and particle filter Filter and activated carbon filter Filter and particulate filter
Differential pressure gauges	Display of the degree of saturation of the filters as an option (not for activated carbon filters)
Lead insert	Optional
Waste disposal system for radio-isotope residual material in the underbench unit	Container for liquid radio-isotope residual material as an option Collapsible boxes for solid radio-isotope residual material as an option Level indicator and/or opening in the work surface as an option

Electrics	
Electrical supply	External sockets
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	With take-off valves for vacuum and gases as an option

Ventilation technology	1200	1500
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	480	600
Pressure loss, filter [Pa] <sup>2)</sup>	25/200	30/235
Pressure loss, particle filter [Pa] <sup>2)</sup>	50/300	60/350
Pressure loss, activated carbon filter [Pa] <sup>2)</sup>	25/250	30/30
Pressure loss, particulate filter [Pa] <sup>2)</sup>	30/250	35/290
Extract air function display	FAZ	
Airflow damper, constant	Airflow-Controller AC	
Airflow damper, variable	Airflow-Controller AC	
Connection height [mm] for FAZ and AC with extract manifold Ø 250 mm	3050	
Underbench exhaust	As an option, depending on requirements and regulations	

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> Pressure loss values refer to the states clean/contaminated.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

In the case of fume cupboards with filters, the pressure loss of the integrated filter stages must be added to the pressure loss of the fume cupboard.

Material/surface	
Internal lining including worktop	Polypropylene Stainless steel

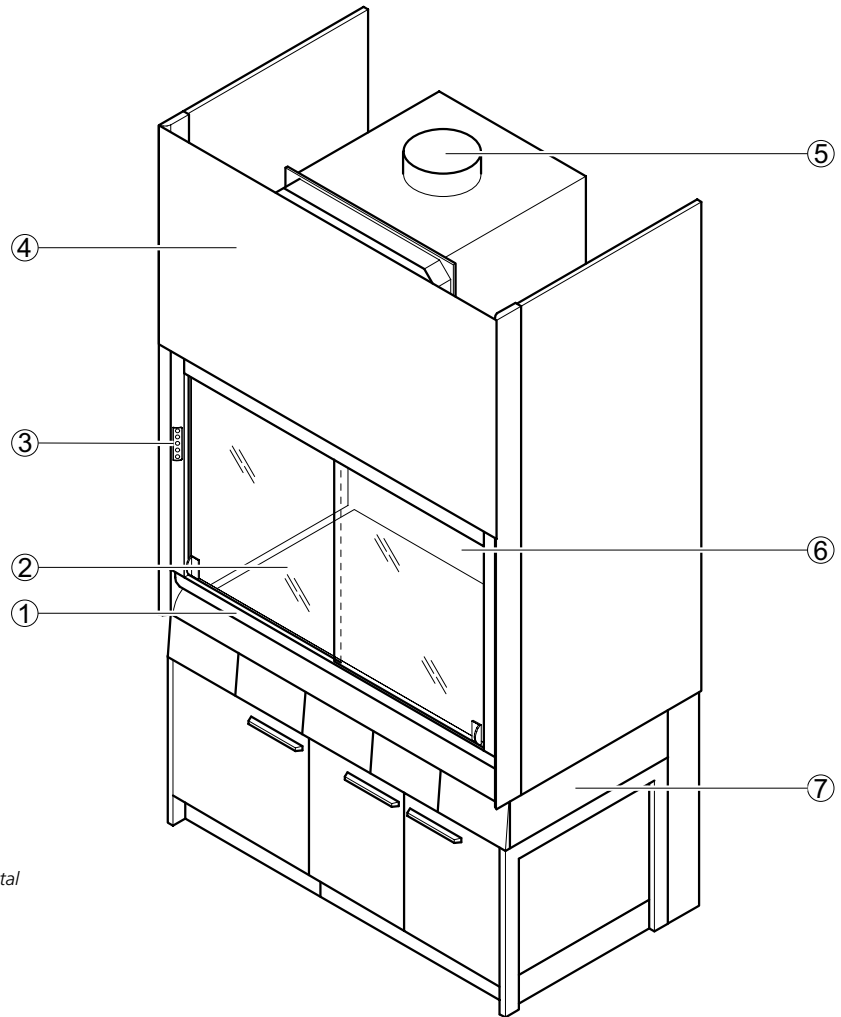
## Special fume cupboards

### Filter fume cupboard

#### Intended use

- Before the extract air from the internal workspace is released into the environment, it is cleaned by a filter unit

#### Design

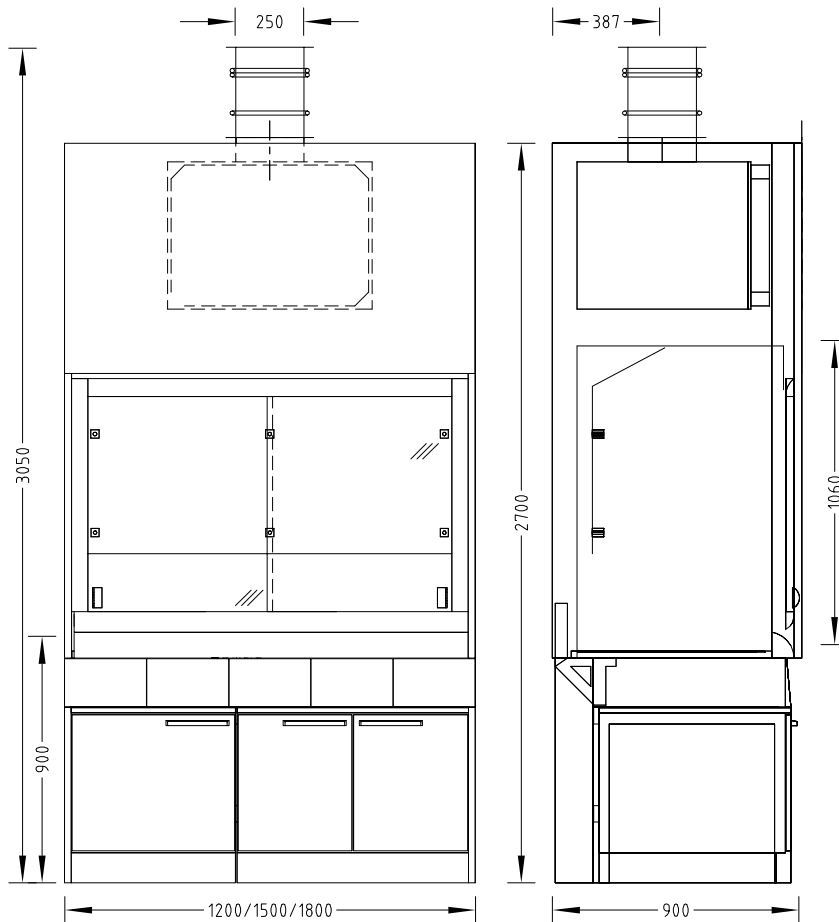


- 1 Sash with handle and horizontal sashes
- 2 Work surface
- 3 FAZ or AC control panel
- 4 Removable fascia panel
- 5 Extract manifold
- 6 Baffle with scaffold points
- 7 H-frame with pushed in under-bench unit with support and service panels

# Special fume cupboards

## Filter fume cupboard

### Dimensional drawing



### Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]	900		
Height [mm]	2700		
Clear width, internal workspace [mm]	1150	1450	1750
Clear height, internal workspace [mm]	1060		
Working height [mm]	900		
Filter housing, width x depth x height [mm]	820 x 775 x 674		

Weight	1200	1500	1800
Filter fume cupboard without installations [kg]	Approx. 270	Approx. 320	370
Filter housing [kg]	90		

# Special fume cupboards

## Filter fume cupboard

Design characteristics	1200	1500	1800
Supporting construction	H-frame with pushed in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Glass pane in the side wall	Possible on the left and/or right side of the fume cupboard; not with stoneware internal lining		
Number of devices for scaffold points, ø 12 to 13 mm	6		8
Material lock	Possible on the left and/or right side of the fume cupboard		
Filter, fume cupboard roof	Specifications on request		
Filter, lateral tall cupboard (max. 3 filter housings)	Specifications on request		
Differential pressure gauge	Display of the degree of saturation of the filters as an option (not for activated carbon filters)		

### Electrics

Electrical supply	External sockets
Fuse box	Optional
Sash controller SC	Optional

### Sanitary technology

Sanitary supply	With take-off valves for vacuum, gases and/or waters and drip cup integrated in the worktop as an option
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Ventilation technology	1200	1500	1800
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	480	600	720
Pressure loss, filter [Pa] <sup>2)</sup>	35/200	45/235	65/290
Pressure loss, particle filter [Pa] <sup>2)</sup>	70/300	95/365	130/430
Pressure loss, activated carbon filter [Pa] <sup>2)</sup>	35/25	45/30	65/35
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract manifold Ø 250 mm	3050		
Underbench exhaust	As an option, depending on requirements and regulations		

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

<sup>2)</sup> Pressure loss values refer to the states clean/contaminated.

The maximum admission pressure of 600 Pa for Waldner airflow dampers must not be exceeded.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.

In the case of fume cupboards with filters, the pressure loss of the integrated filter stages must be added to the pressure loss of the fume cupboard.

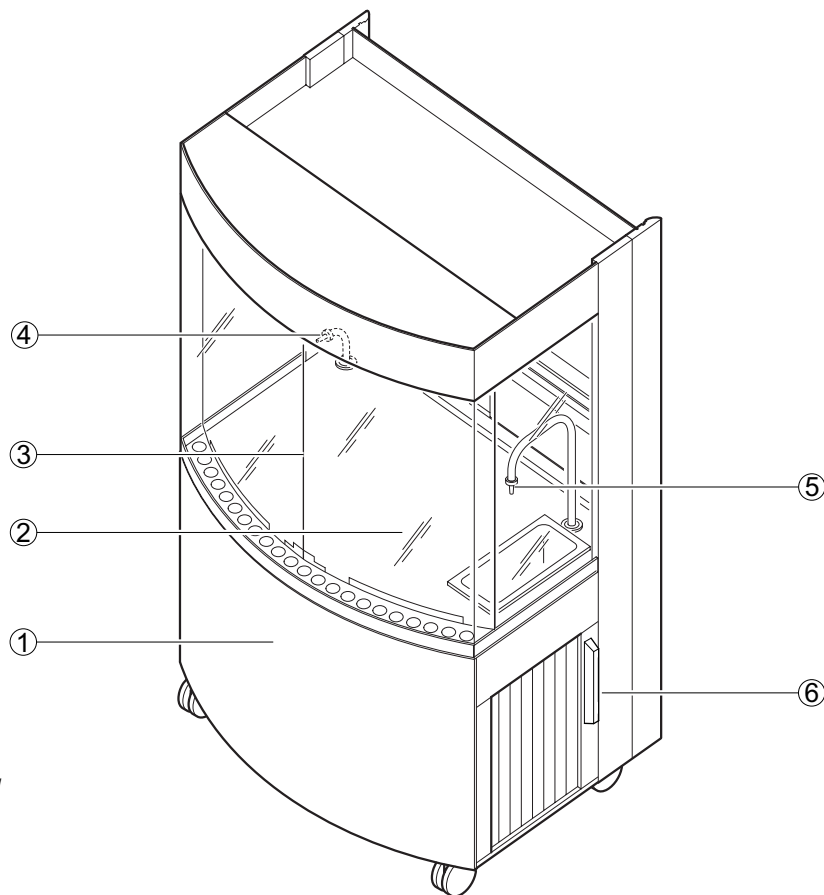
Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Melamine resin coating Solid (grade) laminate

## Intended use

- Can be used where required, with connections for the services supply, e. g. service wings
- Unrestricted view into the cupboard from all sides
- Service outlets in the internal workspace
- Control units located externally at the support

## Design

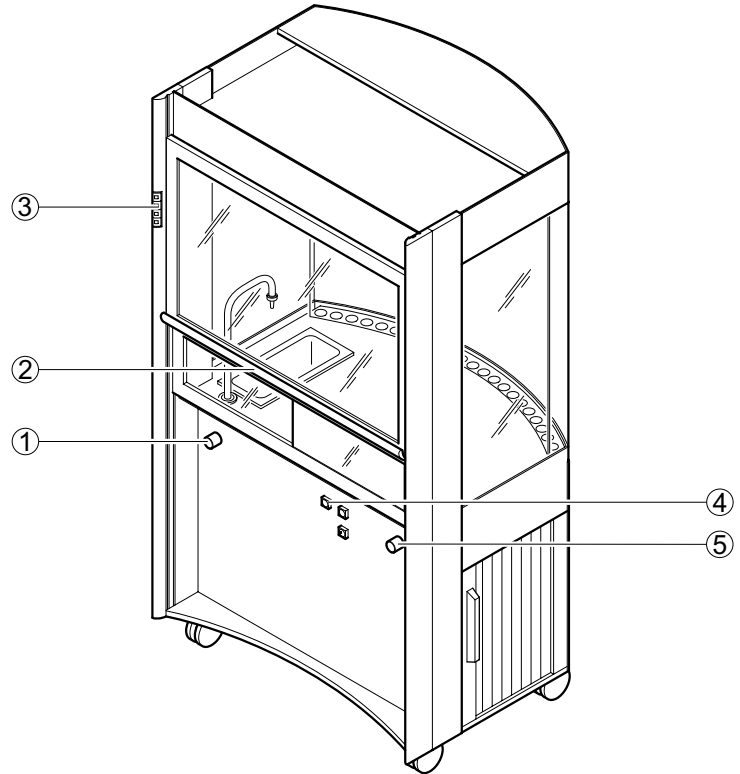
### Front view



- 1 Trolley
- 2 Work surface with surrounding increased edge
- 3 Viewing window and baffle (safety glass)
- 4 Gas outlet
- 5 Water outlet with sink and waste water lifting unit
- 6 Openings for pipes and cables

# Mobile fume cupboards AeroEm

## Rear view



- 1 Valve for water outlet
- 2 Handle with sash and horizontal sash
- 3 FAZ control panel
- 4 Switch for internal sockets
- 5 Valve for gas outlet

## Technical data

Dimensions	
Width [mm]	1050
Depth [mm]	815
Height [mm]	1975
Working height [mm]	900
Height, castors [mm]	120

Weight	
Weight [kg]	180

Design characteristics	
Sash	Two-piece, moves up and down with 2 horizontal sashes each
Glass pane in the side wall	All 4 sides of the fume cupboard
Lighting	Dazzle-free, can be switched from the outside
Roller shutter guiding	For pipes and cables on the left and right side of the fume cupboard



# Mobile fume cupboards AeroEm

Electrics	
Electrical supply	2 sockets in the internal workspace, can be switched individually from the outside
Total power of sockets [W]	1000
Connection voltage [V AC]	230
Voltage of waste water pump [V]	230
Power of lighting [W]	55
Length, electrical connection cable [mm]	2500

Sanitary technology	
Water connection	Optional
Waste water connection	Waste water quick release outlet as an option
Gas connection	Optional
Water fitting (tap)	Cold water WPC or WNC (EN) as an option, with sink, can be operated from the outside
Take-off valve for gases	Optional

Ventilation technology	
Minimum air exchange rate [m <sup>3</sup> /h] <sup>1)</sup>	300
Air-supply assistance fan	Can be switched on the FAZ
Extract air function display	FAZ
2 extract air spigots Ø [mm]	90
Length of extract air duct [mm]	2500

<sup>1)</sup> All air volume specifications refer to an opening height of the sash window of 500 mm and the maximum tracer gas values recommended by BG Chemie.

The indicated air exchange rates are minimum air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We therefore advise against using these values as a basis for dimensioning the ventilation system.

If on-site extract air monitoring systems and controlling products are used, different air volumes may result. The operating limitations must be agreed upon with Waldner beforehand.