Technical Catalogue
SCALA laboratory furniture system

SCALA

WALDNER

Technical Catalogue

The 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 ***SCALA*** laboratory furniture we offer innovative, mature technology, maximum operational safety, ergonomic design and perfect service. Discover all details of our 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 70 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.

WALDNER

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Fume hoods and extraction devices

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1 Fume hoods and extraction devices

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

Design together with an enlarged product range characterise the fume hoods of our ***SCALA*** laboratory range.

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

1 Fume hoods and extraction devices

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

All our fume hoods 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 fume hoods while maintaining the high safety level. Our bench-mounted fume hoods with Secuflow technology which are tested in accordance with EN 14175, e.g., require 270 m3/h/lfm.

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

The fact that our Secuflow fume hood 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 hood worktop

It prevents turbulence that could carry pollutant emissions.

Air flowing into the fume hood 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 side posts of our fume hoods 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 workspac

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 hoods and extraction devices

Clear view of all processes in the workspace

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

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 hood side post provides information on the operational state of the fume hood 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 hood. The photo-electric barrier stops the closing process if there are objects protruding from inside the workspace.

Various fume hood widths available

Our bench-mounted fume hoods are available in widths up to 2100 mm and the side-installed fume hoods up to 1800 mm - of course also in Secuflow technology.

Lighting for the internal workspace

LED lamps uniformly illuminate the fume hood interior - conveniently switchable from the side post.

The best for equipment and variability

Along with the convenient basic equipment, our fume hoods 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 hoods are mounted on a stell support frame. You can install plinth mounted, mobile or solvent cabinets under the fume hood.

Service modules that can be equipped as desired

The replaceable service modules are integrated in the rear and side panels of our fume hoods 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 hood measurements

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

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

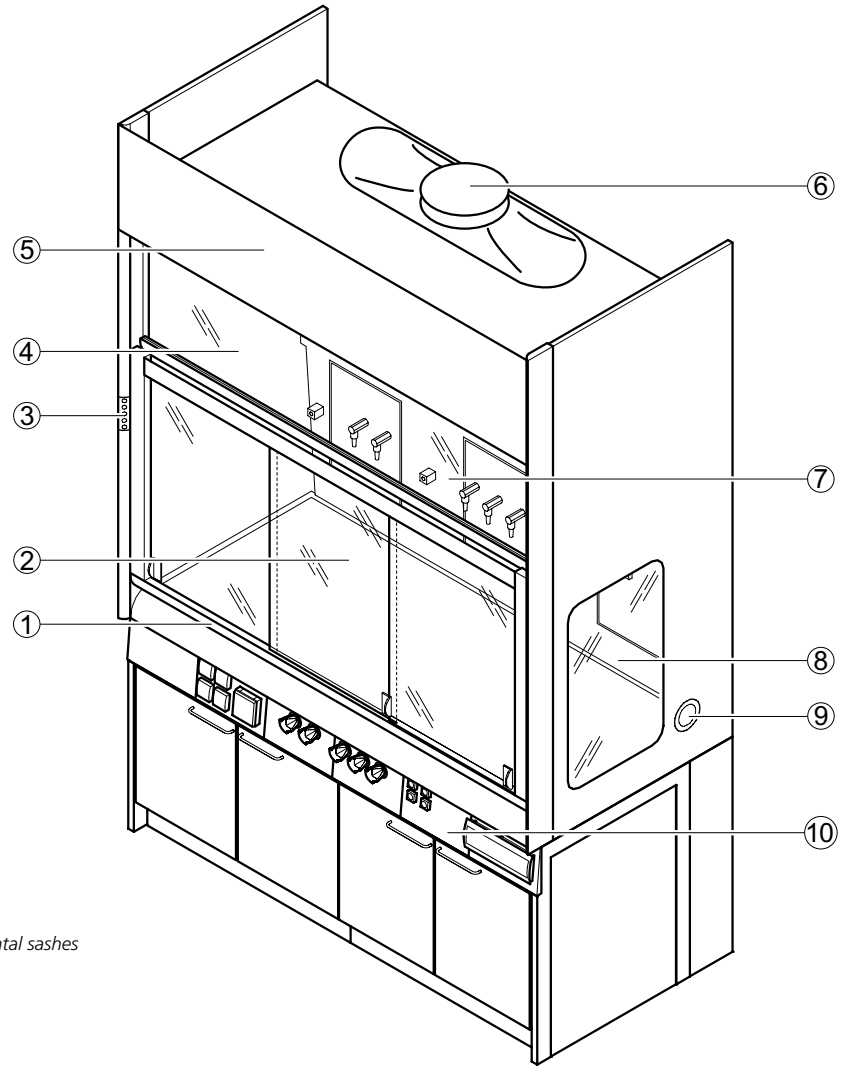
With our ISO 9001 certification and the GS mark for our entire product range, we have closed the circle in relation to fume hood tests and had our test laboratory tested and certified by TÜV NORD CERT GmbH according to the German law on equipment safety (Gerätesicherheitsgesetz).

Bench-mounted fume hoods
Bench-mounted fume hood

Intended use

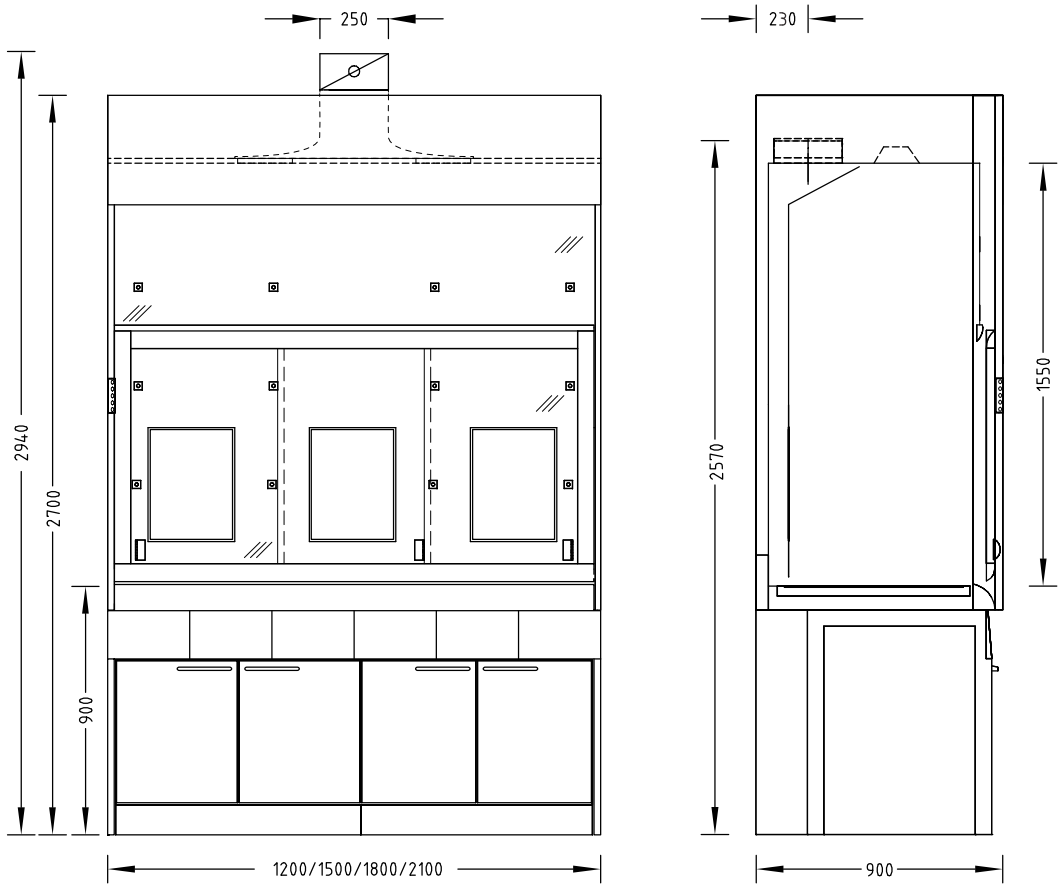
- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 horizontally on the service rail of the support unit

Design



1 Sash with handle and horizontal sashes
2 Worktop
3 FAZ or AC control panel
4 Upper sash window
5 Removable fascia panel
6 Exhaust hood
7 Baffle with service modules
8 Glass pane in the side wall
9 Material lock
10 Bench frame with push-in underbench units with support and service panels

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 hoods
Bench-mounted fume hood

Design characteristics	1200	1500	1800	2100
Supporting construction	H-frame with push-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume hood	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			
Number of devices for scaffold points, ø 12 to 13 mm	9		12	
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5			
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 [m³/h] [1]	480	600	720	840
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 air hood Ø 250 mm	2570			
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2570			
Connection height [mm] for AC with extract air hood Ø 250 mm	2940			
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2910			
Underbench unit extraction system	As an option, depending on requirements and regulations			

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.24 m/s. For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

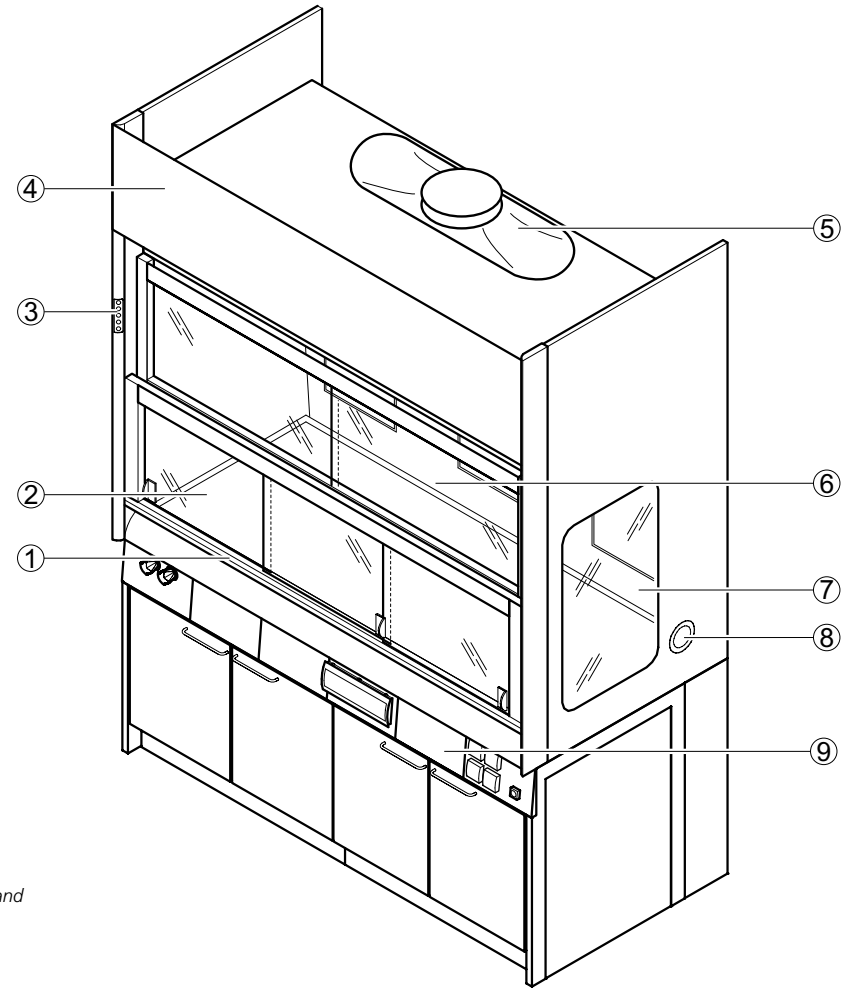
Material/surface	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Melamine resin facing Solid grade laminate Stoneware

Low ceiling bench-mounted fume hood

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
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 horizontally on the service rail of the support unit
- Suitable for rooms with low ceiling height

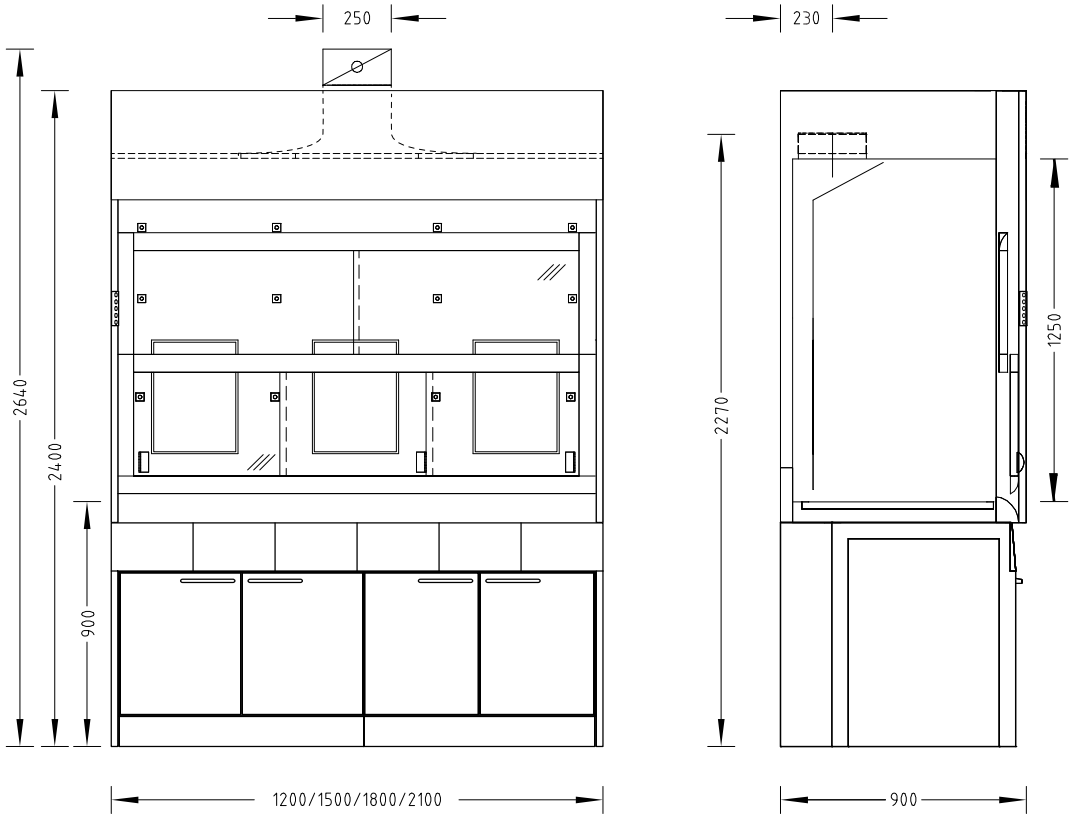
Design



1 *Two-piece sash with handle and horizontal sashes*
2 *Worktop*
3 *FAZ or AC control panel*
4 *Removable fascia panel*
5 *Exhaust hood*
6 *Baffle with service modules*
7 *Glass pane in the side wall*
8 *Material lock*
9 *Bench frame with push-in underbench units with support and service panels*

Bench-mounted fume hoods
Low ceiling bench-mounted fume hood

Dimensional drawing



Technical data

Dimensions	1200	1500	1800	2100
Width [mm]	1200	1500	1800	2100
Depth [mm]	900			
Height [mm]	2400			
Clear width, internal workspace [mm]	1150	1450	1750	2050
Clear height, internal workspace [mm]	1250			
Working height [mm]	900			

Weight	1200	1500	1800	2100
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300	Approx. 350

Design characteristics	1200	1500	1800	2100
Supporting construction	H-frame with push-in underbench units			
Two-piece sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume hood	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			
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12	
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5			
Service modules	2		3	

Bench-mounted fume hoods
Low ceiling bench-mounted fume hood

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 [m³/h] [1]	480	600	720	840
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 air hood Ø 250 mm	2270			
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2270			
Connection height [mm] for AC with extract air hood Ø 250 mm	2640			
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2610			
Underbench unit extraction system	As an option, depending on requirements and regulations			

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.24 m/s. For other design face velocities, please contact your Waldner sales representative.

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A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

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

Bench-mounted fume hoods
Secuflow bench-mounted fume hood

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
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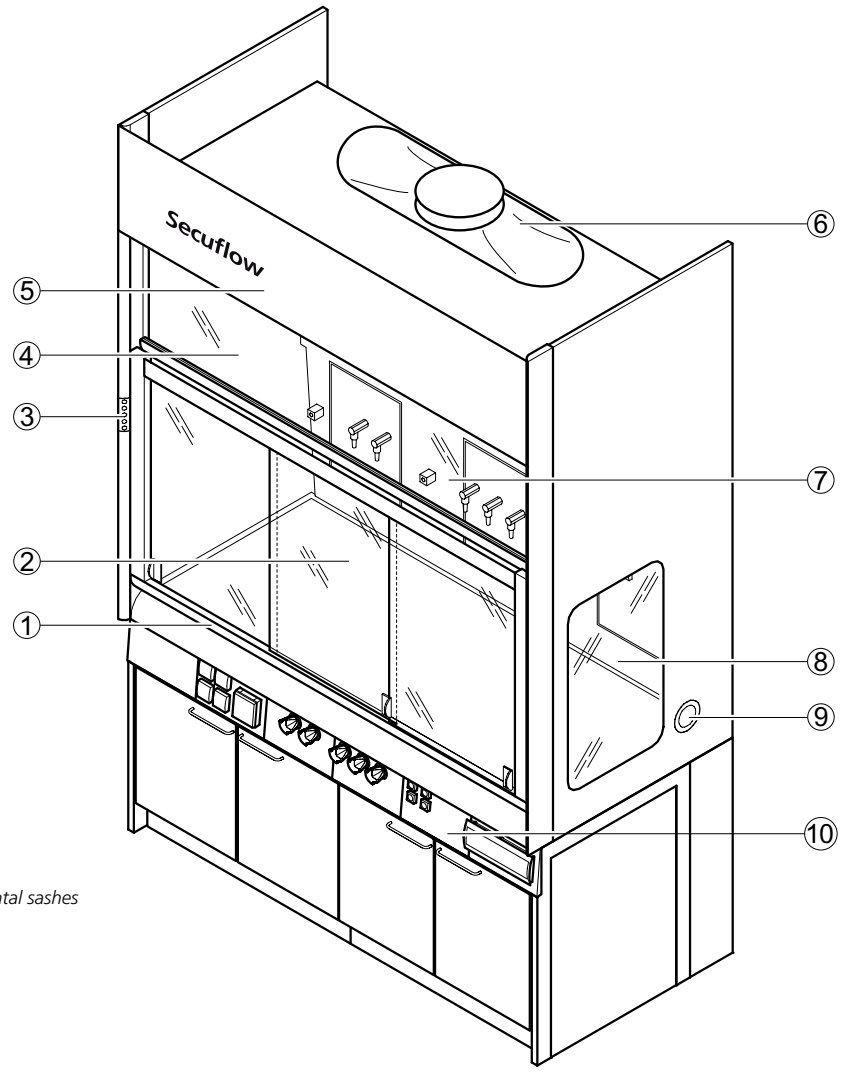
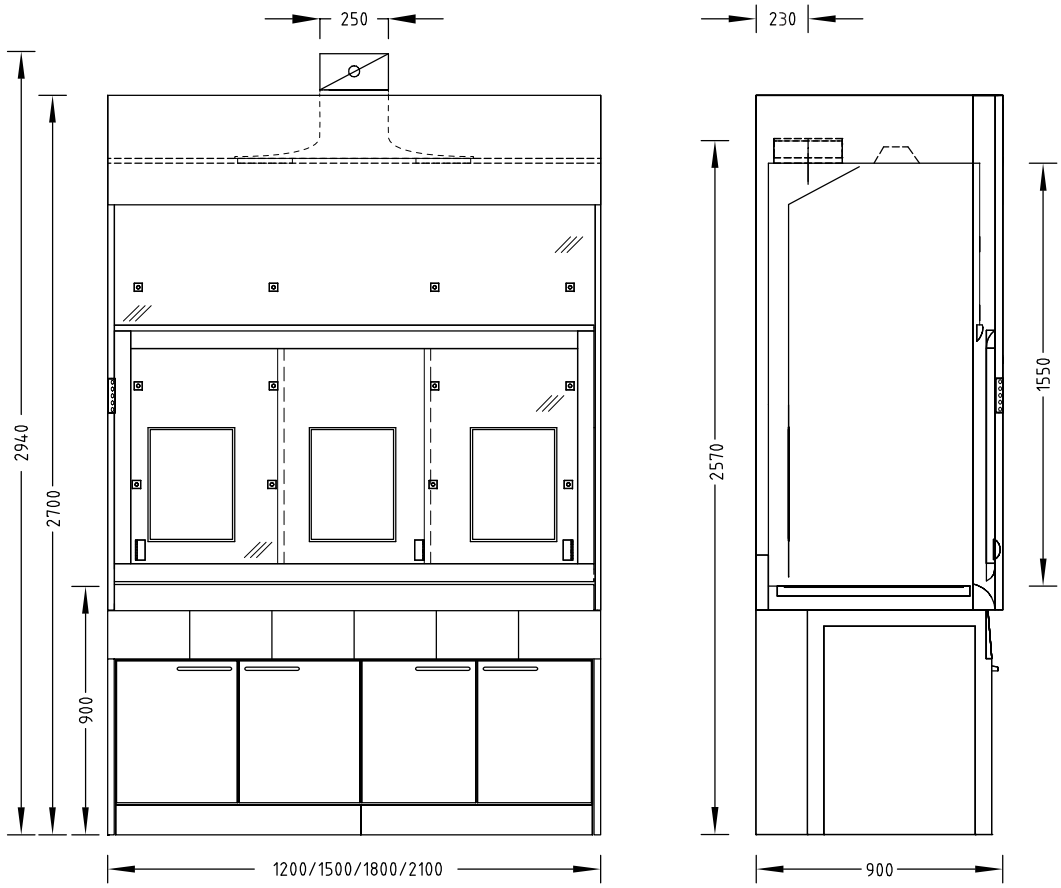
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms
- Not suitable for openly breaking down chemicals
- Active supportive flow technology (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 horizontally on the service rail of the support unit

Design



1 Sash with handle and horizontal sashes
2 Worktop
3 FAZ or AC control panel
4 Upper sash window
5 Removable fascia panel
6 Exhaust hood
7 Baffle with service modules
8 Glass pane in the side wall
9 Material lock
10 Bench frame with push-in underbench units with support and service panels

Dimensional drawing



Technical data

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

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

Bench-mounted fume hoods
Secuflow bench-mounted fume hood

Design characteristics	1200	1500	1800	2100
Supporting construction	H-frame with push-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume hood	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			
Max. number of devices for scaffold points, ø 12 mm to 13 mm	9		12	
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5			
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 [m³/h] [1]	330	410	490	570
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 air hood Ø 250 mm	2570			
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Underbench unit extraction system	As an option, depending on requirements and regulations			

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.17 m/s (+/- 0.01 m/s). For other design face velocities, please contact your Waldner sales representative.

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A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers. The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system. If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

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

Bench-mounted fume hoods
Secuflow low ceiling bench-mounted fume hood

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
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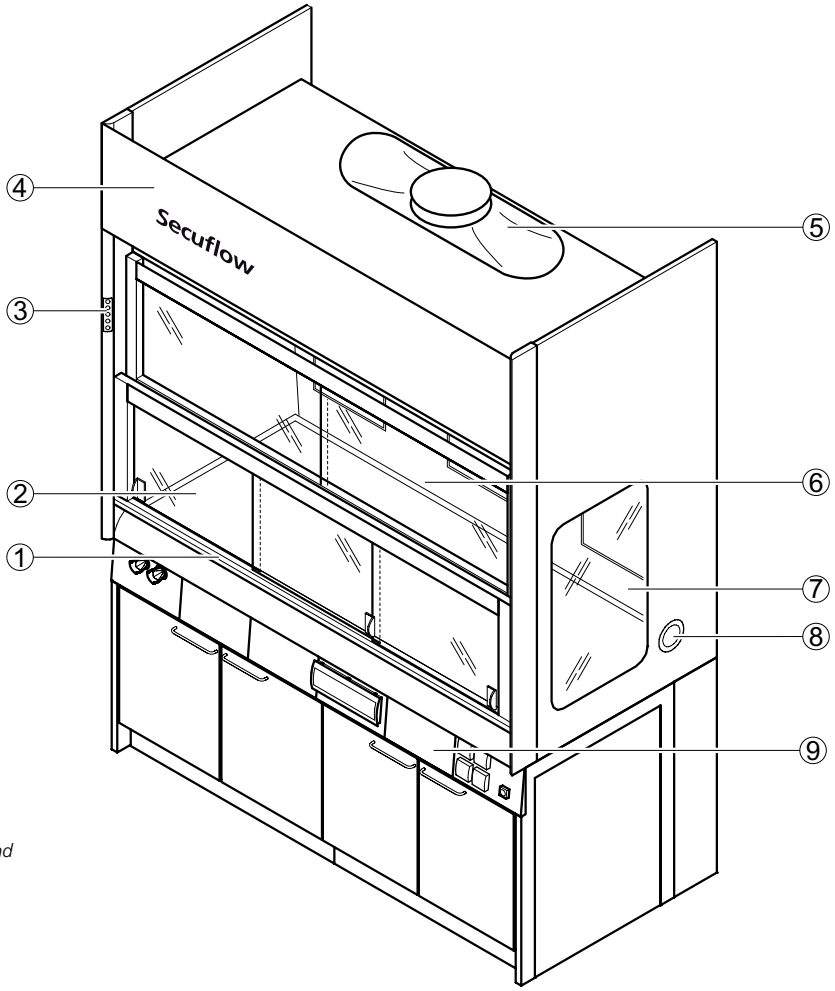
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods constructed in acc. with EN 14175 are normally not suited for use with radioactive substances or microorganisms
- Not suitable for openly breaking down chemicals
- Active supportive flow technology (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 horizontally on the service rail of the support unit
- Suitable for rooms with low ceiling height

Design



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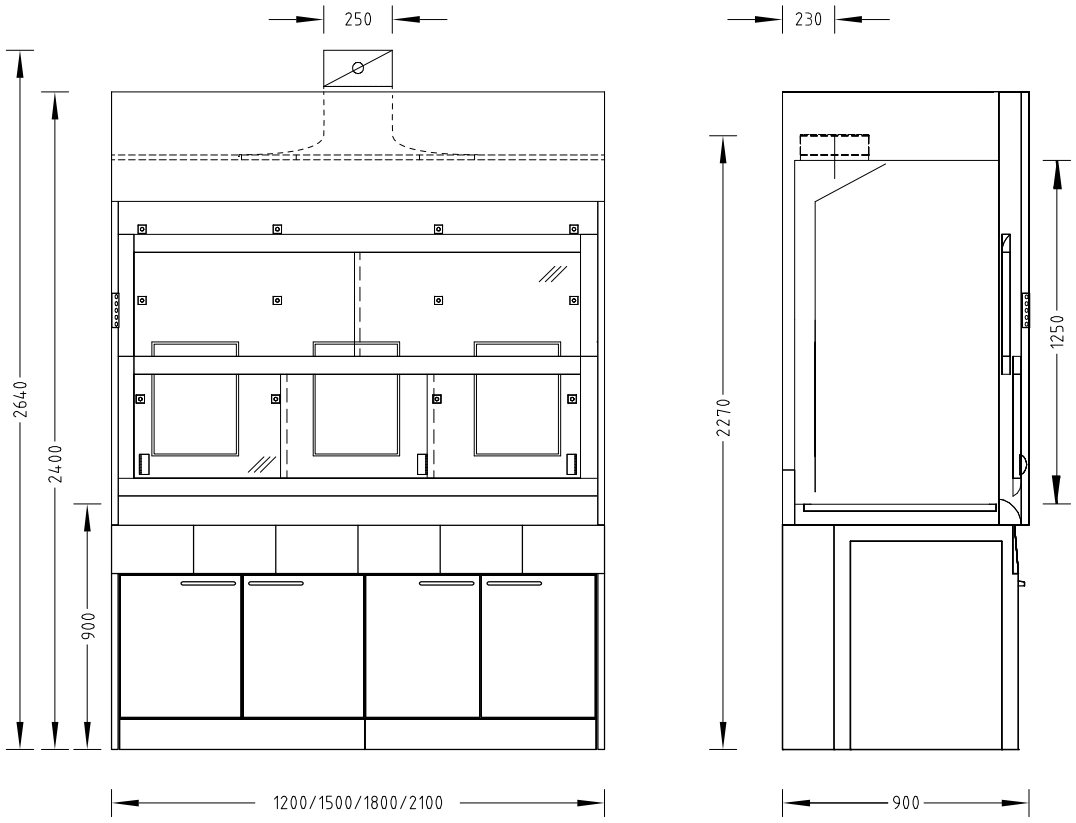
5 *Exhaust hood*
6 *Baffle with service panel*
7 *Glass pane in the side wall*
8 *Material lock*
9 *Bench frame with push-in underbench units with support and service panels*

Bench-mounted fume hoods
Secuflow low ceiling bench-mounted fume hood

Dimensional drawing



Technical data

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Height [mm]	2400			
Clear width, internal workspace [mm]	1150	1450	1750	2050
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Working height [mm]	900			

Weight	1200	1500	1800	2100
Without installation [kg]	Approx. 220	Approx. 260	Approx. 300	Approx. 350

Design characteristics	1200	1500	1800	2100
Supporting construction	H-frame with push-in underbench units			
Two-piece sash	2 horizontal sashes		3 horizontal sashes	
Side panel of the fume hood	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			
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12	
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5			
Service modules	2		3	

Bench-mounted fume hoods
Secuflow low ceiling bench-mounted fume hood

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 [m³/h] [1]	330	410	490	570
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 air hood Ø 250 mm	2270			
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Underbench unit extraction system	As an option, depending on requirements and regulations			

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

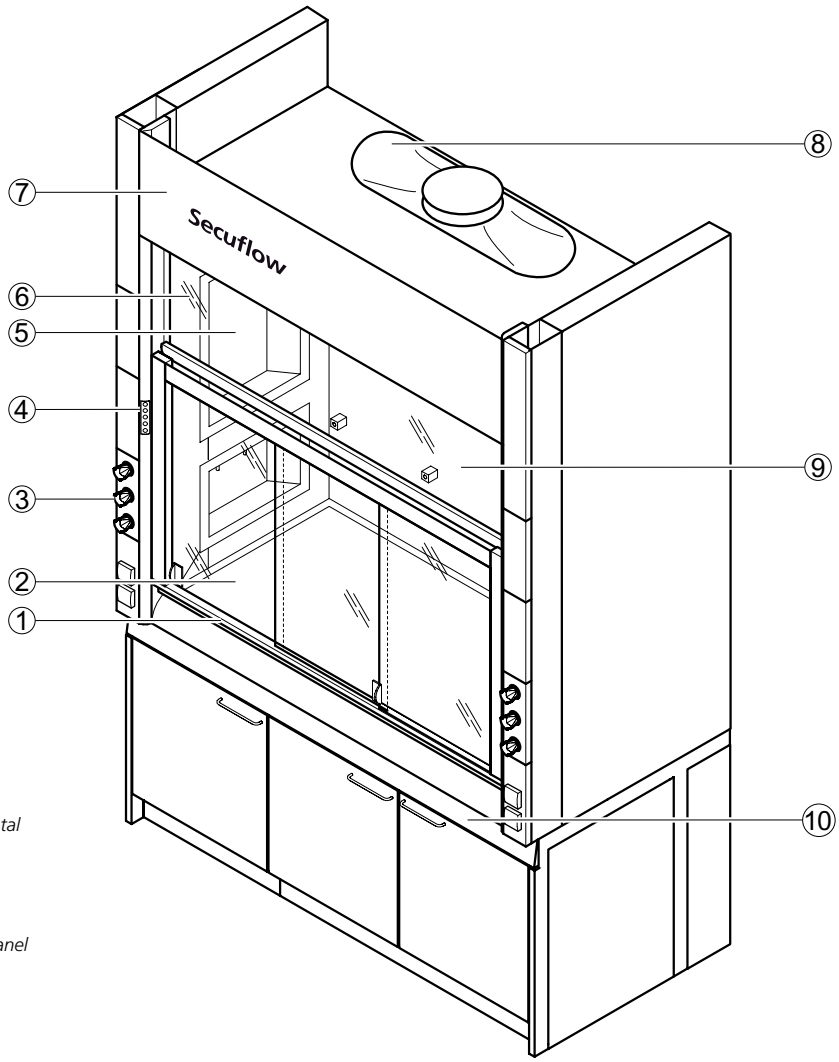
Bench-mounted fume hood with side installation

Secuflow bench-mounted fume hood 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
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 vertically on the side service panels

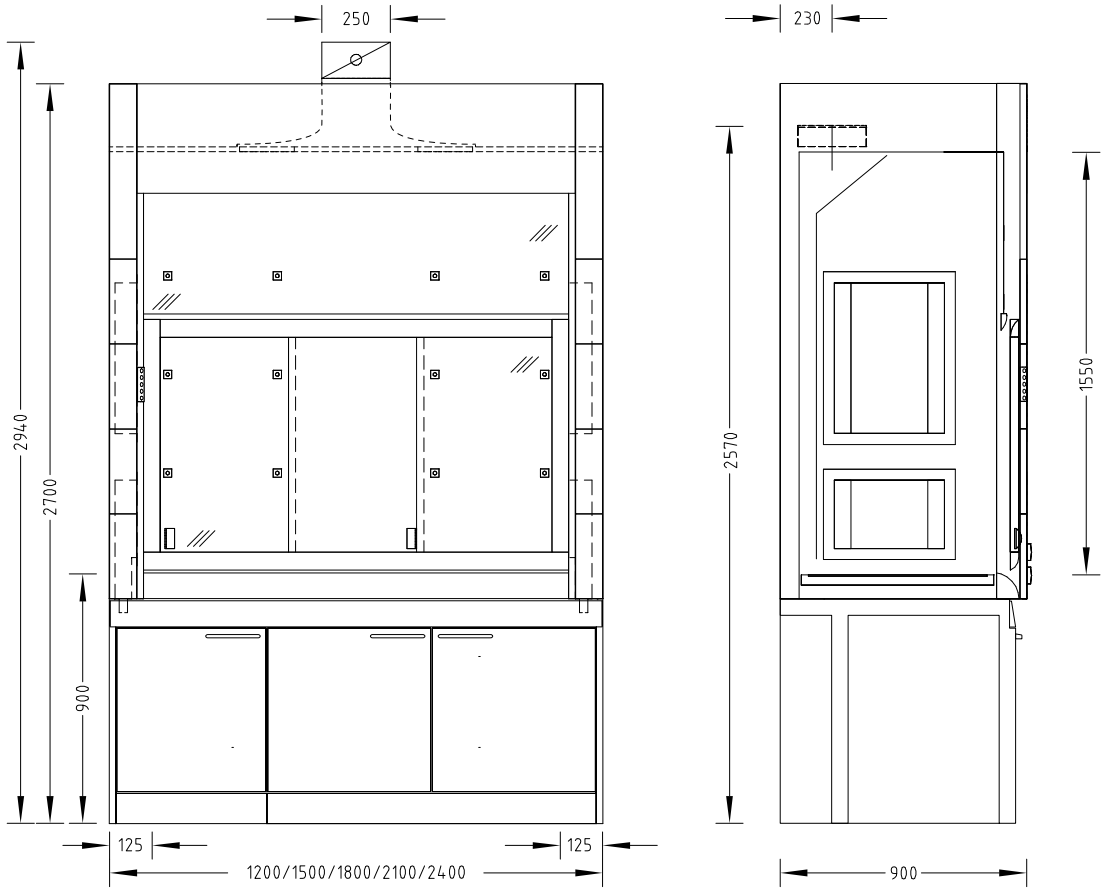
Design



1 *Sash with handle and horizontal sashes*
2 *Worktop*
3 *Service panel*
4 *FAZ or AC control panel*
5 *Service modules in the side panel of the fume hood*
6 *Upper sash window*
7 *Removable fascia panel*
8 *Exhaust hood*
9 *Baffle with scaffold points*
10 *Bench frame with push-in underbench units as an option*

Bench-mounted fume hood with side installation
Secuflow bench-mounted fume hood 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 hood with side installation
Secuflow bench-mounted fume hood with side installation

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	H-frame with push-in underbench units				
Sash	2 horizontal sashes		3 horizontal sashes		
Side panel of the fume hood	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume hood 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
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5				
Service modules	Service modules in the left and/or right side panel of the fume hood, 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] [1]	330	410	490	570	650
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 air hood Ø 250 mm	2570				
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2570				
Connection height [mm] for AC with extract air hood Ø 250 mm	2940				
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2910				
Underbench unit extraction system	As an option, depending on requirements and regulations				

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.17 m/s (+/- 0.01 m/s). For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers. The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system. If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

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

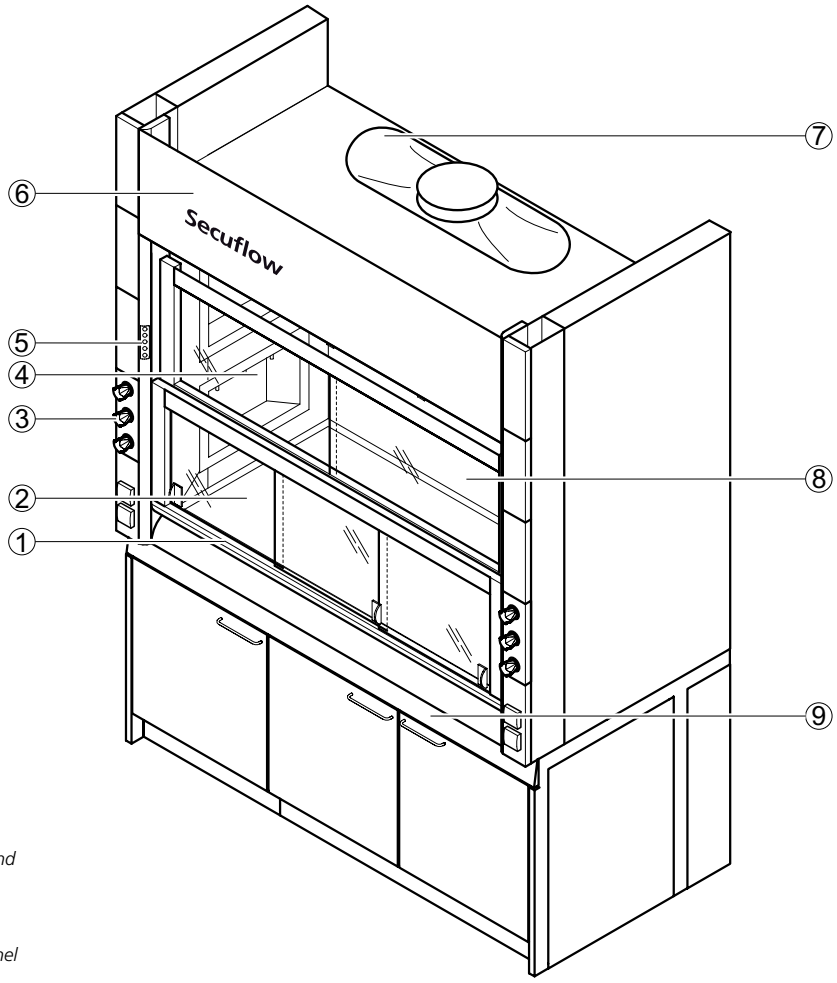
Bench-mounted fume hood with side installation

Secuflow low ceiling bench-mounted fume hood 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
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 vertically on the side service panels
- Suitable for rooms with low ceiling height

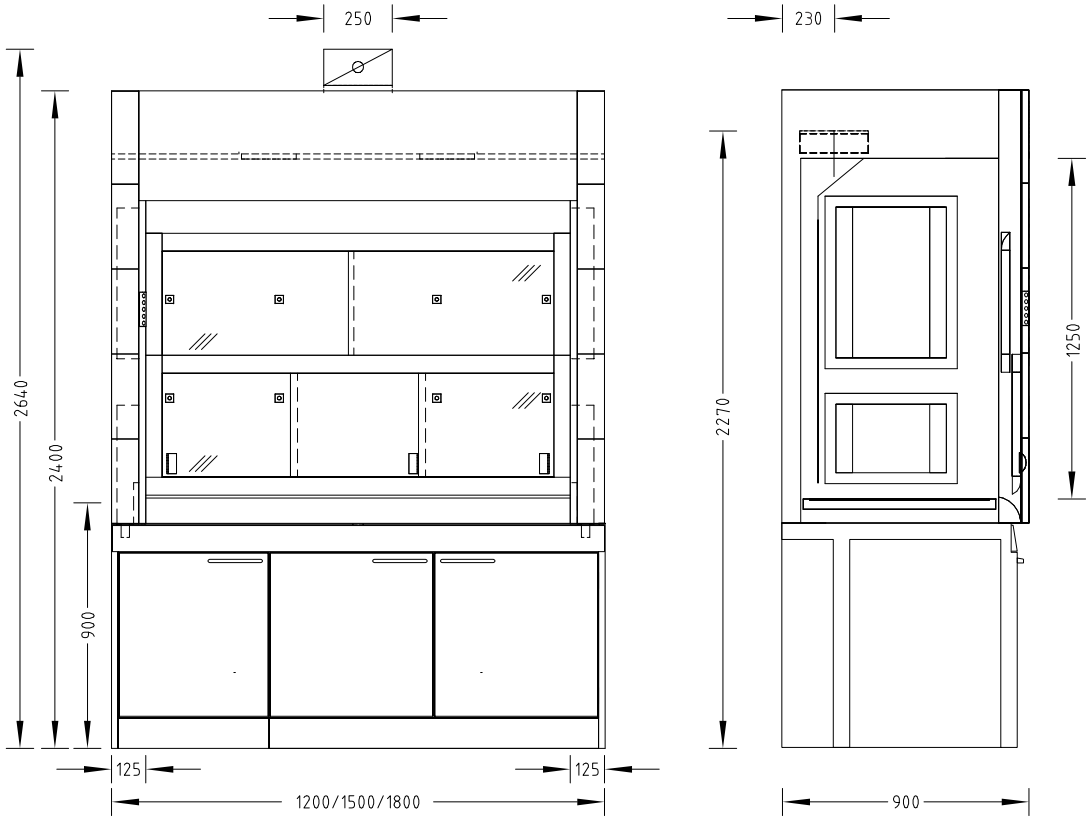
Design



1 Two-piece sash with handle and horizontal sashes
2 Worktop
3 Service panel
4 Service module in the side panel of the fume hood
5 FAZ or AC control panel
6 Removable fascia panel
7 Exhaust hood
8 Baffle with scaffold points
9 Bench frame with push-in underbench units as an option

Bench-mounted fume hood with side installation
Secuflow low ceiling bench-mounted fume hood 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]		1250	
Working height [mm]		900	

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

Design characteristics	1200	1500	1800
Supporting construction	H-frame with push-in underbench units		
Two-piece sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume hood	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume hood, 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	9	
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5		
Service modules	Service modules in the left and/or right side panel of the fume hood, depending on requirement		

Bench-mounted fume hood with side installation
Secuflow low ceiling bench-mounted fume hood 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 [m³/h] [1]	330	410	490
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 air hood Ø 250 mm	2270		
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2270		
Connection height [mm] for AC with extract air hood Ø 250 mm	2640		
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2610		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.17 m/s (+/- 0.01 m/s). For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

Material	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate Stainless steel Melamine resin facing

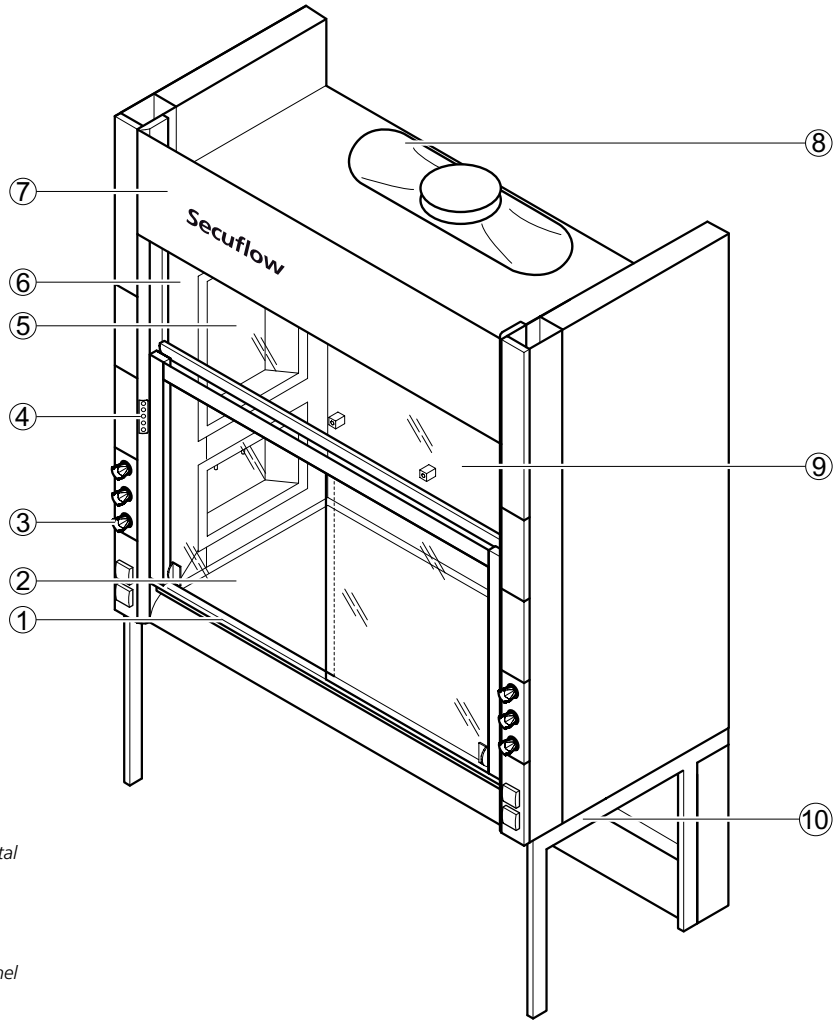
Bench-mounted fume hood with side installation

Secuflow bench-mounted fume hood 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
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 vertically on the side service panels

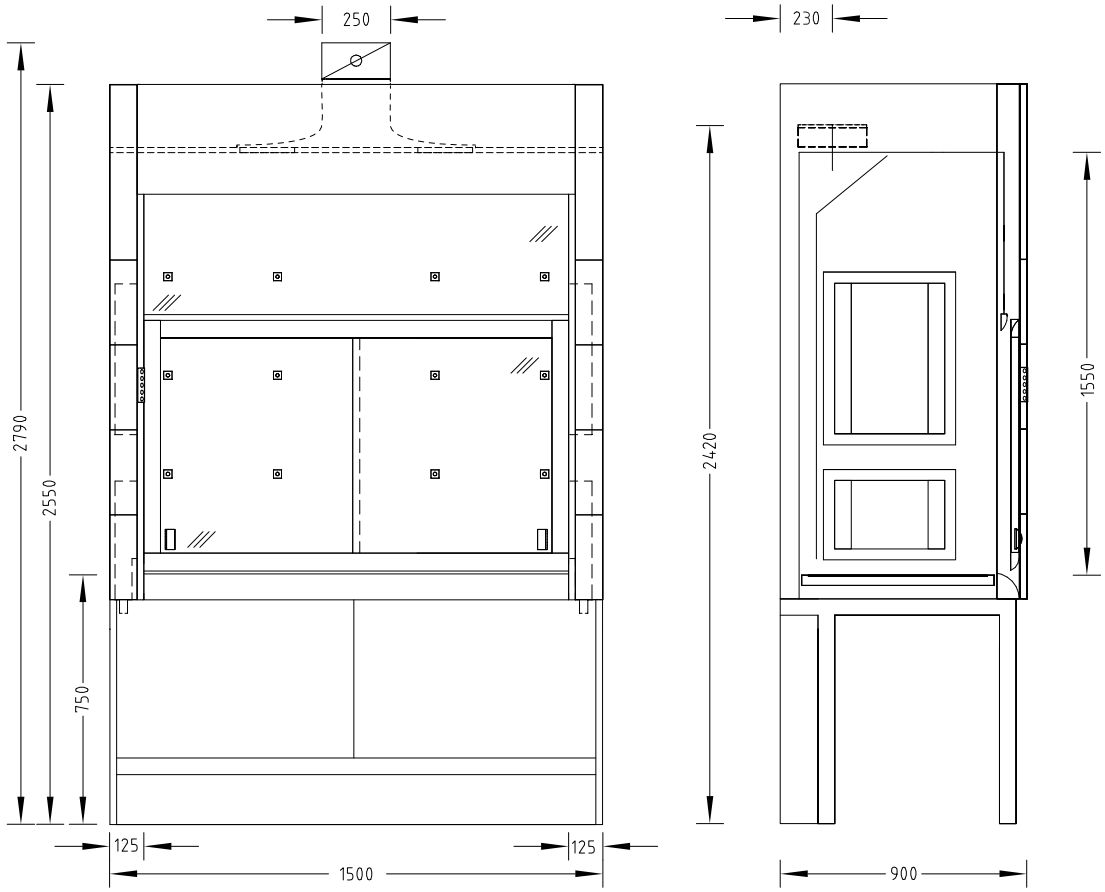
Design



1 Sash with handle and horizontal sashes
2 Worktop
3 Service panel
4 FAZ or AC control panel
5 Service module in the side panel of the fume hood
6 Upper sash window
7 Removable fascia panel
8 Exhaust hood
9 Baffle with scaffold points
10 Bench frame with push-in underbench units as an option

Bench-mounted fume hood with side installation
Secuflow bench-mounted fume hood 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 hood with side installation
Secuflow bench-mounted fume hood with side installation for work performed while seated

Design characteristics	
Supporting construction	H-frame
Sash	2 horizontal sashes
Side panel of the fume hood	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume hood Material lock on the left and/or right as an option
Max. number of devices for scaffold points, ø 12 to 13 mm	12
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5
Service modules	Service modules in the left and/or right side panel of the fume hood, 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 [m³/h] [1]	410
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 air hood Ø 250 mm	2420
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2420
Connection height [mm] for AC with extract air hood Ø 250 mm	2790
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2760
Underbench unit extraction system	As an option, depending on requirements and regulations

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG Chemie). Shown rates correspond to a face velocity of 0.17 m/s (+/- 0.01 m/s). For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

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

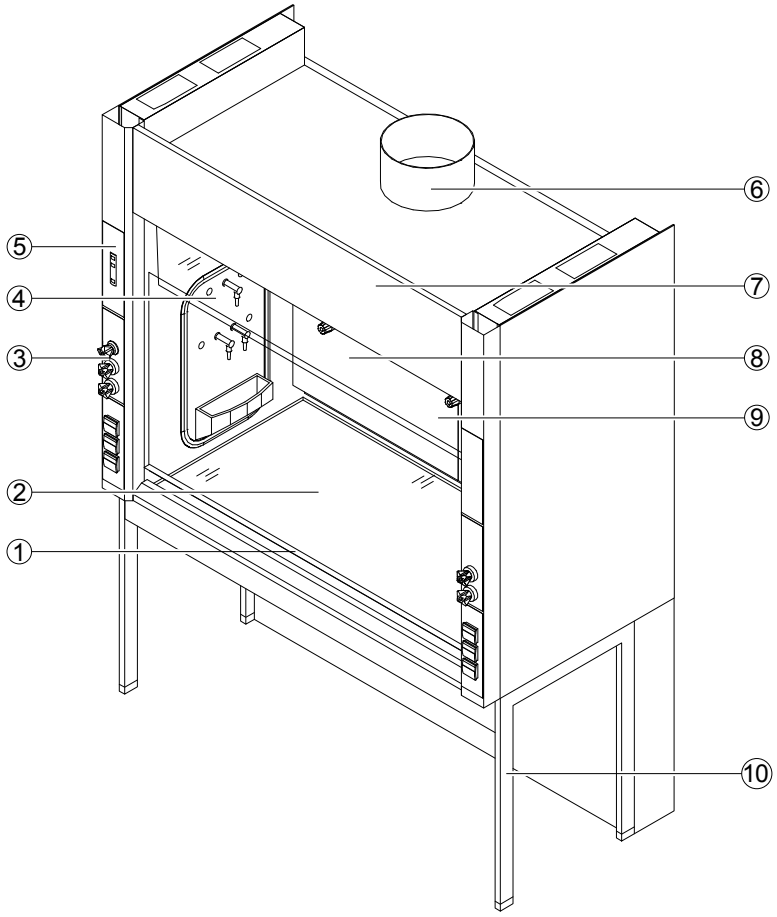
Bench-mounted fume hoods with side installation

Fume hood with side installation, made of steel SI 3 steel

Intended use

- Protective equipment for users, tested in accordance with EN 14175 and ASHRAE 110.
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous concentrations of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- 0Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts from the internal workspace
- General purpose fume hoods constructed in compliance with EN 14175 and ASHRAE 110 are normally not suitable for use with radioactive substances or micro-organisms
- Not suitable for openly breaking down chemicals
- Service outlets in the side panel of the internal workspace
- Control units located externally on the service panels

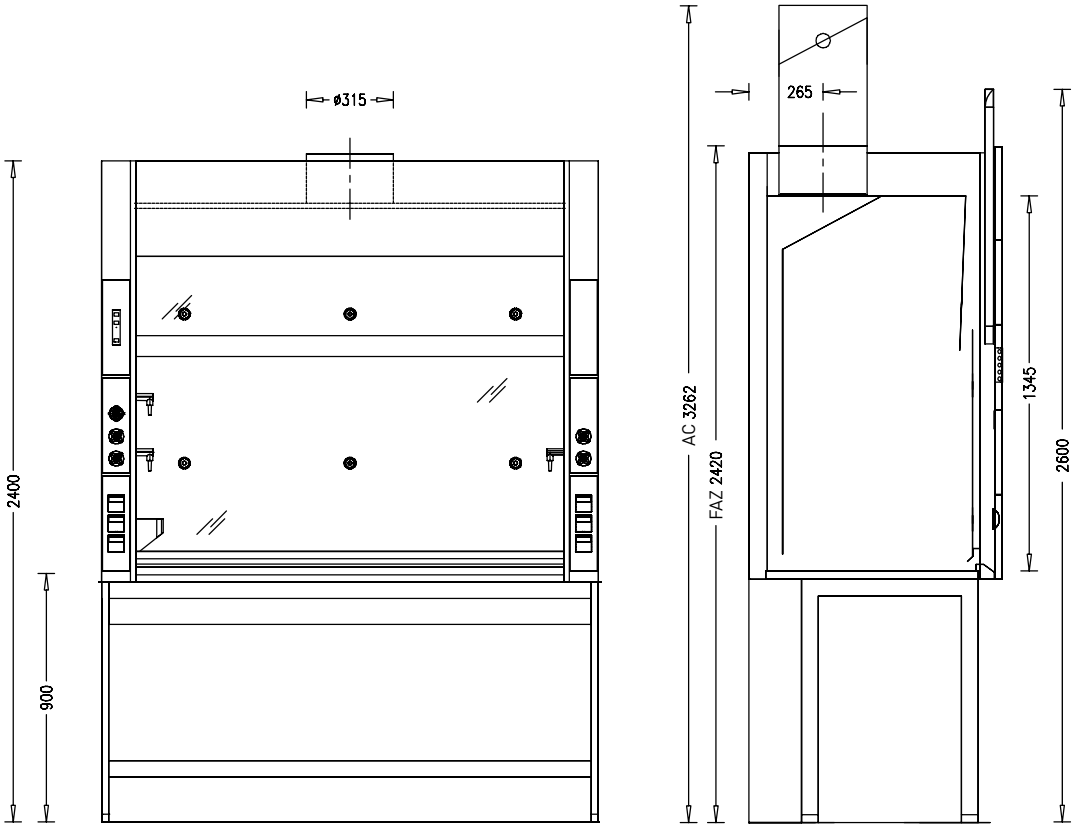
Design



1 Sash with sash handle
2 Worktop
3 Service panel
4 Side panel in fume hood wall
5 Function display control panel
6 Extract air spigot
7 Removable fascia panel
8 Upper sash window
9 Baffle with scaffold points
10 Bench frame

Bench-mounted fume hoods with side installation
Fume hood with side installation, made of steel
SI 3 steel

Dimensional drawing



Technical data

Dimensions	1200	1500	1800	2100	2400
Width [mm]	1200	1500	1800	2100	2400
Depth [mm]			900		
Height [mm]			2400		
Clear width, internal workspace [mm]	940	1240	1540	1840	2140
Clear height, internal workspace [mm]			1345		
Working height [mm]			900		

Weight	1200	1500	1800	2100	2400
Without installation [kg]	Approx. 220	Approx. 290	Approx. 350	Approx. 410	Approx. 470

Bench-mounted fume hoods with side installation
Fume hood with side installation, made of steel
SI 3 steel

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	H-frame with push-in underbench units				
Sash	One-piece				
Sash, divided (optional)	2 horizontal sashes		3 horizontal sashes		
Side panel of the fume hood	Without glazing and without equipment pass through hatch				
Number of units for scaffold points, ø 12 to 13 mm	6	6	6	8	10

Electrics	
Electrical supply	Sockets only external in service panel
Fuse box	Optional
Sash controller SC	Optional

Sanitary technology	
Sanitary supply	Optional: Take-off valves for vacuum, gases and/or water and integrated sink (PP) in side panel

Ventilation technology	1200	1500	1800	2100	2400
EN 14175 minimum air exchange rate [m³/h] [1]	380	460	500	650	750
ASHRAE with 0.3 m/s / 60 fpm [m³/h] [2]	470	620	770	910	1060
ASHRAE with 0.5 m/s / 100 fpm [m³/h] [3]	780	1030	1300	1520	1770
Function display	FAZ / External control				
Airflow damper, variable	Airflow-Controller AC				
Connection height [mm] with function display with extract air spigot Ø 315 mm	2420				
Connection height [mm] with AC with extract air spigot Ø 315 mm	3262				
Floor/underbench extraction system	Optional depending on requirements and regulations				

[1] Air volume specifications refer to an opening height of the sash window of 500 mm (test opening in line with EN 14175-3) and the maximum tracer gas values recommended by BG RCI.

[2] Air volume specifications refer to the prototype test in line with ASHRAE 110 with a face velocity of 60 fpm (0.3 m/s).

[3] Air volume specifications refer to the prototype test in line with ASHRAE 110 with a face velocity of 100 fpm (0.5 m/s).

The indicated minimum air exchange rates were determined under specified test conditions in compliance with EN 14175-3 and ASHRAE 110. Adapt these minimum air exchange rates when sizing the ventilation system.
The required air volumes may be different if on-site extract air monitoring systems or airflow dampers are used. Agree the operating limitations with Waldner.

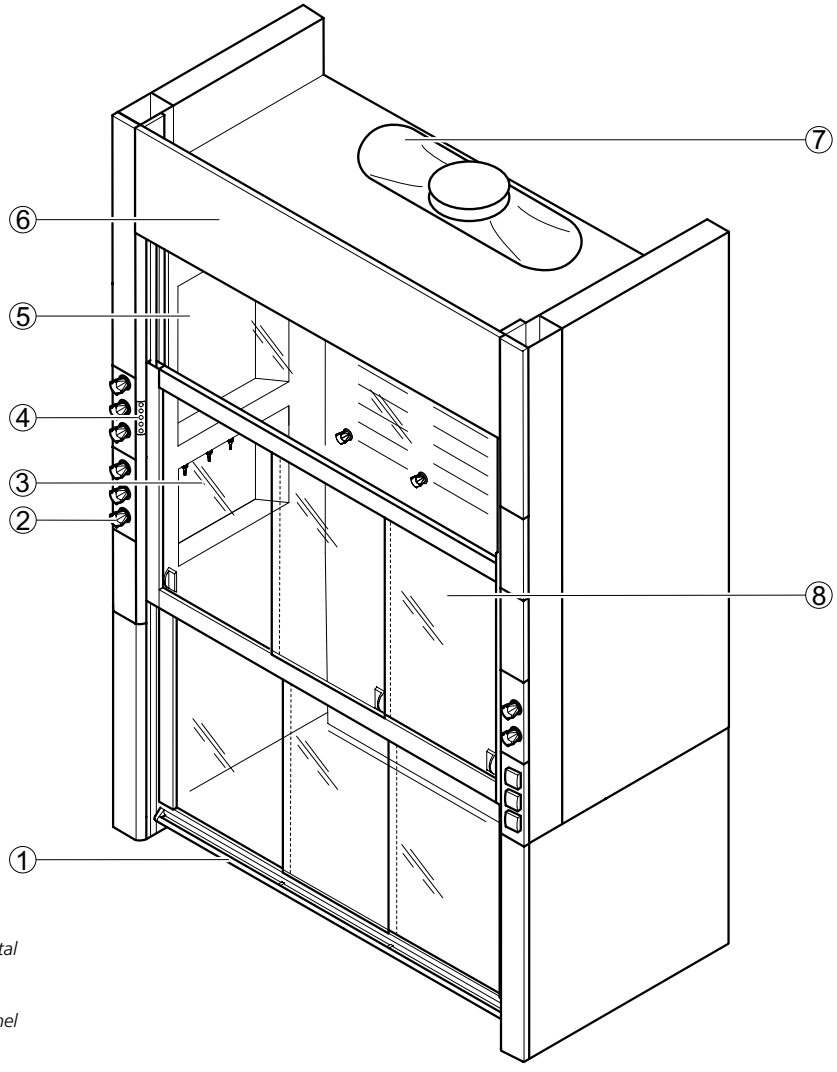
Material/surface	
Worktop	Epoxy, polypropylene, stainless steel
Internal lining	Polyresin, solid grade laminate, polypropylene, stainless steel

Walk-in fume hoods
Walk-in fume hood with side installation

Intended use

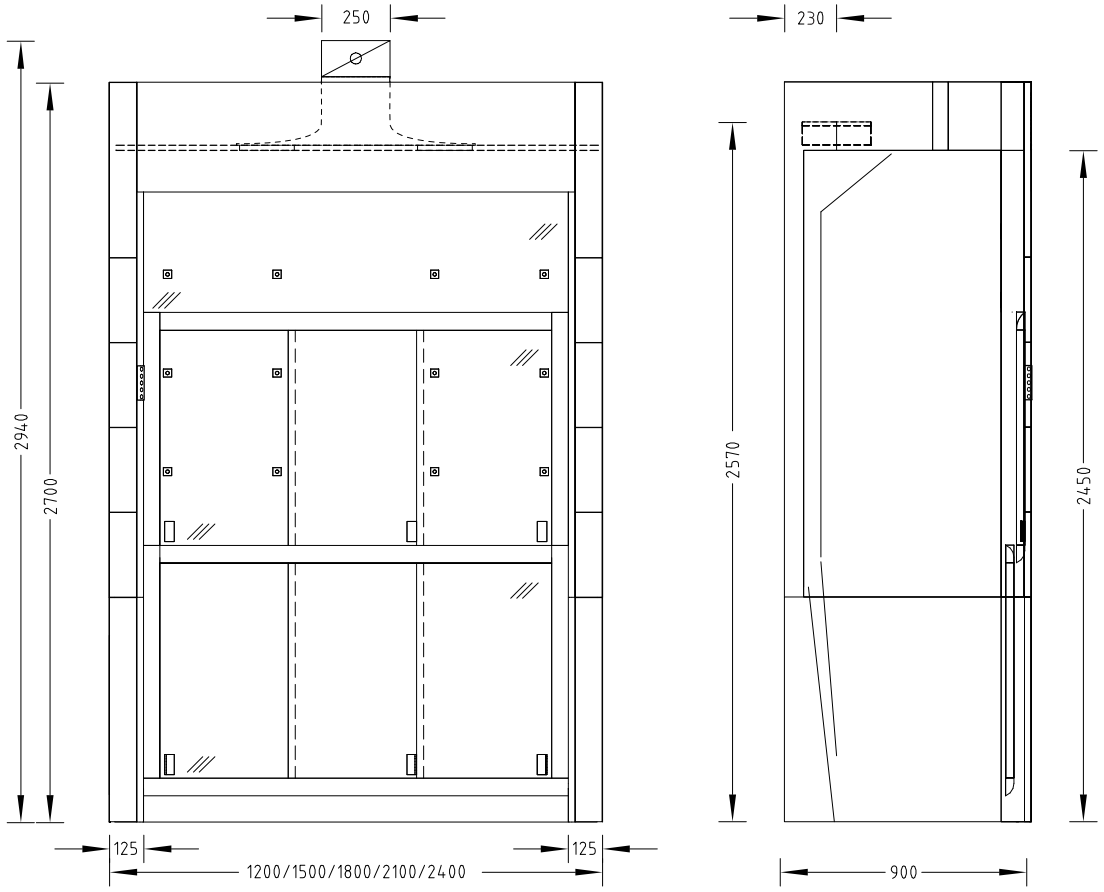
- Protective device for the user, tested in acc. with EN 14175
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 vertically on the side service panels
- Suitable for high experimental set-ups

Design



1 *Sash with handle and horizontal sashes*
2 *Service panel*
3 *Service module in the side panel of the fume hood*
4 *FAZ or AC control panel*
5 *Upper sash window*
6 *Removable fascia panel*
7 *Exhaust hood*
8 *Baffle with scaffold points*

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]			2450		

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

Walk-in fume hoods
Walk-in fume hood 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 hood	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume hood 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
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5				
Service modules	In the left and/or right side panel of the fume hood, 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] [1]	480	600	720	840	960
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 air hood Ø 250 mm	2570				
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2570				
Connection height [mm] for AC with extract air hood Ø 250 mm	2940				
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2910				

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.24 m/s. For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

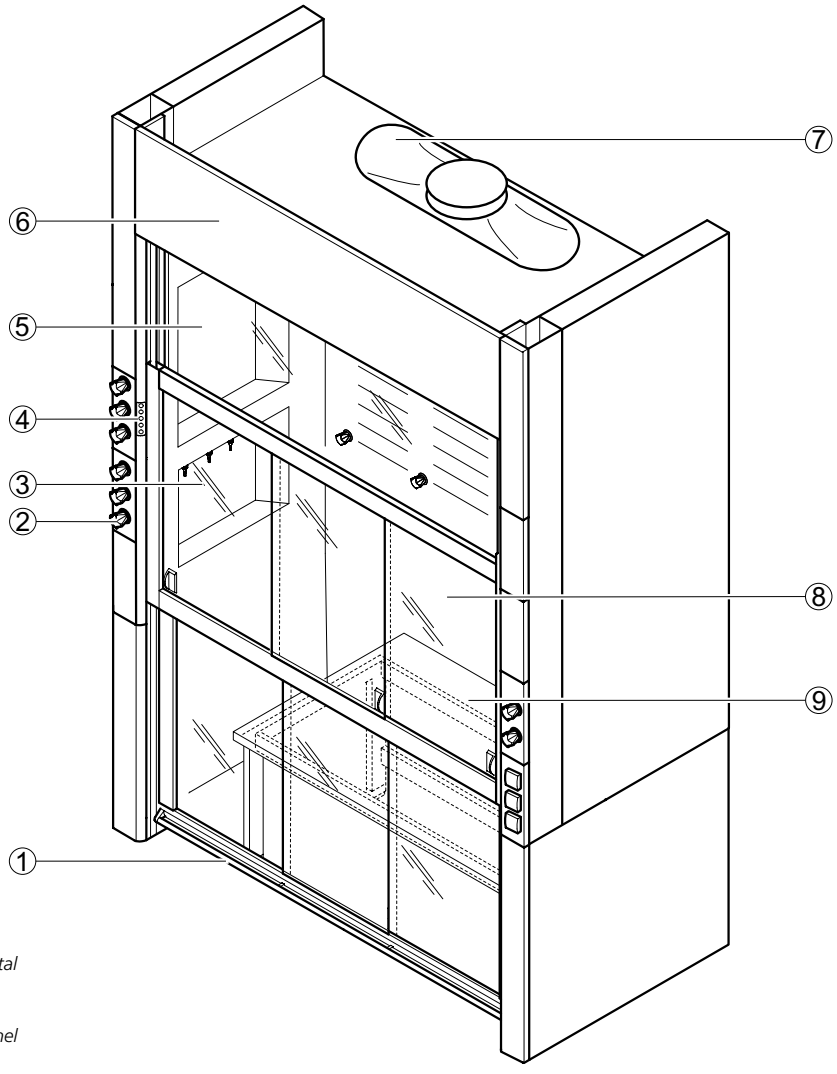
Material	
Internal lining	Solid grade laminate Melamine resin facing

Low level fume hood 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
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace
- General fume hoods 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 set-ups on an add-on table
- Service outlets in the service modules of the side panels of the internal workspace
- Control units located vertically on the side service panels

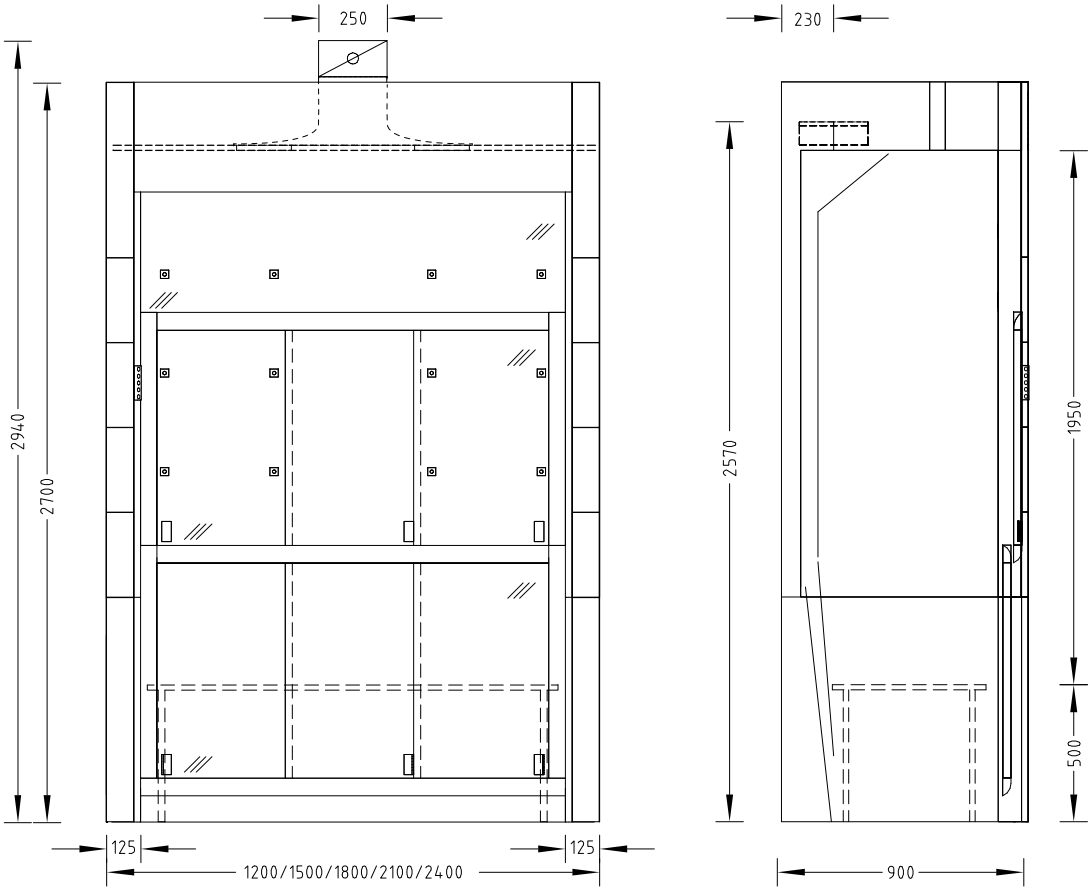
Design



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

Low level fume hoods
Low level fume hood 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]			1950		
Add-on table with H-frame [mm]	900 x 575	1200 x 575	1500 x 575	1800 x 575	2100 x 575
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 hoods
Low level fume hood with side installation

Design characteristics	1200	1500	1800	2100	2400
Work surface	Add-on table H-frame with surrounding increased edge				
Two-piece sash	2 horizontal sashes at the top and bottom		3 horizontal sashes at the top and bottom		
Side of fume hood	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume hood 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
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5				
Service modules	Service modules in the left and/or right side panel of the fume hood, 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] [1]	480	600	720	840	960
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 air hood Ø 250 mm	2570				
Connection height [mm] for FAZ with extract air hood Ø 315 mm [2]	2570				
Connection height [mm] for AC with extract air hood Ø 250 mm	2940				
Connection height [mm] for AC with extract air hood Ø 315 mm [2]	2910				
Underbench unit extraction system	As an option, depending on requirements and regulations				

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI). Shown rates correspond to a face velocity of 0.24 m/s. For other design face velocities, please contact your Waldner sales representative.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends using the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

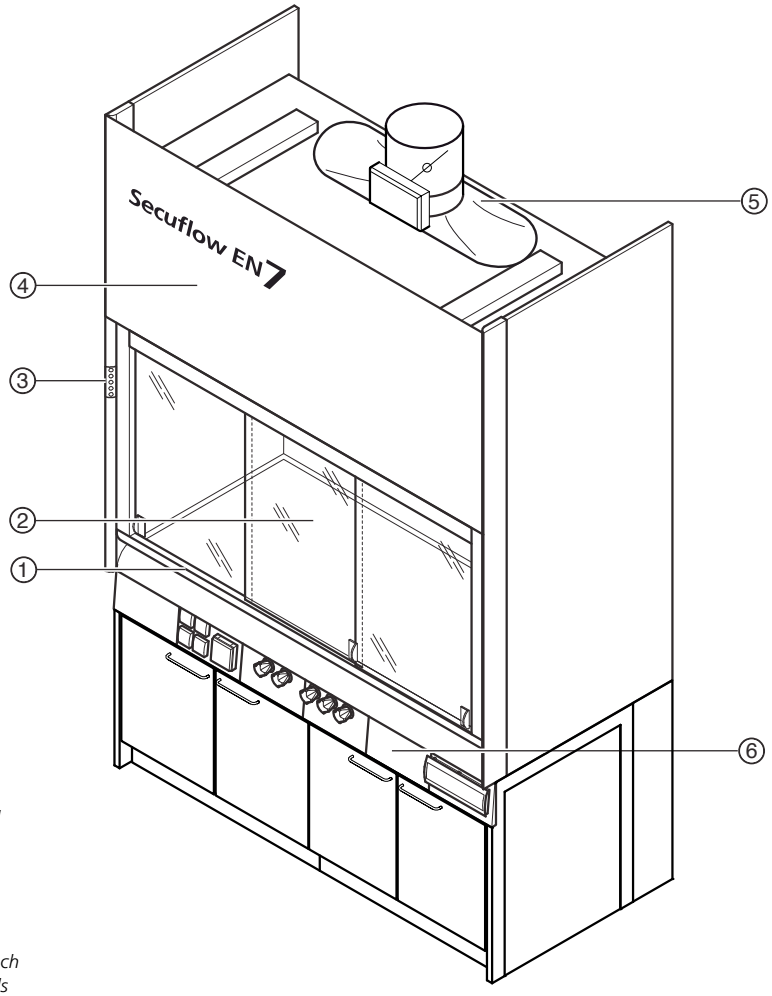
Material	
Worktop H-frame with surrounding increased edge	Polypropylene Epoxy Stoneware Stainless steel
Internal lining	Solid grade laminate Melamine resin facing

Special fume hoods
Secuflow EN7 fume hood for high thermal loads

Intended use

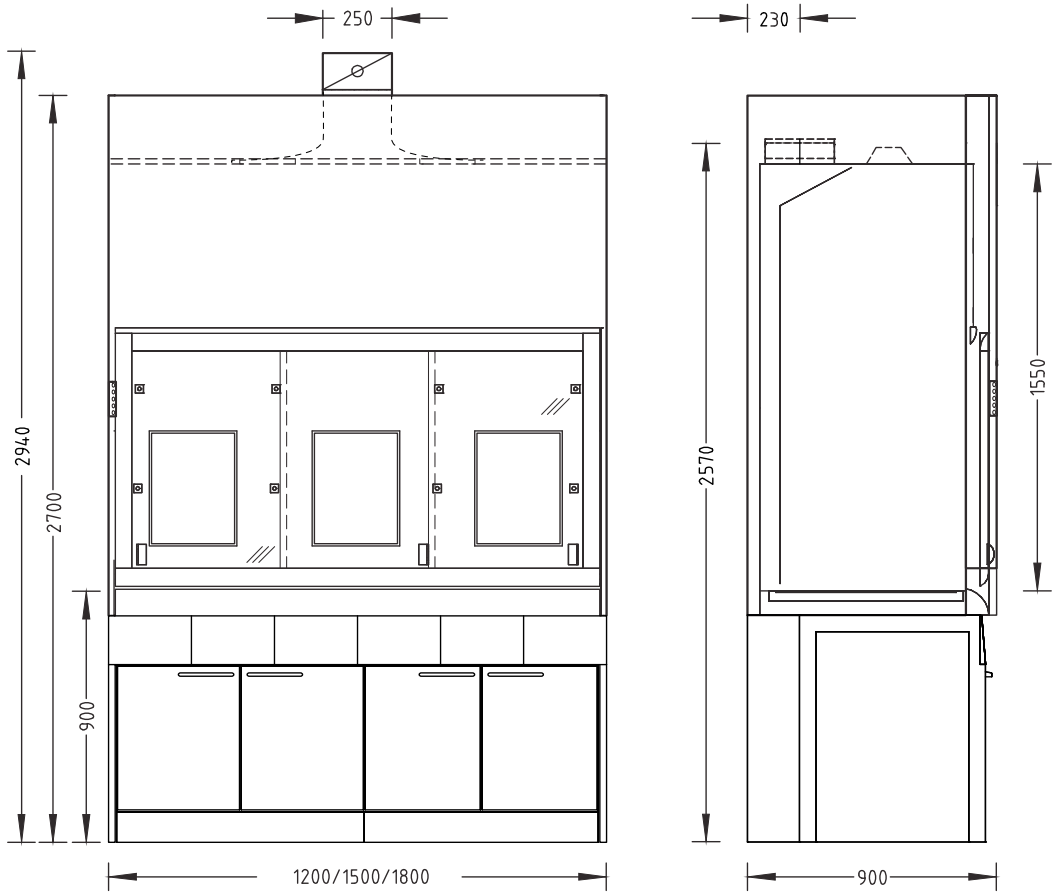
- For working with high thermal loads in the internal workspace (heat sources of 4 KW per metre of clear width in the fume hood)
- Protective device for the user, tested in accordance with DIN EN 14175-7
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles and compounds from the internal workspace
- Fume hoods which are built in accordance with EN 14175-7 are not permitted for working with radioactive substances and 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 for sanitary supply in the rear panel of the internal workspace
- Control units located on the exterior of the support

Design



1 *Sash with handle bar and horizontal sashes*
2 *Worktop*
3 *FAZ or AC control panel*
4 *Removable fascia panel*
5 *Exhaust hood*
6 *Bench frame with push-in underbench units with support and service panels*

Dimensional drawing



Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]		900	
Height [mm]		2700	
Clear internal width of internal space [mm]	1150	1450	1750
Clear internal height of internal space [mm]		1550	
Working height [mm]		900	

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

Special fume hoods
Secuflow EN7 fume hood for high thermal loads

Design characteristics	1200	1500	1800
Supporting construction	H-frame with push-in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Side panel of the fume hood	full		
Max. number of devices for scaffold points, dia. 12 mm up to 13 mm	9		12
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5		
Service modules	2		3

Electrics	
Electrical supply	External sockets in service panels
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
Air flow range without/with thermal load [m³/h] [1]	450/700	450/750	540/900
Function display with temperature monitoring	FAZ		
Airflow damper, constant with temperature monitoring	Airflow-Controller AC		
Airflow damper, variable with temperature control	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ with extract air hood dia. 250 mm	2570		
Connection height [mm] for FAZ with extract air hood dia. 315 mm [2]	2570		
Connection height [mm] for AC with extract air hood dia. 250 mm	2940		
Connection height [mm] for AC with extract air hood dia. 315 mm [2]	2910		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (Test opening in accordance with EN14175-3) and the recommended maximum trace gas values of BG RCI.

[2] In order to minimise noise and pressure losses, for air volumes >1000 m³/h Waldner recommends the extract air hood with a connection diameter of 315 mm.

A maximum admission pressure of 600 Pa should not be exceeded with fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

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

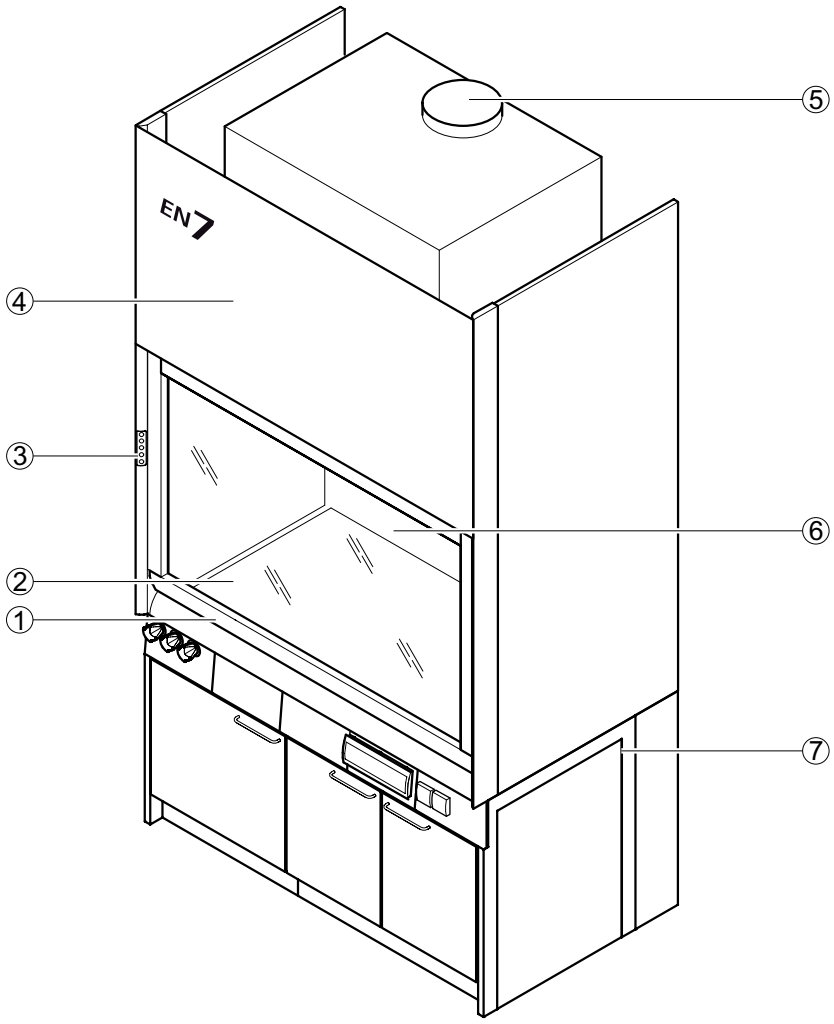
Special fume hoods

EN7 fume hood for high thermal loads in connection with acid digestions (special application fume hood)

Intended use

- Protective device for the user, tested in accordance with DIN EN 14175-7
- Suitable for open, thermal processes of breaking down chemicals with aggressive media such as, e.g., sulphuric acid, hydrochloric acid or aqua regia
- The construction of the fume hood and the materials of the inner lining of the internal workspace determine which aggressive media the device can be used for
- Extraction of fumes and aerosols from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances in the internal workspace
- Protection from flying particles, bodies or parts from the internal workspace
- Fume hoods which are built in accordance with EN 14175-7 are not permitted for working with radioactive substances and microorganisms
- For working with high thermal loads in connection with acid digestions in the internal workspace (heat sources of 4 KW per metre of clear width in the fume hood)

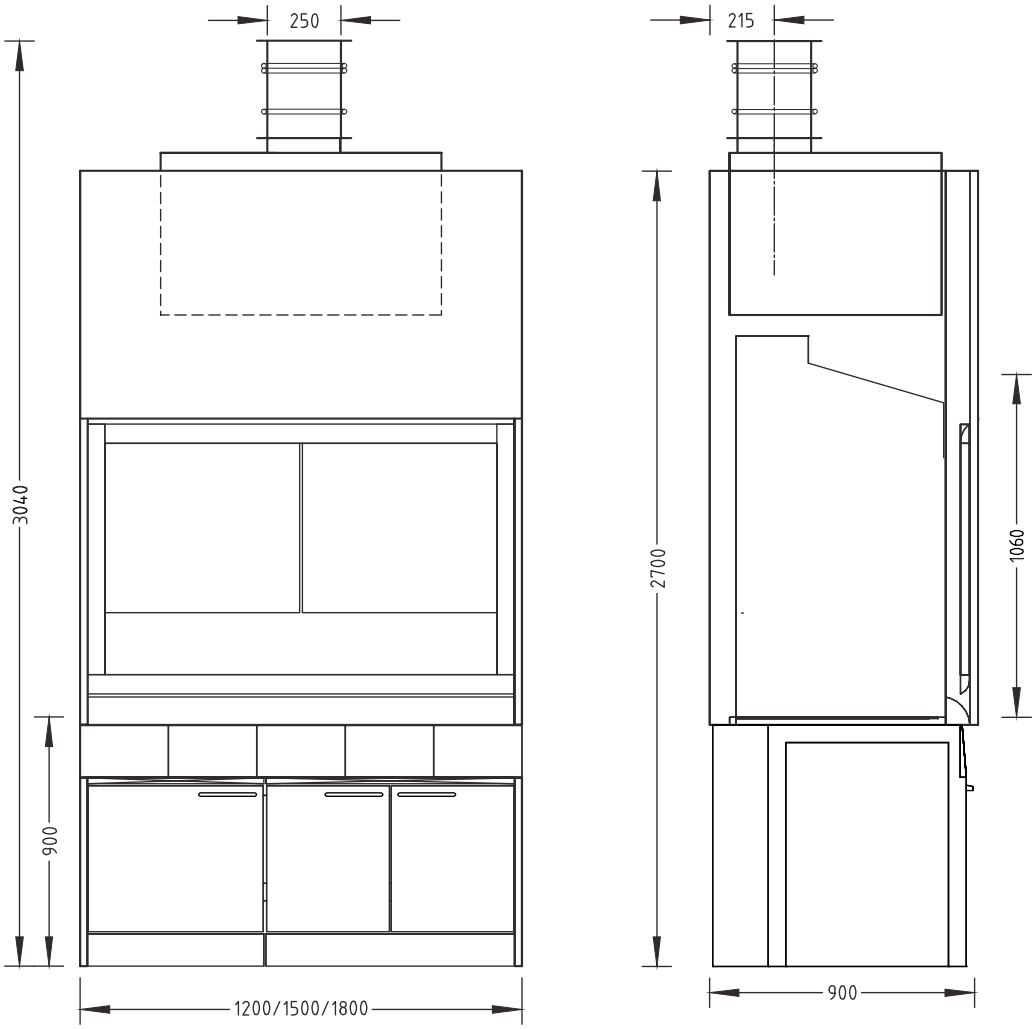
Design



1 *Sash with handle bar*
2 *Worktop*
3 *FAZ or AC control panel*
4 *Removable fascia panel*
5 *Extract air spigot integrated in fume-scrubber (as an option)*
6 *Baffle*
7 *Bench frame with push-in underbench units with support and service panels*

Special fume hoods
EN7 fume hood for high thermal loads in connection with acid digestions (special application fume hood)

Dimensional drawing



Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]		900	
Height [mm]		2700	
Clear internal width of internal space [mm]	1150	1450	1750
Clear internal height of internal space [mm]		1060	
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]	55 (MAALS 1)		63 (MAALS 2)

Special fume hoods
EN7 fume hood for high thermal loads in connection with acid digestions (special application fume hood)

Design characteristics	
Supporting construction	H-frame with push-in underbench units
Extract manifold	Standard
Fume-scrubber	Optional
Neutralisation unit underbench unit	Optional

Electrics	
Electrical supply	External sockets in service panels
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
Minimum air exchange rate [m³/h] [1]	650	800	950
Pressure loss in extract manifold with FAZ/ AC [Pa]	45/120	50/120	85/150
Pressure loss in fume hood with fume-scrubber [Pa]	670/740	780/840	860/920
Müller fume-scrubber type	MAALS 1		MAALS 2
Function display with temperature monitoring	FAZ		
Airflow damper, constant with temperature monitoring	Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract air spigot dia. 250 mm with fume-scrubber	3040		
Connection height [mm] for FAZ with extract manifold dia. 250 mm (with no fume-scrubber)	2380		
Connection height [mm] for AC with extract manifold dia. 250 mm (with no fume-scrubber)	2760		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (Test opening in accordance with EN 14175-3) and the recommended maximum trace gas values of BG RCI.

A maximum admission pressure of 600 Pa should not be exceeded with fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

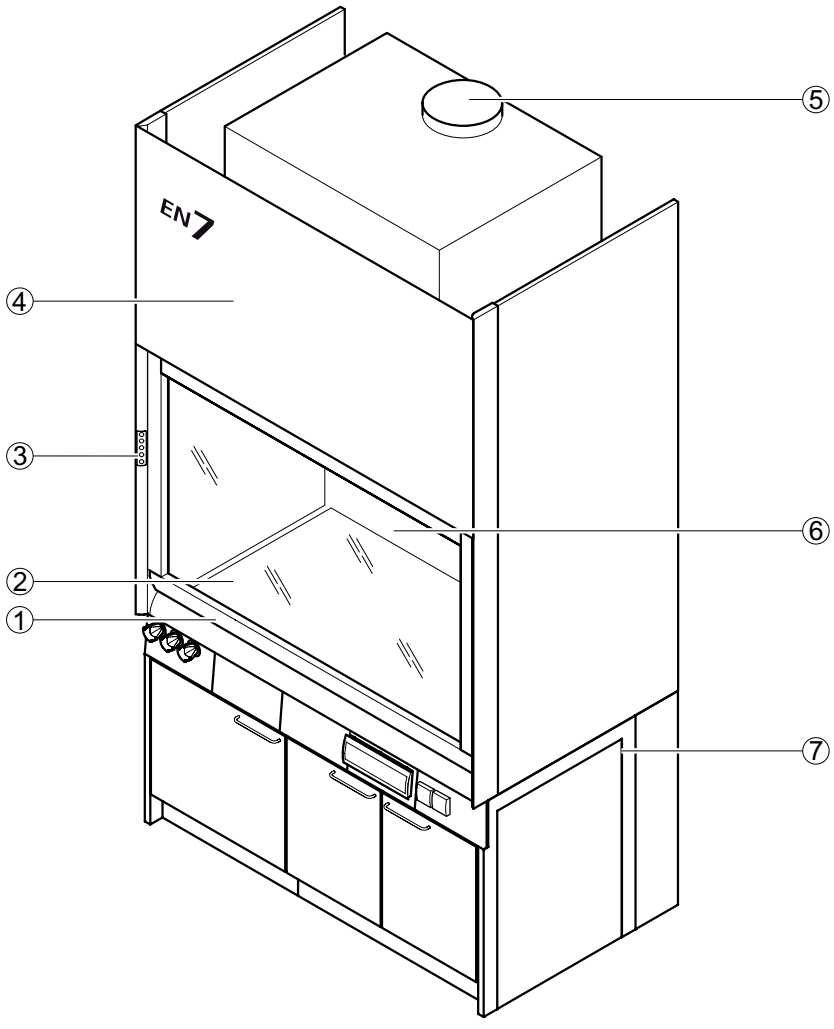
Material/surface	
Internal lining including worktop	Stoneware (when sulphuric acid, hydrochloric acid, aqua regia are used)

Special fume hoods
Fume hood for handling of perchloric acid

Intended use

- Protective device for the user, tested in accordance with DIN EN 14175
- Suitable for open, thermal processes of breaking down chemicals with aggressive media, particularly for perchloric acid
- The construction of the fume hood and the materials of the inner lining of the internal workspace determine which aggressive media the device can be used for
- Extraction of fumes and aerosols from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances in the internal workspace
- Protection from flying particles, bodies or parts from the internal workspace
- Fume hoods which are built in accordance with EN 14175-7 are not permitted for working with radioactive substances and microorganisms
- For working with high thermal loads in connection with acid digestions in the internal workspace (heat sources of 4 KW per metre of clear width in the fume hood).

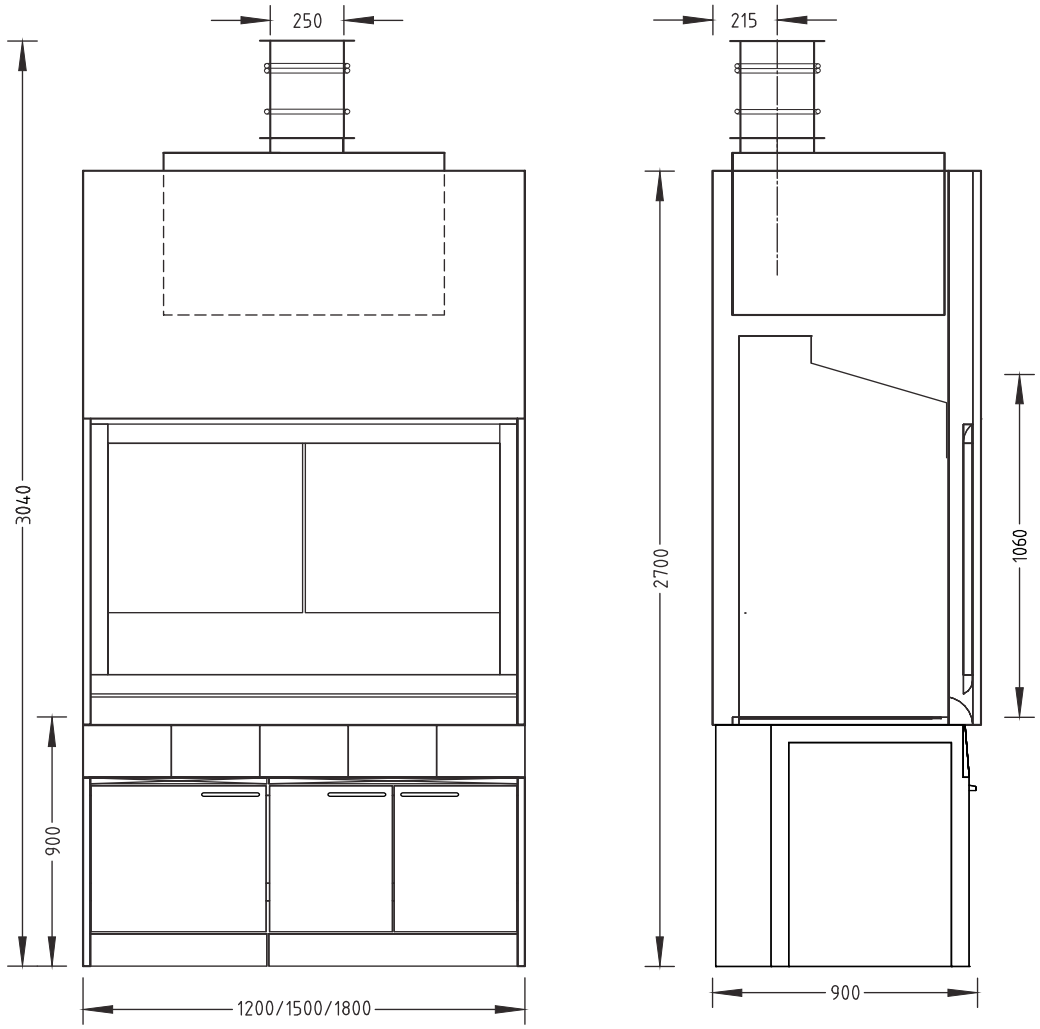
Design



1 *Sash with handle bar*
2 *Worktop*
3 *FAZ or AC control panel*
4 *Removable fascia panel*
5 *Extract air spigot integrated in fume-scrubber (as an option)*
6 *Baffle*
7 *Bench frame with push-in underbench units with support and service panels*

Special fume hoods
Fume hood for handling of perchloric acid

Dimensional drawing



Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]		900	
Height [mm]		2700	
Clear internal width of internal space [mm]	1150	1450	1750
Clear internal height of internal space [mm]		1060	
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]	55 (MAALS 1)		63 (MAALS 2)

Special fume hoods
Fume hood for handling of perchloric acid

Design characteristics	
Supporting construction	H-frame with push-in underbench units
Fume-scrubber	Optional
Extract manifold with sprinkler	Optional (only for fume hoods for handling of perchloric acid)
Neutralisation unit underbench unit	Optional

Electrics	
Electrical supply	External sockets in service panels
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
Minimum air exchange rate [m³/h] [1]	650	800	950
Pressure loss in extract manifold with sprinkler for FAZ/AC [Pa]	140/300	160/350	270/500
Pressure loss in extract manifold with FAZ/AC [Pa]	45/120	50/120	85/150
Pressure loss in fume hood with fume-scrubber [Pa]	670/740	780/840	860/920
Müller fume-scrubber type	MAALS 1		MAALS 2
Function display with temperature monitoring	FAZ		
Airflow damper, constant with temperature monitoring	Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract air spigot dia. 250 mm with fume-scrubber)	3040		
Connection height [mm] with FAC/AC with extract manifold and sprinkler	2430 / 2810		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (Test opening in accordance with EN14175-3) and the recommended maximum trace gas values of BG RCI.

A maximum admission pressure of 600 Pa should not be exceeded with fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

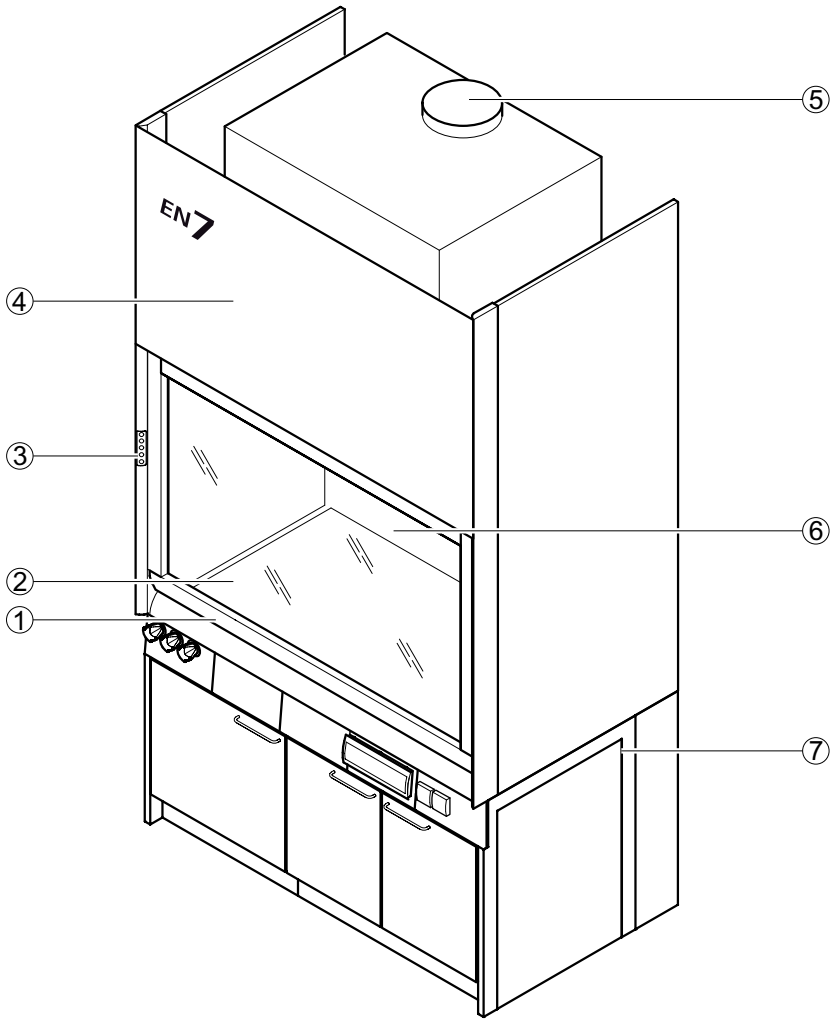
Material/surface	
Internal lining including worktop	Stoneware (when sulphuric acid, hydrochloric acid, aqua regia are used)

Fume hood for handling of hydrofluoric acid

Intended use

- Protective device for the user, tested in accordance with DIN EN 14175-7
- Suitable for open, thermal processes of breaking down chemicals with aggressive media, particularly for hydrofluoric acid
- The construction of the fume hood and the materials of the inner lining of the internal workspace determine which aggressive media the device can be used for
- Extraction of fumes and aerosols from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere in the internal workspace
- Protection from splashes of hazardous substances in the internal workspace
- Protection from flying particles, bodies or parts from the internal workspace
- Fume hoods which are built in accordance with EN 14175-7 are not permitted for working with radioactive substances and microorganisms
- For working with high thermal loads in connection with acid digestions in the internal workspace (heat sources of 4 KW per metre of clear width in the fume hood)

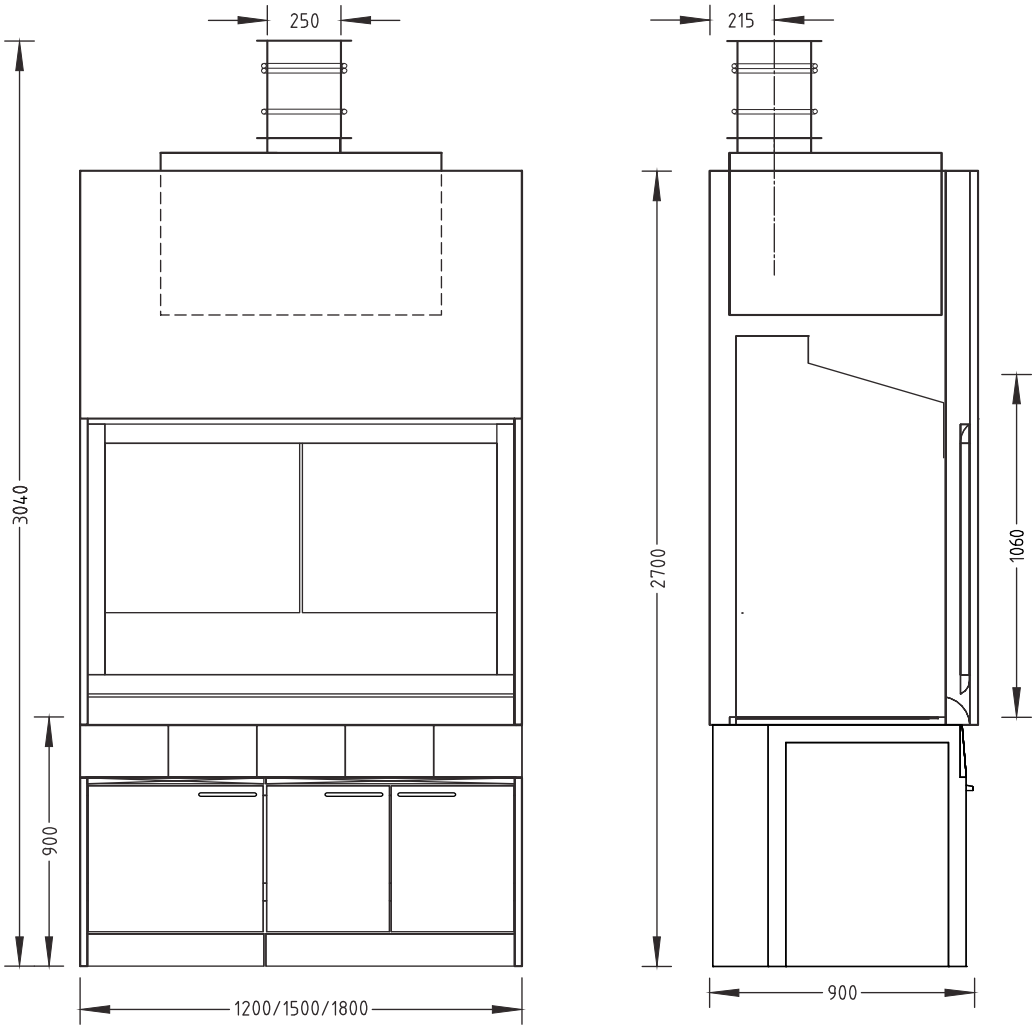
Design



1 *Sash with handle bar*
2 *Worktop*
3 *FAZ or AC control panel*
4 *Removable fascia panel*
5 *Extract air spigot integrated in fume-scrubber (as an option)*
6 *Baffle*
7 *Bench frame with push-in underbench units with support and service panels*

Special fume hoods
Fume hood for handling of hydrofluoric acid

Dimensional drawing



Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]		900	
Height [mm]		2700	
Clear internal width of internal space [mm]	1150	1450	1750
Clear internal height of internal space [mm]		1060	
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]	55 (MAALS 1)		63 (MAALS 2)

Special fume hoods
Fume hood for handling of hydrofluoric acid

Design characteristics	
Supporting construction	H-frame with push-in underbench units
Extract manifold	Standard
Fume-scrubber	Optional
Neutralisation unit underbench unit	Optional

Electrics	
Electrical supply	External sockets in service panels
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
Minimum air exchange rate [m³/h] [1]	650	800	950
Pressure loss in extract manifold with FAZ/ AC [Pa]	45/120	50/120	85/150
Pressure loss in fume hood with fume-scrubber [Pa]	670/740	780/840	860/920
Müller fume-scrubber type	MAALS 1		MAALS 2
Function display with temperature monitoring	FAZ		
Airflow damper, constant with temperature monitoring	Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract air spigot dia. 250 mm with fume-scrubber	3040		
Connection height [mm] for FAZ with extract manifold dia. 250 mm (with no fume-scrubber)	2380		
Connection height [mm] for AC with extract manifold dia. 250 mm (with no fume-scrubber)	2760		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (Test opening in accordance with EN 14175-3) and the recommended maximum trace gas values of BG RCI.

A maximum admission pressure of 600 Pa should not be exceeded with fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

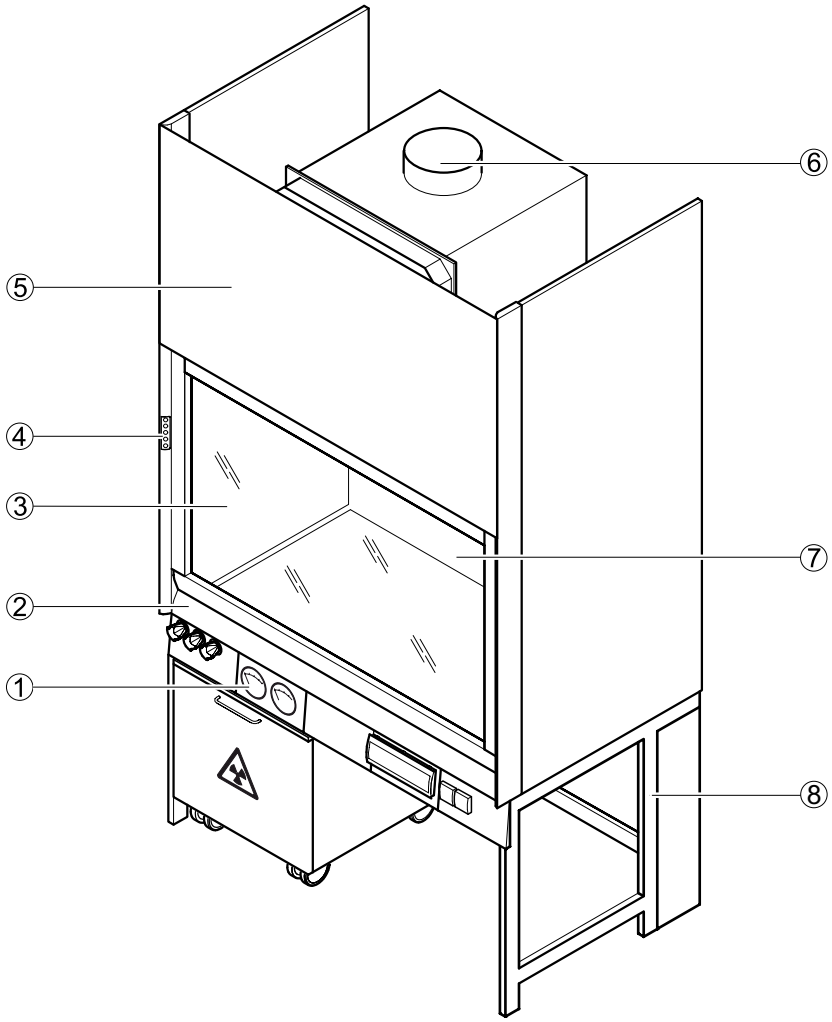
Material/surface	
Internal lining including worktop	Polypropylene (when hydrofluoric acid is used)

Special fume hoods
Radio-isotope fume hood

Intended use

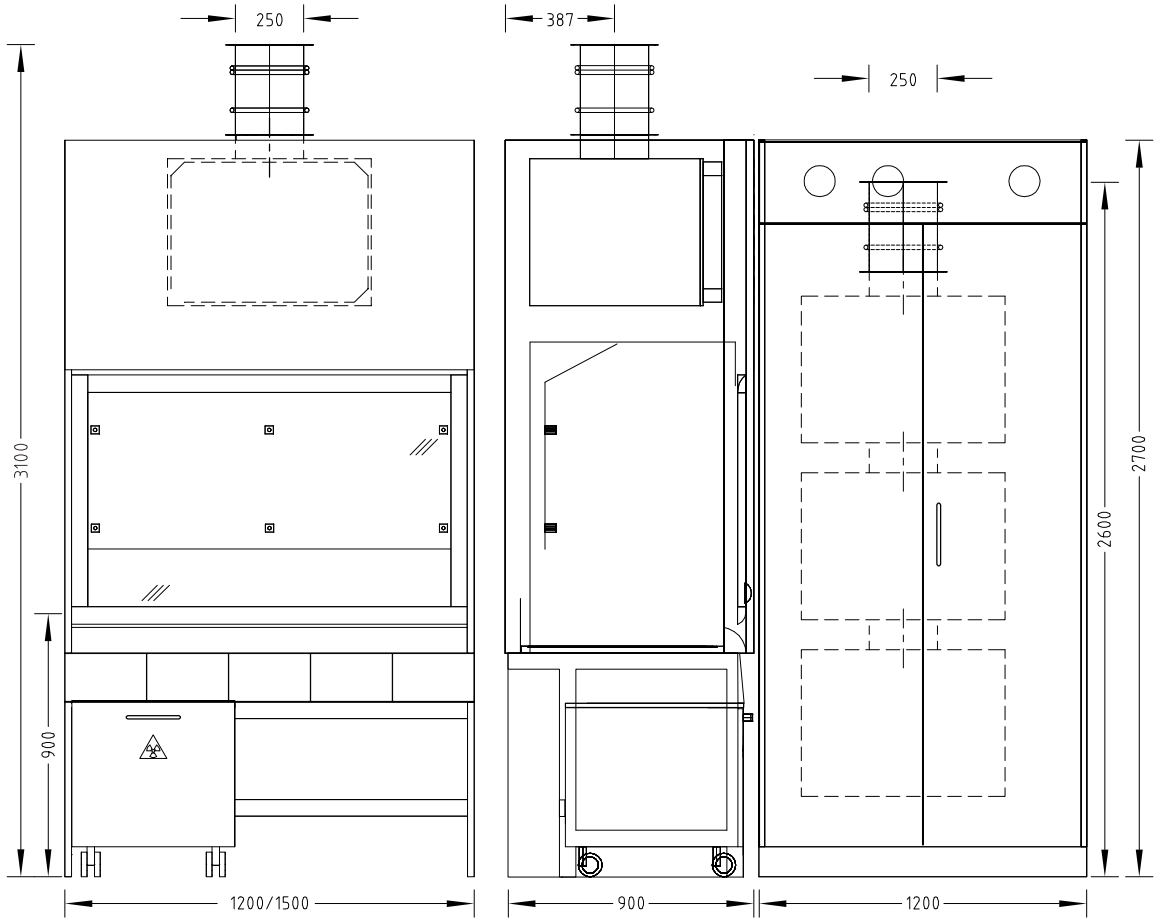
- Protective device for the user, tested in accordance with DIN EN 14175-8
- Extraction during work with radioactive substances if increased requirements for radiation protection apply
- Protection from incorporation, contamination and external radiation exposure
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- Reduced risk of the formation of a high concentration of hazardous substances / hazardous explosive atmosphere 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 hoods which are built in accordance with DIN EN 14175-8 are normally not permitted for use with microorganisms
- Not suitable for openly breaking down chemicals

Design



1 *Differential pressure gauge*
2 *Sash with handle*
3 *Worktop*
4 *FAZ or AC control panel*
5 *Removable fascia panel*
6 *Extract air spigot integrated in filter housing*
7 *Baffle with scaffold points*
8 *Bench frame with push-in underbench units with support and service panels*

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]	1053	
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 hoods
Radio-isotope fume hood

Design characteristics	
Supporting construction	H-frame with push-in underbench units
Sash	One-piece
Number of devices for scaffold points, ø 12 to 13 mm	6
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5
Filter, fume hood roof	Standard equipment: Filter F7 / particle filter H13
Filter, lateral cabinet (max. 3 filter housings)	Filter housing, top: Particulate filter Filter housing, centre: Active charcoal filter Filter housing, bottom: Filter and particle filter
Differential pressure gauges	Display of the degree of saturation of the filters (not for active charcoal filter)
Lead insert	Optional
Waste disposal system for radio-isotope residual material in the underbench unit	Canister 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 worktop as an option

Electrics	
Electrical supply	External sockets in service panels
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 [m³/h] [1]	480	650
Pressure loss, filter [Pa] [2]	25/200	30/235
Pressure loss, particle filter [Pa] [2]	50/300	60/350
Pressure loss, active charcoal filter [Pa] [2]	25/25	30/30
Pressure loss, particulate filter [Pa] [2]	30/250	35/290
Function display	FAZ	
Airflow damper, constant	Airflow-Controller AC	
Airflow damper, variable	Airflow-Controller AC	
Connection height [mm] for FAZ and AC with filter housing Ø 250 mm	3100	
Underbench unit extraction system	As an option, depending on requirements and regulations	

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI).

[2] Pressure loss values refer to the states clean/contaminated.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.
In the case of fume hoods with filters, the pressure loss of the integrated filter stages must be added to the pressure loss of the fume hood.

Material/surface	
Internal lining including worktop	Polypropylene Stainless steel

Special fume hoods
Radio-isotope fume hood

Filter (filter in the filter cabinet or on the fume hood roof)	
Dimensions [mm]	610 x 610 x 46 (+ 8 mm seal)
Pressure loss [Pa] at 1900 m³/h	110
Design characteristics	Filter element (fine particle filter); filter class EN 779: F7 Frame made of multilayer board with grip and type label on the 610-mm side; PU seal on the dust-laden air side
Use	Fine particle filter for particle adsorption, e.g.: Oil smoke and agglomerated soot, tobacco smoke, metal oxide smoke Average efficiency (Em) 80–90%

Particle filter (filter in the filter cabinet or on the fume hood roof)	
Dimensions [mm]	610 x 610 x 292 (+ 7 mm seal)
Pressure loss [Pa] at 2435 m³/h	250
Design characteristics	Particle filter element type: Hepa H13; efficiency: MPPS Frame made of multilayer board with grip and type label on the 610-mm side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H13; particle adsorption 99.95 %; transmittance 0.05%

Active charcoal filter (filter in the filter cabinet)	
Dimensions [mm]	610 x 610 x 292 (+ 7 mm seal)
Pressure loss [Pa] at 600 m³/h	9
Design characteristics	Activated charcoal cell 7C for 16 x activated charcoal cartridges Frame galvanised sheet metal; 2 x U handle and type plate on the 610-mm side; PU tight seat seal on the clean air side
Use	Standard impregnation: for all common radioactive materials, radioactive iodine compounds, radioactive iodomethane, radioactive gases. (A filter with filters class F7 in acc. with EN 779 is recommended.)

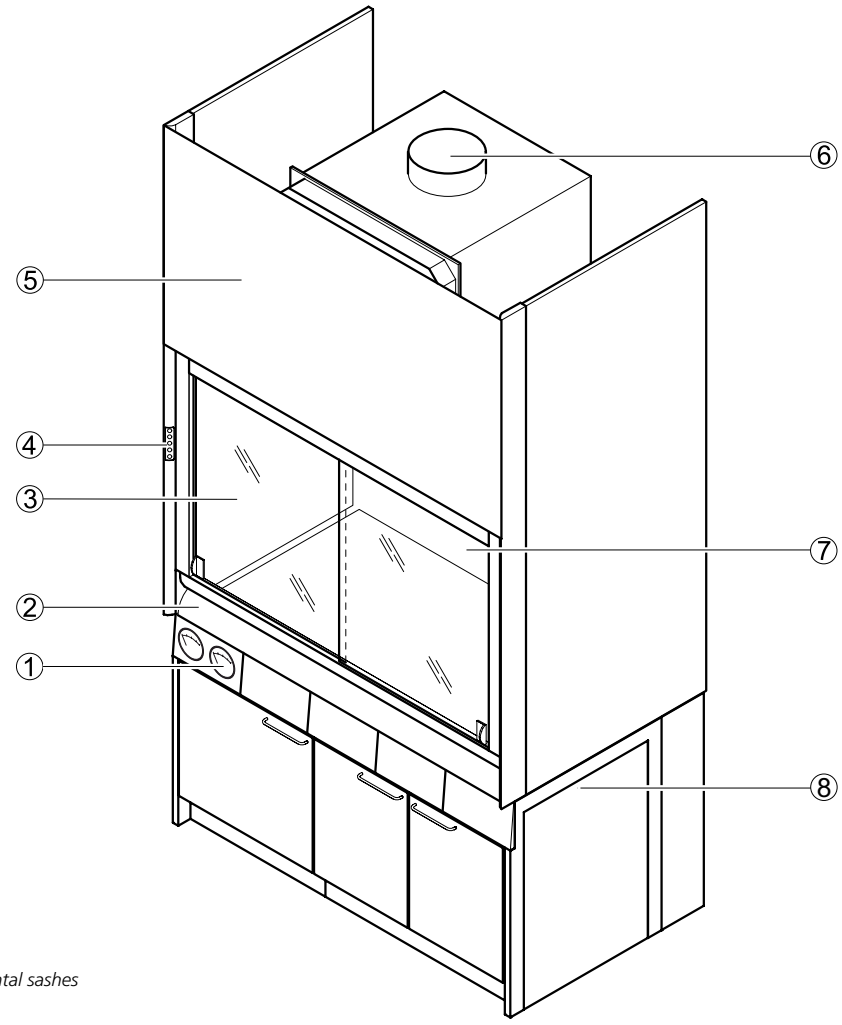
Particulate filter (filter in the filter cabinet)	
Dimensions [mm]	610 x 610 x 292 (+ 7 mm seal)
Pressure loss [Pa] at 1965 m³/h	125
Design characteristics	Particulate- or Micretain filter element type: Hepa H11 in acc. with EN 1822 Frame made of multilayer board with grip and type label on the 610-mm side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H11; particle adsorption 95 %; transmittance 5%; to be installed after active charcoal filters to bind the charcoal dust contamination from the charcoal filter.

Special fume hoods
Filter fume hood

Intended use

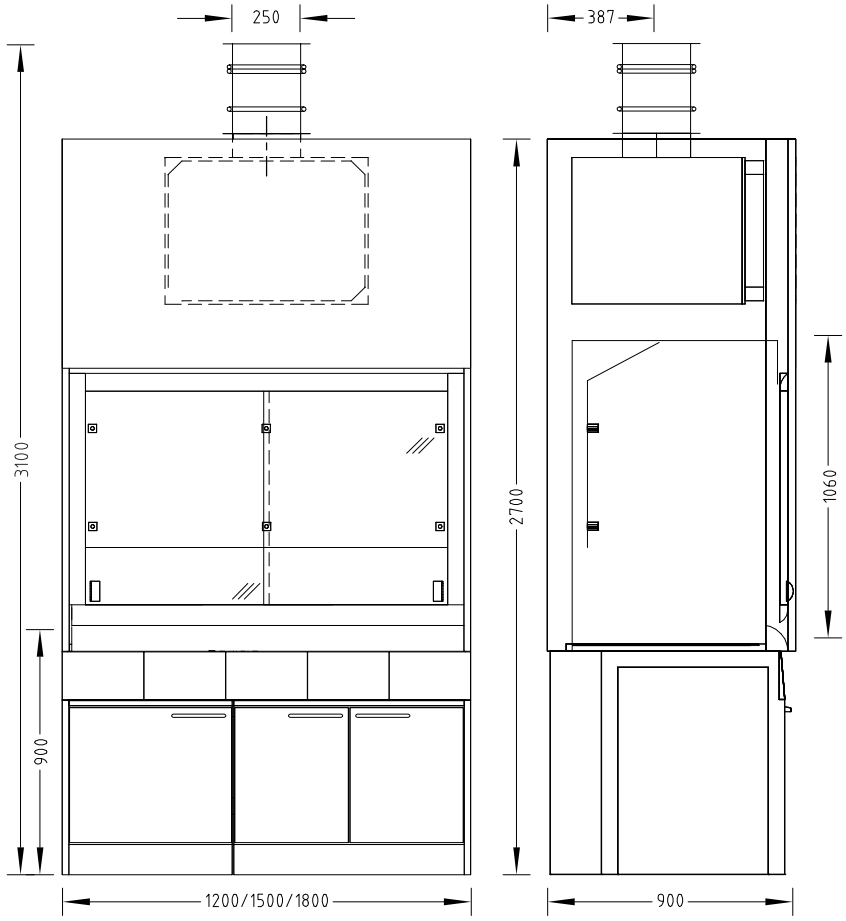
- Before the extract air from the internal workspace is released into the environment, it is cleaned by a filter unit

Design



1 Differential pressure gauge
2 Sash with handle and horizontal sashes
3 Worktop
4 FAZ or AC control panel
5 Removable fascia panel
6 Extract air spigot
7 Baffle with scaffold points
8 Bench frame with push-in underbench units with support and service panels

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 hood without installations [kg]	Approx. 270	Approx. 320	Approx. 370
Filter housing [kg]		90	

Special fume hoods
Filter fume hood

Design characteristics	1200	1500	1800
Supporting construction	H-frame with push-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 hood; not with stoneware internal lining		
Number of devices for scaffold points, ø 12 to 13 mm	6		8
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5		
Material lock	Possible on the left and/or right side of the fume hood		
Filter, fume hood roof	Standard equipment: Filter F7 / particle filter H13		
Differential pressure gauges	Display of the degree of saturation of the filters		

Electrics	
Electrical supply	External sockets in service panels
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
Minimum air exchange rate [m³/h] [1]	480	600	720
Pressure loss, filter [Pa] [2]	35/200	45/235	65/290
Pressure loss, particle filter [Pa] [2]	70/300	95/365	130/430
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 air spigot Ø 250 mm	3100		
Underbench unit extraction system	As an option, depending on requirements and regulations		

[1] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI).

[2] Pressure loss values refer to the states clean/contaminated.

A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers.
The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.
In the case of fume hoods with filters, the pressure loss of the integrated filter stages must be added to the pressure loss of the fume hood.

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

Special fume hoods
Filter fume hood

Filter	
Dimensions [mm]	610 x 610 x 46 (+ 8 mm seal)
Pressure loss [Pa] at 1900 m³/h	110
Design characteristics	Filter element (fine particle filter); filter class EN 779: F7 Frame made of multilayer board with grip and type label on the 610-mm side; PU seal on the dust-laden air side
Use	Fine particle filter for particle adsorption, e.g.: Oil smoke and agglomerated soot, tobacco smoke, metal oxide smoke Average efficiency (Em) 80–90%

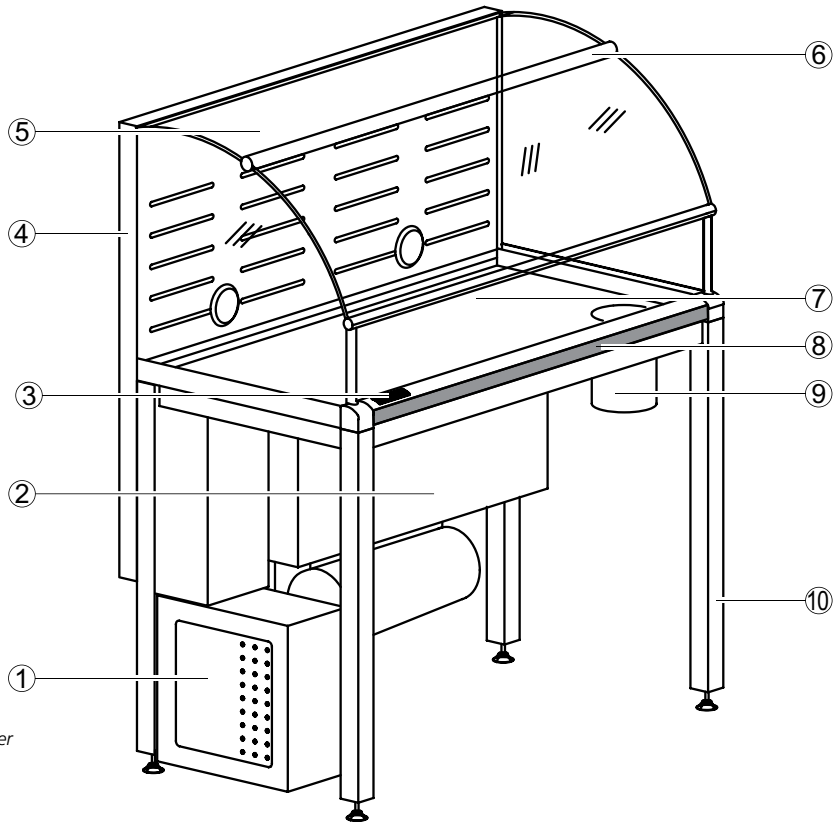
Particle filter	
Dimensions [mm]	610 x 610 x 292 (+ 7 mm seal)
Pressure loss [Pa] at 2435 m³/h	250
Design characteristics	Particle filter element type: Hepa H13; efficiency: MPPS Frame made of multilayer board with grip and type label on the 610-mm side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H13; particle adsorption 99.95 %; transmittance 0.05%

Safety weighing cabinet
AKKURAT

Intended use

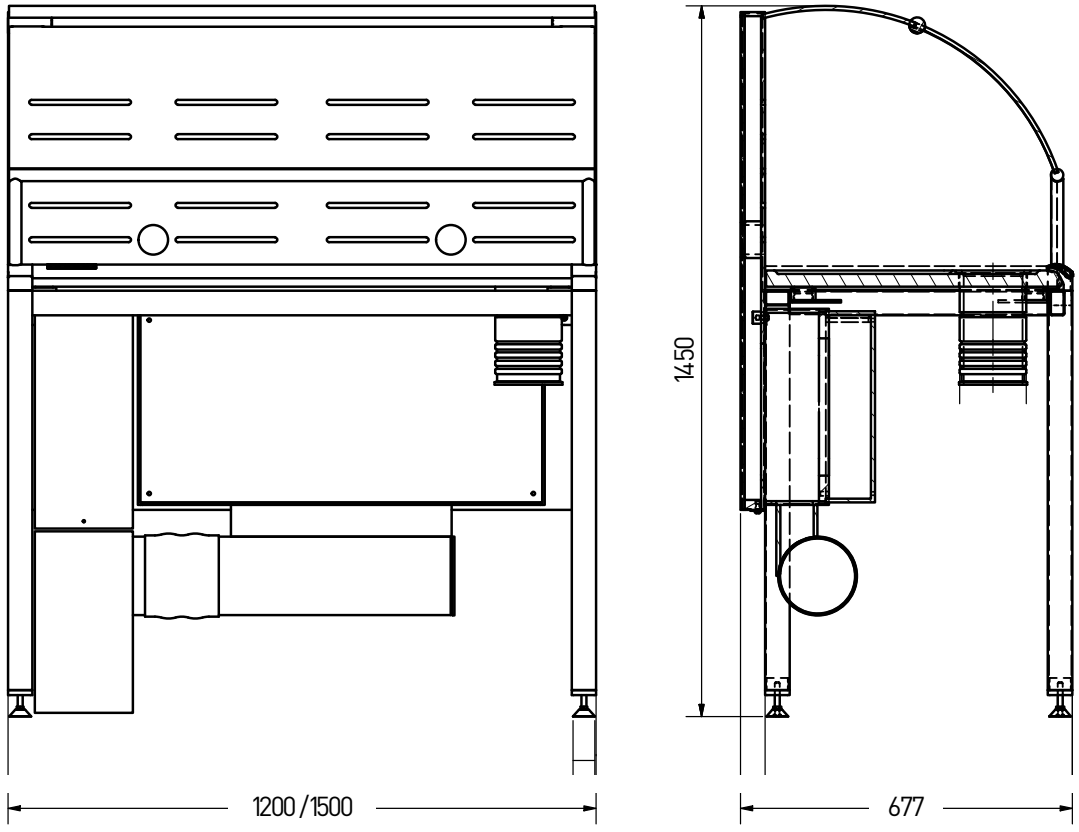
- Protection against airborne particles or aerosols, which can be released when weighing powdered or dusty substances
- Accommodation of high-resolution laboratory balances from all popular manufacturers
- Fully vibration-free environment free from draughts, which micro-balances require
- Precise and safe working with highly active substances
- Completely vibration-decoupled and impact-dampened worktop
- A design focused on functionality and ergonomics meets the most exacting quality and safety requirements
- All functions are at your fingertips and can be selected using the integral control panel
- Air foil cill for optimum supply air flow, which doubles as an ergonomic armrest
- Disposal of any waste produced directly via the waste disposal system integrated in the worktop
- Arrangement of the filter and separate vibration-decoupled fan unit guarantees maximum legroom
- The fully welded steel support frame sub-structure, connected to the vibration-decoupled bearing of the solid ceramic worktop, guarantees fault-free operation, even when using highly sensitive micro-balances

Construction



1 *Fan unit incl. second HEPA filter*
2 *Filter box with HEPA filter*
3 *Fume hood function display control panel*
4 *Double-walled rear wall with two cable through-puts*
5 *Plexiglass head unit and folding front screen*
6 *Hinge with integral lighting*
7 *Vibration-decoupled worktop*
8 *Ionisation bar*
9 *Waste disposal system*
10 *Welded steel support frame*

Dimensional drawing



Technical data

Dimensions	1200	1500
Width [mm]	1200	1500
Depth [mm]	650	
Height [mm]	1450	
Clear width of internal space [mm]	1155	1455
Effective depth of internal space [mm]	575	
Clear internal height of internal space [mm]	530	
Working height [mm]	900	

Weight	1200	1500
Without installation [kg]	120	135

Safety weighing cabinet AKKURAT

Design characteristics	1200	1500
Supporting construction	Steel support frame, fully welded with height-adjustable feet	
Desktop	Technical ceramic with raised edge on all sides	
Upper part	Fully plexiglass upper part Upwardly-hinged front screen LED lighting integrated into the hinge for the front screen Rear wall with integral exhaust system and 2 cable through-puts	
Rear wall	Double-walled, PP white, UV-resistant	
Ventilation	Fan in separate housing with frequency converter for continuously variable speed control	
Mean and second filter box	HEPA H14 particle filter as per DIN EN 1822 filter exchange with almost no contamination due to the bag exchange method	
Ionisation	The separately switched ionising system, which is fully integrated in the balance enclosure, neutralises the non-conductive surfaces in the interior workspace of the balance enclosure and diverts electrostatic charges from the samples. The capacitively working high-voltage electrodes in the inflow area of the front opening are designed to be touch-safe.	

Display / Operation	
Control panel	Control panel with 5 illuminated keys integrated flush with the air foil cill, under which the flow passes, on the front edge of the operating opening
Displays	- Equipment On/Off - Lighting On/Off - Air flow monitoring – alarm triggered when the limit is transgressed - Front opening monitoring – alarm triggered when the front screen is opened - Filter change (time-dependent) - Colour temperature LED lighting – switches between daylight white and neutral white
Operation	- Equipment On/Off - Lighting On/Off - Colour temperature lighting - Air flow alarm acknowledgement - Front opening alarm acknowledgement - Filter change alarm acknowledgement

Handling	
Working substances	Powdered or dusty substances (e.g active ingredients for drug production)
Equipment	Laboratory balances from all popular manufacturers

Ventilation technology	1200	1500
Extract air monitoring	Air volume measurement using the measuring equipment of the fume hood function display	
Face velocity	0,2 m/s (+/-10%) at 140 m³/h optional 0,3 m/s	0,2 m/s (+/-10%) at 180 m³/h optional 0,3 m/s
Noise level	54 dB	
Standard filtering	HEPA / ULPA filter H14 according to DIN EN 1822	
Voltage	230 V	
Power consumption	250 W	

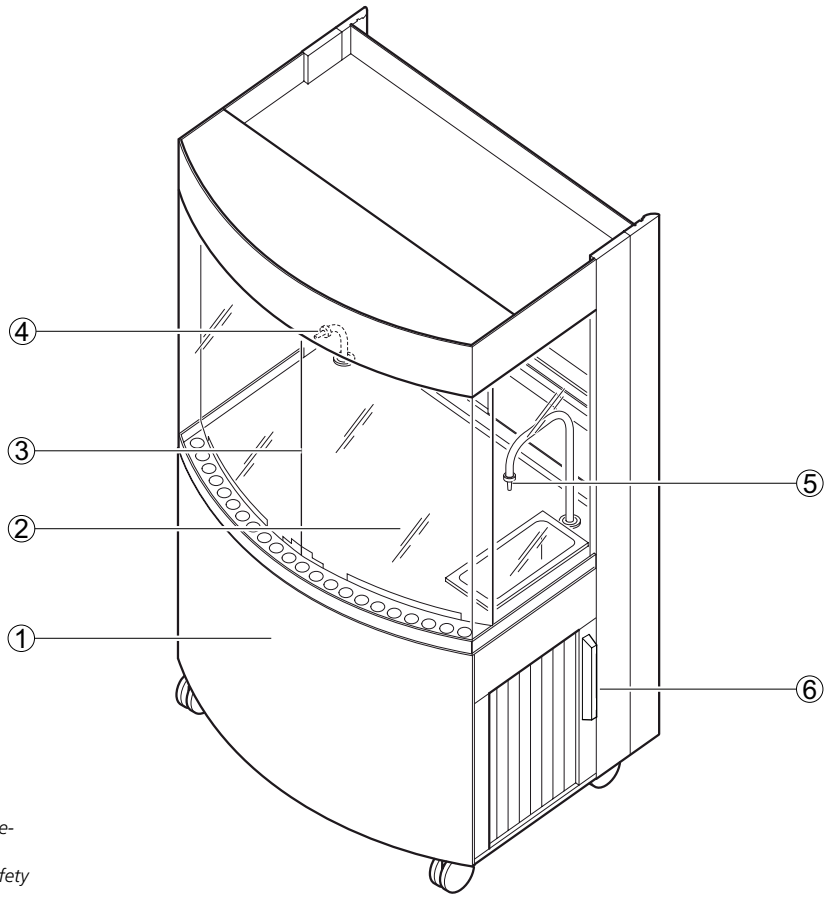
Options	1200	1500
Ventilation connection Ø [mm]	DN 125	
Air exchange rate [m³/h]	170	210
Pressure loss [PA]	10	15

Intended use

- Can be used where required, with connections for the services supply, e. g. service wings
- Unrestricted view into the hood from all sides
- Service outlets in the internal workspace
- Control units located horizontally on the service rail of the support unit

Design

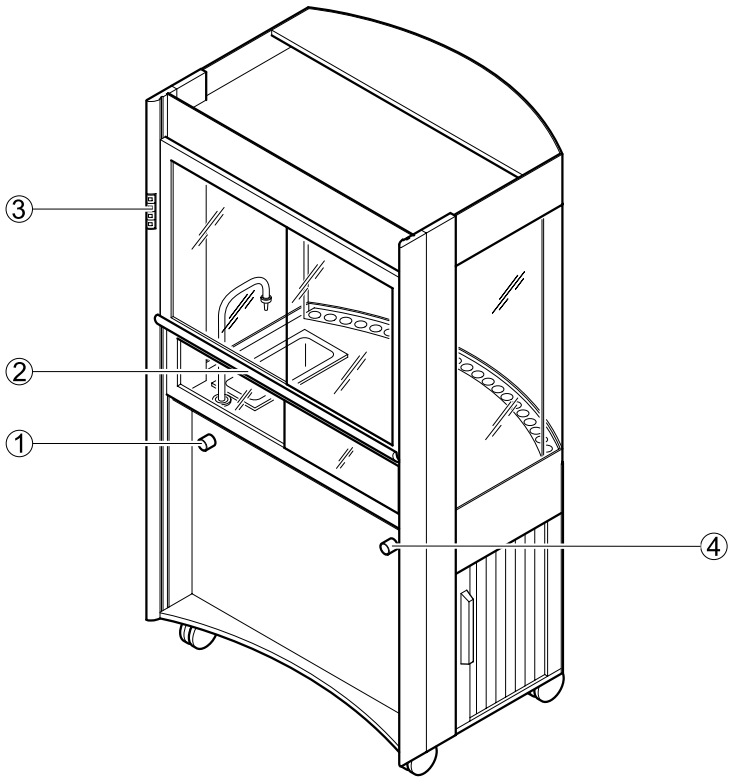
Front view



1 *Trolley*
2 *Worktop 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 hoods
AeroEm

Rear view



1 *Valve for water outlet*
2 *Handle with sash and horizontal sash*
3 *FAZ control panel incl. switch for interior sockets*
4 *Valve for gas outlet*

Technical data

Dimensions	
Width [mm]	1050
Depth [mm]	835
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 hood
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 hood

Mobile fume hoods
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 lifting unit [V]	230
Power of lighting [W]	52
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 drip cup, can be operated from the outside
Gas outlet	Optional

Ventilation technology	
Minimum air exchange rate [m³/h] [1)]	300
Air-supply assistance fan	Can be switched on the FAZ
Function display	FAZ
2 extract air spigots Ø [mm]	90
Length of extract air duct [mm]	2500

[1)] All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175-3) and the maximum tracer gas values recommended by German Standard (BG RCI).

The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3.
These minimum air exchange rates must be adapted when dimensioning the ventilation system.
If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

Material/surface	
Worktop	Stoneware-composite worktop with raised Polypropylene edge

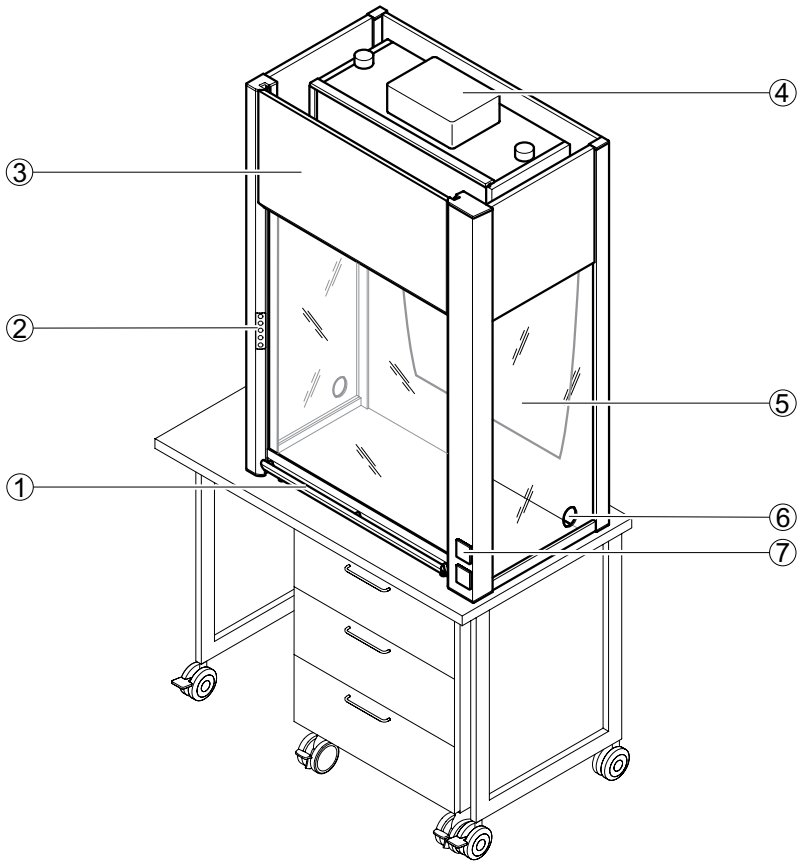
Mobile fume hoods
MobilAir

Intended use

- Can be used where required (only in air-circulating mode)
- Control units located externally
- Not suitable for openly breaking down chemicals
- Not suitable as a replacement for bench-mounted fume hoods in acc. with EN 14175

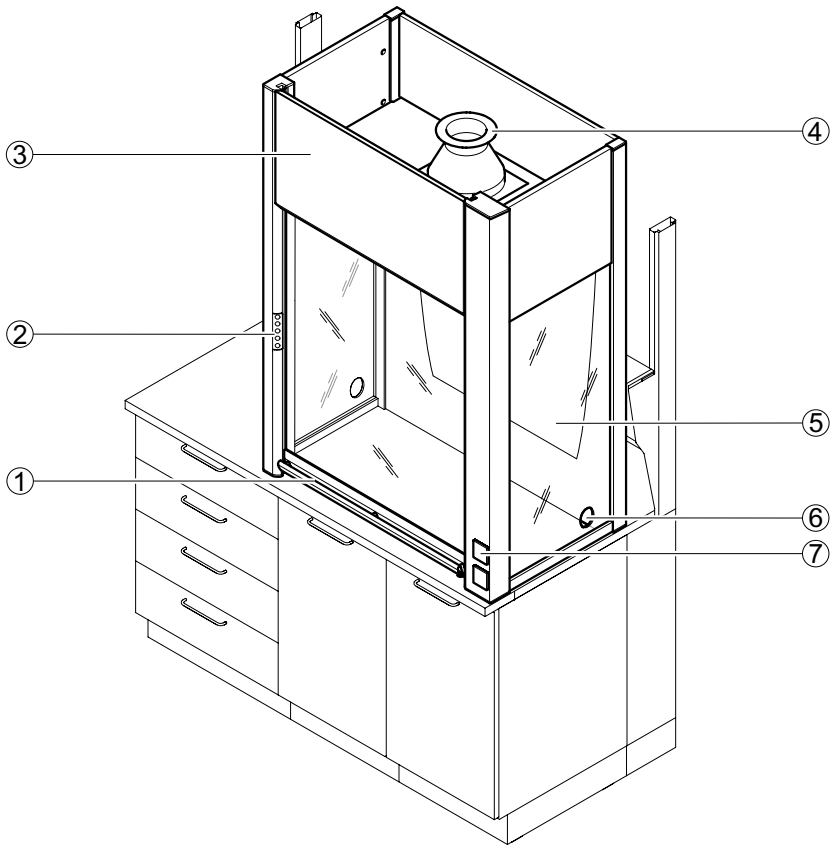
Design

Air-circulating mode



1 *Sash with handle*
2 *FAZ control panel*
3 *Removable fascia panel*
4 *Filter housing with ventilator in air-circulating mode*
5 *Rear panel with air guiding profile*
6 *Material lock*
7 *Sockets*

Extract air operation



1 *Sash with handle*
2 *FAZ control panel*
3 *Removable fascia panel*
4 *Extract air spigot*
5 *Rear panel with air guiding profile*
6 *Material lock*
7 *Sockets*

Technical data

Dimensions	
Width [mm]	900
Depth [mm]	600
Height with sash closed/open [mm]	1215/1620
Access width [mm]	730
Clear width, internal workspace [mm]	850
Effective depth [mm]	503
Clear internal height up to lamp [mm]	846
Clear internal height up to ceiling [mm]	935

Weight	
MobilAir for extract air operation [kg]	Approx. 70
MobilAir for air-circulating mode incl. filter [kg]	Approx. 82

Mobile fume hoods
MobilAir

Design characteristics	
Air-circulating mode	With ventilator and filter
Extract air operation	Extract air spigot connected to on-site extract air system
Lighting	Dazzle-free, can be switched from the outside
Sash	Moves vertically
Material lock	Left and right solid side panel

Electrics	
Electrical supply	2 external sockets
Total power of sockets [W]	1000
Connection voltage [V AC]	230
Lighting [W]	13
Ventilator power [W]	115

Ventilation technology	
Minimum air exchange rate [m³/h]	300
Function display	FAZ as an option
Connection height [mm] Extract air spigot Ø 125 mm	1137

Material	
Side panel design, sash	Plexiglas

Filter type „A“ no.5, gas filter	
Dimensions [mm]	610 x 305 x 150 (+ 8 mm seal)
Pressure loss [Pa] at 300 m³/h	130
Design characteristics	Gas filter cell with 5 layers of activated carbon mat, type „A“; MDF frame; with white-painted grid on both sides, with grip and type label on the 610-mm-side, PU seal on the dust-laden air side
Use	Separable substances: organic gases and vapours (e.g. solvents, petrol fumes, toluol, benzol, kerosine, odours, hydrocarbons with a molar mass (g/mol) of 30 and higher in cold form, non-boiling (VOC, high-boiling substances)

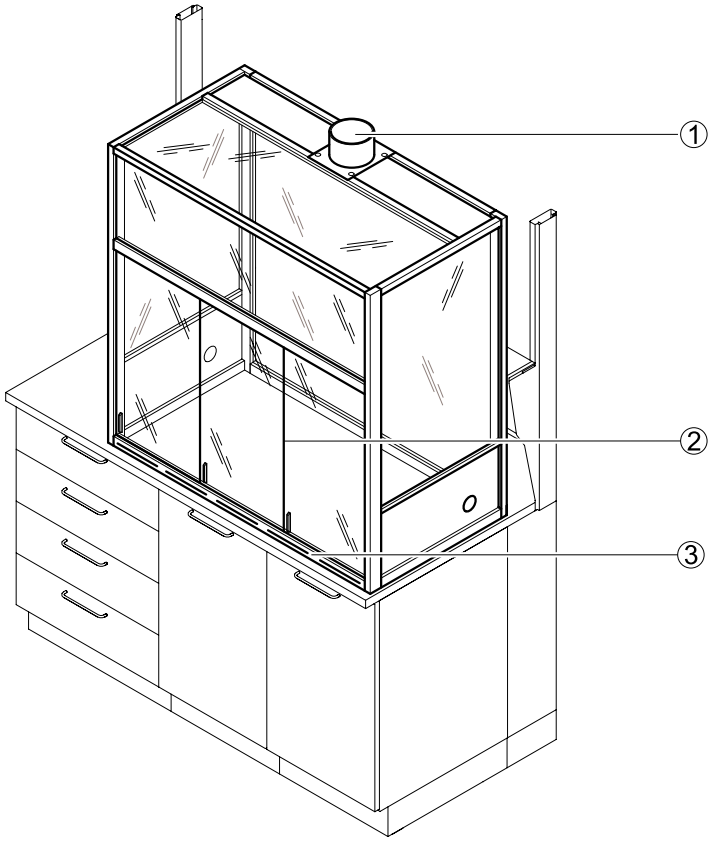
Filter type „BEP“, gas and particle filter	
Dimensions [mm]	610 x 305 x 150 (+ 8 mm seal)
Pressure loss [Pa] at 300 m³/h	240
Design characteristics	Combination filter Hepa H13 with activated carbon mat and particle filter, type „BEP; MDF frame, with white-painted grid on both sides, with grip and type label on the 610-mm-side, PU seal on the dust-laden air side
Use	Separable substances: inorganic gases and vapours (e.g. chlorine, hydrosulphides, sulphur dioxide, hydrogen chlorides, cold and heated). Molecules and particle separation 99.95 % MPPS

Filter type „P“, particle filter cell	
Dimensions [mm]	610 x 305 x 150 (+ 8 mm seal)
Pressure loss [Pa] at 300 m³/h	150
Design characteristics	Particle filter, type „P“, Hepa H13, Midilar MDSA; MDF frame, with white-painted grid on both sides, with grip and type label on the 610-mm-side, fold height 45 mm, PU seal on the dust-laden air side, filter medium flush on the dust-laden air side
Use	Separable substances: Particle separation 99.95 % MPPS, Hepa H13

Intended use

- Extraction of thermal loads, gases, fumes, aerosols or dust escaping from the internal workspace of the housing
- Reduced sound emission
- Not suitable for openly breaking down chemicals
- Not suitable as a replacement for bench-mounted fume hoods in acc. with EN 14175

Design



1 Extract air spigot
2 Horizontal sash
3 Ventilation slots

Technical data

Dimensions	1200	1500	1800	2100
Width [mm]	1200	1500	1800	2100
Depth [mm]	565 715 750 900			
Height [mm]	1450			
Height incl. extract air spigot [mm]	1550			
Height incl. extract manifold [mm]	1750			

Housings
Permanent enclosure

Design characteristics	1200	1500	1800	2100
Construction	Shorter rear panel for using the services if combined with service spines			
Sash	2 horizontal sashes	3 horizontal sashes		
Extract air operation	Connected to on-site extract air system Extract manifold as an option			
Material lock	Optional			
Lighting	Optional			
Shelf board, inside	Optional			

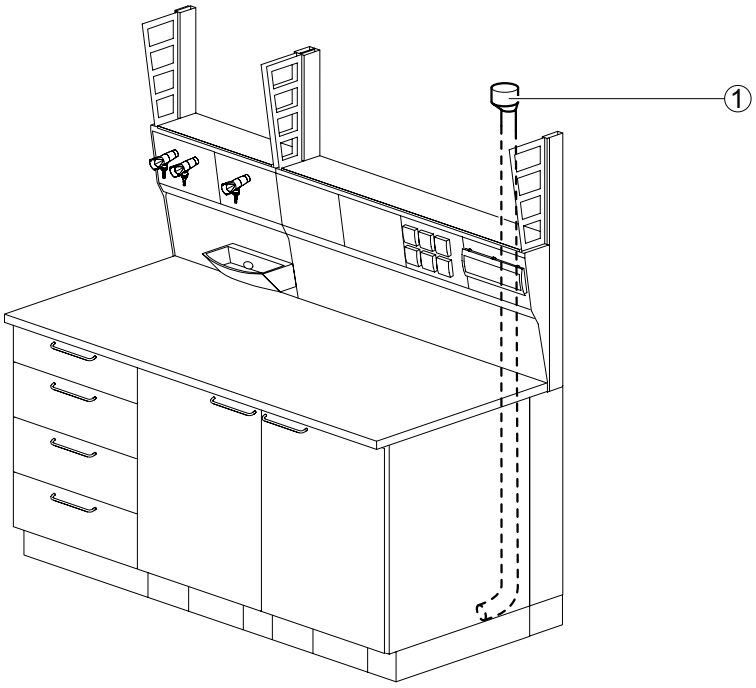
Ventilation technology	
Function display	FAZ as an option
Connection height [mm] for extract air spigot Ø 125 mm	1550

Material	
Side panel design, sash	Safety glass

Intended use

- For the extraction of safety cabinets (underbench units) used for the storage of hazardous materials
- For the extraction of underbench units in service spines and fume hoods

Design



1 Extract air spigot

Technical data

Ventilation technology	
Air exchange rate [m³/h]	30
Ventilation connection (ascending duct) Ø [mm]	90

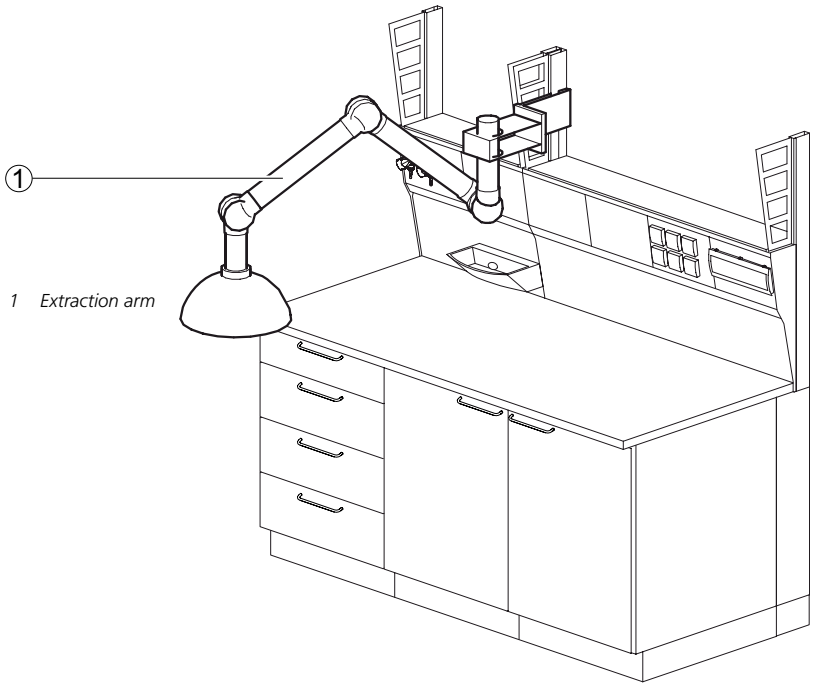
Material	
Ventilating pipe	PPS

Local extraction devices
Extraction arm

Intended use

- For the extraction of a specific area
- For fixing to service wings, service spines or the wall

Design



1 Extraction arm

Technical data

Dimensions	50	75
Pipe system Ø [mm][1)]	50	75
Coupling hood Ø [mm]	350	
Extraction maximum [mm]	50	75

[1)] Pipe system Ø 50 mm only for fastening to the service wing

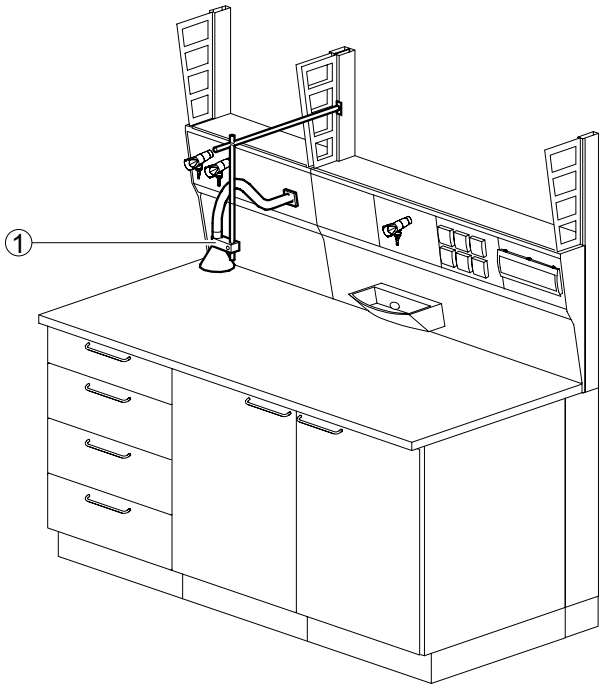
Ventilation technology	50	75
Minimum air exchange rate [m³/h]	50	100
Admission pressure [Pa]	150	
Admission pressure [Pa] with Waldner airflow damper	200	

Material	
Pipe	Anodised aluminium
Hinged bracket	Polypropylene
Coupling hood	Polycarbonate
Suction tip	Anodised aluminium

Intended use

- For the specific extraction of fumes
- Connection to extract air adapter in the service panel

Design



1 Snorkel hood

Technical data

Dimensions	
Length of pipe system [mm] at Ø 40 mm	1000
Hood Ø [mm]	120
Suction tip [mm]	50

Ventilation technology	
Minimum air exchange rate [m³/h]	5
Admission pressure [Pa]	200

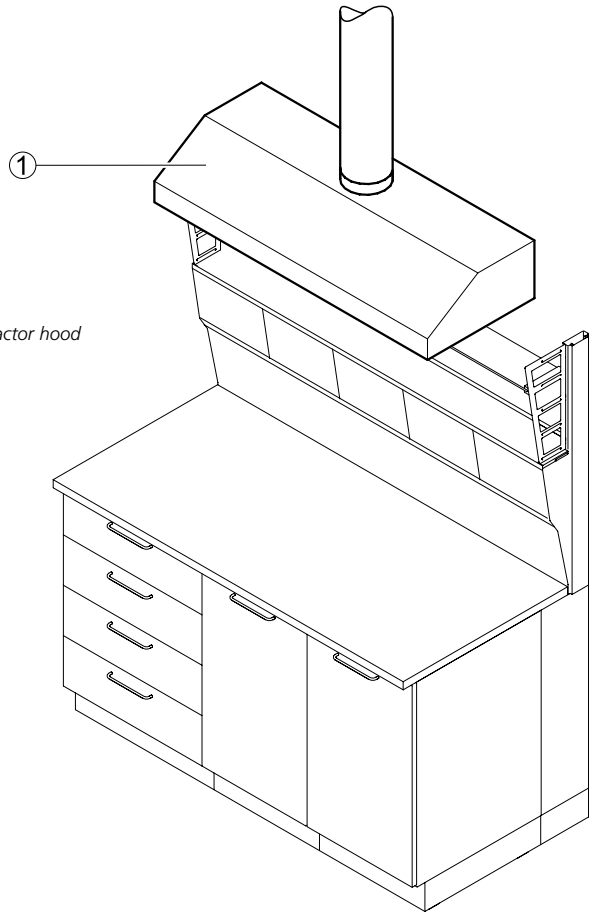
Material	
Pipe and hood	Polypropylene

Local extraction devices
Extractor hood

Intended use

- For the extraction of a specific area
- For fixing to service spines and to the wall

Design



1 Extractor hood

Technical data

Dimensions	1200	1500
Width [mm]	1200	1500
Height x depth [mm]	300 x 600	
Extract air spigot Ø [mm]	200	

Ventilation technology	1200	1500
Minimum air exchange rate [m³/h]	480	600
Admission pressure [Pa]	25	30
Admission pressure [Pa] with Waldner airflow damper	150	

Material	
Extractor hood	Polypropylene

2 Service modules

Our ***SCALA*** range of laboratory furniture is defined by flexibility, mobility and ergonomical design to meet future requirements in the laboratory.

The supply of services plays a major part in a laboratory system.

Our service modules, including service spine, suspended service boom, service column and service wing, not only provide the services in the laboratory but also – more than ever – meet the ergonomic needs of the people working there. The service panels are inclined towards the user for easier accessibility of the fittings and control units.

Characterised by many useful details and a straightforward design, our service modules are fit to meet all requirements of laboratory design.

Our laboratory furniture system is made up of many fewer individual parts. Our service panels are fitted without joints, have even surfaces without edges, and the hidden accessory rail for supplementary functions is installed right where it is needed. This simplifies cleaning and meets high hygienic requirements.

2 Service modules

Space saving services installation

The services supply installations are integrated in the service duct to save space. The modular service panels are inclined towards the user for ergonomic access and handling. This, in turn, leads to a greater usable depth of the worktop.

The service spine

Our service spine gives the designer a basis for designing the laboratory environment and provides a large variety of options for different designs and rapid changes. The service spine is an autonomous unit and can be combined with freely selectable bench frames to form a wall bench or a double work bench.

The accessory rail for suitable accessories

The accessory rail below the service panel level is used for fitting useful accessories such as shelves, scaffold poles and towel rail. These „helpers“ can be moved over all grids and securely fastened.

Simple upgradability

The modular service panels without screws can be quickly replaced if necessary.

Supply pipes, for example for water or compressed air, can be rapidly expanded and fitted using a quick release coupling system without interrupting laboratory operation.

Configuration details of the service spine

The level above the service panels can be used as a shelf. The inserted glass shelves can easily be removed for cleaning. Above it, shelves can be fastened in the lateral pillars. The unit can always be expanded to the top by mounting overbench cabinets.

The service column

As a compact services supply, our service column enables the transparent design of the room.

The service column is equipped with removable panels and an accessory rail and can either be mounted directly to the laboratory ceiling or to the service ceiling.

The suspended service boom

The suspended service boom can be freely suspended from the laboratory ceiling which is useful for certain areas in the laboratory.

It is fitted with removable service panels and an accessory rail and can also be used for floor plans independent of the services. The suspended service boom can be height-adjusted when mounted to the ceiling. It is also possible to install the suspended service boom to the service ceiling.

The service wall duct

As an alternative to the service spine, the service wall duct can be mounted at different heights and directly to a wall, or connected after a service spine fitted against a wall. It is also equipped with panel technology and an accessory rail for variable configuration.

2 Service modules

The service wing system

Our service wing defines the term „freedom in the laboratory“ in a very special way: The new service wing is a major design element which integrates all services such as mechanical or electrical services, EDP, energy-saving lighting, extract air and the waste water disposal system, thus offering a high degree of flexibility.

The possibility of being able to plug in to the service wing for reliable supply and disposal connections practically everywhere means maximum freedom of movement and floor plan design in the laboratory.

The expansion stages of the service wing

The service wing has a modular design and offers four independent expansion stages for free combination. For every application. Using the removable service panels, fittings and connections can be placed as desired.

The accessory rail for useful accessories

The accessory rail accommodates useful accessories such as shelves, service distribution terminal and scaffold points. These can be moved over grids and securely fastened in every position.

Service wing for easy integration

Using the service wing simplifies the laboratory fitting out process and the coordination of different trades. One central feed point suffices.

Existing architectural features and building materials often require costly and time-consuming installations. Requiring minimum installation efforts, this is where the service wing is especially useful.

Energy-saving

The service wing is equipped with energy-saving lamps that illuminate the entire workspace and room and save up to 50 % power (with daylight-dependent control).

The service wing reaches the entire room

All areas of the laboratory are reached using T-elements and our wing segments of different lengths. For a large number of possible configurations. Thus it is possible to „dock" anywhere, anytime.

All benches, racks, mobile sink units or mobile fume hoods can be used as required under the wing. For a flexible working environment.

Precise planning, pre-assembly in the factory

The service wing for your laboratory project is fully pre-assembled by our laboratory builders in accordance with the plans.

You save assembly time on-site and your service wing will be quickly installed and ready to use.

Uncomplicated modification and expansion

Since it is an individual system unit, the service wing can always be modified.

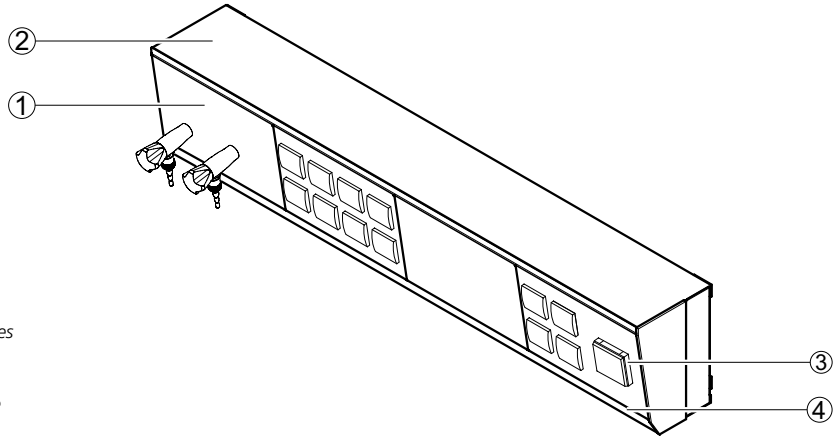
Expanding, upgrading and checking the system are possible with little effort.

Service duct element

Intended use

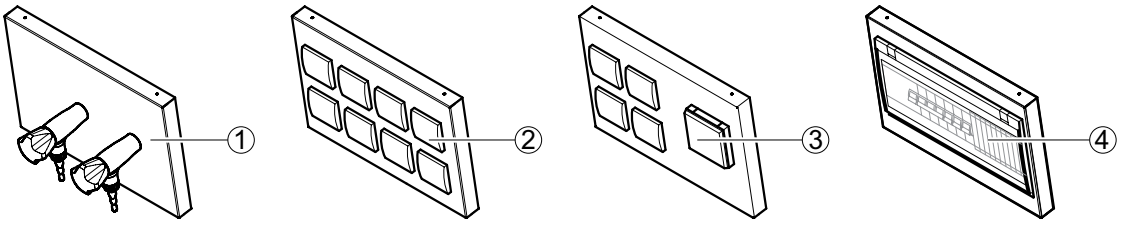
- Services supply at laboratory workstations
- Integration of all service outlets including sockets and multiple connectors for information technology
- Expansion and modification of the services supply through clip-in service panels
- Use in service spines, service wall ducts, suspended service booms, service columns and bench-mounted service ducts
- Tool-free installation of supplementary service duct add-on parts such as pegboard, monitor arm, pipette holder, paper towel dispenser, universal storage area, etc.

Design



1 Service panel with corner valves
2 Storage area
3 Service panel with sockets
4 Accessory rail for the tool-free installation of add-on parts

Service panel variants



1 Service panel with corner valves
2 Service panel with 8 sockets of the same type
3 Service panel with different types of sockets
4 Service panel with automatic circuit breakers

Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800[1)]
Depth [mm] without supporting system	110				
Height [mm]	252				
Front inclination [°]	9				
Service panel, width x height [mm]	300 x 200				

[1)] The service duct can be extended as desired in grid lengths of 300 mm.

Design characteristics	
Number of service panels	Depending on the width of the service duct Supply of electrics and information technology depending on the combination with other service modules
Service panel	Clip-in
Splash guard	Protection type IP 44

Material	
Storage area	Solid grade laminate shelf 5 mm

Electrics	
Electrical supply	Sockets in service panels
Fuse box	Optional
Max. number of sockets 230 V per service panel	8
Max. number of sockets 400 V per service panel	2
Max. number of automatic circuit breakers per service panel	15

Sanitary technology	
Sanitary supply	Service panel with take-off valves for vacuum, gases and/or waters Services supply depending on the combination with other service modules
Max. number of corner valves per service panel	5
Max. number of high purity gas valves per service panel	3 to 5 depending on the type and function

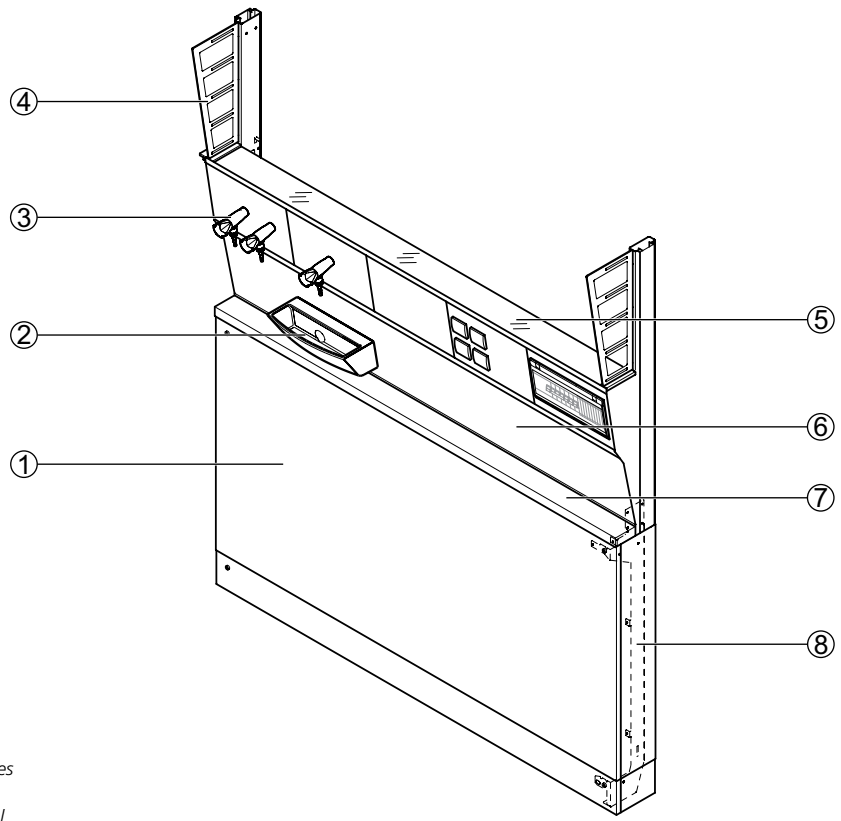
Service spine

Intended use

- For floor-mounted services supply of:
  - Wall benches
  - Double work benches
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Design versions for genetical engineering areas
- Modular fastening of cell add-on parts to the multipurpose uprights, e.g. glass shelves and OSB board, overbench cabinets, scaffold points, etc.
- Tool-free installation of supplementary service duct add-on parts such as pegboard, monitor arm, pipette holder, paper towel dispenser, universal storage area, etc.

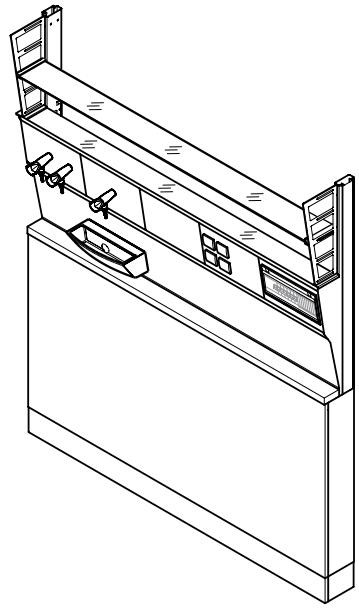
Design

Service spine for wall bench

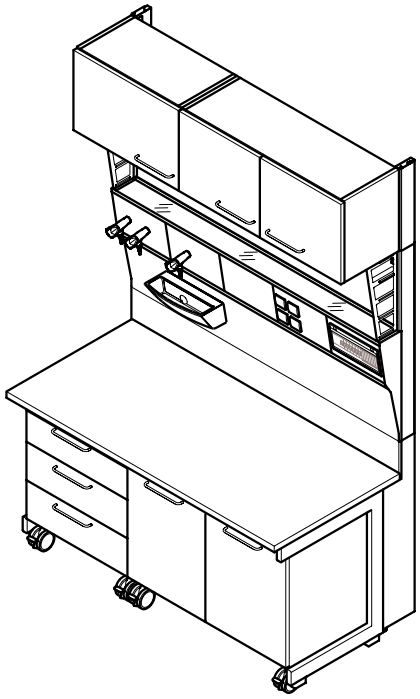


1 Knee-hole cover panel
2 Sink module
3 Service panel with corner valves
4 Pillar for cell add-on parts
5 Service duct with service panel, glass shelf and accessory rail for add-on parts
6 Fascia panel of the service spine
7 Console
8 Multipurpose upright

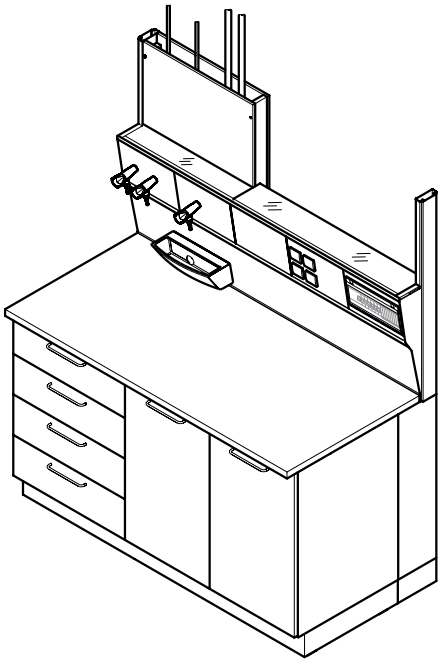
Service spine for wall bench with console and 2 glass shelves, working height 900 mm



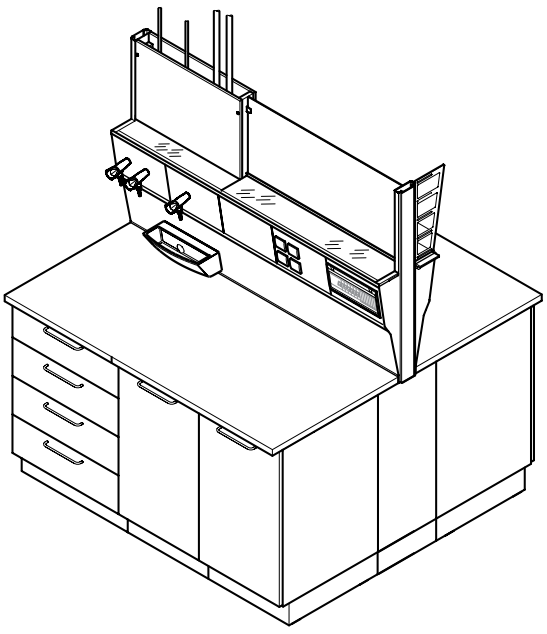
Service spine for wall bench with C-frame, underbench units on castors and overbench cabinet, working height 750 mm



Service spine for wall bench with underbench units on plinth and media supply from above, working height 900 mm

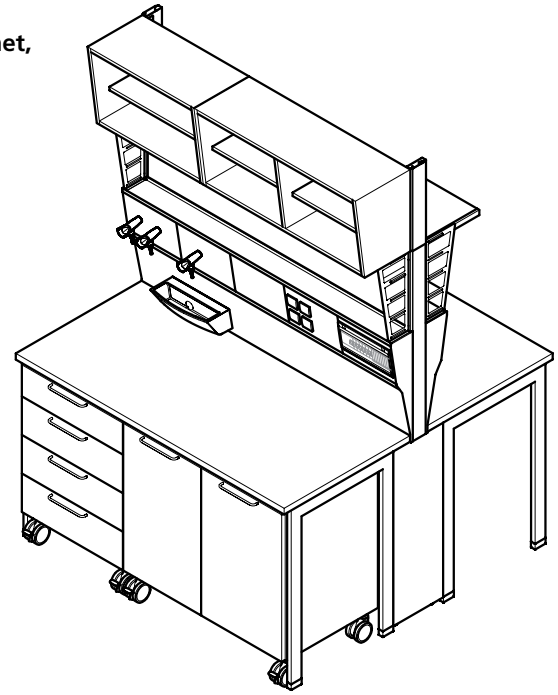


Service spine for double bench with underbench units on plinth and media supply from above, working height



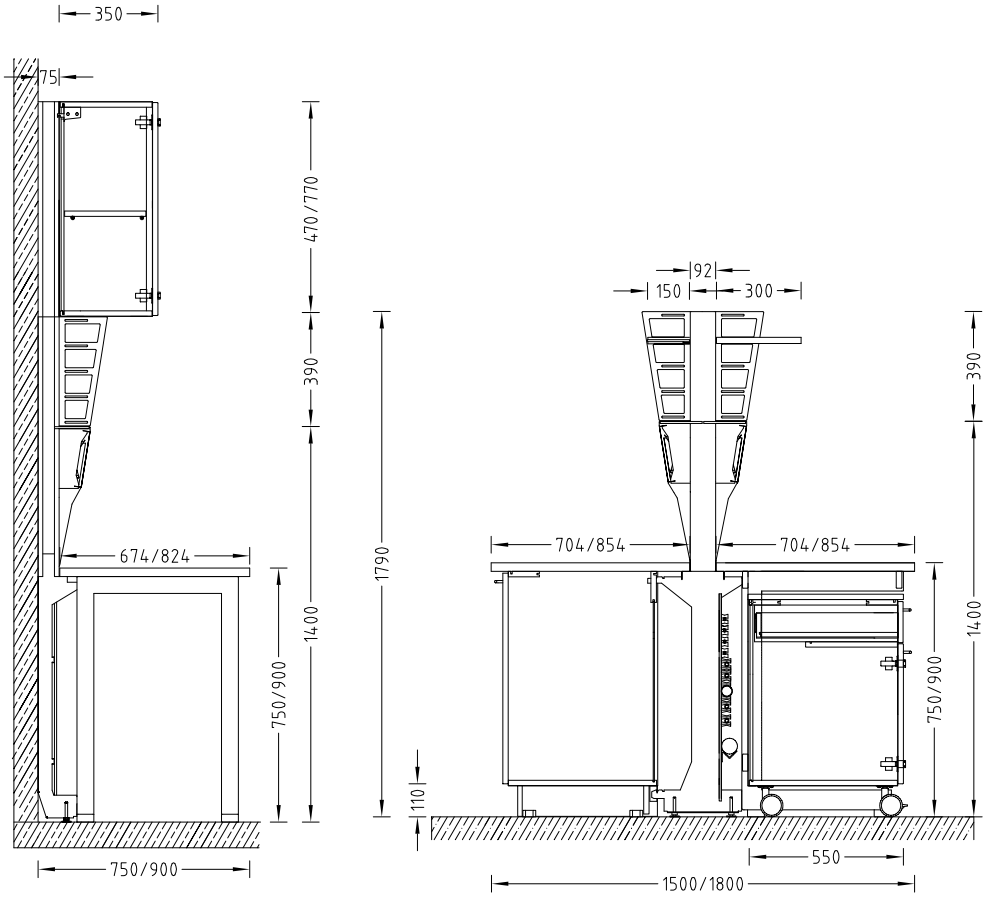
Service spine

Service spine for double bench with H-frame, underbench units on castors and overbench cabinet, working height 900 mm



Dimensional drawing

Service spine for wall bench/double bench



Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth, service spine for wall bench [mm] (incl. wall bench)	75 (750/900)				
Depth, service spine for double bench [mm] (incl. double bench)	92 (1500/1800)				
Height [mm]	1790				
Working height [mm]	750 900				
Height, pillar extension [mm] for overbench cabinet, height 460 mm	470				
Height, pillar extension [mm] for overbench cabinet, height 760 mm	770				
Height, pillar extension [mm] up to ceiling height 3500 mm	Depending on ceiling height				
Service panel, width x height [mm]	300 x 200				
Glass shelf, width x depth [mm]	Width, service spine x 150				
Shelf of OSB board, width x depth [mm]	Width, service spine x 300				

Load bearing capacity	
Glass shelf [kg]	20
Shelf of OSB board [kg]	30
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5

Design characteristics	
Modular design	Wall bench can be equipped on one side, double bench can be equipped on two sides Multipurpose uprights can be extended with service duct, e.g. for overbench cabinets Worktop, cantilever and underbench unit can be replaced without dismounting the installations Grid-independent mounting of accessories
Scaffold points ø [mm]	12 to 13
Number of service panels	Depending on the width of the service duct

Electrics	
Electrical supply	Sockets in the service panel
Fuse box	Optional

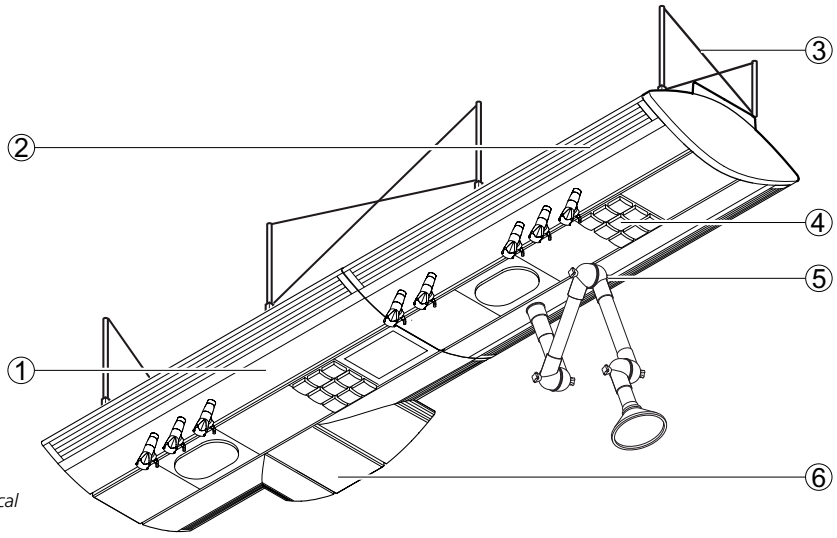
Sanitary technology	
Sanitary supply	Service panel with take-off valves for vacuum, gases and/or waters The supply pipes and cables are routed underneath the worktop or cantilever

Service wing

Intended use

- Laboratory areas with technical devices for services
- Services supply and disposal via the ceiling for:
  - Laboratory benches and sinks below the service wing
  - Local extraction devices and AeroEm fume hood
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Tool-free installation of supplementary service wing add-on parts

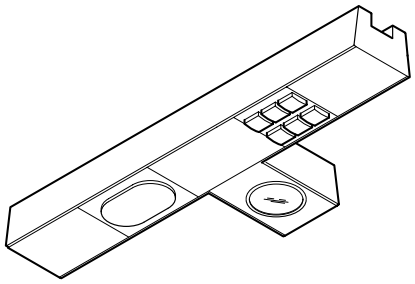
Design



1 *Sanitary duct with gas and water taps*
2 *Wing edge (lamp or moulded part)*
3 *Braced support*
4 *Electrical trunking with electrical connections*
5 *Ventilation duct with local extraction*
6 *T wing element*

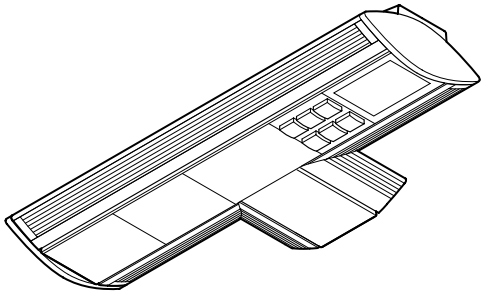
Expansion stage 1

- Electrical trunking with service panels for the power supply



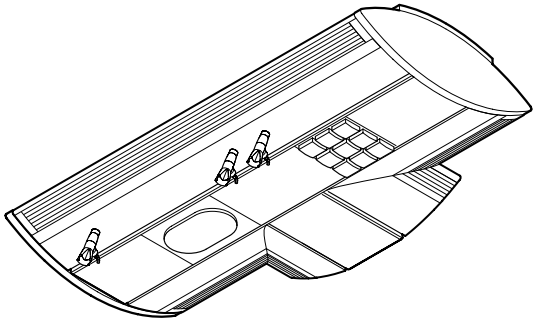
Expansion stage 2

- Electrical trunking with service panels for the power supply
- Wing edge designed as a lamp



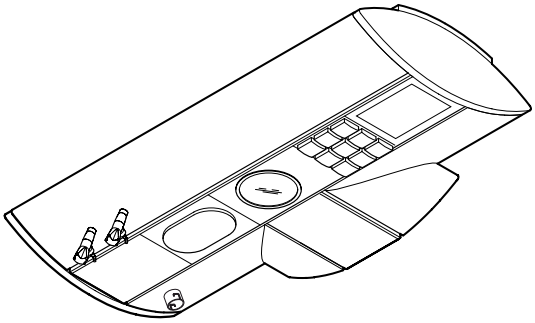
Expansion stage 3

- Electrical trunking with service panels for the power supply
- Sanitary duct
- Ventilation duct
- Wing edge designed as a lamp



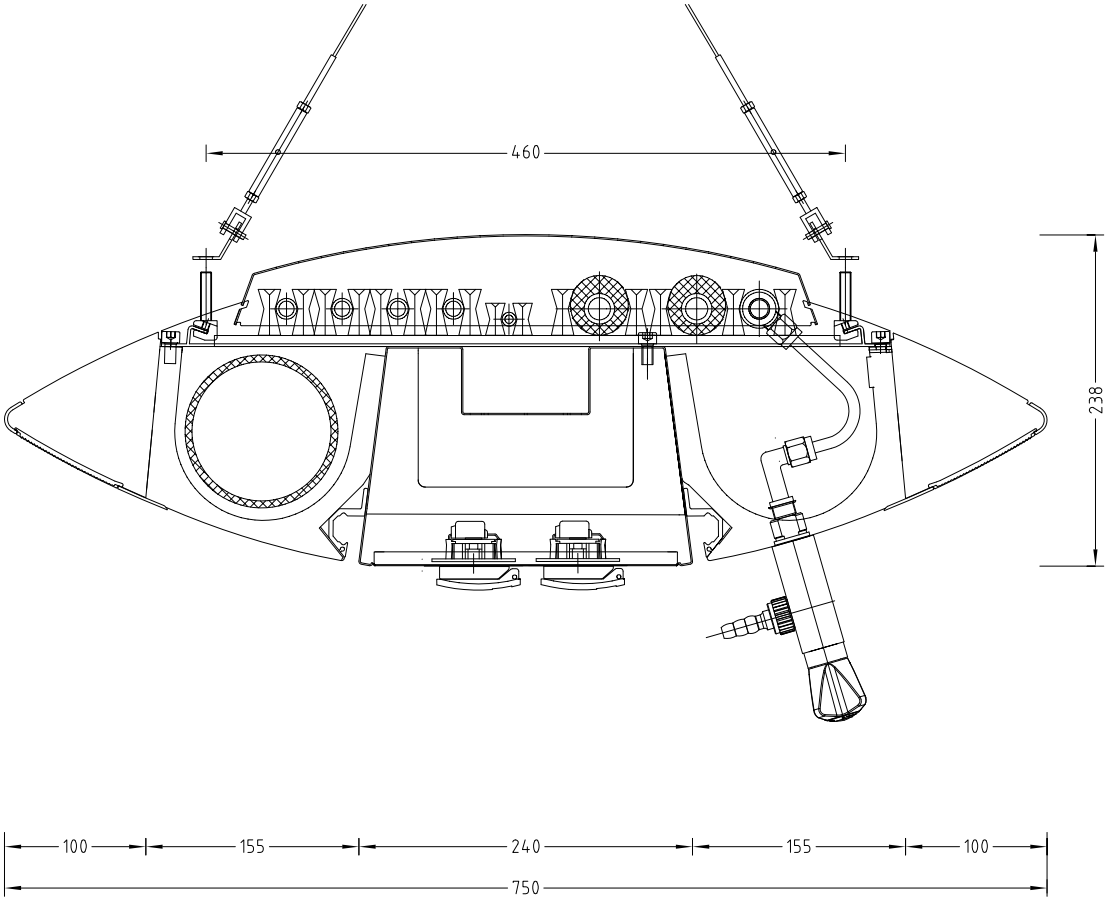
Expansion stage 4

- Electrical trunking with service panels for the power supply
- Sanitary duct
- Ventilation duct
- Wing edge designed as an accessory for the sanitary and ventilation routing



Dimensional drawing

Service wing, expansion stage 3



Service wing

Technical data

Dimensions				
Width [mm]	600	900	1200	1500
Depth [mm] with expansion stage 1	240			
Depth [mm] with expansion stage 2	496			
Depth [mm] with expansion stages 3 and 4	750			
Height [mm] without dust cover for expansion stages 1 and 2	181			
Height [mm] without dust cover for expansion stages 3 and 4	191			
Outer dimensions of service panel [mm]	300x220x29			

Load bearing capacity	
Maximum permissible load [kg]	120

Design characteristics	
Construction	Feeding, wing, T-element as an option Flexible bracing to prevent vibrations Can be equipped on both sides Dust protection through grid elements installed above

Electrics	
Electrical supply	Electrical trunking with service panels for the power supply Connections for telephone, computer, monitor and loudspeaker as an option
Lighting	Lamps integrated in wing edges (direct and indirect lighting) as well as down light in the electrical trunking as an option
Fuse box	Optional

Sanitary technology	
Sanitary supply	Service panels with take-off valves for vacuum, gases and/or waters Supply pipes and cables, ventilation duct guiding Local extraction system and/or extract air spigot for AeroEM as an option

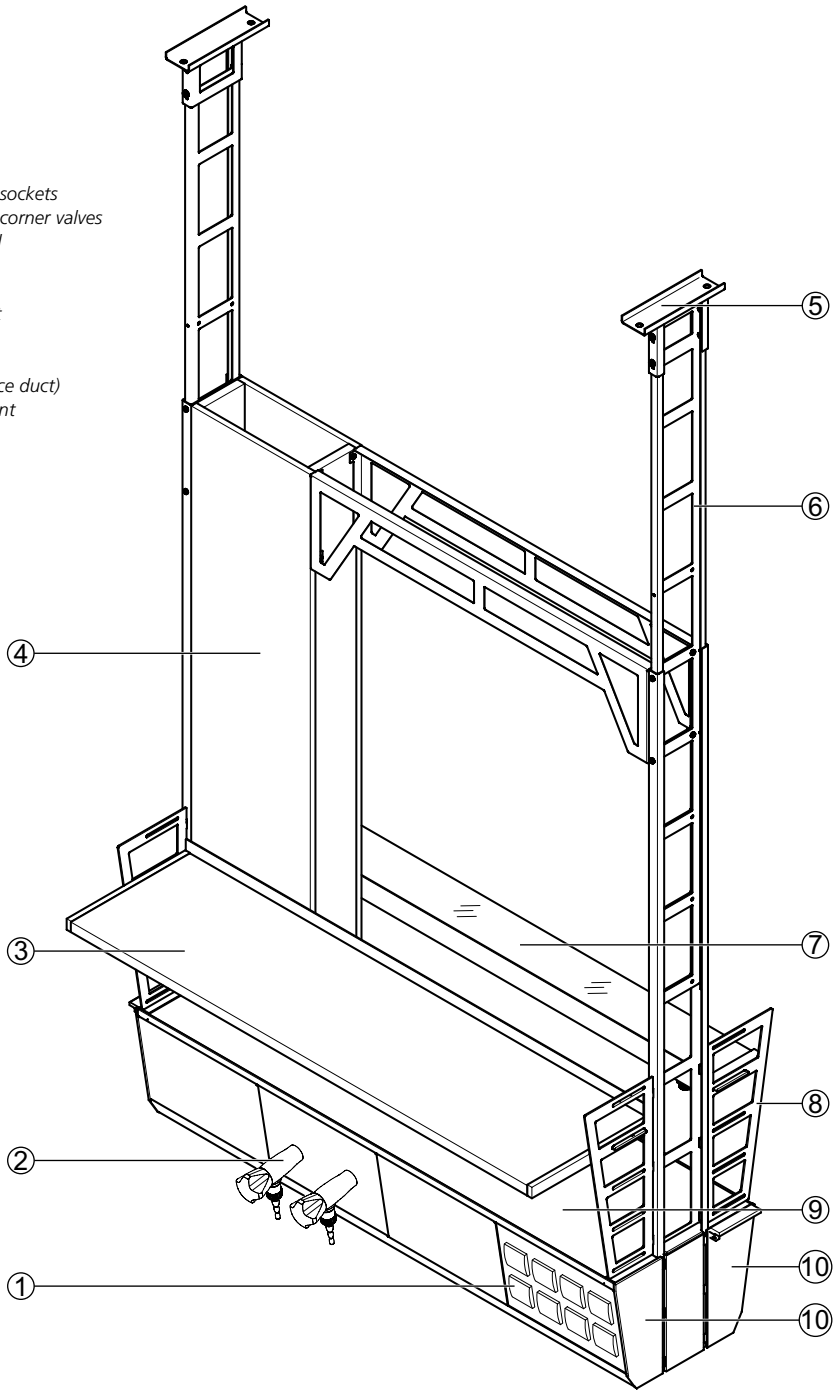
Suspended service boom

Intended use

- Services supply from the ceiling for:
  - Laboratory benches below the suspended service boom
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Design versions for genetical engineering areas
- Modular fastening of boom add-on parts to the supporting construction, e.g. glass shelves and OSB board, scaffold points, etc.
- Tool-free installation of supplementary service duct add-on parts such as monitor arm, pipette holder, paper towel dispenser, universal storage area, etc.

Design

1 Service panel with sockets
2 Service panel with corner valves
3 Shelf of OSB board
4 Media supply duct
5 Ceiling stator
6 Functional element
7 Glass shelf
8 Pillar
9 Storage area (service duct)
10 Service duct element



Suspended service boom

Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm] without pillars	350				
Depth [mm] with pillars	471				
Recommended min. height [mm] bottom edge of suspended service boom to upper edge of finished floor	1750				
Height, supporting construction (max. up to ceiling height 4000 mm)	Depending on ceiling height				
Service panel, width x height [mm]	300 x 200				
Glass shelf, width x depth [mm]	Width, suspended service boom x 150				
Shelf of OSB board, width x depth [mm]	Width, suspended service boom x 300				

Load bearing capacity	
Maximum permissible load [kg]	120
Additional max. load bearing capacity, suspended service boom [kg] per grid	30
Glass shelf [kg]	20
Shelf of OSB board [kg]	30
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5

Design characteristics	
Construction	Functional elements to take up service ducts fastened to the ceiling and connected
Number of service panels (per side)	Depending on the width of the service duct
Scaffold points ø [mm]	12 to 13

Material	
Storage area (service duct)	Solid grade laminate 5 mm

Electrics	
Electrical supply	Sockets in the service panel
Fuse box	Optional

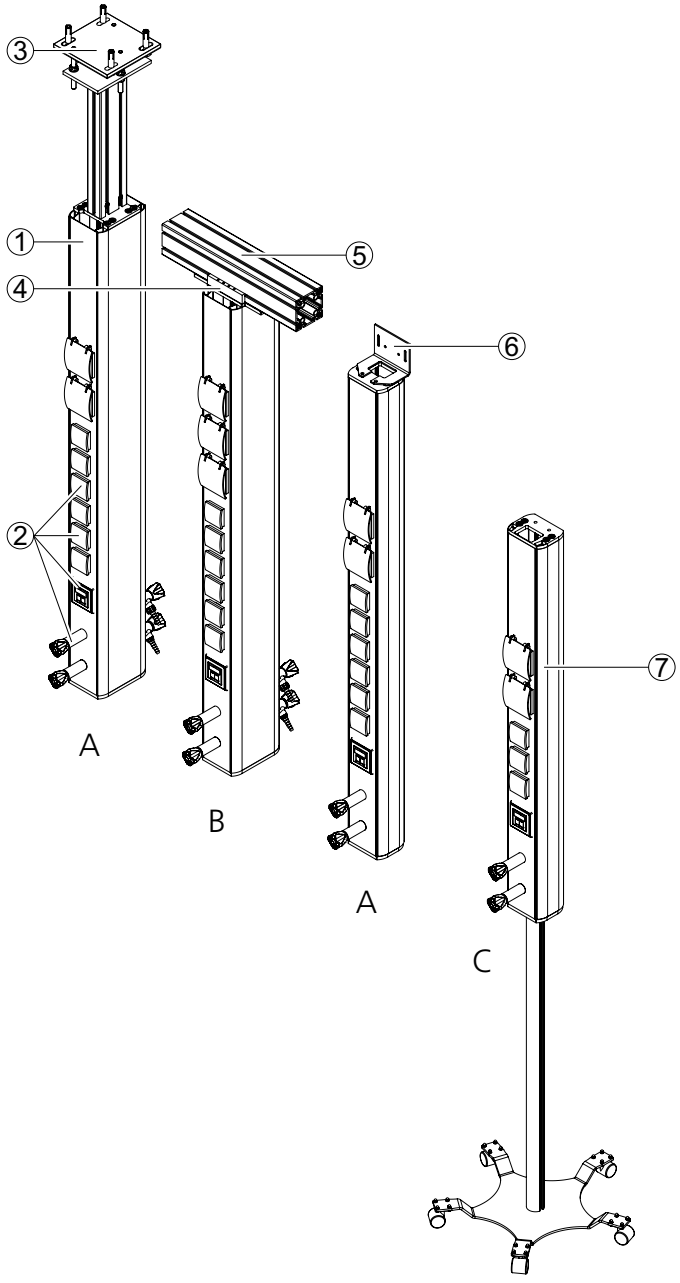
Sanitary technology	
Sanitary supply	Service panel with take-off valves for vacuum, gases and/or waters Supply pipes and cables in supply duct from above

Intended use

- Services supply from the ceiling for:
  - Laboratory benches below the suspended service column
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Version with one or two sides

Design

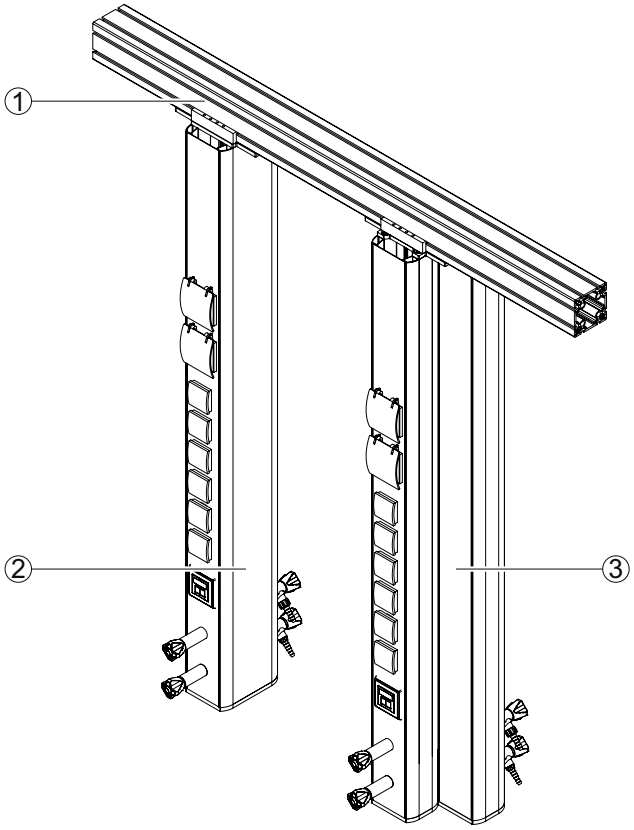
A: SimplyMount, for fastening to bare ceilings or walls
B: SimplyMove, for fastening to ceiling grids / beams
C: SimplyMobile, for fastening to moveable base frames



1 *Electrical cover for connecting terminals*
2 *Separate panels for corner valves, sockets and IT*
3 *Bare ceiling suspension with steel plate and profiled suspension*
4 *Service column on one/two sides of ceiling grid/beam with built-in anti-slip device and sliding element*
5 *Service ceiling, beam design by Waldner*
6 *Fastening for wall installation*
7 *Moveable service column*

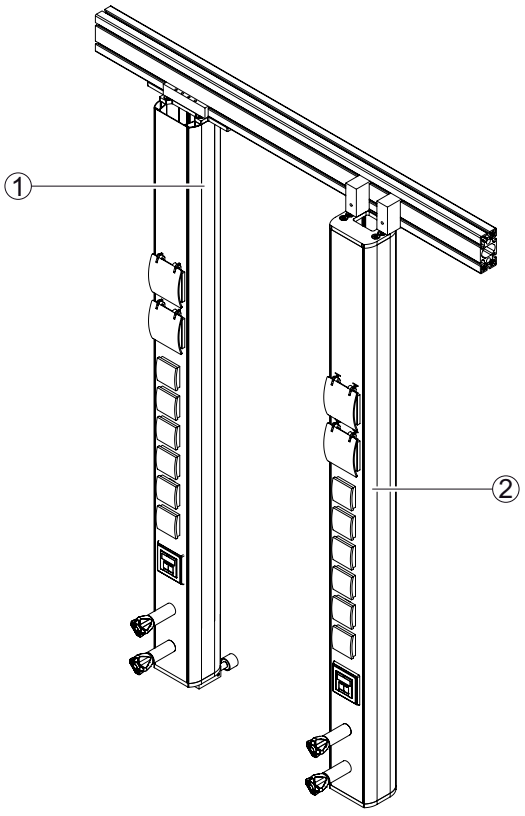
Service column

SimplyMove fastening models on 100x100 mm ceiling grid profile on the room / double bench axis



1 *Ceiling grid / beam profile*
2 *Service column equipped on both sides on ceiling grid profile*
3 *Single-sided service column back to back, moveable against each other on the ceiling grid profile.*

SimplyMove fastening models on the 50x100 mm ceiling grid profile in front of partition wall / wall line:



1 *Service column equipped on one side on ceiling grid profile in the wall area*
2 *Service column equipped on one side fixed in front of the ceiling grid profile (fixed to the profile in the room with the partition wall model)*

Technical data

Dimensions	
Width [mm]	130 / 190
Depth [mm] single-sided	100
Depth [mm] two sides	160
Height [mm]	910 + 1520 + 1820
Height, supporting construction [mm] (max. up to ceiling height 4500 mm)	Adapted to ceiling height
Service panel, width x height [mm]	100 / 160 x variable depending on equipment

Design characteristics	
Construction	Vertical services carried, can be equipped on one or both sides Directly mounted to the aluminium support system, fitted to the bare slab or wall
Equipment	Corner valves, high purity gas valves, socket and IT sockets are possible depending on the requirement

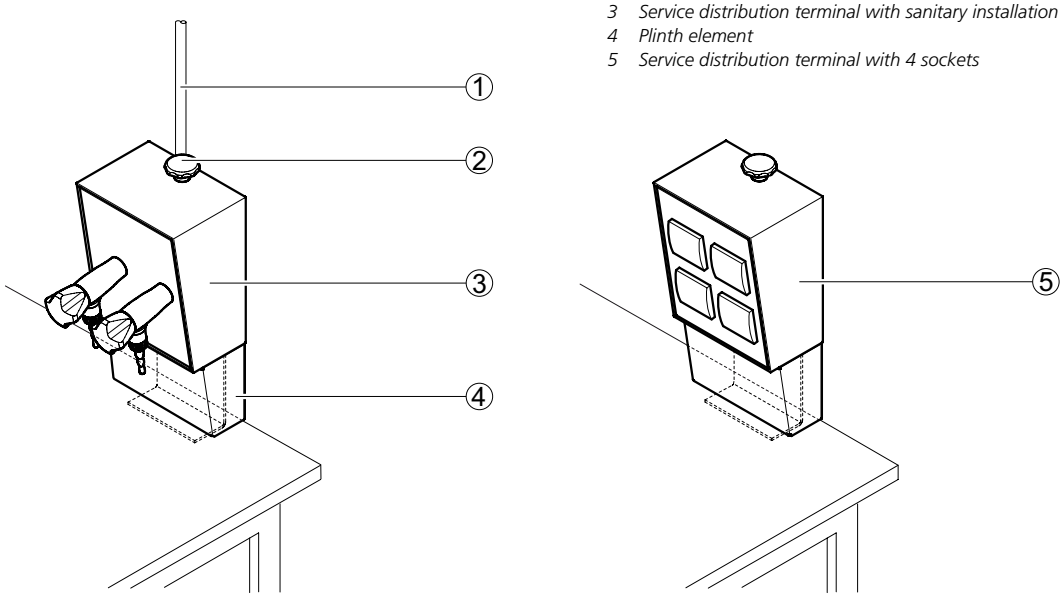
Service distribution terminal

Intended use

- Services supply for clamping to a laboratory workstation
- The station is supplied through a service module which is fastened to the ceiling, such as suspended service boom, service column, service wing, service ceiling or a floor-mounted service spine

Design

1 Connection to several service modules
2 Clamping system
3 Service distribution terminal with sanitary installation
4 Plinth element
5 Service distribution terminal with 4 sockets



Technical data

Dimensions	
Width [mm]	158
Depth [mm]	118
Height [mm]	205
Height incl. plinth element [mm]	310
Service panel, width x height [mm]	150 x 200
Clamping area [mm]	10 – 100

Design characteristics	
Construction	Clamping system for worktop or other frames Services supply via service modules or service spines mounted to the ceiling Tension relief for pipes and cables between the service distribution terminal and service module unit through service beam and straps Cables and hoses are connected to the service module by means of plug-in couplings

Electrics	
Electrical supply	Max. of 4 sockets 230 V per service panel

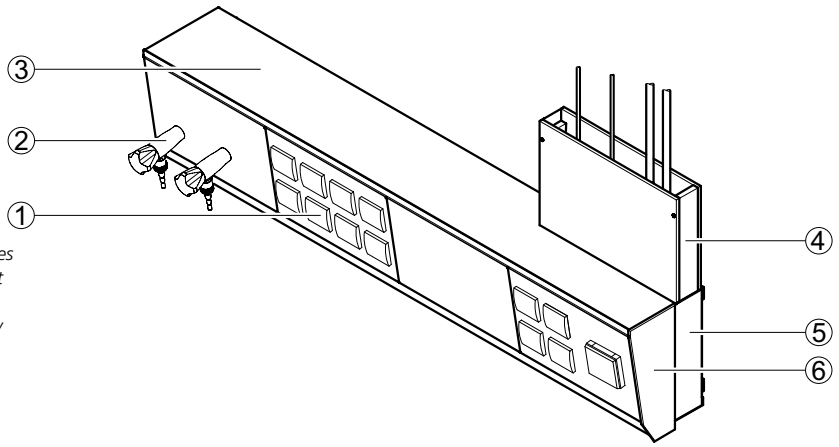
Sanitary technology	
Sanitary supply	Various take-off valves for vacuum, gases or compressed air
Max. number of corner valves per service panel	2
Max. number of high purity gas valves per service panel	1 or 2 (depending on the type and function)

Service wall duct

Intended use

- Wall-mounted services supply for:
  - Laboratory benches under or in front of the service wall duct
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Design versions for genetical engineering areas
- Tool-free installation of supplementary service duct add-on parts such as monitor arm, pipette holder, paper towel dispenser, universal storage area, etc.

Design



1 Service panel with sockets
2 Service panel with corner valves
3 Storage area, service wall duct
4 Media supply from above
5 Fastening profile/media supply
6 Service duct element

Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800[1)]
Depth [mm]	184				
Height [mm]	252				
Service panel, width x height [mm]	300 x 200				

[1)] The service wall duct can be extended as desired in grid lengths of 300 mm.

Load bearing capacity	
Storage area [kg]	20 per installed grid

Design characteristics	
Construction	Service duct for wall mounting incl. solution for inside corner
Number of service panels	Depending on the width of the service duct

Material	
Storage area	Solid grade laminate shelf 5 mm

Electrics	
Electrical supply	Service panel with sockets
Fuse box	Optional

Sanitary technology	
Sanitary supply	Service panel with take-off valves for vacuum, gases and/or waters Supply pipes in the fastening profile

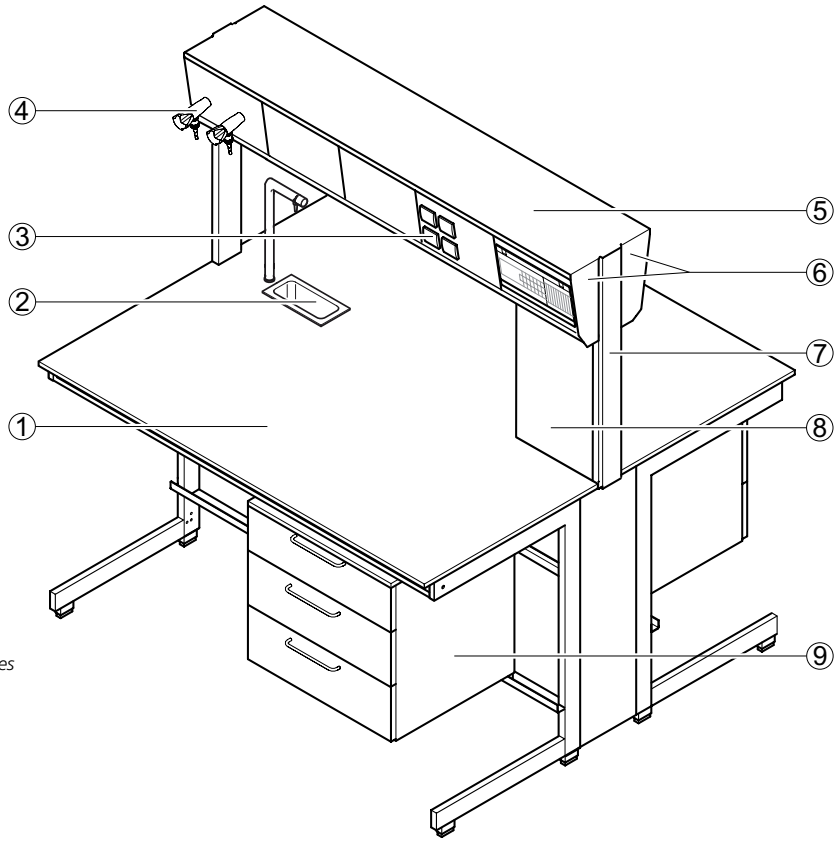
Bench-mounted service duct

Intended use

- Services supply of double work benches
- Design versions for genetical engineering areas
- Modular fastening of cell add-on parts to the multipurpose uprights, e.g. glass shelves and OSB board, overbench cabinets, scaffold points, etc.
- Tool-free installation of supplementary service duct add-on parts such as pegboard, monitor arm, pipette holder, paper towel dispenser, universal storage area, etc.
- Not suitable for double benches where separate work surfaces are required (see also BGI/GUV-I 850-0)

Design

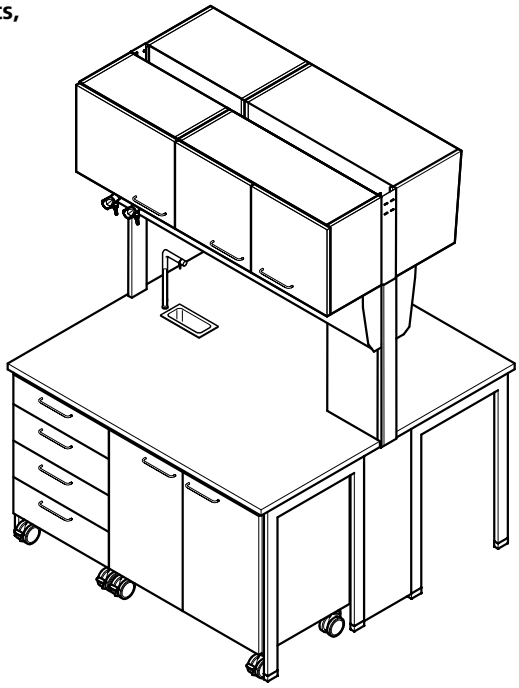
Bench-mounted service duct with C-frame and suspended underbench unit



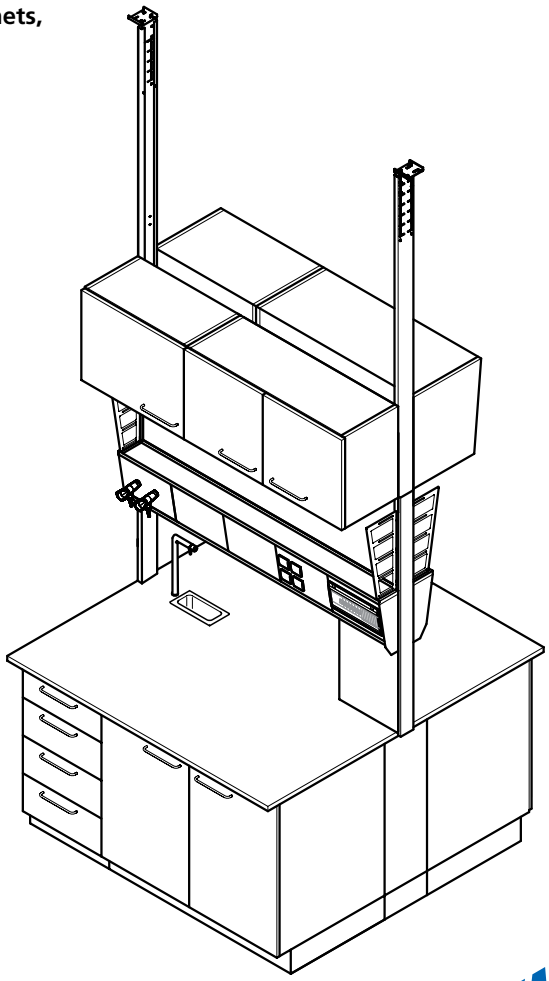
1 Worktop
2 Drip cup with water outlet
3 Service panel with sockets
4 Service panel with corner valves
5 Storage area, service duct
6 Service duct element
7 Multipurpose upright
8 Media supply duct
9 Suspended underbench unit

Bench-mounted service duct

Bench-mounted service duct with overbench cabinets, H-frame and underbench units on castors



Bench-mounted service duct with overbench cabinets, pillar extension and underbench units on plinth



Bench-mounted service duct

Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]	310				
Height [mm]	1602				
Height, opening at working height 900 mm [mm]	450				
Height, pillar extension [mm] (for overbench cabinet, height 460 mm)	462				
Height, pillar extension [mm] (for overbench cabinet, height 760 mm)	762				
Height, pillar extension [mm] (up to ceiling height 3500 mm)	Depending on ceiling height				
Service panel, width x height [mm]	300 x 200				
Glass shelf, width x depth [mm]	Width, bench-mounted unit x 150				
Shelf of OSB board, width x depth [mm]	Width, bench-mounted unit x 300				

Load bearing capacity	
Glass shelf [kg]	20
Shelf of OSB board [kg]	30
Max. load per scaffold point with scaffold rod length 300 mm [kg]	5

Design characteristics	
Construction	Double-sided service duct as bench-mounted unit with opening above the worktop
Number of service panels	Depending on duct width
Scaffold points ø [mm]	12 to 13

Material	
Storage area, service duct	Solid grade laminate shelf 5 mm

Electrics	
Electrical supply	Sockets in the service panel
Fuse box	Optional

Sanitary technology	
Sanitary supply	Service panel with take-off valves for vacuum, gases and/or waters Supply pipes in the bench-mounted unit

3 Laboratory benches and sinks

Laboratory benches are crucial in our ***SCALA*** laboratory furniture system..

The consequent separation of services supply and furniture creates flexibility in the laboratory.

All variants of our benches can be selected with various worktop materials for a large number of application possibilities everywhere in the laboratory.

High stability, straightforward design and perfect appearance characterise our laboratory benches.

Access to water must meet various requirements in the laboratory.

Large sink modules, integrated sinks, drip cups and sink modules in service modules or fume hoods are integrated in the laboratory as required by the specific situation.

Wherever mobility is required, our mobile units are used: under the service wing, for the suspended service boom, the service columns and the service ceiling – for fast moving in the laboratory.

3 Laboratory benches and sinks

Our benches offer a large number of possible applications.

Our new bench frames are made of precision rectangular tubes with reinforced cross-section. The bench frames can carry a load of 200 kg without any problem. Optimally protected against external effects through the entirely homogenous powder coating, our bench frames have a flawless appearance.

The same applies to the surfaces of our worktops. You can choose from our wide range of materials according to your requirements.

Bench frames for different needs

With their constructional designs, C-frame and H-frame bench frames form the basis for our work benches depending on the requirement and application.

Different standard widths available

In order to be able to divide the workplaces in your laboratory to suit your needs, we offer a large number of frame widths.

Improved level compensation

Our new height-adjustable feet for H-frames offer up to 40 mm regulating distance. Easy access and adjustment - for steady positioning.

Easy cleaning

The height adjustment for the C-frame holds it approx. 30 mm above the floor. This makes cleaning the floor extremely easy.

H-frame

provides a high level of stability for add-on tables, mobile tables and analysis tables for working sitting or standing.

Underbench cabinets can be mobile or suspended and moved independent of modular size. Sitting niches are therefore possible anywhere.

C-frames

are extremely steady and can be loaded with 200 kg. They provide users with a large amount of knee and legroom with mobile and suspended underbench units.

Suspended underbench units that can be moved

Our new profile enables underbench units suspended in cantilever and C-frames to be moved across frames.

Movable knee-hole cover panels

For benches without underbench units we use movable and height-adjustable knee-hole cover panels. In this way, installations routed below the rear side of the table can be hidden.

Other useful helpers

Independent table frames can also be combined to create new situations – just as you need them. Our height-adjustable bench can be adjusted from 700 to 950 mm.

Our multi-talent: the rack

The rack is perfect for fitting items of equipment, AquaEl and others. The robust shelves are height-adjustable and the castors enable the fast changing of location.

3 Laboratory benches and sinks

There are no limits to the use of sinks and drip cups in the laboratory. Coordinated with our ***SCALA*** laboratory furniture system and manufactured from tried-and-tested materials, our sink units can ideally be integrated precisely where they are needed. Materials such as stoneware, poly-propylene, stainless steel and epoxy are extremely durable.

Sink modules and drip cups

Sink modules made of stoneware or polypropylene are integrated into the service spine above the bench. Drip cups are fitted directly in the worktop. They are made of stoneware, polypropylene, epoxy resin or stainless steel.

Laboratory sink

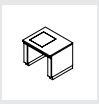
Sinks are permanently installed components of laboratory furniture and placed against the service spine or a wall. Sinks can be combined with various types of worktop materials in many versions.

Mobile sink and AquaEl

The mobile sink with castors supplements the variable laboratory below the service wing and service ceiling. The mobile sink is connected directly to the service wing or service ceiling system via flexible pipes. AquaEl is a ready to plug in compact system for the easy supply and disposal of water in service modules. A lifting unit disposes of the waste water through the respective system.

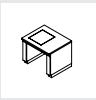
Laboratory benches
Combinations of materials/bench frames

Combinations of worktop and bench frame materials

Material, worktop	Coated particle-board	Solid grade laminate	Solid grade laminate with EBC surface	Polypropylene
 H-frame	x	x	x	x
 C-frame	x	x	x	x
 Mobile table frame	x	x	x	x
 H-frame for low level fume hoods	–	–	–	x [1]
 Balance table	x	–	–	–
 Rack	x [2]	–	–	–

[1] Material with surrounding increased edge
[2] Shelves white

Combinations of worktop and bench frame materials

Material, worktop	Epoxy	Stainless steel	Stoneware	Composite worktop	Glass
 H-frame	x	x	x	x	x
 C-frame	x	x	x	x	x
 Mobile table frame	x	x	x	x	x
 H-frame for low level fume hoods	x [1)]	x [1)]	x [1)]	–	–
 Balance table	–	–	–	–	–
 Rack	–	–	–	–	–

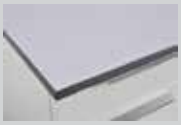
[1)] Material with surrounding increased edge

Laboratory benches
Worktop material

Melamine resin facing/postforming	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulphuric acid
Advantage	Flat
Limitations	Joints sensitive to moisture Medium chemical resistance
Use	Mobile table, add-on table, window benches Instrument benches and laboratory benches in the dry area Cannot be used in the moist or wet area
Weight [kg/m²]	19.6
Overall thickness [mm]	30
	Light grey NCS S 3005 R80B

Polypropylene	
Critical substances	Hydrocarbons Citric acid Oxalic acid Carbon tetrachloride Diesel oil
Damaging substances	Ozone Concentrated nitric acid Chloroform Petrol Benzol
Advantage	No joints Flat Light High chemical resistance to acids and many solvents Easy to dispose of Less breakage of glass
Limitations	Soft surface sensitive to scratches Sensitive to heat
Use	Areas with high resistance to chemicals Working with hydrofluoric acid Radio-isotope area Areas in which the lack of joints is important
Weight [kg/m²]	20.3
Overall thickness [mm] Increased edge [mm]	30 7
	Light grey NCS S 3005 R80B

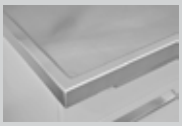
Laboratory benches
Worktop material

Solid grade laminate	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulphuric acid
Advantage	Moisture-resistant Flat Easy to dispose of
Limitations	Reduced coating thickness
Use	Wet rooms Physical laboratories Tables with average load
Weight [kg/m²]	26.4
Overall thickness [mm] Increased edge (as an option) [mm]	19 7
	Light grey NCS S 3005 R80B

Solid grade laminate with EBC surface	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulphuric acid
Advantage	Antibacterial Hardened to withstand electron beams High chemical resistance Moisture-resistant Flat Easy to dispose of
Limitations	Reduced coating thickness
Use	Chemical, microbiological, genetical-engineering laboratories
Weight [kg/m²]	26.4
Overall thickness [mm] Increased edge (as an option) [mm]	20 7
	Grey Similar to NCS S 3000N

Laboratory benches
Worktop material

Epoxy	
Critical substances	Various solvents Diluted acids
Damaging substances	Hydrofluoric acid Concentrated warm mineral acids
Advantage	No joints Flat Solid panel High mechanical load capacity Easy to dispose of
Limitations	Surface sensitive to scratches Sensitive to concentrated acids
Use	Laboratory workstation of all type
Weight [kg/m²]	32
Overall thickness [mm] Increased edge [mm]	19 7
	Platinum grey Similar to NCS S 4202-R

Stainless steel	
Critical substances	Cadmium Lactic acid Oxalic acid
Damaging substances	Compounds containing chlorine and bromine Formic acid Sulphuric acid
Advantage	No joints High resistance to solvents High temperature resistance
Limitations	Sensitive to halogens and their compounds
Use	For maximum loads in the area of decontamination and moisture resistance as well as solvent resistance Biology Microbiology Pharmacy Radio-isotope area Pathology
Weight [kg/m²]	27.5
Overall thickness [mm] Increased edge [mm]	30 7
	

Laboratory benches
Worktop material

Stoneware	
Critical substances	None
Damaging substances	Hydrofluoric acid
Advantage	Best chemical resistance Mechanically stable Easy to dispose of
Limitations	Evenness tolerances due to firing process Thermodynamic stress limited
Use	Areas subject to very high chemical and mechanical stress
Weight [kg/m²]	56
Overall thickness [mm] Increased edge [mm]	26 7
	Light grey NCS S 3005 R80B

Composite worktop	
Critical substances	None
Damaging substances	Hydrofluoric acid
Advantage	Flat Lighter than stoneware Best chemical resistance Easy to dispose of
Limitations	Thermodynamic stress limited
Use	Areas with very high chemical stress
Weight [kg/m²]	40
Overall thickness [mm] Increased edge [mm]	30 7
	White Similar to NCS S 0300-N

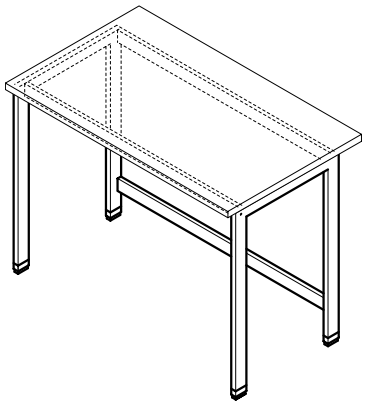
Laboratory benches
Worktop material

Glass	
Critical substances	None
Damaging substances	Hydrofluoric acid
Advantage	Flat High chemical resistance
Limitations	Sensitive to knocks at corners and edges
Use	Laboratory benches of all types subject to large amounts of chemicals
Weight [kg/m²]	38
Overall thickness [mm]	30
	Light green NCS S 2010 G10Y

Intended use

- Bench frame with worktop made of various materials as a work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]	600 750 900				
Working height [mm]	750 900				

Load bearing capacity	
H-frame [kg]	200 (for fixing to the wall or for fixing to a service spine)

Design characteristics	
Construction	For suspended underbench units, cannot be moved for all kinds of frames For underbench units on castors
Height-adjustable feet	Individually adjustable

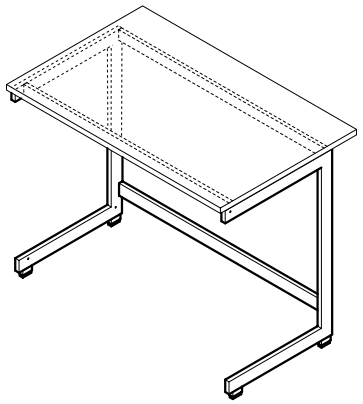
Material	
Bench frame	Steel profile 60/25/2 mm
Worktop	Depending on requirement
Height-adjustable feet	Plastic housing with steel spindle

Laboratory benches
Bench with C-frame

Intended use

- Bench frame with worktop made of various materials as a work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]			600 750 900		
Working height [mm]			750 900		

Load bearing capacity	
C-frame [kg]	200

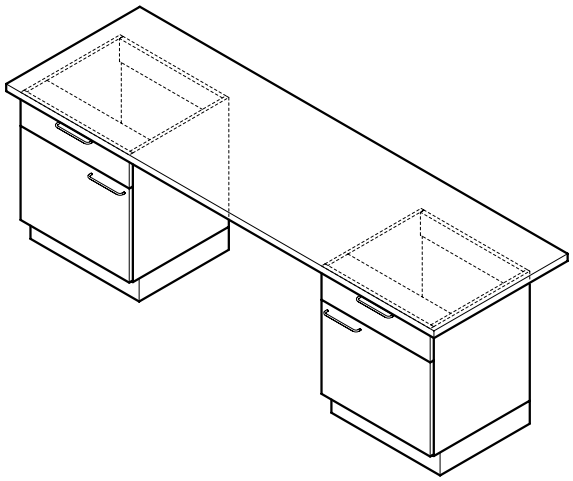
Design characteristics	
Construction	For suspended underbench units, can be moved for all kinds of frames For movable underbench units
Height-adjustable feet	Individually adjustable

Material	
Bench frame	Steel profile 70/25/3 mm
Worktop	Depending on requirement
Height-adjustable feet	Plastic housing with steel spindle

Intended use

- Self-supporting underbench unit on plinth with worktop made of various materials as a work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions	
Overall width [mm]	Max. 2750
Width, underbench unit [mm]	450 600 900 1200
Total depth [mm]	750 900
Working height [mm]	750 900

Material	
Worktop	Depending on width and requirement

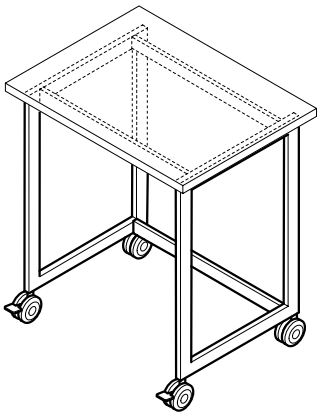
Load bearing capacity	
Bench with self-supporting underbench unit [kg]	200

Mobile tables
Mobile table

Intended use

- Movable bench frame with worktop made of various materials as a work surface and storage area for laboratory work
- Movable supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions			
Width [mm]	900	1200	1500
Depth [mm]	600 750 900		
Working height [mm]	750 900		

Load bearing capacity	
Mobile table [kg]	150
Per heavy load castor [kg]	110

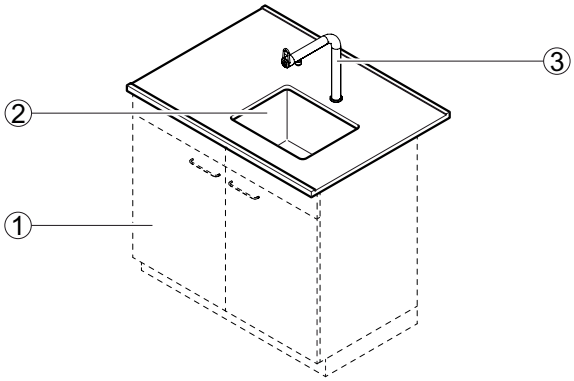
Design characteristics	
Heavy load castors	4, of which 2 can be locked (castor and steering axle can be locked)
Shelf	Optional
Underbench unit	Optional

Material	
Bench frame	Steel profile 60/25/2 mm
Worktop	Depending on requirement

Intended use

- Water supply and disposal
- For cleaning operating equipment
- To take up large amounts of water
- Not suitable for the disposal of chemicals

Design



1 Underbench unit
2 Sink
3 Outlet

Technical data

Material Worktop	Material Sinks	Sink dimensions Width x depth x height [mm]	Type of installation
Stoneware	Stoneware	380 x 380 x 250 530 x 380 x 250 680 x 380 x 250	Sink installed flush with the worktop
Melamine resin facing, Solid grade laminate, Solid grade laminate with EBC surface	Polypropylene	320 x 320 x 200 400 x 400 x 250 500 x 400 x 250	Sink with surrounding increased edge installed in the worktop from above
Melamine resin facing, Solid grade laminate, Solid grade laminate with EBC surface	Stainless steel	340 x 370 x 150 500 x 400 x 250	Sink with surrounding increased edge installed in the worktop from above
Polypropylene	Polypropylene	385 x 385 x 250 485 x 385 x 250	Sink attached to the worktop from the bottom and welded
Stainless steel	Stainless steel	400 x 400 x 250 500 x 400 x 250	Sink welded in flush with the worktop
Composite worktop	Stoneware	380 x 380 x 250 530 x 380 x 250	Sink installed flush with the worktop
Epoxy	Epoxy	406 x 305 x 203 406 x 406 x 190 457 x 380 x 279	Sink installed flush with the worktop

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]			600[1)] 675[1)] 705[1)] 750 825 855 900		
Working height [mm]			900		

[1)] Positioning of the outlets on the side of the sink, if required

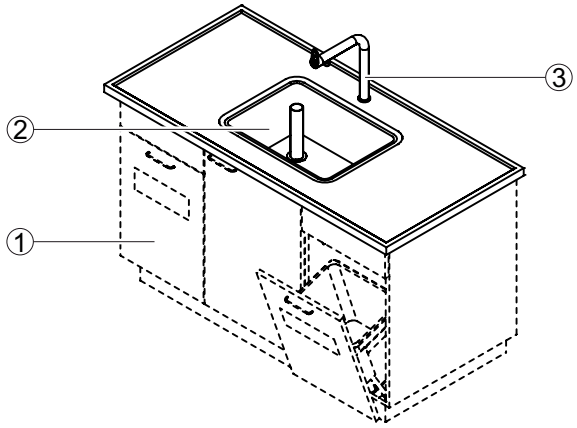
Sanitary technology	
Water connection	Permanent connection
Waste water connection	Permanent connection with siphon
Water fitting (tap)	Bench-mounted service outlet as an option
Eye shower	Optional

Laboratory sinks
End sink

Intended use

- Water supply and disposal
- For cleaning operating equipment
- To take up large amounts of water
- Not suitable for the disposal of chemicals

Design



1 Underbench unit
2 Sink
3 Outlet

Technical data

Material Worktop	Material Sinks	Sink dimensions Width x depth x height [mm]	Type of installation
Stoneware	Stoneware	380 x 380 x 250 530 x 380 x 250 680 x 380 x 250	Sink installed flush with the worktop
Melamine resin facing, Solid grade laminate, Solid grade laminate with EBC surface	Polypropylene	320 x 320 x 200 400 x 400 x 250 500 x 400 x 250	Sink with surrounding increased edge installed in the worktop from above
Melamine resin facing, Solid grade laminate, Solid grade laminate with EBC surface	Stainless steel	340 x 370 x 150 500 x 400 x 250	Sink with surrounding increased edge installed in the worktop from above
Polypropylene	Polypropylene	385 x 385 x 250 485 x 385 x 250	Sink attached to the worktop from the bottom and welded
Stainless steel	Stainless steel	400 x 400 x 250 500 x 400 x 250	Sink welded in flush with the worktop
Composite worktop	Stoneware	380 x 380 x 250 530 x 380 x 250	Sink installed flush with the worktop
Epoxy	Epoxy	406 x 305 x 203 406 x 406 x 190 457 x 380 x 279	Sink installed flush with the worktop

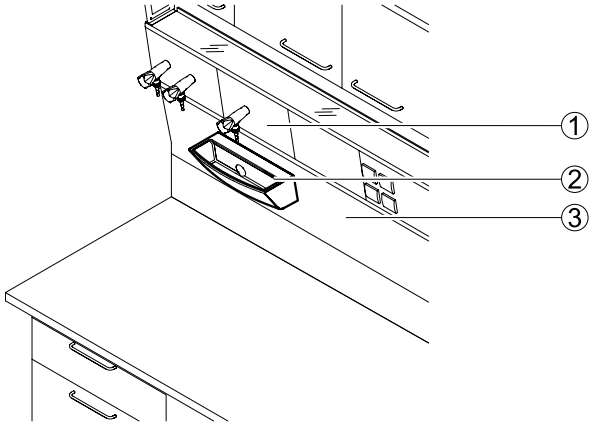
Dimensions		
Width [mm]	1500	1800
Depth [mm]	740	
Working height [mm]	900	

Sanitary technology	
Water connection	Permanent connection
Waste water connection	Permanent connection with siphon
Water fitting (tap)	Bench-mounted service outlet as an option
Eye shower	Optional

Intended use

- Water supply and disposal
- For cleaning operating equipment
- Sink module underneath water fittings to take up small amounts of water
- Not suitable for the disposal of chemicals

Design



1 Service panel with corner valves
2 Sink module
3 Fascia panel for service spine

Technical data

Dimensions	Polypropylene
Width [mm]	294
Depth [mm]	132
Height [mm]	112
Internal sink dimensions width x depth x height [mm]	Approx. 280 x 93 x 93

Material	
Sink module	Polypropylene

Design characteristics	
Construction	Attached to the fascia panel of the service spine

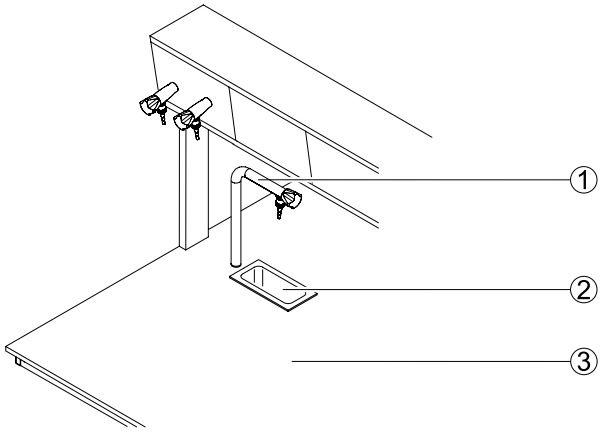
Sanitary technology	
Water connection	Permanent connection
Waste water connection	Permanent connection with siphon
Water fitting (tap)	Cell outlets as an option

Laboratory sinks
Drip cup in worktop

Intended use

- Water supply and disposal
- For cleaning operating equipment
- Drip cup underneath water fittings to take up small amounts of water
- Not suitable for the disposal of chemicals

Design



1 Outlet
2 Drip cup
3 Worktop

Technical data

Dimensions	
Width x depth [mm]	295 x 145
Height [mm]	Approx. 125 to 140 depending on material
Internal sink dimensions width x depth x height [mm]	Approx. 250 x 100 x 150

Material, drip cup	**Material, worktop**
Stoneware	Stoneware, composite worktop
Polypropylene	Polypropylene, melamine resin facing, solid grade laminate, solid grade laminate with EBC surface
Stainless steel	Stainless steel, melamine resin facing, solid grade laminate, solid grade laminate with EBC surface
Epoxy	Epoxy

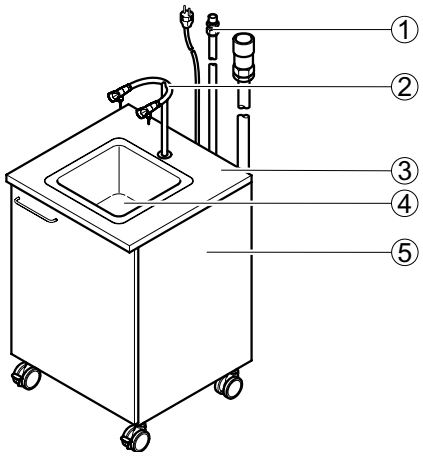
Design characteristics	
Construction	Installed in the worktop from the top or bottom

Sanitary technology	
Water connection	Permanent connection
Waste water connection	Permanent connection with siphon
Water fitting (tap)	Bench-mounted service outlets as an option

Intended use

- Mobile water and gas supply and disposal
- For cleaning operating equipment at any location
- Not suitable for the disposal of chemicals

Design



1 *Connecting pipes*
2 *Fitting with two cold water outlet points*
3 *Worktop*
4 *Sink*
5 *Underbench unit on castors*

Technical data

Dimensions	
Width [mm]	605
Depth [mm]	600
Height without outlet [mm]	900
Sink dimensions width x depth x height [mm]	320 x 320 x 200
Height, [mm] castors	110
Length, supply and drain pipes [mm]	2500
Length, connecting pipes [mm]	2500

Material	
Worktop	Particle-board with melamine resin facing
Sink	Polypropylene

Load bearing capacity	
Mobile sink [kg]	150

Design characteristics	
Construction	Mounted on underbench unit on castors with hinged door Sink installed in the worktop from above Pipes and cables routed out at the rear of the underbench unit Waste water lifting unit in the underbench unit Water supply is switched off in the case of a power failure

Electrics	
Power supply [V]	230

Sanitary technology	
Water connection	Flexible with plug connector
Waste water connection	Flexible with plug connector
Gas connection	Flexible with plug connector as an option
Water fitting (tap)	Standard outlet
Gas outlet	Standard outlet combined with water fitting as an option
Mixer tap	Additional flexible water connection as an option

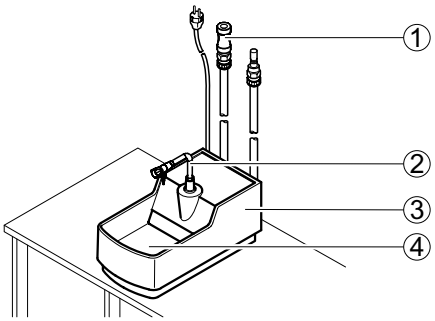
Special tables
AquaEl

Intended use

- Mobile water and gas supply and disposal
- For cleaning operating equipment at the workplace at any mobile or stationary laboratory workstation
- Not suitable for the disposal of chemicals

Design

1 *Connecting pipes*
2 *Outlet with water outlet point*
3 *Housing with pump*
4 *Sink*



Technical data

Dimensions	
Width x depth x height (without outlet) [mm]	317 x 585 x 268
Sink, width x depth x height [mm]	260 x 275 x 105
Length, supply and drain pipes [mm]	1500
Length, connecting pipes [mm]	1500

Weight	
Weight without outlet [kg]	14

Material	
Material	GFK varnished

Design characteristics	
Construction	Compact system with flexible pipes and cables ready for connection Waste water lifting unit integrated in the housing Water supply is switched off in the case of a power failure

Electrics	
Power supply [V]	230

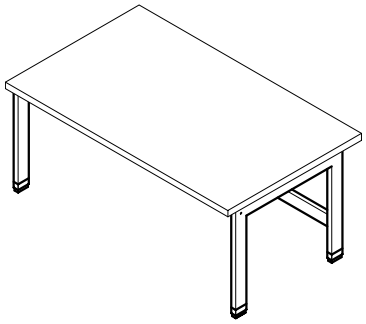
Sanitary technology	
Water connection	Flexible with plug connector
Waste water connection	Flexible with plug connector
Gas connection	Flexible with plug connector as an option
Water fitting (tap)	Standard outlet
Gas outlet	Standard outlet combined with water fitting as an option
Mixer tap	Additional flexible water connection as an option

Add-on table for low level fume hoods

Intended use

- For adding to low level fume hoods
- Bench frame with worktop made of various materials as a work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions					
Width [mm]	900	1200	1500	1800	2100
Depth [mm]	575				
Working height [mm]	500				

Material	
Bench frame	Steel profile 60/25/2 mm
Worktop	Depending on requirement
Height-adjustable feet	Plastic housing with steel spindle

Load bearing capacity	
H-frame [kg]	200

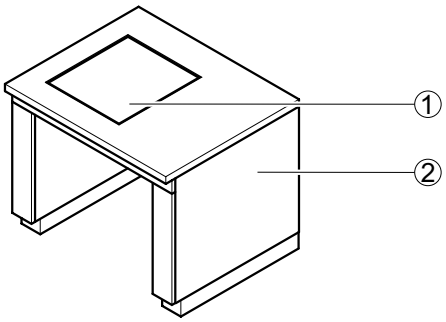
Design characteristics	
Worktop	Surrounding increased edge
Height-adjustable feet	Individually adjustable

Special tables
Balance table

Intended use

- For setting up analytical balances and other sensitive measuring equipment
- Bench frame with worktop and specially mounted, vibration-free plate

Design



1 Balance plate made of fine concrete
2 Table cover

Technical data

Dimensions	
Width [mm]	900
Depth [mm]	750 900
Working height [mm]	750 900
Width x depth [mm] balance plate	400 x 450

Material	
Supporting construction	Steel profile
Worktop	Melamine Solid grade laminate Solid grade laminate with EBC surface
Balance plate	Fine concrete

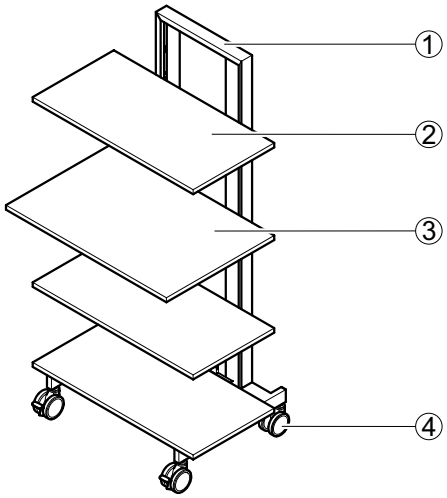
Weight	
Total weight [kg]	120
Balance plate [kg]	65

Design characteristics	
Construction	Specially mounted, heavy balance plate made of fine concrete Supporting construction with balance plate, vibration-decoupled

Intended use

- Mobile flexible storage area
- Can be used with the 600 mm deep shelf as a mobile workplace for desk work
- Not suitable for storing hazardous substances

Design



1 Steel support frame with grid
2 Shelf, depth 450 mm
3 Shelf, depth 600 mm
4 Heavy load castors with brakes

Technical data

Dimensions	
Width [mm] with shelf	900
Depth [mm] with shelf depth 450 mm	600
Height [mm]	1790
Depth, shelf [mm]	450 600

Material	
Supporting construction	Steel profile
Shelf 22 mm	Shelf of OSB board

Load bearing capacity	
Total [kg]	150
Shelf [kg]	20

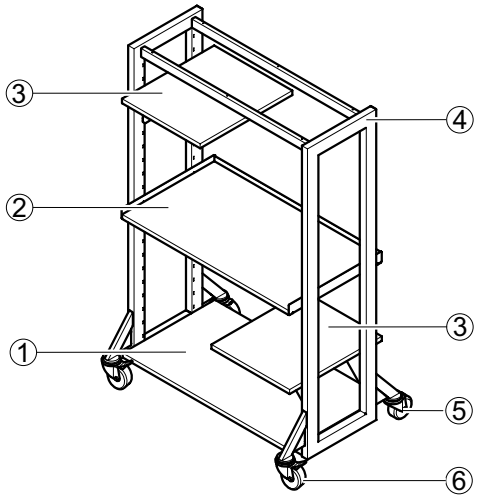
Design characteristics	
Heavy load castors	4, of which 2 can be locked (castor and steering axle can be locked)
Shelf	Can be adjusted without tools with a pitch of 150 mm
Integrated distribution pillar	Optional

Special tables
Heavy duty rack

Intended use

- Mobile multi-stage storage area
- With flexible work surfaces for free horizontal configuration
- Suitable for accommodating stackable and non-stackable measuring instruments / measuring instrument towers
- Suitable for heavy apparatus

Design



1 *Lower shelf, fixed*
2 *Height-adjustable shelf, full width*
3 *Height-adjustable shelf, depth 590 mm*
4 *Steel support frame*
5 *Heavy load castors without brake*
6 *Heavy load castors with brake*

Technical data

Dimensions		
Width [mm]	1200	1800
Depth [mm]	770	
Height [mm]	1790	
Shelf, width x depth [mm]	400 x 590 1070 x 750	400 x 590 1670 x 750

Material	
Supporting construction	Steel profile 70 x 40 mm
Shelf	Shelf of OSB board

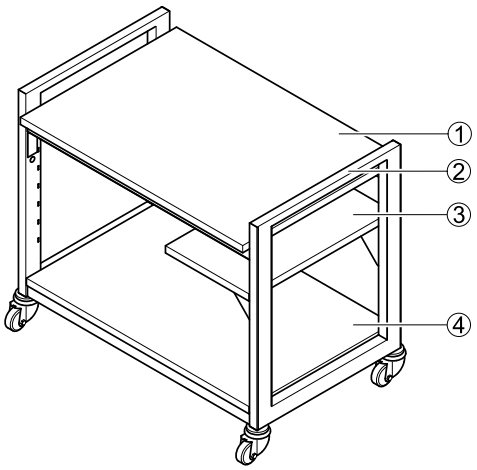
Load bearing capacity	
Total	500 [kg]
Shelf 400 x 590 [mm]	30 [kg]
Shelf 1070 x 750 [mm]	70 [kg]
Shelf 1670 x 750 [mm]	70 [kg]
Lower shelf 1070 x 590 [mm]	150 [kg]
Lower shelf 1670 x 590 [mm]	150 [kg]

Design characteristics	
Heavy load castors	4, of which 2 can be locked (castor and steering axle can be locked)
Shelf	Can be adjusted with a grid of 75 mm

Intended use

- Mobile heavy duty table with worktop and integrated sliding handle. Total load bearing capacity: 500 kg

Design



1 Worktop
2 Integrated sliding handle
3 Height-adjustable intermediate shelf
4 Lower shelf, fixed

3+4 optionally available as accessories, not included in the basic version

Technical data

Dimensions		
Width [mm]	1200	1500
Depth [mm]	750 / 900	
Working height [mm]	900	
Worktop width x depth [mm]	1070 x 750/900	1370 x 750/900
Intermediate side shelf width x depth [mm]	690 x 400	690 x 400
Bottom shelf width x depth [mm]	1070 x 690/840	1370 x 690/840

Material	
Supporting construction	Steel profile 70 x 40 mm
Worktop	30 mm particle-board, coated / 19 mm solid board
Intermediate side shelf and shelf	30 mm particle-board, coated

Load bearing capacity	
Total	500 [kg]
Worktop	500 [kg]only if no intermediate shelves are installed
Intermediate side shelf	30 [kg]
Bottom shelf	150 [kg]

Attention: The maximum load bearing capacity of, in total, 500 kg for the worktop, shelf and intermediate side shelf must not be exceeded with the additional shelves.

Design characteristics	
Heavy load casters	4x lockable (castor and steering axle can be locked), load bearing capacity 300 kg / caster
Intermediate side shelf	Can be adjusted with a grid of 75 mm

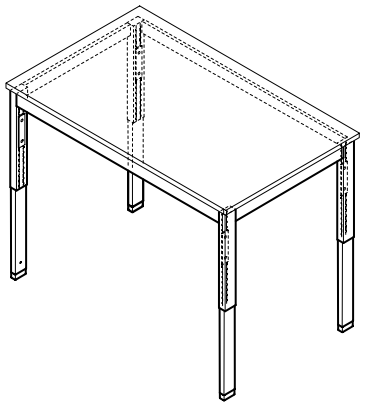
Options/accessories	
Bottom shelf	A shelf is placed on the securely welded supports. Load bearing capacity: 150 kg
Intermediate side shelf	A shelf (depth 40 mm) can be hung in the grid to the left and/or right. Load bearing capacity: 30 kg

Special tables
Height-adjustable table

Intended use

- Bench frame with worktop made of various materials as a height-adjustable work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures

Design



Technical data

Dimensions		
Width [mm]	1200	1500
Depth [mm]	750 900	
Working height [mm]	700 – 950	

Material	
Bench frame	Steel profile 60/25/2 mm
Worktop	Depending on requirement
Height-adjustable feet	Plastic housing with steel spindle

Load bearing capacity	
Total [kg]	200

Design characteristics	
Working height	Can be adjusted with a grid of 25 mm
Bench frame	H-frame

4 Storage cupboards

Our ***SCALA*** laboratory furniture system provides a vast selection of storage variants for fast access and safe storage.

All storage cupboards can be variably equipped and provide optimum space utilisation in all areas of the laboratory.

Designed with a high quality appearance and manufactured to Waldner's high quality requirements.

The melamine resin-coated surfaces are easy to care for and robust against the influences in the laboratory. The front edges on the carcass and the shelves are equipped with impact-resistant 2 mm polypropylene edges. Furthermore, the foil-coated plinth of our furniture is made of waterproof glued blockboard.

For laboratories with increased demands on cleanability, mechanical stress, moisture resistance or extreme dryness, we build our storage cupboards from solid grade laminate material. SGL compact panels do not require edge protection against moisture and are also suitable for extreme climate fluctuations. Solid grade laminate is also difficult to set on fire and has the property of delaying the spread of flames.

Wherever storage cabinets made of steel are required, we also offer our cabinet portfolio made of powder-coated sheet steel. A SEFA-certified version is optionally available. These storage spaces are tested and certified according to SEFA 8M and are suitable for the highest loads and loads.

With furniture made of melamine, solid grade laminate or powder-coated sheet steel, we offer the best selection for every need.

4 Storage cupboards

Large number of variants

For maximum flexibility in the laboratory, we offer a large variety of cabinet and underbench unit variants. Push-in underbench units, either movable or on plinth, easily fit under C- and H-frames, or under fume hoods with their own supporting structure.
Suspended underbench units are integrated directly under the worktop as movable variants in C-frames.

Design and function go together

Seamless handles, optionaly made from aluminium die-cast or stainless steel, are resistant to chemicals and easy to clean. Unique design features can be created in the laboratory by the use of oak trim fronts. Our overbench cabinets are fastened to the service spine or wall without a visible gap.

More mobility in the laboratory

Equipped with four smooth running swivelling castors – two of which can be locked – our movable underbench units can be simply pushed into the support frame of add-on tables or laboratory benches. The castor height is also harmonised and flush with the plinth height of our fixed cabinets.

More safety details

Due to the self-locking protection and change-pull-out catch of the drawers, our movable underbench units will not tilt over. Our top-mounted cabinets are fitted with a rail for safely securing ladders.

More usable storage space

With a depth of 550 mm for the underbench units and 500 mm drawer depth, the storage space is used to full capacity. The best solution offered in the market. We have also expanded the usable storage space of corner cabinets by implementing new fittings.

Optimal positioning

Due to four height-adjustable feet, our laboratory cabinets and underbench units on plinth can be set up straight and steady.

Fully extensible drawers with hidden roller rails

The double-wall steel frame with hidden roller rails is more robust, protected against soiling and thus runs a lot easier than single wall frames with open roll rails. Our standard fully-extensible drawers ensure a clear overview of their contents. All drawer units feature soft-closing mechanisms as standard.

Full extension drawers are available for steel cupboards in various options adapted to the respective markets. If required also with SEFA 8M certification.

Safety for problematic substances

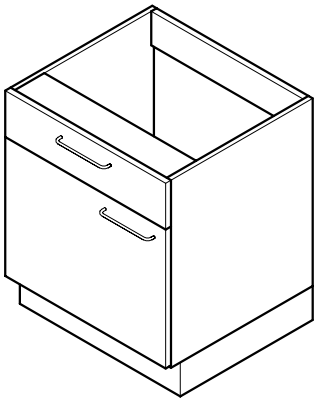
Our safety cabinets for gases, acids, alkalis and flammable liquids meet the highest requirements on material properties and function. Of course the cabinets comply with the current standards.

Underbench units
Underbench unit on plinth

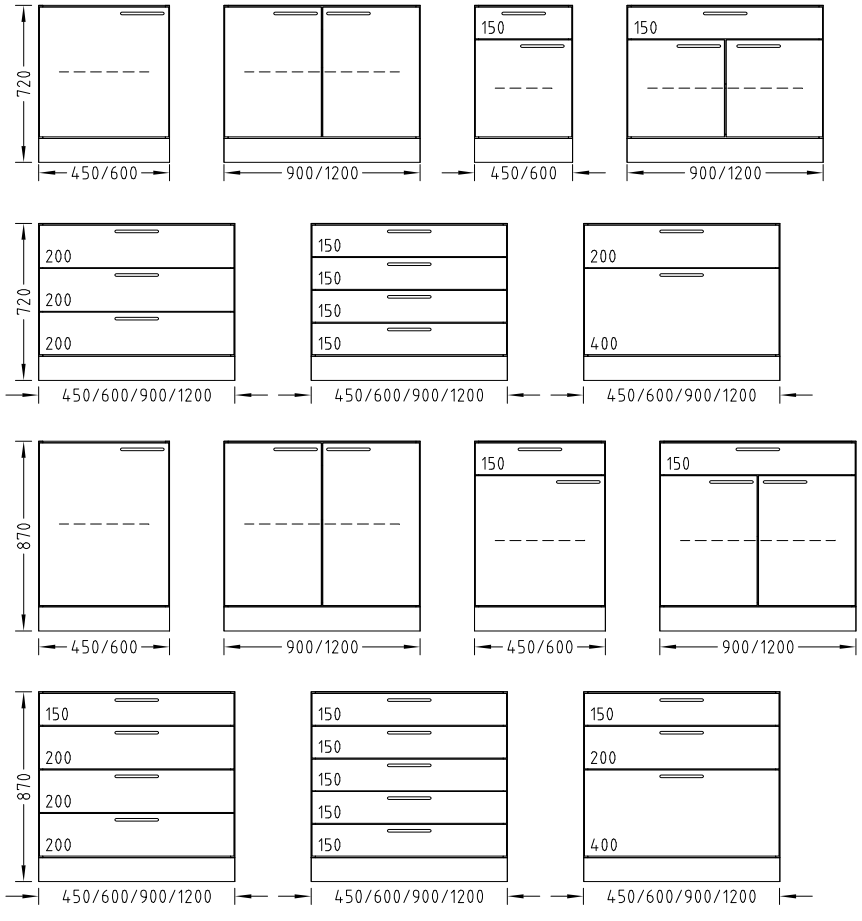
Intended use

- For storing equipment and chemicals in acc. with EN 16121 + EN 16122
- For working heights of 750 mm and 900 mm
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design



Variants



Underbench units
Underbench unit on plinth

Technical data

Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]	550			
Overall height [mm]	720 870			
Height, drawers [mm]	150 200 400 Combination possibilities see variants			
Height, plinth [mm]	110			

Load bearing capacity	
Per shelf/drawer [kg]	30

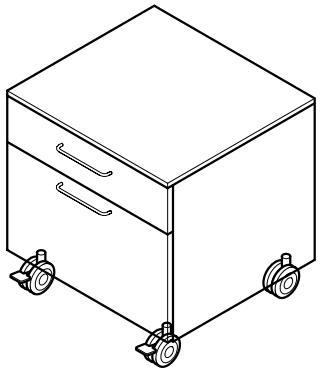
Design characteristics	
Construction	For working height 750 and 900 mm Hinged doors with 270° hinges Drawers, fully extensible Open at the top, rear panel can be removed Shelf, height-adjustable Without doors as a rack 4 height-adjustable feet
Combination possibilities	See variants
Handle	Handle bar *SCALA* U handle, stainless steel
Full-height drawers	Optional
Soft stop for drawer	Standard
Extract air spigot	Optional
Closing	Optional

Underbench units
Underbench unit on castors

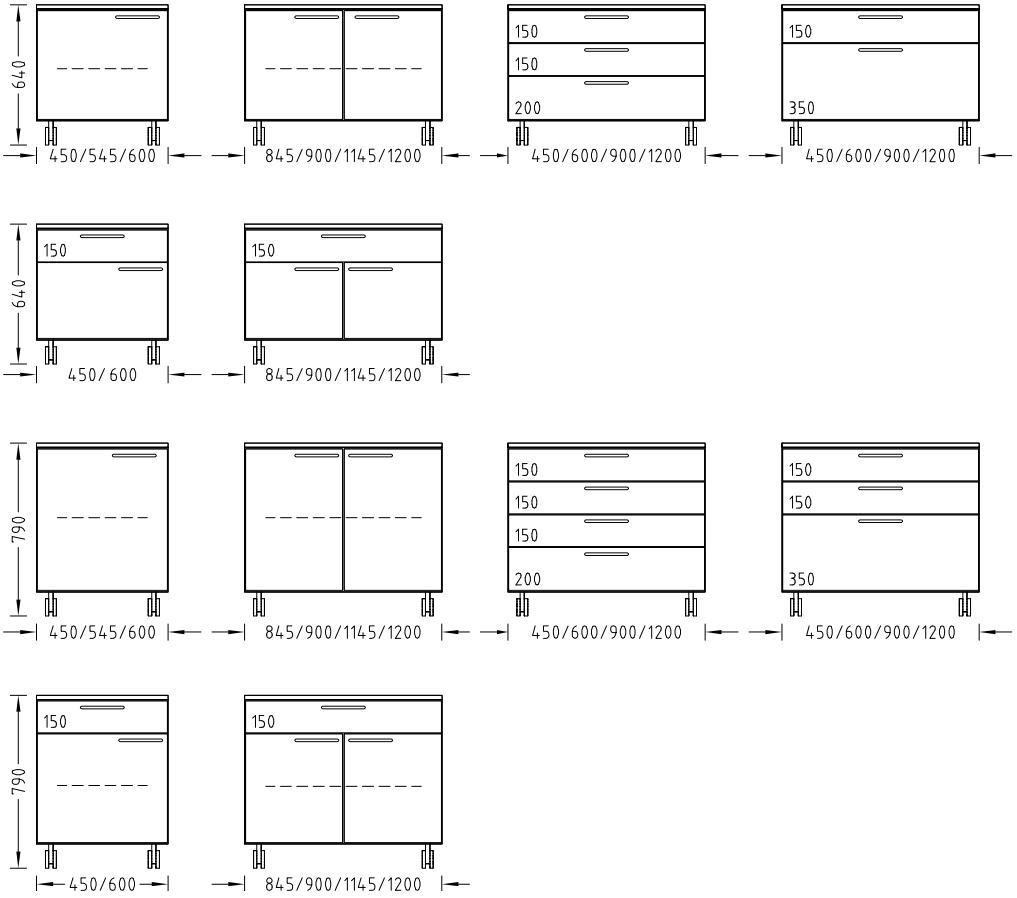
Intended use

- For storing equipment and chemicals flexibly in acc. with EN 16121 + EN 16122
- For working heights of 750 mm and 900 mm
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design



Variants



Underbench units
Underbench unit on castors

Technical data

Dimensions							
Width [mm]	450	545	600	845	900	1145	1200
Depth [mm]	550						
Overall height [mm]	640 790						
Height, drawers [mm]	150 200 350 Combination possibilities see variants						
Height, castors [mm]	110						

Load bearing capacity	
Per shelf/drawer [kg]	30
Per castor [kg]	70

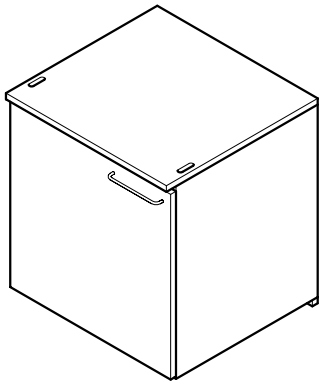
Design characteristics	
Construction	For working height 750 and 900 mm Hinged doors with 270° hinges Drawers, fully extensible and with change-pull-out catch Shelf, height-adjustable Without doors as a rack Covered at the top, rear panel permanently connected with the carcass 4 swivelling castors, front castors can be locked
Combination possibilities	See variants
Handle	Handle bar *SCALA* U handle, stainless steel
Soft stop for drawer	Standard
Closing	Optional
Drawers with change-pull-out catch	Standard

Underbench units
Suspended underbench unit

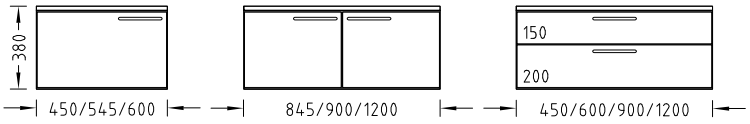
Intended use

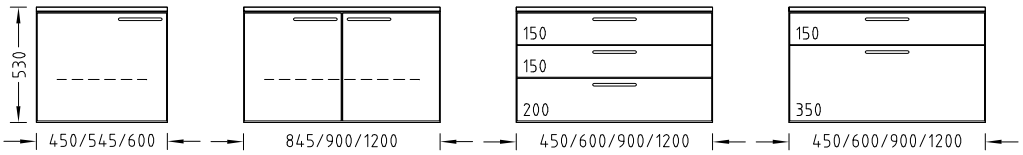
- For storing equipment and chemicals flexibly in acc. with EN 16121 + EN 16122
- For working heights of 750 mm and 900 mm
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

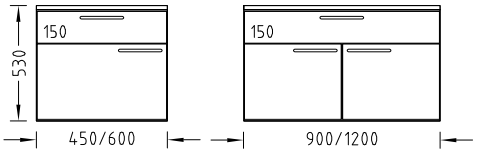
Design



Variants







Underbench units
Suspended underbench unit

Technical data

Dimensions							
Width [mm]	450	545	600	845	900	1145	1200
Depth [mm]	500 (depth of frame 572) 550 (depth of frame 672)						
Height [mm]	380 530						
Height, drawers [mm]	150 200 350 Combination possibilities see variants						

Load bearing capacity	
Per shelf/drawer [kg]	30

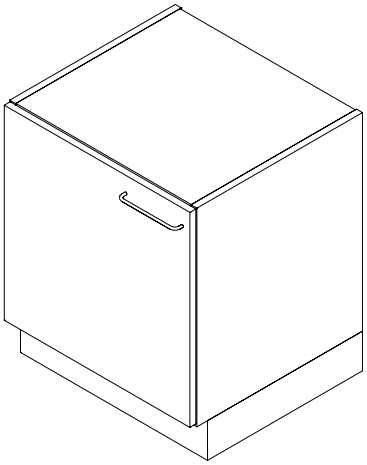
Design characteristics	
Construction	For working height 750 and 900 mm 2 fittings for attaching to the profile rail of the bench frame Hinged doors with 270° hinges Drawers, fully extensible Covered at the top, rear panel permanently connected with the carcass Shelf, height-adjustable For C-frame bench frame: Can be moved to the sides until it protrudes over the bench grid Hinged doors with 1 shelf at a height of 530 mm At a height of 530 mm without doors as a rack with 1 shelf
Combination possibilities	See variants
Handle	Handle bar *SCALA* U handle, stainless steel
Soft stop for drawer	Standard
Closing	Optional

Underbench units
Push-in underbench unit for fume hoods

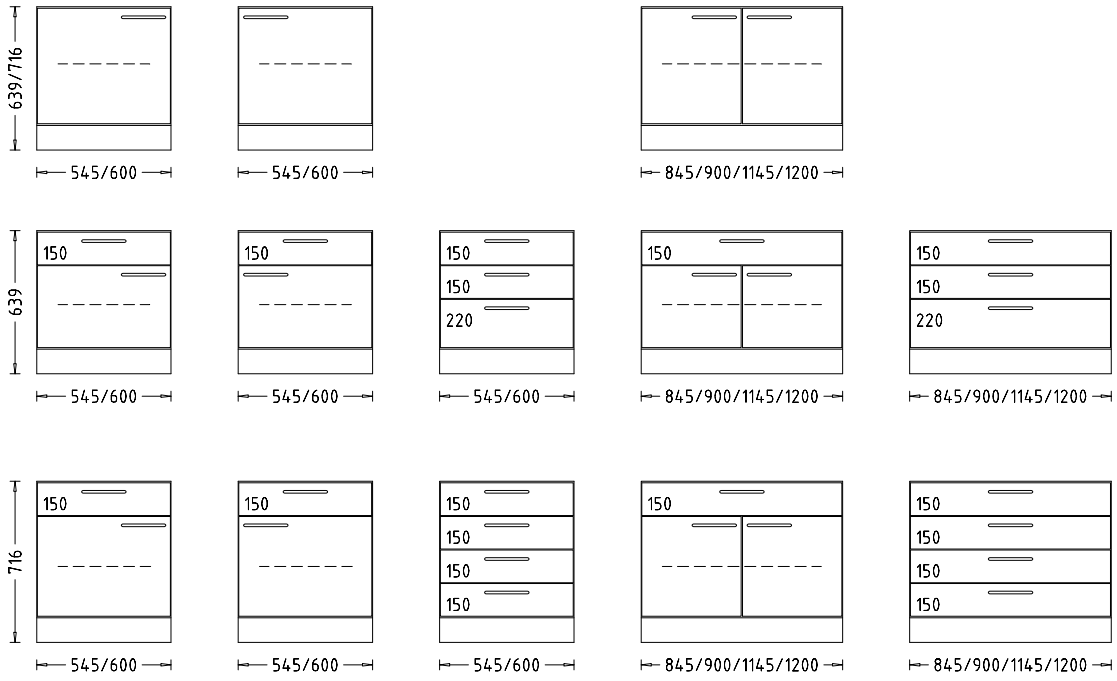
Intended use

- For storing equipment and chemicals in acc. with EN 16121 + EN 16122
- For fume hoods with rear panel installation and for fume hoods with side installation on a steel support frame
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



Variants



Underbench units
Push-in underbench unit for fume hoods

Technical data

Dimensions						
Width [mm]	545	600	845	900	1145	1200
Depth [mm]	550					
Overall height [mm], push-in underbench unit for bench-mounted fume hoods with rear panel installation	640					
Overall height [mm], push-in underbench unit for bench-mounted fume hoods with side installation	716					
Height, plinth [mm]	110					
Height, drawers [mm]	150 220 Combination possibilities see variants					

Load bearing capacity	
Per shelf [kg]	30

Design characteristics	
Construction	Hinged doors with 270° hinges Drawers, fully extensible Closed at the top, rear panel can be removed Shelf, height-adjustable 4 height-adjustable feet
Combination possibilities	See variants
Handle	Handle bar *SCALA* U handle, stainless steel
Extract air spigot	Optional
Closing	Optional

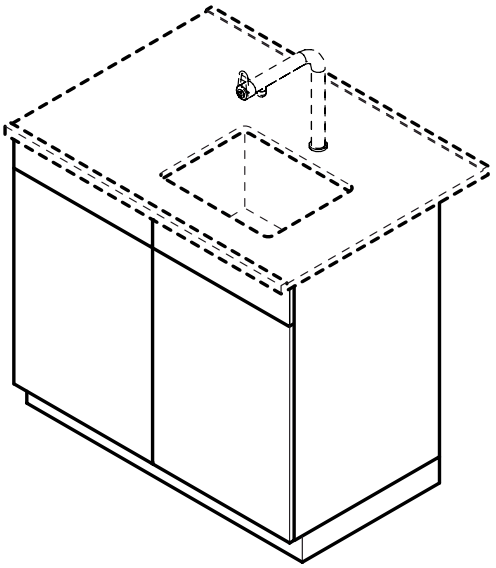
Underbench units
Underbench unit for sinks

Intended use

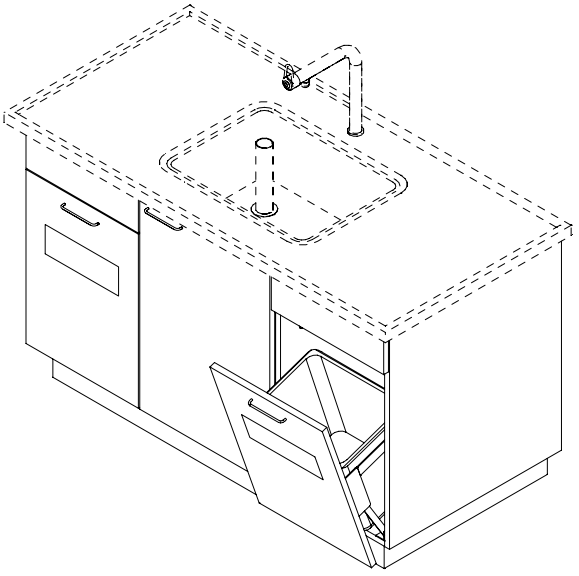
- As an underbench unit for sinks for storing equipment and chemicals in acc. with EN 16121 + EN 16122
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design

Sink with underbench unit for service spines or wall benches

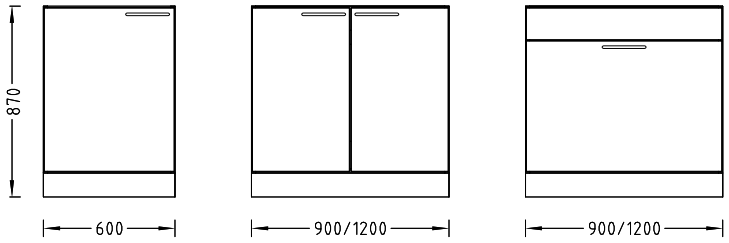


End sink for double benches

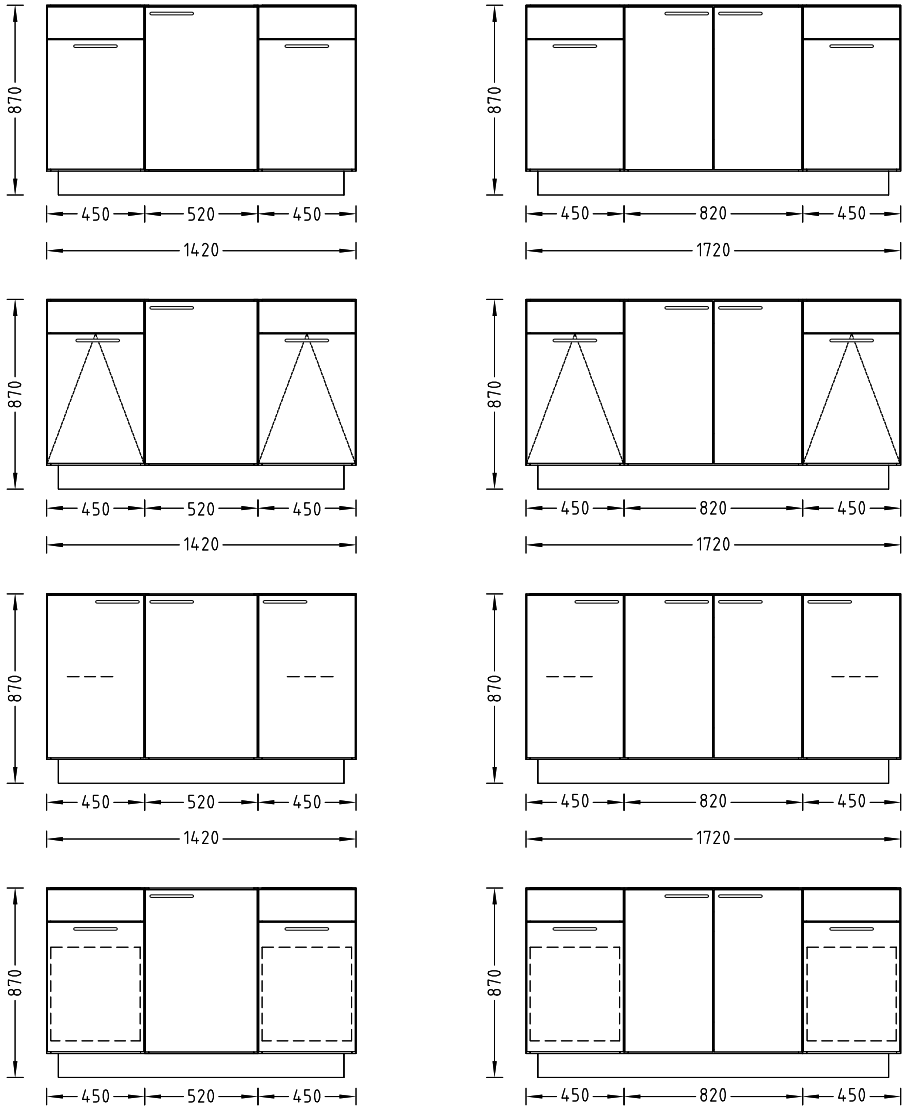


Variants

Sink with underbench unit for service spines or wall benches



End sink for double benches



Underbench units
Underbench unit for sinks

Technical data

Dimensions					
Width [mm]	600 [1]	900 [1]	1200 [1]	1420 [2]	1720 [2]
Depth [mm]	550			700	
Overall height [mm]	870				
Height, plinth [mm]	110				

[1] For sinks on service spines or wall benches

[2] For end sinks

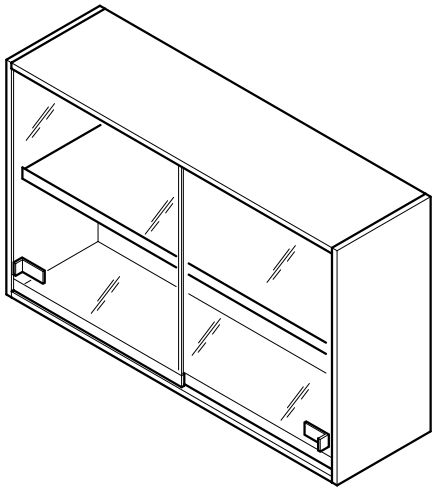
Load bearing capacity	
Per shelf/drawer [kg]	30

Design characteristics	
Construction	Hinged doors with 270° hinges 4 height-adjustable feet Inclined swivel door with waste bin 30 l Waste bin 2 x 15 l with full-height drawer Waste bin 2 x 35 l with full-height drawer Hinged door(s), full-height drawer Combination possibilities see variants
Handle	Handle bar *SCALA* U handle, stainless steel
Closing	Optional

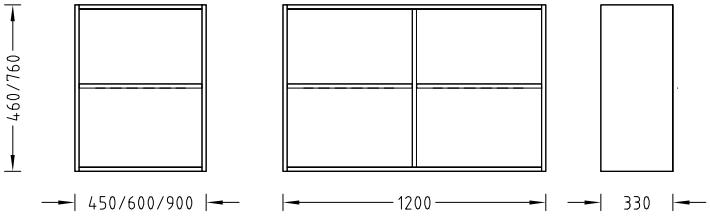
Intended use

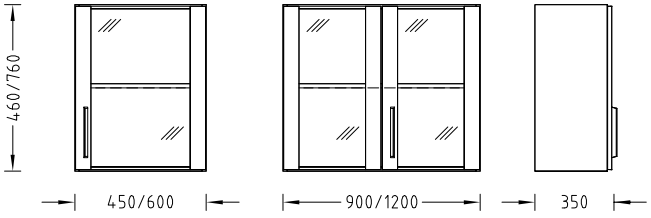
- For storing equipment and chemicals in acc. with EN 16121 + EN 16122
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

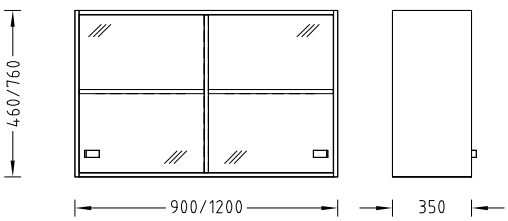
Design



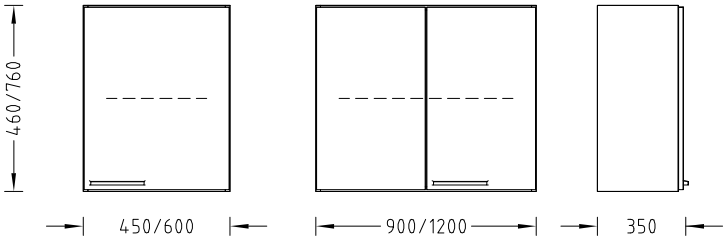
Variants







Overbench cabinets
Overbench cabinet



Technical data

Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]	350			
Height [mm]	460 760			

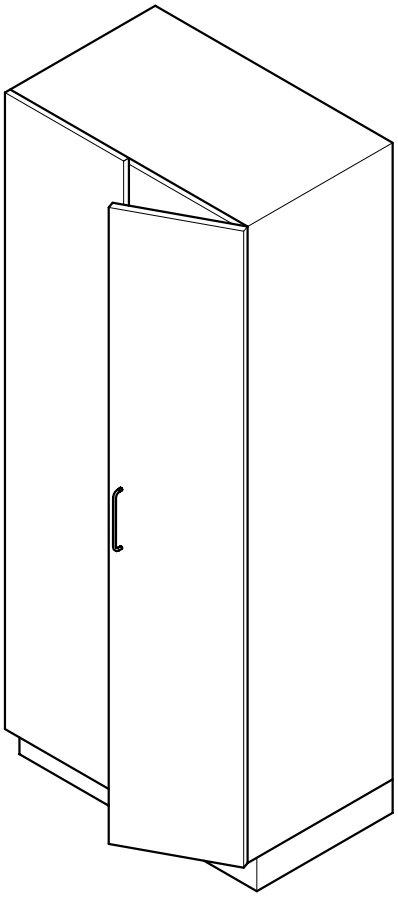
Load bearing capacity	
Per shelf [kg]	30
Load bearing capacity, total [kg]	60

Design characteristics	
Construction	Height-adjustable fitting for fastening to the wall or to the service spine For a width of 1200 mm with central panel Shelf, height-adjustable
Combination possibilities	See variants
Handle	U handle *SCALA* U handle, stainless steel Glass sliding door with affixed plastic handle
Closing	Optional

Intended use

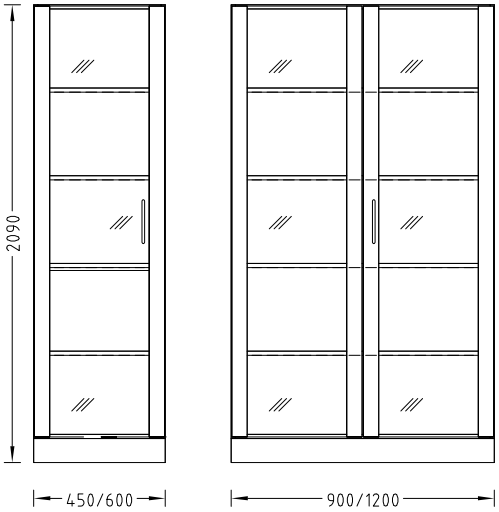
- For storing equipment and chemicals in acc. with EN 16121 + EN 16122
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

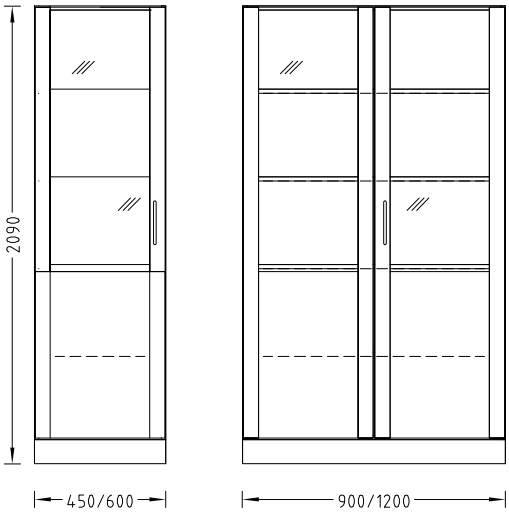
Design

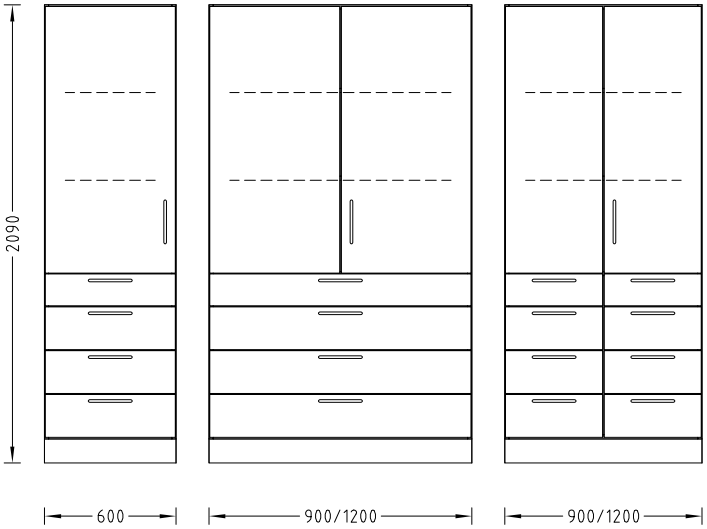


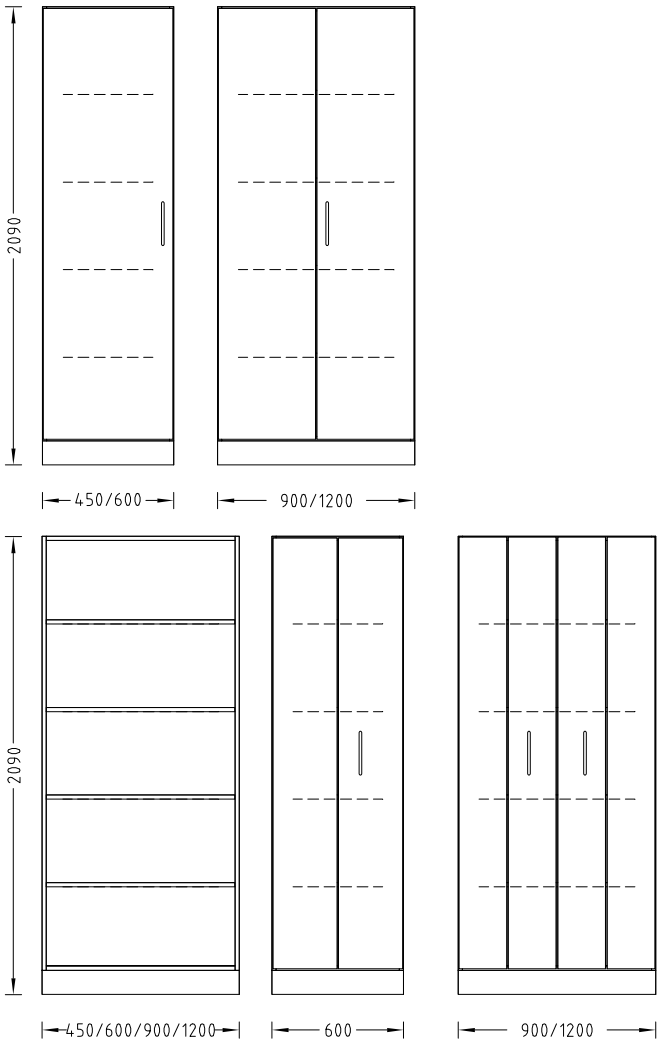
Laboratory cabinets
Laboratory cabinet

Variants








2090
450/600
900/1200
2090
450/600/900/1200
600
900/1200

Laboratory cabinets
Laboratory cabinet

Technical data

Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]	350 550			
Overall height [mm]	2090			
Height, plinth [mm]	110			

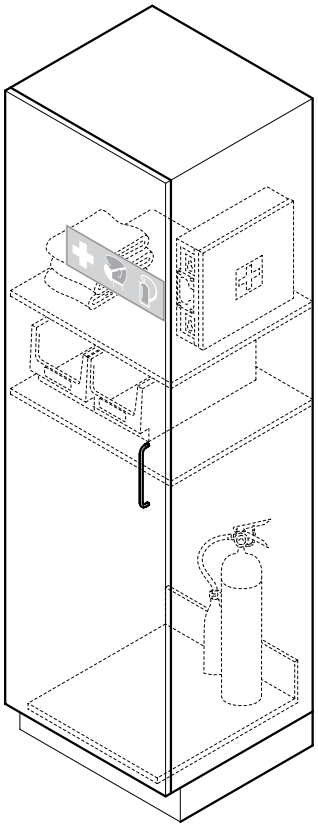
Load bearing capacity	
Per shelf [kg]	30

Design characteristics	
Construction	Hinged doors with 270° hinges Shelves, height-adjustable Drawers, fully extensible 4 height-adjustable feet
Combination possibilities	See variants Drawers only with a depth of 550 mm
Handle	U handle *SCALA* U handle, stainless steel
Shelves, extendable	Optional (with a cabinet depth of 550 mm)
Drawers	Optional (with a cabinet depth of 550 mm)
Soft stop for drawer	Standard
Extract air spigot	Optional
Closing	Optional

Intended use

- For storing protection and rescue materials (fire extinguisher, first aid case, etc.)
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



Technical data

Dimensions	
Width [mm]	600
Depth [mm]	350 550
Overall height [mm]	2090
Height, plinth [mm]	110

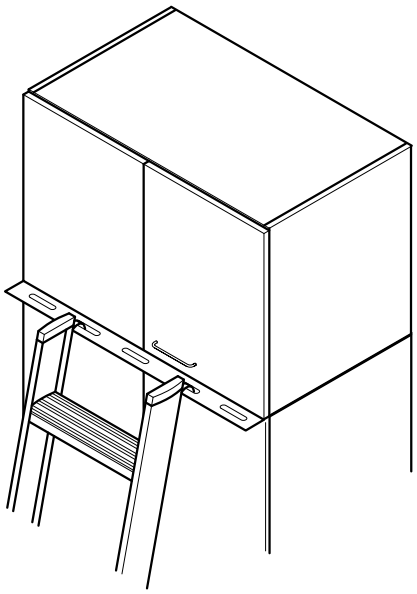
Design characteristics	
Construction	Hinged door with 270° hinges 4 shelves, height-adjustable 4 height-adjustable feet
Equipment	First aid case Fire extinguisher, 5 kg Sand boxes Shovel Fire blankets

Top-mounted cabinets
Top-mounted cabinet

Intended use

- For storing equipment and chemicals in acc. with EN 16121 + EN 16122
- Only suitable as a permanently installed top part on the following Waldner cabinets: Laboratory cabinet, pull-out cabinet, emergency cabinet and acids and alkalis cabinet
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



Technical data

Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]	350 550			
Height [mm]	610 760			

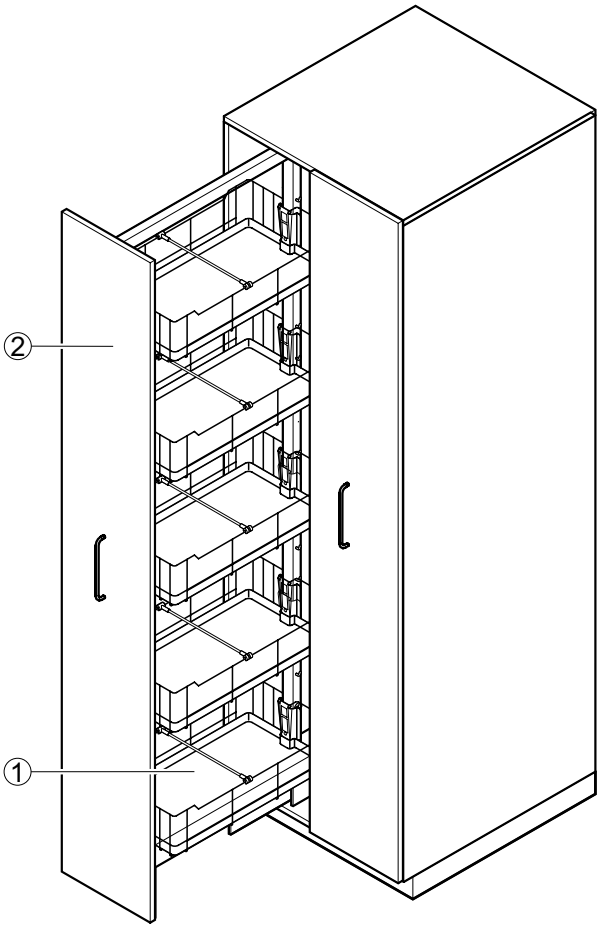
Load bearing capacity	
Per shelf [kg]	30

Design characteristics	
Construction	With rail for securing a ladder For laboratory cabinets with or without extract air spigot 1 shelf, height-adjustable Hinged doors
Handle	U handle *SCALA* U handle, stainless steel
Hook ladder	Optional
Closing	Optional

Intended use

- For storing liquid or solid substances in suitable containers in acc. with EN 16121 + EN 16122
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



1 Wire basket with tray
2 Pull-out

Pull-out cabinets
Pull-out cabinet

Technical data

Dimensions		
Width [mm]	600	900
Depth [mm]	550	
Overall height [mm]	2090	
Height, plinth [mm]	110	
Tray, width x depth x height [mm]	240 x 425 x 40	

Load bearing capacity	
Per drawer [kg]	120
Per tray [kg]	10

Design characteristics	
Construction	5 wire baskets with trays for each drawer, height-adjustable Fastened to the wall 4 height-adjustable feet Drawer doors with drawers accessible from both sides
Handle	U handle *SCALA* U handle, stainless steel
Soft stop for drawers	Optional
Compartment partitioning	Optional
Extract air spigot	Optional
Closing	Optional

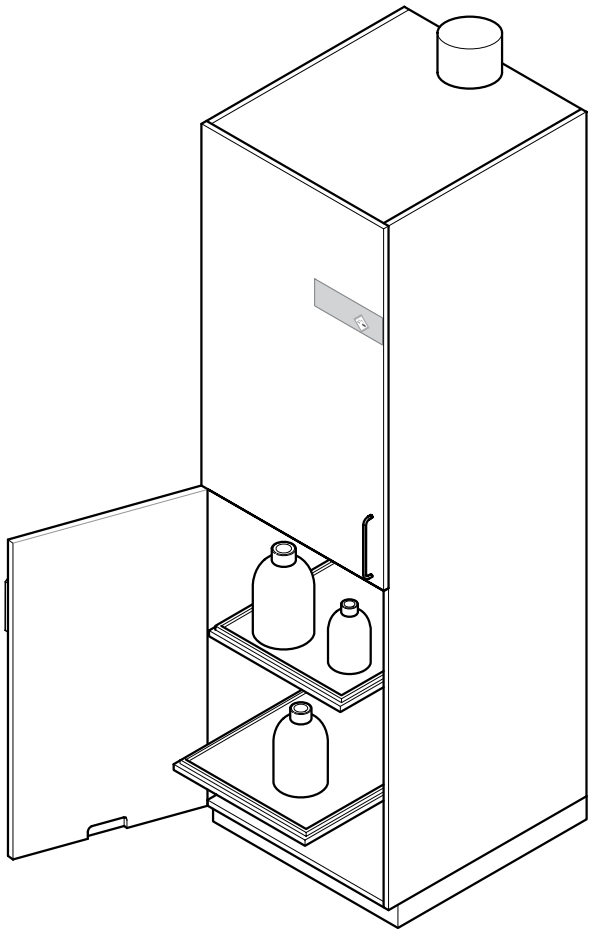
Material	
Tray	Polyethylene

Laboratory cabinet for storing acids and alkalis

Intended use

- For storing limited amounts of flammable acids and alkalis
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances

Design



Special cabinets
Laboratory cabinet for storing acids and alkalis

Technical data

Dimensions	
Width [mm]	600
Depth [mm]	550
Overall height [mm]	2090
Height, plinth [mm]	110

Load bearing capacity	
Per shelf, height-adjustable [kg]	30
Per pull-out shelf [kg]	20

Design characteristics	
Construction	Connection to the permanently active ventilation system 4 shelves, fixed or pull-out 4 height-adjustable feet Separate compartments for acids and alkalis Trays made of polypropylene Coated fittings Hinged doors
Handle	U handle *SCALA* U handle, stainless steel

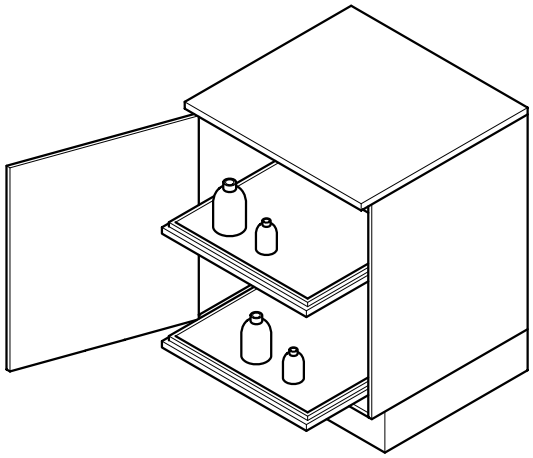
Ventilation data	
Air exchange rate [m³/h]	100
Ventilation connection Ø [mm]	90
Connection height extract air spigot [mm]	2176

Underbench safety unit for storing acids and alkalis

Intended use

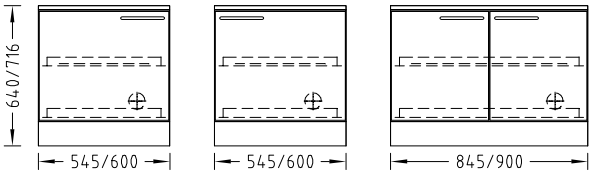
- Push-in or self-supporting underbench unit for bench-mounted fume hoods for storing limited amounts of acids and alkalis
- Not suitable for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances

Design

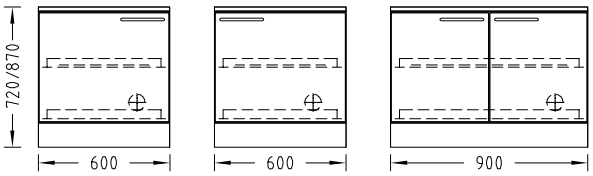


Variants

Push-in underbench units for fume hoods



Self-supporting underbench units for benches



Special cabinets
Underbench safety unit for storing acids and alkalis

Technical data

Dimensions		
Width [mm]	600	900
Width for push-in underbench units [mm]	545/600/845/900	
Depth [mm]	550/650	
Overall height [mm] self-supporting underbench units for benches	720/870	
Overall height [mm], push-in underbench units for bench-mounted fume hoods with rear panel installation	640	
Overall height [mm], push-in underbench units for bench-mounted fume hoods with side installation	716	
Height, plinth [mm]	110	

Load bearing capacity	
Extendable shelf [kg]	20

Design characteristics	
Construction	Connection to the permanently active ventilation system 4 height-adjustable feet Coated fittings 2 extendable shelves with trays Hinged doors Combination possibilities see variants
Handle	Handle bar *SCALA* U handle, stainless steel

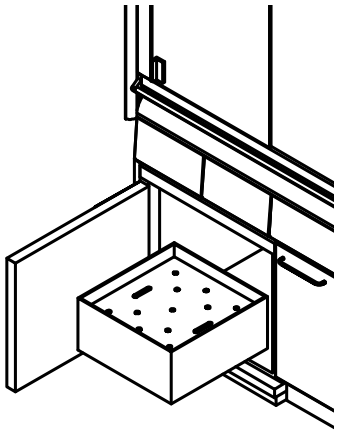
Ventilation data	
Air exchange rate [m³/h]	30
Ventilation connection to the ascending duct Ø [mm]	90

Special cabinets
FWF 90 underbench safety unit for fume hoods for storing flammable liquids

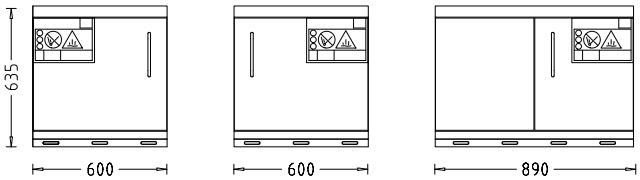
Intended use

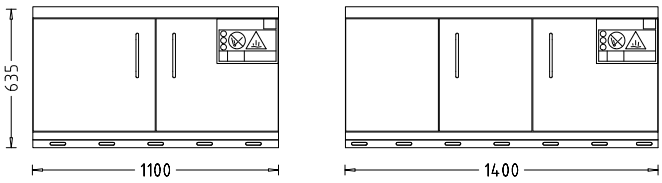
- Push-in underbench unit for bench-mounted fume hoods for storing limited amounts of flammable liquids
- Not suitable for storing gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design



Variants





Special cabinets
FWF 90 underbench safety unit for fume hoods for storing flammable liquids

Technical data

Dimensions				
Width [mm]	600	890	1100	1400
Depth [mm]	600			
Overall height [mm]	635			
Height, plinth [mm]	35			
Max. weight [kg]	130	170	220	290

Load bearing capacity	
Rigid shelf [kg]	30
Drawers [kg]	25

Design characteristics	
Construction	Connection to the permanently active ventilation system Connection to the earth wire with potential equalisation With closing Tray with perforated plate insert Self-closing through current-independent thermal activation in the case of fire Hinged doors Drawer
Combination possibilities	See variants
Handle	U handle, stainless steel
Additional tray pull-out	Optional for drawers
Regulations and standards	EN 14470-1 TRGS 510

Ventilation data	
Air exchange rate [m³/h]	30
Ventilation connection to the ascending duct Ø [mm]	90

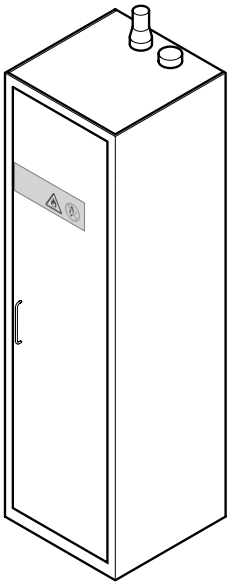
Material	
Underbench unit	Powder-coated stainless steel on the outside Colour: Pure white RAL 9010
Ventilation connection	PPS

FWF 90 safety cabinet for storing flammable liquids

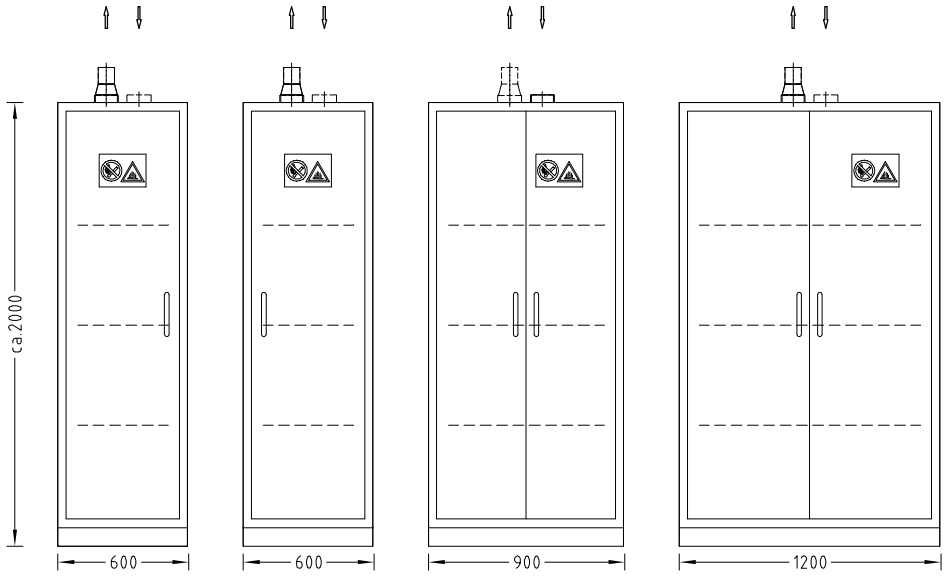
Intended use

- For storing limited amounts of flammable liquids
- Not suitable for storing gas cylinders and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design



Variants



Special cabinets
FWF 90 safety cabinet for storing flammable liquids

Technical data

Dimensions			
Width [mm]	600	900	1200
Depth [mm]	Approx. 600		
Overall height [mm]	Approx. 2000		
Height, plinth [mm]	Approx. 80		
Max. weight [kg]	290	360	470

Load bearing capacity	
Basin bed [kg]	Depending on version

Design characteristics	
Construction	Connection to the permanently active ventilation system Connection to the earth wire with potential equalisation Self-closing through current-independent thermal activation in the case of fire 3 basin beds, height-adjustable Tray with perforated plate insert With closing 4 height-adjustable feet Hinged doors
Combination possibilities	See variants
Other versions and configurations	On request
Regulations and standards	EN 14470-1 TRGS 510

Ventilation data	
Air exchange rate [m³/h]	30
Ventilation connection Ø [mm]	75

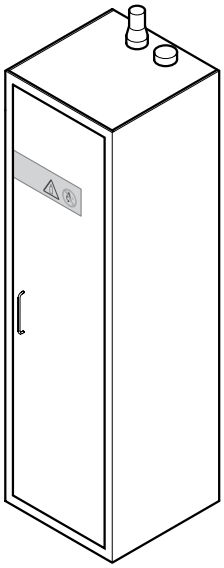
Material	
Laboratory cabinet	Powder-coated stainless steel on the outside Colour: Pure white RAL 9010
Ventilation connection	Galvanised steel

G 90 gas cylinder cabinet

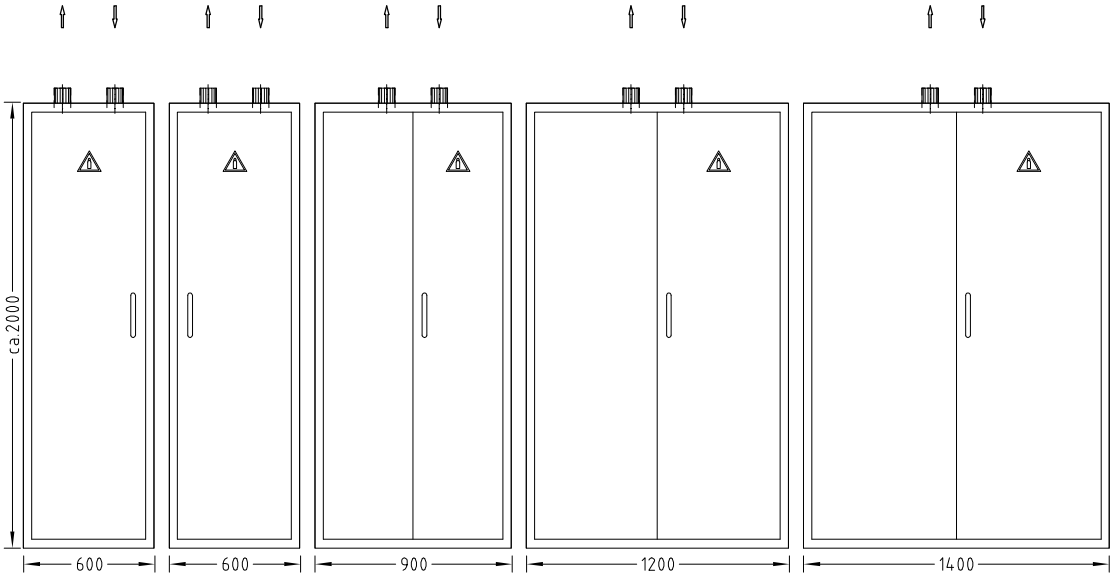
Intended use

- For storing gas cylinders in buildings
- Not suitable for storing flammable liquids and self-igniting or self-decomposing substances
- Not suitable for storing acids and alkalis

Design



Variants



Special cabinets
G 90 gas cylinder cabinet

Technical data

Dimensions	600	900	1200	1400
Width [mm]	600	900	1200	1400
Depth [mm]	Approx. 600			
Overall height [mm]	Approx. 2000			
Max. net weight [kg]	390	530	660	740

Design characteristics	600	900	1200	1400
Construction	Connection to the permanently active ventilation system Mounting rail to take up gas reduction units Roll-in ramp for gas cylinders With closing 4 height-adjustable feet Feed-throughs for pipes and cables in the cabinet ceiling Hinged door(s)			
Max. number of 50 l gas cylinders for cabinet width	1	3	4	4
Other versions and configurations	On request			
Regulations and standards	EN 14470-2			

Ventilation data	600	900	1200	1400
Air exchange rate [m³/h] for cabinet width	60	90	120	140
Ventilation connection Ø [mm]	75			

Material	
Laboratory cabinet	Powder-coated stainless steel on the outside Colour: Pure white RAL 9010
Ventilation connection	Galvanised steel

5 Supply and disposal

For the disposal of liquid and solid substances, we offer our TÜV-certified systems for use in corresponding underbench units.

As a standard feature, our underbench units for waste disposal are equipped with safety trays to accommodate suitable containers. For more container replacement convenience.

Acids, alkalis and flammable liquids can be disposed of directly into the containers through screw-mounted safety funnels, or from the internal workspace through the funnels in the worktop.

Mechanical or electronic level indicators and suitable ventilation systems make these systems complete.

Our latest underbench units for the disposal of solid substances are supplied with two robust waste bins with a capacity of 35 l in a fully extensible drawer, or as a tilting door variant with a waste bin that holds 30 l.

Supply system for flammable liquids

For the cyclic and continuous supply with flammable liquids, suitable safety cabinets are used that are connected to a permanent exhaust air system.

Our cabinets are in accordance with the relevant standards and regulations.

With the safety pistol-grip nozzle with flexible stainless steel supply pipe, flammable liquids can be safely drawn.

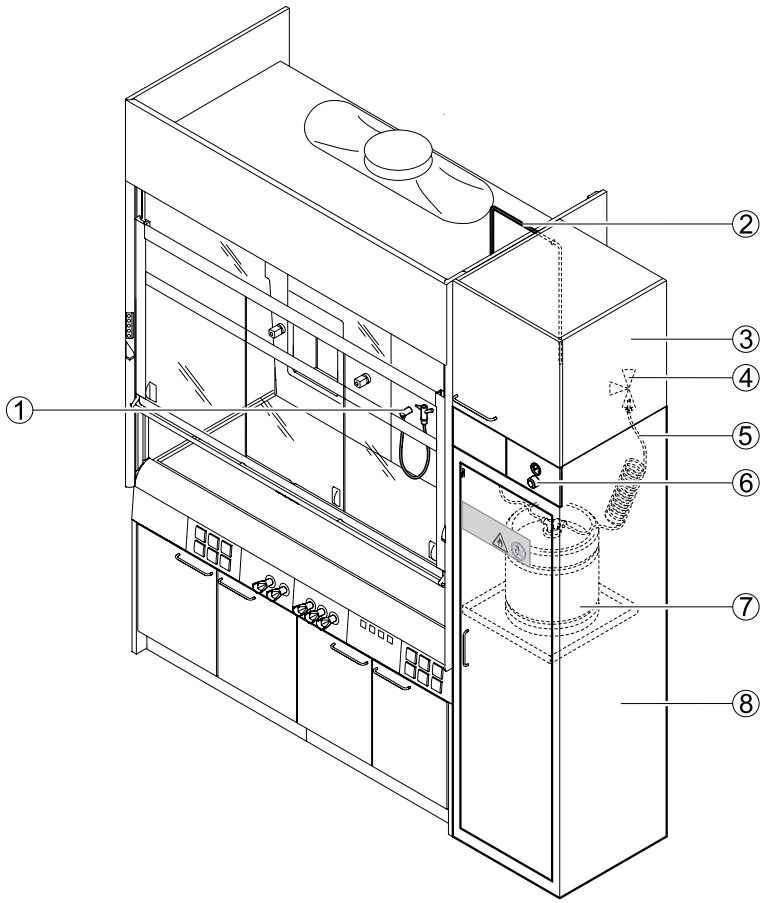
Supply system for flammable liquids

Intended use

- For safely storing and providing flammable liquids at the laboratory workstation in accordance with EN 14470-1 (type 90) and TRGS 510 (appendix L)
- For transferring flammable liquids from containers into small containers (max. 2 containers with 30 l each)
- Not permitted for supplying the following hazardous substances:
  - Acids and alkalis
  - Gas cylinders
  - Radioactive substances
  - Microorganisms

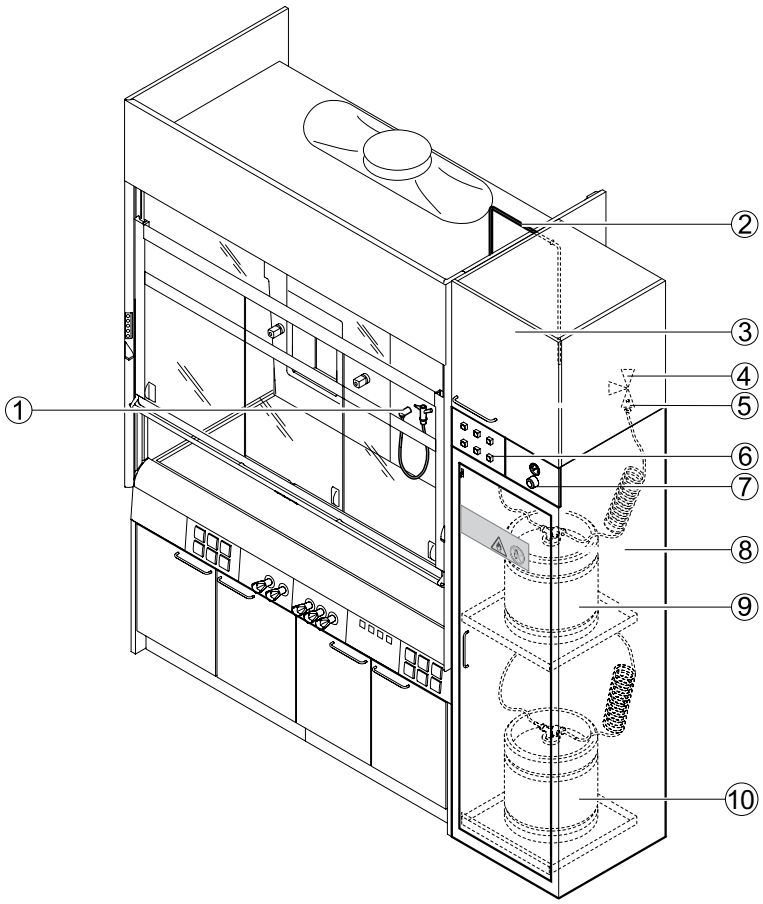
Design

Cyclic supply



1 *Pistol-grip nozzle in the internal workspace*
2 *Outlet pipe*
3 *Top-mounted cabinet*
4 *3-way valve*
5 *Inert gas pipe*
6 *Pressure regulator*
7 *Container*
8 *Safety cabinet*

Continuous supply with automatic container changeover



1 *Pistol-grip nozzle in the internal workspace*
2 *Outlet pipe*
3 *Top-mounted cabinet*
4 *3-way valve*
5 *Inert gas pipe*
6 *Electric module of the monitoring system*
7 *Pressure regulator*
8 *Safety cabinet*
9 *Container 1*
10 *Container 2*

Supply system for flammable liquids

Technical data

Dimensions	
Width [mm]	Approx. 600
Depth [mm]	Approx. 600
Height [mm] with top-mounted cabinet	2700
Container 30 l, height [mm]	440
Container 30 l, Ø [mm]	370

Design characteristics	
Construction	Safety cupboard with: Connection to the ventilation system Connection to potential equalisation with earth wire Self-closing through current-independent thermal activation in the case of fire Shelves, height-adjustable Tray Hinged door
Number of containers 30 l	1-2
Cyclic supply	With different flammable liquids Separate pipes to 1-2 containers in the safety cabinet
Continuous supply	With automatic changeover to the second container Common pipe connected to no more than 2 containers in the safety cabinet Monitoring system: automatic changeover to the second container if container is empty
Pressure regulator, solvent tapping system	Defined pressure of 0.2 bar for transporting the flammable liquid Safety valve from 0.5 bar
Outlet, solvent tapping system	Solvent pistol flexibly mounted in the internal workspace Solvent pistol rigidly mounted in the internal workspace

Material	
Safety cabinet	Stainless steel, powder-coated
Container	Stainless steel
Connection spigot, ventilation Ø 75 mm	Galvanised steel

Ventilation data	
Air exchange rate [m³/h]	50
Ventilation connection to the ascending duct Ø [mm]	90

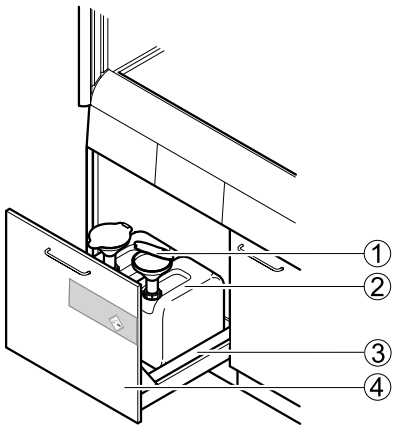
Waste disposal system for acids and alkalis

Intended use

- For safely storing the remnants of acids and alkalis at the laboratory workstation temporarily
- Not permitted for the disposal of the following hazardous substances:
  - Flammable liquids
  - Gas cylinders
  - Radioactive substances
  - Microorganisms

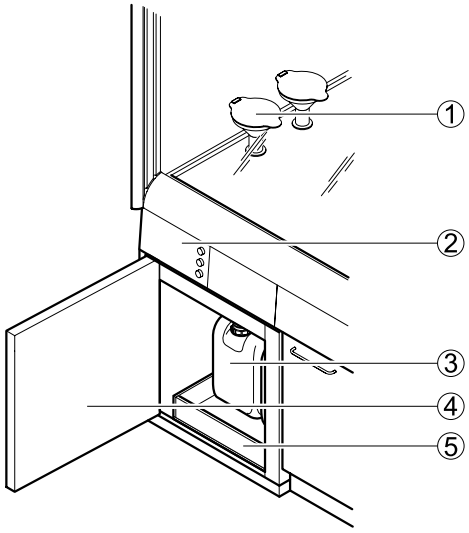
Design

Filling through funnel in the underbench unit



1 Funnel
2 Canisters
3 Tray
4 Underbench unit with full-height drawer

Filling through funnel in the internal workspace



1 Funnel on the worktop
2 Electric module with level indicator and control units
3 Canisters
4 Underbench unit with hinged door (without drawer)
5 Tray

Waste disposal system for acids and alkalis

Technical data

Dimensions for underbench unit on plinth	
Width [mm]	600
Depth [mm]	550
Height [mm] at working height 750 mm	720
Height [mm] at working height 900 mm	870
Max. height [mm]	530
Height, plinth [mm]	110

Dimensions for self-supporting/push-in underbench unit for bench-mounted fume hoods	
Width [mm]	600
Depth [mm]	550
Height [mm] at working height 900 mm	639
Max. height [mm]	425
Height, plinth [mm]	110

Dimensions for self-supporting/push-in underbench unit for bench-mounted fume hoods with side installation	
Width [mm]	600
Depth [mm]	550
Height [mm] at working height 900 mm	716
Max. height [mm]	530
Height, plinth [mm]	110

Dimensions, canister	
5 l width x depth x height [mm]	160 x 185 x 230, connection thread S 55
10 l width x depth x height [mm]	190 x 230 x 340, connection thread S 60
20 l width x depth x height [mm]	260 x 285 x 390, connection thread S 60

Design characteristics	
Construction	Extracted underbench unit with full-height drawer (max. 2 containers) or extracted underbench unit with hinged door and without drawer (max. 2 containers) Coated fittings Tray made of polypropylene
Funnel	Underbench unit with full-height drawer: Funnel, fastened to canister with screws Underbench unit with hinged door: Funnel on worktop with filling pipe between funnel and canister
Filling	Funnel fastened with screws on canister: optical check of the filling level when the canister is transparent Funnel on the worktop: Electronic level indicator, acoustic and visual indication when the maximum level is reached
Approval, canister 5l, 10 l, 20 l	UN 3H1/Y1,9
Resistance	Based on consultation with Waldner

Waste disposal system for acids and alkalis

Funnel in the underbench unit	Canister 5 l	Canister 10 l	Canister 20 l	Canister 10 l and 20 l
Underbench unit on plinth for service spine	–	4	2	2 x 10 l and 1 x 20 l
Push-in underbench unit for service spine	–	4	–	–
Push-in underbench unit for bench-mounted fume hoods	–	4	–	–
Push-in underbench unit for bench-mounted fume hoods with side installation	–	4	2	2 x 10 l and 1 x 20 l

Funnel in the internal workspace	Canister 5 l	Canister 10 l	Canister 20 l	Canister 10 l and 20 l
Underbench unit on plinth for bench-mounted fume hoods	2	2	–	–
Underbench unit on plinth for bench-mounted fume hoods with side installation	2	2	1	1 x 10 l and 1 x 20 l
Push-in underbench unit for bench-mounted fume hoods and fume hoods with side installation	2	2	–	–

Material	
Canisters	PP
Ventilation connection Ø 90 mm	PPS
Tray	PP
Components for installation	Electrically conductive PE-HD

Ventilation data	
Air exchange rate [m³/h]	50
Ventilation connection to the ascending duct Ø [mm]	90

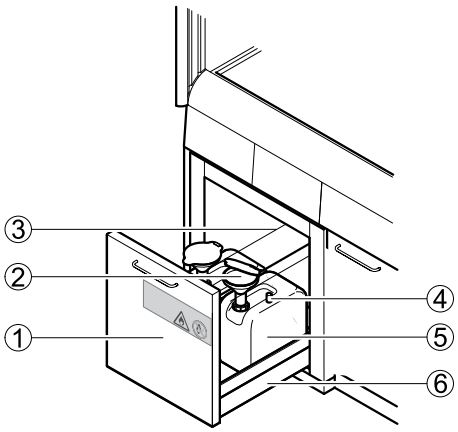
Waste disposal system for flammable liquids

Intended use

- For safely storing remnants of flammable liquids at the laboratory workstation temporarily in accordance with EN 14470-1 (type 90) and TRGS 510
- For waste disposal using screw-mounted funnels in the underbench safety unit or through funnels on the worktop in the internal workspace
- Disposal of HPLC equipment via universal connection
- Not permitted for the disposal of the following hazardous substances:
  - Acids and alkalis
  - Gas cylinders
  - Radioactive substances
  - Microorganisms

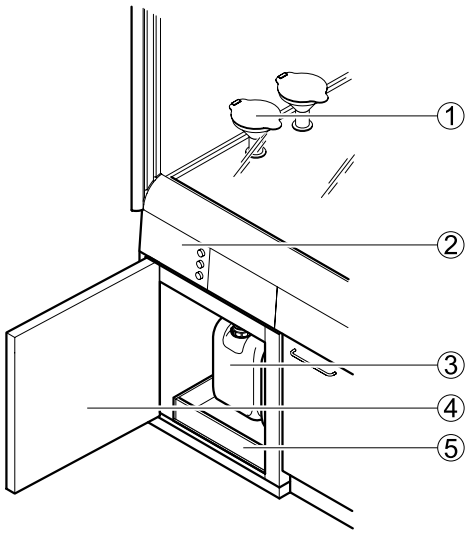
Design

Filling through funnel in the underbench unit



1 *Safety cabinet with full-height drawer*
2 *Funnel*
3 *Earthing cable*
4 *Mechanical level indicator*
5 *Canisters*
6 *Tray*

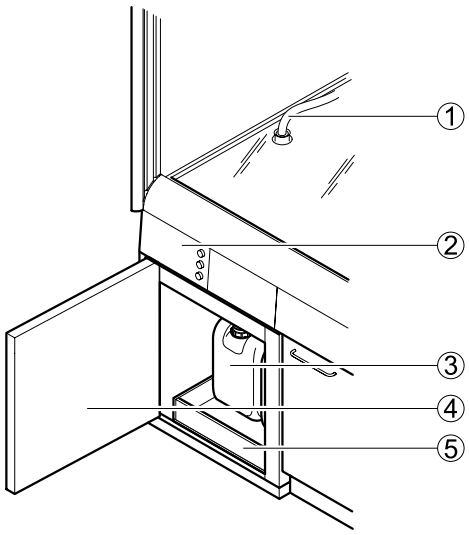
Filling through funnel in the internal workspace



1 *Funnel on the worktop*
2 *Electric module with level indicator and control units*
3 *Canisters*
4 *Safety cabinet with hinged door*
5 *Tray*

Waste disposal system for flammable liquids

**Filled through mounting spigot
for capillaries in the internal workspace**



1 Universal connection on worktop
2 Electrical panel with level indicator and control units
3 Canisters
4 Safety cabinet with hinged door
5 Tray

Waste disposal system for flammable liquids

Technical data

1. Filling via funnel in underbench unit
2. Filling through funnels in the internal workspace

Dimensions	
Underbench safety unit, width x depth [mm]	Approx. 595 x 600
Underbench safety unit, overall height [mm]	Approx. 600
Canister 5 l, width x depth x height [mm]	160 x 185 x 230
Canister 10 l, width x depth x height [mm]	198 x 298 x 264

Design characteristics	
Construction	With funnel in the underbench unit: Underbench safety unit with full-height drawer with max. 2 containers With funnel in the internal workspace: Underbench safety unit with hinged door with max. 2 containers Connection to the ventilation system Connection to potential equalisation with earth wire Funnel, grounded
Canisters	2 canisters, 5 l (insulated) 2 containers 10 l, conductive
Funnel	Underbench safety unit with full-height drawer: Funnel, fastened to canister with screws Underbench safety unit with hinged door, transfer system: Funnel on the worktop is connected with the canister through one filling pipe per funnel
Approval, canister 5l, 10 l, 30 l	UN 3H1/Y1,6
Filling, level indicator	Funnel in the underbench safety unit: mechanical level indicator integrated in 10 l canister Funnel in the internal workspace: Electric level indicator, acoustic and visual indication when the maximum level is reached Connection for liquid chromatographic instrument (HPLC) with spigot instead of funnels and electric level indicator, as an option Filling head is connected to extract air via gas suspension cord
Resistance	Based on consultation with Waldner

Material	
Underbench safety unit	Stainless steel, powder-coated
Canister 5 l	PP
Canister 10 l	Electrically conductive PE-HD
Ventilation connection Ø 90 mm	PPS
Components for installation	Electrically conductive PE-HD
Components for transfer system	Stainless steel

Ventilation data	
Air exchange rate [m³/h]	50
Ventilation connection to the ascending duct Ø [mm]	90

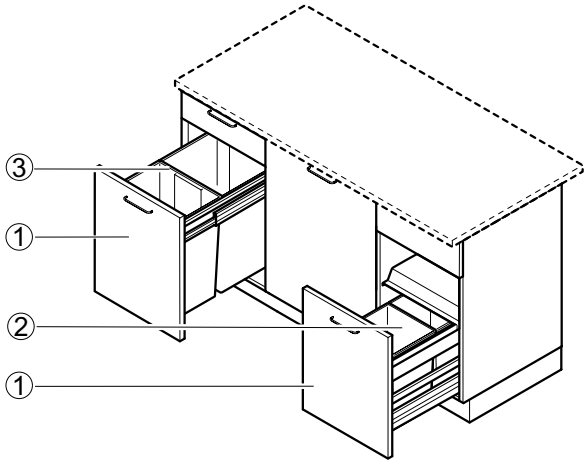
Waste disposal system for solid matter and domestic waste

Intended use

- For the disposal of remnants of solid matter and garbage from laboratory work
- Not suitable for the permanent storage of solid matter and garbage
- Not permitted for the disposal of hazardous substances, especially:
  - Acids and alkalis
  - Flammable liquids
  - Gas cylinders
  - Radioactive substances
  - Microorganisms

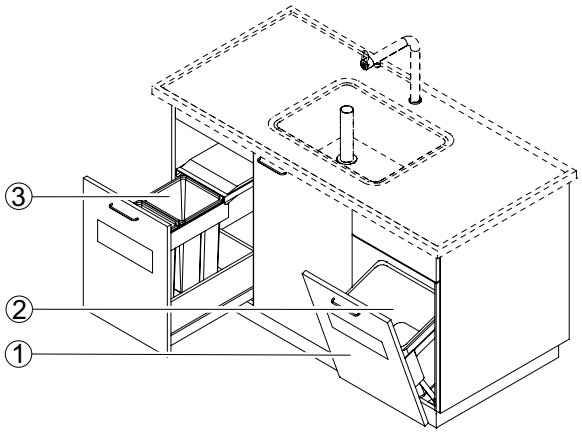
Design

Waste bin with full-height drawer



1 Full-height drawer
2 Waste bin 2 x 15 l
3 Waste bin 2 x 35 l

Waste bin with tilting door



1 Tilting door
2 Waste bin 30 l
3 Waste bin 2 x 35 l

Waste disposal system for solid matter and domestic waste

Technical data

Dimensions for underbench unit on plinth				
Width x height [mm]	450 x 870	600 x 870	450 x 720	600 x 720
Depth [mm]	550			
Height, plinth [mm]	110			
Capacity with full-height drawer	2 x 15 l or 2 x 35 l	2 x 15 l –	2 x 15 l or 2 x 35 l	2 x 15 l –
Capacity with tilting door	1 x 30 l			

Dimensions for underbench unit for sinks			
Width x height [mm]	600 x 870	900 x 870	1200 x 870
Depth [mm]	550		
Height, plinth [mm]	110		
Capacity with full-height drawer	–	2 x 15 l	
Capacity with tilting door	1 x 30 l	2 x 30 l	

Dimensions for self-supporting underbench unit for bench-mounted fume hoods	
Width x height [mm]	600 x 820
Depth [mm]	550
Height, plinth [mm]	110
Capacity with full-height drawer	2 x 15 l
Capacity with tilting door	1 x 30 l

Dimensions for push-in underbench unit for bench-mounted fume hoods		
Width x height [mm]	545 x 639	600 x 639
Depth [mm]	550	
Height, plinth [mm]	110	
Capacity with full-height drawer	2 x 15 l	
Capacity with tilting door	1 x 30 l	

Design characteristics	
Door	Full-height drawer Tilting door
Automatic foot-operated opening	Optionally for full-height drawers up to a width of 600 mm
Extract air spigot	Optional

Material	
Ventilation connection	PPS

Ventilation data	
Air exchange rate [m³/h]	30
Ventilation connection to the ascending duct Ø [mm]	90

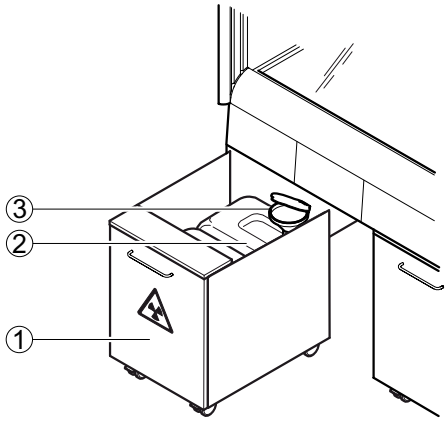
Waste disposal system for radio-isotope residual material

Intended use

- Waste canister at the workplace for the safe disposal of slightly radioactive material
- Not permitted for the disposal of the following hazardous substances:
  - Acids and alkalis
  - Flammable liquids
  - Gas cylinders
  - Microorganisms

Design

Filling through funnel in the underbench unit (funnel with mechanical level indicator)



1 Underbench unit on castors
2 10 l Canisters
3 Funnel

Technical data

Dimensions of underbench units for radio-isotope residual material		
Width [mm]	450	600
Depth [mm]	550	
Overall height [mm]	639	
Height, castors [mm]	110	
Canister 10 l, width x depth x height [mm]	190 x 230 x 340, connection thread S 60	
Collapsible box, width x depth x height [mm]	300 x 300 x 500	

Design characteristics of underbench units for radio-isotope residual material	
Construction	Front side with lead shield on the inside With castors Max. 2 canisters of 10 l in tray made of polypropylene to take up slightly radioactive, liquid residual material Collapsible box to take up solid radio-isotope residual material as an option

6 Education

HELLO, WE ARE WALDNER EDUCATION!

Waldner Education provides innovative all-in-one solutions for educational institutions around the globe.

Our product systems stand for high quality and ergonomic flexibility while promoting trend-setting didactics.

LEARNING SPACES FOR THE EDUCATION OF THE FUTURE

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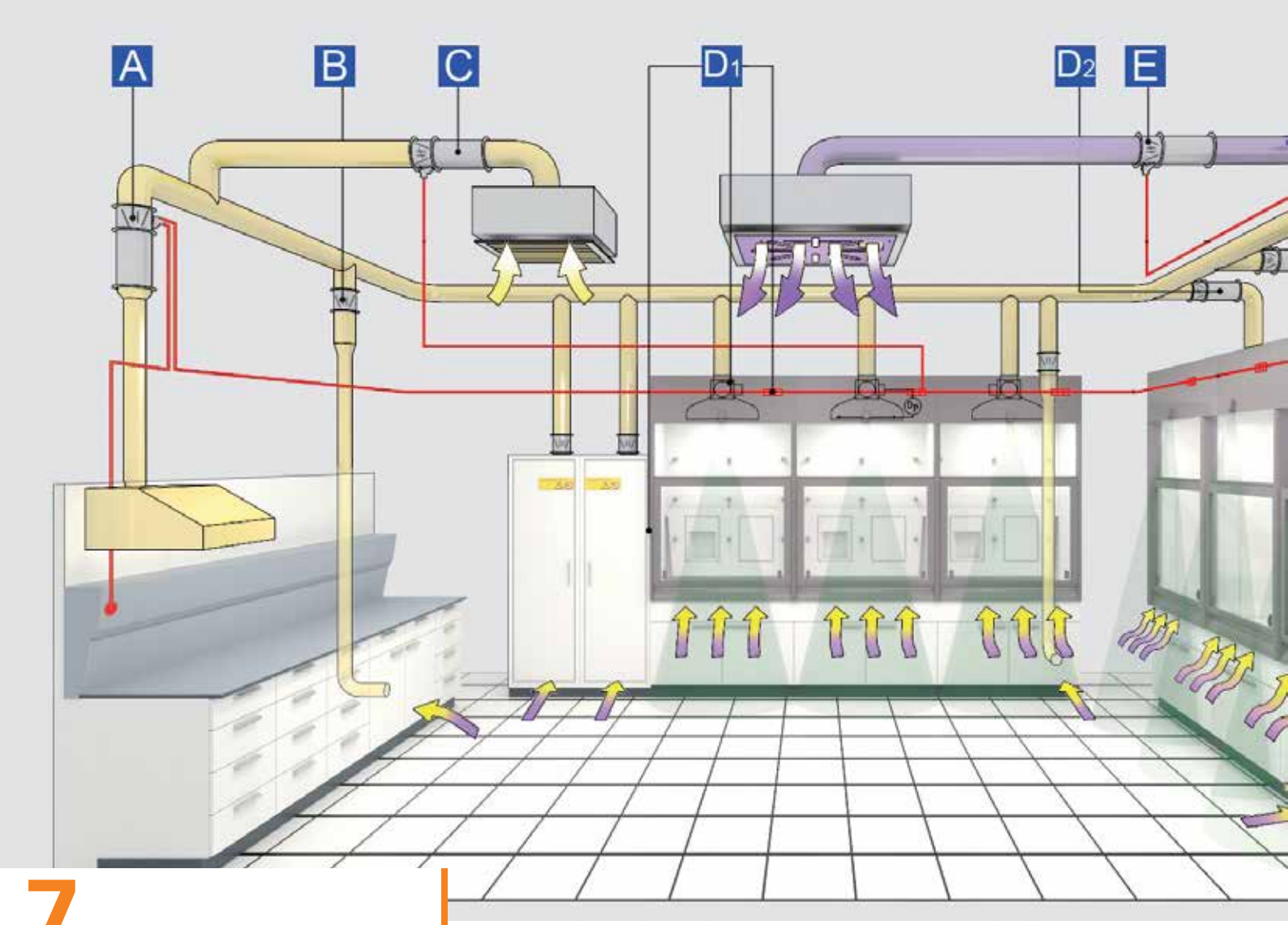
7 Services

We are the only manufacturer of laboratory equipment who offers you fume hoods and variable fume hood control all from one supplier. Make the most of our knowledge and expertise on fume hood and laboratory control.

We have installed a large number of projects of different sizes worldwide, all of which are operating to our customers' great satisfaction. This underlines the philosophy of our global technology company.

Furthermore, you as a customer will find it con-venient and economical to have only one contact for all questions on the issue and also for maintenance.

Being a full-range supplier, we will plan and implement your project in no time – in the typical Waldner way. Being a market leader, we have the necessary capacity for your project – no matter how big. Please contact us. We will be glad to help you.



7 Services

Large cost savings in every operating state

From an economic point of view, the laboratory furniture and the ventilation of the entire laboratory building are no longer separate entities today. Waldner's intelligent laboratory control significantly reduces the operating costs of the ventilation system and ensures maximum work safety.

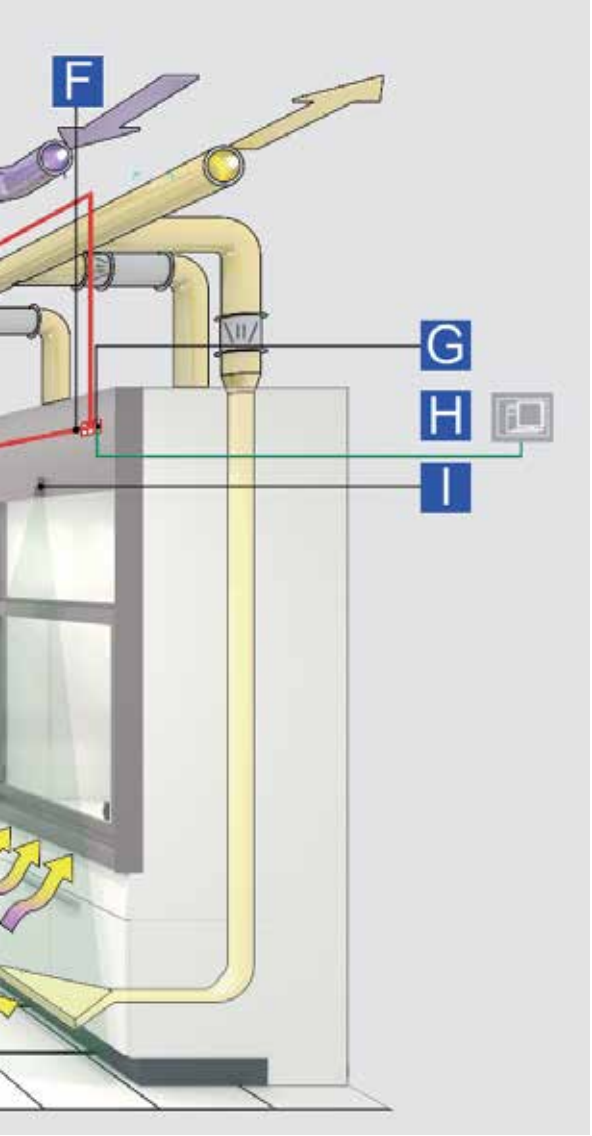
Sophisticated technology for optimum operation

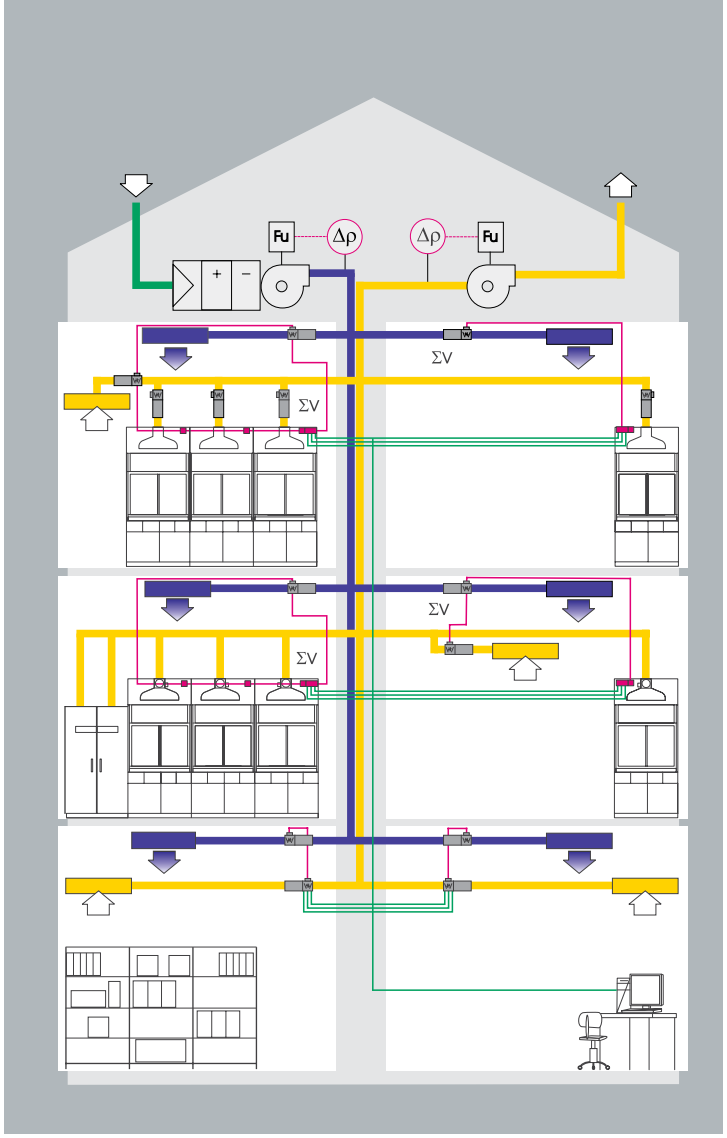
Our fume hoods are an important part of laboratory ventilation and can be integrated into the building ventilation concept in an ideal way. The measuring and control unit incorporated in our Airflow-Controller reliably detects the operating status of the fume hood at all times, and precisely and safely regulates the air flow rate within seconds for safe extract air operation.

If required, the user can increase or decrease the air exchange rate at the fume hood manually at any time.

Investing in our laboratory control will quickly pay for itself

A cost-benefit analysis clearly speaks for our laboratory control: Since the ventilation system is efficiently used while the energy supply is reduced, investing into this laboratory control system will pay off within one to two years. Considering continuously increasing energy prices, this is an important advantage.





Ventilation and control as an overall concept

Being a leading system partner, we will develop an overall concept for your laboratory – from the appropriate sizing of the central ventilation system and the ducts to the selection and use of the appropriate process measuring and control technology.

- **A** Air flow damper for local AC4 Compact extraction
- **B** Mechanical airflow damper
- **C** Airflow damper extract air AC4 Compact
- **D1** Airflow-Controller AC4 v Standard
- **D2** Airflow-Controller AC4 v pipe controller
- **E** Airflow damper Supply air AC4 Compact
- **F** CANopen bus communication
- **G** Airflow-Controller with activated master function for laboratory control
- **H** The following types of communication with DDC/GLT are possible, among others: Analogue I/O, LON bus, Modbus, Profibus, BACnet, Ethernet
- **I** Sash controller SC

Control and monitoring
Control

Control – Airflow-Controller (AC) for fume hoods according to DIN EN 14175-6

Airflow-Controller AC

The central control unit is a microprocessor-based electronic control unit and forms the heart of the Waldner control system.

Our Airflow-Controller calculates quickly and precisely the required air flow rate for safe operation from the sash position based on a defined process. The required air flow rate is then precisely adjusted for you within three seconds. The damper takes less than one second to make a 90° change of angle.

To achieve a precise result, the controller uses a characteristic curve that is based on the damper position and the effective pressure.

Apart from its pure extract air control system , the controller also monitors the optionally available Secuflow technology. If the air flow falls below the required extract air volume, the supportive flow technology automatically switches off and an acoustic and visual warning is issued.

A visual and acoustic alarm signal is also issued when the permissible sash opening area is exceeded in accordance with the specifications of EN 14175.

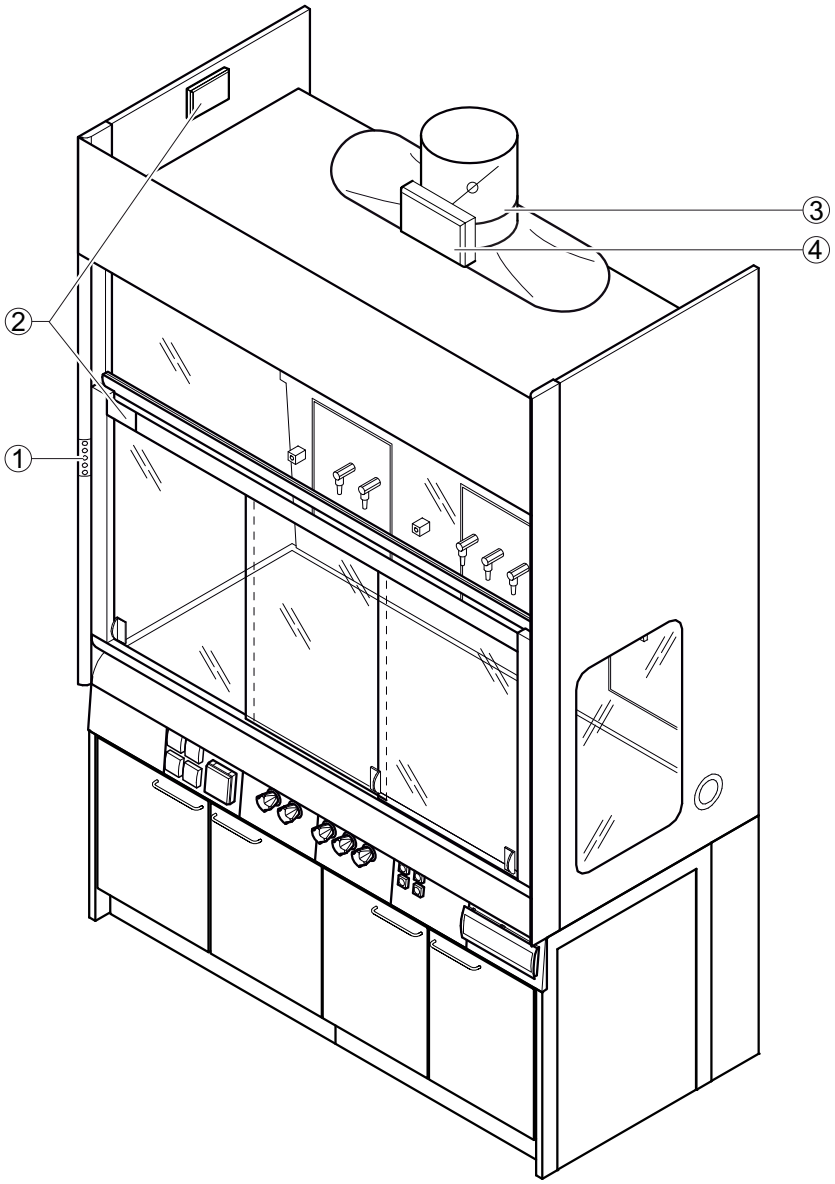
The control flap is used as standard with the extract air hood. Use the motorised damper as a pipe controller to conserve space if the room height is less than 3.30 m.

1 Display and operating device

2 Sensors for detector of sash position

3 Exhaust hood with actuator, measuring system and measurement acquisition

4 Central control unit AC



The fume hood and controller are an entity

The systems are precisely matched to each other, thus ensuring maximum reliability during laboratory operation.

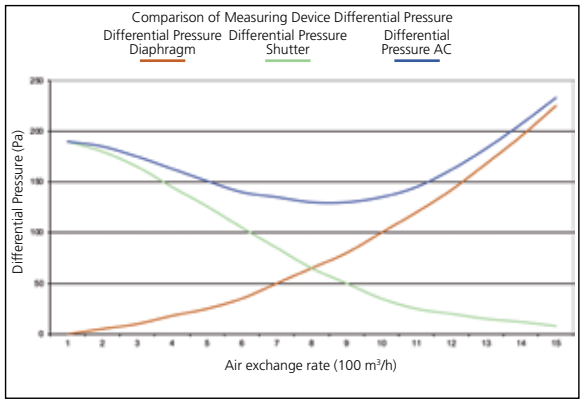
The fume hood and variable air volume control are type-approved in accordance with EN 14175-6 as a complete safety system. Thus, the time-consuming and costly coordination of different trades becomes unnecessary and legal security and warranty are provided by one supplier, if need be.

Our measurement method and measuring system

Due to the variable measuring diaphragm coefficient and the special principle of operation of the measuring system, an airflow stroke of 1:15 can be realised. During night operation, the air volume at the fume hood can thus be reduced to 100 m³/h.

A measuring accuracy of +/- 5 % of the current actual value of the air exchange rate is also guaranteed. This is necessary to ensure that the directed airflow in the laboratory is maintained even if the air exchange rates are low.

EN 14175-6 type tested fume hood control in acc. with 5.4
Measuring in the outer measuring level



Schematic diagram of effective pressure development

Control panel AC

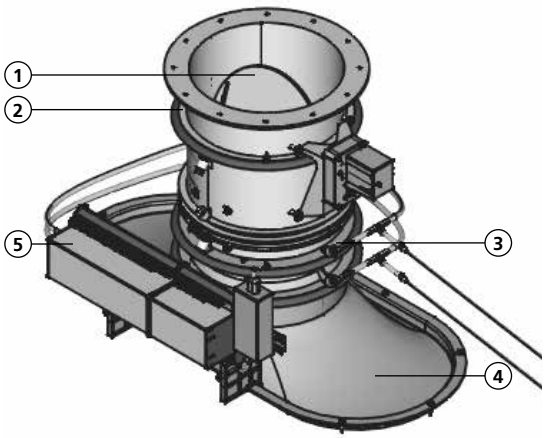
– Menu key

– Light On/Off

– Visual and acoustic alarm

– Flushing function (increasing the air volume)
– Lowered operation

– Monitoring and control on / off
– Service connection



Measuring system Airflow-Controller
1 Control flap
2 Pressure measuring ducts
3 Venturi aperture
4 Exhaust hood
5 Electronics with pressure sensor and solenoid valve

Control and monitoring
Control

Technical data

Characteristics	
Air exchange rate range for diameter DN 250	100 - 1500 m³/h
Air exchange rate range for diameter DN 315	200 - 3000 m³/h
Measuring accuracy to the actual value	+/- 5 %
Nominal capacity	35 VA
Motor run time for 0-90°	1 second
Control time	less than 3 seconds
Permitted system pressure	100 - 500 Pa

Inputs	
Voltage supply	230 V
Digital input	3 pieces (freely parametrisable)
Analogue input	2 pieces (freely parametrisable)
Sash detector	2 pieces (sash and horizontal sash detector)
Connection	RJ 45
CAN bus	RJ 45

Outputs	
Digital output	4 pieces (freely parametrisable)
Analogue output	1 piece (freely parametrisable)
Control panel connection	RJ 12
CAN bus	RJ 45
Motor control	RJ 45

Design	
Airflow damper and monitoring	Constant or variable

Master function for room control

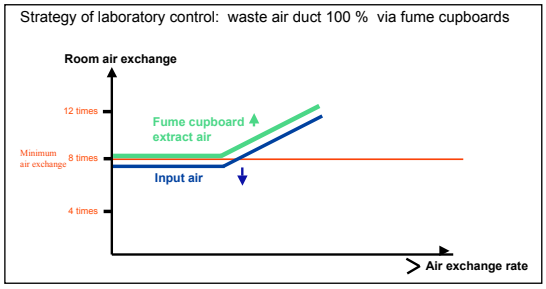
Intelligent room control

Our master function forms a total extract air volume from the individual extract air volumes of all the extraction units in the laboratory. If the minimum air exchange is not achieved by the minimum air values of the fume hoods, then the module automatically raises the required minimum air exchange rate of the fume hoods or room extract air. If the minimum room air exchange is exceeded by opening a fume hood, then the increase of the minimum extract air of the fume hoods is reduced again to the minimum air of the fume hoods at most. If this is not sufficient to achieve the minimum room air exchange, the next step is to reduce the room extract air. Energy-efficient air through-ventilation can therefore always be guaranteed.

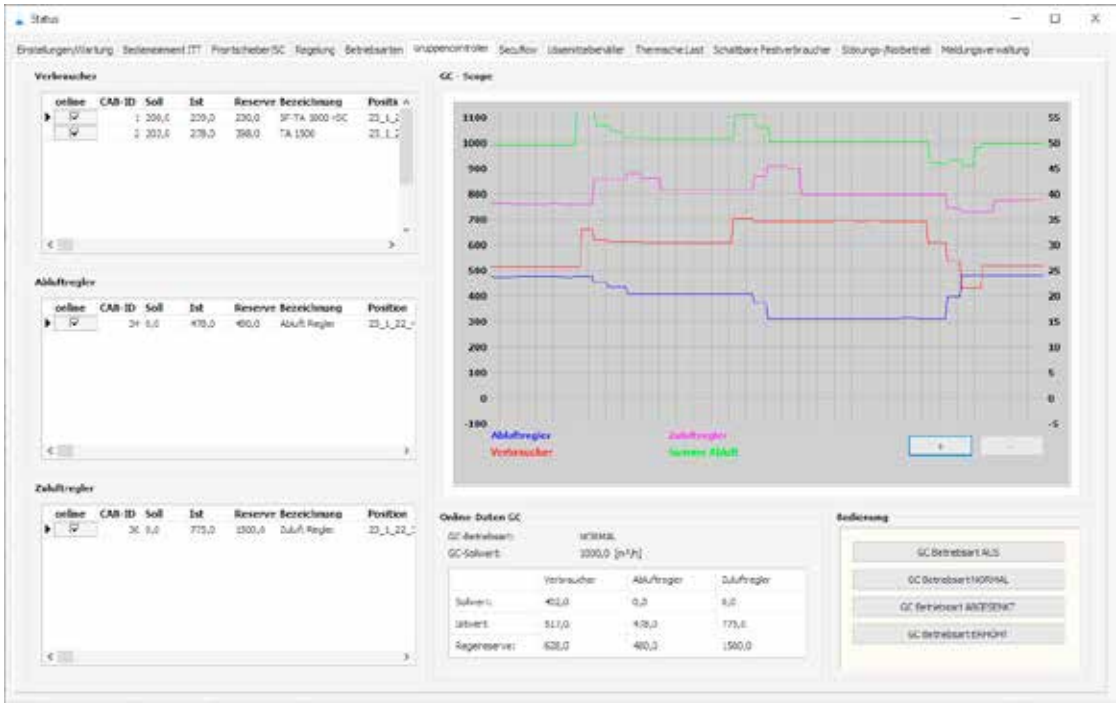
This module is also capable of providing temperature- and room pressure-dependent control.

In the event of the maximum simultaneous extract air volume in a room being exceeded, an alarm is emitted at the specific fume hoods contributing to the excess.

Various bus systems, including BACnet or Modbus, can make available data points, such as the setpoints and actual values of the air flow damper, motorised damper positions, error messages, operating statuses and fume hood sash positions. Remote diagnostics can also be implemented for even faster troubleshooting by means of a simple interface.



Two examples of laboratory control variants



Status window in the parametrisation software

Control and monitoring
Airflow damper for room supply air and extract air

AC4 Compact

Areas of application
– Room input air controller
– Room extract air controller
– Airflow measuring system/measuring panel (without control flap and actuator)
– Extractor hoods, fume hoods

AC4 Compact

AC4 Compact, the microprocessor-based electronic control unit, controls the air volume infinitely.

It quickly and precisely regulates the air flow rate according to the setpoint.

Performance criteria
– Control parameters are adaptively optimised on-line
– Standard tolerances are predictively corrected using a theoretical process model
– Control of the position of the motorised damper
– Floating time: 5 sec.
– Freely parametrisable on a PC basis
– Integrated pressure sensor 0-250 Pa (pressure-resistant up to 2500 Pa)
– Motorised damper housing: galvanised, stainless steel, PPs
– Motorised damper housing with and without insulation case

Connections
– 1 x analogue output
– 1 x analogue input
– 2 x digital input
– 1 x control unit input RJ12
– 2 x CAN interfaces
– 1 x motor output RJ45
– 1 x 24 V double terminal


AC4 Compact


Actuator


Galvanised controller housing with AC4 Compact and fast actuator


Galvanised controller housing with AC4 Compact and fast actuator - rectangular version

Technical data

Flow rate range for rectangular air flow damper, housing of galvanized steel

Construction dimensions		Installation length	Width without and with insulation case	Height without and with insulation case	Vmin	V 7 m/s	Vmax (10 m/s)
Width [mm]	Height [mm]	[mm]	[mm]	[mm]	[m³/h]	[m³/h]	[m³/h]
200	100	135	282	182	72	504	720
300	100	135	382	182	108	756	1080
400	100	135	482	182	144	1008	1440
500	100	135	582	182	180	1260	1800
600	100	135	682	182	216	1512	2160
300	150	170	382	232	162	1134	1620
400	150	170	482	232	216	1512	2160
500	150	170	582	232	270	1890	2700
600	150	170	682	232	324	2268	3240
200	200	220	282	282	144	1008	1440
300	200	220	382	282	216	1512	2160
400	200	220	482	282	288	2016	2880
500	200	220	582	282	360	2520	3600
600	200	220	682	282	432	3024	4320
800	200	220	882	282	576	4032	5760
300	250	270	382	332	270	1890	2700
400	250	270	482	332	360	2520	3600
500	250	270	582	332	450	3150	4500
600	250	270	682	332	540	3780	5400
800	250	270	882	332	720	5040	7200
300	300	325	382	382	324	2268	3240
400	300	325	482	382	432	3024	4320
500	300	325	582	382	540	3780	5400
600	300	325	682	382	648	4536	6480
800	300	325	882	382	864	6048	8640
1000	300	325	1082	382	1080	7560	10800
400	400	430	482	482	576	4032	5760
500	400	430	582	482	720	5040	7200
600	400	430	682	482	864	6048	8640
800	400	430	882	482	1152	8064	11520
1000	400	430	1082	482	1440	10080	14400
1200	400	430	1282	482	1728	12096	17280

Control and monitoring
Airflow damper for room supply air and extract air

Technical data

Flow rate range for round air flow damper, housing of galvanized steel

Nominal size	Installation length	External diameter without insulation case	External diameter with insulation case	Vmin	V 7 m/s	Vmax (10 m/s)
Nominal diam. DN	[mm]	[mm]	[mm]	[m³/h]	[m³/h]	[m³/h]
100	195	99	199	27	190	272
125	195	124	224	43	300	428
160	215	159	259	71	494	706
200	215	199	299	111	776	1108
250	260	249	349	174	1217	1739
315	260	314	414	277	1939	2770
400	315	399	499	448	3135	4479

Flow rate range for round air flow damper, housing of stainless steel

Nominal size	Installation length	External diameter without insulation case	External diameter with insulation case	Vmin	V 7 m/s	Vmax (10 m/s)
Nominal diam. DN	[mm]	[mm]	[mm]	[m³/h]	[m³/h]	[m³/h]
100	195	99	199	27	190	272
125	225	124	224	43	300	428
160	260	159	259	71	494	706
200	300	199	299	111	776	1108
250	375	249	349	174	1217	1739
315	470	314	414	277	1939	2770
400	555	399	499	448	3135	4479
500	800	564	599	701	4908	7012
630	800	704	729	1115	7806	11151

Flow rate range for round air flow damper, housing of polypropylene

Nominal size	Installation length	External diameter without insulation case	External diameter with insulation case	Vmin	V 7 m/s	Vmax (10 m/s)
Nominal diam. DN	[mm]	[mm]	[mm]	[m³/h]	[m³/h]	[m³/h]
110	300	110	198	31	214	306
125	325	125	219	40	280	400
160	360	160	259	67	470	671
200	400	200	298	106	745	1064
250	475	250	348	367	1169	1670
315	570	315	414	263	1841	2630
400	655	400	499	426	2980	4257
500	850	500	599	662	4636	6623
630	1045	630	729	1052	7365	10521

Technical data

Flow rate range for rectangular air flow damper, housing of polypropylene

Construction dimensions		Installation length	Width without insulation case	Height without insulation case	Width with insulation case	Height with insulation case	Vmin	V 7 m/s	Vmax (10m/s)
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[m³/h]	[m³/h]	[m³/h]
140	140	530	200	200	240	240	135	473	676
200	140	530	260	200	300	240	194	680	972
250	140	530	310	200	350	240	244	853	1218
160	160	530	220	220	260	260	177	621	887
280	160	530	340	220	380	260	313	1096	1566
180	180	580	240	240	280	280	226	789	1128
315	180	580	375	240	415	280	398	1392	1988
200	200	580	260	260	300	300	279	978	1397
355	200	580	415	260	455	300	495	1734	2477
630	200	580	690	260	730	300	883	3092	4417
224	224	580	284	284	324	324	348	1220	1742
400	224	580	460	284	500	324	627	2195	3136
250	250	580	310	310	350	350	436	1525	2179
280	280	580	340	340	380	380	548	1920	2742
400	280	580	460	340	500	380	787	2754	3935
315	315	620	375	375	415	415	696	2437	3482
355	355	620	145	415	455	455	887	3105	4435
400	400	620	460	460	500	500	1129	3952	5645
500	400	620	580	480	600	500	1408	4927	7039
630	400	620	710	480	730	500	1770	6196	8851
800	400	620	880	480	900	500	2252	7883	11262

Control and monitoring
Monitoring

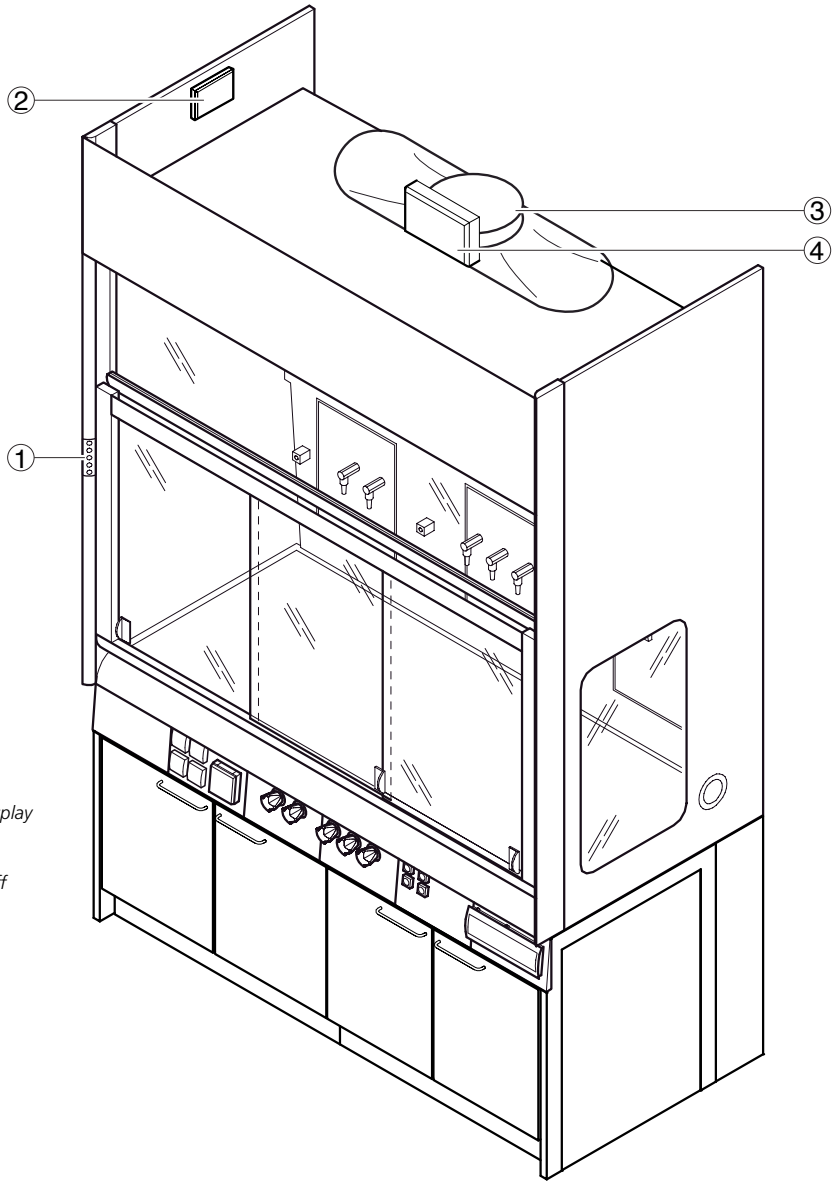
Control – Function display (FAZ) for fume hoods according to EN 14175-2

EN 14175-2 requires continuous monitoring of the ventilation functions of fume hoods to warn laboratory personnel by visual and acoustic signals in the event of a fault. The visual signals cannot be deleted.

Our function display takes over this task. It continuously measures the extract air volume flow and alerts users visually and acoustically if the level falls below the required minimum air exchange rate. It is also capable of monitoring our optional Secuflow technology. As with the AC, the control unit for the function display is ergonomically incorporated in the profile. Statuses are signalled here by means of different coloured lights and a display, and can be acknowledged if necessary.

Airflow measurement FAZ

The air flow rate present is determined by a differential pressure signal that is measured at the extract air hood. This measuring method is independent of room pressure fluctuations and the opening of the sash. In night mode, a second air volume can be monitored.



FAZ control panel

– Not occupied

– Light On/Off

– Visual and acoustic alarm
– Not occupied

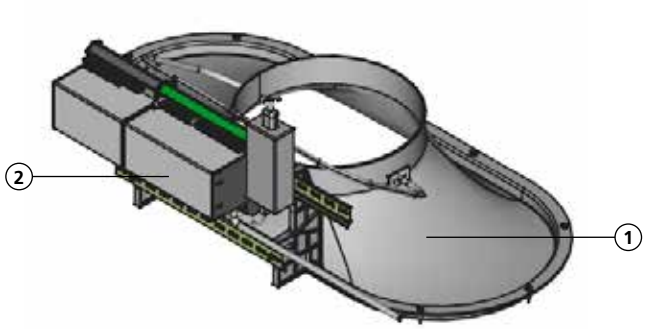
– Night operation display

– Functional monitoring On / Off
– Service connection

1 Display and operating device
2 Potentiometer sash position
3 Exhaust hood with differential pressure measurement
4 Central control unit FAZ

Differential pressure measurement FAZ
1 Exhaust hood, available in two designs:
Diameter of 250 mm and diameter of 315 mm
2 Electronics with pressure sensor

Diameter of measuring tube of 250 mm
for fume scrubber and filter fume hoods



Technical data

Monitoring	Function display (FAZ)
Power supply	230 V
Outputs	Alarm output
	Operating message
	Light switch
Inputs	On
	Off
	Acoustic alarm acknowledgement
	Night operation
Diameter [mm]	250, 315
System connection	Analogue I/O, Modbus

Sash controller SC

The SC supports the opening and closing of the sash by means of a motor, resulting in three benefits. All that is needed is for the sash to be gently touched and the opening and closing process is automatically continued/completed. It can also be operated by a foot switch, providing hands-free control.

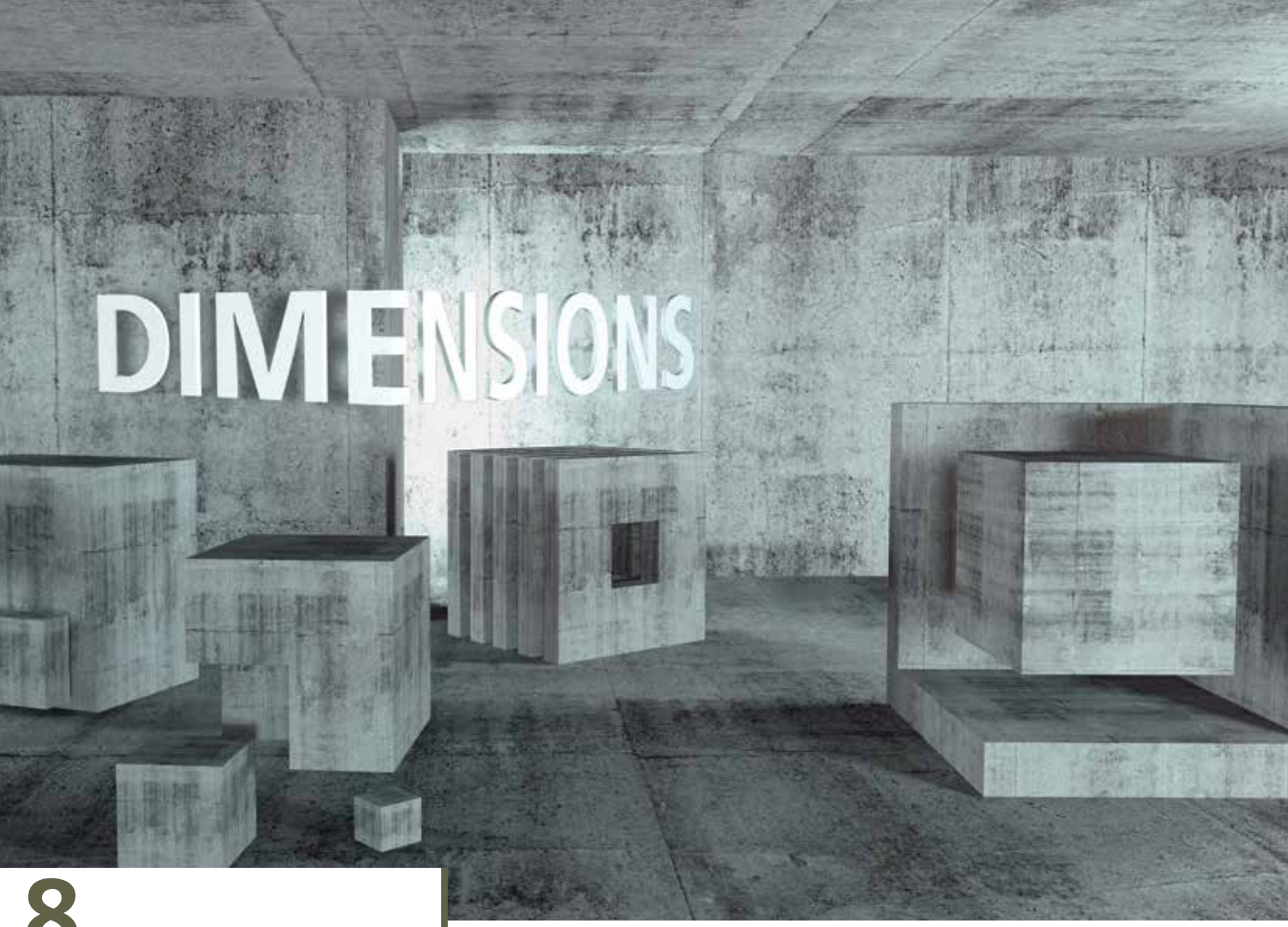
The SC is coupled with a motion detector to increase the safety and energy efficiency of the fume hood and monitor the area in front of the fume hood. If no one is detected in this area, the SC automatically closes the sash after a pre-set time. Objects in the sash area are reliably detected by a light barrier, and the sash stops to protect the experiment set-up. The SC also automatically puts into practice the specifications of Technical Regulation TRGS 526. According to this Technical Regulation, fume hoods not currently in operation need to be closed.

In combination with an Airflow Controller, the SC can also be connected to the DDC/GLT.

Component parts:
1) Processor-controlled central control unit
2) Motor drive (closes and opens the sash)
3) The photo-electric barrier integrated in the sash frame serves to detect obstacles in the path of the sash when the sash is automatically closed
4) The motion detector stops the sash when working in front of the sash

Technical data SC

Closing device	Sash controller SC
Power supply	24 V DC
Nominal capacity	48 VA
Digital inputs	3 pieces
Analogue output	1 piece



8 Dimensions

DIMENSIONS BY WALDNER
THE ALL-IN-ONE SOLUTION FOR CONVERTIBLE ROOMS

DIMENSIONS provides you with the technical infrastructure you need to quickly convert rooms. This gives you the flexibility to use rooms one way today and another way tomorrow. It's fast, functional, cost-effective and aesthetic.

You can obtain everything from a single source: innovative technology, excellent product quality, occupational safety, great user-friendliness, ergonomics, sustainability, appealing aesthetics and a feel-good factor.

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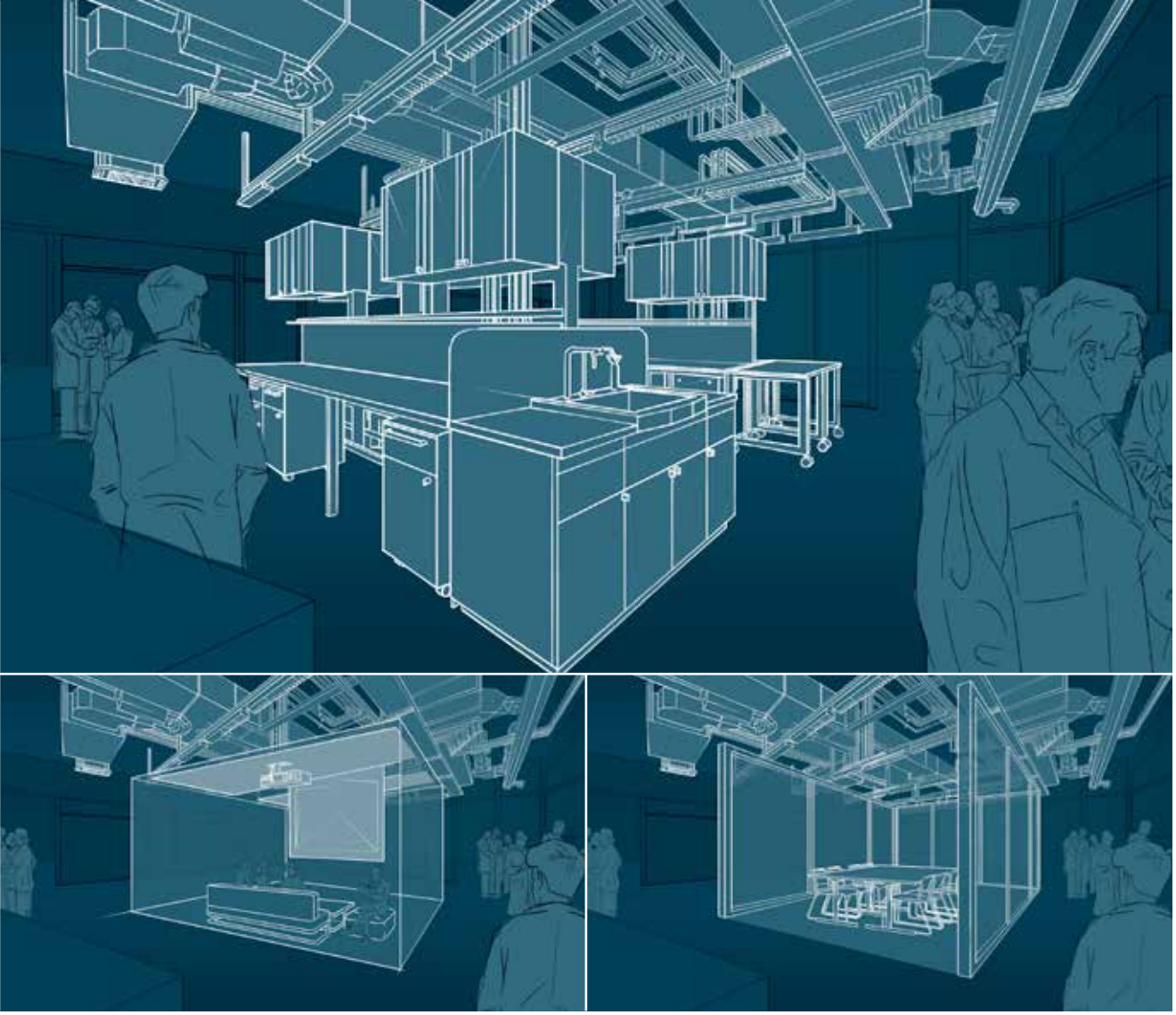


9 Accessories

We have designed useful accessories to individually equip certain areas of your working environment as required for our ***SCALA*** laboratory furniture system..

We will be pleased to show you our accessories that are perfectly adapted to our system.

Make your choice. The complete range of Waldner original accessories can be found in our special catalogue which is available on the Internet at www.waldner.de.
We will also be pleased to send you a printed copy.

10 General

Our innovative developments have made us the market leader in laboratory equipment.

Our products have set the standard for the laboratory workplace worldwide.

We know what our customers expect and we are constantly improving.

We reserve the right to make technical changes in the context of further development. Illustrations, drawings and text content are copyright protected. Re-printing, even of extracts, only with express approval of
WALDNER Laboreinrichtungen SE & Co. KG.

Colours

With respect to design and colour, we placed the emphasis on a balanced appearance with consistency in the application for optimal orientation in the surroundings in which the user spends many hours a day. As a result laboratories can be clearly and timelessly designed for pleasant working.

Pure white
RAL 9010
Similar to NCS S 0602 G91Y
- Storage cupboards
- Internal workspace

Standard for
- Metal parts service module
- Bench frames
- Fume hood fronts

Oak
- Optional as emphasis for storage cupboard fronts

Light grey
NCS S 3005 R80B
Similar to RAL 7040
- Worktops

Option for
- Metal parts service module
- Bench frames

Colours

Anthracite metallic effect
Similar to NCS S 5502 R
Option for
- Fume hood fronts

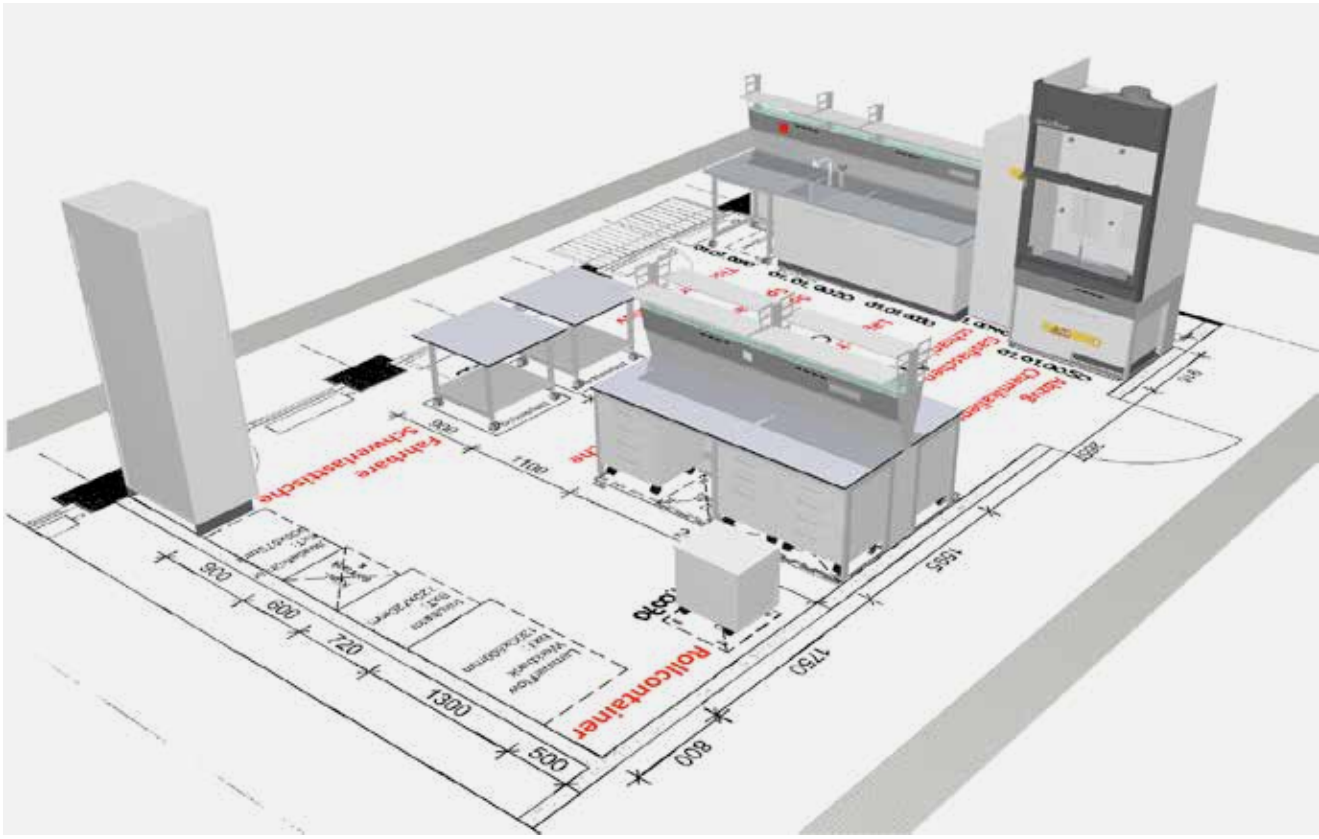
Glass
NCS S 1010 G10Y
- Worktops back-varnished

Dark grey
NCS S 7502 B
Similar to RAL 7015
- Storage cupboard plinth

Stainless steel
- Handles
- Worktops
- Sinks

Pictograms
CMYK 0/16/65/0
- Emphasising all markings for hazardous goods and special storage units

Laboratory planning



Our services go way beyond the pure manufacture of laboratory furniture. Due to our many years of experience in the project business, we have acquired fundamental planning competence. We not only equip your laboratory, but on request we will also take over the planning and coordination of all related trades.

The start of planning

The layout planning defines with two-dimensional clarity the intended space utilisation, requirements and existing features, connections, area dimensions, interfaces and other information.

Clear idea using an additional dimension

The laboratory will become clearly conceivable for you through the 3D drawing. We will then refine the details together with you.

In the next stage of the presentation, your laboratory will be almost "accessible" in colour and with clear, differentiated depth in the rendered representation. You will be able to see your laboratory from all angles.

As a logical conclusion to our precise planning and design work, the laboratory will be installed in your building – of course with the usual Waldner quality and on time.

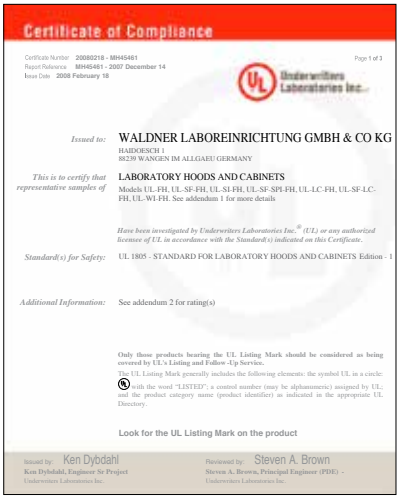
Laboratory planning

Awards

We have been further developing laboratory furniture for more than 70 years. Over this long period of time, we have had a significant impact on the laboratory workplace with our innovations.

As a result of our attention to detail during development and manufacturing, we have an impressive pool of experience in development, manufacture, planning, installation and service.

Numerous patents, brands, design patents and registered designs clearly demonstrate our innovative power. As the market leader, we will continue to do everything to impress our customers with new and innovative ideas.



Awards

Quality right down into the detail is defined not only by our claims about what we do.

We are the first German manufacturer of laboratory furniture to be certified to the quality standard ISO 9001.

ISO 9001 gives you the assurance that you will receive the highest quality products and professional support from the planning phase through to service. Of course, this aspect also covers procurement, development, the technical areas, production and installation.
In-house quality checks and regular training ensure exact observance of the high criteria in ISO 9001.

The products for the ***SCALA*** laboratory furniture system have been tested by TÜV Product Service GmbH based on all applicable standards and regulations in accordance with the German law on equipment safety and have the GS marking.

These test certificates are only awarded if the manufacturing process is continuously monitored. We have undertaken the obligation to monitor production in several ways: all materials, components and individual parts used in our factory are continuously tested, in some cases also in external test institutes.

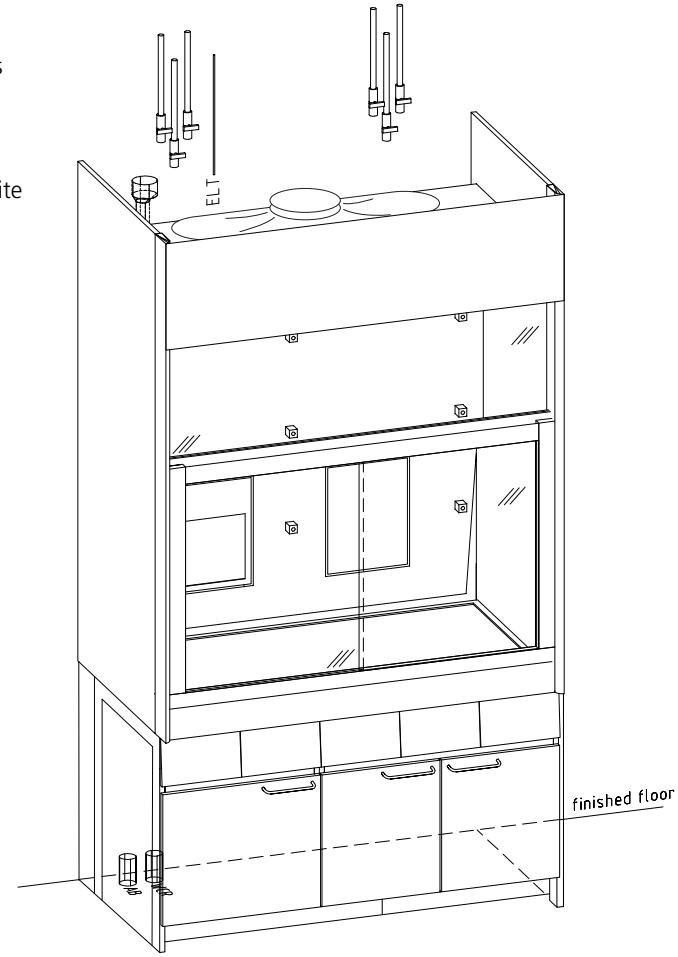
Waldner Laboreinrichtungen are environmentally certified. Our active environmental management system meets the EN ISO 14001 guidelines. To us, all aspects matter: From the materials used to the energy efficiency in the production processes, we strive to ensure environmental safety. The renewable resource “wood”, for example, is exclusively supplied by regional distributors, our powder coatings do not contain any solvents, the wood left over in the production process covers 85% of our heating requirements, all employees receive continuous training in environmental issues, and the EN ISO 14001 conformity is tested by TÜV Süd at regular intervals.

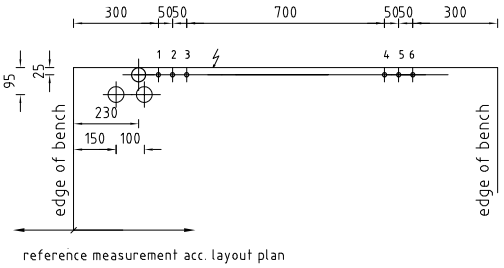
Installation interfaces mechanical and electrical services

- For water and technical gases, shut-off valves with 1/2" internal threads must be provided on-site according to DIN EN 10226-2
- For pure gases, shut-off valves with 10 mm clamp ring connections must be provided on-site
- For waste water connections, a 56 mm plug sleeve must be provided on-site.

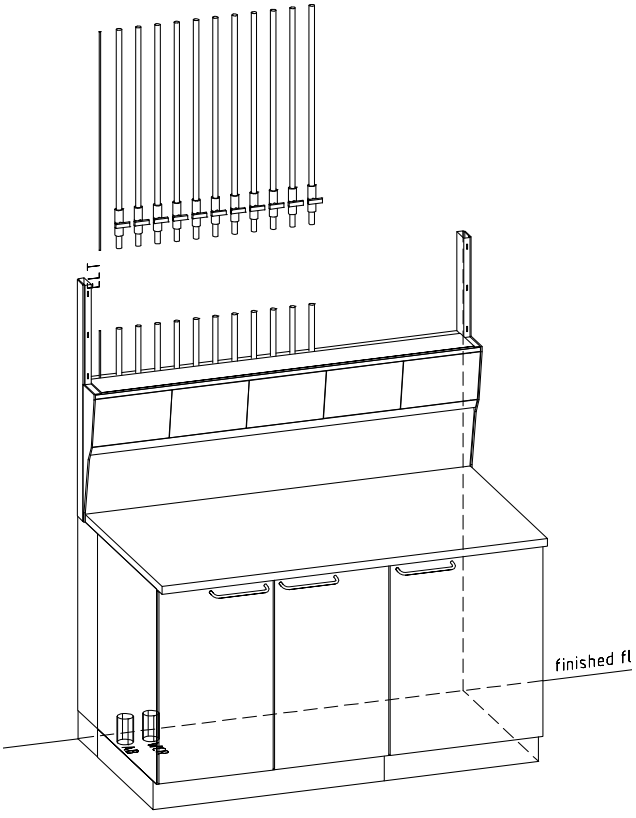
- Electrical supply pipe in acc. with DIN VDE 0100-430
- Type of cable/pipe with on-site fusing upon agreement with Waldner

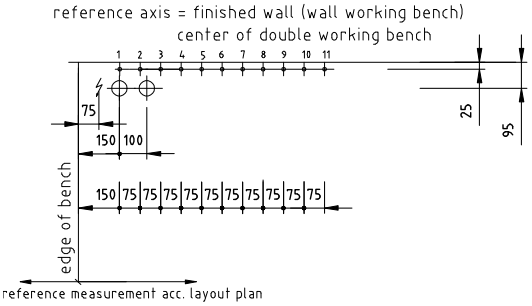
- Waldner will indicate the transfer points for the on-site trades for each project in the cor-res-ponding positional drawings





reference measurement acc. layout plan





reference measurement acc. layout plan

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