

Technical Catalog SCALA laboratory furniture system







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

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

We have redesigned our range of laboratory furniture based on innovative ideas, sophisticated detailed solutions and high-quality materials, thus meeting the requirements of our users with respect to ergonomics and profitability more than ever. Our **SCALA** laboratory furniture system with its flexible application units can easily be adapted to new room situations. In this way we can provide a large number of different design and furniture variants for every functional area of the laboratory.

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

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

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

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







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

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

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



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extraction systems

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

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

Reduced energy consumption – increased profitability

The fluid mechanics have been further optimised which means considerably reduced energy consumption of our new fume cupboards while maintaining the high safety level. Our bench mounted fume cupboards with side installation which are tested in accordance with EN 14175, e.g., use 350 m³/h/lfm, all bench mounted fume cupboards with Secuflow technology require 270 m³/h/lfm. As an important part of the overall laboratory ventilation scheme, our fume cupboards can be perfectly integrated into the building ventilation concept.

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

Improved ergonomics with the inclined operating panel

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



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

It prevents turbulence that could carry pollutant emissions.

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

For more safety

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

Anti-slip device for additional protection

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

Largest possible access area

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

Larger capacity of the internal workspace

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





Fume cupboards and extraction systems

Clear view of all processes in the workspace

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

The new scaffold points

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

All functions at a glance

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

Sash handle with air guiding function

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

The automatic sash

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

New fume cupboard widths available

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

New lighting for the internal workspace

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

The barrier-free sitting height fume cupboard

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



The best for equipment and variability

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

Service modules that can be equipped as desired

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

Our certified test laboratory for fume cupboard measurements

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

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

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



Bench-mounted fume cupboards Bench-mounted fume cupboard

Intended use

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

Design



- Sash with handle and horizontal
- sashes Work surface

1

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

Bench-mounted fume cupboards Bench-mounted fume cupboard

190 -ø --/// 0 0 0 /// 2950 -- 2700 -2720-٥ Π 900 1 1200/1500/1800/2100 900

Dimensional drawing

Technical data

1200	1500	1800	2100
1200	1500	1800	2100
900			
2700			
1150	1450	1750	2050
1550			
900			
	1200 1200 1150	1200 1500 1200 1500 1200 1500 1200 1450 1150 1450	1200 1500 1800 1200 1500 1800 900 2700 2700 1150 1450 1750 1550 900 900

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

1550



Bench-mounted fume cupboards Bench-mounted fume cupboard

Design characteristics	1200	1500	1800	2100		
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units					
Sash	2 horizontal	sashes	3 horizont	al sashes		
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal linir			vare internal lining ware internal lining		
Number of devices for scaffold points, ø 12 to 13 mm	9		12	2		
Service modules	2		3			
Electrics						
Electrical supply	External sockets in service papels					

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 $\ensuremath{\left(\text{PP} \right)}$ as an option

Ventilation technology	1200	1500	1800	2100
Minimum air exchange rate $[m^{3}/h]^{1}$	480	600	720	840
Extract air function display	FAZ			
Airflow damper, constant	Airflow-Controller AC			
Airflow damper, variable	Airflow-Controller AC			
Detector of sash position	Only variable with Airflow-Controller AC			
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720			
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	t 2830			
Connection height [mm] for AC with extract manifold Ø 250 mm	2950			
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	30	70		
Underbench exhaust	As an	option, depending on	requirements and regu	lations

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

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

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

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

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

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

Bench-mounted fume cupboards Low ceiling bench-mounted fume cupboard

Intended use

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



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



Bench-mounted fume cupboards Low ceiling bench-mounted fume cupboard

Dimensional drawing



Technical data

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

Bench-mounted fume cupboards Low ceiling bench-mounted fume cupboard

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

Sanitary technology

Sanitary supply

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

Ventilation technology	1200	1500	1800	2100	
Minimum air exchange rate [m³/h] 1)	480	600	720	840	
Extract air function display		FAZ			
Airflow damper, constant		Airflow-Contro	ller AC		
Airflow damper, variable		Airflow-Contro	ller AC		
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2530				
Connection height [mm] for AC with extract manifold Ø 250 mm	2650				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	2770				
Underbench exhaust	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 and the maximum tracer gas values recommended by BG Chemie.

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

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

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

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

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

and extraction system Fume cupboards



Bench-mounted fume cupboards Secuflow bench-mounted fume cupboard

Intended use

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



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

Bench-mounted fume cupboards Secuflow bench-mounted fume cupboard

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Dimensional drawing

Technical data

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

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



Bench-mounted fume cupboards Secuflow bench-mounted fume cupboard

Optional

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

Sanitary technology

Sash controller SC

Sanitary supply

Service modules with take-off valves for vacuum, gases and/or waters and integrated sink $\left(\mathsf{PP} \right)$ as an option

Ventilation technology	1200	1500	1800	2100		
Minimum air exchange rate $[m^{3}/h]^{1}$	330	410	490	570		
Extract air function display	FAZ					
Airflow damper, constant		Airflow-Co	ontroller AC			
Airflow damper, variable		Airflow-Co	ontroller AC			
Detector of sash position	Only variable with Airflow-Controller AC					
Connection height [mm] for FAZ with extract manifold Ø 250 mm	t 2720					
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	t 2830					
Connection height [mm] for AC with extract manifold Ø 250 mm	t 2950					
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	t 3070					
Underbench exhaust	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 and the maximum tracer gas values recommended by BG Chemie.

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

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

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

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

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

Bench-mounted fume cupboards Secuflow low ceiling bench-mounted fume cupboard

Intended use

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



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



Bench-mounted fume cupboards Secuflow low ceiling bench-mounted fume cupboard

Dimensional drawing



1250

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	Self-supporting underbench units or H-frame with pushed in underbench un			
Sash	2 horizontal sashes 3 horizontal sashes		tal sashes	
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining			
Max. number of devices for scaffold points, ø 12 to 13 mm	9		1.	2
Service modules	2	2	3	3

Bench-mounted fume cupboards Secuflow low ceiling bench-mounted fume cupboard

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

Sanitary technology

Sanitary supply

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

Ventilation technology	1200	1500	1800	2100	
Minimum air exchange rate [m³/h] 1)	330	410	490	570	
Extract air function display		F.	λZ		
Airflow damper, constant		Airflow-Co	ntroller AC		
Airflow damper, variable		Airflow-Co	ntroller AC		
Detector of sash position		Only variable with A	irflow-Controller AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2530				
Connection height [mm] for AC with extract manifold Ø 250 mm	2650				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	2770				
Underbench exhaust	As an	option, depending on	requirements and regu	lations	

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

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

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

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

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

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

and extraction system: Fume cupboards



Bench-mounted fume cupboards with side installation Bench-mounted fume cupboard with side installation

Intended use

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



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

Bench-mounted fume cupboards with side installation Bench-mounted fume cupboard with side installation



Dimensional drawing

Technical data

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

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

1550



Bench-mounted fume cupboards with side installation Bench-mounted fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	Self-supporti	ng underbench ur	nits or H-frame wit	h pushed in under	bench units
Sash	2 horizont	al sashes	3	8 horizontal sashes	
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option			cupboard	
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12		15
Service modules	Service modules i	n the left and/or r	right side panel of requirement	the fume cupboard	d, depending on

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 $\ensuremath{\left(\text{PP} \right)}$ as an option

Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m ³ /h] ¹⁾	420	525	630	840	840
Extract air function display			FAZ		
Airflow damper, constant		Ai	irflow-Controller A	с	
Airflow damper, variable		Ai	irflow-Controller A	с	
Detector of sash position		Only variab	le with Airflow-Cor	ntroller AC	
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	3070				
Underbench exhaust	A	s an option, deper	nding on requireme	nts and regulatio	ns

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

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

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

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

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

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

Bench-mounted fume cupboards with side installation Low ceiling bench-mounted fume cupboard with side installation

Intended use

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



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



Bench-mounted fume cupboards with side installation Low ceiling bench-mounted fume cupboard with side installation

Dimensional drawing



Technical data

Dimensions	1200	1500	1800
Width [mm]	1200	1500	1800
Depth [mm]		900	
Height [mm]		2400	
Clear width, internal workspace [mm]	950	1250	1550
Clear height, internal workspace [mm]		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	Self-supporting underbench units or H-frame with pushed in underbench units			
Two-piece sash	2 horizon	ital sashes	3 horizontal sashes	
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed ir the side panel of the fume cupboard, not with stoneware internal lining Material lock on the left and/or right as an option			
Max. number of devices for scaffold points, ø 12 to 13 mm	6		8	
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending o requirement			

Bench-mounted fume cupboards with side installation Low ceiling bench-mounted fume cupboard with side installation

Electrics					
Electrical supply	External sockets in service panels Internal sockets in service modules				
Fuse box	Optional				
Sash controller SC	Optional				
Sanitary technology					
Sanitary supply	Service modules with take-of sink (PP) as an option	f valves for vacuum, gases and	d/or waters and integrated		
Ventilation technology	1200	1500	1800		
Minimum air exchange rate [m ³ /h] ¹⁾	420	530	630		
Extract air function display		FAZ			
Airflow damper, constant		Airflow-Controller AC			
Airflow damper, variable		Airflow-Controller AC			
Detector of sash position	Only	variable with Airflow-Controlle	er AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2530				
Connection height [mm] for AC with extract manifold Ø 250 mm	2650				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\scriptscriptstyle 2)}$		2770			
Underbench exhaust	As an option,	depending on requirements a	nd regulations		

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

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

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

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

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

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



Bench-mounted fume cupboards with side installation Secuflow bench-mounted fume cupboard with side installation

Intended use

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

Design



- Sash with handle and horizontal sashes
- 2 Work surface

1

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

Bench-mounted fume cupboards with side installation Secuflow bench-mounted fume cupboard with side installation



Technical data

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

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



Bench-mounted fume cupboards with side installation Secuflow bench-mounted fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units				
Sash	2 horizor	2 horizontal sashes 3 horizontal sashes			
Side panel of the fume cupboard	not if serv	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option			
Max. number of devices for scaffold points, ø 12 to 13 mm	9		12		15
Service modules	Service modules	in the left and/or r	right side panel of t requirement	the fume cupboar	d, depending on
Electrics					
Electrical supply	External sockets Internal sockets	in service panels in service modules			
Fuse box	Optional				
Sash controller SC	Optional				
Sanitary technology					
Sanitary supply	Service modules	with take-off valve	es for vacuum, gase	es and/or waters a	nd integrated

sink (PP) as an option

Ventilation technology	1200	1500	1800	2100	2400
Minimum air exchange rate [m ³ /h] 1)	330	410	490	570	650
Extract air function display			FAZ		
Airflow damper, constant		Ai	rflow-Controller A	C	
Airflow damper, variable		Ai	rflow-Controller A	C	
Detector of sash position		Only variabl	e with Airflow-Co	ntroller AC	
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\scriptscriptstyle 2)}$	3070				
Underbench exhaust	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 and the maximum tracer gas values recommended by BG Chemie.

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

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

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

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

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

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

Intended use

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



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



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

Dimensional drawing



Technical data

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

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

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

Design characteristics	1200	1500	1800		
Supporting construction	Self-supporting underbench units or H-frame with pushed in underbench units				
Two-piece sash	2 horizontal sashes 3 horizontal sashes				
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard, not with stoneware internal lining Material lock on the left and/or right as an option; not with stoneware internal lining				
Max. number of devices for scaffold points, ø 12 to 13 mm	6 9				
Service modules	Service modules in the left ar	nd/or right side panel of the fu requirement	me cupboard, depending on		
Electrics					
Electrical supply	External sockets in service pa Internal sockets in service mo	nels odules			
Fuse box	Optional				
Sash controller SC	Optional				
Sanitary technology					
Sanitary supply	Service modules with take-of sink (PP) as an option	f valves for vacuum, gases and	d/or waters and integrated		
Ventilation technology	1200	1500	1800		
Minimum air exchange rate $[m^{3}/h]^{1}$	330	410	490		
Extract air function display		FAZ			
Airflow damper, constant		Airflow-Controller AC			
Airflow damper, variable		Airflow-Controller AC			
Detector of sash position	Only	variable with Airflow-Controlle	er AC		
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2420				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\scriptscriptstyle 2)}$	2530				
Connection height [mm] for AC with extract manifold \varnothing 250 mm	2650				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$	2770				
Underbench exhaust	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 and the maximum tracer gas values recommended by BG Chemie.

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

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

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

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

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



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

Intended use

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



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



Technical data

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

Weight

Without installation [kg]

Approx. 390



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

H-frame

E S	
	Design characteristics
	Supporting construction
	Sash
S	Side panel of the fume cupboard
S	Max. number of devices for scaffold points, ø 12 to 13 mm
	Service modules
0	
	Flectrics
	Electrical supply
5	
	Fuse box
i u	Sash controller SC
	Sanitary technology
×	Sanitary supply
Ð	
	Ventilation technology
0	Minimum air exchange rate $[m^3/h]^{-1}$
	Extract air function display
	Airflow damper, constant
σ	Airflow damper, constant Airflow damper, variable
a	Airflow damper, constant Airflow damper, variable Detector of sash position
ds al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm
rds al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾
oards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm
ooards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm
boards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾
ipboards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²) Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²) Underbench exhaust
cupboards al	 Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench neight [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm.
cupboards a	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²) Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²) Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa
e cupboards al	 Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm² Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm² Connection height [mm] for AC with extract manifold Ø 315 mm² Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa The indicated air exchange rates are minimur therefore advise against using these values as the present of the pre
ne cupboards ai	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa The indicated air exchange rates are minimur therefore advise against using these values as If on-site extract air monitoring systems and of must be agreed upon with Waldner beforehar
me cupboards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa The indicated air exchange rates are minimur therefore advise against using these values as If on-site extract air monitoring systems and of must be agreed upon with Waldner beforehas
ime cupboards ai	 Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa The indicated air exchange rates are minimum therefore advise against using these values as If on-site extract air monitoring systems and a must be agreed upon with Waldner beforehard
ume cupboards al	Airflow damper, constant Airflow damper, variable Detector of sash position Connection height [mm] for FAZ with extract manifold Ø 250 mm Connection height [mm] for FAZ with extract manifold Ø 315 mm ²⁾ Connection height [mm] for AC with extract manifold Ø 250 mm Connection height [mm] for AC with extract manifold Ø 315 mm ²⁾ Underbench exhaust ¹⁾ All air volume specifications refer to an oper recommended by BG Chemie. ²⁾ In order to minimise noise and pressure loss diameter of 315 mm. The maximum admission pressure of 600 Pa The indicated air exchange rates are minimur therefore advise against using these values as If on-site extract air monitoring systems and of must be agreed upon with Waldner beforehat Worktop

	2 horizontal sashes
nel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option
umber of devices for scaffold points, 13 mm	12
modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement
cs	
al supply	External sockets in service panels Internal sockets in service modules
X	Optional
ontroller SC	Optional
ry technology	
y supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option
ation technology	
um air exchange rate [m ³ /h] ¹⁾	530
air function display	FAZ
damper, constant	Airflow-Controller AC

pening height of the sash window of 500 mm and the maximum tracer gas values

Airflow-Controller AC

2570

2730

2800

2920

Only variable with Airflow-Controller AC

osses, for air volumes >1000 m³/h Waldner recommends using an extract manifold with a

As an option, depending on requirements and regulations

a for Waldner airflow dampers must not be exceeded.

um air exchange rates in acc. with DIN EN 14175 for operating the fume cupboards. We as a basis for dimensioning the ventilation system.

d controlling products are used, different air volumes may result. The operating limitations hand.

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

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

Intended use

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

Design



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



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

Dimensional drawing



Technical data

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

Weight

Without installation [kg]

Approx. 390

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

Design characteristics	
Supporting construction	H-frame
Sash	2 horizontal sashes
Side panel of the fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option
Max. number of devices for scaffold points, ø 12 to 13 mm	12
Service modules	Service modules in the left and/or right side panel of the fume cupboard, depending on requirement
Electrics	
Electrical supply	External sockets in service panels Internal sockets in service modules
Fuse box	Optional
Sash controller SC	Optional
Sanitary technology	
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option
Ventilation technology	
Minimum air exchange rate [m ³ /h] ¹⁾	410
Extract air function display	FAZ
Airflow damper, constant	Airflow-Controller AC
Airflow damper, variable	Airflow-Controller AC
Detector of sash position	Only variable with Airflow-Controller AC
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2570
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2730
Connection height [mm] for AC with extract manifold Ø 250 mm	2800
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\ 2)}$	2920
Underbench exhaust	As an option, depending on requirements and regulations
¹⁾ All air volume specifications refer to an opening	ng height of the sash window of 500 mm and the maximum tracer gas values

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

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

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

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

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



Walk-in fume cupboards Walk-in fume cupboard with side installation

Intended use

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

Design



4 FAZ or AC control panel Upper sash window Removable fascia panel 6

1

2

3

sashes

Service panel

Extract air collection duct

of the fume cupboard

8 Baffle with scaffold points

Walk-in fume cupboards Walk-in fume cupboard with side installation



Dimensional drawing

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 cupboards Walk-in fume cupboard with side installation

Design characteristics	1200	1500	1800	2100	2400
Two-piece sash	2 horizontal sashes at the top and bottom		3 horizontal sashes at the top and bottom		
Side of fume cupboard	Glass pane on the left and/or right as an option; not if service modules are installed in the side panel of the fume cupboard Material lock on the left and/or right as an option				cupboard
Number of devices for scaffold points, ø 12 to 13 mm	9		12		15
Service modules	In the left and/o	or right side pane	l of the fume cupb	ooard, depending o	n 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 [m ³ /h] ¹⁾	720	900	1080	1260	1440
Extract air function display			FAZ		
Airflow damper, constant		Ai	irflow-Controller A	кС	
Airflow damper, variable		Ai	irflow-Controller A	кС	
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\rm 2)}$	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\rm 2)}$			3070		

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

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

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

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

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

Material

Internal lining

Solid (grade) laminate

Low level fume cupboards Low level fume cupboard with side installation

Intended use

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

Design



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



Low level fume cupboards Low level fume cupboard with side installation

Dimensional drawing



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 600	1200 x 600	1500 x 600	1800 x 600	2100 x 600
Working height [mm]			500		

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

Low level fume cupboards Low level fume cupboard with side installation

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

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 [m ³ /h] ¹⁾	720	900	1080	1260	1440
Extract air function display			FAZ		
Airflow damper, constant		Ai	irflow-Controller A	С	
Airflow damper, variable		Ai	irflow-Controller A	с	
Detector of sash position	Only variable with Airflow-Controller AC				
Connection height [mm] for FAZ with extract manifold Ø 250 mm	2720				
Connection height [mm] for FAZ with extract manifold Ø 315 mm $^{\scriptscriptstyle 2)}$	2830				
Connection height [mm] for AC with extract manifold Ø 250 mm	2950				
Connection height [mm] for AC with extract manifold Ø 315 mm $^{\scriptscriptstyle 2)}$	3070				
Underbench exhaust	A	s an option, deper	nding on requireme	nts and regulation	ns

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

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

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

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

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

Material

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



Special fume cupboards Special application fume cupboard

Intended use

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

Design



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

Special fume cupboards Special application fume cupboard



Technical data

Dimensional drawing

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

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



Special fume cupboards Special application fume cupboard

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

Electrics

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

Sanitary technology

Sanitary supply

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

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

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

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

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

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

Material/surface

Internal lining including worktop

Stoneware (when sulphuric acid, aqua regia, perchloric acid are used) Polypropylene (when hydrofluoric acid is used)

Special fume cupboards Radio-isotope fume cupboard

Intended use

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

Design



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



cupboards and extraction system Fume

Special fume cupboards Radio-isotope fume cupboard

Dimensional drawing



Dimensions	1200	1500	
Width [mm]	1200	1500	
Depth [mm]	900		
Height [mm]	27	700	
Clear width, internal workspace [mm]	1150	1450	
Clear height, internal workspace [mm]	1060		
Working height [mm]	900		
Filter housing, width x depth x height [mm]	820 x 775 x 674		

Weight	1200	1500
Without installations and lead insert [kg]	Approx. 250	Approx. 300
Filter housing [kg]	9	0

Special fume cupboards Radio-isotope fume cupboard

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

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

Sanitary technology

Sanitary supply

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

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

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

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

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

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

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

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

Material/surface

Internal lining including worktop

Polypropylene Stainless steel



Special fume cupboards Filter fume cupboard

Intended use

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

Design



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

Special fume cupboards Filter fume cupboard



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

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



Special fume cupboards Filter fume cupboard

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

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

Sanitary technology

Sanitary supply

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

Ventilation technology	1200	1500	1800
Minimum air exchange rate [m ³ /h] 1)	480	600	720
Pressure loss, filter [Pa] 2)	35/200	45/235	65/290
Pressure loss, particle filter [Pa] $^{\scriptscriptstyle 2)}$	70/300	95/365	130/430
Pressure loss, activated carbon filter [Pa] $^{\scriptscriptstyle 2\!\scriptscriptstyle)}$	35/25	45/30	65/35
Extract air function display	FAZ		
Airflow damper, constant	Airflow-Controller AC		
Airflow damper, variable	Airflow-Controller AC		
Detector of sash position	Only variable with Airflow-Controller AC		
Connection height [mm] for FAZ and AC with extract manifold Ø 250 mm	3050		
Underbench exhaust	As an option,	depending on requirements a	nd regulations

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

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

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

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

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

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

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

Mobile fume cupboards AeroEm

Intended use

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

Design

Front view



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



Mobile fume cupboards AeroEm

Rear view



Valve for water outlet
 Handle with sash and horizontal sash

- *3 FAZ control panel*
- 4 Switch for internal sockets
- 5 Valve for gas outlet

Width [mm] 105	50
Depth [mm] 815	5
Height [mm] 197	75
Working height [mm] 900	0
Height, castors [mm] 120	0

Weight		
Weight [kg]	180	
Design characteristics		
Sash	Two-piece, moves up and down with 2 horizontal sashes each	
Glass pane in the side wall	All 4 sides of the fume cupboard	
Lighting	Dazzle-free, can be switched from the outside	
Roller shutter guiding	For pipes and cables on the left and right side of the fume cupboard	

Mobile fume cupboards AeroEm

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

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

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

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

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

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



Mobile fume cupboards MobilAir

Intended use

- Can be used where required (only in air-circulating mode)
- Control elements located externally

Design

Air-circulating mode



- ה כמחמנמז מוות באר
- 1 Sash with handle
- 2 FAZ control panel
- 3 Removable fascia panel4 Filter housing with venti
- 4 Filter housing with ventilator in air-circulating mode
- 5 Rear panel with air guiding
- profile
- 6 Material lock
- 7 Sockets

Mobile fume cupboards MobilAir



- 1 Sash with handle
- 2 FAZ control panel
- 3 Removable fascia panel4 Extract air spigot to on-si

Extract air operation

- 4 Extract air spigot to on-site extract air system
- 5 Rear panel with air guiding profile
- 6 Material lock
- 7 Sockets

Technical data

900
600
1215/1620
840
503
846

70 82

Weight

MobilAir for extract air operation [kg]	
MobilAir for air-circulating mode incl. filter [kg]	



Mobile fume cupboards 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	Possible on the left and/or right side of the fume cupboard
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 auchange rate [m3/b]	200

Minimum air exchange rate [m ³ /h]	300
Extract air function display	FAZ as an option
Connection height upper edge of duct [mm] Extract air spigot Ø 125 mm	1137
Connection height [mm] Extract air spigot Ø 120 mm	3050
Air-circulating mode	Filter as an option Ventilator, speed governor for switching on/off as an option

Material

Side panel design, sash

Plexiglas

Housing-ins Permanent enclosure

Intended use

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

Design



1 Connection for extract air

- 2 Horizontal sash
- 3 Ventilation slots

Dimensions	1200	1500	1800	2100
Width [mm]	1200	1500	1800	2100
Depth [mm]		56 7* 75 90	55 15 50 00	
Height [mm]		14	50	
Height incl. extract air spigot [mm]		15	50	
Height incl. extract manifold [mm]		17	50	



Housing-ins 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-s Extract manifo	ite extract air system old as an option	
Material lock		Opt	tional	
Lighting		Opt	tional	
Shelf board, inside		Opt	tional	

Ventilation technology	
Extract air function display	FAZ as an option
Connection height [mm] for extract air spigot Ø 125 mm	1550
Connection height [mm] for extract manifold Ø 250 mm	1750

Material

Side panel design, sash

Safety glass (ESG)

Local extraction systems Underbench exhaust

Intended use

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

Design



- 1 Ventilation connection
- 2 Ventilation slots

Technical data

Ventilation technology	
Air exchange rate [m ³ /h]	40
Ventilation connection (ascending duct) Ø [mm]	90

 Material

 Ventilating pipe
 PPS



Local extraction systems Extract system

Intended use

- For the extraction of combustion residues in laboratories
- For the extraction of cold and hot flames
- To stabilise the burner flame
- To protect the instruments from corrosive fumes

Design



Dimensions	
Dimensioning	Project-planning as required
Extractor hood	Stainless steel
Design characteristics	
Standard	Extractor hood Telescopic tube Pipe systems Ventilators Blow-out unit Fastening elements
Acoustic insulation	Installation of the ventilators and blow-out unit outside the laboratory as an option
Material	
Pipe systems	Stainless steel
Extractor hood	Stainless steel

Local extraction systems Extraction lever

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

Design



Dimensions	50	75
Pipe system Ø [mm]	50	75
Coupling hood Ø [mm]	3!	50
Extraction maximum [mm]	50	75

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

Material	
Pipe	Anodised aluminium
Hinged bracket	Polypropylene
Coupling hood	Polycarbonate
Extraction maximum	Anodised aluminium



Local extraction systems Relieving hood

Intended use

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

Design



Technical data

Dimensions	
Length of pipe system [mm] at Ø 40 mm	1000
Hood Ø [mm]	120
Extraction maximum [mm]	50

Ventilation technology	
Minimum air exchange rate [m ³ /h]	5
Admission pressure [Pa]	200

Plastic

Material

Pipe and hood

Local extraction systems Extractor hood

Intended use

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

Design



Technical data

Dimensions	1200	1500
Width [mm]	1200	1500
Height x depth [mm]	300 x 600	300 x 600
Extract air spigot Ø [mm]	20)0

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	150

Material

Extractor hood

Stainless steel, coated





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.

Due to their modular design, our new service modules, i.e. service spine, suspended service boom, service module, service wing and service ceiling not only provide the services in the laboratory but also – more than ever – meet the ergonomical 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 latest laboratory furniture system is made up of much fewer individual parts. Our service panels are fitted without joints, have even surfaces without edges, and the hidden integrated rail for supplementary functions is installed right where it is needed.

This simplifies cleaning and meets high hygienic requirements.



Service duct	
Service spine	.80
Service wing	.84
Suspended service boom	
Service module	
Service distribution terminal	
Service wall duct	.93
Bench mounted service outlet	
Service ceiling	
Service ceiling	





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 work surface.

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 integrated rail for suitable accessories

The integrated rail below the panel level is used for fitting useful accessories such as storage shelf, reagent pillar, 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 reagent repository. 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 suspended cabinets.


The service module

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

The service module is equipped with removable panels and an integrated 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 panels and an integrated 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 integrated rail for variable configuration.





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 integrated rail for useful accessories

The integrated rail accommodates useful accessories such as instrument 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 cupboards 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 preassembled 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 modules

Service ceiling for flexible laboratories

It is becoming increasingly important that users are able to adapt the laboratory quickly to their changing needs.

The Waldner service ceiling is the first unit to integrate all liquid laboratory services as well as gases, electricity, data supply lines, lighting, ventilation and supply and waste air ducts, and enables the laboratory to be adapted easily to new requirements so it can be used efficiently and variably.

In this way, the service ceiling makes the laboratory flexible and independent from connections, services, supply and disposal units, and the entire laboratory space can be freely adapted to the users' requirements and optimised according to their specific needs.

The service ceiling simplifies laboratory building planning

Entire floors can be covered with the service ceiling and can be restructured as required due to the grid-analogous sectioning, without interfering with the basic structures of the building. The costs for restructuring rooms are considerably reduced compared with conventional laboratory furniture systems.

The space-saving assembly of the integrated trades of our services system saves room height thus reducing the building size.

The service ceiling elements are pre-assembled at the factory and supplied with all components to the almost finished laboratory rooms. There is no need for coordinating different suppliers which, in turn, saves costs. Compared with conventional installation, 90 % less bore holes must be drilled for mounting the entire service ceiling.

The service ceiling can also be integrated into the existing architecture.



Fast modification of rooms

Our service ceiling system will help you respond to new tasks in the laboratory.

The mobile system parts such as benches, underbench units or racks are rolled to another place, mobile components are attached to a suspended service boom, and work in the laboratory will continue to run smoothly according to the new requirements.

Connecting the office to the laboratory

New areas can be created using the service ceiling segments. Installations are changed from the nearest connection blocks. With our partition wall system, the office and the laboratory can operate side by side.

Economical pre-assembly saves precious time

The planned dimensions of the service ceiling for the laboratory project are divided into individual segments. Although very light, the system frame made of high-strength aluminium profiles is extremely stable. All service lines, waste and supply air ducts, power, lighting and connection blocks are mounted precisely to their positions. The individual components are dimensionally accurate which saves time-consuming rectification.

Only one on-site service transfer point

The service ceiling is supplied by an on-site service transfer point and equipped with connection points that are distributed over a freely definable area and connect to the movable service modules at the individual workplaces. This saves costs since it is not necessary to coordinate different trades.

Movable service modules

The service installations on each system frame are equipped with special connection blocks that supply the service modules through flexible pipes and cables. To move the module, the clamping must simply be opened and fastened again.



Service duct

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 panels
- Use in service spines, service wall ducts, suspended service booms, service modules and service bench mounted units
- 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, sanitary
- installation
- Top cover (possibility for storage) 2
- 3 Service panel, electric installation 4
- Integrated rail for the tool-free
- installation of add-on parts

Service panel variants



- Service panel with corner valves 1
- 2 Service panel with 8 sockets of the same type
- Service panel with different types 3 of sockets
- Service panel with automatic 4 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				
Panel, width x height [mm]			300 x 200		

¹⁾ The service duct can be extended as desired in steps of 300 mm.

Service duct

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	

Cover	Solid (grade) laminate 5 mm Glass plate

Electrics	
Electrical supply	Sockets in service panels
Fuse box	Optional
Max. number of sockets 230 V per panel	8
Max. number of sockets 400 V per panel	2
Max. number of automatic circuit breakers per 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 panel	5
Max. number of pure gas outlets per panel	3 to 5 depending on the type and function



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Intended use

- For floor-mounted services supply of:
 - ► Wall benches
 - Double benches
 - > Laboratory devices on mobile tables or underbench constructions
 - Floor-mounted laboratory devices
- Design versions for genetical engineering areas
- Modular fastening of cell add-on parts to the multipurpose uprights, e.g. reagent repositories, instrument shelfs, suspended 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 Installation compartment panel
- 2 Sink module
- 3 Service panel with sanitary installation
- 4 Pillar for cell add-on part
- 5 Service duct with panels, glass shelf and integrated rail for add-on parts
- 6 Service panel
- 7 Cantilever
- 8 Multipurpose upright

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



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



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



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





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



Dimensional drawing

Service spine for wall bench/double bench



Service modules

Technical data

Dimensions	600	900	1200	1500	1800
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 suspended cabinet, height 460 mm	462				
Height, pillar extension [mm] for suspended cabinet, height 760 mm)	762				
Height, pillar extension [mm] up to ceiling height 3500 mm	Depending on ceiling height				
Panel, width x height [mm]	300 x 200				
Reagent repository, width x depth [mm]	Width, service spine x 150				
Instrument shelf, width x depth [mm]	Width, service spine x 300				

Load bearing capacity				
Glass shelf [kg]	20			
Instrument shelf [kg]	30			
Scaffold points [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 suspended 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 systems and AeroEm fume cupboard
 - > Laboratory devices on mobile tables or underbench constructions
 - Floor-mounted laboratory devices
- Tool-free installation of supplementary service wing add-on parts

Design



- 1 Sanitary duct with gas and water outlets
- 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 panels for the power supply



Expansion stage 2

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



Service wing

Expansion stage 3

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



Expansion stage 4

Electrical trunking with 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 4





Service wing

Technical data

Dimensions					
Width [mm]	600	900	1200	1500	
Depth [mm] with expansion stage 1		24	10		
Depth [mm] with expansion stage 2		49	96		
Depth [mm] with expansion stages 3 and 4		75	50		
Height [mm] without dust cover for expansion stages 1 and 2		18	31		
Height [mm] without dust cover for expansion stages 3 and 4		19	91		
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

- Services supply from the ceiling for:
 - Laboratory benches below the suspended service boom
 - Laboratory devices on mobile tables or underbench constructions
 - Floor-mounted laboratory devices
- Design versions for genetical engineering areas
- Modular fastening of service boom add-on parts to the supporting construction, e.g. reagent repositories, instrument shelves, 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

2

5

9





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)		Depe	ending on ceiling h	neight	
Panel, width x height [mm]			300 x 200		
Reagent repository, width x depth [mm]		Width, su	spended service b	oom x 150	
Instrument shelf, width x depth [mm]		Width, su	spended service b	oom x 300	
Load bearing capacity					
Additional max. load bearing capacity, suspended service boom [kg] per grid	30				
Glass shelf [kg]	20				
Instrument shelf [kg]	30				
Scaffold points [kg]	5				
Design characteristics					
Construction	Functional elem	ents to take up ser	vice ducts fastene	d to the ceiling a	nd connected
Number of service panels (per side)	Depending on the width of the service duct				
Scaffold points ø [mm]	12 to 13				
Material					
Cover	Solid (grade) lan	ninate 5 mm			
Electrics					
Electrical supply	Sockets in the se	ervice panel			
Fuse box	Optional				
Sanitary technology					
Sanitary supply	Service panel wi Supply pipes and	th take-off valves f d cables in supply o	or vacuum, gases duct from above	and/or waters	

Service module

Intended use

- Services supply from the ceiling for:
 - Laboratory benches below the suspended service boom
 - > Laboratory devices on mobile tables or underbench constructions
 - Floor-mounted laboratory devices
- Version with one or two sides
- Design versions for genetical engineering areas
- Additional storage area through the connection of service modules with reagent repositories

Design



- 1 Service panel with sanitary installation
- 2 Service panel with electric installation
- 3 C-frame
- 4 Ceiling stator
- 5 Profile
- 6 C-frame for profile
- 7 Service duct



(5)

6

(7)

Service module

Two single-sided service modules with storage area



Two double-sided service modules with storage area



Service module

Technical data

Dimensions				
Width [mm]	252			
Depth [mm] Single-sided		17	9	
Depth [mm] Two sides		27	0	
Height [mm] without C supporting construction		120	00	
Height, supporting construction [mm] (max. up to ceiling height) 4000 mm)		Adapted to co	eiling height	
Panel, width x height [mm]		300 x	200	
Storage area, width [mm]	900	1200	1500	1800
Storage area, depth [mm] Single-sided	105			
Storage area, depth [mm] Two sides		15	5	

Load bearing capacity	
Additional max. load bearing capacity [kg] Service module for each service module pair	20
Reagent glass shelf [kg]	20
Scaffold points [kg]	5

Design characteristics	
Construction	C-frame for service duct mounted to the ceiling, can be equipped on one or two sides, height-adjustable or wall-mounted profile, can be equipped on one side Can be expanded on one and/or two sides
Max. number of service panels (per side)	4
Scaffold points ø [mm]	12 to 13

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
	Accommodation of supply pipes and cables

2



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 module, 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 for singlephase AC



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
Gap [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. 4 sockets for three-phase AC in service panels
Max. number of sockets 230 V per panel	4
Sanitary technology	
Sanitary supply	Various take-off valves for vacuum, gases or compressed air
Max. number of corner valves per panel	2
Max, number of pure gas outlets per 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 devices on mobile tables or underbench constructions
 - Floor-mounted laboratory devices
- 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



- Service panel with electric installation 1
- 2 Service panel with sanitary installation
- 3 Cover for service wall duct
- Media supply from above 4
- Fastening profile/media supply Service duct 5 6

Technical data

Dimensions	600	900	1200	1500	1800
Width [mm]	600	900	1200	1500	1800 ¹⁾
Depth [mm]			184		
Height [mm]			252		
Front inclination [°]			9		
Panel, width x height [mm]			300 x 200		

¹⁾ The service wall duct can be extended as desired in steps of 300 mm.

Load bearing capacity	
Cover [kg]	20 per installed grid
Design characteristics	
Construction	Service duct for wall mounting
Number of service panels	Depending on the width of the service duct
Material	
Cover	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 in the fastening profile



Intended use

- Services supply of double benches
- Design versions for genetical engineering areas
- Modular fastening of cell add-on parts to the multipurpose uprights, e.g. reagent repositories, instrument shelfs, suspended 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 outlet with cantilever frame and suspended underbench unit



- 1 Work surface
- 2 Drip cup with water outlet
- 3 Panel with electric installation
- 4 Panel with sanitary installation
- 5 Cover for bench mounted unit
- 6 Service duct
- 7 Multipurpose upright
- 8 Media supply duct
- 9 Suspended underbench unit

Bench mounted service outlet

Bench mounted service outlet with suspended cabinets, H-frame and castor-mounted underbench units pillar extension and underbench units on a plinth



Service bench mounted unit with suspended cabinets,

Bench mounted service outlet

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 suspended cabinet, height 460 mm)			462		
Height, pillar extension [mm] (for suspended cabinet, height 760 mm)			762		
Height, pillar extension [mm] (up to ceiling height 3500 mm)		Depe	ending on ceiling h	eight	
Panel, width x height [mm]			300 x 200		
Reagent repository, width x depth [mm]		Width,	bench mounted un	it x 150	
Instrument shelf, width x depth [mm]		Width,	bench mounted un	it x 300	
Load bearing capacity					
Reagent repository [kg]	20				
Instrument shelf [kg]	30				
Scaffold points [kg]	5				
Design characteristics					
Construction	Double-sided ser	vice duct as bench	n mounted unit wit	h opening above	the worktop
Number of panels	Depending on d	uct width			
Scaffold points ø [mm]	12 to 13				
Material					
Cover	Solid (grade) lam	iinate 5 mm			
Electrics					
Electrical supply	Sockets in the se	ervice panel			
Fuse box	Optional				
Sanitary technology					
Sanitary supply	Service panel wit Supply pipes in t	th take-off valves f he bench mounte	or vacuum, gases a d unit	and/or waters	

Service ceiling

Intended use

- Ceiling supply system for laboratories with a highly flexible, modular design of the individual branches
- Suitable for all types of laboratories, such as chemical, analytical or physical laboratories
- For laboratories with flexible requirements
- Integration of all building services in the laboratory such as ventilation systems with control, power supply, lighting and services supply
- Individual adaption of the size to the building grid
- Very short installation times at the construction site

Design

Ceiling supply system



- 1 Aluminium profile
- 2 Grid duct for the power supply and outlet boxes
- 3 Supply air duct with controller, sound absorber, etc. as an option
- 4 Sanitary supply with connection block
- 5 Ceiling stator for fastening to the floor ceiling
- 6 Lighting unit
- 7 Extract air pipe with connection spigot



Service ceiling

Connections



- 1 Gas connection
- 2 Technical cooling water connection
- 3 Cooling water connection
- 4 Vacuum connection

Technical data

Dimensions	
Width x depth	Adapted to the building grid
Module width [mm]	Recommended 3000 - 3800
Module depth [mm]	Recommended 2400 - 12000
Recommended height [mm] for support (bottom edge of service ceiling)	2850
Load bearing capacity	
Maximum load bearing capacity [kg/m²] Aluminium profile 250 mm x 50 mm	500
Design characteristics	
Construction	Square module grid made up of aluminium profiles Modules carry service pipes, electrical trunking, supply air duct, extract air duct and lighting system as well as service modules or laboratory furniture Friction-locked connection for partition walls Compensation of building tolerances with ball point supports possible Installation depends on the floor ceiling properties
Electrics	
Electrical supply	Various power supply concepts are possible, such as busbar systems with outlet boxes Busbar systems with 32 A or 64 A Protection type IP 55
Cabling	Cable duct for additional power and data cable routing
Fuse box	Integrated in the busbar or service module

Service ceiling

Sanitary technology	
Supply pipe	Intersection-free Simple retrofitting of all services Any number of connection blocks for vacuum, gases and waters possible
Connection blocks	2, 3 or 4 outlet couplings Connections can be made under pressure (exception: vacuum) via free-flying pipes
Cooling ceiling module	Optional

Ventilation technology	
Supply air	Various ventilation systems, e.g. Laminarflow, Wavedrall etc. Draft-free Very good air mixing
Extract air	Extract air duct with interfaces e.g. for fume cupboards (extract air spigot Ø 250 mm and Ø 90 mm) Mounted on ceiling grid With extract air spigot as an option
Sound absorber module	Optional
Filter module	Optional
Airflow damper	Optional
VAV module	Individual VAV for every room axis with flow section, airflow damper, heat exchanger and sound absorber as an option
Room control	For supply and extract air, temperature and room pressure as an option





In our new **SCALA** laboratory furniture sytem, laboratory benches are of major significance. 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 cupboards 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 modules and the service ceiling – for fast moving in the laboratory.



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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/m² 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, H-frame and cantilever 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 flush-mounted height-adjustable feet for C and H-frames offer up to 23 mm regulating distance, as an option up to 50 mm. Easy access and adjustment, for steady positioning.

Easy cleaning

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



The 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/m². They provide users with a large amount of knee and legroom with mobile and suspended underbench units.

The cantilever frame

provides the greatest legroom and lightest visual impact. It is fitted to service spines or directly to walls via its cantilever bracket design.

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

Add-on tables, Swings and round tables are autonomous objects and can be combined to form new modules as required. 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.





There are no limits to using sinks and sink modules in the laboratory. With a new appearance that matches our range of laboratory furniture **SCALA** and is made of tried-and-tested materials, our sink elements can be perfectly integrated where they are needed. Materials such as stoneware, polypropylene, stainless steel and epoxy are extremely durable.

Stoneware sink modules

Our sink modules can be integrated as end sink units or along the service spine. The module made of high-strength baked and glazed stoneware in 1200 mm width is made of one piece without joints. Our sink modules are mounted on supporting plinth units that can be fitted with drawers and hinged or tilting doors as desired.

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 Material/frame combinations

Combination of worktop material and bench frames

Material, worktop		Melamine resin coating	Postforming	Solid (grade) Iaminate	Solid (grade) laminate Trespa Toplab+	Polypropylene
H-frame		x	x	x	x	x
C-frame		x	x	x	x	x
Cantilever bench frame		x	x	x	x	x
Mobile table frames		x	x	x	x	x
H-frame for low level fume cupboards	$\widehat{\mathbf{N}}$	-	-	-	-	X ⁴⁾
Balance table		x	x	-	-	-
Swing		X ¹⁾	-	-	-	-
Round table	Ĩ~ Ţ	x ¹⁾	-	-	-	-
Rack		X ²⁾	-	-	-	-
Sliding elements		x ³⁾	-	-	-	-

¹⁾ Walnut veneer or light grey

²⁾ Shelves white, top of Sekretär walnut veneer

³⁾ Only walnut veneer

⁴⁾ Material with surrounding increased edge

Laboratory benches Material/frame combinations

Material, worktop		Ероху	Stainless steel	Stoneware	Compound stoneware worktop	Glass
H-frame		x	x	x	x	x
C-frame	$\widehat{\mathcal{M}}$	x	x	x	x	x
Cantilever bench frame	$\widehat{\mathcal{A}}$	x	x	x	x	x
Mobile table frames	\widehat{P}	x	x	x	x	x
H-frame for low level fume cupboards	$\widehat{{\bf P}}$	X ¹⁾	X ¹⁾	X ¹⁾	-	-

¹⁾ Material with surrounding increased edge

3



Laboratory benches Worktop material

Melamine resin coating/postforming	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids
	Nitric acid
	Heated sulphuric acid
Advantage	Flat
Disadvantage	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/m ²]	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
Disadvantage	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/m ²]	20.3
Overall thickness [mm] Increased edge [mm]	30 7
	Light grey NCS S 3005 R80B

3
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
Disadvantage	Reduced coating thickness
Use	Wet rooms
	Physical laboratories
	Tables with average load
Weight [kg/m²]	26.4
Overall thickness [mm]	19
	Light grey
	NCS S 3005 R80B

Solid (grade) laminate Trespa Toplab+	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids
	Nitric acid
	Heated sulphuric acid
Advantage	Antibacterial
	Highly-compressed surface structure
	High chemical resistance
	Moisture-resistant
	Flat
	Easy to dispose of
Disadvantage	Reduced coating thickness
Use	Chemical, microbiological, genetical-engineering laboratories
Weight [kg/m²]	26.4
Overall thickness [mm]	19
	Glacier blue
	Similar to NCS 1010 R80B

3



Ероху	
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
Disadvantage	Surface sensitive to scratches
	Sensitive to concentrated acids
Use	Laboratory workstation of all type
Weight [kg/m²]	32
Overall thickness [mm]	19
Increased edge [mm]	7
	Platinum colored
	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
Disadvantage	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 and sinks

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

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

3



Glass	
Critical substances	None
Damaging substances	Hydrofluoric acid
Advantage	Flat High chemical resistance
Disadvantage	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

3

Laboratory benches Bench with H-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
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]			600 750 900		
Working height [mm]			750 900		
Load bearing capacity					
H-frame [kg/m ²]	200				
Design characteristics					
Height-adjustable feet	Individually adjust	stable			
Material					
Bench frame	Steel profile 60/2	25/2			
Worktop	Depending on re	equirement			
Height-adjustable feet	Plastic				



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
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Technical data

Height-adjustable feet

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]			600 750 900		
Working height [mm]			750 900		
Load bearing capacity					
C-frame [kg/m²]	200				
Design characteristics					
Construction	For suspended a	nd castor-mounted	d underbench unit	s, can be moved st	teplessly
Height-adjustable feet	Individually adjus	stable			
Material					
Bench frame	Steel profile 70/2	25/3			
Worktop	Depending on re	quirement			

Plastic

Laboratory benches Cantilever bench 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
- For permanent mounting to a wall or a wall-mounted service spine
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Technical data

Height-adjustable feet

Dimensions					
Width [mm]	600	900	1200	1500	1800
Depth [mm]			750 900		
Working height [mm]			750 900		
Load bearing capacity					
For wall mounting [kg/m ²]	200				
Design characteristics					
Construction	For suspended a	nd castor-mounted	d underbench unit	s, can be moved s	teplessly
Height-adjustable feet	Individually adjus	table			
Material					
Bench frame	Steel profile 70/2	.5/3 mm			
Worktop	Depending on re	auirement			

Plastic



Intended use

- Self-supporting underbench unit with plinth and worktop made of various materials as a work surface and storage area for laboratory work
- Supporting construction for analytical equipment and superstructures
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions	
Overall width [mm]	Max. 3000
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 [kg/m²]	200

Intended use

- Castor-mounted bench frame with worktop made of various materials as a work surface and storage area for laboratory work
- Castor-mounted supporting construction for analytical equipment and superstructures
- Not suitable for laboratory work where hazardous substances must be extracted

Design



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)			
Shelves	Optional			
Shelf and underbench unit	Optional			

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



Laboratory sinks Laboratory 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 Sinks
- 3 Outlet



Technical data

Material Worktop	Material Sinks	Sink dimensions Width x depth x height [mm]	Type of installation
Stoneware	Stoneware	400 x 400 x 250 500 x 400 x 250	Sink installed flush with the worktop
Melamine resin coating, solid (grade) laminate, Trespa Toplab+, glass	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 coating, solid (grade) laminate, Trespa Toplab+, glass	Stainless steel	400 x 400 x 250 500 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
Compound stoneware worktop	Stoneware	380 x 380 x 250 530 x 380 x 250	Sink installed flush with the worktop
Ероху	Ероху	406 x 305 x 203 406 x 406 x 190 475 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		
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 Laboratory sink with sink module

Intended use

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

Design



1 Outlet

- Sink module 2
- 3 Underbench unit (3-piece)

Variants









Laboratory sinks Laboratory sink with sink module

Technical data

Dimensions				
Width of sink module [mm]	600	1200	1500	1800
Depth of sink module in front of wall-mounted service spine [mm]		685 c	or 835	
Depth of sink module in front of double service spine [mm]		715 c	or 865	
Depth of sink module in front of building wall [mm]		760 c	or 910	
Depth of sink module as front end sink [mm]	-	-	740	740
Overall height of sink module with underbench unit [mm]		910 front t	to 950 rear	
Sink dimensions width x depth x height [mm]	460 x 390 x 250			
Height, edge of sink [mm]		20 front t	to 50 rear	

Material

Sink module

Stoneware

Design characteristics	
Construction	Self-supporting moulded draining area Surrounding increased edge
Modular design	Different underbench units possible As front end sink with special underbench unit

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

Laboratory sinks Sink module on service spine

Intended use

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

Design



- Sanitary panel with outlet 1
- Sink module 2
- 3 Fascia panel of the service spine

Technical data

Dimensions	
Width [mm]	294
Depth [mm]	132
Height [mm]	112
Sink dimensions width x depth x height [mm]	270 x 85 x 80

Material

Sink module	Stoneware Polypropylene
Design characteristics	
Construction	Attached to the fascia panel of the service spine
Sanitary technology	
	Demonstration

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 collectors underneath water outlets 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]	125 140
Sink dimensions width x depth x height [mm]	250 x 100 x 150

Material, drip cup	Material, worktop
Stoneware	Stoneware, compound stoneware worktop
Polypropylene	Polypropylene, melamine resin coating, glass, solid (grade) laminate, Trespa Toplab+
Stainless steel	Stainless steel, melamine resin coating, glass, solid (grade) laminate, Trespa Toplab+
Ероху	Ероху

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

Laboratory sinks **Mobile sink**

-1

2

3

4 -(5)

Intended use

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

Design

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

Dimensions	
Width [mm]	605
Depth [mm]	600
Height without outlet [mm]	907
Sink dimensions width x depth x height [mm]	320 x 320 x 200
Height of castors [mm]	110
Length, supply and drain pipes [mm]	2500
Length, connecting pipes [mm]	2500

Material	
Worktop/sink	Melamine resin coating/polypropylene
Load bearing capacity	
Per castor [kg]	70
Design characteristics	
Construction	Mounted on underbench unit with castors and hinged door 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	

Samary 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 outlet as an option
Mixer tap	Additional flexible water connection as an option



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

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

Material	

Material	GFK varnished
Weight	
Weight without outlet [kg]	14
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
	- -
Ele studios	

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 outlet as an option
Mixer tap	Additional flexible water connection as an option

Special tables Add-on table for low level fume cupboards

Intended use

- For adding to low level fume cupboards
- 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



Dimensions					
Width [mm]	900	1200	1500	1800	2100
Depth [mm]			600		
Working height [mm]			500		
Material					
Bench frame	Steel profile 60/2	5/2			
Worktop	Depending on re	quirement			
Height-adjustable feet	Plastic				
Load bearing capacity					
H-frame [kg/m²]	200				
Design characteristics					
Worktop	Surrounding incr	eased edge			
Height-adjustable feet	Individually adjus	table			



Intended use

- For setting up analytical balances and other sensitive measuring equipment
- Bench frame with worktop and specially mounted, vibration-free plate
- Not suitable for laboratory work where hazardous substances must be extracted

Design



1 Slab made of concrete

2 Table cover

Technical data

Dimensions	
Width [mm]	900
Depth [mm]	750 900
Working height [mm]	750
Balance plate, width x depth [mm]	400 x 450

Material	
Supporting construction	Steel profile
Worktop	Depending on requirement
Balance plate	Fine concrete

Weight

weight	
Total weight [kg]	120
Weight, balance plate [kg]	65

Design characteristics

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

Special tables Rack

aboratory benches and sir

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 laboratory work where hazardous substances must be extracted
- Not suitable for storing hazardous substances

Design



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

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
Shelves 22 mm	Core with melamine resin coating

Load bearing capacity		
Total [kg/m²]	150	
Shelves [kg/m²]	30	

Design characteristics	
Heavy load castors	4, of which 2 can be locked (castor and steering axle can be locked)
Shelves	Can be adjusted without tools with a pitch of 45 mm
Integrated distribution pillar	Optional



Special tables Swing

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
- Visually appealing connection of laboratory benches of different depths
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Technical data

Dimensions		
Width [mm]	1200	1500
Depth [mm]	600 750	- 750 - 900
Working height [mm]	7	50 00
Material		
Bench frame	Steel profile 60/25/2	
Worktop	Depending on requirement	
Load hearing canacity		

Total [kg/m²]

200

Special tables Vertically 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
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions		
Width [mm]	1200	1500
Depth [mm]	6) 7! 9)	00 50 00
Working height [mm]	700	- 950
Material		
Bench frame	Steel profile 60/25/2	
Worktop	Depending on requirement	
Load bearing capacity		
Total [kg/m²]	200	
Design characteristics		
Working height	Can be adjusted with a pitch of 25 mm	
Bench frame	H-frame	



Intended use

- For adding to benches with H-frames and C-frames as an additional work surface
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions	
Diameter [mm]	1200
Working height [mm]	750 900
Material	
Bench frame	Steel profile 60/25/2
Worktop	Depending on requirement
Height-adjustable feet	Plastic
Load bearing capacity	
Round table [kg/m ²]	50

Special tables Sliding element Sekretär

Intended use

- Movable, inclined desk on a laboratory work bench
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions	
Width [mm]	406
Working height, bench [mm]	900
Overall height [mm]	1256
Design characteristics	
Construction	Sliding element on 2 wheels Fastened to the work table by means of a sliding rail
Material	
Sliding element	Melamine resin coating walnut veneer



Intended use

- Movable, fold-out storage area and desk on a laboratory work bench
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions	
Width [mm]	406
Depth [mm]	530
Working height, bench [mm]	900
Load bearing capacity	
Storage area and desk [kg]	15
Design characteristics	
Construction	Sliding element on 2 wheels Fastened to the work table by means of a sliding rail Can be folded down completely
Material	
Sliding element	Melamine resin coating walnut veneer

Special tables Sliding element Protector

Intended use

- Movable protection from splashes and splinters on a laboratory work bench
- Not suitable for laboratory work where hazardous substances must be extracted

Design



Dimensions	
Width [mm]	406
Working height, bench [mm]	900
Height, splash protection [mm]	1800
Design characteristics	
Construction	Sliding element on 2 wheels Fastened to the work table by means of a sliding rail
Material	
Sliding element	Melamine resin coating walnut veneer
Splash protection	Tempered safety glass





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 laboratory cabinets can be expanded, upgraded and, of course, are compatible – for straightforward adaptation to new requirements.

We place maximum value on durability. Even after thousands of load changes, hinges, pull-out rails and surfaces must not weaken. First-class materials which are carefully processed are sure to guarantee long durability.

Apart from laboratory cabinets, suspended cabinets, top-mounted cabinets, underbench units and pull-out cabinets, we have exhaust cabinets for the safe storage of typical laboratory items such as solvents, acids, alkalis and gas cylinders as well as for the disposal of chemicals.



4

Underbench units	
Underbench on plinth	
Underbench unit on castors	
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Self-supporting underbench unit for	
fume cupboards	
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Suspended cabinet	
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Laboratory cabinet	
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Top-mounted cabinet	

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FWF90 underbench unit for fume	
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FWF 90 laboratory cabinet for storing	
flammable liquids	167
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Storage cupboards

Large number of variants

For maximum flexibility in the laboratory, we offer a large variety of cabinet and underbench unit variants. Pushed in underbench units, either movable or on plinth, easily fit under C-frame, H-frame and cantilever frames, or under fume cupboards with their own supporting structure.

Suspended underbench units are integrated directly under the worktop or as movable variants in cantilever frames.

Design and function go together

The aluminium die-cast handles without joints are resistant to chemicals and easy to clean. Special highlights in laboratory design can be set by using walnut veneer fronts. Our suspended 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 changepull-out catch of the drawers, our movable underbench units will not tilt over. Our tall cupboards are fitted with a rail on the inside for safely securing a ladder.



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. We have also expanded the usable storage space of corner cabinets by implementing new fittings.

Surfaces and edges are optimally protected

The melamine resin coated surfaces are easy to clean and robust against the effects in the laboratory. The front edges on the carcass and on the shelves are equipped with impact-resistant 2 mm polypropylene edges. Furthermore, the foil-coated plinths for our furniture are made of water-proof bonded coated plywood board.

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. Softclosing on request.

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.



Storage cupboards

Underbench units Underbench on plinth

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- For working heights 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 on plinth



Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]		5	550	
Overall height [mm]		-	720 370	
Height, drawers [mm]		Combination pos	150 200 400 sibilities see variants	
Height, plinth [mm]			110	
Load bearing capacity				
Per shelf/drawer [kg]	30			
Design characteristics				
Construction	For working height 7 Hinged doors with 2 Drawers, fully extensi Open at the top, rear Shelf, height-adjustal Without doors as a 4 height-adjustable for	50 and 900 mm 70° hinges ible r panel can be remove ble ack eet	d	
Combination possibilities	See variants			
Handle	Handle made of alum U handle, stainless st	ninium diecast eel		
Drawers with change-pull-out catch	Optional			
Full-height drawers	Optional			
Move-in damper for drawer	Optional			
Extract-air spigot	Optional			
Closing	Optional			



Storage cupboards

Underbench units Underbench unit on castors

Intended use

- For the flexible storage of devices and chemicals in acc. with DIN EN 14727
- For working heights 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

Dimensions							
Width [mm]	450	545	600	845	900	1145	1200
Depth [mm]				550			
Overall height [mm]				640 790			
Height, drawers [mm]			Combinatior	150 200 350 n possibilities	see variants		
Height, castors [mm]				110			
Load bearing capacity							
Per shelf/drawer [kg]	30						
Per castor [kg]	70						
Design characteristics							
Construction	For working Hinged doo Drawers, fu Shelf, heigh Without do Covered at 4 swivelling	g height 750 ors with 270° illy extensible nt-adjustable ors as a rack the top, rear castors, fror	and 900 mm hinges and with cha panel permar t castors can	nge-pull-out nently conne be locked	: catch cted with the	carcass	
Combination possibilities	See variants	5					
Handle	Handle mad U handle, s	de of alumini tainless steel	um diecast				
Move-in damper for drawer	Optional						
Closing	Optional						



Storage cupboards

Underbench units Suspended underbench unit

Intended use

- For the flexible storage of devices and chemicals in acc. with DIN EN 14727
- For working heights 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 722)						
Height [mm]				380 530			
Height, drawers [mm]			Combination	150 200 350 n possibilities	see variants		
Load bearing capacity							

Design characteristics Construction For working height 750 and 900 mm
Design characteristics Construction For working height 750 and 900 mm
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/cantilever bench frame: Can be moved to the sides until it protrudes over the bench grid Hinged door(s) 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 made of aluminium diecast U handle, stainless steel
Drawers with change-pull-out catch Optional
Move-in damper for drawer Optional
Closing Optional



Underbench units Self-supporting underbench unit for fume cupboards

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- For fume cupboards with rear panel and side installation

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

Design

For fume cupboards with rear panel installation



For fume cupboards with side installation
Underbench units Self-supporting underbench unit for fume cupboards

Variants

For fume cupboards with rear panel installation

Ð

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-600

-600-











For fume cupboards with side installation



- 600









Underbench units Self-supporting underbench unit for fume cupboards

Technical data

Dimensions					
Width [mm]	600	900	1200		
Depth [mm]		550			
Overall height [mm]		710 820			
Height, plinth [mm]		110			
Load bearing capacity					
Per shelf [kg]	30				
Design characteristics					
Construction	Hinged doors with 270° hinges Service panel above the storage frame for fume cupboards with rear panel installation Closed at the top, rear panel can be removed Shelf, height-adjustable 4 height-adjustable feet				
Combination possibilities	See variants				
Full-height drawers	Optional				
Extract-air spigot	Optional				
Underbench exhaust	Optional				
Acid and alkali equipment	Optional				
Closing	Optional				
Handle	Handle made of aluminium of the stainless steel	diecast			

Underbench units Pushed in underbench unit for fume cupboards

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- For fume cupboards with rear panel and 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

Ŧ			ļ	
- 640/716 -				
1				
	545/600-		 845/900/	1145/1200

Dimensions						
Width [mm]	545	600	845	900	1145	1200
Depth [mm]			5	50		
Overall height [mm] pushed in underbench units for bench-mounted fume cupboards with rear panel installation			6	40		
Overall height [mm] pushed in underbench units for bench-mounted fume cupboards with side installation			7	16		
Height, plinth [mm]			1	10		
Load bearing capacity						
Per shelf [kg]	30					
Design characteristics						
Construction	Hinged doors Closed at the Shelf, height 4 height-adju	s with 270° hing top, rear panel adjustable istable feet	ges can be remov	ed		
Combination possibilities	See variants					
Handle	Handle made U handle, sta	e of aluminium o inless steel	diecast			
Full-height drawers	Optional					
Extract-air spigot	Optional					
Underbench exhaust	Optional					
Closing	Optional					



Storage cupboards

Underbench units Underbench unit for sinks

Intended use

- As an underbench unit for sinks for storing devices and chemicals in acc. with DIN EN 14727
- 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 in front of the wall



Front end sink for double benches



Underbench units Underbench unit for sinks

Variants

Sink with underbench unit for service spines or in front of the wall



Front end sink for double benches







Storage cupboards

Underbench units Underbench unit for sinks

Technical data

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

 $^{\mbox{\tiny 1)}}$ For sinks on service spines or in front of the wall

²⁾ For front end sinks

Load bearing capacity

Per shelf/drawer [kg]

Design characteristics	
Construction	Hinged doors with 270° hinges Shelf, height-adjustable 4 height-adjustable feet Inclined tilting door with waste collector
Door	Hinged door(s), full-height drawer or tilting door Combination possibilities see variants
Handle	Handle made of aluminium diecast U handle, stainless steel
Closing	Optional

30

Suspended cabinets Suspended cabinet

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



Variants





Suspended cabinets Suspended cabinet





Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]	350			
Height [mm]		46	50 50	

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

Design characteristics	
Construction	Height-adjustable fitting for fastening to the wall/service spine For a width of 1200 mm with central panel Shelf, height-adjustable
Combination possibilities	See variants
Handle	Handle made of aluminium diecast U handle, stainless steel Glass sliding door with affixed plastic handle
Rack with inclined side walls	Optional
Closing	Optional

Laboratory cabinets Laboratory cabinet

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design







Storage cupboards

Variants





Laboratory cabinets Laboratory cabinet



4



4

Laboratory cabinets Laboratory cabinet

Dimensions						
Width [mm]	450	600	900	1200		
Depth [mm]		35 55	50 50			
Overall height [mm]		20	90			
Height, plinth [mm]		11	0			
Load bearing capacity						
Per shelf/drawer [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	Handle made of aluminium diecast U handle, stainless steel					
Shelves, extendable	Optional (with a cabinet depth of 550 mm)					
Drawers with change-pull-out catch	Optional (with a cabinet depth of 550 mm)					
Move-in damper for drawer	Optional					
Extract-air spigot	Optional	Optional				
Closing	Optional					

Laboratory cabinets **Emergency cabinet**

Intended use

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

Design



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

Design characteristics	
Construction	Hinged door with 270° hinges 2 shelves, height-adjustable 4 height-adjustable feet
Optional equipment	First aid box 1 CO ₂ fire extinguisher 5 kg 2 fire blankets made of glass fabric 2 sand boxes 1 sand shovel 1 indication label with first aid instructions





Storage cupboards

Top-mounted cabinets Top-mounted cabinet

Intended use

- For storing devices and chemicals in acc. with DIN EN 14727
- 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



Dimensions				
Width [mm]	450	600	900	1200
Depth [mm]		35	50 50	
Height [mm]		6 ⁻ 76	10 50	
Load bearing capacity				
Per shelf [kg]	30			
Design characteristics				
Construction	With integrated rail f For laboratory cupbo 1 shelf, height-adjust	or securing a ladder ards with or without ex table	tract air spigot	
Door	Hinged door(s)			
Handle	Handle made of alum U handle, stainless st	ninium diecast reel		
Hook ladder	Optional			
Closing	Optional			

Pull-out cabinets Pull-out cabinet

Intended use

- For storing liquid or solid substances in suitable containers in acc. with DIN EN 14727
- Not permitted for storing flammable liquids, gas cylinders and self-igniting or self-decomposing substances
- Not permitted for storing acids and alkalis

Design



1 Pull-out

2 Tray with divider



Pull-out cabinets Pull-out cabinet

Technical data

Dimensions		
Width [mm]	600	900
Depth [mm]	55	50
Overall height [mm]	20	90
Height, plinth [mm]	1'	10
Full-height drawer, width x depth [mm]	300 >	x 500
Tray, width x depth x height [mm]	240 x 4	25 x 40
Load bearing capacity		
Per drawer [kg]	100	
Per tray [kg]	10	
Design characteristics		
Construction	5 trays with dividers for each drawer, height Fastened to the wall 4 height-adjustable feet	t-adjustable
Door	Drawer doors with drawers accessible from	both sides
Handle	Handle made of aluminium diecast U handle, stainless steel	
Move-in damper	Optional	
Extract-air spigot	Optional	
Closing	Optional	

Material

Basins

Polypropylene

Special fume cupboards 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 fume cupboards Laboratory cabinet for storing acids and alkalis

Technical data

Air exchange rate [m³/h]

Dimensions	
Width [mm]	600
Depth [mm]	550
Overall height [mm]	2090
Height, plinth [mm]	110
Load bearing capacity	
Rigid shelf [kg]	30
Extendable shelf [kg]	20
Design characteristics	
Construction	Connection to the permanently active ventilation system 4 shelves, fixed or pull-out Separate compartments for acids and alkalis Trays made of polypropylene Coated fittings 4 height-adjustable feet
Door	Hinged doors
Handle	Handle made of aluminium diecast U handle, stainless steel
Ventilation data	

100

Special fume cupboards Underbench unit for fume cupboards for storing acids and alkalis

Intended use

- Pushed in or self-supporting underbench unit for bench-mounted fume cupboards 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

Pushed in underbench units



Self-supporting underbench units for fume cupboards with rear panel installation



Self-supporting underbench units for fume cupboards with side installation





Storage cupboards

Special fume cupboards Underbench unit for fume cupboards for storing acids and alkalis

Dimensions		
Width [mm]	600	900
Depth [mm]	5	50
Overall height [mm] pushed in underbench units for bench-mounted fume cupboards with rear panel installation	6	40
Overall height [mm] pushed in underbench units for bench-mounted fume cupboards with side installation	7	16
Overall height [mm] self-supporting underbench units for bench-mounted fume cupboards with rear panel/side installation	7	10
Height, plinth [mm] pushed in underbench unit	1	10

Load bearing capacity	
Extendable shelf [kg]	20

Design characteristics	
Construction	Connection to the permanently active ventilation system Coated fittings 2 extendable shelves with trays 4 height-adjustable feet
Door	Hinged door Combination possibilities see variants
Handle	Handle made of aluminium diecast U handle, stainless steel

Ventilation data	
Air exchange rate [m ³ /h]	30
Ventilation connection to the ascending duct $\ensuremath{\varnothing}$ [mm]	90

Special fume cupboards FWF90 underbench unit for fume cupboards for storing flammable liquids

Intended use

- Pushed in underbench unit for bench-mounted fume cupboards 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 fume cupboards FWF90 underbench unit for fume cupboards for storing flammable liquids

Dimensions				
Width [mm]	600	900	1100	1400
Depth [mm]		60	00	
Overall height [mm]		63	35	
Height, plinth [mm]		3	5	
Max. weight [kg]	130	170	220	290
Load bearing capacity				
Rigid shelf [kg]	30			
Drawer [kg]	25			
Design characteristics				
Construction	Connection to the permanently active ventilation system Connection to the earth wire with potential equalisation With closing Floor tray with perforated plate insert Self-closing through current-independent thermal activation in the case of fire Hinged door Drawer			
Combination possibilities	See variants			
Handle	U handle, stainless steel			
Additional tray pull-out	As an option for drawers			

Ventilation data	
Air exchange rate [m ³ /h]	30
Ventilation connection to the ascending duct \emptyset [mm]	90

Material	
Underbench unit	Powder-coated stainless steel on the outside, colour: Light grey RAL 7035
Ventilation connection	PPS

Special fume cupboards FWF 90 laboratory 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 fume cupboards FWF 90 laboratory 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 Floor tray with perforated plate insert With closing 4 height-adjustable feet Hinged door			
Combination possibilities	See variants			
Other versions and configurations	On request			
Regulations and standards	DIN EN 14470-1 TRbF 20			
Ventilation data				
Air exchange rate [m ³ /h]	30			
Ventilation connection Ø [mm]	75			

Material	
Laboratory cabinet	Powder-coated stainless steel on the outside, colour: Light grey RAL 7035
Ventilation connection	Galvanised steel

Special fume cupboards G90 gas cylinder cabinet

Intended use

- For storing compressed 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





Storage cupboards

Special fume cupboards G90 gas cylinder cabinet

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 per Mounting rail to take Roll-in ramp for gas of With closing 4 height-adjustable for Feed-throughs for pip	ermanently active ventil up compressed gas re ylinders eet bes and cables in the ca	ation system duction units abinet ceiling	
Door	Hinged door(s)			
Max. number of gas cylinders 50 l for cabinet width	1	2	3	4
Other versions and configurations		On re	quest	

Ventilation data	600	900	1200	1400
Air exchange rate [m ³ /h] for cabinet width	60	90	120	140
Ventilation connection Ø [mm]		7	5	

Material	
Laboratory cabinet	Powder-coated stainless steel on the outside, colour: Light grey RAL 7035
Ventilation connection	Galvanised steel







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 extensible 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-gripp nozzle with flexible stainless steel supply pipe, flammable liquids can be safely drawn.



Supply system for flammable liquids	174
Waste disposal system for acids and alkalis	177
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Waste disposal system for solid matter and domestic waste	183
Waste disposal system for radio-isotope residual material	185



Supply and disposal

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 TRbF (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 Inert gas pipe
- 5 Pressure regulator
- 6 Safety cabinet 7 Container

Supply system for flammable liquids



Continuous supply with automatic container changeover

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



Supply system for flammable liquids

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	Connection to the ventilation system Connection to the earth wire with potential equalisation Self-closing through current-independent thermal activation in the case of fire Height-adjustable shelves Floor tray
Number of containers 30 l	1-2
Door	Hinged door
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 [m ³ /h]	50
Ventilation connection to the ascending duct [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
- The waste disposal system is not permitted for the disposal of the following hazardous substances:
 - ► Flammable liquids
 - ► Gas cylinders
 - Radioactive substances
 - Microorganisms

Design

Filling via funnel in underbench unit



- 1 Funnel with mechanical fill level
- display
- 2 Canister 3 Basin
- 4 Underbench unit with full-height drawer

Filling with funnel in the workspace



- 1 Underbench unit with hinged door
- 2 Electric module with level indicator and control units
- *3 Funnel on the work surface*
- 4 Canister
- 5 Basin
- 6 Extendable shelf



Supply and disposal

Waste disposal system for acids and alkalis

Technical data

Dimensions for underbench unit on a 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

Dimensions for self-supporting/pushed in underbench unit for bench-mounted fume cupboards with rear panel installation

Width [mm]	600
Depth [mm]	550
Height [mm] at working height 900 mm	639
Max. height [mm]	425

Dimensions for self-supporting/pushed in underbench unit for bench-mounted fume cupboards with side installation

Width [mm]	600
Depth [mm]	550
Height [mm] at working height 900 mm	716
Max. height [mm]	530

Dimensions, containe

Dimensions, container	
10 l width x depth x height [mm]	192 x 231 x 320
20 l width x depth x height [mm]	245 x 280 x 390

Design characteristics

Construction	Underbench unit with full-height drawer (max. 2 containers) or underbench unit with hinged door and heavy-duty drawer (max. 2 containers) Connection to the ventilation system Coated fittings Polypropylene tray
Funnel	Underbench unit with full-height drawer: Funnel, fastened to container with screws Underbench unit with hinged door: Funnel on work surface with filling pipe between funnel and container
Filling and level indicator	Funnel fastened with screws on container: Mechanical level indicator with signal rod. When the maximum level is reached the signal rod rises above the funnel edge Funnel on the work surface: Electronic level indicator, acoustic and visual indication when the maximum level is reached
Approval, container 10 l, 20 l	UN 3H1/Y1,9
Resistance	Based on consultation with Waldner

Funnel in the underbench unit	Canister 10 l	Canister 20 I	Canister 10 l and 20 l
Underbench on plinth	4	2	2 x 10 l and 1 x 20 l
Self-supporting/pushed in underbench units for bench-mounted fume cupboards with rear panel installation	4	-	-
Self-supporting/pushed in underbench units for bench-mounted fume cupboards with side installation	4	2	2 x 10 l and 1 x 20 l

Waste disposal system for acids and alkalis

Funnel in the internal workspace	Canister 10 l	Canister 20 l	Canister 10 l + 20 l
Underbench on plinth	-	-	-
Self-supporting/pushed in underbench units for bench-mounted fume cupboards with rear panel installation	2	-	-
Self-supporting/pushed in underbench units for bench-mounted fume cupboards with side installation	2	1	1 x 10 l and 1 x 20 l

Material	
Canister	HDPE
Ventilation connection	PPS
Tray	PP
Components for installation	PTFE/PVDF

Ventilation data	
Air exchange rate [m ³ /h]	50
Ventilation connection to the ascending duct Ø [mm]	90

5



Supply and disposal

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 TRbF (appendix L)
- For waste disposal using screw-mounted funnels in the underbench safety unit or through funnels on the worktop in the internal workspace
- The waste disposal system is not permitted for the disposal of the following hazardous substances:
 - Acids and alkalis
 - ► Gas cylinders
 - Radioactive substances
 - Microorganisms

Design

Filling via funnel in underbench unit



- arawer 2 Funnel with mechanical fill level
- displav
- 3 Canister

Filling with funnel in the workspace





- 1 Safety cabinet with hinged door
- 2 Canister
- 3 Electric module with level
- indicator and control units
- 4 Funnel on the work surface
Waste disposal system for flammable liquids

Transfer system for the disposal of flammable liquids

- 1 Connection for suction pipe
- Connection for extract air duct 2
- Connection for compressed air 3
- pipe
- 4 Grounding socket
- 5 Socket
- Signal button for alarms and 6 acknowledgement
- 7 Operating mode indicator

Disposal for HPLC devices



- Extract air duct 1
- Receiving spigot for capillary 2 tube
- Electric module with level 3 indicator and control units
- Canister 4
- 5 Safety cabinet with hinged door





Waste disposal system for flammable liquids

Technical data

Dimensions of underbench safety unit	
Width [mm]	Approx. 595
Depth [mm]	Approx. 600
Overall height [mm]	Approx. 600
Canister 10 l width x depth x height [mm]	198 x 298 x 264

Design characteristics	
Construction	Underbench safety unit with full-height drawer with max. 2 containers, underbench safety unit with hinged door with max. 2 containers on heavy-duty drawer or with transfer system trolley with 1 transport container Connection to the ventilation system Connection to the earth wire with potential equalisation Funnel, grounded, with flame protection filter
Canister	2 containers 10 l, grounded, or with transfer system 1 container 30 l, grounded, permanently installed
Funnel	Underbench safety unit with full-height drawer: Funnel, fastened to container with screws Underbench safety unit with hinged door, transfer system: Funnel on the work surface is connected with the container through one filling pipe per funnel
Transfer system	Obligatory for container with a capacity of 30 l
Approval, container 10 l, 30 l	UN 3H1/Y1,6
Filling, level indicator	Funnel in the underbench safety unit: Mechanical level indicator with signal rod that rises above the funnel edge when the maximum level is reached Funnel in the internal workspace: Electronic level indicator, acoustic and visual indication when the maximum level is reached Connection for liquid chromatographic instrument (HPLC) with spigot instead of funnels and electronic level indicator, as an option
Resistance	Based on consultation with Waldner

Transfer system for container 30 I	
Construction	Trolley with transport container 60 l, compressed air membrane pump and electronic level indicator When the maximum level is reached, the pump is automatically switched off and acoustic and optical signals are emitted
Trolley, width [mm]	615
Transport container, material	Polyethylene (PE), electrically conducting

Material	
Underbench safety unit	Stainless steel, powder-coated
Canister 10 l, 30 l	High density polyethylene (HDPE), electrically conductive
Flame protection filter, funnel	Stainless steel
Ventilation connection	PPS
Components for installation	PTFE/PVDF

Ventilation data	
Air exchange rate [m ³ /h]	50
Ventilation connection to the ascending duct \emptyset [mm]	90

5

Waste disposal system for solid matter and domestic waste

Intended use

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

Design

Waste collector with full-height drawer



- 1 Waste collector 2 x 15 l
- Waste collector 2 x 35 l 2

3 Full-height drawer

Waste collector with tilting door



1 Waste collector 30 l

2 Tilting door



Technical data

Dimensions for underbench unit on a plin	th			
Width x height [mm]	450 x 870	600 x 870	450 x 720	600 x 720
Capacity with full-height drawer	2 x 15 l or 2 x 35 l	4 x 15 l -	2 x 15 l or 2 x 35 l	4 x 15 l -
Capacity with tilting door	1 x 30 l	1 x 30 l	1 x 30 l	1 x 30 l
Depth [mm]		5	50	
Dimensions for underbench unit for sinks				
Width x height [mm]	600 x 870	900	x 870	1200 x 870
Capacity with full-height drawer	-	4 x	15 l	4 x 15 l
Capacity with tilting door	1 x 30 l	2 x	30 I	2 x 30 l
Depth [mm]		5	50	
Dimensions for self-supporting underben	ch unit for bench-mou	nted fume cupboard	s	
Width x height [mm]		600	x 820	
Capacity with full-height drawer		4 x	15 l	
Capacity with tilting door		1 x	30 I	
Depth [mm]		5	50	
Dimensions for pushed in underbench un	it for bench-mounted f	ume cupboards		
Width x height [mm]	545 :	x 639		600 x 639
Capacity with full-height drawer	2 x	15		4 x 15 l
Capacity with tilting door	1 x	30		1 x 30 l
Depth [mm]		5	50	
Design characteristics				
Door variants	Full-height drawer Tilting door			
Automatic foot-operated opening	As an option for full-	height drawers up to a	a width of 600 mn	n
Extract-air spigot	Optional			
Material				
Ventilation connection	PPS			
	15			
Ventilation data				
Air exchange rate [m ³ /b]	30			
Ventilation connection to the ascending	90			
duct Ø [mm]	50			

5

Waste disposal system for radio-isotope residual material

Intended use

- Waste container 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 Canister
- 3 Funnel with mechanical fill level display

Filling through opening in the work surface (electric level indicator)



- 2 Canister
- *3* Service panel with level indicator
- 4 Opening in the work surface
- 5 Electric fill level display

Technical data

Dimensions of underbench units for radio-is	otope residual material	
Width [mm]	450	600
Depth [mm]	55	50
Overall height [mm]	63	39
Height, castors [mm]	11	10
Canister 20 l, width x depth x height [mm]	250 x 30	00 x 390
Collapsible box, width x depth x height [mm]	300 x 30	00 x 500

Design characteristics of underbench units f	or radio-isotope residual material
Construction	Front side with lead shield on the inside With castors Max. 2 containers of 20 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
Filling and level indicator	Funnel in the underbench unit with mechanical level indicator with signal rod that rises above the funnel edge when the maximum level is reached Opening in the work surface in the internal workspace with electronic level indicator, acoustic and visual indication when the maximum level is reached





We are the technological market leader in Europe for fitting out multi-functional sciences classrooms.

Our new **SCALA** school system integrates variably in all types of rooms without problems and provides a large amount of free space for technical and educational needs.

With our new **SCALA** school system we provide the ideal basis for successful learning. Due to the large number of possible configurations our modular concept enables to design multi-functional class-rooms and to fully utilise their capacities. In this way, technology and science can be experienced in many different ways.

We will be pleased to send you detailed information on our new school system. Please contact us at www.waldner-schule.de.







Services

We are the only manufacturer of laboratory equipment who offers you fume cupboards and variable fume cupboard control all from one supplier. Benefit from our know-how in the field of laboratory control.

All over the world we have realised a large number of projects of varying size; these projects are operated to the great satisfaction of our customers. This fact confirms our philosophy of acting as a system provider.

Furthermore, you as a customer will find it convenient 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.







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 cupboards are an important part of laboratory ventilation and can be integrated into the building ventilation concept in an ideal way. The measurement and control system of our Airflow-Controller identifies the state of utilisation of the fume cupboard reliably at any time and adjusts the air exchange rate precisely and safely within seconds.

If required, the air exchange rate at the fume cupboard can be increased or decreased 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 Airflow damper Extractor hood AC3 Compact
- B Mechanical airflow damper
- C Airflow damper extract air AC3 Compact
- D1 Airflow-Controller AC3 v Standard
- D2 Airflow-Controller AC3 v pipe controller
- E Airflow damper Supply air AC3 Compact
- F CAN bus
- G Airflow-Controller with activated master function for laboratory control
- H The following methods of communication with the DDC/building control are possible: Analogue I/O, LON bus, Modbus, Profi bus, BACnet, Ethernet
- Sash controller SC



Control and monitoring Control

Control – Airflow Controller (AC) for fume cupboards DIN EN 14175 part 6

Airflow-Controller (AC)

The central control unit is a microprocessorbased electronic control unit and forms the heart of the Waldner control system.

The standard set value is determined via the sash position. The processor rapidly and precisely adjusts this value using defined control behaviour (adaptive or predictive). The microprocessor detects the required damper position, has a maximum regulating speed of two seconds for 90° and is equipped with a position control system. Setpoint changes settle fully within three seconds.

In addition during calculation, an appropriate measuring diaphragm coefficient is determined using a family of characteristics defined from the damper position and the differential pressure. In accordance with DIN EN 14175, a visual and acoustic alarm indicates when the value drops below the set value. A visual and acoustic alarm is also generated if the sash is opened beyond the maximum permitted sash opening.

As a standard, the control damper is used with a plenium duct. For rooms with a height less than 3.30 m motorised dampers must be used as pipe controllers.

On the use of the Secuflow technology, this feature is monitored and controlled. If the extract air volume drops below the stipulated extract air volume, the supportive flow technology is shut down. If the supportive flow technology fails, this is indicated by a visual and acoustic alarm, and the extract air flow rate is automatically increased to the value for a standard fume cupboard.



1 Display and control unit



2 Sensors for detector of sash position



3 Extract plenium with actuator, measuring system and measurement acquisition



4 Central control unit AC



Control and monitoring Control

ervices

The fume cupboard and controller are an entity

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

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

Our patented 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 cupboard 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.



DIN EN 14175-T6 type-tested fume cupboard control in acc. with 5.4 Measuring in the outer measuring level





Control panel AC Display and switching: – Light on/off

- Visual and acoustic alarm
- Flushing function (increasing the air volume)
- Lowered operation
- Monitoring and control on/off



- 3 Measuring panel
- 4 Plenium duct
- 5 Pressure sensor
- 6 Magnetic valves



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°	2 seconds
Control time	3 seconds adjusted
Permitted system pressure	100 - 600 Pa

Inputs	
Voltage supply	24 V DC
Digital input	6 piece (freely parameterisable)
Analog input	1 piece (freely parameterisable)
Sash detector	2 pieces (sash and horizontal sash detector)
Mod-Bus connection	RS 232
PDR connection	RS 232
Can bus	

Outputs	
Digital output	5 piece (freely parameterisable)
Analog output	1 piece (freely parameterisable)
Control of AC3-Compact	RS 485
Control panel connection	RJ 10
Can bus	
Motor control	RJ 45

Control and monitoring Laboratory control

Master function for room control

The module cyclically acquires the individual extract rates of the extracted units in the laboratory so that a total extract air volume can be formed.

A minimum air exchange can be maintained for four different operating states in the laboratory. If the minimum air exchange is not achieved by the minimum air values for the fume cupboards, the module determines the corresponding minimum value and sends it to the fume cupboards or room extract air airflow dampers. If a fume cupboard is opened and the minimum air exchange is exceeded, the remaining fume cupboards or the room extract air airflow damper are reduced to their minimum air value. If the minimum air exchange continues to be exceeded, the input air is increased.

The temperature and room pressure can be controlled with this module.

A stipulated simultaneity (per laboratory max. extract rate) for the use of the fume cupboards can be monitored. When the stipulated max. extract rate is exceeded, a signal is sent to the fume cupboards in the laboratory.

The control unit controls input and extract air airflow dampers (AC-Compact) via the internal bus system.

Data between the laboratory control and the DDC or GLT can be exchanged using the following interfaces:

- Modbus RTU
- LON bus
- Profibus
- Ethernet
- BACnet
- Analogue I/0



Example of a laboratory control variant

Softwa	reversion			10.21						Sta AC- Feb	itus Adresse Jerstack	1 Kein Fehler			
Raum	ummer	2	2	2						Ra	ummente			0.000	
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Datum				120308						Wa	melastabl	uhrung			20
					1,					lstw	ert l'empe	ratur			
			G	LT						lstw	ert Zuluft		1	0	m²/h
desse	Betriebsart	Luft Soll	Luft	Winkel	Druck	Fenster	Queifenster	Sterung	GLT	Sensor	Einheit	Raunbilanz	DB	SW	HW
	Erhöht	1454	1458	54,9	0	0	0	Ok.		0,5			10	21	2
1.0	EIN		199	0	53,4	0	0	Ok.		0,1	°C	ja	10	21	2
1.1	Raumzulult			0	26,5			Ok.					10	6	0
2.0	Erhöht	650	653	54,9	100,4	42	1	Ok.		0,1	m²/h	ja	10	21	2
3.0	EIN		201	0	44,9	0	0	Ok.		0,1	°C	ja -	10	21	2
4.0	EIN		201	0	41	0	0	Ok.		0,1	°C	ja .	10	21	2
5.0	EIN		203	0	48,7	0	2	Ok.		0,1	°C	ja .	10	21	2
.O.U				-				10.4				1.5			

Control and monitoring Laboratory control

AC3-Compact

Areas of application

- Input air controller
- Room extract air controller
- Airlfow measuring system/measuring panel
- (without control flap and actuator)
- Extension module for AC3

Up to four AC3-Compact controllers can be connected and managed for each AC3 controller.

AC3-Compact

AC3-Compact, the microprocessor-based electronic control unit, controls the air volume infinitely.

It rapidly and precisely adjusts the air exchange rate to suit the set value using defined control behaviour (predictive and adaptive).

Features

- Control parameters are adaptively optimised online
- Standard tolerances are predictively corrected using a theoretical process model
- Control of the position of the motorised damper
- Floating time: 5 seconds adjusted
 - 3 sec. 80 % of the set value
- Freely parameterisable on a PC basis
- Integrated pressure sensor 0-250 Pa (pressureresistant up to 2500 Pa)
- Motorised damper housing: galvanised, stainless steel, PPs

Connections (partly parameterisable)

- 2 x analog output
- 1 x analog output
- 1 x digital input
- 1 x control panel input RJ 10
- 1 x Modbus input internal RJ 45
- 1 x Modbus output internal RJ 45
- 1 x motor output RJ 45
- 1 x connector with twin terminals 24 VAC/DC, I max. 0.7 A (17 W)



AC3-Compact



Actuator



Galvanised controller housing with AC3-Compact and fast actuator

Control and monitoring Laboratory control

Technical data

Nominal size	Installation length	Air exchange	rate range B1	Air exchange	rate range B0	Air exchange rate range B2	
[mm]	[mm]	Vmin	Vnom	Vmin	Vnom	Vmin	Vnom
100	530	27	190	19	136	39	272
125	530	43	299	31	214	61	428
160	530	71	494	50	353	101	706
200	580	111	776	79	554	159	1108
250	580	174	1217	124	869	249	1739
315	620	277	1939	198	1385	396	2770
355	620	352	2466	252	1762	504	3523
400	620	448	3135	320	2239	640	4479
500	960	701	4909	501	3506	1003	7012
630	960	1115	7806	796	5575	1595	11151

Design values for round input and extract air airflow dampers

Design values for square input and extract air airflow dampers

Construction dimensions		Installation length	Air exchange rate range B1		Air exchange rate range B0		Air exchange rate range B2	
Width [mm]	Height [mm]	[mm]	Vmin	Vnom	Vmin	Vnom	Vmin	Vnom
200	140	530	98	689	70	492	141	984
250	140	530	123	862	88	616	176	1232
280	160	530	158	1107	113	791	226	1581
315	180	580	201	1404	143	1003	287	2006
355	200	580	252	1761	180	1258	360	2516
400	224	580	318	2227	227	1590	455	3181
400	280	580	398	2788	284	1992	570	3983
315	315	620	353	2469	252	1763	504	3527
355	355	620	449	3140	320	2243	641	4486
400	400	620	570	3992	407	2851	815	5703
500	400	620	714	4995	509	3598	1020	7135
630	400	620	900	6299	642	4499	1287	8998
800	400	620	1143	8004	816	5717	1635	11434
630	200	620	433	3133	316	2238	633	4476



Control and monitoring Monitoring

Monitoring – Function display (FAZ) for fume cupboards DIN EN 14175 part 2

DIN EN 14175 Part 2 requires continuous monitoring of the ventilation function of fume cupboards to warn the laboratory personnel with visual and acoustic signals in the event of a fault. The visual signal cannot be canceled.

The FAZ is an electronic monitoring system that continuously measures the extract volume flow rate. It provides an acoustic alarm and a visual alarm when the flow rate drops below the threshold set for the extract air. Since the air exchange rate and – if applicable – the Secuflow technology are continuously checked, permanent monitoring of the fume cupboard's ventilation function is ensured.

The display is in the guide profile on the fume cupboard. Alarms, e.g. shortage of air, are indicated in red and warnings, e.g. exceeding the max. operational sash opening height, are indicated in orange. The acoustic alarm can be deactivated by pressing a switch button. Switching on/off the FAZ by the user can be enabled as an option.

Airflow measurement FAZ

The extract-air manifold on the fume cupboard is used to generate the pressure signal.

The measurement is a differential pressure measurement. The function display works independent of room pressure fluctuations and independent of the sash opening.

During night operation, a second air volume can be monitored.



Differential pressure measurement FAZ

- 1 Plenium duct, available in two designs: Diameter 250 mm and diameter 315 mm
- 2 Pressure sensor

Diameter of measuring tube 250 mm for washer and filter fume cupboards



Technical data

Monitoring	Function display (FAZ)
Power supply	24 V DC
Outputs	Alarm output
	Operating message
	Light switch
Inputs	On
	Off
	Acoustic alarm acknowledgement
	Night operation
Diameter [mm]	250, 315

Sash controller

If the operator slightly moves the sash, the opening or closing movement of the sash is supported and continued by a motor.

The sash electronics close the fume cupboard sash using a motor when the fume cupboard is not in use. The area in front of the fume cupboard is monitored by a motion detector. If no movement is detected in front of the fume cupboard for a certain period of time, the sash is closed. The photo-electric barrier integrated in the bottom edge of the sash is used to detect obstacles in the path of the sash and the closing process is stopped.

The use of a sash controller means that the requirement in TRGS 526 to close fume cupboards when they are not currently in use is implemented automatically in practice.

The closing delay after the sensors are enabled can be set between one and fifteen minutes.

Component parts:

- 1) Processor-controlled central control unit
- 2) Motor drive (closes and opens the sash)
- 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













Accessories

For our latest **SCALA** laboratory furniture system, we have designed useful accessories to fit out your working environment in certain laboratory areas individually as required.

Their system compliance, flexibility and sophisticated design make the movable sliding elements Sekretär, Assistent and Protector space-saving and extremely useful helpers at the workplace.

We will be pleased to show you many more accessories that are perfectly adapted to our new 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-lab.com. We will also be pleased to send you a printed copy.







Our innovative developments have made us the European 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.

This catalogue represents the situation as of March 2009. 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 GmbH & Co. KG.



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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.

White

RAL 9010 pure whiteStorage cupboardsInternal workspace

Walnut

- Sekretär, Assistent, Protector
- Optional as emphasis for storage cupboard fronts

Light grey NCS S 3005 R80B

- Metal parts, service module
- Bench frames,
- worktops

Colours



Anthracite metallic

effect NCS S 5502 R Fume cupboard fronts Glass NCS S 1010 G10Y Worktops back-varnished

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



Stainless steel

- Sash 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 60 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 European market leader, we will continue to do everything to impress our customers with new and innovative ideas. You can always see the current state of our developments and patents in the Internet at www.waldner-lab.com.





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 DIN ISO 9001.

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 DIN ISO 9001.

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









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General

Installation interfaces mechanical and electrical services

- Water and technical gases are terminated on-site with 1/2" shut-off valves with internal thread.
- Pure gases with Swagelok screw coupling 10 mm
- Waste water connection is terminated on-site with a 56 mm plug sleeve
- Electrical supply pipe in acc. with DIN_VDE 0100 part 430
- Type of cable/pipe with on-site fusing upon agreement
- We will indicate the transfer points for the on-site trades for each project in the corresponding positional drawings.







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