



SECUFLOW

LABORATORY FUME HOODS





SECUFLOW

We are continuously working to improve our laboratory equipment which is why being the leader in fume hood innovation is no coincidence. With constant updates, the Secuflow is always operating at an optimal performance level, ensuring that our fume hoods will continue to meet the demands of any laboratory application and user workspace requirements.

Equipped with optimized supply and exhaust air ducts, the Secuflow can be operated with a face velocity of only 40 FPM. This reduces energy consumption tremendously, while still fulfilling the requirements of ASHRAE 110-2005. Available in rear wall and side panel installation, with new widths and a larger internal workspace, Secuflow clearly sets the standard for the future in air filtration.



// MORE SAFETY, ECONOMY AND COMFORT THAN EVER

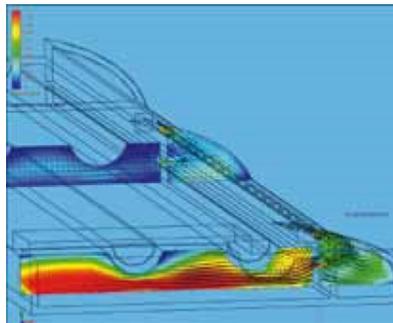
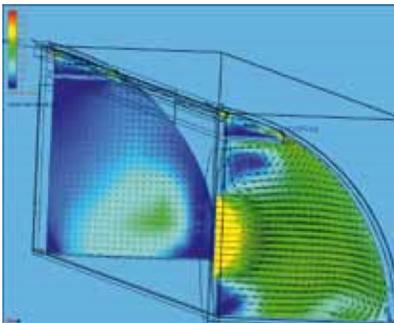
This significantly reduced energy consumption makes laboratory operations even more economical. With many detailed modifications, such as the inclined control panel which now angles towards the user, the new sash lock, the 2-chamber flow technology, the flow-in duct between the sash frames and the side post profile, the Soft Touch control panel, and the integration of sink modules into the rear panel of the fume hood, as well as many other design features, user safety and comfortable working conditions are ensured.

Fume hoods with services on side walls are also available, as are sitting height fume hoods for handicapped accessibility.



// SOPHISTICATED FLOW TECHNOLOGY

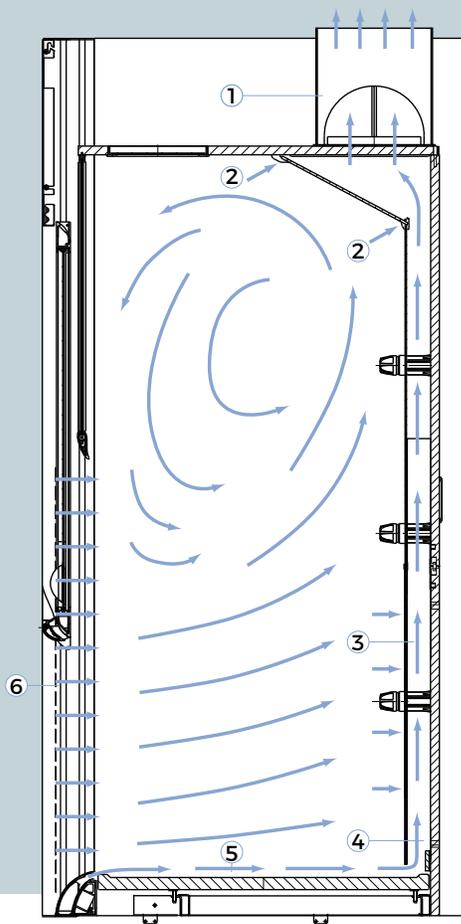
BECAUSE WE ARE CONSTANTLY FURTHER DEVELOPING OUR COMPANY AND OUR PRODUCTS, WE ARE LEADING THE MARKET IN THE FIELD OF LABORATORY FURNITURE AND FUME HOODS. WE COMBINE OUR ENGINEERING KNOW-HOW WITH SCIENTIFIC FINDINGS IN AIR FLOW TECHNOLOGY.



The result is our highly innovative Secuflow with supportive flow technology for optimum flow regulation. With the Secuflow, supportive air is systematically directed into the internal workspace from the aerodynamically designed sill on the side panel and along the worktop. This prevents turbulences and perfectly stabilizes inflow air.

Extraction is performed safely on the rear panel of the fume hood slightly above the worktop, around the service panels and through the top panel.

AIR FLOW TECHNOLOGY



1 EXTRACT MANIFOLD

2 INCLINED EXTRACT FUME HOOD TOP PANEL

3 EXTRACT SERVICE PANELS IN BAFFLE

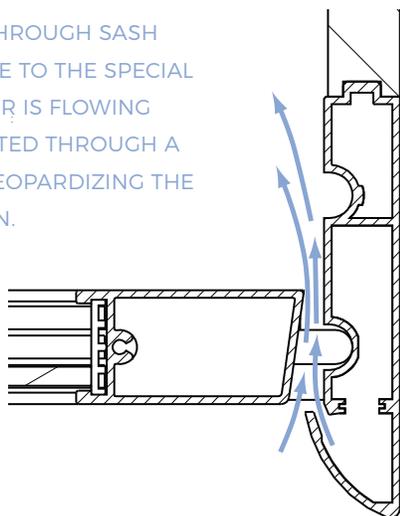
4 BAFFLE

5 SUPPORTIVE FLOW TECHNOLOGY OVER ENTIRE WIDTH OF WORKTOP

6 SUPPORTIVE FLOW TECHNOLOGY ALONG BOTH SIDE POSTS

Due to the optimized flow in our new fume hoods, now even less exhaust air is necessary to ensure safe operation. Secuflow takes you one step ahead in laboratory fume hood technology.

// CROSS SECTION THROUGH SASH AND SIDE POST. DUE TO THE SPECIAL DESIGN, AMBIENT AIR IS FLOWING IN BEING ACCELERATED THROUGH A NOZZLE WITHOUT JEOPARDIZING THE SPLASH PROTECTION.





// MAXIMUM WORK SAFETY IN THE LABORATORY

OPERATING LABORATORY FUME HOODS WITH ONLY THE SASH CLOSED, IS NOT ALWAYS POSSIBLE DURING EVERYDAY LABORATORY WORK. IT IS OFTEN NECESSARY TO MODIFY EXPERIMENTAL SETUPS OR PROCESSES INSIDE THE FUME HOOD.

Turbulences which can create outbreaks from inside the workspace can occur when opening the sash, if the sash is open, or when working in the internal workspace.

Complex experimental setups or people walking past the fume hood will intensify this outbreak effect into the laboratory, thus endangering staff working with the fume hood.

By today's standards, there is even more emphasis on the containment factor of fume hoods when the sash is open. The containment values in conventional standard fume hoods can be reduced by increasing the exhaust air volume. This results in an increased energy consumption and higher noise levels in air filtration.

SECUFLOW



Due to the optimized flow in our new fume hoods, the new Secuflow offers even more safety and requires less energy. When the internal workspace is extensively equipped or a lot of movement is taking place in front of the fume hood, the Secuflow still shows excellent containment values – including when the sash is open. And all this is achieved with reduced exhaust air volumes and, as a consequence, a significantly lower energy consumption.

In an extensive test series, we have defined the new standard that again surpasses the requirements of ASHRAE 110-2005, for maximum safety at work.



// AIR IS DIRECTED INTO THE FUME HOOD WHEN PUSHING UP THE SASH. THE SASH HANDLE PROFILE IS SHAPED LIKE A SPOILER.



// LOCK ON THE SASH CAN EASILY BE OPERATED WITH ONE HAND.



// MEASURABLE TECHNICAL INNOVATIONS

THE SECUFLOW HAD TO PASS A CONSIDERABLE NUMBER OF TESTS IN ALL DEVELOPMENT STAGES. THE AERODYNAMICALLY OPTIMAL DESIGN WAS CAREFULLY DETERMINED, AS WAS THE ERGONOMIC FUNCTIONALITY OF THE SUPPLY CONNECTIONS OR MODULAR INSTALLATION ELEMENTS.

With the new profile of the worktop edge, the well designed exhaust air distribution in the fume hood, as well as the stable circulation around the side posts, we have been able to reduce the exhaust air volume in our fume hoods even further while guaranteeing constant, safe operation. The airflow of the supportive flow technology in the area of the sash opening is perfectly matched to the entire extractor distribution on the rear panel and the internal workspace.

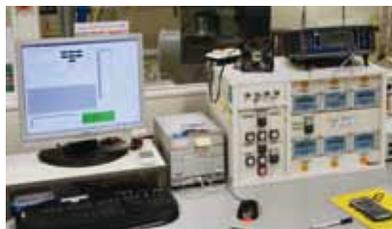
All physical influences on aerodynamically relevant areas of the fume hood were tested. Noise was reduced even further in the new Secuflow fume hoods. We achieved the lowest and best scores possible in a very wide range operating stages.

SECUFLOW *AERODYNAMICALLY OPTIMAL DESIGN MEETS ERGONOMIC FUNCTIONALITY*



This significantly reduced energy consumption has caused significantly stricter criteria for flow technology in fume hoods. In particular, the new robustness test defines high requirements for the containment values of fume hoods. The robustness test simulates real laboratory conditions by generating frequent movement in front of the hood during the measuring procedure.

Beyond the requirements of ASHRAE 110-2005, we also performed the tests for an opening height of 35.43". Here too, the new Secuflow performs with its outstanding test results for the benefit of user safety.





// 40% LESS AIR REQUIRED WITH SECUFLOW

DURING LABORATORY OPERATION, A STANDARD FUME HOOD CONSUMES ABOUT THE SAME AMOUNT OF ENERGY PER YEAR AS A FAMILY HOME. SO IT IS NOT SURPRISING THAT THE VENTILATION OF THE LABORATORY BUILDING ACCOUNTS FOR THE MAIN PART OF LABORATORY OPERATING COSTS. THE FLOW RATE OF CONDITIONED SUPPLY AIR AND THE DIMENSIONING OF THE VENTILATION SYSTEM CLEARLY DEPEND ON THE FUME HOODS USED.

At 60 FPM (0.3 m/s), Secuflow fume hoods easily fall below the maximum values for tracer gas specified by ASHRAE 110-2005. Conventional fume hoods generally require at least 100 FPM (0.5 m/s) for this same function.

In this way, the Secuflow reduces the air volume by 40% when compared with conventional fume hoods. Secuflow hoods can be safely operated at velocities up to 40 FPM. At this rate, energy savings realized can be 60% less than conventional hoods.

This means significant savings, not only in energy costs and investment costs for the ventilation system, but also in the dimensioning of the entire building. Investing in the Secuflow will quickly pay for itself.

SECUFLOW OPTIMUM PERFORMANCE IN EVERY STAGE OF OPERATION



We will be happy to calculate the potential savings for your specific laboratory project. The countless advantages of Secuflow make it an intelligent investment for your laboratory, and will continue to set the fume hood standards much higher for all laboratories now and of the future.

It's time for more flexibility, safety and compatibility in your current workspace. Use our experience to your advantage.



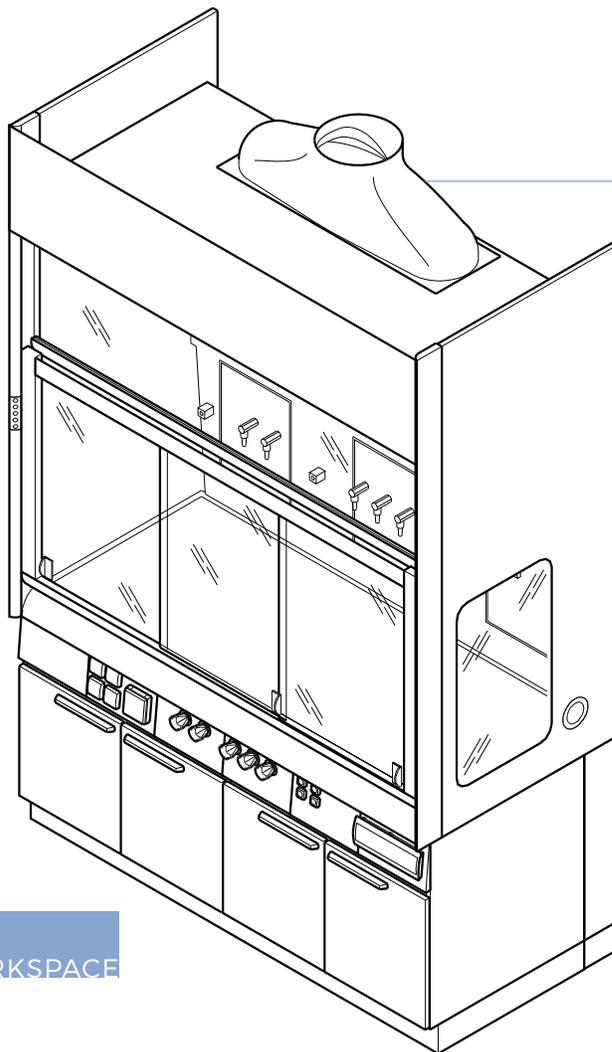
SECUFLOW

BENCH-MOUNTED FUME HOOD

Energy efficiency, perfect ergonomics and a larger internal workspace make working with our new fume hoods even safer and more convenient than any other available system.

A new design, together with an enlarged product range, characterizes the fume hoods of our new laboratory line. Combined with grid widths up to 94.94 in (2400 mm), we offer the most comprehensive product range available on the market.

The slender patented side posts of our fume hoods offer an increased clear width of the internal workspace of the fume hood. The internal workspace is 10 % higher, making it larger all together. This is useful when working with tall and wide experimental equipment.



// LARGEST USABLE INTERNAL WORKSPACE

INTENDED USE

- Protective device for the user, tested in acc. with ASHRAE 110-2005
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous toxic concentrations 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 against flying debris, compounds or particles from the internal workspace
- General purpose fume hoods constructed in acc. with ASHRAE 110-2005 are normally not suited for use with radioactive substances or microorganisms *

- Not suitable for the process of chemical digestions *
- 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
- Only low ceiling bench-mounted fume hoods: Suitable for rooms with a low height

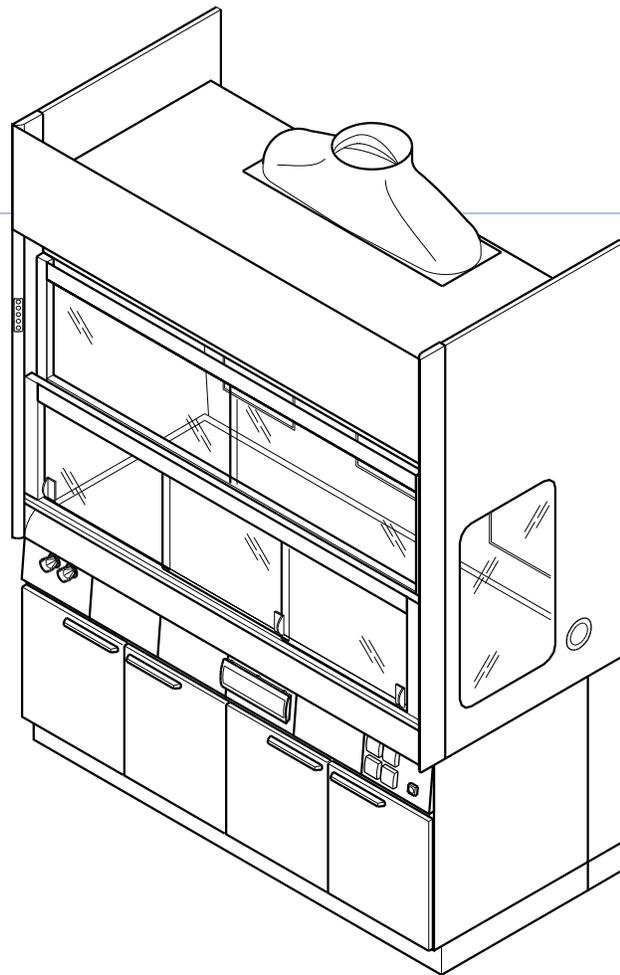
// Refer to our technical catalog for special application fume hoods designed according to standards covering special applications.

TECHNICAL DATA

DIMENSIONS	47.24 (1200)	59.06 (1500)	70.87 (1800)	82.68 (2100)
Width [in] (mm)	47.24 (1200)	59.06 (1500)	70.87 (1800)	82.68 (2100)
Depth [in] (mm)	35.43 (900)			
Height [in] (mm) (*Low ceiling fume hood)	106.30 (2700) *94.49 (*2400)			
Clear width of internal workspace [in] (mm)	45.28 (1150)	57.09 (1450)	68.90 (1750)	80.71 (2050)
Clear height of internal workspace [in] (mm) (*Low ceiling fume hood)	61.02 (1550) *49.21 (*1250)			
Working height [in] (mm)	35.43 (900)			

SECUFLOW

LOW CEILING // BENCH-MOUNTED



VENTILATION TECHNOLOGY	47.24 (1200)	59.06 (1500)	70.87 (1800)	82.68 (2100)
Minimum air exchange rate [cfm] ¹⁾ (m ³ /h) ¹⁾ at a face velocity of 60 FPM (0.3 m/s)	400 (680)	489 (830)	577 (980)	665 (1130)
Minimum air exchange rate [cfm] ¹⁾ (m ³ /h) ¹⁾ at a face velocity of 40 FPM (0.2 m/s)	294 (500)	347 (590)	406 (690)	465 (790)
Exhaust 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 for FAZ with extract manifold 9.84" // *Low ceiling fume hood	107.09 (2720) *95.28 (*2420)			
Connection height for FAZ with extract manifold 12.4" // *Low ceiling fume hood	112.20 (2850) *100.39 (*2550)			
Connection height for AC with extract manifold 9.84" // *Low ceiling fume hood	116.14 (2950) *104.33 (*2650)			
Connection height for AC with extract manifold 12.4" // *Low ceiling fume hood	120.87 (3070) *109.05 (*2770)			
Underbench exhaust	As an option, depending on requirements and regulations			

- All air volume specifications refer to an opening height of the sash window of 18 in (457 mm) (test opening in acc. with ASHRAE 110-2005).
- In order to minimize noise and pressure losses, for air volumes >588.6 cfm (1000 m³/h) Waldner recommends using the extract manifold with a connection diameter of 12.4 in (315 mm).
- Face velocity refer to an opening height of the sash window of 18 in (457 mm).
- Maximum admission pressure of 0.09 psi (600 Pa) for fume hoods with airflow dampers should not be exceeded.
- The indicated air exchange rates were determined under test conditions specified in ASHRAE 110-2005. To dimension the ventilation system, these minimum air exchange rates must also be adapted.
- If on-site exhaust air monitoring systems or airflow dampers are used, the required air volumes may differ.
- The operating limitations must be agreed upon with Waldner.

MATERIAL/SURFACE

Worktop	Stoneware , Polypropylene, Stainless steel, Epoxy
Internal lining	HPL (high pressure laminate), Solid grade laminate, Stoneware



EN7

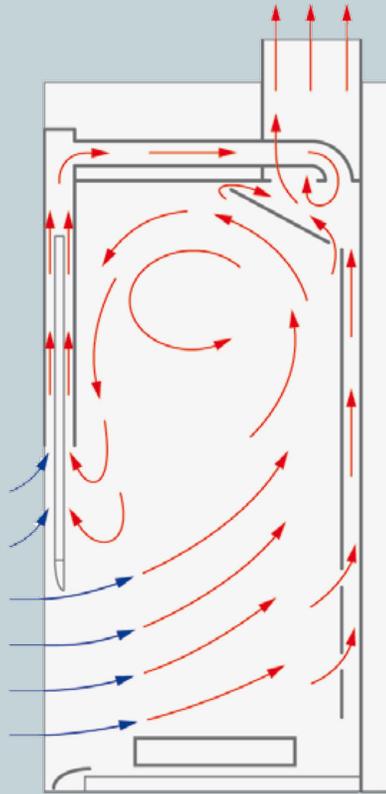
A LAB OUTFITTED WITH EN7 FUME HOODS HAS THE VERSATILITY TO ACCOMMODATE ALL APPLICATIONS, WHILE ALLOWING USERS THE FREEDOM TO PERFORM ANY TYPE OF LAB WORK.

FROM ROUTINE HOOD PROCEDURE TO THE HANDLING OF HIGH THERMAL & ACID LOADS, THE SECUFLOWEN7 SECURES USER SAFETY. AND BECAUSE OF ITS SOPHISTICATED AIR FLOW TECHNOLOGY, THE EN7 STILL MAINTAINS ALL THE BENEFITS OF THE SUPPORTIVE FLOW, SECUFLOW.

By testing & retesting the flow technology, we've been able to minimize our fumehoods' overall energy consumption, meanwhile achieving the absolute highest standard of safety for you, the user. And with such advanced flow technology, your safety is guaranteed even when handling the most caustic of materials inside the fume hood interior.

Our primary focus has always been, and will continue to be the development and advancement of our products. We are committed to continue creating the most sophisticated, energy efficient laboratory & research facilities in the world. Our intelligent lab equipment and modular furniture systems have set the industry standard, for the future.

We have been sharing our laboratory expertise with standardization committees for many years, in a constant effort to further develop safety in laboratories. We test our fume hoods in accordance with ASHRAE Standard 110P-2005, in our very own certified testing lab!



EN7 FLOW PATTERN

WITH HEAT SOURCE

STANDARD FUME HOOD WITH HEAT SOURCE



EN7 FUME HOOD WITH HEAT SOURCE



// BENCH-MOUNTED FUME HOODS FOR HIGH THERMAL LOADS

The new standard EN 14175-7:2012 regulates fume hoods for special application with high thermal and/or acid loads. The use of these special purpose fume hoods instead of general purpose fume hoods is usually the result of a risk assessment.

The standard is applicable for the following special purpose fume hoods

- HIGH THERMAL LOADS
- HIGH THERMAL LOADS + ACID DIGESTIONS
- HANDLING OF PERCHLORIC ACID
- HANDLING OF HYDROFLUORIC ACID

REQUIREMENTS FOR MATERIALS

In fume hoods for high thermal loads, the materials used must be able to meet the resulting demands. The materials must be resistant to acids, acidic vapors and to thermal deformation at the working temperatures.

REQUIREMENTS ON THE CLEANABILITY

The construction of the fume hood must secure the necessary access to all air flow parts for cleaning purposes.

REQUIREMENTS ON THE AIR FLOW AND THE MONITORING

Impacts on the air current, caused by thermal loads and installed heating appliances, for example, must be taken into account and limited. In addition to the fume hood function display with the acoustic and optical alarm, fume hoods for high thermal loads must be equipped with a temperature sensor that will trigger an alarm when the maximum temperature is reached.

While the previous standard series EN 14175 defines exclusively isothermal conditions in the fume cupboard, the newly issued part 7 offers the opportunity to evaluate the safety of fume hoods on incidence of high thermal loads. This closes a significant gap, as working with heat sources in the fume hood is part of the everyday routine work in many laboratories.

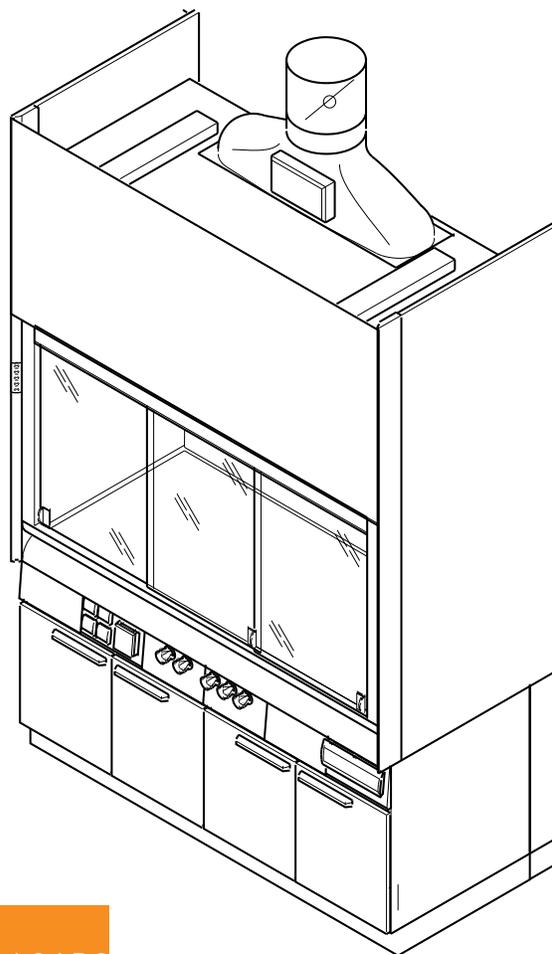
SECUFLOW EN7

BENCH-MOUNTED FUME HOOD FOR HIGH THERMAL LOADS

The Secuflow is especially successful because it can be operated with lower extract air volumes, which means considerable saving in energy costs and in the investment costs for the ventilation system. The Secuflow is the safest and most ecologically sound variant.

We have developed the Secuflow EN7 to secure these benefits also for working with high thermal loads. Due to its sophisticated supply and extract air flow, this fume hood secures safe operation when working with thermal loads, whilst retaining all the benefits of the supportive flow fume hood Secuflow.

When the laboratory is equipped with Secufow EN7 fume hoods, the user is ideally equipped for any kind of laboratory work: whether this is normal operation or working with thermal loads.



// SPECIALTY HOOD FOR HIGH THERMAL LOADS

INTENDED USE

- For work with high thermal loads in the inside of the fume hoods // Heat sources of 4 KW per meter inner width of the hood
- Protective device for the user, tested in accordance with EN 14175-7:2012
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace

- General fume hoods constructed in acc. with EN 14175 are not suited for use with radioactive substances or microorganisms
- Not suitable for openly breaking down chemicals
- Active supportive flow technology // Secuflow, reduces the energy consumption while regulations and standards are observed
- Service outlets for sanitary supply in the rear panel of the internal workspace
- Control units located horizontally on the service rail of the support unit

TECHNICAL DATA

DIMENSIONS	47.24" (1200)	59.06" (1500)	70.87" (1800)
Width [in] (mm)	47.24 (1200)	59.06 (1500)	70.87 (1800)
Depth [in] (mm)		35.43 (900)	
Height [in] (mm) (*Low ceiling fume hood)		106.30 (2700)	
Clear width of internal workspace [in] (mm)	45.28 (1150)	57.09 (1450)	68.90 (1750)
Clear height of internal workspace [in] (mm) (*Low ceiling fume hood)		61.02 (1550)	
Working height [in] (mm)		35.43 (900)	

DESIGN CHARACTERISTICS	47.24" // 1200 mm	59.06" // 1500 mm	70.87" // 1800 mm
Supporting construction	Self-supporting underbench units or H-frame with push-in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
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		
Fuse box, 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			
	47.24" // 1200 mm	59.06" // 1500 mm	70.87" // 1800 mm
Air flow range without / with thermal load [m ³ /h] 1)	360 / 600	450 / 750	540 / 900
Airflow damper, variable, including detector of sash position	Airflow-Controller AC		
Function display with temperature monitoring	FAZ		
Connection height [mm] for AC with extract manifold Ø 250 mm	2950		
Underbench exhaust	As an option, depending on requirements and regulations		

All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175) and the maximum tracer gas values recommended by German Standard (BG Chemie). A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers. The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system. If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

MATERIAL/SURFACE	
Worktop	Stoneware , Polypropylene, Stainless steel, Epoxy
Internal lining	Melamine resin facing, Solid grade laminate, Stoneware



IONIC

We are continuously working to improve our laboratory equipment which is why being the leader in fume hood innovation is no coincidence. With constant updates, the Secuflow is always operating at an optimal performance level, ensuring that our fume hoods will continue to meet the demands of any laboratory application and user workspace requirements.

Equipped with optimized supply and exhaust air ducts, the Secuflow can be operated with a face velocity of only 40 FPM. This reduces energy consumption tremendously, while still fulfilling the requirements of ASHRAE 110-2005. Available in rear wall and side panel installation, with new widths and a larger internal workspace, Secuflow clearly sets the standard for the future in air filtration.

SECUFLOW IONIC THE FUME HOOD WITH IONIZATION TECHNOLOGY



// IONIC FUME HOOD FOR DUSTY SUBSTANCES

This significantly reduced energy consumption makes laboratory operations even more economical. With many detailed modifications, such as the inclined control panel which now angles towards the user, the new sash lock, the 2-chamber flow technology, the flow-in duct between the sash frames and the side post profile, the Soft Touch control panel, and the integration of sink modules into the rear panel of the fume hood, as well as many other design features, user safety and comfortable working conditions are ensured.

Fume hoods with services on side walls are also available, as are sitting height fume hoods for handicapped accessibility.



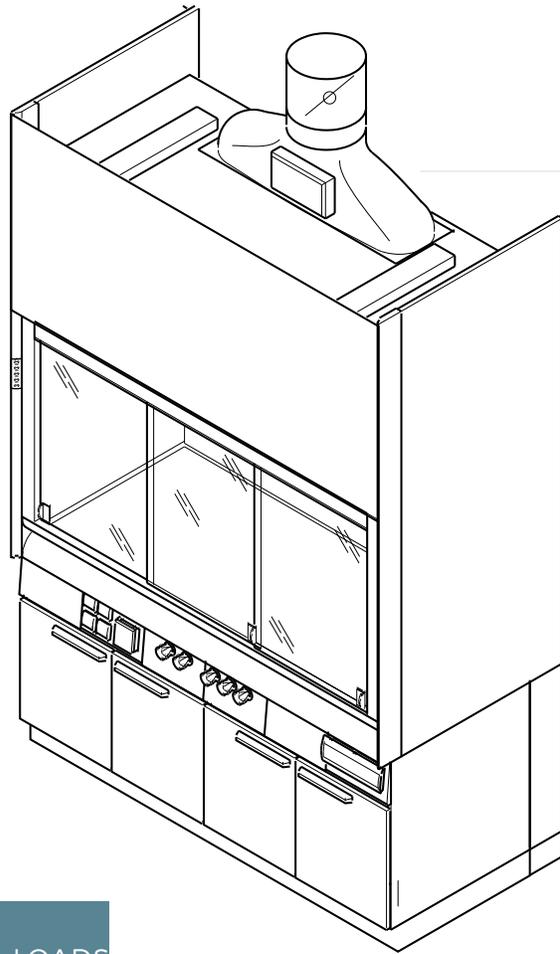
SECUFLOW IONIC

IONIC FUME HOOD FOR DUSTY SUBSTANCES

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We have developed the Secuflow EN7 to secure these benefits also for working with high thermal loads. Due to its sophisticated supply and extract air flow, this fume hood secures safe operation when working with thermal loads, whilst retaining all the benefits of the supportive flow fume hood Secuflow.

When the laboratory is equipped with Secufow EN7 fume hoods, the user is ideally equipped for any kind of laboratory work: whether this is normal operation or working with thermal loads.



// SPECIALTY HOOD FOR HIGH THERMAL LOADS

INTENDED USE

- For work with high thermal loads in the inside of the fume hoods // Heat sources of 4 KW per meter inner width of the hood
- Protective device for the user, tested in accordance with EN 14175-7:2012
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace

- General fume hoods constructed in acc. with EN 14175 are not suited for use with radioactive substances or microorganisms
- Not suitable for openly breaking down chemicals
- Active supportive flow technology // Secuflow, reduces the energy consumption while regulations and standards are observed
- Service outlets for sanitary supply in the rear panel of the internal workspace
- Control units located horizontally on the service rail of the support unit

TECHNICAL DATA

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Electrical supply	External sockets in service panels		
Fuse box, Sash controller SC	Optional		
SANITARY TECHNOLOGY			
Sanitary supply	Service modules with take-off valves for vacuum, gases and/or waters and integrated sink (PP) as an option		
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MATERIAL/SURFACE	
Worktop	Stoneware , Polypropylene, Stainless steel, Epoxy
Internal lining	Melamine resin facing, Solid grade laminate, Stoneware



GREEN

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SECUFLOW GFH GREEN FUME HOOD FOR RECIRCULATING AIR OPERATION



// GREEN FUME HOOD FOR RECIRCULATING AIR OPERATION

Due to the optimized flow in our new fume hoods, now even less exhaust air is necessary to ensure safe operation. Secuflow takes you one step ahead in laboratory fume hood technology.



// LOCK ON THE SASH CAN EASILY BE OPERATED WITH ONE HAND.

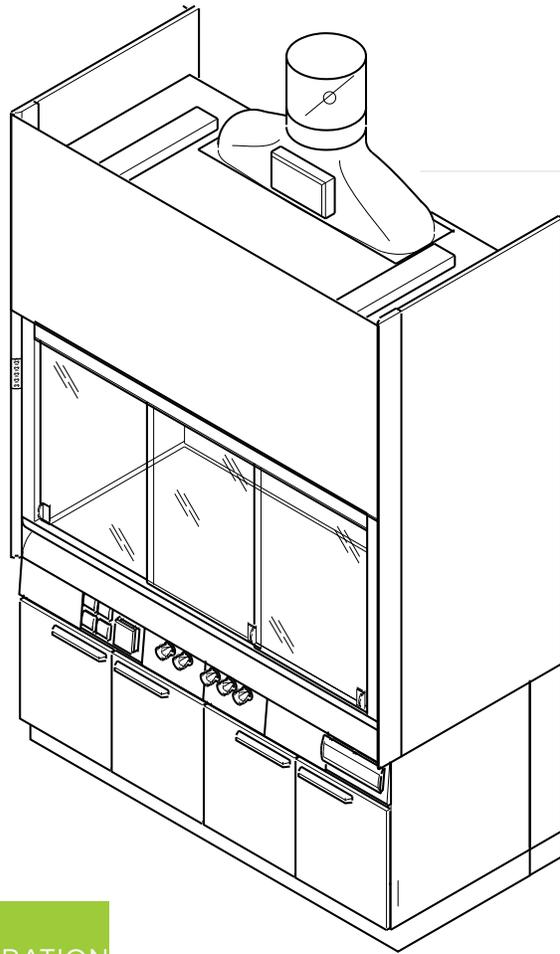
SECUFLOW GFH

GREEN FUME HOOD FOR RECIRCULATING OPEN AIR OPERATION

The Secuflow is especially successful because it can be operated with lower extract air volumes, which means considerable saving in energy costs and in the investment costs for the ventilation system. The Secuflow is the safest and most ecologically sound variant.

We have developed the Secuflow EN7 to secure these benefits also for working with high thermal loads. Due to its sophisticated supply and extract air flow, this fume hood secures safe operation when working with thermal loads, whilst retaining all the benefits of the supportive flow fume hood Secuflow.

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// GFH FOR RECIRCULATING AIR OPERATION

INTENDED USE

- For work with high thermal loads in the inside of the fume hoods // Heat sources of 4 KW per meter inner width of the hood
- Protective device for the user, tested in accordance with EN 14175-7:2012
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous amounts of pollutants from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection from flying particles, bodies or parts escaping from the internal workspace

- General fume hoods constructed in acc. with EN 14175 are not suited for use with radioactive substances or microorganisms
- Not suitable for openly breaking down chemicals
- Active supportive flow technology // Secuflow, reduces the energy consumption while regulations and standards are observed
- Service outlets for sanitary supply in the rear panel of the internal workspace
- Control units located horizontally on the service rail of the support unit

TECHNICAL DATA

DIMENSIONS	47.24" (1200)	59.06" (1500)	70.87" (1800)
Width [in] (mm)	47.24 (1200)	59.06 (1500)	70.87 (1800)
Depth [in] (mm)		35.43 (900)	
Height [in] (mm) (*Low ceiling fume hood)		106.30 (2700)	
Clear width of internal workspace [in] (mm)	45.28 (1150)	57.09 (1450)	68.90 (1750)
Clear height of internal workspace [in] (mm) (*Low ceiling fume hood)		61.02 (1550)	
Working height [in] (mm)		35.43 (900)	

DESIGN CHARACTERISTICS	47.24" // 1200 mm	59.06" // 1500 mm	70.87" // 1800 mm
Supporting construction	Self-supporting underbench units or H-frame with push-in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
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		
Fuse box, 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			
	47.24" // 1200 mm	59.06" // 1500 mm	70.87" // 1800 mm
Air flow range without / with thermal load [m ³ /h] 1)	360 / 600	450 / 750	540 / 900
Airflow damper, variable, including detector of sash position	Airflow-Controller AC		
Function display with temperature monitoring	FAZ		
Connection height [mm] for AC with extract manifold Ø 250 mm	2950		
Underbench exhaust	As an option, depending on requirements and regulations		

All air volume specifications refer to an opening height of the sash window of 500 mm (test opening in acc. with EN 14175) and the maximum tracer gas values recommended by German Standard (BG Chemie). A maximum admission pressure of 600 Pa should not be exceeded in the case of fume hoods with airflow dampers. The indicated minimum air exchange rates were determined under specified test conditions in acc. with EN 14175-3. These minimum air exchange rates must be adapted when dimensioning the ventilation system. If on-site extract air monitoring systems or airflow dampers are used, the required air volumes may be different. The operating limitations must be agreed upon with Waldner.

MATERIAL/SURFACE	
Worktop	Stoneware , Polypropylene, Stainless steel, Epoxy
Internal lining	Melamine resin facing, Solid grade laminate, Stoneware



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