LAB SCAPE FURNITURE & EQUIPMENT

2017
PRODUCT CATALOG

LABORATORY BENCH SYSTEMS

Bench Systems Specification Information

This guide is a tool to help build working environments suitable for this products application. Each component has a specific part number so as to easily track and cost projects. Each style or system has advantages and disadvantages you must review each to find the best fit. Cost, flexibility, usage, and environment will determine the best solution. Each application comes in a powder-coated steel, aluminum, or polished stainless steel.
For casework see separate suppliers catalog or contact us direct for more information.

General information relating to frame work and specifications
Selecting the system that best suites your needs

1. **Frame System Selection and material type – Carbon steel, aluminum, or stainless steel. Note only carbon steel will need a powder coat finish. Gauges range from 16 up to 11 gauge based on model and material selected.**
2. **Each frame system uses support structure to build bench modules from the floor up or off a work surface. Unless utilizing the Vision or Lynx ceiling service systems see there sections specifically.**
3. **Lengths are typically nominal sizes of 3, 4, 5, and 6 foot with options for special applications including corners.**
4. **Frame upright tubes by product description**
   Discovery – 2" x 6" steel tube 11 gauge (stainless steel will be 14 gauge)
   Discovery LT – 2" X 3" steel tube 14 gauge with stainless steel the same
   Euro – 2" x 10" steel extrusion with radius ends gauge 14 only
   Vision – Bench not released
   Eko – 2" x 2" steel tube 14 gauge (stainless steel will be 16 gauge)
   Eko LT – 1" x 3" steel tube 14 gauge (stainless steel will be 16 gauge)

Note: All square or rectangle carbon steel tubes that are 2" and under use ASTM A-500 grade B material. While the 1" X 4" tube will be a ASTM-513 type.

1"X3" = weight per foot 2.16 lbs 14 gauge
2"x2" = weight per foot 2.164 lbs 14 gauge
2"x3" = weight per foot 3.9 lbs 14 gauge
2"x6" = weight per foot 6.46 lbs 11 gauge

Mechanical properties of the upright structural tubing:
All surfaces are mechanically cleaned in the forming process. Soil oil, grease, loose mill scale removed prior to powder coating.
All components including framing if carbon steel will be treated in a light etching bath and wash cycle before oven drying. After oven drying the pre-determined powder color is applied. The powder coated parts are then cured in an oven for a specified timed cycle to create the best possible finish.
Casework and storage selection see either separate catalogs or contact your sales representative.

5. **Accessory options – Your options include shelving systems such as flat, seismic, book end type, dished, or angled. The upright tubes can be pierced two ways one is the standard slots the other is a round with a ¼-20 insert for supporting shelving. A combination of both can be used as well.**
6. **Other accessory options include electrical and data ports or add on options. You can choose from using a standard conduit direct connection to a single junction box. Or a more modular application by using our modular power components. Note the modular power can only be used on the Discovery, Discovery LT, Vision, and Euro systems.**
7. **Each bench module can be equipped as well with data ports. We currently use a Panduit© snap in type connector. This 6 port system allows for your internal phone, Ethernet, or direct cable systems to be incorporated into your design. We also offer the option to add the system you currently use and will engineer the system in as required. For more options and information see the electrical portion of this catalog.**
8. **Static mounting conditions have a couple options for leveling devices. Each device is rated for a minimum of 1,500 lbs with heavier loads use the HD version of the leveling device. The levelers use a minimum of a 3/8-18 type thread with a material of chrome plated steel or stainless steel. The pad is a non-marking neoprene black in color. For seismic conditions we offer a pad**

with a built in floor securing option to meet local and state codes for these conditions. We also have add on seismic bracing and stabilizing devices.

9. Mobile – each system has the option to have casters added for mobility if this option best suites your needs. We can also incorporate quick disconnect power and plumbing options as required for your project. Casters are NSF approved non-marking type with locks. Caster types and sizes based on information presented by the customer for load capabilities and operational environment. This will also dictate size and type of caster required to best meet the presented requirements.
10. Selecting work surfaces – Material information only for more detail see that section.
    A. Materials for use with these bench systems include but are not limited to steel, 304 & 316 stainless steel, perforated stainless steel, plastic laminate, ESD compliant work surfaces, plastic, phenolic resin, epoxy resin, wood, and ceramic based materials.

Accessories not shown with benches see accessories catalog or contact your representative.
Special add on features include:

Monitor arms and add on accessory options
PC carriers for under the counter or side mounted
Key board trays various sizes and material types including stainless steel
Marker boards and slat walls
Divider panels or end panels of stainless steel, steel, laminate, clear acrylic, frosted acrylic, epoxy, or phenolic resin.
ADA compliant stations or module sections with hand crank or power lift options. These individual stations can be incorporated in with each type of bench systems as required. Typical lift capabilities are 1,100 lbs. per station.

More accessories are available for information regarding options just contact your dealer or representative.

For help in selecting your system contact your local dealer. We can quickly develop your system today with a quote.

Lab Bench Systems

	DISCOVERY™ FRAME SPECIFICATIONS					VISION™, EKO™ & EURO™ FRAME SPEC		
	DISCRIPTION	**GAUGE**	**MATRL.**			**DISCRIPTION**	**GAUGE**	**MATRL.**
1	Standard frame construction	11	CRS		1	Standard frame construction	14	CRS
2	Cantilevers standard	11	CRS		2	Cantilevers standard	11	CRS
3	Cantilevers heavy duty	14	CRS		3	Cantilevers heavy duty	14	CRS
4	Shelving standard	16	CRS		4	Shelving standard	16	CRS
5	Suspension kits	11	Stn. Stl.		5	Suspension kits	14	CRS
6	Bridges standard	16	CRS		6	Bridges standard	16	CRS
7	Feet all sizes	14	CRS		7	Feet all sizes	14	CRS
8	Dividers steel	18	CRS/Stn. Stl.		8	Dividers steel	18	CRS/Stn. Stl.
9	Vertical supply chase	20	CRS		9	Vertical supply chase	20	CRS

ALL SYSTEMS UNLESS SPECIAL:

Note: This system is also sold in type 304-stainless steel.

This system is a bolt-together assembly using the components listed below to complete.

A. Feet bolt into uprights to complete one upright assembly. All uprights and feet are shipped loose for easier shipping unless Assembly is requested. Feet are shipped with leveling pads stainless steel with a neoprene cover non-marking. Casters And different leveling pads can be added.

A1. Tools needed to complete the assembly, Phillips screw driver, Allen wrenches, & end wrenches.

B. Bridge sections are bolted into uprights various lengths. This also includes the floating system when uprights are pierced Accordingly.

C. Cantilevers bolt into uprights and are adjustable from sitting to standing heights. Accept for the heavy duty version which is Sold in a standing or seated version typically for supporting suspended casework or heavy equipment.

D. Shelves bolt onto the uprights or slide in if the uprights are slotted. There are three types of shelves, gravity feed that is Adjustable. There is also a standard shelf along with a seismic version. Shelves are welded construction with spot welded Hat channel support members.

F. Work surfaces are secured to the cantilevers and are removable when needed.

G. Accessories are added as needed to complete your assembly see list.

H. Storage selected from supplied casework information. Select material and then add to the bench assembly. If suspended Add kits for each bench module that requires supporting casework. Note all bench modules must use the heavy duty type Of cantilever if your using the suspended system.

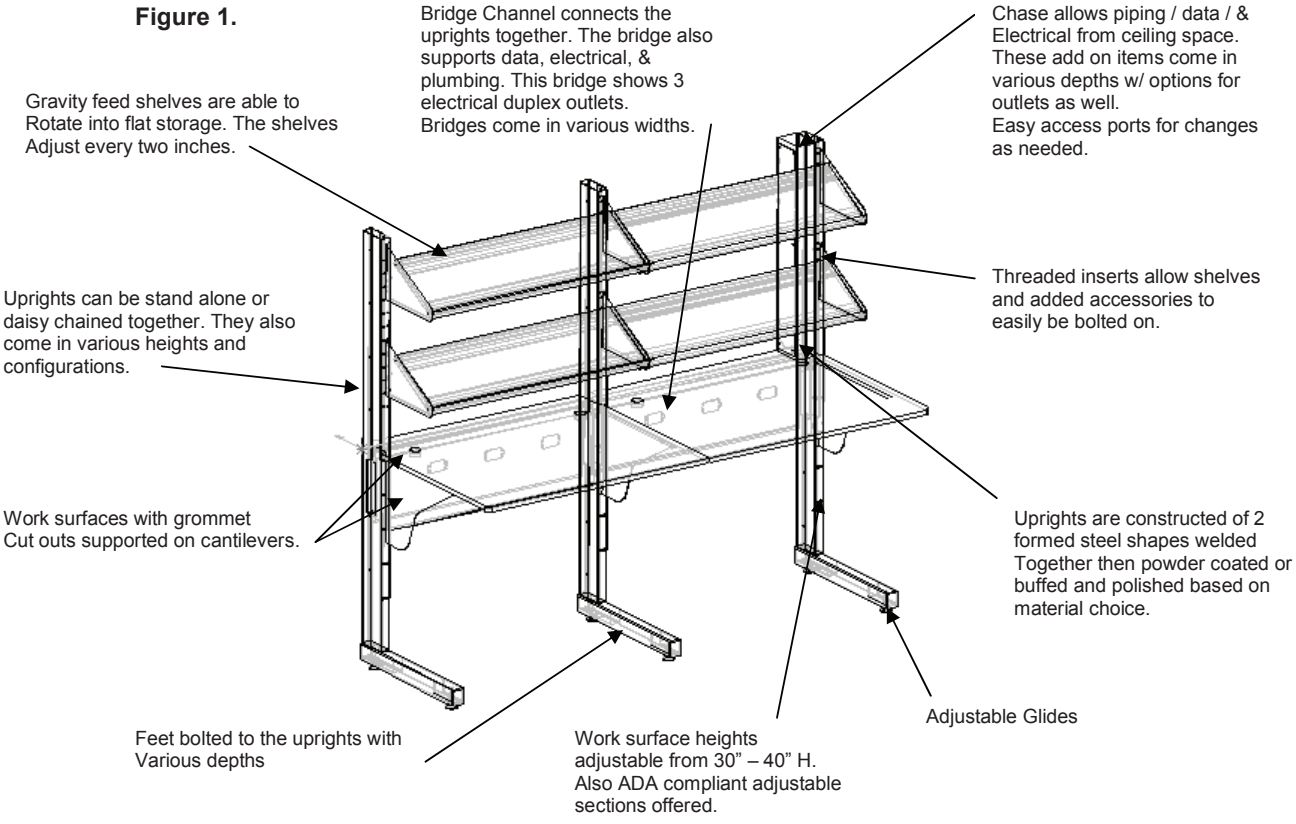
I. Submit part numbers and quantities for pricing. Or contact your representative for a layout design.

Discovery Bench Systems™

General Information:

The Discovery laboratory solution uses a welded rectangle tube construction. This main structure has cantilevers to hold up the work surfaces. Removable and replaceable feet, glides, shelves, and added utility chases for more capabilities. The system has various standard lengths and can be modified for a specific length where needed. This system can be specified directly by the customer or by a Labscape Inc. representative. Labscape Inc. will typically assist a customer through there applications. Architects may wish to use our symbol library to help speed up design time. General pricing is also provided to help customers make initial decision concerning there projects.
Each component used to build the system will be listed with a part number and general information explaining the part and its function. As an aid a small part diagram typically an isometric will be displayed with the part number charts.
This system is fabricated from carbon steel and 304-stainless steel when required. The bench shown below will indicate basic components and where they are being used in the system. This will help you build your specific bench system.
This system lends itself well to supply data, plumbing, and electrical systems through the super structure and chase components. This system can have all your data and electrical components installed at the factory. You can also have your plumbing and electrical pre-installed up to a "J" box and piped up, down, or strait out based on needs. These are all extra charges listed in the accessories section.

Figure 1.

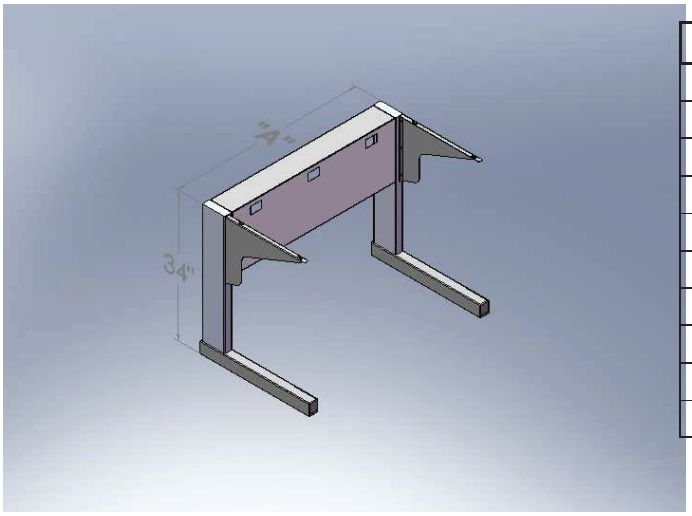


Discovery Frame System

The above Discovery Bench System layout gives you a brief overview of components offered in this specification guide. For further details refer to Figures 2 & 3.

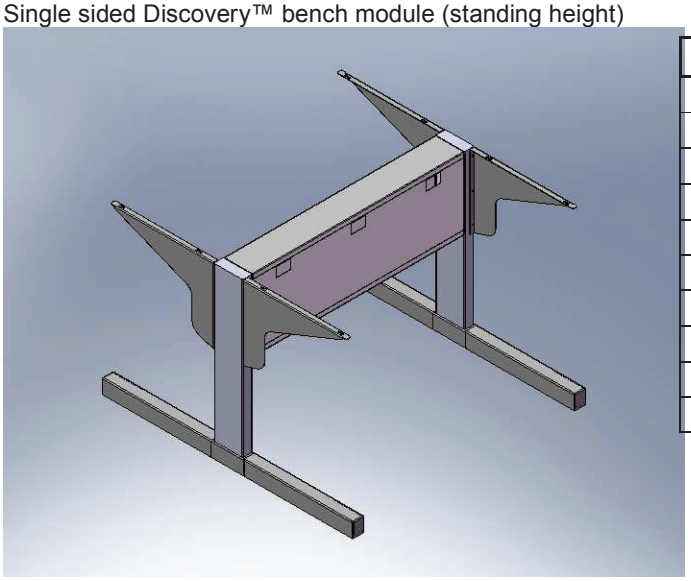
Select Single and Double sided standing and sitting height benches Discovery™ series (2”x6” framing)

This is where you select the modules that best fit your needs. These are the standard bench configurations with out uprights going beyond the work surface. Standard widths are indicated in the spread sheets. Note these benches adjust from standing height to sitting. When they are adjusted down to sitting height the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See accessory section.



Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-35	24"w x29"d x 35"h	Adjustable work surface height
1SS-030-DLB-35	30"w x29"d x 35"h	Adjustable work surface height
1SS-036-DLB-35	36"w x29"d x 35"h	Adjustable work surface height
1SS-042-DLB-35	42"w x29"d x 35"h	Adjustable work surface height
1SS-048-DLB-35	48"w x29"d x 35"h	Adjustable work surface height
1SS-054-DLB-35	54"w x29"d x 35"h	Adjustable work surface height
1SS-058-DLB-35	58"w x29"d x 35"h	Adjustable work surface height
1SS-060-DLB-35	60"w x29"d x 35"h	Adjustable work surface height
1SS-072-DLB-35	72"w x29"d x 35"h	Adjustable work surface height

Single sided Discovery™ bench module (standing height)



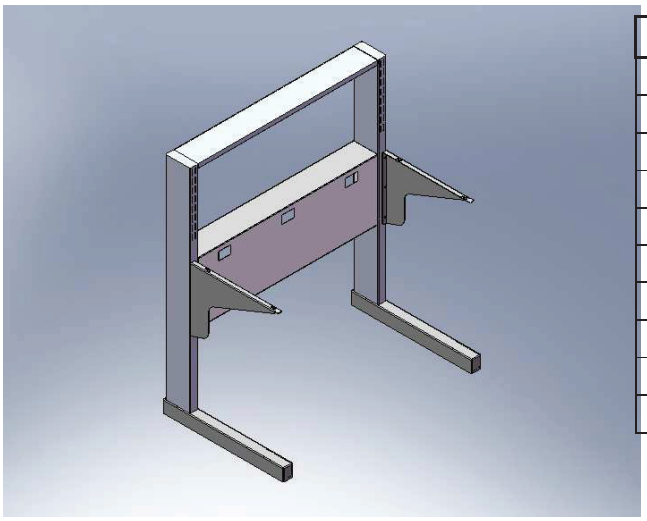
Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-35	24"w x58"d x 35"h	Adjustable work surface height
1DS-030-DLB-35	30"w x58"d x 35"h	Adjustable work surface height
1DS-036-DLB-35	36"w x58”d x 35"h	Adjustable work surface height
1DS-042-DLB-35	42"w x58"d x 35"h	Adjustable work surface height
1DS-048-DLB-35	48"w x58"d x 35"h	Adjustable work surface height
1DS-054-DLB-35	54"w x58"d x 35"h	Adjustable work surface height
1DS-058-DLB-35	58"w x58"d x 35"h	Adjustable work surface height
1DS-060-DLB-35	60"w x58"d x 35"h	Adjustable work surface height
1DS-072-DLB-35	72"w x58"d x 35"h	Adjustable work surface height

Double sided Discovery™ bench module (standing height)

Modules listed above contain standard 2”x6” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet. All other components such as casters, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise.

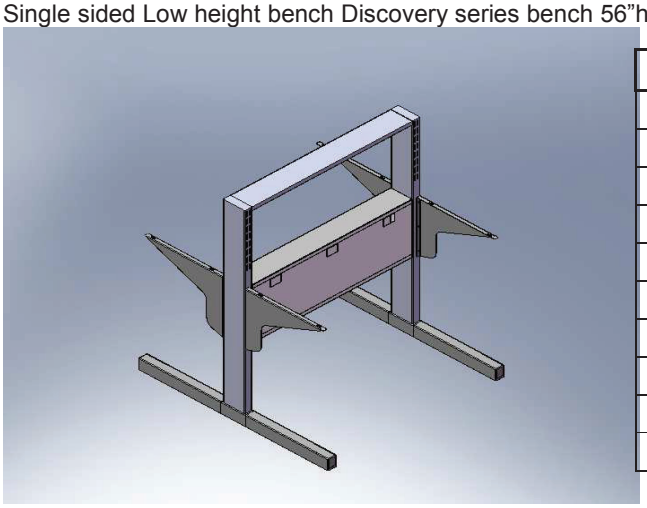
Select Single and Double sided low height upright benches Discovery™ series

These are the standard bench configurations with low height uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section.



Single sided Low height bench Discovery series bench 56”high

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-56	24"w x29"d x 56"h	Adjustable work surface height
1SS-030-DLB-56	30"w x29"d x 56"h	Adjustable work surface height
1SS-036-DLB-56	36"w x29"d x 56"h	Adjustable work surface height
1SS-042-DLB-56	42"w x29"d x 56"h	Adjustable work surface height
1SS-048-DLB-56	48"w x29"d x 56"h	Adjustable work surface height
1SS-054-DLB-56	54"w x29"d x 56"h	Adjustable work surface height
1SS-058-DLB-56	58"w x29"d x 56"h	Adjustable work surface height
1SS-060-DLB-56	60"w x29"d x 56"h	Adjustable work surface height
1SS-072-DLB-56	72"w x29"d x 56"h	Adjustable work surface height



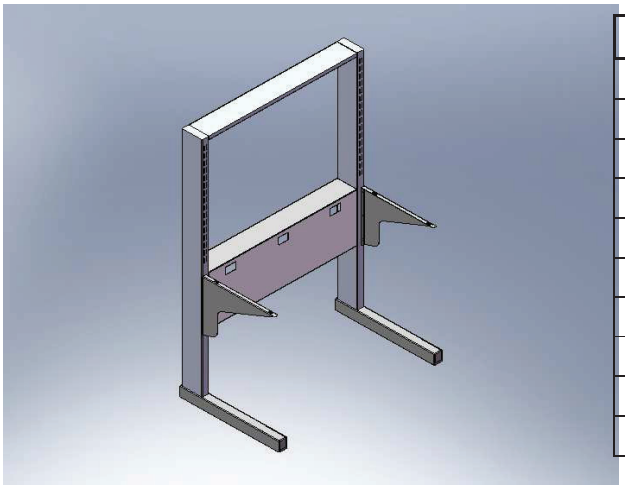
Double sided Low height bench Discovery series bench 56”high

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-56	24"w x58"d x 56"h	Adjustable work surface height
1DS-030-DLB-56	30"w x58"d x 56"h	Adjustable work surface height
1DS-036-DLB-56	36"w x58"d x 56"h	Adjustable work surface height
1DS-042-DLB-56	42"w x58"d x 56"h	Adjustable work surface height
1DS-048-DLB-56	48"w x58"d x 56"h	Adjustable work surface height
1DS-054-DLB-56	54"w x58"d x 56"h	Adjustable work surface height
1DS-058-DLB-56	58"w x58"d x 56"h	Adjustable work surface height
1DS-060-DLB-56	60"w x58"d x 56"h	Adjustable work surface height
1DS-072-DLB-56	72"w x58"d x 56"h	Adjustable work surface height

Modules listed above contain standard 2”x6” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet, and upper support. All other components such as shelving, casters, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise.

Select Single and Double sided medium height upright benches Discovery™ series

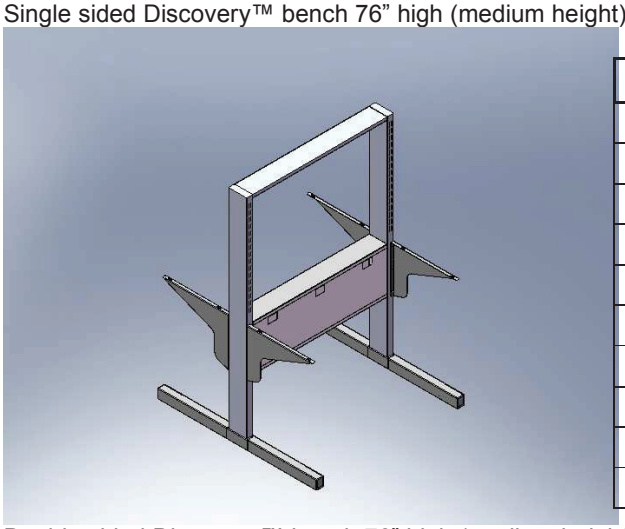
These are the standard bench configurations with medium height uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (**Note when using casters do not exceed this height)**



Single sided Discovery™ bench 76” high (medium height)

Bench Module Sizing Chart

PART NO.	SIZE	DISC.
1SS-024-DLB-76	24"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-030-DLB-76	30"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-036-DLB-76	36"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-042-DLB-76	42"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-048-DLB-76	48"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-054-DLB-76	54"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-058-DLB-76	58"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-060-DLB-76	60"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-072-DLB-76	72"w x29"d x 76"h	Adjustable cantilevers & shelving



Double sided Discovery™ bench 76” high (medium height)

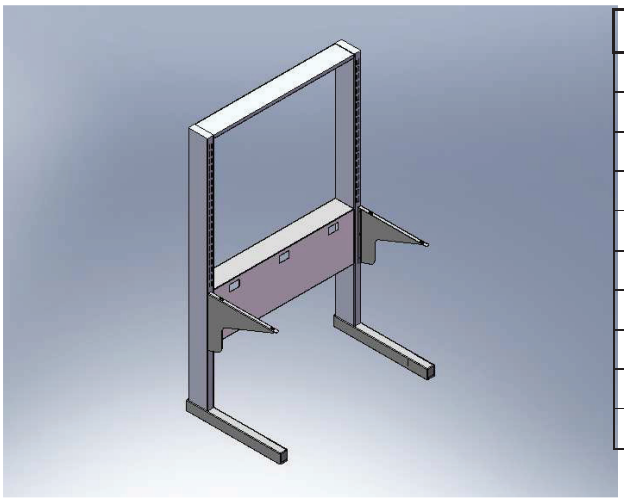
Bench Module Sizing Chart

PART NO.	SIZE	DISC.
1DS-024-DLB-76	24"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-030-DLB-76	30"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-036-DLB-76	36"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-042-DLB-76	42"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-048-DLB-76	48"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-054-DLB-76	54"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-058-DLB-76	58"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-060-DLB-76	60"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-072-DLB-76	72"w x58"d x 76"h	Adjustable cantilevers & shelving

Modules listed above contain standard 2”x6” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet, and upper support. All other components such as shelving, casters, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise.

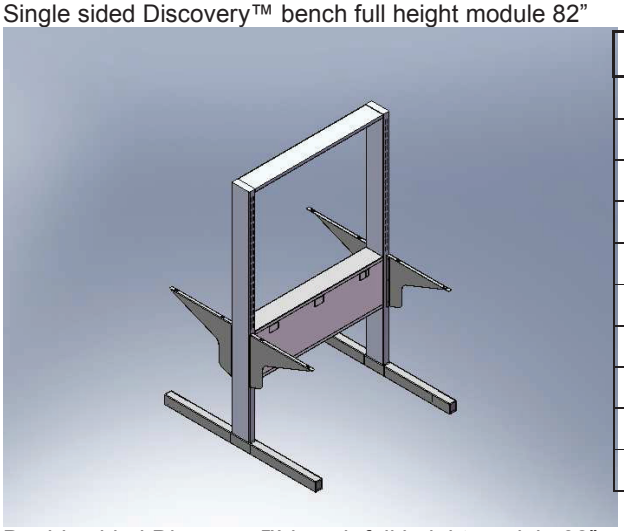
Select Single and Double sided full height upright benches Discovery™ series

These are the standard bench configurations with full height uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (**Note when using casters do not exceed this height)**



Single sided Discovery™ bench full height module 82”

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-82	24"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-030-DLB-82	30"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-036-DLB-82	36"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-042-DLB-82	42"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-048-DLB-82	48"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-054-DLB-82	54"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-058-DLB-82	58"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-060-DLB-82	60"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-072-DLB-82	72"w x29"d x 82"h	Adjustable cantilevers & shelving



Double sided Discovery™ bench full height module 82”

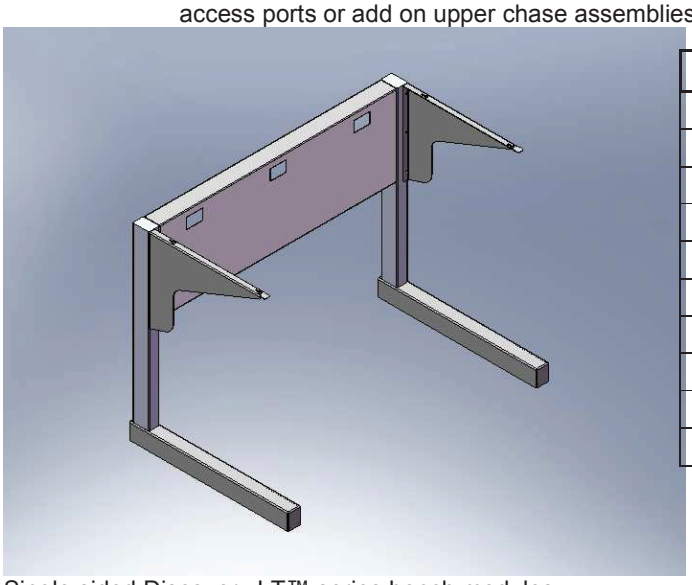
Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-82	24"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-030-DLB-82	30"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-036-DLB-82	36"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-042-DLB-82	42"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-048-DLB-82	48"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-054-DLB-82	54"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-058-DLB-82	58"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-060-DLB-82	60"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-072-DLB-82	72"w x29"d x 82"h	Adjustable cantilevers & shelving

Modules listed above contain standard 2”x6” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet, and upper support. All other components such as shelving, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise. Also it is not recommended to use this module with casters due to the excessive height.

For bench accessories see section of this catalog

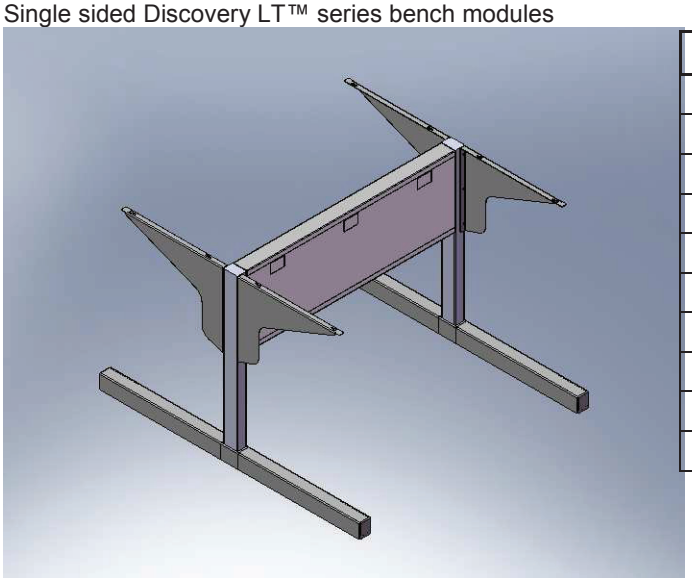
Select Single and Double sided standing and sitting height benches Discovery LT™ series (2”x3” framing)

These are the standard bench configurations with out uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down to sitting height the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section.



Single sided Discovery LT™ series bench modules

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-LT35	24"w x29"d x 35"h	Adjustable work surface height
1SS-030-DLB-LT35	30"w x29"d x 35"h	Adjustable work surface height
1SS-036-DLB-LT35	36"w x29"d x 35"h	Adjustable work surface height
1SS-042-DLB-LT35	42"w x29"d x 35"h	Adjustable work surface height
1SS-048-DLB-LT35	48"w x29"d x 35"h	Adjustable work surface height
1SS-054-DLB-LT35	54"w x29"d x 35"h	Adjustable work surface height
1SS-058-DLB-LT35	58"w x29"d x 35"h	Adjustable work surface height
1SS-060-DLB-LT35	60"w x29"d x 35"h	Adjustable work surface height
1SS-072-DLB-LT35	72"w x29"d x 35"h	Adjustable work surface height



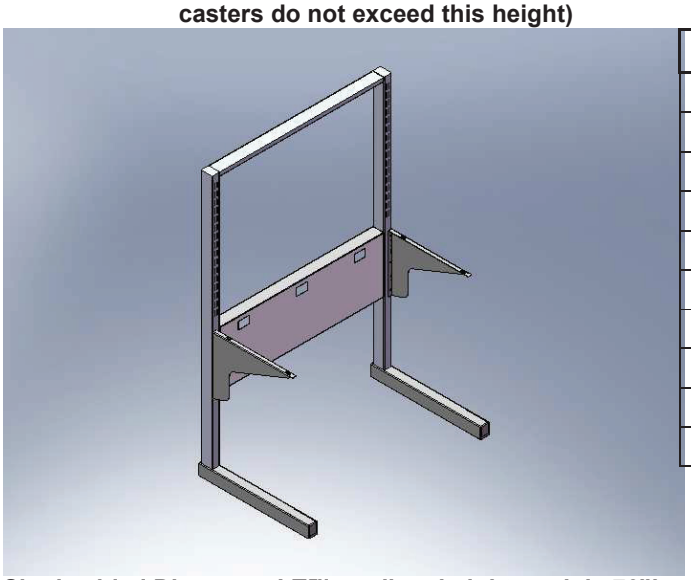
Double sided Discovery LT™ series bench modules

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-LT35	24"w x58"d x 35"h	Adjustable work surface height
1DS-030-DLB-LT35	30"w x58"d x 35"h	Adjustable work surface height
1DS-036-DLB-LT35	36"w x58"d x 35"h	Adjustable work surface height
1DS-042-DLB-LT35	42"w x58"d x 35"h	Adjustable work surface height
1DS-048-DLB-LT35	48"w x58"d x 35"h	Adjustable work surface height
1DS-054-DLB-LT35	54"w x58"d x 35"h	Adjustable work surface height
1DS-058-DLB-LT35	58"w x58"d x 35"h	Adjustable work surface height
1DS-060-DLB-LT35	60"w x58"d x 35"h	Adjustable work surface height
1DS-072-DLB-LT35	72"w x58"d x 35"h	Adjustable work surface height

Modules listed above contain standard 2”x3” steel tube construction that includes: uprights, feet, cantilevers, bridge, leveling feet. All other components such as casters, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise.

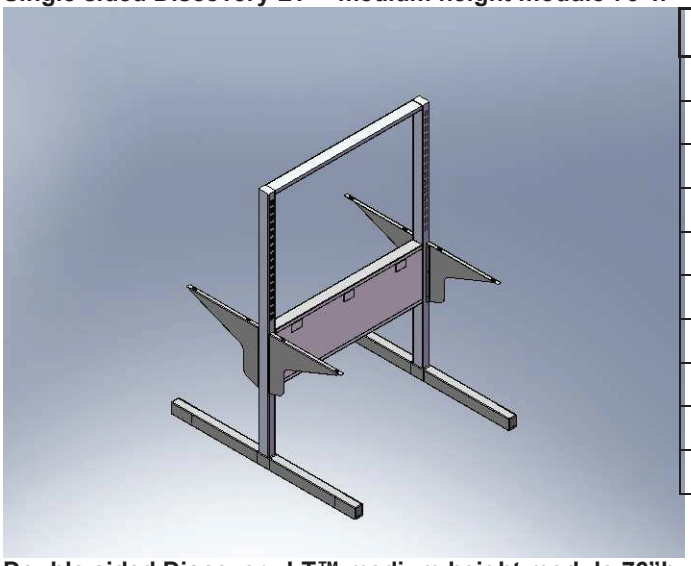
Select Single and Double sided medium height upright benches Discovery LT™ series

These are the standard bench configurations with medium height uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (**Note when using casters do not exceed this height)**



Single sided Discovery LT™ medium height module 76”h

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-LT76	24"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-030-DLB-LT76	30"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-036-DLB-LT76	36"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-042-DLB-LT76	42"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-048-DLB-LT76	48"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-054-DLB-LT76	54"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-058-DLB-LT76	58"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-060-DLB-LT76	60"w x29"d x 76"h	Adjustable cantilevers & shelving
1SS-072-DLB-LT76	72"w x29"d x 76"h	Adjustable cantilevers & shelving



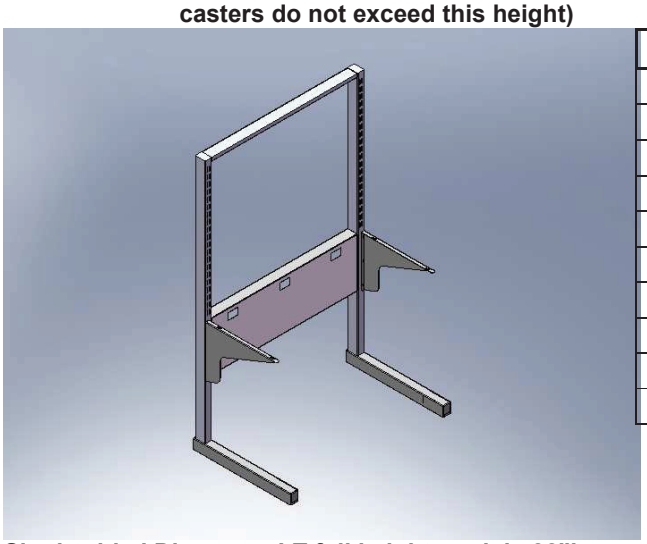
Double sided Discovery LT™ medium height module 76”h

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-LT76	24"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-030-DLB-LT76	30"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-036-DLB-LT76	36"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-042-DLB-LT76	42"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-048-DLB-LT76	48"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-054-DLB-LT76	54"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-058-DLB-LT76	58"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-060-DLB-LT76	60"w x58"d x 76"h	Adjustable cantilevers & shelving
1DS-072-DLB-LT76	72"w x58"d x 76"h	Adjustable cantilevers & shelving

Modules listed above contain standard 2”x6” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet, and upper support. All other components such as shelving, casters, electrical, data, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise.

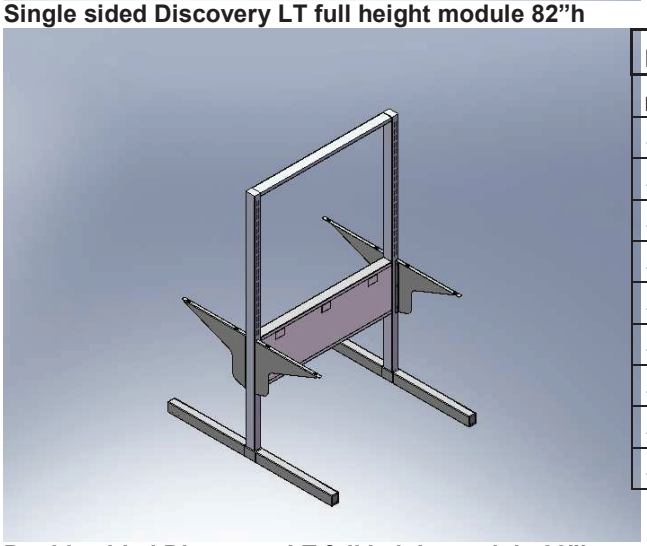
Select Single and Double sided full height upright benches Discovery LT™ series

These are the standard bench configurations with full height uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches adjust from standing height to sitting. When they are adjusted down the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (**Note when using casters do not exceed this height)**



Single sided Discovery LT full height module 82”h

Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SS-024-DLB-LT82	24"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-030-DLB-LT82	30"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-036-DLB-LT82	36"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-042-DLB-LT82	42"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-048-DLB-LT82	48"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-054-DLB-LT82	54"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-058-DLB-LT82	58"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-060-DLB-LT82	60"w x29"d x 82"h	Adjustable cantilevers & shelving
1SS-072-DLB-LT82	72"w x29"d x 82"h	Adjustable cantilevers & shelving



Double sided Discovery LT full height module 82”h

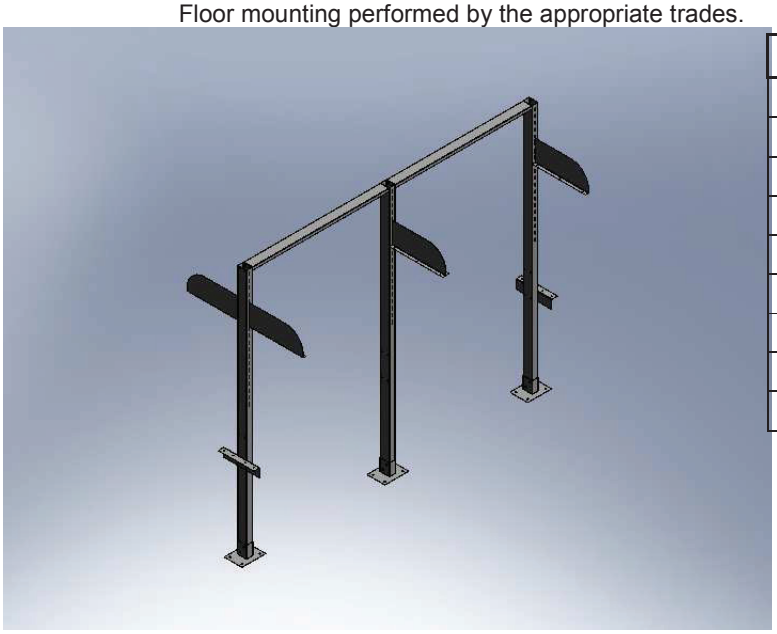
Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-DLB-LT82	24"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-030-DLB-LT82	30"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-036-DLB-LT82	36"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-042-DLB-LT82	42"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-048-DLB-LT82	48"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-054-DLB-LT82	54"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-058-DLB-LT82	58"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-060-DLB-LT82	60"w x29"d x 82"h	Adjustable cantilevers & shelving
1DS-072-DLB-LT82	72"w x29"d x 82"h	Adjustable cantilevers & shelving

Modules listed above contain standard 2”x3” steel tube construction that include uprights, feet, cantilevers, bridge, leveling feet, and upper support. All other components such as shelving, electrical, data, work surfaces, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will be provided unless specified otherwise. Also it is not recommended to use this module with casters due to the excessive height.

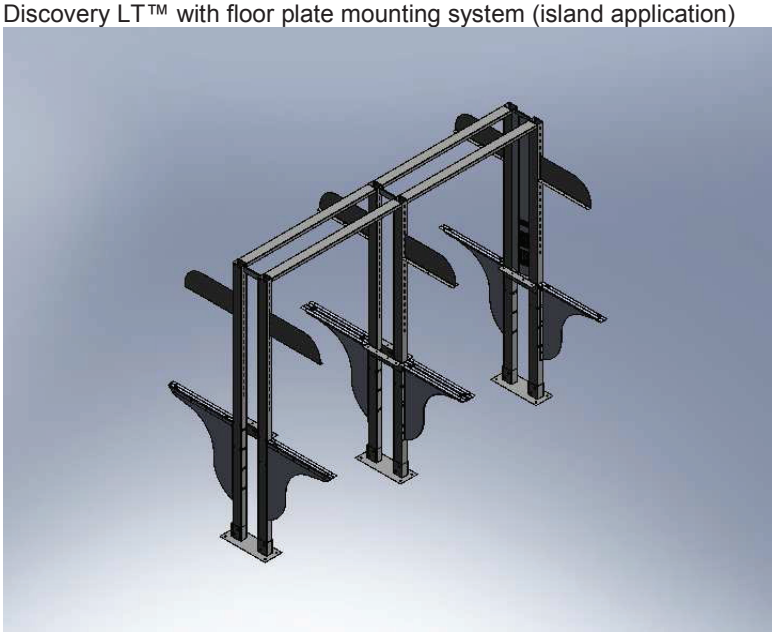
For bench accessories see section of this catalog

Select Double sided full height island benches Discovery LT™ series (2”x3” framing) with floor plate mounting system

These are the standard bench configurations with uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Work surfaces should be cut accordingly to allow for penetration of upright tubes. Base cabinets support work surface and also help stabilize this assembly unless using double upright configuration. Floor plates are provided with hardware for connection to uprights only. Floor mounting performed by the appropriate trades.



Discovery LT™ with floor plate mounting system (island application)



Discovery LT™ stand alone floor plate mounting system
Floor plates, hardware, upper horizontal supports, and cantilevers where applicable are supplied.

Floor Mount Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SU-024-FMU-86	24"w x3"d x 86"h	Bolt together assembly
1SU-030-FMU-86	30"w x3"d x 86"h	Bolt together assembly
1SU-036-FMU-86	36"w x3"d x 86"h	Bolt together assembly
1SU-042-FMU-86	42"w x3"d x 86"h	Bolt together assembly
1SU-048-FMU-86	48"w x3"d x 86"h	Bolt together assembly
1SU-054-FMU-86	54"w x3"d x 86"h	Bolt together assembly
1SU-058-FMU-86	58"w x3"d x 86"h	Bolt together assembly
1SU-060-FMU-86	60"w x3"d x 86"h	Bolt together assembly

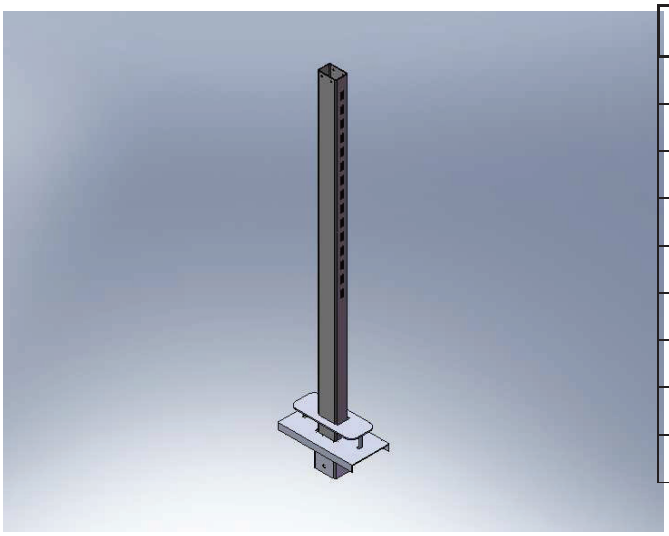
This system comes standard with uprights, floor plates, hardware, middle and upper support brackets and channels. This system also has an option for ½ floor plates for end of run applications to keep the floor plate hidden behind a utility panel.
For shelving options see Accessories section. You can also add on power and data chases as required. Plumbing can also be run through both systems as required. Contact your dealer or representative.

Double Floor Mount Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DU-024-FMU-86	24"w x24”d x 86"h	Bolt together assembly
1DU-030-FMU-86	30"w x24"d x 86"h	Bolt together assembly
1DU-036-FMU-86	36"w x24"d x 86"h	Bolt together assembly
1DU-042-FMU-86	42"w x24"d x 86"h	Bolt together assembly
1DU-048-FMU-86	48"w x24"d x 86"h	Bolt together assembly
1DU-054-FMU-86	54"w x24"d x 86"h	Bolt together assembly
1DU-058-FMU-86	58"w x24"d x 86"h	Bolt together assembly
1DU-060-FMU-86	60"w x24"d x 86"h	Bolt together assembly

Cantilevers are adjustable from seated height to standing. This assembly also can have add on power and data chase assemblies. Casework is not needed with this assembly to complete the installation. This system can also be used along walls or set up to support equipment either standard duty or by using the HD version of the cantilevers. The HD version is also designed to support under-mount casework and storage options.
For shelving options see Accessories section.

Select Double sided Bench Top Mounted Discovery LT™ Single tube series

This system is designed to mount to the work surface off the counter top. The work surface must have a cut out (3-1/16”x2-1/16” min). It is also recommended that you do not split the tops where you penetrate for the upright. The under-mount bracing is needed to complete the assembly do not leave off. One assembly includes two upright assemblies, one horizontal support, and under mount pressure plate plus hardware.



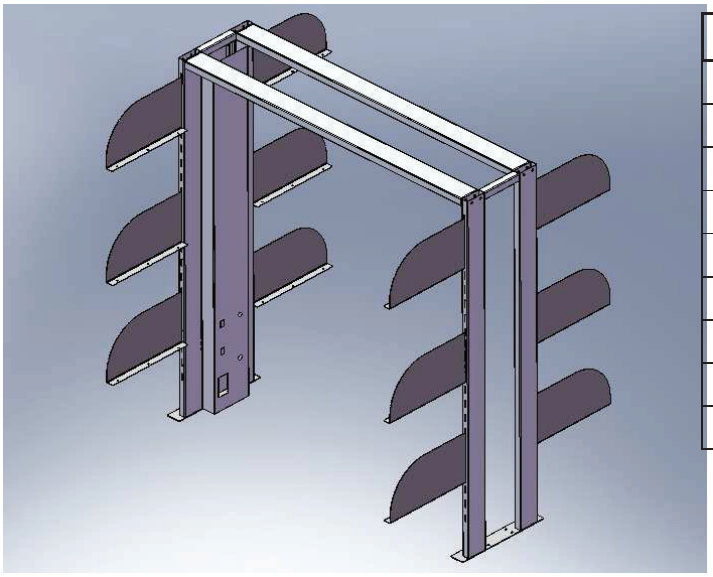
Bench top mounted Discovery LT single tube assembly shown with bottom pressure plate

Bench Surface Mount Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-BMU-48	24"w x3"d x 48"h	Bolt together assembly
1DS-030-BMU-48	30"w x3"d x 48"h	Bolt together assembly
1DS-036-BMU-48	36"w x3"d x 48"h	Bolt together assembly
1DS-042-BMU-48	42"w x3"d x 48"h	Bolt together assembly
1DS-048-BMU-48	48"w x3"d x 48"h	Bolt together assembly
1DS-054-BMU-48	54"w x3"d x 48"h	Bolt together assembly
1DS-058-BMU-48	58"w x3"d x 48"h	Bolt together assembly
1DS-060-BMU-48	60"w x3"d x 48"h	Bolt together assembly

Not all items shown but supplied top horizontal support, hardware, under mount pressure plate, and 2 upright slotted tube assemblies. For add on components see accessories.

Select Double sided Bench Top Mounted EKO LT™ series (1”x3” slotted steel upright)

This system is designed to mount to the work surface off the counter top. The work surface must have drilled holes to accept mounting plate. Note the under support such as casework or other structure must be strong enough to accept the added loads of the bench and shelving plus the materials stowed. The loads will be transferred down to the work surface and casework. Use under-counter support where possible.

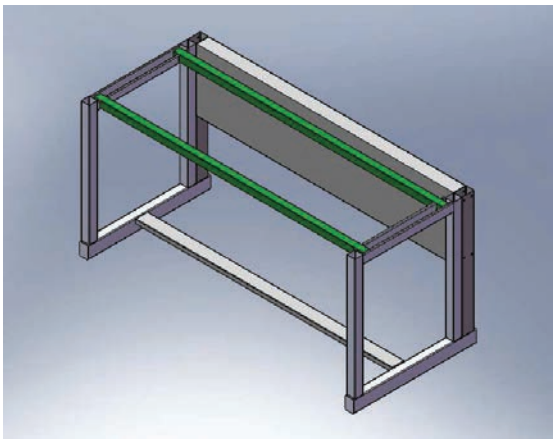


EKO LT™ series counter top mounted bench system 48”h (shown with power chase and shelf hanger brackets)

Bench Surface Mount Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1DS-024-BSM-48	24"w x12"d x 48"h	Bolt together assembly
1DS-030-BSM-48	30"w x12"d x 48"h	Bolt together assembly
1DS-036-BSM-48	36"w x12"d x 48"h	Bolt together assembly
1DS-042-BSM-48	42"w x12"d x 48"h	Bolt together assembly
1DS-048-BSM-48	48"w x12"d x 48"h	Bolt together assembly
1DS-054-BSM-48	54"w x12"d x 48"h	Bolt together assembly
1DS-058-BSM-48	58"w x12"d x 48"h	Bolt together assembly
1DS-060-BSM-48	60"w x12"d x 48"h	Bolt together assembly

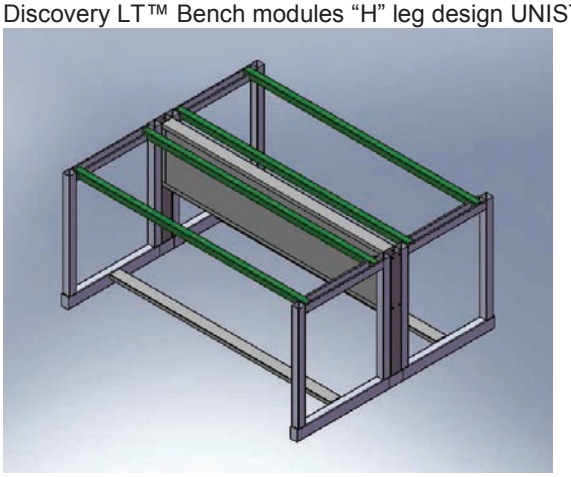
Select Single and Double sided standing and sitting height benches Discovery LT™ series (2”x3” Fixed H-LEG framing) Casework suspended system

These are the standard bench configurations with out uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches are fixed standing height or sitting (specify). When they are adjusted down to sitting height the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (Recommended for heavy or medium load applications)



Discovery LT™ Bench modules “H” leg design UNISTRUT® for suspended casework Single Sided

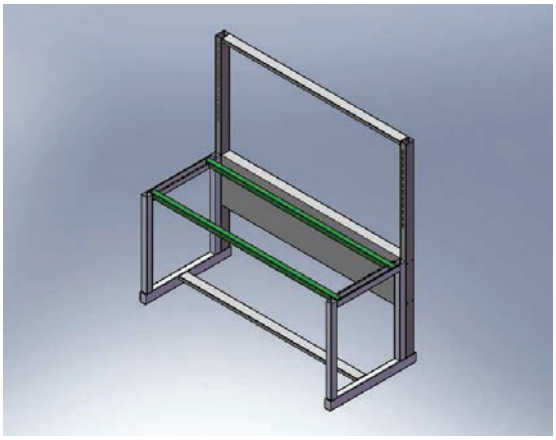
Bench "H" Leg Module Sizing Chart		
PART NO.	SIZE	DISC.
1HS-024-DLB-LT35	24"w x29"d x 35"h	Fixed work surface height
1HS-030-DLB-LT35	30"w x29"d x 35"h	Fixed work surface height
1HS-036-DLB-LT35	36"w x29"d x 35"h	Fixed work surface height
1HS-042-DLB-LT35	42"w x29"d x 35"h	Fixed work surface height
1HS-048-DLB-LT35	48"w x29"d x 35"h	Fixed work surface height
1HS-054-DLB-LT35	54"w x29"d x 35"h	Fixed work surface height
1HS-058-DLB-LT35	58"w x29"d x 35"h	Fixed work surface height
1HS-060-DLB-LT35	60"w x29"d x 35"h	Fixed work surface height
1HS-072-DLB-LT35	72"w x29"d x 35"h	Fixed work surface height



Discovery LT™ Bench modules “H” leg design UNISTRUT® for suspended casework Double Sided

Bench “H” Leg Module Sizing Chart		
PART NO.	SIZE	DISC.
1HD-024-DLB-LT35	24"w x58"d x 35"h	Fixed work surface height
1HD-030-DLB-LT35	30"w x58"d x 35"h	Fixed work surface height
1HD-036-DLB-LT35	36"w x58"d x 35"h	Fixed work surface height
1HD-042-DLB-LT35	42"w x58"d x 35"h	Fixed work surface height
1HD-048-DLB-LT35	48"w x58"d x 35"h	Fixed work surface height
1HD-054-DLB-LT35	54"w x58"d x 35"h	Fixed work surface height
1HD-058-DLB-LT35	58"w x58"d x 35"h	Fixed work surface height
1HD-060-DLB-LT35	60"w x58"d x 35"h	Fixed work surface height
1HD-072-DLB-LT35	72"w x58"d x 35"h	Fixed work surface height

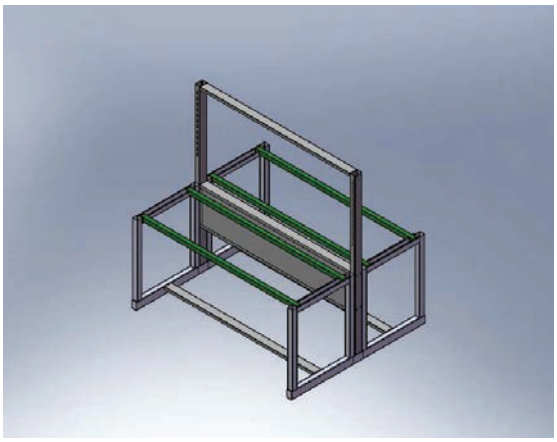
Select Single and Double sided medium height benches Discovery LT™ series (2”x3” Fixed H-LEG framing) Casework suspended system



Discovery LT™ “H” leg single sided assembly with 76”h slotted uprights

Bench "H" Leg Module Sizing Chart		
PART NO.	SIZE	DISC.
1HS-024-DLB-LT76	24"w x29"d x 76"h	Fixed work surface height
1HS-030-DLB-LT76	30"w x29"d x 76"h	Fixed work surface height
1HS-036-DLB-LT76	36"w x29"d x 76"h	Fixed work surface height
1HS-042-DLB-LT76	42"w x29"d x 76"h	Fixed work surface height
1HS-048-DLB-LT76	48"w x29"d x 76"h	Fixed work surface height
1HS-054-DLB-LT76	54"w x29"d x 76"h	Fixed work surface height
1HS-058-DLB-LT76	58"w x29"d x 76"h	Fixed work surface height
1HS-060-DLB-LT76	60"w x29"d x 76"h	Fixed work surface height
1HS-072-DLB-LT76	72"w x29"d x 76"h	Fixed work surface height

Select Single and Double sided medium height benches Discovery LT™ series (2”x3” Fixed H-LEG framing) Casework suspended system



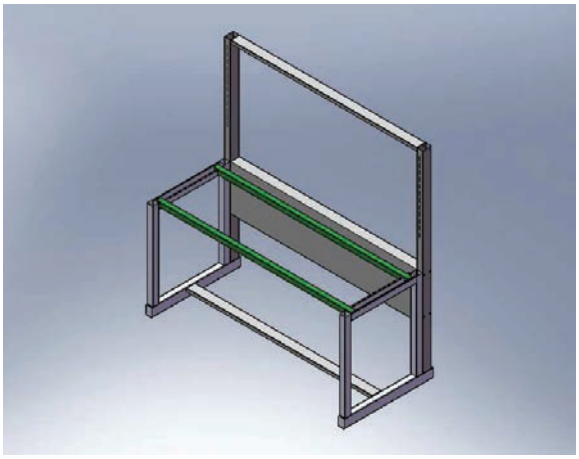
Discovery LT™ “H” leg double sided assembly with 76”h slotted uprights

Bench “H” Leg Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1HD-024-DLB-LT76	24"w x58"d x 76"h	Fixed work surface height
1HD-030-DLB-LT76	30"w x58"d x 76"h	Fixed work surface height
1HD-036-DLB-LT76	36"w x58"d x 76"h	Fixed work surface height
1HD-042-DLB-LT76	42"w x58"d x 76"h	Fixed work surface height
1HD-048-DLB-LT76	48"w x58"d x 76"h	Fixed work surface height
1HD-054-DLB-LT76	54"w x58"d x 76"h	Fixed work surface height
1HD-058-DLB-LT76	58"w x58"d x 76"h	Fixed work surface height
1HD-060-DLB-LT76	60"w x58"d x 76"h	Fixed work surface height
1HD-072-DLB-LT76	72"w x58"d x 76"h	Fixed work surface height

Modules listed above contain standard 2”x3” & 2”x2” steel tube construction that include slotted uprights, feet, horizontal support, bridge, leveling feet & Unistrut®. All other components such as casters, electrical, data, work surfaces, and plumbing sold separately. All hardware for assembly is provided.
Note electrical and data knockouts will not be provided unless specified

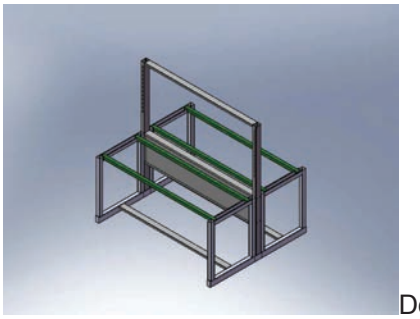
Select Single and Double sided medium height benches Discovery LT™ series (2”x3” Fixed H-LEG framing) Casework suspended system

These are the standard bench configurations with uprights going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches are fixed standing height or sitting (specify). When they are adjusted down to sitting height the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See add accessory section. (Recommended for heavy or medium load applications)



Discovery LT™ “H” leg single sided assembly with 82”h full height slotted uprights

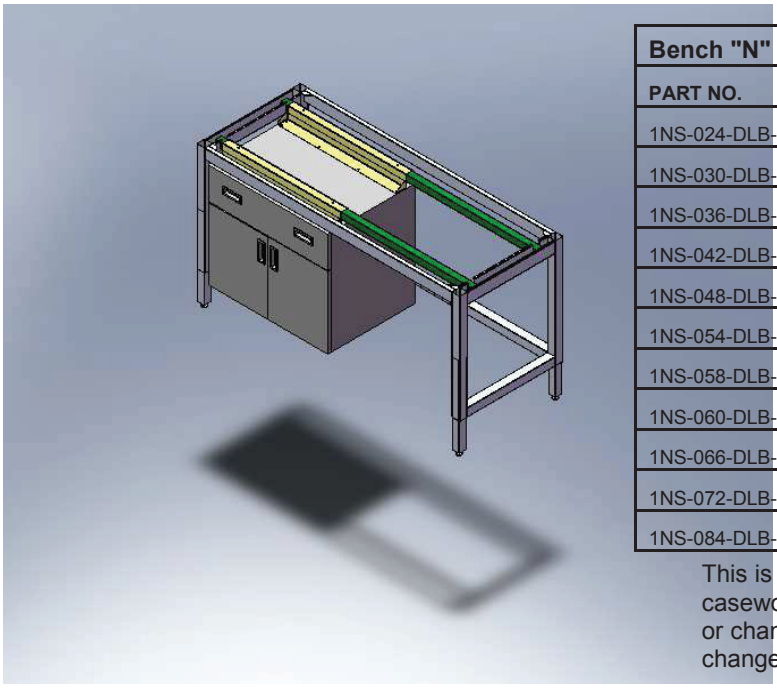
Bench "H" Leg Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1HS-024-DLB-LT82	24"w x29"d x 82"h	Fixed work surface height
1HS-030-DLB-LT82	30"w x29"d x 82"h	Fixed work surface height
1HS-036-DLB-LT82	36"w x29"d x 82"h	Fixed work surface height
1HS-042-DLB-LT82	42"w x29"d x 82"h	Fixed work surface height
1HS-048-DLB-LT82	48"w x29"d x 82"h	Fixed work surface height
1HS-054-DLB-LT82	54"w x29"d x 82"h	Fixed work surface height
1HS-058-DLB-LT82	58"w x29"d x 82"h	Fixed work surface height
1HS-060-DLB-LT82	60"w x29"d x 82"h	Fixed work surface height
1HS-072-DLB-LT82	72"w x29"d x 82"h	Fixed work surface height



For double sided versions of this bench either use 2 single sided systems or one bolt together shared single double sided center upright. For more information on this type of system contact your dealer or representative. These systems are constructed in both 2”x2” and 2”x3” steel and stainless steel tube type construction.

Double sided Discovery LT “H” leg 82”h

Single sided “N” Framed benches EKO™ series (Stand alone system) with or without vertical slotted uprights



EKO Frame system with adjustable height legs and robust welded frame design

Bench "N" Leg Module Sizing Chart		
PART NO.	SIZE	DISC.
1NS-024-DLB-LT36	24"w x29"d x 36"h	Adjustable work surface height
1NS-030-DLB-LT36	30"w x29"d x 36"h	Adjustable work surface height
1NS-036-DLB-LT36	36"w x29"d x 36"h	Adjustable work surface height
1NS-042-DLB-LT36	42"w x29"d x 36"h	Adjustable work surface height
1NS-048-DLB-LT36	48"w x29"d x 36"h	Adjustable work surface height
1NS-054-DLB-LT36	54"w x29"d x 36"h	Adjustable work surface height
1NS-058-DLB-LT36	58"w x29"d x 36"h	Adjustable work surface height
1NS-060-DLB-LT36	60"w x29"d x 36"h	Adjustable work surface height
1NS-066-DLB-LT37	66"w x29"d x 36"h	Adjustable work surface height
1NS-072-DLB-LT36	72"w x29"d x 36"h	Adjustable work surface height
1NS-084-DLB-LT37	84"w x29"d x 36"h	Adjustable work surface height

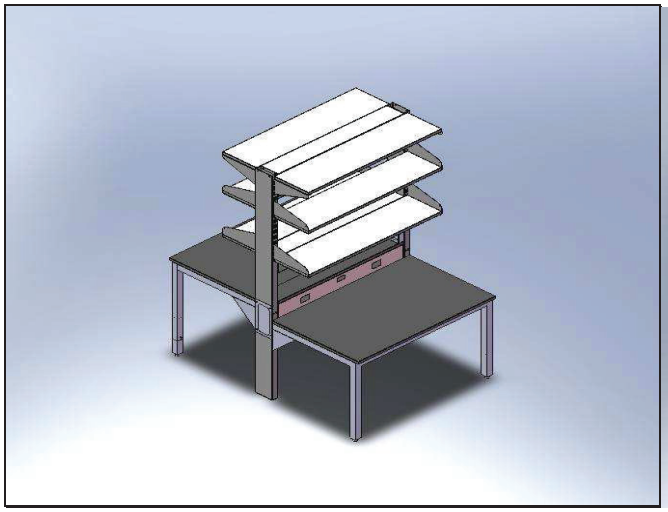
This is a fully welded frame with supports for suspended casework. The casework can easily be moved from side to side or changed out for many different configurations. As your lab changes you can adapt storage and systems as required.

The chart below is for systems with 78”h slotted uprights. The design is the same as above accept for the rear vertical frame tubes run 78”h and are slotted in the front to accept shelving and storage.

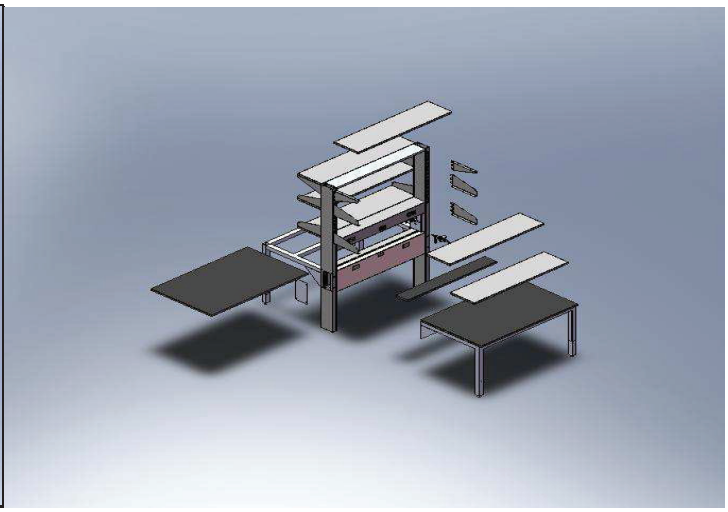
Bench "N" Leg Module Sizing Chart		
PART NO.	SIZE	DISC.
1NS-024-DLB-LT82	24"w x29"d x 82"h	Adjustable work surface height
1NS-030-DLB-LT82	30"w x29"d x 82"h	Adjustable work surface height
1NS-036-DLB-LT82	36"w x29"d x 82"h	Adjustable work surface height
1NS-042-DLB-LT82	42"w x29"d x 82"h	Adjustable work surface height
1NS-048-DLB-LT82	48"w x29"d x 82"h	Adjustable work surface height
1NS-054-DLB-LT82	54"w x29"d x 82"h	Adjustable work surface height
1NS-058-DLB-LT82	58"w x29"d x 82"h	Adjustable work surface height
1NS-060-DLB-LT82	60"w x29"d x 82"h	Adjustable work surface height
1NS-066-DLB-LT82	66"w x29"d x 82"h	Adjustable work surface height
1NS-072-DLB-LT82	72"w x29"d x 82"h	Adjustable work surface height
1NS-084-DLB-LT82	84"w x29"d x 82"h	Adjustable work surface height

These frame systems use either leveling feet or casters and can also be fully piped and wired for power, plumbing, and data as required. Frames can be manufactured in 2” or 1-1/2” square tube design based on requirements. If not specified 1-1/2” will be used unless noted. This system is used as a stand alone type system typically. For all the add on accessories see accessory section in this catalog.

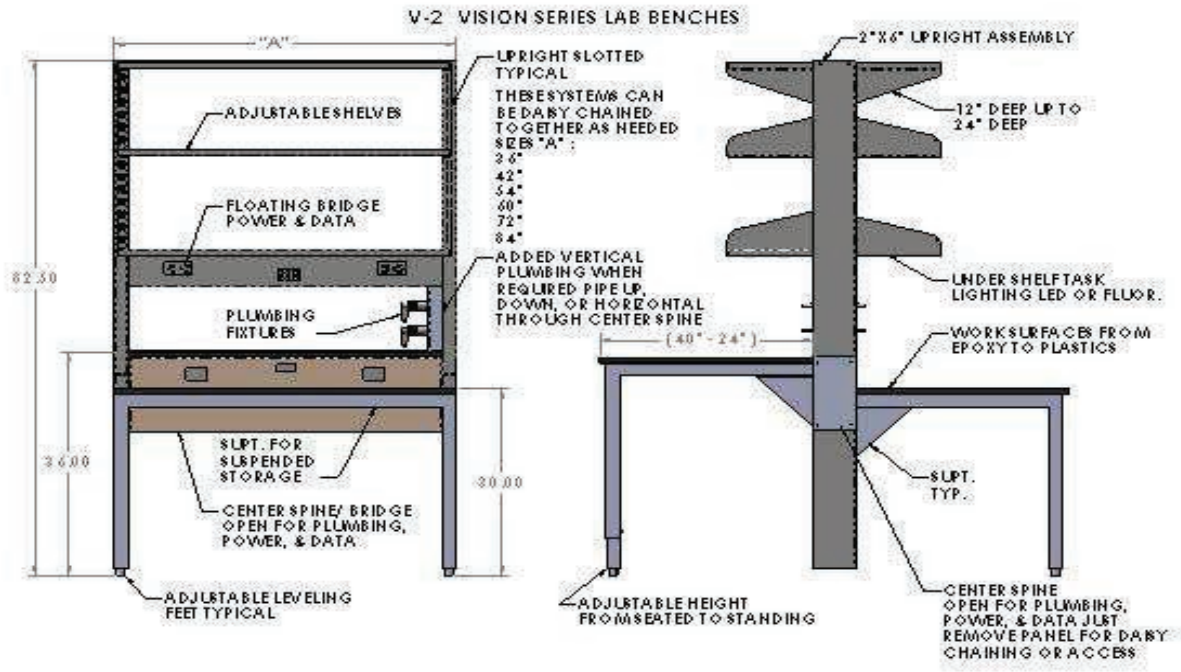
VISION Series Laboratory benches



V2 Series bench assembled



Assembly process shown



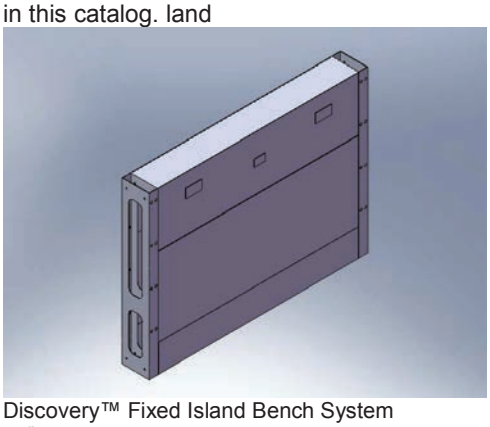
Accessories:

Under bench suspended storage options. Roll out versions are also available as well as fixed floor mounted when required.

- Lighting options include 2', 3', and 4' options for task lighting.
- Keyboard pullout trays include an economical to high end versions with ergonomic applications.
- PC Carriers are also available with under mount systems or side mount when required.
- Monitor arms are available various types
- Privacy panels including marker boards are available also included in this group drying rack or stainless steel dividers.
- Your choice of work surfaces that include epoxy resin, phenolic resin, stainless steel, plastics, wood, and laminates.

Double sided Center Island benches Discovery™ series (Fixed Floor mounted system) Use with Tables or separate benches

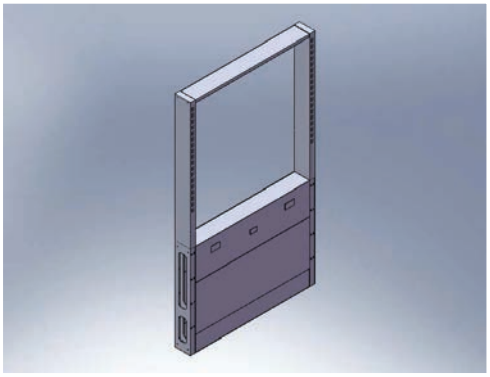
These are the standard island configurations with uprights not going beyond the work surface. Standard widths are indicated in the sizing charts. Note these benches are fixed height or sitting (specify). When the benches or tables set next to the system are sitting height the electrical and data ports are exposed. Work surfaces should be cut accordingly to allow for this process unless specified. Standing height configurations can use access ports or add on upper chase assemblies for power. See accessories section
in this catalog. land



Discovery™ Fixed Island Bench System
36”h (Power, data, and plumbing delivery system)

Floor Mount Island Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SU-024-FMI-36	24"w x6"d x 36"h	Bolt together assembly
1SU-030-FMI-36	30"w x6"d x 36"h	Bolt together assembly
1SU-036-FMI-36	36"w x6"d x 36"h	Bolt together assembly
1SU-042-FMI-36	42"w x6"d x 36"h	Bolt together assembly
1SU-048-FMI-36	48"w x6"d x 36"h	Bolt together assembly
1SU-054-FMI-36	54"w x6"d x 36"h	Bolt together assembly
1SU-058-FMI-36	58"w x6"d x 36"h	Bolt together assembly
1SU-060-FMI-36	60"w x6"d x 36"h	Bolt together assembly

The 6” deep system is shown we also offer a 12” and 24” deep base system as well.

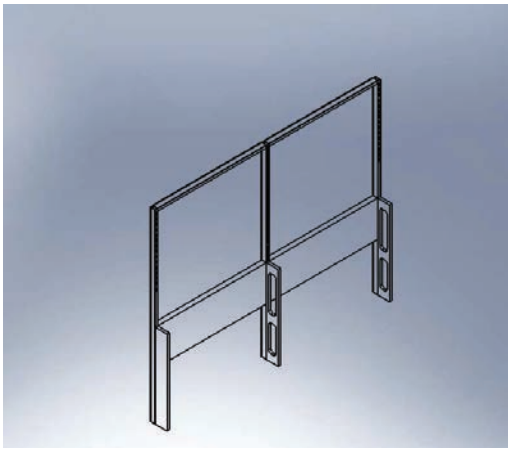


Floor Mount Island Bench Module Sizing Chart		
PART NO.	**SIZE**	**DISC.**
1SU-024-FMI-86	24"w x6"d x 86"h	Bolt together assembly
1SU-030-FMI-86	30"w x6"d x 86"h	Bolt together assembly
1SU-036-FMI-86	36"w x6"d x 86"h	Bolt together assembly
1SU-042-FMI-86	42"w x6"d x 86"h	Bolt together assembly
1SU-048-FMI-86	48"w x6"d x 86"h	Bolt together assembly
1SU-054-FMI-86	54"w x6"d x 86"h	Bolt together assembly
1SU-058-FMI-86	58"w x6"d x 86"h	Bolt together assembly
1SU-060-FMI-86	60"w x6"d x 86"h	Bolt together assembly

Island Floor mounted Discovery™ Bench System 82”h (Power, data, and plumbing delivery system)
Modules listed above contain standard 2”x6” steel tube construction that include slotted uprights, filler panels, “c” bridge, Upper horizontal support, and floor mounting plate with supports. All other components such as shelving, cantilevers, electrical, data, and plumbing sold separately. All hardware for assembly is provided accept floor mounting hardware.

Note electrical and data knockouts will be provided unless specified 4 electrical and 2 data.

EURO STYLE NONEVASIVE CASEWORK MOUNTED FRAMES AND SUPPORTS



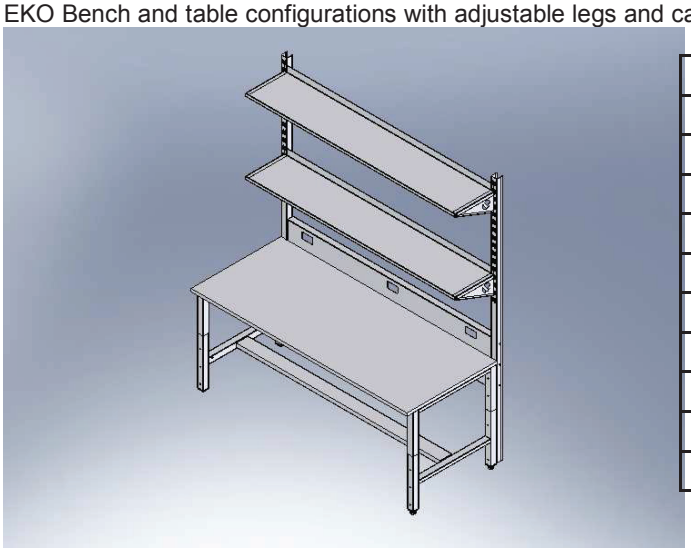
EURO Style non evasive system – this frame work attaches to the back of casework and allows for shelving against walls or you can create islands with no physical attachment to the room itself. Besides using the Discovery line of products this allows another option if you do not like protruding feet or having to worry about modified casework to fit the system. This simply attaches to any casework. Frames are designed to allow power, data, and plumbing to run through the system. Also the lower center spine can be pierced to carry fixtures as well. Uprights 1”x2 or 1”x3” with welded on support frame that attaches to casework. All other features are stock production items. These systems use our standard shelves, hangers, and supports where possible.

Applications include:
Clean rooms
Modular applications
Leased or rented lab space
Temporary use
Add on to existing casework

Single sided benches EKO™ series (Fixed and mobile tables with Bolt on uprights)

These are the standard table bench type system with adjustable height legs. The construction is a 2”x2” tube steel frame and upright. This system is sold in both steel and 304 stainless steel as required to meet customer needs. This can also be used for ADA applications as required. Adjustment ranges are from 30” to 40” high.

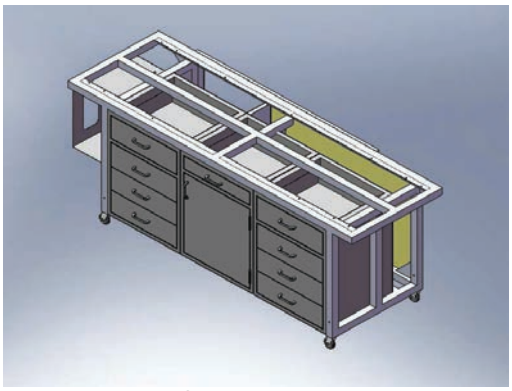
EKO Bench and table configurations with adjustable legs and casters shown (leveling feet standard)



EKO Bench with full height uprights 2”x2” frame, power bridge assembly, and flat shelves. Very economical system.

Bench Adjustable Height Module Chart		
PART NO.	**SIZE**	**DISC.**
1HS-024-ELB-A82	24"w x30"d x 82"h	Adj. work surface height
1HS-030-ELB-A82	30"w x30"d x 82"h	Adj. work surface height
1HS-036-ELB-A82	36"w x30"d x 82"h	Adj. work surface height
1HS-042-ELB-A82	42"w x30"d x 82"h	Adj. work surface height
1HS-048-ELB-A82	48"w x30"d x 82"h	Adj. work surface height
1HS-054-ELB-A82	54"w x30"d x 82"h	Adj. work surface height
1HS-058-ELB-A82	58"w x30"d x 82"h	Adj. work surface height
1HS-060-ELB-A82	60"w x30"d x 82"h	Adj. work surface height
1HS-072-ELB-A82	72"w x30"d x 82"h	Adj. work surface height

Specialty Benches



Special designs and specific applications:
We currently run design specific products for many different industries including electronics. We offer ESD compliant furniture systems as well that are not shown in this catalog.
This bench is an example of design formulated and built within days and shipped within three weeks. We typically can design and build your system in a very timely manner and stay within your budget as well. For more details contact your dealer or representative.
Special fields of application include:
Electronics
Manufacturing / Production lines
Test platforms
Integration with existing systems
Forensics
Food production and testing

Custom built systems are available with a quick turn around…
Labscape will manufacture specialized tables, carts, and benches. We continually work with our customers to develop custom built systems to better serve your needs. We can either take our existing product and develop a new system or start with a completely new design. Contact us today so that we can develop a system for you. Below are samples of systems we have developed for our customers and are now in use around the world.

Mobil Tech Benches

Special Heavy Duty Test bench 2,000lb plus

ACCESSORY ADD COMPONENTS

Floating Bridge Connector Double Sided:

Discovery Bench System – DS or Double Sided Cut Outs for Power and Data and plumbing. Floating Bridge Horizontal Connector Double sided for above work surfaces. If data is needed
For any of the configurations add –(D) at the very end of the part number.
For REAGEANT shelf add "R" at the end of your part number. Note all LT versions are 3" deep just follow part number with -LT.

FLOATING BRIDGE HORIZONTAL DS SELECTION CHART

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-DSF	Connector w/o electrical c/o or plumbing or data	6"x22"x7"
006-028-DSF	Connector w/o electrical c/o or plumbing or data	6"x28"x7"
006-034-DSF	Connector w/o electrical c/o or plumbing or data	6"x34"x7"
006-040-DSF	Connector w/o electrical c/o or plumbing or data	6"x40"x7"
006-046-DSF	Connector w/o electrical c/o or plumbing or data	6"x46"x7"
006-058-DSF	Connector w/o electrical c/o or plumbing or data	6"x58"x7"

FLOATING BRIDGE HORIZONTAL DS W/ POWER SELECTION CHART

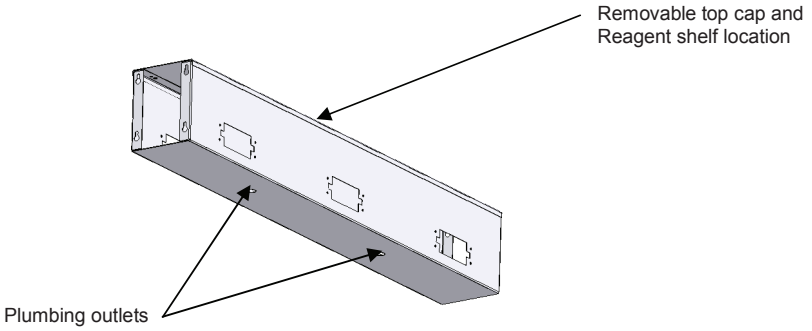
PART NO.	DISCRIPTION	SIZE DxWxH
006-022-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x22"x7"
006-028-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x28"x7"
006-034-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x34"x7"
006-040-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x40"x7"
006-046-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x46"x7"
006-058-DSF-P	Connector w/ 2 electrical duplex w/o plumbing	6"x58"x7"

For more duplex outlets add number after P such as 006-022-DSF-P4

FLOATING BRIDGE HORIZONTAL DS W/ POWER AND PLUMBING SELECTION CHART

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x22"x7"
006-028-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x28"x7"
006-034-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x34"x7"
006-040-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x40"x7"
006-046-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x46"x7"
006-058-DSF-PP	Connector w/o data with c/o 4 dup. and 2 cutout plumbing	6"x58"x7"

Note: Add 5 to the first # prefix indicates component to be type 304-stainless steel with a number 4 finish. For example 006-028-DSF becomes 506-028-DSF for stainless steel.
Also for both power and data cut outs add PD to the end of the size indicated. For more then
The pictured number of cutouts adds PDS to the end and submit number of data and outlets needed. For vertical chase connection indicate the width size only like –PDS6, or 6" wide chase.



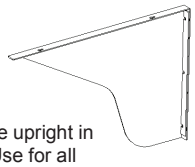
Note: Power and plumbing access into ceiling or floor is completed through the uprights or typically through add on pipe chase assemblies up or down. Floating bridges are cutout accordingly to match up with the uprights pierced locations. Also you can add a Reagent shelf to the top of the bridge if needed.

Cantilevers:

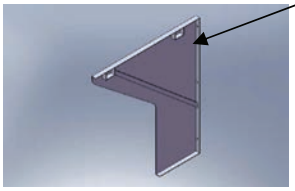
Bench System –
Cantilever – Steel support brackets used to carry work surfaces and casework as needed.
Left and Right Selection guide – Note heavy-duty cantilevers with tube are also set up to handle under mount casework. Specify by adding a "U" after the part number if suspending casework.
Note: The 5 prefix indicates component to be type 304-stainless steel with a number 4 finish.

HANDED CANTILEVER SELECTION CHART

PART NO.	DISCRIPTION	SIZE WxDxH
006-023-SCB-RH	Cantilever RH mounted standard duty	1"x24"x23"
006-029-SCB-RH	Cantilever RH mounted standard duty	1"x24"x29"
006-035-SCB-RH	Cantilever RH mounted standard duty	1"x24"x35"
006-023-HCB-RH	Cantilever RH mounted heavy duty w/ supt. Tube	1"x24"x23"
006-029-HCB-RH	Cantilever RH mounted heavy duty w/ supt. Tube	1"x29"x29"
006-023-SCB-LH	Cantilever LH mounted standard duty	1"x24"x23"
006-029-SCB-LH	Cantilever LH mounted standard duty	1"x24"x29"
006-035-SCB-LH	Cantilever LH mounted standard duty	1"x24"x35"
006-023-HCB-LH	Cantilever LH mounted heavy duty w/ supt. Tube	1"x24"x23"
006-029-HCB-LH	Cantilever LH mounted heavy duty w/ supt. Tube	1"x29"x29"



Standard cantilever simply bolts on to the upright in various seated and standing positions. Use for all versions of bench series.



Insert slots for under mount casework Channels, see kit sizes

The HD cantilever is set up to provide support members for under mount cabinets. This same cantilever can also be used when heavy devices will be placed on the work surface supported by cantilevers.

Vertical Chase:

The vertical chase is screwed to the vertical uprights either to the ceiling or to the floor. The chases carry or segregate plumbing, electrical, & data. Each chase has an access panel for easy installation and up keep. Use LT in part number example LT5-028-VUC (All LT versions 3"deep)
Discovery Bench System – Utility Vertical Chase with Covers (Use same part number below for LT but add –LT to end of part number)

VERTICAL CHASE SELECTION CHART (For LT use LT5- to start part number)

PART NO.	DISCRIPTION	SIZE WxDxH
006-028-VUC	Ceiling to upright top – set for 10' height 4" wide	4"x6"x28"
006-028-VUC-6	Ceiling to upright top – set for 10' height 6" wide	6"x6"x28"
006-028-VUC-8	Ceiling to upright top – set for 10' height 8" wide	8"x6"x28"
006-028-VUC-10	Ceiling to upright top – set for 10' height 10" wide	10"x6"x28"
006-028-VUC-12	Ceiling to upright top – set for 10' height 12" wide	12"x6"x28"

Note: Add 5 to the first # prefix indicates component to be type 304-stainless steel with a number 4 finish. For example 006-028-VUC becomes 506-028-VUC for stainless steel. Also remember to add an alternate width just add it to the end of the part number like 006-022-VUC-7 (7" wide utility chase 22" high). If power or data outlets are needed specify.

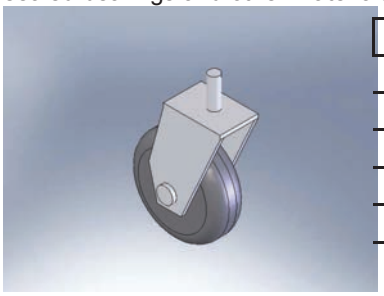
All vertical enclosures have access panels for easy installation and upkeep. Panels are easy to remove and replace.

The enclosure runs the length of the upright. There are extensions for continued penetration into the drop ceiling space.
Also separate walls can be added for segregated utilities.

The depth of the enclosure varies based on how much data, power, and plumbing needed. The enclosure can be modified to any depth needed.

Casters and Leveling Feet:

The casters are an NSF approved type ranging from standard duty rated at 200lbs per caster. The next step up is rated for medium duty with a rating of 300 to 400lbs per caster. And the heavy duty caster rated for 1,000lbs per caster. All casters are locking and non-locking type with non-skidding wheels. Special sealed bearings and other materials can be specified just contact your local dealer or representative.

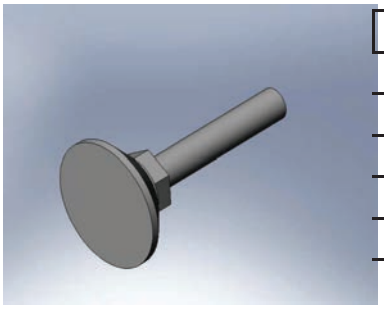


Locking and non-locking swivel typical

CASTERS STANDARD AND HEAVY DUTY		
PART NO.	**DISCRIPTION (Standard duty 250lbs per caster)**	**COLOR**
006-003-SDC	Caster standard duty 3" wheel (sold in sets of 4)	BLACK
006-004-SDC	Caster standard duty 4" wheel	GRAY
006-005-SDC	Caster standard duty 5" wheel	GRAY
006-006-HDC	Caster heavy duty 5" wheel	BLACK
	Heavy duty caster 800 lbs per caster	

Leveling Feet:

The leveling feet are a nickel plated or stainless steel construction with a non marking neoprene pad. The loads are rated for each leveling pad.
Note for seismic conditions we also provide a pad with a plate for easy floor attachment.

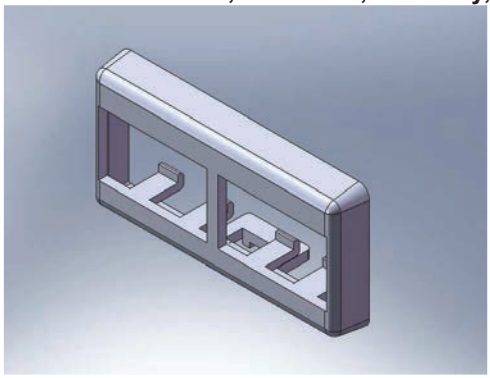


Adjustable height leveling pads

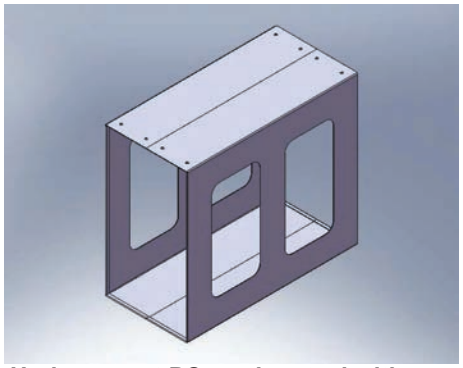
LEVELING PADS FOR STANDARD, SIESMIC, AND VIBRATION CONTROL		
PART NO.	**DISCRIPTION (Standard duty 1,200lbs per leveling pad)**	**COLOR**
006-001-SLF	Standard duty leveling pad non marking neoprene	BLACK
SM6-001-SLF	Seismic control type leveling foot pad	BLACK
VC6-001-SLF	Vibration control leveling foot non-marking	BLACK
006-002-SLF	Economical leveling pad non marking neoprene	BLACK
	All are made from either stainless steel or plated steel	

DATA:

Our typical data ports are cut out to receive a Panduit© style connector that allows for up to four connections. We are not limited to supplying just Panduit© type products if there is a specific manufacture you use will typically make adjustments for that product. We only offer receptacle installation all other or final installation by appropriate trades. When ordering your system just specify what product you would prefer.
Colors: -W = White, -B = Black, -G = Gray, and –S = Sand (snap in covers are offered to seal off)



Part #101-003-002-G Shown without J45 Connectors



Under mount PC carrier steel with a powder coat finish to match bench #101-010-CPU

Power Chase Horizontal:

The horizontal chase is mounted to the top of the “c” bridge used to hold the uprights together. The horizontal chase allows for data and power outlets above the standing height work surface. For greater details see below. Also note for 3” deep LT version use LT6-022-HPC for example.
Discovery & Discovery LT Bench System – Horizontal Power Chase (Add –LT to part number)

HORIZONTAL POWER CHASE SELECTION CHART

PART NO.	DISCRIPTION	SIZE WxDxH
006-022-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x22"x6"
006-028-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x28"x6"
006-034-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x34"x6"
006-040-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x40"x6"
006-046-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x46"x6"
006-058-HPC	Horizontal Power Chase w/o electrical c/o or data	6"x58"x6"

HORIZONTAL POWER CHASE w/ DATA SELECTION CHART

PART NO.	DISCRIPTION	SIZE WxDxH
006-022-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x22"x6"
006-028-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x28"x6"
006-034-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x34"x6"
006-040-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x40"x6"
006-046-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x46"x6"
006-058-HPC-D	Horizontal Power Chase w/ data c/o one is std. cntred	6"x58"x6"

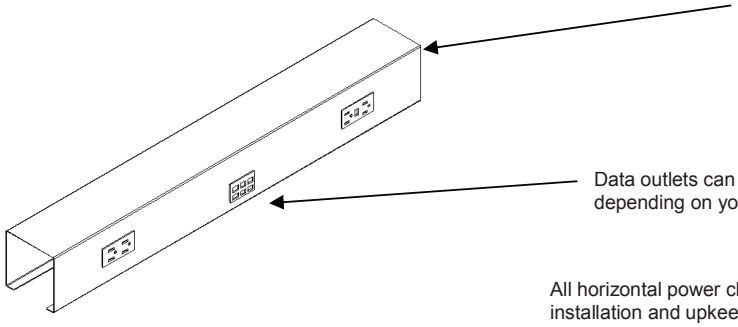
HORIZONTAL POWER CHASE w/ POWER SELECTION CHART

PART NO.	DISCRIPTION	SIZE WxDxH
006-022-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x22"x6"
006-028-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x28"x6"
006-034-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x34"x6"
006-040-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x40"x6"
006-046-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x46"x6"
006-058-HPC-P	Horizontal Power Chase w/ electrical c/o 2 dup std.	6"x58"x6"

HORIZONTAL POWER CHASE w/ POWER SELECTION CHART

PART NO.	DISCRIPTION	SIZE WxDxH
006-022-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x22"x6"
006-028-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x28"x6"
006-034-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x34"x6"
006-040-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x40"x6"
006-046-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x46"x6"
006-058-HPC-PD	Horizontal Power Chase w/ electrical c/o 2 dup & 1 data	6"x58"x6"

Note: Add 5 to the first # prefix indicates component to be type 304-stainless steel with a number 4 finish. For example 006-028-HPC becomes 506-028-HPC for stainless steel. For more then the pictured number of cutouts add S to the end and submit number of data and power outlets needed. For vertical chase connection indicate LH or RH utility run and chase width size.



This add on Horizontal power chase allows for added connections. These are mounted in between the uprights. They are set up to be hardwired or used with modular power.

Data outlets can be punched per your request depending on your specified needs.

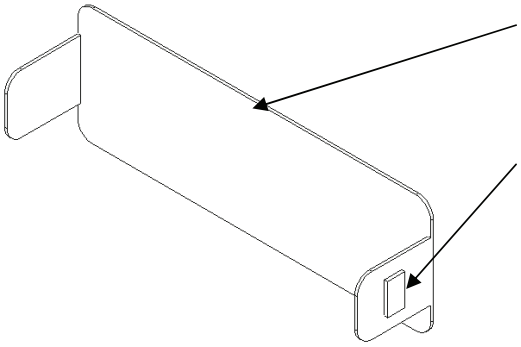
All horizontal power chases have access panels for easy installation and upkeep. Panels are easy to remove and replace.

Top Cap & Top Horizontal Stretcher selection:

Discovery Bench System – Top caps snap into top of uprights to seal off. The top stretchers are recommended when not using shelves to tie everything together. For LT version 2”x3” add –LT to the end of the part number.

TOP CAP SELECTION CHART

PART NO.	DISCRIPTION	SIZE DxW
006-026-CSC	Carbon steel snap in top cap powder coated to match structure.	6"x2”
006-026-SSC	304 stainless steel with a brushed finish snap in top cap	6”x2”
LT6-026-CSC	Carbon steel snap in top cap powder coated to match structure.	3"x2”
LT6-026-SSC	304 stainless steel with a brushed finish snap in top cap	3”x2”

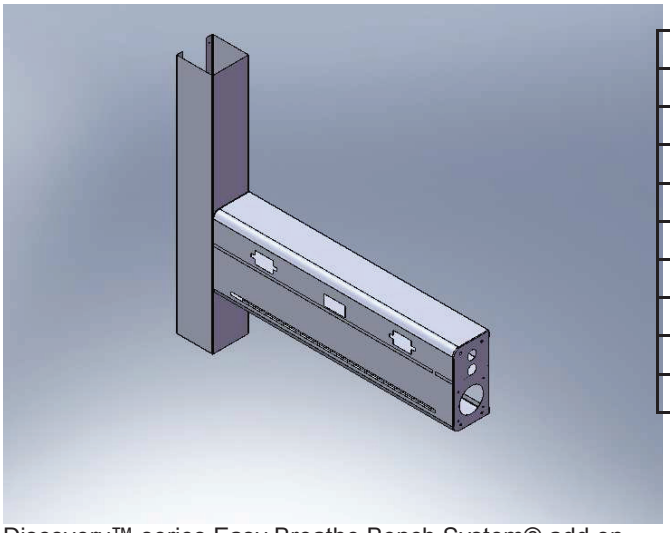


The top cap is manufactured from the same material as the bench. So if your using the standard components this will be carbon steel Powder coated with a determined finish.

typical of the stainless steel version as well. Caps are used where plumbing and wiring are not being strung through the upright.

Easy Breathe Bench Systems©

Discovery Bench System – The Easy Breathe Bench System© built in odor and fume removal system off the bench work surface. This assembly is mounted just above the work area to remove odors or annoying fumes. The system uses fans and carbon charged filters. All fans and filters are accessible through the back of the system. This system also carries plumbing, power, and data as add in options.



Discovery™ series Easy Breathe Bench System© add on.

Easy Breathe Bench System Sizing Chart		
PART NO.	SIZE	DISC.
1DS-024-EBS	24"w x6"d x 36"h	Bolt on assembly
1DS-030-EBS	30"w x6"d x 36"h	Bolt on assembly
1DS-036-EBS	36"w x6"d x 36"h	Bolt on assembly
1DS-042-EBS	42"w x6"d x 36"h	Bolt on assembly
1DS-048-EBS	48"w x6"d x 36"h	Bolt on assembly
1DS-054-EBS	54"w x6"d x 36"h	Bolt on assembly
1DS-058-EBS	58"w x6"d x 36"h	Bolt on assembly
1DS-060-EBS	60"w x6"d x 36"h	Bolt on assembly

Panels Bench Back:

Discovery & LT Bench Systems – Typically used on single sided benches.
Panel backs conceal Bridge to Floor

BACK PANEL PAINTED STEEL

PART NO.	DISCRIPTION	SIZE DxWxH
006-024-PBB	Panel end powder coated steel	1"x24"x23"
006-030-PBB	Panel end powder coated steel	1"x30"x23"
006-036-PBB	Panel end powder coated steel	1"x36"x23"
006-048-PBB	Panel end powder coated steel	1"x48"x23"
006-054-PBB	Panel end powder coated steel	1"x54"x23"
006-060-PBB	Panel end powder coated steel	1"x60"x23"

Note: Stainless steel type 304 will have a number four type finish.

BACK PANEL STAINLESS STEEL

PART NO.	DISCRIPTION	SIZE DxWxH
006-024-PBB-SS	Panel end stainless steel type 304	1"x24"x23"
006-030-PBB-SS	Panel end stainless steel type 304	1"x30"x23"
006-036-PBB-SS	Panel end stainless steel type 304	1"x36"x23"
006-048-PBB-SS	Panel end stainless steel type 304	1"x48"x23"
006-054-PBB-SS	Panel end stainless steel type 304	1"x54"x23"
006-060-PBB-SS	Panel end stainless steel type 304	1"x60"x23"

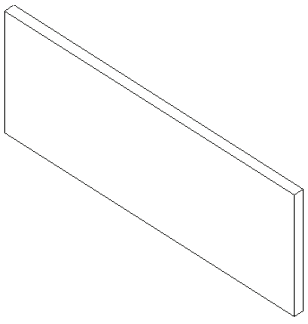
BENCH BACK PANEL TO TOP PAINTED STEEL

PART NO.	DISCRIPTION	SIZE DxWxH
006-024-PBB	Panel bench back to top steel w/ powder finish	1"x24"x40"
006-030-PBB	Panel bench back to top steel w/ powder finish	1"x30"x40"
006-036-PBB	Panel bench back to top steel w/ powder finish	1"x36"x40"
006-048-PBB	Panel bench back to top steel w/ powder finish	1"x48"x40"
006-054-PBB	Panel bench back to top steel w/ powder finish	1"x54"x40"
006-060-PBB	Panel bench back to top steel w/ powder finish	1"x60"x40"

BENCH BACK PANEL TO TOP STAINLESS STEEL

PART NO.	DISCRIPTION	SIZE DxWxH
006-024-BBC-SS	Panel bench back to top stainless steel type 304	1"x24"x40"
006-030-BBC-SS	Panel bench back to top stainless steel type 304	1"x30"x40"
006-036-BBC-SS	Panel bench back to top stainless steel type 304	1"x36"x40"
006-048-BBC-SS	Panel bench back to top stainless steel type 304	1"x48"x40"
006-054-BBC-SS	Panel bench back to top stainless steel type 304	1"x54"x40"
006-060-BBC-SS	Panel bench back to top stainless steel type 304	1"x60"x40"

Note: For special height just insert the size into the part number such as 006-050-045-BBC-SS. This would result in a 50" wide panel by 45" tall.



Closure also is used to seal off back of casework when open in the back. For use see figure 3.

Privacy Panels:

Discovery Bench System – Typically used on double-sided benches.
Privacy Panels include mounting brackets

PRIVACY PANEL PAINTED STEEL KIT

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-030-S?	Panel privacy powder coated steel	1"x22"x30"
006-028-030-S?	Panel privacy powder coated steel	1"x28"x30"
006-034-030-S?	Panel privacy powder coated steel	1"x34"x30"
006-040-030-S?	Panel privacy powder coated steel	1"x40"x30"
006-046-030-S?	Panel privacy powder coated steel	1"x46"x30"
006-058-030-S?	Panel privacy powder coated steel	1"x58"x30"

? Add number for powder color for panels

PRIVACY PANEL STAINLESS STEEL KIT

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-030-SS	Panel privacy stainless steel type 304	1"x22"x30"
006-028-030-SS	Panel privacy stainless steel type 304	1"x28"x30"
006-034-030-SS	Panel privacy stainless steel type 304	1"x34"x30"
006-040-030-SS	Panel privacy stainless steel type 304	1"x40"x30"
006-046-030-SS	Panel privacy stainless steel type 304	1"x46"x30"
006-058-030-SS	Panel privacy stainless steel type 304	1"x58"x30"

Note: Stainless steel will have a number four type finish.

PRIVACY PANEL FROSTED ACRYLIC

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-040-FA	Panel privacy frosted acrylic panel	1"x22"x40"
006-028-040-FA	Panel privacy frosted acrylic panel	1"x28"x40"
006-034-040-FA	Panel privacy frosted acrylic panel	1"x34"x40"
006-040-040-FA	Panel privacy frosted acrylic panel	1"x40"x40"
006-046-040-FA	Panel privacy frosted acrylic panel	1"x46"x40"
006-058-040-FA	Panel privacy frosted acrylic panel	1"x58"x40"

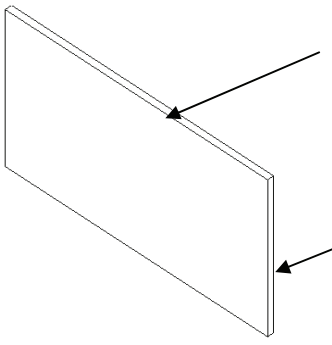
PRIVACY PANEL SLAT WALL

PART NO.	DISCRIPTION	SIZE DxWxH
006-022-040-SW	Panel privacy slat wall	1"x22"x40"
006-028-040-SW	Panel privacy slat wall	1"x28"x40"
006-034-040-SW	Panel privacy slat wall	1"x34"x40"
006-040-040-SW	Panel privacy slat wall	1"x40"x40"
006-046-040-SW	Panel privacy slat wall	1"x46"x40"
006-058-040-SW	Panel privacy slat wall	1"x58"x40"

For special privacy panel sizes just change the last two digits in the part number like 006-022-040-SS change to 12" high. The new part number will be 006-022-012-SS.

MATERIALS:

- Glass frosted & smoked
- Laminate
- Plastic
- Epoxy resin
- Wood
- Polyresin®
- Slat wall
- Marker boards



Privacy panels run from the work surface up to the top of the uprights vertically. There attached between the uprights using channel or angles. We offer special sizes and materials as needed.

Each panel comes with its own installation kit. Included in the kit are mounting brackets and screws.

Note: Privacy panels can be manufactured from laminate, veneer, frosted glass, smoked glass, epoxy resin, and plastic. All mentioned materials come with a mounting kit.

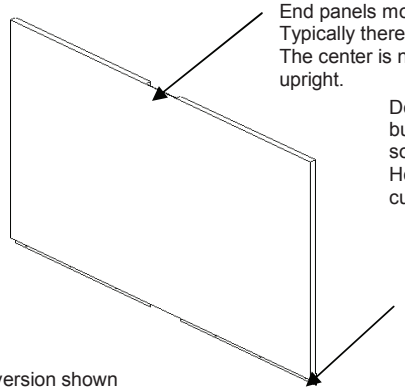
End Panels:

Discovery Bench System – Used on end of bench runs fastened to vertical uprights.
End Panels include mounting brackets

30 END PANEL STAINLESS STEEL KIT

PART NO.	DISCRIPTION	SIZE DxWxH
006-024-030-SS	Panel end powder coated steel	1"x24"x30"
006-030-030-SS	Panel end powder coated steel	1"x30"x30"
006-036-030-SS	Panel end powder coated steel	1"x36"x30"
006-048-030-SS	Panel end powder coated steel	1"x48"x30"
006-054-030-SS	Panel end powder coated steel	1"x54"x30"
006-060-030-SS	Panel end powder coated steel	1"x60"x30"

Stainless steel type 304 with a number brushed finish.
Note: Stainless steel type 304 will have a number four type finish.
For special end panel sizes just change the last two digits in the part number like 006-022-040-EPS change to 12" high. The new part number will be 006-022-012-EPS.



End panels mount to the upright at the end of a bench run. Typically there is a sink or need for mounting equipment. The center is notched to fit around and secure to the upright.

Double wall construction with sound dampening and a buffed finish. Inner and outer structure is welded unless solid phenolic. Special attachment hardware included. Holes can be added or mounting hardware as needed per customers request.

Bottom section can be pinned for clean look or screwed into the back splash or into the deck if needed. The structure is very rigid and sound.

Stainless steel version shown

Panel materials not listed above include clear acrylic and frosted acrylic panels. These panels can have radius corners and special shapes as specified.

Work Surfaces:

Discovery Bench System – Surfaces are attached to the cantilevers in various depths.
Work surface sizes and material chart, for color see Formica chips. Standard widths are 24", 30", 36", & 40" see next section for special sizes for corners.

PHENOLIC RESIN 1"THK.

PART NO.	DESCRIPTION	SIZE DxWxL
PR6-0##-036-???	Phenolic resin surfaces black core color TBD	1"x ? "x36"
PR6-0##-048-???	Phenolic resin surfaces black core color TBD	1"x ? "x48"
PR6-0##-054-???	Phenolic resin surfaces black core color TBD	1"x ? "x54"
PR6-0##-060-???	Phenolic resin surfaces black core color TBD	1"x ? "x60"
PR6-0##-072-???	Phenolic resin surfaces black core color TBD	1"x ? "x72"
PR6-0##-096-???	Phenolic resin surfaces black core color TBD	1"x ? "x96"

STAINLESS STEEL TYPE 304 (1"THK.)

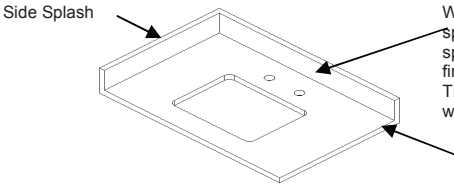
PART NO.	DESCRIPTION	SIZE DxWxL
SS6-0##-036	Type 304 brushed stainless steel 16 gauge	1"x ? "x36"
SS6-0##-048	Type 304 brushed stainless steel 16 gauge	1"x ? "x48"
SS6-0##-054	Type 304 brushed stainless steel 16 gauge	1"x ? "x54"
SS6-0##-060	Type 304 brushed stainless steel 16 gauge	1"x ? "x60"
SS6-0##-072	Type 304 brushed stainless steel 16 gauge	1"x ? "x72"
SS6-0##-096	Type 304 brushed stainless steel 16 gauge	1"x ? "x96"

Work Surfaces continued

EPOXY RESIN 1"THK. Colors Include 1. Black 2. Gray 3. White

PART NO.	DESCRIPTION	SIZE DxWxL
ER6-0##-036-??	Epoxy resin work surfaces heavy material	1"x ? "x36"
ER6-0##-048-??	Epoxy resin work surfaces heavy material	1"x ? "x48"
ER6-0##-054-??	Epoxy resin work surfaces heavy material	1"x ? "x54"
ER6-0##-060-??	Epoxy resin work surfaces heavy material	1"x ? "x60"
ER6-0##-072-??	Epoxy resin work surfaces heavy material	1"x ? "x72"
ER6-0##-096-??	Epoxy resin work surfaces heavy material	1"x ? "x96"

The center -0##- is to add in the tops width front to back. The last three question marks are there to be filled with chip color number located in the color section for work surfaces. The first two letters of the part number signifies type of work surface material. For plastic add PP this will designate Polypropylene with limited color selection. Type 316 stainless steel is also offered contact your dealer direct for further details.
*For stainless steel back splash add * before the prt number and height so for a 4" high splash it should look like *SS6-030-036-4. This number will create a top that is 36" wide 30" deep w/ a 4" high back splash.*



Work surface with a sink cut out and faucet knock outs. This top also has a side splash and back splash mounted. All splash are sealed using epoxy resin unless specified. Also stainless steel will be integrated into the top then welded and finished.
This is a typical under mount sink cut out assembly. These can be used anywhere within the bench systems work surfaces.

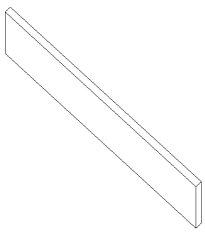
Back & Side Splash Selection:

Discovery Bench System – Back splashes and side splash come in various materials and sizes to match the work surfaces. Stainless will be formed in refer back to surfaces chart.
Back splash sizes and material see standard finishes. Standard widths are 24", 30", 36", & 40" see next section for special sizes for corners.

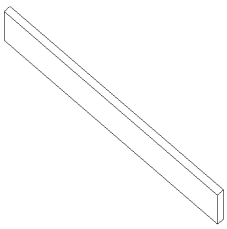
STANDARD BACK SPLASH HEIGHTS ARE: ½" , 1", 4" & 6"

PART NO.	DISCRIPTION	SIZE DxHxL
PL6-0##-036-???	Select material type use work surface selections	1"x ## "x36"
PL6-0##-048-???	Select material type use work surface selections	1"x ##"x48"
PL6-0##-054-???	Select material type use work surface selections	1"x ##"x54"
PL6-0##-060-???	Select material type use work surface selections	1"x ## "x60"
PL6-0##-072-???	Select material type use work surface selection	1"x ##"x72"
PL6-0##-096-???	Select material type use work surface selections	1"x ##"x96"

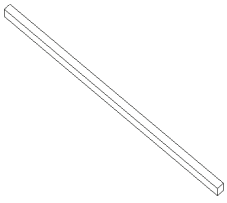
The center -0##- is to add in the tops width front to back. The last three question marks are there to be filled with chip color number located in the color section for work surfaces. The first two letters of the part number signifies type of work surface material. For plastic add PP this will designate Polypropylene with limited color selection. For stainless steel back splash add an asterisk before the tops number and add the splash height to the very end of the part number. The splash will be formed into the surface and welded seamless.



Back splash 6" high typically attached with hardware and epoxy Resin for a water tight seal.



Back splash 4" high the most typical Height requested.



Back splash 1" high this also is attached the same as the others. We offer factory installation if needed.

Shelves:

Bench Systems –
Shelf selection guide

STEEL STANDARD 13" or 15" DEEP SHELF SELECTION CHART

PART NO.	DISCRIPTION	SIZE
006-0##-036	Standard steel shelf w/ 2" high back	"A"x6"x36"
006-0##-042	Standard steel shelf w/ 2" high back	"A"x6"x42"
006-0##-048	Standard steel shelf w/ 2" high back	"A"x6"x48"
006-0##-054	Standard steel shelf w/ 2" high back	"A"x6"x54"
006-0##-060	Standard steel shelf w/ 2" high back	"A"x6"x60"

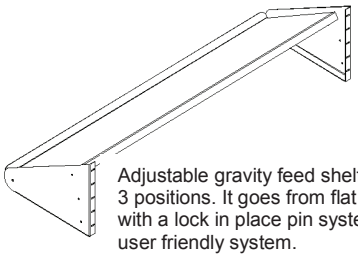
STEEL STANDARD 13" or 15" DEEP SEISMIC SHELF SELECTION CHART

PART NO.	DISCRIPTION	SIZE
006-0##-036-SS	Steel shelf w/ 2" high back & 1" sides	"A"x6"x36"
006-0##-042-SS	Steel shelf w/ 2" high back & 1" sides	"A"x6"x42"
006-0##-048-SS	Steel shelf w/ 2" high back & 1" sides	"A"x6"x48"
006-0##-054-SS	Steel shelf w/ 2" high back & 1" sides	"A"x6"x54"
006-0##-060-SS	Steel shelf w/ 2" high back & 1" sides	"A"x6"x60"

STEEL STANDARD 13" or15" DEEP GRAVITY FEED SHELF SELECTION CHART

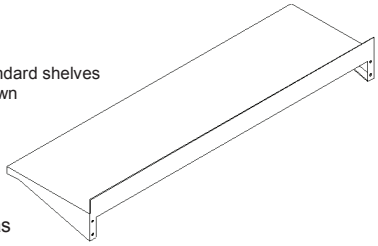
PART NO.	DISCRIPTION	SIZE
006-0##-036-GF	Steel shelf w/ 2" high front w/ angle adjustment	"A"x6"x36"
006-0##-042-GF	Steel shelf w/ 2" high front w/ angle adjustment	"A"x6"x42"
006-0##-048-GF	Steel shelf w/ 2" high front w/ angle adjustment	"A"x6"x48"
006-0##-054-GF	Steel shelf w/ 2" high front w/ angle adjustment	"A"x6"x54"
006-0##-060-GF	Steel shelf w/ 2" high front w/ angle adjustment	"A"x6"x60"

Note: The 5 prefix indicates component to be type 30304-stainless steel with a number 4 finish. For example your stainless steel part number would be 506-015-036-GF.



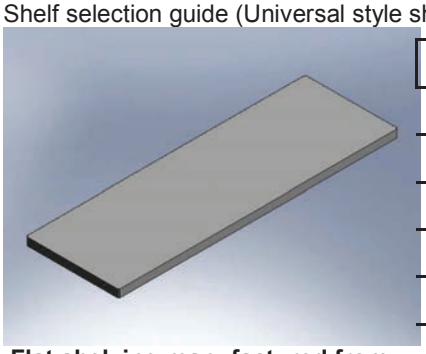
Adjustable gravity feed shelf. The shelf has 3 positions. It goes from flat to 15º to 30º with a lock in place pin system. It's a very user friendly system.

Standard shelves shown



Seismic shelf not shown, same as standard accept with a rail all across front.

Bench System –
Shelf selection guide (Universal style shelving also used with wall mount standards)



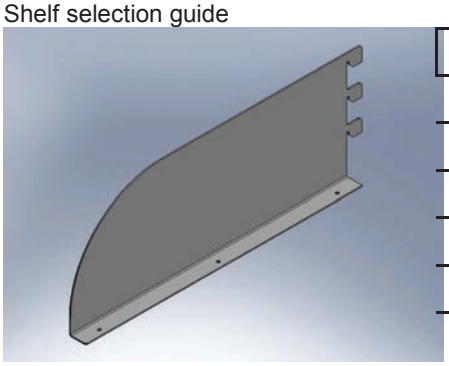
FLAT SHELVES PHENOLIC, EPOXY, AND LAMINATE 6", 12", 13", AND 18"DP

PART NO.	DISCRIPTION	FINISH
006-FSL-024	24" Wide shelf typically 1" thick material TBD	TBD
006-FSL-030	30" Wide shelf typically 1" thick material TBD	TBD
006-FSL-036	36" Wide shelf typically 1" thick material TBD	TBD
006-FSL-048	48" Wide shelf typically 1" thick material TBD	TBD
	All are made from either stainless steel or plated steel	

Flat shelving manufactured from steel, stainless steel, epoxy, phenolic, laminate, and glass.

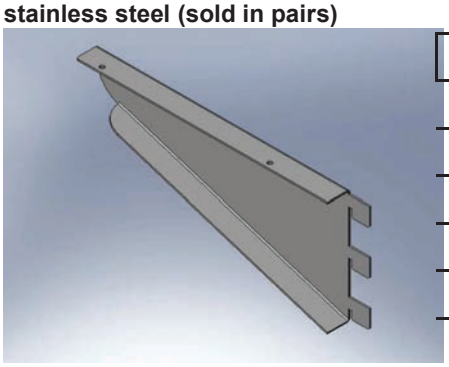
Shelves:

Bench Systems –
Shelf selection guide



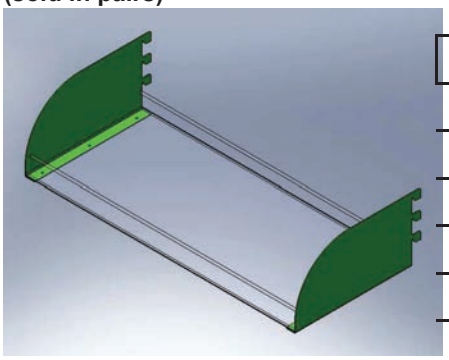
SHELF HANGER BRACKETS (BOOK END STYLE) Sold in pairs		
PART NO.	**DISCRIPTION**	**FINISH**
006-BEB-006	6” x 6” x1” wide material steel with a powder coat finish	TBD
006-BEB-012	6” x 12” x 1” wide material steel with a powder coat finish	TBD
006-BEB-013	6” x 13” x 1” wide material steel with a powder coat finish	TBD
006-BEB-018	6” x 18” x 1” wide material steel with a powder coat finish	TBD
006-BEB-024	6” x 24” x 1” wide material steel with a powder coat finish	TBD

Book end style Hanger brackets used for supporting steel, laminate, glass, epoxy, phenolic, and stainless steel (sold in pairs)



BRACKETS UNDER MOUNT TYPE (Sold in pairs)		
PART NO.	**DISCRIPTION**	**FINISH**
006-UMB-006	6” x 1” wide material steel with a powder coat finish	TBD
006-UMB-012	6” x 1” wide material steel with a powder coat finish	TBD
006-UMB-018	6” x 1” wide material steel with a powder coat finish	TBD
006-UMB-024	6” x 1” wide material steel with a powder coat finish	TBD
	All are made from either stainless steel -SS or steel	

Under mount shelf bracket used to support flat steel, laminate, epoxy, and phenolic shelving. (sold in pairs)



FLAT SHELVES GLASS TYPICALLY 6”, 12”, 13”, AND 18”DP		
PART NO.	**DISCRIPTION**	**FINISH**
006-FSL-G24	24” Wide shelf typically 1” thick material ¼” TEMPERED	TBD
006-FSL-G30	30” Wide shelf typically 1” thick material ¼” TEMPERED	TBD
006-FSL-G36	36” Wide shelf typically 1” thick material ¼” TEMPERED	TBD
006-FSL-G48	48” Wide shelf typically 1” thick material ¼” TEMPERED	TBD
	All glass is trimmed with stainless steel channels typically	

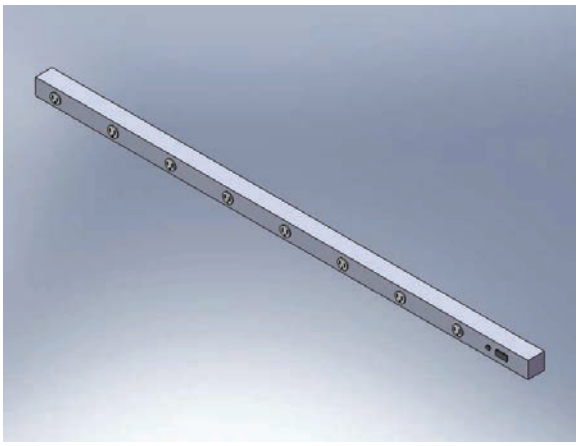
Glass shelves (glass shelf shown with rails)

Plumbing:

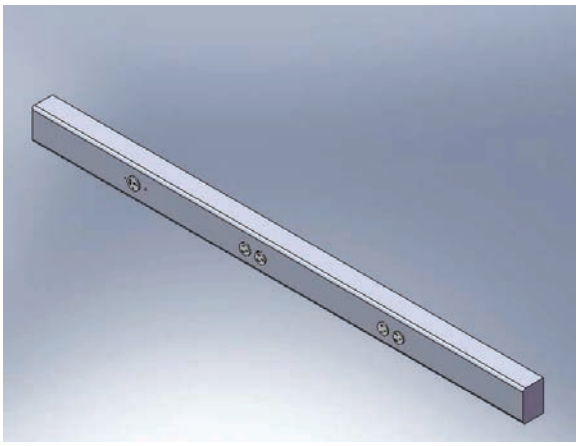
Bench Systems – Can be plumbed with a quick disconnect type plumbing system for vacuum, air, gas, and other lab special gases or liquids. These same systems are also offered in our Over Head Service Centers. This also allows the plumbing to be daisy chained from bench to bench. We are currently using Water Saver Company© and Staubli© products to complete bench modules when requested.
This system allows for your mobile benches to remain mobile even if there set up to supply plumbing services.
For further information and design options contact your local dealer or representative.

Power:

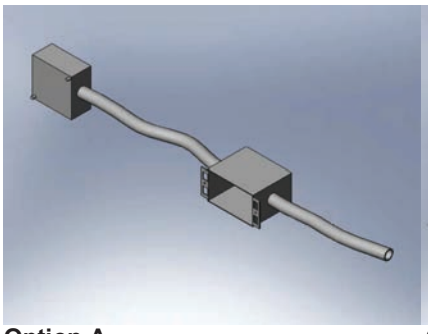
Bench System –
Besides built in power there are other add on options for external applications to distribute power.
These systems add unique flexibility to our vast bench and table systems. This is only a guide if there are specific products you prefer to use just contact your dealer or representative.



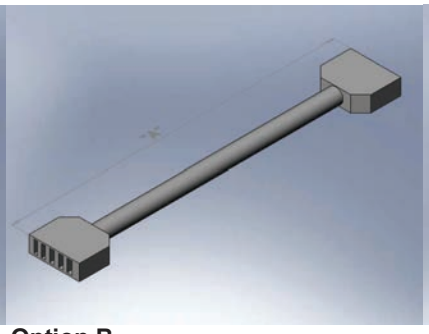
Various lengths of Wiremold© power strips (add to tables and benches as needed) Option E



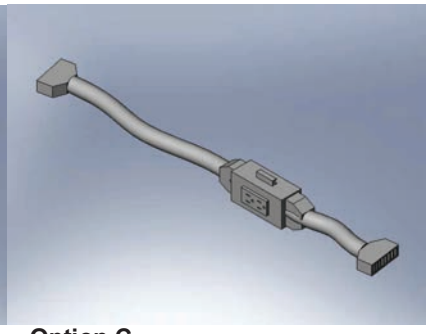
Various lengths of Wiremold© and Starline© flexible power races Option D



Option A



Option B



Option C

Power selection for benches:

There are three options available for power concerning bench models. All benches that have the power option can use either external services from above Options D & E or one of three options listed below.

Option One – power will be wired using option A that wires one or two outlets back to a junction box. If double sided then there will be two sets but one junction box. This option can also wire each outlet on a separate circuit if required. Then if benches are daisy chained together wire all back to main connection point. This can also be wired to the junction box and then have a plug or pig tail out of the "j" box based on customer requests.

Option Two – Modular power using internal wiring back to one junction box with a connection to each bench through a modular plug connection option B.

Option Three – Modular power all the way through the bench. Typical applications for 2 circuits with the option up to 4. Benches can be simply plugged together up to 4 per circuit. See option C for modular power option.

When specifying bench systems just select a power option or you can always option out completely and have your electrical contractor handle the installation. Or have us at least load the appropriate electrical devices that are specified.

Typically we handle this portion of the benches on a project to project basis. We also offer European components if specified. Final wiring will be performed by appropriate trades in there respective country according to there own local codes and specifications.

Vertical Power Chase Assemblies:

Vertical power chases for both plumbing and electrical systems. For sizing contact your dealer or representative. As with all our systems we do offer custom built sizes and features based on customer needs. This includes materials and accessories.

Indiana University Research – Floor plate bench system with power and plumbed chases

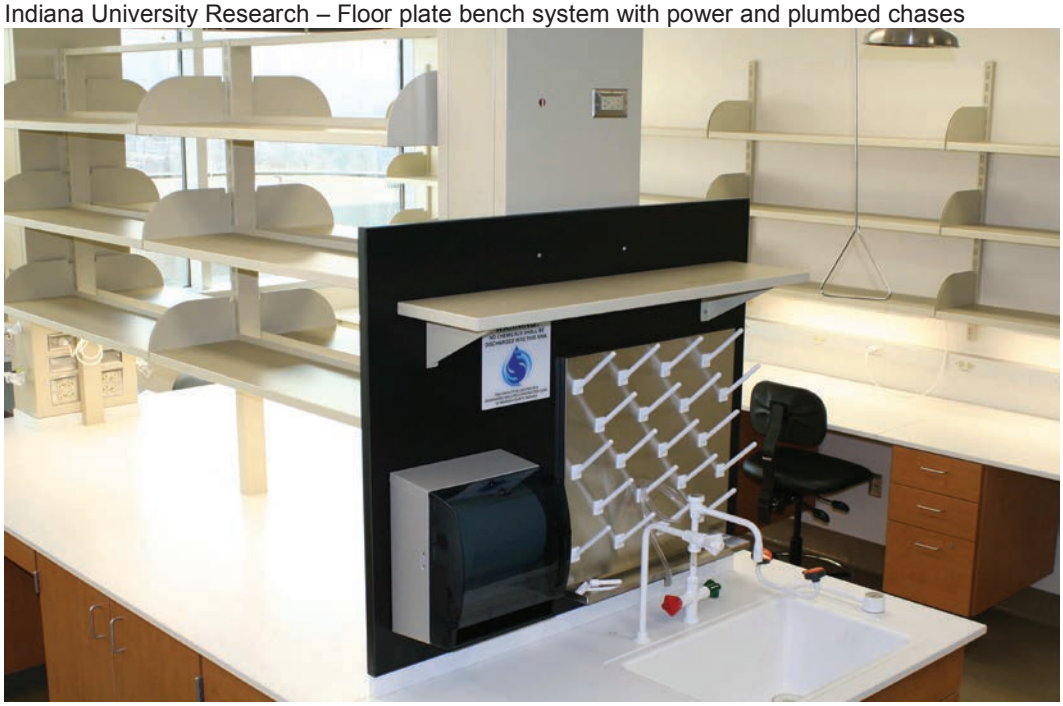
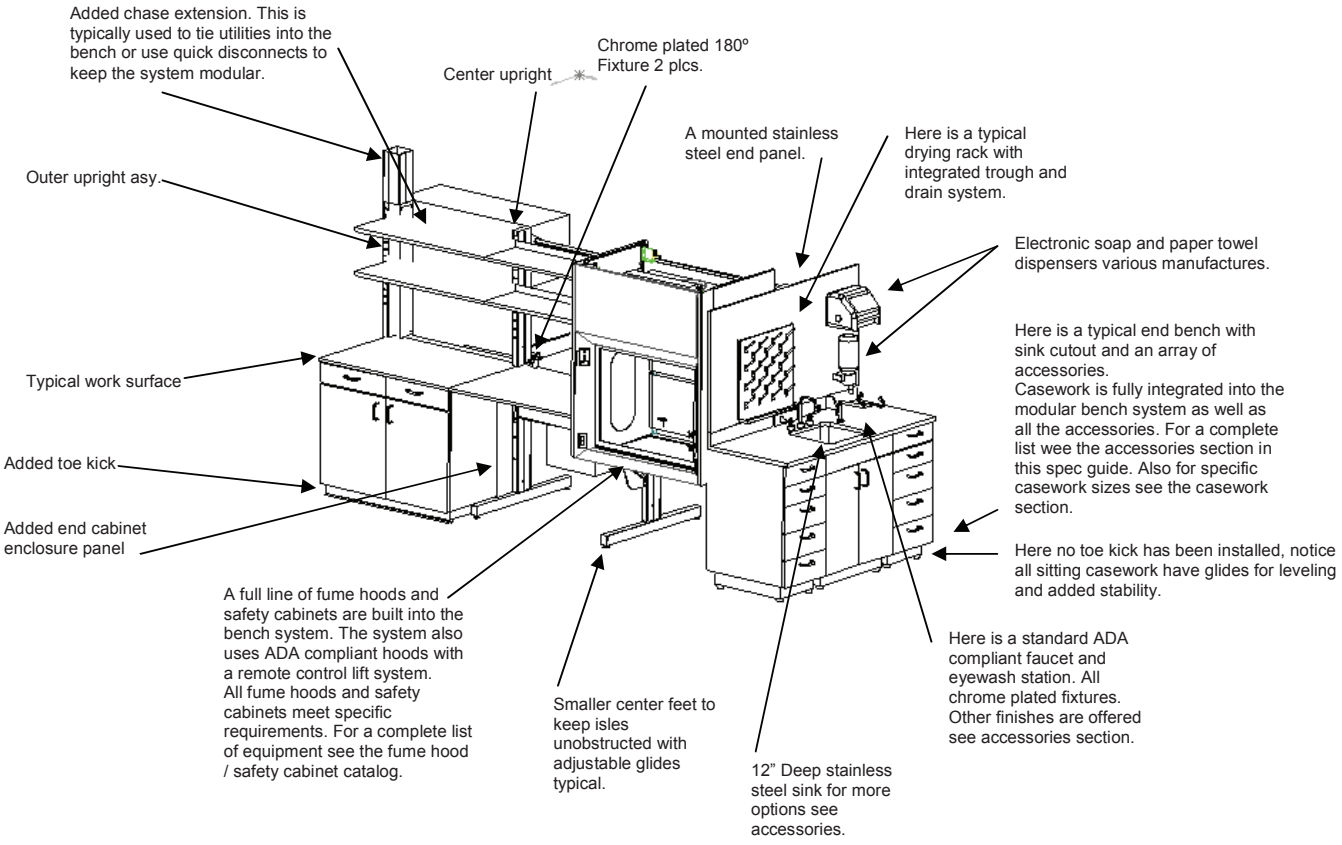


FIGURE 3. Complete Discovery Bench Layout
Side A



DISCOVERY BENCH SYSTEMS
Standard assembly daisy chained with sink end unit

Accessories:

All Bench Systems –
Here is an additional list product for the bench systems. For a complete list, call us for details.

- **Snorkel Hoods**
- **Bench integrated fume removal system**
- **Monitor arms**
- **Under work surface PC holders**
- **Paper towel dispensers**
- **Soap dispensers**
- **Waste containment devices**
- **Drying racks, acrylic, stainless steel, phenolic, & epoxy resin**
- **Sinks, stainless steel, plastic, & epoxy resin various sizes**
- **Lighting, fluorescent, LED, and halogen**
- **Backer boards and slat wall**
- **Grommets for extra data and cabling through work surfaces**
- **Tables both static and mobile**
- **Reagent carts and standard utility carts**
- **Mobile work stations**
- **Safety fixtures, showers, eye wash, etc.**
- **Special storage ACID / FLAME cabinets various sizes**
- **Seating laboratory specific**
- **Data and power fixed and modular**

APPENDIX 1

SCALA

2017
PRODUCT CATALOG

LABORATORY BENCH SYSTEMS

WALDNER

More safety, economy and comfort than ever: Our Secuflow fume hoods

We are continuously working to improve our laboratory equipment because being the leader in innovation is no coincidence.

Having developed the Secuflow further within our new range of laboratory furniture, ***SCALA,*** means that our Secuflow fume hoods again fulfill the highest user requirements.

Available in rear wall and side panel installation, with new widths and a larger internal workspace, investing in Secuflow returns significant advantages:

We have now reduced our fume hoods' energy consumption even further. Equipped with optimized supply and exhaust air ducts, the Secuflow can be operated with a face velocity of only 40 FPM still fulfilling the requirements of ASHRAE 110-2005.

This significantly reduced energy consumption makes laboratory operations even more economical.

Modifications of details such as the control panel which is inclined towards the user, the new lock on the sash, the 2-chamber flow technology, the flow-in duct between the sash frames and the side post profile, the Soft Touch control panel, the sink modules

Secuflow

The Secuflow: Satisfies highest user requirements

integrated into the rear panel of the fume hood, as well as many other design features ensure safe and comfortable working conditions.

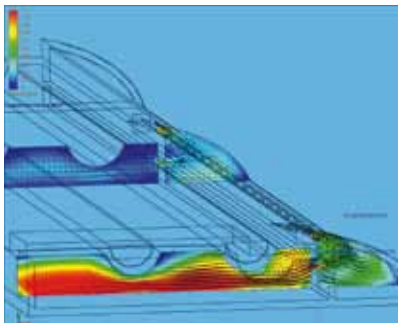
Fume hoods with services on side walls are also available, as are sitting height fume hoods for people in wheelchairs.

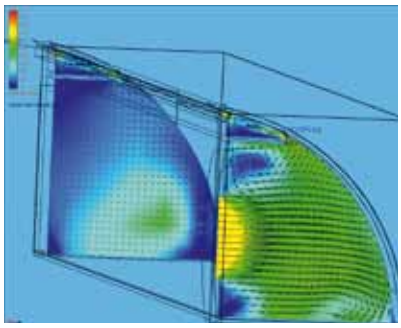
Find out why the Secuflow sets the standard for the future.

WALDNER

What makes Secuflow superior: Its 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. To achieve this, we combine our engineering know-how with scientific findings in flow technology.





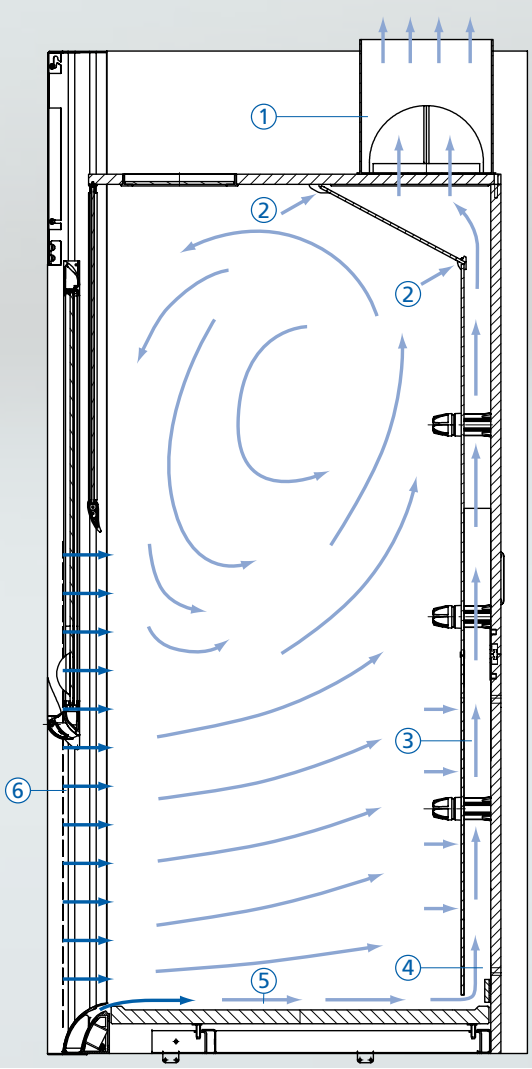
The result is our highly innovative Secuflow with supportive flow technology for optimum flow regulation.

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 the inflow air.

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

Secuflow

The Secuflow: Where construction and science go hand in hand



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.

① Extract manifold

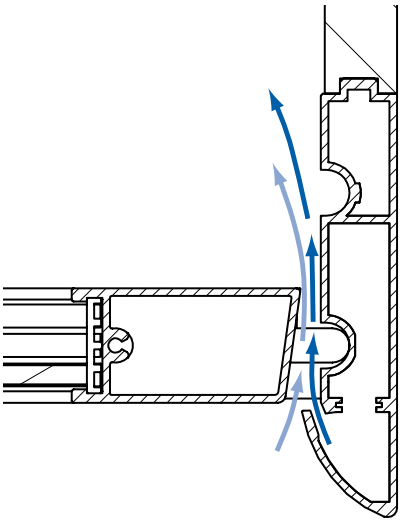
② Inclined extract fume hood top panel

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



**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.**

WALDNER

Maximum work safety in the laboratory

Operating laboratory fume hoods with the sash closed only 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.

This is why the European standard EN 14175 now places 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.

Secuflow

The Secuflow: Optimum values for laboratory staff

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 – even 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 extensive test series, we have defined the new standard that again surpasses the requirements of EN 14175 and ASHRAE 110-2005, which sets the standard for the future. For maximum safety at work.

The lock on the sash can easily be operated with one hand

**Directs air into the fume hood when pushing up the sash:
The sash handle profile is shaped like a spoiler**

WALDNER

From theory to practice: Technical innovations can be measured

The Secuflow had to pass a considerable number of tests in all development stages.

The aerodynamically optimal component 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 cleverly 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 safe operation at all times.

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 and noise was reduced even further in the new Secuflow fume hoods. We achieved the lowest possible values under a wide range of different operating conditions.

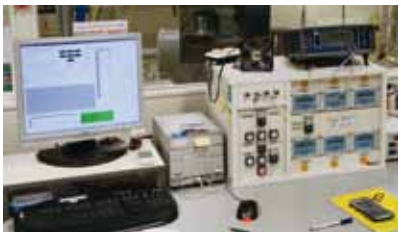
The result of our work is a perfectly coherent product which has passed all final EN 14175 and ASHRAE 110-2005 tests with excellent results.

Secuflow

The Secuflow: Optimum values in every operating state

The European standard, EN 14175, has defined 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 both, EN 14175 and ASHRAE 110-2005, we also performed the tests for an opening height of 35.43 in (*900 mm*). Here too, the new Secuflow performs with its outstanding test results for the benefit of user safety.



WALDNER

The Secuflow requires at least 40% less air than conventional fume hoods

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.

In this way, the Secuflow reduces the air volume by 40% compared with conventional fume hoods. Secuflow hoods can be safely operated at velocities to 40 FPM. At this rate, energy savings realized can be 60% less than coventional 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. Make use of the advantages of the Secuflow for your laboratory of the future.

Secuflow

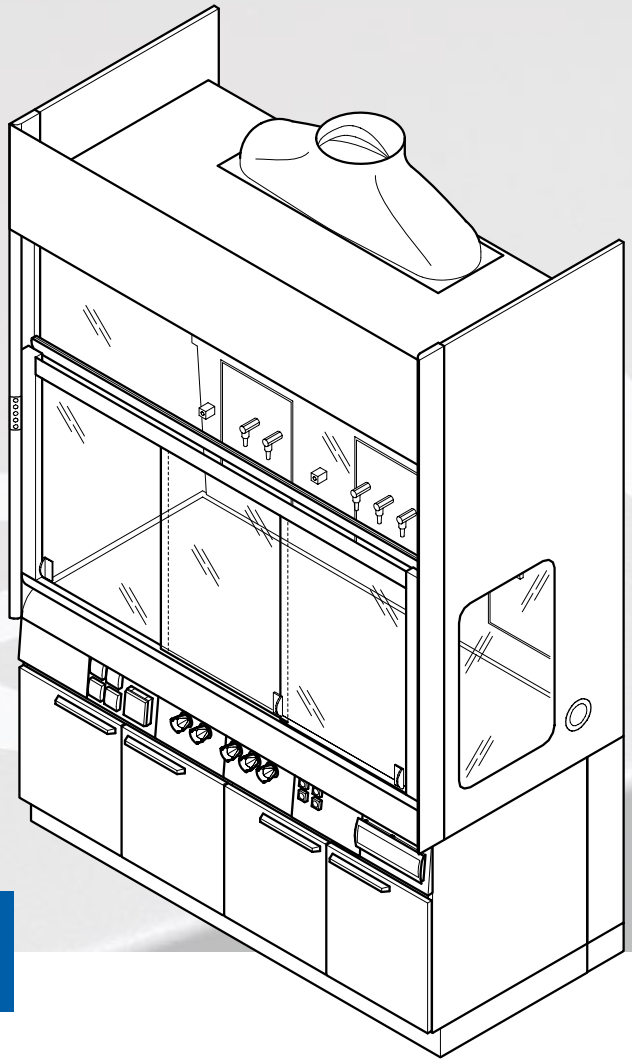
The Secuflow: Investing into the laboratory of the future

We will be happy to calculate the potential savings for your specific laboratory project through Secuflow fume hoods.

In addition, we are the only manufacturer who offers you fume hoods and controls all from one supplier. Benefit from our know-how. We will be glad to help you.

For more information about Waldner laboratory control, please see our special brochure or visit us at www.waldner-inc.com.

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.

A new design together with an enlarged product range characterizes the fume hoods of our new ***SCALA*** laboratory line.

Combined with grid widths up to 94.94 in *(2400 mm)*, we offer the most comprehensive product range available in the market.

Largest usable internal workspace

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.

Secuflow bench-mounted fume hoods

Intended use

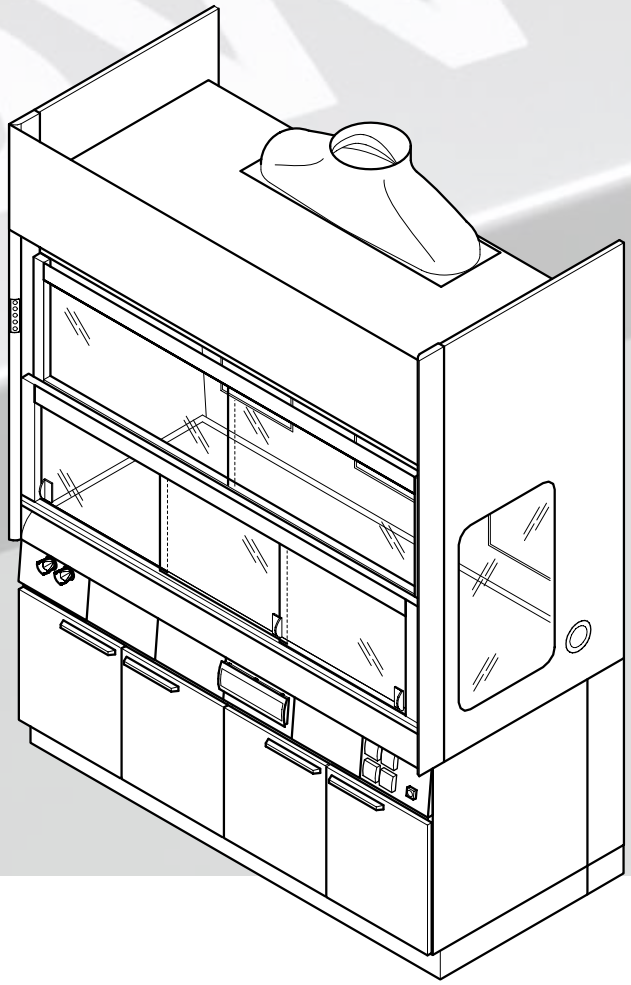
- Protective device for the user, tested in acc. with ASHRAE 110-2005
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- To prevent the formation of dangerous potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection against flying debis, 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 fume hood



Ventilation technology	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Minimum air exchange rate [cfm] [1] *(m³/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] *(m³/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 [mm] for FAZ with extract manifold Ø9.84 in *(250 mm)* (*Low ceiling fume hood)	107.09 *(2720)* *95.28 *(*2420)*			
Connection height [mm] for FAZ with extract manifold 12.4 in *(315 mm)* [2] (*Low ceiling fume hood)	112.20 *(2850)* *100.39 *(*2550)*			
Connection height [mm] for AC with extract manifold 9.84 in *(250 mm)* (*Low ceiling fume hood)	116.14 *(2950)* *104.33 *(*2650)*			
Connection height [mm] for AC with extract manifold 12.4 in *(315 mm)* [2] (*Low ceiling fume hood)	120.87 *(3070)* *109.05 *(*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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] 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)*.

[3] Face velocity refer to an opening height of the sash window of 18 in *(457 mm)*.

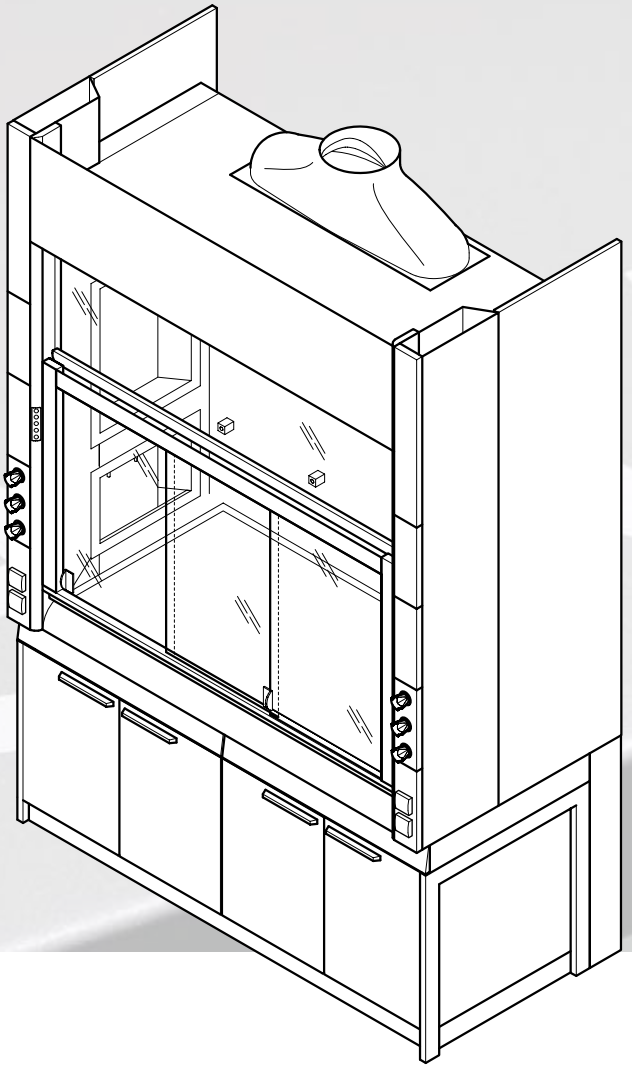
Maximum admission pressure of 0.09 psi *(600 Pa)* for fume hoods with airflow dampers should not be exceeded.

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

Secuflow bench-mounted fume hood with services on side walls



The best for equipment and variability

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

The Secuflow with services on side walls is also suitable as a sitting height fume hood for people in wheelchairs.

Service modules that can be equipped as desired

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

Secuflow bench-mounted fume hoods with services on side walls

Intended use

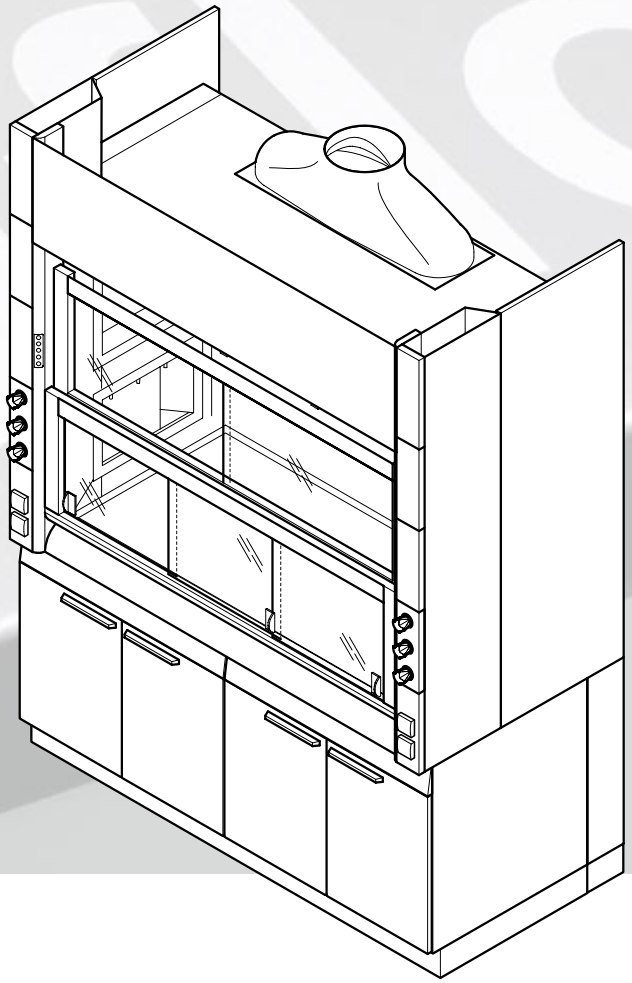
- Protective device for the user, tested in acc. with ASHRAE 110-2005
- Extraction of fumes, aerosols and dust from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- To prevent the formation of dangerous, potentially explosive atmospheres in the internal workspace
- Protection from splashes of hazardous substances
- Protection against flying debis, 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 service modules of the side panels of the internal workspace
- Control units located externally at the service panels
- Only low ceiling bench-mounted fume hoods: Suitable for rooms with a low height
- Only sitting height fume hoods: Suitable for work performed while seated

** refer to our technical catalog for special application fume hoods designed according to standards covering special applications*

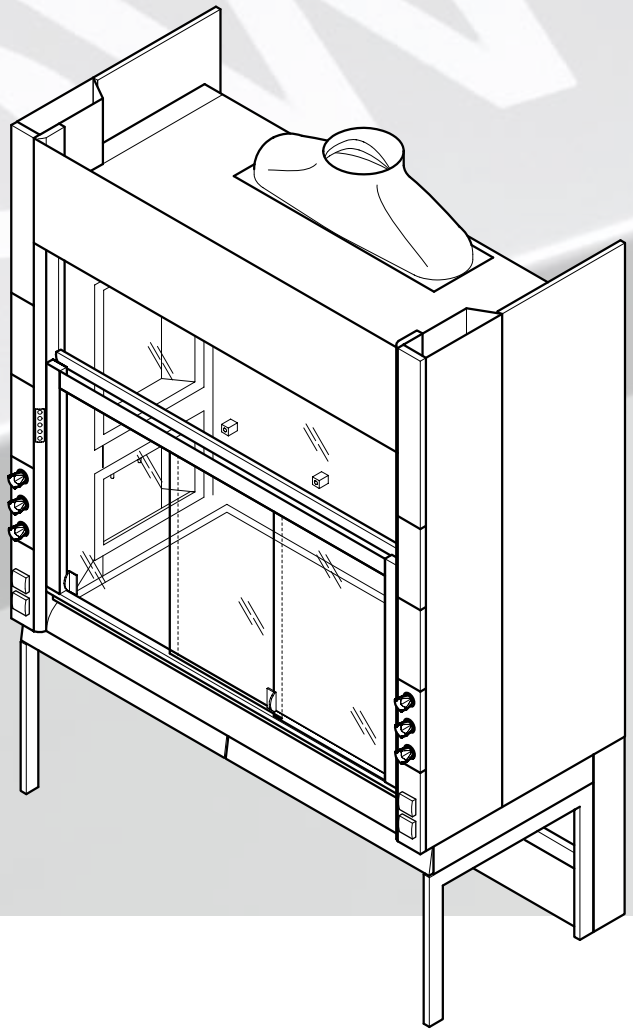
Technical data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)* Secuflow bench-mounted fume hood with services on side walls Width [in] *(mm)* Secuflow low ceiling bench-mounted fume hood with services on side walls Width [in] (mm) Secuflow sitting height fume hood with services on side walls	47.24 *(1200)* 47.24 *(1200)*	59.06 *(1500)* 59.06 *(1500)* 59.06 *(1500)*	70.87 *(1800)* 70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*	35.43 *(900)*				
Height [in] *(mm)* (*Low ceiling fume hood) (**Sitting height fume hood)	106.30 *(2700)* *94.49 *(*2400)* **100.39 *(**2550)*			106.30 *(2700)*	
Clear width of internal workspace [in] *(mm)*	37.40 *(950)*	49.21 *(1250)*	61.02 *(1550)*	72.83 *(1850)*	84.65 *(2150)*
Clear height of internal workspace [in] *(mm)* (*Low ceiling fume hood)	61.02 *(1550)* *49.21 *(*1250)*			61.02 *(1550)*	
Working height [in] *(mm)* (**Sitting height fume hood)	35.43 *(900)* **29.53 *(**750)*				

Secuflow low ceiling bench-mounted fume hood with services on side walls



Secuflow sitting height fume hood with services on side walls



Ventilation technology	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 60 FPM *(0.3 m/s)*	341 *(580)*	430 *(730)*	518 *(880)*	606 *(1030)*	695 *(1180)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 40 FPM *(0.2 m/s)*	253 *(430)*	312 *(530)*	371 *(630)*	430 *(730)*	489 *(830)*
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 [mm] for FAZ with extract manifold Ø9.84 in *(250 mm)* (*Low ceiling fume hood) (**Sitting height fume hood)	107.09 *(2720)* *95.28 *(*2420)* **101.18 *(**2570)*			107.09 *(2720)*	
Connection height [mm] for FAZ with extract manifold 12.4 in *(315 mm)* [2] (*Low ceiling fume hood) (**Sitting height fume hood)	112.20 *(2850)* *100.39 *(*2550)* **106.30 *(**2700)*			112.20 *(2850)*	
Connection height [mm] for AC with extract manifold Ø9.84 in *(250 mm)* (*Low ceiling fume hood) (**Sitting height fume hood)	116.14 *(2950)* *104.33 *(*2650)* **110.24 *(**2800)*			116.14 *(2950)*	
Connection height [mm] for AC with extract manifold 12.4 in *(315 mm)* [2] (*Low ceiling fume hood) (**Sitting height fume hood)	120.87 *(3070)* *109.05 *(*2770)* **114.96 *(**2920)*			120.87 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] In order to minimise 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)*.

[3] 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, Epoxy, stainless steel
Internal lining	Solid grade laminate, stainless steel (not for sitting height fume hood)

WALDNER

WALDNER

Technical Catalog
SCALA laboratory furniture system

2017
PRODUCT CATALOG

LABORATORY BENCH SYSTEMS

WALDNER

Technical Catalog
SCALA

The new design of our ***SCALA*** laboratory furniture program is creating the laboratory of the future.

Only when design and functionality effectively complement each other will arise real, useful results which enrich the laboratory working environment.

With innovative ideas, demanding detail solutions and the best materials, we have newly formed our laboratory program to meet the needs of the user with respect to ergonomics and efficiency more than ever before.

Our ***SCALA*** laboratory furniture system flexibly adapts to new, problem-free working environments. That way it unfolds a large number of different designs and constructions for every functional area in the laboratory.

With our new ***SCALA*** laboratory furniture, we offer you innovative, mature technology, the highest level of work safety and ergonomics, and perfect service. Discover all new details on the following pages.

It is for good reason that customers all over the world have trusted in us and our achievements for more than 60 years.

With the technical catalog, we give you the foundation for your future laboratory to hold in your hand.

Please contact us – we are always happy to hear from you.

WALDNER

Technical Catalog
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1 Fume hoods and exhaust devices

Fume hoods and exhaust devices

Table of contents

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3 Laboratory benches and sinks

4 Storage cabinets

Storage cabinets

5 Supply and disposal

6 School

7 Media

8 Accessories

9 General

WALDNER

1 Fume hoods and exhaust devices

Energy efficiency, optimal ergonomics and a very large internal volume make work with our new fume hood even safer and more comfortable for users than before.

New design coupled with an increased product range shape the fume hoods of our new ***SCALA*** laboratory program.

In combination with lengths up to 94.5 in *(2400 mm)* our fume hoods provide you the most extensive variety of products on the market! Nearly all fume hoods are also available with Secuflow technology.

1 Fume hoods and exhaust devices

Work in laboratories where gases, vapors, particulate matter or liquids in dangerous quantities and concentrations are handled must be carried out in fume hoods.

All of our new fume hoods ensure highest level of safety, ease of use and ergonomics for the operator – at the greatest cost-effectiveness.

Less power consumption than before – for economical operation

Through further improvement of fluid dynamics, our new fume hoods consume significantly less energy than before while still maintaining a high level of safety. For example our conventional fume hoods can be operated with a face velocity of 80 FPM and our Secuflow fume hoods with 40 FPM still fulfilling the requirements of ASHRAE 110-1995.

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

The fact that our Secuflow fume hood technology also reduces the investment and operating costs for the ventilation system is a further economic advantage – made possible by the integrated supportive flow technology. You can find further information on this topic in our Secuflow brochure.

Improved ergonomics by means of the inclined control panel

Through the inclination to the operating panel to the user, all fixtures and functions are even easier to reach and to use.

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

It prevents turbulence that could cause the release of contaminated air.

Air flowing through the fume hood is guided through the airfoil-like profile geometry (with low turbulence over the worktop) to the back panel – where the safe removal of heavy gasses, e. g. solvent fumes, is taken care of directly over the worktop.

For more safety

Out toothed belt sash suspension unit ensures maximum safety, while also significantly reducing maintenance. The stainless steel reinforced toothed belts show the highest stability in endurance tests with more than 200,000 load cycles. The design of the sash frame provides the best splash and shatter protection.

The anti-slip device provides additional protection

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

Maximum usable contact surface

Our slender, patented fume hood side posts provide more usable width in the internal workspace, and their special design ensures that there is little turbulence in the intake air.

Larger internal volume

Through 10 % more internal height, the entire workspace is increased. Beneficial for high and projecting experimental equipment.

1 Fume hoods and exhaust devices

Clear view of all processes in the workspace
The sash window of the fume hood head unit enables a clear view of all high experimental equipment and procedures.

The new scaffold points
Scaffold rods of 0.47 in *(12 mm)* and 0.51 in *(13 mm)* diameters can be firmly and securely fastened.

All functions at a glance
The soft-touch control elements integrated into the fume hood side posts at eye height provide information about the operational state.

Window sash handle with air exhaust function
When open, air flows into the workspace and pollutant backflow is prevented. The balanced and free-moving sash mechanism including the release for the sash stop can be operated with one hand at any point along the sash.

The automatic sash
The sash is closed automatically when there is nobody working in the fume hood. A photo-electric barrier stops the closing process if there are objects protruding from inside the workspace.

New fume hood widths to choose from
Our bench-mounted fume hoods are now available in widths of 82.68 in *(2100 mm)*, side-installation fume hoods in 94.5 in *(2400 mm)* – naturally with Secuflow technology as well.

New interior lighting
Energy efficient lamps steadily illuminate the internal workspace – easily switchable from the side posts.

Barrier-free sitting height fume hood
We also provide fume hoods with services on side walls in a wheelchair accessible design. The design of all our control switches provides for optimal ergonomics and freedom of movement for seated operations at the fume hood.

The best for equipment and variability

Along with convenient standard equipment, our fume hoods provide a wide range of variable equipment options. Depending on the application, the worktop is made of stoneware, epoxy resin, polypropylene or stainless steel. Our fume hoods are assembled with self-supporting underbench units or on a steel support frame. It is possible to install fixed base underbench cabinets, mobile cabinets, metal solvent cabinets, and others under the fume hood.

The service modules for assembly as needed

Integrated into the back and side wall of our fume hoods, removable service modules provide for the supply of sanitary and electrical services.

Our certified test laboratory for fume hood measurements

On the publication of EN 14175 we set up our new test laboratory for fume hoods. The latest technical equipment and the GS certification via TÜV Product Service GmbH guarantee the best measurement results in relation to accuracy and reproducibility.

We test fume hoods according to EN 14175. Furthermore, we also perform measurements according to ASHRAE 110/1995.

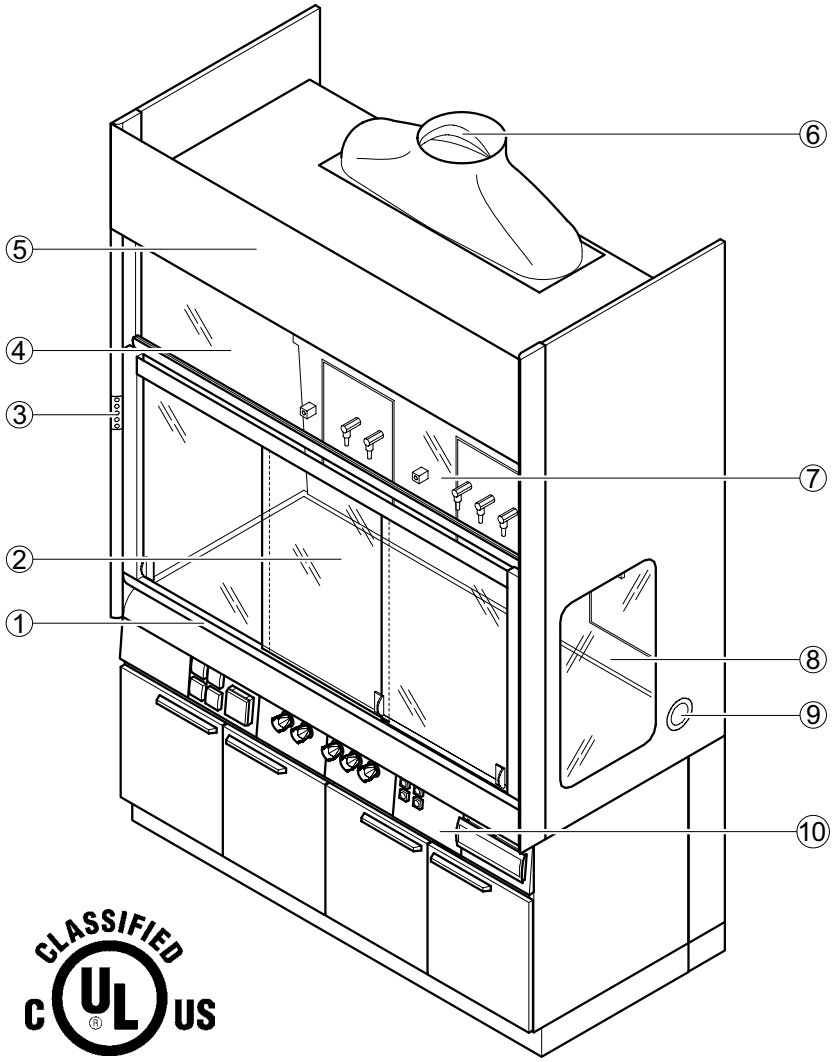
Beyond our ISO 9001 certification and the GS marking for our entire product range, we have closed the loop in relation to fume hood tests and had our test laboratory certified by TÜV Product Service GmbH according to the German law on product safety (Gerätesicherheitsgesetz).

Bench-mounted fume hoods
Bench-mounted fume hood

Use

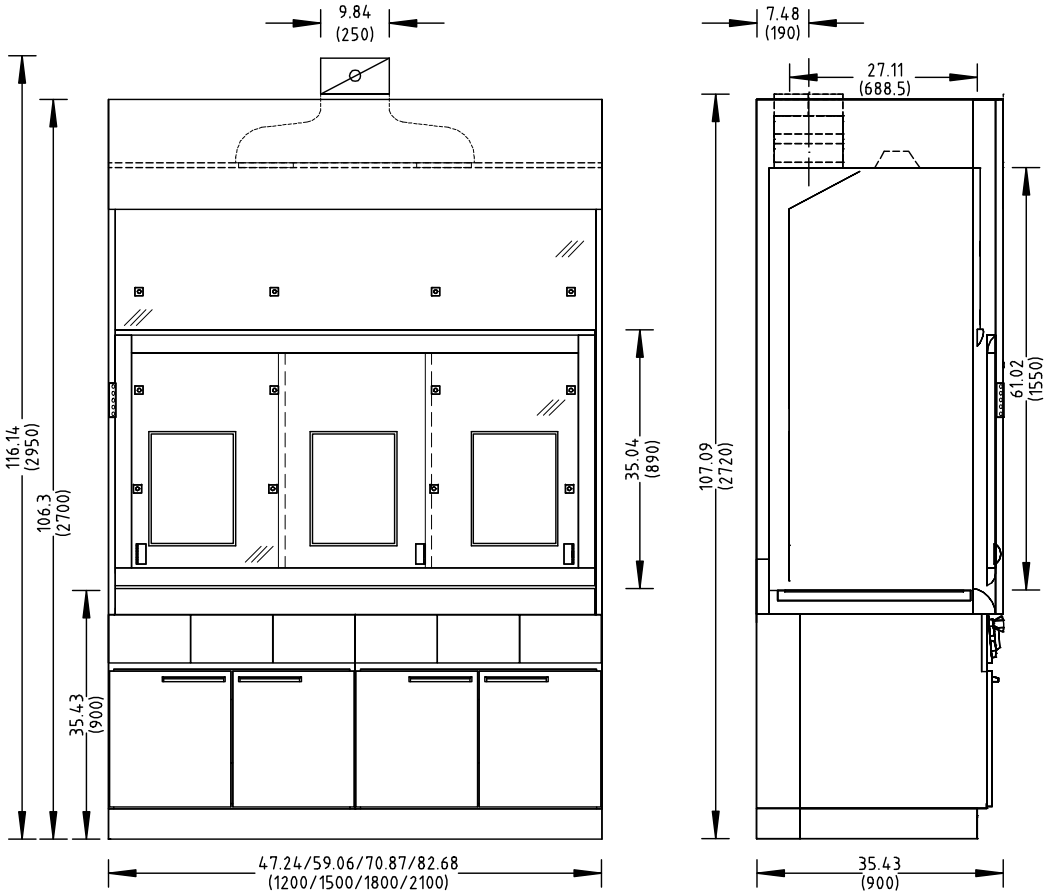
- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Service outlets in the back wall of the internal workspace
- Operating controls externally at the traverse

Design



1 Sash with sash handle and horizontal sash
2 Worktop
3 Control panel FAZ or AC
4 Upper sash window
5 Removable front filler panel
6 Extract manifold
7 Baffle with service modules
8 Optional glazed side panel
9 Optional cable pass-through
10 Self-supporting underbench unit with traverse and service panels

Dimensional drawing



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)*	106.3 *(2700)*			
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*	80.71 *(2050)*
Interior effective height [in] *(mm)*	61.02 *(1550)*			
Working height [in] *(mm)*	35.43 *(900)*			

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Without installation [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*	approx. 881.84 *(400)*

Bench-mounted fume hoods
Bench-mounted fume hood

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel	Optional glazed side panel left and/or right, not for stoneware internal lining Optional cable pass-through left and/or right, not for stoneware internal lining			
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9		12	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*			
Service modules	2		3	

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Minimum volume flow [cfm] *(m³/h)* [1]	282.5 *(480)*	353.2 *(600)*	423.8 *(720)*	494.4 *(840)*
Extract air function display	FAZ			
Flow regulator, constant	Airflow controller AC			
Flow regulator, variable	Airflow controller AC			
Detector of horizontal sash position	Only variable with airflow controller AC			
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.84 in *(250 mm)*	107.09 *(2720)*			
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12408 in *(315 mm)* [2]	112.20 *(2850)*			
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.84 in *(250 mm)*	116.14 *(2950)*			
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.40 in *(315 mm)* [2]	120.87 *(3070)*			
Underbench exhaust extraction	Optional according to requirements and specifications			

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.40 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

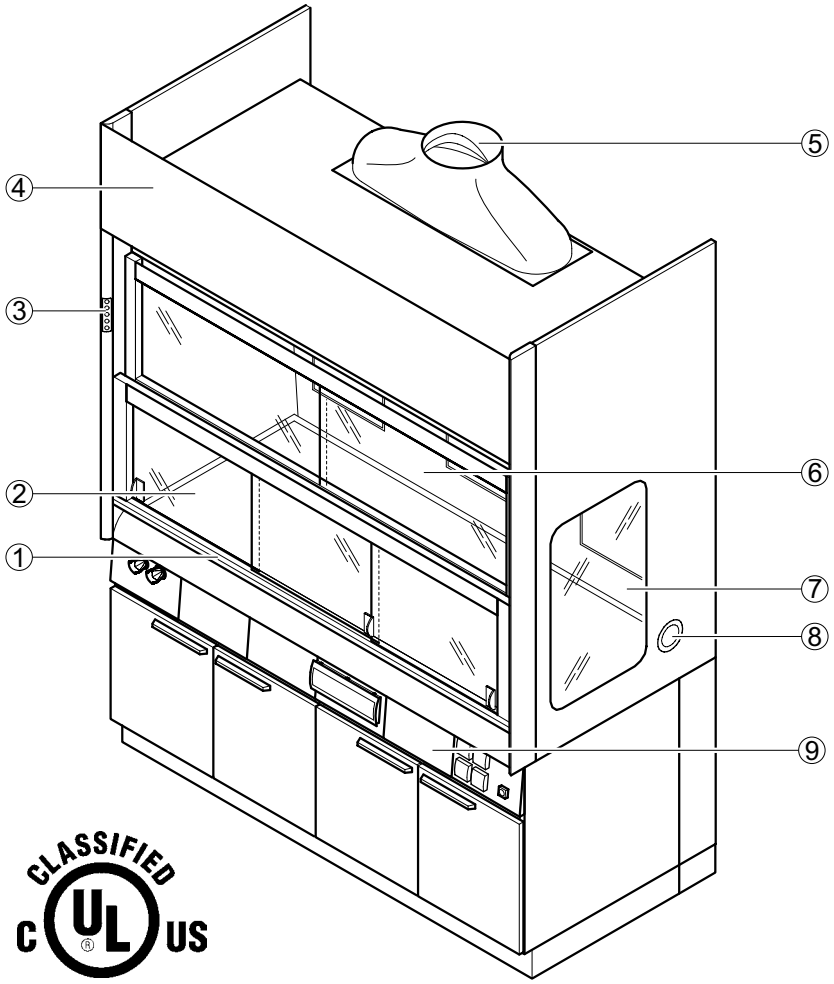
Material/Facing	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate HPL (high pressure laminate)

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

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Service outlets in the back wall of the internal workspace
- Operating controls externally at the traverse
- Suitable for spaces with low ceiling heights

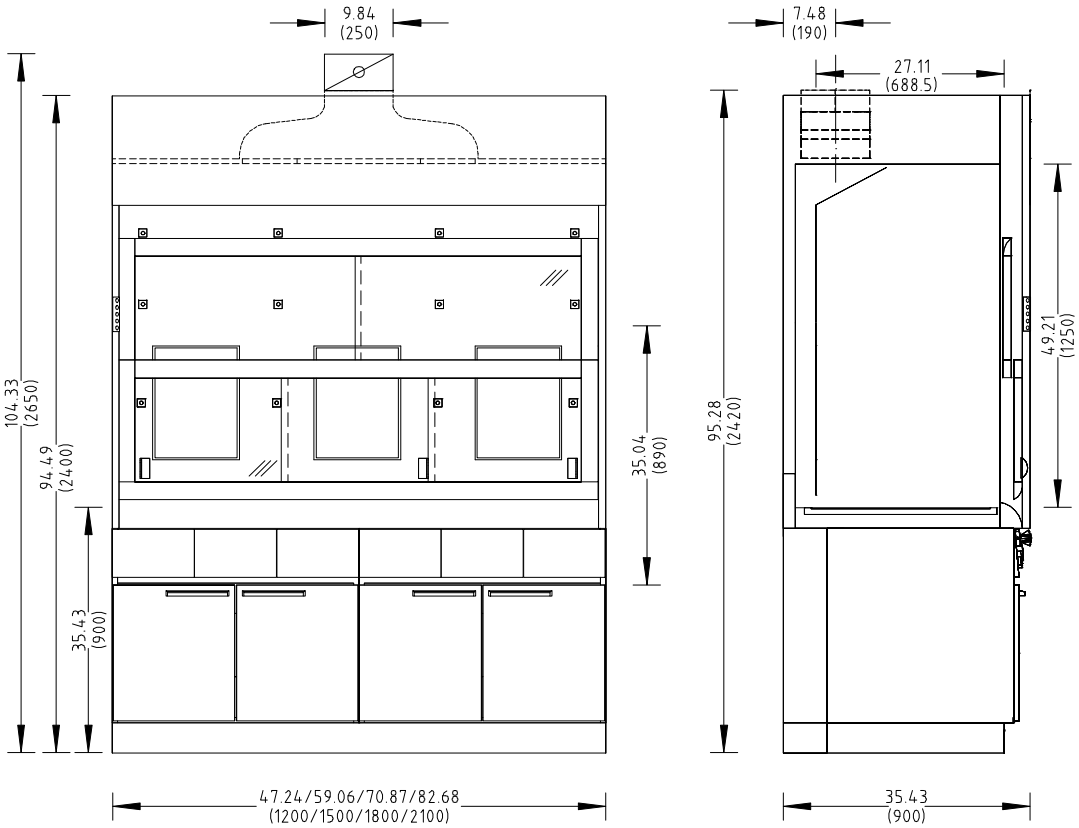
Design



1 *Two-part sash with sash handle and horizontal sash*
2 *Worktop*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Extract manifold*
6 *Baffle with service modules*
7 *Optional glazed side panel*
8 *Optional cable pass-through*
9 *Self-supporting underbench unit with traverse and service panels*

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

Dimensional drawing



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)*	94.49 *(2400)*			
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*	80.71 *(2050)*
Interior effective height [in] *(mm)*	49.21 *(1250)*			
Working height [in] *(mm)*	35.43 *(900)*			

Weight	**47.24***(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Without installation [lb] *(kg)*	approx. 485.01 *(220)*	approx. 573.2 *(260)*	approx. 661.38 *(300)*	approx. 771.62 *(350)*

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel	Optional glazed side panel left and/or right, not for stoneware internal lining Optional cable pass-through left and/or right, not for stoneware internal lining			
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9		12	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*			
Service modules	2		3	

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

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Minimum volume flow [cfm] *(m³/h)* [1]	282.5 *(480)*	353.2 *(600)*	423.8 *(720)*	494 *(840)*
Extract function display	FAZ			
Flow regulator, constant	Airflow controller AC			
Flow regulator, variable	Airflow controller AC			
Detector of horizontal sash position	Only variable with airflow controller AC			
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.75 in *(250 mm)*	95.28 *(2420)*			
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.28 in *(315 mm)* [2]	100.39 *(2550)*			
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.75 in *(250 mm)*	104.33 *(2650)*			
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.28 in *(315 mm)* [2]	109.05 *(2770)*			
Underbench exhaust extraction	Optional according to requirements and specifications			

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.40 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

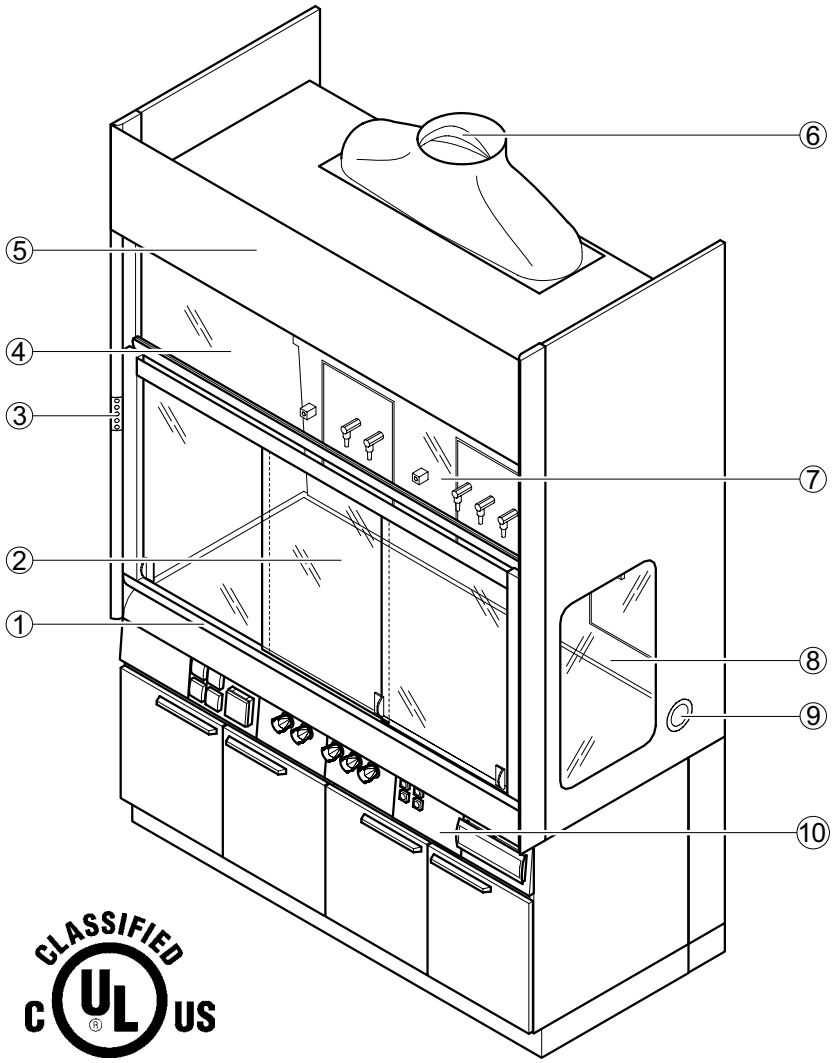
Material/Facing	
Worktop	Stoneware Polypropylene Stainless steel Epoxy
Internal lining	Solid grade laminate HPL (high pressure laminate)

Bench-mounted fume hoods
Secuflow bench-mounted fume hood

Use

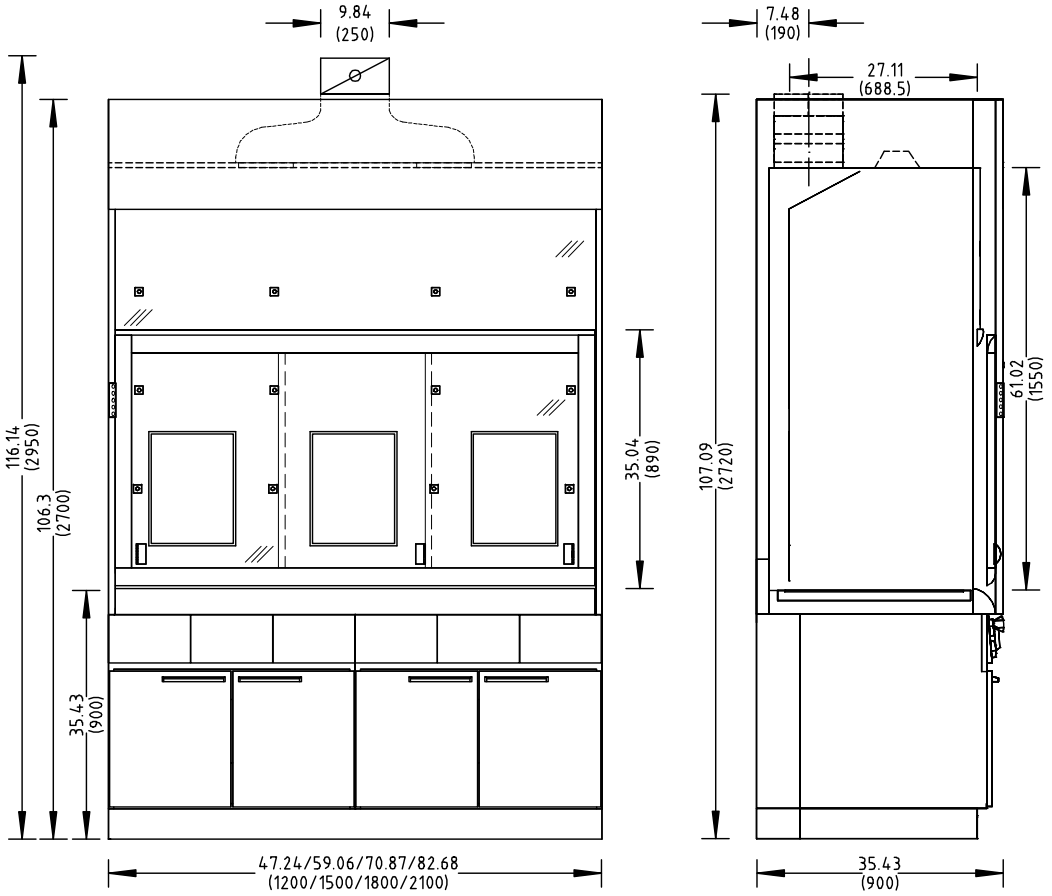
- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets in the back wall of the internal workspace
- Operating controls externally at the traverse

Design



1 *Sash with sash handle and horizontal sash*
2 *Worktop*
3 *Control panel FAZ or AC*
4 *Upper sash window*
5 *Removable front filler panel*
6 *Extract manifold*
7 *Baffle with service modules*
8 *Optional glazed side panel*
9 *Optional cable pass-through*
10 *Self-supporting underbench unit with traverse and service panels*

Dimensional drawing



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)*	106.3 *(2700)*			
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*	80.71 *(2050)*
Interior effective height [in] *(mm)*	61.02 *(1550)*			
Working height [in] *(mm)*	35.43 *(900)*			

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Without installation [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*	approx. 881.84 *(400)*

Bench-mounted fume hoods
Secuflow bench-mounted fume hood

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel	Optional glazed side panel left and/or right, not for stoneware internal lining Optional cable pass-through left and/or right, not for stoneware internal lining			
Max. number of devices for scaffold points, ø 0.47 in *(12 mm)* to 0.51 in *(13 mm)*	9		12	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*			
Service modules	2		3	

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Minimum air exchange rate [cfm] [1] *(m³/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] *(m³/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 [mm] for FAZ with extract manifold Ø9.84 in (250 mm)	107.09 *(2720)*			
Connection height [mm] for FAZ with extract manifold 12.4 in (315 mm) [2]	112.20 *(2850)*			
Connection height [mm] for AC with extract manifold 9.84 in (250 mm)	116.14 *(2950)*			
Connection height [mm] for AC with extract manifold 12.4 in (315 mm) [2]	120.87 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] 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)*.

[3] 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.

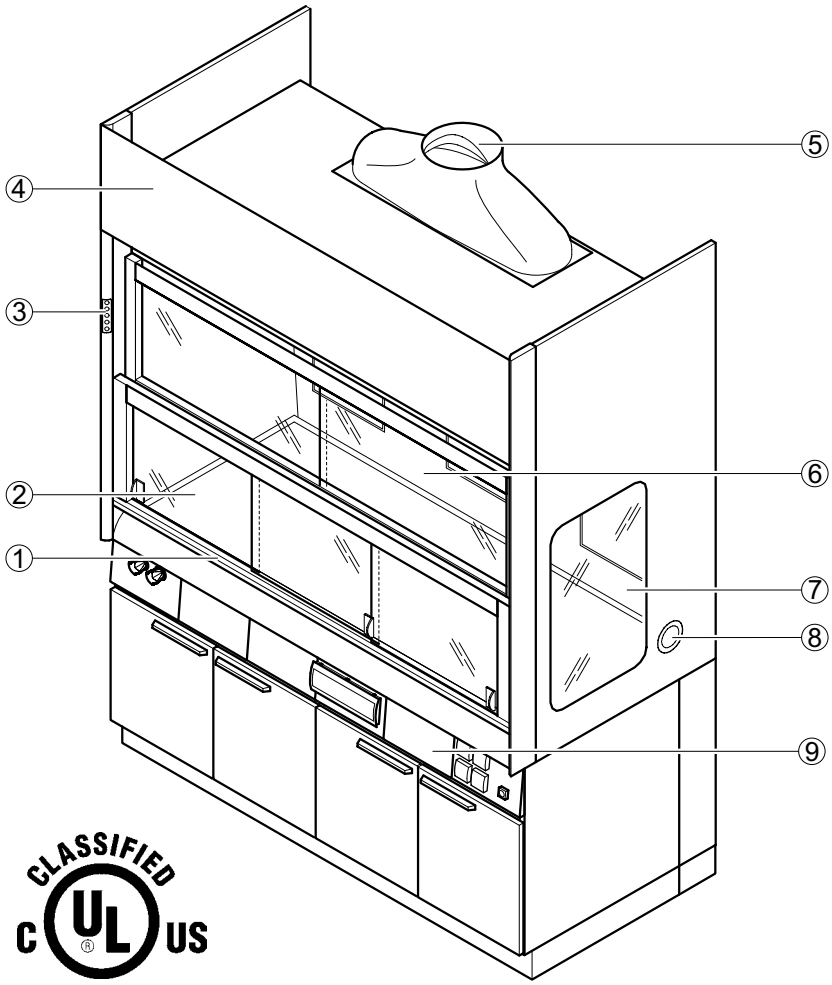
Material/Facing	
Worktop	Stoneware Polypropylene Stainless steel Epoxy
Internal lining	Solid grade laminate HPL (high pressure laminate)

Secuflow low ceiling bench-mounted fume hood

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets in the back wall of the internal workspace
- Operating controls externally at the traverse
- Suitable for spaces with low ceiling heights

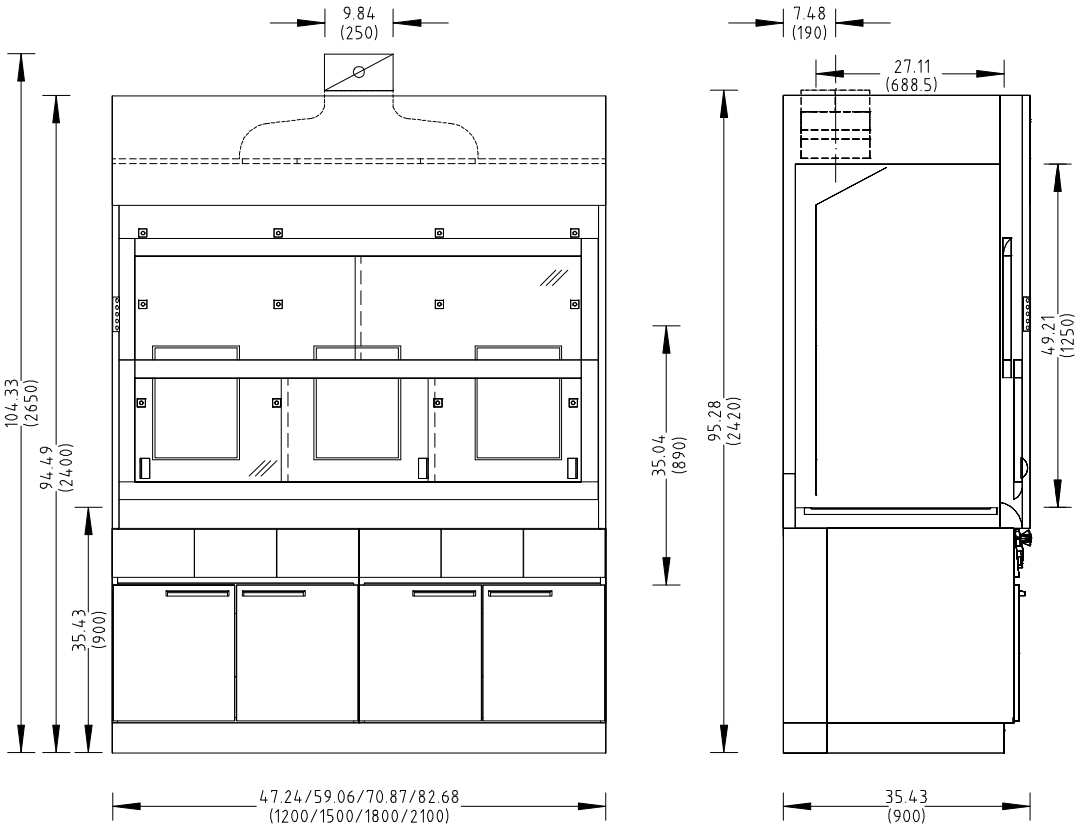
Design



1 *Two-part sash with sash handle and horizontal sash*
2 *Worktop*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Extract manifold*
6 *Baffle with service panel*
7 *Optional glazed side panel*
8 *Optional cable pass-through*
9 *Self-supporting underbench unit with traverse and service panels*

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

Dimensional drawing



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)*	94.49 *(2400)*			
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.9 *(1750)*	80.71 *(2050)*
Interior effective height [in] *(mm)*	49.21 *(1250)*			
Working height [in] *(mm)*	35.43 *(900)*			

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Without installation [lb] *(kg)*	approx. 485.01 *(220)*	approx. 573.2 *(260)*	approx. 661.38 *(300)*	approx. 771.62 *(350)*

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units			
Sash	2 horizontal sashes		3 horizontal sashes	
Side panel	Optional glazed side panel left and/or right, not for stoneware internal lining Optional cable pass-through left and/or right, not for stoneware internal lining			
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9		12	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*			
Service modules	2		3	

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

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
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Minimum air exchange rate [cfm] [1] *(m³/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 [mm] for FAZ with extract manifold Ø9.84 in (250 mm)	95.28 *(2420)*			
Connection height [mm] for FAZ with extract manifold 12.4 in (315 mm) [2]	100.39 *(2550)*			
Connection height [mm] for AC with extract manifold 9.84 in (250 mm)	104.33 *(2650)*			
Connection height [mm] for AC with extract manifold 12.4 in (315 mm) [2]	109.05 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] 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)*.

[3] 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.

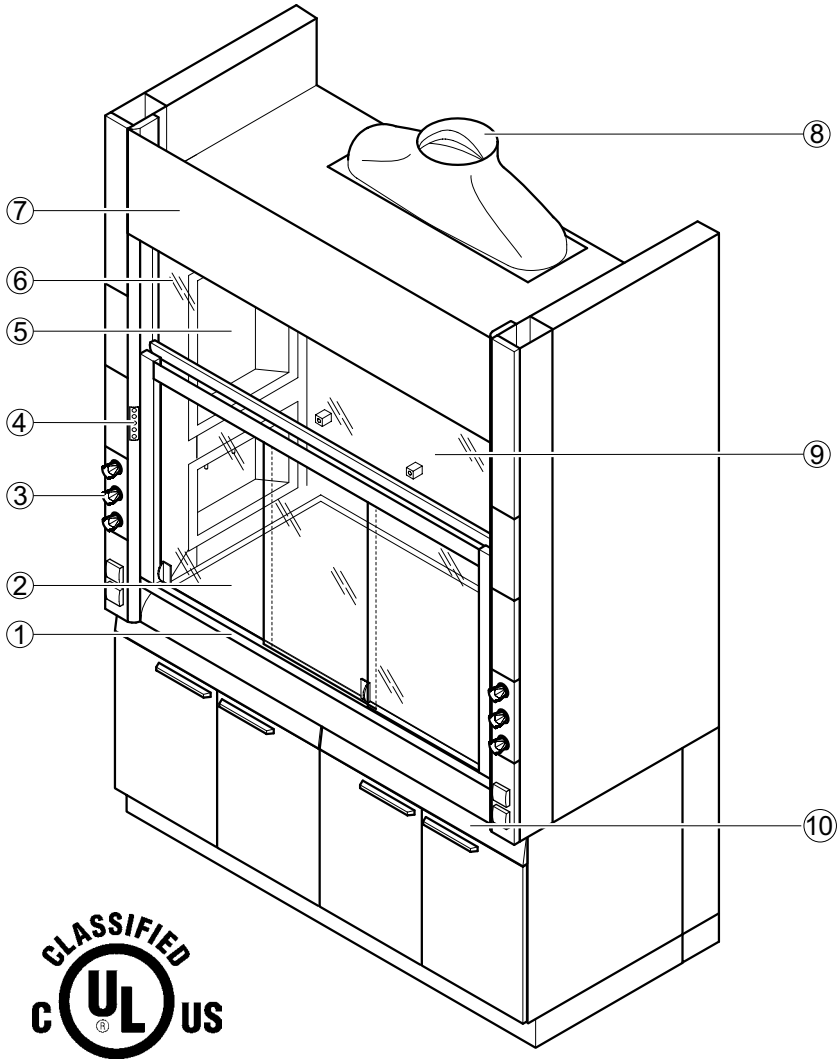
Material/Facing	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate HPL (high pressure laminate)

Bench-mounted fume hoods with services on side walls
Bench-mounted fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels

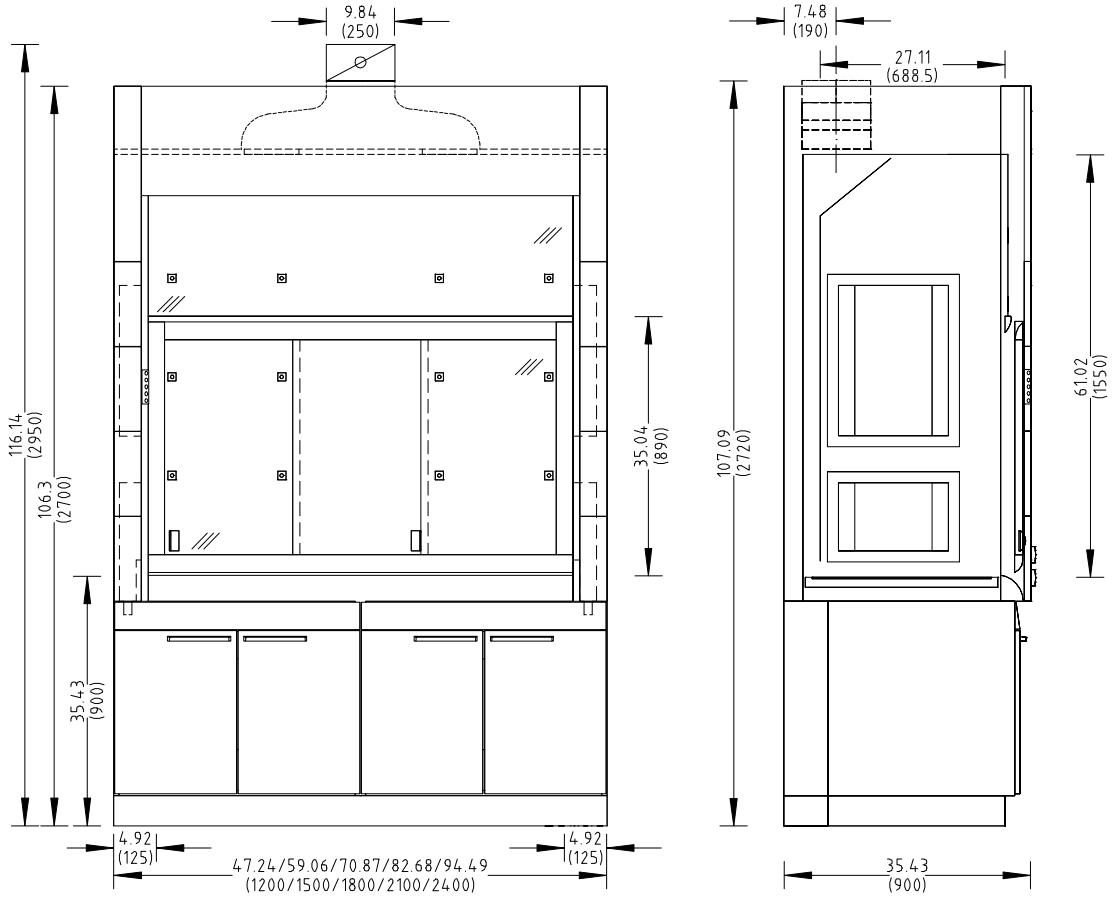
Design



1 *Sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Control panel FAZ or AC*
5 *Service modules in the fume hood side wall*
6 *Upper sash window*
7 *Removable front filler panel*
8 *Extract manifold*
9 *Baffle with scaffold points*
10 *Self-supporting underbench unit*

Bench-mounted fume hoods with services on side walls
Bench-mounted fume hood with services on side walls

Dimensional drawing



Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*	35.43 *(900)*				
Height [in] *(mm)*	106.30 *(2700)*				
Interior effective width [in] *(mm)*	37.40 *(950)*	49.21 *(1250)*	61.02 *(1550)*	72.83 *(1850)*	84.65 *(2150)*
Interior effective height [in] *(mm)*	61.02 *(1550)*				
Working height [in] *(mm)*	35.43 *(900)*				

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Without installation [lb] *(kg)*	approx. 705.47 *(320)*	approx. 859.79 *(390)*	approx. 992.07 *(450)*	approx. 1124.35 *(510)*	approx. 1256.62 *(570)*

Bench-mounted fume hoods with services on side walls
Bench-mounted fume hood with services on side walls

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units				
Sash	2 horizontal sashes		3 horizontal sashes		
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right				
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9	12			15
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*				
Service modules	According to requirements, service modules in the left and/or right fume hood side wall				

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum volume flow [cfm] *(m³/h)* [1]	247.2 *(420)*	309 *(525)*	370.8 *(630)*	432.6 *(735)*	494.4 *(840)*
Extract function display	FAZ				
Flow regulator, constant	Airflow controller AC				
Flow regulator, variable	Airflow controller AC				
Detector of horizontal sash position	Only variable with airflow controller AC				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.75 in *(250 mm)*	107.09 *(2720)*				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.28 in *(315 mm)* [2]	112.20 *(2850)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.75 in *(250 mm)*	116.14 *(2950)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.28 in *(315 mm)* [2]	120.87 *(3070)*				
Underbench exhaust extraction	Optional according to requirements and specifications				

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.4 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

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

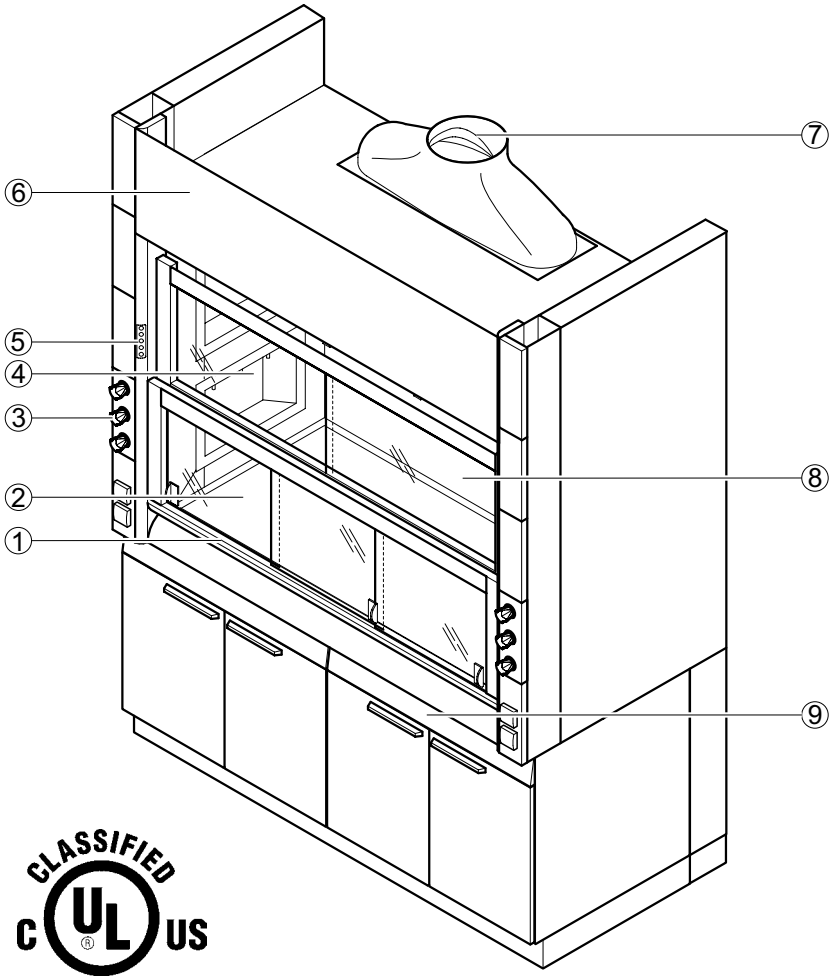
Bench-mounted fume hoods with services on side walls

Low ceiling bench-mounted fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels
- Suitable for spaces with low ceiling heights

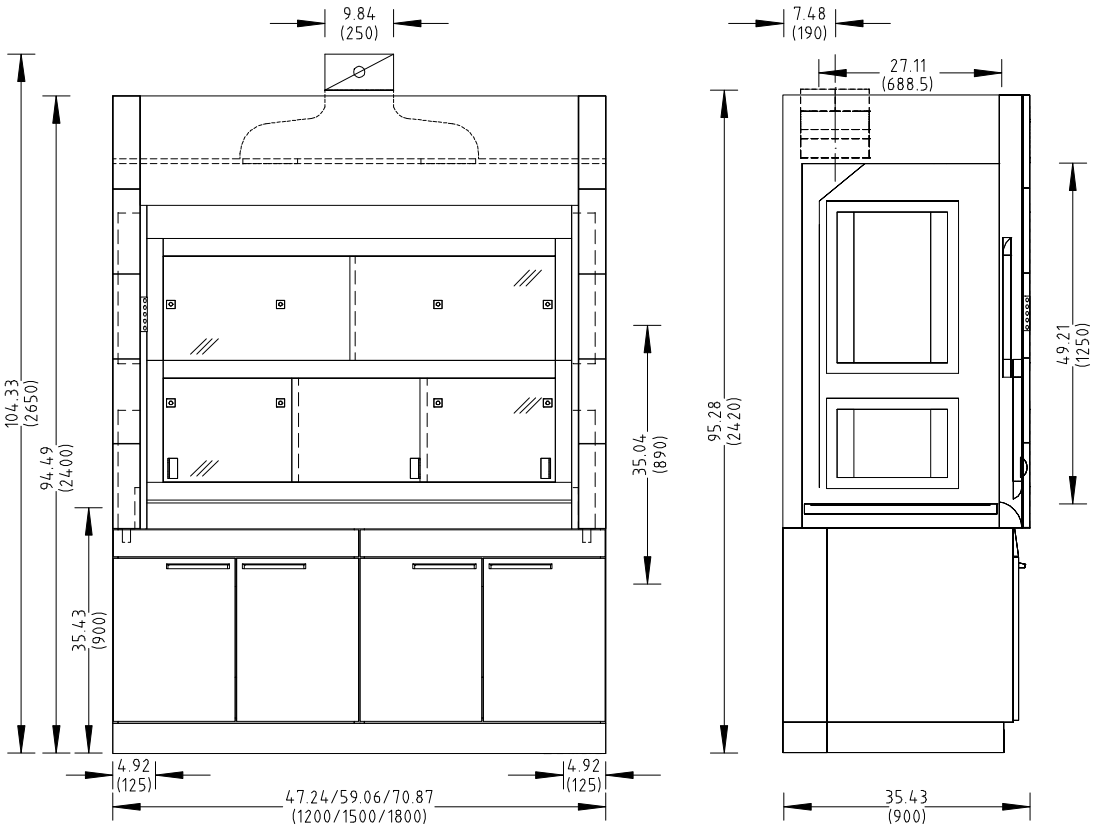
Design



1 *Two-part sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Service module in the fume hood side wall*
5 *Control panel FAZ or AC*
6 *Removable front filler panel*
7 *Extract manifold*
8 *Baffle with scaffold points*
9 *Self-supporting underbench unit*

Bench-mounted fume hoods with services on side walls
Low ceiling bench-mounted fume hood with services on side walls

Dimensional drawing



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)*	94.49 *(2400)*		
Interior effective width [in] *(mm)*	37.4 *(950)*	49.21 *(1250)*	61.02 *(1550)*
Interior effective height [in] *(mm)*	49.21 *(1250)*		
Working height [in] *(mm)*	35.43 *(900)*		

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation [lb] *(kg)*	approx. 485.01 *(220)*	approx. 573.2 *(260)*	approx. 661.38 *(300)*

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units		
Two-part sash	2 horizontal sashes		3 horizontal sashes
Side panel	Optional glazed side panel left and/or right, not for service panels in the fume hood side wall, not for stoneware internal lining Optional cable pass-through left and/or right		
Max. number of devices for scaffold points, ø 0.47 *(12)* up to 0.51 in *(13 mm)*	6	8	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*		
Service modules	According to requirements, service modules in the left and/or right fume hood side wall		

Bench-mounted fume hoods with services on side walls
Low ceiling bench-mounted fume hood with services on side walls

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Minimum volume flow [cfm] *(m³/h)* [1]	247.2 *(420)*	312 *(530)*	370.8 *(630)*
Extract function display	FAZ		
Flow regulator, constant	Airflow controller AC		
Flow regulator, variable	Airflow controller AC		
Detector of horizontal sash position	Only variable with airflow controller AC		
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.75 in *(250 mm)*	95.28 *(2420)*		
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.28 in *(315 mm)* [2]	100.39 *(2550)*		
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.75 in *(250 mm)*	104.33 *(2650)*		
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.28 in *(315 mm)* [2]	109.05 *(2770)*		
Underbench exhaust extraction	Optional according to requirements and specifications		

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie.

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.4 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

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

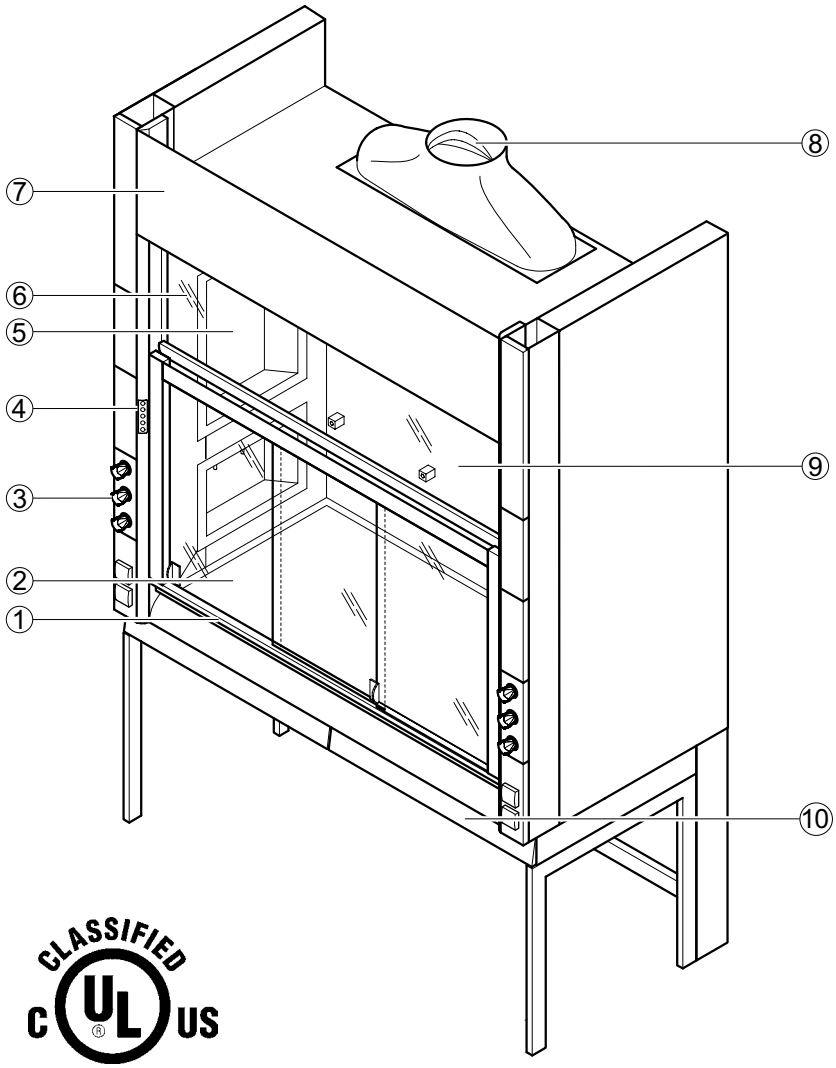
Bench-mounted fume hoods with services on side walls

Secuflow bench-mounted fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels

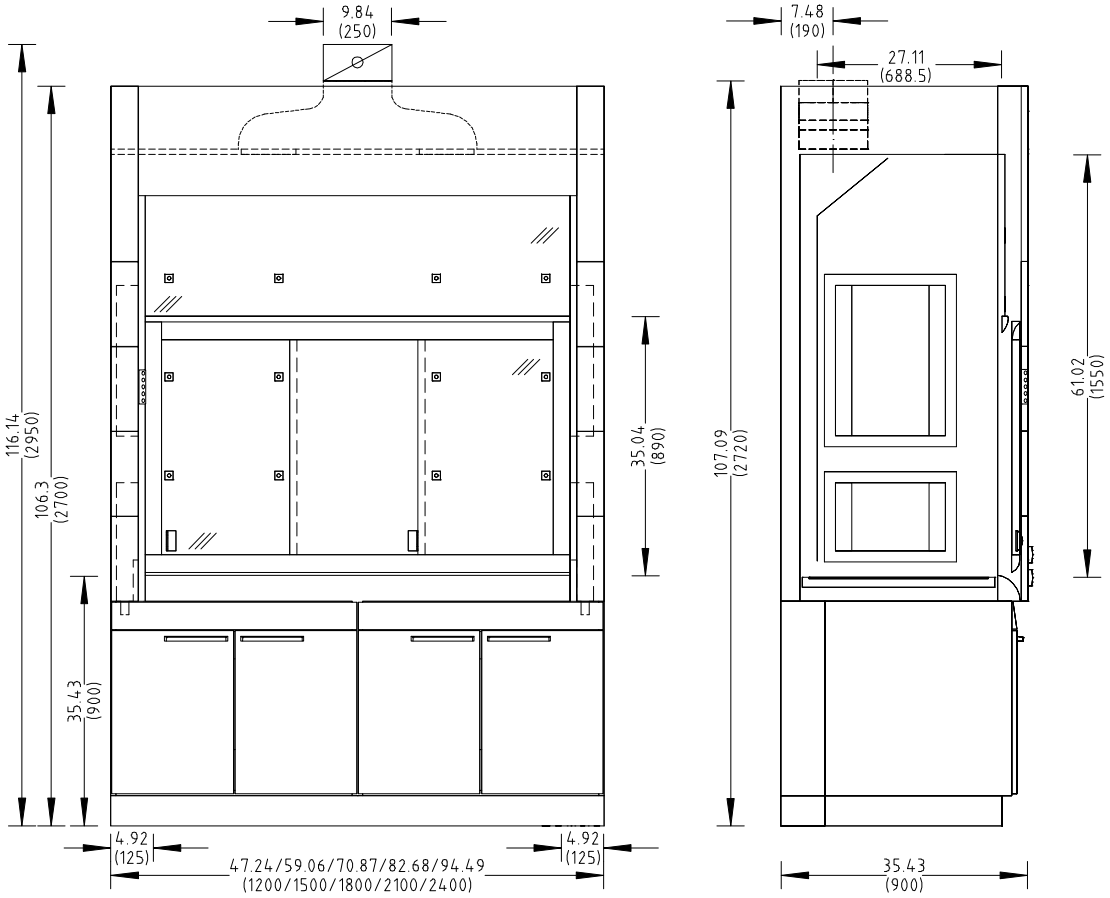
Design



1 *Sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Control panel FAZ or AC*
5 *Service modules in the fume hood side wall*
6 *Upper sash window*
7 *Removable front filler panel*
8 *Extract manifold*
9 *Baffle with scaffold points*
10 *Support frame optional with pushed-in underbench units*

Bench-mounted fume hoods with services on side walls
Secuflow bench-mounted fume hood with services on side walls

Dimensional drawing



Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*	35.43 *(900)*				
Height [in] *(mm)*	106.3 *(2700)*				
Interior effective width [in] *(mm)*	37.4 *(950)*	49.21 *(1250)*	61.02 *(1550)*	72.83 *(1850)*	84.65 *(2150)*
Interior effective height [in] *(mm)*	61.02 *(1550)*				
Working height [in] *(mm)*	35.43 *(900)*				

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Without installation [lb] *(kg)*	approx. 705.47 *(320)*	approx. 859.79 *(390)*	approx. 992.07 *(450)*	approx. 1124.35 *(510)*	approx. 1256.62 *(570)*

Bench-mounted fume hoods with services on side walls
Secuflow bench-mounted fume hood with services on side walls

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units				
Sash	2 horizontal sashes		3 horizontal sashes		
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right				
Max. number of devices for scaffold points, ø 0.47 *(12)* up to 0.51 in *(13 mm)*	9	12			15
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*				
Service modules	According to requirements, service modules in the left and/or right fume hood side wall				

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 60 FPM *(0.3 m/s)*	341 *(580)*	430 *(730)*	518 *(880)*	606 *(1030)*	695 *(1180)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 40 FPM *(0.2 m/s)*	253 *(430)*	312 *(530)*	371 *(630)*	430 *(730)*	489 *(830)*
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 [mm] for FAZ with extract manifold Ø9.84 in (250 mm)	107.09 *(2720)*			107.09 *(2720)*	
Connection height [mm] for FAZ with extract manifold 12.4 in (315 mm) [2]	112.20 *(2850)*			112.20 *(2850)*	
Connection height [mm] for AC with extract manifold Ø9.84 in (250 mm)	116.14 *(2950)*			116.14 *(2950)*	
Connection height [mm] for AC with extract manifold 12.4 in (315 mm) [2]	120.87 *(3070)*			120.87 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] In order to minimise 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)*.

[3] 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/Facing	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate Stainless steel HPL (high pressure laminate)

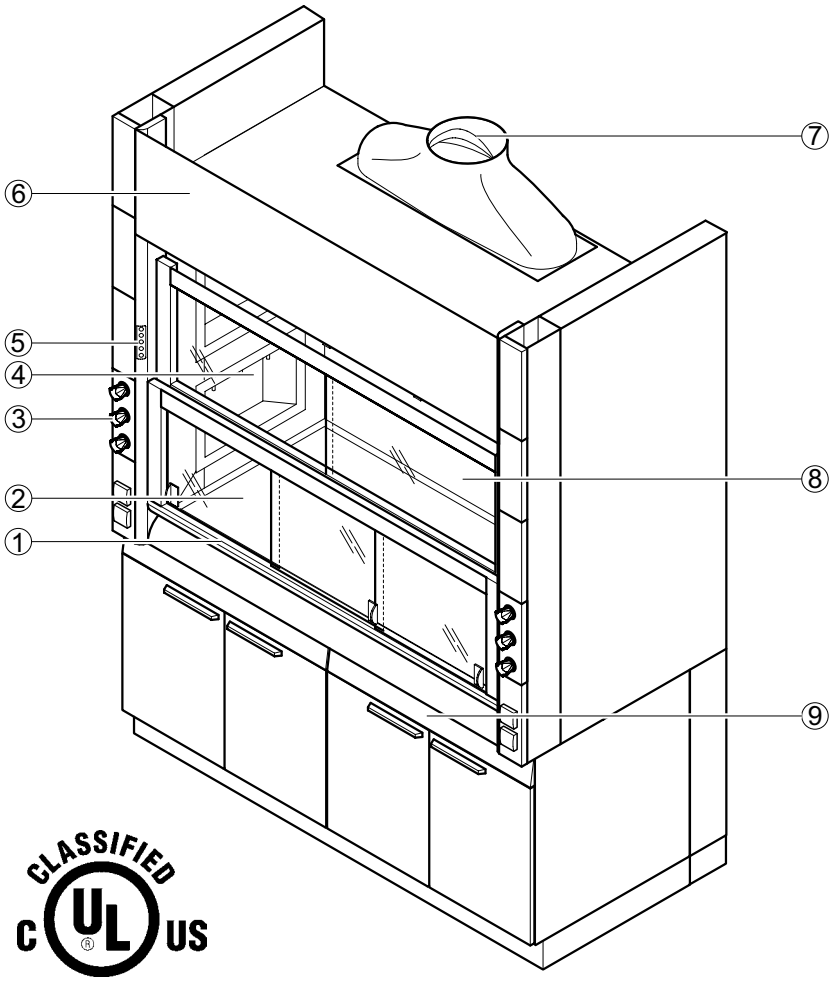
Bench-mounted fume hoods with services on side walls

Secuflow low ceiling bench-mounted fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels
- Suitable for spaces with low ceiling heights

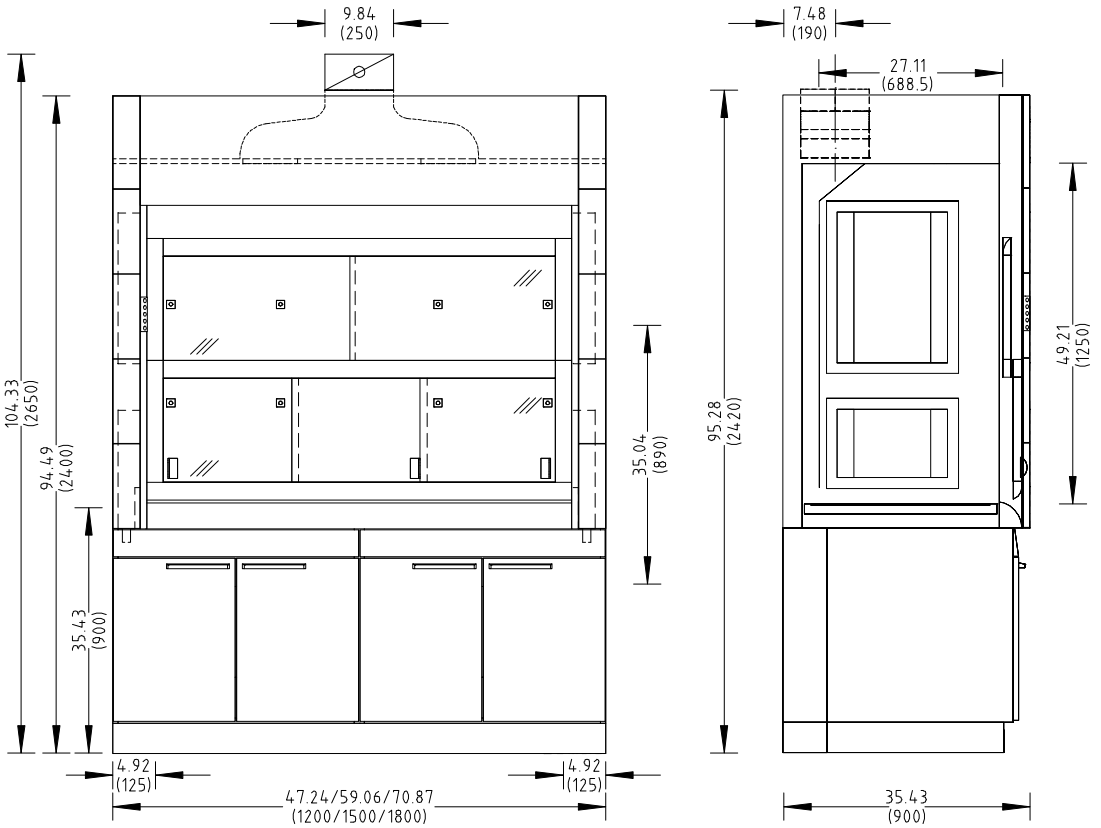
Design



1 *Two-part sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Service module in the fume hood side wall*
5 *Control panel FAZ or AC*
6 *Removable front filler panel*
7 *Extract manifold*
8 *Baffle with scaffold points*
9 *Self-supporting underbench unit*

Bench-mounted fume hoods with services on side walls
Secuflow low ceiling bench-mounted fume hood with services on side walls

Dimensional drawing



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)*	94.49 *(2400)*		
Interior effective width [in] *(mm)*	37.4 *(950)*	49.21 *(1250)*	61.02 *(1550)*
Interior effective height [in] *(mm)*	49.21 *(1250)*		
Working height [in] *(mm)*	35.43 *(900)*		

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation [lb] *(kg)*	approx. 485.01 *(220)*	approx. 573.2 *(260)*	approx. 661.38 *(300)*

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units		
Two-part sash	2 horizontal sashes		3 horizontal sashes
Side panel	Optional glazed side panel left and/or right, not for service panels in the fume hood side wall, not for stoneware internal lining Optional cable pass-through left and/or right, not for stoneware internal lining		
Max. number of devices for scaffold points, ø 0.47 *(12)* up to 0.51 in *(13 mm)*	6	9	
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*		
Service modules	According to requirements, service modules in the left and/or right fume hood side wall		

Bench-mounted fume hoods with services on side walls
Secuflow low ceiling bench-mounted fume hood with services on side walls

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 60 FPM *(0.3 m/s)*	341 *(580)*	430 *(730)*	518 *(880)*	606 *(1030)*	695 *(1180)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 40 FPM *(0.2 m/s)*	253 *(430)*	312 *(530)*	371 *(630)*	430 *(730)*	489 *(830)*
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 [mm] for FAZ with extract manifold Ø9.84 in (250 mm)	95.28 *(2420)*			107.09 *(2720)*	
Connection height [mm] for FAZ with extract manifold 12.4 in (315 mm) [2]	100.39 *(2550)*			112.20 *(2850)*	
Connection height [mm] for AC with extract manifold Ø9.84 in (250 mm)	104.33 *(2650)*			116.14 *(2950)*	
Connection height [mm] for AC with extract manifold 12.4 in (315 mm) [2]	109.05 *(2770)*			120.87 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] In order to minimise 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)*.

[3] 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.

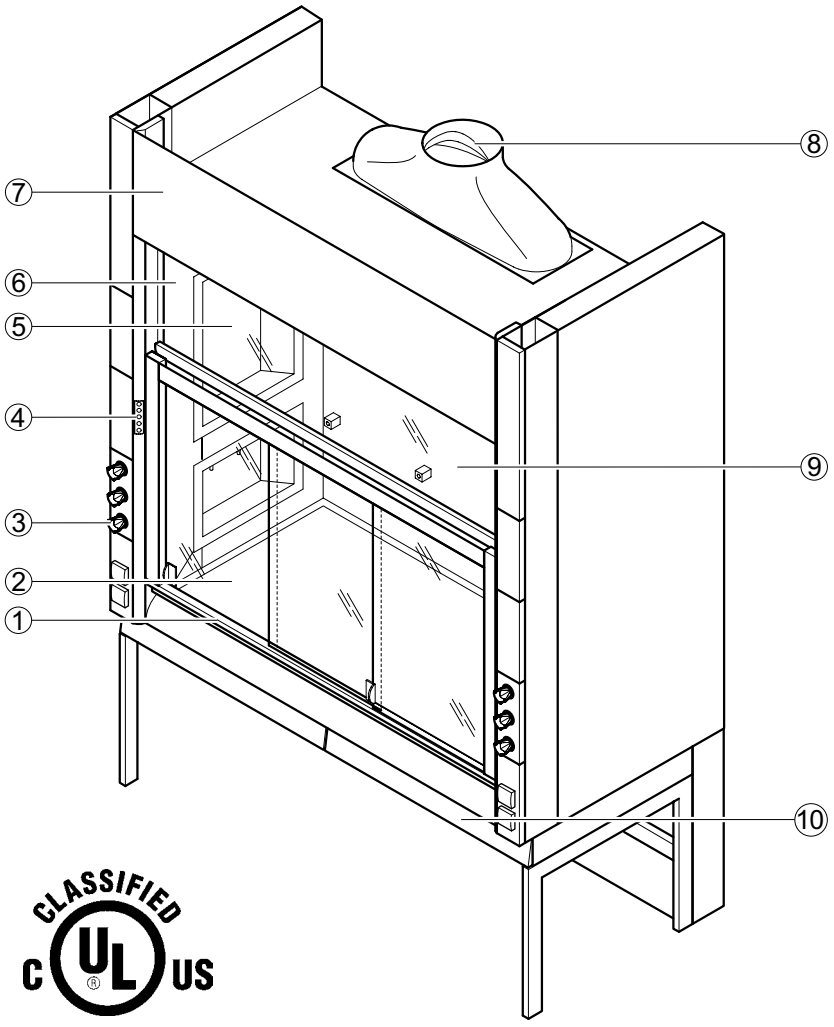
Material	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate Stainless steel HPL (high pressure laminate)

Bench-mounted fume hoods with services on side walls
Sitting height fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Adapted for usage while sitting
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels

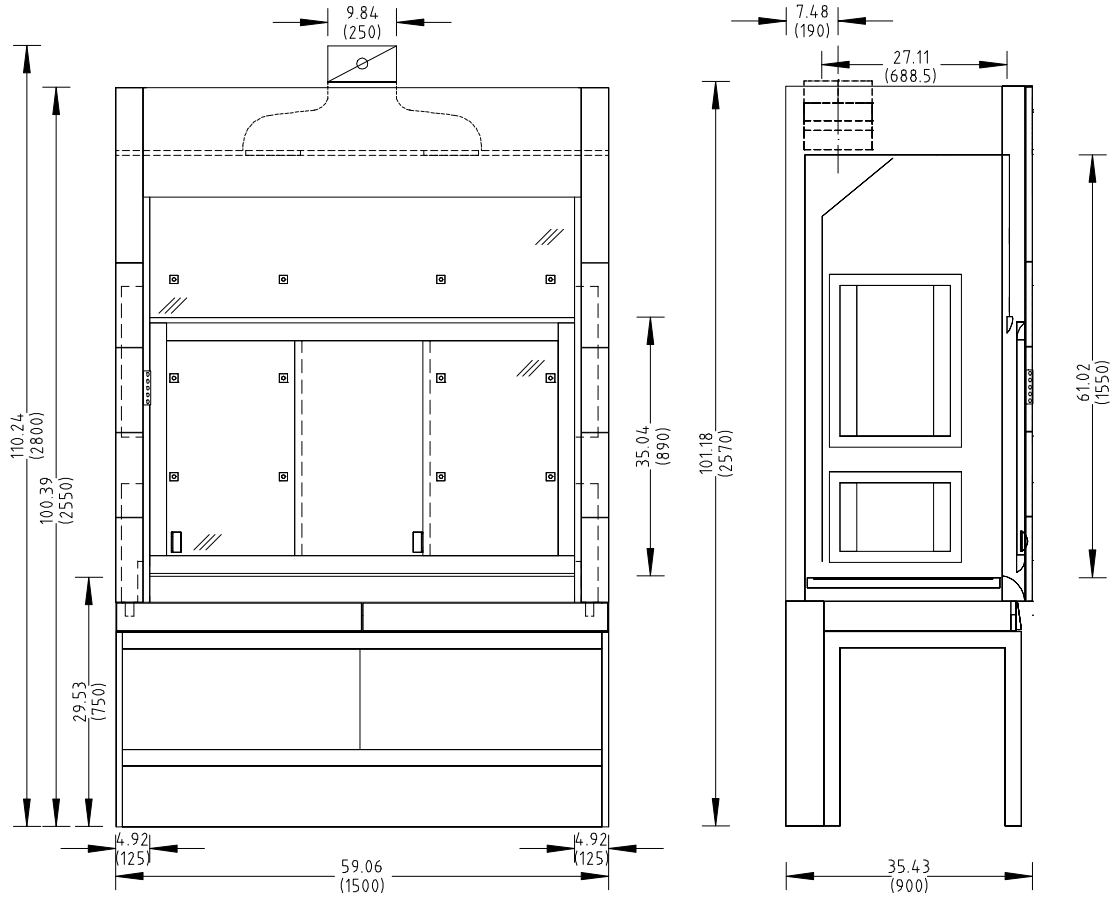
Design



1 *Sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Control panel FAZ or AC*
5 *Service module in the fume hood side wall*
6 *Upper sash window*
7 *Removable front filler panel*
8 *Extract manifold*
9 *Baffle with scaffold points*
10 *Support frame optional with pushed-in underbench units*

Bench-mounted fume hoods with services on side walls
Sitting height fume hood with services on side walls

Dimensional drawing



Technical Data

Dimensions	
Width [in] *(mm)*	59.06 *(1500)*
Depth [in] *(mm)*	35.43 *(900)*
Height [in] *(mm)*	100.39 *(2550)*
Interior effective width [in] *(mm)*	49.21 *(1250)*
Interior effective height [in] *(mm)*	61.02 *(1550)*
Working height [in] *(mm)*	29.53 *(750)*

Weight	
Without installation [lb] *(kg)*	approx. 859.79 *(390)*

Bench-mounted fume hoods with services on side walls
Sitting height fume hood with services on side walls

Relevant features	
Supporting structure	H-frame
Sash	2 horizontal sashes
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	12
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*
Service modules	According to requirements, service modules in the left and/or right fume hood side wall

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	
Minimum volume flow [cfm] *(m³/h)* [1]	312 *(530)*
Extract function display	FAZ
Flow regulator, constant	Airflow controller AC
Flow regulator, variable	Airflow controller AC
Detector of horizontal sash position	Only variable with airflow controller AC
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.84 in *(250 mm)*	101.18 *(2570)*
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.4 in *(315 mm)* [2]	106.30 *(2700)*
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.84 in *(250 mm)*	110.24 *(2800)*
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.4 in *(315 mm)* [2]	114.96 *(2920)*
Underbench exhaust extraction	Optional according to requirements and specifications

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.4 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

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

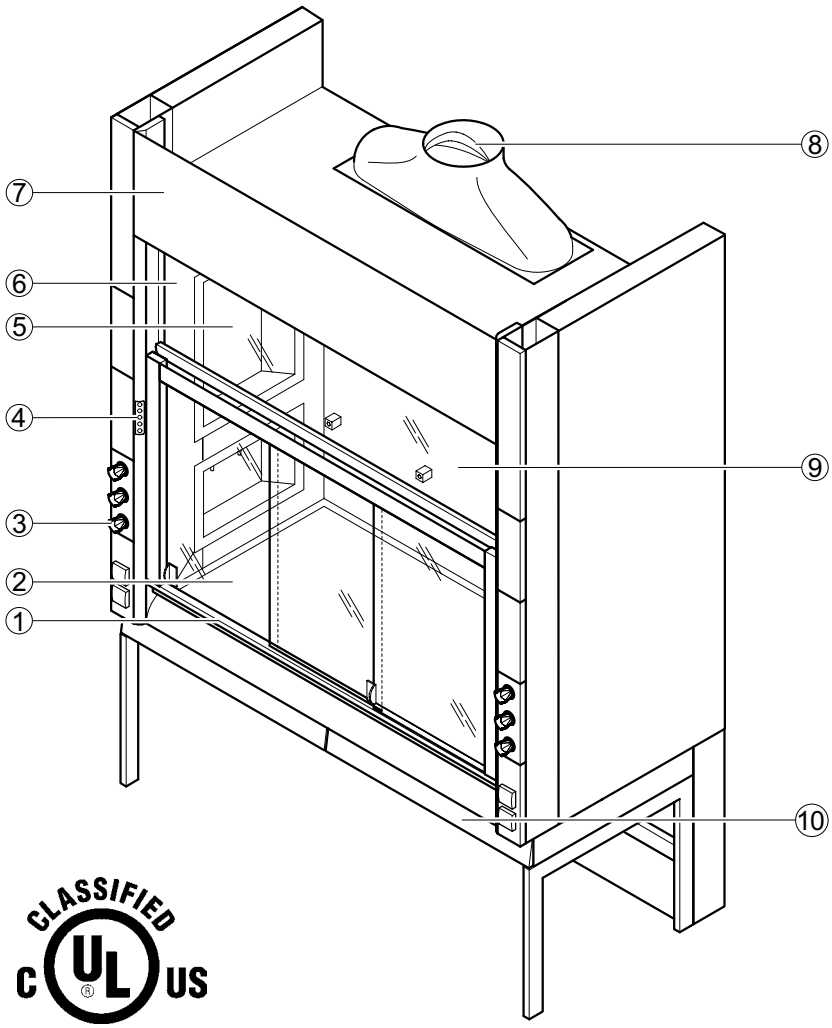
Bench-mounted fume hoods with services on side walls

Secuflow sitting height fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Adapted for usage while sitting
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels

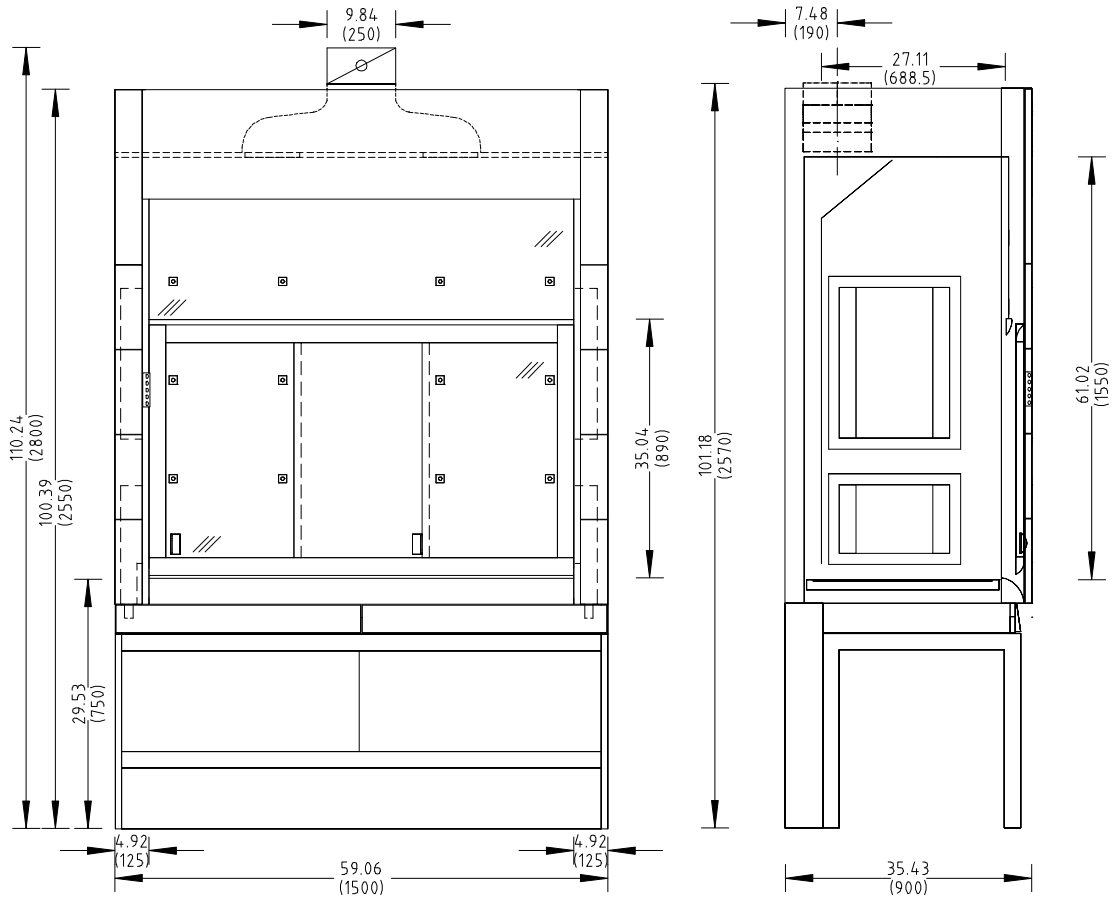
Design



1 *Sash with sash handle and horizontal sash*
2 *Worktop*
3 *Service panel*
4 *Control panel FAZ or AC*
5 *Service module in the fume hood side wall*
6 *Upper sash window*
7 *Removable front filler panel*
8 *Extract manifold*
9 *Baffle with scaffold points*
10 *Support frame optional with pushed-in underbench units*

Bench-mounted fume hoods with services on side walls
Secuflow sitting height fume hood with services on side walls

Dimensional drawing



Technical Data

Dimensions	
Width [in] *(mm)*	59.06 *(1500)*
Depth [in] *(mm)*	35.43 *(900)*
Height [in] *(mm)*	100.39 *(2550)*
Interior effective width [in] *(mm)*	49.21 *(1250)*
Interior effective height [in] *(mm)*	61.02 *(1550)*
Working height [in] *(mm)*	29.53 *(750)*

Weight	
Without installation [lb] *(kg)*	approx. 859.79 *(390)*

Relevant features	
Supporting structure	H-frame
Sash	2 horizontal sashes
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right

Bench-mounted fume hoods with services on side walls
Secuflow sitting height fume hood with services on side walls

Relevant features	
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	12
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*
Service modules	According to requirements, service modules in the left and/or right fume hood side wall

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 60 FPM *(0.3 m/s)*	341 *(580)*	430 *(730)*	518 *(880)*	606 *(1030)*	695 *(1180)*
Minimum air exchange rate [cfm] [1] *(m³/h)* [1] at a face velocity of 40 FPM *(0.2 m/s)*	253 *(430)*	312 *(530)*	371 *(630)*	430 *(730)*	489 *(830)*
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 [mm] for FAZ with extract manifold Ø9.84 in (250 mm)	101.18 *(2570)*			107.09 *(2720)*	
Connection height [mm] for FAZ with extract manifold 12.4 in (315 mm) [2]	106.30 *(2700)*			112.20 *(2850)*	
Connection height [mm] for AC with extract manifold Ø9.84 in (250 mm)	11110.24 *(2800)*			116.14 *(2950)*	
Connection height [mm] for AC with extract manifold 12.4 in (315 mm) [2]	114.96 *(2920)*			120.87 *(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 18 in *(457 mm)* (test opening in acc. with ASHRAE 110-2005).

[2] In order to minimise 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)*.

[3] 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/Facing	
Worktop	Stoneware Polypropylene Epoxy Stainless steel
Internal lining	Solid grade laminate Stainless steel HPL (high pressure laminate)

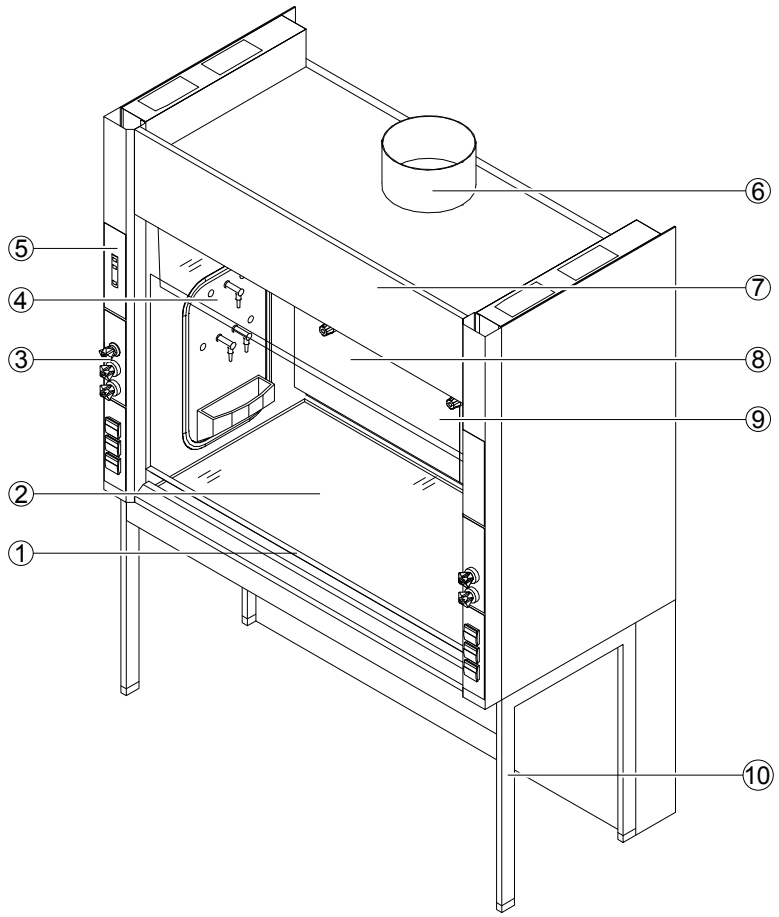
Bench-mounted fume hoods with services on side walls

Bench-mounted fume hood with services on side walls made of stainless steel - SI 3 steel

Use

- Safety equipment for operators, tested according to EN 14175 and ASHRAE 110-2005
- Extraction of fumes, aerosols and dusts from the interior workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the interior workspace
- Protection against dangerous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175 and ASHRAE 110-2005, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical breakdowns
- Service outlets in the side wall of the internal workspace
- Operating controls externally at the service panels

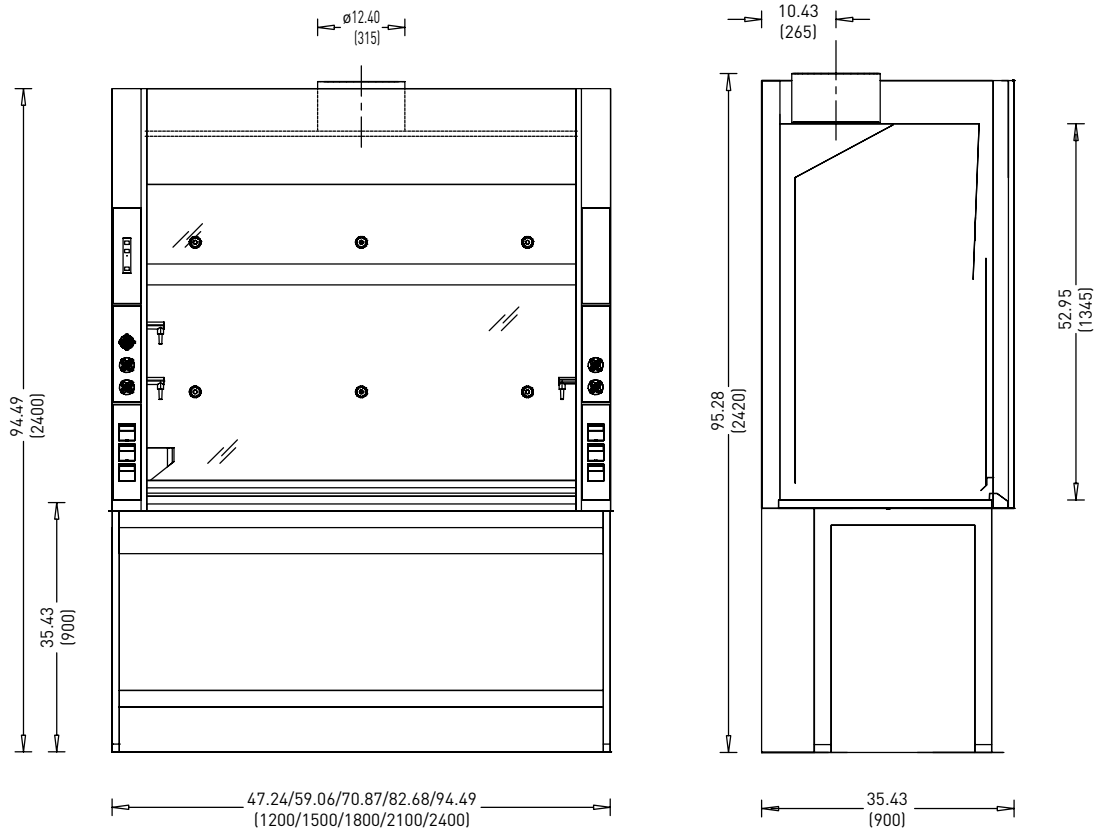
Design



1 Sash with handle
2 Work top
3 Service panel
4 Side panel in fume hood wall
5 FAZ operating field
6 Extract air spigot
7 Removable front filler panel
8 Upper sash window
9 Baffle with scaffold points
10 Support frame

Bench-mounted fume hoods with services on side walls
Bench-mounted fume hood with services on side walls made of stainless steel - SI 3 steel

Dimensional drawing



Technical data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*	35.43 *(900)*				
Height [in] *(mm)*	94.49 *(2400)*				
Interior effective width [in] *(mm)*	37.01 *(940)*	48.82 *(1240)*	60.63 *(1540)*	72.44 *(1840)*	84.25 *(2140)*
Interior effective height [in] *(mm)*	52.95 *(1345)*				
Working height [in] *(mm)*	35.43 *(900)*				

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Without installation [lb] *(kg)*	approx. 485.10 *(approx. 220)*	approx. 639.45 *(approx. 290)*	approx. 771.75 *(approx. 350)*	approx. 904.05 *(approx. 410)*	approx. 1036.35 *(approx. 470)*

Bench-mounted fume hoods with services on side walls
Bench-mounted fume hood with services on side walls made of stainless steel - SI 3 steel

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Supporting structure	H-frame with pushed-in underbench units				
Sash	One piece				
Number of devices for scaffold points, ø 0.47 to 0.51 inch *(12 to 13 mm)*	6	6	6	8	10

Electrical engineering	
Electrical supply	Power outlets only in the service panel
Fuse box	Optional

Sanitary engineering	
Sanitary supply	Optional: Fittings for vacuum, gas and/or water and integrated sink (PP) in side panel

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
EN 14175 Minimum volume flow [cfm] [1] *(m³/h)* [1]	223.67 *(380)*	270.76 *(460)*	294.30 *(500)*	382.59 *(650)*	441.45 *(750)*
ASHRAE with 60 fpm *(0.3 m/s)* [cfm] [2] *(m³/h)* [2]	276.64 *(470)*	364.93 *(620)*	453.22 *(770)*	535.63 *(910)*	623.92 *(1060)*
ASHRAE with 100 fpm *(0.5 m/s)* [cfm] [3] *(m³/h)* [3]	459.11 *(780)*	606.26 *(1030)*	765.18 *(1300)*	894.67 *(1520)*	1041.82 *(1770)*
Function display	FAZ / Controller by others				
Connection point level [in] for FAZ with extract air spigot Ø 12.40 inch *(315 mm)*	95.28 *(2420)*				
Underbench exhaust extraction	Optional according to requirements and specifications				

[1] Air volume specifications refer to sash window opening height of 19.69 inch *(500 mm)* (test opening according to EN 14175) and the recommended tracer gas maximum value from BG Chemie.

[2] Air volume specifications refer to the model evaluation test according to ASHRAE 110-2005 with an inflow rate of 60 fpm *(0.3 m/s)*.

[3] Air volume specifications refer to the model evaluation test according to ASHRAE 110-2005 with an inflow rate of 100 fpm *(0.5 m/s)*.

The listed minimum volume flows were determined according to EN 14175-3 and ASHRAE 110-2005 under defined test conditions. These minimum volume flows must be matched for the design of the ventilation system.
The required air volumes may differ when using on-site exhaust air control systems or airflow dampers. Operating limitations must be verified by Waldner.

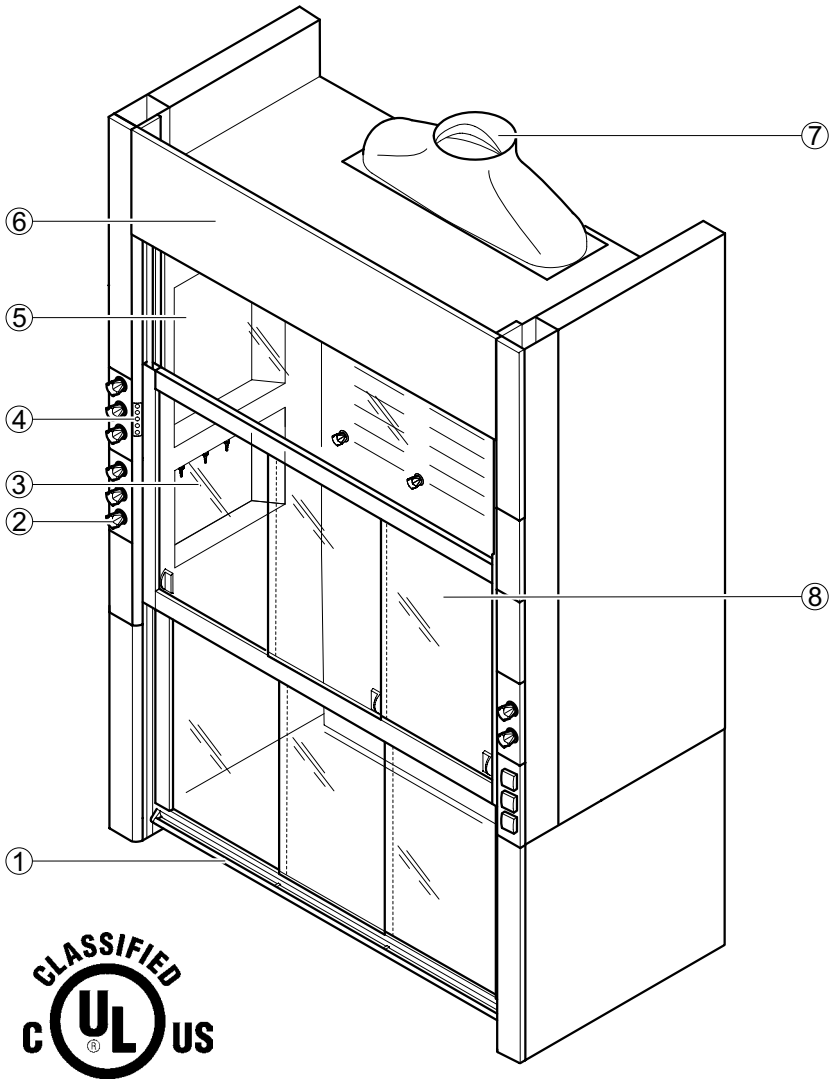
Material/Facing	
Work top	Epoxy
Internal lining	Polyresin Solid grade laminate

Floor-mounted fume hood with services on side walls

Use

- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Suitable for barrier-free entering of the internal workspace
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels
- Suitable for high experimental setups

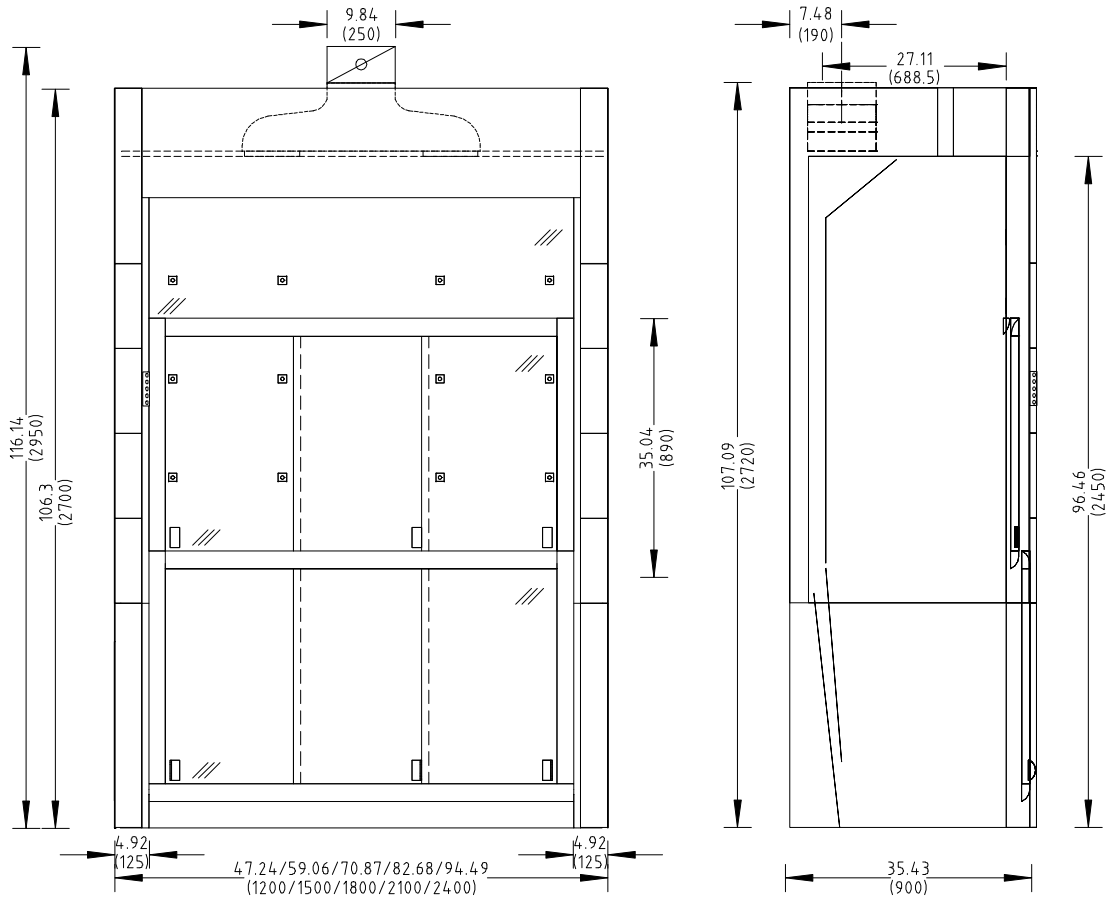
Design



1 Sash with sash handle and horizontal sash
2 Service panel
3 Service module in the fume hood side wall
4 Control panel FAZ or AC
5 Upper sash window
6 Removable front filler panel
7 Extract manifold
8 Baffle with scaffold points

Floor-mounted fume hoods
Floor-mounted fume hood with services on side walls

Dimensional drawing



Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*			35.43 *(900)*		
Height [in] *(mm)*			106.3 *(2700)*		
Interior effective width [in] *(mm)*	37.4 *(950)*	49.21 *(1250)*	61.02 *(1550)*	72.83 *(1850)*	84.65 *(2150)*
Interior effective height [in] *(mm)*			96.46 *(2450)*		

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Without installation [lb] *(kg)*	approx. 705.47 *(320)*	approx. 859.79 *(390)*	approx. 992.07 *(450)*	approx. 1124.35 *(510)*	approx. 1256.62 *(570)*

Floor-mounted Fume hoods
Floor-mounted fume hood with services on side walls

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Two-part sash	Each with 2 horizontal sashes at the top and bottom		Each with 3 horizontal sashes at the top and bottom		
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right				
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9	12			15
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*				
Service modules	According to requirements, service modules in the left and/or right fume hood side wall				

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum volume flow [cfm] *(m³/h)* [1]	423.8 *(720)*	529.7 *(900)*	635.7 *(1080)*	741.6 *(1260)*	847.6 *(1440)*
Extract air function display	FAZ				
Flow regulator, constant	Airflow controller AC				
Flow regulator, variable	Airflow controller AC				
Detector of horizontal sash position	Only variable with airflow controller AC				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.84 in *(250 mm)*	107.09 *(2720)*				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.4 in *(315 mm)* [2]	112.20 *(2850)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.84 in *(250 mm)*	116.14 *(2950)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.4 in *(315 mm)* [2]	120.87 *(3070)*				

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.4 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are minimum volume flows for operation of the fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

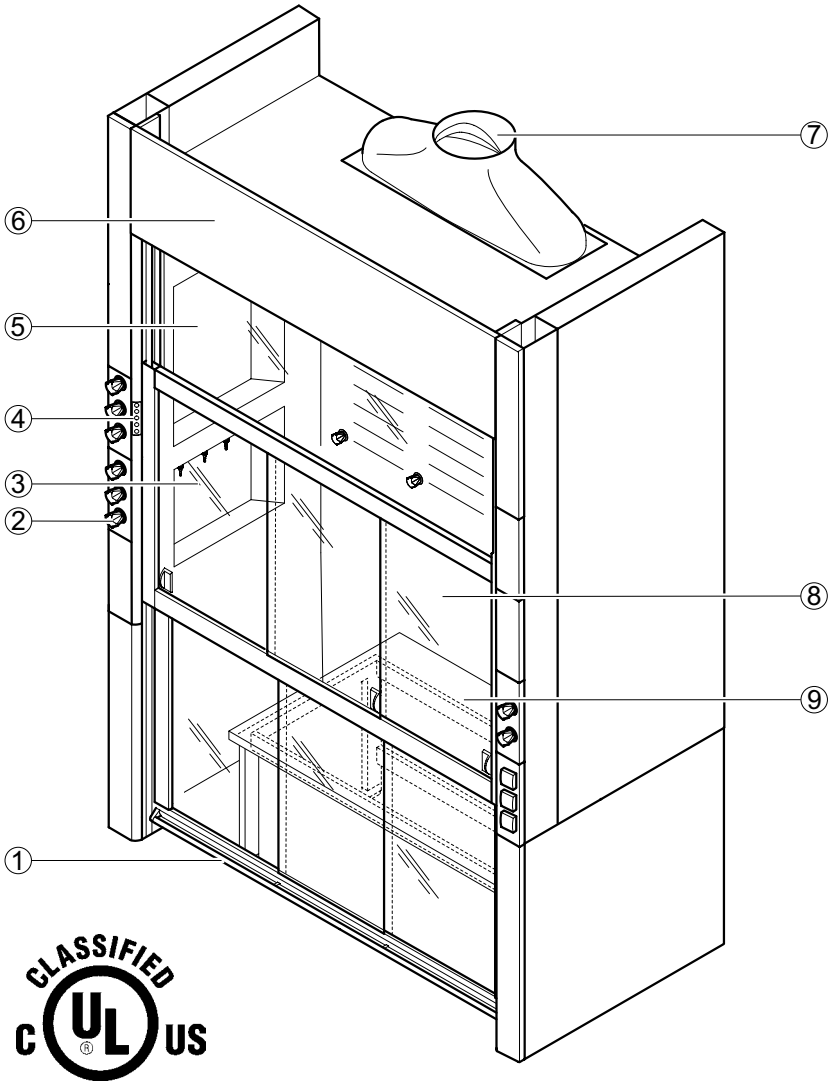
Material	
Internal lining	Solid grade laminate Stainless steel HPL (high pressure laminate)

Low level fume hoods
Low level fume hood with services on side walls

Use

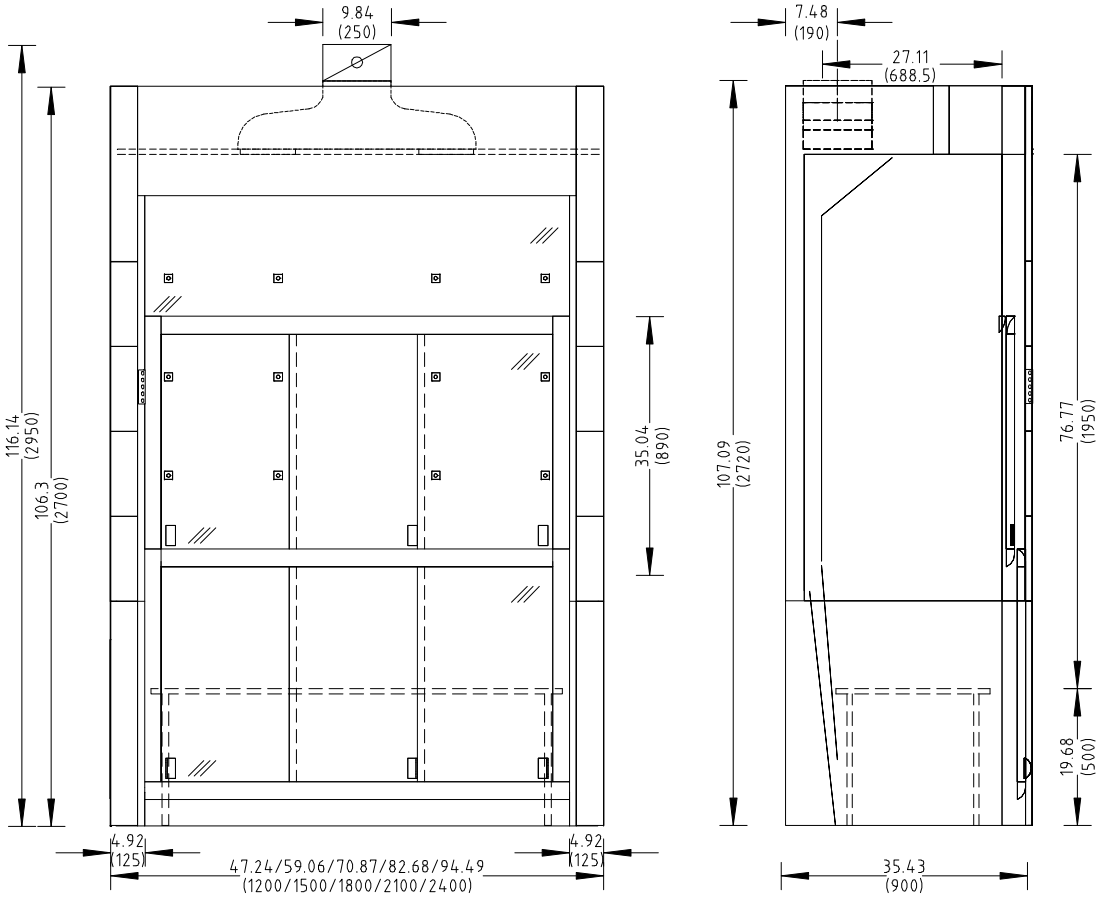
- Safety equipment for operators, tested according to EN 14175
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to EN 14175, are generally not suited for work with radioactive substances or for work with micro-organisms.
- Not to be used for exposed work involving chemical digestions
- Adapted for test set-ups on an add-on table
- Service outlets in the service module of the interior workspace's side walls
- Operating controls externally at the service panels

Design



1 *Sash with sash handle and horizontal sash*
2 *Service panel*
3 *Service module in the fume hood side wall*
4 *Control panel FAZ or AC*
5 *Upper sash window*
6 *Removable front filler panel*
7 *Extract manifold*
8 *Baffle with scaffold points*
9 *Add-on table*

Dimensional drawing



Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Width [in] *(mm)*	47.24*(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*	94.49 *(2400)*
Depth [in] *(mm)*	35.43 *(900)*				
Height [in] *(mm)*	106.3 *(2700)*				
Interior effective width [in] *(mm)*	37.4 *(950)*	49.21 *(1250)*	61.02 *(1550)*	72.83 *(1850)*	84.65 *(2150)*
Interior effective height [in] *(mm)*	76.77 *(1950)*				
Add-on table with H-frame [in] *(mm)*	35.43 *(900)* x 23.62 *(600)*	47.24 *(1200)* x 23.62 *(600)*	59.06 *(1500)* x 23.62 *(600)*	70.87 *(1800)* x 23.62 *(600)*	82.68 *(2100)* x 23.62 *(600)*
Working height [in] *(mm)*	19.69 *(500)*				

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Without installation [lb] *(kg)*	approx. 705.47 *(320)*	approx. 859.79 *(390)*	approx. 992.07 *(450)*	approx. 1124.35 *(510)*	approx. 1256.62 *(570)*

Low level fume hoods
Low level fume hood with services on side walls

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Worktop	Add-on table H-frame with marine edging				
Sash	Each with 2 horizontal sashes at the top and bottom		Each with 3 horizontal sashes at the top and bottom		
Side panel	Optional glazed side panel left and/or right not for service modules in the fume hood side wall Optional cable pass-through left and/or right				
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	9	12			15
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*				
Service modules	According to requirements, service modules in the left and/or right fume hood side wall				

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panels Power outlets on the interior in the service modules
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Optional service module with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*	**94.49** *(2400)*
Minimum volume flow [cfm] *(m³/h)* [1]	423.8 *(720)*	529.7 *(900)*	635.7 *(1080)*	741.6 *(1260)*	847.6 *(1440)*
Extract function display	FAZ				
Flow regulator, constant	Airflow-Controller AC				
Flow regulator, variable	Airflow-Controller AC				
Detector of horizontal sash position	Only variable with airflow controller AC				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 9.84 in *(250 mm)*	107.09 *(2720)*				
Connection point level [in] *(mm)* for FAZ with extract manifold Ø 12.4 in *(315 mm)* [2]	112.20 *(2850)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 9.84 in *(250 mm)*	116.14 *(2950)*				
Connection point level [in] *(mm)* for AC with extract manifold Ø 12.4 in *(315 mm)* [2]	120.87 *(3070)*				
Underbench exhaust extraction	Optional according to requirements and specifications				

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.6 cfm *(1000 m³/h)* an extract manifold with diameter 12.4 in *(315 mm)*.

With the sash in the closed position the minimum volume flow can be reduced to 120 cfm *(203.9 m³/h)* when utilizing the Waldner AC3 airflow controller or a conventional VAV system.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are minimum volume flows for operation of the fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

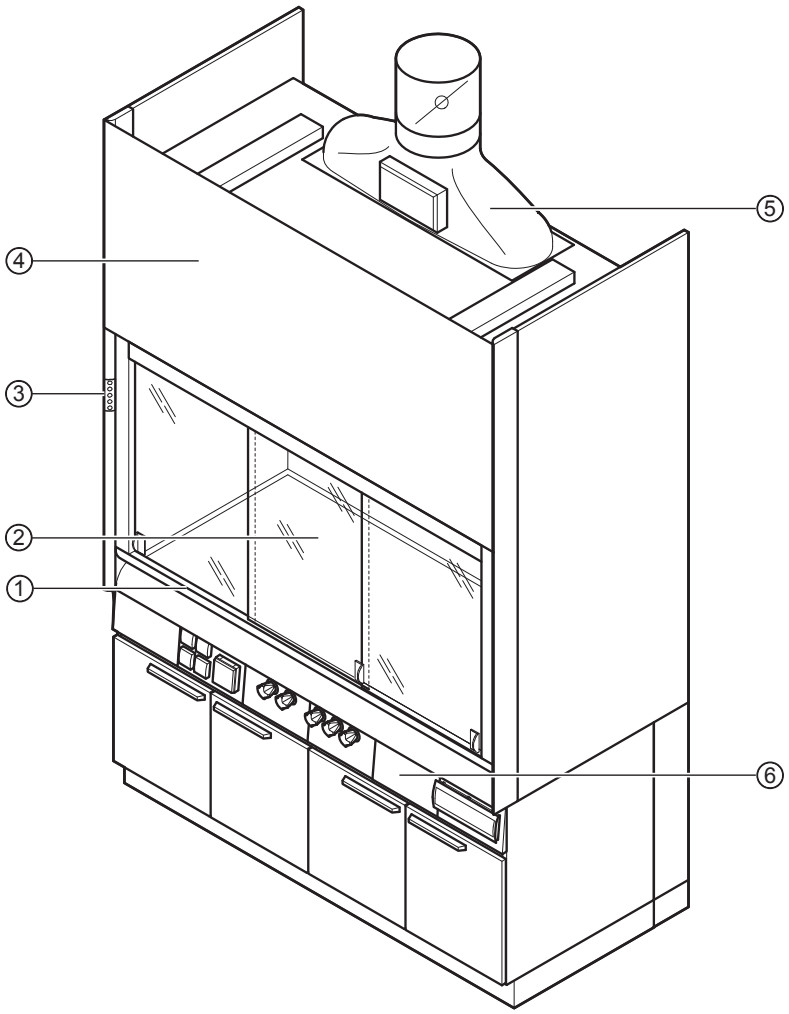
Material	
H-frame add-on table with marine edging	Polypropylene Epoxy Stoneware Stainless steel
Internal lining	Solid grade laminate Stainless steel HPL (high pressure laminate)

Secuflow EN7 fume hood for high thermal loads

Use

- For working with high thermal loads in the fume hood interior workspace (heat sources of 4 KW per meter clear width of the fume hood)
- Safety equipment for operators, tested according to DIN EN 14175-7:2012
- Extraction of fumes, aerosols and dusts from the interior workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the interior workspace
- Protection against dangerous substances
- Protection against flying debris, compounds or particles from the fume hood interior workspace
  Fume hoods built according to EN 14175 are not permitted to be used for work with radioactive substances or for work with micro-organisms
- Not to be used for exposed work involving chemical digestions
- Reduction of energy usage through supportive flow technology (Secuflow technology) in accordance with regulations and norms
- Service outlets for sanitary supply in the back wall of the interior workspace
- Control units externally at the traverse

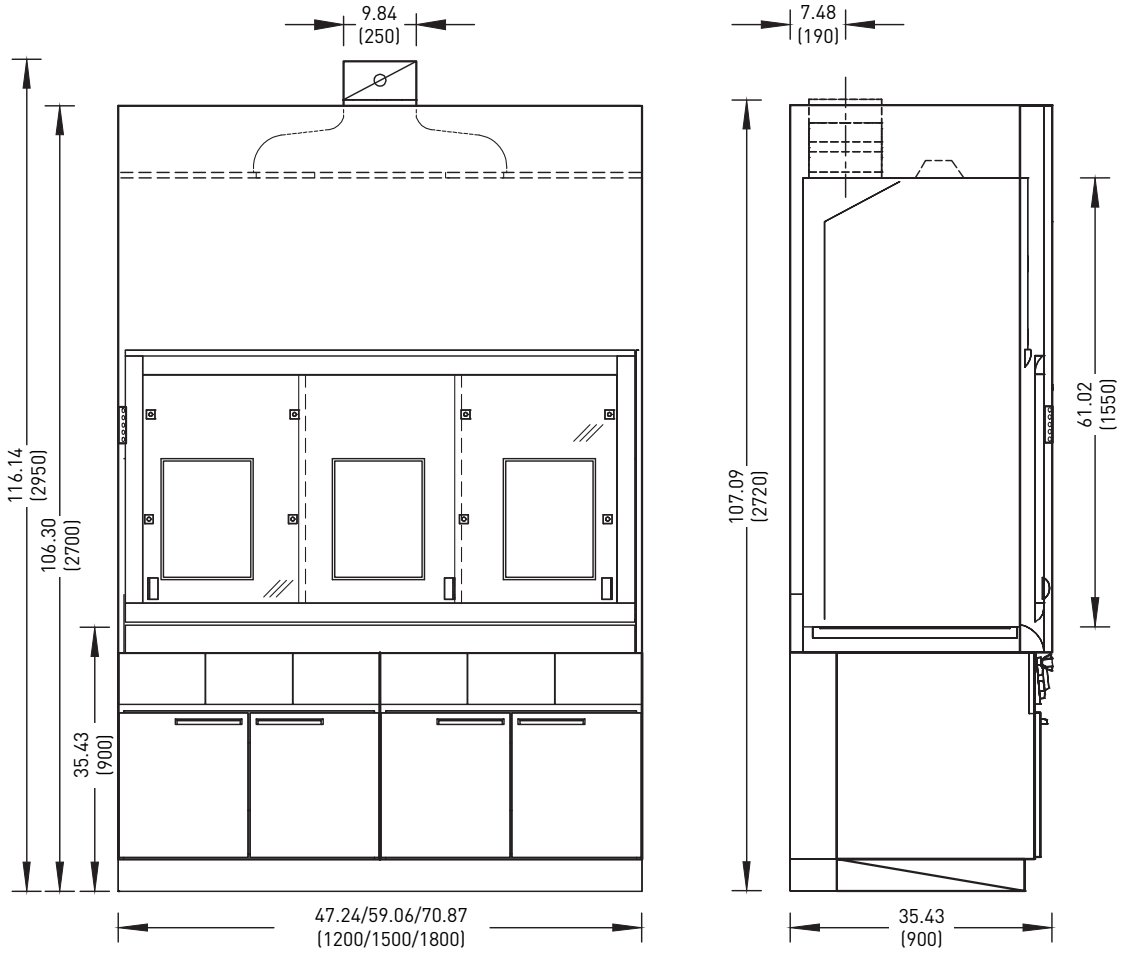
Design



1 *Sash with sash handle and horizontal sash*
2 *Work top*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Exhaust air manifold*
6 *Self-supporting underbench unit with traverse and service panels*

Specialized fume hoods
Secuflow EN7 fume hood for high thermal loads

Dimensional drawing



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)*		106.3 *(2700)*	
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*
Interior effective height [in] *(mm)*		61.02 *(1550)*	
Working height [in] *(mm)*		35.43 *(900)*	

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Side panel	full		

Specialized fume hoods
Secuflow EN7 fume hood for high thermal loads

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Max. number of devices for scaffold points, ø 0.47 in *(12 mm)* to 0.51 in *(13 mm)*	9		12
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*		
Service modules	2		3

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panel
Fuse box	Optional
Sash controller SC	Optional

Sanitary engineering	
Sanitary supply	Optional multiple service terminals with fittings for vacuum, gas and/or water and integrated sink (PP)

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Air flow rate without /with thermal load [cfm] *(m³/h)* [1]	211.90/353.16 *(360/600)*	264.87/441.45 *(450/750)*	317.84/529.74 *(540/900)*
Function display with temperature control	FAZ		
Airflow damper, constant with temperature control	Airflow controller AC		
Airflow damper, variable with temperature regulation	Airflow controller AC		
Detector of horizontal sash position	Only with variable airflow controller AC		
Connection point level [in] *(mm)* for FAZ with exhaust air manifold Ø 9.84 in *(250 mm)*	107.09 *(2720)*		
Connection point level [in] *(mm)* for FAZ with exhaust air manifold Ø 12.40 in *(315 mm)* [2]	111.42 *(2830)*		
Connection point level [in] *(mm)* for AC with exhaust air manifold Ø 9.84 in *(250 mm)*	116.14 *(2950)*		
Connection point level [in] *(mm)* for AC with exhaust air manifold Ø 12.40 in *(315 mm)* [2]	120.87 *(3070)*		
Underbench floor extraction	Optional according to requirements and specifications		

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* (Test opening according to EN 14175) and the recommended tracer gas maximum value from BG Chemie.

[2] In order to minimize noise and pressure leakage, Waldner recommends, for air volumes of >588.60 cfm *(1000 m³/h)*an exhaust air manifold with termination diameter 12.40 in *(315 mm)*.
A maximum pressure of 0.087 psi *(600 Pa)* should not be exceeded for fume hoods with airflow damper.
The listed minimum volume flows were determined according to EN 14175-3 under defined test conditions. These minimum volume flows must be adapted for the design of the ventilation system.
The required air volumes may differ when using on-site exhaust air control systems or airflow dampers. Operating limitations must be verified by Waldner.

Material/Facing	
Work top	Stoneware Polypropylene Stainless steel Epoxy
Internal lining	HPL (high pressure laminate) Solid grade laminate Stoneware

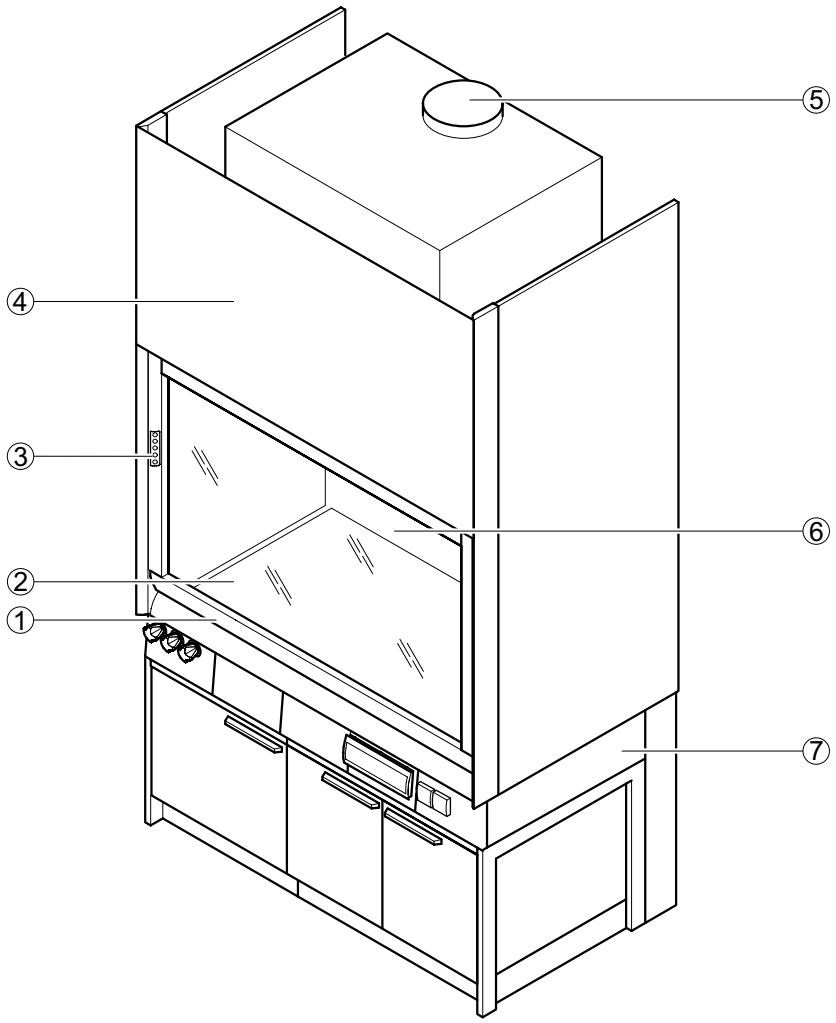
Specialized fume hoods

EN7 fume hood for high thermal loads in combination with acid hydrolysis (special application fume hood)

Use

- Safety equipment for operators, tested according to DIN EN 14175-7:2012
- Adapted for open, thermal chemical digestions with aggressive media, e.g. sulfuric acid, hydrochloric acid or aqua regia
- Structural design of the fume hood and materials of the internal lining determine the usage capabilities in terms of the type of aggressive media
- Extraction of fumes and aerosols from the interior workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the interior workspace
- Protection against dangerous substances in the internal workspace
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to DIN EN 14175-7:2012 are not permitted to be used for work with radioactive substances or for work with micro-organisms
- For working with high thermal loads in combination with acid hydrolysis in the fume hood interior workspace (heat sources of 4 KW per meter clear width of the fume hood)

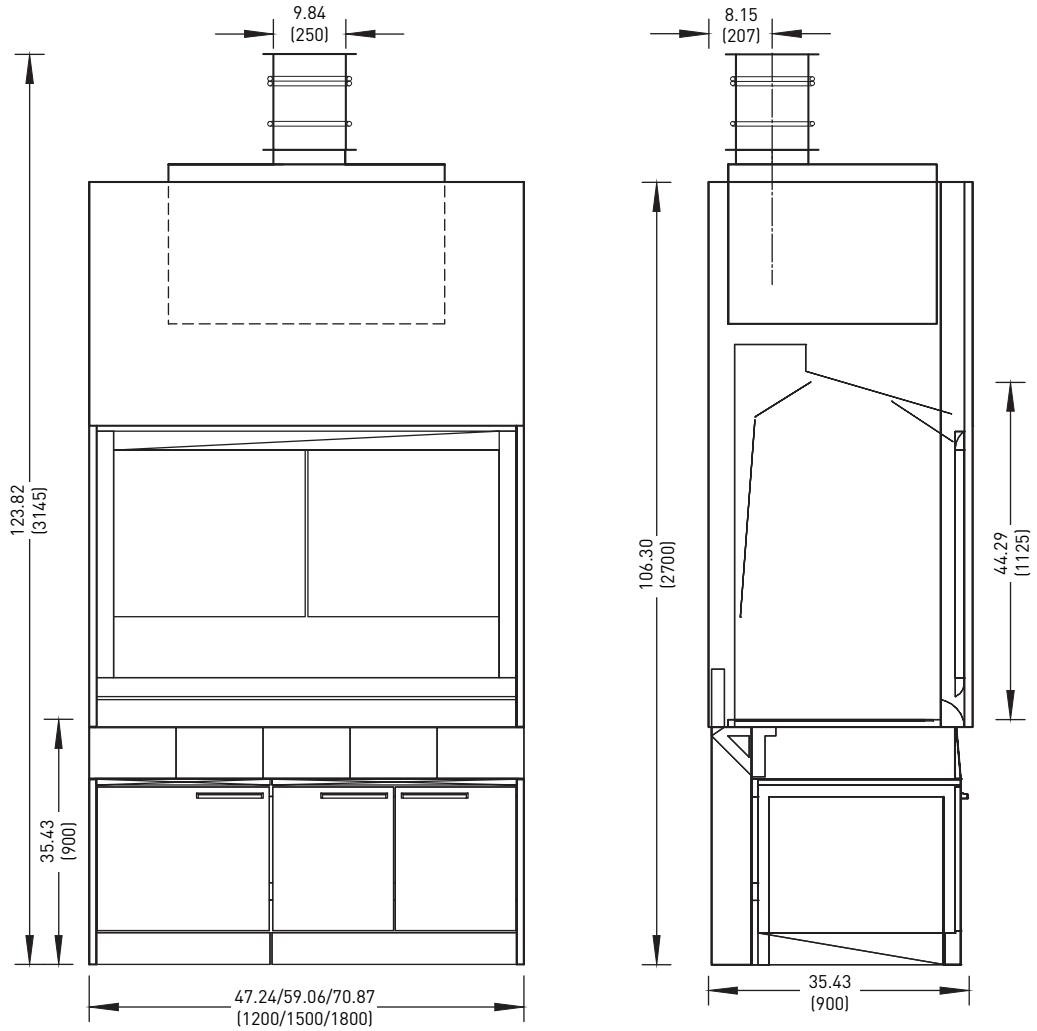
Design



1 *Sash with handle*
2 *Work top*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Exhaust air spigot integrated into fume scrubber (optional)*
6 *Baffle*
7 *H-frame with pushed-in under-bench unit with traverse and service panels*

Specialized fume hoods
EN7 fume hood for high thermal loads in combination with acid hydrolysis (special application fume hood)

Dimensional drawing



Technical data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Width [mm]	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [mm]		35.43 *(900)*	
Height [mm]		106.3 *(2700)*	
Interior effective width [mm]	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*
Interior effective height [mm]		44.29 *(1125)*	
Working height [mm]		35.43 *(900)*	

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation and fume scrubber [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*
Fume scrubber without contents [lb] *(kg)*	198.45 *(90)* (Type C 54)		220.50 *(100)* (Type C 90)

Specialized fume hoods
EN7 fume hood for high thermal loads in combination with acid hydrolysis (special application fume hood)

Relevant features	
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units
Extract air manifold	Standard
Fume scrubber	Optional
Underbench neutralization unit	Optional

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panel
Fuse box	Optional
Sash controller SC	Optional

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

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Minimum volume flow [cfm] *(m³/h)* [1]	23.26 *(600)*	29.35 *(750)*	35.43 *(900)*
Exhaust air manifold pressure loss with FAZ/AC [psi] *(Pa)*	0.006/0.017 *(45/120)*	0.007/0.017 *(50/120)*	0.012/0.021 *(85/150)*
Fume hood pressure loss with fume scrubber [psi] *(Pa)*	0.063/0.073 *(440/510)*	0.082/0.092 *(570/640)*	0.107/0.116 *(740/800)*
Friatec fume scrubber type	C 54		C 90
Function display with temperature control	FAZ		
Airflow damper, constant with temperature control	Airflow controller AC		
Connection point level [in] *(mm)* for FAZ and AC with exhaust air spigot Ø 9.84 in *(250 mm)* with fume scrubber	123.82 *(3145)*		
Connection point level [in] *(mm)* for FAZ with exhaust air manifold Ø 9.84 in *(250 mm)* (without fume scrubber)	94.88 *(2410)*		
Connection point level [in] *(mm)* for AC with exhaust air manifold Ø 9.84 in *(250 mm)* (without fume scrubber)	103.94 *(2640)*		
Underbench floor extraction	Optional according to requirements and specifications		

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* (Test opening according to EN 14175) and the recommended tracer gas maximum value from BG Chemie.
A maximum pressure of 0.087 psi *(600 Pa)* should not be exceeded for fume hoods with airflow dampers.
The listed minimum volume flows were determined according to EN 14175-3 under defined test conditions. These minimum volume flows must be adapted for the design of the ventilation system.
The required air volumes may differ when using on-site exhaust air control systems or airflow dampers. Operating limitations must be verified by Waldner.

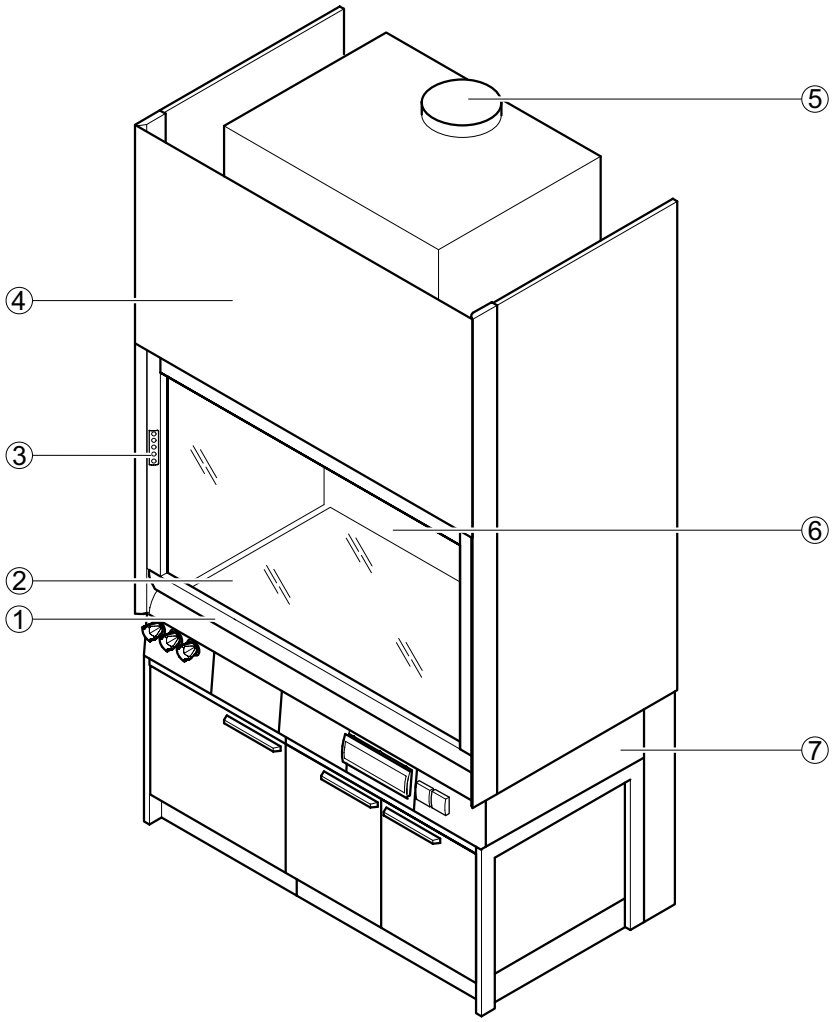
Material/Facing	
Internal lining including work top	Stoneware (for use of sulfuric acid, hydraulic acid, aqua regia)

Specialized fume hoods
Perchloric acid fume hood

Use

- Safety equipment for operators, tested according to DIN EN 14175-7:2012
- Suitable for open, thermal digestion with aggressive media, especially for perchloric acid
- Structural design of the fume hood and materials of the internal lining determine the usage capabilities in terms of the type of aggressive media
- Exhaust of fumes and aerosols from the interior workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the interior workspace
- Protection against dangerous substances in the internal workspace
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to DIN EN 14175-7:2012 are not permitted to be used for work with radioactive substances or for work with micro-organisms
- For working with high thermal loads in combination with acid hydrolysis in the fume hood interior workspace (heat sources of 4 KW per meter clear width of the fume hood)

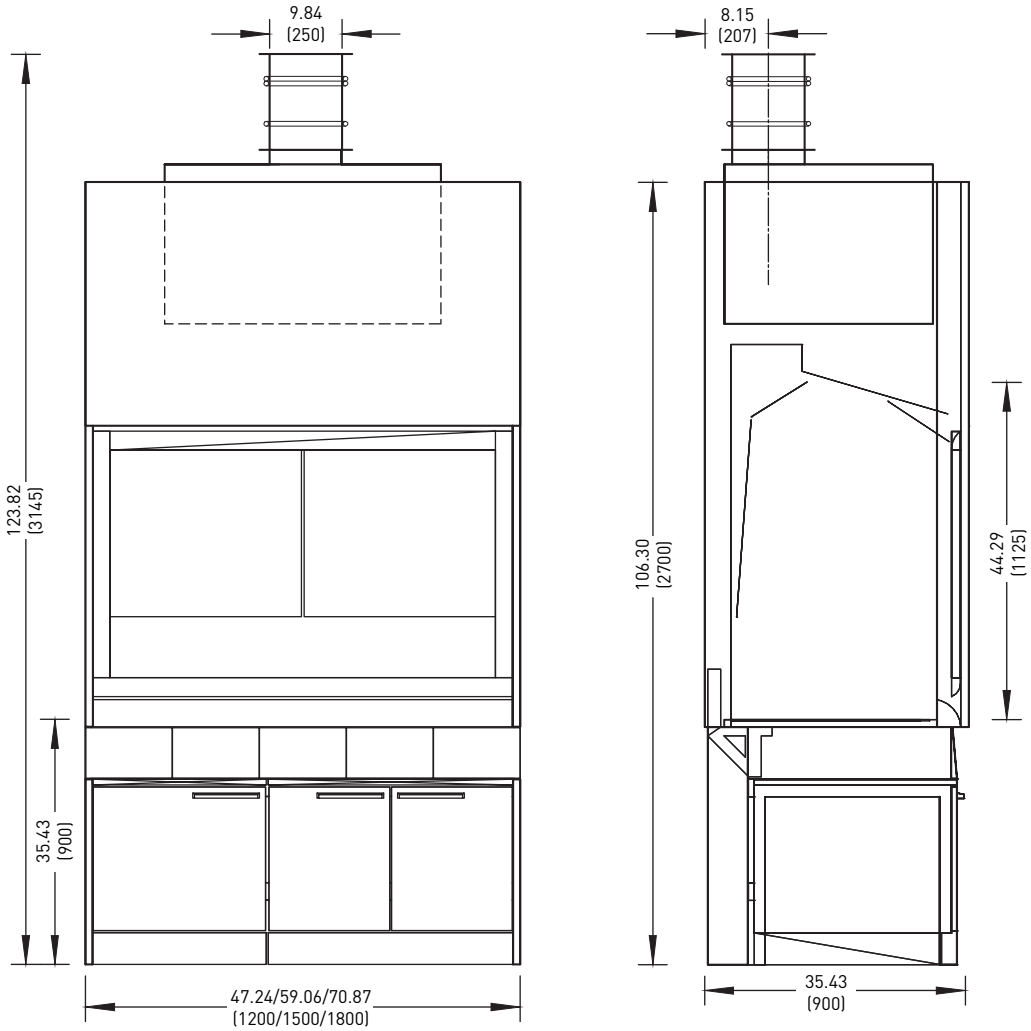
Design



1 *Sash with handle*
2 *Work top*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Exhaust air spigot integrated into fume scrubber (optional)*
6 *Baffle*
7 *H-frame with pushed-in under-bench unit with traverse and service panels*

Specialized fume hoods
Perchloric acid fume hood

Dimensional drawing



Technical data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Width [mm]	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [mm]	35.43 *(900)*		
Height [mm]	106.3 *(2700)*		
Interior effective width [mm]	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*
Interior effective height [mm]	44.29 *(1125)*		
Working height [mm]	35.43 *(900)*		

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation and fume scrubber [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*
Fume scrubber without contents [lb] *(kg)*	198.45 *(90)* (Type C 54)		220.50 *(100)* (Type C 90)

Specialized fume hoods
Perchloric acid fume hood

Relevant features	
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units
Fume scrubber	Optional
Exhaust air manifold with sprinkler	Optional (only for perchloric acid fume hoods)
Underbench neutralization unit	Optional

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panel
Fuse box	Optional
Sash controller SC	Optional

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

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Minimum volume flow [cfm] *(m³/h)* [1)]	23.26 *(600)*	29.35 *(750)*	35.43 *(900)*
Exhaust air manifold pressure loss with sprinkler with FAZ/AC [psi] *(Pa)*	0.020/0.043 *(140/300)*	0.023/0.050 *(160/350)*	0.039/0.072 *(270/500)*
Exhaust air manifold pressure loss with FAZ/AC [psi] *(Pa)*	0.006/0.017 *(45/120)*	0.007/0.017 *(50/120)*	0.012/0.021 *(85/150)*
Fume hood pressure loss with fume scrubber [psi] *(Pa)*	0.063/0.073 *(440/510)*	0.082/0.092 *(570/640)*	0.107/0.116 *(740/800)*
Friatec fume scrubber type	C 54		C 90
Function display with temperature control	FAZ		
Airflow damper, constant with temperature control	Airflow controller AC		
Connection point level [in] *(mm)* for FAZ and AC with exhaust air spigot Ø 9.84 in *(250 mm)* with fume scrubber)	123.82 *(3145)*		
Connection point level [in] *(mm)* for FAZ/AC withexhaust air manifold and sprinkler	98.23/111.22 *(2495/2825)*		
Underbench exhaust extraction	Optional according to requirements and specifications		

[1)] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* (Test opening according to EN 14175) and the recommended tracer gas maximum value from BG Chemie.
A maximum pressure of 0.087 psi *(600 Pa)* should not be exceeded for fume hoods with airflow dampers.
The listed minimum volume flows were determined according to EN 14175-3 under defined test conditions. These minimum volume flows must be adapted for the design of the ventilation system.
The required air volumes may differ when using on-site exhaust air control systems or airflow dampers. Operating limitations must be verified by Waldner.

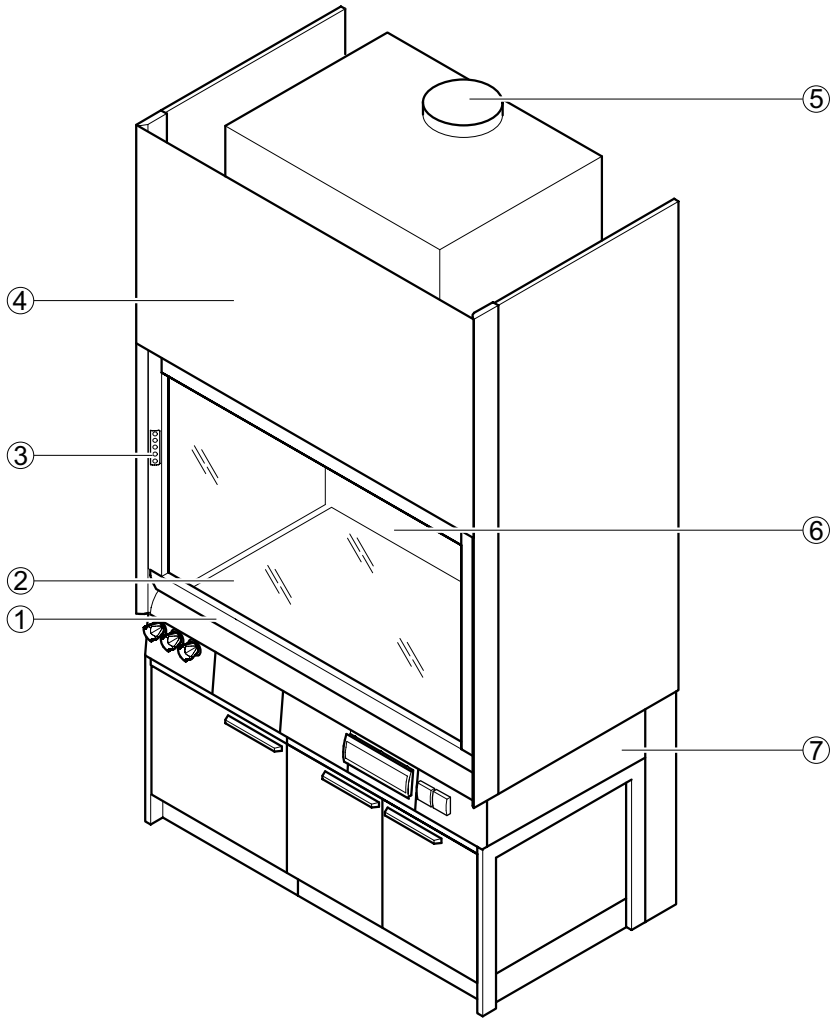
Material/Facing	
Internal lining including work top	Stoneware (use of sulfuric acid, hydraulic acid, aqua regia)

Specialized fume hoods
Hydroflouric acid fume hood

Use

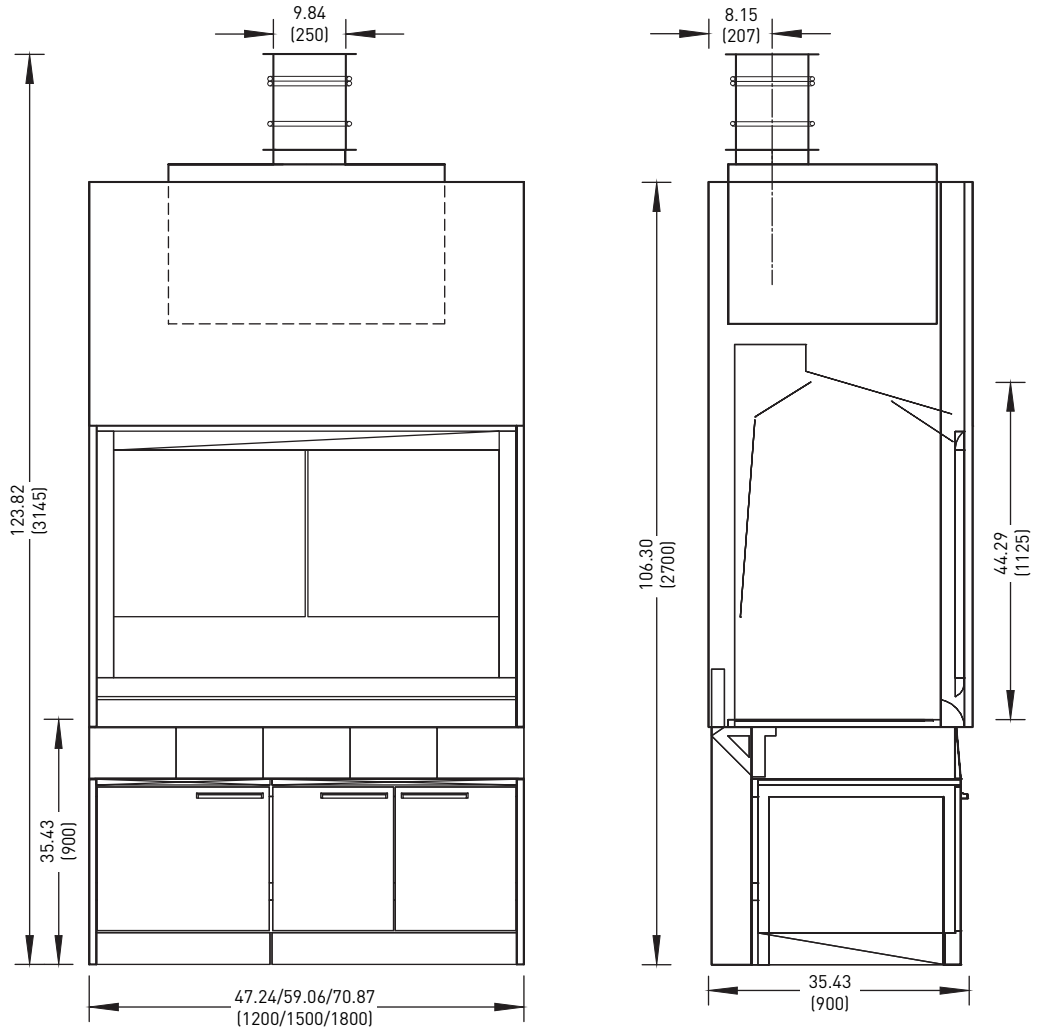
- Safety equipment for operators, tested according to DIN EN 14175-7:2012
- Suitable for open, thermal digestion with aggressive media, especially for hydroflouric acid
- Structural design of the fume hood and materials of the internal lining determine the usage capabilities in terms of the type of aggressive media
- Exhaust of fumes and aerosols from the interior workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the interior workspace
- Protection against dangerous substances in the internal workspace
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to DIN EN 14175-7:2012 are not permitted to be used for work with radioactive substances or for work with micro-organisms
- For working with high thermal loads in combination with acid hydrolysis in the fume hood interior workspace (heat sources of 4 KW per meter clear width of the fume hood)

Design



1 *Sash with handle*
2 *Work top*
3 *Control panel FAZ or AC*
4 *Removable front filler panel*
5 *Exhaust air spigot integrated into fume scrubber (optional)*
6 *Baffle*
7 *H-frame with pushed-in under-bench unit with traverse and service panels*

Dimensional drawing



Technical data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Width [mm]	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [mm]		35.43 *(900)*	
Height [mm]		106.3 *(2700)*	
Interior effective width [mm]	45.28 *(1150)*	57.09 *(1450)*	68.90 *(1750)*
Interior effective height [mm]		44.29 *(1125)*	
Working height [mm]		35.43 *(900)*	

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Without installation and fume scrubber [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*	approx. 771.61 *(350)*
Fume scrubber without contents [lb] *(kg)*	198.45 *(90)* (Type C 54)		220.50 *(100)* (Type C 90)

Specialized fume hoods
Hydroflouric acid fume hood

Relevant features	
Supporting structure	Self-supporting underbench units or H-frame with pushed-in underbench units
Exhaust air manifold	Standard
Fume scrubber	Optional
Underbench neutralization unit	Optional

Electrical engineering	
Electrical supply	Power outlets on the exterior in the service panel
Fuse box	Optional
Sash controller SC	Optional

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

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Minimum volume flow [cfm] *(m³/h)* [1]	23.26 *(600)*	29.35 *(750)*	35.43 *(900)*
Exhaust air manifold pressure loss with FAZ/AC [psi] *(Pa)*	0.006/0.017 *(45/120)*	0.007/0.017 *(50/120)*	0.012/0.021 *(85/150)*
Fume hood pressure loss with fume scrubber [psi] *(Pa)*	0.063/0.073 *(440/510)*	0.082/0.092 *(570/640)*	0.107/0.116 *(740/800)*
Friatec fume scrubber type	C 54		C 90
Function display with temperature control	FAZ		
Airflow damper, constant with temperature control	Airflow controller AC		
Connection point level [in] *(mm)* for FAZ and AC with exhaust air spigot Ø 9.84 in *(250 mm)* with fume scrubber	123.82 *(3145)*		
Connection point level [in] *(mm)* for FAZ with exhaust air manifold Ø 9.84 in *(250 mm)* (without fume scrubber)	94.88 *(2410)*		
Connection point level [in] *(mm)* for AC with exhaust air manifold Ø 9.84 in *(250 mm)* (without fume scrubber)	103.94 *(2640)*		
Underbench exhaust extraction	Optional according to requirements and specifications		

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* (Test opening according to EN 14175) and the recommended tracer gas maximum value from BG Chemie.
A maximum pressure of 0.087 psi *(600 Pa)* should not be exceeded for fume hoods with airflow dampers.
The listed minimum volume flows were determined according to EN 14175-3 under defined test conditions. These minimum volume flows must be adapted for the design of the ventilation system.
The required air volumes may differ when using on-site exhaust air control systems or airflow dampers. Operating limitations must be verified by Waldner.

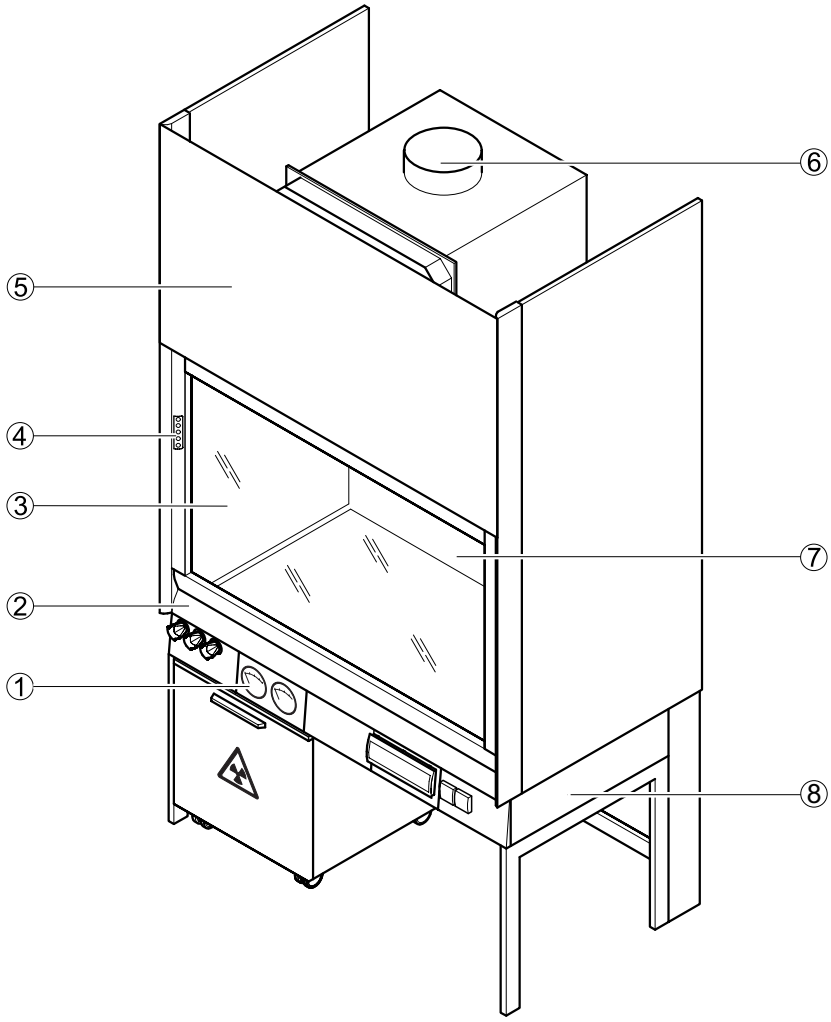
Material/Facing	
Internal lining including work top	Polypropylene (use of hydrofluoric acid)

Specialized fume hoods
Radio-isotope fume hood

Use

- Safety equipment for operators, tested according to DIN 25466
- Exhaust extraction for work with radioactive substances involving heightened requirements for radiation protection
- For protection against incorporation, contamination and exterior radiation exposure
- Extraction of fumes, aerosols and dusts from the internal workspace to prevent dangerous toxic concentrations from escaping into the laboratory
- For avoiding the creation of a dangerous, potentially explosive atmosphere in the internal workspace
- Protection from splashes and spills of hazardous substances in the internal workspace
- Protection against flying debris, compounds or particles from the internal workspace
- Fume hoods built according to DIN 25466 are generally not permitted for use in work with micro-organisms
- Not to be used for exposed work involving chemical digestions

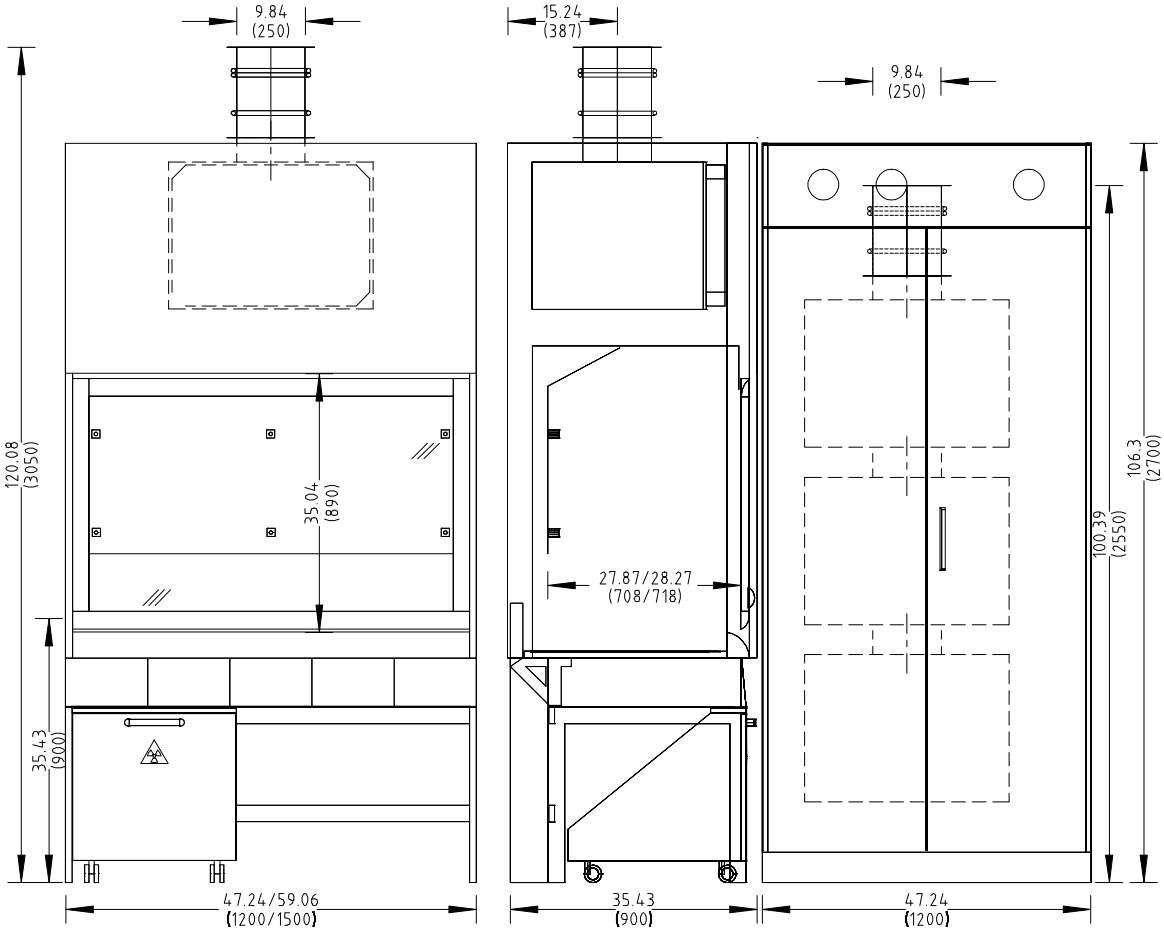
Design



1 *Differential pressure gauge*
2 *Sash with handle*
3 *Worktop*
4 *Control panel FAZ or AC*
5 *Removable front filler panel*
6 *Extract air spigots integrated into the filter housing*
7 *Baffle with scaffold points*
8 *H-frame with pushed-in under-bench unit with traverse and service panels*

Specialized fume hoods
Radio-isotope fume hood

Dimensional drawing



Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)*	35.43 *(900)*	
Height [in] *(mm)*	106.3 *(2700)*	
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*
Interior effective height [in] *(mm)*	41.73 *(1060)*	
Interior effective depth with internal lining PP [in] *(mm)*	27.87 *(708)*	
Interior effective depth with internal lining stainless steel [in] *(mm)*	28.27 *(718)*	
Working height [in] *(mm)*	35.43 *(900)*	
Filter housing width x depth x height [in] *(mm)*	32.28 *(820)* x 30.51 *(775)* x 26.54 *(674)*	

Weight	**47.24** *(1200)*	**59.06** *(1500)*
Without installation and lead insert [lb] *(kg)*	approx. 551.15 *(250)*	approx. 661.38 *(300)*
Filter housing [lb] *(kg)*	198.41 *(90)*	

Specialized fume hoods
Radio-isotope fume hood

Relevant features	
Supporting structure	H-frame with pushed-in underbench units
Sash	One piece
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	6
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*
Filter, fume hood roof	Standard equipment: Filter F7 / particle filter H13
Filter for lateral tall cabinet (max. 3 filter housings)	Filter housing, top: Particulate filter Filter housing, centre: Active charcoal filter Filter housing, bottom: Filter and particle filter
Differential pressure gauge	Display of the filter's saturation level (does not apply to active charcoal filters)
Lead insert	Optional
Disposal system for radionuclide waste material in the underbench unit	Optional canister for collecting liquid radionuclide waste material Optional folding carton for collecting solid radionuclide waste material Optional level indicator and/or opening in the worktop

Electrical engineering	
Electrical supply	Exterior receptacles
Fuse box	Optional
SC sash controller	Optional

Sanitary engineering	
Sanitary supply	Take-off valves for vacuum and gases as an option

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*
Minimum volume flow [cfm] *(m³/h)* [1]	282.5 *(480)*	353.2 *(600)*
Pressure drop prefilter [psi] *(Pa)* [2]	0.0036 *(25)* / 0.029 *(200)*	0.0044 *(30)* / 0.034 *(235)*
Pressure drop filter for particle filter [psi] *(Pa)* [2]	0.0073 *(50)* / 0.044 *(300)*	0.0087 *(60)* / 0.050 *(350)*
Pressure drop charcoal filter [psi] *(Pa)* [2]	0.0036 *(25)* / 0.036 *(250)*	0.0044 *(30)* / 0.0044 *(30)*
Pressure drop particulate filter [psi] *(Pa)* [2]	0.0044 *(30)* / 0.036 *(250)*	0.0050 *(35)* / 0.042 *(290)*
Extract function display	FAZ	
Flow regulator, constant	Airflow controller AC	
Flow regulator, variable	Airflow controller AC	
Connection point level [in] *(mm)* for FAZ and AC with extract manifold Ø 9.84 in *(250 mm)*	120.08 *(3050)*	
Underbench exhaust extraction	Optional according to requirements and specifications	

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] Pressure drop indications refer to conditions of clean/polluted.

For Waldner airflow dampers, a maximum pressure of 0.087 psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

For fume hoods with filter devices, the pressure drop of the built-in filter layers must be added to the pressure drop of the fume hood.

Specialized fume hoods
Radio-isotope fume hood

Filter (filter in the filter cabinet or on the fume hood roof)	
Dimensions [in] *(mm)*	24.02 x 24.02 x 1.81 (+ 0.31 seal) *(610 x 610 x 46 (+ 8 mm seal))*
Pressure loss [psi] *(PA)* at 1118.30 cfm m³/h *(1900 m³/h)*	0.016 *(110)*
Design characteristics	Filter element (fine particle filter); filter class EN 779: F7 Frame made of multilayer board with grip and type label on the 24.02 in *(610-mm)* side; PU seal on the dust-laden air side
Use	Fine particle filter for particle adsorption, e.g.: Oil smoke and agglomerated soot, tobacco smoke, metal oxide smoke Average efficiency (Em) 80–90%

Particle filter (filter in the filter cabinet or on the fume hood roof)	
Dimensions [in] *(mm)*	24.02 x 24.02 x 11.50 (+ 0.28 seal) *(610 x 610 x 292 (+ 7 mm seal))*
Pressure loss [psi] *(PA)* at 1433.19 cfm m³/h *(2435 m³/h)*	0.036 *(250)*
Design characteristics	Particle filter element type: Hepa H13; efficiency: MPPS Frame made of multilayer board with grip and type label on the 24.02 in *(610-mm)* side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H13; particle adsorption 99.95 %; transmittance 0.05%

Active charcoal filter (filter in the filter cabinet)	
Dimensions [in] *(mm)*	24.02 x 24.02 x 11.50 (+ 0.28 seal) *(610 x 610 x 292 (+ 7 mm seal))*
Pressure loss [psi] *(PA)* at 353.15 cfm m³/h *(600 m³/h)*	0.0014 *(9)*
Design characteristics	Activated charcoal cell 7C for 16 x activated charcoal cartridges Frame galvanised sheet metal; 2 x U handle and type plate on the 24.02 in *(610-mm)* side; PU tight seat seal on the clean air side
Use	Standard impregnation: for all common radioactive materials, radioactive iodine compounds, radioactive iodomethane, radioactive gases. (A filter with filters class F7 in acc. with EN 779 is recommended.)

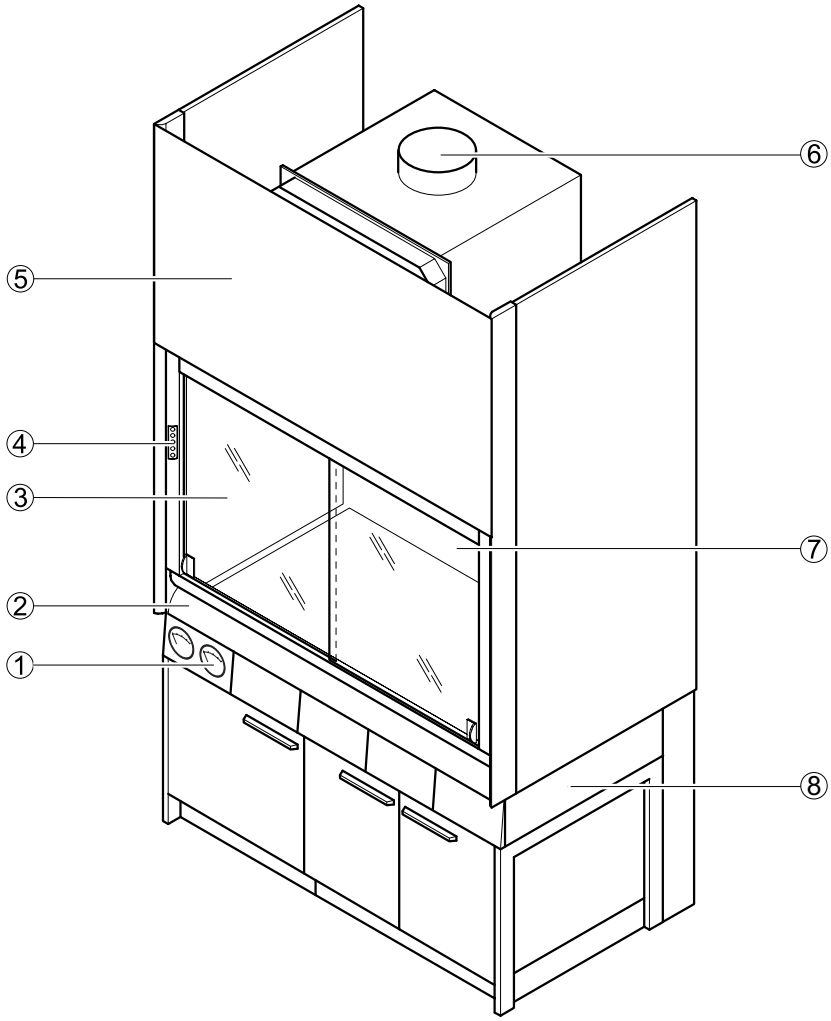
Particulate filter (filter in the filter cabinet)	
Dimensions [in] *(mm)*	24.02 x 24.02 x 11.50 (+ 0.28 seal) *(610 x 610 x 292 (+ 7 mm seal))*
Pressure loss [psi] *(PA)* at 1156.56 cfm m³/h *(1965 m³/h)*	0.018 *(125)*
Design characteristics	Particulate- or Micretain filter element type: Hepa H11 in acc. with EN 1822 Frame made of multilayer board with grip and type label on the 24.02 in *(610-mm)* side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H11; particle adsorption 95 %; transmittance 5%; to be installed after active charcoal filters to bind the charcoal dust contamination from the charcoal filter.

Material/Facing	
Internal lining including worktop	Polypropylene Stainless steel

Use

- Before the exhaust air is released into the environment, air from the internal workspace is purified through a filter unit

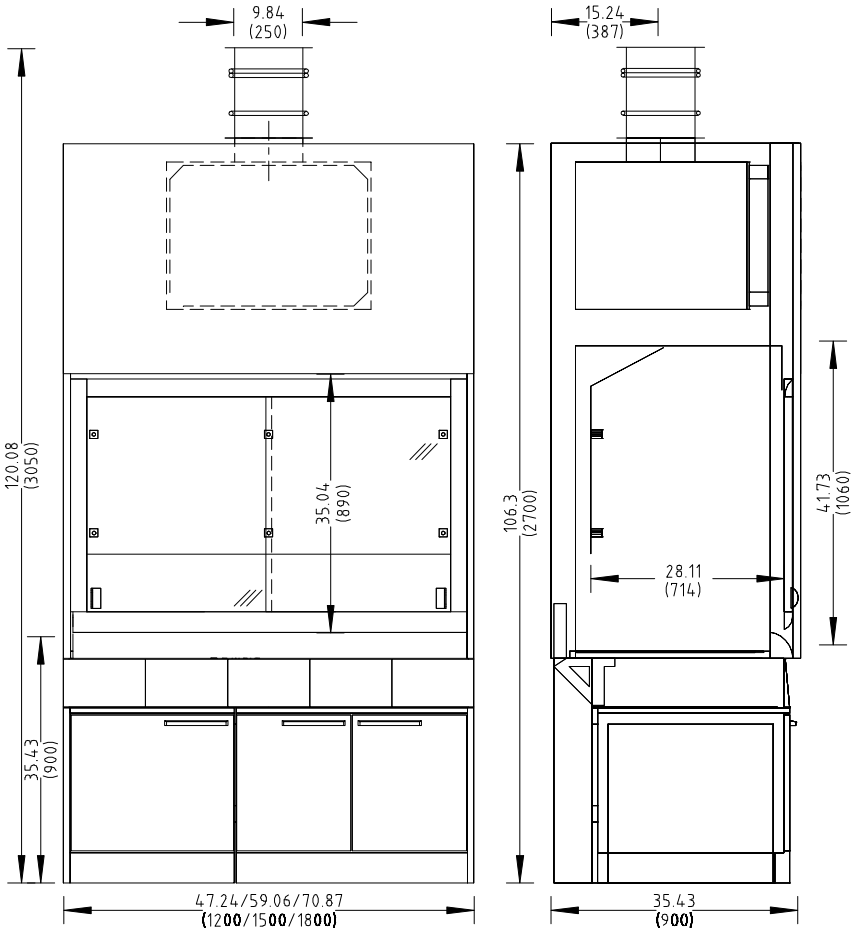
Design



1 *Differential pressure gauge*
2 *Sash with sash handle and horizontal sash*
3 *Worktop*
4 *Control panel FAZ or AC*
5 *Removable front filler panel*
6 *Extract air spigot*
7 *Baffle with scaffold points*
8 *H-frame with pushed-in under-bench unit with traverse and service panels*

Specialized fume hoods
Filter fume hood

Dimensional drawing



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)*	106.3 *(2700)*		
Interior effective width [in] *(mm)*	45.28 *(1150)*	57.09 *(1450)*	68.9 *(1750)*
Interior effective height [in] *(mm)*	41.73 *(1060)*		
Working height [in] *(mm)*	35.43 *(900)*		
Filter housing width x depth x height [in] *(mm)*	32.28 *(820)* x 30.51 *(775)* x 26.54 *(674)*		

Weight	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Filter fume hood without installations [lb] *(kg)*	approx. 595.24 *(270)*	approx. 705.47 *(320)*	815.7 *(370)*
Filter housing [lb] *(kg)*	198.41 *(90)*		

Specialized fume hoods
Filter fume hood

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Supporting structure	H-frame with pushed-in underbench units		
Sash	2 horizontal sashes		3 horizontal sashes
Glazed side panel	Possible on the left and/or right fume hood panes: not for stoneware internal lining		
Max. number of devices for scaffold points, ø 0.47 *(12)* to 0.51 in *(13 mm)*	6		8
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*		
Cable pass-through	Possible in the left and/or right fume hood panes		
Filter, fume hood roof	Standard equipment: Filter F7 / particle filter H13		
Differential pressure gauge	Display of the filter's saturation level (does not apply to active charcoal filters)		

Electrical engineering	
Electrical supply	Exterior receptacles
Fuse box	Optional
Sash controller SC	Optional

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

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Minimum volume flow [cfm] *(m³/h)* [1]	282.5 *(480)*	353.2 *(600)*	423.8 *(720)*
Pressure drop prefilter [psi] *(Pa)* [2]	0.0050 *(35)* / 0.029 *(200)*	0.0065 *(45)* / 0.034 *(235)*	0.0094 *(65)* / 0.042 *(290)*
Pressure drop filter for suspended particles [psi] *(Pa)* [2]	0.010 *(70)* / 0.044 *(300)*	0.014 *(95)* / 0.053 *(365)*	0.019 *(130)* / 0.062 *(430)*
Extract air function display	FAZ		
Flow regulator, constant	Airflow controller AC		
Flow regulator, variable	Airflow controller AC		
Detector of horizontal sash position	Only variable with airflow controller AC		
Connection height [in] *(mm)* for FAZ and AC with extract air spigot Ø 9.84 in *(250 mm)*	120.08 *(3050)*		
Underbench exhaust extraction	Optional according to requirements and specifications		

[1] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

[2] Pressure drop indications refer to conditions of clean/polluted.

For Waldner airflow dampers, a maximum pressure of 0.087

psi *(600 Pa)* must not be exceeded.

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

For fume hoods with filter devices, the pressure drop of the built-in filter layers must be added to the pressure drop of the fume hood.

Specialized fume hoods
Filter fume hood

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

Filter	
Dimensions [in] *(mm)*	24.02 x 24.02 x 1.81 (+ 0.31 seal) *(610 x 610 x 46 (+ 8 mm seal))*
Pressure loss [psi] *(PA)* at 1118.30 cfm m³/h *(1900 m³/h)*	0.016 *(110)*
Design characteristics	Filter element (fine particle filter); filter class EN 779: F7 Frame made of multilayer board with grip and type label on the 24.02 in *(610-mm)* side; PU seal on the dust-laden air side
Use	Fine particle filter for particle adsorption, e.g.: Oil smoke and agglomerated soot, tobacco smoke, metal oxide smoke Average efficiency (Em) 80–90%

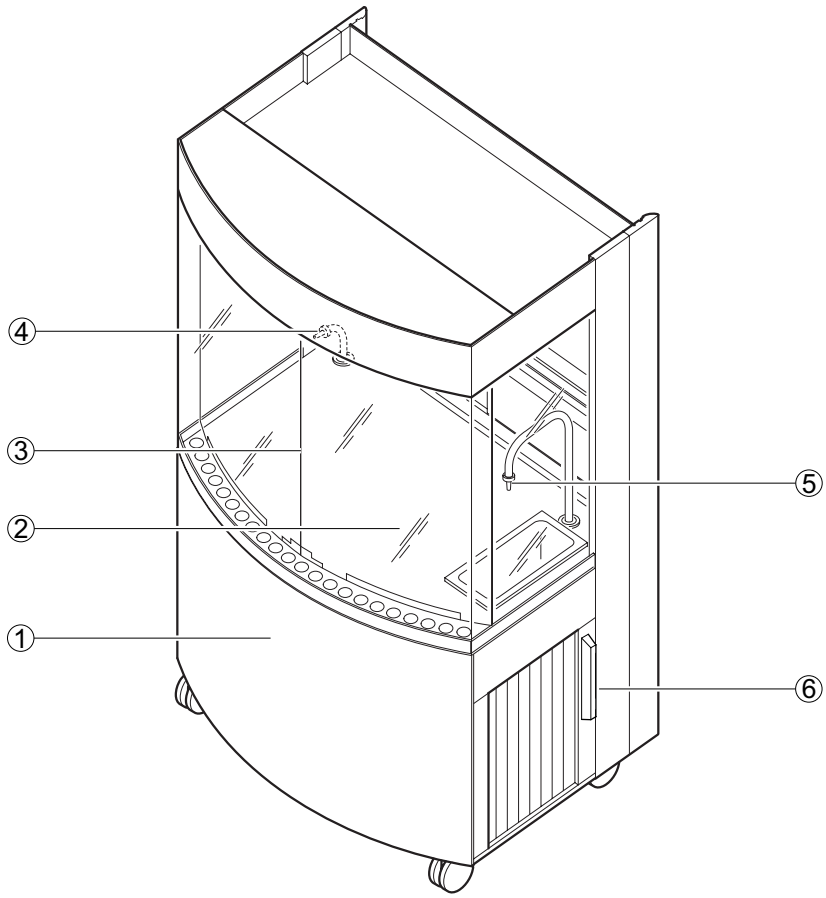
Particle filter	
Dimensions [in] *(mm)*	24.02 x 24.02 x 11.50 (+ 0.28 seal) *(610 x 610 x 292 (+ 7 mm seal))*
Pressure loss [psi] *(PA)* at 1433.19 cfm m³/h *(2435 m³/h)*	0.036 *(250)*
Design characteristics	Particle filter element type: Hepa H13; efficiency: MPPS Frame made of multilayer board with grip and type label on the 24.02 in *(610-mm)* side; PU tight seat seal on the clean air side; filter medium flush on the clean air side
Use	Particle filter for the adsorption of particles up to H13; particle adsorption 99.95 %; transmittance 0.05%

Use

- For usage in any location with connections for service provision e.g. a service wing
- Fully visible from all sides
- Service outlet in the internal workspace
- Operating controls externally at the traverse

Design

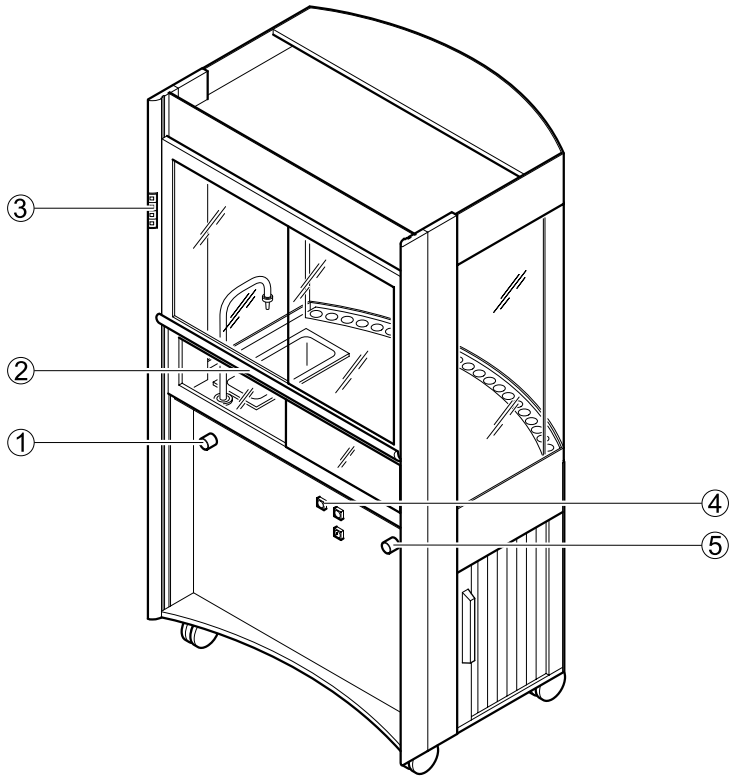
Front view



1 *Lifting block*
2 *Worktop with marine edging*
3 *Window and deflector (safety glass)*
4 *Gas outlet*
5 *Water outlet with drainage basin and waste water lifting unit*
6 *Openings for pipework*

Mobile fume hoods
AeroEm

Rear view



1 Valve for water outlet
2 Sash handle with front sash and horizontal sash
3 FAZ operating field
4 Switch for interior receptacles
5 Valve for gas outlet

Technical Data

Dimensions	
Width [in] *(mm)*	41.34 *(1050)*
Depth [in] *(mm)*	32.09 *(815)*
Height [in] *(mm)*	77.76 *(1975)*
Working height [in] *(mm)*	35.43 *(900)*
Height, casters [in] *(mm)*	4.72 *(120)*

Weight	
Weight [lb] *(kg)*	396.83 *(180)*

Relevant features	
Sash	Two parts, can be moved up and down, each with 2 horizontal sashes
Glazed side panel	All 4 fume hood sides
Lighting	Non-glare, switchable from the outside
Rolling shutter guides	For pipework on the left and right side panels

Electrical engineering	
Electrical supply	2 power outlets in the internal workspace, individually switchable from outside
Total power of outlets [W]	1000
Connection voltage [V AC]	230
Voltage of waste water pump [V]	230
Lighting output [W]	52
Length of electrical connection cable [in] *(mm)*	98.43 *(2500)*

Sanitary engineering	
Water connection	Optional
Waste water connection	Optional waste water coupling
Gas connection	Optional
Water fitting	Optional cold water WPC or WNC (EN), with drainage sink, operable from outside
Take-off valve for gases	Optional

Ventilation engineering	
Minimum volume flow [cfm] *(m³/h)* [1)]	176.6 *(300)*
Supply air back-up fans	Switchable on FAZ
Extract air function display	FAZ
2 extract air spigots Ø [in] *(mm)*	3.54 *(90)*
Length of exhaust air duct [in] *(mm)*	98.43 *(2500)*

[1)] All air volume specifications refer to sash window opening height of 19.69 in *(500 mm)* and the recommended tracer gas maximum value from BG Chemie

The listed volume flows are according to DIN EN 14175 minimum volume flows for operation of fume hoods. It is therefore disadvised to use these values as a model for the ventilation system.

Air volume may differ when using on-site extract air control systems and other products. Operating limitations must be verified by Waldner before usage.

Material/Facing	
Worktop	Compound stoneware worktop with polypropylene edge

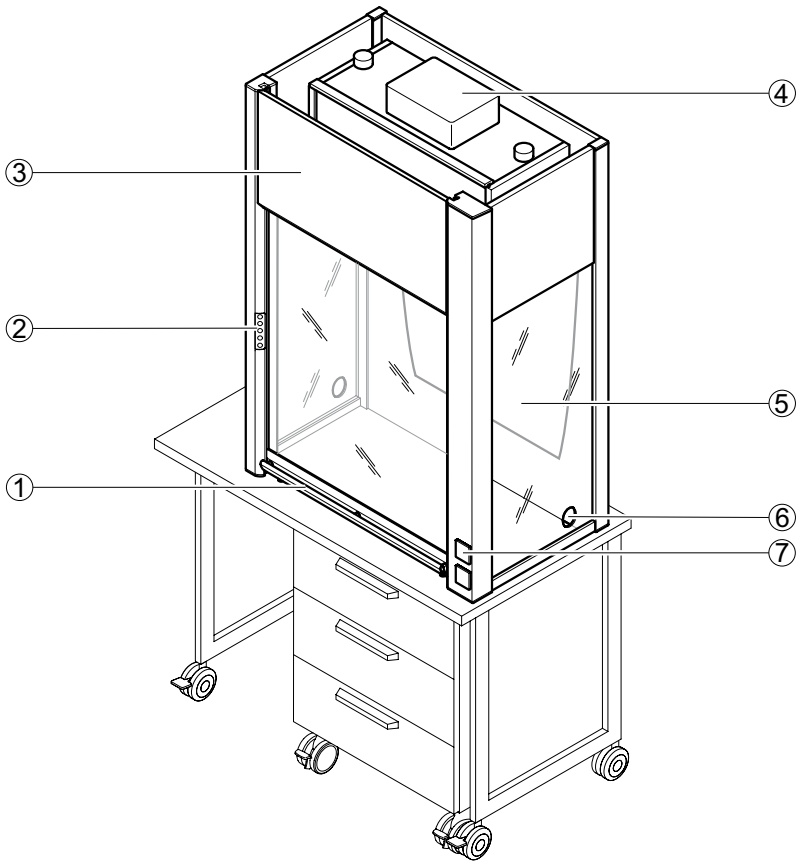
Mobile fume hoods
MobilAir

Use

- For usage at any location (only with air circulation)
- Operating controls on the exterior
- Not to be used for exposed work involving chemical digestions
- Not to be used as a substitute for for bench-mounted fume hood according to EN 14175

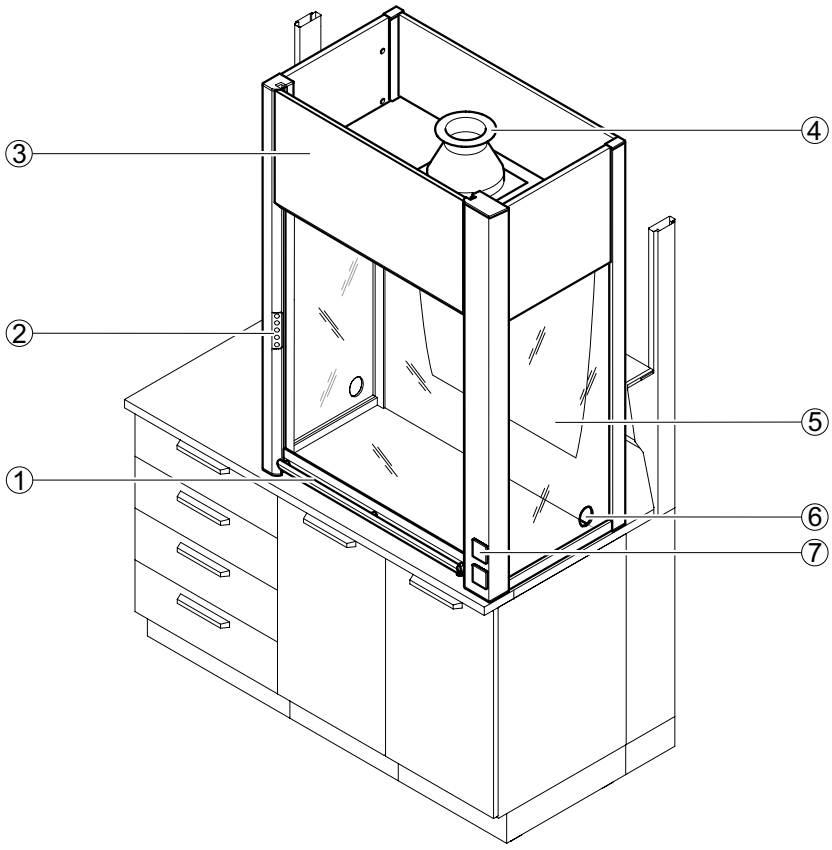
Design

Air circulator



1 Sash with handle
2 Control panel FAZ
3 Removable front filler panel
4 Filter housing with ventilator in the air circulator
5 Back wall with baffle profile
6 Cable pass-through
7 Receptacles

Air extraction system



1 *Sash with handle*
2 *Control panel FAZ*
3 *Removable front filler panel*
4 *Extract air spigot attached to on-site exhaust air system*
5 *Back wall with baffle profile*
6 *Cable pass-through*
7 *Receptacles*

Technical Data

Dimensions	
Width [in] *(mm)*	35.43 *(900)*
Depth [in] *(mm)*	23.62 *(600)*
Height with closed/open sash [in] *(mm)*	47.83 *(1215)*/63.78 *(1620)*
Interior effective width [in] *(mm)*	33.07 *(840)*
Usable depth [in] *(mm)*	19.80 *(503)*
Interior effective height [in] *(mm)*	33.31 *(846)*

Weight	
MobilAir for air extraction [lb] *(kg)*	154.32 *(70)*
MobilAir for air circulation mode inc. filter [lb] *(kg)*	180.78 *(82)*

Mobile fume hoods
MobilAir

Relevant features	
Air circulator	With fan and filter (see filter types)
Air extraction system	Extract air spigot attached to on-site exhaust air system
Lighting	Non-glare, switchable from the outside
Sash	Can be moved upwards
Cable pass-through	Possible in the left and/or right fume hood panes

Electrical engineering	
Electrical supply	2 exterior receptacles
Total power of outlets [W]	1000
Connection voltage [V AC]	230
Lighting output [W]	13
Fan capacity [W]	115

Ventilation engineering	
Minimum volume flow [cfm] *(m³/h)*	176.6 *(300)*
Extract air function display	Optional FAZ
Connection height [in] *(mm)* Extract air spigot Ø 4.92 in *(125 mm)*	44.76 *(1137)*

Material	
Side execution, sash	Plexiglass

Filter type „A" no.5, gas filter	
Dimensions [in] *(mm)*	24.02 x 12.01 x 5.91 *(610 x 305 x 150)* (+ 0.31 in *(8 mm)* seal)
Pressure loss [psi] (Pa) at 176.57 cfm *(300 m³/h)*	0.019 *(130)*
Design characteristics	Gas filter cell with 5 layers of activated carbon mat, type „A"; MDF frame; with white-painted grid on both sides, with grip and type label on the 24.02 in (610 mm) side, PU seal on the dust-laden air side
Use	Separable substances: organic gases and vapours (e.g. solvents, petrol fumes, toluol, benzol, kerosine, odours, hydrocarbons with mass weights 30 and higher), cold, non-boiling (VOC, high-boiling substances)

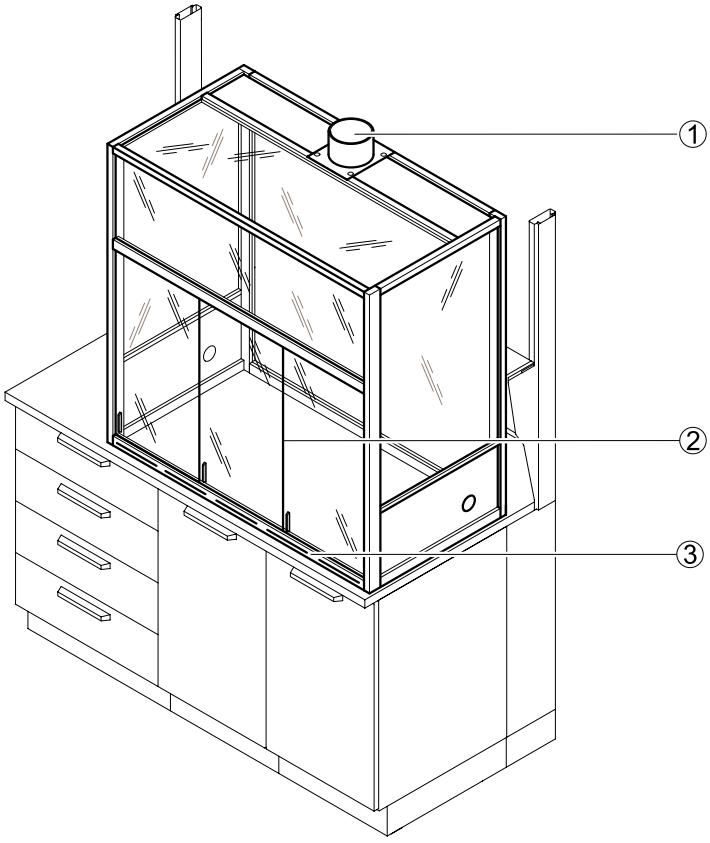
Filter type „BEP", gas and particle filter	
Dimensions [in] *(mm)*	24.02 x 12.01 x 5.91 *(610 x 305 x 150)* (+ 0.31 in *(8 mm)* seal)
Pressure loss [psi] (Pa) at 176.57 cfm *(300 m³/h)*	0.035 *(240)*
Design characteristics	Combination filter Hepa „H"13 with activated carbon mat and particle filter, type „BEP; MDF frame, with white-painted grid on both sides, with grip and type label on the 24.02 in (610 mm) side, PU seal on the dust-laden air side
Use	Separable substances: inorganic gases and vapours (e.g. chlorine, hydrosulphides, sulphur dioxide, hydrogen chlorides, cold and heated). Molecules and particle separation 99.95 % MPPS

Filter type „P", particle filter cell	
Dimensions [in] *(mm)*	24.02 x 12.01 x 5.91 *(610 x 305 x 150)* (+ 0.31 in *(8 mm)* seal)
Pressure loss [psi] (Pa) at 176.57 cfm *(300 m³/h)*	0.022 *(150)*
Design characteristics	Particle filter, type „P", Hepa „H"13, Midilar MDSA; MDF frame, with white-painted grid on both sides, with grip and type label on the 24.02 in (610 mm) side, fold height 45 mm PU seal on the dust-laden air side, filter medium flush on the dust-laden air side
Use	Separable substances: Particle separation 99.95 % MPPS, Hepa „H"13

Use

- Extraction of thermal loads, gases, fumes, aerosols or dust from the interior of the housing
- Reduction of sonic emissions
- Not to be used for exposed work involving chemical digestions
- Not to be used as a substitute for for bench-mounted fume hood according to EN 14175

Design



1 Extract air spigot
2 Horizontal sashes
3 Ventilation slots

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)*	22.24 *(565)* 28.15 *(715)* 29.53 *(750)* 35.43 *(900)*			
Height [in] *(mm)*	57.09 *(1450)*			
Height inc. extract air spigot [in] *(mm)*	61.02 *(1550)*			
Height inc. extract manifold [in] *(mm)*	68.90 *(1750)*			

Housings
Permanent enclosure

Relevant features	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*	**82.68** *(2100)*
Design	For combination with service spines, shortened back wall for usage of services			
Sash	2 horizontal sashes	3 horizontal sashes		
Air extraction system	attached to on-site exhaust air system Optional extract manifold			
Cable pass-through	Optional			
Lighting	Optional			
Interior shelf	Optional			

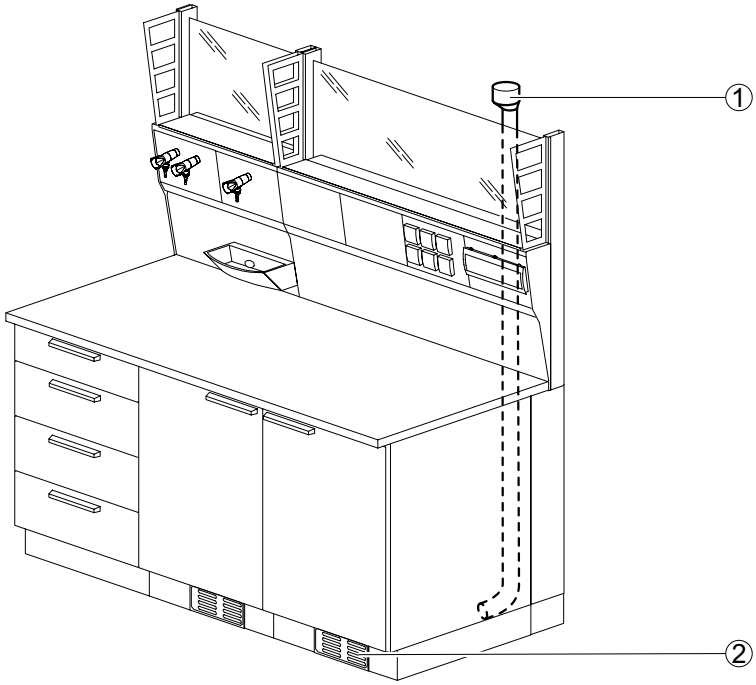
Ventilation engineering	
Function display	FAZ as an option
Connection height [in] *(mm)* for extract air spigot Ø 4.92 in *(125 mm)*	61.02 *(1550)*

Material	
Side execution, sash	Safety glass (toughened glass)

Use

- For exhaust extraction from safety cabinets (underbench units) where dangerous substances are stored
- For exhaust extraction from underbench units in service spines and fume hoods

Design



1 *Extract air spigot*
2 *Ventilation slots*

Technical Data

Ventilation engineering	
Volume flow [cfm] *(m³/h)*	23.5 *(40)*
Ventilation connector (ascending duct) Ø [in] *(mm)*	3.54 *(90)*

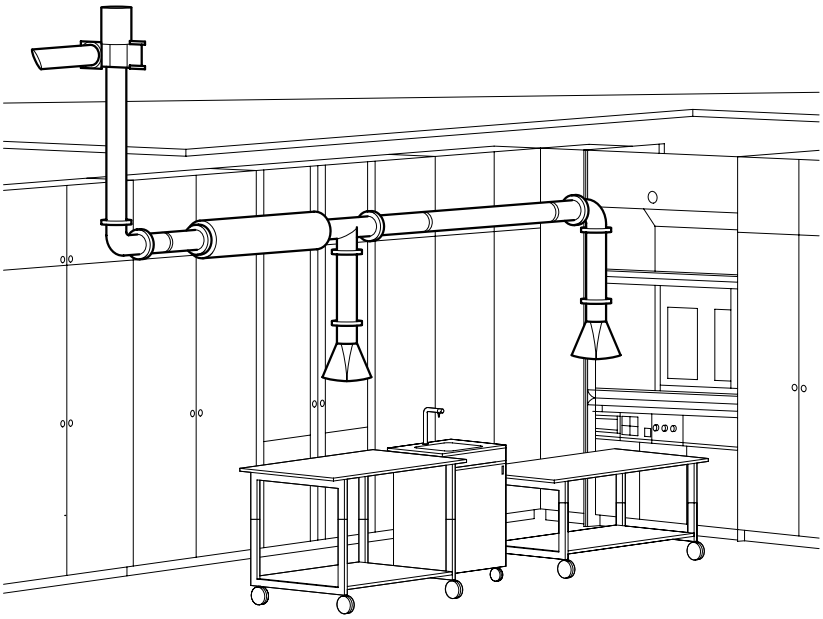
Material	
Ventilation pipe	PPS

Local exhausts
AAS extract air system

Use

- For exhaust extraction of combustion residue in laboratory spaces
- For extraction of exhaust from cold and hot flames
- For stabilization of flames from burner units
- For protecting instruments against corrosive fumes

Design



Technical Data

Dimensions	
Dimensioning, design	Project planning according to requirements
Canopy hood	Stainless steel

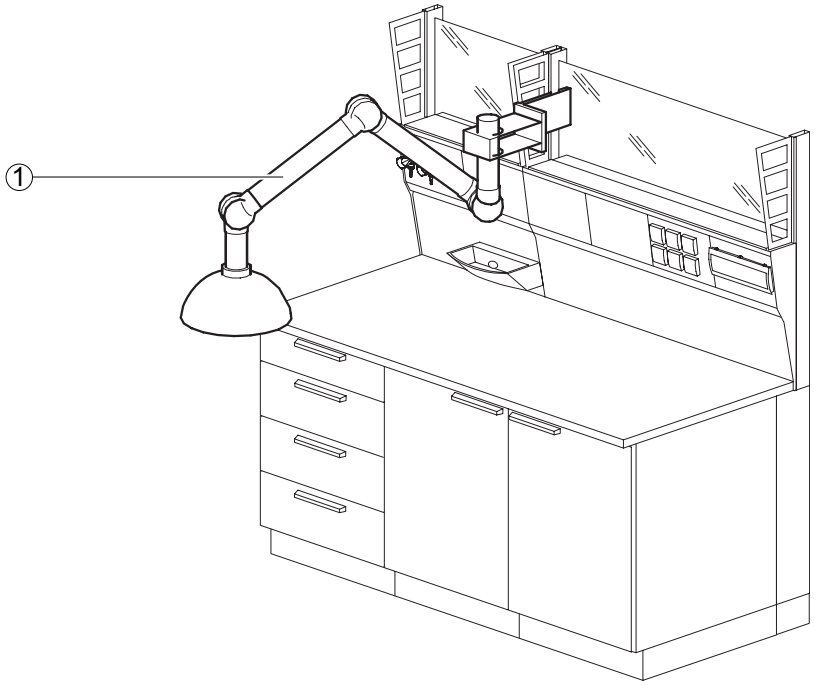
Relevant features	
Standard	Canopy hood Telescopic tube Piping system Fans Blow-out unit Fastening elements
Acoustic insulation	Option installation of fans and blow-out unit outside of the laboratory

Material	
Piping system	Stainless steel
Canopy hood	Stainless steel

Use

- For targeted exhaust extraction from a particular area
- For mounting on service spines, service wings and on the wall

Design



1 Extraction lever

Technical Data

Dimensions	**1.97** *(50)*	**2.95** *(75)*
Pipework system Ø [in] *(mm)*	1.97 *(50)*	2.95 *(75)*
Dome hood Ø [in] *(mm)*	13.78 *(350)*	
Extract head [in] *(mm)*	1.97 *(50)*	2.95 *(75)*

Ventilation engineering	**1.97** *(50)*	**2.95** *(75)*
Minimum volume flow [cfm] *(m³/h)*	29.4 *(50)*	58.9 *(100)*
Primary pressure [psi] *(Pa)*	0.022 *(150)*	0.022 *(150)*
Primary pressure [psi] *(Pa)* with Waldner air flow damper	0.029 *(200)*	0.029 *(200)*

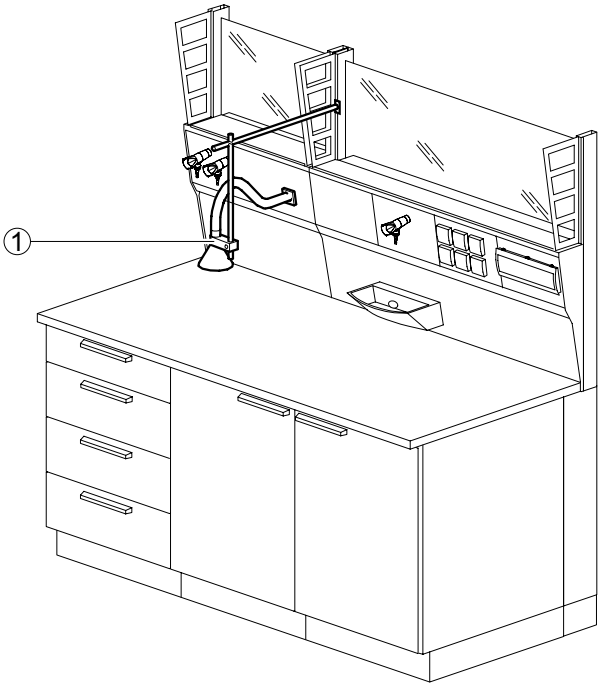
Material	
Pipework	Anodized aluminum
Hinged bracket	Polypropylene
Dome hood	Polycarbonate
Extract head	Anodized aluminum

Local exhausts
Relieving hood

Use

- For targeted extraction of fumes
- Attachment to the extract air adaptor in the service panel

Design



1 Relieving hood

Technical Data

Dimensions	
Length of piping system [in] *(mm)* at Ø 1.57 in *(40 mm)*	39.37 *(1000)*
Hood Ø [in] *(mm)*	4.72 *(120)*
Extract head [in] *(mm)*	1.97 *(50)*

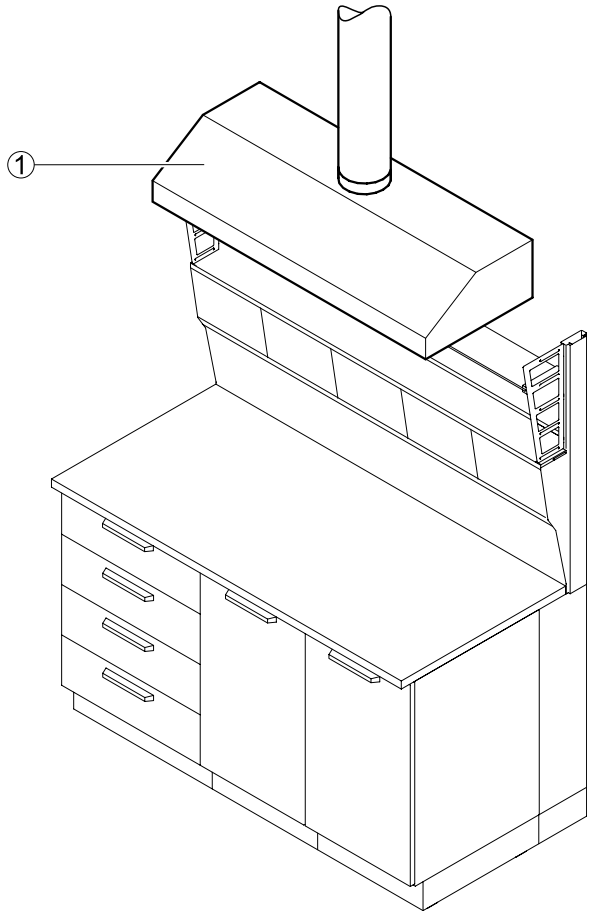
Ventilation engineering	
Minimum volume flow [cfm] *(m³/h)*	5
Primary pressure [psi] *(Pa)*	0.029 *(200)*

Material	
Piping and hood	Plastic

Use

- For targeted exhaust extraction from a particular area
- For mounting on service spines and on the wall

Design



1 Canopy hood

Technical Data

Dimensions	**47.24** *(1200)*	**59.06** *(1500)*
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*
Height x Depth [in] *(mm)*	11.81 *(300)* x 23.62 *(600)*	11.81 *(300)* x 23.62 *(600)*
Extract air spigot Ø [in] *(mm)*	7.87 *(200)*	

Ventilation engineering	**47.24** *(1200)*	**59.06** *(1500)*
Minimum volume flow [cfm] *(m³/h)*	282.5 *(480)*	353.2 *(600)*
Primary pressure [psi] *(Pa)*	0.0036 *(25)*	0.0044 *(30)*
Primary pressure [psi] *(Pa)* with Waldner air flow damper	0.0218 *(150)*	0.0218 *(150)*

Material	
Canopy hood	Polypropylene

2 Service modules

Our ***SCALA*** laboratory program defines itself via flexibility, mobility and ergonomics for the future of the laboratory.

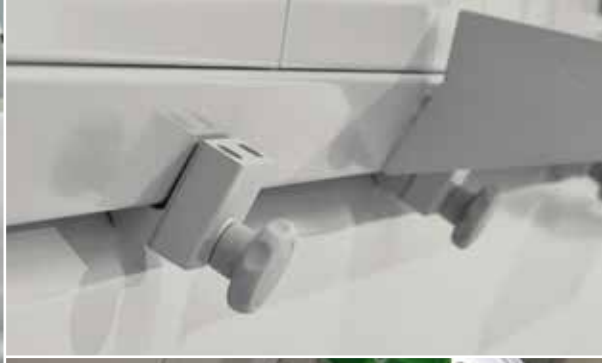
The services area has central importance in a laboratory system.

Our new service modules such as service spines, suspended service booms, service modules, service wings, and service ceilings, by means of their modular design, don't just provide services – they are more ergonimcally suited to the researchers in the laboratory than ever before. The valves and control elements are easier to reach because the service panels are inclined towards the user.

With useful details for a visually clear presentation, our service modules are increasing the standards in laboratory design.

Our new laboratory furniture system contains significantly fewer individual parts. Our service panels are seamlessly fitted, the even form is without bulky edges, and the concealed internal rail is built to accommodate additional features.

This facilitates cleaning and fulfills the highest demands for hygiene.



2 Service modules

Space-saving service distribution terminal

The service supply installations are housed in the service duct to save space. The modular service panels, inclined towards the user, are ergonomical and easy to reach. The result is far more usable depth on the work surface.

Service spines

The service spine provides many options during the design of the laboratory environment for different designs and rapid changes. As an independent unit, the service spine can be combined with freely selectable bench frames for wall-mounted work stations or for a double-sided bench.

Internal rail for compatible equipment

The internal rail below the panel surface accommodates useful equipment, such as storage shelves, reagent stands, scaffold pipes and towel holders. Attached "helpers" can be adjusted along the gird, and securely fastened.

Uncomplicated upgradability

The modular, screwless service panels can be rapidly exchanged as the need arises.

Supply lines, such as for water and compressed air, are quickly adjusted and installed with a plug-in coupling system – without appreciable interruption of laboratory operations.

Equipment details for service spines

The surface above the service panel can be used as a reagent shelf. The inlaid glass shelves are easily detachable for cleaning. In addition, it is possible to fasten shelves onto the side walls. Suspended cabinets make upward extensions possible at any time.

Service modules

As a compact service supply, our service modules offer the possibility of transparent room design.

Equipped with removable panels and an internal rail, the service modules can either be installed directly on the laboratory ceiling or on the service ceiling.

Suspended service boom

As an element freely suspended from the laboratory ceiling, the suspended service boom provides advantages for certain areas of the laboratory.

Equipped with removable panels and an internal rail, the suspended service boom is also usable in service-independent layouts. Height-adjustment is possible for installation on the laboratory ceiling. The suspended service boom can also be installed on the service ceiling.

Service wall duct

As an alternative to service spines, service ducts can be installed directly on the wall or in connection with a wall-sided service spine. Additionally equipped with panel technology and internal rails for variable placement.

2 Service modules

The service wing system

Our service wing defines freedom in the laboratory in a special manner: as the central furniture element, integrating all key services such as plumbing, electrical, EDP, energy-saving lighting, exhaust air and also the disposal of waste water, our new service wing provides a high degree of flexibility.

It is possible to safely plug-in to supply and disposal connections practically anywhere, providing a great degree of flexibility and free floor plan design.

The expansion stages of service wings

With its modular design, the service wing offers many independent and freely combinable expansion stages. For every imaginable application. With the exchangable service panel, valves and connections can be positioned as desired.

Internal rail for auxiliary equipment

The internal rail accommodates useful accessories such as instrument shelves, service stations and scaffold points. These allow for movement along the grid, and secure fastening in any position.

The service wing can be easily integrated

The use of the service wing simplifies completion of the interior and coordination of trades. One central feed point is sufficient.

Existing architecture and its configuration often requires further installations. In this respect, the service is especially easy to install with minimal assembly expenses.

Economical energy usage

The energy saving lamps set into the service wings evenly light up the workspace and the room, and spare the use of current by up to 50 % (with daylight-dependent control).

The service wing reaches the entire room

We make every area of the laboratory accessible using T-elements and the different lengths of our wing elements. For a number of placement opportunities. It can be "docked" anytime, anywhere.

All benches, racks, mobile sink units or mobile fume hoods are freely set under the wing – for a flexible working environment.

Precise planning, on-site preassembly

The service wing will be pre-assembled exactly according to plan for your laboratory project.

In that way, we save assembly time on-site, and your service wing is quickly assembled and ready to use.

Alteration and expansion are simple

With its property as an individual system unit, the service wing is always capable of being altered.

It is possible to expand, improve and control the system with little effort.

2 Service modules

Service ceilings for flexible laboratory rooms

It is of essential importance to be able to quickly adapt the laboratory, and it will continue to expand in the future.

The Waldner service ceiling, for the first time, integrates all liquid laboratory services, gases, current, datalines, lighting, and air conditioning, as well as supply air and extract air flow, and offers effective and variable use of the laboratory by means of high adaptability to changing conditions.

With the service ceiling, the entire laboratory will not only be flexible and independent from connections and service, supply and removal units, but also the entire laboratory room is freely changeable by the user and can be optimized with respect to specific needs.

The service ceiling simplifies the planing of the laboratory building

Entire stories can be covered by the service ceiling and newly divided as needed through the gridless partitioning – without interfering with the building structure. This drastically reduces the costs of a redesign, as opposed to conventional laboratory furniture.

The space-saving arrangement of integrated assembly areas of our service systems reduces the building volume.

The factory-assembled service ceiling elements are delivered with all components on-site, making the room almost pre-assembled. This limits the coodination of different service providers, and thus costs as well. The number of bores for the suspension of the complete service ceiling has been reduced by over 90 % compared with a conventional installation.

The service ceiling is also integratable with existing architecture.

Quick change of environment

Our service ceiling system successfully responds to new tasks in the laboratory.

The mobile parts of the system, such as benches, underbench units or racks, are rolled to another place, mobile components docked to a suspended service boom, and working on new tasks runs more smoothly in the laboratory.

Connecting the office to the laboratory

New areas can be created by means of the service ceiling segments. Changing the installation follows from the nearest connection block. Through our partition system, it is possible to realize the direct coexistence of office and laboratory.

Rational preassembly saves valuable time

The planned dimensions of the service ceiling for the laboratory project is subdivided into individual segments. The system framework, made from high-strength aluminum profiles, is extremely stable despite its low weight. All service lines, supply and extract air ducts, current, lighting and connection blocks are installed in just the right position. The accuracy of all the individual components prevents time-consuming reworking.

Only one on-site service delivery point

Fed via an on-site service delivery point, the service ceiling offers connection points distributed over a freely definable surface unit to the movable service modules at several workstations. That limits costs, since it dispenses with the coordination of different trades.

Movable service modules

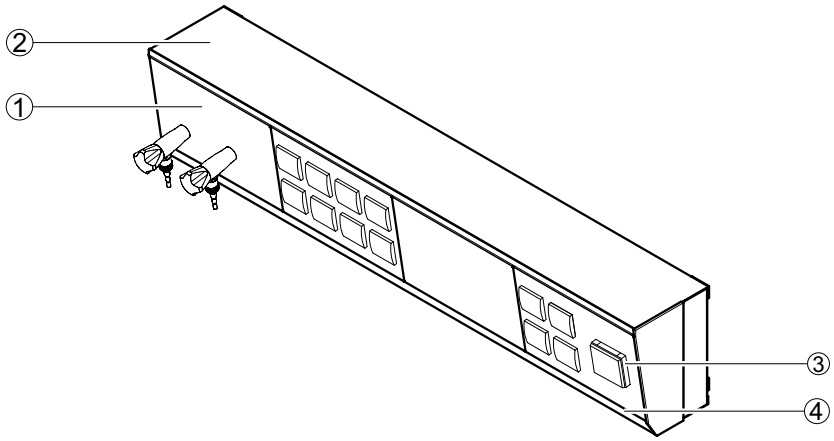
The service installation on each individual system frame carries special connection blocks from which the service modules are supplied with movable lines. Moving the modules simply requires loosening the clamp and fastening it again.

Service duct

Use

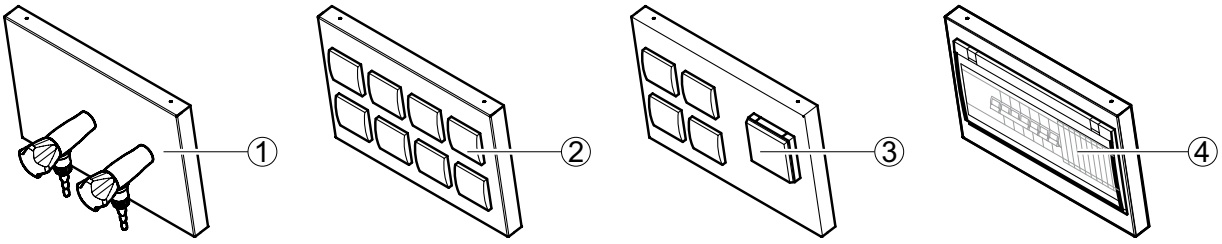
- Supply of services at the laboratory workstation
- Integration of all tapping points, including sockets and multiple connectors, for information engineering
- Enhancement and modification of the services supply through clipping of the panels
- For use in service spines, service wall ducts, suspended service booms, service modules and bench-mounted service outlets
- Tool-free installation of supplemental service duct add-on parts such as pegboards, monitor arms, pipette holders, paper towel dispensers, universal storage, etc.

Design



1 Service panel plumbing
2 Top cover (storage capacity)
3 Service panel electrical installation
4 Integrated rail for tool-free installation of add-on parts

Variants of the service panel



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

Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800* [1]*)*
Depth [in] *(mm)* without carrier system	4.33 *(110)*				
Height [in] *(mm)*	9.92 *(252)*				
Front inclination [°]	9				
Panel width x height [in] *(mm)*	11.81 *(300)* x 7.87 *(200)*				

[1] The service duct is extendable in increments of 11.81 in *(300 mm)*

Relevant features	
Number of service panels	Dependent on width of service duct Supply of electrical and information technology corresponding to combination with other service modules
Service panel	Clipped to size
Waterproof protection	Degree of protection IP 44

Material	
Covering	Solid grade laminate 0.2 in *(5 mm)* Glass plate

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional
Max. number of 230 V outlets per panel	8
Max. number of 400 V outlets per panel	2
Max. number of automatic circuit breakers per panel	15

Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Service supply corresponding to combination with other service modules
Max. number of corner valves per panel	5
Max. number of high purity gas valves per panel	3 to 5, depending on model and function

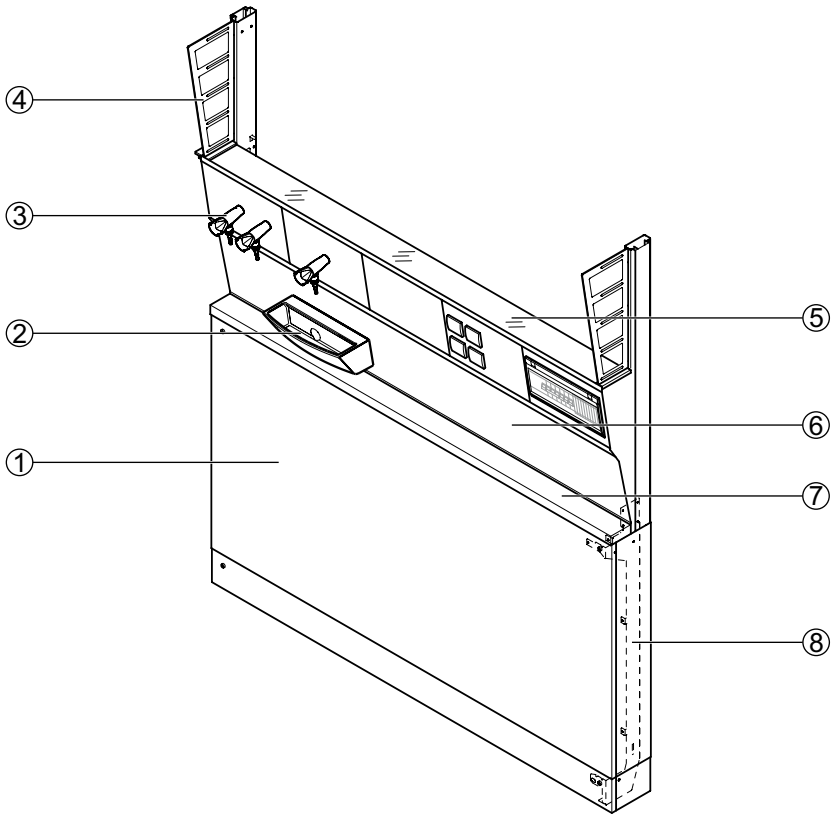
Service spine

Use

- For floor-mounted services supply to:
  - Wall benches
  - Double work benches
  - Laboratory equipment on mobile tables or substructures
  - Floor-mounted laboratory equipment
- Variants for genetic field
- Modular attachment of cell add-ons at function stands such as reagent shelves, instrument shelves, suspended cabinets, scaffold points, etc.
- Tool-free installation of supplemental service duct add-on parts such as pegboards, monitor arms, pipette holders, paper towel dispensers, universal storage, etc.

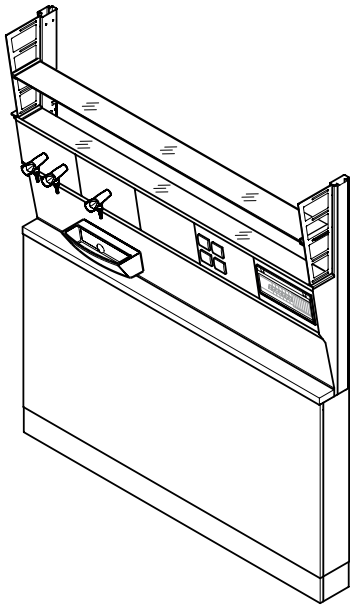
Design

Service spine for wall bench

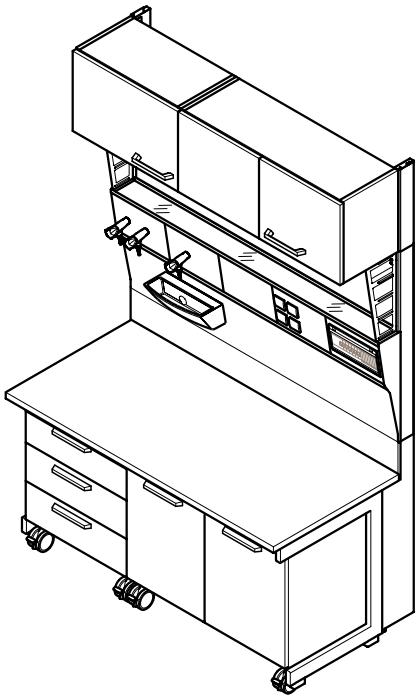


1 *Knee-hole cover panel*
2 *Sink module*
3 *Service panel for plumbing*
4 *Pillars for attachment parts*
5 *Service duct with panels, glass shelf and integrated rail for add-on parts*
6 *Service panel*
7 *Cantilever*
8 *Function stands*

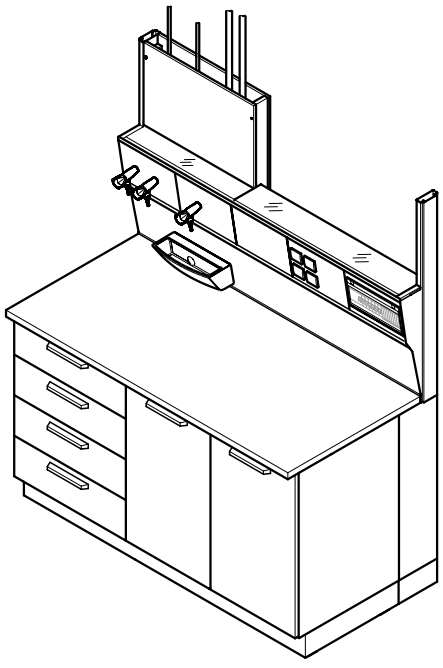
Service spine for wall bench with cantilever and 2 glass shelves, working height 35.43 in *(900 mm)*



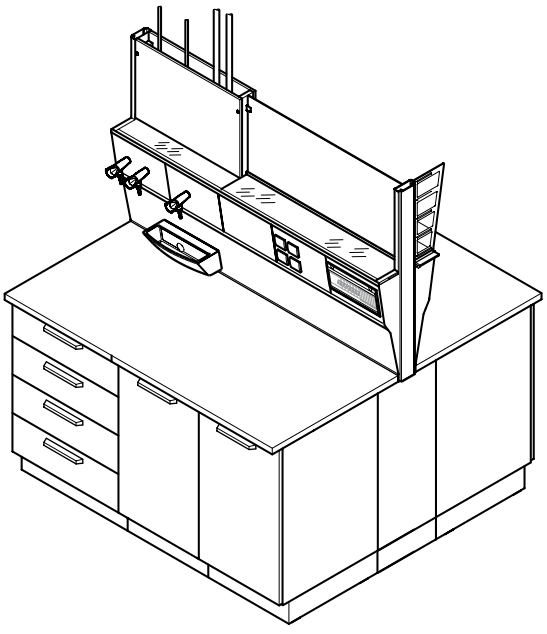
Service spine for wall bench with C-frame, under-bench units on casters and suspended cabinet, working height 29.53 in *(750 mm)*



Service spine for wall bench with underbench units on plinth and service supply from above, working height 35.43 in *(900 mm)*

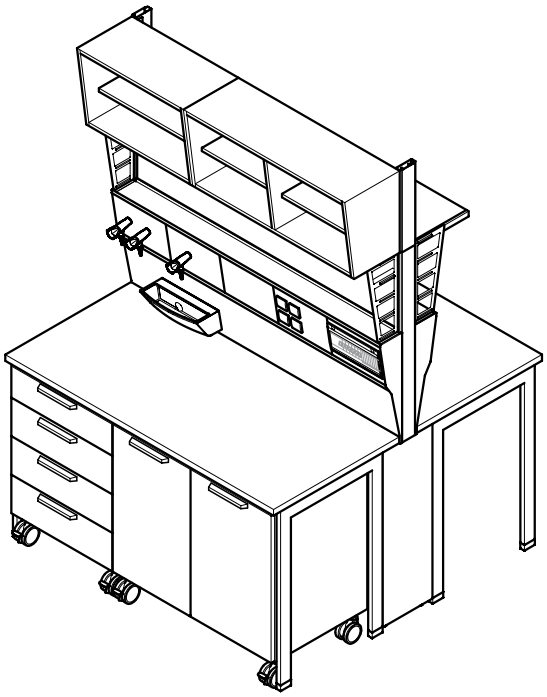


Service spine for double work bench with under-bench units on plinth and service supply from above, working height 35.43 in *(900 mm)*



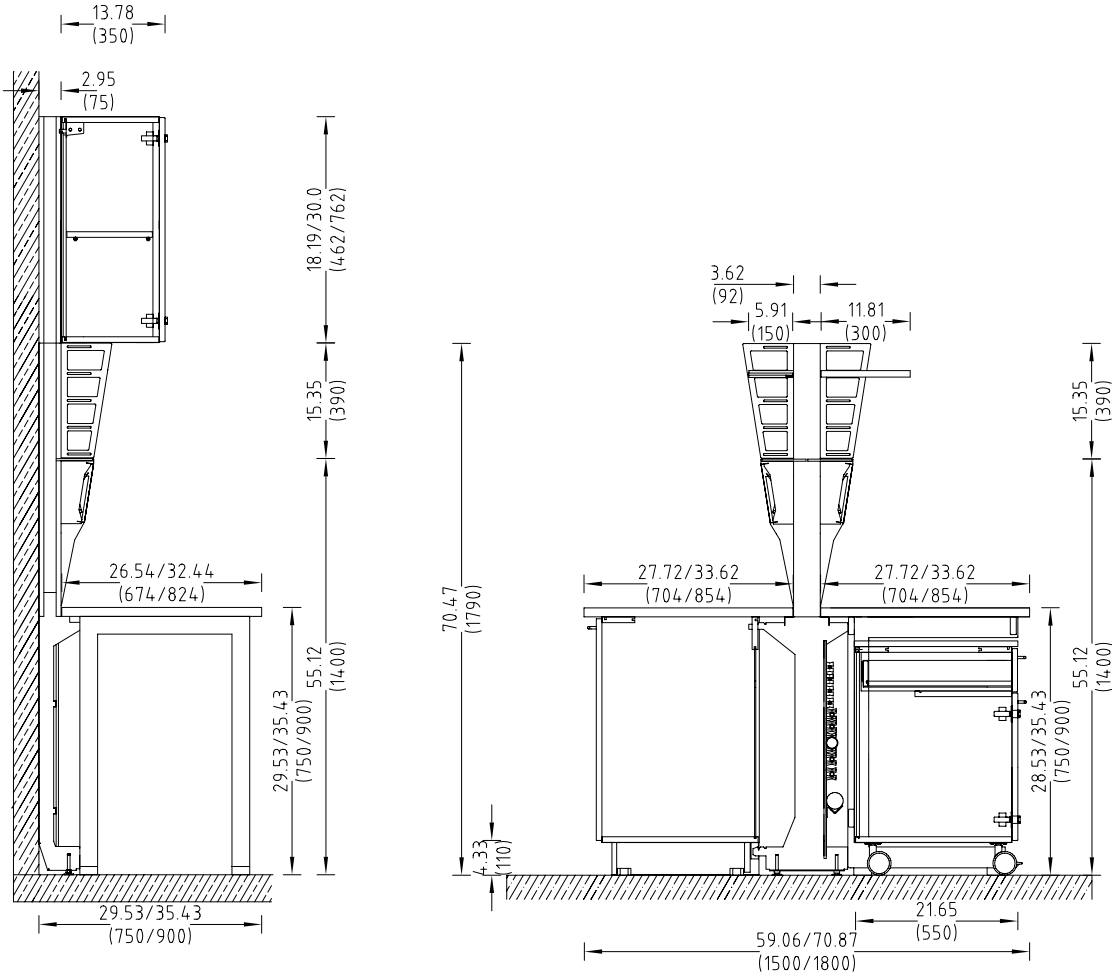
Service spine

Service spine for double work bench with H-frame, underbench units on casters and suspended cabinet, working height 35.43 in *(900 mm)*



Dimensional drawing

Service spine for wall-mounted/double work bench



Technical Data

Dimensions	**23.62** *(600)*	**35.43** *(900)*	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth, service spine for wall-mounted work bench [in] *(mm)* (incl. wall-mounted work bench)	2.95 *(75)* (29.53 *(750)*/35.43 *(900)*)				
Depth, service spine for double work bench [in] *(mm)* (incl. double work bench)	3.62 *(92)* (59.06 *(1500)*/70.87 *(1800)*)				
Height [in] *(mm)*	70.47 *(1790)*				
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*				
Height, pillar extension [in] *(mm)* for suspended cabinet with height of 18.11 in *(460 mm)*	18.19 *(462)*				
Height, pillar extension [in] *(mm)* for suspended cabinet with height of 29.92 in *(760 mm)*)	30.0 *(762)*				
Height, pillar extension [in] *(mm)* up to the ceiling 137.8 in *(3500 mm)*	Depending on ceiling height				
Panel width x height [in] *(mm)*	11.81 *(300)* x 7.87 *(200)*				
Reagent repository width x height [in] *(mm)*	Service spine width x 5.91 *(150)*				
Instrument shelf width x height [in] *(mm)*	Service spine width x 11.81 *(300)*				

Load bearing capacity	
Glass shelf [lb] *(kg)*	44.09 *(20)*
Instrument shelf [lb] *(kg)*	66.14 *(30)*
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*

Relevant features	
Modular layout	Can be equipped one-sided for wall bench and two-sided for double work bench Function stands with service duct capable of being adapted, e. g. for suspended cabinet Worktop, cantilever and underbench unit compatible without disassembling the installations Grid-independent assembly of accessories
Scaffold points ø [in] *(mm)*	0.47 *(12)* to 0.51 *(13)*
Number of service panels	Dependent on width of service duct

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional

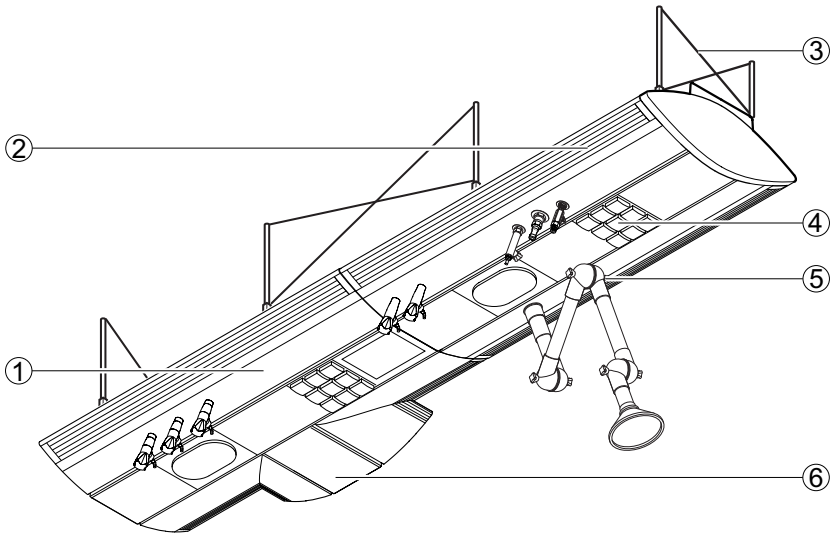
Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Guiding of supply lines under the worktop or the cantilever

Service wing

Use

- Laboratory areas with technical devices for services.
- Services supply and disposal via the ceiling for:
  - Laboratory benches and sinks under the service wing
  - Local exhaust equipment and AeroEm fume hood
  - Laboratory equipment on mobile tables or substructures
  - Floor-mounted laboratory equipment
- Tool-free installation of supplemental service wing add-on parts

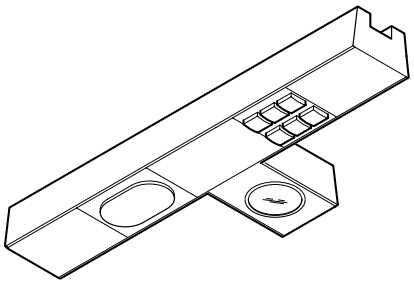
Design



1 *Sanitary duct with gas and water fixtures*
2 *Wing edge (lamp or molded part)*
3 *Braced suspension unit*
4 *Trunking with electric terminal box*
5 *Air duct with local extraction system*
6 *T-wing element*

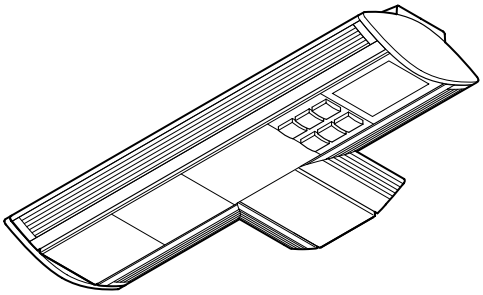
Expansion stage 1

Trunking with panels for electrical supply



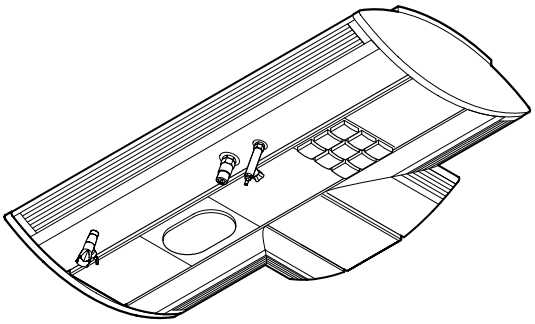
Expansion stage 2

Trunking with panels for electrical supply
Wing edges constructed as lights



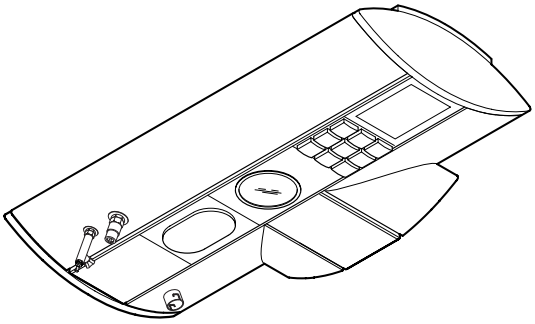
Expansion stage 3

Trunking with panels for electrical supply
Wing edges constructed as lights
Sanitary duct
Air duct



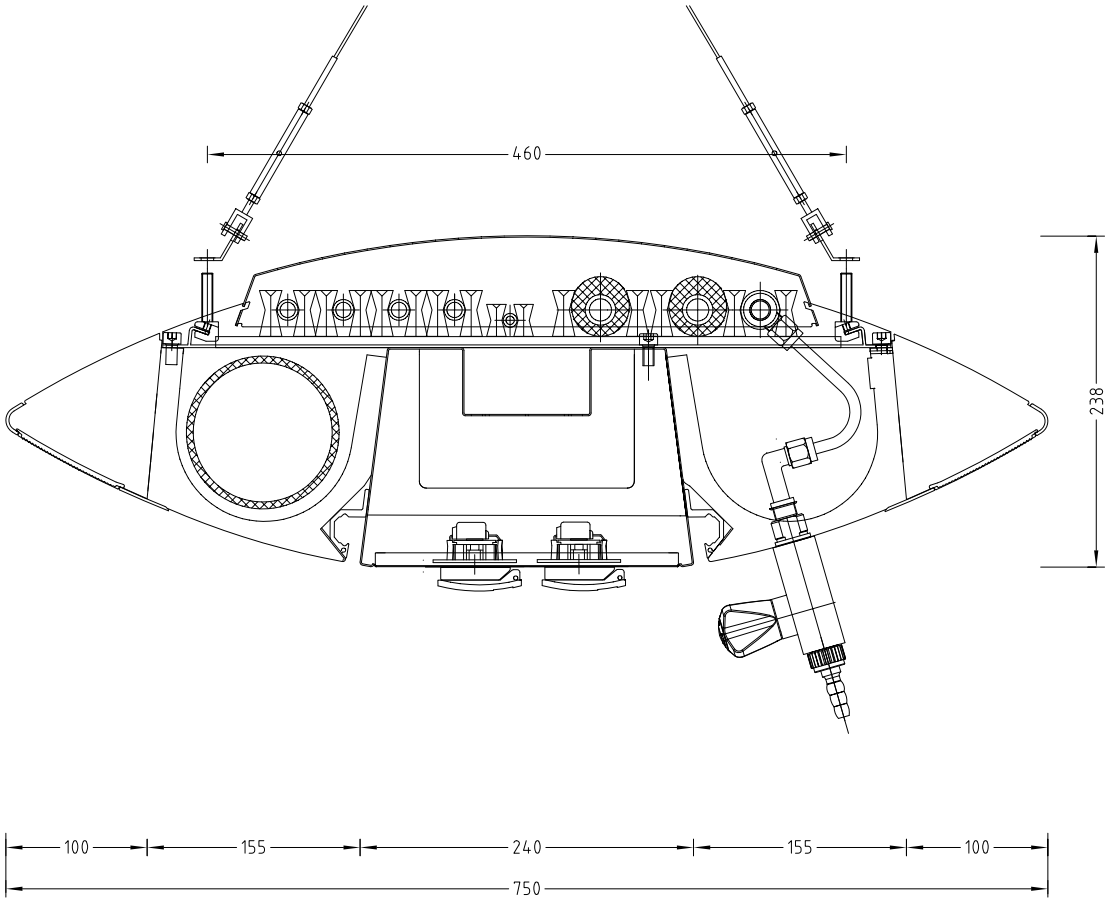
Expansion stage 4

Trunking with panels for electrical supply
Sanitary duct
Air duct
Wing edges constructed as add-on for sanitary and air ducts



Dimensional drawing

4 service wing expansion stages



Service wing

Technical Data

Dimensions				
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)* at expansion stage 1	9.45 *(240)*			
Depth [in] *(mm)* at expansion stage 2	19.53 *(496)*			
Depth [in] *(mm)* at expansion stages 3 and 4	29.53 *(750)*			
Height [in] *(mm)* without dust cover at expansion stages 1 and 2	7.13 *(181)*			
Height [in] *(mm)* without dust cover at expansion stages 3 and 4	7.52 *(191)*			
Service panel outer dimension [in] *(mm)*	11.81x8.66x1.14 *(300x220x29)*			

Relevant features	
Design	Optional incoming-, blade-, T-element Flexible tension for the prevention of vibrations Both sides can be used Dust protection provided by grid element mounted overhead

Electrical engineering	
Electrical supply	Electrical trunking with service panels to supply electricity Optional facilities for telephone, computer, monitor and loud speaker
Lighting	Optional integration of lights in wing edges (direct and indirect lighting) as well as downlight in the electrical trunking
Fuse box	Optional

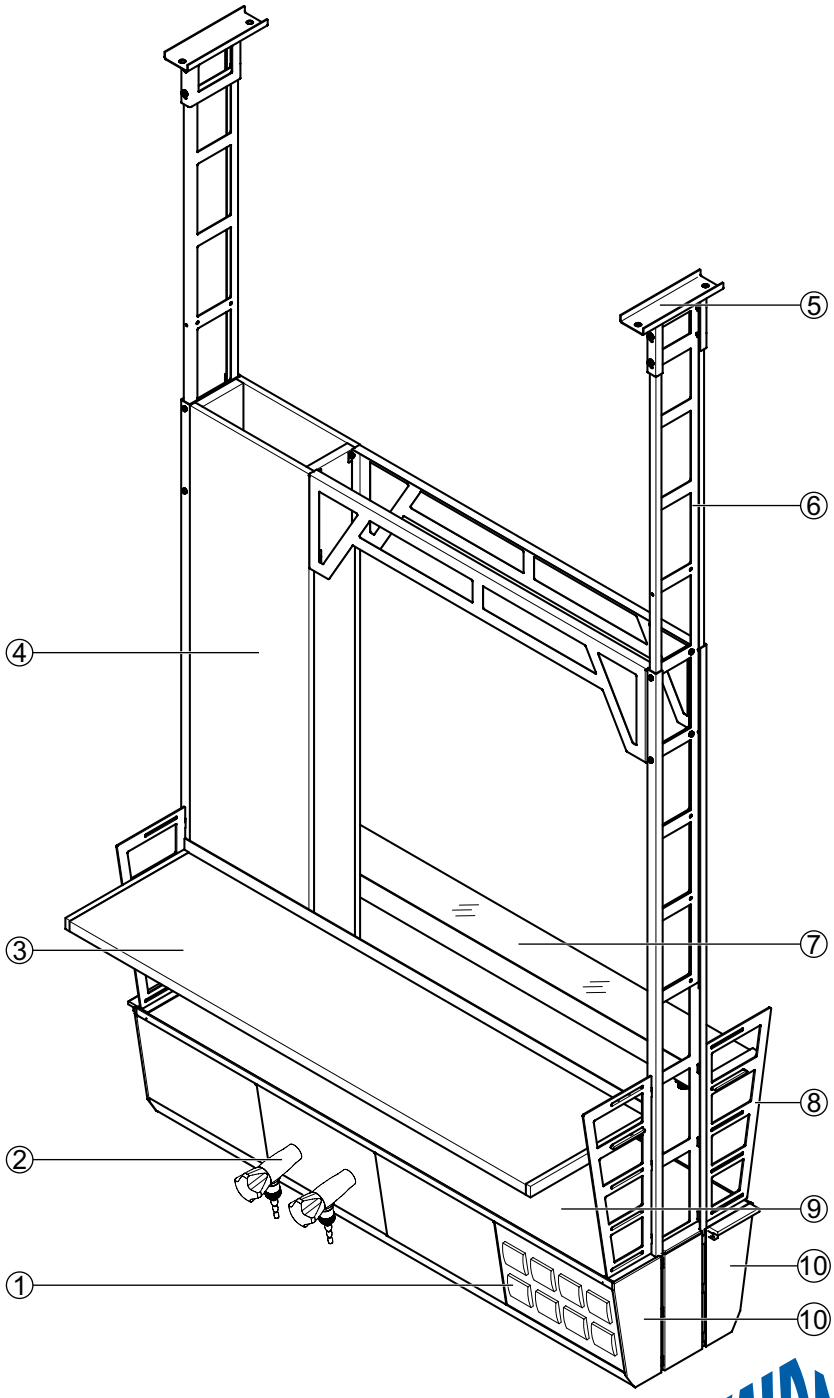
Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Supply lines, ventilation system Optional local extraction system and/or extract air spigot for AeroEM

Suspended service boom

Use

- Services suply via the ceiling for:
  - Laboratory benches under the suspended service boom
  - Laboratory equipment on mobile tables or substructures
  - Floor-mounted laboratory equipment
- Variants for genetic fields
- Modular attachment of service boom add-on parts on the supporting construction such as reagent repositories, instrument shelves, scaffold points, etc.
- Tool-free installation of supplemental service duct add-on parts such as pegboards, monitor arms, pipette holders, paper towel dispensers, universal storage, etc.

Design



1 *Service panel with electric installation*
2 *Service panel for plumbing*
3 *Instrument shelf*
4 *Supply duct*
5 *Ceiling anchor*
6 *Function bracket*
7 *Glass shelf*
8 *Pillars*
9 *Service duct covering*
10 *Service duct*

Suspended service boom

Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)* without side walls	13.78 *(350)*				
Depth [in] *(mm)* with side walls	18.54 *(471)*				
Recommended minimum height [in] *(mm)* of bottom edge suspended service boom to top edge finished floor	68.90 *(1750)*				
Height of supporting construction (up to ceiling height of 157.48 in *(4000 mm)*)	Depending on ceiling height				
Panel width x height [in] *(mm)*	11.81 *(300)* x 7.87 *(200)*				
Reagent repository width x height [in] *(mm)*	Service spine width x 5.91 *(150)*				
Instrument shelf width x height [in] *(mm)*	Service spine width x 11.81 *(300)*				

Load bearing capacity	
Additional max. load bearing capacity, suspended service boom [lb] *(kg)* per grid	66.14 *(30)*
Glass shelf [lb] *(kg)*	44.09 *(20)*
Instrument shelf [lb] *(kg)*	66.14 *(30)*
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*

Relevant features	
Design	Function bracket anchored to the ceiling, attached, for the incorporation of service ducts
Max. number of service panels (per side)	Dependent on width of service duct
Scaffold points ø [in] *(mm)*	0.47 *(12)* to 0.51 *(13)*

Material	
Covering	Solid grade laminate 0.2 in *(5 mm)*

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional

Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Supply lines in supply shaft from above

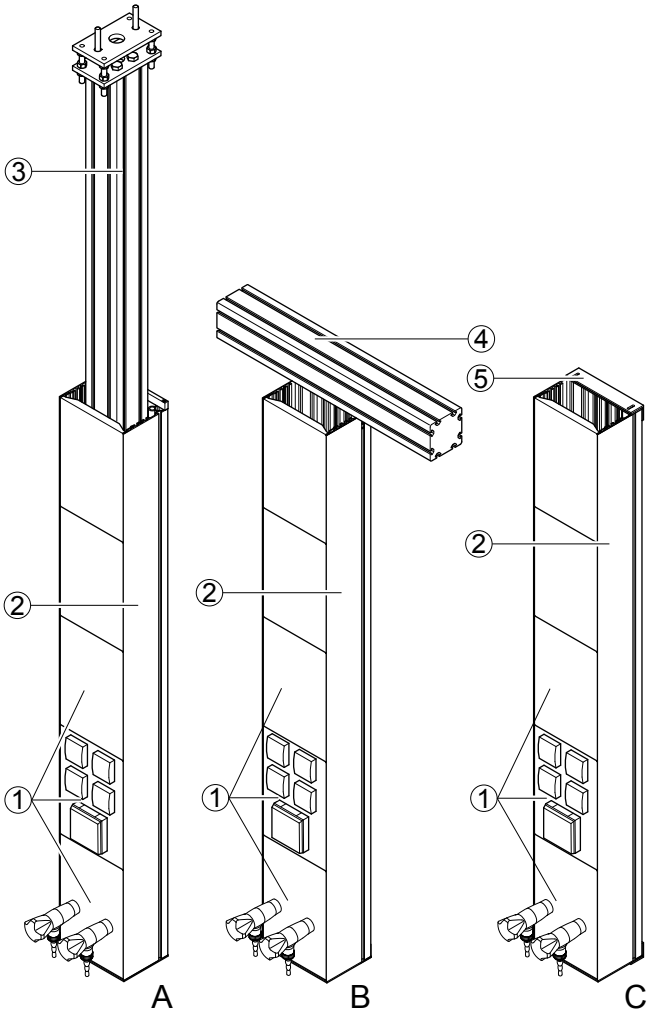
Service column

Use

- Services suply via the ceiling for:
  - Laboratory benches under the service columns
  - Laboratory equipment on mobile tables or substructures
  - Floor-mounted laboratory equipment
- One or two-sided design
- Variants for genetic engineering areas
- Additional storage areas through the connection of service columns with reagent repositories

Design

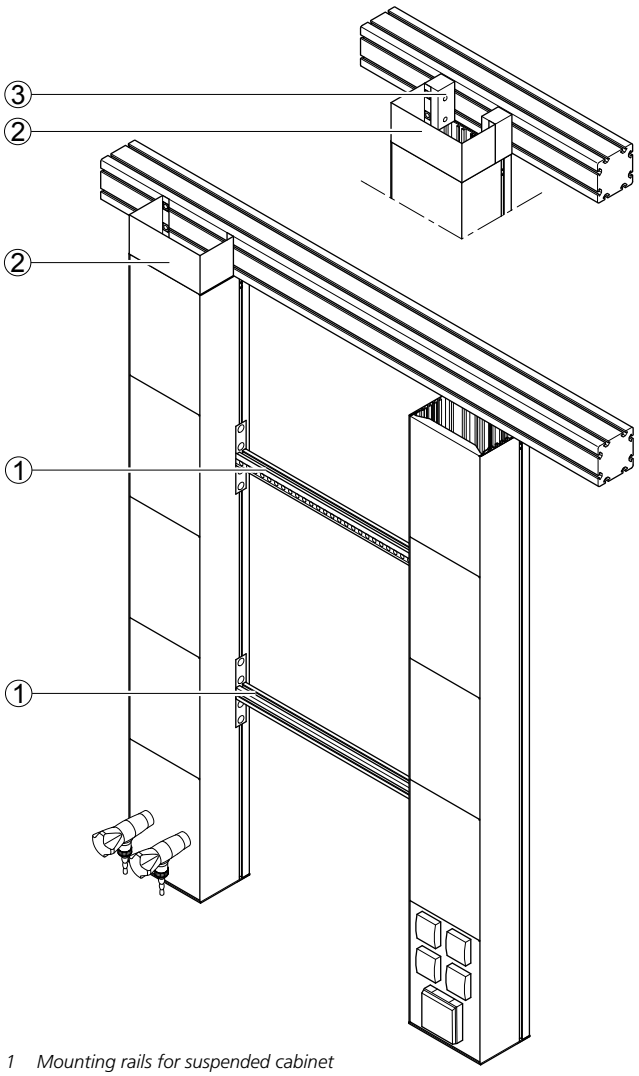
A: Raw ceiling
B: Service ceiling
C: Wall



1 *Service panel with corner valves/ outlets/empty panel*
2 *Single/double-sided service column aluminum profile*
3 *Ceiling console with steel sheet and aluminum profile*
4 *Service ceiling (by client)*
5 *Angle profile for wall mounting*
6 *Service column*

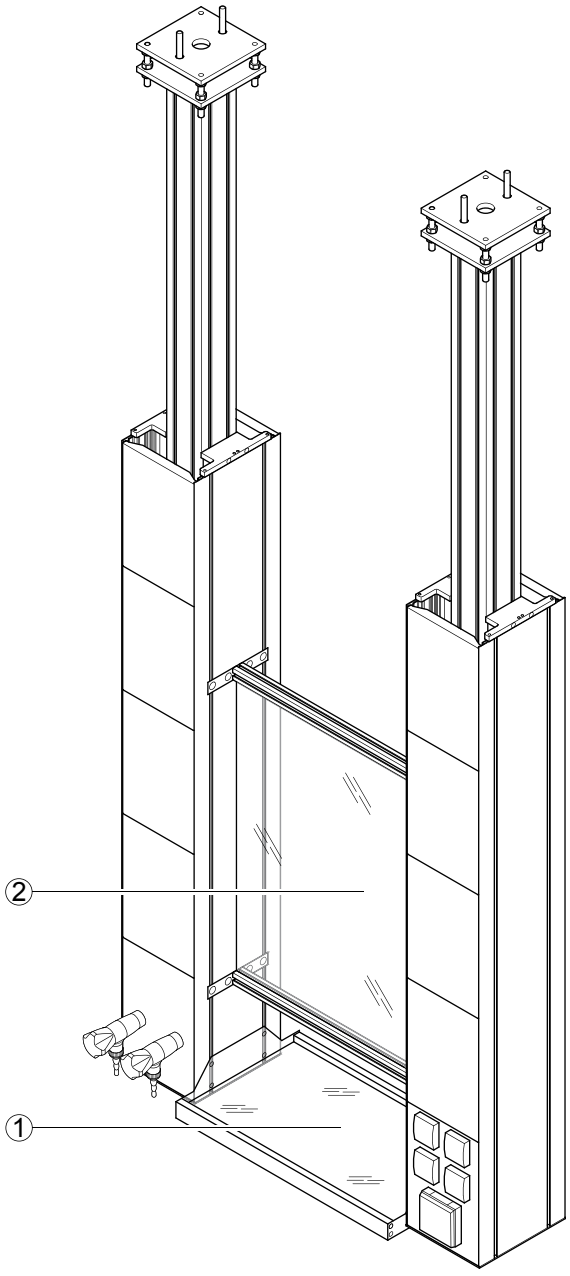
Service column

Two single-sided service columns with storage



1 Mounting rails for suspended cabinet
2 Cover plate (service ceiling mounting)
3 Adapter blocks (service ceiling mounting)

Two double-sided service columns with storage



1 Glass shelf
2 Splash protection

Technical Data

Dimensions			
Width [in] *(mm)*	8.07 *(205)*		
Depth [in] *(mm)* single-sided	5.51 *(140)*		
Depth [in] *(mm)* double-sided	9.45 *(240)*		
Height [in] *(mm)* without C-supporting construction	59.06 *(1500)* + 70.87 *(1800)*		
Height, supporting construction [in] *(mm)* (up to ceiling height of 177.17 in *(4500 mm)*)	Adjusted to the ceiling height		
Panel width x height [in] *(mm)*	7.8 *(200)* x 11.7 *(300)*		
Storage width [in] *(mm)*	24.02 *(610)*	35.83 *(910)*	47.64 *(1210)*
Storage depth [in] *(mm)*	13.78 *(350)*		

Relevant features	
Design	C-shelf anchored to the ceiling for service column, for one or two-sided use, height adjustable or profile attached to the wall, for one-sided use Extendable on one or both sides Service column flange-mounted directly to the aluminium supporting system
Max. number of service panels (per side)	5
Scaffold points ø [in] *(mm)*	0.47 *(12)* to 0.51 *(13)*
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional

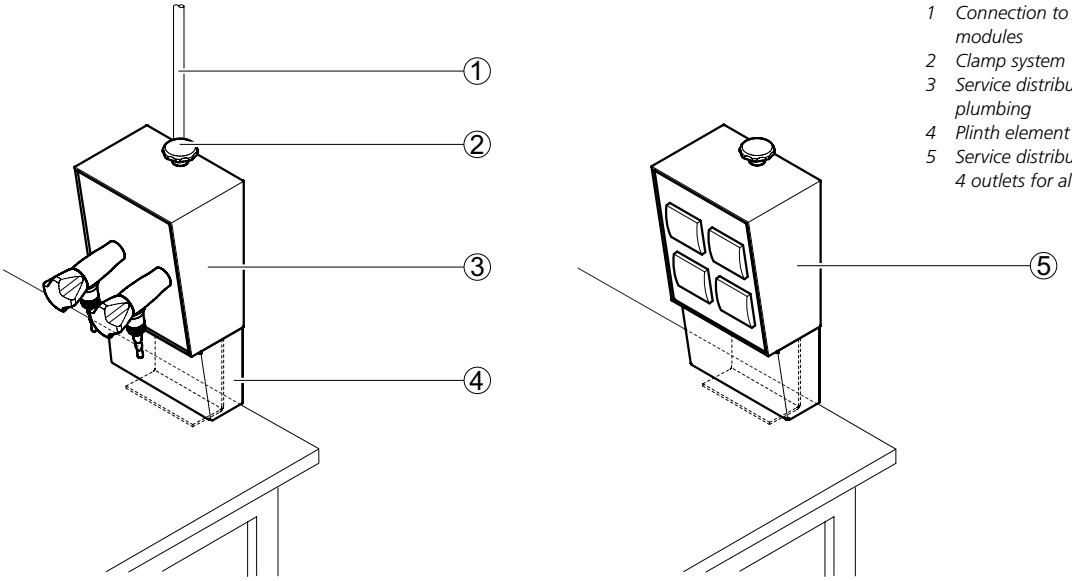
Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Incorporation of supply lines

Service distribution terminal

Use

- Services supply for connection to a laboratory workstation
- Supply of the station via service columns suspended from the ceiling, such as suspended service booms, service columns, service wings, service ceilings, or via a floor-mounted service spine

Design



1 Connection to other service modules
2 Clamp system
3 Service distribution terminal with plumbing
4 Plinth element
5 Service distribution terminal with 4 outlets for alternating current

Technical Data

Dimensions	
Width [in] *(mm)*	6.22 *(158)*
Depth [in] *(mm)*	4.65 *(118)*
Height [in] *(mm)*	8.07 *(205)*
Height including plinth element [in] *(mm)*	12.20 *(310)*
Panel width x height [in] *(mm)*	5.91 *(150)* x 7.87 *(200)*
Clamping gap [in] *(mm)*	0.39 *(10)* - 3.94 *(100)*

Relevant features	
Design	Clamping system for worktop or other supports Services supply via ceiling-mounted service column or service spine Tension relief for pipes between service distribution terminal and service module units through service beams and junctions Cable and hose connected with service modules via plug-in coupling

Electrical engineering	
Electrical supply	Max. 4 power outlets with alternating current in service panels
Max. number of 230 V outlets per panel	4

Sanitary engineering	
Sanitary supply	Various taps and fittings for vacuum, gases or compressed air
Max. number of corner valves per panel	2
Max. number of high purity gas valves per panel	1 or 2 (depending on model and function)

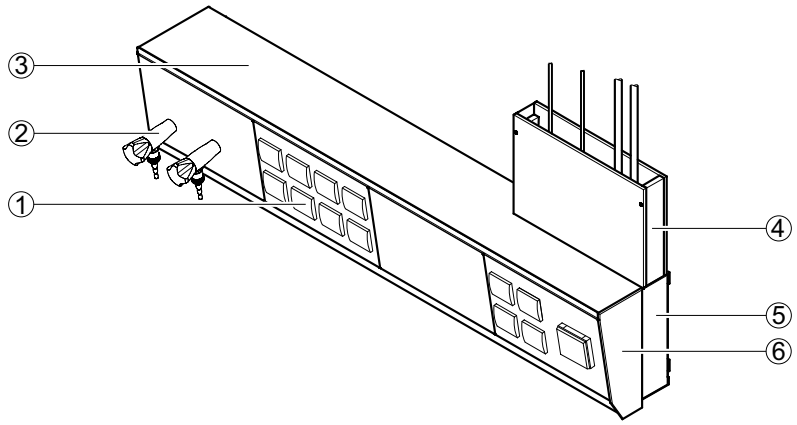
Service wall duct

Use

- Wall-mounted services supply for:
  - Laboratory benches under or in front of the service wall duct
  - Laboratory equipment on mobile tables or underbench constructions
  - Floor-mounted laboratory equipment
- Variants for genetic engineering areas
- Tool-free installation of supplemental service duct add-on parts such as pegboards, monitor arms, pipette holders, paper towel dispensers, universal storage, etc.

Design

1 *Service panel with electric installation*
2 *Service panel for plumbing*
3 *Service wall duct covering*
4 *Service supply from above*
5 *Fastening profile/service channel*
6 *Service duct*



Technical Data

Dimensions	**23.62** *(600)*	**35.43** *(900)*	**47.24** *(1200)*	**59.06** *(1500)*	**70.87** *(1800)*
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800* [1]*)*
Depth [in] *(mm)*	7.24 *(184)*				
Height [in] *(mm)*	9.92 *(252)*				
Front inclination [°]	9				
Panel width x height [in] *(mm)*	11.81 *(300)* x 7.87 *(200)*				

[1] The service wall duct is extendable in increments of 11.81 in *(300 mm)*

Load bearing capacity	
Covering [lb] *(kg)*	44.09 *(20)* per installed grid

Relevant features	
Design	Service duct for wall mounting incl. solution for inside corner
Number of service panels	Dependent on width of service duct

Material	
Covering	Solid grade laminate 0.2 in *(5 mm)*

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional

Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Supply lines in fastening profile

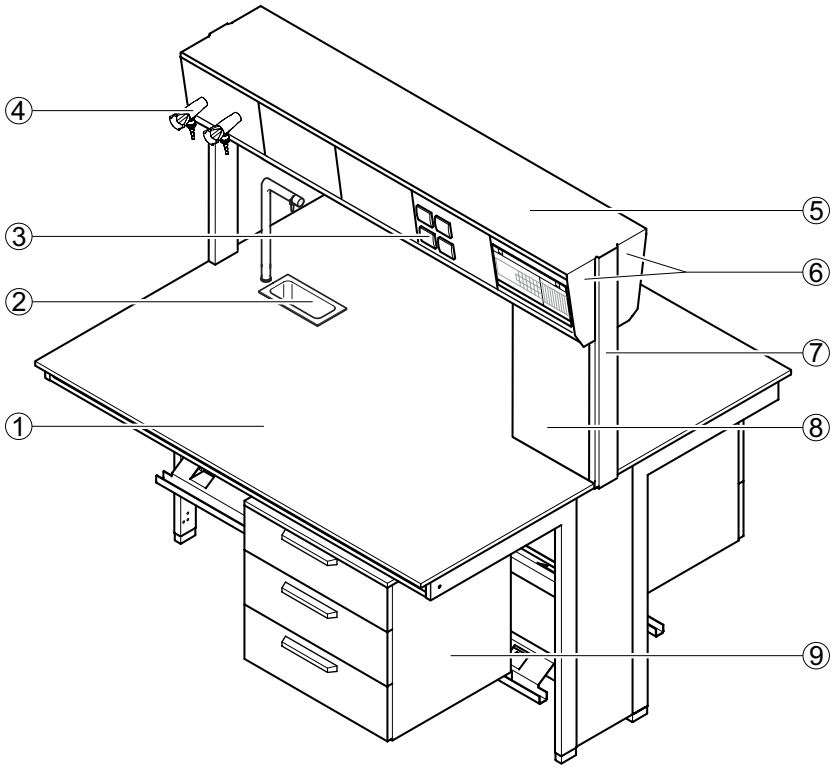
Bench-mounted service outlet

Use

- Services supply for double work benches
- Variants for genetic fields
- Modular attachment of cell add-ons at function stands such as reagent repositories, instrument shelves, suspended cabinets, scaffold points, etc.
- Tool-free installation of supplemental service duct add-on parts such as pegboards, monitor arms, pipette holders, paper towel dispensers, universal storage, etc.
- Not suitable for double work benches where separate work surfaces are required (cf. BGI/GUV-I 850-0)

Design

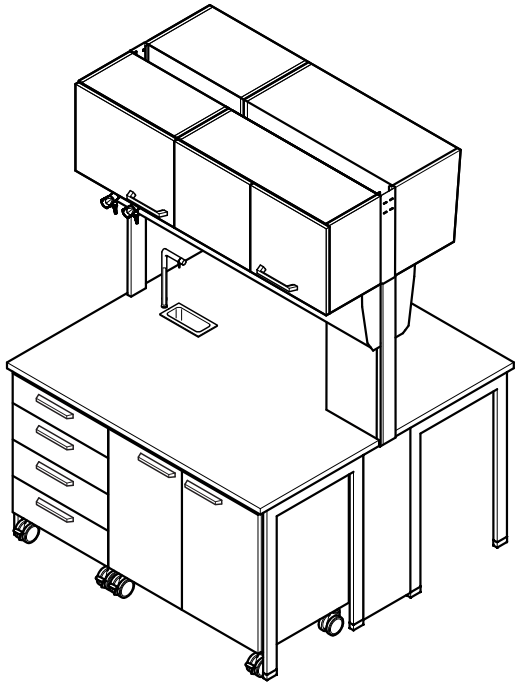
Bench-mounted service outlet with cantilever frame and suspended underbench unit



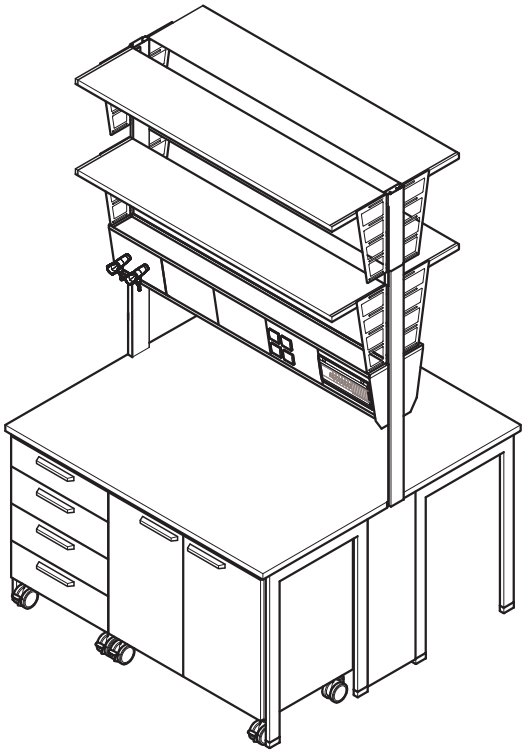
1 Worktop
2 Panel with electric installation
3 Panel with plumbing
4 Bench-attachment covering
5 Service duct
6 Function stands
7 Service supply slot
8 Suspended underbench unit

Bench-mounted service outlet

Bench-mounted service outlet with suspended cabinets, H-frame and underbench units on casters



Bench-mounted service outlet with shelves and underbench units on casters



Bench-mounted service outlet

Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)*	12.20 *(310)*				
Height [in] *(mm)*	63.07 *(1602)*				
Height, opening for working height of 35.43 in *(900 mm)* [in] *(mm)*	17.72 *(450)*				
Height, pillar extension [in] *(mm)* (for suspended cabinet height of 18.11 in *(460 mm)*)	18.19 *(462)*				
Height, pillar extension [in] *(mm)* (for suspended cabinet height of 30.51 in *(760 mm)*)	30.0 *(762)*				
Height, pillar extension [in] *(mm)* (up to ceiling height of 137.8 in *(3500 mm)*)	Depending on ceiling height				
Panel width x height [in] *(mm)*	11.81 *(300)* x 7.87 *(200)*				
Reagent repository width x height [in] *(mm)*	Bench attachment width x 5.91 *(150)*				
Instrument shelf width x height [in] *(mm)*	Bench attachment width x 11.81 *(300)*				

Load bearing capacity	
Reagent repository [lb] *(kg)*	44.09 *(20)*
Instrument shelf [lb] *(kg)*	66.14 *(30)*
Max. load per scaffold point with scaffold rod length 11.81 inch *(300 mm)* [lb] *(kg)*	11.02 *(5)*

Relevant features	
Design	Two-sided service duct as bench attachment with opening above the tabletop
Number of panels	Dependent on width of duct
Scaffold points ø [in] *(mm)*	0.47 *(12)* to 0.51 *(13)*

Material	
Covering	Solid grade laminate 0.2 in *(5 mm)*

Electrical engineering	
Electrical supply	Socket in service panel
Fuse box	Optional

Sanitary engineering	
Sanitary supply	Service panel with taps and fittings for vacuum, gases and/or water Supply lines in bench attachment

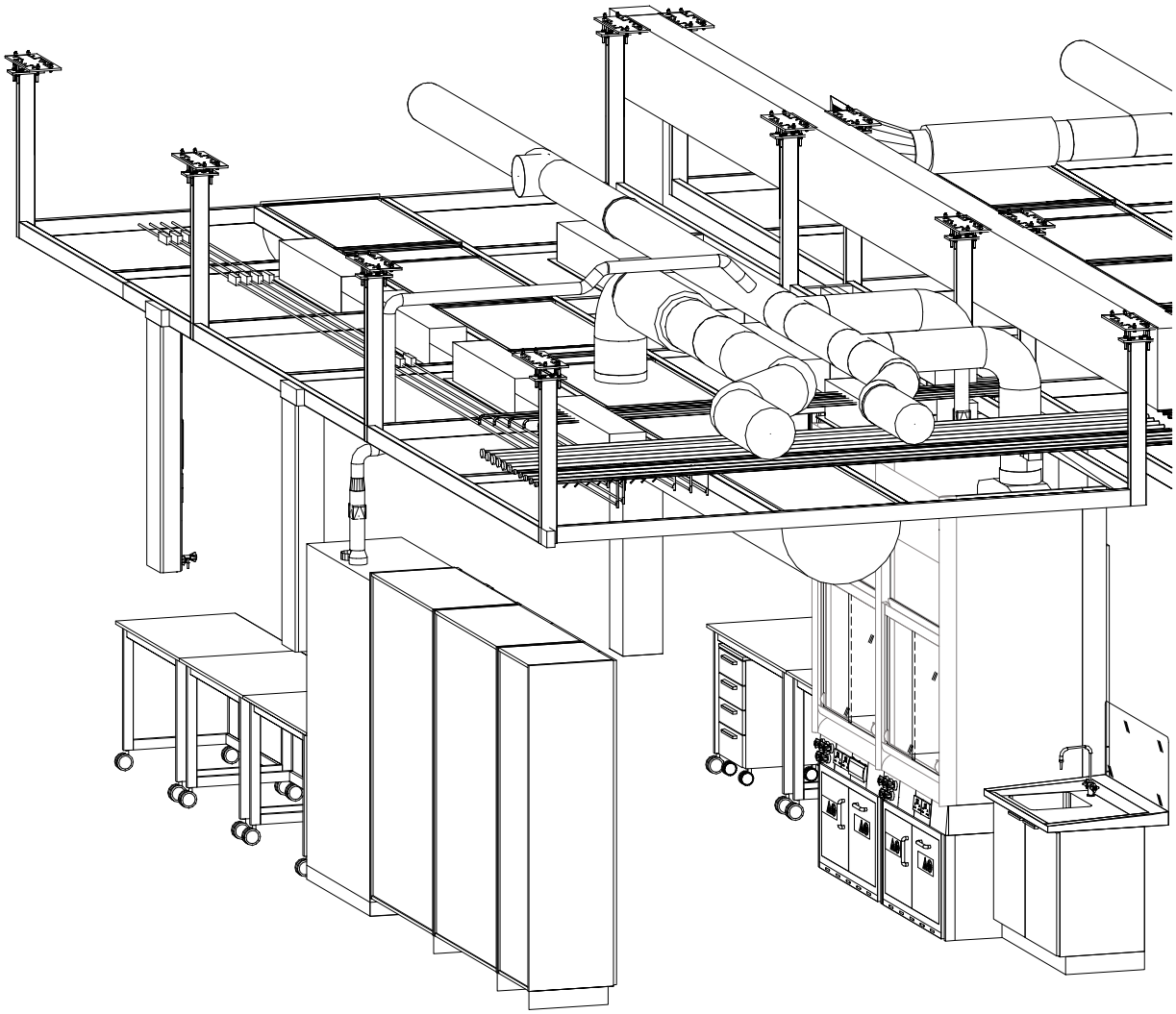
Service ceiling

Use

- Ceiling supply system for laboratories with highly flexible, modular layout of the individual project phases
- Suitable for all types of laboratories, including chemical, analytical, physical
- For laboratories with diverse requirements
- Integration of all mechanical systems trades in the lab room, such as ventilation systems with control, electrical supply, lighting and services supply
- Custom size adjustment to the building grid
- Very short on-site assembly time

Design

Ceiling supply system



Service ceiling

Technical Data

Dimensions	
Width x depth	Adjusted to the building grid
Module width [in] *(mm)*	Suggested 118.11 *(3000)* - 149.61 *(3800)*
Module depth [in] *(mm)*	Suggested 94.49 *(2400)* - 472.44 *(12000)*
Suggested height [in] *(mm)* for suspension unit (bottom edge of service ceiling)	112.2 *(2850)*

Load bearing capacity	
Maximum load bearing capacity [lbs/ft²] *(kg/m²)*	102.5 *(500)*
Aluminum profile [in] *(mm)*	1.97 *(50)* x 1.97 *(50)* 3.94 *(100)* x 1.97 *(50)* 3.94 *(100)* x 3.94 *(100)*

Relevant features	
Design	Rectangular module grid from aluminum profile Modules carry service lines, electrical trunking, air supply duct, extract air duct and lighting system as well as service modules (e.g. service pillars), laboratory equipment Frictional connection for partition wall Spherical joint suspension units make the adjustment of engineering tolerance possible Assembly dependent on the condition of the ceiling

Electrical engineering	
Electrical supply	Various power supply concepts possible, e. g. bus bar systems with outlet boxes Bus bar systems with 32 A or 64 A Degree of protection IP 55
Cabling	Cable duct to the extra power and data route
Fuse box	Integrated into bus bar or service module

Sanitary engineering	
Supply line	Intersection-free Simple retrofitting of all services is possible With any number of terminal blocks for vacuum, gases and water
Terminal blocks	2, 3 or 4 outlet couplings Connections lockable under pressure (except for vacuum) via exposed pipes
Cooling	Optional

Ventilation technology	
Supply air	Various aeration systems, e.g. laminar flow, wavedrall, textile-based, etc. Draft-proof Excellent air mixing
Extract air	Extract air duct with interfaces for, among other things, fume hoods (extract air spigot Ø 9.84 in *(250 mm)* and Ø 3.54 in *(90 mm)*) Elevated on ceiling grid Optional with room extract air spigot
Sound attenuator module	Optional
Filter module	Optional
Airflow damper	Optional
VAV module	Optional individual VAV for each spacial axis with inflow zone, airflow damper, heat exchanger and sound attenuator
Room control	Optional for supply and extract air, temperature and room pressure

Lighting technology	
Light-band system	Various kinds of optics
	Min. 500 Lux
Lighting in the supply air system	Also possible in a textile-based supply air system as an option

3 Laboratory benches and sinks

In our new ***SCALA*** laboratory furniture system, laboratory benches have primary importance.

We create flexibility in the laboratory by keeping the supply and disposal services consistenly self-contained.

Our work benches are equipable with individually selectable tabletop materials in all models – for a variety of applications in each area of the laboratory.

Our laboratory benches feature a high level of stability, straightforward design and attractive appearance.

In the laboratory, access to water has to meet a variety of needs.

Amply dimensioned sink modules, integrated sinks, and drip cups, built into service spines or fume hoods, are integrated into the laboratory environment as needed.

Where flexibility is sought, our mobile units fit the bill – under the service wings, with suspended service booms, service modules, and service ceilings – for quick changes of location in the laboratory.

3 Laboratory benches and sinks

Our benches fit many applications.

We produce our new bench frames out of precision rectangular stainless steel with reinforced cross-sections. Thus our benches handle the strain of 41 lbs/ft² *(200 kg/m²)* without any problem. The thorougly homogeneous powder coating, which protects our bench frames from outside influences, results in a flawless appearance.

The same is true for our work surfaces. You can select from our wide spectrum of materials according to your desires.

Bench frames for a variety of needs

You can choose from our C-frame, H-frame and cantilever frame work benches, to suit your needs and purposes.

The greatest variety of grid frames available

For optimal implementation in the workplace, we offer a variety of frame widths.

Improved levelling

Our new, flush height-adjustable feet for C-frames and H-frames provide up to 0.91 in *(23 mm)* travel distance – optionally to 1.97 in *(50 mm)*. Easily accessible and adjustable – for a completely safe status.

For easier cleaning

The new levelling keeps the C-frame approx. 1.18 in *(30 mm)* over the floor. It is formed in such a way that cleaning at the floor level is quite easy.

H-frames
provide great stability for add-on tables, mobile tables and analysis tables for seated or standing work.

Underbench cabinets can be mobile, suspended and laterally adjusted independent of a grid. Knee holes are therefore possible anywhere.

C-frames
are extremely stable and can be loaded with 41 lbs/ft² *(200 kg/m²)*. They provide great knee and leg room for mobile and suspended underbench units.

Cantilever frames
provide the greatest leg room and lightest visual impact. They are attached to service spines or directly to walls via their cantilever bracket design.

Movable suspended underbench units
Our new guiding rail allows for completely framed sliding of suspended underbench units with cantilever frames or C-frames.

Movable knee-hole cover panels
In benches without underbench units, we place movable and height-adjustable knee-hole cover panels. Thus, installations routed below the rear side of the table can be concealed.

Other useful helpers
Add-on tables, swings and round tables are also combinable to new situations as independent objects – entirely as needed. Our height-adjustable table can be positioned from 27.55 *(700)* to 37.4 in *(950 mm)*.

Our multi-purpose rack
The rack is ideally equipped for fitting equipment, AquaEl and others. The stable shelves are height-adjustable and the casters enable quick re-positioning.

3 Laboratory benches and sinks

There are no limits on the use of sinks, sink modules and cup sinks in the laboratory. In new design, adjusted to our ***SCALA*** laboratory furniture program and manufactured out of chosen materials, our sink elements can be integrated wherever they are needed. Materials like stoneware, polypropylene, stainless steel and epoxy resin are extremely durable.

Sink modules made of stoneware

Our sink modules can be used as end units, but can also be fitted inline with service spines. The module is made of high-strength fired, glazed stoneware in widths of 47.24 in *(1200 mm)* and is made of one jointless piece. Our sink modules are mounted supporting plinth units that can be fitted with drawers, hinged or tilting doors as desired.

Sink modules and drip cups

Sink modules, made of stoneware or polypropylene, are integrated in the service spine above the bench levels. Drip cups are inserted directly into the worktops – made of stoneware, polypropylene, epoxy resin or stainless steel.

Laboratory sink with built-in basin

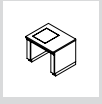
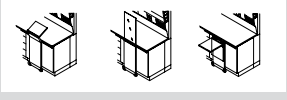
As permanently installed parts of the laboratory furninture, sinks are either placed against a service spine or a wall. Sinks come in various designs, and are combinable with a wide variety of worktop materials.

Mobile sinks and AquaEl

The mobile sinks are equipped with casters, and they supplement the flexibility of the laboratory in conjunction with the service wing and the service ceiling. Using flexible pipes, the connection of the mobile sinks leads directly to the service wing or the service ceiling system. The AquaEl is a plug-in compact system that can be used for straightforward supply and disposal of water from service modules. Here, a pump removes the wastewater over the respective system.

Laboratory benches
Material/frame combinations

Combination of worktop materials and bench frames

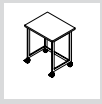
Worktop material	Melamine resin coating	Postformed	Solid grade laminate	Solid grade laminate Trespa TopLab+	Polypropylene
H-frame 	x	x	x	x	x
C-frame 	x	x	x	x	x
Cantilever frame 	x	x	x	x	x
Mobile bench frames 	x	x	x	x	x
H-frame for low level fume 	–	–	–	–	x [4]
Balance table 	x	x	–	–	–
Swing 	x [1]	–	–	–	–
Round table 	x [1]	–	–	–	–
Rack 	x [2]	–	–	–	–
Sliding elements 	x [3]	–	–	–	–

[1] Walnut decor or light gray

[2] White shelves, Sekretär boards walnut decor

[3] Only walnut decor

[4] Material with marine edging

Worktop material	Epoxy	Stainless steel	Stoneware	Compound worktop - stoneware	Glass
H-frame 	x	x	x	x	x
C-frame 	x	x	x	x	x
Cantilever frame 	x	x	x	x	x
Mobile bench frames 	x	x	x	x	x
H-frame for low level fume 	x [1)]	x [1)]	x [1)]	–	–

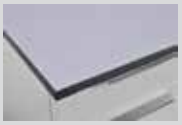
[1)] Material with marine edging

Laboratory benches
Worktop material

Melamine resin coating/postforming	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulfuric acid
Advantage	Flat
Disadvantage	Joints sensitive to moisture Medium chemical resistance
Use	Mobile tables, add-on tables, window benches Instrument benches and laboratory benches in the dry area Cannot be used in moist or wet area
Weight [lbs/ft²] *(kg/m²)*	4 *(19.6)*
Total thickness [in] *(mm)*	1.18 *(30)*
	Light gray NCS S 3005 R80B

Polypropylene	
Critical substances	Hydrocarbons Citric acid Oxalic acid Carbon tetrachloride Diesel oil
Damaging substances	Ozone Concentrated nitric acid Chloroform Gas Benzol
Advantage	Jointless Flat Light High chemical resistance to acids and many solvents Easy to dispose of Less glass breakage
Disadvantage	Soft surface sensitive to scratches Heat-sensitive
Use	Areas with high chemical resistance Working with hydrofluoric acid Radio-isotope area Areas in which the lack of joints is important
Weight [lbs/ft²] (kg/m²)	4.2 (20.3)
Total thickness [in] (mm) Increased edge [in] (mm)	1.18 (30) 0.28 (7)
	Light gray NCS S 3005 R80B

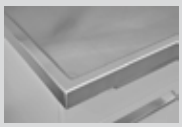
Laboratory benches
Worktop material

Solid grade laminate	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulfuric acid
Advantage	Moisture-resistant Flat Easy to dispose of
Disadvantage	Reduced coating thickness
Use	Wet rooms Physical laboratories Benches with average load
Weight [lbs/ft²] (kg/m²)	5.4 (26.4)
Total thickness [in] (mm)	0.75 (19)
	Light gray NCS S 3005 R80B

Solid grade laminate Trespa TopLab+	
Critical substances	Acids in concentrations > 10 %
Damaging substances	Concentrated hydrochloric acids Nitric acid Heated sulfuric acid
Advantage	Antibacterial Highly compressed surface structure High chemical resistance Moisture-resistant Flat Easy to dispose of
Disadvantage	Reduced coating thickness
Use	Chemical, micro-biological, genetic engineering labatories
Weight [lbs/ft²] (kg/m²)	5.4 (26.4)
Total thickness [in] (mm)	0.79 (20)
	Glacier blue Similar to NCS 1010 R80B

Laboratory benches
Worktop material

Epoxy	
Critical substances	Various solvents Diluted acids
Damaging substances	Hydrofluoric acid Concentrated warm mineral acids
Advantage	Jointless 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 types
Weight [lbs/ft²] *(kg/m²)*	6.6 *(32)*
Total thickness [in] *(mm)*	0.75 *(19)*
Increased edge [in] *(mm)*	0.28 *(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 Sulfuric acid
Advantage	Jointless 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 [lbs/ft²] *(kg/m²)*	5.6 *(27.5)*
Total thickness [in] *(mm)*	1.18 *(30)*
Increased edge [in] *(mm)*	0.28 *(7)*
	

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 [lbs/ft²] *(kg/m²)*	11.5 *(56)*
Total thickness [in] *(mm)* Increased edge [in] *(mm)*	1.02 *(26)* 0.28 *(7)*
	Light gray NCS S 3005 R80B

Compound worktop - stoneware	
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 high chemical exposure
Weight [lbs/ft²] *(kg/m²)*	8.2 *(40)*
Total thickness [in] *(mm)* Increased edge (epoxy resin) [in] *(mm)*	1.18 *(30)* 0.28 *(7)*
	White Similar to NCS S 0300-N

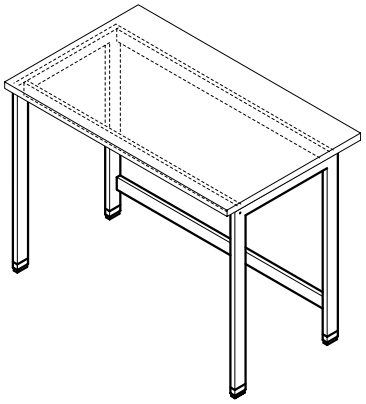
Service modules
Worktop material

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 [lbs/ft²] (kg/m²)	7.8 (38)
Total thickness [in] (mm)	1.18 (30)
	Light green NCS S 2010 G10Y

Use

- Bench frame with worktops made of various materials as work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)*			23.62 *(600)* 29.53 *(750)* 35.43 *(900)*		
Working height [in] *(mm)*			29.53 *(750)* 35.43 *(900)*		

Load bearing capacity	
H-frame [lbs/ft²] *(kg/m²)*	41 *(200)*

Relevant features	
Height-adjustable feet	Individually adjustable

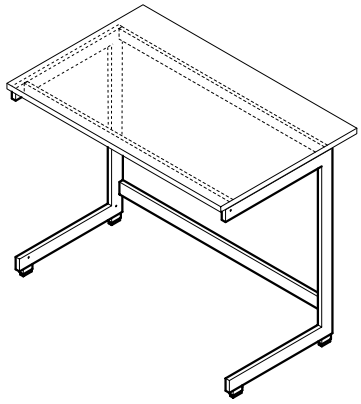
Material	
Bench frame [in] *(mm)*	Steel section 2.34 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations
Height-adjustable feet	Plastic

Laboratory benches
Bench with C-frame

Use

- Bench frame with worktops made of varied materials as work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)*			23.62 *(600)* 29.53 *(750)* 35.43 *(900)*		
Working height [in] *(mm)*			29.53 *(750)* 35.43 *(900)*		

Load bearing capacity	
C-Frame [lbs/ft²] *(kg/m²)*	41 *(200)*

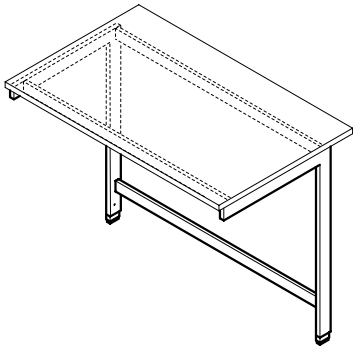
Relevant features	
Design	For suspended and caster-mounted underbench units, easily movable
Height-adjustable feet	Individually adjustable

Material	
Bench frame [in] *(mm)*	Steel section 2.76 *(70)* / 0.98 *(25)* / 0.12 *(3)*
Worktop	See table Material/frame combinations
Height-adjustable feet	Plastic

Use

- Bench frame with worktops made of varied materials as work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations
- For permanent installation on a wall or a wall-mounted service spine
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)*	29.53 *(750)* 35.43 *(900)*				
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*				

Load bearing capacity	
For wall installation [lbs/ft²] *(kg/m²)*	41 *(200)*

Relevant features	
Design	For suspended and caster-mounted underbench units, easily movable
Height-adjustable feet	Individually adjustable

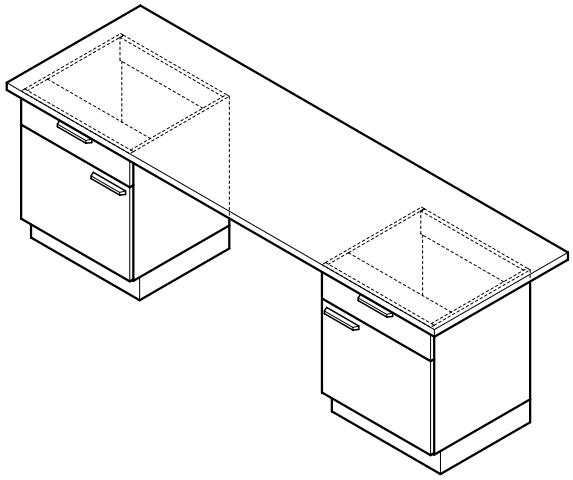
Material	
Bench frame [in] *(mm)*	Steel section 2.76 *(70)* / 0.98 *(25)* / 0.12 in *(3)*
Worktop	See table Material/frame combinations
Height-adjustable feet	Plastic

Laboratory benches
Bench with supporting underbench unit

Use

- Self-supporting underbench units on plinth and worktop made of varied materials as work and storage area for laboratory work
- Supporting structure for chemical analysis devices and installations
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions	
Total width [in] *(mm)*	Max. 118.11 *(3000)*
Width of underbench unit [in] *(mm)*	17.72 *(450)* 23.62 *(600)* 35.43 *(900)* 47.24 *(1200)*
Total depth [in] *(mm)*	29.53 *(750)* 35.43 *(900)*
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*

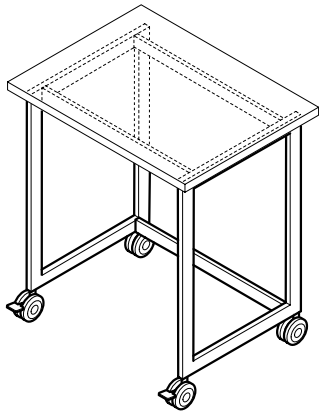
Material	
Worktop	See table Material/frame combinations

Load bearing capacity	
Table [lbs/ft²] *(kg/m²)*	7.87 *(200)*

Use

- Caster-mounted bench frame with worktops made of varied materials as work and storage areas for laboratory work
- Movable supporting structure for chemical analysis devices and installations
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions			
Width [in] *(mm)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)*	23.62 *(600)* 29.53 *(750)* 35.43 *(900)*		
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*		

Load bearing capacity	
Mobile table [lb] *(kg)*	330 *(150)*
Each heavy duty caster [lb] *(kg)*	242 *(110)*

Relevant features	
Heavy-duty casters	4, 2 of which are lockable (lockable casters and steering axle)
Extendable shelf	Optional
Shelf and underbench unit	Optional

Material	
Bench frame [in] *(mm)*	Steel section 2.36 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations

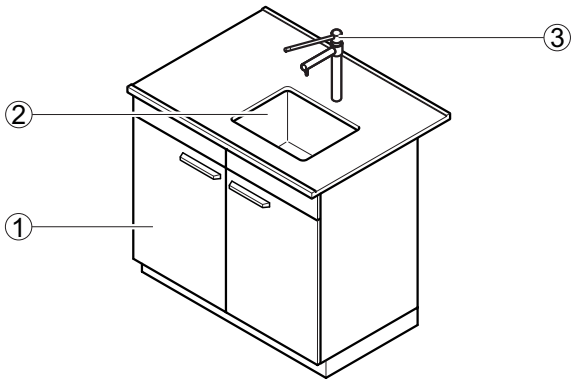
Laboratory sinks
Laboratory sink

Use

- Water supply and disposal
- For cleaning equipment
- For containing large volumes of water
- Not to be used for disposal of chemicals

Design

1 Underbench unit
2 Sink
3 Fitting



Technical Data

Material Worktop	Material Sink	Sink dimensions width x depth x height [in] *(mm)*	Mode of installation
Stoneware	Stoneware	15.75 *(400)* x 15.75 *(400)* x 9.84 *(250)* 19.69 *(500)* x 15.75 *(400)* x 9.84 *(250)*	Sink fitted flush in the worktop
Melamine resin coating, laminate, Trespa Toplab+, glass	Polypropylene	12.6 *(320)* x 12.6 *(320)* x 7.87 *(200)* 15.75 *(400)* x 15.75 *(400)* x 9.84 *(250)* 19.69 *(500)* x 15.75 *(400)* x 9.84 *(250)*	Sink with raised edge inserted into the worktop from above
Melamine resin coating, laminate, Trespa Toplab+, glass	Stainless steel	13.39 *(340)* x 14.57 *(370)* x 5.91 *(150)* 19.69 *(500)* x 15.75 *(400)* x 9.84 *(250)*	Sink with raised edge inserted into the worktop from above
Polypropylene	Polypropylene	15.16 *(385)* x 15.16 *(385)* x 9.84 *(250)* 19.09 *(485)* x 15.16 *(385)* x 9.84 *(250)*	Sink attached to the worktop from below and welded
Stainless steel	Stainless steel	15.75 *(400)* x 15.75 *(400)* x 9.84 *(250)* 19.69 *(500)* x 15.75 *(400)* x 9.84 *(250)*	Sinks fitted flush in the worktop
Compound worktop - stoneware	Stoneware	14.96 *(380)* x 14.96 *(380)* x 9.84 *(250)* 20.87 *(530)* x 14.96 *(380)* x 9.84 *(250)*	Sink fitted flush in the worktop
Epoxy	Epoxy	15.98 *(406)* x 12.01 *(305)* x 7.99 *(203)* 15.98 *(406)* x 15.98 *(406)* x 7.48 *(190)* 18.7 *(475)* x 14.96 *(380)* x 10.98 *(279)*	Sink fitted flush in the worktop

Dimensions					
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth [in] *(mm)*			23.62 *(600)*[1)] 26.57 *(675)*[1)] 27.76 *(705)*[1)] 29.53 *(750)* 32.48 *(825)* 33.67 *(855)* 35.43 *(900)*		
Height [in] *(mm)*			35.43 *(900)*		

[1)] If necessary, fitting positioned laterally next to the sink

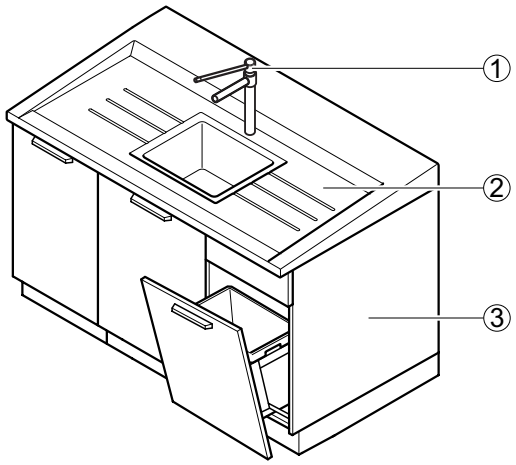
Sanitary engineering	
Water connection	Fixed connection
Waste water connection	Fixed conneciton with siphon
Water fitting	Optional bench-mounted service valve
Eye wash	Optional

Laboratory sink with sink module

Use

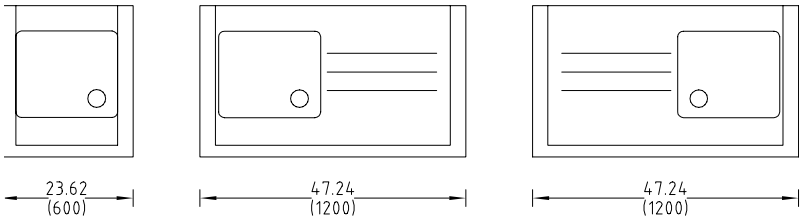
- Water supply and disposal
- For cleaning equipment
- For containing large volumes of water
- For installing on specialized underbench units
- Not to be used for disposal of chemicals

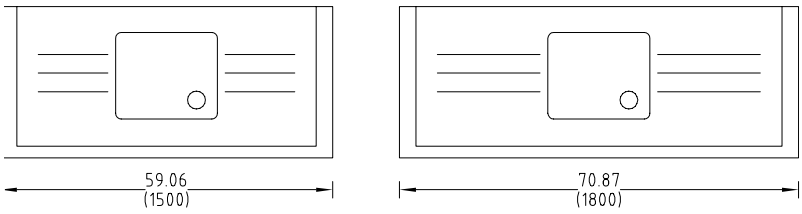
Design



1 Fitting
2 Sink module
3 Underbench unit (3 parts)

Variants





Technical Data

Laboratory sinks
Laboratory sink with sink module

Dimensions				
Width, sink module [in] *(mm)*	23.62 *(600)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*
Depth, sink module for wall bench with service spine [in] *(mm)*	26.57 *(675)* or 32.48 *(825)*			
Depth, sink module for double bench with service spine [in] *(mm)*	27.76 *(705)* or 33.66 *(855)*			
Depth, sink module in front of building wall [in] *(mm)*	29.92 *(760)* or 35.83 *(910)*			
Depth, sink module as an end sink [in] *(mm)*	–		28.74 *(730)*	
Overall height, sink module with underbench unit [in] *(mm)*	front 35.83 *(910)* to 37.40 *(950)* rear			
Sink dimensions, width x depth x height [in] *(mm)*	18.11 *(460)* x 15.35 *(390)* x 9.84 *(250)*			
Height, edge of sink [in] *(mm)*	front 0.79 *(20)* to 1.97 *(50)* rear			

Material	
Sink module	Stoneware

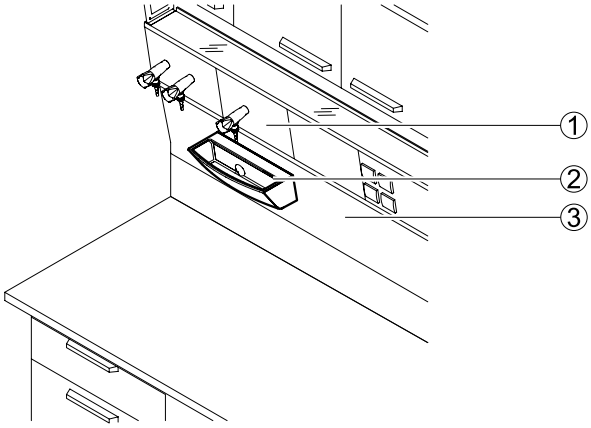
Relevant features	
Design	Self-supporting, integrally moulded draining area Marine edging
Modular layout	Various underbench units possible as front-end sink with specialized underbench unit

Sanitary engineering	
Water connection	Fixed connection
Waste water connection	Fixed conneciton with siphon
Water fitting	Bench-mounted fitting optional
Eye wash	Optional

Use

- Water supply and disposal
- For cleaning equipment
- Drip collector under water fittings for containing small volumes of water
- Not to be used for disposal of chemicals

Design



1 *Sanitary panel with fitting*
2 *Drip cup*
3 *Front filler panel of the service spine*

Technical Data

Dimensions	
Width [in] *(mm)*	11.57 *(294)*
Depth [in] *(mm)*	5.2 *(132)*
Height [in] *(mm)*	4.41 *(112)*
Sink dimensions width x depth x height [in] *(mm)*	10.63 *(270)* x 3.35 *(85)* x 3.15 *(80)*

Material	
Sink module	Stoneware Polypropylene

Relevant features	
Design	Attached to the front filler panel of the service spine

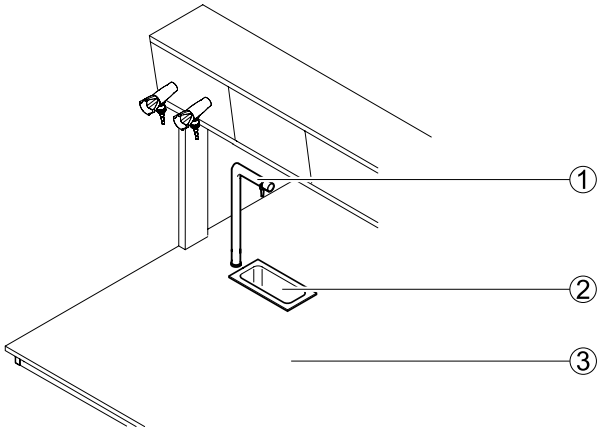
Sanitary engineering	
Water connection	Fixed connection
Waste water connection	Fixed conneciton with siphon
Water fitting	Optional spine fitting

Laboratory sinks
Drip cup in worktop

Use

- Water supply and disposal
- For cleaning equipment
- Drip collector under water fittings for containing small volumes of water
- Not to be used for disposal of chemicals

Design



1 Fitting
2 Drip cup
3 Worktop

Technical Data

Dimensions	
Width x depth [in] *(mm)*	11.61 *(295)* x 5.71 *(145)*
Height [in] *(mm)*	4.92 *(125)* 5.51 *(140)*
Sink dimensions width x depth x height [in] *(mm)*	9.84 *(250)* x 3.94 *(100)* x 5.91 *(150)*

Material drip cup	**Material worktop**
Stoneware	Stoneware, compound worktop - stoneware
Polypropylene	Polypropylene, melamine resin coating, glass, laminate, Trespa Toplab+
Stainless steel	Stainless steel, melamine resin coating, glass, laminate, Trespa Toplab+
Epoxy	Epoxy

Relevant features	
Design	Fastened to the worktop from below or above

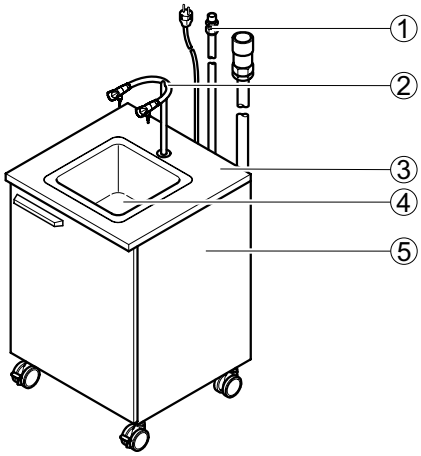
Sanitary engineering	
Water connection	Fixed connection
Waste water connection	Fixed conneciton with siphon
Water fitting	Standard fitting optional

Use

- Mobile supply and disposal of water and gas
- For cleaning equipment at any location
- Not to be used for disposal of chemicals

Design

1 *Connecting pipes*
2 *Fitting with two cold water outlets*
3 *Worktop*
4 *Sink*
5 *Underbench unit on casters*



Technical Data

Dimensions	
Width [in] *(mm)*	23.82 *(605)*
Depth [in] *(mm)*	23.62 *(600)*
Height without fittings [in] *(mm)*	35.71 *(907)*
Sink dimensions width x depth x height [in] *(mm)*	12.6 *(320)* x 12.6 *(320)* x 7.87 *(200)*
Height of casters [in] *(mm)*	4.33 *(110)*
Length of inflow and outflow pipes [in] *(mm)*	98.43 *(2500)*
Length of connecting pipes [in] *(mm)*	98.43 *(2500)*

Material	
Worktop/drip cups	Melamine resin coating/polypropylene

Load capacity	
Each caster [lb] *(kg)*	154.32 *(70)*

Relevant features	
Design	Mounted on underbench unit on casters with hinged doors Attached to the worktop from above Pipes routed out at the rear of the underbench unit Drainage pumping system in underbench unit Disconnection of water intake in case of power outage

Electrical engineering	
Electrical power supply [V]	230

Sanitary engineering	
Water connection	Flexible with male coupling
Waste water connection	Flexible with male coupling
Gas connection	Optionally flexible with male coupling
Water fitting	Standard fitting
Gas fitting	Optional standard fitting in combination with water fitting
Mixing tap	Optional additional flexible water fitting

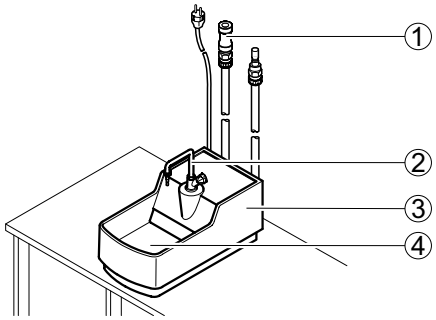
Laboratory sinks
AquaEl

Use

- Mobile supply and disposal of water and gas
- For cleaning equipment at the work station, or at any mobile or stationary laboratory work station
- Not to be used for disposal of chemicals

Design

1 *Connecting pipes*
2 *Fitting for water outlet*
3 *Housing with pump*
4 *Sink*



Technical Data

Dimensions	
Width x depth x height (without fittings) [in] *(mm)*	12.48 *(317)* x 23.03 *(585)* x 10.55 *(268)*
Sink width x depth x height [in] *(mm)*	10.24 *(260)* x 10.83 *(275)* x 4.13 *(105)*
Length of inflow and outflow pipes [in] *(mm)*	59.06 *(1500)*
Length of connecting pipes [in] *(mm)*	59.06 *(1500)*

Material	
Material	GRP coated

Weight	
Weight without fittings [lb] *(kg)*	30.86 *(14)*

Relevant features	
Design	Ready to plug-in compact system with flexible pipes Waste water lifting unit integrated into the housing Disconnection of water intake in case of power outage

Electrical engineering	
Electrical power supply [V]	230

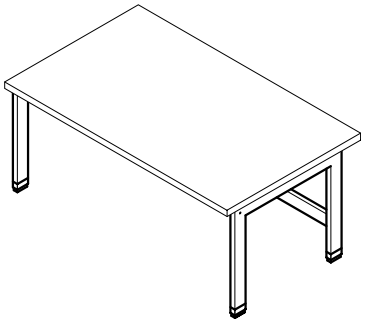
Sanitary engineering	
Water connection	Flexible with male coupling
Waste water connection	Flexible with male coupling
Gas connection	Optionally flexible with male coupling
Water fitting	Standard fitting
Gas fitting	Optional standard fitting in combination with water fitting
Mixing tap	Optional additional flexible water fitting

Add-on table for low level fume hoods

Use

- For installation in low level fume hoods
- Bench frame with worktops made of varied materials as work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations

Design



Technical Data

Dimensions					
Width [in] *(mm)*	35.43 *(900)*	47.24 *(1200)*	59.06 *(1500)*	70.87 *(1800)*	82.68 *(2100)*
Depth [in] *(mm)*	22.64 *(575)*				
Working height [in] *(mm)*	19.69 *(500)*				

Material	
Bench frame [in] *(mm)*	Steel section 2.36 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations
Height-adjustable feet	Plastic

Load bearing capacity	
H-frame [lbs/ft²] *(kg/m²)*	41 *(200)*

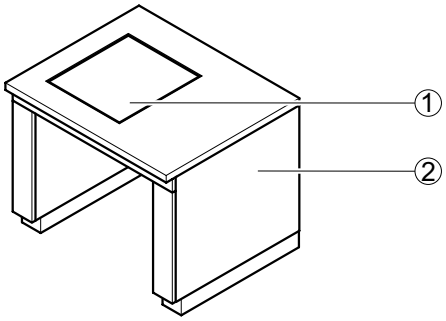
Relevant features	
Worktop	Marine edging
Height-adjustable feet	Individually adjustable

Special tables
Balance table

Use

- For installing analytical balances and other sensitive measuring devices
- Bench frame with worktop and specially positioned vibration-isolated surface
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



1 Concrete worktop
2 Table sheathing

Technical Data

Dimensions	
Width [in] *(mm)*	35.43 *(900)*
Depth [in] *(mm)*	29.53 *(750)* 35.43 *(900)*
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*
Balance plate width x depth [in] *(mm)*	15.75 *(400)* x 17.72 *(450)*

Material	
Supporting construction	Steel section
Worktop	See table Material/frame combinations
Balance plate	Smooth concrete

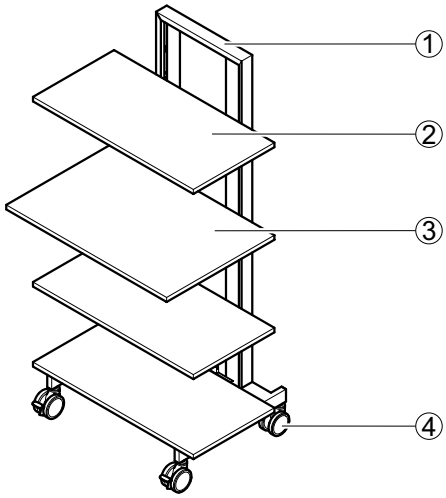
Weight	
Total weight [lb] *(kg)*	264.55 *(120)*
Weight of balance plate [lb] *(kg)*	143.3 *(65)*

Relevant features	
Design	Specially mounted, heavy balance plate made of smooth concrete Supporting construction for the balance plate vibration isolated

Use

- Mobile, flexible storage area
- Combinable with the 23.62 in *(600 mm)* deep shelf to create a mobile desk/work station
- Not to be used for storing dangerous substances

Design



1 *Steel support frame with latticing*
2 *Depth of bottom storage shelf 17.72 in (450 mm)*
3 *Depth of bottom storage shelf 23.62 in (600 mm)*
4 *Heavy-duty casters with brakes*

Technical Data

Dimensions	
Width [in] *(mm)* with shelf	35.43 *(900)*
Depth [in] *(mm)* with shelf depth 17.55 in *(450 mm)*	23.62 *(600)*
Height [in] *(mm)*	70.47 *(1790)*
Depth of shelf [in] *(mm)*	17.72 *(450)* 23.62 *(600)*

Material	
Supporting construction	Steel section
Shelf 0.87 in *(22 mm)*	Mounting plate with melamine resin coating

Load bearing capacity	
Total [lbs/ft²] *(kg/m²)*	30.7 *(150)*
Shelf [lbs/ft²] *(kg/m²)*	6.1 *(30)*

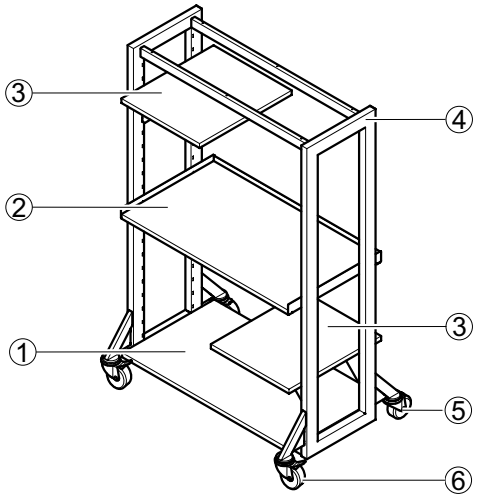
Relevant features	
Heavy-duty casters	4, 2 of which are lockable (lockable casters and steering axle)
Shelf	Adjustable without tools in a grid of 1.78 in *(45 mm)*
Integrated distribution pillar	Optional

Special tables
Heavy duty rack

Intended use

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

Design



1 *Lower shelf, fixed*
2 *Height-adjustable shelf, full width*
3 *Height-adjustable shelf, depth 23.23 in (590 mm)*
4 *Steel support frame*
5 *Heavy duty casters without brake*
6 *Heavy duty casters with brake*

Technical data

Dimensions		
Width [in] *(mm)*	47.24 *(1200)*	70.87 *(1800)*
Depth [in] *(mm)*	30.31 *(770)*	
Height [in] *(mm)*	70.47 *(1790)*	
Shelf, width x depth [in] *(mm)*	15.75 x 23.23 *(400 x 590)* 42.13 x 29.53 *(1070 x 750)*	15.75 x 23.23 *(400 x 590)* 65.75 x 29.53 *(1670 x 750)*

Material	
Supporting construction	Steel profile 2.76 x 1.57 in *(70 x 40 mm)*
Shelf	Shelf of OSB board

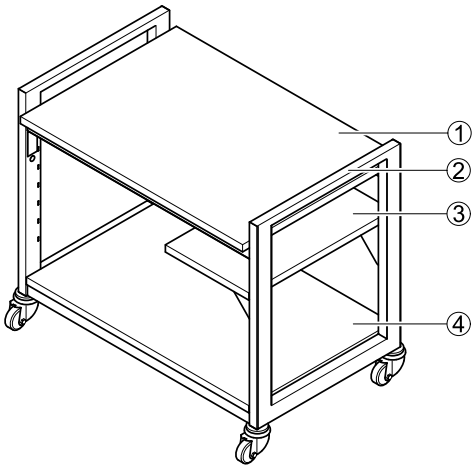
Load bearing capacity	
Total	1102.31 lb *(500 kg)*
Shelf 15.75 x 23.23 [in] *(400 x 590 mm)*	66.14 lb *(30 kg)*
Shelf 42.13 x 29.53 [in] *(1070 x 590 mm)*	154.32 lb *(70 kg)*
Shelf 65.75 x 29.53 [in] *(1670 x 590 mm)*	154.32 lb *(70 kg)*
Lower shelf 42.13 x 29.53 [in] *(1070 x 590 mm)*	330.69 lb *(150 kg)*
Lower shelf 65.75 x 29.53 [in] *(1670 x 590 mm)*	330.69 lb *(150 kg)*

Design characteristics	
Heavy duty casters	4, of which 2 can be locked (caster and steering axle can be locked)
Shelf	Can be adjusted with a grid of 2.95 in *(75 mm)*

Use

- Movable heavy-duty bench frame with work top and integrated handle. Total load bearing capacity: 1102.31 lb *(500 kg)*

Design



1 Worktop
2 Integrated handle
3 Height-adjustable intermediate shelf
4 Lower storage shelf, fastened

3+4 Optionally available as accessories, not contained in the basic model

Technical data

Dimensions		
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)*	29.53/35.43 *(750/900)*	
Working height [in] *(mm)*	35.43 *(900)*	
Table top width x depth [in] *(mm)*	42.13 x 29.53/35.43 *(1070 x 750/900)*	53.94 x 29.53/35.43 *(1370 x 750/900)*
Side intermediate floor width x depth [in] *(mm)*	27.17 x 15.75 *(690 x 400)*	27.17 x 15.75 *(690 x 400)*
Lower storage shelf width x depth [in] *(mm)*	42.13 x 27.17/33.07 *(1070 x 690/840)*	53.94 x 27.17/33.07 *(1370 x 690/840)*

Material	
Supporting construction	Steel profile 2.76 x 157 in *(70 x 40 mm)*
Worktop	1.18 in *(30 mm)* particle board with a layer of melamine / 0.75 in *(19 mm)* solid grade laminate
Side intermediate floor and storage shelf	1.18 in *(30 mm)* particle board with a layer of melamine

Load bearing capacity	
Total	1102.31 lb *(500 kg)*
Worktop	1102.31 lb *(500 kg)*, only if no intermediate/storage shelves are mounted
Lateral intermediate shelf	66.14 lb *(30 kg)*
Lower storage shelf	330.69 lb *(150 kg)*

Attention: The total maximum load bearing capacity of 1102.31 lb (500 kg) for work top, lower storage shelf and intermediate shelf should not be exceeded by additional shelves.

Relevant features	
Heavy-duty castors	4x lockable (lockable castors and steering axle), load bearing capacity 300 kg / castor
Lateral intermediate shelf	Adjustable in a grid of 75 mm

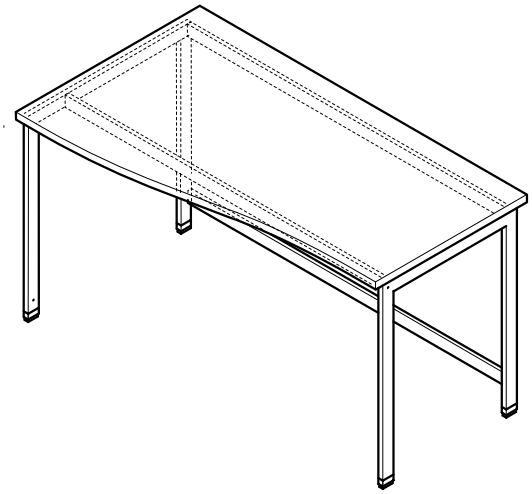
Options /accessories	
Lower storage shelf	A shelf is applied on the firmly welded traverse Load bearing capacity: 330.69 lb *(150 kg)*
Lateral intermediate shelf	Left and/or right, a shelf, depth 1.57 in (40 mm), can be hooked into in a grid. Load bearing capacity: 66.14 lb (30 kg)

Special tables
Swing

Use

- Bench frame with worktops made of varied materials as work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations
- Visually appealing combination of laboratory tables of various depths
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions		
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)*	23.62 *(600)* - 29.53 *(750)* 29.53 *(750)* - 35.43 *(900)*	
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*	

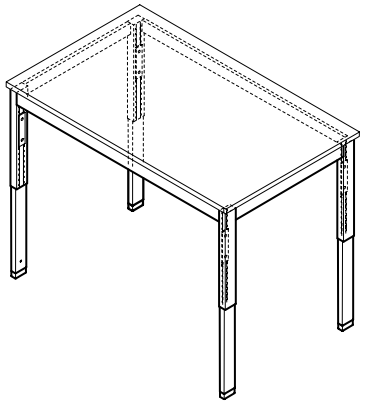
Material	
Bench frame [in] *(mm)*	Steel section 2.36 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations

Load bearing capacity	
Total [lbs/ft²] *(kg/m²)*	41 *(200)*

Use

- Bench frame with worktops made of varied materials as height-adjustable work and storage areas for laboratory work
- Supporting structure for chemical analysis devices and installations
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions		
Width [in] *(mm)*	47.24 *(1200)*	59.06 *(1500)*
Depth [in] *(mm)*	29.53 *(750)* 35.43 *(900)*	
Working height [in] *(mm)*	27.56 *(700)* - 37.4 *(950)*	

Material	
Bench frame [in] *(mm)*	Steel section 2.36 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations

Load bearing capacity	
Total [lbs/ft²] *(kg/m²)*	41 *(200)*

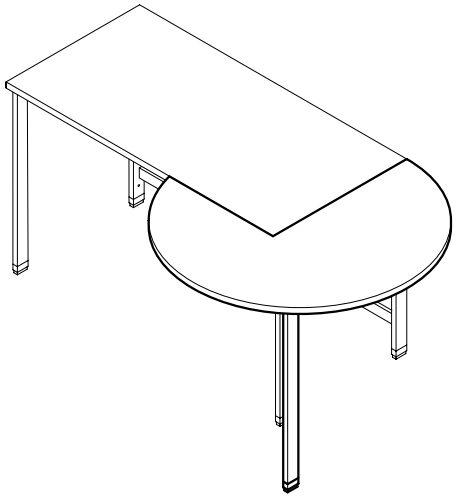
Relevant features	
Working height	Adjustable in a grid of 0.99 in *(25 mm)*
Bench frame	H-frame

Special tables
Round table

Use

- For installation as an additional work surface on tables with H- and C-frames
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions	
Diameter [in] *(mm)*	47.24 *(1200)*
Working height [in] *(mm)*	29.53 *(750)* 35.43 *(900)*

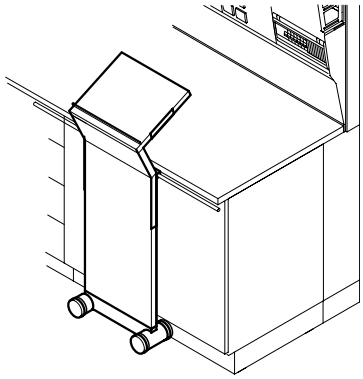
Material	
Bench frame [in] *(mm)*	Steel section 2.36 *(60)* / 0.98 *(25)* / 0.08 *(2)*
Worktop	See table Material/frame combinations
Height-adjustable feet	Plastic

Load bearing capacity	
Round table [lbs/ft²] *(kg/m²)*	10.2 *(50)*

Use

- Movable, slanted writing surface attached to a laboratory work bench

Design



Technical Data

Dimensions	
Width [in] *(mm)*	16.38 *(416)*
Working height, bench [in] *(mm)*	35.43 *(900)*
Max. total height [in] *(mm)*	48.98 *(1244)*

Relevant features	
Design	Sliding elements on 4 wheels Fastened to a sliding rail on the laboratory work bench

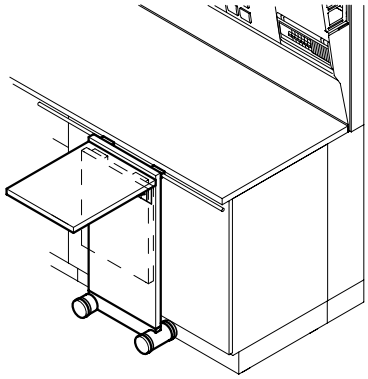
Material	
Sliding element	Melamin resin coating, walnut decor

Special tables
Sliding element Assistent

Use

- Movable, installation and writing surface that swings out of a laboratory work bench
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions	
Width [in] *(mm)*	15.98 *(406)*
Depth [in] *(mm)*	20.87 *(530)*
Working height, bench [in] *(mm)*	35.43 *(900)*

Load bearing capacity	
Storage and writing surface [lb] *(kg)*	33.07 *(15)*

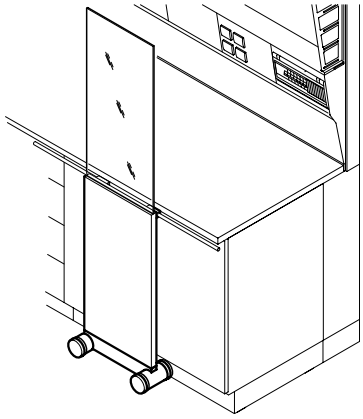
Relevant features	
Design	Sliding elements on 4 wheels Fastened to the work bench by means of a sliding rail Can be folded down completely

Material	
Sliding element	Melamin resin coating, walnut decor

Use

- Movable splash and splinter guard attached to a laboratory work bench
- Not to be used for laboratory work that requires the extraction of dangerous substances

Design



Technical Data

Dimensions	
Width [in] *(mm)*	15.98 *(406)*
Working height, bench [in] *(mm)*	35.43 *(900)*
Height, splash guard [in] *(mm)*	70.87 *(1800)*

Relevant features	
Design	Sliding elements on 4 wheels Fastened to the work bench by means of a sliding rail Tempered safety glass (toughened glass)

Material	
Sliding element	Melamin resin coating, walnut decor
Splash guard	Tempered safety glass (toughened glass)

4 Storage cabinets

Our ***SCALA*** laboratory furniture system provides you the greatest possible selection of storage variations for quick access and safe storage.

All storage cabinets are variably equipable and allow for the optimal use of space in all sorts of laboratories.

Designed with a sophisticated appearance – manufactured with Wadner's high quality.

The laboratory cabinets can be extended, upgraded and are, of course, compatible – for problem-free adaptation to new requirements.

We place special value on durability. Even after thousands of load changes, hinges, pull-out rails and surfaces must not give in. First-class materials, carefully processed, guarantee long durability – with certainty.

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

4 Storage cabinets

Great number of options

For the highest flexibility in the laboratory we provide our cabinets and underbench units in the widest variety of designs. Pushed-in underbench units in plinth and movable designs are in best position under C-frames, H-frames, cantilever frames or under fume hoods with individual support structures.

Suspended underbench units are attached directly under the worktop, or as a sliding variant in cantilver support frames.

Design and function go hand in hand

The jointless handles made from die-cast aluminum are chemical resistant and can be cleaned easily. Special emphasis can be placed in the laboratory design through the use of walnut decor set into the fronting. The attachment of our suspended cabinets on the service spines or on the wall can be effected without an observable gap.

More mobility in the laboratory

With four smooth-running casters, two of them lockable, our movable underbench units can be positioned simply in the frame on add-on tables or laboratory benches. The caster height is also harmonized and flush with the plinth height of our fixed cabinets.

More safety details

Our movable underbench units are made tilt-resistant through self-locking protection and the pull-out catch of the drawer compartment. Our tall cabinets have an integrated rail on the inside for safely suspending a ladder.

More useable storage space

With an underbench depth of 21.65 in *(550 mm)* and the drawer compartment depth of 19.69 in *(500 mm)* we provide the best usable storage space on the market. Even in corner cabinets, we have expanded the usable storage space by means of new service outlets.

Surfaces and edges are optimally protected

The melamine resin coated faces 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 0.08 in *(2 mm)* polypropylene edges. In addition, the foil-coated plinths of our furnishings are manufactured out of waterproof bonded plywood.

Optimal positioning

Due to four height-adjustable feet, our laboratory cabinets and underbench units can be set up straight and absolutely stable with plinths.

Fully extendable drawer compartments with concealed roller rails

The double-wall steel frame with concealed roller rails is more stable, protected against soiling and thus operates more easily than single wall frames with open roller rails. Our standard full extension creates a complete overview. Soft stops are standard on all drawer compartments.

Safety for problematic substances

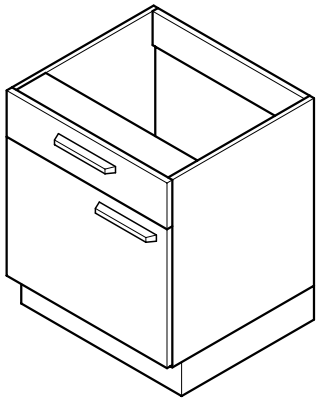
Our security cabinets for gasses, acids and bases as well as flammable liquids meet the highest requirements on material properties and function. Naturally, in accordance with current standards.

Underbench units
Underbench unit on plinth

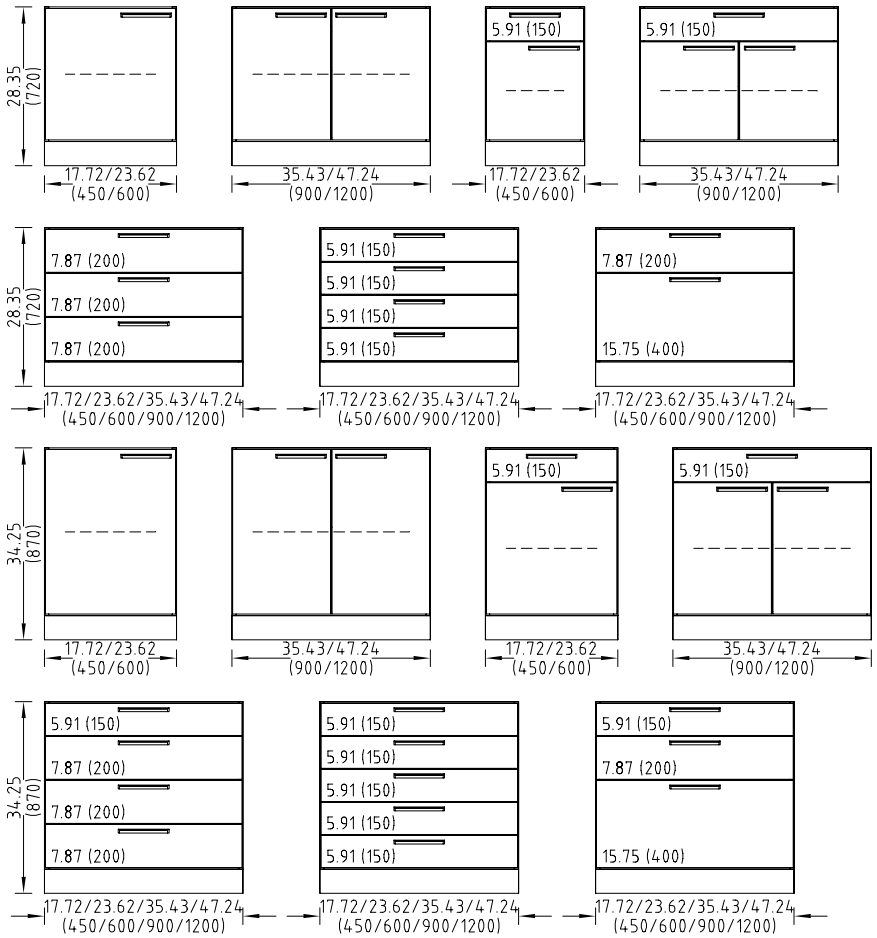
Use

- For storage of instruments and chemicals, according to DIN EN 14727
- For working heights of 29.53 in *(750 mm)* and 35.43 in *(900 mm)*
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design



Variants



Technical Data

Dimensions				
Width [in] *(mm)*	17.72 *(450)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	21.65 *(550)*			
Total height [in] *(mm)*	28.35 *(720)* 34.25 *(870)*			
Height, drawer compartments [in] *(mm)*	5.91 *(150)* 7.87 *(200)* 15.75 *(400)* For possible combinations, see variants			
Height, plinth [in] *(mm)*	4.33 *(110)*			

Load bearing capacity	
Each shelf/drawer compartment [lb] *(kg)*	66.14 *(30)*

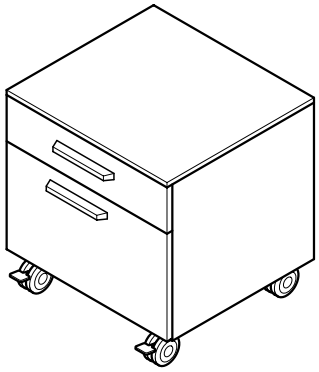
Relevant features	
Design	For working heights of 29.53 *(750)* and 35.43 in *(900 mm)* Hinged door with 270° hinges Fully extendable drawer compartments Open top, detachable rear wall Shelf, height-adjustable Without doors as a rack 4 height-adjustable feet
Possible combinations	See variants
Handle	Handle bar SCALA U handle stainless steel
Full-height drawers	Optional
Move-in damper for drawer compartments	Standard
Extract air spigot	Optional
Locking device	Optional

Underbench units
Underbench unit on casters

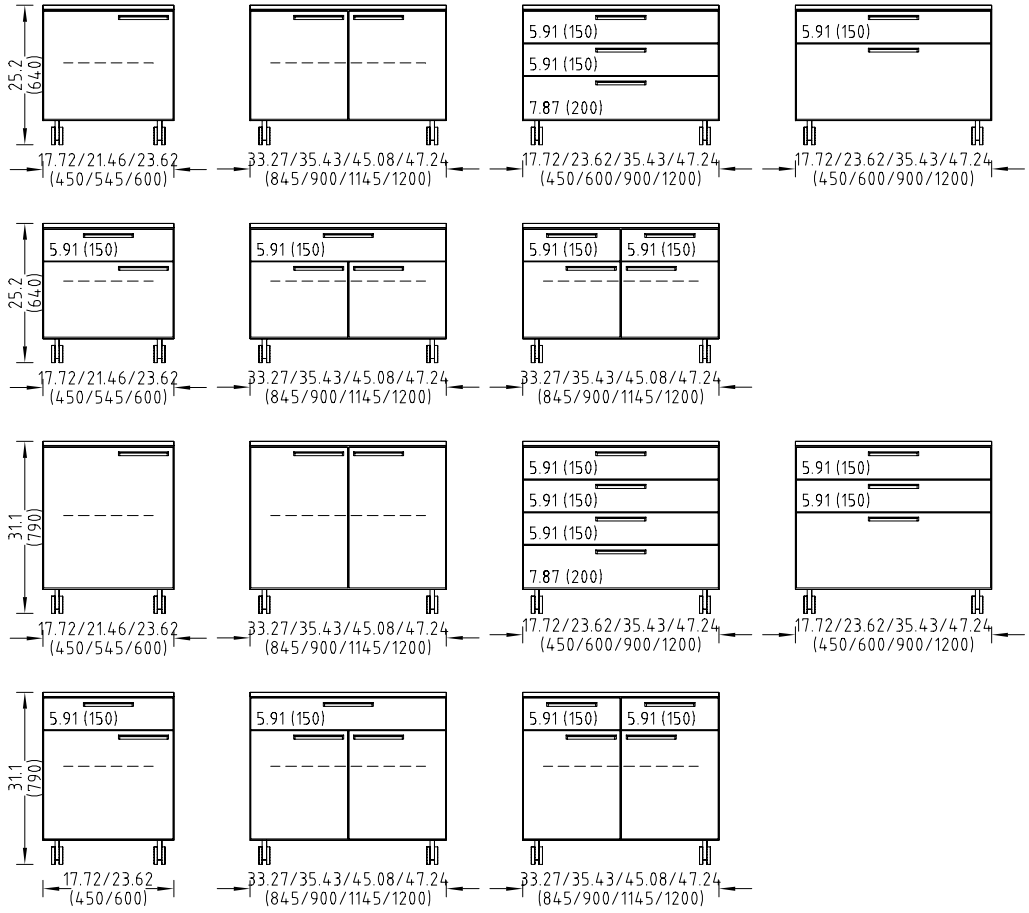
Use

- For flexible storage of instruments and chemicals, according to DIN EN 14727
- For working heights of 29.53 in *(750 mm)* and 35.43 in *(900 mm)*
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design



Variants



Technical Data

Dimensions							
Width [in] *(mm)*	17.72 *(450)*	21.46 *(545)*	23.62 *(600)*	33.27 *(845)*	35.43 *(900)*	45.08 *(1145)*	47.24 *(1200)*
Depth [in] *(mm)*	21.65 *(550)*						
Total height [in] *(mm)*	25.2 *(640)* 31.1 *(790)*						
Height, drawer compartments [in] *(mm)*	5.91 *(150)* 7.87 *(200)* 13.78 *(350)* For possible combinations, see variants						
Height, casters [in] *(mm)*	4.33 *(110)*						

Load bearing capacity	
Each shelf/drawer compartment [lb] *(kg)*	66.14 *(30)*
Each caster [lb] *(kg)*	154.32 *(70)*

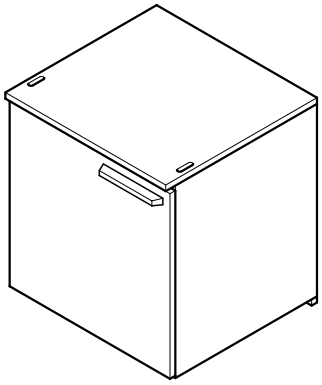
Relevant features	
Design	For working heights of 29.53 *(750)* and 35.43 in *(900 mm)* Hinged door with 270° hinges Fully extendable drawer compartments and change-pull-out catches Shelf, height-adjustable Without doors as a rack Top covered, rear wall firmly connected with carcass 4 swivelling casters, front casters lockable
Possible combinations	See variants
Handle	Handle bar SCALA U handle stainless steel
Move-in damper for drawer compartments	Standard
Locking device	Optional
Drawer compartments with change pull-out catch	Standard

Underbench units
Suspended underbench unit

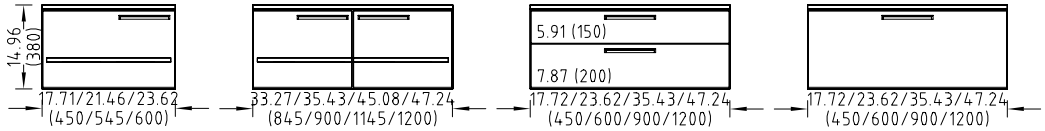
Use

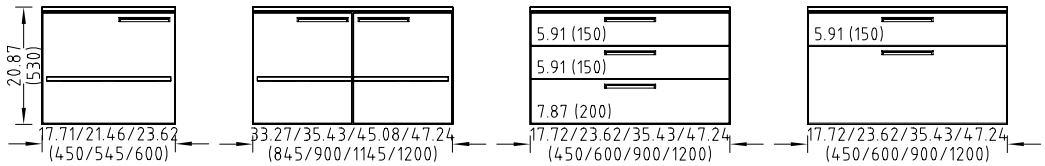
- For flexible storage of instruments and chemicals, according to DIN EN 14727
- For working heights of 29.53 in *(750 mm)* and 35.43 in *(900 mm)*
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

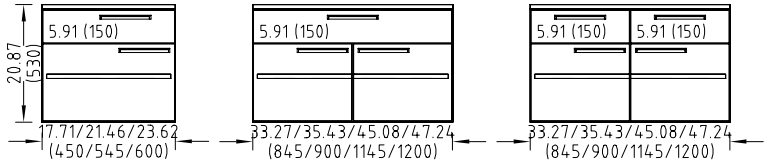
Design



Variants







Technical Data

Dimensions							
Width [in] *(mm)*	17.72 *(450)*	21.46 *(545)*	23.62 *(600)*	33.27 *(845)*	35.43 *(900)*	45.08 *(1145)*	47.24 *(1200)*
Depth [in] *(mm)*	19.69 *(500)* (depth of frame, 22.52 *(572)*) 21.62 *(550)* (depth of frame, 26.46 *(672)*)						
Height [in] *(mm)*	14.96 *(380)* 20.87 *(530)*						
Height, drawer compartments [in] *(mm)*	5.91 *(150)* 7.87 *(200)* 13.78 *(350)* For possible combinations, see variants						

Load bearing capacity	
Each shelf/drawer compartment [lb] *(kg)*	66.14 *(30)*

Relevant features	
Design	For working heights of 29.53 *(750)* and 35.43 in *(900 mm)* 2 service outlets for replacements in the profile rail of the bench frame Hinged door with 270° hinges Fully extendable drawer compartments Top covered, rear wall firmly connected with carcass Shelf, height-adjustable With C frame/cantilever frame, laterally movable over the table grid Hinged door(s) with 1 shelf, height 20.87 in *(530 mm)* Height of 20.87 in *(530 mm)* without doors, with 1 shelf
Possible combinations	See variants
Handle	Handle bar SCALA U handle stainless steel
Move-in damper for drawer compartments	Standard
Locking device	Optional

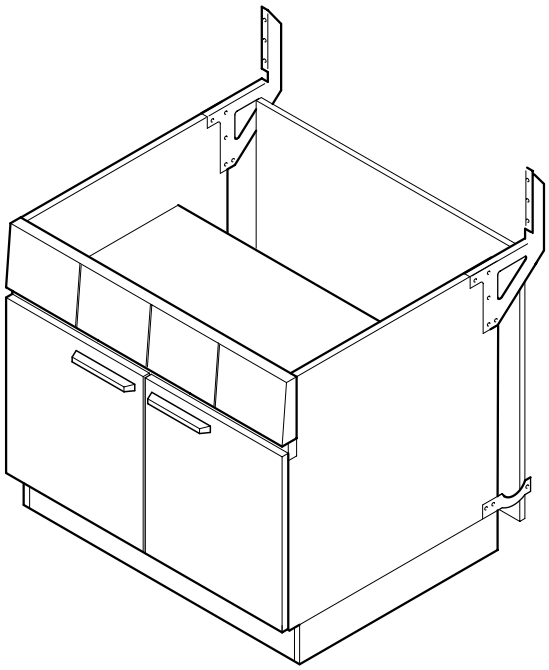
Underbench units
Self-supporting underbench unit for fume hoods

Use

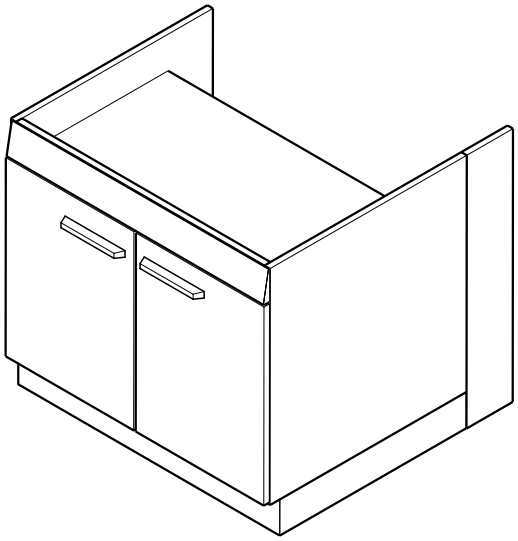
- For storage of instruments and chemicals, according to DIN EN 14727
- For fume hoods with services on baffle and side walls
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design

For fume hoods with services on baffle

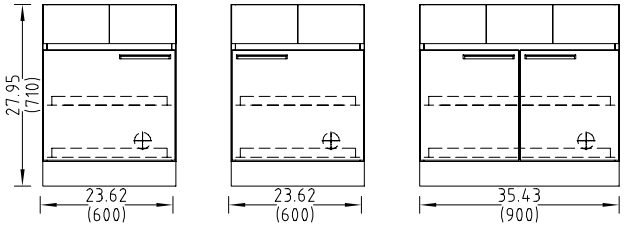


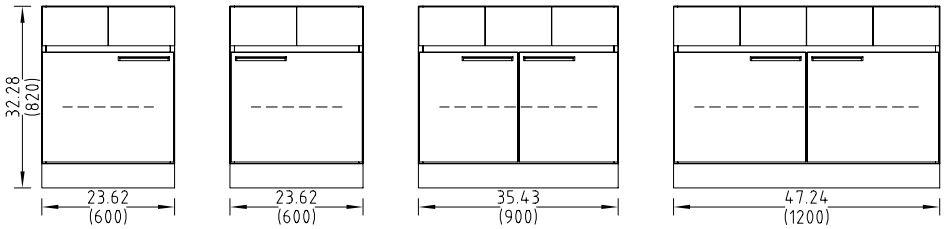
For fume hoods with services on side walls



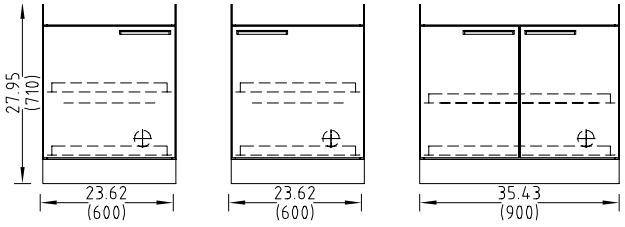
Variants

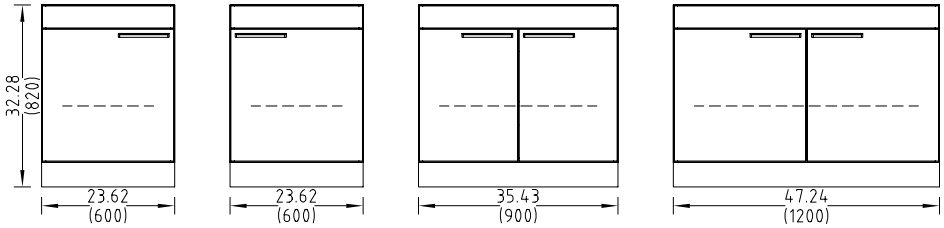
For fume hoods with services on baffle





For fume hoods with services on side walls





Underbench units
Self-supporting underbench unit for fume hoods

Technical Data

Dimensions			
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	21.65 *(550)*		
Total height [in] *(mm)*	27.95 *(710)* 32.28 *(820)*		
Height, plinth [in] *(mm)*	4.33 *(110)*		

Load bearing capacity	
Each shelf [lb] *(kg)*	66.14 *(30)*

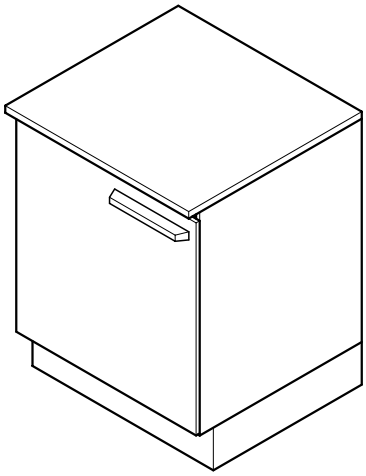
Relevant features	
Design	Hinged door with 270° hinges Service panel on top of the storage cabinet for fume hoods with services on baffle Covered top, detachable rear wall Shelf, height-adjustable 4 height-adjustable feet
Possible combinations	See variants
Full-height drawers	Optional
Extract air duct	Optional
Underbench exhaust	Optional
Acids-bases-equipment	Optional
Locking device	Optional
Handle	Handle bar SCALA U handle stainless steel

Underbench units
Pushed-in underbench unit for fume hoods

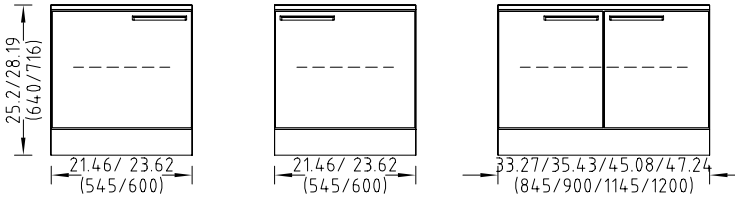
Use

- For storage of instruments and chemicals, according to DIN EN 14727
- For fume hoods with services on baffle and side walls, on steel support frame
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

Design



Variants



Technical Data

Dimensions						
Width [in] *(mm)*	21.46 *(545)*	23.62 *(600)*	33.27 *(845)*	35.43 *(900)*	45.08*(1145)*	47.24 *(1200)*
Depth [in] *(mm)*	21.65 *(550)*					
Total height [in] *(mm)* pushed-in underbench unit for bench-mounted fume hood, with services on baffle	25.2 *(640)*					
Total height [in] *(mm)* pushed-in underbench unit for bench-mounted fume hood, with services on side walls	28.19 *(716)*					
Height, plinth [in] *(mm)*	4.33 *(110)*					

Load bearing capacity	
Each shelf [lb] *(kg)*	66.14 *(30)*

Relevant features	
Design	Hinged door with 270° hinges Open top, detachable rear wall Shelf, height-adjustable 4 height-adjustable feet
Possible combinations	See variants
Handle	Handle bar SCALA U handle stainless steel
Full-height drawers	Optional
Extract air duct	Optional
Underbench exhaust	Optional
Locking device	Optional

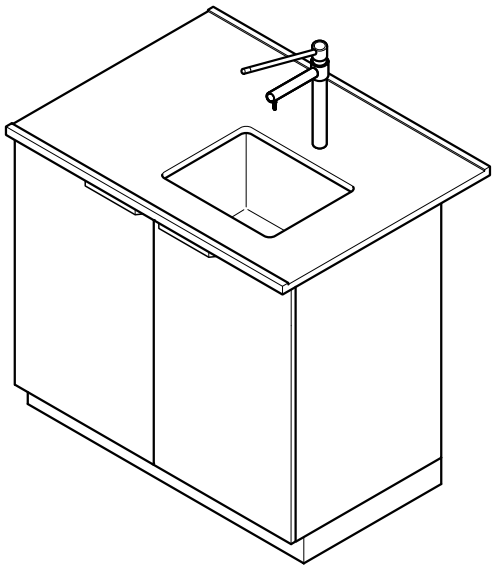
Underbench units
Underbench unit for sinks

Use

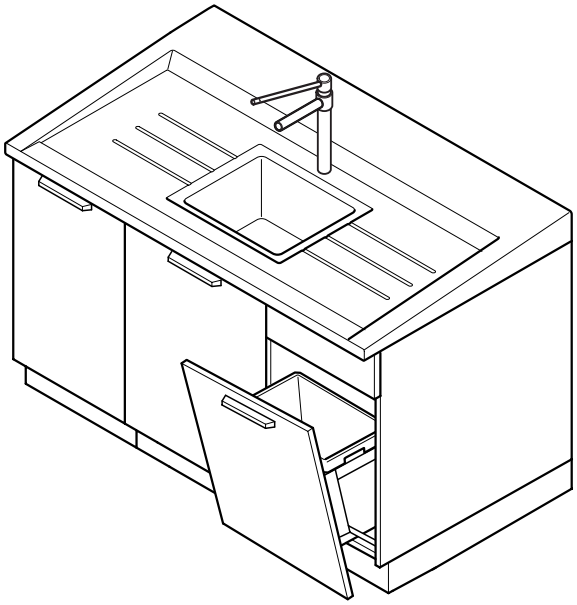
- As underbench unit for sinks, for storage of instruments and chemicals, according to DIN EN 14727
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design

Sink with underbench unit for service spines or on the wall

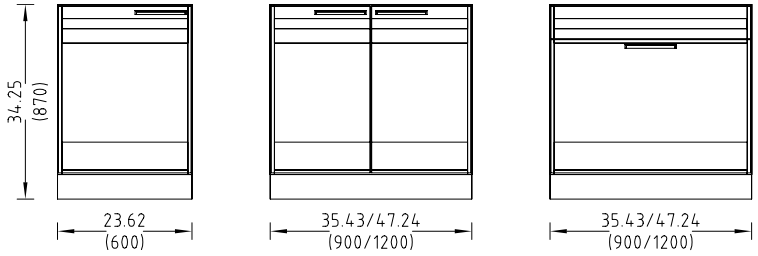


Front end sink for island benches

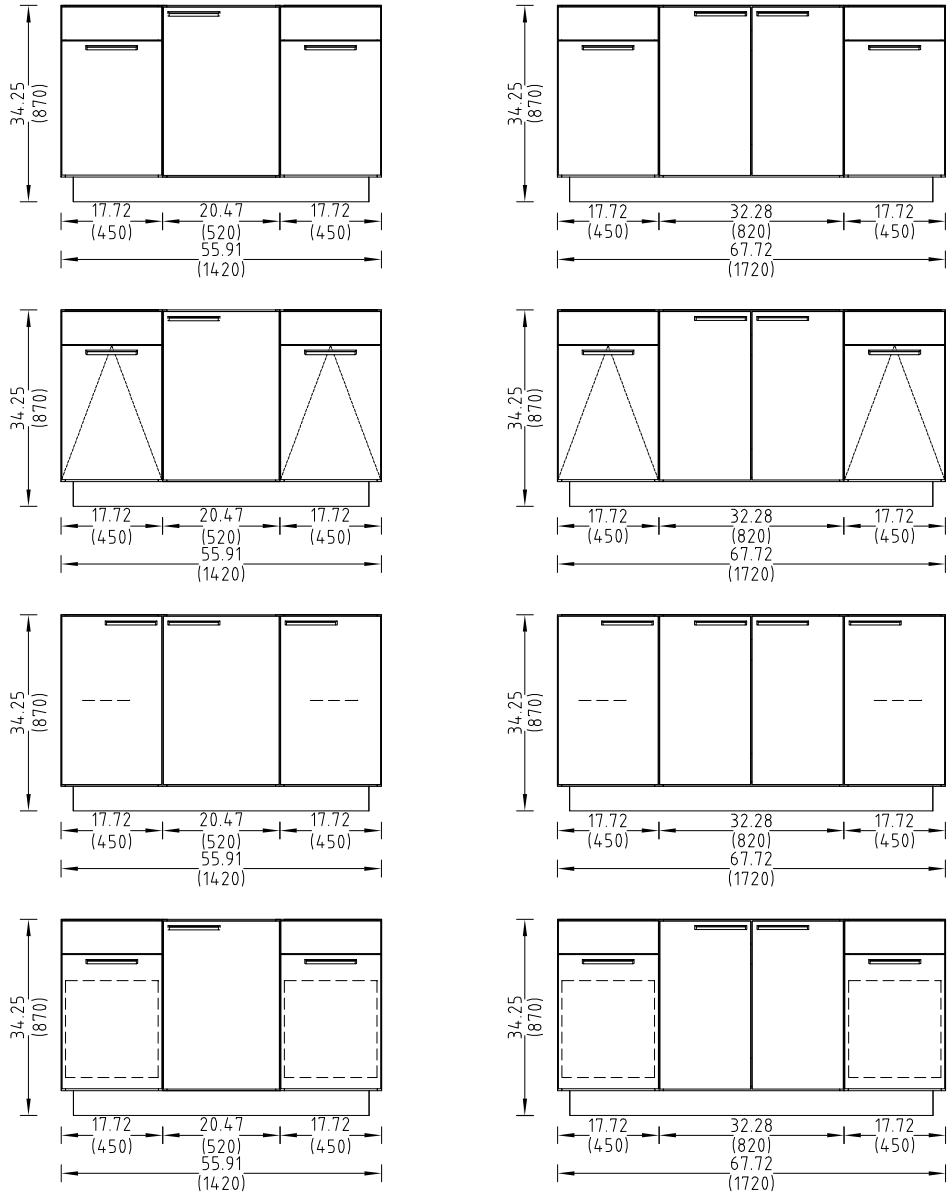


Variants

Sink with underbench unit for service spines or on the wall



Front end sink for island benches



Underbench units
Underbench unit for sinks

Technical Data

Dimensions					
Width [in] *(mm)*	23.62 *(600)*[1)]	35.43 *(900*[1)]*)*	47.24 *(1200*[1)]*)*	55.91 *(1420*[2)]*)*	67.72 *(1720*[2)]*)*
Depth [in] *(mm)*	21.65 *(550)*	21.65 *(550)*	21.65 *(550)*	27.56 *(700)*	27.56 *(700)*
Total height [in] *(mm)*	34.25 *(870)*	34.25 *(870)*	34.25 *(870)*	34.25 *(870)*	34.25 *(870)*
Height, plinth [in] *(mm)*	4.33 *(110)*	4.33 *(110)*	4.33 *(110)*	4.33 *(110)*	4.33 *(110)*

[1)] For sinks on service spines or on the wall

[2)] For front end sinks

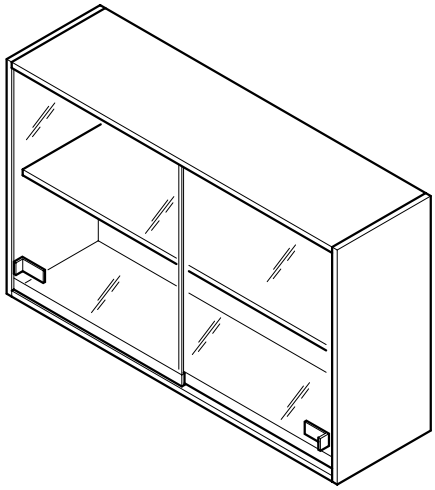
Load bearing capacity	
Each shelf/drawer compartment [lb] *(kg)*	66.14 *(30)*

Relevant features	
Design	Hinged door with 270° hinges 4 height-adjustable feet Inclined swivel door with waste bin 7.93 gal *(30 l)* Waste bin 2 x 3.96 gal *(15 l)* with full-height drawer Waste bin 2 x 9.24 gal *(35 l)* with full-height drawer Hinged door(s), full-height drawer Combination possibilities see variants
Handle	Handle bar SCALA U handle stainless steel
Locking device	Optional

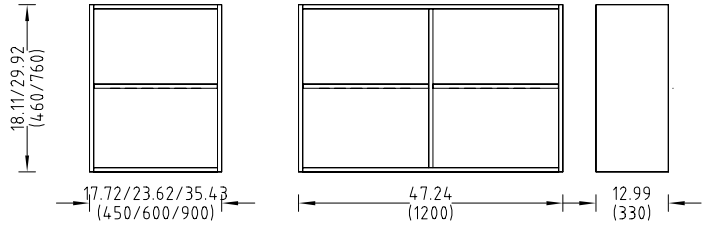
Use

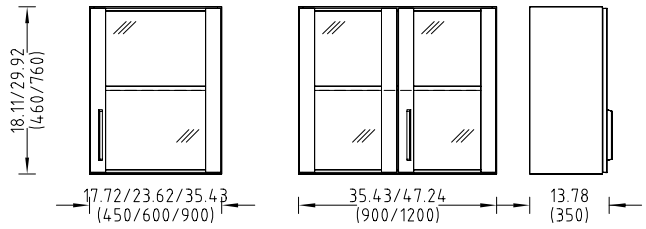
- For storage of instruments and chemicals, according to DIN EN 14727
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

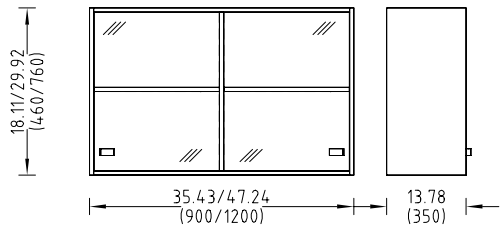
Design



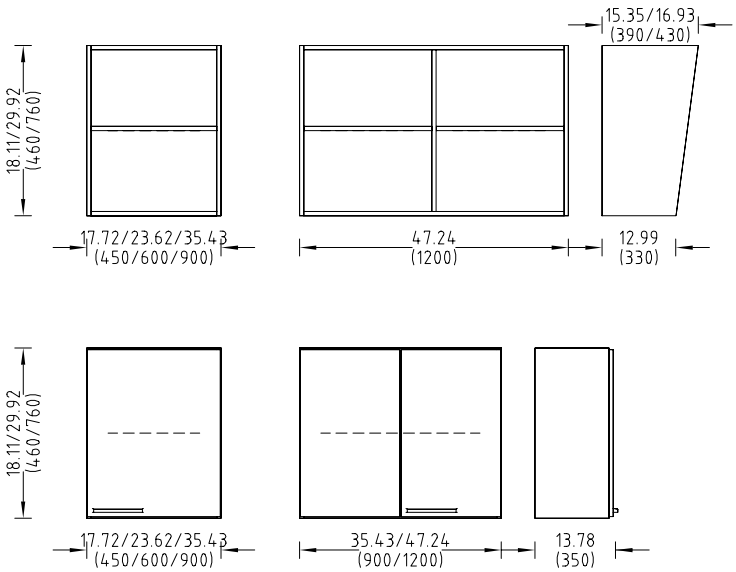
Variants







Suspended cabinets
Suspended cabinet



Technical Data

Dimensions				
Width [in] *(mm)*	17.72 *(450)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	13.78 *(350)*			
Height [in] *(mm)*	18.11 *(460)* 29.92 *(760)*			

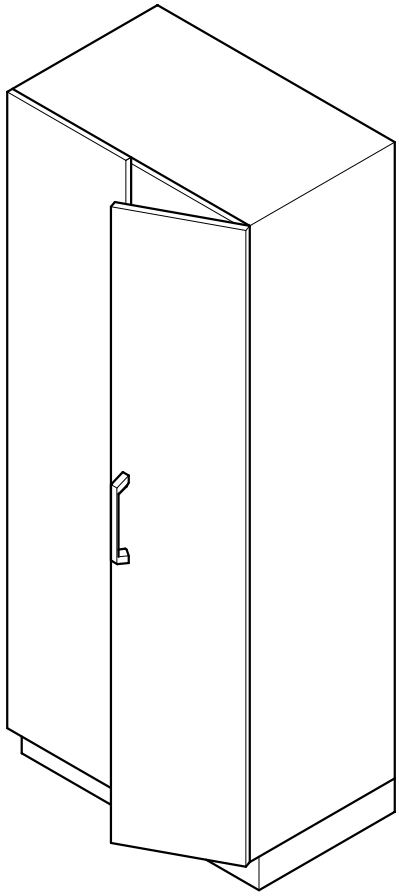
Load bearing capacity	
Each shelf [lb] *(kg)*	66.14 *(30)*
Total load bearing capacity [lb] *(kg)*	132.28 *(60)*

Relevant features	
Design	Automatic level fitting for fastening to wall/service spine Width of 47.24 in *(1200 mm)* with central panel Shelf, height-adjustable
Possible combinations	See variants
Handle	U handle SCALA U handle stainless steel Plastic handle affixed to glass sliding door
Shelf with inclined side walls	Optional
Locking device	Optional

Use

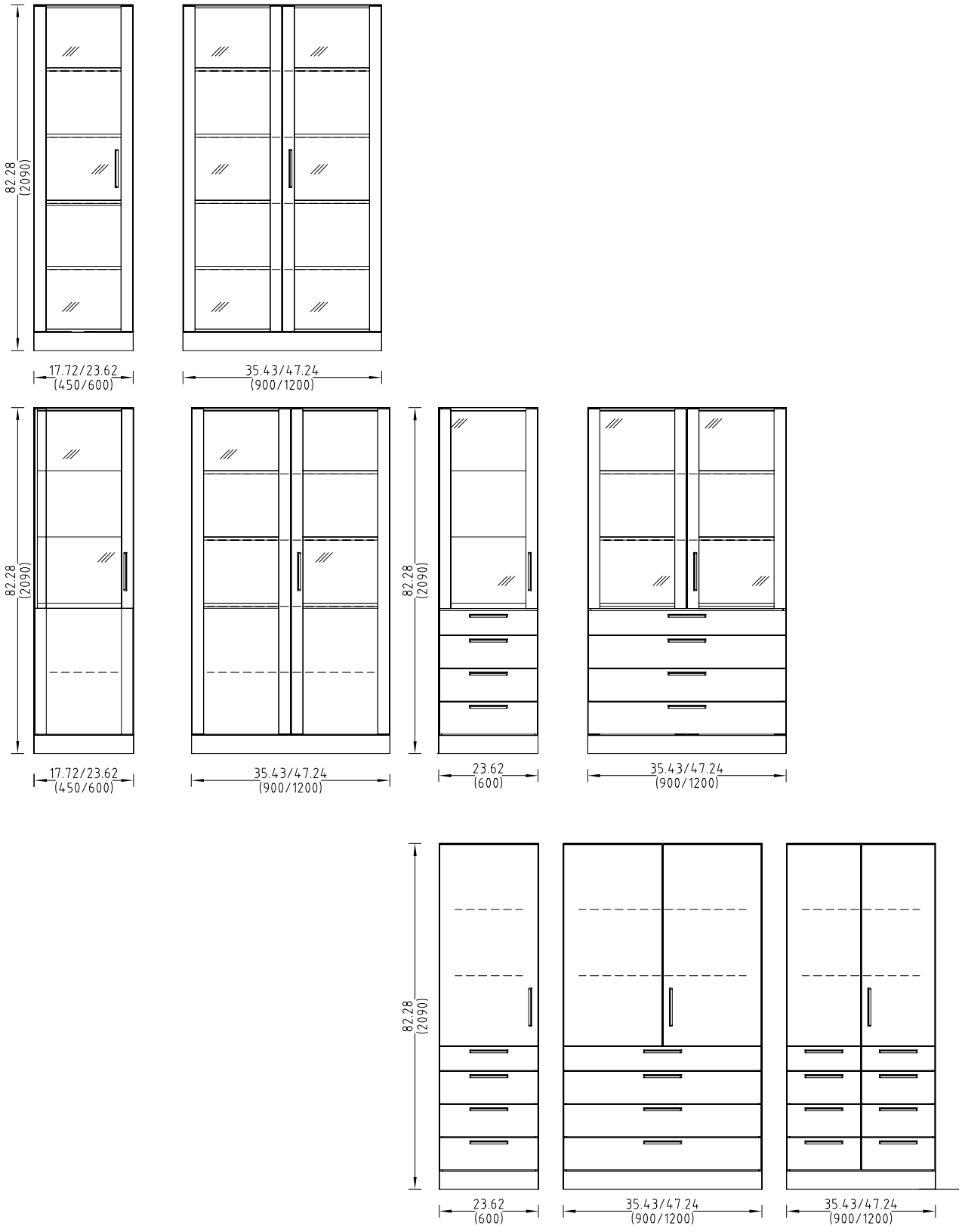
- For storage of instruments and chemicals, according to DIN EN 14727
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

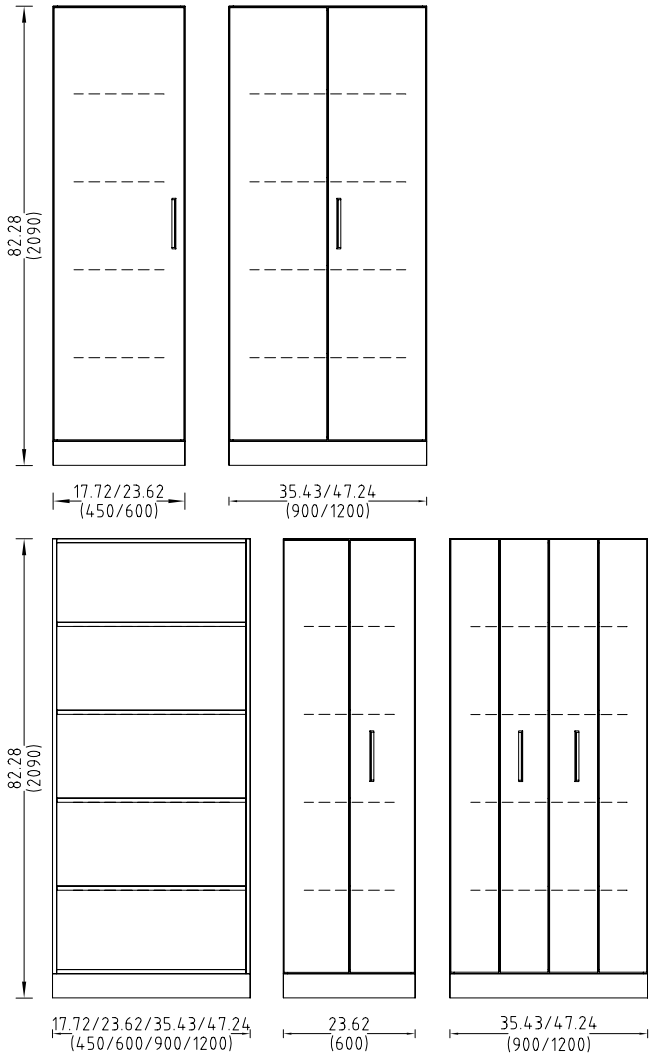
Design



Laboratory cabinets
Laboratory cabinet

Variants




82.28
(2090)
17.72/23.62
(450/600)
35.43/47.24
(900/1200)
82.28
(2090)
17.72/23.62/35.43/47.24
(450/600/900/1200)
23.62
(600)
35.43/47.24
(900/1200)

Laboratory cabinets
Laboratory cabinet

Technical Data

Dimensions				
Width [in] *(mm)*	17.72 *(450)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	13.78 *(350)* 21.65 *(550)*			
Total height [in] *(mm)*	82.28 *(2090)*			
Height, plinth [in] *(mm)*	4.33 *(110)*			

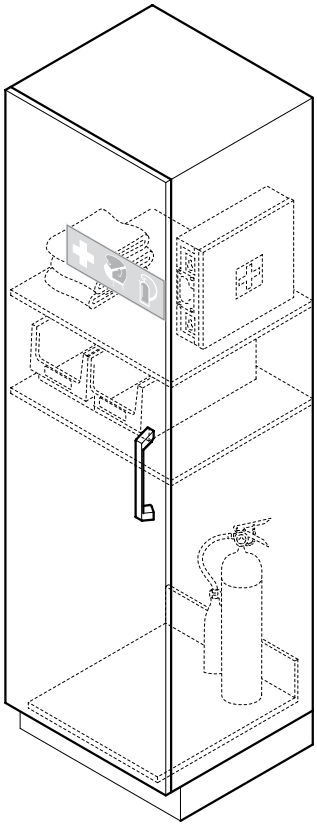
Load bearing capacity	
Each shelf/drawer compartment [lb] *(kg)*	66.14 *(30)*

Relevant features	
Design	Hinged door with 270° hinges Shelves, height-adjustable Fully extendable drawer compartments 4 height-adjustable feet
Possible combinations	See variants, drawers only with depth 21.65 in *(550 mm)*
Handle	U handle SCALA U handle stainless steel
Shelves, extendable	Optional (with cabinet depth of 21.65 in *(550 mm)*)
Drawer compartments with change pull-out catch	Optional (with cabinet depth of 21.65 in *(550 mm)*)
Move-in damper for drawer compartments	Standard
Extract air duct	Optional
Locking device	Optional

Use

- For storage of protective equipment and rescue equipment (fire extinguisher, first aid kit etc.)
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

Design



Technical Data

Dimensions	
Width [in] *(mm)*	23.62 *(600)*
Depth [in] *(mm)*	13.78 *(350)* 21.65 *(550)*
Total height [in] *(mm)*	82.28 *(2090)*
Height, plinth [in] *(mm)*	4.33 *(110)*

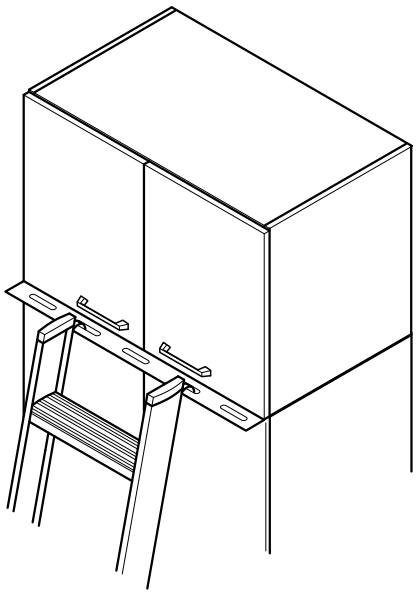
Relevant features	
Design	Hinged door with 270° hinges 2 shelves, height-adjustable 4 height-adjustable feet
Optional equipment	1 first aid kit 1 CO_2 fire extinguisher, 11.02 lb *(5 kg)* 2 fiber glass fire blankets 2 sand boxes 1 sand shovel 1 instruction label with first aid instructions

Top-mounted cabinets
Top-mounted cabinet

Use

- For storage of instruments and chemicals, according to DIN EN 14727
- Only suitable as permanently installed top part for the following Waldner cabinets: Laboratory cabinet, pull-out cabinet, emergency cabinet as well as acid and base cabinet
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

Design



Technical Data

Dimensions				
Width [in] *(mm)*	17.72 *(450)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	13.785 *(350)* 21.65 *(550)*			
Height [in] *(mm)*	24.02 *(610)* 29.92s *(760)*			

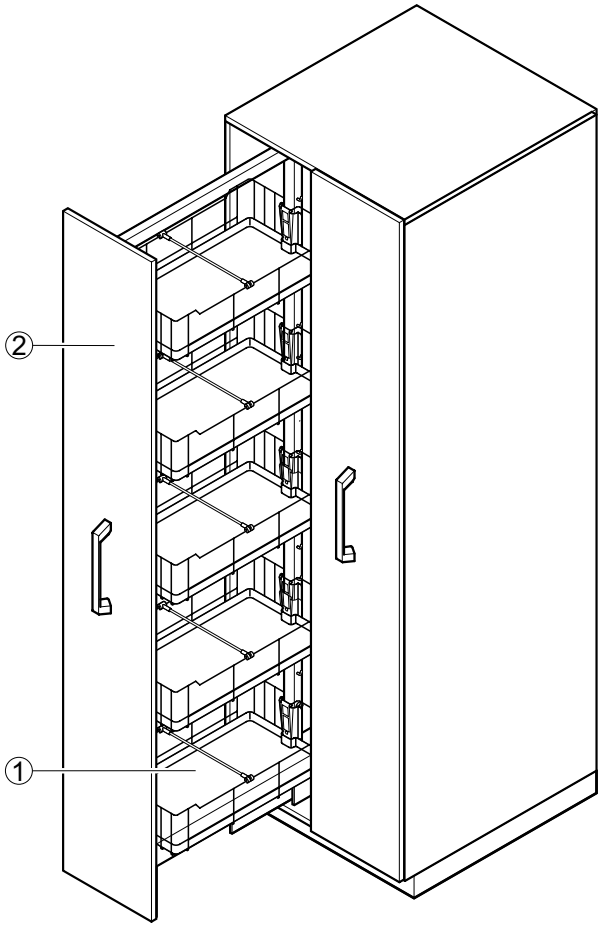
Load bearing capacity	
Each shelf [lb] *(kg)*	66.14 *(30)*

Relevant features	
Design	With rail for attaching a ladder For laboratory cabinets with or without extract air spigot 1 shelf, height-adjustable
Door	Hinged door(s)
Handle	U handle SCALA U handle stainless steel
Connecting ladder	Optional
Locking device	Optional

Use

- For storage of liquid or solid substances in suitable containers containers, according to DIN EN 14727
- Not approved for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances
- Not approved for storage of acids and bases

Design



1 Wire basket with tray
2 Pull-out

Pull-out cabinets
Pull-out cabinet

Technical Data

Dimensions		
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*
Depth [in] *(mm)*	21.65 *(550)*	
Total height [in] *(mm)*	82.28 *(2090)*	
Height, plinth [in] *(mm)*	4.33 *(110)*	
Full-height drawer, width x depth [in] *(mm)*	11.81 *(300)* x 19.69 *(500)*	
Tray, width x depth x height [in] *(mm)*	9.45 *(240)* x 16.73 *(425)* x 1.57 *(40)*	

Load bearing capacity	
Each pull-out [lb] *(kg)*	220.46 *(100)*
Each tray [lb] *(kg)*	22.05 *(10)*

Relevant features	
Design	5 wire baskets with trays for each drawer, height-adjustable Wall fastening 4 height-adjustable feet
Door	Pull-out doors with pull-outs accessible from both sides
Handle	U handle SCALA U handle stainless steel
Move-in damper	Optional
Compartment partitioning	Optional
Extract air spigot	Optional
Locking device	Optional

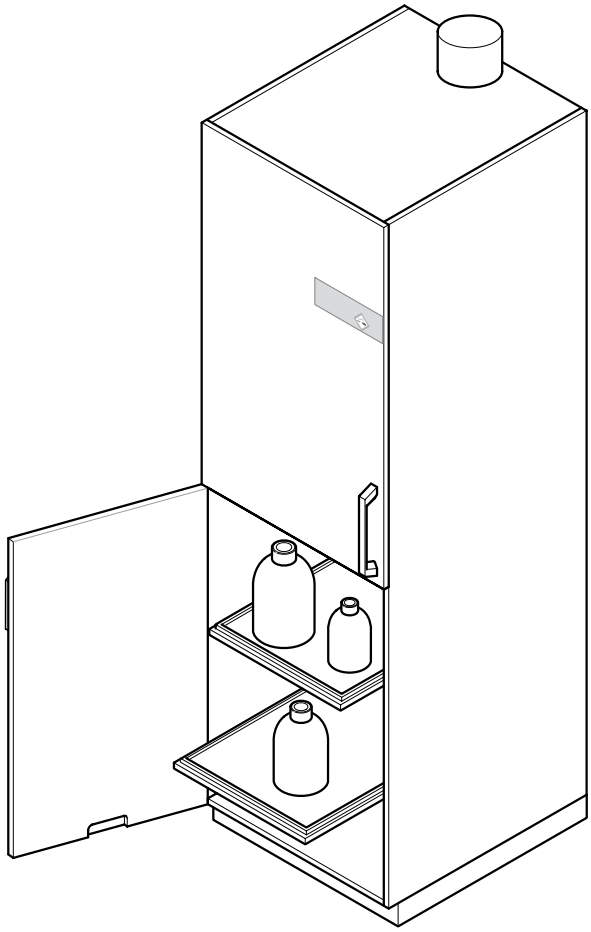
Material	
Trays	Polyethylene

Laboratory cabinet for storage of acids and bases

Use

- For storage of limited quantites of acids and bases
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances

Design



Exhaust cabinets
Laboratory cabinet for storage of acids and bases

Technical Data

Dimensions	
Width [in] *(mm)*	23.62 *(600)*
Depth [in] *(mm)*	21.65 *(550)*
Total height [in] *(mm)*	82.28 *(2090)*
Height, plinth [in] *(mm)*	4.33 *(110)*

Load bearing capacity	
Fixed shelf [lb] *(kg)*	66.14 *(30)*
Extendable shelves [lb] *(kg)*	44.09 *(20)*

Relevant features	
Design	Connection to permanently working ventilation system 4 shelves, fixed or extendable Separate compartments for acids and bases Polypropylene collecting tray Coated fittings 4 height-adjustable feet
Door	Hinged doors
Handle	U handle SCALA U handle stainless steel

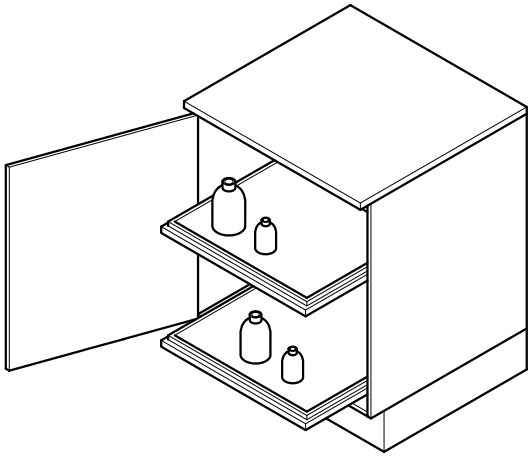
Ventilation data	
Volume flow [cfm] *(m³/h)*	58.9 *(100)*
Ventilation connection Ø [in] *(mm)*	3.54/ *(90*
Connection height extract air spigot [in] *(mm)*	85.67 *(2176)*

Exhaust cabinets
Underbench unit for fume hoods for the storage of acids and bases

Use

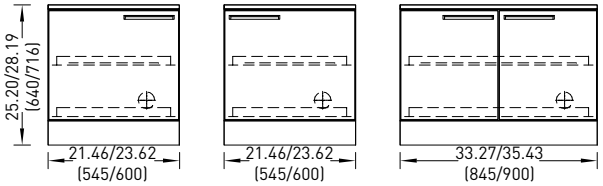
- Pushed-in or self-supporting underbench unit for bench-mounted fume hoods, for storage of limited quantities of acids and bases
- Not to be used for storage of flammable liquids, gas cylinders, and spontaneously flammable or decomposing substances

Design

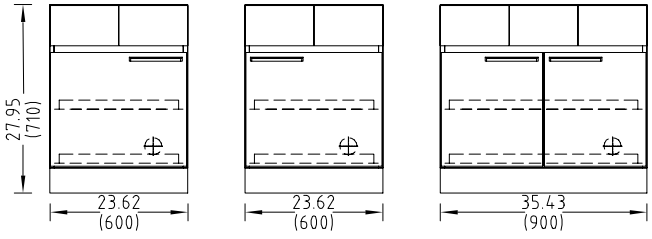


Variants

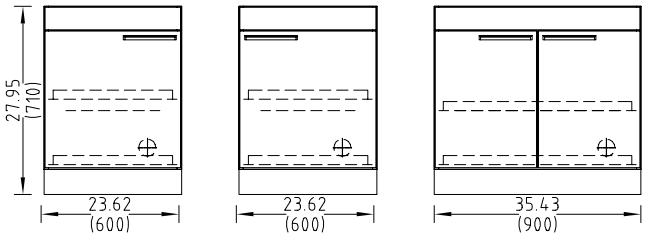
Pushed-in underbench units



Self-supporting underbench units for fume hoods with services on baffle



Self-supporting underbench units for fume hoods with services on side walls



Exhaust cabinets
Underbench unit for fume hoods for the storage of acids and bases

Technical Data

Dimensions		
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*
Width for pushed-in underbench units [in] *(mm)*	21.46/23.62/33.27/35.43 *(545/600/845/900)*	
Depth [in] *(mm)*	21.65 *(550)*	
Total height [in] *(mm)* for pushed-in underbench units for bench-mounted fume hood, with services on baffle	25.2 *(640)*	
Total height [in] *(mm)* for pushed-in underbench units for bench-mounted fume hood, with services on side walls	28.19 *(716)*	
Total height [in] *(mm)* for self-supporting underbench units for bench-mounted fume hood, with services on baffle/side walls	27.95 *(710)*	
Height for plinth [in] *(mm)*	4.33 *(110)*	

Load bearing capacity	
Extendable shelves [lb] *(kg)*	44.09 *(20)*

Relevant features	
Design	Connection to permanently working ventilation system Coated fittings 2 extendable shelves, with collecting trays 4 height-adjustable feet
Door	Hinged door For possible combinations, see variants
Handle	Handle bar SCALA U handle stainless steel

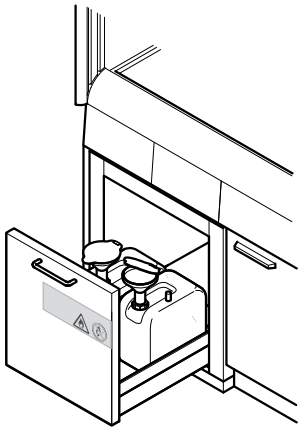
Ventilation data	
Volume flow [cfm] *(m^3/h)*	17.7 *(30)*
Ventilation connection to the ascending duct Ø [in] *(mm)*	3.54 *(90)*

Exhaust cabinets
FWF 90 underbench unit for fume hoods for the storage of flammable liquids

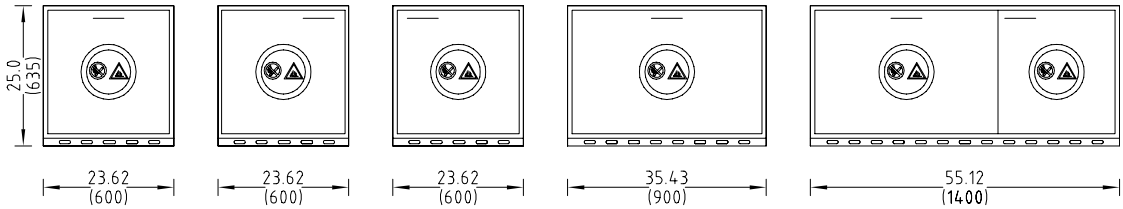
Use

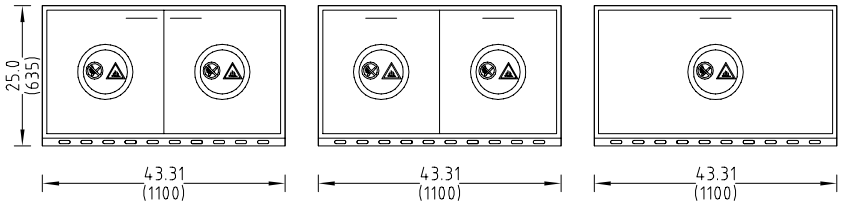
- Pushed-in underbench unit for bench-mounted fume hoods for storage of limited quantities of flammable liquids
- Not to be used for gas cylinders and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design



Variants





Exhaust cabinets
FWF 90 underbench unit for fume hoods for the storage of flammable liquids

Technical Data

Dimensions				
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	43.31 *(1100)*	55.12 *(1400)*
Depth [in] *(mm)*	23.62 *(600)*			
Total height [in] *(mm)*	25.0 *(635)*			
Height, plinth [in] *(mm)*	1.38 *(35)*			
Weight, max. [lb] *(kg)*	286.6 *(130)*	374.78 *(170)*	485.01 *(220)*	639.33 *(290)*

Load bearing capacity	
Fixed shelf [lb] *(kg)*	66.14 *(30)*
Drawer [lb] *(kg)*	55.12 *(25)*

Relevant features	
Design	Connection to permanently working ventilation system Connection to grounding line with potential equalization With locking device Basin bed with perforated sheet metal element Automatic locking through current-independent thermal activation, in case of fire Hinged door Drawer
Possible combinations	See variants
Handle	Stainless steel U handle
Additional tray extension	Optional for drawers
Regulations and standards	DIN EN 14470-1 TRGS 510 (German ordinance on flammable liquids)

Ventilation data	
Volume flow [cfm] *(m^3/h)*	17.7 *(30)*
Ventilation connection to the ascending duct Ø [in] *(mm)*	3.54 *(90)*

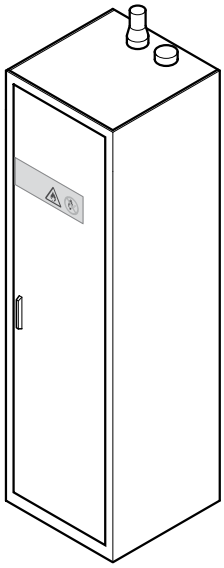
Material	
Underbench unit	Powder-coated steel exterior, color: Light gray RAL 7035
Ventilation connection	PPS

Exhaust cabinets
FWF 90 laboratory cabinet for the storage of flammable liquids

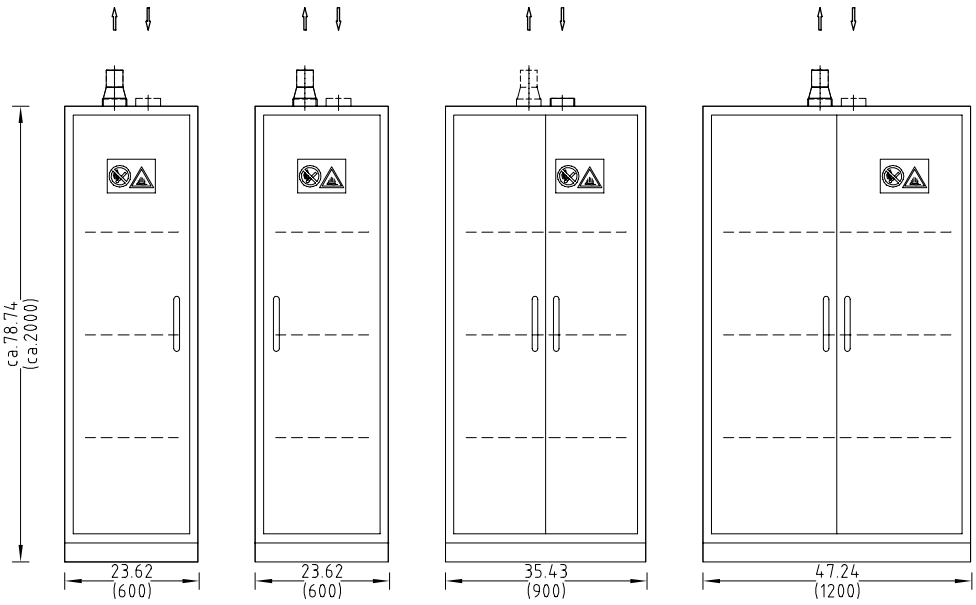
Use

- For storage of limited quantities of flammable liquids
- Not to be used for gas cylinders and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design



Variants



Exhaust cabinets
FWF 90 laboratory cabinet for the storage of flammable liquids

Technical Data

Dimensions			
Width [in] *(mm)*	23.62 *(600)*	35.43 *(900)*	47.24 *(1200)*
Depth [in] *(mm)*	approx. 23.62 *(600)*		
Total height [in] *(mm)*	approx. 78.74 *(2000)*		
Height, plinth [in] *(mm)*	approx. 3.15 *(80)*		
Weight, max. [lb] *(kg)*	639.33 *(290)*	793.66 *(360)*	1036.16 *(470)*

Load bearing capacity	
Basin bed [lb] *(kg)*	Dependent on design

Relevant features	
Design	Connection to permanently working ventilation system Connection to grounding line with potential equalization In case of fire, automatic locking through current-independent thermal activation 3 basin beds, height-adjustable Basin bed with perforated sheet metal element With locking device 4 height-adjustable feet Hinged door
Possible combinations	See variants
Additional designs and equipment	Available on request
Regulations and standards	DIN EN 14470-1 TRGS 510 (German ordinance on flammable liquids)

Ventilation data	
Volume flow [cfm] *(m³/h)*	17.7 *(30)*
Ventilation connection Ø [in] *(mm)*	2.95 *(75)*

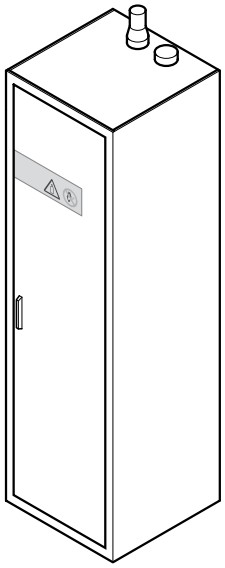
Material	
Laboratory cabinet	Powder-coated steel exterior, color: Light gray RAL 7035
Ventilation connection	Galvanized steel

Exhaust cabinets
G90 cabinet for gas cylinders

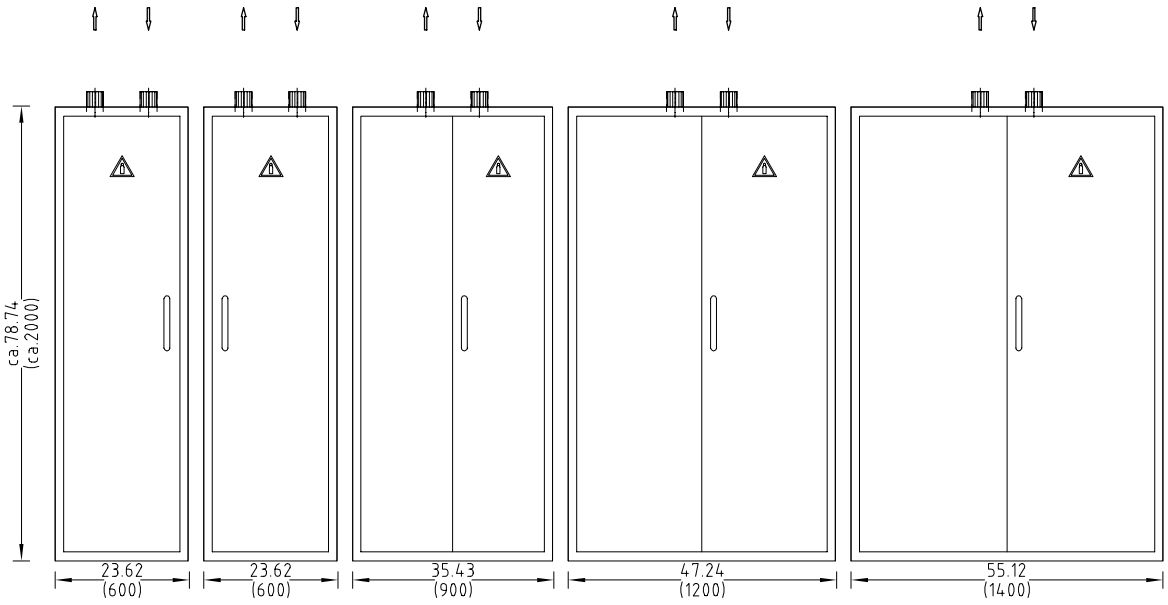
Use

- For storage of gas cylinders in buildings
- Not to be used for storage of flammable liquids and spontaneously flammable or decomposing substances
- Not to be used for storage of acids and bases

Design



Variants



Exhaust cabinets
G90 cabinet for gas cylinders

Technical Data

Dimensions	**23.62** *(600)*	**35.43** *(900)*	**47.24** *(1200)*	**55.12** *(1400)*
Width [in] *(mm)*	23.2 *(600)*	35.43 *(900)*	47.24 *(1200)*	55.12 *(1400)*
Depth [in] *(mm)*	approx. 23.62 *(600)*			
Total height [in] *(mm)*	approx. 78.74 *(2000)*			
Empty weight max. [lb] *(kg)*	859.79 *(390)*	1168.44 *(530)*	1455.04 *(660)*	1631.4 *(740)*

Relevant features	**23.62** *(600)*	**35.43** *(900)*	**47.24** *(1200)*	**55.12** *(1400)*
Design	Connection to permanently working ventilation system Mounting rails for incorporation of compressed gas reduction units Ramp for rolling in gas cylinders With locking device 4 height-adjustable feet Ducts for piping and cables in cabinet cover			
Door	Hinged door(s)			
Max. number of 13.2 gal *(50 l)* by cabinet width	1	3	4	4
Additional designs and equipment	Available on request			

Ventilation data	**23.62** *(600)*	**35.43** *(900)*	**47.24** *(1200)*	**55.12** *(1400)*
Volume flow [cfm] *(m³/h)* by cabinet width	35.3 *(60)*	53 *(90)*	70.6 *(120)*	82.4 *(140)*
Ventilation connection Ø [in] *(mm)*	2.95 *(75)*			

Material	
Laboratory cabinet	Powder-coated steel exterior, color: Light gray RAL 7035
Ventilation connection	Galvanized steel

5 Supply and disposal

For the disposal of liquids and solid substances, we offer you our TÜV-certified system for use in appropriate underbench units.

Our underbench units for waste disposal are standardly equipped with pullout safety trays for the inclusion of suitable containers. For even more convenient container removal.

The disposal of acids, bases and flammable liquids can be directly into the container via screw-mounted safety funnels; or inside the fume hood via funnels which are built into the worktop.

Mechanical or electronic level indicators and suitable ventilation units make the system complete.

We furnish our new underbench units for waste disposal of solid substances with two robust, 9.24 gal *(35 l)* capacity waste bins, either fully extensible or with tilting door, with a waste bin of 7.92 gal *(30 l)* intake volume.

Supply system for flammable liquids

For cyclical and continuous supply of flammable liquids, suitable safety cabinets are used, which are connected to a permanent exhaust system.

Our cabinets comply with relevant standards and regulations.

Our safety pump nozzles with flexible supply pipes made of stainless steel are used for the safe withdrawal of flammable liquids.

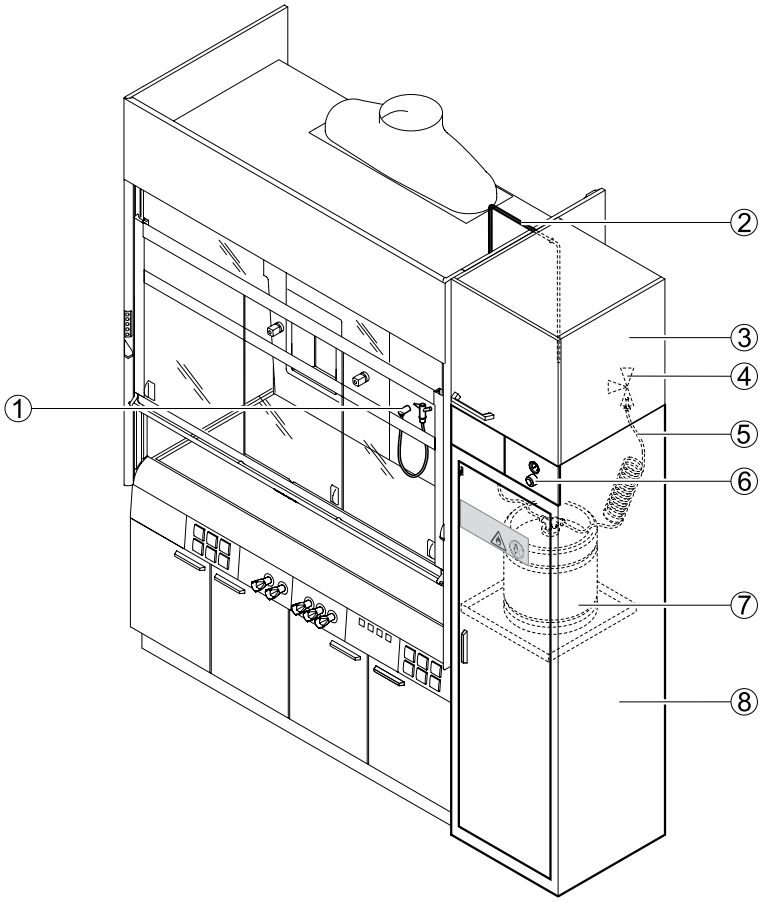
Supply system for flammable liquids

Use

- For safe storage and retrieval of flammable liquids in the laboratory workstation according to EN 14470-1 (type 90) and TRGS 510 (appendix L)
- For the transferring of flammable liquids from containers into small casks (max. 2 containers with 30 l each)
- Not suitable for the storage of the following hazardous substances:
  - acids and bases
  - gas cylinders
  - radioactive substances
  - micro-organisms

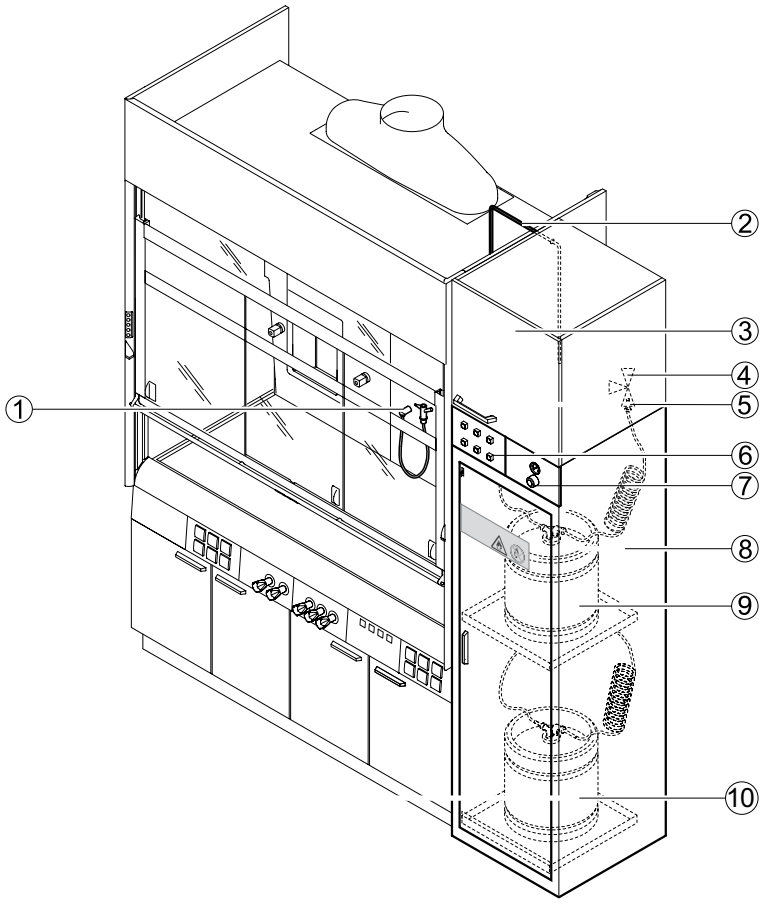
Design

Cyclic supply



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

Continuous supply with automatic changeover to another container



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

Supply system for flammable liquids

Technical Data

Dimensions	
Width [in] *(mm)*	approx. 23.62 *(600)*
Depth [in] *(mm)*	approx. 23.62 *(600)*
Height [in] *(mm)* with top-mounted cabinet	106.3 *(2700)*
Container 7.92 gal *(30 l)*, Height [in] *(mm)*	17.32 *(440)*
Container 7.92 gal *(30 l)*, Ø [in] *(mm)*	14.57 *(370)*

Relevant features	
Design	Safety cabinet with: Connection to ventilation system Connection to voltage compensation with grounding line Automatic locking through current-independent thermal activation, in case of fire Height-adjustble shelves Hinged door
Number of containers 7.92 gal *(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 second container Joint pipe connected to maximal 2 containers in the safety cabinet Monitoring system: with empty container, automatic changover to second container
Pressure regulator solvent dispenser system	Defined pressure of NaN 2.9 psi *(0,2 bar)* for carrying flammable liquid Safety valve at NaN 7.2 psi *(0,5 bar)*
Extraction point solvent dispenser system	Flexible solvent pump nozzle spray in the internal workspace Fixed solvent pump nozzle in the internal workspace

Material	
Safety cabinet	Powder-coated steel
Container	Stainless steel
Air connection spigot Ø 2.95 in *(75 mm)*	PPs

Ventilation data	
Volume flow [cfm] *(m³/h)*	29.4 *(50)*
Ventilation connection on the ascending duct [in] *(mm)*	3.54 *(90)*

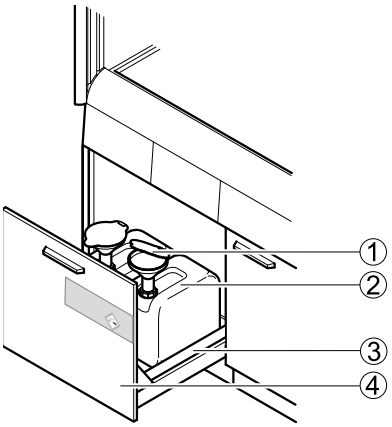
Waste disposal system for acids and bases

Use

- For safe intermediate storage of residual acids and bases in the laboratory workstation
- The following dangerous substances are not suitable for the waste disposal system:
  - flammable liquids
  - gas cylinders
  - radioactive substances
  - micro-organisms

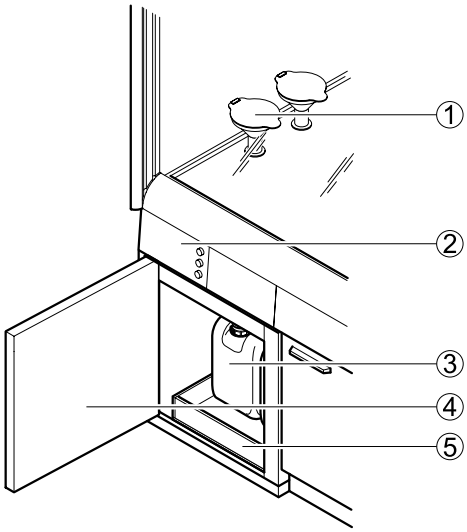
Design

Filling via funnel in underbench unit



1 *Funnel with mechanical level indicator*
2 *Container*
3 *Tray*
4 *Underbench unit with full-height drawer*

Filling via funnel in internal workspace



1 *Underbench unit with hinged door*
2 *Electrical module with level indicator and control unit*
3 *Funnel on the work surface*
4 *Container*
5 *Tray*
6 *Extendable shelf*

Waste disposal system for acids and bases

Technical Data

Dimensions for underbench unit on plinth	
Width [in] *(mm)*	23.62 *(600)*
Depth [in] *(mm)*	21.65 *(550)*
Height [in] *(mm)* at working height 29.53 in *(750 mm)*	28.35 *(720)*
Height [in] *(mm)* at working height 35.43 in *(900 mm)*	34.25 *(870)*
Max. height [in] *(mm)*	20.87 *(530)*

Dimensions for self-supporting/pushed-in underbench unit for bench-mounted fume hood with services on baffle	
Width [in] *(mm)*	23.62 *(600)*
Depth [in] *(mm)*	21.65 *(550)*
Height [in] *(mm)* at working height 35.43 in *(900 mm)*	25.16 *(639)*
Max. height [in] *(mm)*	16.73 *(425)*

Dimensions for self-supporting/pushed-in underbench unit for bench-mounted fume hood with services on side walls	
Width [in] *(mm)*	23.62 *(600)*
Depth [in] *(mm)*	21.65 *(550)*
Height [in] *(mm)* at working height 35.43 in *(900 mm)*	28.19 *(716)*
Max. height [in] *(mm)*	20.87 *(530)*

Dimensions container	
1.32 gal *(5 l)* width x depth x height [in] *(mm)*	6.30 *(160)* x 7.28 *(185)* x 9.06 *(230)*, connecting threat S 55
3.17 gal *(12 l)* width x depth x height [in] *(mm)*	7.68 *(195)* x 9.09 *(231)* x 13.78 *(350)*, connecting threat S 60
5.28 gal *(20 l)* width x depth x height [in] *(mm)*	10.24 *(260)* x 11.22 *(285)* x 15.35 *(390)*, connecting threat S 60

Relevant features	
Design	Vented underbench unit with full-height drawer (max. 2 containers) or vented underbench unit with hinged door and without drawer (max. 2 containers) Coated fittings Tray made of polypropylene
Funnel	Underbench unit with full-height drawer: funnel screw-mounted on container Underbench unit with hinged door: funnel on work surface with filling pipe between funnel and container
Filling and level indicator	Funnel screw-mounted on container mechanical level indicator with signal rod, which rises over the edge of the funnel when the maximum level has been reached Funnel on work surface: electronic level indicator, acoustic and visual signal indicates maximum level has been reached
Approval container 1.32 gal *(5l)*, 3.17 gal *(12 l)*, 5.28 gal *(20 l)*	UN 3H1/Y1,6
Resistance	Based on consultation with Waldner

Waste disposal system for acids and bases

Funnel in underbench unit	**Container 1.32 gal** *(5 l)*	**Container 3.17 gal** *(12 l)*	**Container 5.28 gal** *(20 l)*	**Container 3.17 gal** *(12 l)* **and 5.28 gal** *(20 l)*
Underbench unit on plinth	–	4	2	2 x 3.17 gal *(12 l)* and 1 x 5.28 gal *(20 l)*
Self-supporting/pushed-in underbench unit for bench-mounted fume hood, with services on baffle	–	4	–	–
Self-supporting/pushed-in underbench unit for bench-mounted fume hood, with services on side walls	–	4	2	2 x 3.17 gal *(12 l)* and 1 x 5.28 gal *(20 l)*

Funnel in internal workspace:	**Container 1.32 gal** *(5 l)*	**Container 3.17 gal** *(12 l)*	**Container 5.28 gal** *(20 l)*	**Container 3.17 gal** *(12 l)* **+ 5.28 gal** *(20 l)*
Underbench unit on plinth	2	–	–	–
Self-supporting/pushed-in underbench unit for bench-mounted fume hood, with services on baffle	2	2	–	–
Self-supporting/pushed-in underbench unit for bench-mounted fume hood, with services on side walls	2	2	1	1 x 3.17 gal *(12 l)* and 1 x 5.28 gal *(20 l)*

Material	
Container	PP
Ventilation connection	PPS
Tray	PP
Components for installation	Electrically conductive PE-HD

Ventilation data	
Volume flow [cfm] *(m³/h)*	29.4 *(50)*
Ventilation connection on the ascending duct Ø [in] *(mm)*	3.54 *(90)*

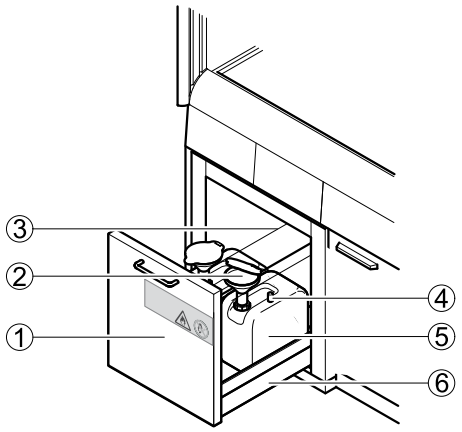
Waste disposal system for flammable liquids

Use

- For safe intermediate storage of residual flammable liquids in the laboratory workstation according to EN 14470-1 (type 90) and TRGS 510 (appendix L)
- For disposal via screw-mounted funnels in safety underbench units or via funnels on the work surface in the internal workspace
- The following dangerous substances are not suitable for the waste disposal system:
  - acids and bases
  - gas cylinders
  - radioactive substances
  - micro-organisms

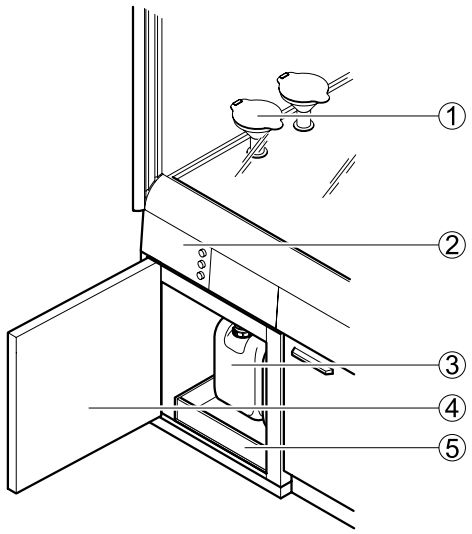
Design

Filling via funnel in underbench unit



1 *Safety cabinet with full-height drawer*
2 *Funnel*
3 *Grounding cable*
4 *Funnel with mechanical level indicator*
5 *Container*
6 *Collecting tray*

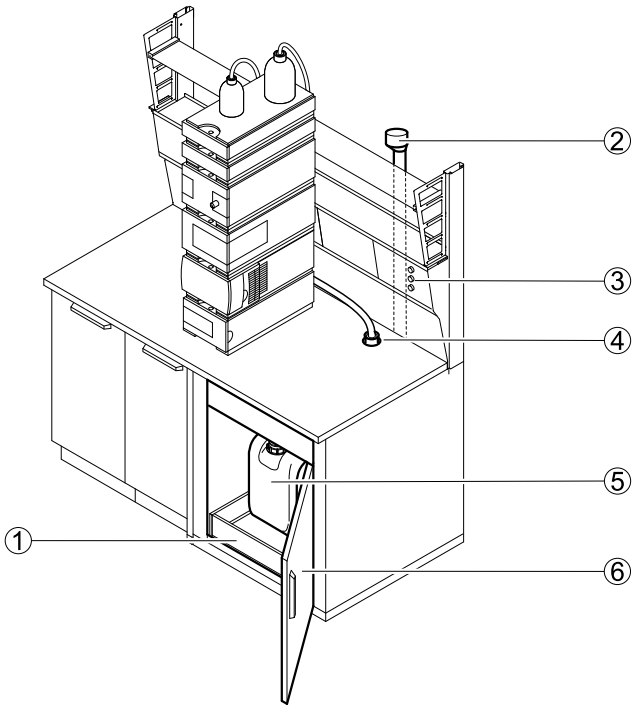
Filling via funnel in internal workspace



1 *Safety cabinet with hinged door*
2 *Container*
3 *Electrical module with level indicator and control units*
4 *Funnel on the work surface*

Waste disposal system for flammable liquids

Disposal system for HPLC equipment



1 *Collecting tray*
2 *Extract air duct*
3 *Electrical panel with level indicator and control units*
4 *Intake spigot for capillaries*
5 *Container*
6 *Safety cabinet with hinged door*

Waste disposal system for flammable liquids

Technical Data

1. Filling via funnel in the underbench unit
2. Filling via funnel in the fume hood internal workspace
3. Transfer system with trolley

Dimensions underbench safety unit	
Safety underbench unit width x depth [in] *(mm)*	approx. 23.43 x 23.62*(595 x 600)*
Safety underbench unit total height [in] *(mm)*	approx. 23.62 *(600)*
Container 1.32gal *(5 l)* width x depth x height [in] *(mm)*	6.30 x 7.28 x 9.06 *(160 x 185 x 230)*
Container 2.64 gal *(10 l)* width x depth x height [in] *(mm)*	7.80 x 11.73 x 10.39 *(198 x 298 x 264)*
Container 7.92 gal *(30 l)* width x depth x height [in] *(mm)*	10.43 x 14.37 x 16.14 *(265 x 365 x 410)*

Relevant features	
Design	With funnel in underbench unit: Underbench safety unit with full-height drawer with max. 2 containers With funnel in fume hood internal workspace: Underbench safety unit with hinged door with max. 2 containers or with transfer system with 1 container Connection to ventilation system Connection to voltage compensation with grounding line Funnel, grounded
Container	2 containers 1.32 gal *(5 l)*, isolating, 2 conductive containers 2.64 gal *(10 l)*, or with transfer system 1 conductive container 7.92 gal *(30 l)*, permanently installed
Funnel	Safety cabinet with full-height drawer: Funnel screw-mounted on container Safety underbench unit with hinged door, transfer system: Funnel on the the work surface is connected with the container through one filling pipe per funnel
Transfer system	Manditory for container with 7.92 gal *(30 l)* maximum level
Approval for container 1.32 gal *(5 l)*, 2.64 gal *(10 l)*, 7.92 gal *(30 l)*	UN 3H1/Y1,6
Filling, level indicator	Funnel in safety underbench unit: mechanical level indicator integrated in the 2.64 gal *(10 l)* container Funnel in fume hood internal workspace: electrical level indicator, acoustic and visual signal when maximum level has been reached Optional connection for liquid chromatograph (HPLC) with spigots instead of funnels and with electrical level indicator Filler head is connected with gas displacement line to extract air
Resistance	Based on consultation with Waldner

Cart for transfer system	
Design	Trolley with 15.84 gal *(60 l)* compressed air membrane pump and electronic level indicator At maximum level the automatic pump is shutdown and acoustic and visual signals are emitted
Trolley, width [in] *(mm)*	24.21 *(615)*
Transport container, material	Polyethylene (PE), electrically conducting

Material	
Safety underbench unit	Powder-coated steel
Container 1.32 gal *(5 l)*	PP
Container 2.64 gal *(10 l)*, 7.92 gal *(30 l)*	High density polyethylene, electrically conductive
Ventilation connection	PPS
Components for installation	Electrically conductive PE-HD
Components for transfer system	Stainless steel

Ventilation data	
Volume flow [cfm] *(m³/h)*	29.4 *(50)*
Ventilation connection on the ascending duct Ø [in] *(mm)*	3.54 *(90)*

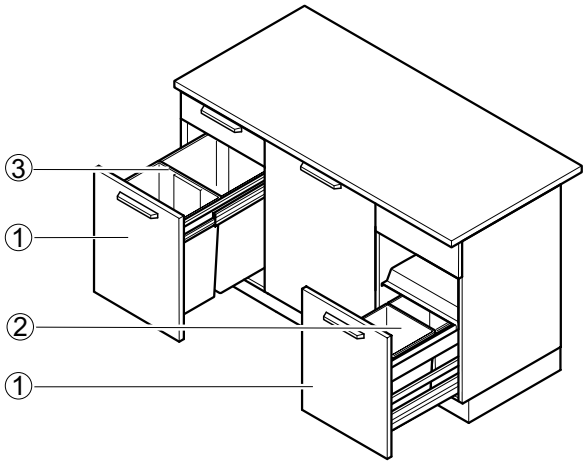
Disposal system for solid waste and domestic waste

Use

- For disposal of residual solid waste and of domestic waste in laboratory work
- Not suitable for permanent storage of solid waste and domestic waste
- Not suitable for the disposal of dangerous substances, especially:
  - acids and bases
  - flammable liquids
  - gas cylinders
  - radioactive substances
  - micro-organisms

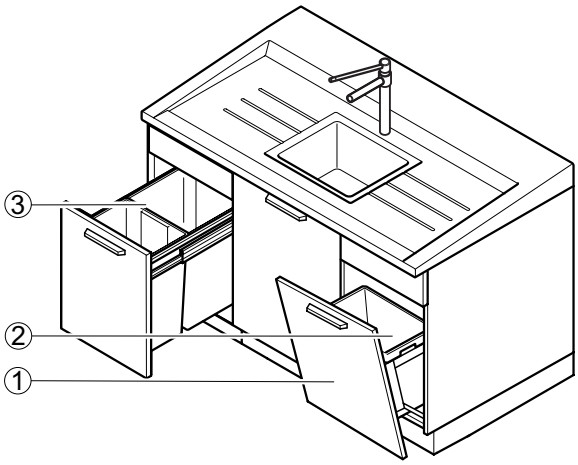
Design

Waste collector with full-height drawer



1 Full-height drawer
2 Waste collector
2 x 3.96 gal (15 l)
3 Waste collector
2 x 9.24 gal (35 l)

Waste collector with tilting door



1 Tilting door
2 Waste collector
7.92 gal (30 l)
3 Waste collector
2 x 9.24 gal (35 l)

Disposal system for solid waste and domestic waste

Technical Data

Dimensions for underbench unit on plinth				
Width x height [in] *(mm)*	17.72 *(450)* x 34.25 *(870)*	23.62 *(600)* x 34.25 *(870)*	17.72 *(450)* x 28.35 *(720)*	23.62 *(600)* x 28.35 *(720)*
Capacity with full-height drawer	2 x 3.96 gal *(15 l)* or 2 x 9.24 gal *(35 l)*	4 x 3.96 gal *(15 l)* -	2 x 3.96 gal *(15 l)* or 2 x 9.24 gal *(35 l)*	4 x 3.96 gal *(15 l)* -
Capacity with tilting door	1 x 7.92 gal *(30 l)*	1 x 7.92 gal *(30 l)*	1 x 7.92 gal *(30 l)*	1 x 7.92 gal *(30 l)*
Depth [in] *(mm)*	21.65 (550)			

Dimensions for underbench unit for sinks			
Width x height [in] *(mm)*	23.62 *(600)* x 34.25 *(870)*	35.43 *(900)* x 34.25 *(870)*	47.24 *(1200)* x 34.25 *(870)*
Capacity with full-height drawer	–	4 x 3.96 gal *(15 l)*	4 x 3.96 gal *(15 l)*
Capacity with tilting door	1 x 7.92 gal *(30 l)*	2 x 7.92 gal *(30 l)*	2 x 7.92 gal *(30 l)*
Depth [in] *(mm)*	21.65 (550)		

Dimensions for self-supporting underbench unit for bench-mounted fume hood	
Width x height [in] *(mm)*	23.62 *(600)* x 32.28 *(820)*
Capacity with full-height drawer	4 x 3.96 gal *(15 l)*
Capacity with tilting door	1 x 7.92 gal *(30 l)*
Depth [in] *(mm)*	21.65 (550)

Dimensions for pushed-in underbench unit for bench-mounted fume hood		
Width x height [in] *(mm)*	21.46 *(545)* x 25.16 *(639)*	23.62 *(600)* x 25.16 *(639)*
Capacity with full-height drawer	2 x 3.96 gal *(15 l)*	4 x 3.96 gal *(15 l)*
Capacity with tilting door	1 x 7.92 gal *(30 l)*	–
Depth [in] *(mm)*	21.65 (550)	

Relevant features	
Door variants	Full-height drawer Tilting door
Automatic opening using foot operation	Optional for full-height drawers up to a width of 23.62 in *(600 mm)*
Extract air spigot	Optional

Material	
Ventilation air connection	PPS

Ventilation data	
Volume flow [cfm] *(m³/h)*	17.7 *(30)*
Ventilation air connection on the ascending duct Ø [in] *(mm)*	3.54 *(90)*

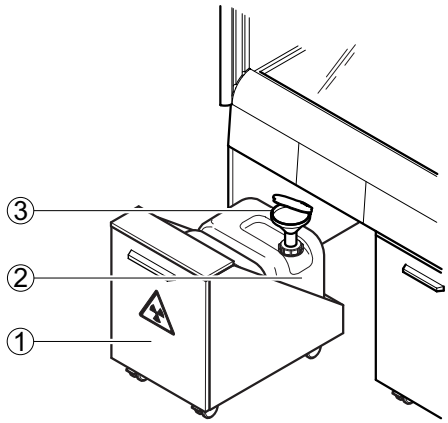
Disposal system for radionuclide waste

Use

- Waste container in the workstation for safe disposal of heavy radioactive waste
- Not suitable for disposal of the following dangerous substances:
  - acids and bases
  - flammable liquids
  - gas cylinders
  - micro-organisms

Design

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



1 Underbench on casters
2 Container 3.17 gal (12l)
3 Funnel

Technical Data

Dimensions underbench units for radionuclide waste		
Width [in] *(mm)*	17.72 *(450)*	23.62 *(600)*
Depth [in] *(mm)*	21.65 *(550)*	
Total height [in] *(mm)*	25.16 *(639)*	
Height, casters [in] *(mm)*	4.33 *(110)*	
Container 3.17 gal *(12 l)*, width x depth x height [in] *(mm)*	7.68 *(195)* x 9.09 *(231)* x 13.78 *(350)*, connecting threat S 60	
Folding carton, width x depth x height [in] *(mm)*	11.81 *(300)* x 11.81 *(300)* x 19.69 *(500)*	

Dimensions underbench units for radionuclide waste	
Design	Front inside with lead sheet With casters Max. 2 containers 3.17 gal *(12 l)* in discharge tray made from polypropylene for the intake of weakly radioactive, residual liquid waste Optional folding carton for the intake of strong radionuclide residual waste

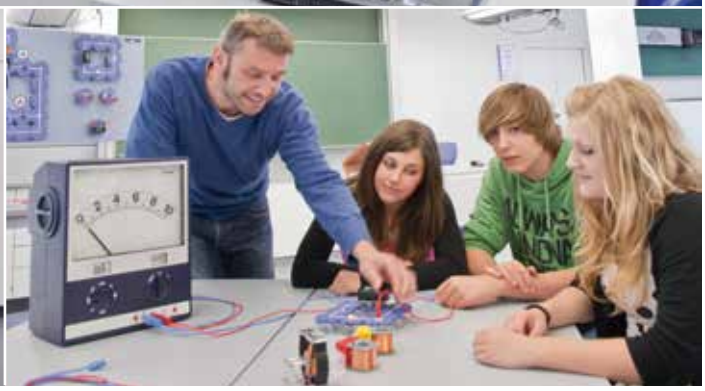
6 School

We are the technological market leaders in Europe in the design of multi-functional science classrooms.

Our new ***SCALA*** school system can be easily and flexibly integrated into any setting, and affords the free space for technical and educational needs.

With our ***SCALA*** school system, we provide the ideal basis for successful learning. Due to the large number of possible configurations, our modular concept creates multi-functional classrooms with great adaptability. Thus technology and science can be experienced in all sorts of ways.

For extensive information with all details about our new school system, we will gladly send you more literature – please contact us at www.waldner-schule.de



7 Media

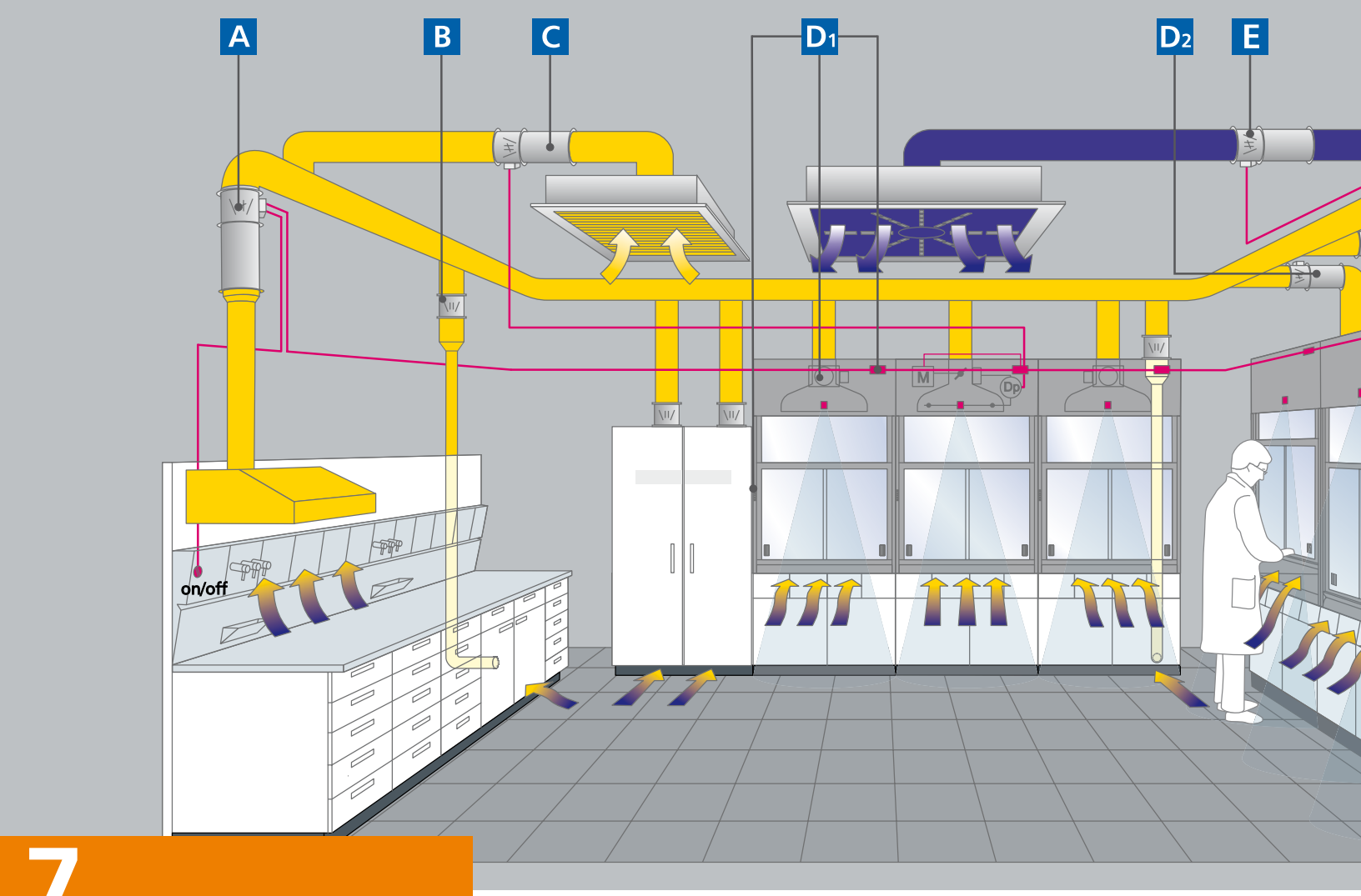
We are the only producer of laboratory furnishings to offer fume hoods and variable fume hood controls crafted by a single hand. Take advantage of our know-how on laboratory room control questions.

We have completed a large number of projects around the world in all kinds of sizes, all of which are being operated to the complete satisfaction of our customers. This confirms our philosophy of acting as a system provider.

And we provide the additional advantage that you, as a customer, only need to contact one partner to respond to your questions – and especially when it comes to your maintenance issues.

Being a full range supplier, we plan and complete your project the typical Waldner way and in the shortest time. Being the market leader, we have the capacity required for your projects – regardless of their scope – Just contact us, we will be happy to provide you with advice.


Airflow Controller



7 Media

Clear operating cost savings regardless of operating status

Business requirements no longer allow you to separate your laboratory equipment from the ventilation of the entire laboratory building. Waldner's intelligent laboratory controls significantly reduce ventilation system operating costs and provide the highest level of work safety.

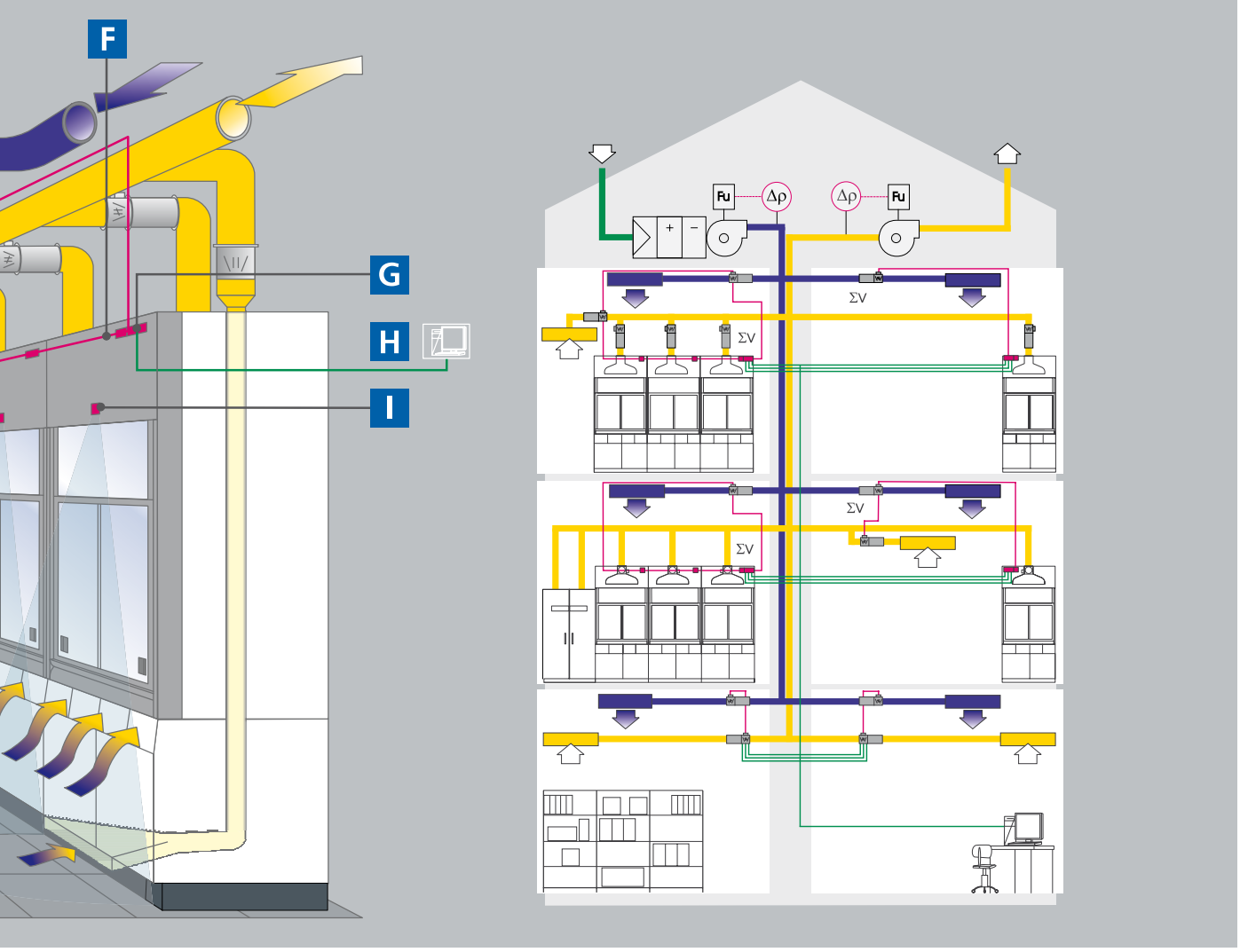
Optimum function through engineering that is properly thought through

Our fume hoods can be ideally integrated into the ventilation concept for the building as a significant component of laboratory ventilation. The measurement and control unit of our Airflow-Controller reliably recognizes the fume hood's utilization condition at all times and within seconds precisely and securely adjustes the air flow rate.

If needed, the user can manually decrease or increase the air exchange rate at the hood anytime.

Investments in our laboratory room controls will quickly amortize

Economic returns clearly speak for our laboratory room controls: The laboratory room control will amortize within one to two years, if the ventilation system is used efficiently given appropriately reduced energy usage. This is a significant advantage given continuously increasing energy prices.



Ventilation and controls as an overall concept

Being a leading system partner, we will create an overall concept design for your laboratory. This will begin with dimensioning the central ventilation system and ducts to fit your usage requirements and end with implementing appropriate measurement, console, and control engineering.

- **A** Airflow damper canopy hood AC 3 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 room controls
- **H** The following methods of communication with the DDC/building control are possible:
  Analogue I/O, LON bus, MOD bus, Profibus, BACnet, Ethernet
- **I** Sash controller SC

Control system - Airflow-Controller (AC) for fume hoods fulfilling DIN EN 14175 Part 6

Airflow controller (AC)

The heart of Waldner control components is a central unit consisting of an electronic control system controlled by a microprocessor.

The standard set value for the airflow rate is determined via the sash position. The processor controls this quickly and precisely by using specific (adaptive or predictive) control behavior. The microprocessor recognizes the required damper valve position, disposes of a max. servo velocity of two seconds for 90°, and is equipped with a position feedback control. This allows all set point changes to be corrected in less than three seconds.

The controller calculates an appropriate measuring diaphragm coefficient by integrating a range of variables from the damper position and the differential pressure. As required by DIN EN 14175, when the value drops below the set point, an optical and acoustic alarm is triggered. An optical and acoustic alarm is also triggered when the sash is opened beyond the maximum permitted sash opening.

As a standard, the control damper is used with the extract air manifold. Motorized dampers must be used as pipe controllers if the room height is less than 129.92 in *(3.30 m)*.

This feature is monitored and controlled when Secuflow technology is used. The supportive flow technology shuts down when the exhaust air falls below specified amounts.

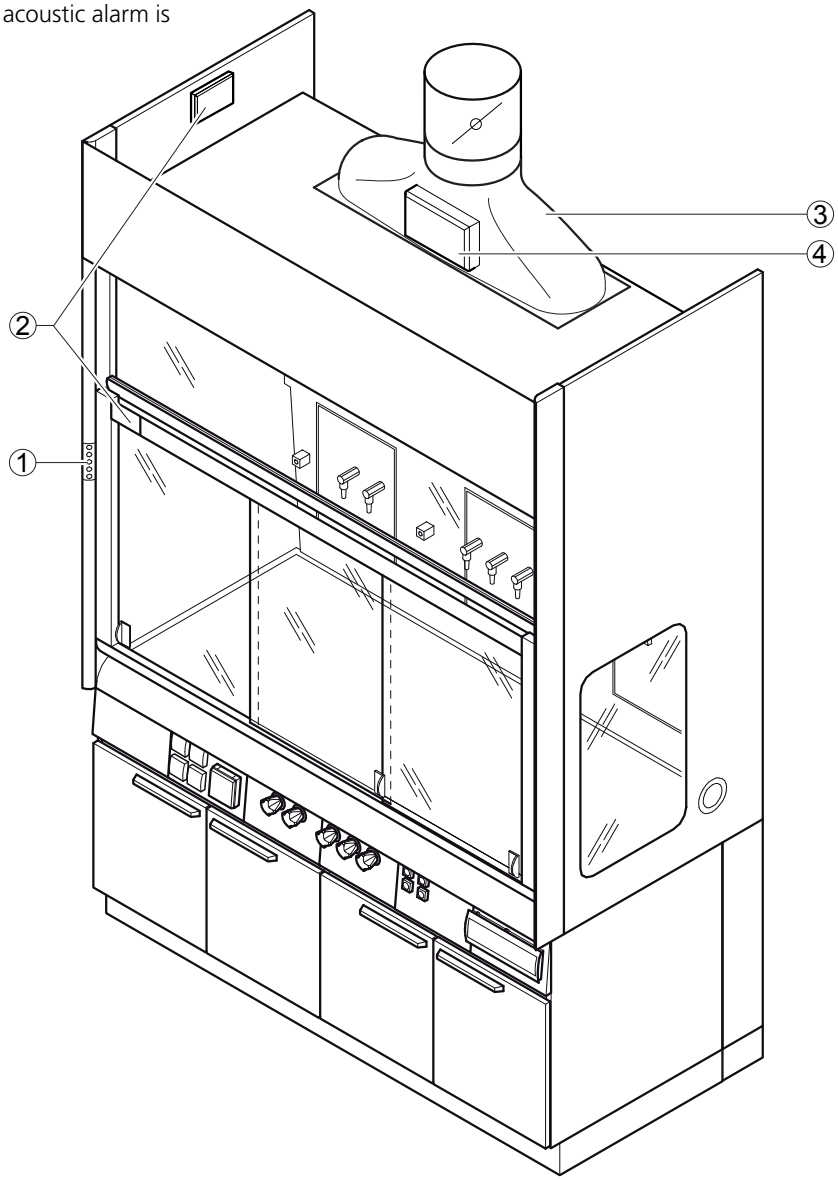
If the supportive flow mechanism fails, the optical and acoustic alarm is triggered and the extract air flow rate will automatically increase to the rate of a standard fume hood.

1 Display and operating device

2 Sensor technology to detect the sash position

3 Extract air manifold with actuator, measuring equipment and measured data acquisition

4 Central control unit AC



Fume hood and controller form a single unit

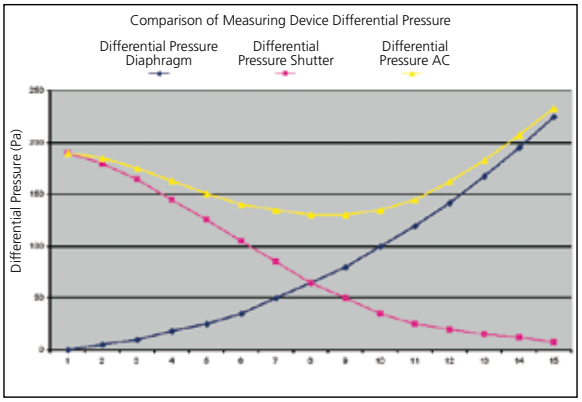
The systems are precisely synchronized, providing for the highest level of reliability during ongoing laboratory operations.
Both fume hood and variable air volume control are approved under DIN EN 14175 Part 6 as a complete safety device. Thus, the time-consuming and costly coordination of different trades becomes unnecessary and legal security and warranty are provided by one supplier, if need be.

Our patented measuring method and measuring equipment

A volumetric flow rate deviation of 1:15 can be achieved through the variable diaphragm factor and the special way that the measuring equipment functions. Air volume on the fume hood can be reduced during night operations to 58.9 cfm *(100 m³/h)*.

At the same time measuring accuracy for volume flow value is guaranteed to +/- 5%. This is required to secure compliance with directed air flow in the laboratory even when volume flows are low.

Fume hood control type approved under DIN EN 14175-T6 5.4 measurement in the exterior measuring plane



Differential pressure curve AC

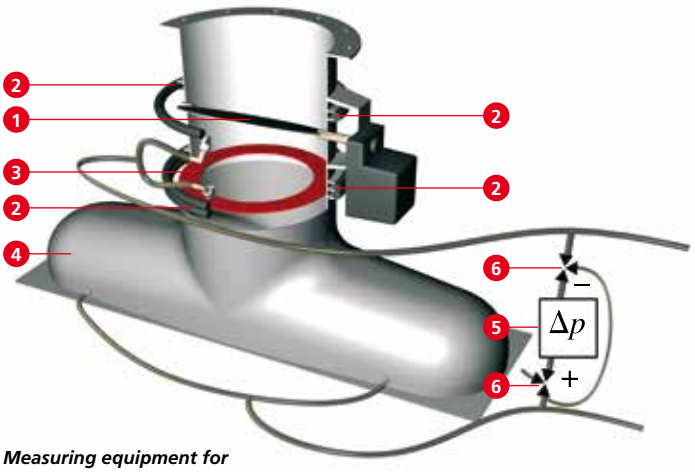
Operating Panel AC
Anzeige und Schalten:
– Light On/Off

– Optical and acoustic alarm system

– Rinsing function (increase in air volume)

– Reduced operation

– Monitoring and feedback control on/off



Measuring equipment for Airflow-Controller
1 Control flap
2 Pressure measuring duct
3 Calibrated orifice
4 Extract air manifold
5 Pressure sensor
6 Magnetic valve

Control Systems and Monitoring
Control Systems

Technical Data

Characteristics	
Air flow rate range for DN 97.5 in *(250 mm)*	58.9cfm *(100m³/h)* - 882.9cfm *(1500m³/h)*
Air flow rate range for DN 122.85 in *(315 mm)*	117.7 cfm *(200 m³/h)* - 1765.8 cfm *(3000 m³/h)*
Measuring accuracy to actual value [%]	+/- 5
Nominal output [VA]	35
Motor operating time at 0-90° [sec]	2
Settling time [sec]	3
Allowable system pressure	0.015 psi *(100 Pa)* - 0.087 psi *(600 Pa)*

Inputs	
Voltage supply	24 V DC
Digital input	6 pieces (parameters can be freely set)
Analogue input	1 pieces (parameters can be freely set)
Sash detector	2 pieces (vertical and horizontal sash detector)
Mod-Bus connection	RS 232
PDR connection	RS 232
CAN-Bus	

Outputs	
Digital output	5 pieces (parameters can be freely set)
Analogue output	1 pieces (parameters can be freely set)
Control of AC3 Compact	RS 485
Connection operating field	RJ 10
CAN-Bus	
Motor control	RJ 45

Master function to control the room

In order to create an overall air amount, the module will cyclically register individual exhaust amounts from the siphoned units in the laboratory room.

In each case, a minimum air exchange can be held for four different operational states in the laboratory room. The module will determine the corresponding minimum value and will transmit these to the fume hoods or volume flow regulators for the room exhaust systems, if the minimum air-exchange rate is not achieved through the fume hood minimum air values. The other fume hoods or volume flow regulators for the room exhaust systems will be lowered to their minimum air values, if the air exchange rate exceeds the minimum when a fume hood is opened. The room inlet air will be increased if the minimum air exchange rate continues to be exceeded.

Temperature and room pressure can be regulated through the module.

For the use of the fume hoods, a preset simultaneity (max. exhaust amount per laboratory room) can be monitored. When the preset exhaust amount is exceeded a signal is sent to the fume hoods in the laboratory.

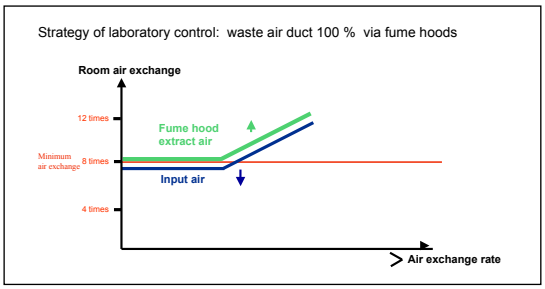
The room ventilation volume controls (AC Compact) are controlled by the control unit over an internal bus system.

Data exchange between the laboratory room controls and the DDC or GLT can take place over the following interfaces:

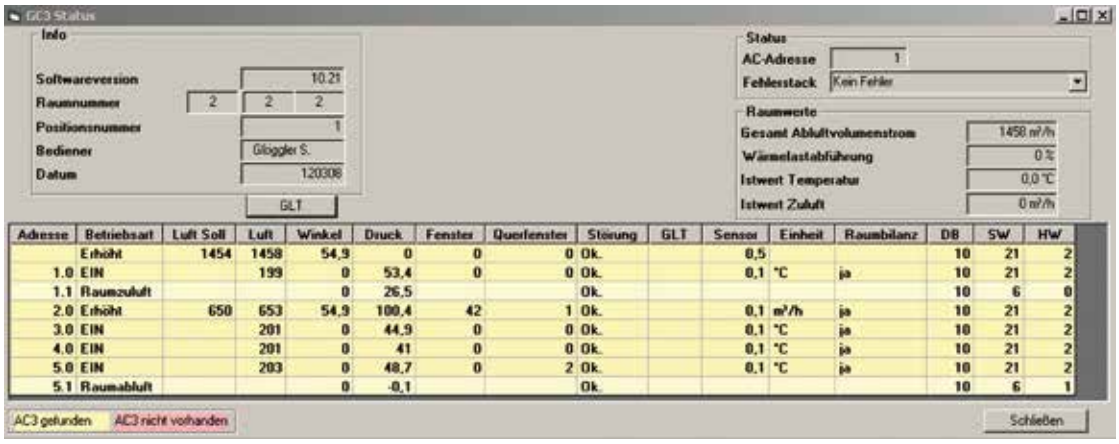
– MOD bus RTU
– LON bus
– Profibus
– Ethernet
– BACnet
– Analogue I/0

Data points such as set values and actual values of the airflow dampers, motorised damper positions, error messages, operating states and sash positions of the fume hoods can, e.g., be provided for visualisation.

Complete solutions are available for implementing a remote diagnostics system for laboratory control components.



Two examples of variations on laboratory control systems



Control Systems and Monitoring
Airflow controller for laboratory supply and exhaust air

AC3 Compact

Application areas
– Room intake control
– Room exhaust control
– Airflow measuring equipment / measuring orifice (without control flap and actuating drive)
– Expansion module for AC3
Up to four AC3 compact controls can be switched on and administered per AC3 control

AC3 Compact
Air amounts can be continuously variably controlled with the AC3 Compact microprocessor-based electronic control unit.

It rapidly and precisely controls the airflow according to the desired value and over a predetermined control action (predictive and adaptive).

Performance characteristics
– Control parameters are adaptively optimized online
– Standard tolerances are predictively corrected using a theoretical process model
– Motorized damper position feedback control
– Floating time: 5 seconds, settled
3 seconds, 80 % of setpoint
– Free ability to set parameters through PCs
– Integrated pressure sensor 0 psi *(0 Pa)* - 0.036 psi *(250 Pa)* (pressure-resistant to 0.362 psi *(2500 Pa)*)
– Motorized damper housing: galvanized, stainless steel, PPs

Connections (parameters can be partially set)
– 2 x analogue output
– 1 x analogue input
– 1 x digital input
– 1 x operating field input RJ 10
– 1 x Modbus internal input RJ 45
– 1 x Modbus internal output RJ 45
– 1 x motor output RJ 45
– 1 x connecting plug with double terminals
24 VAC/DC, I max. 0.7 A (17 W)

AC3 Compact

Actuating drive


Galvanized control housing with AC3 Compact and rapid actuating drive

Technical Data

Design table for round supply and extract air airflow dampers

Nominal size	Fitting length	Volume flow range B1		Volume flow range B0		Volume flow range B2	
[in] *(mm)*	[in] *(mm)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*
3.94 *(100)*	20.87 *(530)*	15.9 *(27)*	111.8 *(190)*	11.2 *(19)*	80 *(136)*	23 *(39)*	160.1 *(272)*
4.92 *(125)*	20.87 *(530)*	25.3 *(43)*	176 *(299)*	18.2 *(31)*	126 *(214)*	35.9 *(61)*	251.9 *(428)*
6.3 *(160)*	20.87 *(530)*	41.8 *(71)*	290.8 *(494)*	29.4 *(50)*	207.8 *(353)*	59.4 *(101)*	415.6 *(706)*
7.87 *(200)*	22.83 *(580)*	65.3 *(111)*	456.8 *(776)*	46.5 *(79)*	326.1 *(554)*	93.6 *(159)*	652.2 *(1108)*
9.84 *(250)*	22.83 *(580)*	102.4 *(174)*	716.3 *(1217)*	73 *(124)*	511.5 *(869)*	146.6 *(249)*	1023.6 *(1739)*
12.4 *(315)*	24.41 *(620)*	163 *(277)*	1141.3 *(1939)*	116.5 *(198)*	815.2 *(1385)*	233.1 *(396)*	1630.4 *(2770)*
13.98 *(355)*	24.41 *(620)*	207.2 *(352)*	1451.5 *(2466)*	148.3 *(252)*	1037.1 *(1762)*	296.7 *(504)*	2073.6 *(3523)*
15.75 *(400)*	24.41 *(620)*	263.7 *(448)*	1845.3 *(3135)*	188.4 *(320)*	1317.9 *(2239)*	376.7 *(640)*	2636.3 *(4479)*
19.69 *(500)*	37.8 *(960)*	412.6 *(701)*	2889.4 *(4909)*	294.9 *(501)*	2063.6 *(3506)*	590.4 *(1003)*	4127.3 *(7012)*
24.8 *(630)*	37.8 *(960)*	656.3 *(1115)*	4594.6 *(7806)*	468.5 *(796)*	3281.4 *(5575)*	938.8 *(1595)*	6563.5 *(11151)*

Design table for angular supply and extract air airflow dampers

Construction size		Fitting length	Volume flow range B1		Volume flow range B0		Volume flow range B2	
Width [in] *(mm)*	Height [in] *(mm)*	[in] *(mm)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*	Vmin [cfm] *(m³/h)*	V. nom. [cfm] *(m³/h)*
7.87 *(200)*	5.51 *(140)*	20.87 *(530)*	57.7 *(98)*	405.5 *(689)*	148330 *(70)*	289.6 *(492)*	83 *(141)*	579.2 *(984)*
9.84 *(250)*	5.51 *(140)*	20.87 *(530)*	72.4 *(123)*	507.4 *(862)*	51.8 *(88)*	362.6 *(616)*	103.6 *(176)*	725.2 *(1232)*
11.02 *(280)*	6.3 *(160)*	20.87 *(530)*	93 *(158)*	651.6 *(1107)*	66.5 *(113)*	465.6 *(791)*	133 *(226)*	930.6 *(1581)*
12.4 *(315)*	7.09.*(180)*	22.83 *(580)*	118.3 *(201)*	826.4 *(1404)*	84.2 *(143)*	590.4 *(1003)*	168.9 *(287)*	1180.7 *(2006)*
13.98 *(355)*	7.87 *(200)*	22.83 *(580)*	148.3 *(252)*	1036.5 *(1761)*	105.9 *(180)*	740.5 *(1258)*	211.9 *(360)*	1480.9 *(2516)*
15.75 *(400)*	8.82 *(224)*	22.83 *(580)*	187.2 *(318)*	1310.8 *(2227)*	133.6 *(227)*	935.9 *(1590)*	267.8 *(455)*	1872.3 *(3181)*
15.75 *(400)*	11.02*(280)*	22.83 *(580)*	234.3 *(398)*	1641 *(2788)*	167.2 *(284)*	1172.5 *(1992)*	335.5 *(570)*	2344.4 *(3983)*
12.4 *(315)*	12.4 *(315)*	24.41 *(620)*	207.8 *(353)*	1453.3 *(2469)*	148.3 *(252)*	1037.7 *(1763)*	296.7 *(504)*	2076 *(3527)*
13.98 *(355)*	13.98 *(355)*	24.41 *(620)*	264.3 *(449)*	1848.2 *(3140)*	188.4 *(320)*	1320.2 *(2243)*	377.3 *(641)*	2640.5 *(4486)*
15.75 *(400)*	15.75 *(400)*	24.41 *(620)*	335.5 *(570)*	2349.7 *(3992)*	239.6 *(407)*	1678.1 *(2851)*	479.7 *(815)*	3356.8 *(5703)*
19.69 *(500)*	15.75 *(400)*	24.41 *(620)*	420.3 *(714)*	2940.1 *(4995)*	299.6 *(509)*	2117.8 *(3598)*	600.4 *(1020)*	4199.7 *(7135)*
24.8 *(630)*	15.75 *(400)*	24.41 *(620)*	529.7 *(900)*	3707.6 *(6299)*	377.9 *(642)*	2648.1 *(4499)*	757.5 *(1287)*	5296.2 *(8998)*
31.5 *(800)*	15.75 *(400)*	24.41 *(620)*	672.8 *(1143)*	4711.2 *(8004)*	480.3 *(816)*	3365 *(5717)*	962.4 *(1635)*	6730.1 *(11434)*
24.8 *(630)*	7.87 *(200)*	24.41 *(620)*	254.9 *(433)*	1844.1 *(3133)*	186 *(316)*	1317.3 *(2238)*	372.6 *(633)*	2634.6 *(4476)*

For optimum adaptation of the airflow dampers to the air exchange rate range and the size of the duct network, the measuring panel sizes (B1/B0/B2) are available for each dimension. The standard version of the airflow dampers includes the measuring panel B1.
Maximum air velocity in the measuring panel:
B1: 1377.95 FPM *(7 m/s)*; B0: 984.25 FPM *(5 m/s)*; B2: 1968.50 FPM *(10 m/s)*

Monitoring - Function display (FAZ) for fume hoods fulfilling DIN EN 14175 Part 2

To warn laboratory personnel in the event of a failure through optical and acoustic signals, DIN EN 14175 Part 2 requires continuous monitoring of ventilation functions in fume hood. The optical signal cannot be turned off.

The FAZ is an electronic monitoring system that continuously measures the air exchange rate. When the volume flow falls below the preset threshold value, it triggers both acoustic and optical alarms. This continuous control of the airflow and, where needed, of the Secuflow technology, guarantees a continuous monitoring of the fume hood's ventilation function.

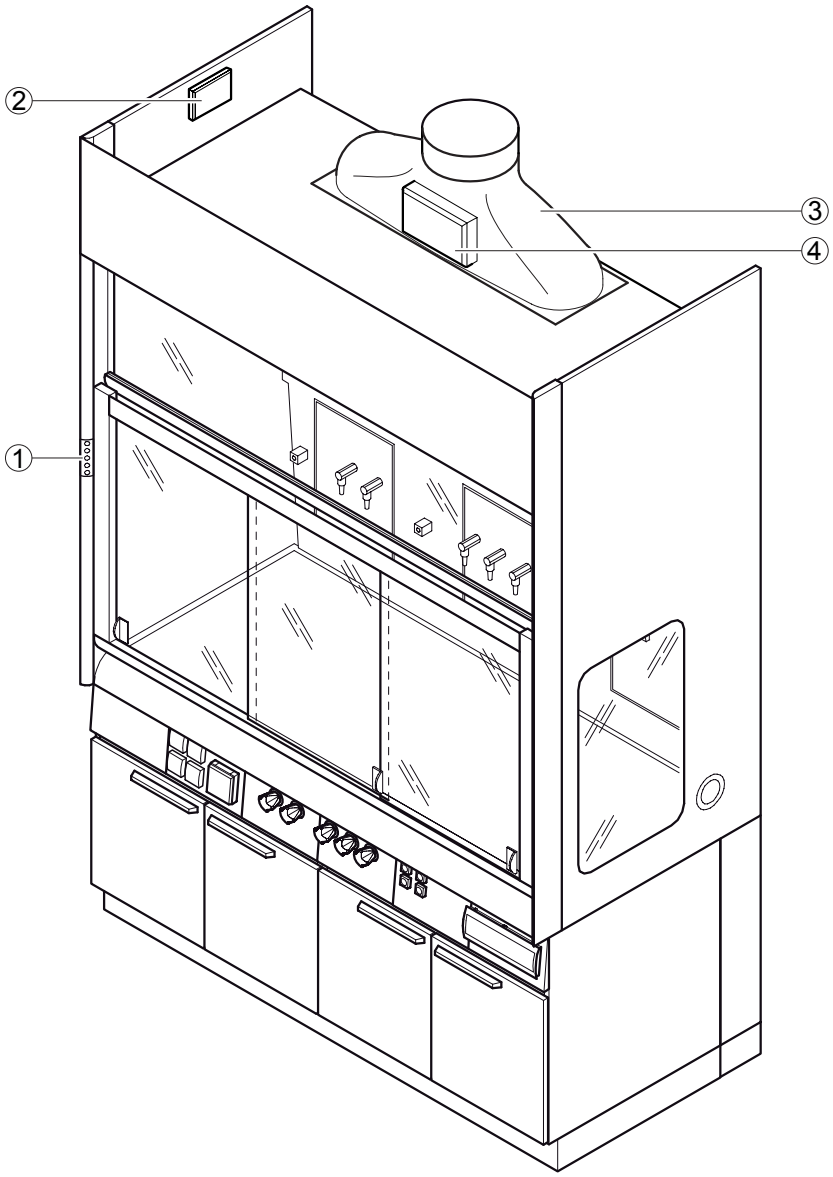
The display is located in the fume hoods profile. Alarms, such as lack of air, are signaled in red, while warning, such as exceeding the max. sash opening height, are signaled in orange. Pressing a button can deactivate the acoustic alarm. A user-enabled on-off switch for the FAZ system is available as an option.

Airflow measurement FAZ

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

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

During nighttime operations, a second air volume can be monitored.

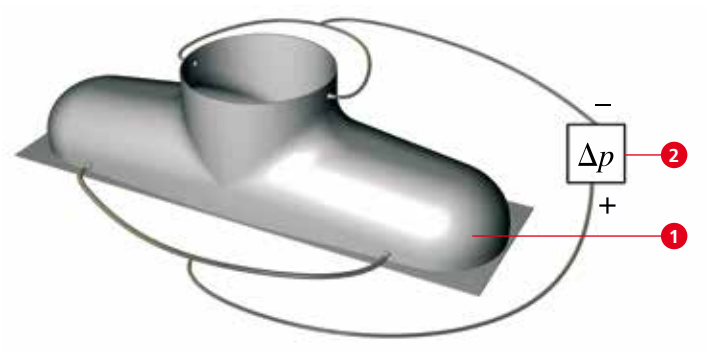


FAZ operating field
– Light On/Off
– Optical and acoustic alarm system
– Not assigned
– Display night operation
– Function monitoring on/off

1 Display and operating device
2 Potentiometer sash position
3 Extract air manifold with differential pressure measurement
4 FAZ central unit

FAZ differential pressure measurement
1 Extract air manifold, available in two versions:
9.84 in (250 mm) diameter and 12.40 in (315 mm)
2 Pressure sensor

9.84 in (250 mm) measuring pipe diameter for scrubber and filter fume hoods



Technical Data

Monitoring	Function display (FAZ)
Electrical power supply	24 V DC
Outputs	Alarm output Status message Light switch
Inputs	On Off Accoustic alarm shut-off Night operations
Diameter [in] *(mm)*	9.84 *(250)*, 12.40 *(315)*
System connection	Analogue I/0, Modbus

Sash controller

When the user lightly activates the sash, the sash's opening or closing process will be supported and completed by a motor.

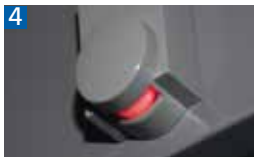
When the fume hood is not used, the electronics of the sash will close the fume hood sash with the aid of a motor. The area in front of the fume hood is monitored by a motion detector. If no movement occurs for a predetermined period of time, the sash will automatically close. As a safety feature, a photoelectric barrier is built into the bottom edge of the sash and prevents the sash from closing if there are obstacles in its path.

The requirements of TRGS 526, that fume hoods which are currently not in use, are automatically and practically fulfilled through a sash controller.

The closing delay period after the sensors are enabled can be set to between 30 seconds and fifteen minutes.

In combination with an airflow controller the sash controller can also be connected to the DDC/BMS.

Components:
1) Processor-controlled central unit
2) Motor drive (closes and opens the sash)
3) A photoelectric barrier that is integrated in the sash frame serves to detect obstacles during the automatic closing process
4) The motion detector will stop the sash when working in front of the fume hood



Technical data SC

Closing device	Sash controller SC
Power supply	24 V DC
Nominal capacity	48 VA
Inputs	Open Closed

8 Accessories

For our new ***SCALA*** laboratory furniture system, we have developed accessories that allow you to furnish your working environment – in your particular area of the laboratory – according to your individual needs.

System-conforming, flexible and sophisticated in design, our movable sliding elements Sekretär, Assistent and Protector present themselves as space-saving and extremely useful helpers in the workplace.

We will be pleased to show you many more accessories, custom fit to our new system.

The choice is yours – you can find our complete line of accessories in our special catalog, which we will gladly send to you, or can be viewed on the internet at www.waldner-inc.com.

9 General

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

Our products set the benchmark worldwide, and have definitely molded the laboratory workstation.

Since we know the expections of our customers, we are continuously developing and improving.

This catalog represents the condition of our product line in May 2009. We reserve the right to make technical changes in the context of further development. Pictures, descriptions and textual contents are copyrighted. Reproduction, even extracts, only with the explicit approval of our headquarter Waldner Laboreinrichtungen GmbH & Co. KG.

Color scheme

We have paid attention to design and color to make a balanced appearance, resulting in an optimal orientation for the researchers, in an environment that they will spend long hours every day. We give the laboratory environment a clear and timeless design – making work pleasant.

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

Walnut

- Sekretär, Assistent, Protector
- Optional as emphasis for storage cabinet fronting

Light gray
NCS S 3005 R80B

- Metalwork service modules
- Bench frames, worktops

Color scheme

Anthracite metallic effect
Similar to
NCS S 5502 R
Fume hood frontings

Light green
Glass
NCS S 1010 G10Y
- Rear-lacquered worktops

Dark gray
NCS S 7502 B
similar to RAL 7015
Storage cabinet on plinth

Stainless steel

Handles
Worktops
Sinks

Pictograms
CMYK 0/16/65/0
- Emphasizing all labels for hazardous material and special storage spaces

Laboratory planning

Our service goes far beyond merely manufacturing the finest laboratory furniture. Due to our many years of experience in project management, we have acquired profound planning competence. We not only equip your laboratory, but on request we can undertake the planning and coordination of all related trades.

The start of planning

Layout planning defines, with two-dimensional clarity, the best utilization of available space. We take your needs into account, as well as the existing environment: dimensions, access to services, required connections, and other pertinent information.

The third dimension gives a clear picture

We now provide you with malleable three-dimensional drawings of the laboratory space. Then we refine the details together.

The next step of the presentation is to add color and depth perception. So the rendered presentation makes your laboratory almost "accessible" as if you could already walk right into it. You can see your laboratory from all angles.

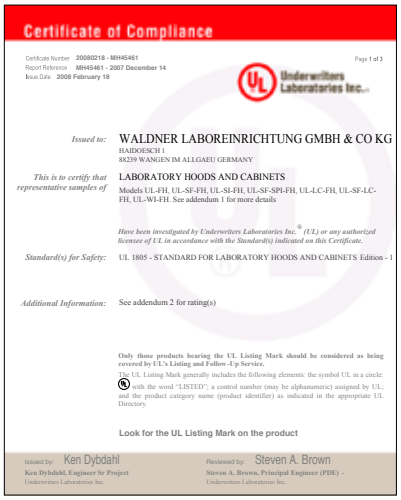
As the logical conclusion of precise planning and project development, we install your new laboratory in the highly professional manner for which Waldner has become known – complete, precise and on time.

Awards

We have been developing our laboratory furniture for more than 60 years. Over this entire period of time, we have definitively influenced the laboratory workplace with our innovations.

Because of our attention to detail during development, planning and manufacturing over a long period of time, we have built an impressive pool of experience in all phases of our complete service, including product development, manufacturing, project management, installation and service.

Numerous patents, brands, design patents and registered designs are an impressive demonstration of our innovative power. As the European market leader, we will continue to do everything possible to impress our customers with new and innovative products. To view our latest developments, innovations and patents, please visit our website at www.waldner-inc.com.



Quality down to the finest detail isn't just our claim, it's what we do.

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

To qualify for ISO 9001, we must maintain the finest quality products and professional service and support every step of the way – from initial planning through final installation. This level of quality assurance applies to every phase of our manufacturing as well: procurement, product development, engineering, production, and installation. Our in-house quality checks and regular training courses ensure the exact observance of the demanding criteria required to comply with ISO 9001.

All products forour ***SCALA*** laboratory furniture system have been tested by TUV Product Service GmbH based on all applicable standards and regulations in accordance with German law on equipment safety (Geratesicherheitsgesetz) and carry the GS marking. Different fume hood types are as well certified according to UL 1805.

These test certificates are only awarded to companies who practice continuous monitoring of high quality standards throughout the entire manufacturing process. We honor our obligation to monitor production in many ways: all materials, components, and individual parts used in our factory are continuously quality tested by us, and in some cases by independent testing laboratories, as well.

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


ZERTIFIKAT


DVGW-Baumusterprüfzertifikat
DVGW type examination certificate


ZERTIFIKAT

Die Zertifizierungsstelle der TÜV SÜD Management Service GmbH bescheinigt, dass das Unternehmen

WALDNER
Laboreinrichtungen GmbH & Co. KG
Haidtech 1, 88239 Wangen, Deutschland

Geltungsbereich:
Vertrieb, Entwicklung/Konstruktion, Projektierung, Produktion, Versand, Montage und Service von Laboreinrichtungen;
Niederlassung Süd
Haidtech 1, 88239 Wangen, Deutschland
Niederlassung Mitte/West
Zeppelinstraße 16, 64625 Bensheim, Deutschland
Niederlassung Nord/Ost
Georgenstraße 35, 10117 Berlin, Deutschland

Geltungsbereich:
Projektierung und Vertrieb von Laboreinrichtungen

ein Qualitätsmanagementsystem eingeführt hat und anwendet.
Durch ein Audit, Bericht-Nr. 70020755 wurde der Nachweis erbracht, dass die Forderungen der
ISO 9001:2008
erfüllt sind. Dieses Zertifikat ist gültig in Verbindung mit dem Hauptzertifikat bis 2014-11-13
Zertifikat-Registrier-Nr. 12 100 17842/01 TMS

München, 2011-11-28
Seite 1 von 1
QMS-TGA-ZM-07-02


URKUNDE


ZERTIFIKAT

Die Zertifizierungsstelle der TÜV SÜD Management Service GmbH bescheinigt, dass das Unternehmen

WALDNER
Laboreinrichtungen GmbH & Co. KG
Haidtech 1
88239 Wangen, Deutschland

für den Geltungsbereich
Vertrieb, Entwicklung/Konstruktion, Projektierung Produktion, Versand, Montage und After-Sales von Laboreinrichtungen

ein Umweltmanagementsystem eingeführt hat und anwendet.
Durch ein Audit, Bericht-Nr. 70020755 wurde der Nachweis erbracht, dass die Forderungen der
ISO 14001:2004
erfüllt sind. Dieses Zertifikat ist gültig bis 2013-12-07
Zertifikat-Registrier-Nr. 12 104 17842 TMS

München, 2010-12-28
EMS-TGA-ZM-07-02

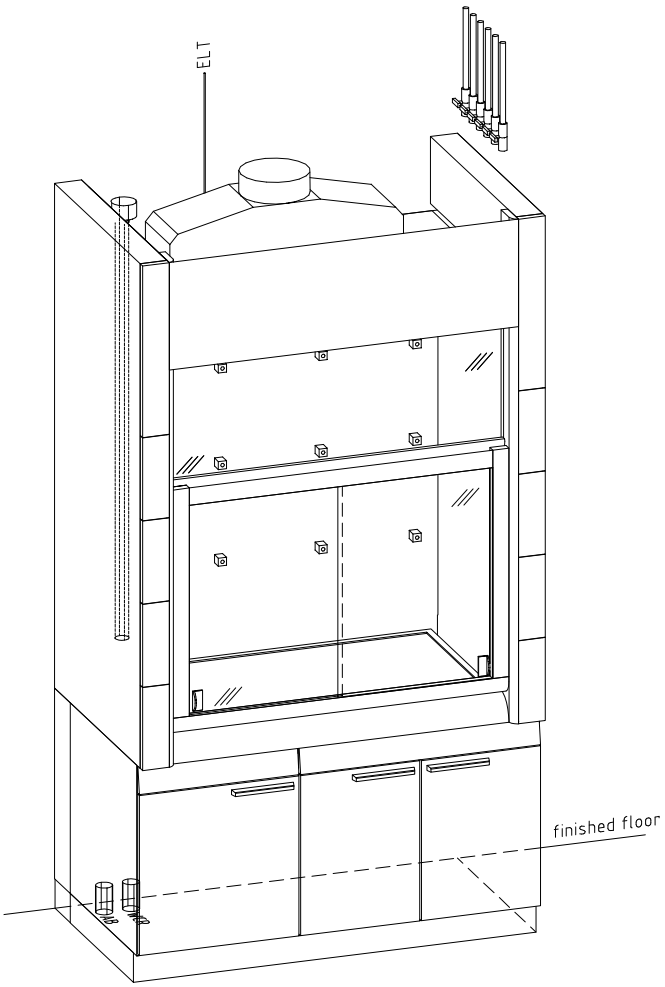
SEFA
ASHRAE
DVGW CERT GMBH
TÜV SÜD ISO 9001
CE
CLASSIFIED C UL US
TÜV SÜD GS geprüfte Sicherheit
DIN

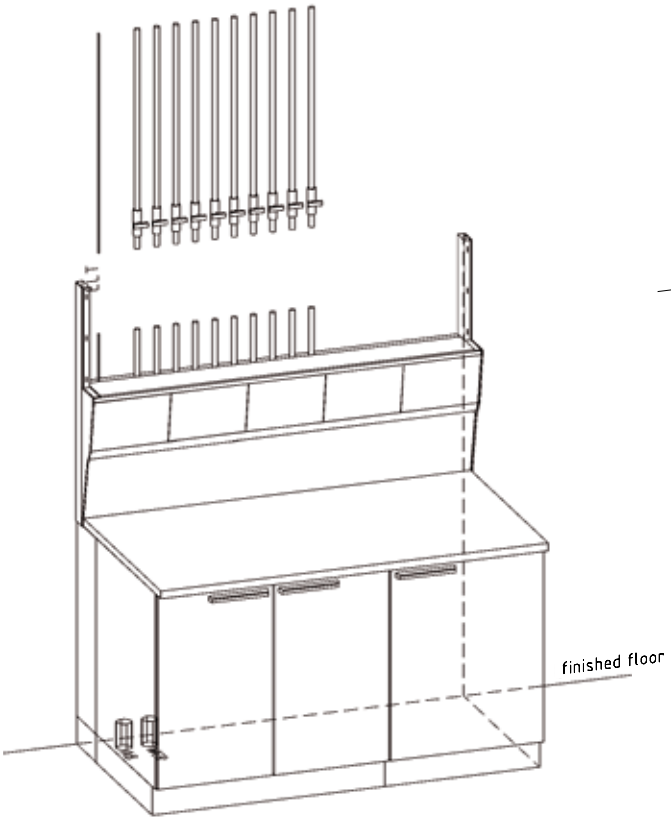
Installation interfaces of plumbing and electrical services

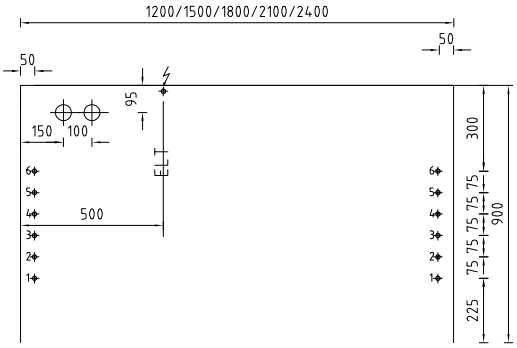
- Water and industrial gases ending on-site with NPT 1/2" internal screw thread shut-off valves
- Pure gases with 1/4" OD Swagelok screw coupling
- Waste water ends on-site with 5/4" OD plug sleeve

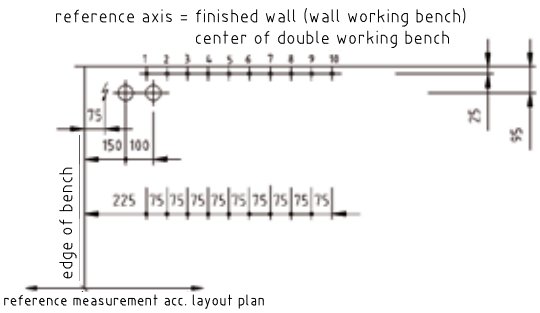
- Electrical cable according to
  UL 1584
  UL/CSA 600V
  UL AWM Style 21098
  CSA AWM I A/B II A/B
- Cable type in coordination with on-site fuse protection upon agreement

- We provide transfer points for on-site trades, specific to the project, in our position drawings









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