renggli

II Edition

TREND-SETTING LABORATORY TECHNOLOGIES

renggli

Table of Contents

Introduction	4
Furniture systems	12
Laboratory worktops	14
Laboratory sinks	16
Polypropylene elements	17
Fittings and valves	18
Standard systems with simple top units	
RL 1 Basic system	20
RL 2 Basic system with mobile cabinets	24
Standard systems with extended top units	
RL 3 Basic module system	28
RL 4 Module system with mobile cabinets	32
RL 5 Module system with suspended cabinets	36
RL 6 Module system with mobile cabinets	40
RL 7 Ceiling installation system	44
Suspended cabinets	48
Special cabinets	49
Laboratory cupboards	50
Specialist cupboards	52
RL Individual Customized system	54
Fume hoods	
LabAirTec extraction fume hoods	55
Green Fume Hood non-extraction fume hoods	62
References	64

RL 1 – Basic system

Professional laboratory furniture system with permanent, fixed cabinets placed on a base unit. Cabinets function as a support for worktops. Top units and utility connections are installed on a worktop.

RL 2 – Basic system with mobile cabinets

Mobile cabinets are placed under stable powder-painted frames. Cabinets may be replaced or rearranged to meet User's requirements.

RL 3 – Basic module system

Laboratory system with extended top units. Placement of utilities and waste disposal areas are fully adjusted to User's requirements. Cabinets function as a support for worktops.

RL 4 – Module system with mobile cabinets

Professional laboratory furniture system with extended attachments which allow the User to make various modifications. Mobile cabinets are located under a stable workbench frame and may be easily moved or replaced.

RL 5 – Module system with suspended cabinets

Professional laboratory furniture system with fixed cabinets suspended on stable workbench frames. Cabinets are placed on a height convenient for the User.

RL 6 – Module system with mobile cabinets

Laboratory furniture system distinguished by significant flexibility in respect of User's requirements. All cabinets have a mobile structure and may be easily moved.

RL 7 – Ceiling installation system

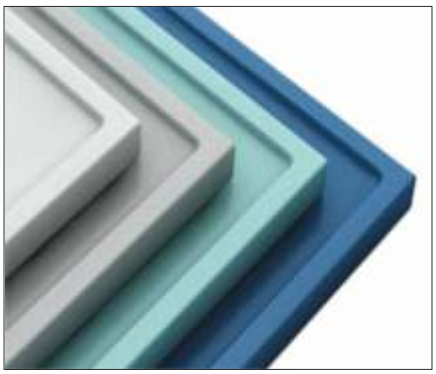
Ceiling utility supply system completely separates furniture from utility supply units and shelves substituting traditional laboratory top units.

RL Individual – Customized system

Our philosophy focuses on individuality. If you have unusual needs or special requirements for your workplace, we will comprehensively design and furnish you laboratory.
We are open to Customers' wishes. If you need new laboratory equipment, if you want to perform reconstruction or only supplement laboratory furniture, we will carefully coordinate the project, following your vision till the completion.

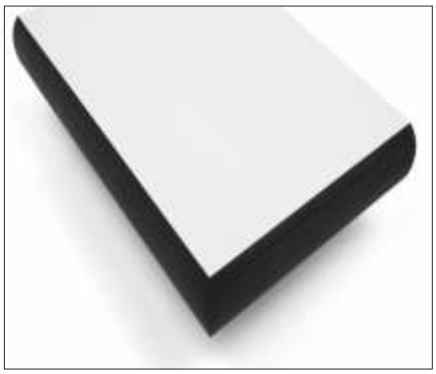
Laboratory worktops

Worktops for laboratories constitute integral and inseparable components of laboratory benches. The material for their production should be selected according to the planned purpose of the benches and substances used in the laboratory. Durability and usefulness of the furniture depends on the resistance of the worktop to loading, humidity, mechanical damage and chemicals.



Monolithic ceramics

- very good chemical resistance
- worktops recommended for work with concentrated reagents
- very good mechanical and scratch resistance
- very good resistance to UV radiation
- non-resistant only to HF
- available in version without elevated edges or with integrated ceramic edges
- suitable for chemical and microbiological laboratories

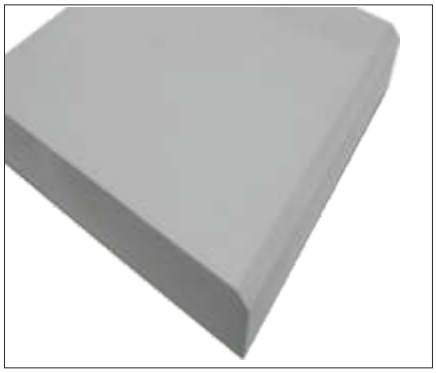


Phenolic resin

- good chemical resistance to acids and alkalis
- good mechanical resistance
- very good humidity resistance
- available in versions with flat or elevated edges
- suitable for analytical and chemical laboratories

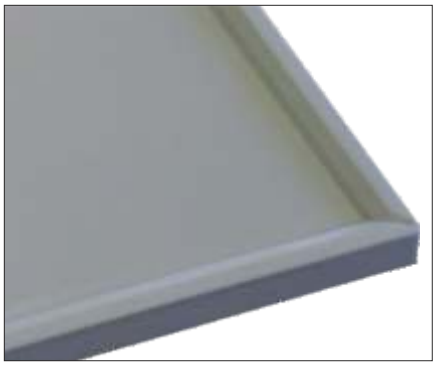
Quartz and granite conglomerate

- good chemical resistance to acids and alkalis
- good mechanical resistance
- good abrasion and scratch resistance
- available in versions with flat or elevated edges
- suitable for analytical and chemical laboratories



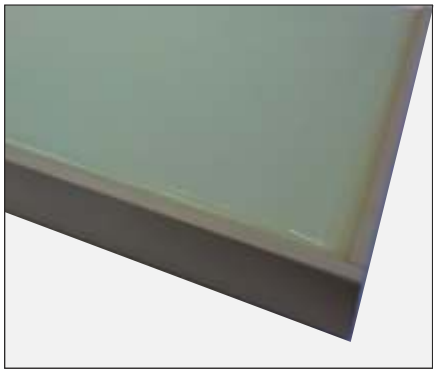
Epoxy resin

- good chemical resistance to acids and alkalis
- very good resistance to high and low temperatures
- available in versions with flat or elevated edges
- suitable for analytical and chemical laboratories



Polypropylene

- very good chemical resistance
- good mechanical resistance
- very good humidity resistance
- easy to clean
- available in versions with flat or elevated edges
- suitable for chemical and school laboratories



Glass

- good chemical resistance to acids and alkalis
- available with integrated elevated edges
- modern design
- suitable for analytical and chemical laboratories

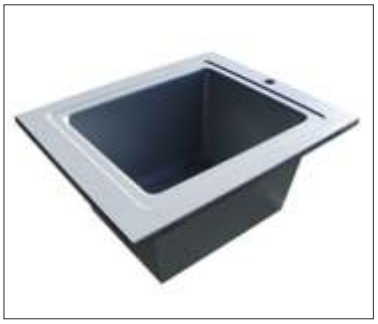
Postforming laminate

- good mechanical resistance
- wide variety of colours
- reasonable price
- suitable for analytical and school laboratories

Laboratory sinks

Of monolithic ceramics

- very good chemical resistance to acids and alkalis
- good resistance to high temperatures
- single or double sinks available
- installation: suspended, flush with a worktop, overmounted



Of epoxy resin

- very good chemical resistance to acids and alkalis
- good mechanical resistance
- single or double sinks available
- installation: mounted from the bottom or from the top

Of polypropylene

- very good chemical resistance to acids and alkalis
- good mechanical resistance
- single or double sinks available
- mounted from the bottom

Of stainless steel

- good mechanical resistance
- single or double sinks available
- overmounted sinks

Polypropylene elements

We offer a broad range of products made of polypropylene. Such material is distinguished by high chemical resistance to, among others, most acids, alkalis, solvents and alcohols.

We produce various dishes, trays, mobile trays, drain boards, full waste disposal stations and much more on Customers' demand.

Fittings and valves

Single-handle mixer

- worktop mixer
- for hot/cold water
- internal pipes made of brass plate covered with a layer of epoxide paint
- extended handle to turn on the mixer with your elbow
- mobile spout
- 39 cm in height
- spout length of 30 cm

Single-handle mixer

- wall mixer
- for hot/cold water
- internal pipes made of brass plate covered with a layer of epoxide paint
- extended handle to turn on the mixer with your elbow
- mobile spout
- spout length of 19 cm

Cold water tap

- worktop tap
- internal pipes made of brass plate covered with a layer of epoxide paint
- mobile spout with a hose connector
- spout length of 15 cm

Demineralized water tap

- worktop tap
- internal pipes made of brass plate covered with a layer of epoxide paint
- membrane head
- spout with a hose connector
- spout length of 15 cm
- 30 cm in height

Fittings and valves

Flammable gases

- protection against accidental opening (Press & Turn)
- hot-stamped brass body
- 3-zone utility designation in compliance with EN 13792 norm
- single, double or fourfold valves
- table, suspended or wall installation

Non-flammable gases

- protection against accidental opening (Press & Turn)
- hot-stamped brass body
- 3-zone utility designation in compliance with EN 13792 norm
- utilities: oxygen, nitrogen, carbon dioxide, argon, helium, vacuum, hydrogen, compressed air

Water

- hot-stamped brass body
- faucets with a 3-zone colour code
- opening / closing angle 2 x 360°
- suspended or wall (column) installation

Fume hood sets

- utilities: flammable gases, non-flammable gases, cold water, hot water, deionized water, ice water
- provided in a ready-to-assemble set

Set elements

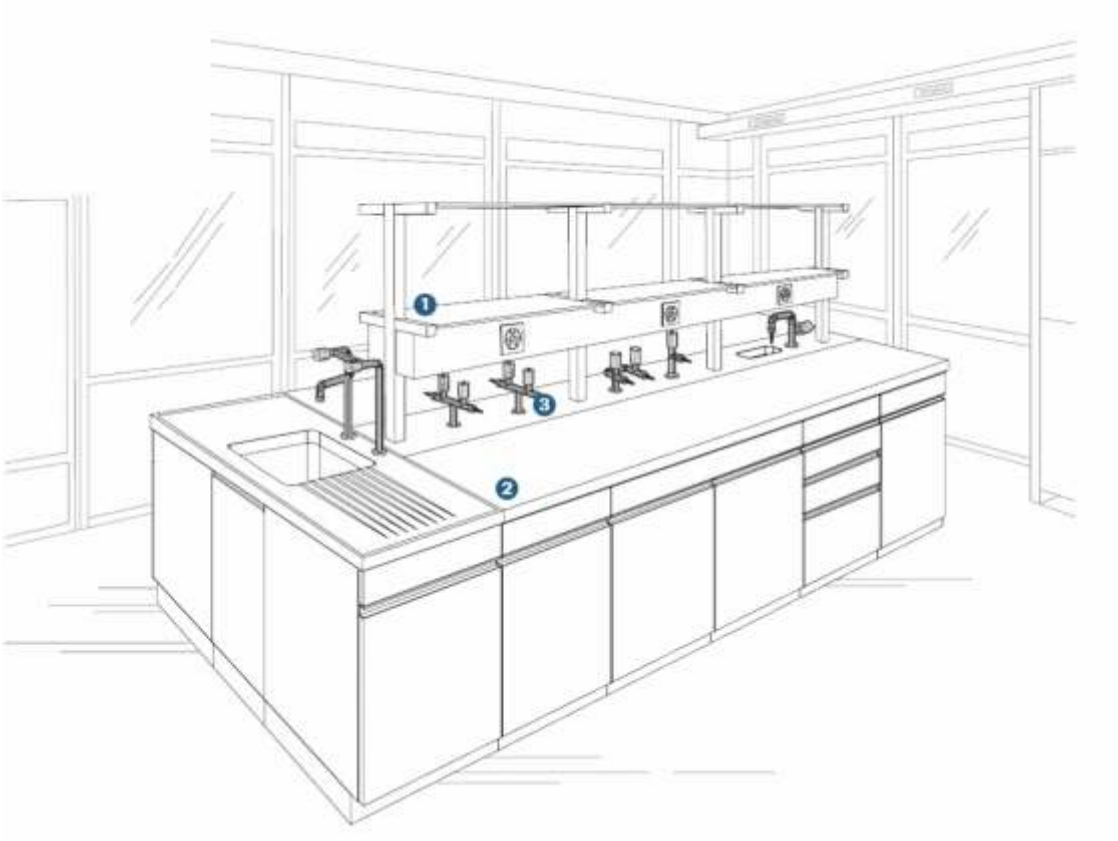
- Uniflex valve
- Uniflex hose medium-valve
- Uniflex hose spout-valve
- Uniflex outlet
- wall connector, elbow

RL 1

RL 1 – Basic system

Professional laboratory furniture system with permanent, fixed cabinets placed on a base unit. Cabinets function as a support for worktops. Top units and utility connections are installed on a worktop.

- for laboratories with precisely specified technological process
- for defined workstation requirements
- varied construction of cabinets allows the User to customize their arrangement
- cabinets are permanent elements of the laboratory bench
- compact, simple construction



1. 

Worktop cabinets are perfect for storing indispensable materials and chemical reagents. Positions of the shelves may be adjusted, therefore the User may store materials needed for work on different heights.

2. 

Worktops are permanently fixed to cabinets.

3. 

Utility connections of the highest quality are placed on the worktop according to User's preferences.

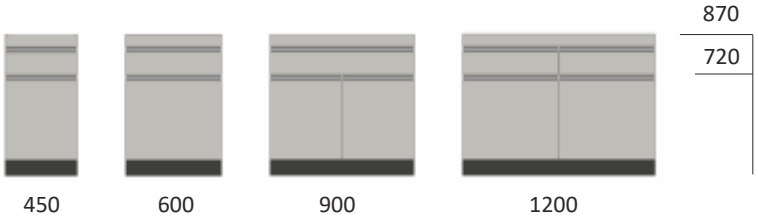
Laboratory cabinets

Cabinet with a full door

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents

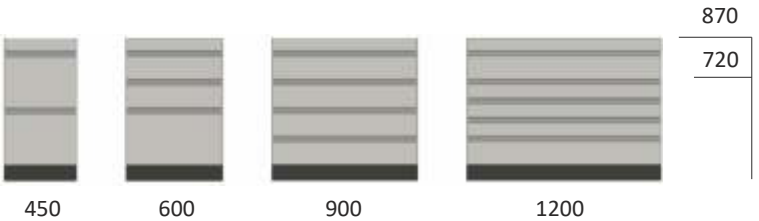
Cabinet with a drawer and door

- on a base unit
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents



Cabinet with drawers

- on a base unit
- height of drawers selected by the Customer
- possibility to equip the shelves with organizers for small laboratory pieces
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware

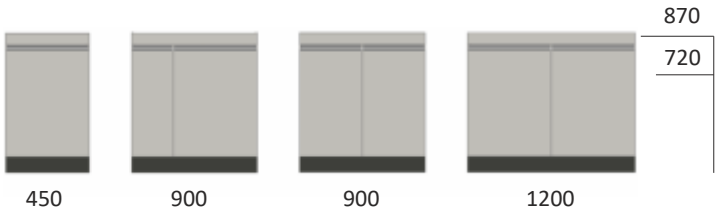


Open cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time

Installation cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- the shelf space may be dedicated to detergents storage



Special cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents

RL 2

RL 2 – Basic system with mobile cabinets

Mobile cabinets are placed under stable powder-painted frames.
Cabinets may be replaced or rearranged to meet User's requirements.

- suitable when the requirements of workstation are changed
- easy exchange / replacement of cabinets
- varied construction of cabinets allows the User to customize their arrangement
- ideal system for Customers requiring flexibility in furniture arrangement

1 

Rear wheels and front gliders facilitate fast and simple cabinet replacement.

2 

Frames assembled with worktops into one unit, fully independent of substructure.

3 

Handle bars are covered with plastic caps to prevent injuries. Letter tags on drawer fronts help to keep the contents in order.

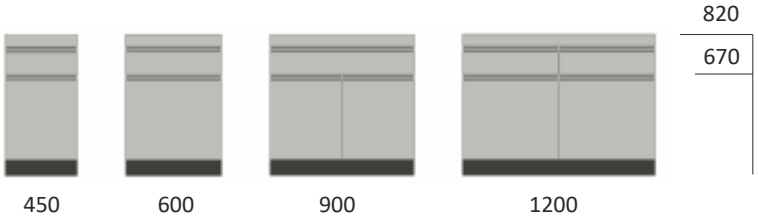
Laboratory cabinets

Cabinet with a full door

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents

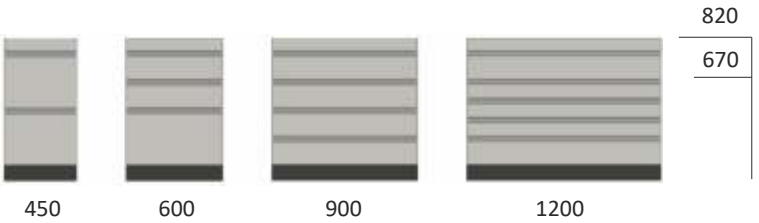
Cabinet with a drawer and door

- on a base unit
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents



Cabinet with drawers

- on a base unit
- height of drawers selected by the Customer
- organizers for small laboratory pieces optional
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware

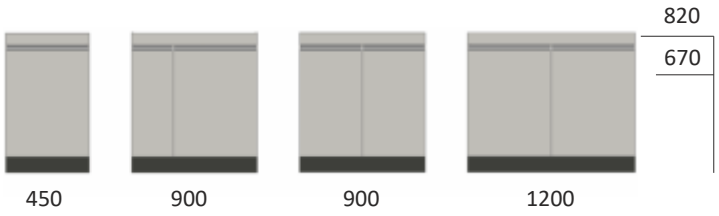


Open cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time

Installation cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- shelf space may be dedicated to detergents storage



Special cabinet

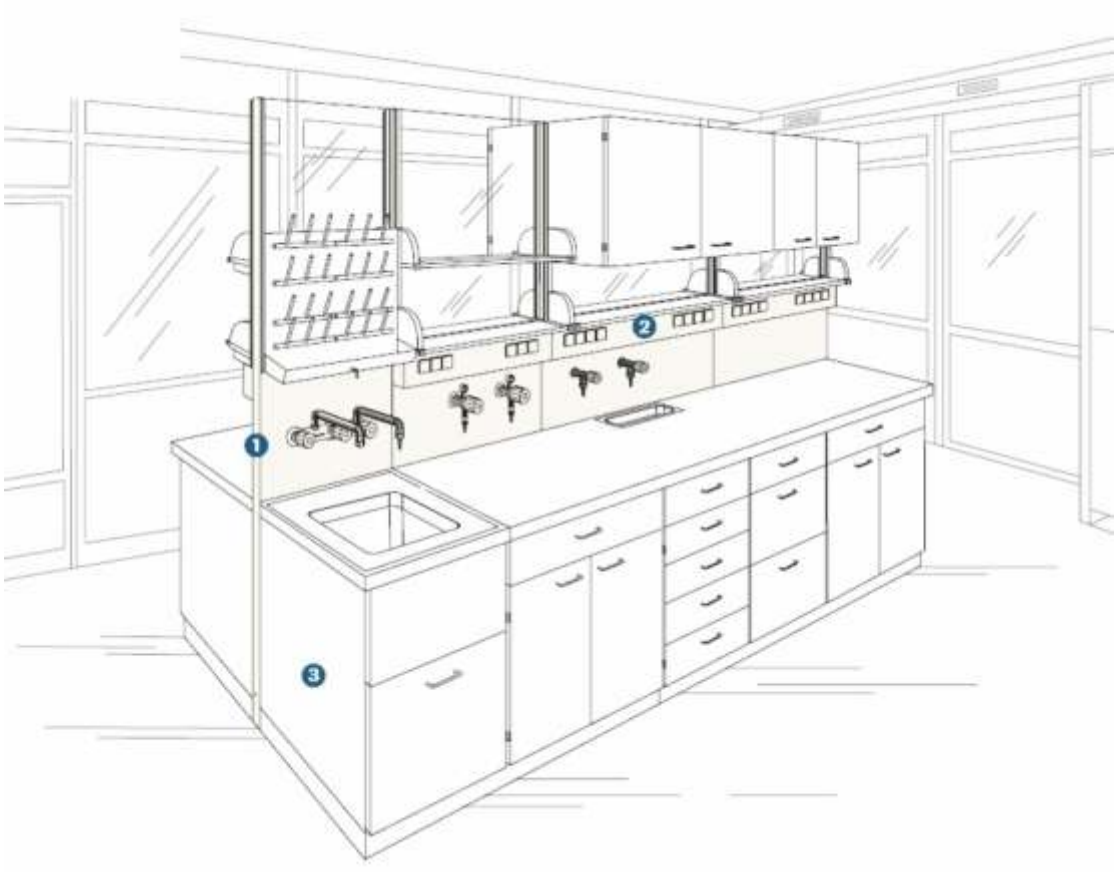
- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents

RL 3

RL 3 – Basic module system

Laboratory system with extended top units. Placement of utilities and waste disposal areas are fully adjusted to User's requirements. Cabinets function as a support for worktops.

- for laboratories with precisely specified technological process
- for defined workstation requirements
- varied construction of cabinets allows the User to customize their arrangement
- cabinets are permanent elements of the laboratory benches



1. 

Installation panels facilitate the supply of various utilities. For User's safety cables are led through installation chambers built in attachments.

2. 

Sheet, plastic or aluminium channels are designed to store all electrical installations.

3. 

Cabinets are tightly fixed to the floor which protects them from dirt. The User may access the installation area by sliding rear panels of cabinets.

Laboratory cabinets

Cabinet with a full door

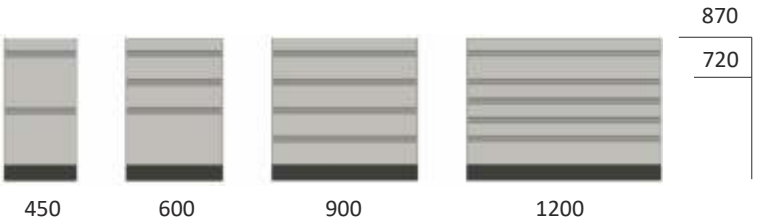
- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents

Cabinet with a drawer and door

- on a base unit
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents

Cabinet with drawers

- on a base unit
- height of drawers selected by the Customer
- possibility to equip the shelves with organizers for small laboratory pieces
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware

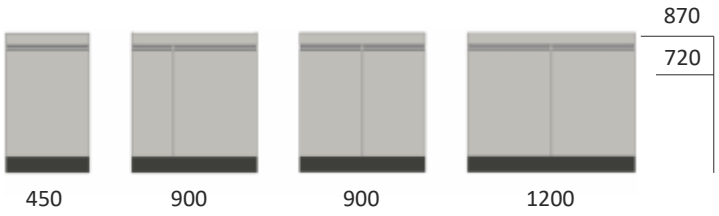


Open cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time

Installation cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- the shelf space may be dedicated to detergents storage



Special cabinet

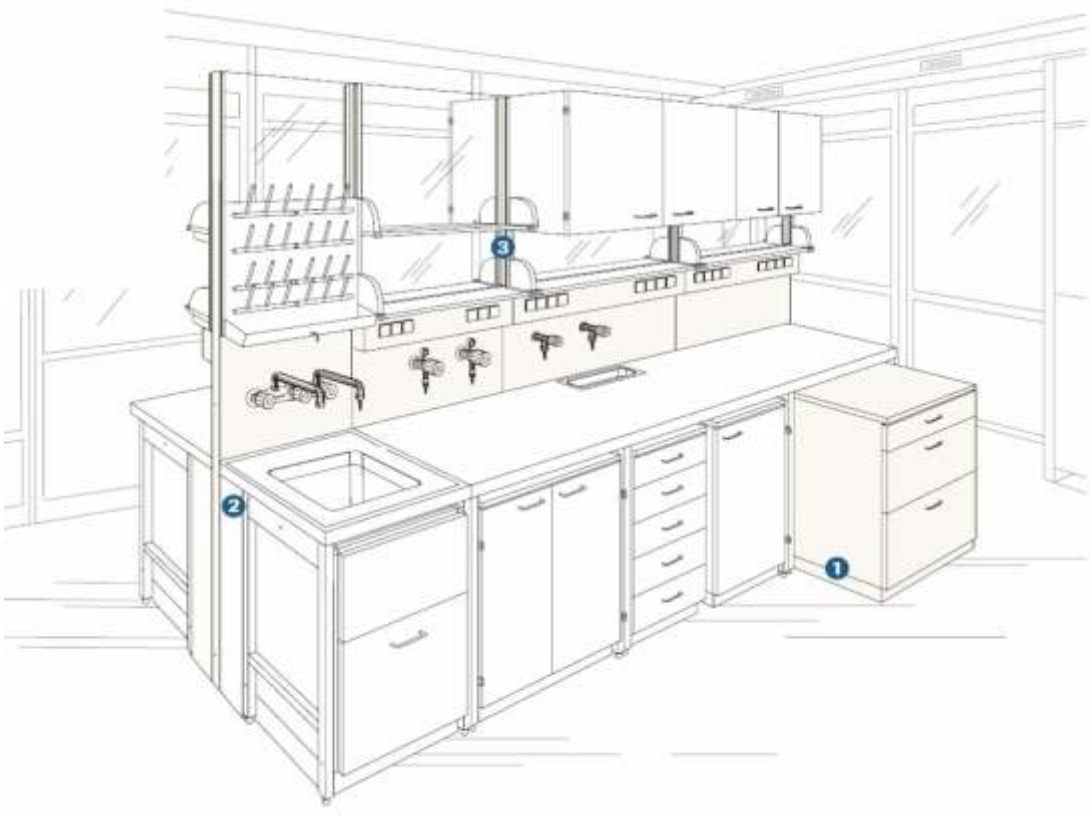
- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents

RL 4

RL 4 – Module system with mobile cabinets

Professional laboratory furniture system with extended attachments which allow the User to make various modifications. Mobile cabinets are located under a stable workbench frame and may be easily moved or replaced.

- suitable when the requirements of workstation are changed
- easy exchange / replacement of cabinets
- varied construction of cabinets allows the User to customize their arrangement
- laboratory attachments independent of workbenches
- installation panels constitute an integral internal part of an attachment
- ideal system for Customers requiring flexibility in furniture arrangement



1

Rear wheels and front gliders enable the User to move cabinets by slightly lifting the front.

2

The frames and workbenches are integrated into one unit.

3

Due to guide bar systems it is possible to arrange the workstation according to the number of shelves and cabinets.

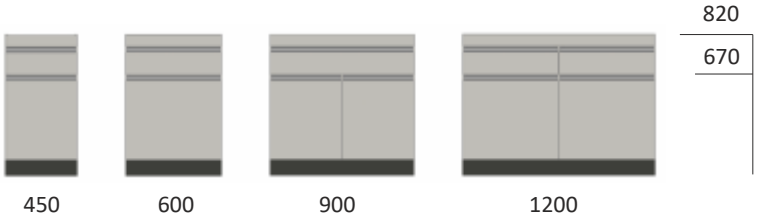
Laboratory cabinets

Cabinet with a full door

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents

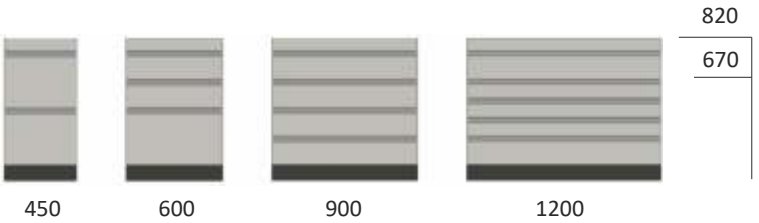
Cabinet with a drawer and door

- on a base unit
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents



Cabinet with drawers

- on a base unit
- height of drawers selected by the Customer
- possibility to equip the shelves with organizers for small laboratory pieces
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware

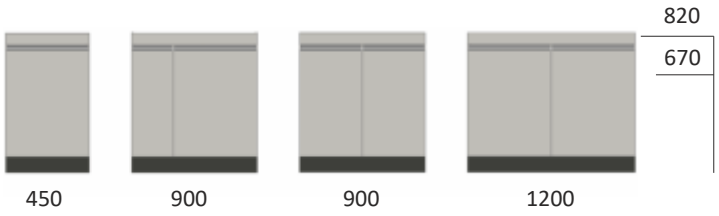


Open cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time

Installation cabinet

- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- the shelf space may be dedicated to detergents storage



Special cabinet

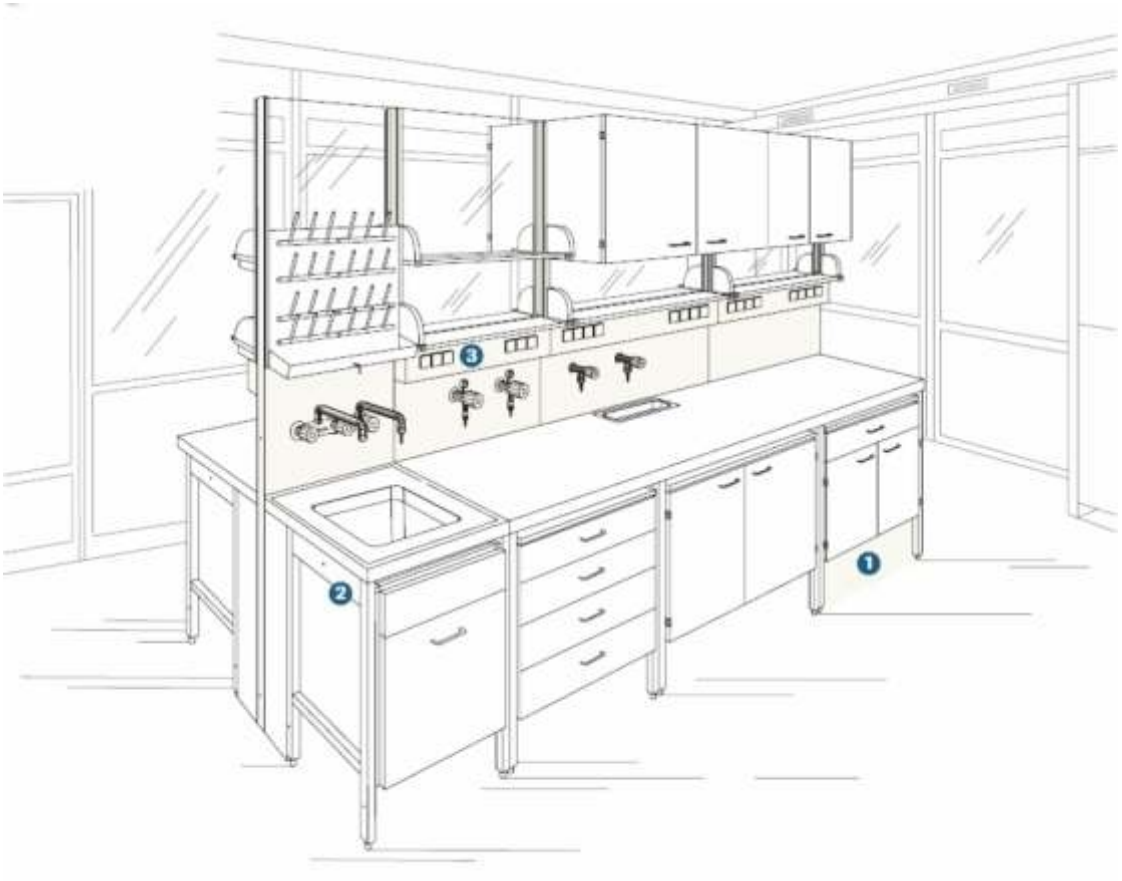
- on a base unit
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents

RL 5

RL 5 – Module system with suspended cabinets

Professional laboratory furniture system with fixed cabinets suspended on stable workbench frames. Cabinets are placed on a height convenient for the User.

- suitable when the requirements of workstation are changed
- easy exchange / replacement of suspended cabinets due to convenient mounting system
- laboratory attachments independent of workbenches
- installation panels constitute an integral internal part of an attachment
- easy to clean in the laboratory due to free access to the space under cabinets



1. 

Suspended cabinets make it easy to keep the workstation clean.

2. 

Solid and stable base construction facilitates the suspension of entire rows of work cabinets.

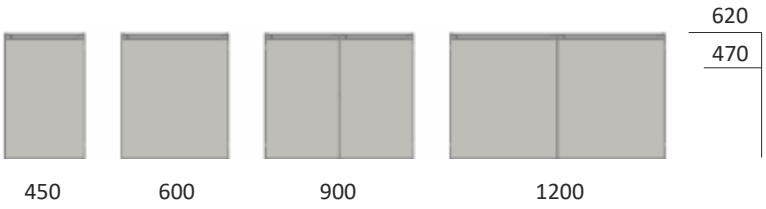
3. 

Ability to add extra utilities in installation panels thanks to unoccupied holes covered with sanitary panels.

Laboratory cabinets

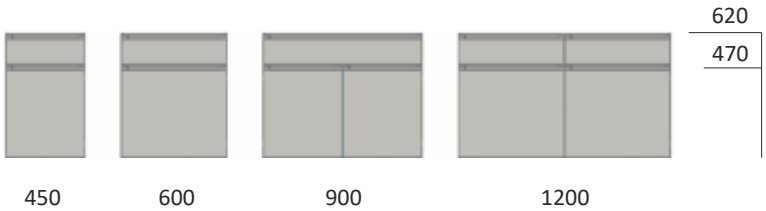
Cabinet with a full door

- suspended
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents



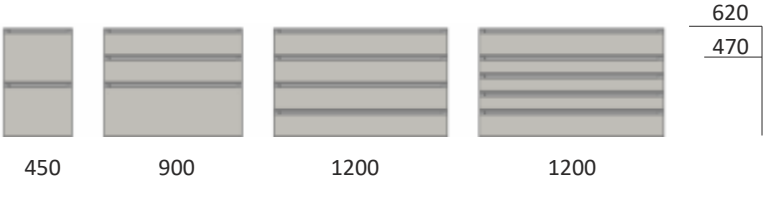
Cabinet with a drawer and door

- suspended
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents



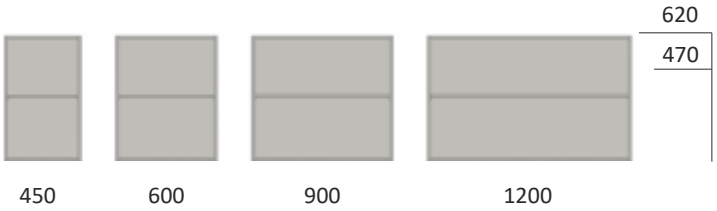
Cabinet with drawers

- suspended
- height of drawers selected by the Customer
- possibility to equip the shelves with organizers for small laboratory pieces
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware



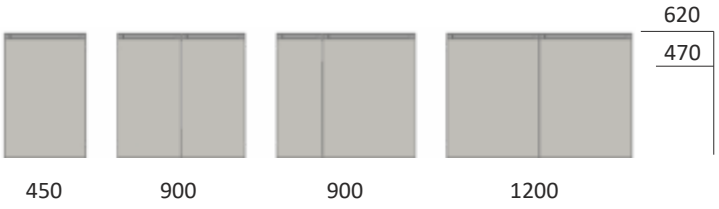
Open cabinet

- suspended
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time



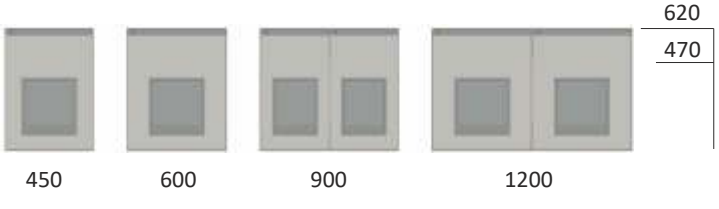
Installation cabinet

- suspended
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- the shelf space may be dedicated to detergents storage



Special cabinet

- suspended
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents

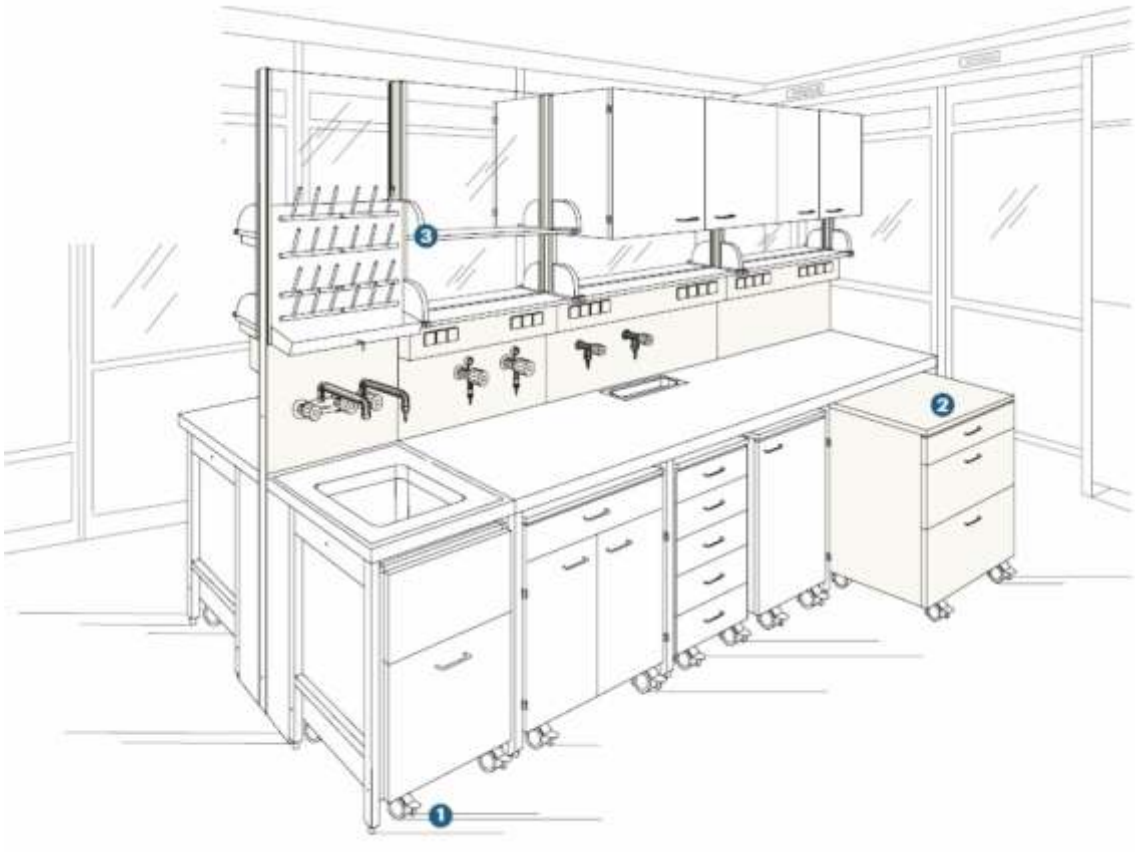


RL 6

RL 6 – Module system with mobile cabinets

Laboratory furniture system distinguished by significant flexibility in respect of User's requirements. All cabinets have a mobile structure and may be easily moved.

- suitable when the requirements of workstation are changed
- easy exchange / replacement of mobile cabinets
- varied construction of cabinets allows the User to customize their arrangement
- laboratory attachments independent of workbenches
- installation panels constitute an integral internal part of an attachment
- easy access to installation area ensuring quick connection or disconnection of necessary utilities.



1. 

All cabinets are fitted with high quality wheels.

2. 

Simple pull-out of cabinets creates additional work space which enables the User to fully customise the workstation.

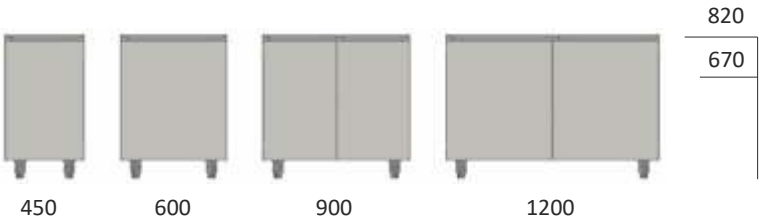
3. 

Shelves and cabinets over laboratory benches are mounted on top units. They provide space for chemical reagents and equipment.

Laboratory cabinets

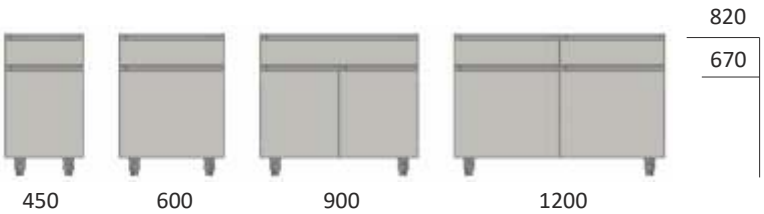
Cabinet with a full door

- on wheels
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store tall glassware, small laboratory equipment and bottles with chemical reagents



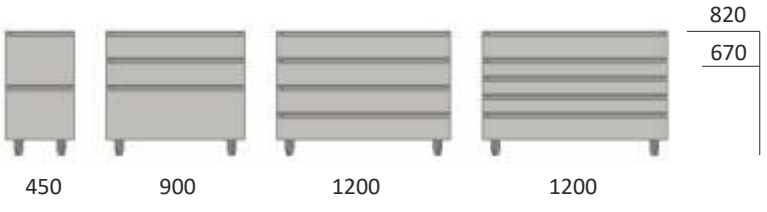
Cabinet with a drawer and door

- on wheels
- with a top drawer
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware (pipettes, pumps)
- bottom part of the cabinet perfect for storing glassware and reagents



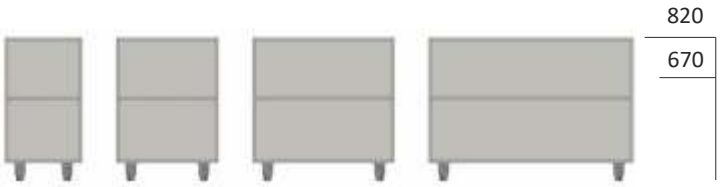
Cabinet with drawers

- on wheels
- height of drawers selected by the Customer
- possibility to equip the shelves with organizers for small laboratory pieces
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- version with a lock
- designed to store small laboratory glassware



Open cabinet

- on wheels
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed to store frequently used appliances and chemical reagents without the necessity to open the door each time

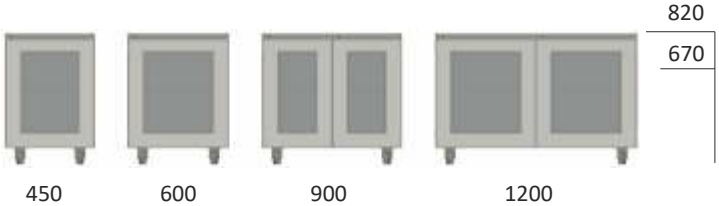


Installation cabinet

- on wheels
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- designed for waste disposal stations
- the shelf space may be dedicated to detergents storage

Special cabinet

- on wheels
- height adjusted to work in a standing or sitting position
- available widths: 450, 600, 900, 1200 mm
- available in a version with air holes or with a glazed door
- version with a lock
- designed to store chemical reagents



RL 7

RL 7 – Ceiling installation system

Ceiling utility supply system completely separates furniture from utility supply units and shelves substituting traditional laboratory top units. Ceiling installations allow the Customer to use the work space to the fullest.

- maximum use of work space
- precise supply of all utilities through mobile channels
- ability to adjust installation channels by laboratory staff
- no interference with technological processes
- ensures simple system upgrading and minimizes its costs

The removable utility modules (i.e. electricity, water, gases, vacuum) facilitate disassembly, quick upgrading and effective renovation.

Aluminium ceiling profiles of up to 4-meter span and carrying capacity up to 2 tons. The carrying capacity may be increased, if needed.

Utility distribution blocks, mounted to ceiling profiles, allow the User to make various modifications of the workstation, if necessary.

Ceiling installation which facilitates easy fume hoods movement.

Due to modular construction, RL 7 laboratory system, including cabinets for laboratory beakers, is fully mobile.

It is possible to connect utilities in various places (to meet User's future requirements).

List of references
Centre de Recherche Biopole d'Espalinges
Clariant AG
ETH Hönggerberg
Helsinn Advanced Synthesis SA
Heraeus
F. Hoffmann-La Roche
Migros Genossenschaft
PSI Paul Scherrer Institut
Timcal SA

The concept of RL 7 installation is a joint project of the Federal Institute of Technology (ETH) in Zurich and Renggli company. RL 7 installation constitutes a standard product of Renggali company. We are proud of our considerable experience in implementing this system in many well-known international enterprises.

Everything is mobile- principle
All RL 7 system laboratory furniture, without exception, is fully flexible and mobile. The ceiling grid, which may cover the entire ceiling area, leads all technical installations of the building and facilitates simple arrangement of partition walls. All components may be easily rearranged to User's requirements, which considerably reduces the costs of future modernisation and allows the User to perform it in a short time.

Utility column – optimal utility supply
Utility supply is completely independent of the building infrastructure. Vertical utility columns, conveniently suspended on a vertical ceiling grid, facilitate the supply of particular utilities, whereas due to elastic hoses and cables they may be easily translocated.

Ceiling grid – stable base
Covering the ceiling, aluminium grid is permanently fastened to the ceiling and provides base for utilities, partition walls and splash panels. The ceiling grid may support the utility columns, suspended cabinets, fume hoods and other elements of laboratory infrastructure.

Suspended cabinets

Cabinet with a full door

- single or double door
- available heights: 500, 700 mm
- available widths: 450, 600, 900 and 1200 mm
- suitable for storing laboratory glassware

Glazed cabinet

- single or double door
- available heights: 500, 700 mm
- available widths: 450, 600, 900 and 1200 mm
- it is possible to immediately see the content of the cabinet
- suitable for storing laboratory glassware and small equipment

Open cabinet

- available heights: 500, 700 mm
- available widths: 450, 600, 900 and 1200 mm
- suitable for storing frequently used substances and materials without the necessity to open the door each time

Special cabinets

- cabinet fitted with a pulled-out PP tray protecting the cabinet against possible spill of the stored fluid

- suitable for storing laboratory reagents, canisters and bottles

- a cabinet door permanently jointed with the baseboard

- perfect solution for places where no base is necessary, e.g. due to inserting a rollaway tray

- a cabinet with an integrated large bin, pulled-out each time the door is opened

- a perfect solution to maintain hygiene and aesthetics of the laboratory

- a cabinet with an integrated bin, pulled-out each time the door is opened

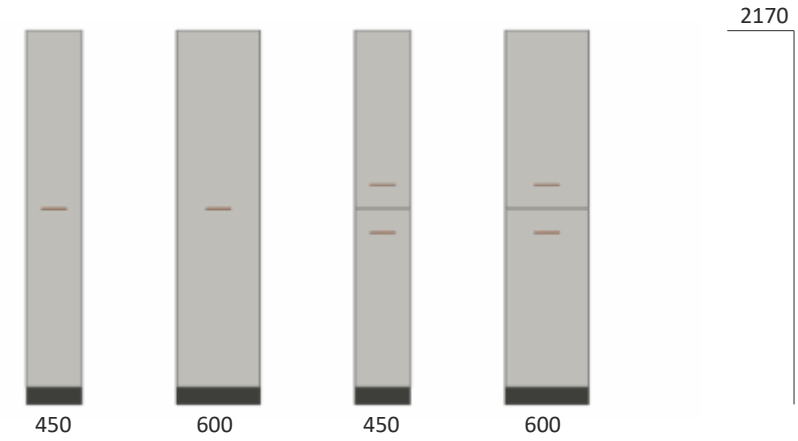
- a perfect solution to maintain hygiene and aesthetics of the laboratory

Laboratory cupboards

Cargo cupboard

- divided or full door
- available widths: 300, 450, 600 and 900 mm
- a cupboard with an integrated bin, pulled-out each time the door is opened

- suitable for storing laboratory reagents, glassware and equipment



Cupboard with glazed door

- divided or full door
- available widths: 450, 600, 900 and 1200 mm
- enables the User to immediately see the content of the cupboard

- suitable for storing laboratory glassware and equipment

Ventilated cupboard

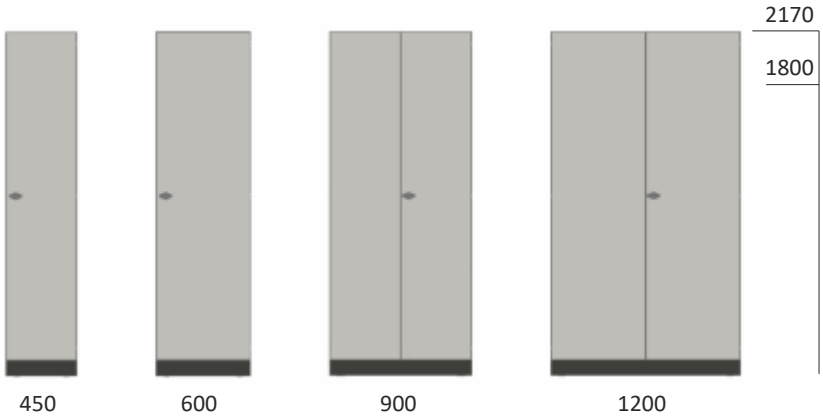
- with an integrated air pot guaranteeing proper cupboard ventilation
- available widths: 450, 600, 900 and 1200 mm
- to increase safety the cupboards may be covered with chemically resistant PP or fireproof PS

- suitable for storing laboratory reagents, canisters and bottles

Cupboard with a full door

- single or double door
- available widths: 450, 600, 900 and 1200
- version with a lock

- suitable for storing laboratory reagents, glassware and equipment



Specialist laboratory cupboards

Fireproof safety cupboards of Q-Pegasus-90 and Q-Classc-90 series are durable and have solid construction. In order to improve the corrosion protection the safety related elements are mounted on the external part of the storing chamber. The door is fitted with a cylinder lock (it is possible to integrate the lock with a central locking system) and integrated indicator of a locking mode (red/green). Pursuant to norm EN 14470-1, the cupboards have 90-minute fire-resistance.

Q-Pegasus-90 Series

- convenient use – mechanism for opening the double cupboard door with one hand (AGT)
- automatic door closing system (TSA) – closes the door 60 seconds after opening the cupboard, sound and visual signalling before closing
- built-in air ducts allowing for connection to ventilation installation
- wide range of internal equipment
- available widths: 1193, 893 and 599 mm
- height of 1953 mm

Q-Classic-90 Series

- closing the door in particular positions
- door blockade in particular positions
- automatic closing of door in case of fire
- built-in air ducts allowing for connection to ventilation installation
- wide range of internal equipment
- available widths: 1193, 893 and 599 mm
- height of 1953 mm

Specialist cupboards for acids and alkalis

Cupboards for acids and alkalis of SL-Classic series ensure safe storage of hazardous substances in a workplace. External body is made of powder-painted sheet, whereas the internal body of special panels covered with melamine. In order to improve the corrosion protection the safety related elements are mounted on the external part of the storing chamber. Each door may be opened and closed independently of the other due to two hermetically separated chambers, while special plastic seals prevent hazardous vapours from getting out of the cupboard.

Free-standing models

- in order to improve the corrosion protection the safety related elements are mounted on the external part of the storing chamber
- built-in air ducts allowing for connection to ventilation installation
- the inside of the cupboard is fitted with pulled-out shelves with removable plastic trays
- available widths: 1197 and 597 mm
- height of 1965 mm

Under fume hood models

- in order to improve the corrosion protection the safety related elements are mounted on the external part of the storing chamber
- built-in air ducts allowing for connection to ventilation installation
- the inside of the cupboard is fitted with pulled-out shelves with removable plastic trays
- available widths: 590, 1100 and 1400 mm
- height of 600 mm

RL Indywidual

RL Individual – Customized system

Our philosophy focuses on individuality. If you have unusual needs or special requirements for your workplace, we will design and furnish you laboratory.

Design created for renowned Fraunhofer Institute.

List of references
Ernst von Bergmann-Kaserne
FCP - Neubau der Fekultät für Chemie und Pharmazie der LMU
Fraunhofer Institut Stuttgart IPA
Oberflächen - technikum
Klinisch Molekularbiologisches
Forschungszen-trum
MPI für Chemische fester Stoffe
MPI für Matallforschung

LabAirTec

LabAirTec

LabAirTec Renggli fume hood system provides increased level of safety and independence as well as better work comfort. The cooperation of aerodynamic and extraction system experts (Tintschl and ThyssenKrupp) with Renggli engineers resulted in a concept of four-degree safety pyramid according to which consecutive safety modules are added. The system effectively protects laboratory employees' health and reduces maintenance costs.

LabAirTec Renggli fume hood system has a specially designed air intake system (Bypass) and a unique extraction system (extraction modules). The air volume is reduced, while the intake power is increased. It results in significant improvement of operator's safety and decrease in operation costs. LabAirTec Renggli fume hood system allows for additional utilities to be installed later, which renders the installation easier and limits its costs.

The highest standards of LabAirTec fume hoods, in respect of both technical and economical matters, have been proved by technical tests.

S1

Bypass System
Technologically advanced bypass system is distinguished by specially designed air intake apertures next to table top edge, front guide bar and on the side of the front frame. Intake apertures provide laminar (non-turbulent) air flow and fixed aeration level.

Air extraction module
Unlike standard constructions, the patented system has numerous advantages. The profiles of our extraction modules increase the efficiency of air flow, and, therefore, the level of removed emissions grows. Moreover, they provide optimal laminar flow. The modules are easily disassembled which facilitates regular disinfection.

Front frame
All control and monitoring functions, interface and bypass system are integrated in the front frame. The installation of additional utilities and maintenance may be carried out in an easy and convenient manner. Aluminium front frame has an optimal construction and modern design.

Drawer with utilities
Drawer with utilities guarantees high level of safety during installation as well as operation. It contains control valves and supply connection. The drawer may be completely pulled out and mounted again, e.g. during modernisation.

Monitoring and control
User friendly monitoring and control system is located at eye level, it is easy to operate, and, in consequence, safe to use and intuitive.

LabAirTec

S2

Control of air volume flow
The volume stream of the removed air remains on desired level during the entire time of work. Greater safety, considerable reduction of operation costs.

S3

Automatic front stop
Air flow is regulated by monitoring of the front window position. Combined with automatic window closure, it significantly reduces operation costs.

S4

Active air intake
Air flow is actively supported by fans located in the front aluminium frame.

LabAirTec – The Concept of Safety Pyramid

LabAirTec fume hoods are safe, easy to use and they guarantee convenient working conditions. Efficiency levels of LabAirTec fume hood are much better than those specified in norm DIN EN 14175.

S1 **Standard version**

Bypass System – laminar air flow

Modules of air extraction conducted through special profiles which increase the efficiency of exhaust

Monitoring and control of fume hood by an intuitive panel placed at eye level

Drawer with utilities ensuring simplicity of use and easy modernisation of utilities

S2

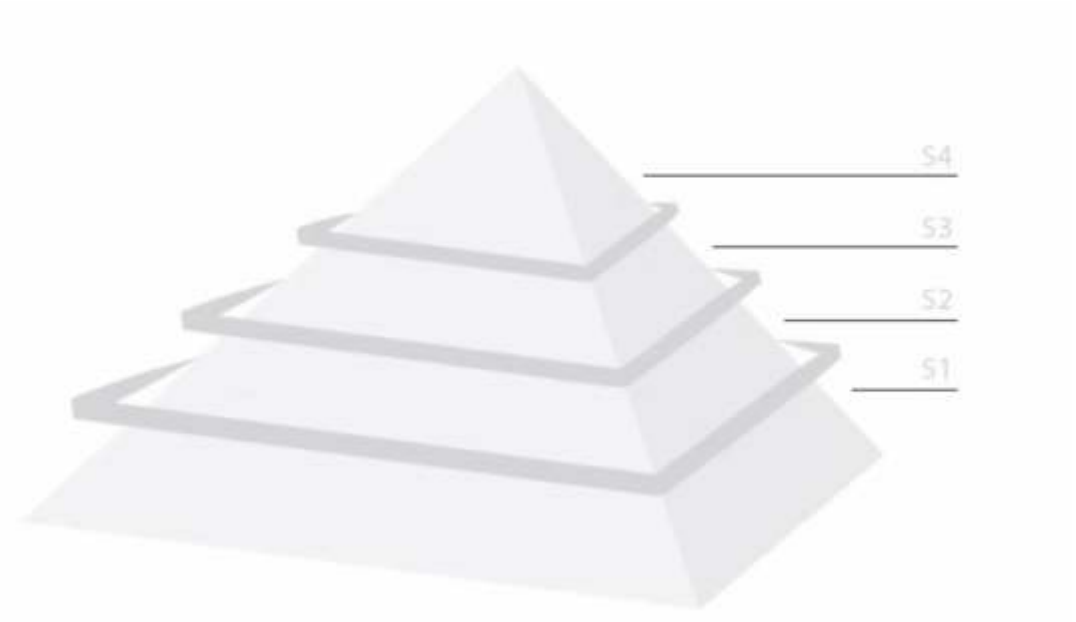
\+ Control of exhaled volume of air in relation to front stop position
Air volume indicator dependent on conditions considerably increases safety level

S3

\+ Automatic closure of the front stop increases work safety and significantly reduces costs

S4

\+ Active air intake
Maximal safety with considerably reduced maintenance costs



LabAirTec

Optimization of operation costs

The concept of safety pyramid brings measurable financial benefits to the User

The higher level of configuration, the greater maintenance savings for LabAirTec fume hoods (S1-S4).

Example calculation of annual costs:

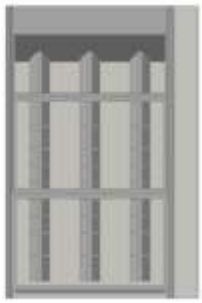
Lab Air Tec 1500 fume hood	Air volume in m^3/h	Annual maintenance costs in PLN	Reduction of costs in %
S4	275	3210.00	45
S3	320	3750.00	55
S2	440	5160.00	75
S1	600	7020.00	100

Laboratory fume hood models

“Walk-in” fume hood

- models without a worktop
- designed to maximally increase the height of the work chamber – where there is a necessity to install large laboratory devices
- available widths: 1200, 1500 and 1800 mm
- external depth 960 mm
- available heights 2400 and 2600 mm

1200



1500

1800

Fume hood with a lowered worktop

- the height of the worktop may be adjusted to Customer’s needs
- worktop: ceramic, of epoxy resin, glass, of polypropylene
- standard equipment: water spout, PP sink, two electric sockets 230V, work chamber lightning, control panel
- designed to maximally increase the height of the work chamber – where there is a necessity to install large laboratory devices
- available widths: 1200, 1500 and 1800 mm
- available heights 2400 and 2600 mm

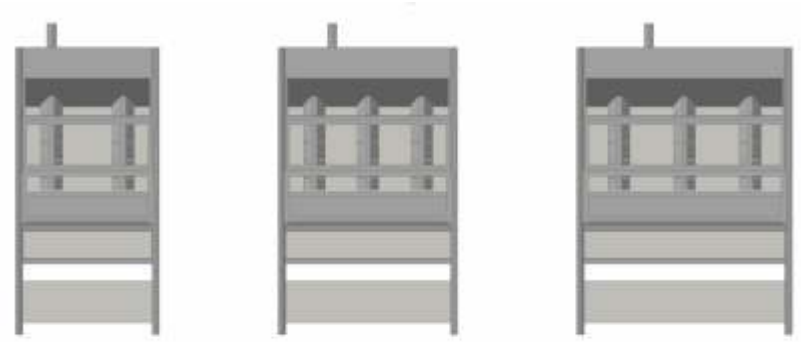
1200

1500

1800

Standard fume hood of 2400 mm in height

- worktop at the height of 900 mm
- worktop: ceramic, of epoxy resin, glass, of polypropylene
- standard equipment: water spout, PP sink, two electric sockets 230V, work chamber lightning, control panel
- work chamber lining: laminate (standard), of HPL phenolic resins, monolithic ceramics, polypropylene, acid resistant sheet
- available widths 1200, 1500 and 1800 mm
- height 2400 mm



1200 1500 1800

Standard fume hood of 2600 mm in height

- worktop at the height of 900 mm
- worktop: ceramic, of epoxy resin, glass, of polypropylene
- standard equipment: water spout, PP sink, two electric sockets 230V, work chamber lightning, control panel
- work chamber lining: laminate (standard), of HPL phenolic resins, monolithic ceramics, polypropylene, acid resistant sheet
- available widths 1200, 1500 and 1800 mm
- height 2600 mm

1200 1500 1800

Green Fume Hood

LabAirTec „*green*" - ecological awareness, workplace safety and low maintenance costs with full control and protection.

LabAirTec „*green*" fume hoods are Renggli response to increasing energy and installation expenses. The devices do not need to be installed to ventilation system to operate.
Qualified engineers of Renggli company and Erlab SAS together have worked out unique solutions, both User and environment friendly.
Emission of pollution released from the filters is 100 times lower than the permissible threshold values. Additionally, LabAirTec „*green*"fume hoods use innovative communication software to monitor and manage work safety – gGuard. It allows the User to control the network consisting of up to 250 fume hoods.
LabAirTex „*green*" fume hoods have numerous patented innovations, they are safe, extremely efficient and energy-saving. They may be widely used in laboratories to work both with acids and solvents, irrespective of their state of aggregation (liquid, solid).

LabAirTec „*green*" has the DIN EN 14175-3 and AFNOR NF X 15-211:2009 certificates.

Advantages

- **does not require to be connected to ventilation**
- **reduces energy costs up to 96%**
- **no air pollution**
- **lowers installation costs**
- **easy to move**

Greenfumehood TECHNOLOGIES by erlab
Filtration - Detection - Communication

LabAirTec „green”

Safe filtration technology Neutrodine©

Neutrodine© is an effect of 40 years of research in Elab laboratories and the most advanced product in the field of molecular filtration technology.

- Unique filtration system

Effective filtration of acid, solvents and alkalis vapours in the same filter.

- Increased retention capacity

50% increase of retention capacity which prolongs filter suitability for use.

- Varied applications

Greater variety of retained molecule types allows the User to use the fume hood for work with the majority of commonly used chemicals.

Safety due to RFID technology

GreenFumeHood is activated after registering of the personalized RFID card.
There are separate access levels available:
- User – ensures full operation of approved settings and activates all alarms
- Administrator – ensures the access to important data concerning device operation record, such as registered use, record of alarms and sensor settings.

Safety due to electronical filter identification system

Installation of filters is very easy due to the electronical filter identification system (RFID) which not only notifies about the presence of the filter but also enables employees to use it properly and distinguishes between new and used filters.

Safety due to filter saturation sensor

In order to provide protection and safety of the staff, LabAirTec has a unique sensor of filter saturation. It detects solvents as well as acids. This innovative system is based on two sensors, each with a unique level of sensitivity. The solvent sensor has a system of sensitivity regulation which adjusts to the molecules of the used chemicals. The sensor of air cleanness allows the User to constantly monitor the air pollution in the laboratory.

Safety due to temperature detection and advanced alert system

The temperature sensor inside LabAirTec detects unusual fluctuations in temperature and has a sound alarm. In the case of temperature fluctuations information about anomalies is simultaneously passed on to the authorised employee thorough the monitoring software gGuard©.
The system offers two detection levels: the first alert is sent when the temperature exceeds 60°C and remains on a fixed level, the second alarm is activated when the temperature of the surroundings reaches 80°C (the blower fans are turned on).

Safety through the advanced communication technology gGuard©

Technology developed with Microsoft© and used in LabAirTec „green”, gGuard©, is designed to provide full control through constant monitoring.
It allows the administrator to check the current state of a particular LabAirTec „green” fume hood in real time without the necessity of turning the device off, also by means of an external computer.

Example projects

SWITZERLAND

ABB, Baden
Alusuisse, Chippis
Ascom, Berno
Carbogen Laboratoires, Hunzenschwil
Coop Schweiz, Pratteln
Lonza, Visp
Nestlé, Vers-chez-les-Blanc
Novartis, Bazylea
Novartis Biocenter, Stein
Roche, Bazylea
Shell Switzerland, Bazylea
Eidgenössische Technische Hochschule, Zürich
Gymnasium Appenzell
Ingenieurschule Burgdorf
Schweizerisches Tropeninstitut, Bazylea
Universität Bazylea
Clinique Bel-Air, Genewa
Höhenklinik, Wald
Kantonsspital Genf
Kantonsspital Liestal
Kinderspital St. Gallen
Kreuzspital Chur
Merian-Iselin-Spital, Bazylea
Pathologisches Institut, Berno
Rheumaklinik, Leukerbad
Universitätsklinik Zürich
Universität Berno
Universität Fribourg
Universität Lozanna
Universität Züricha

GERMANY

Böhringer Ingelheim, Biberach
FCP, Grosshadern
Forschungszentrum Caesar, Bonn
Fraunhofer Institut Golm
Fraunhofer, Stuttgart
Max-Bürger-Forschungszentrum, Lipsk
MPI für Biophysik, Frankfurt
MPI für Infektionsbiologie Charité, Berlin
Schering, Berlin
Havelland Kreiskrankenhaus, Nauen
Kreiskrankenhaus, Freiberg
Krankenhaus der barmherzigen Brüder, Monachium
Unfallkrankenhaus Berlin-Marzahn

POLAND

Powiatowa Stacja Sanitarno-Epidemiologiczna, Radom
Grupa Azoty Zakłady Azotowe Kędzierzyn S.A., Kędzierzyn- Koźle
Imperial Tobacco Polska Manufacturing S.A., Radom
Kosmepol Sp. z o.o., Kanie
Gedeon Richter Polska Sp. z o.o., Grodzisk Mazowiecki
Volkswagen Poznań Sp. z o.o., Poznań
"ENERGOPOMIAR" Sp. z o.o., Gliwice
BioTech Poland Sp. z o.o., Warszawa
Partner Systems Sp. z o.o., Człochów
Zakłady Mleczarskie Laktopol Sp. z o.o., Łosice
Przedsiębiorstwo Wodociągów i Kanalizacji w Suwałkach Sp. z o.o.
TELE-FONIKA Kable S.A., Kraków
Centrum Wspierania Innowacji „NOVOTEC" Sp. z o.o., Warszawa
Balton Sp. z o. o., Warszawa
Politechnika Białostocka, Białystok
CEDC International Sp. z o.o., Białystok
Muzeum Pałac w Wilanowie, Wilanów
Uniwersytet Medyczny, Zakład Toksykologii, Białystok
Uniwersytet Medyczny, Centrum Badań Klinicznych, Białystok
Uniwersytet Medyczny, Zakład Medycyny Sądowej, Białystok
Uniwersytet Rzeszowski, Rzeszów
POWERGREEN Sp. z o.o., Łódź

AUSTRIA

Arzneimittel, Wiedeń
Biochemie Kundl, Tirol
Novartis Forschungszentrum, Wiedeń
Semperit, Wimpassing
Leopold Franzens Universität, Innsbruck
Hirnforschungszentrum, Wiedeń
Technische Universität, Wiedeń
Universitätszentrum Althanstrasse, Wiedeń

THE WORLD

ABB Power Generation Ltd., Dżakarta, Indonezja
Bachem Inc. Fine Chemicals, Torrance/Los, Angeles, USA
Balzers, St. Petersburg, Rosja
Ciba-Geigy, Johannesburg, RPA
Global Green, Dongguan, Chiny
Instituto de Aprovechiamiento de Plátanos, Quito, Ekwador
International Tobacco, Kunming, Chiny
Kadoori Farm, Hongkong, Chiny
Onassis Cardiac Surgery Centre, Ateny, Grecja
Qatar Medical Faculty, Katar
Technische Universität Lissabon, Portugalia
Universität Budapest, Węgry
Universitäten von Ilorin and Port Harcourt, Nigeria
Sandoz, Singapur
Sventa, Moskwa, Rosja

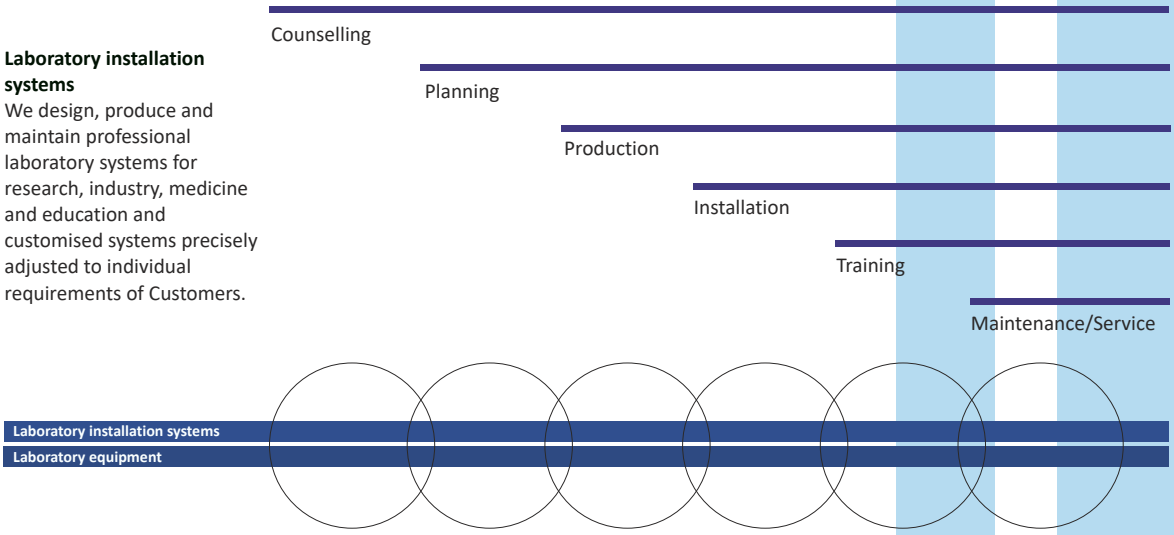
NOTES

NOTES

Comprehensive service

Service of Renggli company is comprehensive: from the full range of furniture systems and equipment to professional services. We will advise you on the proper selection and arrangement of furniture as well as laboratory equipment. We will design, produce, install and conduct the training. We offer professional service inspection as part of after-sale support.

Laboratory installation systems
We design, produce and maintain professional laboratory systems for research, industry, medicine and education and customised systems precisely adjusted to individual requirements of Customers.



Laboratory equipment
We offer a wide selection of laboratory equipment for various purposes.

All individual requirements and needs are carefully assessed, also in respect of feasibility. Preliminary selection concerns the unit equipment. The projects are prepared in cooperation with the User.

Professional staff efficiently carries out the entire process of planning and designing connected with space adaptation. It allows for the development of the final project.

Production of furniture and laboratory installations is conducted in our production plants in compliance with the highest production standards.

Highly qualified installation staff guarantees timely and professional installation of laboratory systems.

Detailed manual and professional training ensures safe and easy use.

Qualified service and maintenance employees guarantee maximal efficiency of the installed systems.

Visit our webpage **www.renggli.pl**