



МеталлДизайн



2014

Exhaust hoods
Storage cabinets
Exhaust systems



METALLDESIGN LLC has been for over 12 years occupying a leading position in the market of development, design and manufacture of laboratory equipment and laboratory furniture in Russia. The company has proved to be a reliable partner for enterprises and scientific institutions by making a feasible contribution to the implementation of their scientific and technical development.

Specialists of METALLDESIGN LLC study specifics and projects for fitting out laboratories of various branches of industry.

We develop equipment and furniture by creating new models oriented to needs of enterprises of Russia and near and far foreign countries.



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Structure of exhaust hoods by METALLDESIGN LLC

Exhaust hoods constitute a built-up metal structure consisting of a top of the hood with a working chamber and a base.

Top of the hood (Pic. 1)

The top of the hood consists of a metal case, inside of which a working chamber with a table top is located and restricted at the front by a portal with protective screens.

The metal case is made as a rigid structure painted with epoxy-polyester powder paint. Exhausting from the working area of the exhaust hood is performed through a branch pipe with a diameter of 200 mm located on the roof of the case.

- The purpose of the exhaust hood is determined by the working chamber material.
- In exhaust hoods of 'Metal' type, the working chamber is made of steel with epoxy-polyester coating (Pic. 2)
 - In exhaust hoods of 'Stainless steel' type, the working chamber is made of stainless steel (Pic. 3)
 - In exhaust hoods of 'PVC' type (Pic. 4), the working chamber is made of steel covered with foamed polyvinylchloride sheets.
 - In exhaust hoods of 'Fiberglass plastic' type (Pic. 5), the working chamber is designed as a monolith capsule made of glass composite based on bisphenol epoxy-vinyl-etheral resin.

In the portal are located: a sliding protective screen made of hardened glass or organic glass, a fixed screen made of plastic, metal or two sliding hardened glasses, and a system of rollers cables with a weight



to provide a uniform motion of the sliding screen. The weight is located in the left column of the portal (Pic. 9). All parts (weight, cable in polyethylene housing, rollers) are accessible for maintenance and repair directly from the front side of the hood. It is particularly important if the hood is located in a corner of the room or situated in a single row with other exhaust hoods.

Two splash-proof sockets are located on the left cover of the portal. Two splash-proof sockets, automatic circuit breaker with a protective cutout device (ABB DS 941 16A), power-up tumbler (ONA 2 PB 16A), and air flow monitor MVP 002 with a function of control of lighting, ventilation and heating platforms are located on the right cover of the portal (Pic. 8).

On the roof of the working chamber there are glass-covered windows through which lighting is performed. The following luminaires are used in exhaust hoods:

- one luminous luminaire (Pic. 6) (2x18 W) for hoods with a length of 1205 mm;
- two luminous luminaires (Pic. 6) (2x18 W) for hoods with a length of 1505 mm and 1805 mm;
- two searchlights (150 W) for hoods with heating platforms with a length of 1505 mm, 1805 mm and one for hoods with a length of 1205 mm;
- an explosion-proof luminaire is installed inside the working chamber for exhaust hoods with an explosion-proof luminaire; for hoods with dish-washing sinks, with an explosion-proof luminaire. In that case it is recommended to put the circuit breaker outside the room where the exhaust hood is installed.



Base (Pic. 10)

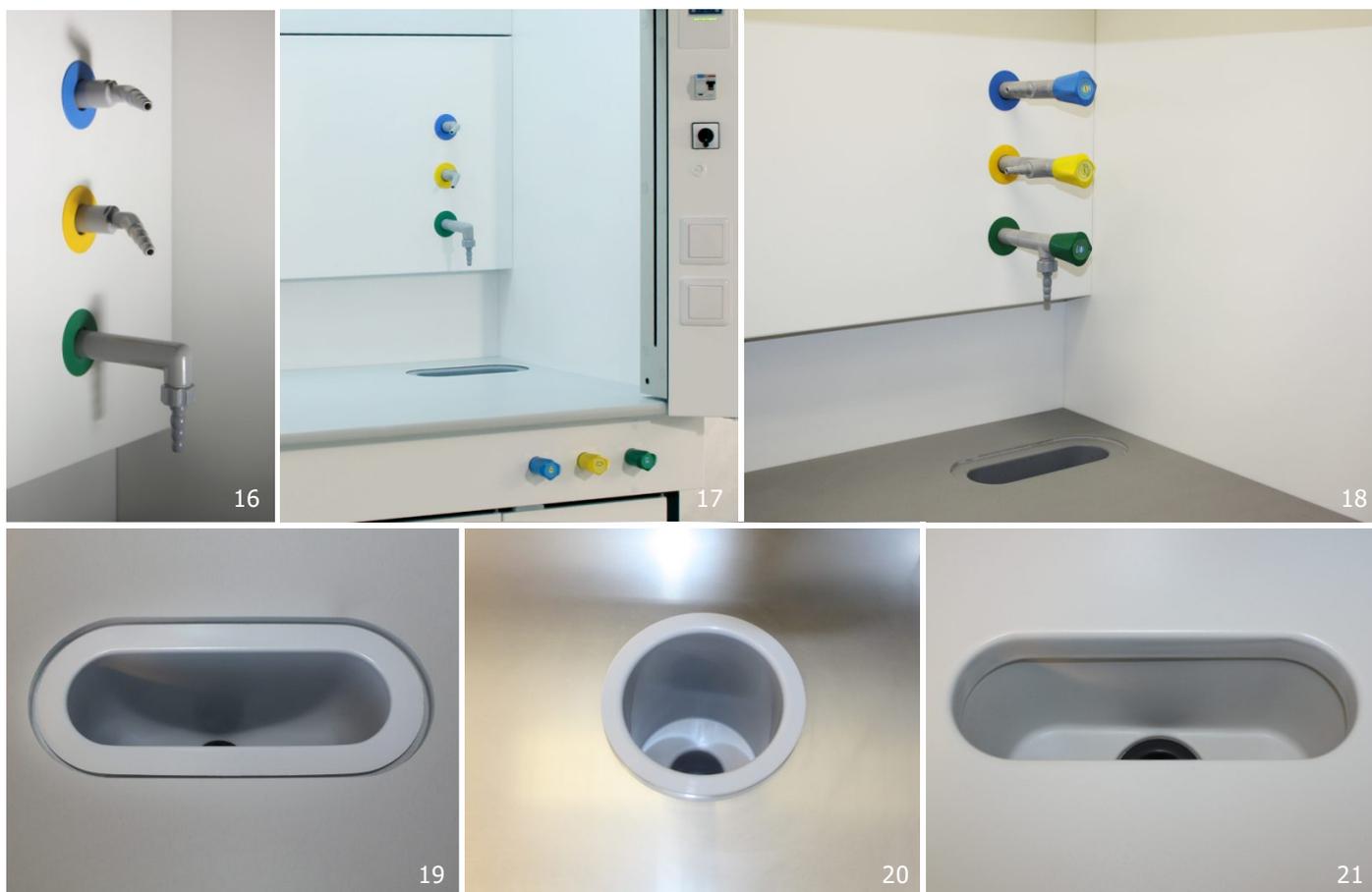
The base is made of sheet steel and cold-rolled pipes 60x30 mm and 30x30 mm. All parts of the base are painted with epoxy-polyester powder paints of white and dark-grey colors.

In the base are located: one built-in ventilated cabinet (for 1205 mm exhaust hoods) or two built-in ventilated cabinets (for 1505 mm and 1805 mm exhaust hoods) and one unventilated technological section (for 1205 mm and 1505 mm exhaust hoods), or two unventilated technological sections (for 1805 mm exhaust hoods).

The built-in MET (Metal) cabinets (Pic. 11) are designed for storage of substances that don't cause corrosion. The case of the cabinet is made of metal. A steel shelf and an in-out metal tray are located inside the cabinet.

The built-in PE (Polyethylene) cabinets (Pic. 14) are designed for storage of chemical reagents (including acids). The case of the cabinet is made of polyethylene. Two shelves made of LabGrade laminated plastic are located inside the cabinet. The inner surface of the cabinet is covered with sheet PVC. There no metal parts in the storage are of the cabinet.

The built-in cabinets have an exhaust system independent of air movement in the working chamber of the cabinet. Ventilated sections of the cabinets are connected directly to the upper branch pipe bend of the exhaust hood by means of PVC air chutes. In exhaust hoods with an explosion-proof luminaire, cabinets are connected to the upper branch pipe by means of metal air ducts.



The technological section is designed for servicing the sink flushing valve (Pic. 15) as well as placing auxiliary materials (Pic. 12). In hoods with heating platforms, fans with filters (Pic. 13) are located in technological sections in order to provide cooling of heating platforms.

All METALLDESIGN exhaust hoods are provided with a possibility to be connected to an earthing loop.

Exhaust hoods (with dish-washing sinks, with an oil product wash sink, for high-altitude installations, for muffle furnaces, shelf, radiochemical, Light hoods) have different designs, and their description is given in corresponding sections.

Taps and drain sinks

An exhaust hood can be equipped with taps for water and gases, vacuum and air, which are ordered as optional equipment.

The exhaust hood design provides a possibility to install a built-in drain sink (Durcon sink (Pic. 10), polypropylene sink (Pic. 20), monolith ceramic sink (Pic. 21).

In hoods (height of 2130 mm), taps are located on the rear wall of the working chamber, i.e. directly in the working area of the hood (Pic. 18). The hood provides for a maximum of three taps to be installed, with only one tap with a drain sink being possible.

In hoods (height of 2430 mm) and in Fiberglass plastic hoods (height of 2540 mm), remote valves are mounted on the panel of the base (Pic. 17), and nozzles are located on the rear wall of the working chamber, i.e. directly in the working area of the hood (Pic. 16). The hood provides for a maximum of three taps to be installed, with only one tap with a drain sink being possible.

To connect water and gases, exhaust hoods are fitted out with flexible piping.

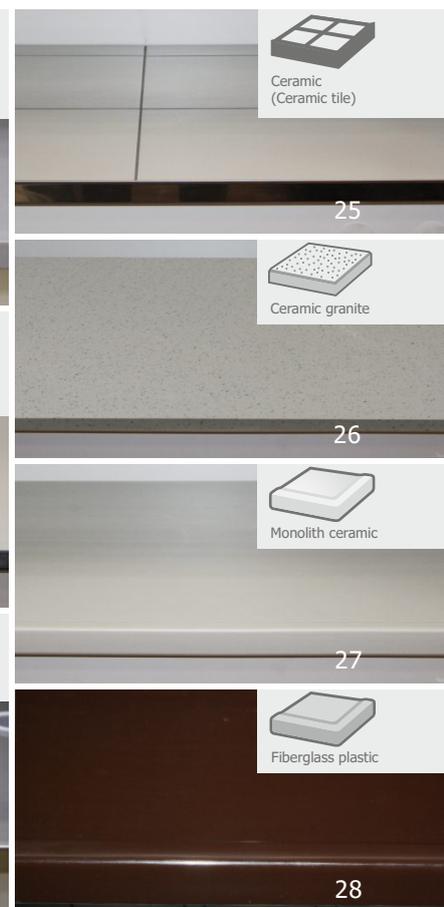
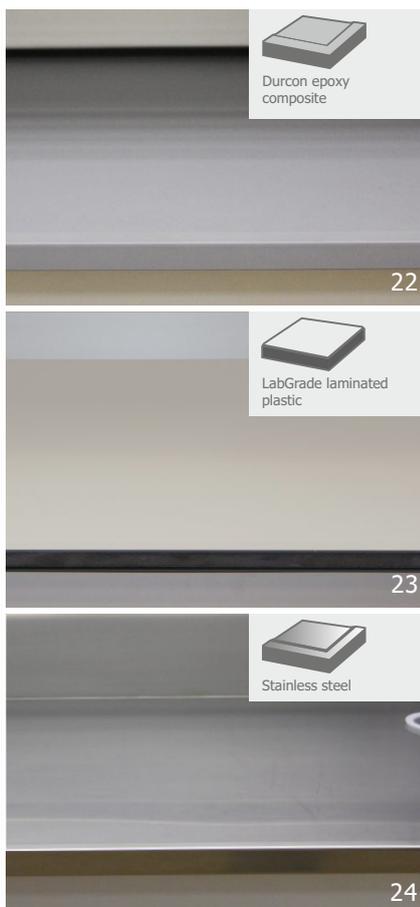


Table tops

Name and material of table top

Designation for order

Durcon epoxy composite (Pic. 22)

DU

LabGrade laminated plastic (Pic. 23)

LG

Stainless steel (Pic. 24)

HC

Ceramic (Ceramic tile) (Pic. 25)

KE

Ceramic granite (Pic. 26)

KE-Гр

Monolith ceramic (Pic. 27)

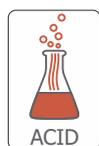
M-KE

Fiberglass plastic (Pic. 28)

СП



Reference designations that help to determine the purpose of METALLDESIGN products presented in the catalogue:



Permitted to work with acids



Electrical equipment installed



Explosion-proof luminaire installed



Clothing storage



Work with acids not recommended



Electrical equipment absent



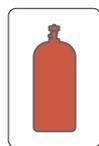
Recommended to store dishes



Permitted to work with oil products and organic substances



Permitted to store acids



Storage of gas bottles



Work with oil products and organic substances not recommended

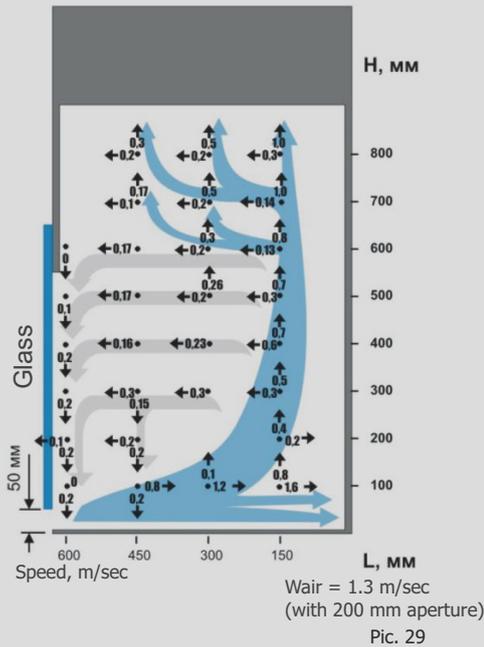


Not recommended to store acids

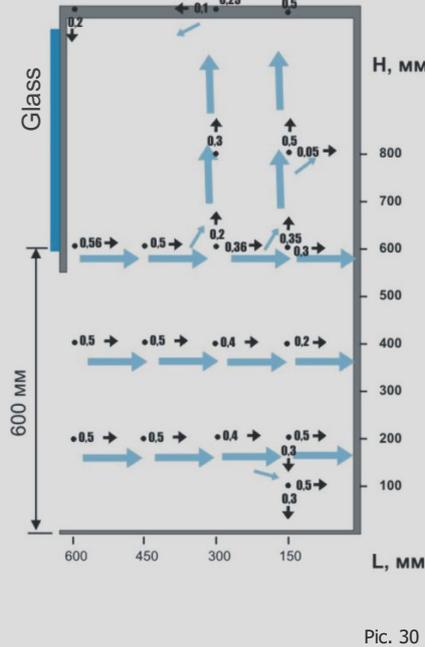


Storage of laboratory accessories

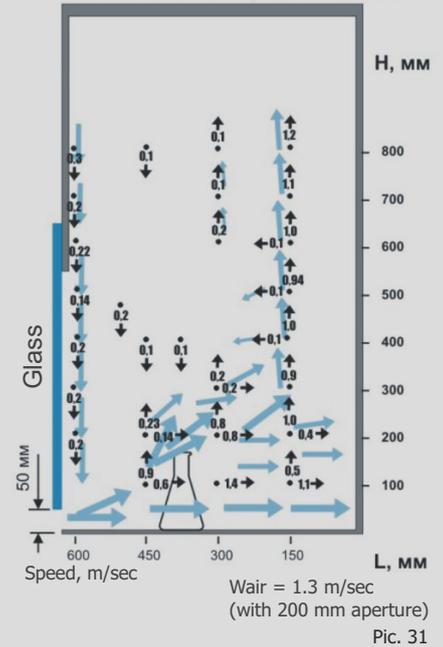
Aperture height 50 mm



Aperture height 600 mm (glass up)



Aperture height 50 mm, flasks V=500 ml



Direction and speed of air flow in Metal exhaust hoods with a distance between table top and sliding screen handle of 50 mm (Pic. 29) and 600 mm (Pic. 30)

Direction and speed of air flow in Metal exhaust hoods with chemical dishes present on the table top (distance between table top and sliding screen handle of 50 mm) (Pic. 31)

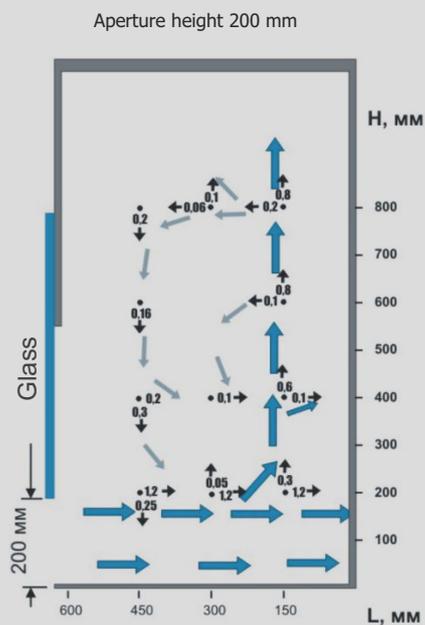
L - расстояние от задней стенки рабочей камеры, мм.

Movement of air flows in exhaust hoods

Working chamber of METALLDESIGN exhaust hoods are designed in such a way that an air flow, when passing through the working aperture, moves parallel to the table to towards the rear wall. A part of air mass gets into the air duct formed by the screen and the rear wall of the working chamber, and another part rises up parallel to the screen. The united air flow is removed from the upper branch pipe of the hood (Pic. 29, 30 and 32)

In hoods with heating platforms, thanks to the operation of additional fans, the zone of vertical air movement is considerably expanded, which allows efficiently removing chemical compound vapors practically throughout the table top area (Pic. 33)

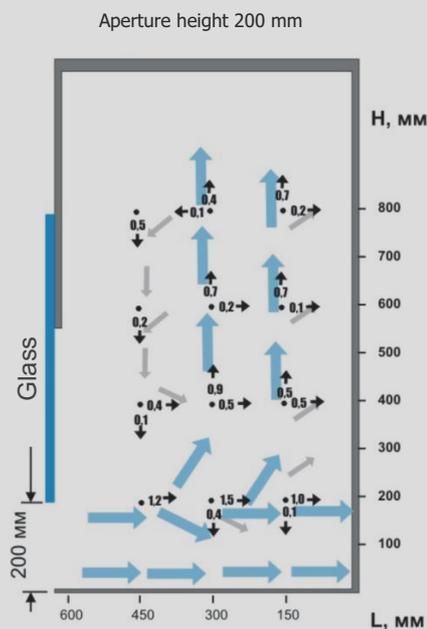
When chemical dishes are present inside the hood, the main direction of air flow movement doesn't change in essence, with air 'washing' of flask and glass necks being always observed (Pic. 31)



Pic. 32

Direction and speed of air flow in Fiberglass plastic exhaust hoods (distance between table top and sliding screen handle of 200 mm (Pic. 32))

L = distance from working chamber rear wall, mm



Pic. 33

Direction and speed of air flow in exhaust hoods with heating platforms (distance between table top and sliding screen handle of 200 mm (Pic. 33))



Air flow monitor MVP 002

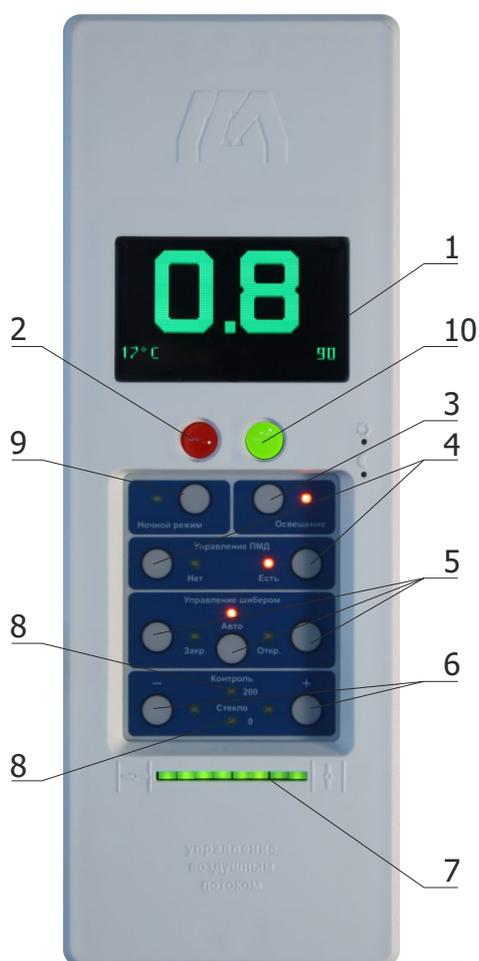
A new development of our company, air flow control monitor MVP 002 (Pic. 34, 35), is offered to automatically control air flows in METALLDESIGN exhaust hoods.

Functions performed by MVP 002:

- digital indication of the air speed in the exhaust hood aperture in meters per second;
- constant light indication of the value of the flow speed through the aperture;
- automatic maintenance of a preset flow speed independently of a position of the sliding screen of the exhaust hood by means of automatic control of the slide valve mounted in the exhaust branch pipe and the fan rotation speed;
- automatic maintenance of a preset flow speed in the 'day' (within the range of 0.3-1.5 m/sec) and 'night' (within the range of 0.1-0.3 m/sec) ventilation operating mode;
- monitors of neighboring exhaust hoods can be connected to each other with a control cable to form a network in order that the fan rotation speed is set taking account of the position of all protective screens of all hoods connected to the same fan;
- light-emitting diode indication of the slide valve position;
- possibility of manual control of the slide valve;

Structure

- air flow blocking in case of occurrence of a flame in the exhaust hood (when the exhaust hood is fitted out with the system for prevention of flame spread in air-ducts (SPFSA));
- indication of the positioning of the protective sliding screen in the lower position and at the conventional height of 200 mm (for hoods with heating platforms);
- power control of PMD infrared lamps in exhaust hoods with heating platforms;
- possibility to connect a pressure sensor and a computer through a USB port in order to perform testing of the exhaust system;
- fault data indication on a graphical display;
- switch-on and switch-off of lighting in the working chamber of the exhaust hood.

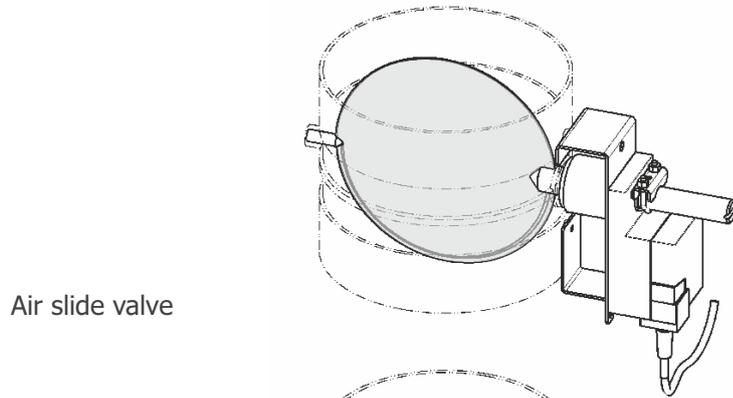


35

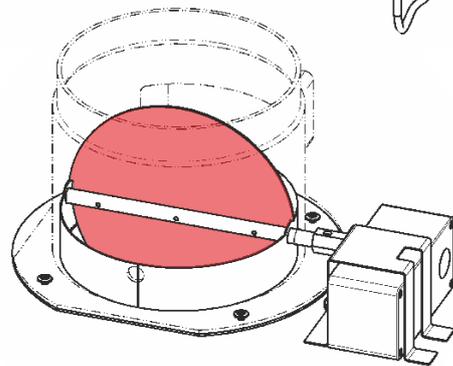
- 1 – graphical display with air flow speed indication and service information;
- 2 – light-emitting diode (red) of prohibitive flow speed;
- 3 – lighting button;
- 4 – PMD control buttons;
- 5 – slide valve control buttons;

- 6 – buttons to set required flow speeds;
- 7 – slide valve position indicator;
- 8 – indicators of the sliding screen position at control points;
- 9 – 'night mode' button;
- 10 – light-emitting diode (green) of recommended flow speed.

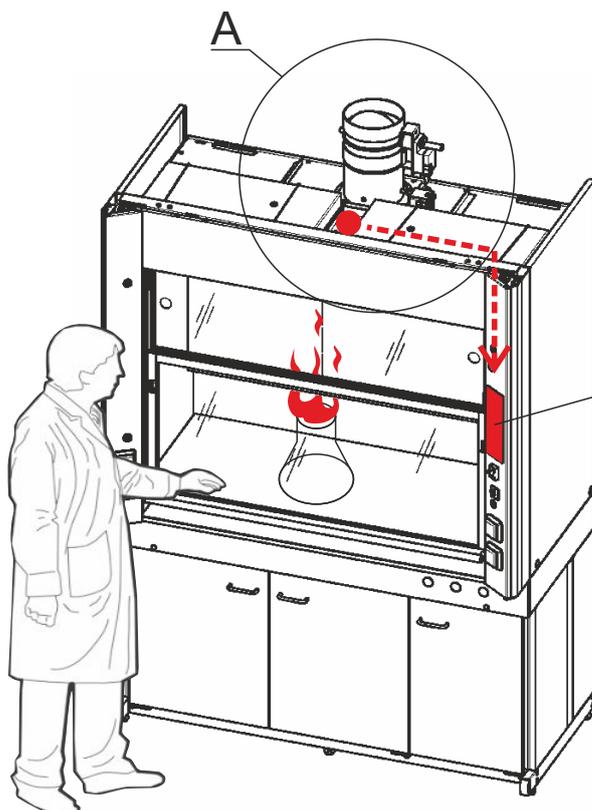
Exhaust hood with the system for prevention of flame spread in air-ducts (SPFSA)



Air slide valve



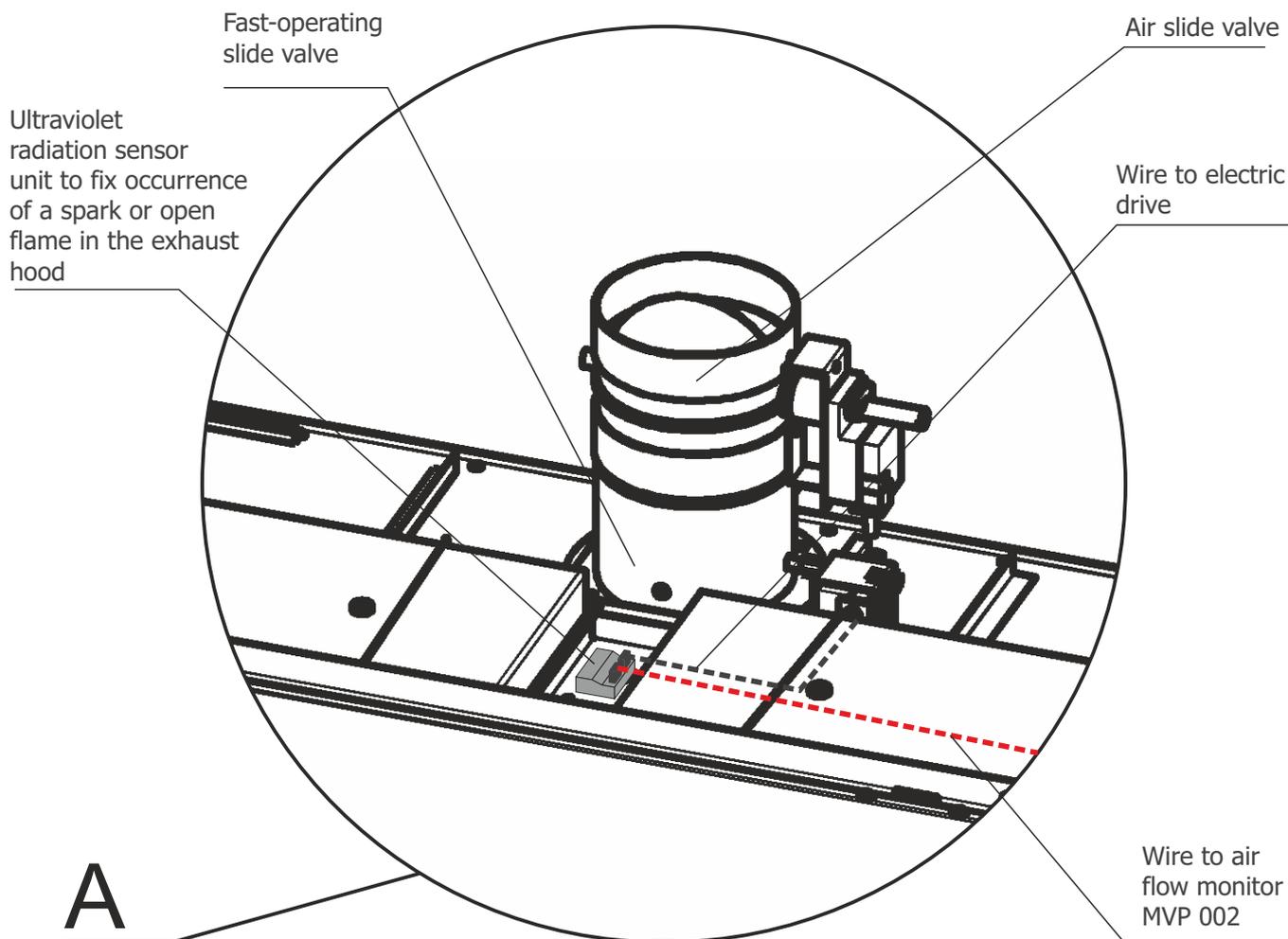
Fast-operating slide valve



Air flow monitor
MVP 002

Structure

e-mail: info@lenlab.ru
+7 (812) 703-01-65



Principle of operation

An ultraviolet sensor is mounted at the top of the working chamber of the exhaust hood, which fixes occurrence of a spark or open flame. Information about inflammation comes to the processor of the air flow monitor MVP 002 that gives a command to de-energize the drive of the air throttle mounted in the branch pipe of the exhaust hood.

Under action of the return spring, within 3 seconds, the throttle of the fast-operating fire slide valve blocks the whole area of the ventilation duct, at the

same time stopping the draught in the working chamber and hood cabinets, and thereby closes the flame access to the laboratory ventilation system.

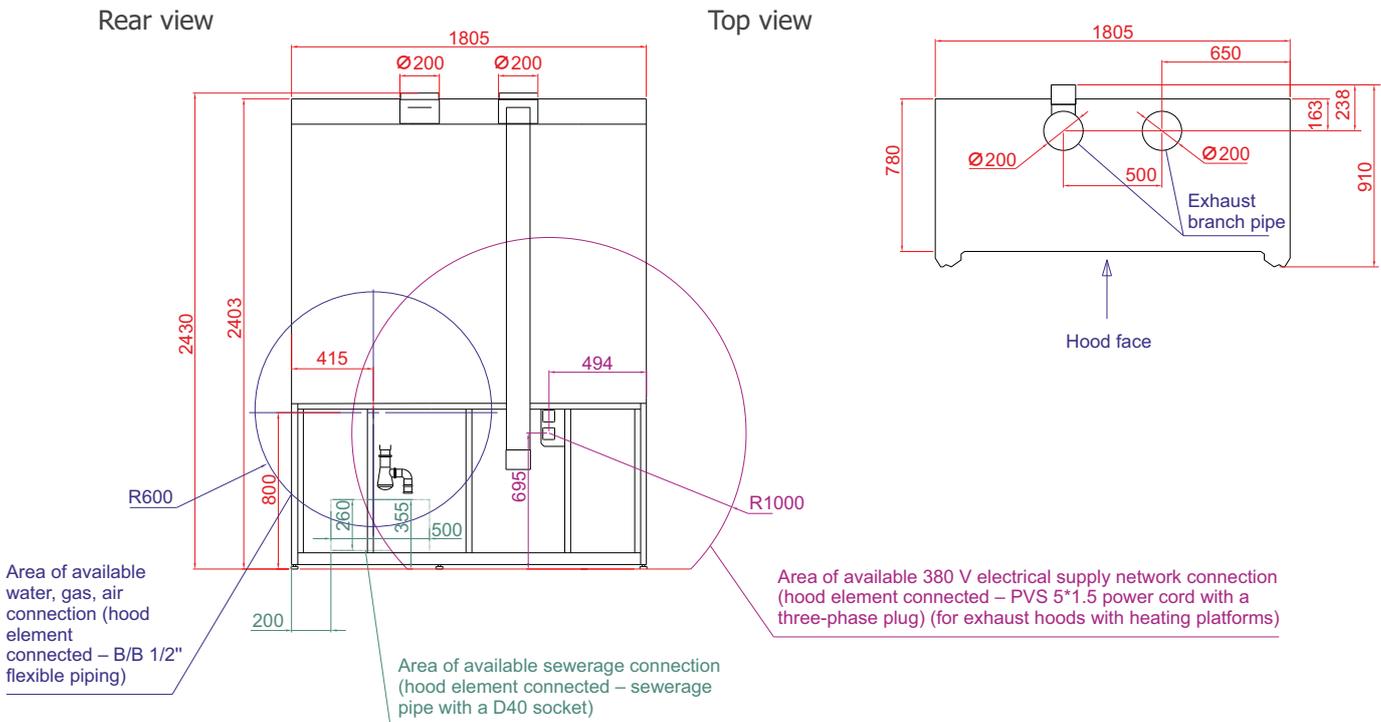
The system can be installed in the following exhaust hoods:

- Metal exhaust hoods;
- Stainless steel exhaust hoods;
- PVC exhaust hoods.

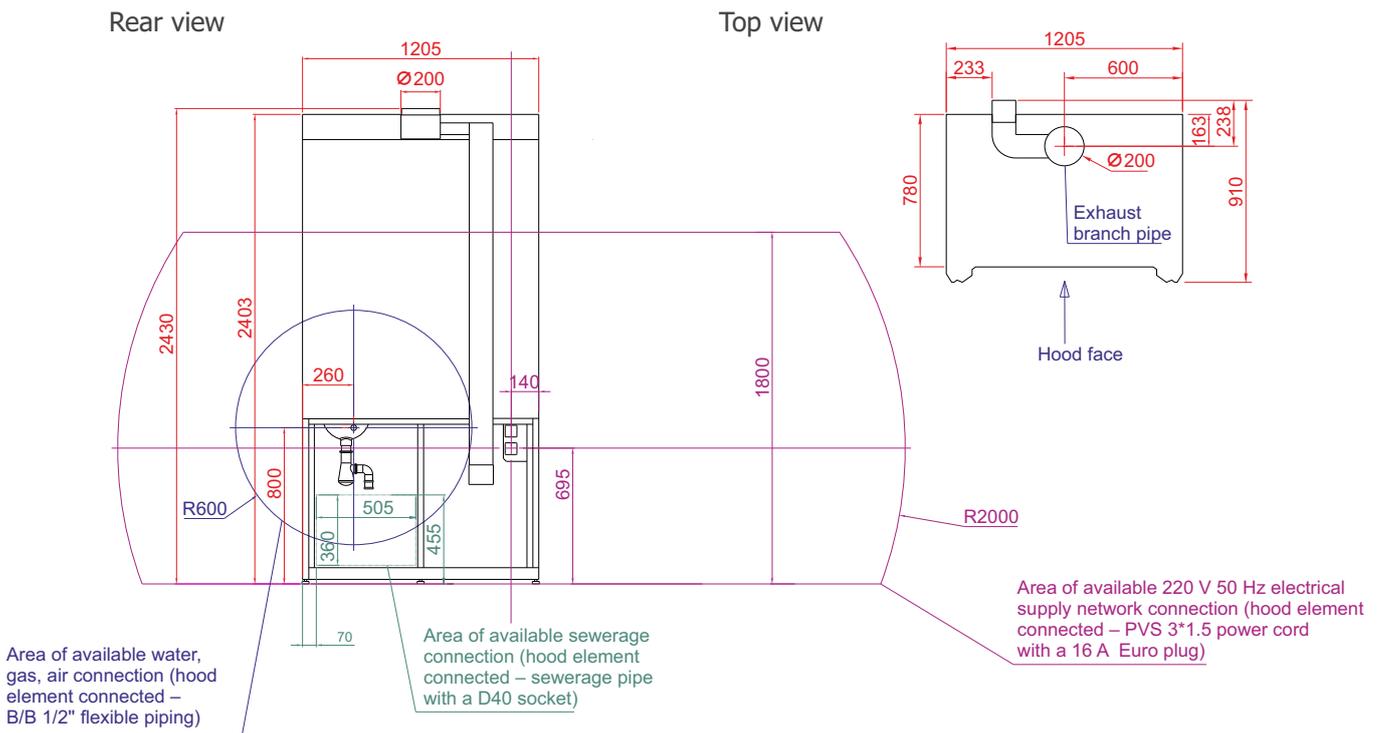
Name	Cat. No.
SPFSA for exhaust hoods with the length of 1205 mm, 1505 mm	445050
SPFSA for exhaust hoods with the length of 1805 mm	445080

Layout of zones of connection of service lines to METALLDESIGN LLC exhaust hoods

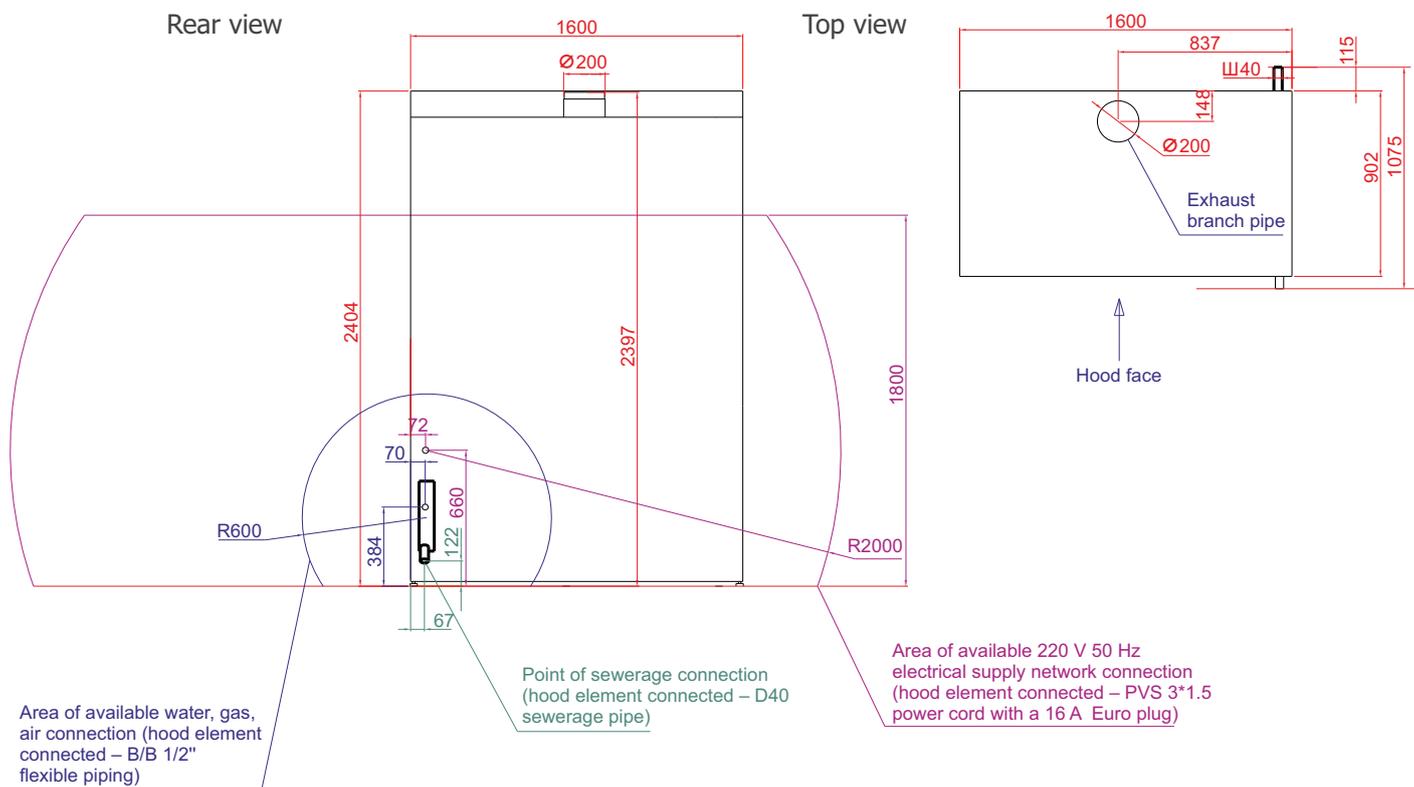
Exhaust hoods 1805x910x2430



Exhaust hoods 1205x910x2430

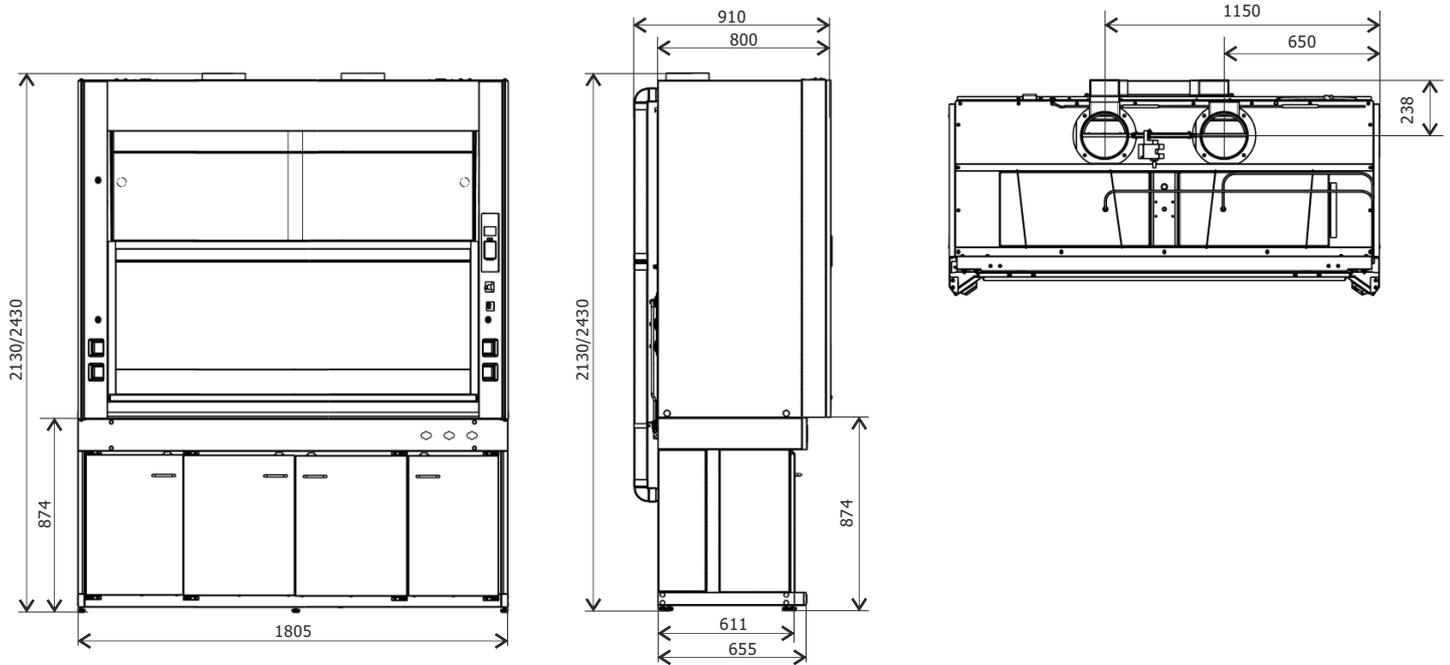


Hood for high-altitude installations 1600x1075x2404

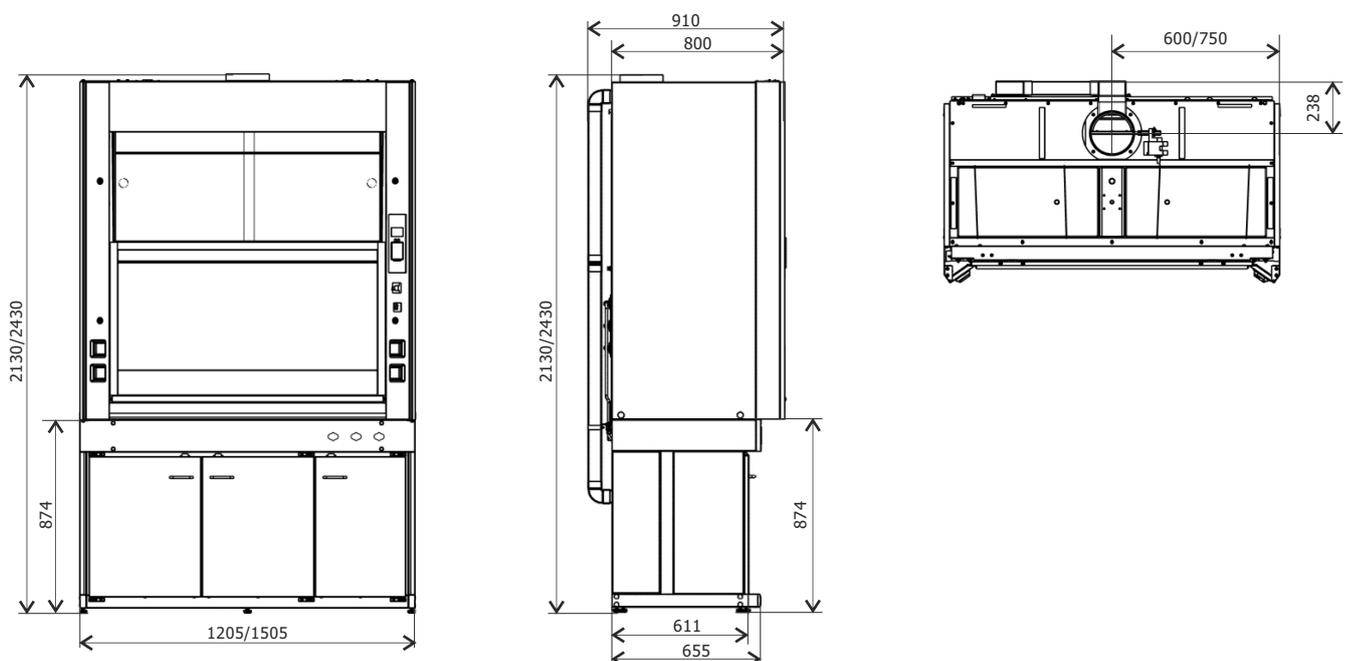


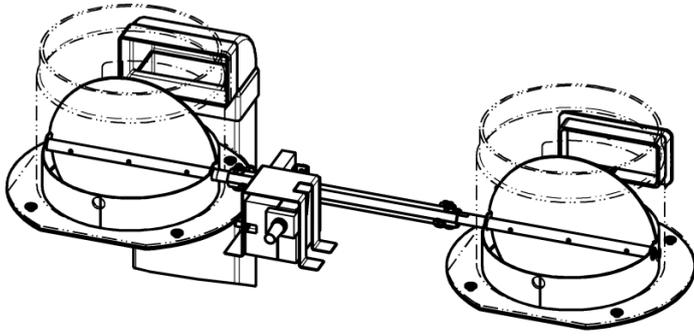
Layout of zones of connection of service lines to METALLDESIGN LLC exhaust hoods

Metal exhaust hoods 1805x910x2130/2430

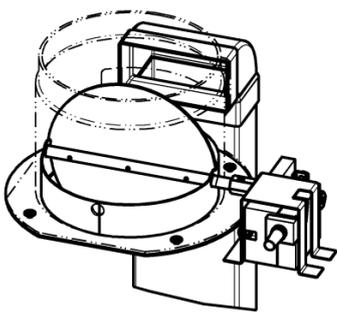
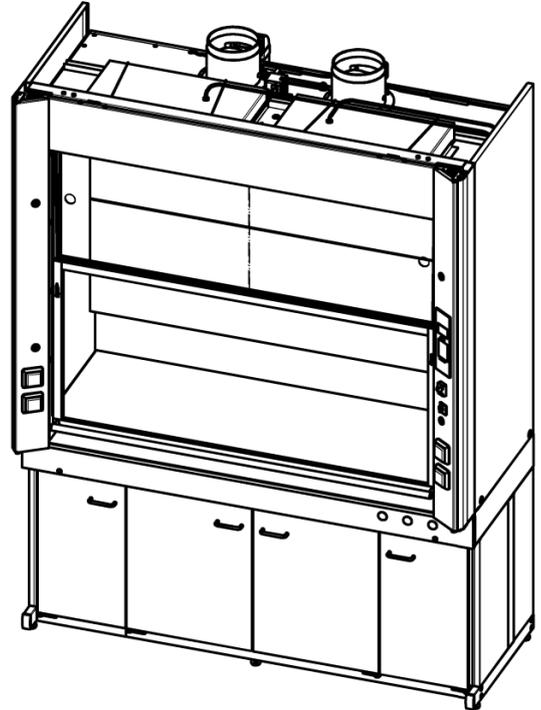


Metal exhaust hoods 1205/1505x910x2130/2430

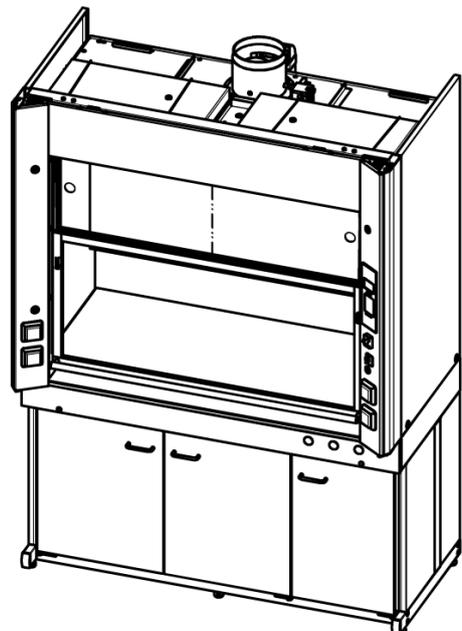




Slide valve with an electric drive

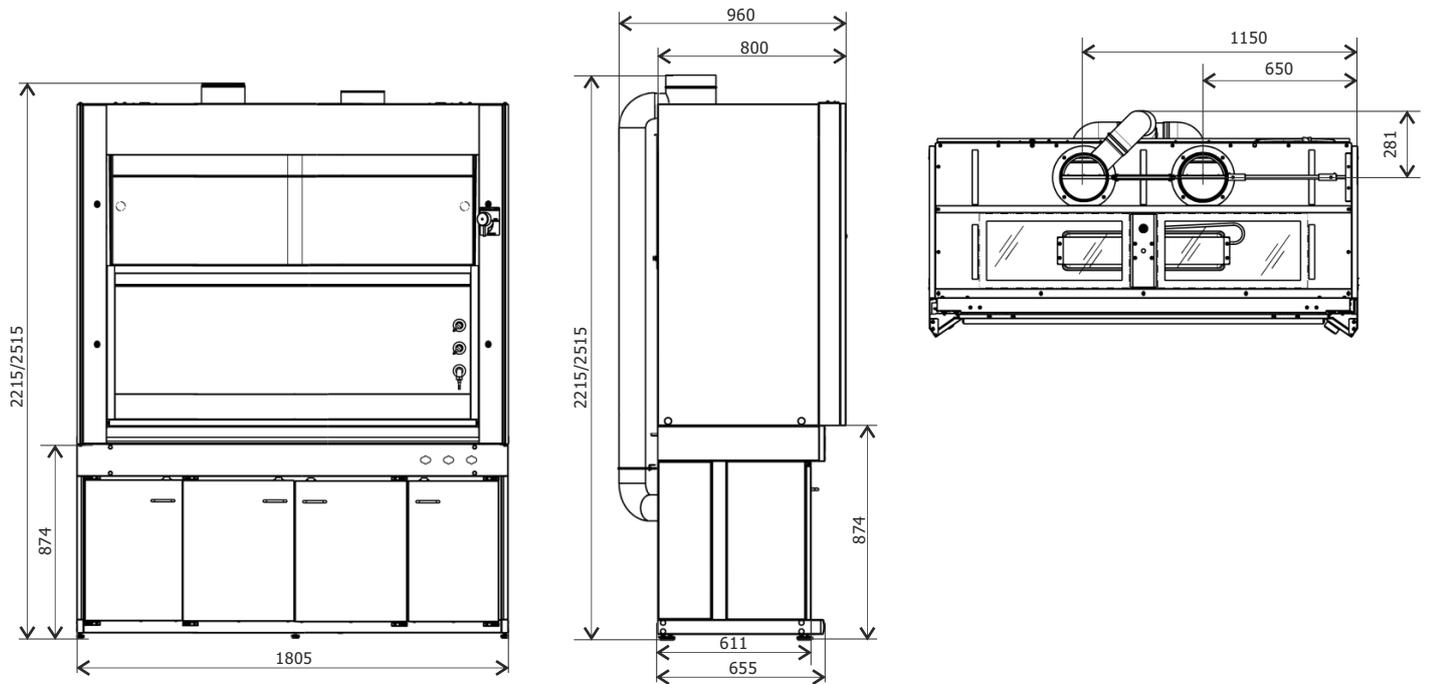


Slide valve with an electric drive

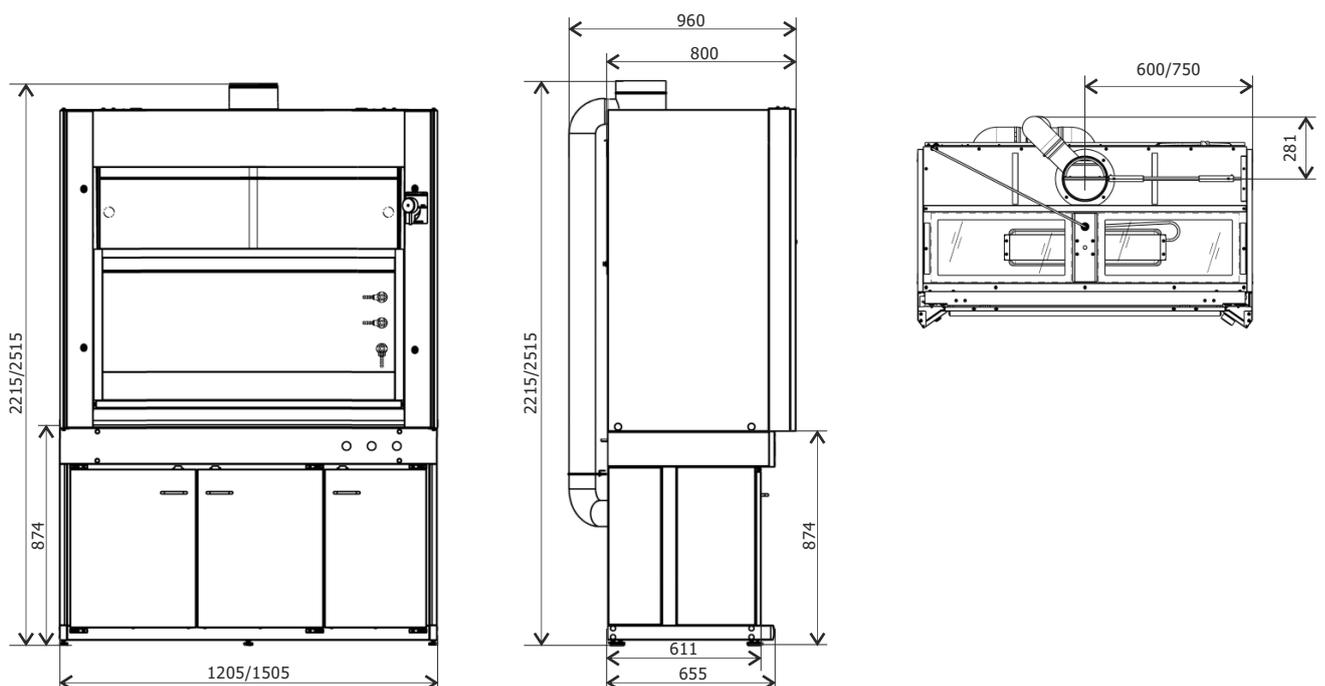


Layout of zones of connection of service lines to METALLDESIGN LLC exhaust hoods

Exhaust hoods with an explosion-proof luminaire 1805x960x2215/2515

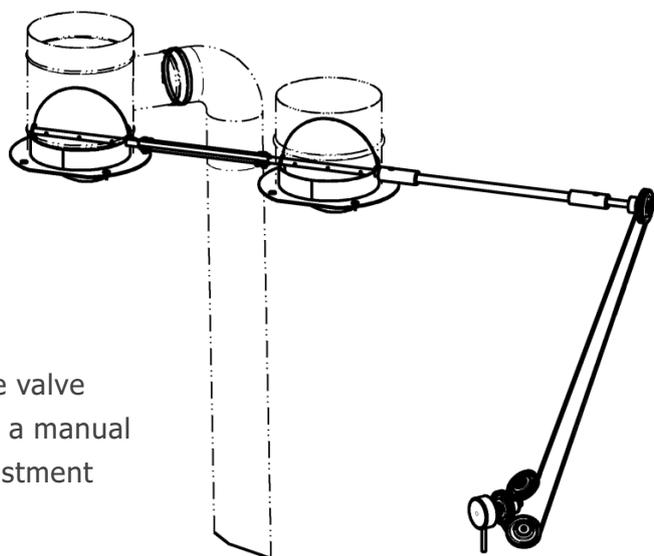


Exhaust hoods with an explosion-proof luminaire 1205/1505x960x2215/2515

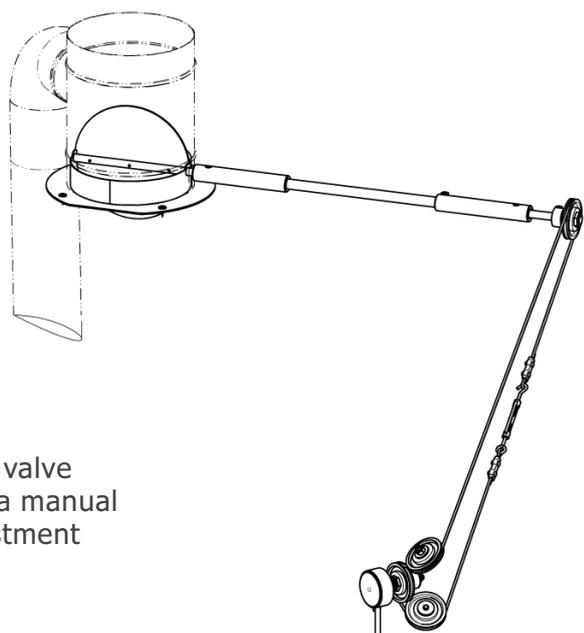
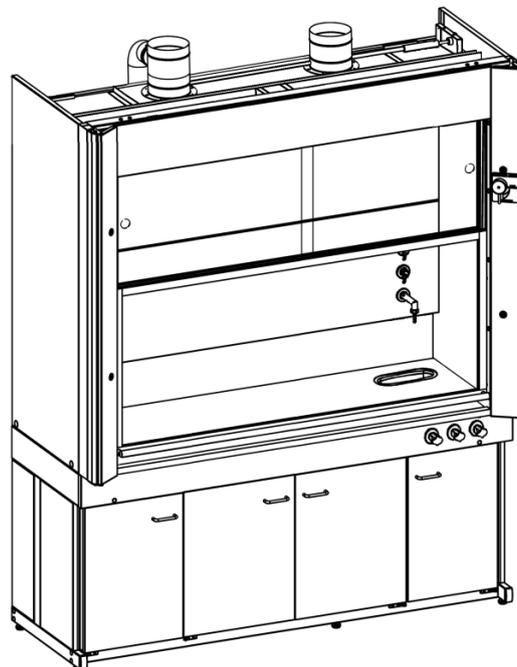


Structure

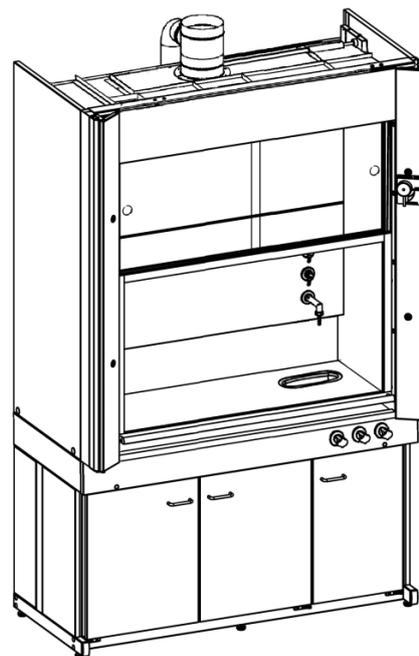
e-mail: info@lenlab.ru
+7 (812) 703-01-65



Slide valve
with a manual
adjustment

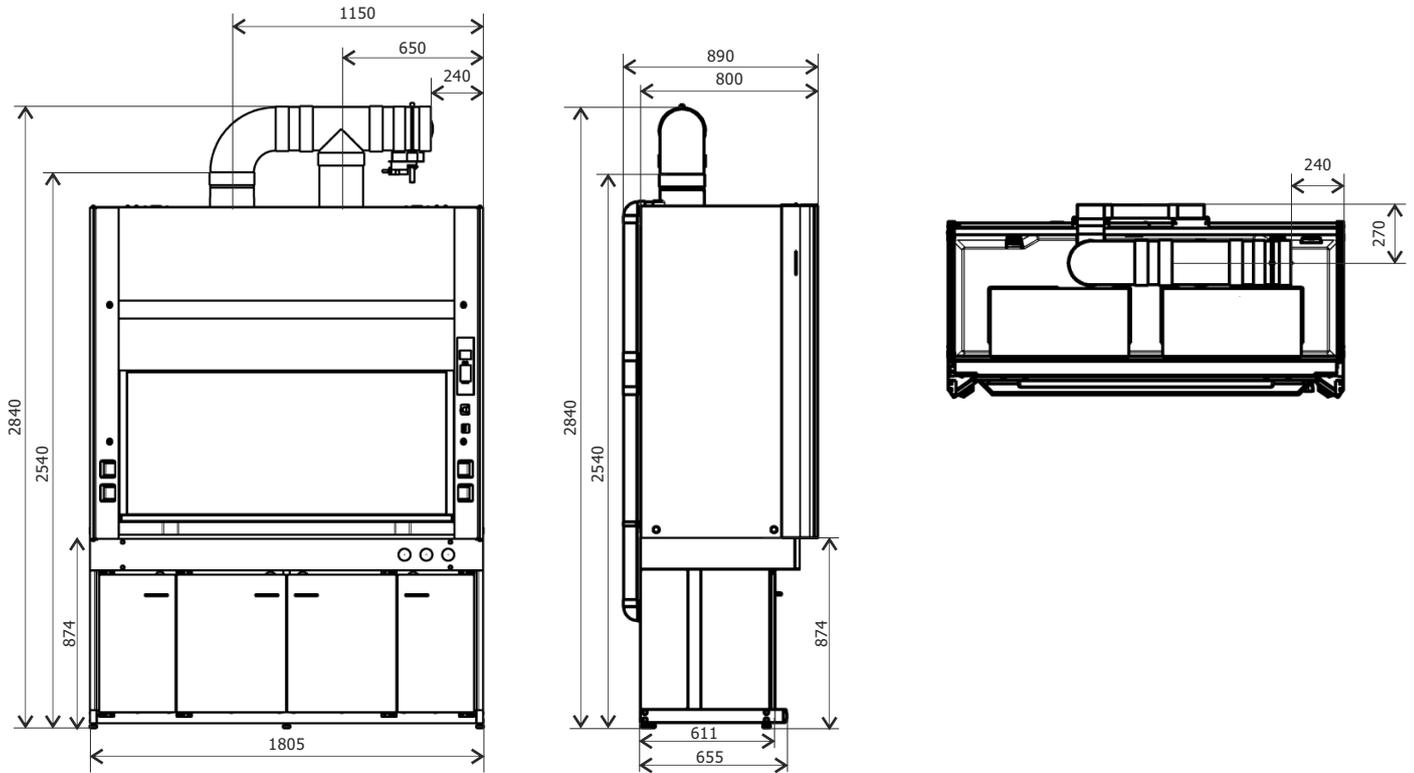


Slide valve
with a manual
adjustment

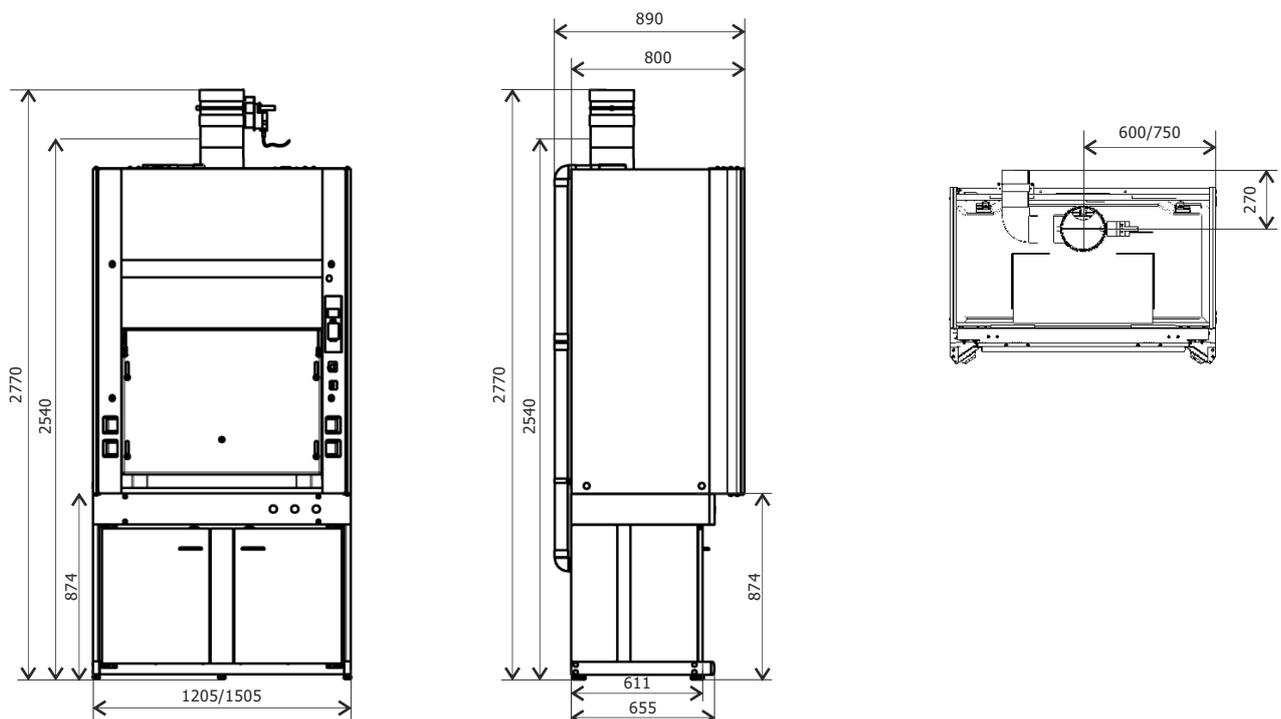


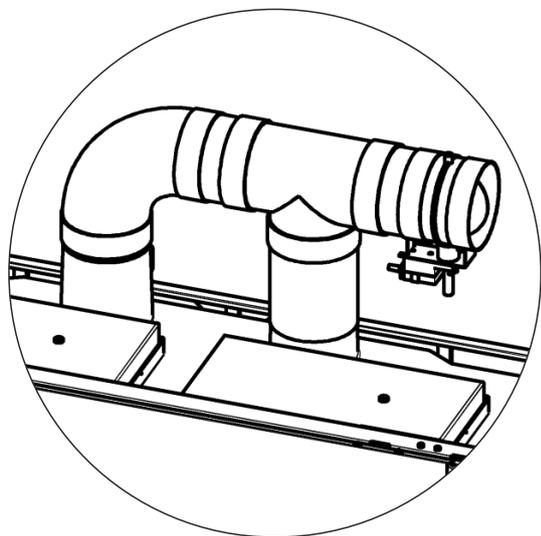
Layout of zones of connection of service lines to METALLDESIGN LLC exhaust hoods

Exhaust hoods / Fiberglass plastic 1805x890x2540

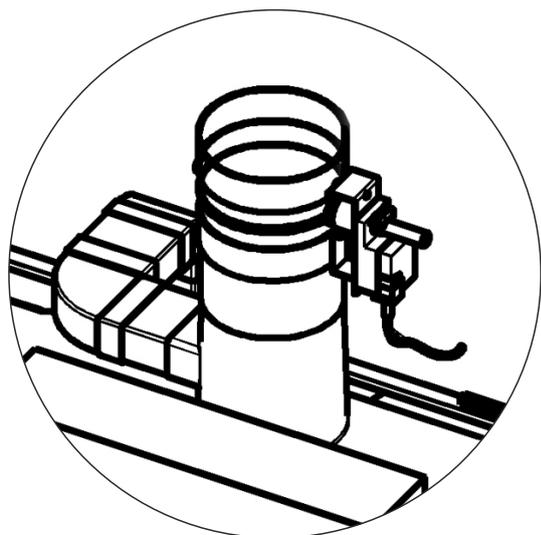
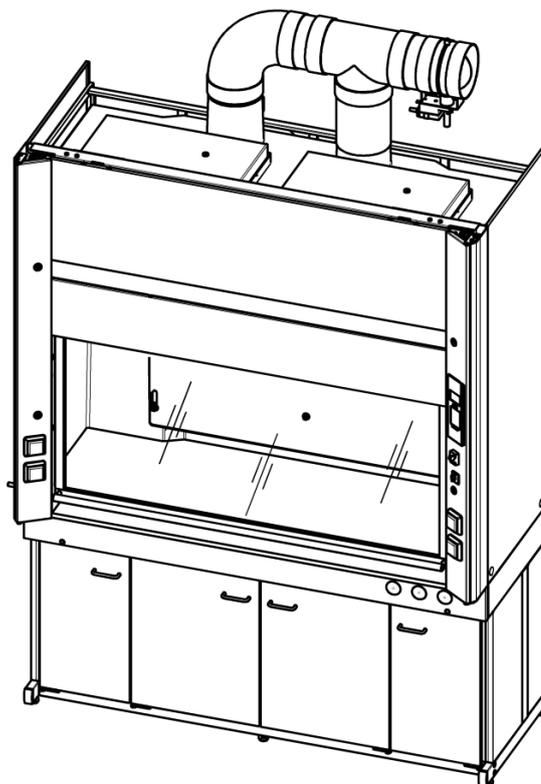


Exhaust hoods / Fiberglass plastic 1205/1505x890x2540

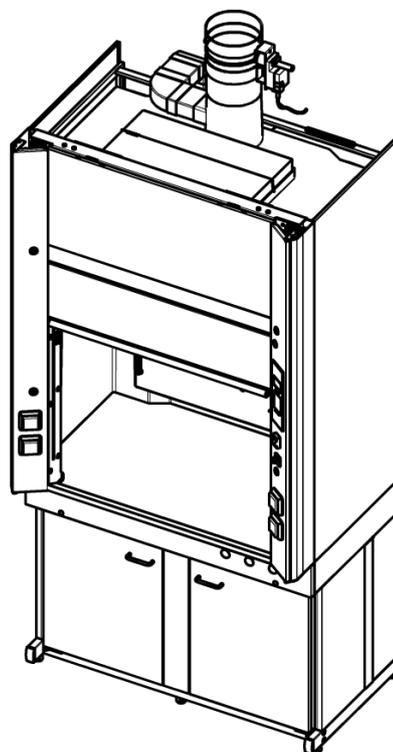




Slide valve with an electric drive



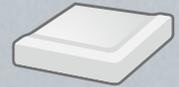
Slide valve with an electric drive



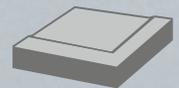




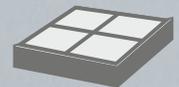
Exhaust
hoods



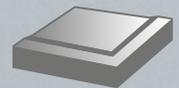
Monolith ceramic



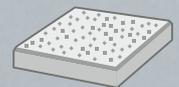
Durcon



Ceramic



Stainless steel

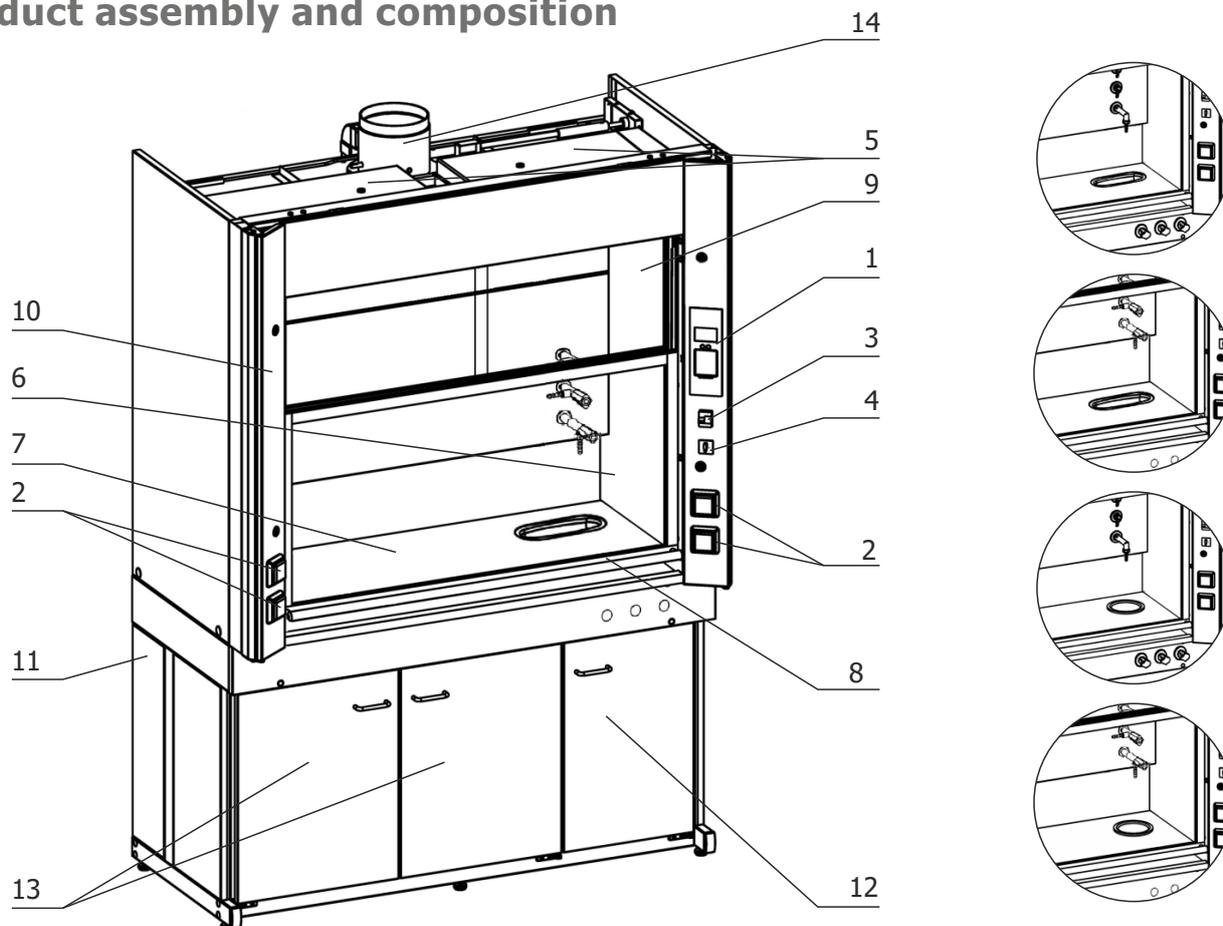


Ceramic granite

Features

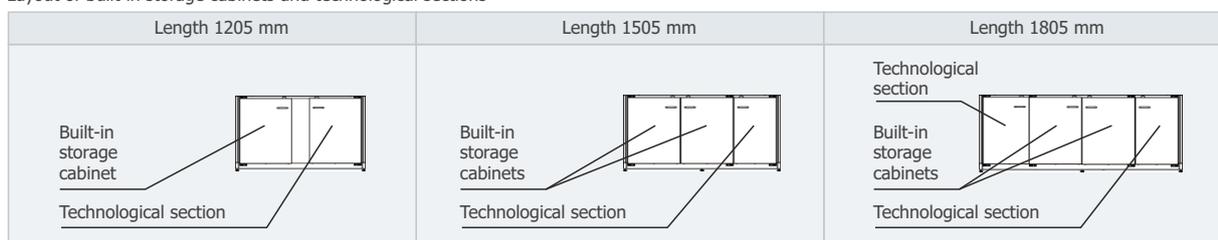
- Work with organic substances and diluted acids
- Working chamber made of powder-painted steel
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Ventilated metal and polyethylene cabinets

Product assembly and composition



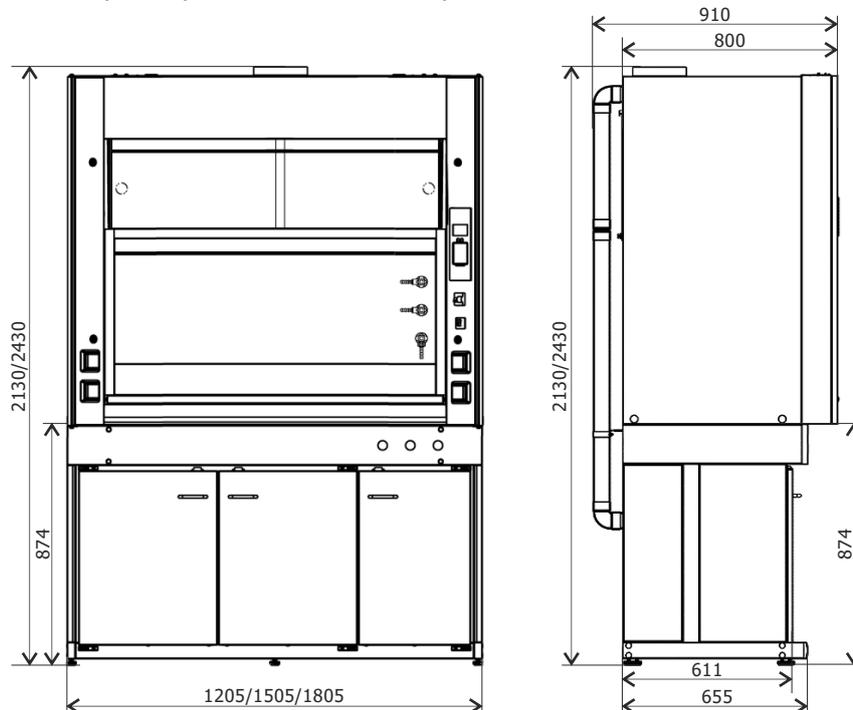
Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Air flow monitor MVP 002	1	1	1
2 Socket 220 V	4	4	4
3 Differential automaton 16 A	1	1	1
4 Circuit breaker	1	1	1
5 Luminaire 2 x 18 W	1	2	2
6 Working chamber	1	1	1
7 Table top	1	1	1
8 Sliding frame with hardened glass	1	1	1
9 Fixed frame with sliding hardened glasses	1	1	1
10 Portal	1	1	1
11 Hood base	1	1	1
12 Technological section	1	1	2
13 Built-in storage cabinets	1	2	2
14 Branch pipe for ventilation connection	1	1	2
15 Slide valve	1	1	1
16 Set of changeable cabinet hinges	1	1	1
17 Set of keys for portal cover locks	1	1	1
18 Reagent trays	4	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Metal exhaust hoods 1205/1505/1805 x 910 x 2130/2430



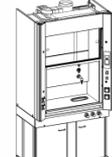
Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	910
высота	2130/2430
Height Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

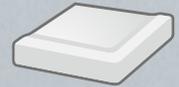
Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	2130 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000
Remote water tap with PP sink	2430 mm	448500
Remote tap with Durcon sink		448540
Remote gas tap		448600
Remote compressed air tap		448700
Remote vacuum tap (special order)		448800

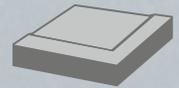
Dimensions

Шафы вытяжные Металл												
	Name	Length	Width	Height	Working surface	Cabinet material	Cat. No.					
		1205 mm	910 mm	2130 mm	Durcon	Met	411050					
						PE	412050					
					Ceramic	Met	411030					
						PE	412030					
					Stainless steel	Met	411020					
						PE	412020					
					Ceramic granite	Met	411060					
						PE	412060					
					Monolith ceramic	Met	411010					
						PE	412010					
							1505 mm	910 mm	2130 mm	Durcon	Met	441050
											PE	442050
Ceramic	Met	441030										
	PE	442030										
Stainless steel	Met	441020										
	PE	442020										
Ceramic granite	Met	441060										
	PE	442060										
Monolith ceramic	Met	441010										
	PE	442010										
	Metal exhaust hoods	1805 mm	910 mm	2130 mm						Durcon	Met	461050
											PE	462050
					Ceramic	Met	461030					
						PE	462030					
					Stainless steel	Met	461020					
						PE	462020					
					Ceramic granite	Met	461060					
						PE	462060					
					Monolith ceramic	Met	461010					
						PE	462010					
							1205 mm	910 mm	2430 mm	Durcon	Met	421050
											PE	422050
Ceramic	Met	421030										
	PE	422030										
Stainless steel	Met	421020										
	PE	422020										
Ceramic granite	Met	421060										
	PE	422060										
Monolith ceramic	Met	421010										
	PE	422010										
		1505 mm	910 mm	2430 mm						Durcon	Met	451050
											PE	452050
					Ceramic	Met	451030					
						PE	452030					
					Stainless steel	Met	451020					
						PE	452020					
					Ceramic granite	Met	451060					
						PE	452060					
					Monolith ceramic	Met	451010					
						PE	452010					
							1805 mm	910 mm	2430 mm	Durcon	Met	481050
											PE	482050
Ceramic	Met	481030										
	PE	482030										
Stainless steel	Met	481020										
	PE	482020										
Ceramic granite	Met	481060										
	PE	482060										
Monolith ceramic	Met	481010										
	PE	482010										

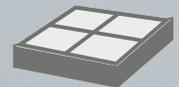
Exhaust
hoods



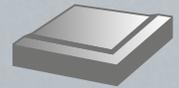
Monolith ceramic



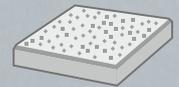
Durcon



Ceramic



Stainless steel

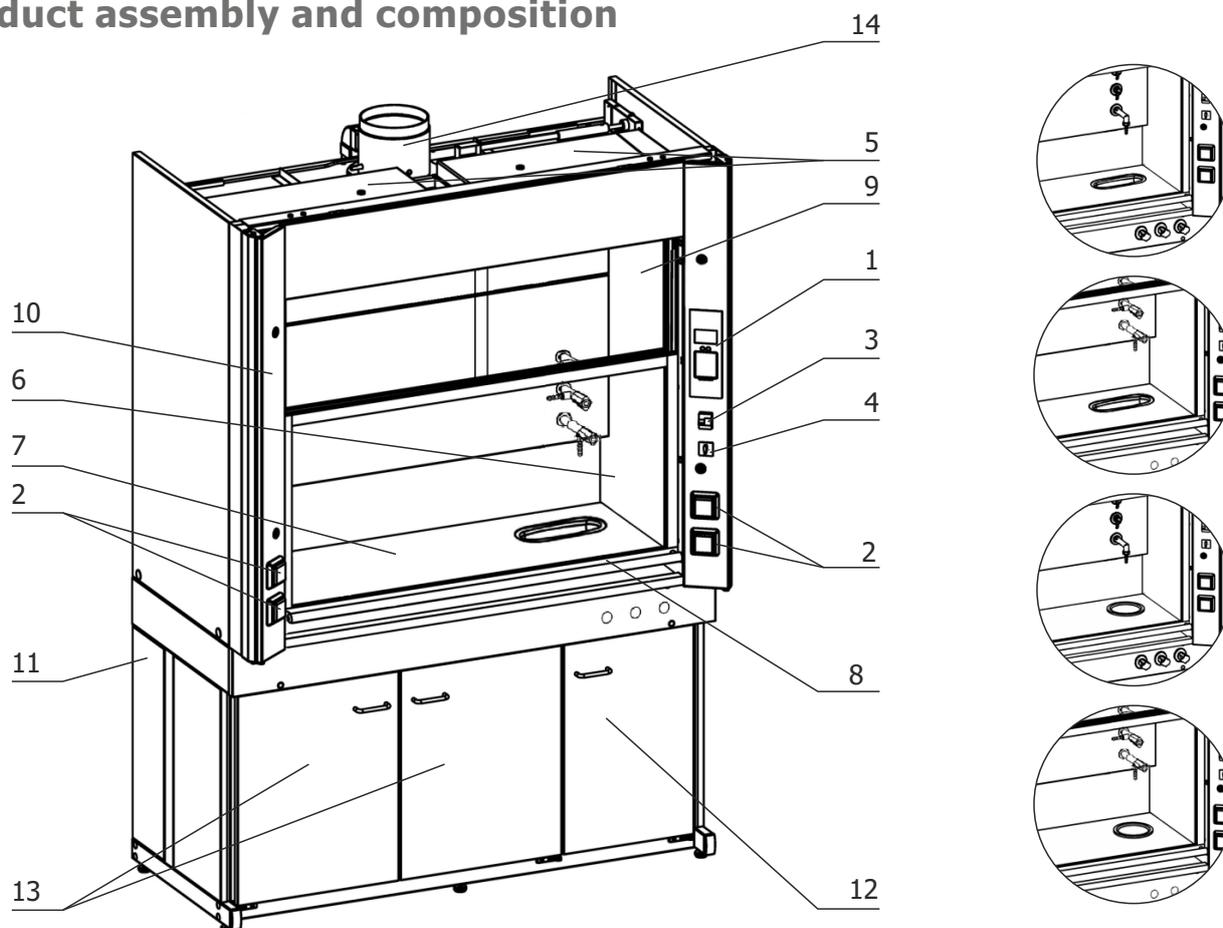


Ceramic granite

Features

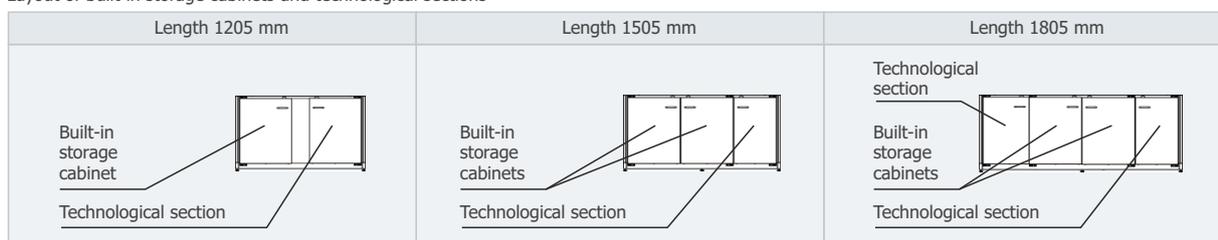
- Work with organic substances and diluted acids
- Working chamber made of stainless steel of 316L grade
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Ventilated metal and polyethylene cabinets

Product assembly and composition



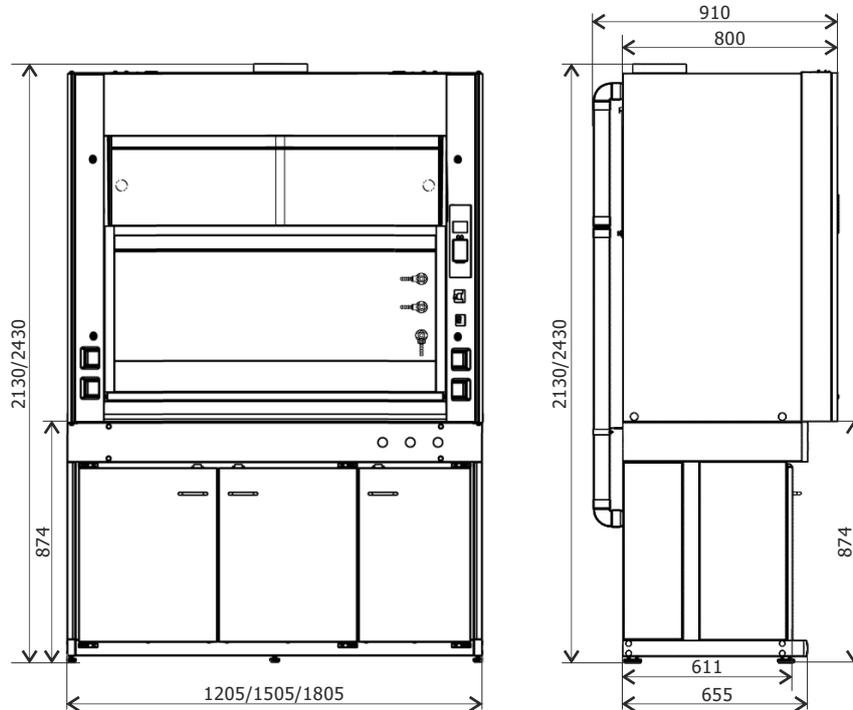
Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Air flow monitor MVP 002	1	1	1
2 Socket 220 V	4	4	4
3 Differential automaton 16 A	1	1	1
4 Circuit breaker	1	1	1
5 Luminaire 2 x 18 W	1	2	2
6 Working chamber	1	1	1
7 Table top	1	1	1
8 Sliding frame with hardened glass	1	1	1
9 Fixed frame with sliding hardened glasses	1	1	1
10 Portal	1	1	1
11 Hood base	1	1	1
12 Technological section	1	1	2
13 Built-in storage cabinets	1	2	2
14 Branch pipe for ventilation connection	1	1	2
15 Slide valve	1	1	1
16 Set of changeable cabinet hinges	1	1	1
17 Set of keys for portal cover locks	1	1	1
18 Reagent trays	4	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Stainless steel exhaust hoods 1205/1505/1805 x 910 x 2130/2430



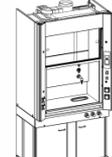
Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	910
Height	2130/2430
Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	2130 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000
Remote water tap with PP sink		2430 mm
Remote tap with Durcon sink	448540	
Remote gas tap	448600	
Remote compressed air tap	448700	
Remote vacuum tap (special order)	448800	

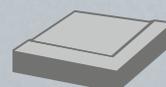
Dimensions

Stainless steel exhaust hoods												
	Name	Length	Width	Height	Working surface	Cabinet material	Cat. No.					
	Stainless steel exhaust hoods	1205 mm	910 mm	2130 mm	Durcon	Met	411250					
						PE	412250					
					Ceramic	Met	411230					
						PE	412230					
					Stainless steel	Met	411220					
						PE	412220					
					Ceramic granite	Met	411260					
						PE	412260					
					Monolith ceramic	Met	411210					
						PE	412210					
						Stainless steel exhaust hoods	1505 mm	910 mm	2130 mm	Durcon	Met	441250
											PE	442250
Ceramic	Met	441230										
	PE	442230										
Stainless steel	Met	441220										
	PE	442220										
Ceramic granite	Met	441260										
	PE	442260										
Monolith ceramic	Met	441210										
	PE	442210										
	Stainless steel exhaust hoods	1805 mm	910 mm	2130 mm						Durcon	Met	461250
											PE	462250
					Ceramic	Met	461230					
						PE	462230					
					Stainless steel	Met	461220					
						PE	462220					
					Ceramic granite	Met	461260					
						PE	462260					
					Monolith ceramic	Met	461210					
						PE	462210					
						Stainless steel exhaust hoods	1205 mm	910 mm	2430 mm	Durcon	Met	421250
											PE	422250
Ceramic	Met	421230										
	PE	422230										
Stainless steel	Met	421220										
	PE	422220										
Ceramic granite	Met	421260										
	PE	422260										
Monolith ceramic	Met	421210										
	PE	422210										
	Stainless steel exhaust hoods	1505 mm	910 mm	2430 mm						Durcon	Met	451250
											PE	452250
					Ceramic	Met	451230					
						PE	452230					
					Stainless steel	Met	451220					
						PE	452220					
					Ceramic granite	Met	451260					
						PE	452260					
					Monolith ceramic	Met	451210					
						PE	452210					
						Stainless steel exhaust hoods	1805 mm	910 mm	2430 mm	Durcon	Met	481250
											PE	482250
Ceramic	Met	481230										
	PE	482230										
Stainless steel	Met	481220										
	PE	482220										
Ceramic granite	Met	481260										
	PE	482260										
Monolith ceramic	Met	481210										
	PE	482210										

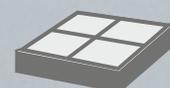
Exhaust
hoods



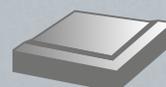
Monolith ceramic



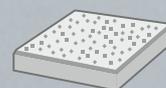
Durcon



Ceramic



Stainless steel



Ceramic granite

Explosion-proof luminaire
2 x 18 W

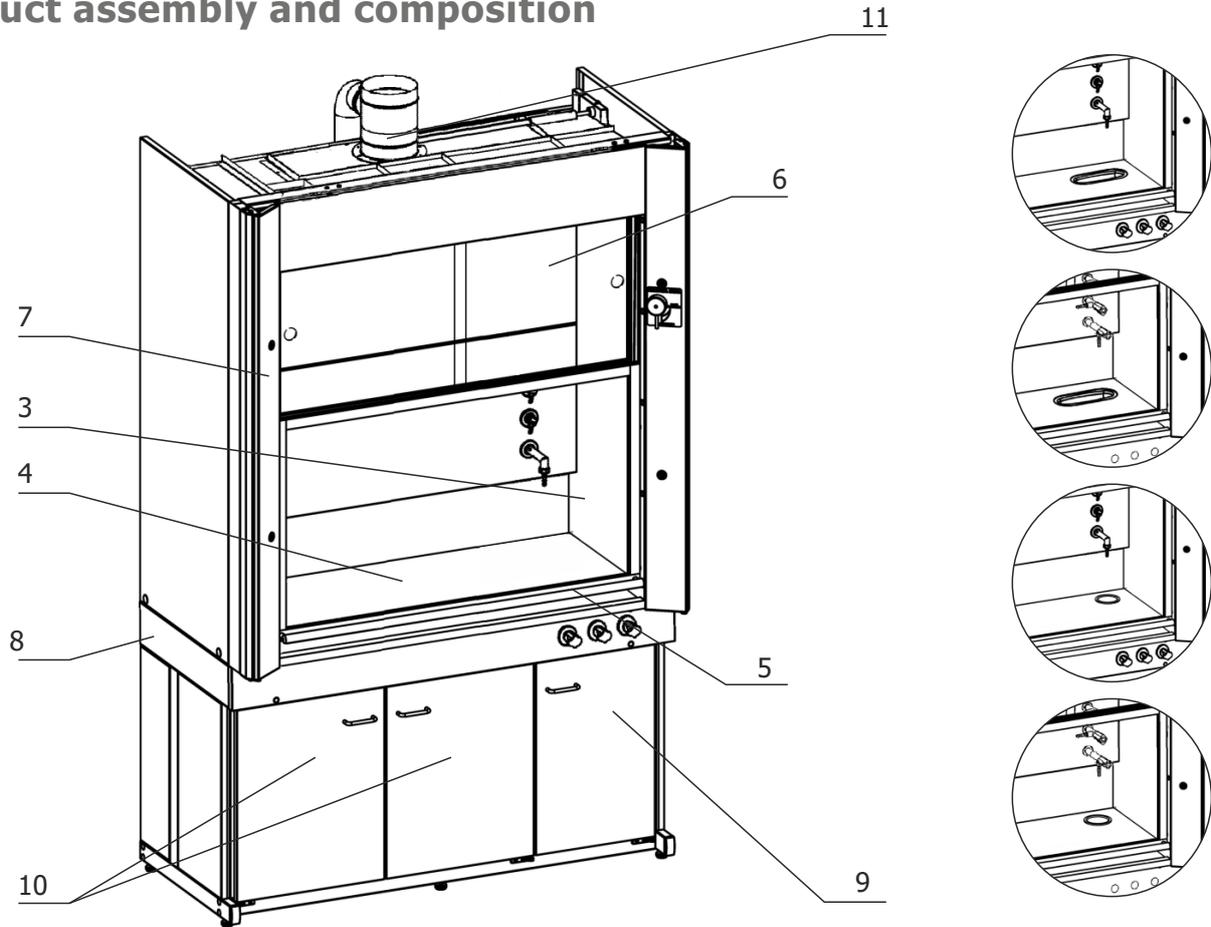


Explosion-proof
double-pole
switch

Features

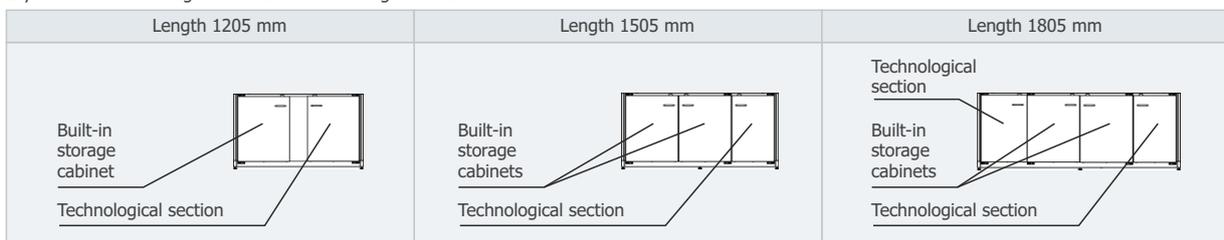
- Designed for work with organic substances and diluted acids
- Working chamber made of:
 - stainless steel of 316L grade
 - powder-painted steel
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding glasses
- Ventilated metal cabinets
- Inner aluminum exhaust air ducts
- Explosion-proof luminaire inside the working chamber
- Possibility to mound an explosion-proof switch outside the room area

Product assembly and composition



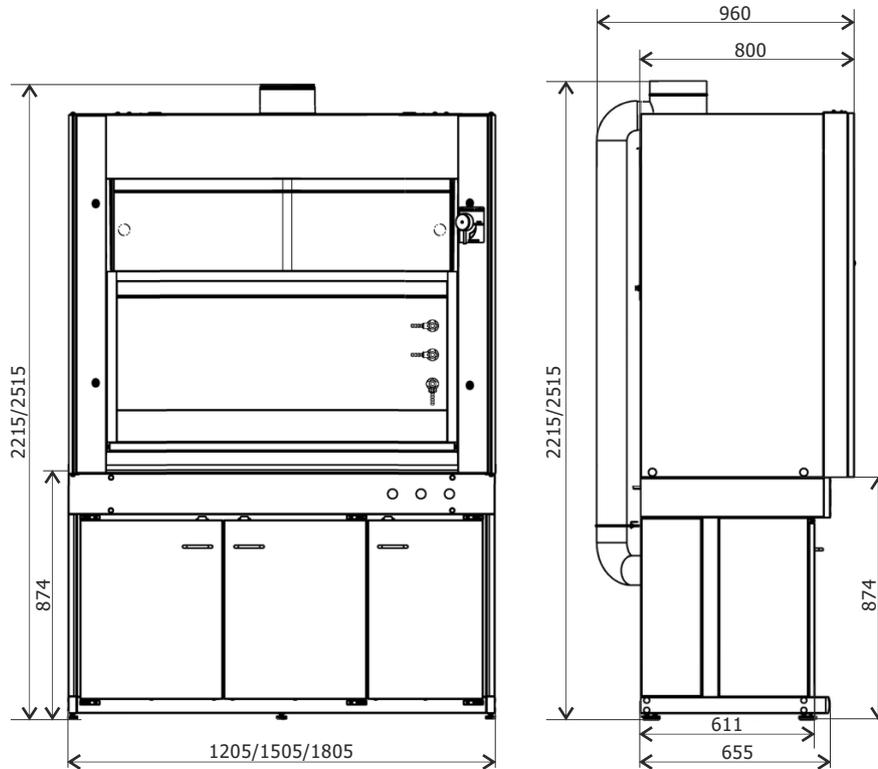
Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Explosion-proof double-pole switch	1	1	1
2 Explosion-proof luminaire 2 x 18 W	1	1	1
3 Working chamber	1	1	1
4 Table top	1	1	1
5 Sliding frame with hardened glass	1	1	1
6 Fixed frame with sliding hardened glasses	1	1	1
7 Portal	1	1	1
8 Hood base	1	1	1
9 Technological section	1	1	2
10 Built-in storage cabinets	1	2	2
11 Branch pipe for ventilation connection	1	1	2
12 Slide valve	1	1	1
13 Set of changeable cabinet hinges	1	1	1
14 Set of keys for portal cover locks	1	1	1
15 Reagent trays	4	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Exhaust hoods with an explosion-proof luminaire 1205/1505/1805 x 960 x 2215/2515



Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	960
Height	2215/2515
Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

Technical characteristics

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	2130 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000
Remote water tap with PP sink	2430 mm	448500
Remote tap with Durcon sink		448540
Remote gas tap		448600
Remote compressed air tap		448700
Remote vacuum tap (special order)		448800

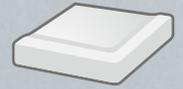
Dimensions

Exhaust hoods with an explosion-proof luminaire								
	Name	Length	Width	Height	Working chamber	Working surface	Cabinet material	Cat. No.
		1205 mm	960 mm	2215 mm	Powder-coated steel	Durcon	Met	411051
						Ceramic	Met	411031
						Stainless steel	Met	411021
						Ceramic granite	Met	411061
						Monolith ceramic	Met	411011
					Stainless steel	Durcon	Met	411251
						Ceramic	Met	411231
						Stainless steel	Met	411221
						Ceramic granite	Met	411261
						Monolith ceramic	Met	411211
		1505 mm	960 mm	2215 mm	Powder-coated steel	Durcon	Met	441051
						Ceramic	Met	441031
						Stainless steel	Met	441021
						Ceramic granite	Met	441061
						Monolith ceramic	Met	441011
					Stainless steel	Durcon	Met	441251
						Ceramic	Met	441231
						Stainless steel	Met	441221
						Ceramic granite	Met	441261
						Monolith ceramic	Met	441211
	Exhaust hoods with an explosion-proof luminaire	1805 mm	960 mm	2215 mm	Powder-coated steel	Durcon	Met	461051
						Ceramic	Met	461031
						Stainless steel	Met	461021
						Ceramic granite	Met	461061
						Monolith ceramic	Met	461011
					Stainless steel	Durcon	Met	461251
						Ceramic	Met	461231
						Stainless steel	Met	461221
						Ceramic granite	Met	461261
						Monolith ceramic	Met	461211
		1205 mm	960 mm	2515 mm	Powder-coated steel	Durcon	Met	421051
						Ceramic	Met	421031
						Stainless steel	Met	421021
						Ceramic granite	Met	421061
						Monolith ceramic	Met	421011
					Stainless steel	Durcon	Met	421251
						Ceramic	Met	421231
						Stainless steel	Met	421221
						Ceramic granite	Met	421261
						Monolith ceramic	Met	421211
		1505 mm	960 mm	2515 mm	Powder-coated steel	Durcon	Met	451051
						Ceramic	Met	451031
						Stainless steel	Met	451021
						Ceramic granite	Met	451061
						Monolith ceramic	Met	451011
					Stainless steel	Durcon	Met	451251
						Ceramic	Met	451231
						Stainless steel	Met	451221
						Ceramic granite	Met	451261
						Monolith ceramic	Met	451211
		1805 mm	960 mm	2515 mm	Powder-coated steel	Durcon	Met	481051
						Ceramic	Met	481031
						Stainless steel	Met	481021
						Ceramic granite	Met	481061
						Monolith ceramic	Met	481011
					Stainless steel	Durcon	Met	481251
						Ceramic	Met	481231
						Stainless steel	Met	481221
						Ceramic granite	Met	481261
						Monolith ceramic	Met	481211

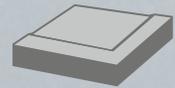
Exhaust hoods



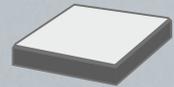
ACID OIL



Monolith ceramic



Durcon

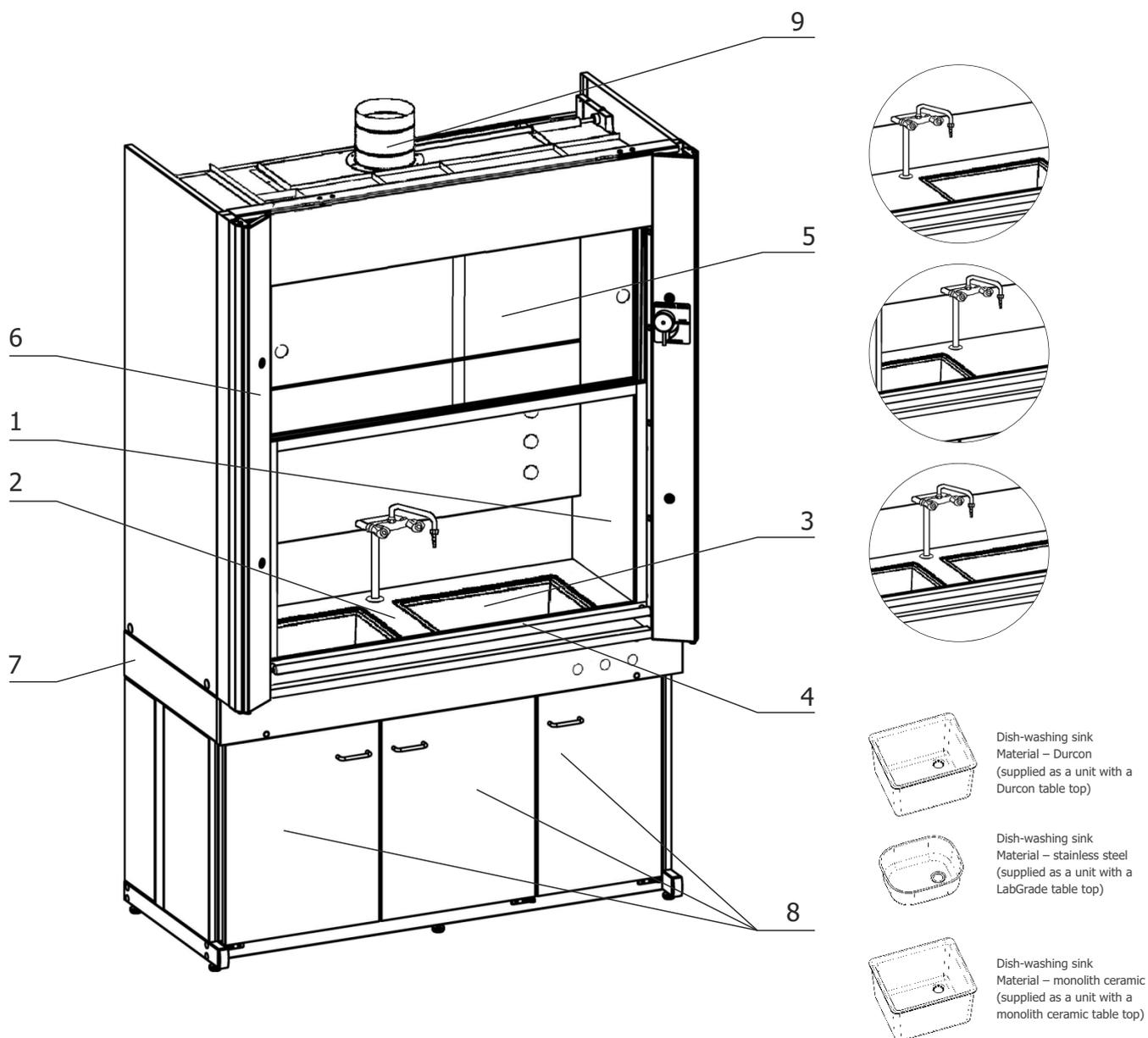


LabGrade

Features

- Work with organic substances and diluted acids
- Working chamber made of powder-painted steel
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses

Product assembly and composition



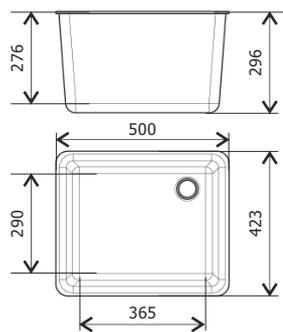
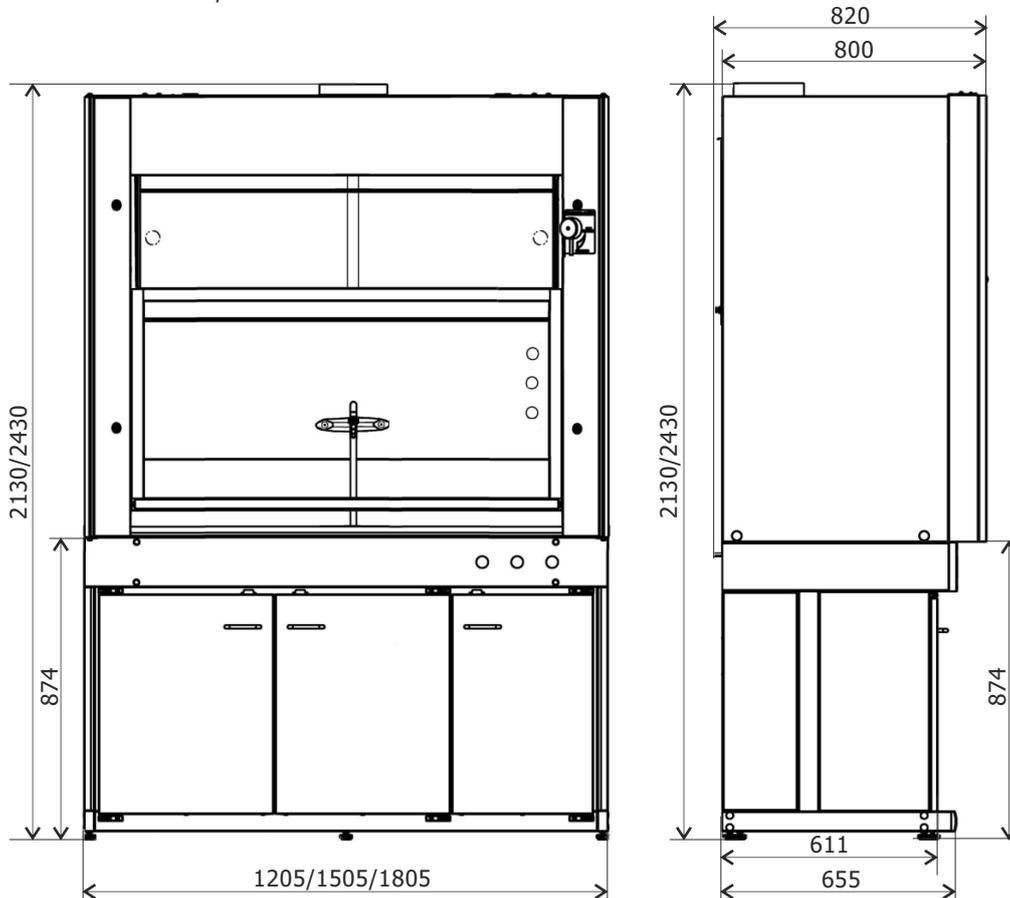
Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Working chamber	1	1	1
2 Table top	1	1	1
3 Sliding frame with hardened glass	1	1	2
4 With dish-washing sink	1	1	1
5 Fixed frame with sliding hardened glasses	1	1	1
6 Portal	1	1	1
7 Hood base	1	1	1
8 Technological section	1	1	1
9 Branch pipe for ventilation connection	1	1	2
10 Slide valve	1	1	1
11 Flushing valve	1	1	1
12 Set of changeable cabinet hinges	1	1	1
13 Set of keys for portal cover locks	1	1	1
14 Reagent trays	4	4	4

Attention! There are no built-in storage cabinets, only a technological section.

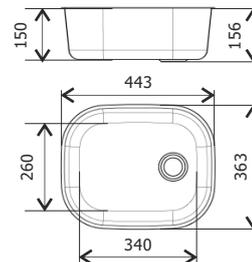
Technical characteristics

Exhaust hoods Metal / With dish-washing sinks

1205/1505/1805 x 820 x 2130/2430



Dish-washing sink
Material – Durcon
(supplied as a unit with a
Durcon table top)



Dish-washing sink
Material – stainless steel
(supplied as a unit with a
LabGrade table top)

Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	820
Height	2130/2430
Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

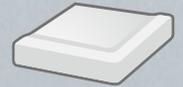
Dimensions

Exhaust hoods Metal / With dish-washing sinks									
	Name	Length	Width	Height	Working chamber	Type of sink	Working surface	Sink material	Cat. No.
		1205 mm	820 mm	2130 mm	Powder-coated steel	1 sink	Durcon	Durcon	413050
							LabGrade	Stainless steel	413090
							Monolith ceramic	Monolith ceramic	413010
		1205 mm	820 mm	2430 mm	Powder-coated steel	1 sink	Durcon	Durcon	423050
							LabGrade	Stainless steel	423090
							Monolith ceramic	Monolith ceramic	423010
		1505 mm	820 mm	2130 mm	Powder-coated steel	1 sink	Durcon	Durcon	443050
							LabGrade	Stainless steel	443090
							Monolith ceramic	Monolith ceramic	443010
	Exhaust hoods Metal / With dish-washing sinks	1505 mm	820 mm	2130 mm	Powder-coated steel	2 sinks	Durcon	Durcon	444050
							LabGrade	Stainless steel	444090
							Monolith ceramic	Monolith ceramic	444010
		1505 mm	820 mm	2430 mm	Powder-coated steel	1 sink	Durcon	Durcon	453050
							LabGrade	Stainless steel	453090
							Monolith ceramic	Monolith ceramic	453010
		1505 mm	820 mm	2430 mm	Powder-coated steel	2 sinks	Durcon	Durcon	454050
							LabGrade	Stainless steel	454090
							Monolith ceramic	Monolith ceramic	454010
		1805 mm	820 mm	2430 mm	Powder-coated steel	1 sink	Durcon	Durcon	483050
							LabGrade	Stainless steel	483090
							Monolith ceramic	Monolith ceramic	483010
		1805 mm	820 mm	2430 mm	Powder-coated steel	2 sinks	Durcon	Durcon	484050
							LabGrade	Stainless steel	484090
							Monolith ceramic	Monolith ceramic	484010

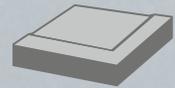
Exhaust hoods



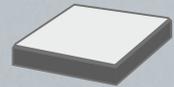
ACID
OIL



Monolith ceramic



Durcon

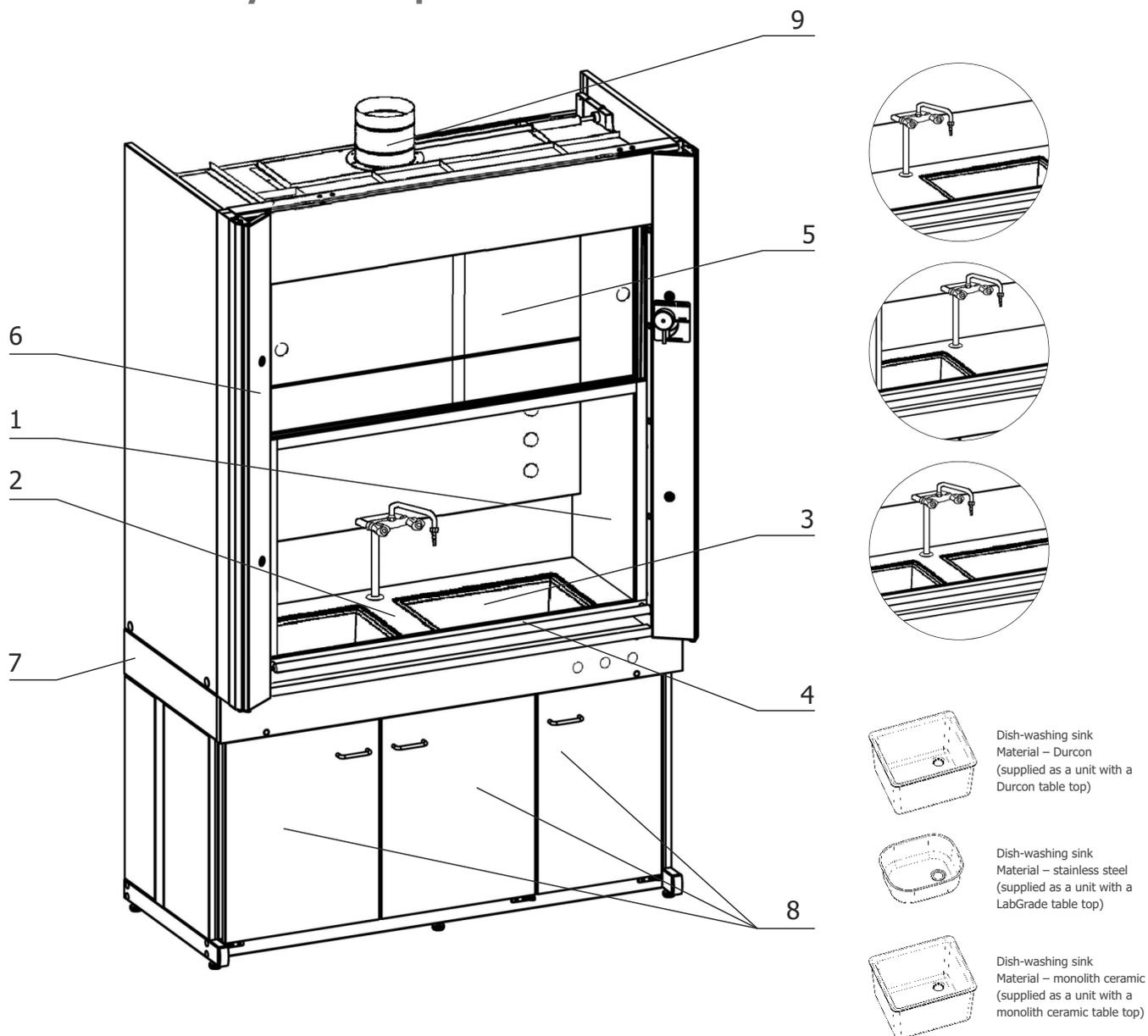


LabGrade

Features

- Work with organic substances and diluted acids
- Working chamber made of stainless steel of 316L grade
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses

Product assembly and composition



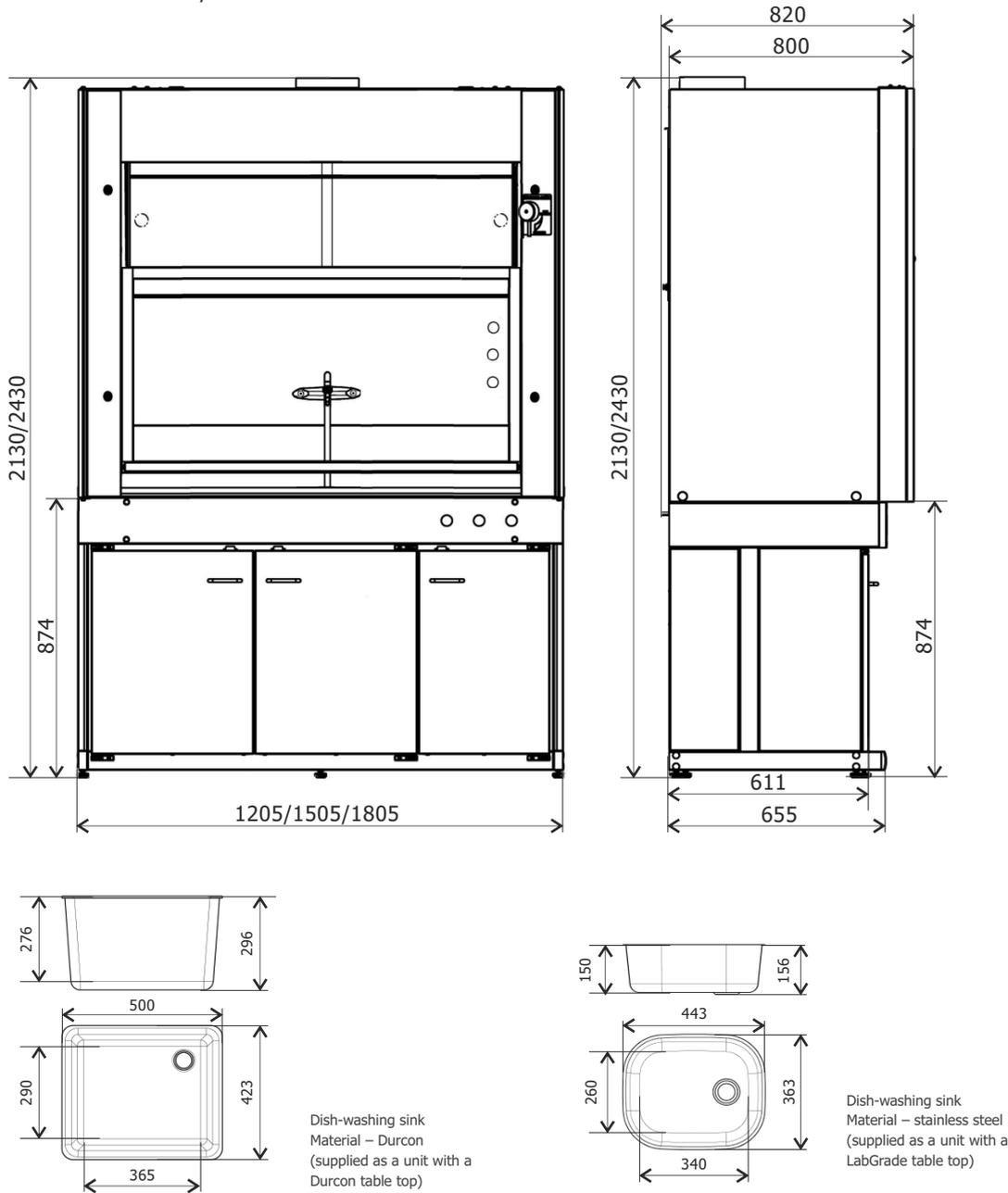
Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Working chamber	1	1	1
2 Table top	1	1	1
3 Sliding frame with hardened glass	1	1	2
4 With dish-washing sink	1	1	1
5 Fixed frame with sliding hardened glasses	1	1	1
6 Portal	1	1	1
7 Hood base	1	1	1
8 Technological section	1	1	1
9 Branch pipe for ventilation connection	1	1	2
10 Slide valve	1	1	1
11 Flushing valve	1	1	1
12 Set of changeable cabinet hinges	1	1	1
13 Set of keys for portal cover locks	1	1	1
14 Reagent trays	4	4	4

Attention! There are no built-in storage cabinets, only a technological section.

Technical characteristics

Exhaust hoods Stainless steel / With dish-washing sinks

1205/1505/1805 x 820 x 2130/2430



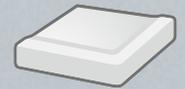
Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	820
Height	2130/2430
Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

Dimensions

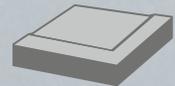
Exhaust hoods Stainless steel / With dish-washing sinks													
	Name	Length	Width	Height	Working chamber	Type of sink	Working surface	Sink material	Cat. No.				
		1205 mm	820 mm	2130 mm	Stainless steel	1 sink	Durcon	Durcon	413250				
							LabGrade	Stainless steel	413290				
							Monolith ceramic	Monolith ceramic	413210				
				820 mm	2430 mm	Stainless steel	1 sink	Durcon	Durcon	423250			
								LabGrade	Stainless steel	423290			
								Monolith ceramic	Monolith ceramic	423210			
		1505 mm			820 mm	2130 mm	Stainless steel	1 sink	Durcon	Durcon	443250		
									LabGrade	Stainless steel	443290		
									Monolith ceramic	Monolith ceramic	443210		
	Exhaust hoods Stainless steel / With dish-washing sinks		1505 mm			820 mm	2130 mm	Stainless steel	2 sinks	Durcon	Durcon	444250	
										LabGrade	Stainless steel	444290	
										Monolith ceramic	Monolith ceramic	444210	
				1805 mm			820 mm	2430 mm	Stainless steel	1 sink	Durcon	Durcon	453250
											LabGrade	Stainless steel	453290
											Monolith ceramic	Monolith ceramic	453210
		1805 mm			820 mm			2430 mm	Stainless steel	2 sinks	Durcon	Durcon	454250
											LabGrade	Stainless steel	454290
											Monolith ceramic	Monolith ceramic	454210
			1805 mm			820 mm		2130 mm	Stainless steel	1 sink	Durcon	Durcon	483250
											LabGrade	Stainless steel	483290
											Monolith ceramic	Monolith ceramic	483210
				1805 mm			820 mm	2430 mm	Stainless steel	2 sinks	Durcon	Durcon	484250
											LabGrade	Stainless steel	484290
											Monolith ceramic	Monolith ceramic	484210

With an explosion-proof luminaire / With dish-washing sinks

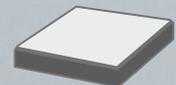
Exhaust
hoods



Monolith ceramic



Durcon



LabGrade

Explosion-proof luminaire
2 x 18 W



Explosion-proof
double-pole switch

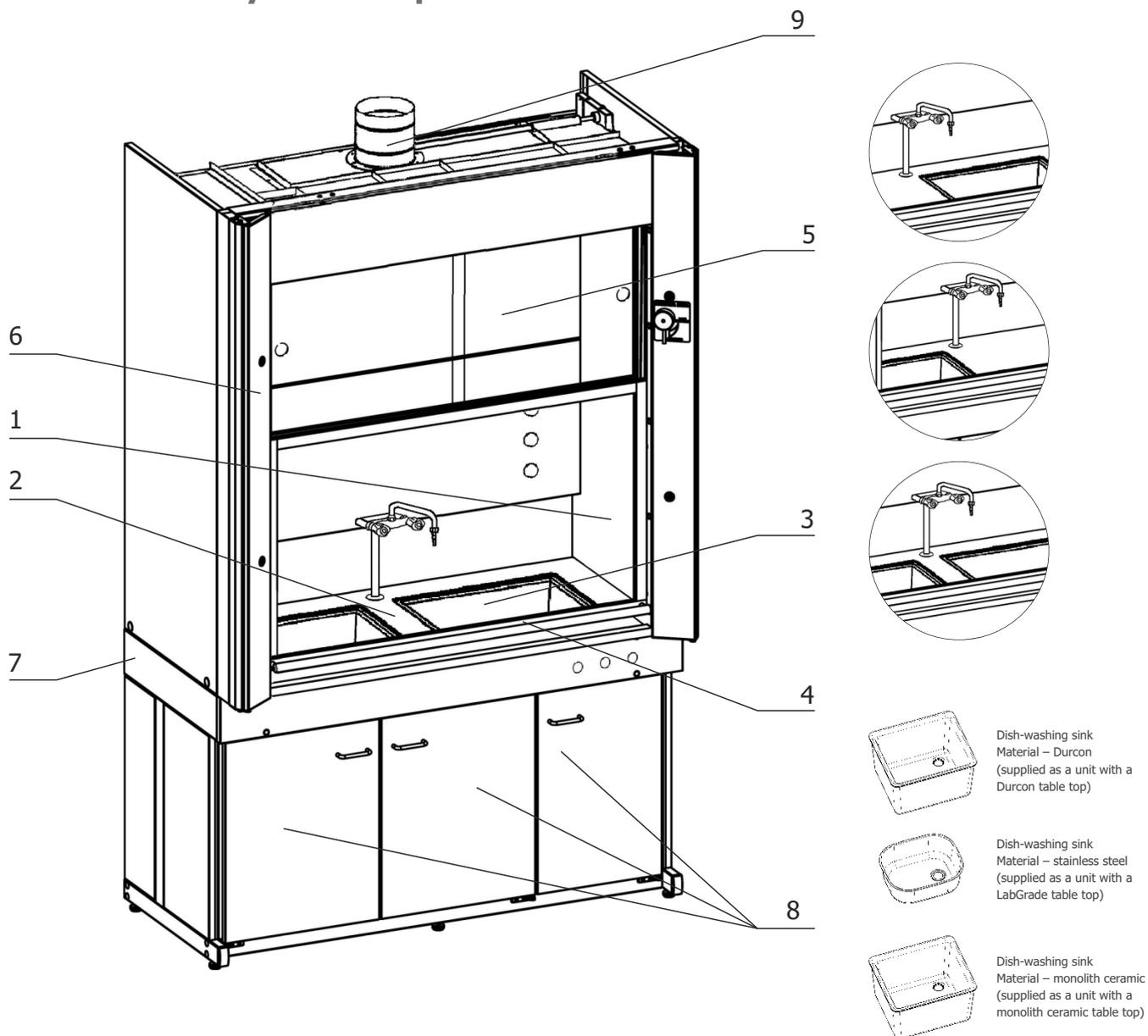
Features

- Designed for work with organic substances and diluted acids
- Working chamber made of:
 - stainless steel of 316L grade
 - powder-painted steel
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Explosion-proof luminaire inside the working chamber
- Possibility to mound an explosion-proof switch outside the room area

With an explosion-proof luminaire / With dish-washing sinks

e-mail: info@lenlab.ru
+7 (812) 703-01-65

Product assembly and composition



Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Working chamber	1	1	1
2 Table top	1	1	1
3 Dish-washing sink	1	1 2	1 2
4 Sliding frame with hardened glass	1	1	1
5 Fixed frame with sliding hardened glasses	1	1	1
6 Portal	1	1	1
7 Hood base	1	1	1
8 Technological section	1	1	1
9 Branch pipe for ventilation connection	1	1	2
10 Slide valve	1	1	1
11 Flushing valve	1	1	1
12 Set of changeable cabinet hinges	1	1	1
13 Set of keys for portal cover locks	1	1	1
14 Reagent trays	4	4	4

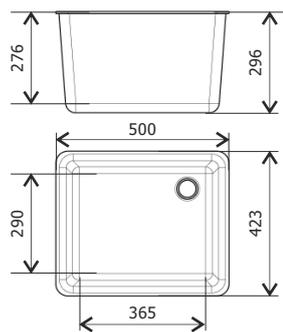
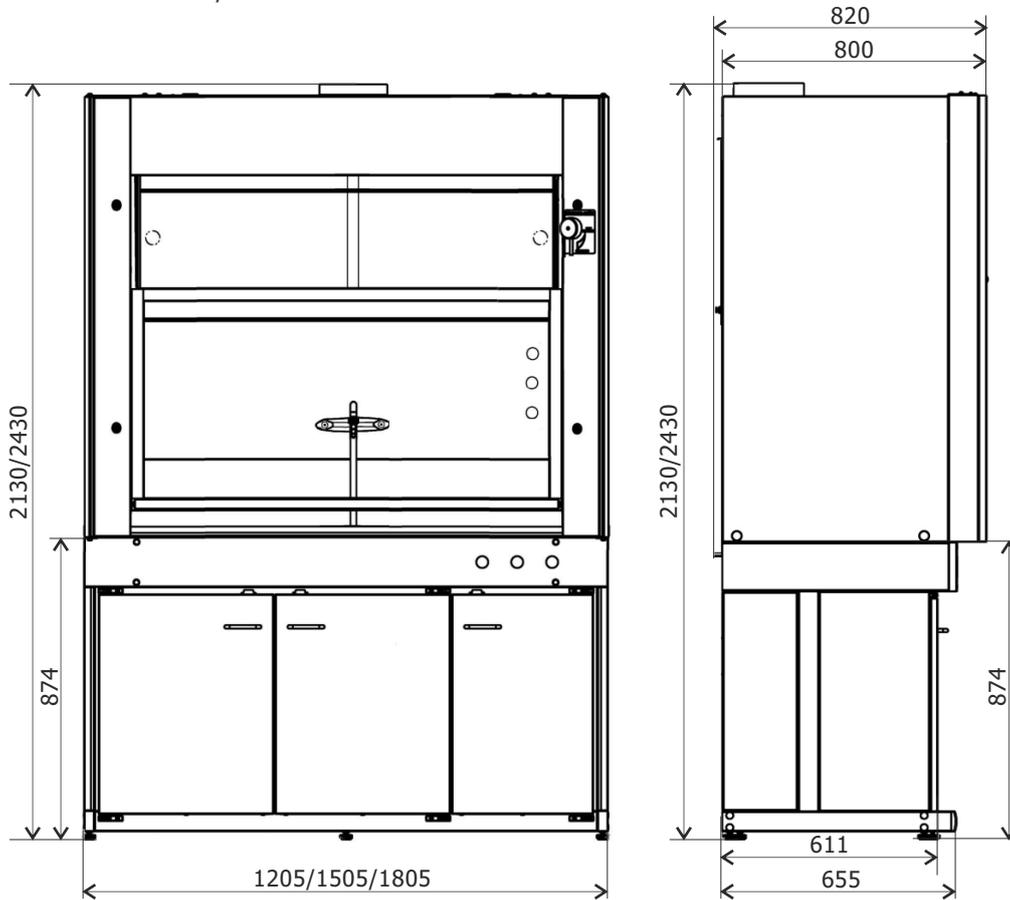
Attention! There are no built-in storage cabinets, only a technological section.

With an explosion-proof luminaire / With dish-washing sinks

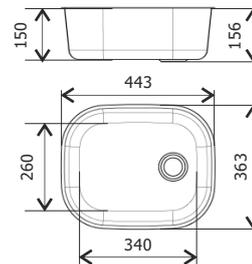
Technical characteristics

Exhaust hoods with an explosion-proof luminaire / with dish-washing sinks

1205/1505/1805 x 820 x 2130/2430



Dish-washing sink
Material – Durcon
(supplied as a unit with a
Durcon table top)



Dish-washing sink
Material – stainless steel
(supplied as a unit with a
LabGrade table top)

Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	820
Height	2130/2430
Working chamber dimensions, mm:	
Length	1095/1395/1695
Width	635
Height	1055/1355
Weight, kg, no more	290

With an explosion-proof luminaire / With dish-washing sinks

e-mail: info@lenlab.ru
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Dimensions

Exhaust hoods with an explosion-proof luminaire / with dish-washing sinks									
	Name	Length	Width	Height	Working chamber	Type of sink	Working surface	Sink material	Cat. No.
		1205 mm	820 mm	2130 mm	Powder-coated steel	1 sink	Durcon	Durcon	413051
							LabGrade	Stainless steel	413091
							Monolith ceramic	Monolith ceramic	413011
							Durcon	Durcon	413251
							LabGrade	Stainless steel	413291
				Monolith ceramic	Monolith ceramic		413211		
				2430 mm	Powder-coated steel		Durcon	Durcon	423051
							LabGrade	Stainless steel	423091
							Monolith ceramic	Monolith ceramic	423011
							Durcon	Durcon	423251
LabGrade	Stainless steel	423291							
Monolith ceramic	Monolith ceramic	423211							
	Exhaust hoods with an explosion-proof luminaire / with dish-washing sinks	1505 mm	820 mm	2130 mm	Powder-coated steel	2 sinks	Durcon	Durcon	443051
							LabGrade	Stainless steel	443091
							Monolith ceramic	Monolith ceramic	443011
							Durcon	Durcon	443251
							LabGrade	Stainless steel	443291
				Monolith ceramic	Monolith ceramic		443211		
				2430 mm	Powder-coated steel		Durcon	Durcon	444051
							LabGrade	Stainless steel	444091
							Monolith ceramic	Monolith ceramic	444011
							Durcon	Durcon	444251
LabGrade	Stainless steel	444291							
Monolith ceramic	Monolith ceramic	444211							
		1505 mm	820 mm	2430 mm	Powder-coated steel	1 sink	Durcon	Durcon	453051
							LabGrade	Stainless steel	453091
							Monolith ceramic	Monolith ceramic	453011
							Durcon	Durcon	453251
							LabGrade	Stainless steel	453291
				Monolith ceramic	Monolith ceramic		453211		
				2130 mm	Powder-coated steel		Durcon	Durcon	454051
							LabGrade	Stainless steel	454091
							Monolith ceramic	Monolith ceramic	454011
							Durcon	Durcon	454251
LabGrade	Stainless steel	454291							
Monolith ceramic	Monolith ceramic	454211							
		1805 mm	820 mm	2430 mm	Powder-coated steel	1 sink	Durcon	Durcon	483051
							LabGrade	Stainless steel	483091
							Monolith ceramic	Monolith ceramic	483011
							Durcon	Durcon	483251
							LabGrade	Stainless steel	483291
				Monolith ceramic	Monolith ceramic		483211		
				2130 mm	Powder-coated steel		Durcon	Durcon	484051
							LabGrade	Stainless steel	484091
							Monolith ceramic	Monolith ceramic	484011
							Durcon	Durcon	484251
LabGrade	Stainless steel	484291							
Monolith ceramic	Monolith ceramic	484211							
		1805 mm	820 mm	2430 mm	Powder-coated steel	2 sinks	Durcon	Durcon	484051
							LabGrade	Stainless steel	484091
							Monolith ceramic	Monolith ceramic	484011
							Durcon	Durcon	484251
							LabGrade	Stainless steel	484291
				Monolith ceramic	Monolith ceramic		484211		
				2130 mm	Stainless steel		Durcon	Durcon	484051
							LabGrade	Stainless steel	484091
							Monolith ceramic	Monolith ceramic	484011
							Durcon	Durcon	484251
LabGrade	Stainless steel	484291							
Monolith ceramic	Monolith ceramic	484211							





With an oil product sink

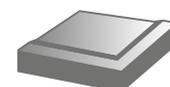
Exhaust hoods /

With an oil product sink 1410 x 816 x 2144

With an oil product sink with an explosion-proof luminaire 1410 x 816 x 2244

Technical characteristics

Exhaust hoods



Stainless steel

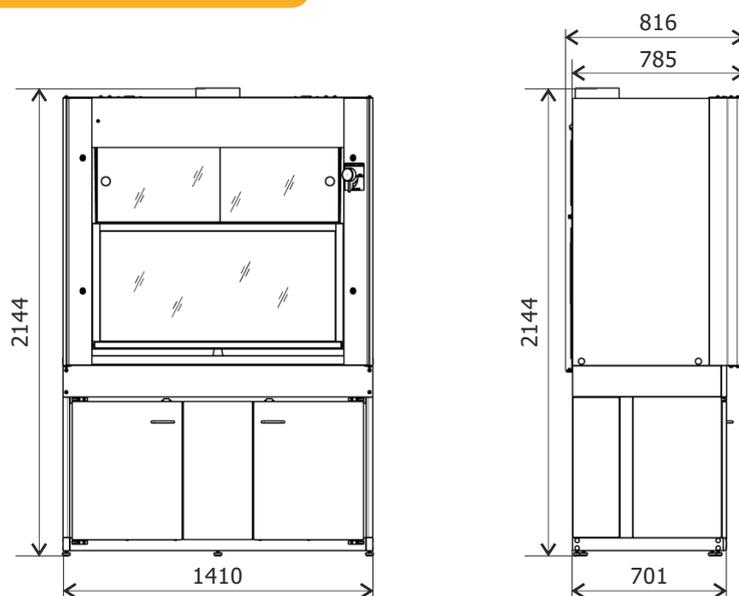


Stainless steel table top with a deep sink

Explosion-proof luminaire
2 x 18 W



Explosion-proof double-pole switch

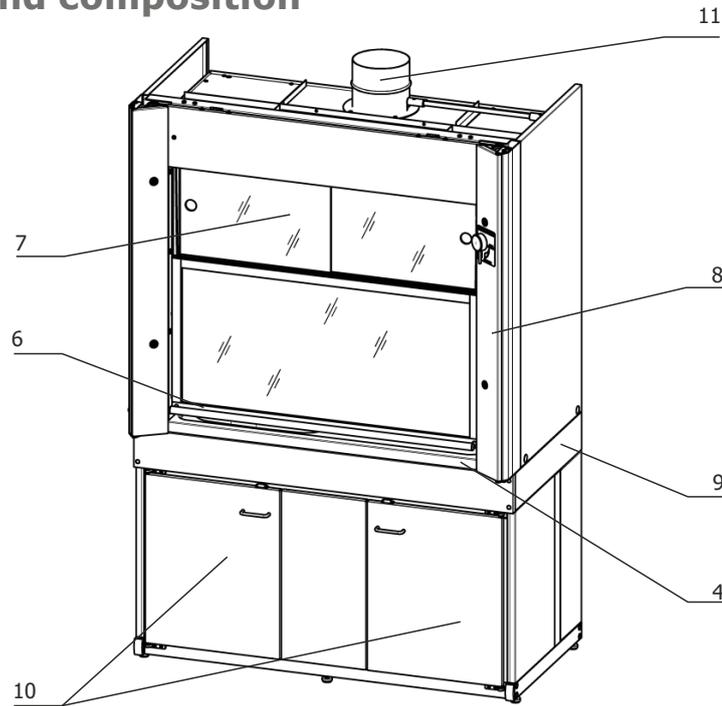


Characteristic	Value	
	With an oil product sink	With an oil product sink with an explosion-proof luminaire
Air duct diameter, mm	200	200
Overall dimensions, mm:		
Length	1410	1410
Width	816	816
Height	2144	2144
Working chamber dimensions, mm:		
Length	1204	1204
Width	665	665
Height	1055	1055
Weight, kg, no more	290	290

Features

- Working chamber made of stainless steel of 316L grade, easy to wash, fire-proof
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Stainless steel settling tank with a removable cover
- Stainless steel table top with a sink (sink depth 300 mm)

Product assembly and composition



Name	With an oil product sink	With an oil product sink with an explosion-proof luminaire
1 Explosion-proof double-pole switch	-	1
2 Explosion-proof luminaire 2 x 18 W	-	1
3 Working chamber	1	1
4 Table top	1	1
5 Oil product sink	1	1
6 Sliding frame with hardened glass	1	1
7 Fixed frame with sliding hardened glasses	1	1
8 Portal	1	1
9 Hood base	1	1
10 Technological section	1	1
11 Branch pipe for ventilation connection	1	1
12 Slide valve	1	1
13 Set of changeable cabinet hinges	1	1
14 Set of keys for portal cover locks	1	1
15 Special tap	1	1

Attention! There are no built-in storage cabinets, only a technological section.

Dimensions

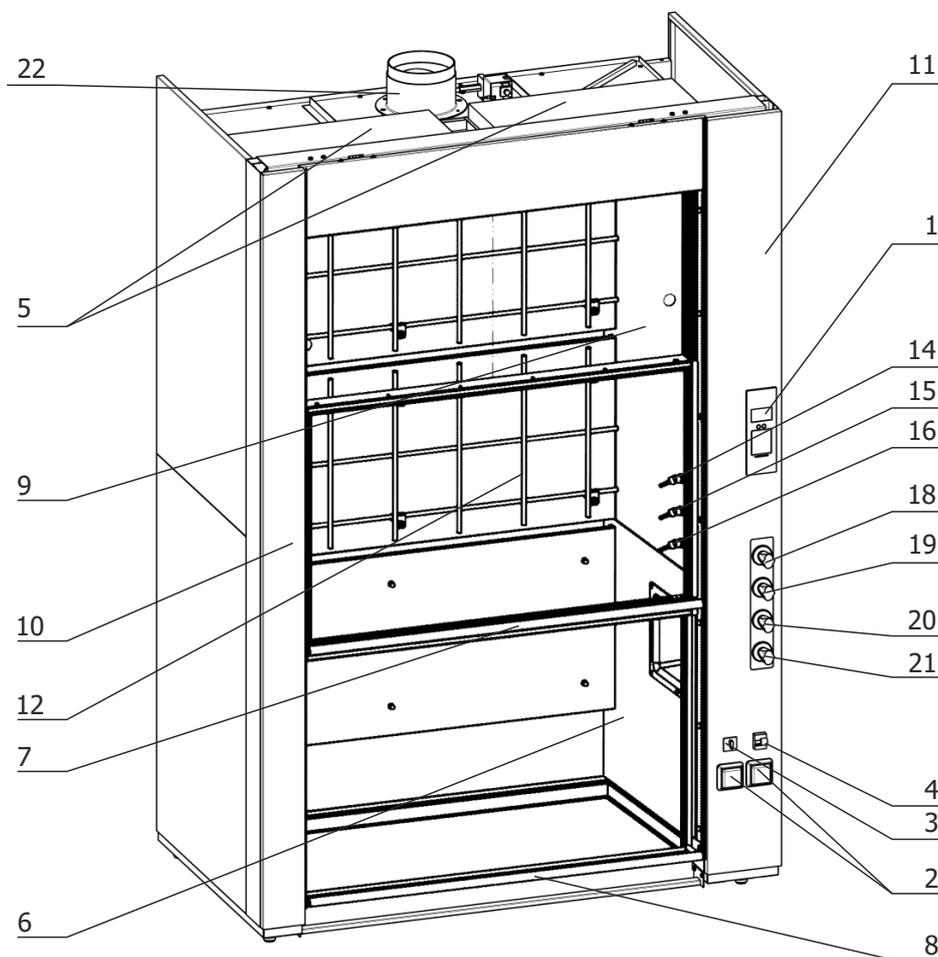
Special-purpose exhaust hoods with an oil product sink							
	Name	Length	Width	Height	Working surface	Sink material	Cat. No.
	With an oil product sink	1410 mm	816 mm	2144 mm	Stainless steel	Stainless steel	413220
	With an oil product sink with an explosion-proof luminaire			2144 mm			413221



Features

- Work with organic substances and diluted acids
- Metal case consists of two parts mounted on each other
- Working chamber made of powder-painted steel
- Two independent sliding screens made of hardened glass in powder-painted aluminum frames
- Upper fixed screen with sliding hardened glasses
- Two rack nets on the rear wall of the working chamber

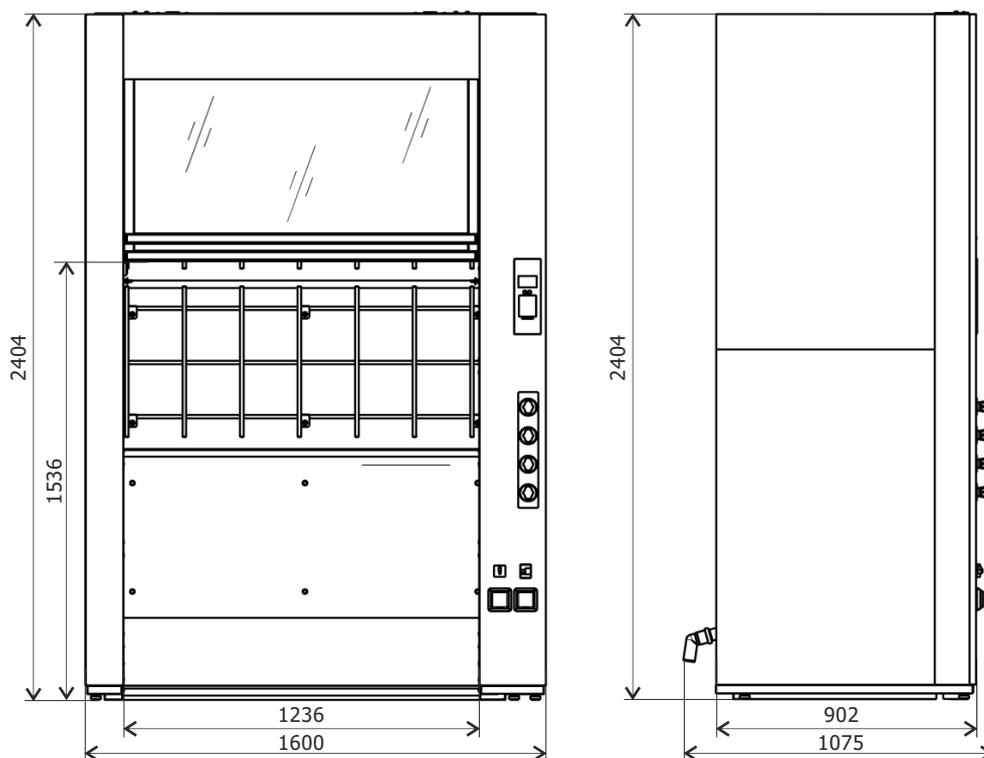
Product assembly and composition



Name	Количество шт.
1 Air flow monitor MVP 002	1
2 Socket 220 V	2
3 Circuit breaker	1
4 Differential automaton 16 A	1
5 Luminaire 2 x 18 W	2
6 Working chamber	1
7 Middle sliding frame with hardened glass	1
8 Lower sliding frame with hardened glass	1
9 Fixed frame with sliding hardened glasses	1
10 Left portal column	1
11 Right portal column	1
12 Metal lattice	1
13 Polypropylene sink	1
14 Vacuum nozzle	1
15 Air nozzle	1
16 Gas nozzle	1
17 Water nozzle	1
18 Remote vacuum tap	1
19 Remote air tap	1
20 Remote gas tap	1
21 Remote water tap	1
22 Branch pipe for ventilation connection	1
23 Slide valve	1

Technical characteristics

Шкаф вытяжной для установок большой высоты 1600x1075x2404



Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1600
Width	1075
Height	2404
Working chamber dimensions, mm:	
Length	1235
Width	625
Height	1535
Weight, kg, no more	280

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

In case of need to place devices and equipment in the working zone, for example a set for performance of work according to GOST 11851-85 "Determination of paraffins in oil", the hood can be fitted out with movable tables of EuroMini series.

Movable table						
	Name	Length	Width	Height	Working surface	Cat. No.
	Movable table	800 mm	600 mm	900 mm	Grey laminate /Labgrade	245880
					Durcon/Labgrade	245840
					Labgrade/Labgrade	245890
	Movable table	800 mm	600 mm	450 mm	Grey laminate /Labgrad	245980
					Durcon/Labgrade	245940
					Labgrade/Labgrade	245990



The exhaust hood constitutes a built-up structure consisting of a case and a portal.

The metal case consists of two parts mounted on each other. The working chamber in the case is made of steel coated with powder paint. On the rear wall of the working chamber there is a rack net to hold chemical dishes. An ABS-plastic niche is fastened in the right wall of the working chamber, in which a polypropylene sink with the diameter of 90 mm is located.

Two sliding protective screens made of hardened glass are located in the portal to provide access to the working zone of the hood up to the height of 1550 mm. The upper screen has sliding glasses to facilitate access to chemical installations as well as clearing inside the hood.

A lifting gear is located in the left and right parts of the portal. All parts of the gear (weight, cable, rollers) are accessible for service and repair directly from the front side of the hood. A steel cable in polyethylene housing and polypropylene rollers provide reliability and long service life of the gear.

Two fluorescent luminaires provide lighting of the working zone. In a standard assembly, four taps with remote faucets are installed: for water, gas, compressed air, and vacuum. Service lines and mains inside the hood are made of copper pipe with 1/2 inch standard threaded fittings to connect the hood to laboratory service lines.

Dimensions

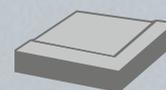
Special-purpose exhaust hoods for high-altitude installations						
	Name	Length	Width	Height	Working chamber	Cat. No.
	Шкаф вытяжной для установок большой высоты	1600мм	1075мм	2404мм	Сталь с порошковым покрытием	460000

Exhaust
hoods

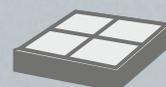


ACID

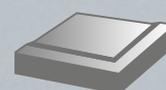
OIL



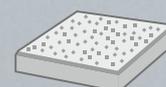
Durcon



Ceramic



Stainless steel

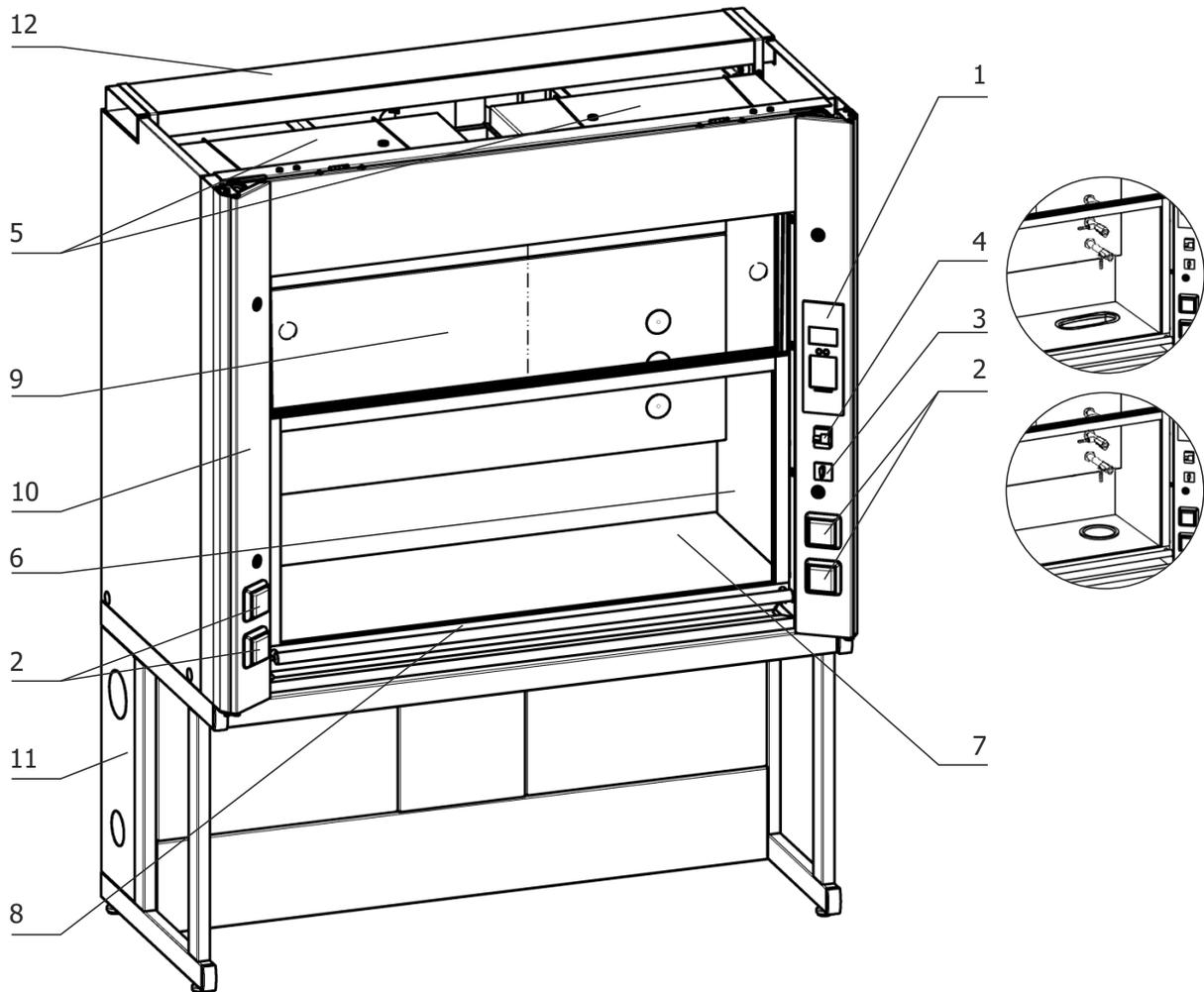


Ceramic granite

Features

- Ideally suitable for rooms with a ceiling height of 2 m
- Ideally suitable for work in the sitting position, the working surface height is 750 mm
- There is a possibility to mount suspended cabinets (left or right) with an exhauster
- Exhaust arrangement to side faces
- Work with organic substances and diluted acids
- Working chamber made of powder-painted steel
- Sliding screens made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses

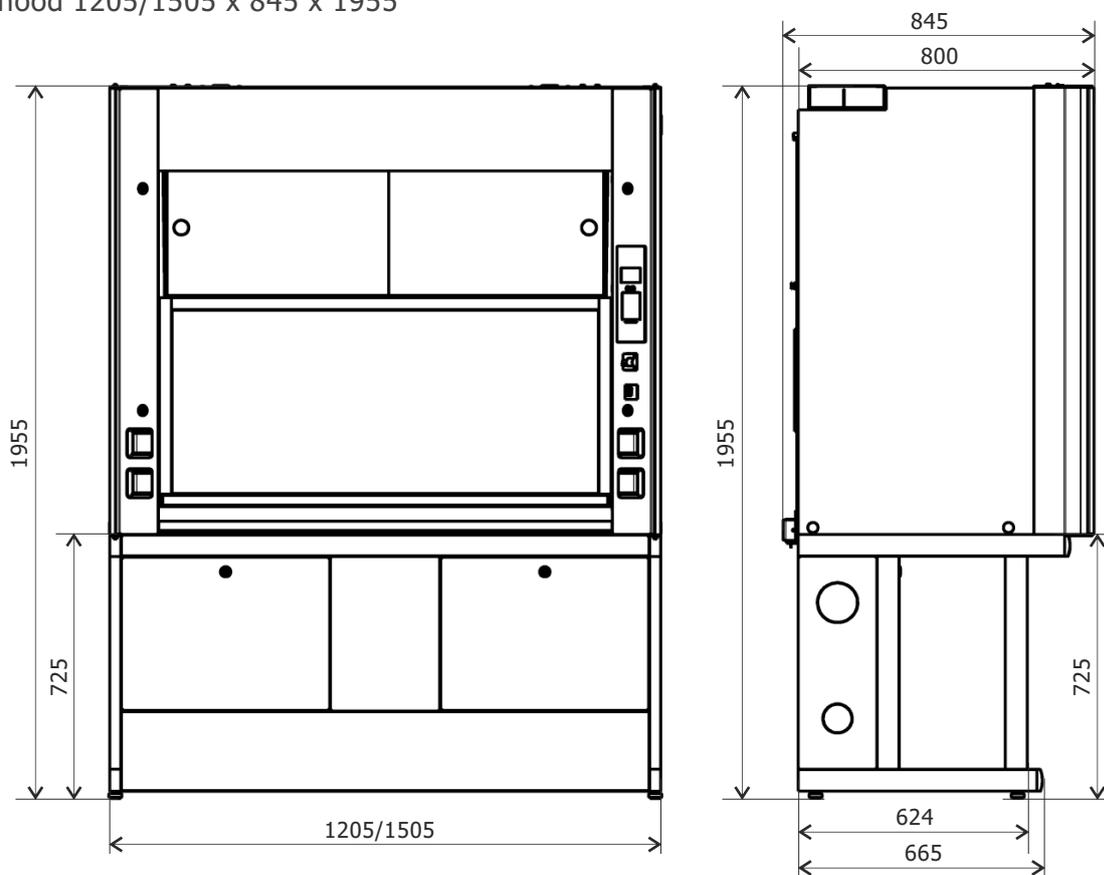
Product assembly and composition



Name	Number of pieces	
	Length 1205 mm	Length 1505 mm
1 Air flow monitor MVP 002	1	1
2 Socket 220 V	4	4
3 Circuit breaker	1	1
4 Differential automaton 16 A	1	1
5 Luminaire 2 x 18 W	1	2
6 Working chamber	1	1
7 Table top	1	1
8 Sliding frame with hardened glass	1	1
9 Fixed frame with sliding hardened glasses	1	1
10 Portal	1	1
11 Hood base	1	1
12 Air duct with rectangular cross-section	1	1
13 Set of keys for portal cover locks	1	1
14 Reagent trays	4	4

Technical characteristics

Exhaust hood 1205/1505 x 845 x 1955



Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct with rectangular cross-section 203 x 60 mm	
Overall dimensions, mm:	
Length	1205/1505
Width	845
Height	1955
Working chamber dimensions, mm:	
Length	1095/1395
Width	635
Height	1055
Weight, kg, no more	200/230

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	1955 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000

Shelf

e-mail: info@lenlab.ru
+7 (812) 703-01-65

Dimensions

Special-purpose shelf exhaust hoods							
	Name	Length	Width	Height	Working chamber	Working surface	Cat. No.
	Shelf exhaust hoods	1205 mm	845 mm	1955 mm	Powder-coated steel	Stainless steel	430020
						Ceramic	430030
						Durcon	430050
						Ceramic granite	430060
		Stainless steel			Stainless steel	430220	
					Ceramic	430230	
					Durcon	430250	
					Ceramic granite	430260	
	Shelf exhaust hoods	1505 mm	845 mm	1955 mm	Powder-coated steel	Stainless steel	470020
						Ceramic	470030
						Durcon	470050
						Ceramic granite	470060
		Stainless steel			Stainless steel	470220	
					Ceramic	470230	
					Durcon	470250	
					Ceramic granite	470260	

Exhaust
hoods



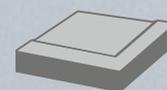
ACID



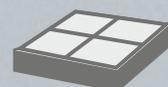
OIL



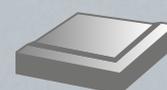
B35



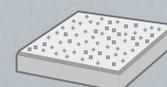
Durcon



Ceramic

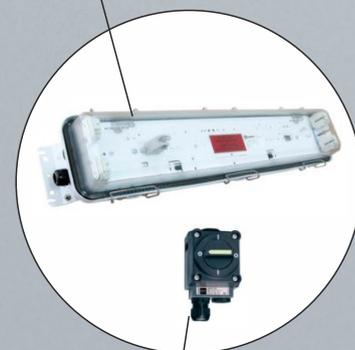


Stainless steel



Ceramic granite

Explosion-proof luminaire
2 x 18 W

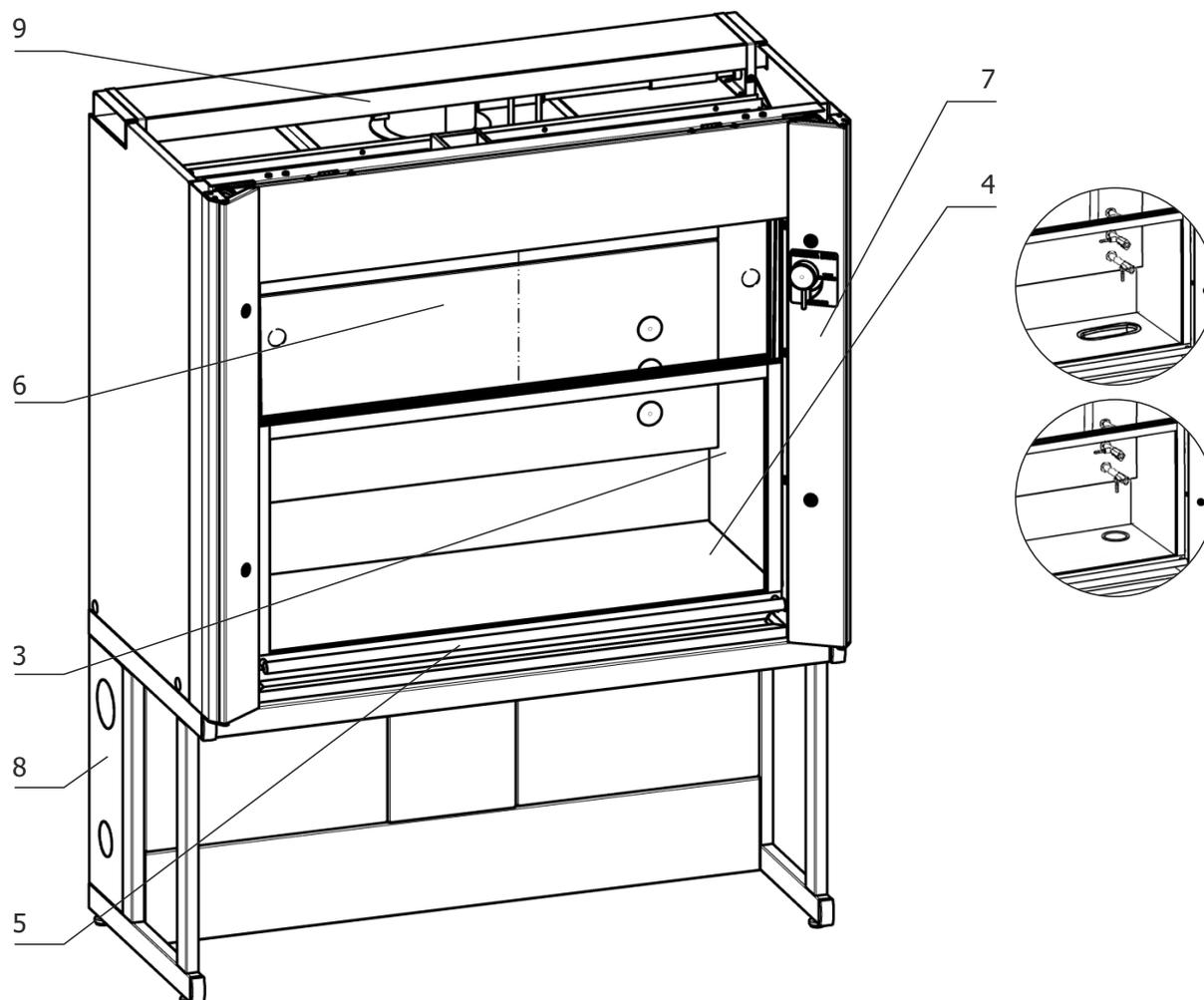


Explosion-proof
double-pole switch

Features

- Ideally suitable for rooms with a ceiling height of 2 m
- Ideally suitable for work in the sitting position, the working surface height is 750 mm
- There is a possibility to mount suspended cabinets (left or right) with an exhauster
- Exhaust arrangement to side faces
- Work with organic substances and diluted acids
- Working chamber made of powder-painted steel
- Sliding screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses

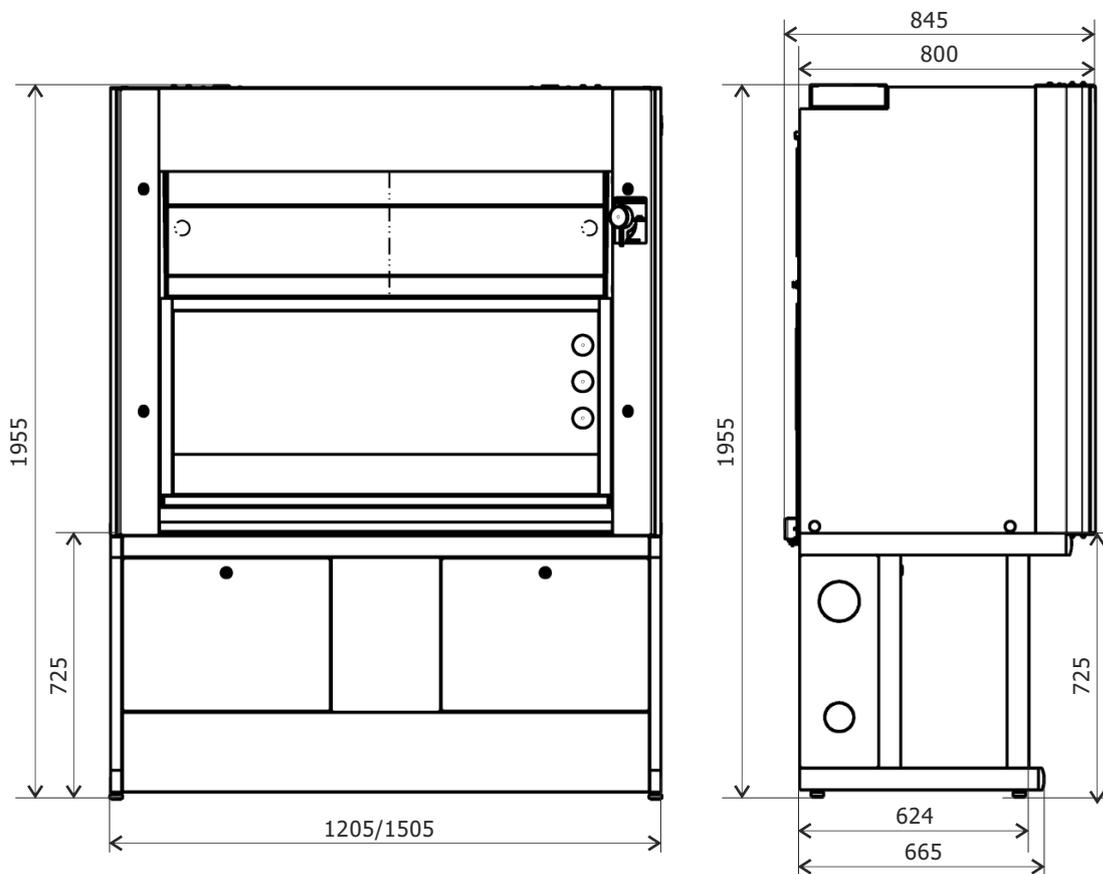
Product assembly and composition



Name	Number of pieces	
	Length 1205 mm	Length 1505 mm
1 Explosion-proof luminaire 2 x 18 W	1	1
2 Explosion-proof double-pole switch	1	1
3 Working chamber	1	1
4 Table top	1	1
5 Sliding frame with hardened glass	1	1
6 Fixed frame with sliding hardened glasses	1	1
7 Portal	1	1
8 Hood base	1	1
9 Air duct with rectangular cross-section	1	1
10 Set of keys for portal cover locks	1	1
11 Reagent trays	4	4

Technical characteristics

Exhaust hood 1205/1505 x 845 x 1955



Characteristic	Value
Air duct with rectangular cross-section 203 x 60 mm	
Overall dimensions, mm:	
Length	1205/1505
Width	845
Height	1955
Working chamber dimensions, mm:	
Length	1095/1395
Width	635
Height	1055
Weight, kg, no more	200/230

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	1955 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000

Shelf with an explosion-proof luminaire

e-mail: info@lenlab.ru
+7 (812) 703-01-65

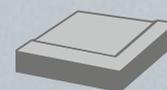
Dimensions

Special-purpose shelf exhaust hoods with an explosion-proof luminaire							
	Name	Length	Width	Height	Working chamber	Working surface	Cat. No.
	Shelf exhaust hoods with an explosion-proof luminaire	1205 mm	845 mm	1955 mm	Powder-coated steel	Stainless steel	430021
						Ceramic	430031
						Durcon	430051
						Ceramic granite	430061
					Stainless steel	Stainless steel	430221
						Ceramic	430231
						Durcon	430251
						Ceramic granite	430261
	Shelf exhaust hoods with an explosion-proof luminaire	1505 mm	845 mm	1955 mm	Powder-coated steel	Stainless steel	470021
						Ceramic	470031
						Durcon	470051
						Ceramic granite	470061
					Stainless steel	Stainless steel	470221
						Ceramic	470231
						Durcon	470251
						Ceramic granite	470261

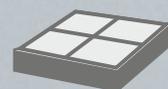
Light



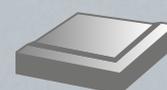
Exhaust hoods



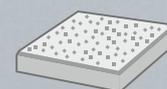
Durcon



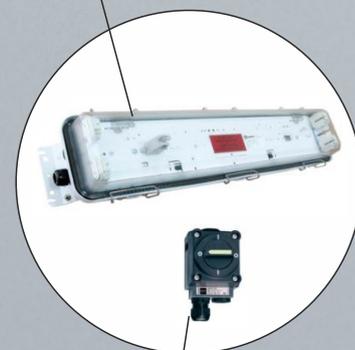
Ceramic



Нержавеющая сталь



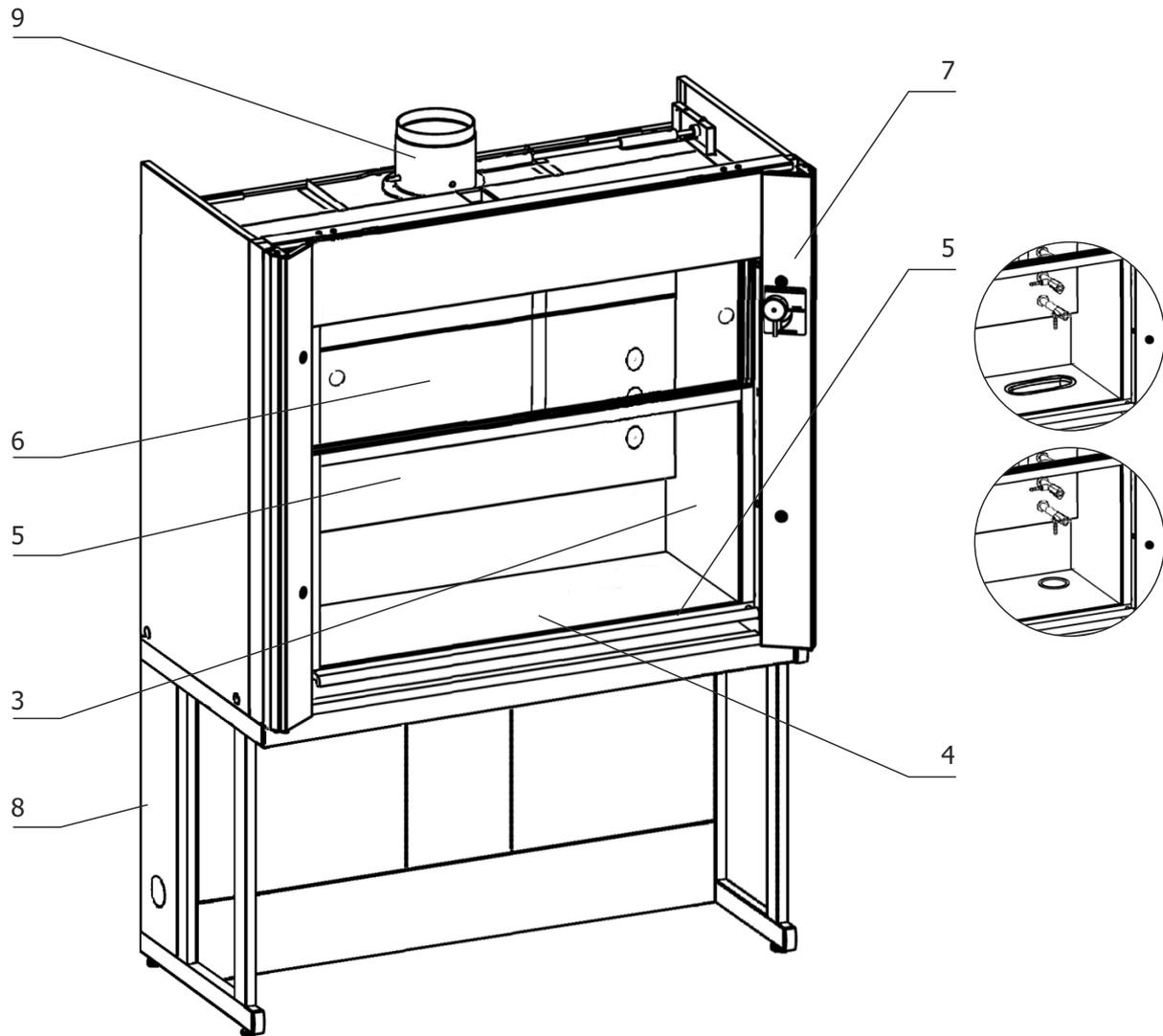
Ceramic granite

Explosion-proof luminaire
2 x 18 WExplosion-proof
double-pole
switch

Features

- Work with organic substances and diluted acids (Metal)
- Work with concentrated acids (PVC)
- Sliding screen made of hardened glass in a powder-painted aluminum frame
- Upper fixed screen with sliding hardened glasses
- Working temperature of the PVC working zone surfaces no more than 65 °C
- Presence of electrics is not provided for
- Possibility to install an explosion-proof luminaire

Product assembly and composition



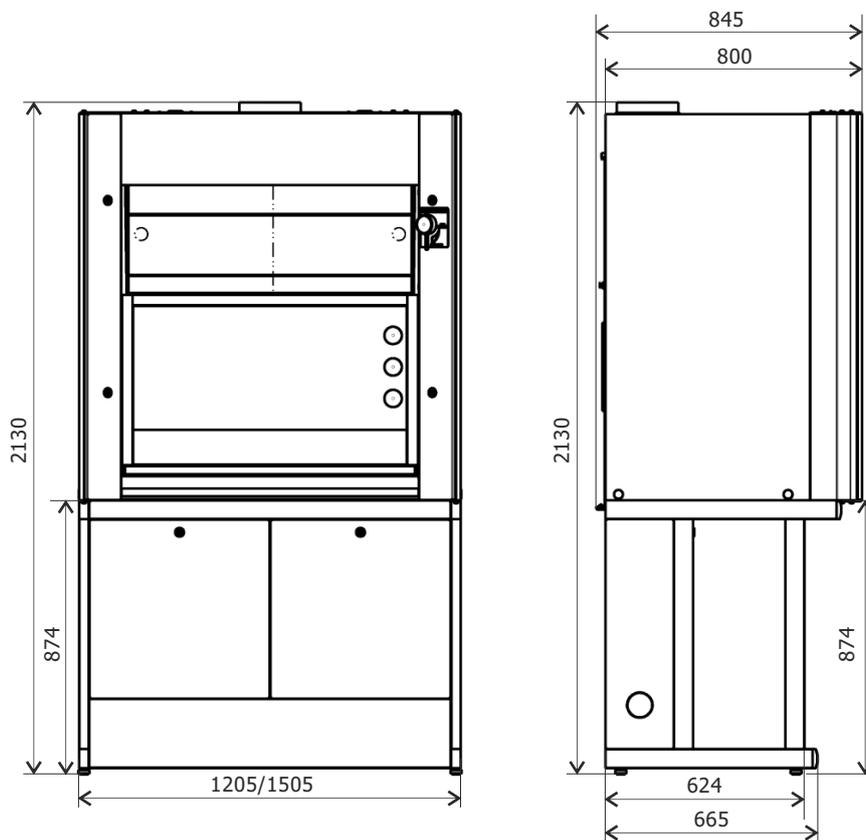
Name	Light exhaust hood		Light exhaust hood with an explosion-proof luminaire	
	Number of pieces		Number of pieces	
	Length 1205 mm	Length 1505 mm	Length 1205 mm	Length 1505 mm
1 Explosion-proof luminaire 2 x 18 W	-	-	1	1
2 Explosion-proof double-pole switch	-	-	1	1
3 Working chamber	1	1	1	1
4 Table top	1	1	1	1
5 Sliding frame with hardened glass	1	1	1	1
6 Fixed frame with sliding hardened glasses	1	1	1	1
7 Portal	1	1	1	1
8 Hood base	1	1	1	1
9 Branch pipe for ventilation connection	1	1	1	1
10 Slide valve	1	1	1	1
11 Set of keys for portal cover locks	1	1	1	1
12 Reagent trays	4	4	4	4

Technical characteristics

Special-purpose exhaust hoods /

Light 1205/1505 x 845 x 2130

Light with an explosion-proof luminaire 1205/1505 x 845 x 2130



Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505
Width	845
Height	2130
Working chamber dimensions, mm:	
Length	1095/1395
Width	635
Height	1055
Weight, kg, no more	200/230

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	2130 mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000

Light

e-mail: info@lenlab.ru
+7 (812) 703-01-65

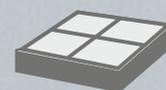
Dimensions

Special-purpose shelf exhaust hoods Light												
	Name	Length	Width	Height	Working chamber	Working surface	Cat. No.					
	Light	1205 mm	845 mm	2130 mm	Powder-coated steel	Stainless steel	410020					
						Ceramic	410030					
						Durcon	410050					
						Ceramic granite	410060					
					PVC	Stainless steel	410820					
						Ceramic	410830					
						Durcon	410850					
						Ceramic granite	410860					
					Stainless steel	Stainless steel	410220					
						Ceramic	410230					
						Durcon	410250					
						Ceramic granite	410260					
	Light	1505 mm	845 mm	2130 mm	Powder-coated steel	Stainless steel	440020					
						Ceramic	440030					
						Durcon	440050					
						Ceramic granite	440060					
					PVC	Stainless steel	440820					
						Ceramic	440830					
						Durcon	440850					
						Ceramic granite	440860					
					Stainless steel	Stainless steel	440220					
						Ceramic	440230					
						Durcon	440250					
						Ceramic granite	440260					
	Light with an explosion-proof luminaire	1205 mm	845 mm	2130 mm	Powder-coated steel	Stainless steel	410021					
						Ceramic	410031					
						Durcon	410051					
						Ceramic granite	410061					
					Stainless steel	Stainless steel	410221					
						Ceramic	410231					
						Durcon	410251					
						Ceramic granite	410261					
						Light with an explosion-proof luminaire	1505 mm	845 mm	2130 mm	Powder-coated steel	Stainless steel	440021
											Ceramic	440031
											Durcon	440051
											Ceramic granite	440061
Stainless steel	Stainless steel	440221										
	Ceramic	440231										
	Durcon	440251										
	Ceramic granite	440261										

Exhaust hoods

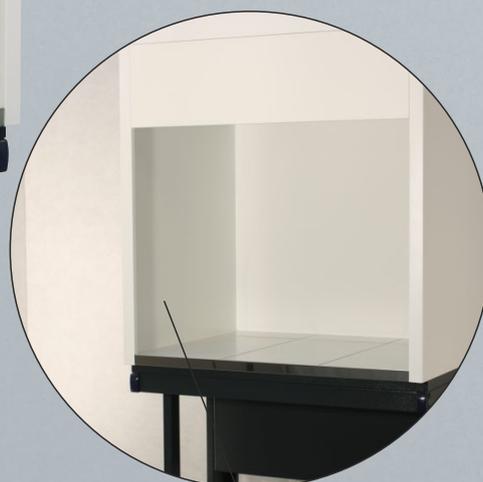


ACID OIL



Ceramic

Working chamber – powder-painted steel; stainless steel heat shields on walls

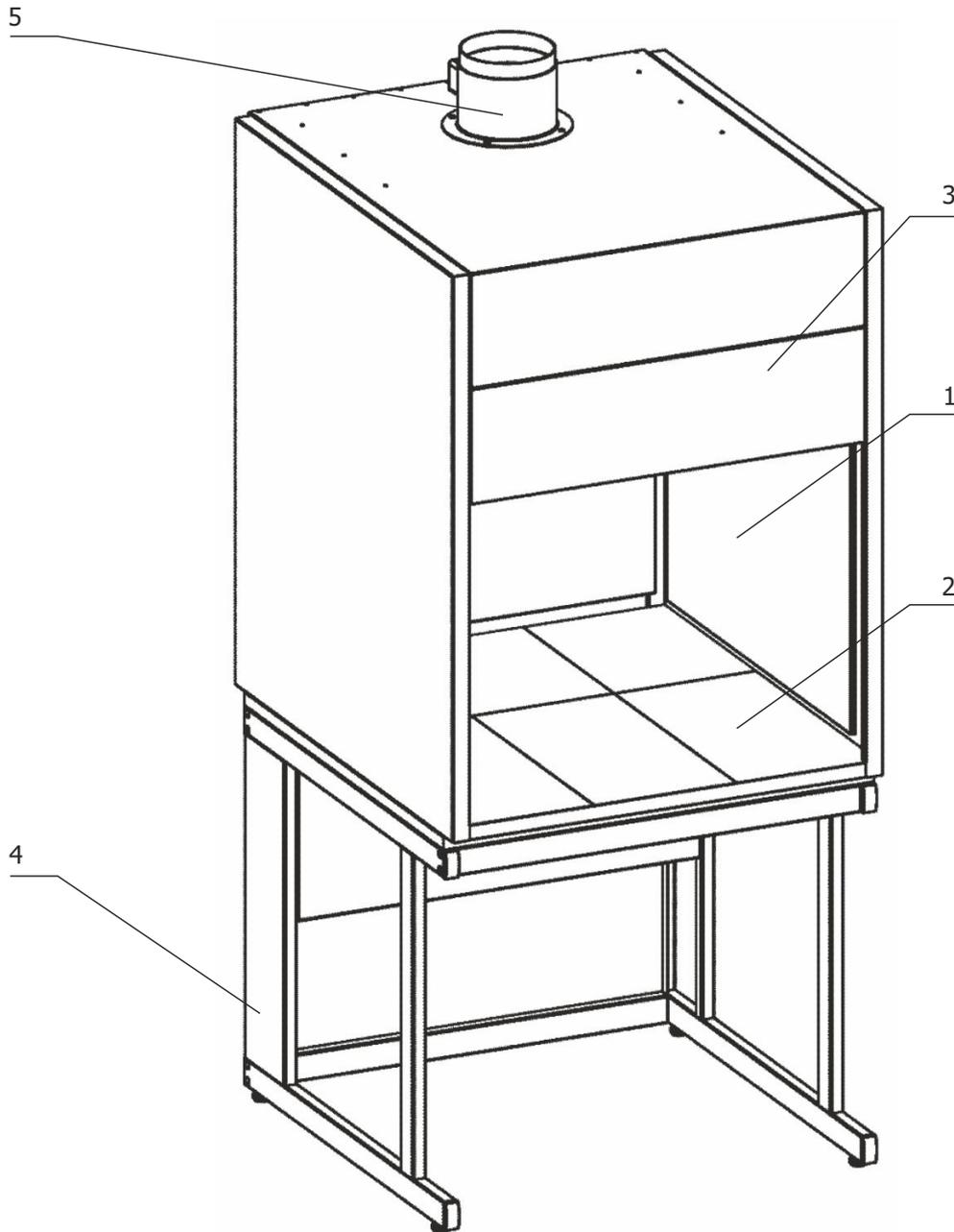


Working chamber – powder-painted steel

Features

- Powder-painted metal case
- Adjustable supports
- Ceramic tile working surface
- Air duct with the diameter of 200 mm in acid-proof version
- Removable upper screen for installation of large-size furnaces

Product assembly and composition



Name	Number of pieces	
	Length 775 mm	Length 1060 mm
1 Working chamber	1	1
2 Table top	1	1
3 Removable upper screen	1	1
4 Hood base	1	1
5 Air duct with the diameter of 200 mm in acid-proof version	1	1

For muffle furnaces

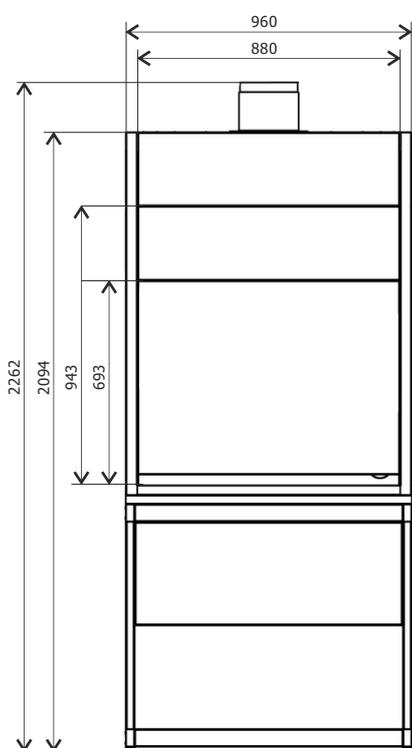
Technical characteristics

Special-purpose exhaust hoods /

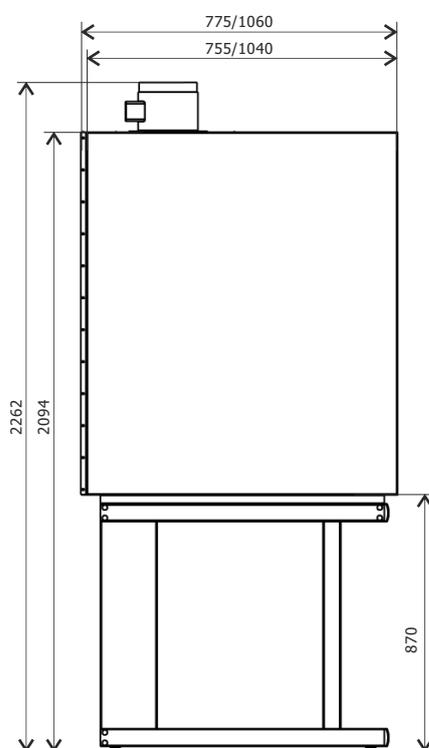
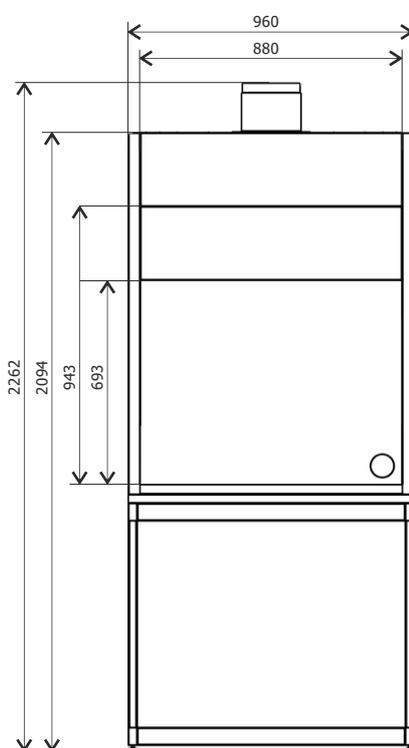
For muffle furnaces 960 x 775 x 2262

For muffle furnaces, deep 960 x 1060 x 2262

For muffle furnaces



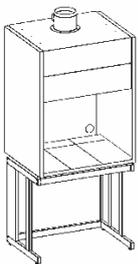
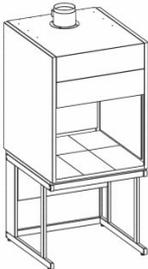
For muffle furnaces, deep



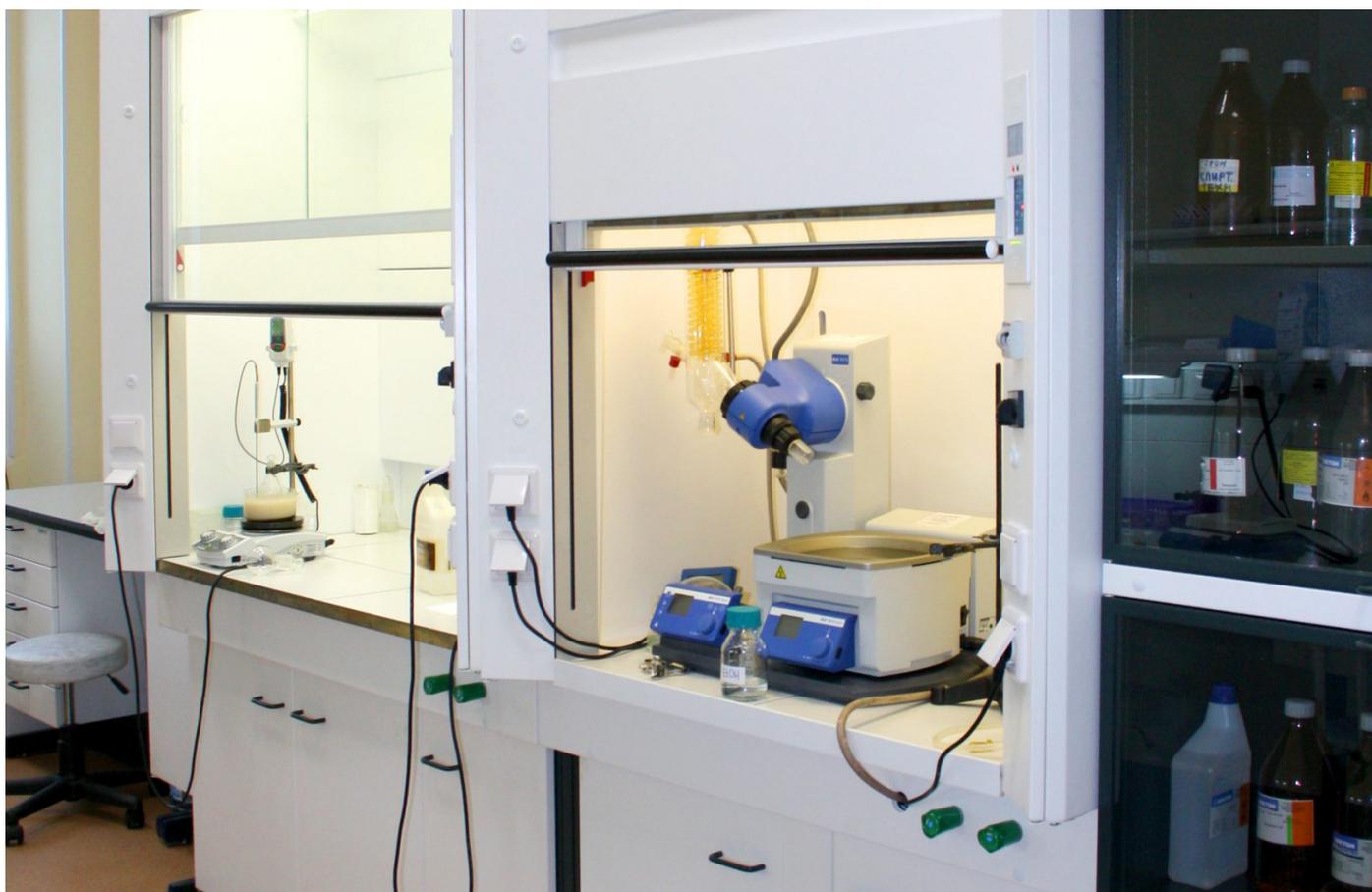
Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	960
Width	775/1060
Height	2260
Weight, kg, no more	100/140



Dimensions

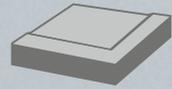
Special-purpose shelf exhaust hoods for muffle furnaces							
	Name	Length	Width	Height	Working chamber	Working surface	Cat. No.
	Hood for muffle furnaces	960 mm	775 mm	2262 mm	Powder-painted steel	Керамика	400030
			1060 mm		Powder-painted steel; stainless steel heat shields on walls		400031
	Hood for muffle furnaces, deep						



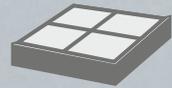




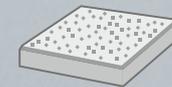
Exhaust
hoods



Durcon



Ceramic

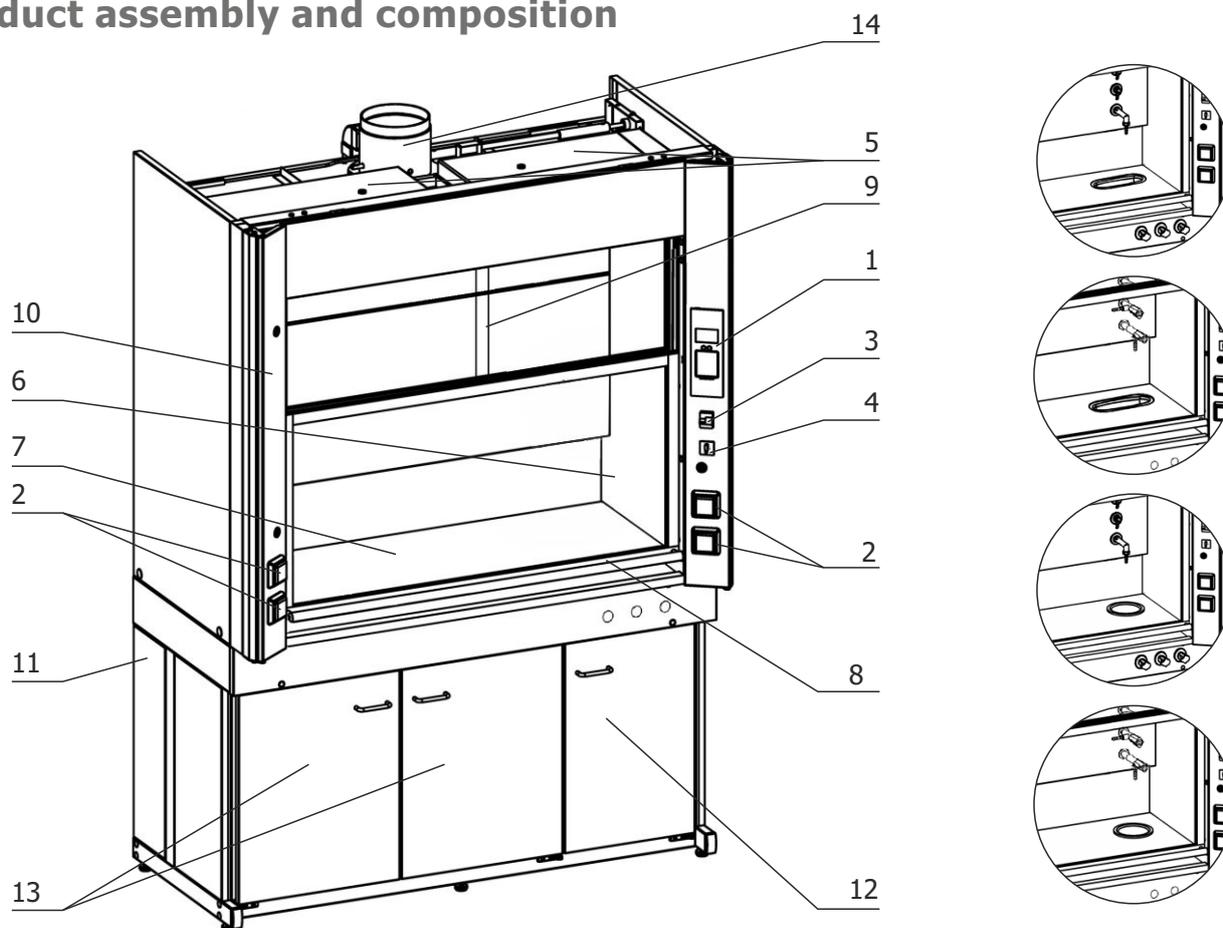


Ceramic granite

Features

- Work with concentrated acids and organic substances
- Working chamber made of stainless steel coated with PVC
- No metal parts inside the working chamber
- Working temperature of working chamber PVC surfaces no more than 65 °C
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Ventilated metal and polyethylene cabinets

Product assembly and composition



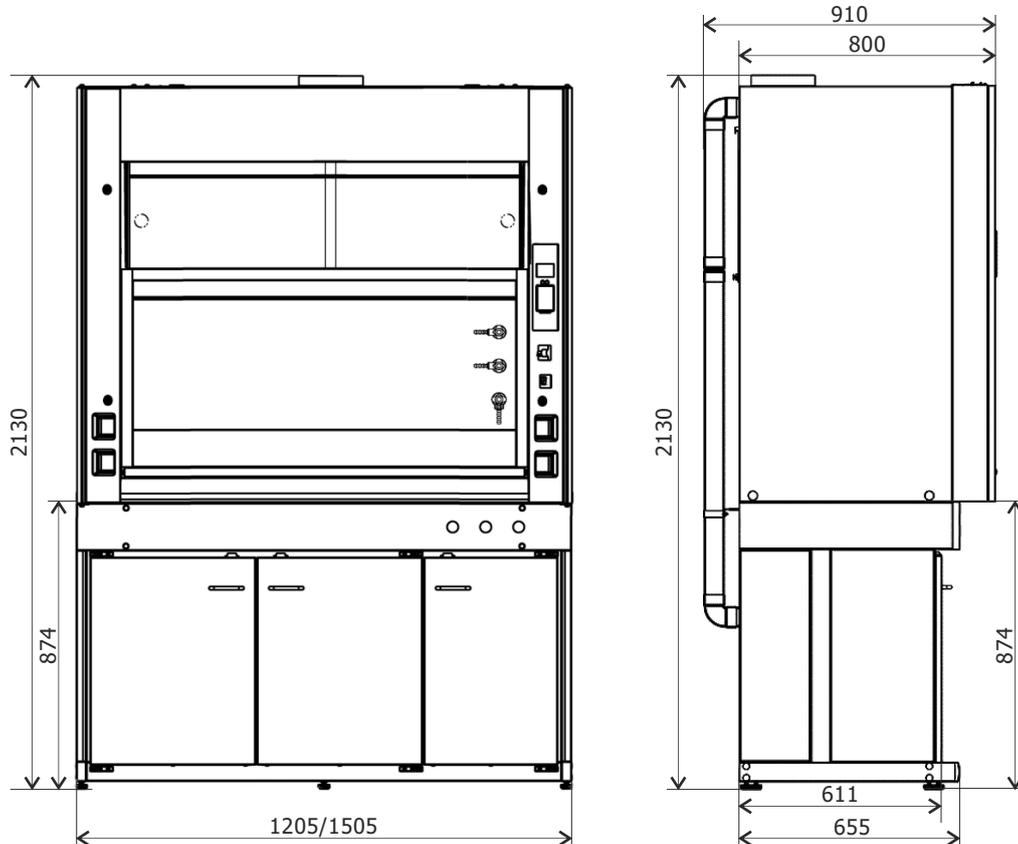
Name	Number of pieces	
	Length 1205 mm	Length 1505 mm
1 Air flow monitor MVP 002	1	1
2 Socket 220 V	4	4
3 Differential automaton 16 A	1	1
4 Circuit breaker	1	1
5 Luminaire 2 x 18 W	1	2
6 Working chamber	1	1
7 Table top	1	1
8 Sliding frame with hardened glass	1	1
9 Fixed frame with sliding hardened glasses	1	1
10 Portal	1	1
11 Hood base	1	1
12 Technological section	1	1
13 Built-in storage cabinets	1	2
14 Branch pipe for ventilation connection	1	1
15 Slide valve	1	1
16 Set of changeable cabinet hinges	1	1
17 Set of keys for portal cover locks	1	1
18 Reagent trays	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Exhaust hood with plastic working chamber / PVC 1205/1505 x 910 x 2130



Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505
Width	910
Height	2130
Working chamber dimensions, mm:	
Length	1095/1395
Width	635
Height	1055
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

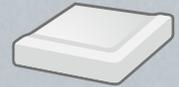
Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap with PP sink	2130mm	448200
Water tap with Durcon sink		448240
Gas tap		448100
Compressed air tap		448300
Vacuum tap (special order)		448000

Dimensions

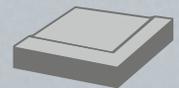
Exhaust hoods with plastic working chamber / PVC												
	Name	Length	Width	Height	Working surface	Cabinet material	Cat. No.					
	Exhaust hood with plastic working chamber / PVC	1205 mm	910 mm	2130 mm	Durcon	Met	411850					
						PE	412850					
					Ceramic	Met	411830					
						PE	412830					
					Ceramic granite	Met	411860					
						PE	412860					
						Exhaust hood with plastic working chamber / PVC	1505 mm	910 mm	2130 mm	Durcon	Met	441850
											PE	442850
Ceramic	Met	441830										
	PE	442830										
Ceramic granite	Met	441860										
	PE	442860										



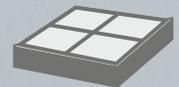
Exhaust
hoods



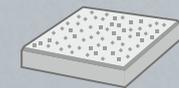
Monolith ceramic



Durcon



Ceramic

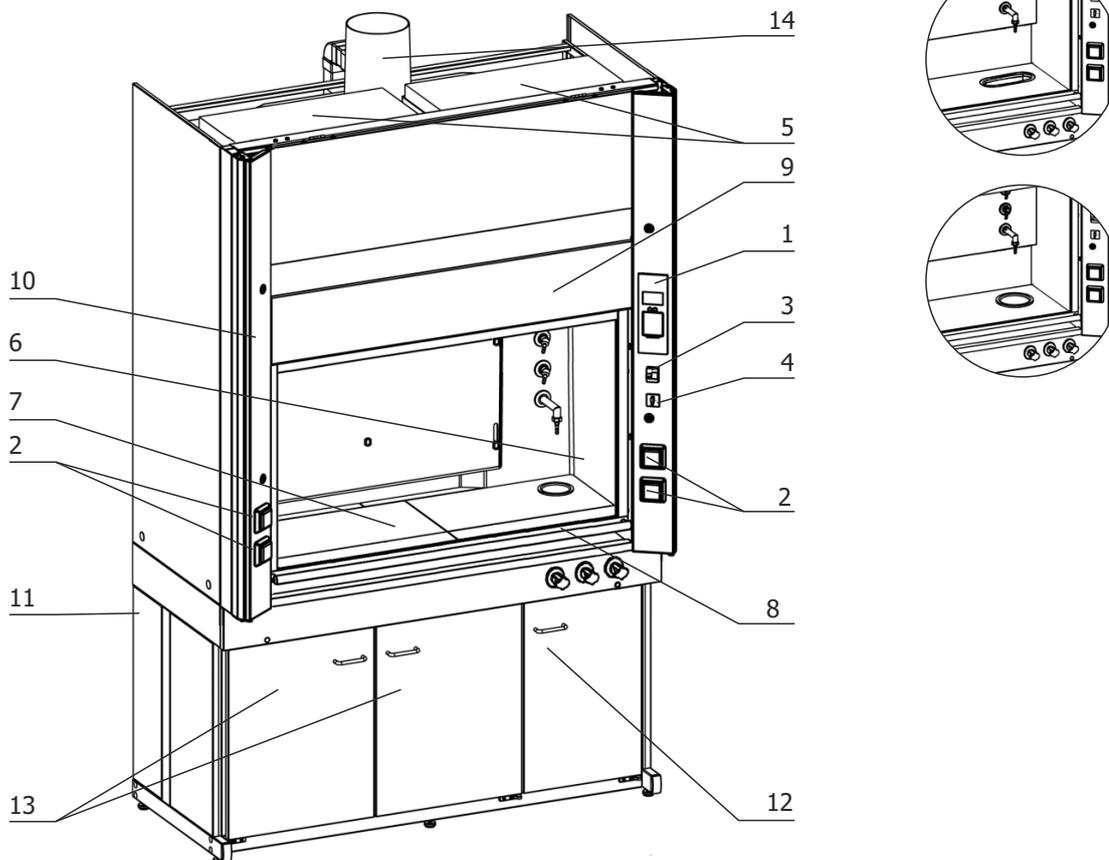


Ceramic granite

Features

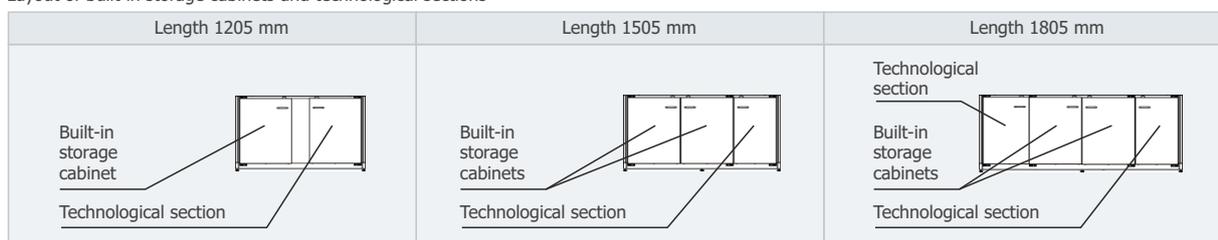
- Work with concentrated acids and organic substances
- Working chamber made of fiberglass plastic
- Permissible working chamber temperature no more than 130 °C
- No metal parts inside the working chamber
- Work with heating platforms or electric plates
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Ventilated metal and polyethylene cabinets
- Sliding protective screen made of fiberglass plastic for redistribution of air flows (on the rear wall of the working chamber)

Product assembly and composition



Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Air flow monitor MVP 002	1	1	1
2 Socket 220 V	4	4	4
3 Differential automaton 16 A	1	1	1
4 Circuit breaker	1	1	1
5 Luminaire 2 x 18 W	1	2	2
6 Working chamber	1	1	1
7 Table top	1	1	1
8 Sliding frame with hardened glass	1	1	1
9 Panel	1	1	1
10 Portal	1	1	1
11 Hood base	1	1	1
12 Technological section	1	1	2
13 Built-in storage cabinets	1	2	2
14 Branch pipe for ventilation connection	1	1	2
15 Slide valve	1	1	1
16 Set of changeable cabinet hinges	1	1	1
17 Set of keys for portal cover locks	1	1	1
18 Reagent trays	4	4	4

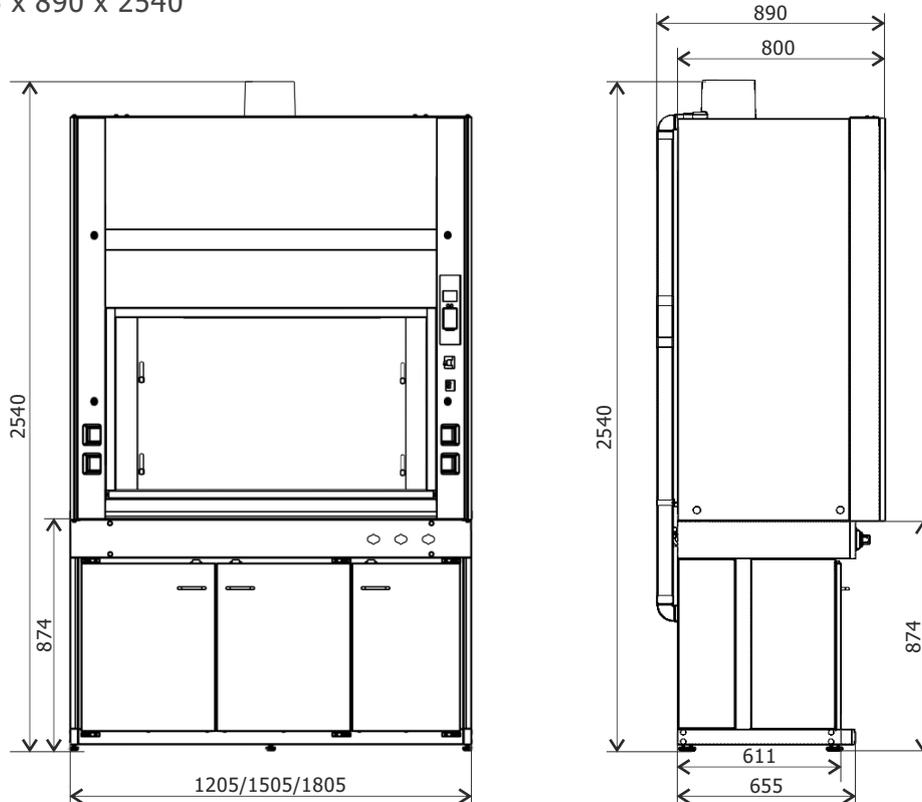
Layout of built-in storage cabinets and technological sections



Technical characteristics

Exhaust hood with plastic working chamber / Fiberglass plastic

1205/1505/1805 x 890 x 2540



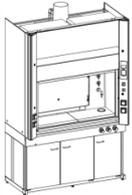
Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	890
Height	2540
Height with an 1805 long exhaust hood slide valve (detailed information on page 24)	2840
Height with an 1205, 1505 long exhaust hood slide valve (detailed information on page 24)	2770
Working chamber dimensions, mm:	
Length	1120/1420/1720
Width	530
Height	1395
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75 .

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Remote water tap with PP sink	2540 mm	448501
Remote water tap with Durcon sink		448541
Remote gas tap		448601
Remote compressed air tap		448701
Remote vacuum tap (special order)		448801

Dimensions

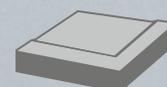
Exhaust hoods with plastic working chamber / Fiberglass plastic												
	Name	Length	Width	Height	Working surface	Cabinet material	Cat. No.					
		1205 mm		2540 mm	Durcon	Met	421750					
						PE	422750					
					Ceramic	Met	421730					
						PE	422730					
					Ceramic granite	Met	421760					
						PE	422760					
					Monolith ceramic	Met	421710					
						PE	422710					
						Exhaust hoods fiberglass plastic	1505 mm	890 mm	2540 mm	Durcon	Met	451750
											PE	452750
Ceramic	Met	451730										
	PE	452730										
Ceramic granite	Met	451760										
	PE	452760										
Monolith ceramic	Met	451710										
	PE	452710										
		1805 mm		2540 mm						Durcon	Met	481750
											PE	482750
					Ceramic	Met	481730					
						PE	482730					
					Ceramic granite	Met	481760					
						PE	482760					
					Monolith ceramic	Met	481710					
						PE	482710					



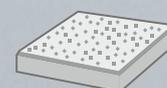
Exhaust
hoods



Monolith ceramic



Durcon

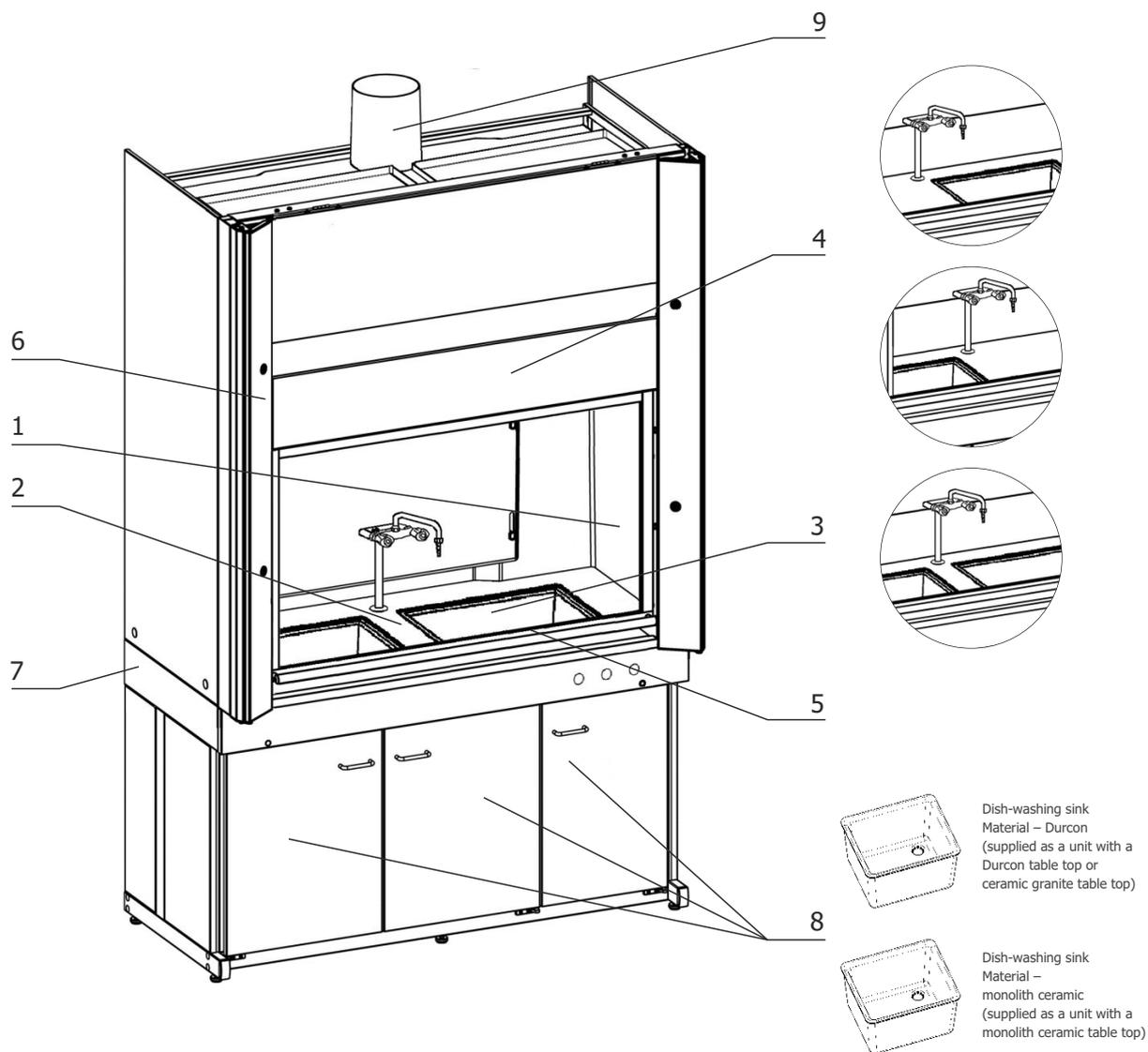


Ceramic granite

Features

- Work with concentrated acids and organic substances
- Working chamber made of fiberglass plastic
- Permissible working chamber temperature no more than 130 °C
- No metal parts inside the working chamber
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- There are no storage cabinets, only technological sections
- Sliding protective screen made of fiberglass plastic for redistribution of air flows (on the rear wall of the working chamber)

Fiberglass plastic / With dish-washing sinks

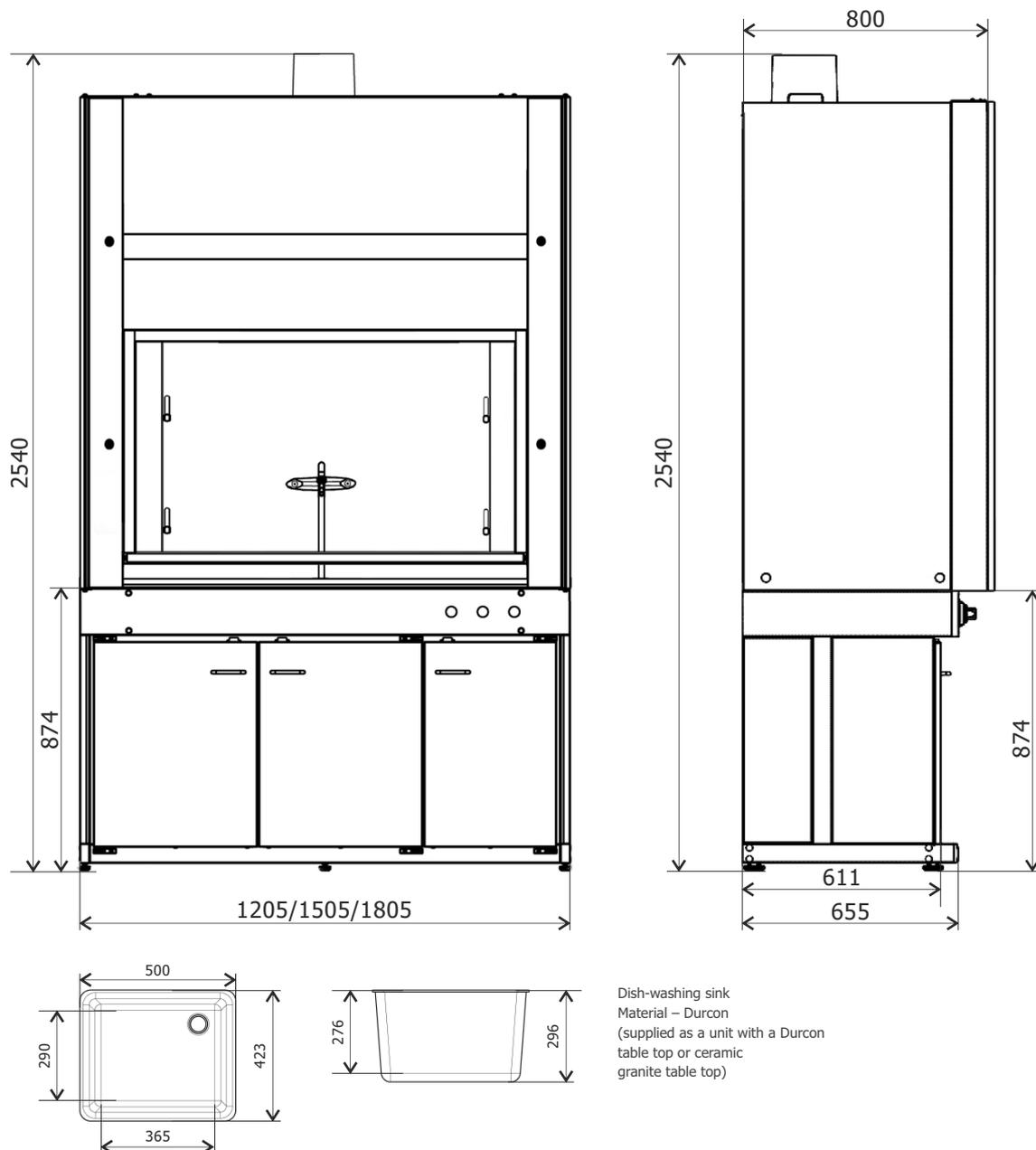


Name	Number of pieces		
	Length 1205 mm	Length 1505 mm	Length 1805 mm
1 Working chamber	1	1	1
2 Table top	1	1	1
3 With dish-washing sink	1	1 2	1 2
4 Panel	1	1	1
5 Sliding frame with hardened glass	1	1	1
6 Portal	1	1	1
7 Hood base	1	1	1
8 Technological section	1	1	1
9 Branch pipe for ventilation connection	1	1	2
10 Flushing valve	1	1	1
11 Set of changeable cabinet hinges	1	1	1
12 Set of keys for portal cover locks	1	1	1
13 Reagent trays	4	4	4

Attention! There are no built-in storage cabinets, only a technological section.

Technical characteristics

Exhaust hood with plastic working chamber / Fiberglass plastic /
With dish-washing sinks 1205/1505/1805 x 890 x 2540



Characteristic	Value
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	800
Height	2540
Working chamber dimensions, mm:	
Length	1120/1420/1720
Width	530
Height	1395
Weight, kg, no more	290

Fiberglass plastic / With dish-washing sinks

Dimensions

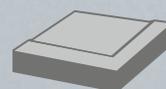
Fiberglass plastic / With dish-washing sinks								
	Name	Length	Width	Height	Type of sink	Working surface	Sink material	Cat. No.
		1205 mm	800 mm	2540 mm	1 sink	Durcon	Durcon	423750
						Monolith ceramic	Monolith ceramic	423710
						Ceramic granite	Durcon	423760
		1505 mm	800 mm	2540 mm	1 sink	Durcon	Durcon	453750
						Monolith ceramic	Monolith ceramic	453710
						Ceramic granite	Durcon	453760
	Exhaust hoods Fiberglass plastic with dish-washing sinks	1505 mm	800 mm	2540 mm	2 sinks	Durcon	Durcon	454750
						Monolith ceramic	Monolith ceramic	454710
						Ceramic granite	Durcon	454760
		1805 mm	800 mm	2540 mm	1 sink	Durcon	Durcon	483750
						Monolith ceramic	Monolith ceramic	483710
						Ceramic granite	Durcon	483760
		1805 mm	800 mm	2540mm	2 sinks	Durcon	Durcon	484750
						Monolith ceramic	Monolith ceramic	484710
						Ceramic granite	Durcon	484760



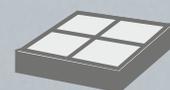
Exhaust
hoods



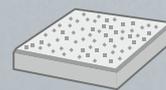
Monolith ceramic



Durcon



Ceramic

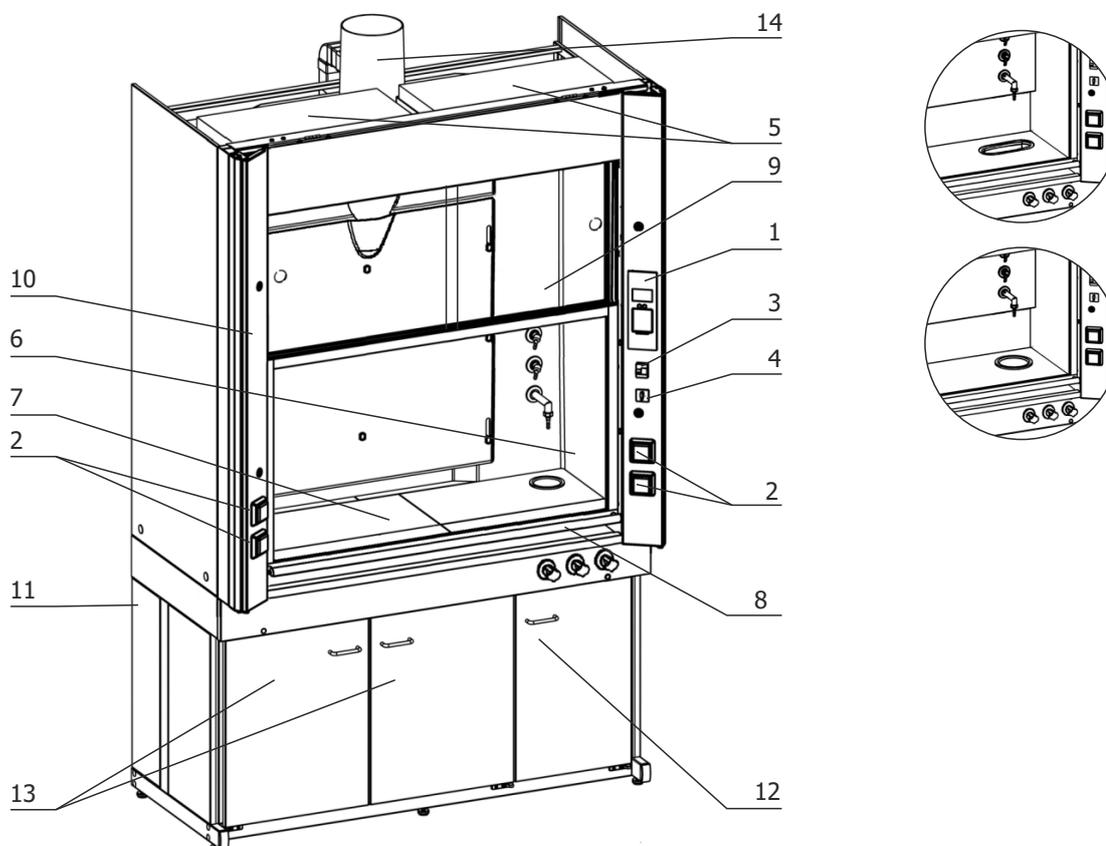


Ceramic granite

Features

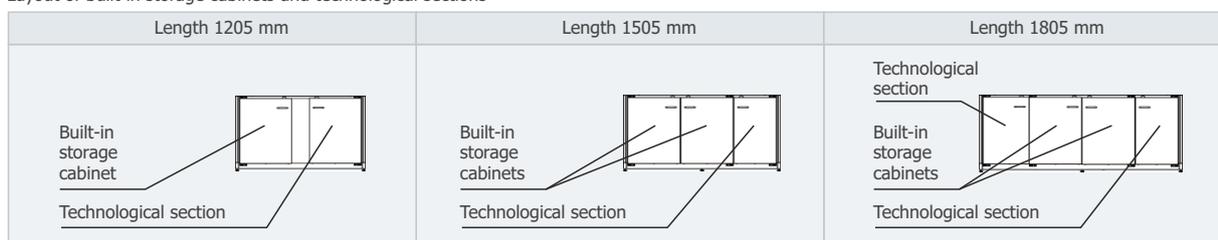
- Work with organic substances and concentrated acids
- Work with electric plates
- Working chamber made of fiberglass plastic, with an enlarged-height aperture
- Permissible working chamber temperature no more than 130 °C
- No metal parts inside the working chamber
- Sliding protective screen made of hardened glass in a powder-painted aluminum frame
- Upper screen with sliding hardened glasses
- Ventilated metal or polyethylene cabinets
- Sliding screen made of fiberglass plastic for redistribution of air flows (located on the rear wall of the working chamber)

Product assembly and composition



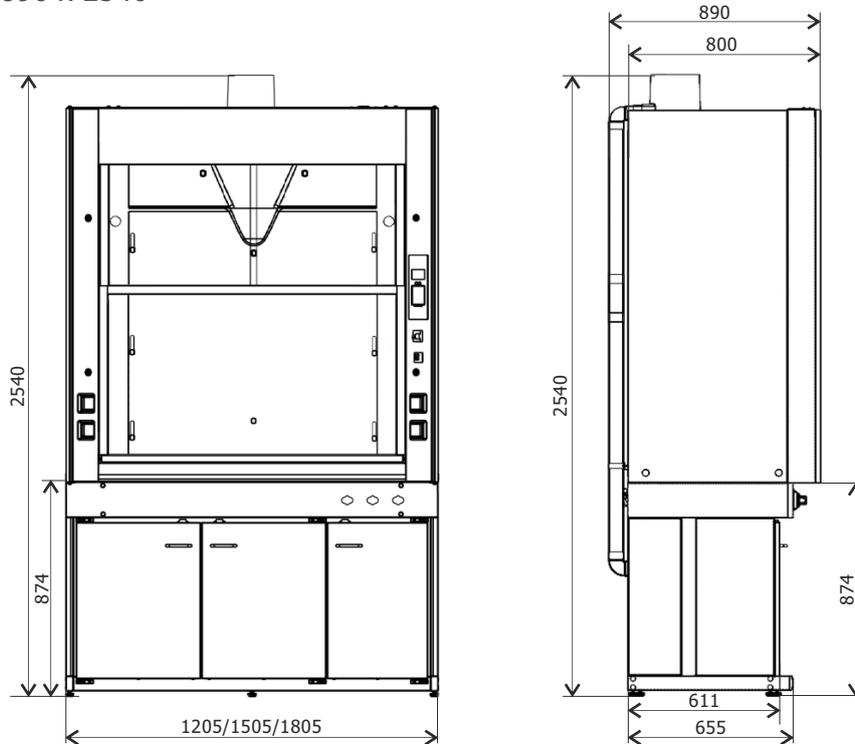
Name	Number of pieces		
	Length1205 mm	Length1505 mm	Length1805 mm
1 Air flow monitor MVP 002	1	1	1
2 Socket 220 V	4	4	4
3 Дифференциальный автомат 16А	1	1	1
4 Circuit breaker	1	1	1
5 Luminaire 2 x 18 W	1	2	2
6 Working chamber	1	1	1
7 Table top	1	1	1
8 Sliding frame with hardened glass	1	1	1
9 Fixed frame with sliding hardened glasses	1	1	1
10 Portal	1	1	1
11 Hood base	1	1	1
12 Technological section	1	1	2
13 Built-in storage cabinets	1	2	2
14 Branch pipe for ventilation connection	1	1	2
15 Slide valve	1	1	1
16 Set of changeable cabinet hinges	1	1	1
17 Set of keys for portal cover locks	1	1	1
18 Reagent trays	4	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Exhaust hood with plastic working chamber / Universal laboratory fiberglass plastic
1205/1505/1805 x 890 x 2540



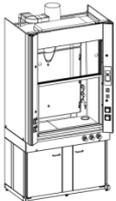
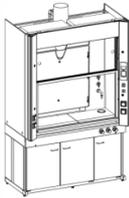
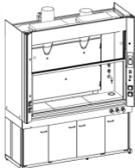
Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505/1805
Width	890
Height	2540
Height with an 1805 long exhaust hood slide valve (detailed information on page 24)	2840
Height with an 1205, 1505 long exhaust hood slide valve (detailed information on page 24)	2770
Working chamber dimensions, mm:	
Length	1120/1420/1720
Width	530
Height	1395
Weight, kg, no more	290

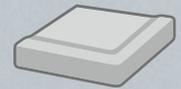
Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Remote water tap with PP sink	2540 mm	448501
Remote water tap with Durcon sink		448541
Remote gas tap		448601
Remote compressed air tap		448701
Remote vacuum tap (special order)		448801

Dimensions

Exhaust hoods with plastic working chamber / Universal laboratory fiberglass plastic							
	Name	Length	Width	Height	Working surface	Cabinet material	Cat. No.
		1205 mm		2540 mm	Durcon	Met	421350
						PE	422350
					Ceramic	Met	421330
						PE	422330
					Ceramic granite	Met	421360
						PE	422360
					Monolith ceramic	Met	421310
						PE	422310
	Exhaust hoods / Universal laboratory fiberglass plastic	1505 mm	890 mm	2540 mm	Durcon	Met	451350
						PE	452350
					Ceramic	Met	451330
						PE	452330
					Ceramic granite	Met	451360
						PE	452360
					Monolith ceramic	Met	451310
						PE	452310
		1805 mm		2540 mm	Durcon	Met	481350
						PE	482350
					Ceramic	Met	481330
						PE	482330
					Ceramic granite	Met	481360
						PE	482360
					Monolith ceramic	Met	481310
						PE	482310



Fiberglass plastic

Exhaust
hoods

ACID



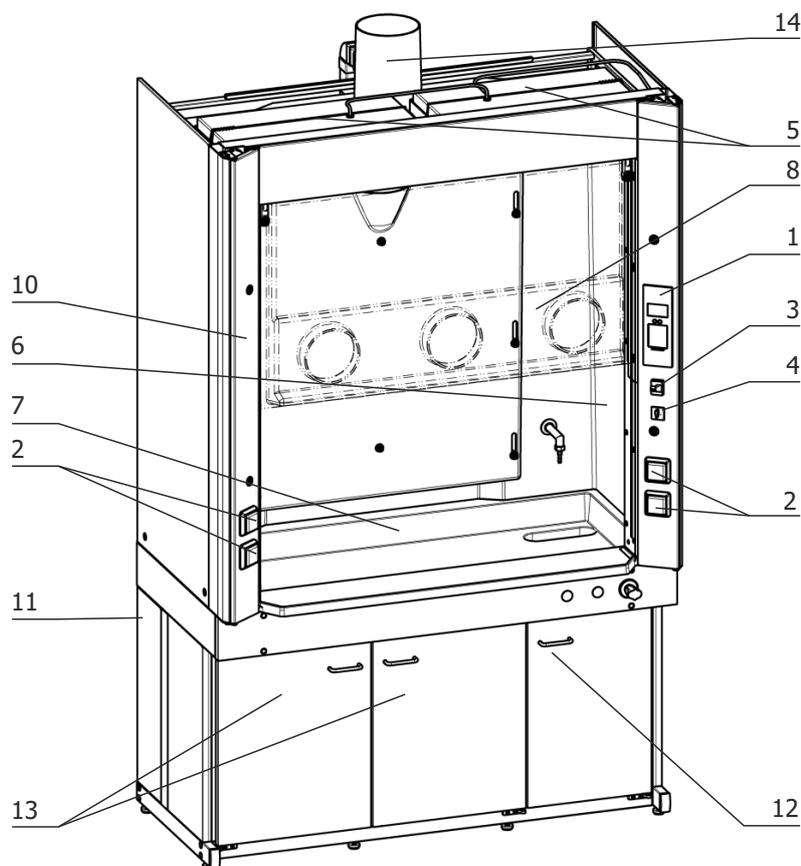
OIL

Table top is
made as a
90 mm deep
bath

Features

- Work with radioactive substances
- Work with concentrated acids and organic substances
- Working chamber made of fiberglass plastic
- Table top is made as a 90 mm deep bath
- A sink is mounted in the table top
- Table top is glued together with the working chamber capsule to form a whole
- No metal parts inside the working chamber
- Sliding protective screen made of 6 mm thick organic glass, with no frame or any metal elements
- Ventilated polyethylene cabinets
- Movable screen made of fiberglass plastic for redistribution of air flows (located on the rear wall of the working chamber)

Product assembly and composition



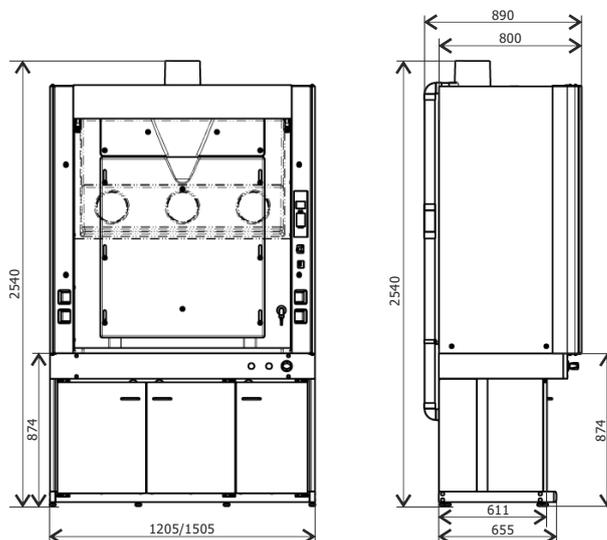
Name	Number of pieces	
	Length 1205 mm	Length 1505 mm
1 Air flow monitor MVP 002	1	1
2 Socket 220 V	4	4
3 Differential automaton 16 A	1	1
4 Circuit breaker	1	1
5 Luminaire 2 x 18 W	1	2
6 Working chamber	1	1
7 Table top	1	1
8 Sliding frame with hardened glass	1	1
9 Fixed frame with sliding hardened glasses	1	1
10 Portal	1	1
11 Hood base	1	1
12 Technological section	1	1
13 Built-in storage cabinets	1	2
14 Branch pipe for ventilation connection	1	1
15 Slide valve	1	1
16 Set of changeable cabinet hinges	1	1
17 Set of keys for portal cover locks	1	1
18 Reagent trays	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

Exhaust hood with plastic working chamber / Radiochemical fiberglass plastic
1205/1505 x 890 x 2540



Characteristic	Value
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Power of devices connected, kW, no more	2,2
Air duct diameter, mm	200
Overall dimensions, mm:	
Length	1205/1505
Width	890
Height	2540
Height with an 1205, 1505 long exhaust hood slide valve (detailed information on page 24)	2770
ΓWorking surface dimensions, mm:	
Length	1150/1450
Width	680
Dimensions of table top bath, mm:	
Length	1090/1390
Width	495
Height	90
Height up to table top working surface, mm:	900
Dimensions of working chamber aperture closed with sliding screen, mm:	
Length	930/1230
Width	600
Dimensions of working chamber aperture closed with fixed screen, mm:	
Length	930/1230
Width	600
Permissible load on table top, kg	300
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Additional equipment

Additional equipment for exhaust hoods		
Name	Hood height	Cat. No.
Water tap	2450 mm	448501

Radiochemical fiberglass plastic

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Radiochemical exhaust hood.

The exhaust hood (hereinafter 'exhaust hood') constitutes a structure manufactured in accordance with requirements of GOS 25743-83 'Radiochemical exhaust hoods. Types, main parameters and dimensions' and GOST 18325-80 'Laboratory furniture for work with radioactive substances'.

The hood consists of a base and a working chamber that is closed with a portal with a sliding transparent protective screen.

The base is made of sheet steel with the thickness of 1 mm and cold-rolled pipes sized 60x30 mm and 30x30 mm. All parts of the base are painted with epoxy-polyester powder paints of white and dark-grey colors. In the base there are two sections designed for storage of reagents. The reagent storage reagents are connected to the ventilation system by means of PVC ventilation skips. For improving the corrosion resistance, sections are made of high-pressure polyethylene by vacuum formation method.

The working chamber is made of fiberglass plastic (epoxy-vinyl-etheral resin DION 9700) and constitutes a structure manufactured in the following way:

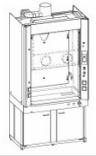
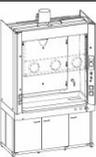
- Table top: made as a 90 mm deep bath. A sink with dimensions similar to CS-12 DURCON is mounted in the table top. The table top is glued together with the upper capsule of the working chamber to form a whole.
- Side walls of the working chamber don't have any openings.
- A ventilation connection branch pipe is fastened to the upper part of the working chamber. In the ceiling of the working chamber there is a window covered with glass and designed for installing a fluorescent luminaire. If there is no luminaire, the working chamber of the exhaust hood can be lightened with luminaires available in the laboratory.
- There are no metal elements in the working chamber structure.
- In front of the rear wall inside the working chamber, at the distance of 60 mm to it, a screen is mounted to form an air duct. The screen is fastened to the rear wall of the chamber with M12 polypropylene screws.
- The opening of the branch pipe is covered from the side of the working chamber with the second screen to prevent ingress of condensate onto the table top and form an air flow.
- The sliding protective screen is made of 6 mm thick organic glass, has no frame or any metal elements and can be manufactured in two versions:
 - without flanges to hold gloves
 - with flanges 180 mm in diameter. (for 1505 mm long exhaust hoods the number of flanges is 3; for 1205 mm long exhaust hoods the number of flanges is 2)
- The sliding protective screen can be removed and mounted into place by one person within 3-5 minutes.
- The structure of the screen allows treating with any decontaminating solutions. Presence of any slits or gaps in the screen is inadmissible.

The outer housing of the hood (case) is made of sheet steel with the thickness of 1 mm and painted with epoxy powder paint of white color.

The sliding screen is moved in the portal along guides made of LabGrade laminate plastic. A counterbalance is used as a screen weight compensator. The counterbalance moves in a closed channel mounted in the portal in such a way that cables are easy to replace and not requiring moving the hood.

The exhaust hood is equipped with an air flow automated control system on the basis of the MVP-002 monitor. The exhaust hood is also equipped with an ultrasonic sliding screen position sensor located in the left portal. To improve visibility, a fixed 6 mm thick organic glass screen manufactured by vacuum formation method is mounted in the upper part of the portal.

Dimensions

Exhaust hoods with plastic working chamber / Radiochemical fiberglass plastic									
	Name	Length	Width	Height	Working chamber	Table top	Protective screen	Cabinet material	Cat. No.
	Radiochemical fiberglass plastic	1205 mm	890 mm	2540 mm	Fiberglass plastic	Fiberglass plastic	Organic glass	PE	422377
		1505 mm							452377

With heating platforms

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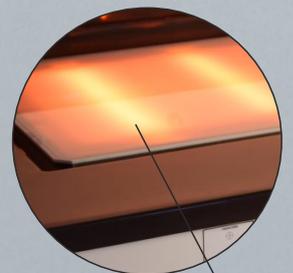






Fiberglass plastic

Organic glass
sliding
protective
screen



Working surface of heating
platforms – glass ceramic

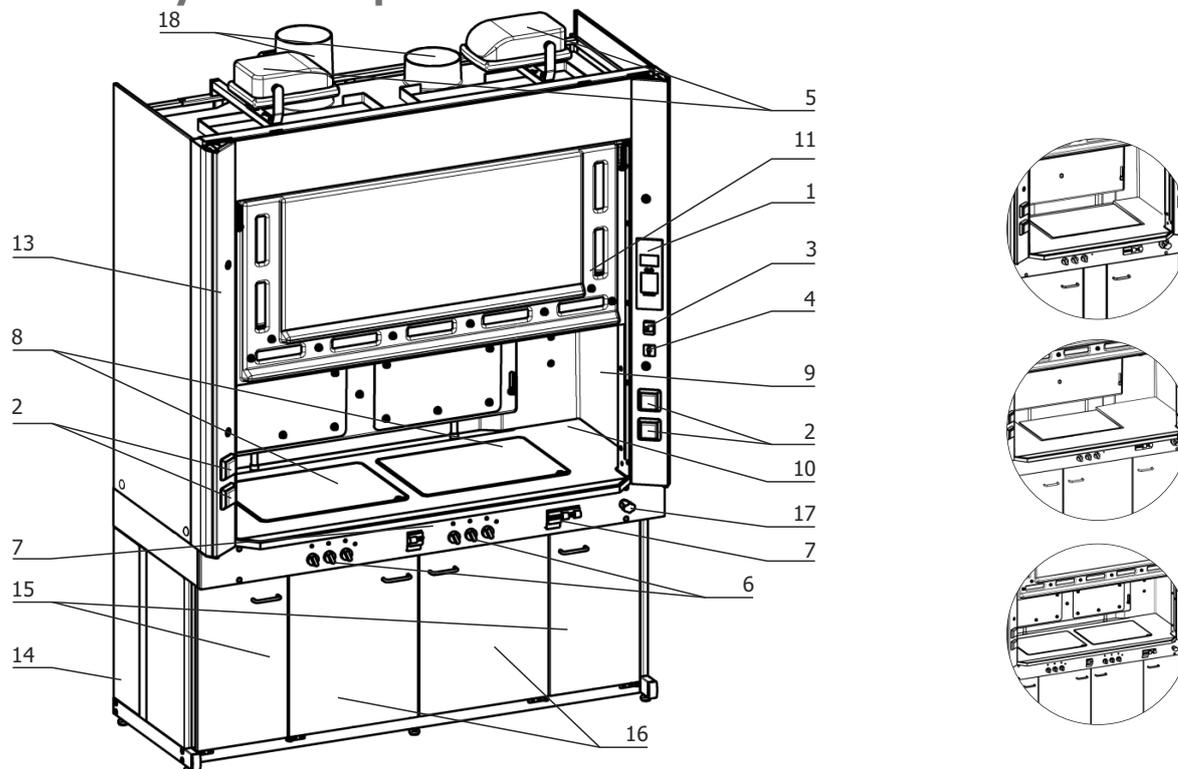
Exhaust
hoods



Features

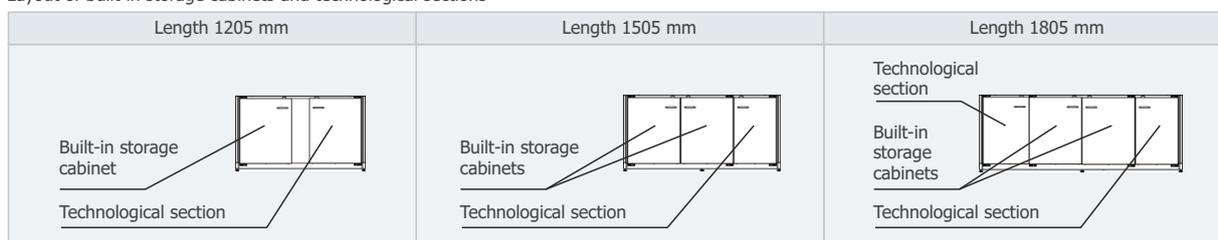
- Designed for work connected with heating and evaporation of concentrated acids
- Working chamber and table top made of fiberglass plastic
- Permissible working chamber temperature no more than 130 °C
- No metal parts inside the working chamber
- Sliding protective screen made of organic glass
- Working chamber air duct sprinkling system
- Two heating platforms PMD 6004 (for hoods L=1805 mm) and one heating platform PMD 6004 (for hoods L=1205 mm and L=1505 mm)
- Ventilated polyethylene cabinets
- Sliding screen made of fiberglass plastic for redistribution of air flows (located on the rear wall of the working chamber)

Product assembly and composition



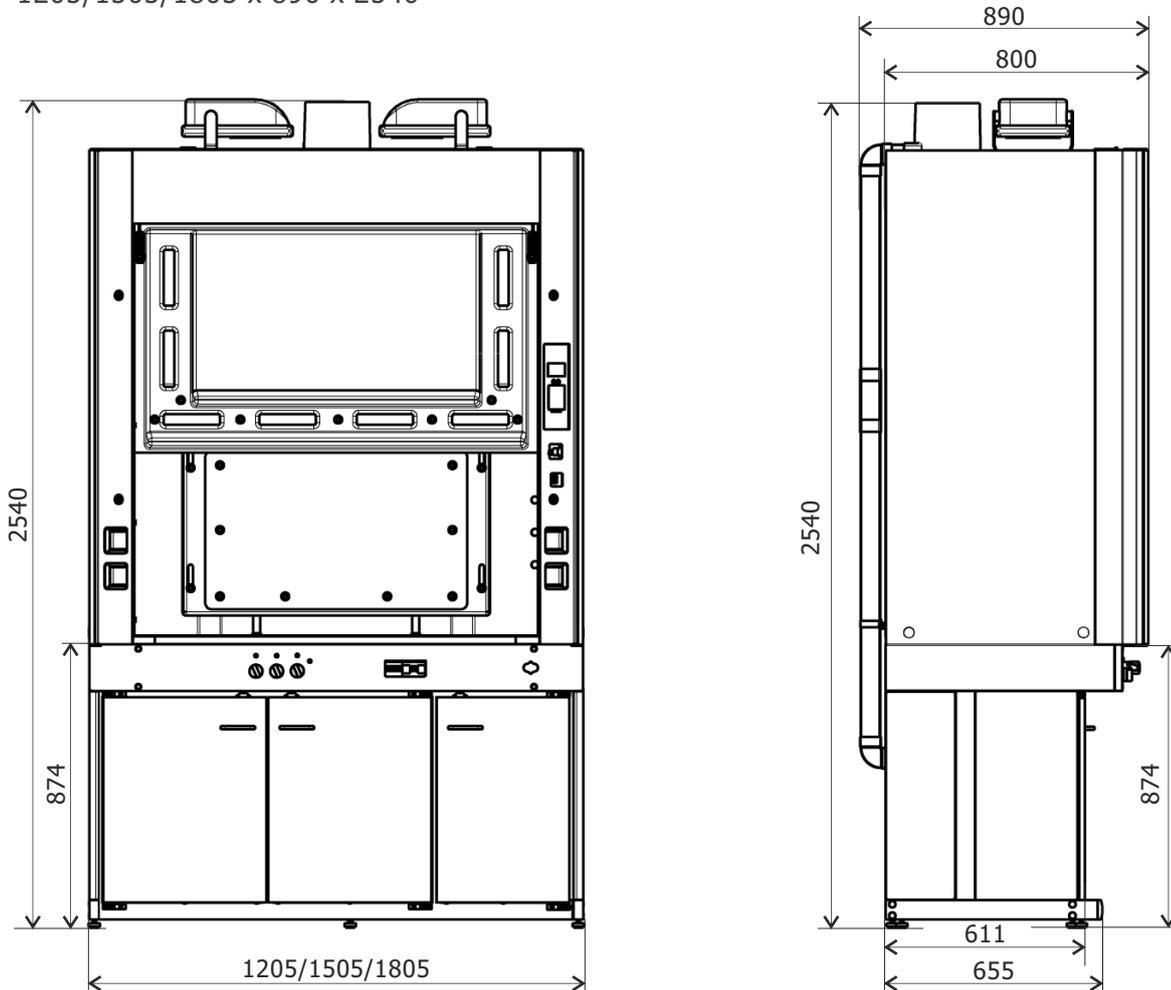
Name	Number of pieces		
	Length 1205mm	Length 1505mm	Length 1805mm
1 Air flow monitor MVP 002	1	1	1
2 Socket 220 V	4	4	4
3 Automatic circuit breaker	1	1	1
4 Power-down tumbler	1	1	1
5 Searchlight 150 W	1	2	2
6 Heating platform control knobs	3	3	6
7 Three-phase automatic circuit breaker	1	1	2
8 Heating platforms	1	1	2
9 Working chamber	1	1	1
10 Table top	1	1	1
11 Sliding organic glass protective screen	1	1	1
12 Panel	1	1	1
13 Portal	1	1	1
14 Hood base	1	1	1
15 Technological section	1	1	2
16 Built-in storage cabinets	1	2	2
17 Sprinkler water-feed tap	1	1	1
18 Branch pipe for ventilation connection	1	1	2
19 Slide valve	1	1	1
20 Set of changeable cabinet hinges	1	1	1
21 Set of keys for portal cover locks	1	1	1
22 Reagent trays	4	4	4

Layout of built-in storage cabinets and technological sections



Technical characteristics

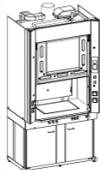
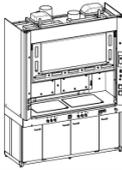
Exhaust hood with heating platforms
1205/1505/1805 x 890 x 2540



Characteristic	Value
Power of devices connected, kW, no more	2,2
Attention! The hood is connected to three-phase 380V, 50Hz network and one-phase 220V, 50Hz.	
Maximum power consumption for hoods L=1205 mm and L=1505 mm with one heating platform, kW	6
Maximum power consumption for hoods L=1805 mm with two heating platforms, kW	12
Overall dimensions, mm:	
Length	1205/1505/1805
Width	890
Height	2540
Height with an 1805 long exhaust hood slide valve (detailed information on page 24)	2840
Height with an 1205, 1505 long exhaust hood slide valve (detailed information on page 24)	2770
Working chamber dimensions, mm:	
Length	1120/1420/1720
Width	530
Height	1395
Weight, kg, no more	290

Electric injury protection rating: The exhaust hood pertains to class 1 according to GOST 12.2.007.0-75

Dimensions

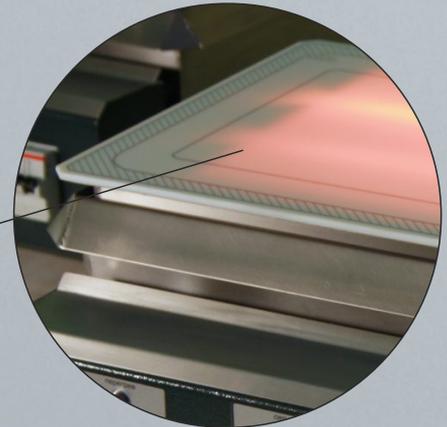
Exhaust hoods with heating platforms							
	Name	Length	Width	Height	Working surface	Working surface of heating platform	Cat. No.
	Exhaust hoods with a heating platform	1205 mm					426770
	Exhaust hoods with a heating platform	1505 mm	890 mm	2540 mm	Fiberglass plastic	Glass ceramic	456770
	Exhaust hoods with two heating platforms	1805 mm					486772



PMD



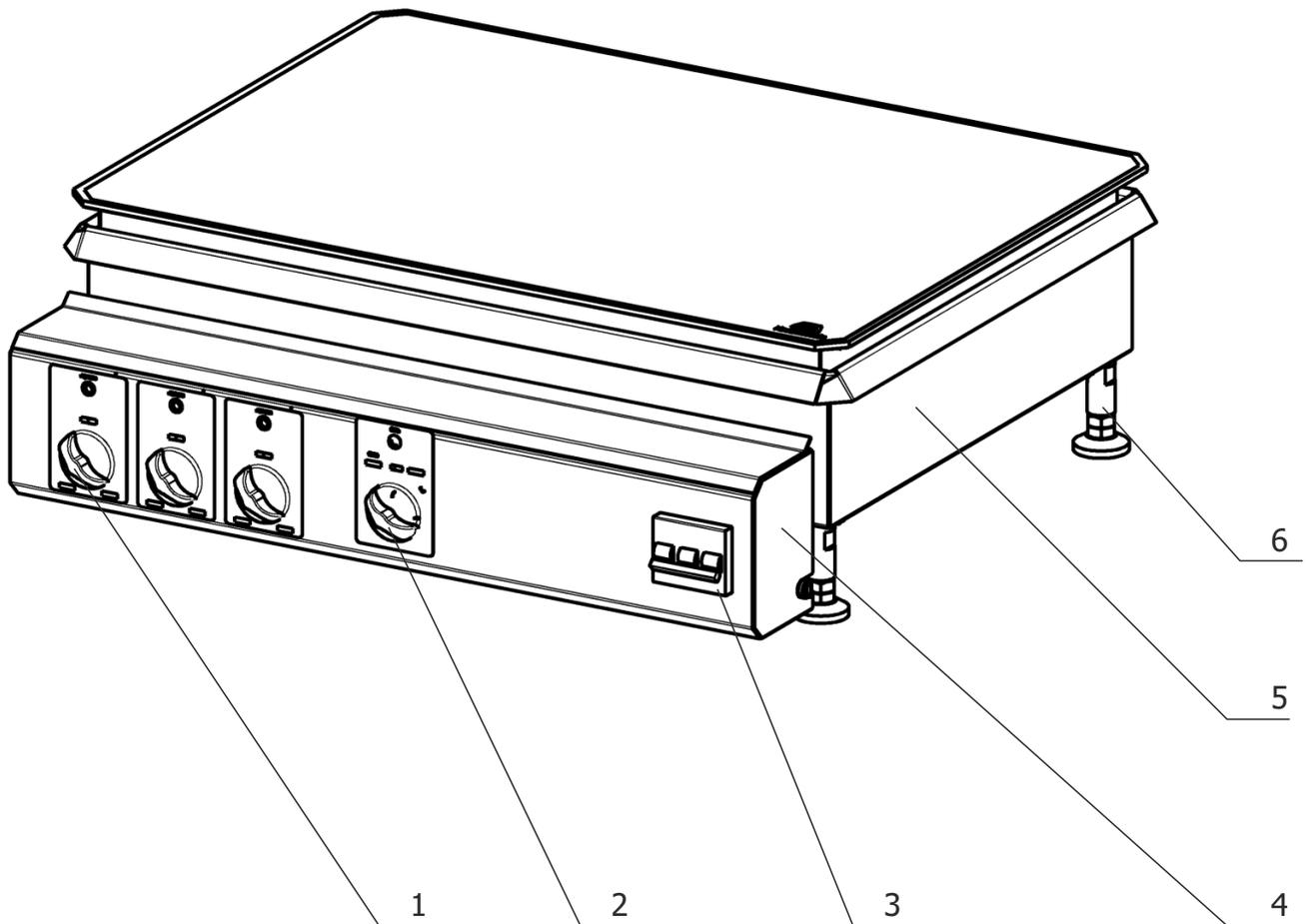
Working surface –
glass ceramic



Features

- Heating of liquid samples from 50 °C to 300 °C
- Operating mode attainment time no more than 10 sec.
- Two power ranges
- Continuous power adjustment of Philips heater in each range
- Three independent sample heating sectors (PMD 6004); three independent sample heating sectors (PMD 2004)
- Service life of infrared lamps not less than 5000 hours
- Service life of glass-ceramic surface not less than 5 years
- Case material – titan
- Control unit case material – powder-painted steel
- Deflectors material – titan
- Cooling of infrared lamps deflectors – forced by means of: integral fans (PMD 6004), one fan (PMD 2004)
- Overheating protection of each of infrared lamps with shut-off indication

Product assembly and composition

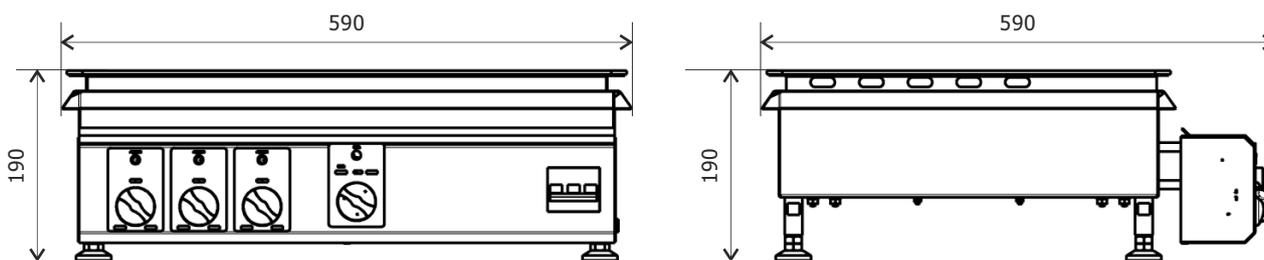


Name	Number of pieces	
	Length 460 mm	Length 590 mm
1 Lamp power continuous control knob	1	3
2 Installation power discrete control knob	1	1
3 Current overload protection automaton	1	1
4 Control unit	1	1
5 Lamp unit housing	1	1
6 Legs	4	4
7 Fan	1	3

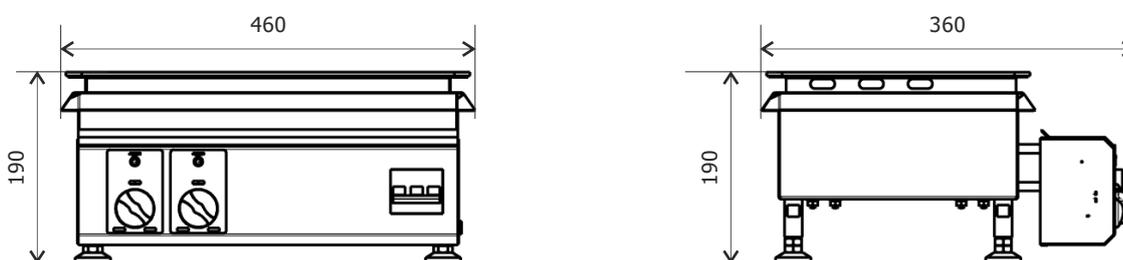
Technical characteristics

Heating platforms PMD 6004 – 590 x 590 x 190,
PMD 2004 – 460 x 360 x 190

Heating platform PMD 6004

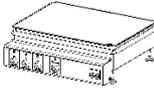


Heating platform PMD 2004



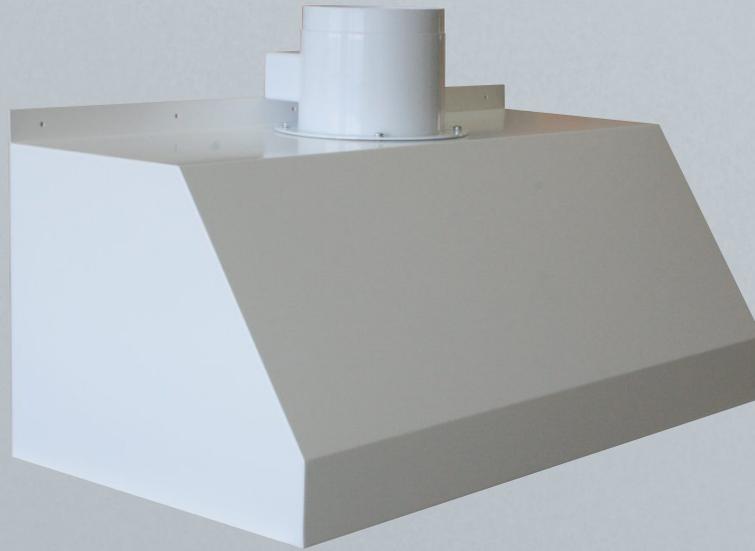
Characteristic	Values	
	PMD 2004	PMD 6004
Overall dimensions, mm:		
Length	460	590
Width	360	590
Height	190	190
Supply network voltage, V	220±10	3 phases 380
Network frequency, Hz	50±10	50
Power consumption, kW, no more	2,3	6
Power adjustment range, separately on each channel, %	0 -100	0 -100
Continuous work time at 100% power, not less	8	8
Working surface dimensions, mm:		
Length	440	575
Width	255	475
Working surface material	Glass ceramic «Ceran»	Glass ceramic «Ceran»
Weight, kg, no more	8	20

Dimensions

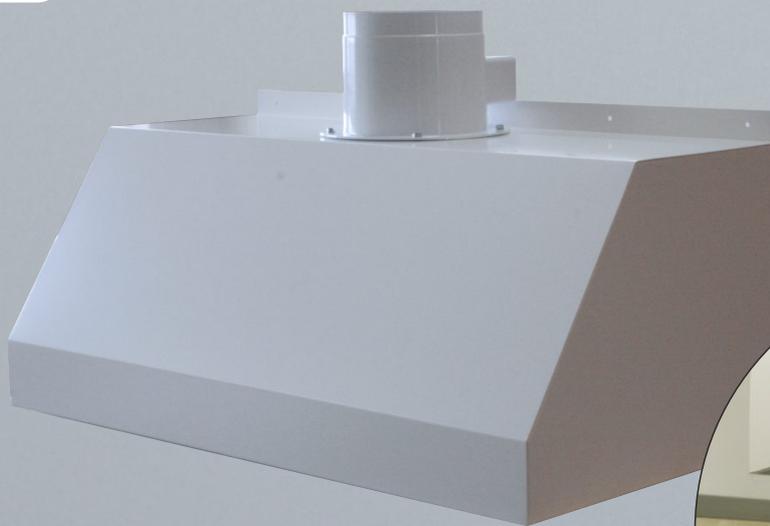
Heating platforms						
	Name	Length	Width	Height	Working surface	Cat. No.
	Heating platforms PMD 6004	590 mm	590 mm	190 mm	Glass ceramic	806004
		Heating platforms PMD 2004	460 mm			360 mm

Hoods

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Hoods



Version of fastening
of the hood to the
laboratory ceiling



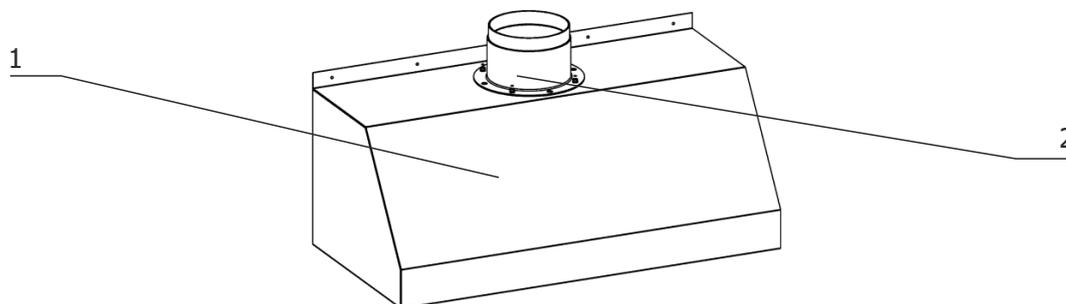
Features

- Metal powder-painted case
- Air duct d200 in acid-proof version

Hoods

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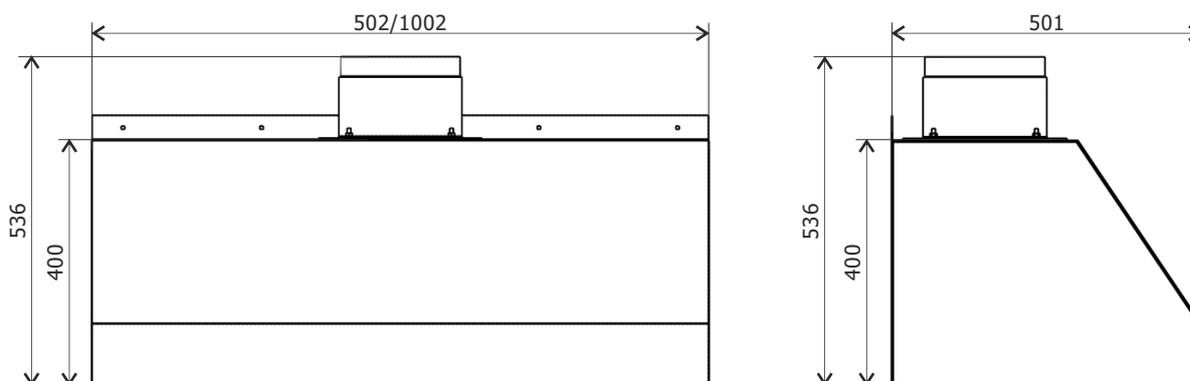
Product assembly and composition



Name	Number of pieces	
	Length 1002 mm	Length 502 mm
Case	1	1
Branch pipe	1	1

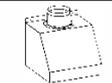
Technical characteristics

Hoods 502/1002 x 501 x 536



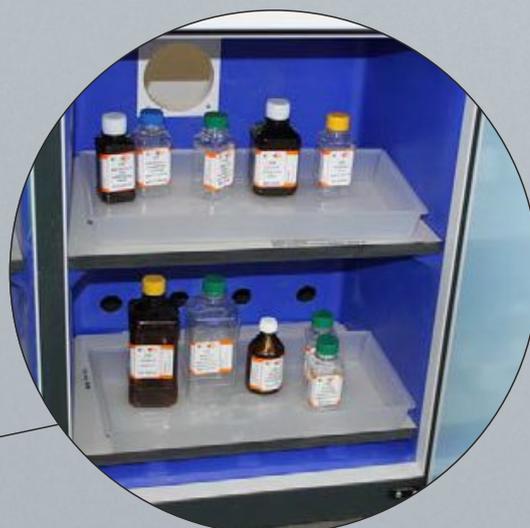
Characteristic	Values	
	Large hood	Small hood
Case material	Steel	Steel
Overall dimensions, mm:		
Length	1002	502
Width	501	501
Height	536	536
Air duct diameter, mm	200	200
Weight, kg, no more	13	8

Dimensions

Hoods							
	Name	Length	Width	Height	Case material	Branch pipe material	Cat. No.
	Large hood	502mm	501mm	536mm	Steel	Plastic	400001
	Small hood	1002mm			Steel	Plastic	400000



Reagent
trays



Versions of use of trays:
on polyethylene shelves
in storage cabinets

Features

- Protects surfaces of cabinet shelves and cabinet sections from corrosive liquid spillages:
Trays are made of polypropylene, therefore they are resistant to all kinds of chemical reagents in case of spillages; high boards restrain up to 2,7 liters of spilled liquid
- Provides cleanness of working places in the laboratory and ease of storage:
Even insignificant impurities, moisture, spilled dry reagents – all of these will remain in the tray, not on the table shelf and not in the cabinet draw; thanks to compact size the trays are easy to wash and dry
- Durable and convenient:
Mechanically resistant and hermetical because made by injection molding method;
There no welded seams;
Universal, can be mounted wherever there it is required

Reagent trays

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Possible versions of use of trays in 'METALLDESIGN' laboratory furniture



On shelves of metal cabinets in the exhaust hood



In the drawer of storage cabinets



On shelves of EuroMax technological stands



On shelves of polyethylene cabinets in storage cabinets

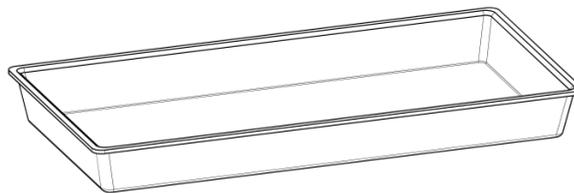


On shelves of metal cabinets in storage cabinets



On shelves of polyethylene cabinets in the exhaust hood

Product assembly and composition



Technical characteristics

Tray 410 x 205 x 45



Characteristic	Value
Product material	Polypropylene
Overall dimensions, mm:	
Length	410
Width	205
Height	45
Weight, kg, no more	0,29

Dimensions

Reagent trays						
	Name	Length	Width	Height	Material	Cat. No.
	Reagent tray	410 mm	205 mm	45 mm	Polypropylene	930000



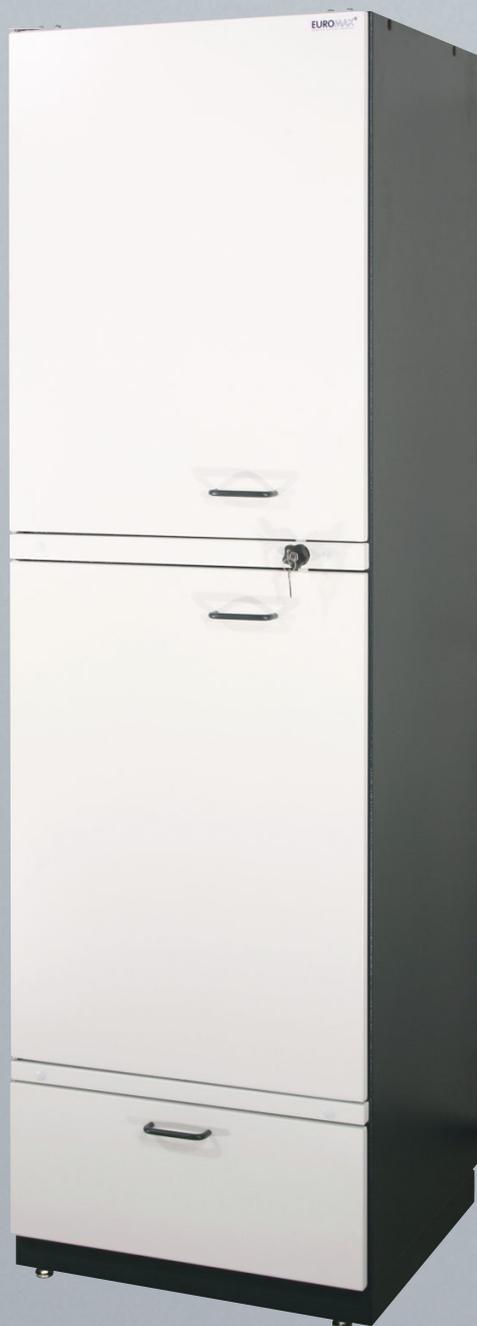


Cabinets for storage of acids and dishes

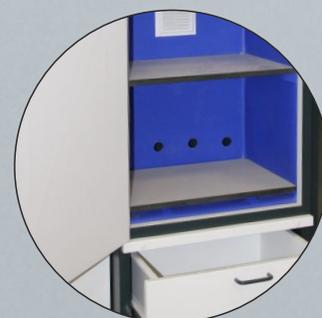
(Metal, polyethylene)

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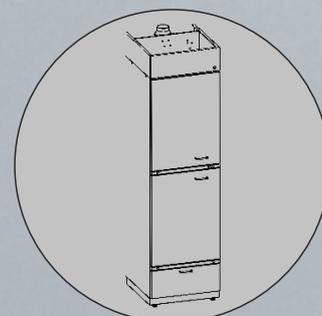
Storage
cabinets



Metal capsules



Polyethylene capsules



Possibility to install
a ventilation unit

Features

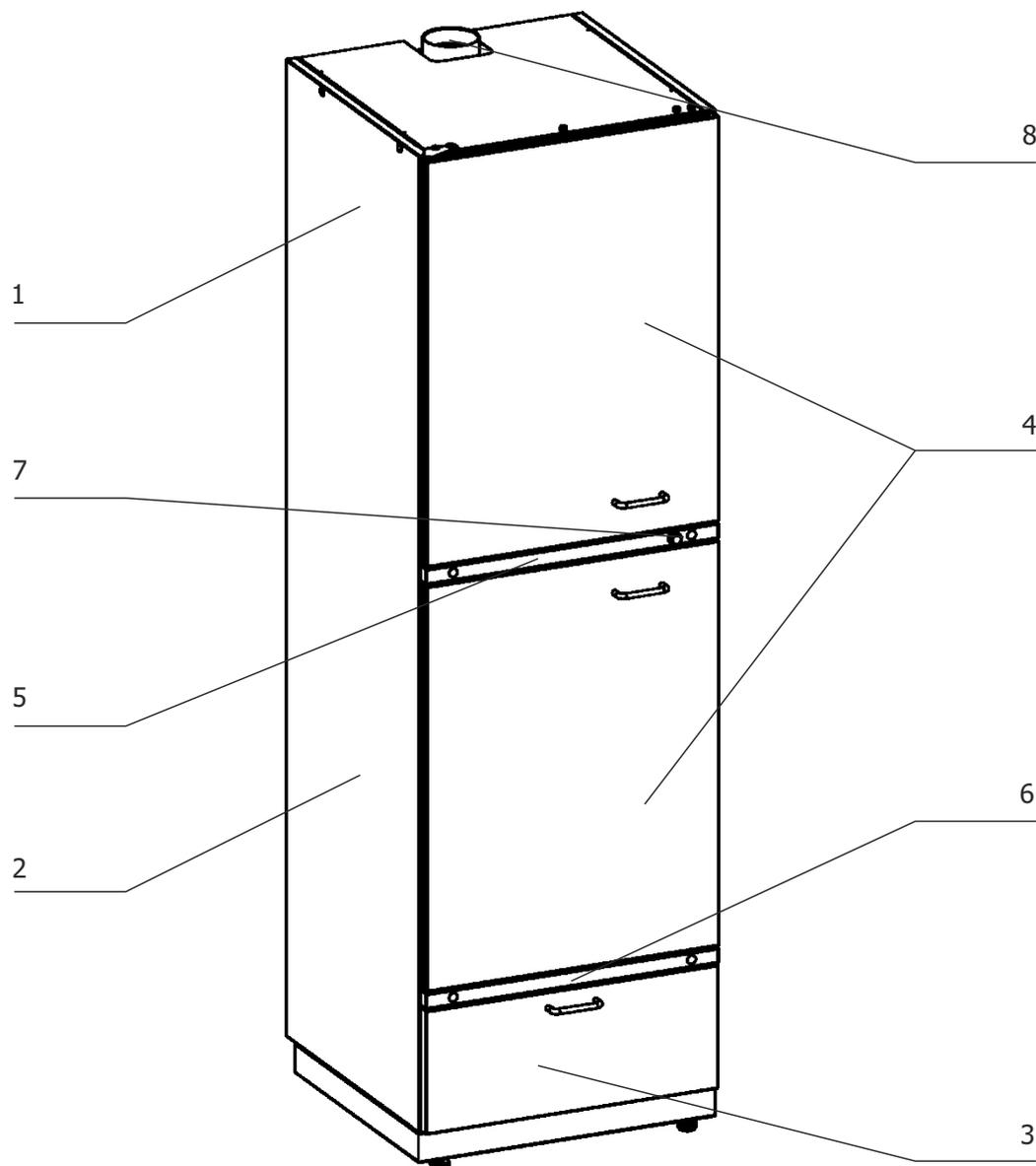
- Metal powder-painted case
- Lockable metal capsule for dishes storage (metal cabinets) and lockable polyethylene capsules for acids storage (polyethylene cabinets)
- Drawer to store accessories
- Removable steel doors with sound-absorbing stuffing
- Possibility to rearrange doors to be opened to the right or left
- Adjustable supports
- Door hinges outside the storage zone
- Air duct in acid-proof version to arrange exhaust out of the upper and lower capsule
- Possibility to install a ventilation unit
- Four polypropylene trays for reagents

Cabinets for storage of acids and dishes

(Metal, polyethylene)

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Product assembly and composition



Name	Number of pieces	
	Metal cabinet	Polyethylene cabinet
1 Upper section	1	1
2 Lower section	1	1
3 Drawer	1	1
4 Outer doors	2	2
5 Central lath	1	1
6 Lower lath	1	1
7 Lock	1	1
8 Flange	1	1
9 Reagent trays	4	4

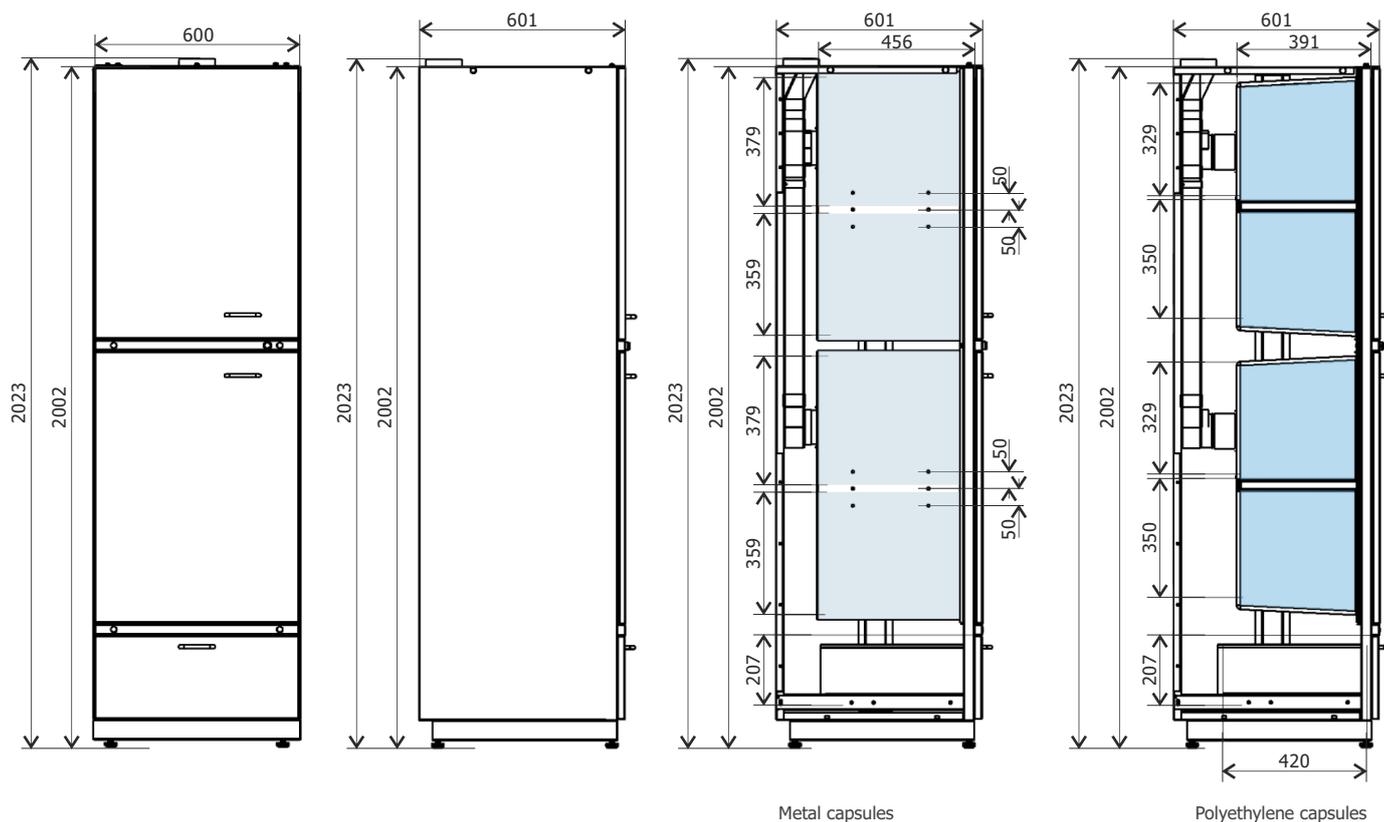
Cabinets for storage of acids and dishes

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(Metal, polyethylene)

Technical characteristics

Cabinets for storage of acids and dishes (metal, polyethylene) 600 x 601 x 2023



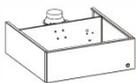
Metal capsules

Polyethylene capsules

Characteristic	Values	
	Metal	Polyethylene
Overall dimensions, mm:		
Length	600	600
Width	601	601
Height	2023 (2223*)	2000 (2223*)
Air duct diameter, mm	100	100
Capsule volume, l	169	105
Drawer volume, l	36	36
Weight, kg, no more	105	105

* - when delivered with a ventilation unit

Additional equipment

	Ventilation unit of storage cabinets	Value	Cat. No.
	Characteristic		
	Supply voltage, V	220±10%	540300
	Rated frequency, Hz	50±5	
	Fan power, W	35	

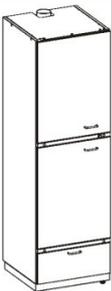
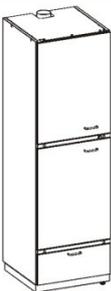
Cabinets for storage of acids and dishes

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(Metal, polyethylene)



Dimensions

Cabinets for storage of acids and dishes (metal, polyethylene)						
	Name	Length	Width	Height	Capsule material	Cat. No.
	Cabinets for storage of acids and dishes (metal)	600 mm	601 mm	2023 mm	Metal	533400
	Cabinets for storage of acids and dishes (polyethylene)				Polyethylene	533700

Cabinets for storage of acids and dishes

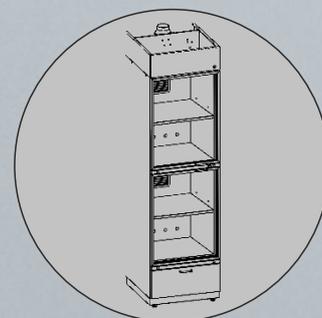
with glass doors (metal)

Saint Petersburg
METALLDESIGN LLC

Storage
cabinets



Metal capsules



Possibility to install a
ventilation unit

Features

- Metal powder-painted case
- Lockable metal capsule for dishes storage (metal cabinets)
- Drawer to store accessories
- Removable steel doors with sound-absorbing stuffing
- Possibility to rearrange doors to be opened to the right or left
- Adjustable supports
- Door hinges outside the storage zone
- Air duct in acid-proof version to arrange exhaust out of the upper and lower capsule
- Possibility to install a ventilation unit
- Four polypropylene trays for reagents

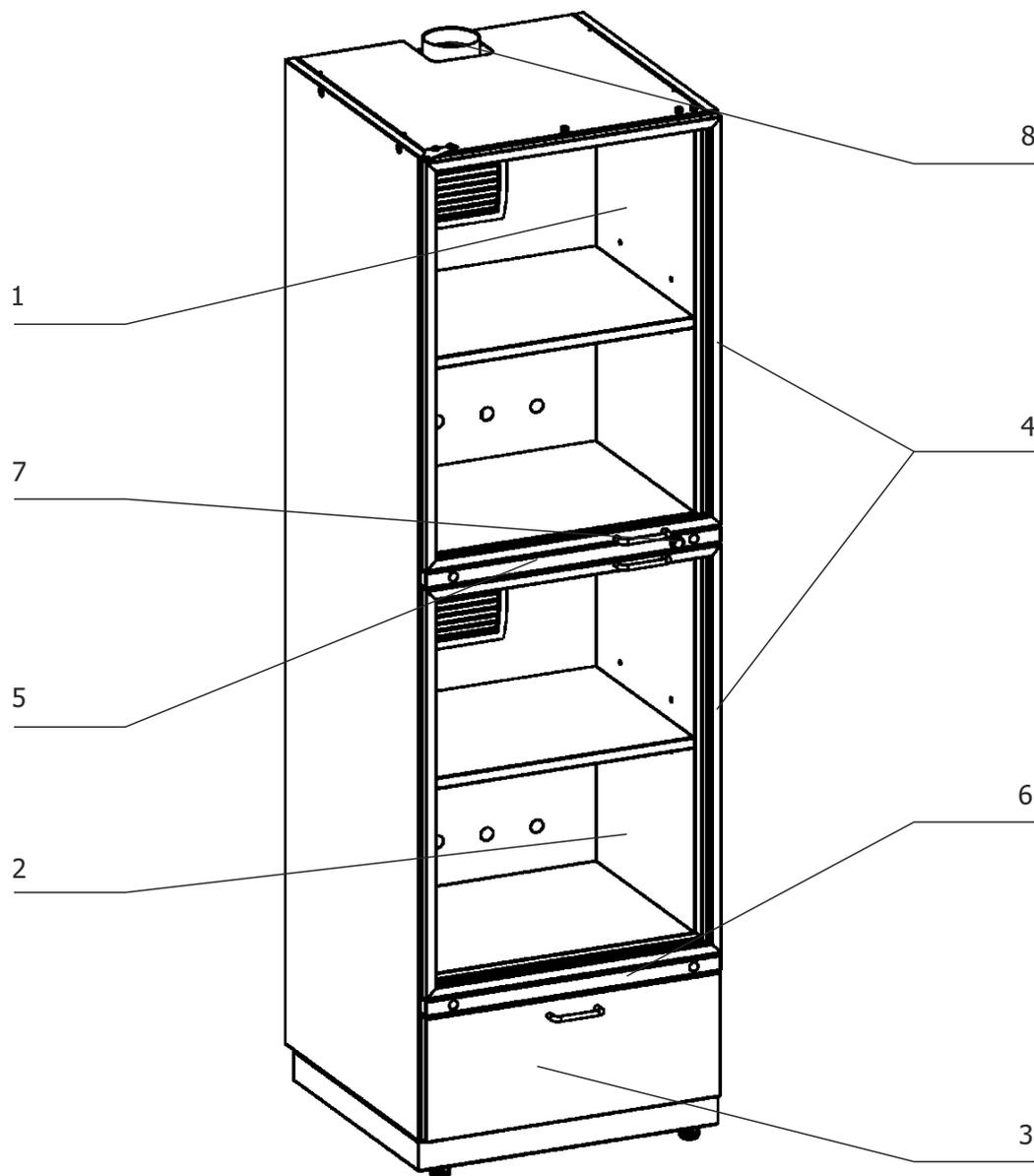
Cabinets for storage of acids and dishes

with glass doors (metal)

e-mail: info@lenlab.ru

+7 (812) 703-01-65

Product assembly and composition



Name	Количество шт.
1 Upper section	1
2 Lower section	1
3 Drawer	1
4 Outer doors	2
5 Central lath	1
6 Lower lath	1
7 Lock	1
8 Flange	1
9 Reagent trays	4

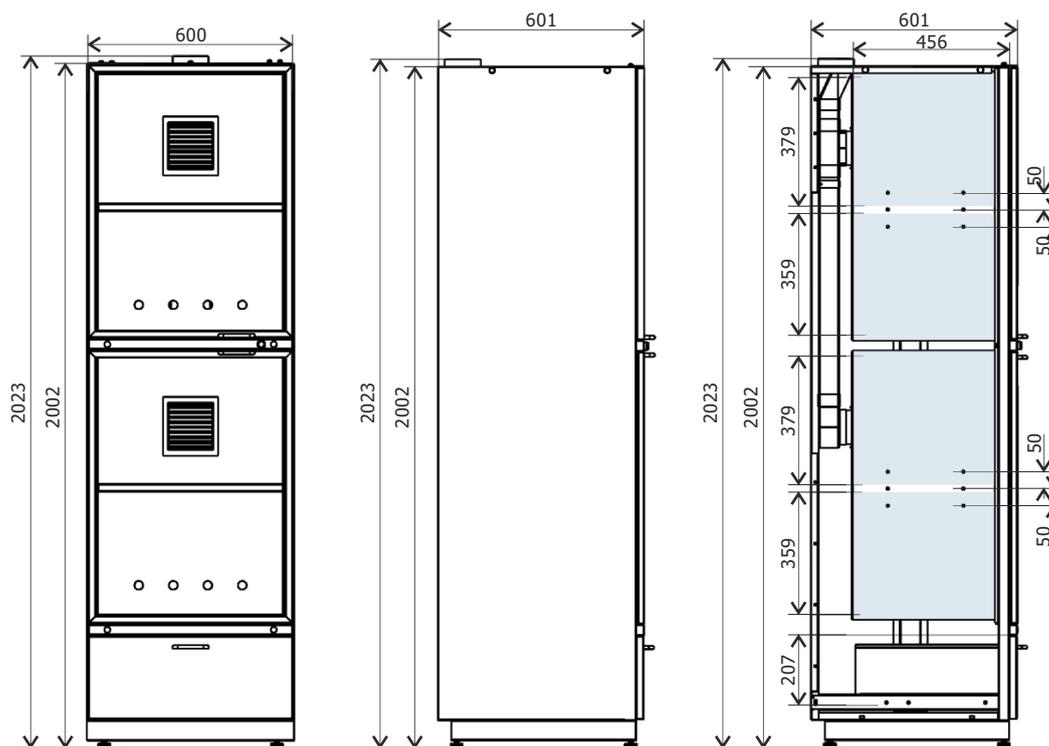
Cabinets for storage of acids and dishes

Saint Petersburg
METALLDESIGN LLC

with glass doors (metal)

Technical characteristics

Cabinets for storage of acids and dishes
with glass doors (metal) 600 x 601 x 2023

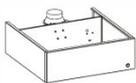


Metal capsules

Characteristic	Values
	Metal
Overall dimensions, mm:	
Length	600
Width	601
Height	2023 (2223*)
Air duct diameter, mm	100
Capsule volume, l	169
Drawer volume, l	36
Weight, kg, no more	105

* - when delivered with a ventilation unit

Additional equipment

	Ventilation unit of storage cabinets	Value	Cat. No.
	Characteristic		540300
	Supply voltage, V	220±10%	
	Rated frequency, Hz	50±5	
	Fan power, W	35	

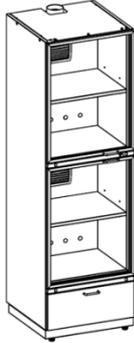
Cabinets for storage of acids and dishes

with glass doors (metal)

e-mail: info@lenlab.ru
+7 (812) 703-01-65



Dimensions

Cabinets for storage of acids and dishes with glass doors						
	Name	Length	Width	Height	Capsule material	Cat. No.
	<p>Cabinets for storage of acids and dishes with glass doors</p>	600 mm	601 mm	2023 mm	Metal	533200

Cabinets for storage of acids and dishes

with combined doors (metal, polyethylene)

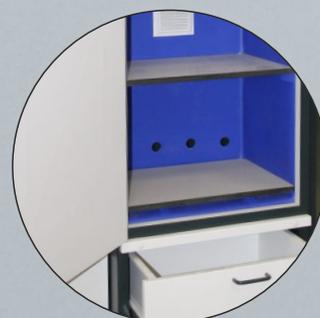
Saint Petersburg
METALLDESIGN LLC



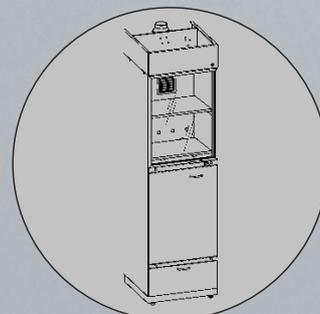
Storage
cabinets



Metal capsules



Polyethylene capsules



Possibility to install a
ventilation unit

Features

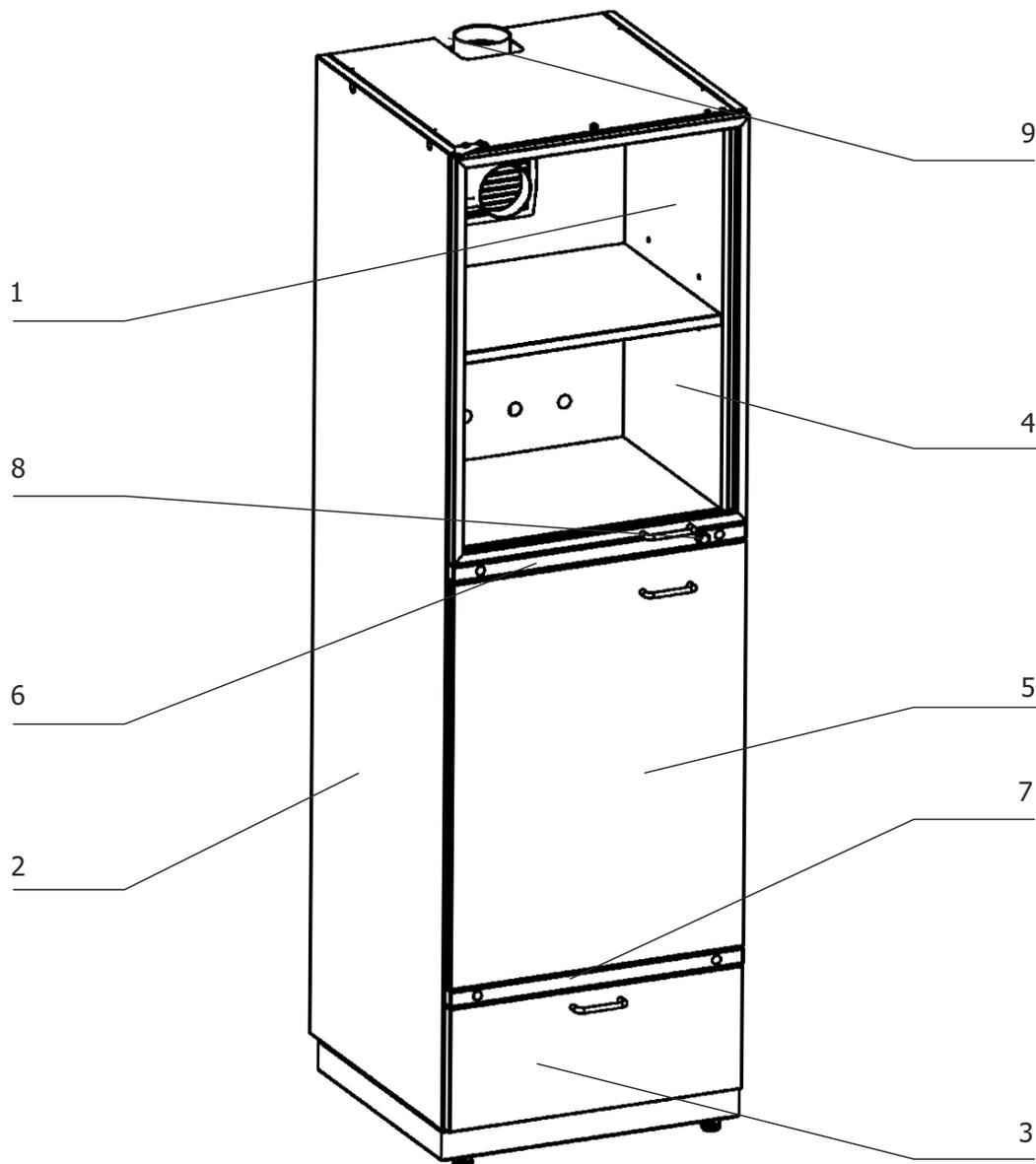
- Metal powder-painted case
- Lockable metal capsules for dishes storage and lockable polyethylene capsules for acids storage
- Drawer to store accessories
- Removable steel doors with sound-absorbing stuffing
- Adjustable supports
- Door hinges outside the storage zone
- Air duct in acid-proof version to arrange exhaust out of the upper and lower capsule
- Possibility to install a ventilation unit
- Four polypropylene trays for reagents

Cabinets for storage of acids and dishes

e-mail: info@lenlab.ru
+7 (812) 703-01-65

with combined doors (metal, polyethylene)

Product assembly and composition



Name	Number of pieces	
	Metal cabinet	Polyethylene cabinet
1 Upper section	1	1
2 Lower section	1	1
3 Drawer	1	1
4 Outer door of glass in aluminum profile	1	1
5 Outer door of steel	1	1
6 Central lath	1	1
7 Lower lath	1	1
8 Lock	1	1
9 Flange	1	1
10 Reagent trays	4	4

Cabinets for storage of acids and dishes

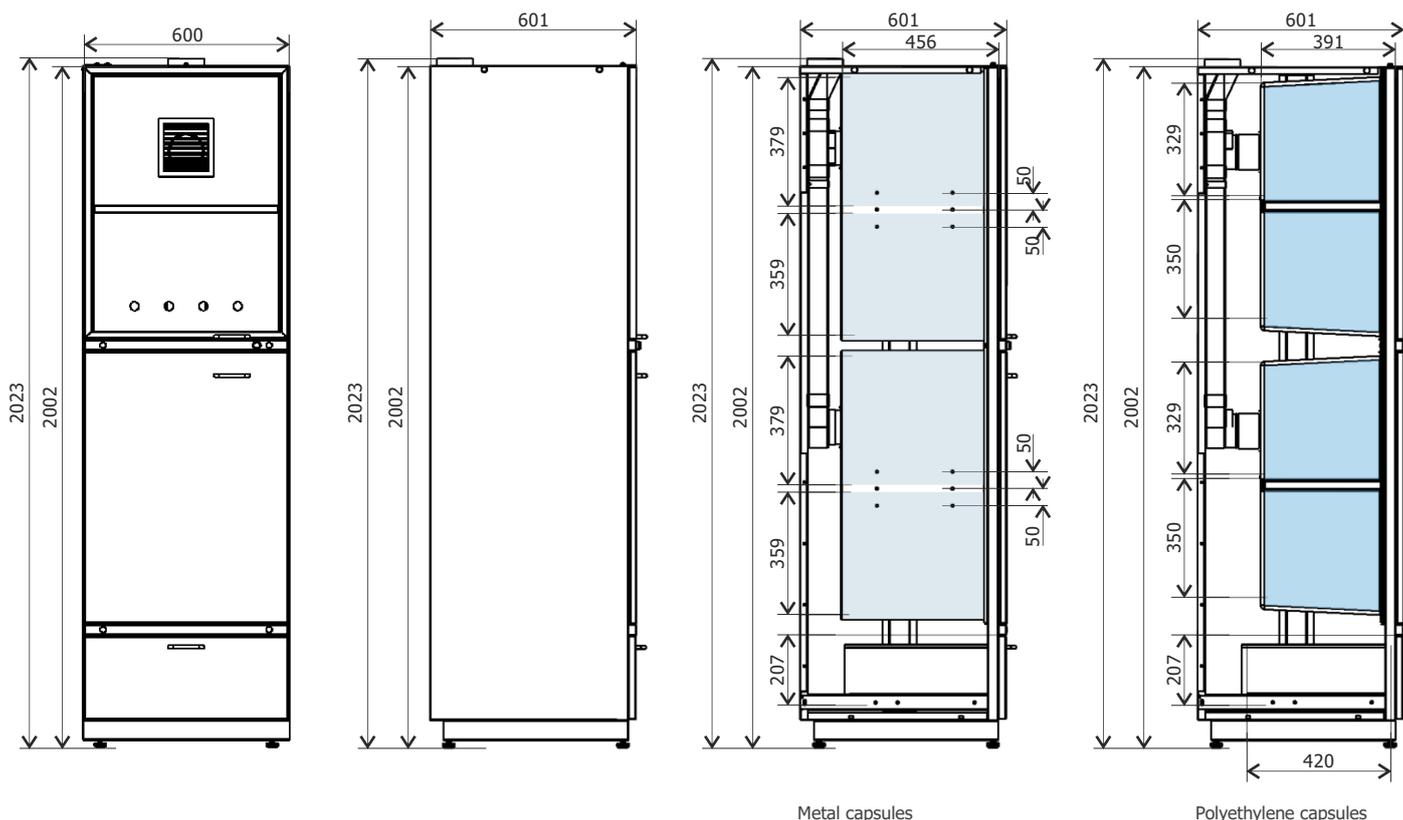
with combined doors (metal, polyethylene)

Saint Petersburg
METALLDESIGN LLC

Technical characteristics

Cabinets for storage of acids and dishes with combined doors (metal, polyethylene)

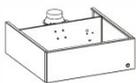
600 x 601 x 2023



Characteristic	Values	
	Metal	Polyethylene
Overall dimensions, mm:		
Length	600	600
Width	601	601
Height	2023 (2223*)	2023 (2223*)
Air duct diameter, mm	100	100
Capsule volume, l	169	105
Drawer volume, l	36	36
Weight, kg, no more	105	105

* - when delivered with a ventilation unit

Additional equipment

	Ventilation unit of storage cabinets	Value	Cat. No.
	Characteristic		540300
	Supply voltage, V	220±10%	
	Rated frequency, Hz	50±5	
	Fan power, W	35	

Cabinets for storage of acids and dishes

with combined doors (metal, polyethylene)

e-mail: info@lenlab.ru
+7 (812) 703-01-65

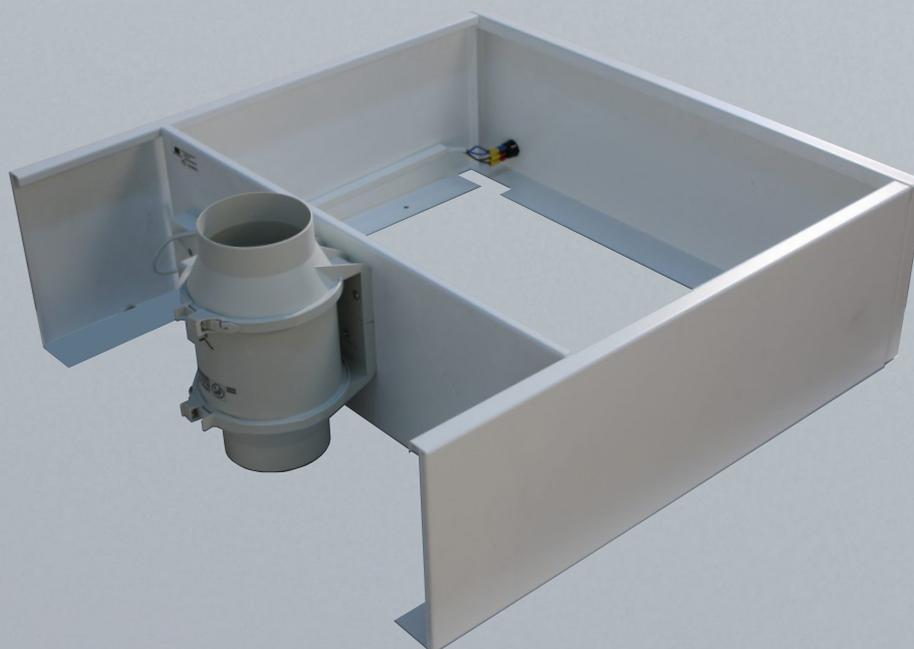


Dimensions

Cabinets for storage of acids and dishes with combined doors (metal, polyethylene)						
	Name	Length	Width	Height	Capsule material	Kat. №
	Metal cabinet, combined, left doors	600 mm	601 mm	2023 mm	Metal	533100
	Metal cabinet, combined, right doors				Metal	533300
	Polyethylene cabinet, combined, left doors				Polyethylene	533500
	Polyethylene cabinet, combined, right doors				Polyethylene	533600



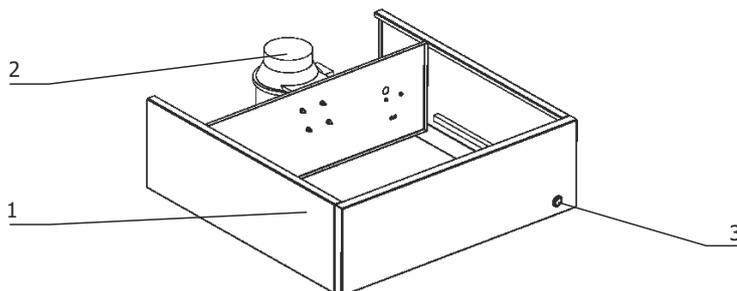
Ventilation unit of storage cabinets



Features

- Designed for ventilation of inner space of acids and dishes storage cabinets
- Metal powder-painted case
- Fan, protection class IP 44

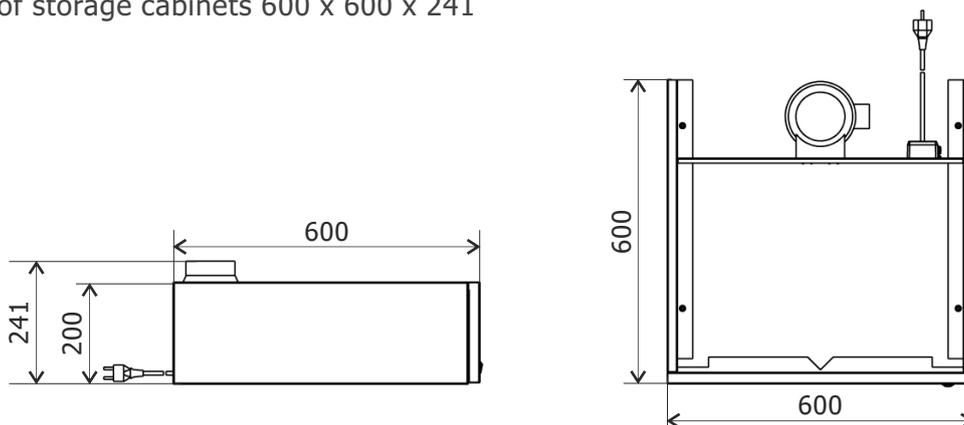
Product assembly and composition



Name	Number of pieces
1 Case	1
2 Fan	1
3 Switch-on button	1

Technical characteristics

Ventilation unit of storage cabinets 600 x 600 x 241



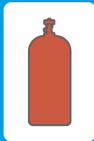
Ventilation unit of storage cabinets	
Characteristic	Value
Overall dimensions, mm:	
Length	600
Width	600
Height	241
Supply voltage, V	220±10%
Rated frequency, Hz	50±5
Fan power, W	35
Noise level, dB	No more than 18
Fan delivery, cbm/hour	160

Dimensions

Ventilation unit of storage cabinets						
	Name	Length	Width	Height	Material	Cat. No.
	Ventilation unit of storage cabinets	600 mm	600 mm	241 mm	Metal	540300



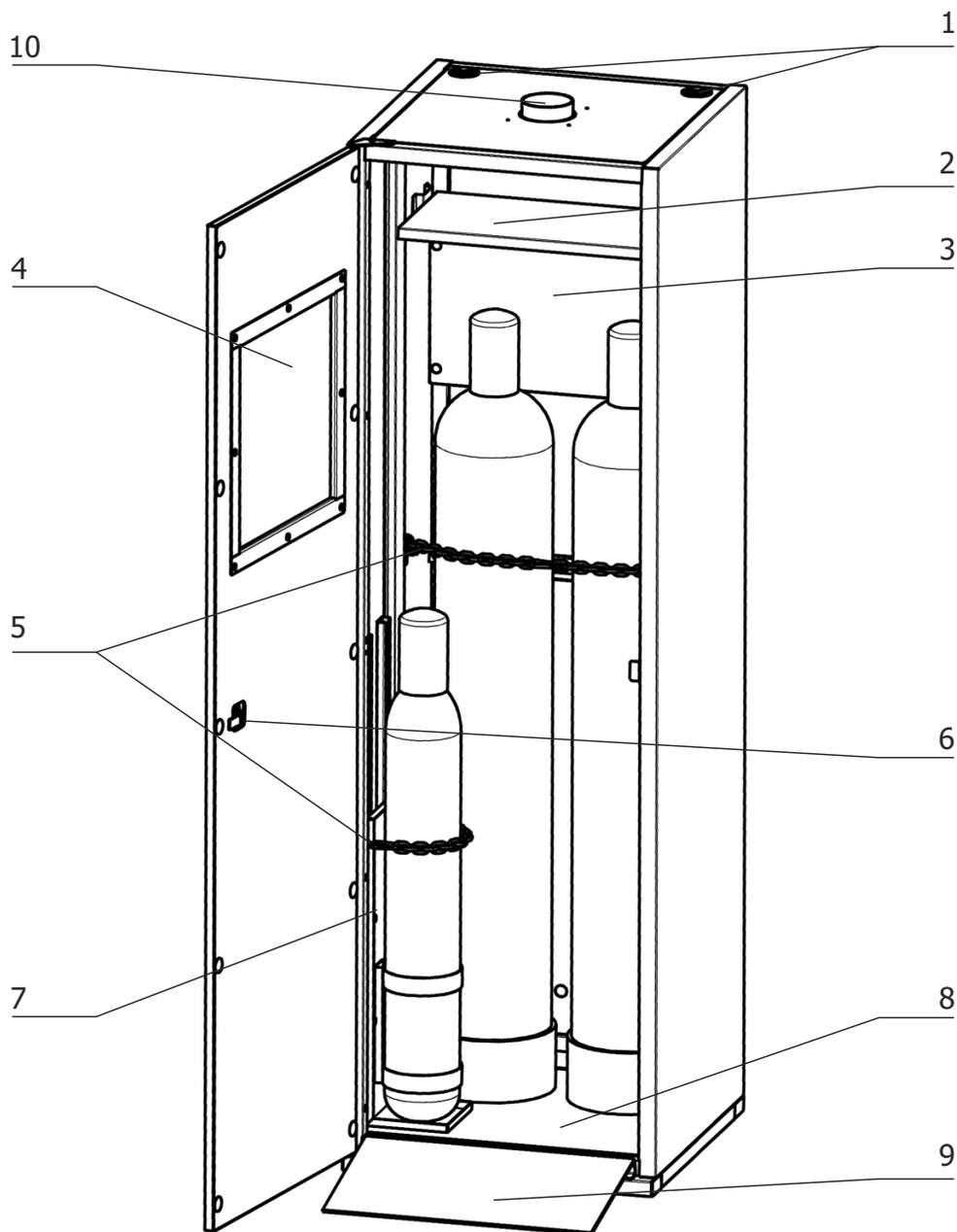
Storage
cabinets



Features

- Metal powder-painted case
- Designed for storage of gas bottles according to GOST 949-73 in laboratory rooms
- Key-lockable door
- Bottle fastening with a spring-hook chain
- Holder to fasten a small-capacity bottle
- Ramp to facilitate putting of bottles
- Maximum capacity 2 bottles of 40-50 liters and one bottle of 16 liters
- Branch pipe of 100 mm for connecting to ventilation
- Hardened glass inspection window
- Opening in the cover to pass pipelines
- Shelf to store keys and reducers

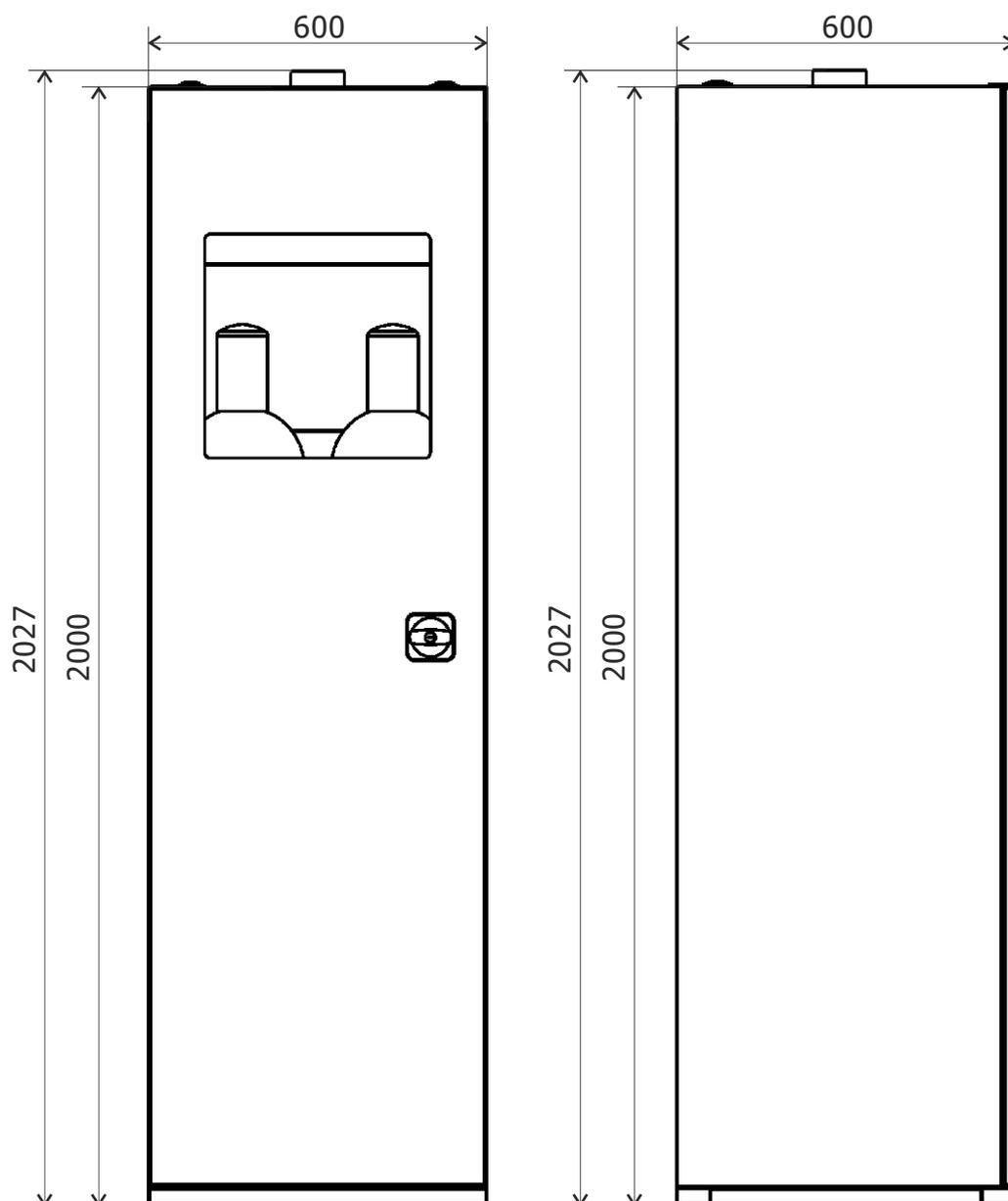
Product assembly and composition



Name	Number of pieces
	Polyethylene cabinet
1 Opening to pass pipelines	2
2 Shelf to place installation tool	1
3 Panel	1
4 Inspection window	1
5 Bottle fastening with a spring-hook chain	2
6 Lock	1
7 Holder to fasten small-capacity bottles with height adjustment	1
8 Reinforced bottom	1
9 Ramp to facilitate putting of bottles	1
10 Ventilation branch pipe	1

Technical characteristics

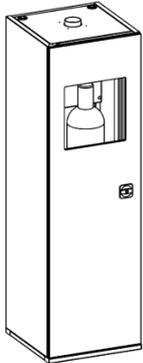
Cabinets for storage of gas bottles 600 x 600 x 2027



Characteristic	Value
Overall dimensions, mm:	
Length	600
Width	600
Height	2027
Ventilation branch pipe diameter, mm	100
Weight, kg, no more	106



Dimensions

Cabinet for storage of gas bottles						
	Name	Length	Width	Height	Case material	Cat. No.
	Cabinet for storage of gas bottles	600 mm	600 mm	2027 mm	Metal	533900

Cabinets for storage of laboratory accessories (metal small cabinet)

Saint Petersburg
METALLDESIGN LLC



Inner part – metal

Storage
cabinets



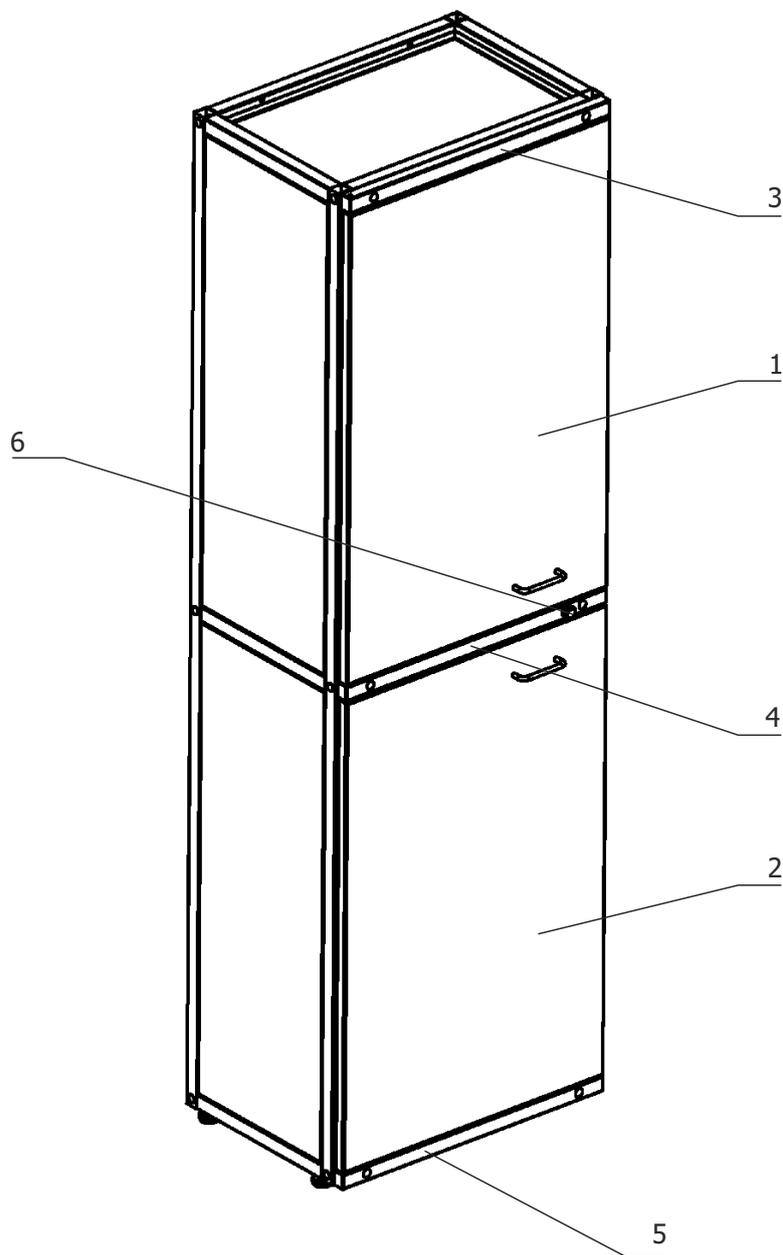
Features

- Designed for storage of documents, books, dishes, and devices
- Distance between shelves can be changed from 205 to 500 mm with a 75 mm step
- Wall fastening is provided to avoid an overthrow
- Possibility is provided to rearrange doors to be opened to the right or left
- Metal powder-painted case
- Key-lockable doors
- Structure is not designed for connecting to ventilation

Cabinets for storage of laboratory accessories (metal small cabinet)

e-mail: info@lenlab.ru
+7 (812) 703-01-65

Product assembly and composition



Name	Number of pieces
1 Upper door	1
2 Lower door	1
3 Upper lath	1
4 Central lath	1
5 Lower lath	1
6 Lock	1

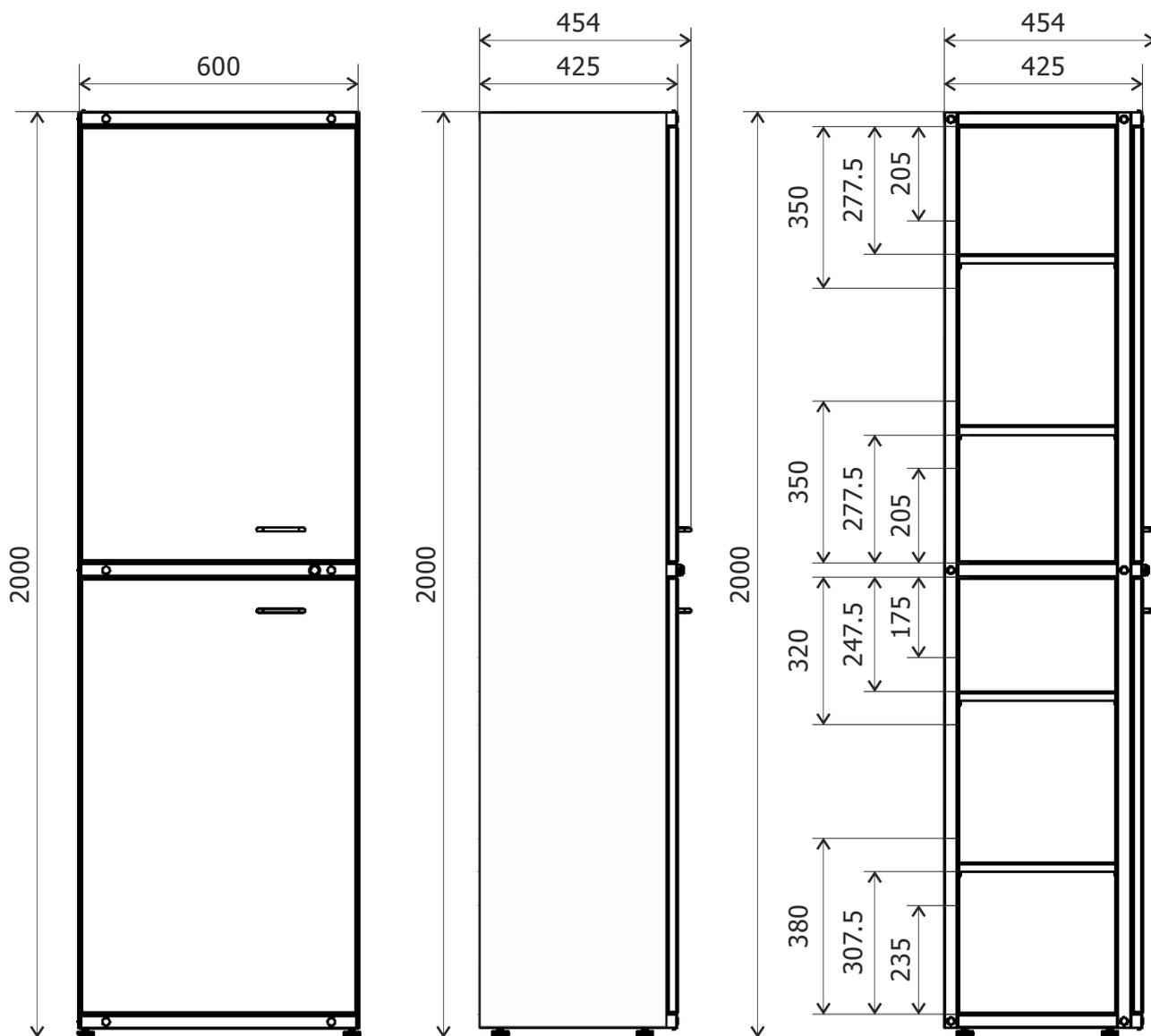
Cabinets for storage of laboratory accessories (metal small cabinet)

Saint Petersburg
METALLDESIGN LLC

Technical characteristics

Cabinets for storage of laboratory accessories

(metal small cabinet) 600 x 425 x 2000



Characteristic	Value
Overall dimensions, mm:	
Length	600
Width	425
Height	2000
Weight, kg, no more	95

Cabinets for storage of laboratory accessories (metal small cabinet)

e-mail: info@lenlab.ru
+7 (812) 703-01-65



Dimensions

Cabinets for storage of laboratory accessories (metal small)						
	Name	Length	Width	Height	Material of shelves	Cat. No.
	<p>Cabinets for storage of laboratory accessories (metal small)</p>	600 mm	425 mm	2000 mm	Metal	333400

Cabinets for storage of laboratory accessories (small cabinet for dishes)

Saint Petersburg
METALLDESIGN LLC



Inner part – metal

Storage cabinets



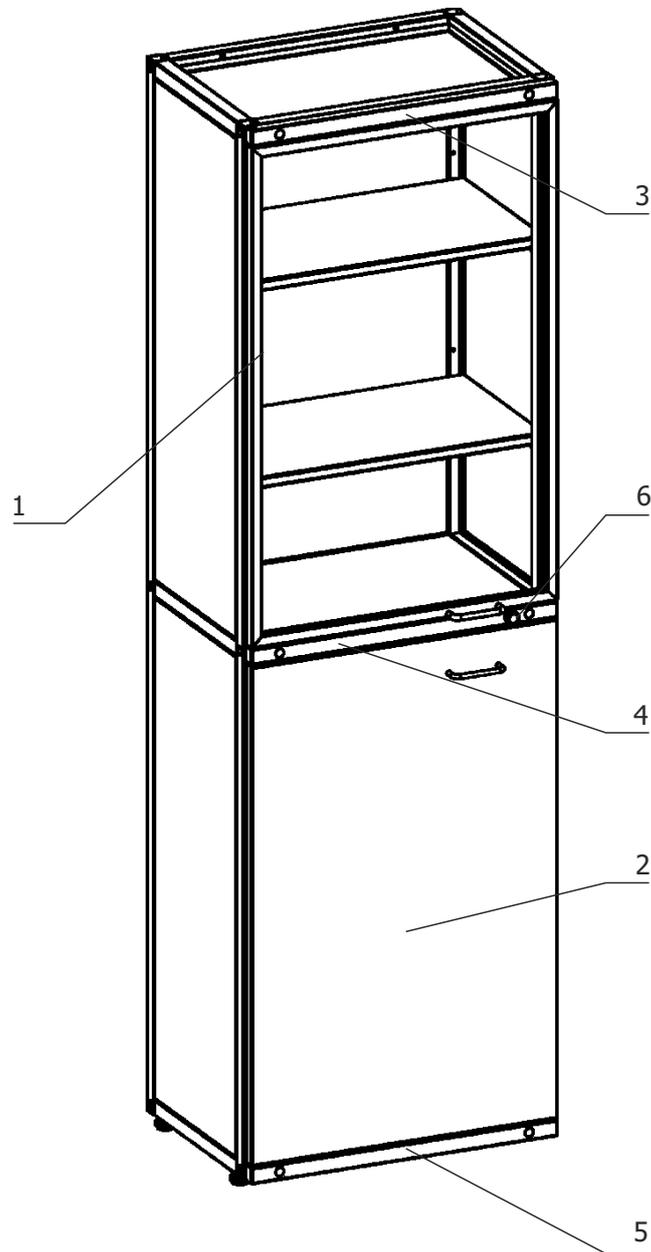
Features

- Designed for storage of documents, books, dishes, and devices
- Distance between shelves can be changed from 205 to 500 mm with a 75 mm step
- Wall fastening is provided to avoid an overthrow
- Possibility is provided to rearrange doors to be opened to the right or left
- Metal powder-painted case
- Key-lockable doors
- Structure is not designed for connecting to ventilation

Cabinets for storage of laboratory accessories (small cabinet for dishes)

e-mail: info@lenlab.ru
+7 (812) 703-01-65

Product assembly and composition



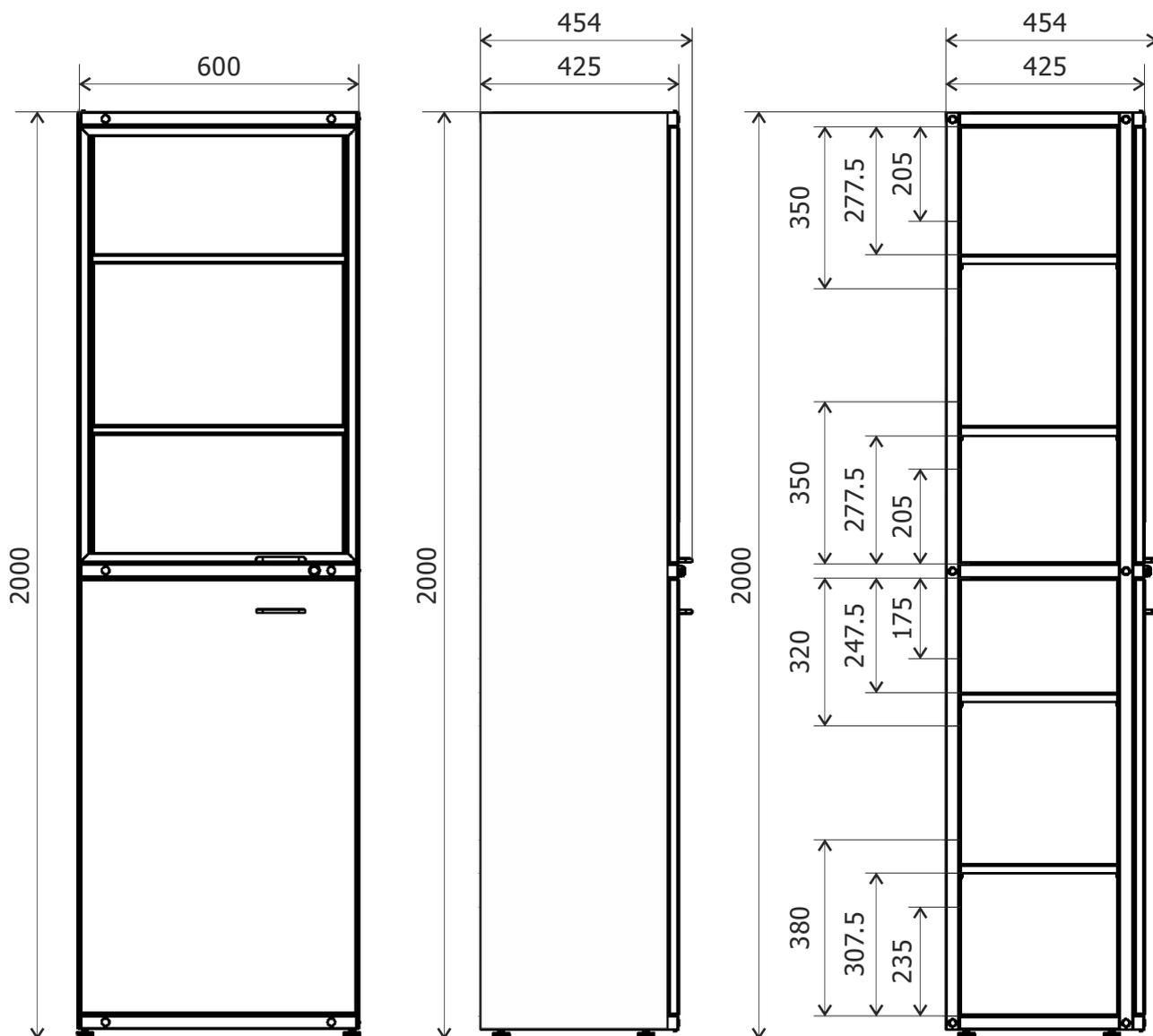
Name	Number of pieces
1 Upper door	1
2 Lower door	1
3 Upper lath	1
4 Central lath	1
5 Lower lath	1
6 Lock	1

Cabinets for storage of laboratory accessories (small cabinet for dishes)

Saint Petersburg
METALLDESIGN LLC

Technical characteristics

Cabinets for storage of laboratory accessories
(small cabinet for dishes) 600 x 425 x 2000



Characteristic	Value
Overall dimensions, mm:	
Length	600
Width	425
Height	2000
Weight, kg, no more	95

Cabinets for storage of laboratory accessories (small cabinet for dishes)

e-mail: info@lenlab.ru
+7 (812) 703-01-65

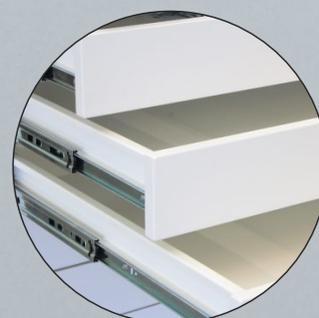


Dimensions

Cabinets for storage of laboratory accessories (small cabinet for dishes)						
	Name	Length	Width	Height	Material of shelves	Cat. No.
	<p>Cabinets for storage of laboratory accessories (small cabinet for dishes)</p>	600	425 mm	2000 mm	Metal	333200



Inner part – metal



Metal drawers

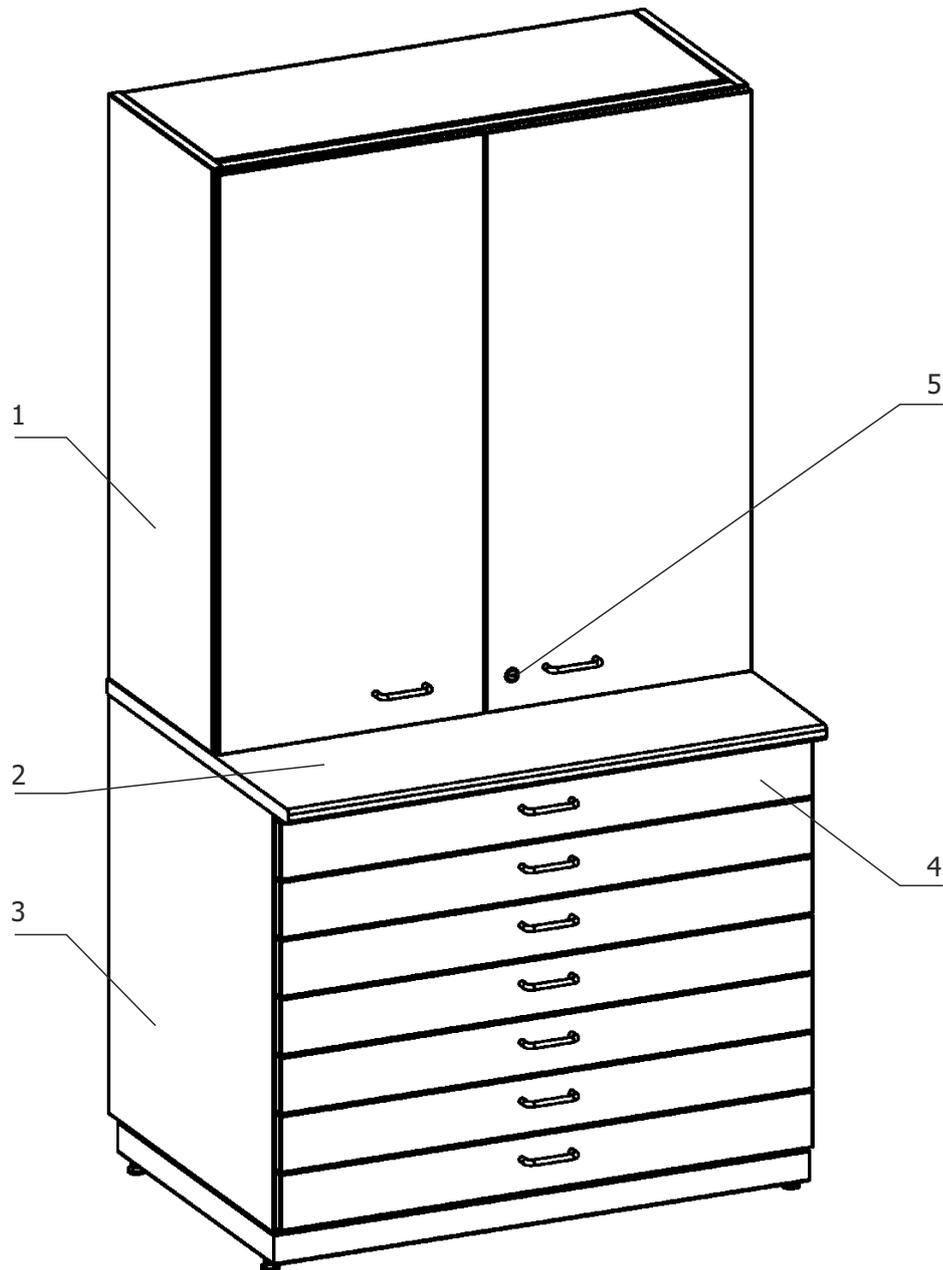
Storage
cabinets



Features

- Designed for storage of tables and devices
- Upper section with four removable shelves and lockable doors
- Lower section with seven voluminous drawers allowing to store A1 format tables
- Metal powder-painted case
- Structure is not designed for connecting to ventilation

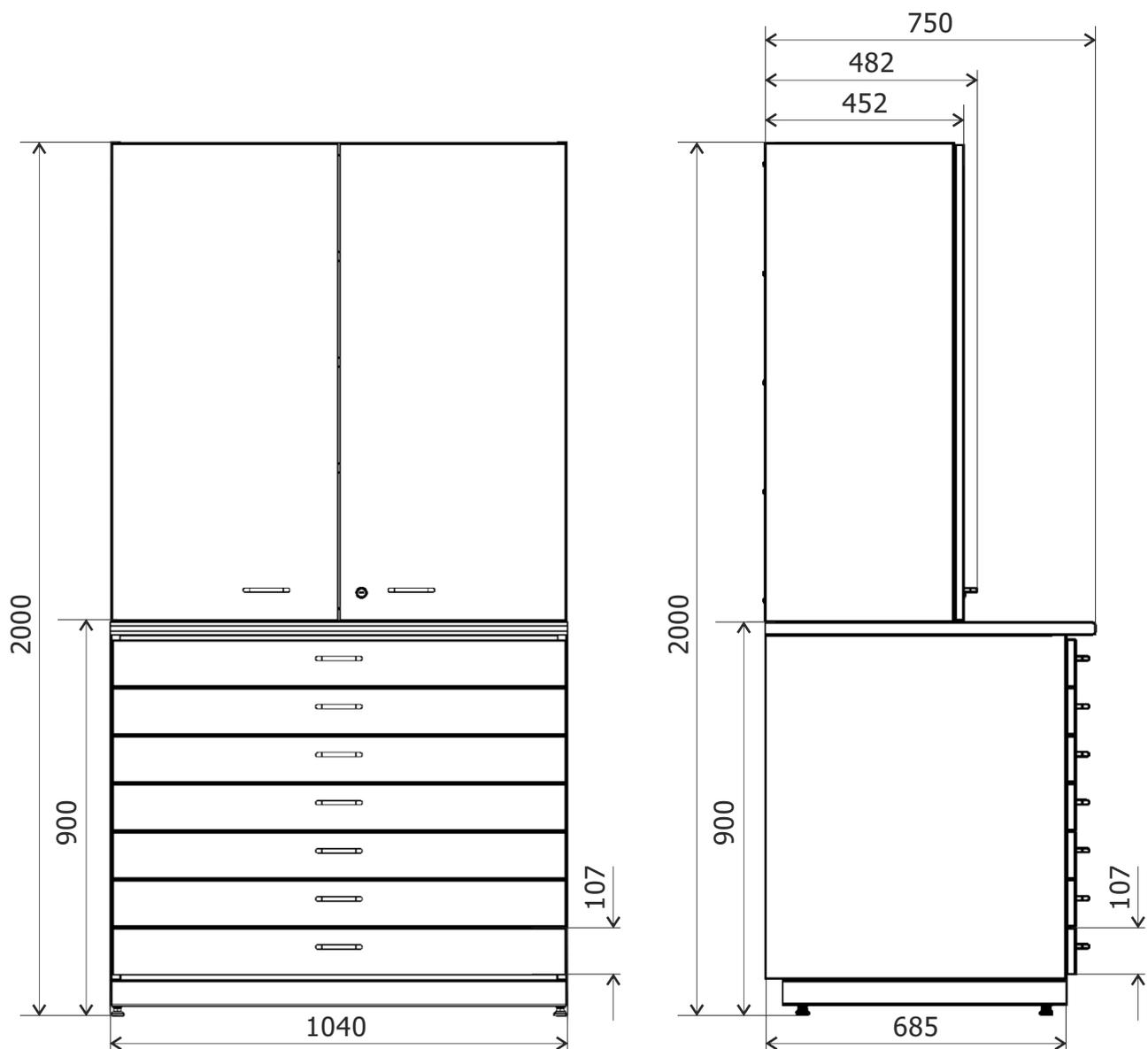
Product assembly and composition



Name	Number of pieces
1 Upper cabinet	1
2 Table top	1
3 Drawer pedestal	1
4 Drawer	7
5 Lock	1

Technical characteristics

Cabinets for laboratory accessories 1040 x 750 x 2000



Characteristic	Value
Overall dimensions, mm:	
Length	1040
Width	750
Height	2000
Weight, kg, no more	190



Dimensions

Cabinets for laboratory accessories						
	Name	Length	Width	Height	Table top material	Cat. No.
	Cabinets for laboratory accessories	1040 mm	750 mm	2000 mm	Laminate	633800



Metal drawers

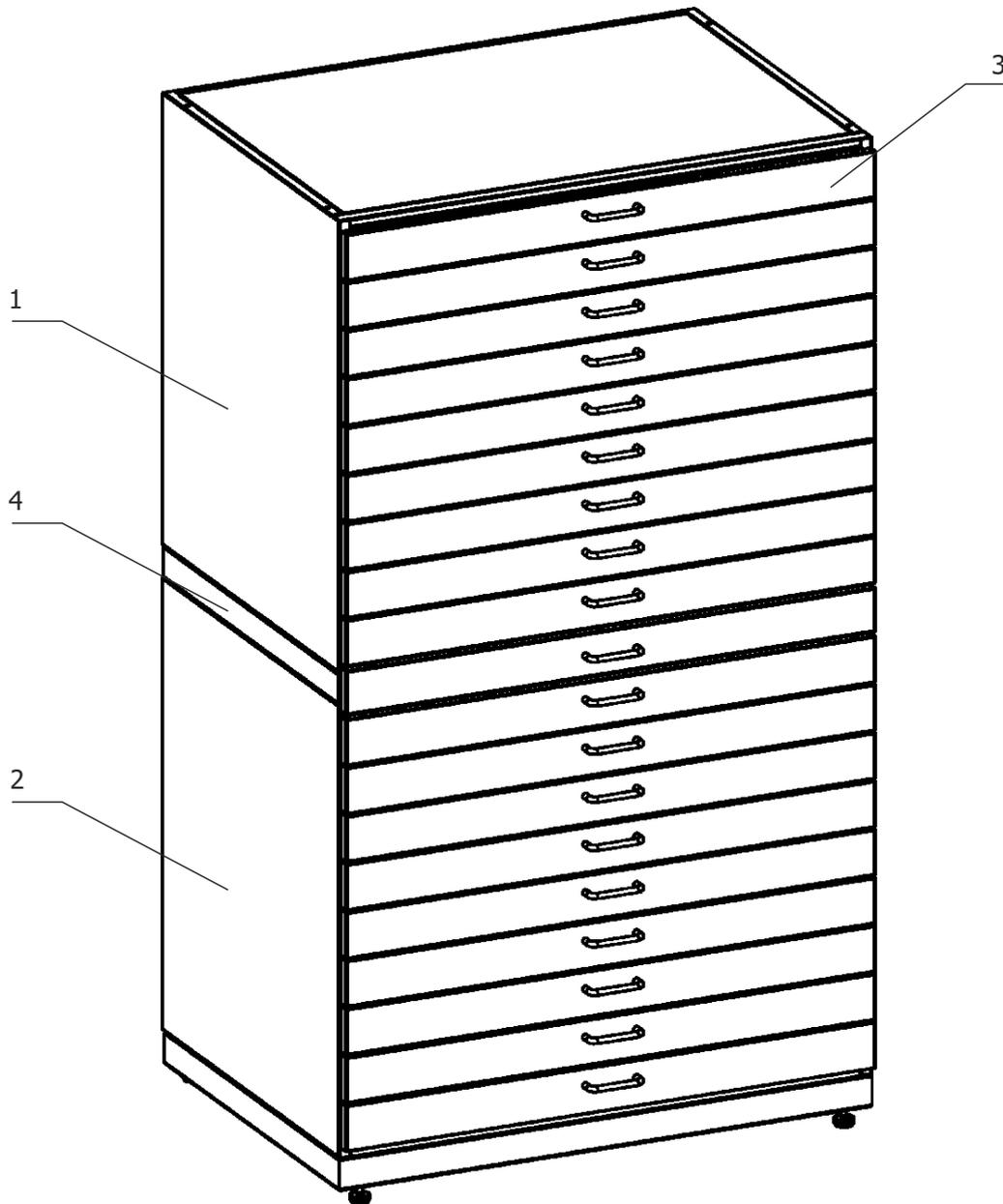
Storage
cabinets



Features

- Designed for storage of tables and devices
- Two sections with nine drawers each, separated by the middle section with a removable shelf
- Format of drawers allows to store A1 format drawings in the unfolded form
- Metal powder-painted case
- Structure is not designed for connecting to ventilation

Product assembly and composition



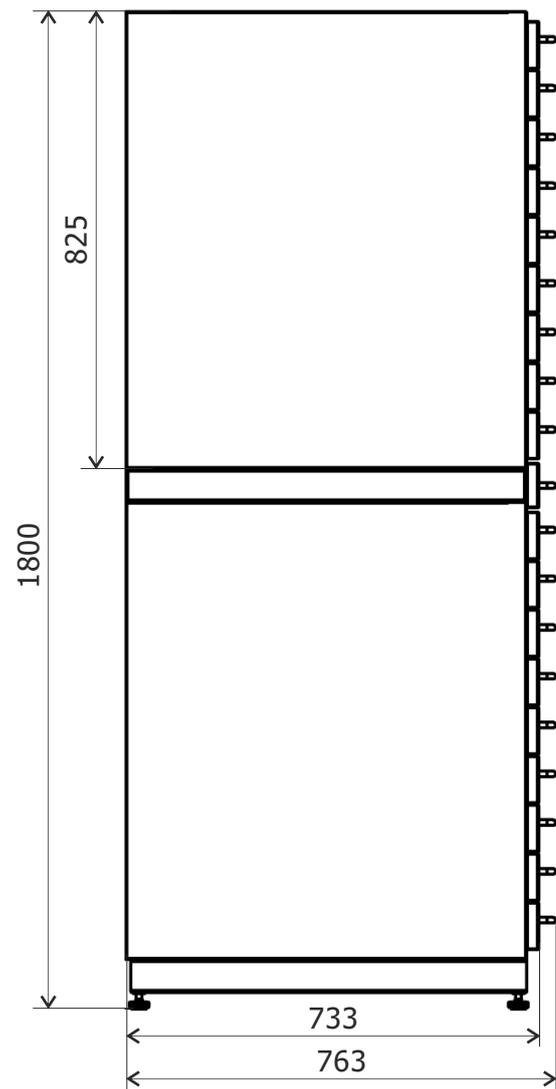
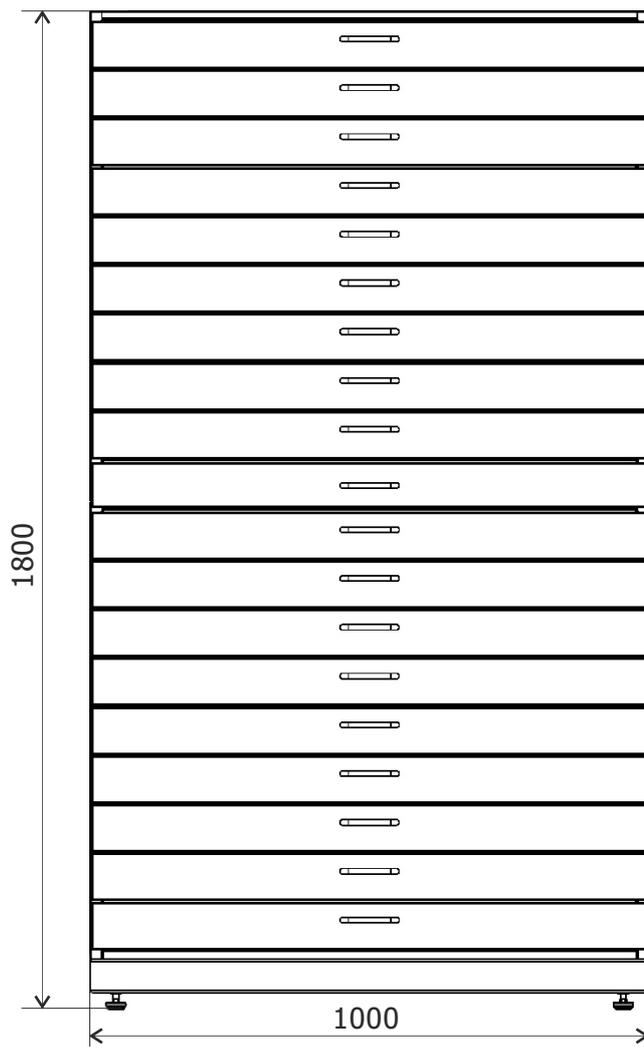
Name	Number of pieces
1 Pedestal with a spacer	1
2 Pedestal with a socle	1
3 Drawer	18
4 Section with a drawer shelf	1

Archival cabinet

Saint Petersburg
METALLDESIGN LLC

Technical characteristics

Archival cabinets 1000 x 733 x 1800



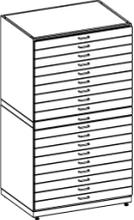
Characteristic	Value
Overall dimensions, mm:	
Length	1000
Width	733
Height	1800
Weight, kg, no more	290

Archival cabinet

e-mail: info@lenlab.ru
+7 (812) 703-01-65



Dimensions

Archival cabinets					
	Name	Length	Width	Height	Cat. No.
	Archival cabinets	1000 mm	733 mm	1800 mm	533800



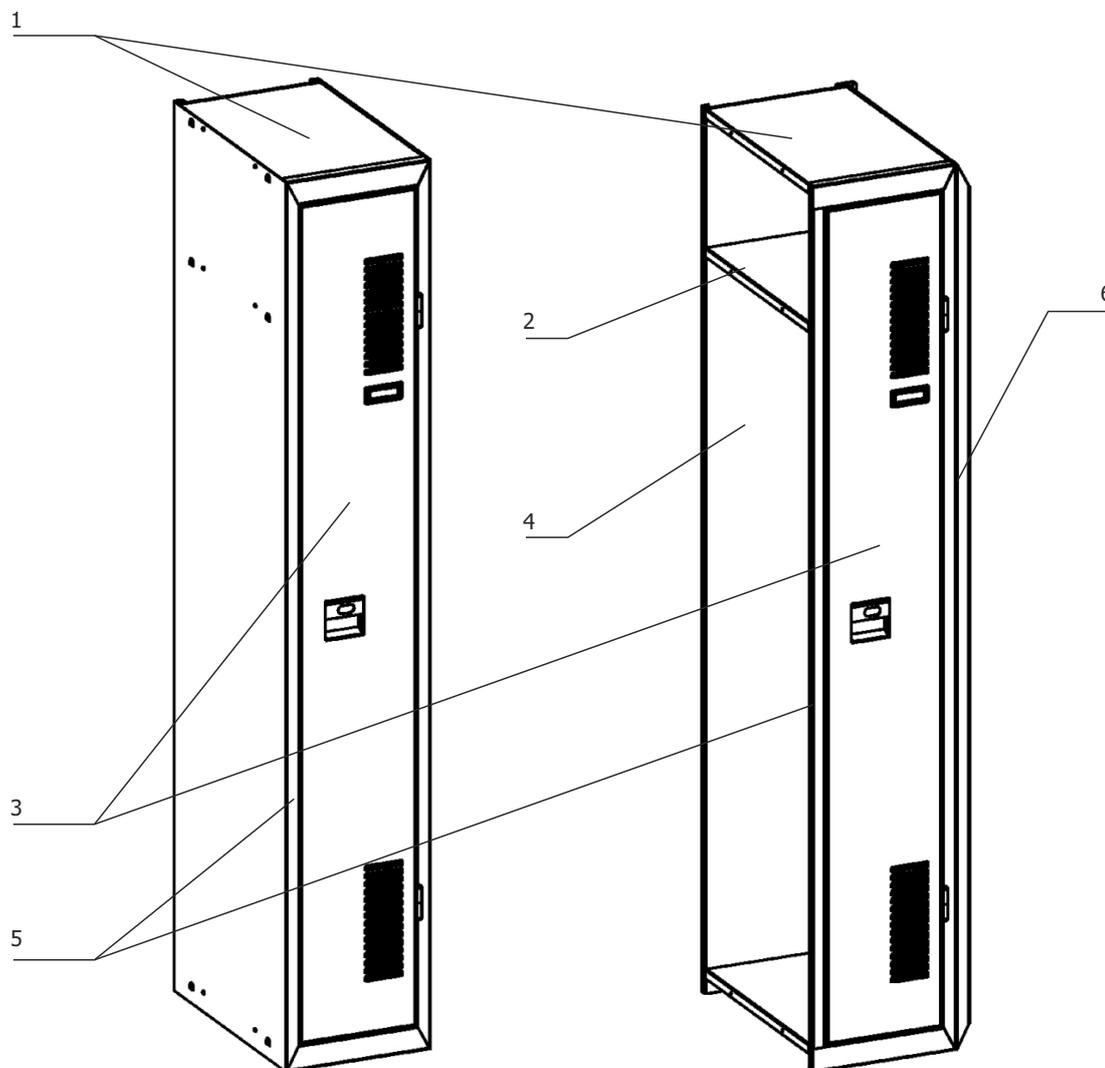
Storage
cabinets



Features

- Main section of the clothing cabinet
- Additional section of the clothing cabinet supplements the main section and allows to create a clothing cabinet with any number of sections

Product assembly and composition



Clothing cabinet

Additional section of the clothing cabinet

Name	Number of pieces	
	Clothing cabinet	Additional section of the clothing cabinet
1 Cover	1	1
2 Shelf	1	1
3 Door	1	1
4 Rear wall	1	1
5 Frame	1	1
6 Intermediate wall	-	1

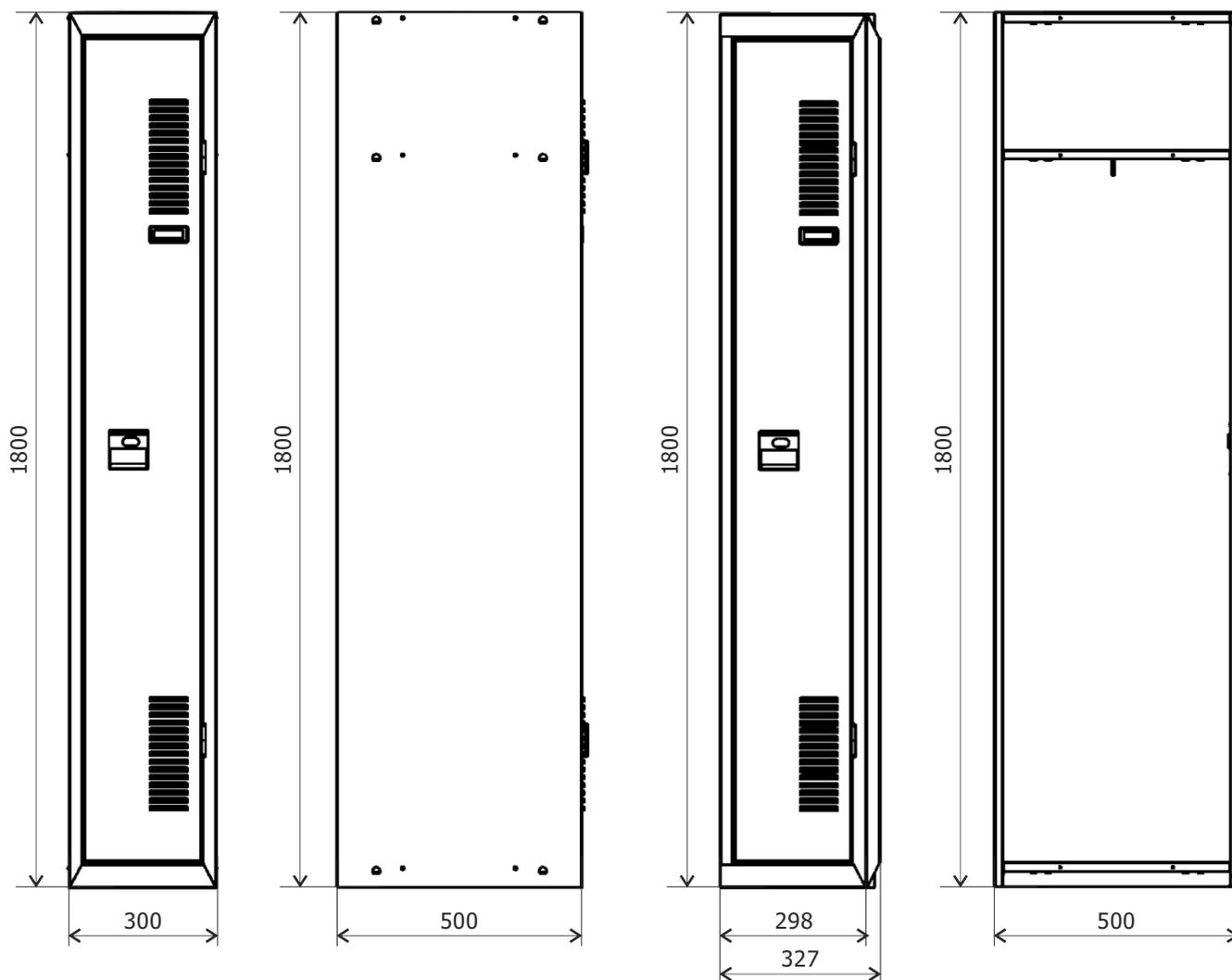
Clothing cabinet

Saint Petersburg
METALLDESIGN LLC

Technical characteristics

Clothing cabinet 300 x 500 x 1800,

additional section of the clothing cabinet 327x500x1800



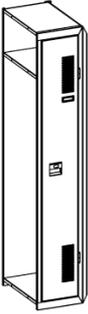
Clothing cabinet

Additional section of the clothing cabinet

Characteristic	Value	
	Clothing cabinet	Additional section of the clothing cabinet
Overall dimensions, mm:		
Length	300	327
Width	500	500
Height	1800	1800
Weight, kg, no more	30	30



Dimensions

Clothing cabinet, additional section of the clothing cabinet						
	Name	Length	Width	Height	Working zone	Cat. No.
	Clothing cabinets	300mm	500mm	1800mm	Metal	633000
	Additional section of the clothing cabinet	327mm	500mm	1800mm	Metal	633001

Scrubber



Tank material – glass composite on basis of bisphenol epoxy-vinyl-etheral resin DION 9700

Features

- Scrubber is designed for recovery acids vapor in the air flow coming out of exhaust hoods in laboratories
- Scrubber operating principle is based on acid vapor absorption by sodium carbonate solution (technical soda)
- Scrubber consists of a base and a cylinder case with a cover made of polypropylene

Operating principle

e-mail: info@lenlab.ru
+7 (812) 703-01-65



The scrubber is designed for recovery acids vapor in the air flow coming out of exhaust hoods in laboratories.

The scrubber operating principle is based on acid vapor absorption by sodium carbonate solution (technical soda). Air containing acid vapor comes to the scrubber lower part and passes through an array of irrigated packings of ceramic acid-resistant rings. As a result of a mass exchange in the film generated on the surface of the rings, acid goes over to the water phase where it is neutralized by soda. Cleaned air passes through a mist eliminator and is removed by a fan of the laboratory exhaust ventilation system. To irrigate the packings, 'sprayers' are used, through which absorbing solution is constantly delivered by means of a centrifugal pump. Acidity of solution absorbed is controlled with a pH meter. Absorbing solution is poured into the scrubber tank, in

which the fluid level is maintained by water entry from the water pipeline.

Spent absorbing solution contains acid salts (nitrates, chlorides, sulfates, hypochlorites etc.) and a soda excess, so it doesn't endanger the sewerage systems (alkaline medium). The interval of replacement of solution in the scrubber tank (or soda addition into it) is determined by the quantity of acids evaporated in the laboratory.

The scrubber consists of a base and a cylinder case with a cover that are made of polypropylene. The base constitutes a metal pedestal in which a fiberglass plastic tank with two air ducts, a pump, and a piping system are mounted. At the front end of the base there are a pH controller, a network power switch, and a differential automaton.



Inside the cylinder case there is a packing consisting of randomly heaped ceramic rings lying on a plastic grid. The packing is irrigated with absorbing solution through the 'sprayers'. The packing upper part is covered with a mist eliminator. On the rear wall of the scrubber base, a polyethylene tank is fastened, which is fitted out with a float valve. By means of that device, the scrubber tank is filled with water from the water pipeline and a constant absorbing fluid level in the scrubber is maintained.

The scrubber can be mounted in any place in the laboratory or in auxiliary rooms fitted out with ventilation system, water pipeline, and sewerage. The minimum distance from the scrubber rear wall to the room wall is 0.5-0.6 m.

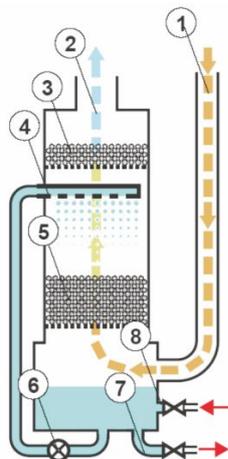
The scrubber is connected to water pipeline by means of flexible piping. The water supply line must have a shutoff valve without fail at that.

To drain fluid, the scrubber connected to the sewerage with plastic sewer pipes with the diameter of 40 mm.

Ventilation pipes from exhaust hoods are connected to one of lower air ducts of the scrubber. Depending on the scrubber position relative to exhaust hoods, either the left or the right air duct is used. The air duct not in use is closed up with a cover and serves for feeding absorbing solution.

The ventilation pipe is connected to the upper branch pipe of the scrubber. At that the connection must provide for a possibility to periodically control the state of 'sprayers'.

Scrubber action diagram



1. Air mixture entering from the exhaust hood
2. Cleaned air exit to the ventilation
3. Fender
4. 'Sprayers'
5. Ceramic packing
6. Acid-resistant pump
7. Discharge liquid outlet
8. Tap water delivery

Scrubber operation features

Influence of the evaporated acid quantity on the scrubber recovery degree (by the example of aqua regia). Air consumption 1700 cbm per hour

No.	Acid evaporated		Acid concentration in air g-e/cbm	Recovery degree, %
	l/h	g-e (gram-equivalent)/h		
1	0,4	5,5	0,0032	94
2	0,78	10,7	0,0063	96
3	1,1	15,7	0,0090	80
4	1,5	20,8	0,0122	76

A maximum possible quantity of acid at an air consumption equal to 1700 cbm/hour must not exceed 0.8 l/hour or 6.4 l for 8 hours (a workday). In that case, the scrubber efficiency is the most (recovery degree is 94-96%). With increasing the evaporated acid quantity up to 8 l and more for a workday, the recovery degree falls down to 75-80%.

The influence of the air consumption on the scrubber recovery degree (by the example of aqua regia). The evaporated acid quantity 10.3 gram-equivalent/hour (0.8 l/hour)

No.	Air consumption cbm/hour	Acid concentration in air g-e/cbm	Recovery degree, %
1	1700	0,0060	96
2	1200	0,0090	74
3	800	0,0137	66

With decreasing the air consumption coming through the exhaust hood with the same evaporated acid quantity, the recovery degree falls. This is related to the increase of the acid concentration in air (from 0.0060 to 0.0137 gram-equivalent per cbm). At that the packing height is not enough, so a 'breakthrough' occurs. In addition, with a loss of air speed (as a result of the consumption decrease), the mass exchange (acid absorption by solution) deteriorates. Thus, the scrubber air consumption must be 1500-1700 cbm per hour.

Influence of the acid evaporation uniformity on the scrubber recovery degree (by the example of aqua regia).

When evaporating acid, a danger of a 'volley' emission exists. It happens when acid or aqua regia is heated. In that case, at the initial moment (first several minutes) an intensive emission of dissolved gases occurs: hydrogen chloride, chlorine and nitric oxides.

In other words, if many samples with the above-listed acids are placed into the exhaust hood and heated (but not brought to boil), so liberated gases will 'break through' the packing, being only absorbed in part.

No.	Heating duration, min	Acid evaporated, g-e	Acid concentration in air g-e/cbm	Recovery degree, %
1	5	3,3	0,0232	45
2	10	1,7	0,0060	92
3	20	2,6	0,0046	92

containing acids, simultaneous fast heating of more than 0.5 l of acids should be avoided. It is enough to sequentially heat 0.5 l of each acid during 3-4 minutes, after which all samples can be boiled for any period of time. In that case, the scrubber recovery degree will not be less than 92%.

The more uniform acid is evaporated the higher is the recovery degree. When working with halogen

Dependence of the scrubber hydraulic resistance on the air consumption

No.	Hydraulic resistance, Pa	Air consumption, cbm/hour
1	100	550
2	200	830
3	400	1170
4	600	1430
5	800	1650
6	1000	1850

This will be the actual air consumption when the SMRT2/200 fan operates with the scrubber.

The scrubber resistance with an air consumption equal to approximately 1800 cbm/hour is 1000 Pa (102 mm water column). A calculation of the scrubber resistance at 2000 cbm/hour (if trying to connect three exhaust hoods with the width of 1505 mm) leads to the figure 1164 Pa. It is impossible to select a fan from the group of acid-resistant fans (for example SMRT) for such air consumption and pressure differential.

The dependence of the scrubber hydraulic resistance (Pa) on the air consumption (cbm/sec) can be calculated using the formula 1: $\Delta p = 3775 W^2$

Thus, this scrubber can be efficiently used for work with two exhaust hoods with the width of 1505 mm and three ones with the width of 1205 mm. The maximum air consumption will be 1700 cbm/hour. With an allowance for losses at bends, narrow spots etc in a real laboratory, the air consumption will be 1500-1600 cbm/hour. It should be emphasized that trying to increase the air consumption leads to an abrupt rise of the hydraulic resistance (see Formula 1).

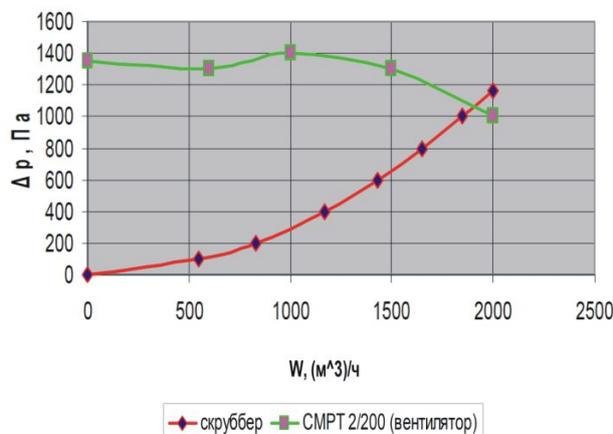
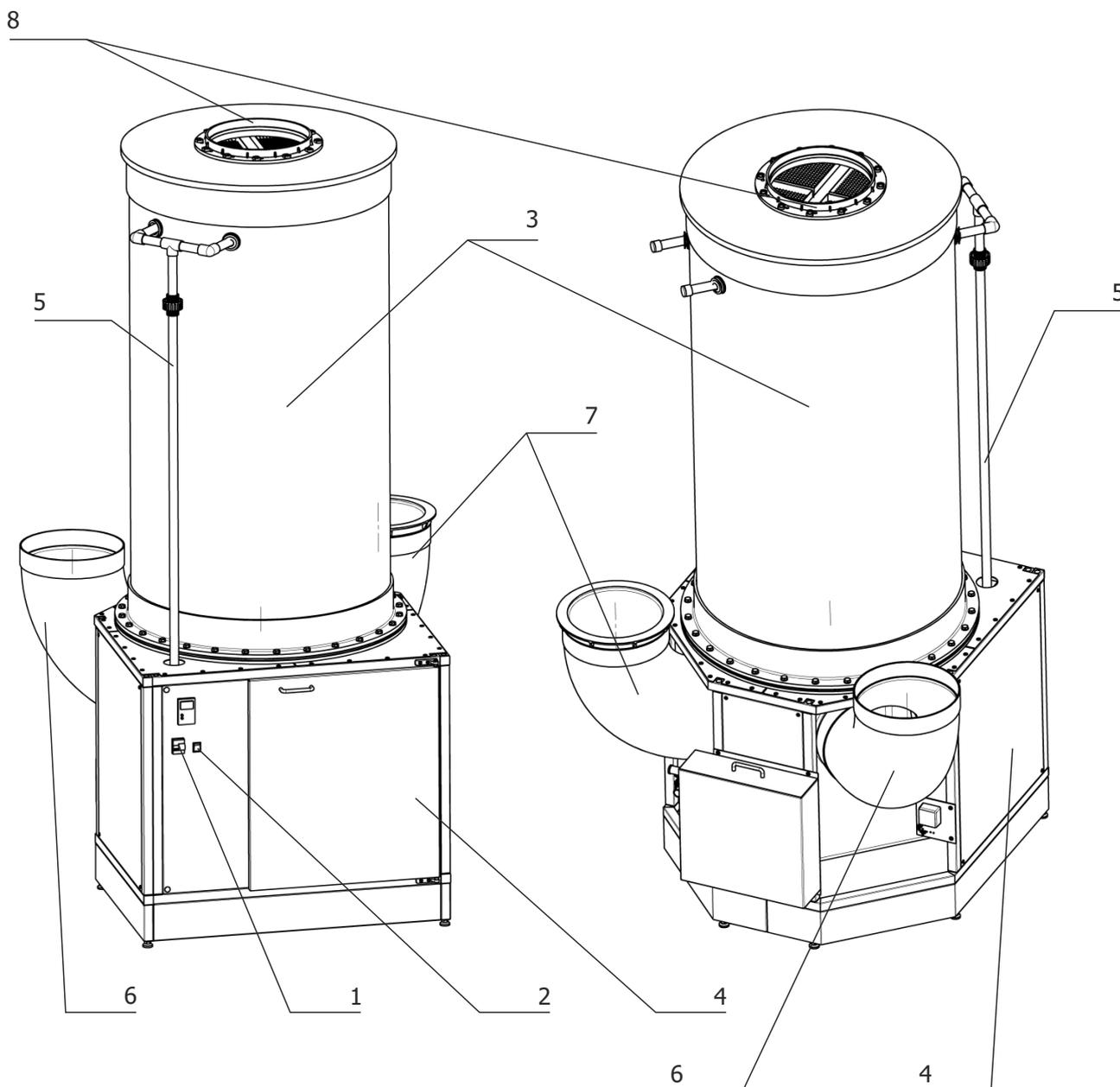


Diagram of dependence of the scrubber hydraulic resistance on the air consumption

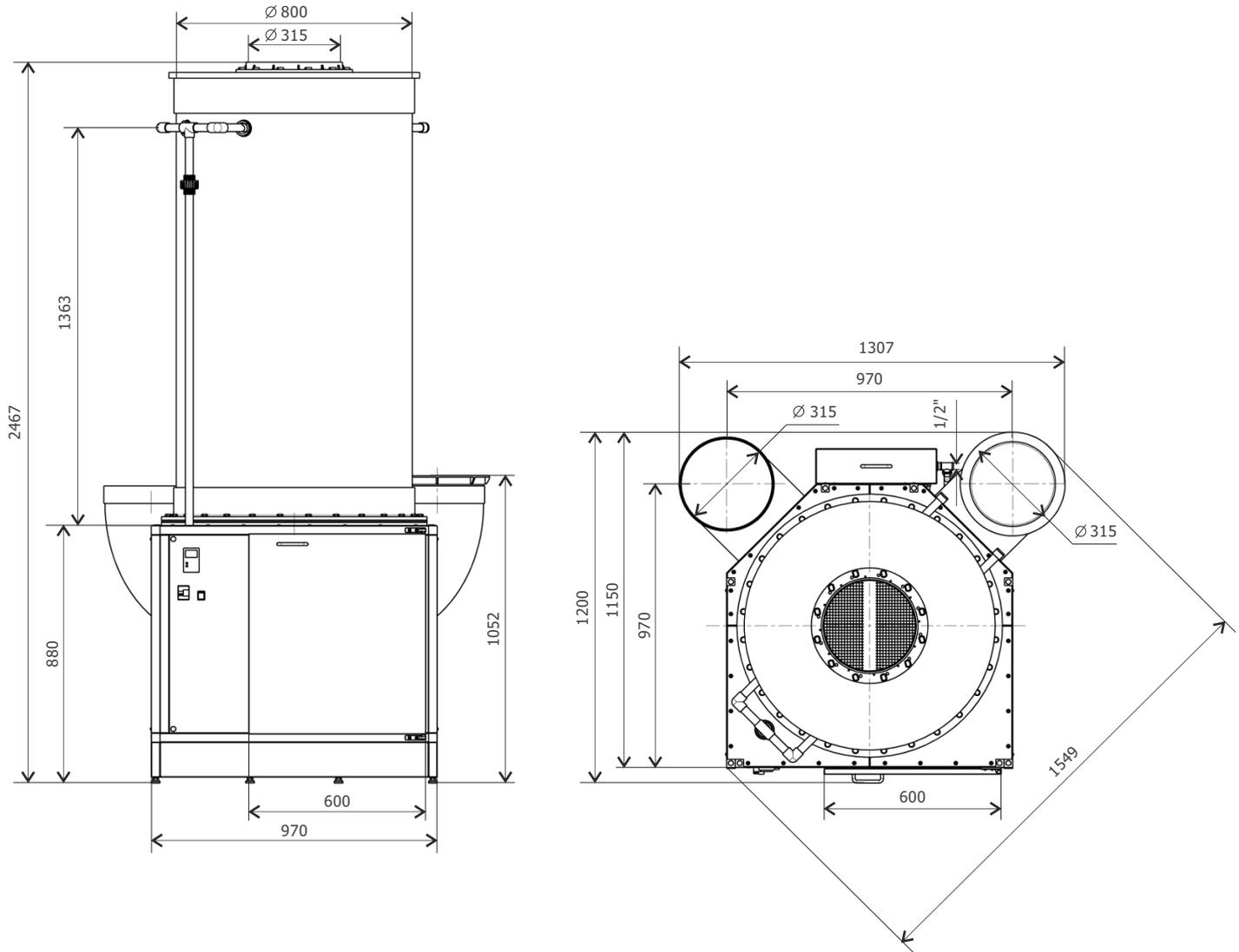
The diagram shows an intersection point of the fan SMRT2/200 (Spain) performance and the scrubber hydraulic resistance performance.

Technical characteristics



Name	Number of pieces
1 Differential automaton	1
2 Electric power switch	1
3 Cylinder case	1
4 Base	1
5 Pipe	1
6 Left air duct	1
7 Right air duct	1
8 Flange	1

Technical characteristics



Characteristic	Value
Consumption of air to be cleaned, cbm per hour	1500-1800
Maximum evaporated acid quantity for 8 hour at a recover degree equal to 94-96%, l	6
Hydraulic resistance at the air consumption of 1700 cbm/hour, Pa	900
Optimum number of exhaust hoods connected to the scrubber:	
with the width of 1205 mm	3
with the width of 1505 mm	2
with the width of 1805 mm	2
Requirements to the ventilation plant connected to the scrubber:	
Centrifugal fan made of polymeric materials	
Pressure developed by the fan at the air consumption of 1500 cbm/hour, at least, Pa	1300
Fan electric motor power, at least, kW	1,5
Scrubber packing:	
Material – ceramic acid-resistant rings 15 x 15 x 3 and 25 x 25 x 3	
Packing weight, kg	490
Height, mm	1200
Diameter, mm	780
Absorbing solution tank	
Tank capacity, l	150
Tank material – glass composite based on DION 9700 bisphenol epoxy-vinyl-ethereal resin	



Characteristic	Value
Packing irrigating pump:	
Pump material – polypropylene	
Version – centrifugal pump with a magnetic clutch	
Pump capacity, cbm per hour	4,5
Pump electric motor power, W	120
Pump electric motor power, W	220 V, 50 Hz, 150 W
Scrubber electric power supply	
Width with branch pipes, mm	1307
Height, mm	2467
Depth, mm	1200
Diameter of air ducts to connect to ventilation, mm	315
Diameter of connecting branch to connect to water pipeline, mm	1/2 inch
Diameter of pipe to connect to sewerage, mm	40
Equipped scrubber weight, kg	700

Dimensions

Scrubber					
	Name	Length	Width	Height	Cat. No.
	Scrubber	1307 mm	1200 mm	2467 mm	573400



Delivery and erection of exhaust system components is a program of METALDESIGN factory to supplement the wide family of exhaust hoods and laboratory furniture manufactured by us. Technical solutions offered by us – special fans, air ducts and scrubbers – are the subject of our perennial research and analysis of existing needs of chemical laboratories. Products described in this section constitute a comprehensive solution for the most actual problems of exhaust system operation in laboratories – personnel safety, corrosion, environmental protection.

The main problems arising out of erection of a corrosion-resistant chemical laboratory exhaust consisting of any metal air ducts are the following:

- High cost of air duct materials when using stainless steels or titanium alloys;

- High labor intensity of manufacture resulting in high cost of metal air ducts;

- Noisiness resulting in necessity of additional expenses for mufflers;

- Enhanced corrosion in welded joint areas;

- Increase of pressure losses in the system due to butt elements, junctions, flange connections, and often off-design air duct geometry;

- Increased probability of accumulation of dust, chemical compounds and condensate in the system;

- Need for earthing.



Plastic pipes, fittings and fans offered by METALDESIGN LLC have the following advantages;

- Wide range of air duct diameters: from 110 to 355 mm and from 400 to 1500 mm;
- Acid-resistance is ensured by using plastics as material: polyethylene, polypropylene or polyvinylchloride;
- The offered set of fittings allows building any complexity exhaust system circuits;
- Low weight of structure elements doesn't require installing complicated systems of suspensions and doesn't make special demands to bearing structures;
- When erecting the exhaust system, all joints are glued without gaps and with no sealing inserts at that;
- Plastic air ducts are not electricity-conductive and

don't require any earthing system;

- All elements are made by the seamless manufacturing technique to exclude any condensate leakage.

Exemplary calculations of exhaust systems

Exhaust system design stages.

- Step 1. Compiling a list of all equipment located in the laboratory room and to be connected to the ventilation system.
- Step 2. Determining the air consumption through each point.
- Step 3. Partitioning the system into several 'hoses' (in case of need).
- Step 4. Designing air ducts attached to the equipment.
- Step 5. Calculating the exhaust system pressure losses, drawing pressure loss – air consumption diagrams.
- Step 6. Evaluating the need for regulation of air flows, selecting a slide valve control system.
- Step 7. Selecting a fan and a control system.
- Step 8. Drawing up an order.

Compiling a list of equipment to be connected to the ventilation system.

Example:

1. Exhaust hood with the width of 1505 mm;
2. Exhaust hood with a heating platform the width of 1505 mm;
3. Heating stove cabinet;
4. Reagent storage cabinet – 2 pcs.

Determining the air consumption through each point.

The air volume removed through the exhaust hood is determined depending on the air speed in the hood working aperture according to normative documents in force in the relevant industry branch or international standards. So SN 495-77 'Design instruction for scientific research institution buildings' regulates the following air speeds in the hood aperture:

Maximum permissible concentration of harmful substances in the working zone, mg/m ³	Air speed in the hood designed aperture, m/sec
More than 10	0,5
From 10 to 0.1	0,7
Less than 0.1	1,0

The air speed in the exhaust hood aperture according to data of the publication: R.V. Shchekin 'Heat and gas supply and ventilation handbook. Book 2. Air ventilation and conditioning, 1976' is related to the maximum permissible concentration of harmful substances as follows:

Maximum permissible concentration of harmful substances in the working zone, mg/m ³	Air speed in the hood designed aperture, m/sec
More than 10	0,5
From 10 to 0.1	0,6 - 1
Less than 0.1	1 - 1,5

In operations connected with emission into the air of aerosols and dust of 1, 2, 3 hazard class substances, the air speed in the hood designed aperture should be taken as equal to 1.2-1.5 m/sec.

The designed aperture area is taken as equal to 0.2 sq m per 1 m of length. For METALLDESIGN exhaust hoods, the working aperture width is equal to the hood width minus 0.24 m.

Thus for example 1 (see above), we accept the following:

- Work with substances that don't generate fumes and aerosols with a maximum permissible concentration less than 0.1 mg/m³
- 1505 exhaust hood aperture width is equal to $1.5 - 0.24 = 1.26$ m
- 1505 heating platform exhaust hood aperture width is equal to $1.5 - 0.24 = 1.26$ m

According to the above tables, for work with such substances we accept the air speed in the exhaust hood aperture as equal to 1.0 m/sec.

Thus the air consumption through exhaust hoods with the width of 1505 mm will be:

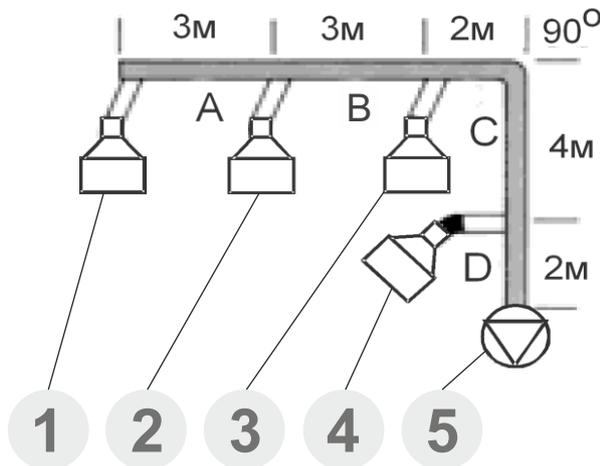
$$1.26 \times 0.2 \times 1.0 \times 3600 = 907 \text{ cbm/hour}$$

We take the air consumption through the reagent storage cabinet as equal to 150 cbm/hour.

We take the air consumption through the heating stove cabinet as equal to 300 cbm/hour.

Exhaust calculation scheme.

The exhaust calculation shall begin with drawing a system sketch, indicating locations of exhaust hoods and storage cabinets, fan, as well as air duct area lengths between them.



- 1, 2 – Reagent storage cabinet;
- 3 – Exhaust hood with a metal working chamber 1505 mm;
- 4 – Exhaust hood with a heating platform;
- 5 – Fan.

Thus the air consumption is:

In area A – 150 cbm/hour, air duct diameter 200 mm; in area B – 300 cbm/hour, air duct diameter 200 mm; in area C – 1200 cbm/hour, air duct diameter 200 mm; in area D – 2100 cbm/hour, air duct diameter 315 mm.

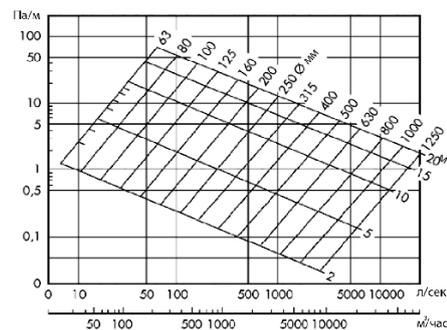
Determining the exhaust system pressure losses.

To determine pressure losses (measured in Pa) in the air duct it is necessary to know the air consumption through it (m³/h). Picture 1 shows pressure losses in direct circular section air ducts per meter of length depending on the flow speed. The diagram allows selecting an air duct of an optimum diameter and knowing the value of pressure loss therein with its length of 1 m, using recommended values of air consumption and air speed.

Let's determine parameters of an air duct required for transporting 2100 m³/h of air. For this, let's find on the lower scale expressed in m³/h the mark of

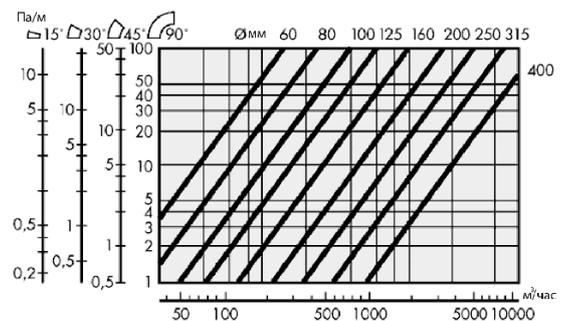
2100 and mentally join it with a point on the straight line of the air duct diameter 315 mm, with the air speed therein being equal to approximately 6.5 m/s. This point corresponds to the mark of 2 Pa on the Y-axis showing a pressure loss in 1 m of air duct. Thus, if the area length is 5 m, the full pressure loss in such an air duct will be equal to 2 Pa * 5 = 10 Pa.

Pic. 1. Diagram of pressure loss in round air ducts



It is also necessary to take account of pressure losses in round bends presented in Picture 2.

Pic. 2. Diagram of pressure loss in round bends



The diagram allows finding out the value of pressure loss in the bend, using the value of its bending angle, diameter and air consumption. For this, let's find an intersection of the vertical line corresponding to our air consumption (2100 cbm/hour) with the slash describing the diameter of 315 mm, and read the value of pressure loss on the vertical line on the left for 90° bend. It will be approximately 8 Pa.



Let's determine pressure losses for area A, B, C, and D.

- Area A: using the diagram of pressure loss in round air ducts, let's determine a pressure loss therein, with the air duct diameter of 200 mm and air consumption of 150 m³/h.

A: 150 m³/h, air duct diameter 200 mm, speed 2 m/s, pressure loss $0.4 \text{ Pa} * 3 = 1.2 \text{ Pa}$.

- Area B: let's repeat the same calculation not forgetting that the air consumption through this area will already be 300 m³/h.

B: 150 m³/h, air duct diameter 200 mm, speed 3 m/s, pressure loss $0.5 \text{ Pa} * 3 = 1.5 \text{ Pa}$.

- Area C: let's repeat the same calculation not forgetting that the air consumption through this area will already be 1200 m³/h.

C: 1200 m³/h, air duct diameter mm, speed 7 m/s, pressure loss $2 \text{ Pa} * (2+4) = 12 \text{ Pa}$.

- Area D: let's repeat the same calculation not forgetting that the air consumption through this area will already be 2100 m³/h.

D: 2100 m³/h, air duct diameter 200 mm, speed 6.5 m/s, pressure loss $2 \text{ Pa} * 2 = 4 \text{ Pa}$.

When the last area calculation is completed, it is necessary to determine pressure losses in bends and half-normal bends which have the same diameter as direct air ducts in these areas. In our case, it is a 90° bend and with the diameter of 200 mm. The pressure loss therein can be determined by the diagram of pressure loss in round bends which is 8 Pa. This the total pressure loss in air ducts is: $1.2 + 1.5 + 12 + 4 + 8 = 26.7 \text{ Pa}$.

To calculate the total pressure loss of the exhaust system designed, it is necessary to add exhaust hood pressure loss values to the obtained pressure losses. Dependences of METALLDESIGN exhaust hood pressure losses on the air consumption are shown in the table:

Air consumption	Air speed in the aperture, m/sec	Exhaust hood with a metal working chamber, Pa	Exhaust hood with a fiberglass plastic exhaust chamber and a heating platform, Pa
360	0,4	21	35
720	0,8	85	142
1080	1,2	192	319
1440	1,6	341	567

As follows from the table, with the preset air consumption of 900 cbm/hour the pressure loss of the exhaust hood with a metal working chamber is 133 Pa, and the fiberglass plastic hood 226 Pa. The pressure loss in storage cabinets and heating stove cabinets doesn't exceed 50 Pa.

Now let's add up all values of pressure loss for direct air duct areas, bends, exhaust hoods and storage cabinets.
The desired value is:
 $26.7 + 133 + 226 + 50 + 50 + 50 = 535.7$ Pa. With a cumulative air consumption through all points of the ventilation system being equal to 2100 cbm/hour.

Note

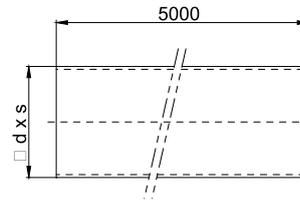
- If behind the fan exhaust there is an air duct, its resistance shall be taken into account too.
- If the air duct network doesn't have a large extension, it is better to use air ducts of the same diameter.

On the assumption of the calculation data, for efficient operation of the offered ventilation system a fan is needed to create a depression of at least 540 Pa at the air consumption of 2100 cbm per hour. Centrifugal fans of cat. No. BO3152, cat. No. BO3155, cat. No. BO3126 are suitable for that purpose.

To arrange an exhaust system in laboratories equipped with METALDESIGN exhaust hoods, the company offers the following component parts:

- PVC junctions and fittings;
- Slide valves with a handle;
- Slide valves with electric drive;
- Acid-proof centrifugal fans;
- Channel fans in metal case;
- Electronic single-phase fan motor rotating speed regulators
- Phase asynchronous motor rotating speed regulators (invertors) for fans with a power up to 7 kW.

Materials: PVC, PPS, PPS-EI



PVC ¹⁾		rohr1-		PPs ²⁾		rohr2-		PPs-el ³⁾		rohr5-	
d x s	kg/m	d x s	kg/m	d x s	kg/m	d x s	kg/m	d x s	kg/m	d x s	kg/m
0063x01,9	0,56	0020x01,9	0,12	0016x02,2	0,10						
0075x02,2	0,78	0025x02,3	0,17	0020x01,9	0,12						
0090x02,7	1,20	0032x03,0	0,28	0025x02,3	0,17						
0110x01,8	0,95	0040x03,0	0,36	0032x03,0	0,28						
0125x01,8	1,08	0050x03,0	0,45	0040x03,0	0,36						
0140x01,8	1,21	0063x03,0	0,58	0050x03,0	0,45						
0160x01,8	1,39	0075x03,0	0,70	0063x03,0	0,58						
0160x02,5	1,88	0090x03,0	0,85	0063x05,8	1,10						
0180x01,8	1,57	0110x03,0	1,05	0075x03,0	0,70						
0180x02,5	2,12	0125x03,0	1,19	0075x06,8	1,70						
0200x01,8	1,80	0140x03,0	1,40	0090x03,0	1,05						
0200x02,5	2,36	0160x03,0	1,60	0110x03,0	1,29						
0225x01,8	1,96	0180x03,0	1,80	0125x03,0	1,50						
0225x02,8	3,00	0200x03,0	2,00	0140x03,0	1,70						
0250x02,0	2,40	0225x03,5	2,60	0160x03,0	1,85						
0250x02,5	3,00	0250x03,5	2,80	0180x03,0	2,13						
0250x02,9	3,42	0280x04,0	3,58	0200x03,0	2,37						
0280x02,3	3,11	0315x05,0	5,00	0225x03,5	3,20						
0280x02,9	3,82	0355x05,0	5,65	0250x03,5	3,47						
0315x02,5	3,78	0400x06,0	7,61	0280x04,0	4,40						
0315x02,9	4,40	0450x07,0	8,40	0315x05,0	6,14						
0355x02,9	5,30	0500x08,0	12,26	0355x05,0	8,52						
0400x03,2	6,10	0630x10,0	19,30	0400x06,0	9,34						
0450x03,6	7,70	0800x10,0	29,30								
0450x05,6	9,27										
0500x04,0	9,38										
0500x05,6	11,71										
0600x05,0	13,01										
0700x06,0	14,00										
0800x06,3	21,70										
0900x10,0	38,60										
1000x12,0	51,40										
1200x14,0	71,90										
1400x10,0	60,20										

Elements that are often ordered, have our company's catalog number and, as a rule, are off-the-shelf available are listed below:

Name	Cat.No.
PVC pipe 110*1,8	B01201
PVC pipe 125*1,8	B01250
PVC pipe 140*1,8	B01241
PVC pipe 160*1,8	B01261
PVC pipe 180*1,8	B01208
PVC pipe 200*1,8	B01202
PVC pipe 225*2,8	B01225
PVC pipe 250*2,0	B01205
PVC pipe 280*2,9	B01228
PVC pipe 315*2,5	B01203
PVC pipe 355*2,9	B11204
PVC pipe 400*3,2	B01206
PVC pipe 500*4,0	B01255
PVC pipe 75*2,2	B01272
PVC pipe 90*2,7	B01292

Name	Cat.No.
PP pipe 110*3,0	BP1201
PP pipe 125*3,0	BP1250
PP pipe 140*3,0	BP1241
PP pipe 160*3,0	BP1261
PP pipe 180*3,0	BP1281
PP pipe 200*3,0	BP1202
PP pipe 225*3,5	BP1225
PP pipe 250*3,5	BP1205
PP pipe 280*4,0	BP1208
PP pipe 315*5,0	BP1215
PP pipe 400*6,0	BP1240

The pipe is delivered in pieces from 1 running meter, maximum length 5 m. Use a muff for connecting.

If you haven't found what you need among these items, please indicate the following in the order to receive a commercial offer: Serial number, name, required material, required mounting diameter, required quantity.

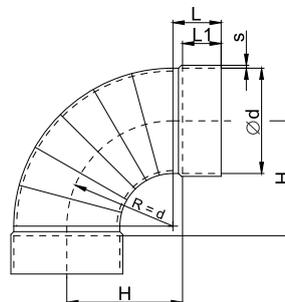
Exemplary order for this page:

1. PVC pipe 450*5.6 – 15 running meters.
2. PPs pipe 20*1.9 – 45 running meters.

YOU CAN RECEIVE DETAILED INFORMATION BY REQUESTING OUR ELECTRONIC CATALOG OF VENTILATION COMPONENTS

90 degree bend

Muff coupling $R = d$.



d	PVC, PVC-C, PVC-UV					PPs, PP, PE, PPs-el, PVDF				
	L	L1	H	s	kg	L	L1	H	s	kg
0050	30	25	55	3,0	0,1	30	25	55	3,0	0,1
0063	30	25	70	3,0	0,1	30	25	70	3,0	0,1
0075	40	35	80	3,0	0,2	40	35	80	3,0	0,2
0090	40	35	95	3,0	0,3	40	35	95	3,0	0,2
0110	50	40	120	3,0	0,4	50	40	120	3,0	0,3
0125	50	40	135	3,0	0,6	50	40	135	3,0	0,4
0140	50	40	150	3,0	0,7	50	40	150	3,0	0,4
0160	50	40	170	3,0	0,8	50	40	170	3,0	0,5
0180	60	50	190	3,0	1,0	60	50	190	3,0	0,7
0200	60	50	210	3,0	1,4	60	50	210	3,0	0,9
0225	60	50	235	3,0	1,8	60	50	235	3,5	1,2
0250	60	50	260	3,0	2,6	60	50	260	3,5	1,5
0280	60	50	290	3,0	2,0	60	50	290	4,0	2,8
0315	60	50	325	3,0	2,8	60	50	325	5,0	3,2
0355	60	50	365	4,0	3,4	60	50	365	5,0	4,1
0400	70	60	410	4,0	4,4	70	60	410	6,0	5,1
0450	70	60	460	4,0	7,0	70	60	460	6,0	6,5
0500	70	60	510	5,0	9,0	70	60	510	6,0	7,0
0560	-	-	-	-	-	110	90	580	6,0	11,5
0600	80	70	610	5,0	14,0	-	-	-	-	-
0630	-	-	-	-	-	110	90	650	8,0	14,0
0700	110	90	715	6,0	26,0	-	-	-	-	-
0710	-	-	-	-	-	110	90	730	8,0	20,0
0800	120	100	810	7,0	33,0	120	100	820	10,0	40,0
0900	130	110	1030	8,0	56,5	130	110	1030	8,0	44,8
1000	130	110	1030	8,0	79,2	130	110	1030	8,0	68,5

Elements that are often ordered, have our company's catalog number and, as a rule, are off-the-shelf available are listed below:

Name	Cat.No.
PVC 90 degree bend 75	B01372
PVC 90 degree bend 90	B01392
PVC 90 degree bend 110	B01301
PVC 90 degree bend 125	B01350
PVC 90 degree bend 160	B01362
PVC 90 degree bend 180	B00138
PVC 90 degree bend 200	B01302
PVC 90 degree bend 250	B01305
PVC 90 degree bend 315	B01303
PVC 90 degree bend 355	B01304
PVC 90 degree bend 400	B01340

If you haven't found what you need among these items, please indicate the following in the order to receive a commercial offer: Serial number, name, required material, required mounting diameter, required quantity.

Exemplary order for this page:

1. PP 90 degree bend 710 – 1 pc.
2. PVC-C bend 140 – 45 pcs.

Coupling muff

Muff coupling



d	PVC, PVC-UV, PVC-C					PPs, PP, PE, PPs-el, PVDF				
	L	L1	L2	s	kg	L	L1	L2	s	kg
0050	80	25	30	3,0	0,1	80	25	30	3,0	0,1
0063	80	25	30	3,0	0,1	80	25	30	3,0	0,1
0075	100	35	30	3,0	0,1	100	35	30	3,0	0,1
0090	100	35	30	3,0	0,1	100	35	30	3,0	0,1
0110	100	40	20	3,0	0,2	100	40	20	3,0	0,1
0125	100	40	20	3,0	0,2	100	40	20	3,0	0,1
0140	100	40	20	3,0	0,1	100	40	20	3,0	0,2
0160	100	40	20	3,0	0,3	100	40	20	3,0	0,2
0180	100	40	20	3,0	0,2	100	40	20	3,0	0,2
0200	120	50	20	3,0	0,3	120	50	20	3,0	0,2
0225	120	50	20	3,0	0,4	120	50	20	3,5	0,3
0250	120	50	20	3,0	0,5	120	50	20	3,5	0,4
0280	120	50	20	3,0	0,4	120	50	20	4,0	0,4
0315	120	50	20	3,0	0,6	120	50	20	5,0	0,8
0355	135	50	35	4,0	0,6	135	50	35	5,0	0,9
0400	155	60	35	4,0	1,0	155	60	35	6,0	1,0
0450	160	60	40	4,0	1,4	160	60	40	6,0	1,2
0500	160	60	40	4,0	1,7	160	60	40	6,0	1,0
0560	-	-	-	-	-	170	70	30	6,0	2,0
0600	165	65	35	5,0	2,4	-	-	-	-	-
0630	-	-	-	-	-	170	70	30	8,0	2,2
0700	215	90	35	6,0	3,3	-	-	-	-	-
0710	-	-	-	-	-	215	90	35	8,0	3,3
0800	230	100	30	8,0	4,6	230	100	30	8,0	4,2
0900	250	100	50	8,0	6,7	250	125	0	8,0	5,2
1000	250	100	50	8,0	8,6	250	125	0	8,0	7,2
1200	*	*	*	*	*	*	*	*	*	*
1250	250	125	0	10,0	13,6	250	125	0	10,0	9,0
1400	350	175	0	10,0	21,3	350	175	0	12,0	14,2

Elements that are often ordered, have our company's catalog number and, as a rule, are off-the-shelf available are listed below:

Name	Cat.No.
PVC muff 75	B01571
PVC muff 90	B01592
PVC muff 110	B01501
PVC muff 200	B01502
PVC muff 250	B01505
PVC muff 280	B01575
PVC muff 315	B01503
PVC muff 355	B11504
PVC muff 400	B01544
PVC muff 500	B01550

If you haven't found what you need among these items, please indicate the following in the order to receive a commercial offer:

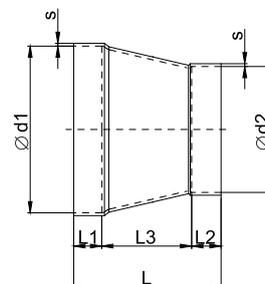
Serial number, name, required material, required mounting diameter, required quantity.

Exemplary order for this page:

1. PP coupling muff 710 – 1 pc.
2. PVC-C coupling muff 140 – 45 pcs.

Symmetrical junction

Muff coupling



d1 - d2	PVC, PVC-C, PVC-U/V							PPs, PP, PE, PPs-eI, PVDF					
	L	L1	L2	L3	s	kg	L	L1	L2	L3	s	kg	
0200-0050	360	50	35	275	3,0	0,4	360	50	35	275	3,0	0,3	
0200-0063	350	50	25	275	3,0	0,4	350	50	25	275	3,0	0,3	
0200-0075	340	50	35	255	3,0	0,5	340	50	35	255	3,0	0,4	
0200-0090	310	50	35	225	3,0	0,5	310	50	35	225	3,0	0,4	
0200-0110	300	50	40	210	3,0	0,5	300	50	40	210	3,0	0,4	
0200-0125	245	50	40	155	3,0	0,5	245	50	40	155	3,0	0,4	
0200-0140	220	50	40	130	3,0	0,5	220	50	40	130	3,0	0,3	
0200-0160	195	50	50	95	3,0	0,4	195	50	50	95	3,0	0,4	
0200-0180	145	50	50	45	3,0	0,5	145	50	50	45	3,0	0,5	
0225-0050	405	50	35	320	3,0	0,9	405	50	35	320	3,0	0,8	
0225-0063	390	50	25	315	3,0	0,9	390	50	25	315	3,0	0,8	
0225-0075	380	50	35	295	3,0	0,8	380	50	35	295	3,0	0,7	
0225-0090	350	50	35	265	3,0	0,7	350	50	35	265	3,0	0,6	
0225-0110	300	50	40	210	3,0	0,6	300	50	40	210	3,0	0,6	
0225-0125	290	50	40	200	3,0	0,5	290	50	40	200	3,0	0,5	
0225-0140	260	50	40	170	3,0	0,6	260	50	40	170	3,0	0,5	
0225-0160	225	50	40	135	3,0	0,5	225	50	40	135	3,0	0,4	
0225-0180	210	50	50	110	3,0	0,4	210	50	50	110	3,0	0,4	

Elements that are often ordered, have our company's catalog number and, as a rule, are off-the-shelf available are listed below:

Name	Cat.No.
PVC junction 160-110	B01614
PVC junction 200-110	B01612
PVC junction 200-160	B01636
PVC junction 250-110	B01615
PVC junction 250-160	B01635
PVC junction 250-180	B00518
PVC junction 250-200	B01625
PVC junction 280-250	B01685
PVC junction 315-110	B01613
PVC junction 315-200	B01623
PVC junction 315-250	B01653
PVC junction 355-200	B01654
PVC junction 355-250	B01664
PVC junction 355-315	B01674

Name	Cat.No.
PVC junction 400-160	B01677
PVC junction 400-200	B01676
PVC junction 400-250	B01678
PVC junction 400-315	B01675
PVC junction 400-355	B01679
PVC junction 450-400	B01644
PVC junction 500-315	B01655

Name	Cat.No.
PVC junction with displacement 110-200	B21661
PVC junction with displacement 200-160	B21663
PVC junction with displacement 200-250	B21662
PVC junction with displacement 250-315	B21665
PVC junction with displacement 315-355	B21664

If you haven't found what you need among these items, please indicate the following in the order to receive a commercial offer: Serial number, name, required material, required mounting diameter, required quantity.

Exemplary order for this page:

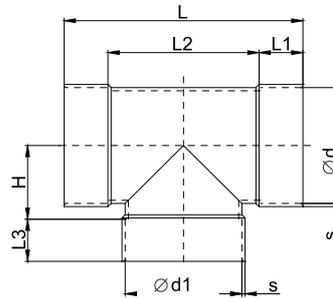
1. PP junction 110-50 – 1 pc.
2. PVC-C junction with displacement 1400-1250 – 5 pcs.

WE ARE ALSO READY TO DELIVER JUNCTIONS WITH MOUNTING DIAMETERS OF 50 TO 500 MM, JUNCTIONS WITH DISPLACED SYMMETRY AXIS AND, BY SPECIAL ORDER, JUNCTIONS WITH DIAMETER UP TO 1400 MM.

YOU CAN RECEIVE DETAILED INFORMATION BY REQUESTING OUR ELECTRONIC CATALOG OF VENTILATION COMPONENTS

T-bend

Muff coupling



ød	ød1	ød	L	L1	L2	L3	H	PVC, PVC-C, PC, PVC-UV		PP, PE, PPs, PPs-el, PVDF	
								s	s1	s	s1
0180	0140	0180	375	50	275	40	110	2,5	3,0	3,0	3,0
0180	0160	0180	375	50	275	40	110	2,5	3,0	3,0	3,0
0200	0050	0200	375	50	275	25	120	2,5	3,0	3,0	3,0
0200	0063	0200	375	50	275	35	120	2,5	3,0	3,0	3,0
0200	0075	0200	375	50	275	35	120	2,5	3,0	3,0	3,0
0200	0090	0200	375	50	275	35	120	2,5	3,0	3,0	3,0
0200	0110	0200	375	50	275	40	120	2,5	3,0	3,0	3,0
0200	0125	0200	375	50	275	40	120	2,5	3,0	3,0	3,0
0200	0140	0200	375	50	275	40	120	2,5	3,0	3,0	3,0
0200	0160	0200	375	50	275	45	120	2,5	3,0	3,0	3,0
0200	0180	0200	375	50	275	50	120	2,5	3,0	3,0	3,0
0225	0050	0225	420	50	320	25	130	2,8	3,0	3,5	3,0
0225	0063	0225	420	50	320	35	130	2,8	3,0	3,5	3,0
0225	0075	0225	420	50	320	35	130	2,8	3,0	3,5	3,0
0225	0090	0225	420	50	320	35	130	2,8	3,0	3,5	3,0
0225	0110	0225	420	50	320	40	130	2,8	3,0	3,5	3,0
0225	0125	0225	420	50	320	40	130	2,8	3,0	3,5	3,0
0225	0140	0225	420	50	320	40	130	2,8	3,0	3,5	3,0
0225	0160	0225	420	50	320	45	130	2,8	3,0	3,5	3,0
0225	0180	0225	420	50	320	50	130	2,8	3,0	3,5	3,0
0225	0200	0225	420	50	320	50	130	2,8	3,0	3,5	3,0
0250	0050	0250	420	50	320	25	140	2,9	3,0	3,5	3,0
0250	0063	0250	420	50	320	35	140	2,9	3,0	3,5	3,0
0250	0075	0250	420	50	320	35	140	2,9	3,0	3,5	3,0
0250	0090	0250	420	50	320	35	140	2,9	3,0	3,5	3,0
0250	0110	0250	420	50	320	40	140	2,9	3,0	3,5	3,0
0250	0125	0250	420	50	320	40	140	2,9	3,0	3,5	3,0

Elements that are often ordered, have our company's catalog number and, as a rule, are off-the-shelf available are listed below:

Name	Cat.No.
PVC T-bend 110	B01701
PVC T-bend 160	B01761
PVC T-bend 200	B01702
PVC T-bend 250	B01705
PVC T-bend 315	B01703
PVC T-bend 355	B01704
PVC T-bend 400	B01706

Name	Cat.No.
PVC T-bend 250*200*250	B01852
PVC T-bend 315*200*315	B01832
PVC T-bend 400*315*400	B01843
PVC T-bend 500*315*500	B01853

If you haven't found what you need among these items, please indicate the following in the order to receive a commercial offer: Serial number, name, required material, required mounting diameter, required quantity.

Exemplary order for this page:

1. PP T-bend 50 – 1 pc.
2. PVC-C T-bend 500-110-500 – 2 pcs.

WE ARE ALSO READY TO DELIVER T-BENDS WITH A MIDDLE OUTLET WELDED ON THE MITRE TO THE PIPE AXIS, T-BENDS WITH FLANGE CONNECTIONS ETC.

YOU CAN RECEIVE DETAILED INFORMATION BY REQUESTING OUR ELECTRONIC CATALOG OF VENTILATION COMPONENTS

We also deliver:

Flanges for various purposes.



Edge lines.



Flexible damping muffers for 5r instable couplings and fan connections; plugs.



Plastic ventilation components

Saint Petersburg
METALDESIGN LLC

Return valves.



Various slide valves for manual recorded stepwise adjustment and adjustment by means of electric drive.



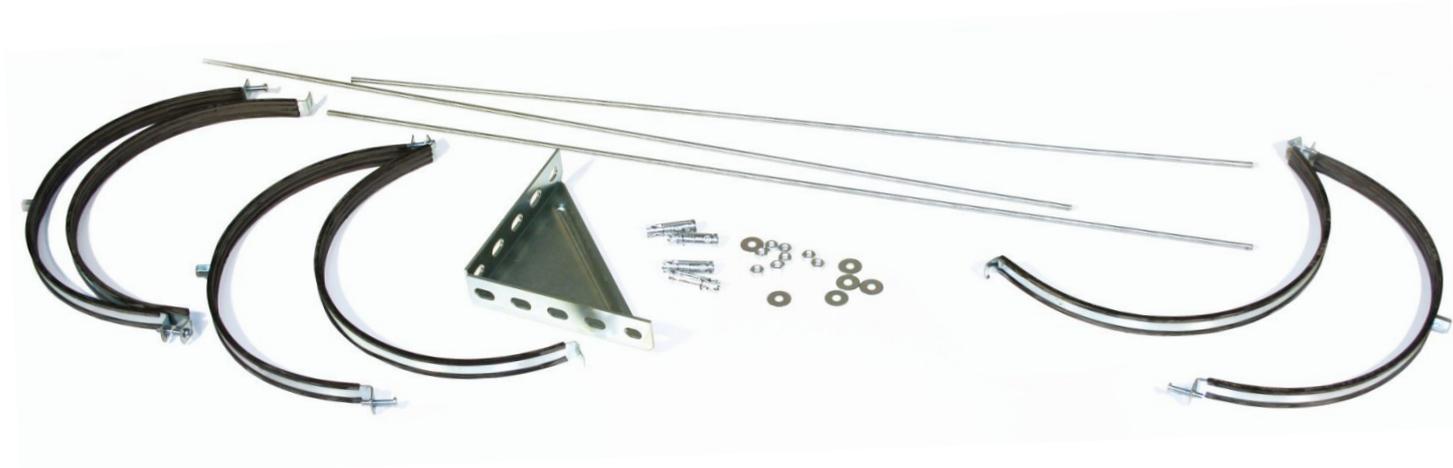
Plastic ventilation components

e-mail: info@lenlab.ru
+7 (812) 703-01-65

Condensate collectors.



Air duct fastening and suspension systems.



And much more.

Our company is ready to help you in organizing all kinds of works from design to delivery of components for creating efficient and durable exhaust systems.

Fans

Saint Petersburg
METALLDESIGN LLC

SEAT fan



Centrifugal fans												
Code for order	Name	Fan delivery with the system total resistance				Motor power, kW	Rate rotating speed, rotations per minute	Net weight, kg	IP protection	Currents Starting / Rated, A	Noisiness, dB	Branch pipe diameter, mm
		300 Pa, m3/h	600 Pa, m3/h	1000 Pa, m3/h	1200 Pa, m3/h							
B03121	SEAT fan 15/2870 0,37 kW	650	0	0	0	0,37	2870	10,2	55	1,7/1,0	44	125
B03126	SEAT fan 20/2800 0,75 kW	2600	2200	0	0	0,75	2800	13,2	55	3,2/1,9	51	160
B03128	SEAT fan 20/2800 1,1 kW	2300	2000	1500	0	1,1	2870	15,7	55	4,7/2,7	69	160
B03142	SEAT fan 25/1450 0,37 kW	1700	0	0	0	0,37	1500	12,1	55	2,1/1,2	45	200
B03143	SEAT fan 35/1500 5,5 kW	10200	10200	6000	0	5,5	1450	50	55	20,8/11,9	82	315
B03152	SEAT fan 25/2850 1,5 kW	3000	3000	3000	1500	1,5	2870	19,9	55	5,9/3,4	89	200
B03153	SEAT fan 35/1500 7,5 kW	10200	10200	10200	0	7,5	1450	68	55	26,7/15,4	82	315
B03155	SEAT fan 30/1450 1,5 kW	4500	1500	0	0	1,5	1450	27,5	55	6,4/3,7	83	250
BK3163	SEAT fan 35/1000 2,2 kW	7000	0	0	0	2,2	950	46	55	9,6/5,5	82	315
B03323	SEAT fan 25/2800 2,2 kW	3500	3500	3500	3000	2,2	2800	20,9	55	8,8/5,1	85	200
B03330	SEAT fan 25/2800 3 kW	3500	3500	3500	3500	3	2800	25,7	55	10/3,6	71	200

SEET fan

Motor category:
ATEX Eex IIB T4



Centrifugal fans												
Code for order	Name	Fan delivery with the system total resistance				Motor power, kW	Rate rotating speed, rotations per minute	Net weight, kg	IP protection	Currents Starting / Rated, A	Noisiness, dB	Branch pipe diameter, mm
		300 Pa, m3/h	600 Pa, m3/h	1000 Pa, m3/h	1200 Pa, m3/h							
BK3126	SEAT fan 20/2800 0,75 kW Motor category: ATEX EEx IIB T4	1800	1400	0	0	0,75	2800	14,2	3gas*	3,2/1,9	51	160
BK3142	SEAT fan 25/1450 0,37 kW Motor category: ATEX EEx IIB T4	1700	0	0	0	0,37	1500	12,3	3gas*	2,1/1,2	43	200
BK3143	SEAT fan 35/1400 5,5 kW Motor category: ATEX EEx IIB T4	10200	10200	6000	0	5,5	1450	50	3gas*	19,2/11	82	315
BK3155	SEAT fan 30/1450 1,1 kW Motor category: ATEX EEx IIB T4	3500	3500	0	0	1,1	1450	27,5	3gas*	4,4/2,55	83	250
BK3163	SEAT fan 35/950 2,2 kW Motor category: ATEX EEx IIB T4	7000	0	0	0	2,2	950	47	3gas*	9,6	5,5	315

VENT channel fan



Centrifugal fans												
Code for order	Name	Fan delivery with the system total resistance				Motor power, kW	Rate rotating speed, rotations per minute	Net weight, kg	IP protection	Currents Starting / Rated, A	Noisiness, dB	Branch pipe diameter, mm
		300 Pa, m3/h	600 Pa, m3/h	1000 Pa, m3/h	1200 Pa, m3/h							
B33222	VENT channel fan 200 L	550	180	0	0	0,17	2600	5	44	5	52	200
B33225	VENT channel fan 250 L	750	250	0	0	0,18	2750	6	44	5	54	250
B33223	VENT channel fan 315 L	1300	850	0	0	0,35	2700	8	44	5	55	315

JET fan

Roof installation



JET fan

Centrifugal fans												
Code for order	Name	Fan delivery with the system total resistance				Motor power, kW	Rate rotating speed, rotations per minute	Net weight, kg	IP protection	Currents Starting / Rated, A	Noisiness, dB	Branch pipe diameter, mm
		300 Pa, m3/h	600 Pa, m3/h	1000 Pa, m3/h	1200 Pa, m3/h							
B03727	JET fan 20/3000 0,75 kW Roof installation	1800	1400	0	0	0,75	3000	24	55	3,2/1,9	69	160
B03753	JET fan 25/1500 0,37kW Roof installation	1500	0	0	0	0,37	1400	25,5	55	2,1/1,2	65	200
B03731	JET fan 25/3000 2,2 kW Roof installation	4000	4000	3400	3000	2,2	2870	35	55	8,8/5,1	74	200
B03776	JET fan 30/1500 1,1 kW Roof installation	3750	2750	0	0	1,1	1450	43,2	55	6,4/3,7	70,7	250

Brief description:

Absolute corrosion resistance of the case.

Gas permeability required for technological processes.

Fan delivery from 300 to 9000 m3/hour.

Plastic centrifugal fans are used for delivering aggressive media such as vapors containing acid or solvent.

Case and fan impellers are made by rotary injection molding technique.

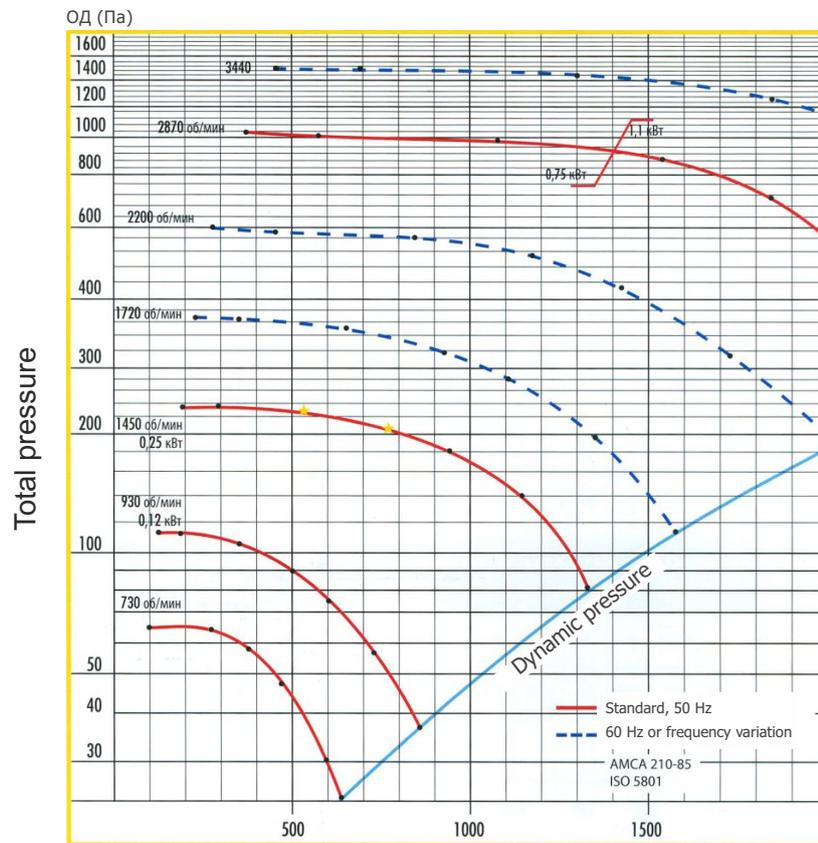
Hardly-inflammable polypropylene (PPs) of grey color is used for this in batch manufacturing version.

All models are fitted out with a robust mounting frame made of sheet steel or polypropylene to support the motor and facilitate the mounting.

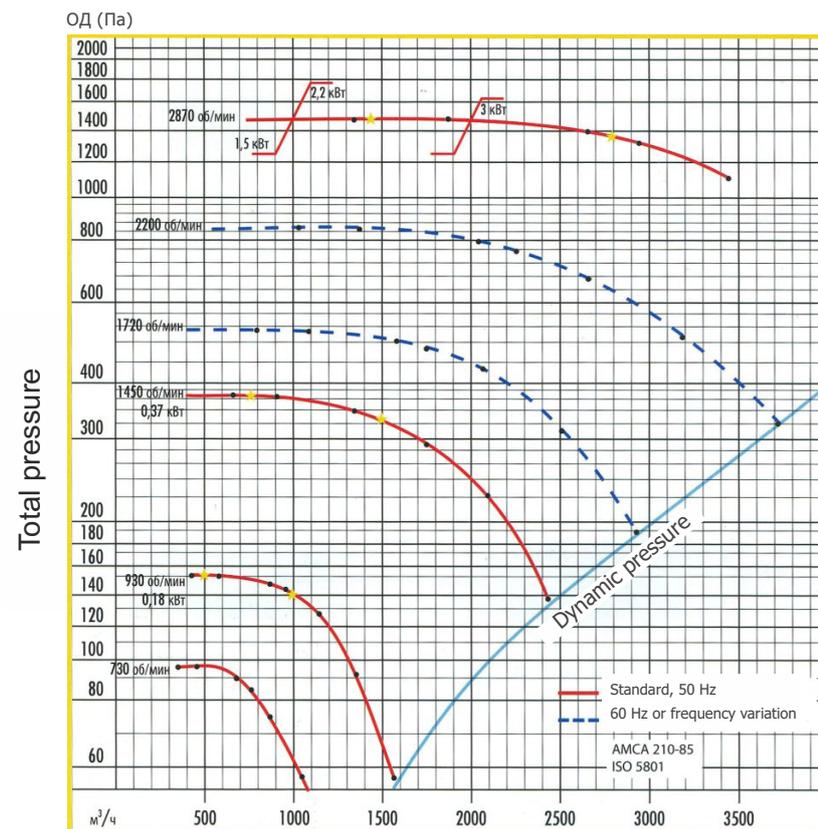
Standard three-phase motors in compliance with IEC requirements are used.

B3 embodiment, IP 55 level sealing protection, F electrical insulation class.

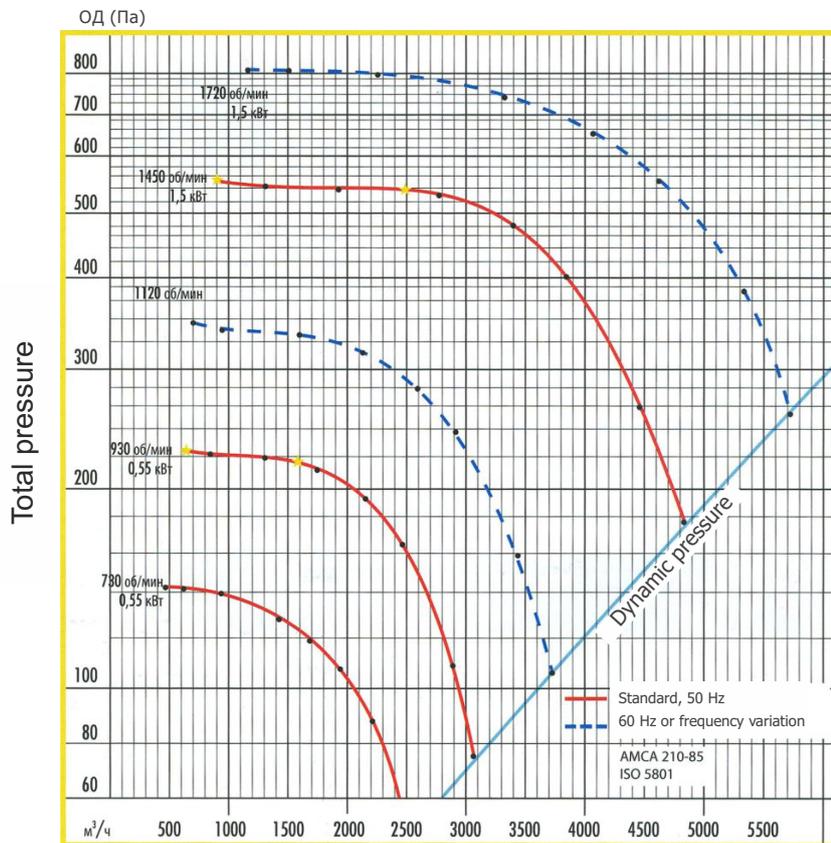
SEAT 20



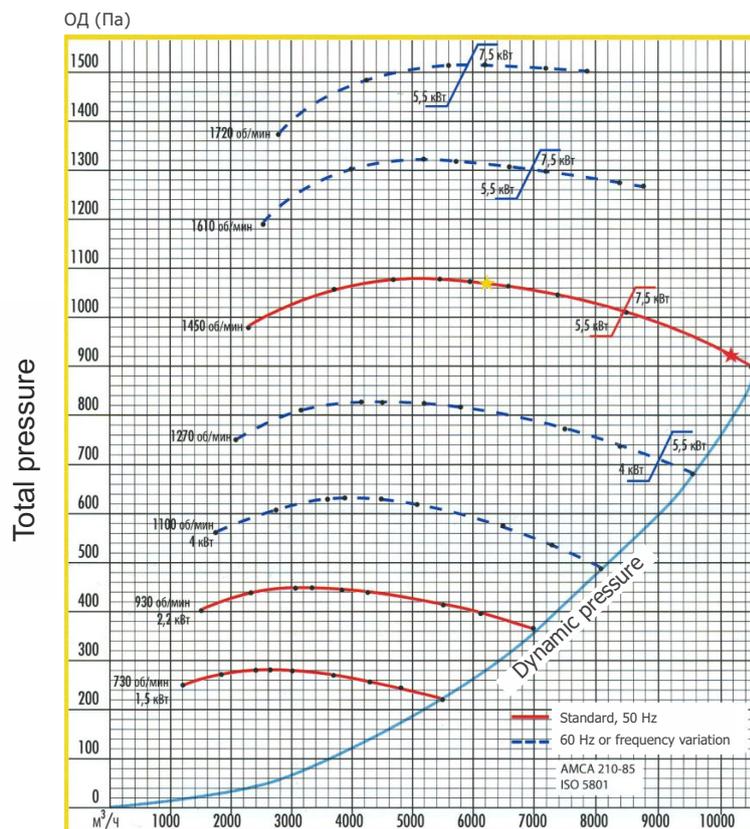
SEAT 25



SEAT 30



SEAT 35



All METALDESIGN products comply with obligatory requirements established by Technical Regulations of the Russian Federation and the Customs Union, which is confirmed by relevant certificates and declarations as well as a facultative certification in the field of fire safety and electrical safety was carried out.

Our products are manufactured under control of the quality management system of the manufacturer METALDESIGN LLC, which has been certified for the compliance with the requirements:

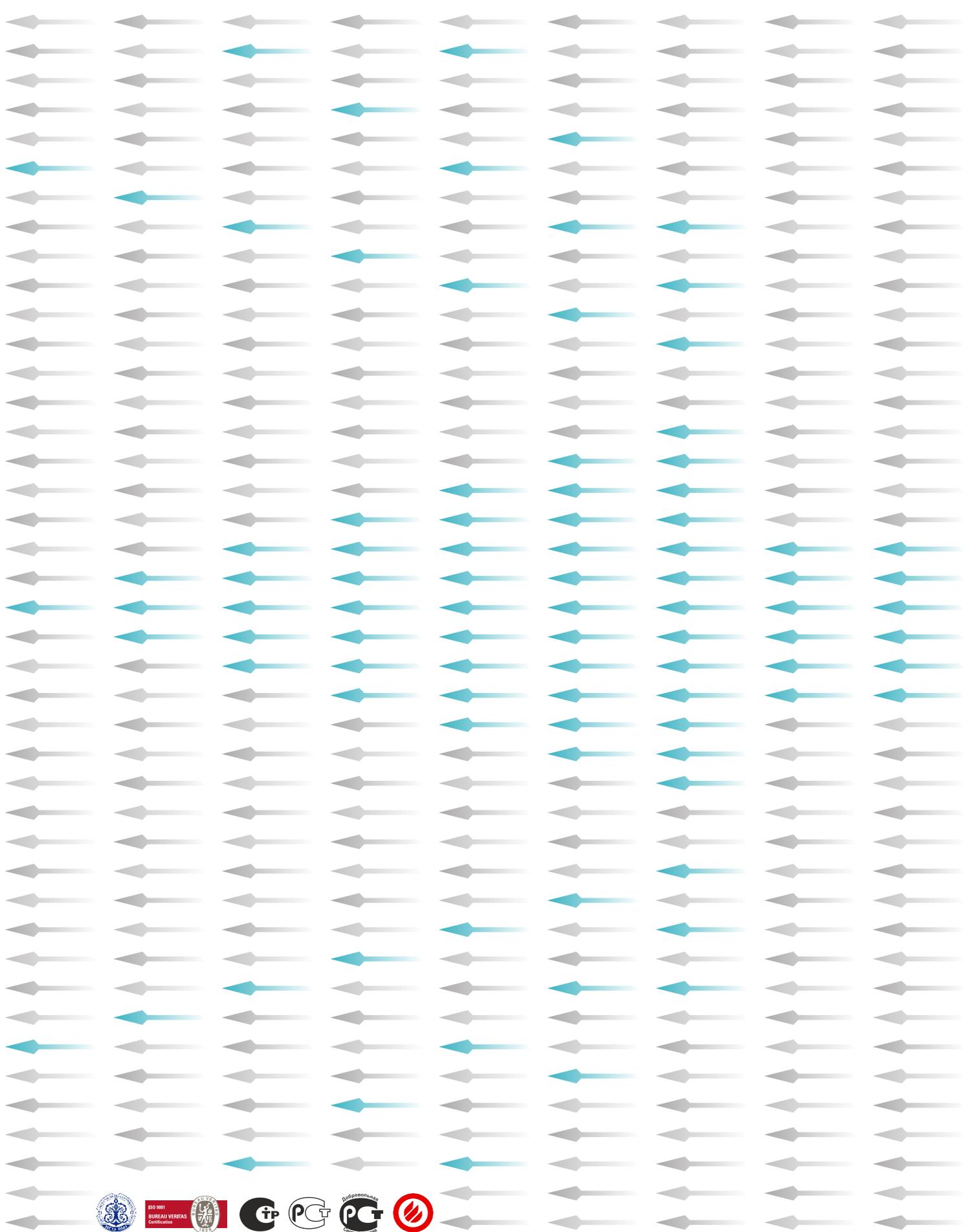
International standard ISO 9001:2008 by the certification body "Bureau Veritas Certification" Certificate No. RU 228296Q-U dated 12.07.2012

Interstate standard GOST ISO 9001-2011 in GOST R certification system by the certification body "Russian Register" Association Certificate No. POCC RU.MC08.K02078 dated 14.03.2014



Standard of the organization OAO "Gazprom" STO Gazprom 9001-2012 by the authorized organization OAO "Gazprom-komplektatsiya" – AS "Russian Register" Reg. No. of the certificate in the unified register of OAO "Gazprom" No.ГК.OC.0001.СК.000222 dated 14.03.2014





AB24

ПР 019

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