

# IV



**Laboratory furniture  
fume hoods**

## Laboratory furniture

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**Steel laboratory furniture**

The furniture that we offer is remarkable for its mechanical resistance. It has been constructed from highest quality materials. There is a wide selection of standard frames, cupboards, panels and worktops, but customized solutions are available too.

## Advantages

- steel construction based on A, C, O - type frames covered by chemically resistant epoxy paint, featuring easy leveling, plastic feet; possibility of realization cabinets based on pedestal, without frames
- module system – possibility of extend in the future
- wide selection of worktops
- possibility to choose height of stands: 900 mm (standing work) or 750 mm (sitting work)
- cabinets made of galvanized steel, covered by chemically resistant epoxy powder paint on light grey colour (RAL 7035 – possibility to choose different colour from RAL palette)
- various configuration of cabinets: right/left doors, drawer and door, column with drawers
- possibility to fit drawers or containers on wheels under the worktop
- wall mounted cabinets closed or opened: height 480, 630, 780 mm
- self-closing hinges and slides
- possibility to place door lock for drawers and doors
- wide range of additional accessories – chemo resistant sinks, armature, drains, eye-washers, emergency showers, top sections with different length shelves, bridges, electrical sockets, gas valves
- work safety guaranteed by compliance with PN-EN 13150 and PN-EN14727 norm
- consulting, projects and visualizations

## Indications and abbreviations

- SZ – underbench cabinet
- SZK – underbench cabinet with castors
- SZM – underbench cabinet with service supply
- SZO – octagonal underbench cabinet
- SZW – wall mounted shelves with the door
- SZWR – wall mounted open shelves
- S – frame
- 450-900 – cupboard width – frame height
- 2D – double wing door
- 1DP/1DL – single left/right door
- 1DP1S/1DL1S - single left/right door, one drawer
- 2D1S – double wing door, one drawer
- 2D2S – double wing door, two drawers
- 3S – three drawers
- 4S – four drawers

# Steel laboratory furniture

## Frames - height 750 mm

Frames with height of 750 mm (to sitting work). Available types: A, C, O

width	450, 600, 900, 1200, 1500 [mm]
model	A, C, O - basic
order number	MP_S 450-750 P MP_S 600-750 P MP_S 900-750 P MP_S 1200-750 P MP_S 1500-750 P
width	450, 600, 900, 1200, 1500 [mm]
model	A, C, O - expendable
order number	MP_S 450-750 R MP_S 600-750 R MP_S 900-750 R MP_S 1200-750 R MP_S 1500-750 R



TYPE A



TYPE C



TYPE O



## Underbench cabinets

Underbench cabinets to 750 mm frames, height of cabinet 480 mm, depth 500 mm

width	450, 600 [mm]
door	1
drawers	-
order number	MP_SZ 450-750 1D MP_SZ 600-750 1D
width	900, 1200 [mm]
door	2
drawers	-
order number	MP_SZ 900-750 2D MP_SZ 1200-750 2D
width	450, 600, 900 [mm]
door	-
drawers	3
order number	MP_SZ 450-750 3S MP_SZ 600-750 3S MP_SZ-900-750 3S



## Containers - height 480 mm

Containers on wheels to place under worktop, to 750 mm frame, height of cabinet 480 mm (+height of wheels), depth 500 mm



width	450, 600 [mm]
door	1
drawers	-
order number	MP_SZK 450-750 1D MP_SZK 600-750 1D
width	450, 600 [mm]
door	-
drawers	3
order number	MP_SZK 450-750 3S MP_SZK 600-750 3S



## Frames - height 900 mm

Frames with of 900 mm (to standing work). Available types: A, C, O

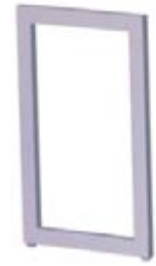
width	450, 600, 900, 1200, 1500 [mm]
model	A, C, O - basic
order number	MP_S 450-900 P MP_S 600-900 P MP_S 900-900 P MP_S 1200-900 P MP_S 1500-900 P
width	450, 600, 900, 1200, 1500 [mm]
model	A, C, O - expendable
order number	MP_S 450-900 R MP_S 600-900 R MP_S 900-900 R MP_S 1200-900 R MP_S 1500-900 R



TYPE A






TYPE C



TYPE O

## Underbench cabinets

Underbench cabinets to 900 mm frames, height of cabinets 630 mm, depth 500 mm

	width	450, 600 [mm]
	door	1
	drawers	- / 1
	order number	MP_SZ 450-900 1D MP_SZ 450-900 1D1S MP_SZ 600-900 1D MP_SZ 600-900 1D1S
	width	900, 1200 [mm]
	door	2
	drawers	- / 1 / 2
	order number	MP_SZ 900-900 2D MP_SZ 900-900 2D1S MP_SZ 900-900 2D2S MP_SZ 1200-900 2D MP_SZ 1200-900 2D1S MP_SZ 1200-900 2D2S
	width	450, 600, 900 [mm]
	door	-
	drawers	4
	order number	MP_SZ 450-900 4S MP_SZ 600-900 4S MP_SZ 900-900 4S

Installation cabinets to 900 mm frame, height of cabinet 630 mm, depth 500 mm

width	600, 900, 1200 [mm]
door	1 / 2
drawers	-
order number	MP_SZM 600-900 1D MP_SZM 900-900 2D MP_SZM 1200-900 2D






Octagonal underbench cabinet, to 900 mm frame, height of cabinet 630 mm

width	1000 [mm]
door	1
drawers	-
order number	MP_SZO 1000-900 1D

## Container - height 630 mm

Containers on wheels to place under worktop, to 900 mm frame, height of cabinet 630 mm (+height of wheels), depth 500 mm

	width	450, 600 [mm]
	door	1
	drawers	- / 1
	order number	MP_SZK 450-900 1D MP_SZK 450-900 1D1S MP_SZK 600-900 1D MP_SZK 600-900 1D1S
	width	450, 600 [mm]
	door	-
	drawers	4
	order number	MP_SZK 450-900 4S MP_SZK 600-900 4S



# Steel laboratory furniture

## Wall mounted cabinets

Wall mounted cabinets with doors available in 3 different heights: 480, 630, 780 mm,



width	450, 600, 900, 1200, 1500 [mm]
height	480, 630, 780 [mm]
door	1 / 2 / 3
order number	MP_SZW 450-480 1D MP_SZW 450-630 1D MP_SZW 450-780 1D MP_SZW 600-480 1D MP_SZW 600-630 1D MP_SZW 600-780 1D MP_SZW 900-480 2D MP_SZW 900-630 2D MP_SZW 900-780 2D MP_SZW 1200-480 2D MP_SZW 1200-630 2D MP_SZW 1200-780 2D MP_SZW 1500-480 3D MP_SZW 1500-630 3D MP_SZW 1500-780 3D

## Wall mounted cabinets

Wall mounted cabinets available in 3 different heights 480, 630, 780 mm doors can be glass as an option (opened or slided)



width	450, 600, 900, 1200, 1500 [mm]
height	480, 630, 780 [mm]
door	1 / 2 / 3
order number	MP_SZWR 450-480 1D MP_SZWR 450-630 1D MP_SZWR 450-780 1D MP_SZWR 600-480 1D MP_SZWR 600-630 1D MP_SZWR 600-780 1D MP_SZWR 900-480 2D MP_SZWR 900-630 2D MP_SZWR 900-780 2D MP_SZWR 1200-480 2D MP_SZWR 1200-630 2D MP_SZWR 1200-780 2D MP_SZWR 1500-480 3D MP_SZWR 1500-630 3D MP_SZWR 1500-780 3D



## Top sections and bridges

Top sections and bridges available in segments in maximum length of 1500mm

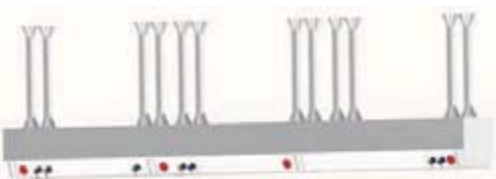


Columns with possibility to install media	
order number	MP_K (high)
	MP_K (low)

Shelf installed between columns	
order number	MP_PN



Bridges for media available in segments in maximum length of 1500 mm



bridge for media	
order number	M_MW



## Optional equipment for cabinets and containers

- door lock:
  - for cabinet with double door – lock in every door
  - for cabinet with drawers – central lock locking all drawers (pic. 2) or lock for every drawer (pic. 3)
- internal drawer – possibility to replace standard internal shelf for internal drawer based on Tandembox slides (pic. 4)
- possibility to change the height of drawers based on Tandembox slides – D-type drawers (pic. 5)
- glass door - tempered glass in aluminum frame, based on Blum hinges – door lock not available in this version (pic. 5)
- Orgaline - flexible system of internal division of drawers (pic. 6)
- Polypropylene cuvette
- Possibility to make cabinet with perforation (pic. 7)

## Options for tall cabinets

- door lock (pic. 1)
- sliding glass door (tempered glass) based on aluminum frame in Siso system (pic. 8)
- glass door - tempered glass in aluminum frame, based on Blum system; - door lock not available in this version (pic. 5)
- possibility to make cabinets on pedestal



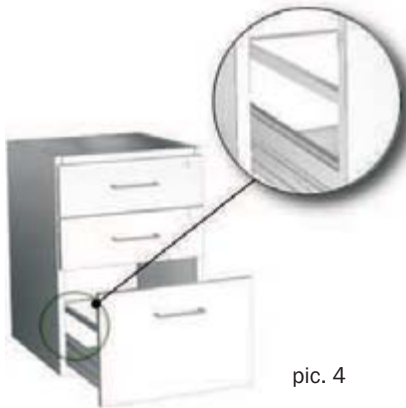
pic. 1



pic. 2



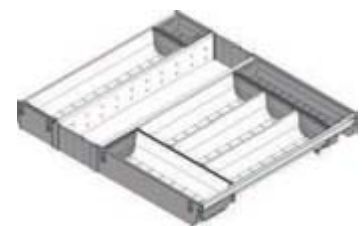
pic. 3



pic. 4



pic. 5



pic. 6



pic. 7



pic. 8



pic. 9

## Laboratory tall cabinets

Laboratory tall cabinets are available in various dimensions and configuration of interior

Advantages:

- stable construction made of steel covered by powder coated chemically resistant epoxy paint (Qualicoat certificate)
- standard colour RAL 7035 (possibility to choose different colour from RAL palette - option)
- interior made according to customer requirements (cabinets for files, card- index files, clothing, reinforced etc.)
- door lock (option)
- self-closing hinges and slides
- single or double door versions

We also offer a wide range of cabinets partially opened and closed in standard version or adapted to customer requirements.





## Worktops



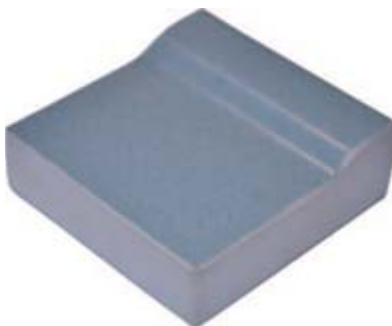
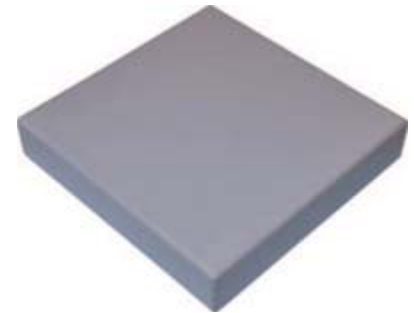
**DURCON** – worktop made of epoxy resin. This material has monolithic and ideally homogenous structure on the whole thickness. It characterizes very low permeability, high resistance on high temperature, hardness comparable with stone and without stratification or fractures. DURCON is highly resistant to most acid and other chemical compounds and used in laboratory works as well as discoloration which is the result of pigment. Available thickness: 19 or 25 mm with or without marine edge.

**QUARTZ-GRANITE CONGLOMERATE** – worktop made of quartz-granite conglomerate with polyester resin. This kind of worktop characterizes high mechanical resistance and smooth surface. Possibility to order also marine edge worktop. Thickness: 20 mm.



**MAX RESISTANCE** – laboratory worktop made of pressure laminate. It consists of hard black core (manufactured as a result of pressing of cellulose fibres in high pressure and temperature) which is covered both sided with layer of special paper and melamine resin. This material is non-flammable and does not absorb moisture. Surface is resistant on many chemical substances. Thickness: 4-20 mm.

**LAMINATE** – worktop made of chipboard covered on the outside with layer of HPL laminate. Because of its limited chemical and physical resistance, laminate worktops are applicable mainly as tables under apparatus, subsidiary tables or laboratory desks.




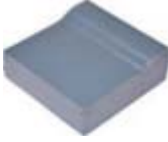


**MONOLITE CERAMIC** – this worktop is homogenous in the whole section, glazed with very high chemical resistance (except HF acid) and mechanical. Possibility to order flat or with marine edge.

**ACID PROOF STAINLESS STEEL** – worktop made of steel grade OH18N9 (AISI 304, DIN 1.4301). High mechanical and thermal resistance. Possibility to order worktop with marine edge.



## Chemical resistance table of selected worktops - comparison test

WORKTOPS	EPOXY RESIN (Durcon)	QUARTZ-GRANITE CONGLOMERATE (Quarella)	PHENOLIC RESIN (Max Resistance)	SOLID CERAMIC
<b>Chemical environment</b>				
1. Acetone	No Effect	No Effect	No Effect	No Effect
2. Acetonitrile	No Effect	No Effect	No Effect	No Effect
3. Alizarin	No Effect	Slight Discoloration	No Effect	No Effect
4. Ethyl Alcohol 50%	No Effect	No Effect	No Effect	No Effect
5. Ethyl Alcohol 95%	No Effect	No Effect	No Effect	No Effect
6. Ammonia 25%	No Effect	No Effect	No Effect	No Effect
7. Giemsa's Stain	No Effect	Discoloration	No Effect	No Effect
8. Wright's Stain	No Effect	Discoloration	No Effect	No Effect
9. Benzene	No Effect	No Effect	No Effect	No Effect
10. Acetic Oxide	No Effect	No Effect	No Effect	No Effect
11. Aniline Blue	No Effect	Slight Discoloration	No Effect	No Effect
12. Methylene Blue	No Effect	Discoloration	No Effect	No Effect
13. 2-Butane	No Effect	No Effect	No Effect	No Effect
14. Sodium Chloride 10%	No Effect	No Effect	No Effect	No Effect
15. Ferric Chloride	No Effect	No Effect	Slight Discoloration	No Effect
16. Potassium Dichromate solution in Sulfuric Acid	Discoloration	Slight Discoloration	No Effect	No Effect
17. Carbon Tetrachloride	No Effect	No Effect	No Effect	No Effect
18. Congo Red	No Effect	No Effect	No Effect	No Effect
19. 1,2-Dichloroethane	No Effect	Slight Discoloration	No Effect	No Effect
20. Dichloroethane	No Effect	Slight Discoloration	No Effect	No Effect
21. Potassium Dichromate	No Effect	No Effect	No Effect	No Effect
22. N, N-Dimethylformamide	No Effect	No Effect	No Effect	No Effect
23. 1,4-Dioxane	No Effect	No Effect	No Effect	No Effect
24. Eosin	No Effect	Slight Discoloration	No Effect	No Effect
25. Diethyl Ether	No Effect	No Effect	No Effect	No Effect
26. Phenol	No Effect	No Effect	No Effect	No Effect
27. Crystal Violet	No Effect	Discoloration	Discoloration	No Effect
28. Methyl Violet	No Effect	Discoloration	Discoloration	No Effect
29. Formaldehyde 37%	No Effect	No Effect	No Effect	No Effect
30. Carbolin Fuchsin	No Effect	Slight Discoloration	Discoloration	No Effect
31. Alkaline Fuchsin	No Effect	Discoloration	Discoloration	No Effect
32. Furfural	Slight Discoloration	Discoloration	No Effect	No Effect
33. Ethylene Glycol	No Effect	No Effect	No Effect	No Effect
34. N-Hexane	No Effect	No Effect	No Effect	No Effect
35. Heptane	No Effect	No Effect	No Effect	No Effect
36. Izoctane	No Effect	No Effect	No Effect	No Effect
37. Crystalline Iodine	No Effect	Slight Discoloration	Discoloration	No Effect
38. Potassium Iodide 10%	No Effect	No Effect	No Effect	No Effect
39. Carmine	No Effect	No Effect	No Effect	No Effect
40. Xylene	No Effect	No Effect	No Effect	No Effect
41. Nitric Acid 10%	No Effect	No Effect	No Effect	No Effect

The conditions of the test:

In the case of non-volatile substances, the reagent of app. 1/2cm<sup>3</sup> was placed on the tested sample of the material. Used in further tests chemicals were covered on the surface of the tested sample of the material with the glazed surface to slow down the evaporation process

In the case of volatile reagents, soaked cotton was placed on the tested sample of the material and it was covered with the glass lid.

The test had ran for 16 hours; then the surface of the tested sample of the material was washed with water and the soap, then dried. The above table shows the test results.



No Effect




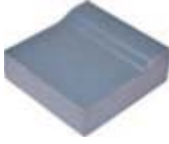


Slight Discoloration



Discoloration

# Steel laboratory furniture

WORKTOPS	EPOXY RESIN (Durcon)	QUARTZ-GRANITE CONGLOMERATE (Quarella)	PHENOLIC RESIN (Max Resistance)	SOLID CERAMIC
<b>Chemical environment</b>				
42. Nitric Acid 65%	Discoloration	Discoloration	Discoloration	No Effect
43. Chromic Acid 40%	Discoloration	Discoloration	Discoloration	No Effect
44. Citric Acid 10%	No Effect	No Effect	No Effect	No Effect
45. Hydrofluoric Acid 48%	Discoloration	Discoloration	Discoloration	Discoloration
46. Phosphoric Acid 85%	No Effect	No Effect	No Effect	No Effect
47. Acetic Acid 5%	No Effect	No Effect	No Effect	No Effect
48. Crystal Acetic Acid	No Effect	No Effect	No Effect	No Effect
49. Oleic Acid	No Effect	No Effect	No Effect	No Effect
50. Sulphuric Acid 33%	No Effect	No Effect	No Effect	No Effect
51. Sulphuric Acid 60%	No Effect	No Effect	No Effect	No Effect
52. Sulphuric Acid 96%	Discoloration	Discoloration	No Effect	No Effect
53. Potassium Permanganate	No Effect	No Effect	No Effect	No Effect
54. Kerosene	No Effect	No Effect	No Effect	No Effect
55. Butyl Acetate	No Effect	No Effect	No Effect	No Effect
56. Ethyl Acetate	No Effect	No Effect	No Effect	No Effect
57. Aniline Oil	No Effect	No Effect	No Effect	No Effect
58. Cotton Oil	No Effect	No Effect	No Effect	No Effect
59. Mineral Oil	No Effect	No Effect	No Effect	No Effect
60. Transformer Oil	No Effect	No Effect	No Effect	No Effect
61. Olive Oil	No Effect	No Effect	No Effect	No Effect
62. Acridine Orange	No Effect	Discoloration	No Effect	No Effect
63. Sodium Hypochlorite 5%	No Effect	No Effect	No Effect	No Effect
64. Soap Solution 1%	No Effect	No Effect	No Effect	No Effect
65. Safranin	No Effect	No Effect	No Effect	No Effect
66. Copper (II) Sulfate	No Effect	No Effect	No Effect	No Effect
67. Sudan III	No Effect	No Effect	No Effect	No Effect
68. Turpentine	No Effect	No Effect	No Effect	No Effect
69. Tetrahydrofuran	No Effect	No Effect	No Effect	No Effect
70. Trichloroethylene	No Effect	No Effect	No Effect	No Effect
71. Chromium Oxide	No Effect	No Effect	No Effect	No Effect
72. Toluene	No Effect	No Effect	No Effect	No Effect
73. Sodium Carbonate 2%	No Effect	No Effect	No Effect	No Effect
74. Sodium Carbonate 20%	No Effect	No Effect	No Effect	No Effect
75. Distilled Water	No Effect	No Effect	No Effect	No Effect
76. Boiled Water (5 min)	No Effect	No Effect	No Effect	No Effect
77. Hydrogen Peroxide 3%	No Effect	No Effect	No Effect	No Effect
78. Hydrogen Peroxide 20%	No Effect	No Effect	No Effect	No Effect
79. Ammonium Hydroxide 28%	No Effect	No Effect	No Effect	No Effect
80. Sodium Hydroxide 10%	No Effect	No Effect	No Effect	No Effect
81. Sodium Hydroxide 50%	No Effect	No Effect	No Effect	No Effect
82. Malachite Green	No Effect	Discoloration	No Effect	No Effect

The conditions of the test:

In the case of non-volatile substances, the reagent of app.1/2cm<sup>3</sup> was placed on the tested sample of the material. Used in further tests chemicals were covered on the surface of the tested sample of the material with the glazed surface to slow down the evaporation process

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No Effect



Slight Discoloration



Discoloration