

Köttermann Fume Cupboards.

Individually configurable.



We exceed standards for you.

Individually configurable efficiency.



Subject to technical modifications
Status: January 2018

Contents

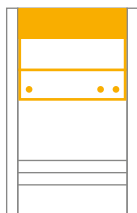
- 02 Overview of fume cupboard types
- 03 Which fume cupboard for which requirement?
- 04 Bench-type fume cupboards
- 06 Energy-efficient fume cupboards
- 08 Walk-in and distillation fume cupboards
- 10 Height-adjustable fume cupboards
- 12 High-performance fume cupboards
- 14 Radionuclide fume cupboards
- 16 Pharmacy hood
- 18 Substructures and accessories
- 20 Fume cupboard electronics
- 21 Modularity
- 22 Contact

Fume cupboard types

Flexible and individually configurable

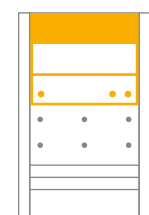
When dealing with volatile hazardous substances, dusts or aerosols, the protection of employees is our top priority. Such works must therefore be carried out in a fume cupboard.

KÖTTERMANN fume cupboards not only achieve top results in all relevant tests, but also offer users ergonomic advantages that make work processes easier and thus even safer.

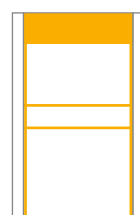


Bench-type fume cupboards
All-rounders for general use

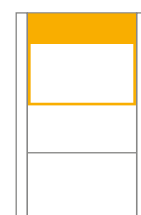
- **Complete range**
the right fume cupboard for every application
- **Made from Steel**
high quality and long lasting
- **Perfect safety**
certified by independent institutes
- **Ergonomic functions**
to improve workflows
- **Exemplary sustainability**
low operating costs, recyclable material
- **Quality "Made in Germany"**
best price-performance ratio



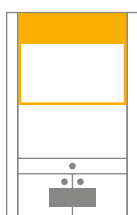
Energy-efficient fume cupboards
EXPLORIS EcoPlus®
The low-energy fume cupboard



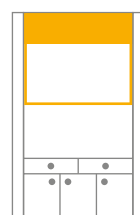
Walk-in and distillation fume cupboards
High experimental setups



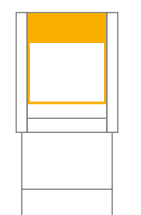
Height-adjustable fume cupboards
EXPLORIS VarioTop®
Ergonomics in the workplace due to flexible working heights



High-performance fume cupboards
Optimal protection when working with acids and high thermal loads



Radionuclide fume cupboards
For dealing with radioactive isotopes



Pharmacy hood
Space-saving and flexible

Benefits

- Certification of all EXPLORIS® standard fume cupboards according to DIN EN 14175
- Optimized exhaust air system in terms of flow technology
- Excellent containment capacity for pollutants
- Sash made of laminated safety glass
- Especially low operating costs
- Lots of space for devices due to particularly large interior depth
- Easy operation and safe monitoring through integrated EXPLORIS TouchTronic®*
- Support of various applications through individual gas, water and electrical services
- Tested for 20 years of operation
- Electric cables free from halogenated hydrocarbons
- Cable entry through the inlet profile at the worktop

Possibilities for substructures

- Safety underbench cabinets for flammable liquids
- Chemical storage underbench cabinets
- Acid and base underbench cabinets
- Standard pedestal underbench cabinets
- Mobile underbench cabinets
- Knee-space panel
- Waste collection system
- Neutralisation system
- EXPLORIS LevelControl®

Equipment options

- EXPLORIS TouchTronic®
– fume cupboard electronics with touch screen for controlling and monitoring all functions
- EXPLORIS AutoProtect®
– closes the sash automatically as soon as the fume cupboard area is left
- EXPLORIS AirMonitor®
– monitoring function with digital display, option of volume flow or face velocity
- EXPLORIS AirControl®
– for variable control of the exhaust air volume flow
- EXPLORIS CloseGuard®
– stops the automatic closing of the sash in the event of obstacles
- EXPLORIS LevelControl®
– waste collection system with electronic fill level monitoring
– for solvent and aqueous wastes
– can be integrated in safety underbench cabinets
– can be integrated in acid and base cabinets
– filling of containers directly from the fume cupboard interior
– electrically conductive polypropylene
- Temperature sensor in high-performance fume cupboards
– for monitoring the interior temperature and alarming when a limit value is exceeded
- Foot switch for operating the sash
– practical when no hand is free
- Worktops in different materials
– optionally height-adjustable (EXPLORIS VarioTop®)
- LED-Interior lighting
– bright and uniform illumination of the workspace
- Programmable sockets in the fume cupboard interior
– individually switchable
– start-stop-timer and countdown
- Integrated fuses / RCCBs
- Fittings for water and gases in different purity
– easy and safe to reach outlets
- Scaffolding parts for the installation on the rear panel of the fume cupboard
- Drawers in the fume cupboard frame
- Baffle
- Exhaust air scrubber

Which fume cupboard for which requirement?

KÖTTERMANN fume cupboards for every application

Fume cupboards can be used universally in the laboratory. They ensure optimum protection against hazardous substances. The selection of the appropriate fume cupboard type depends both on the room conditions of the laboratory and on the type of chemicals used. Especially when using acids, the following recommendations should be followed.

Fume cupboards for general use
(Bench-type, distillation, walk-in fume cupboard, EXPLORIS VarioTop®, EXPLORIS EcoPlus®)

	suitable	occasional use	not suitable
Organic solvents	X		
Weak acids	X		
Diluted mineral acids	X		
Cold concentrated mineral acids		X	
Hot concentrated mineral acids			X
Hydrofluoric acid			X
Radioactive substances			X
High thermal load			X

Fume cupboards for general use
with Trespa® TopLab® VERTICAL lining

	suitable	occasional use	not suitable
Organic solvents	X		
Weak acids	X		
Diluted mineral acids	X		
Cold concentrated mineral acids	X		
Hot concentrated mineral acids		X	
Hydrofluoric acid			X
Radioactive substances			X
High thermal load			X

High-performance fume cupboards
with PP lining (polypropylene) / fume cupboard for hydrofluoric acid

	suitable	suitable but not recommended	not suitable
Organic solvents		X	
Weak acids		X	
Diluted mineral acids		X	
Cold concentrated mineral acids		X	
Hot concentrated mineral acids		X	
Hydrofluoric acid	X		
Radioactive substances			X
High thermal load	X		

High-performance fume cupboards
with ceramic lining

	suitable	not suitable
Organic solvents	X	
Weak acids	X	
Diluted mineral acids	X	
Cold concentrated mineral acids	X	
Hot concentrated mineral acids	X	
Hydrofluoric acid		X
Radioactive substances		X
High thermal load	X	

Radionuclide fume cupboards

	suitable	not suitable
Organic solvents	X	
Weak acids	X	
Diluted mineral acids	X	
Cold concentrated mineral acids		X
Hot concentrated mineral acids		X
Hydrofluoric acid		X
Radioactive substances	X	
High thermal load		X

Bench-type fume cupboards

All-rounders for general use



A particularly energy-saving variant of the fume cupboard for general use is the

EXPLORIS EcoPlus®

More information
on page 6

Description

EXPLORIS® bench-type fume cupboards for general use can be used universally in the laboratory. They are ideal for dealing with organic solvents and are also suitable for working with cold or diluted acids. Depending on the room height of the laboratory, there is a choice between a high and a low design.

Properties and benefits

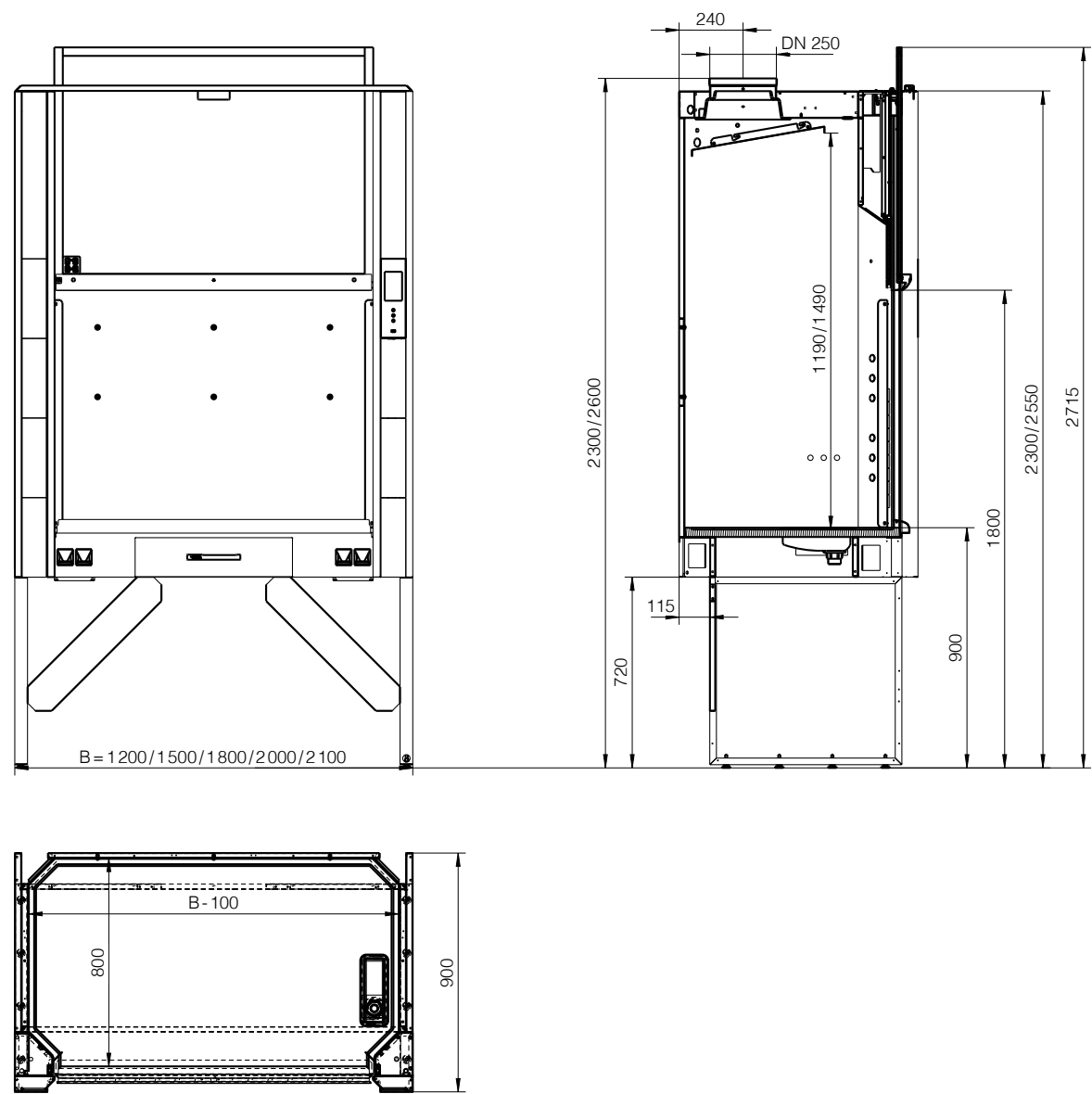
- Certified according to DIN EN 14175 Part 2 and Part 3
- With innovative EXPLORIS TouchTronic®* as standard
- Low operating costs due to low airflow
- Extra large interior depth due to special worktop shape

EXPLORIS TouchTronic®



*More information on page 20

Dimensions EXPLORIS® Bench-type fume cupboard high / low design



Equipment Options

- Sash options
 - one-piece sash (fume cupboards with standard front height)
 - telescopic sash (fume cupboards with reduced front height)
 - two-piece laminated safety glass (with and without sliding glass panels)
- Foot switch for operating the sash
- Interior: coated steel, optional lining in Trespa® TopLab® VERTICAL
- Drawer with full pull-out, cushioned automatic closure and label
- Worktops in different materials
- LED interior lighting
- Programmable sockets in the fume cupboard chamber
- Individual gas, water and electrical fittings with quality products from BROEN - LAB A/S, Spectron Gas Control Systems GmbH and GCE GmbH Integrated fuses / RCCBs
- Scaffolding parts for the installation on the rear panel of the fume cupboard
- Cable entry through the inlet profile on the worktop
- Cable bushing in the fume cupboard side
- Window in the fume cupboard side
- Also available as fume cupboard for low ceiling height with reduced front height (2 300 mm) and floor-mounted service columns

EXPLORIS® Bench-type fume cupboards

Dimensions in mm | Volume flow in m³/h

Width	1 200	1 500	1 800	2 000	2 100
Front height	2 300/2 550	2 300/2 550	2 300/2 550	2 300/2 550	2 300/2 550
Housing height	2 300/2 600	2 300/2 600	2 300/2 600	2 300/2 600	2 300/2 600
Depth	900	900	900	900	900
Usable space width	1 100	1 400	1 700	1 900	2 000
Usable space height	1 190/1 490	1 190/1 490	1 190/1 490	1 190/1 490	1 190/1 490
Usable space depth	800	800	800	800	800
Working height	900	900	900	900	900
Minimum permissible volume flow **	450	530	680	800	800
Volume flow to be adjusted	480	600	720	840	840
Maximum permissible volume flow	1 500	1 500	1 500	1 500	1 500

** Alarm value

High-performance fume cupboards

Optimal protection when working with acids and high thermal loads



Description

High-performance fume cupboards are specially designed for high chemical loads, which occur, for example, when fuming strong mineral acids such as sulphuric, nitric and hydrochloric acid or aqua regia.

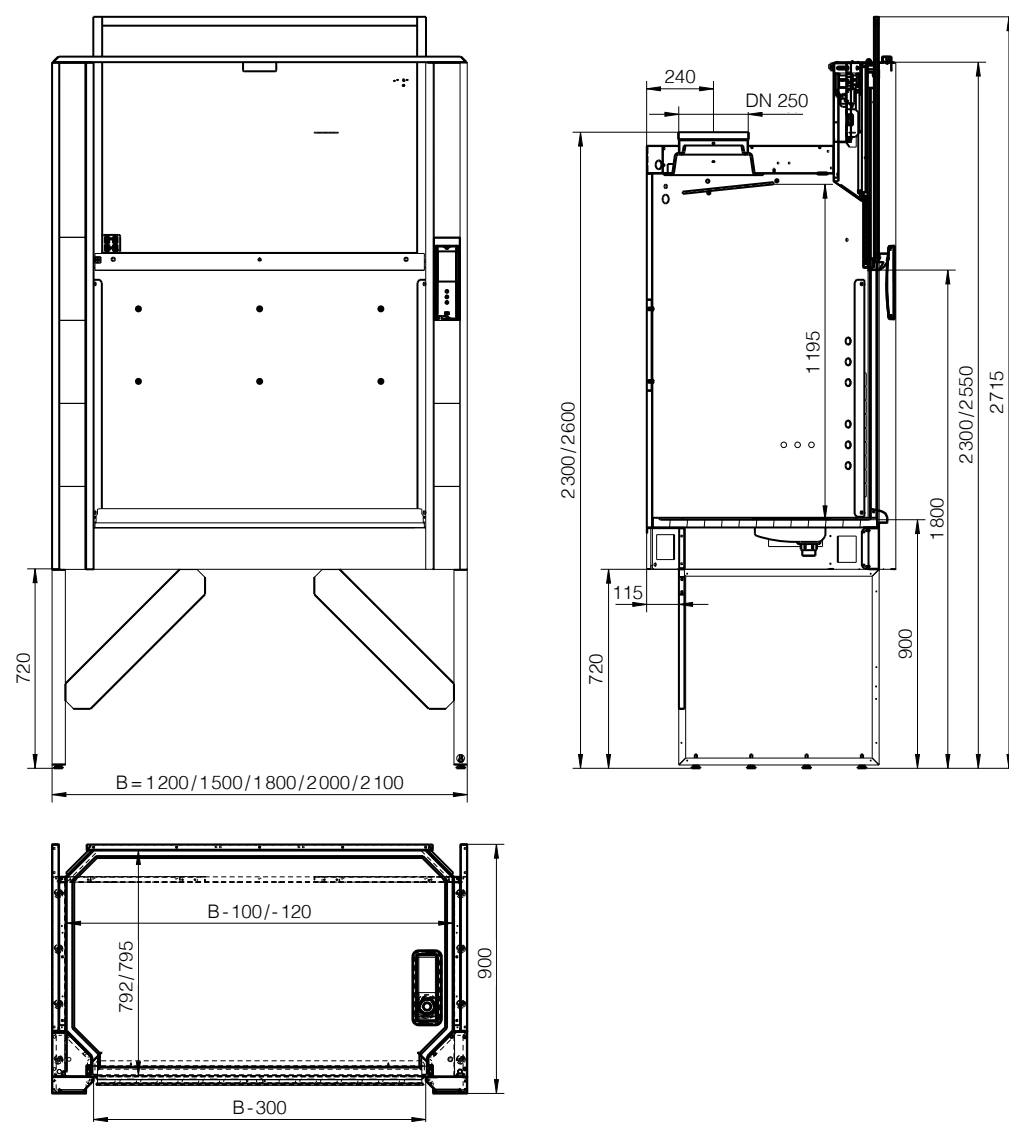
Lined with resistant ceramic or polypropylene, EXPLORIS® high-performance fume cupboards protect against all acid attacks. Due to its design, the special airflow also allows working with high thermal loads.

Properties and benefits

- Certified according to DIN EN 14175 Part 2, Part 3 and Part 7
- With innovative EXPLORIS TouchTronic®* as standard
- Enormous resistance due to large-area linings
- Special air technology for working with high heat development
- Extra large interior depth
- Temperature sensor with alarm function

*More information on page 20

Dimensions EXPLORIS® High-performance fume cupboard



EXPLORIS® High-performance fume cupboards

Dimensions in mm | Volume flow in m³/h

Width	1200	1500	1800	2000	2100
Front height	2300/2550	2300/2550	2300/2550	2300/2550	2300/2550
Housing height	2300/2600	2300/2600	2300/2600	2300/2600	2300/2600
Depth	900	900	900	900	900
Usable space width PP lining	1090	1390	1690	1890	1990
Usable space width Ceramic lining	1080	1380	1680	1880	1980
Usable space height	1195	1195	1195	1195	1195
Usable space depth PP lining	795	795	795	795	795
Usable space depth Ceramic lining	792	792	792	792	792
Working height	900	900	900	900	900
Minimum permissible volume flow **	660	830	990	1790	1790
Volume flow to be adjusted	720	900	1080	1900	1900
Maximum permissible volume flow	1500	1500	1500	2000	2000

** Alarm value

Equipment Options

- Sash options
 - one-piece sash (fume cupboards with standard front height)
 - telescopic sash (fume cupboards with reduced front height)
 - two-piece laminated safety glass
 - made of polycarbonate – especially for applications with hydrofluoric acid
- Foot switch for operating the sash
- Interior: lining made of
 - acid-resistant ceramic
 - polypropylene: especially for working with hydrofluoric acid
- Worktops made of polypropylene or ceramic
- LED interior lighting
- Individual gas, water and electrical fittings with quality products from BROEN-LAB A/S, Spectron Gas Control Systems GmbH and GCE GmbH
- Integrated fuses / RCCBs
- Scaffolding parts for the installation on the rear panel of the fume cupboard
- Drawer in the fume cupboard frame
- Cable entry through the inlet profile on the worktop
- Exhaust air scrubber for exhaust air cleaning
- Also available as fume cupboard for low ceiling height with reduced front height (2300mm) and floor-mounted service columns

Pharmacy hood

Space-saving and flexible



General

Pharmacy fume cupboards are small fume cupboards that were especially developed for the handling of hazardous substances in pharmacies. Of course, they comply with the requirements of §4(2) of the German Pharmacy Regulations and are ideally suited for working with dusty preparations or volatile chemicals – not only in pharmacies.

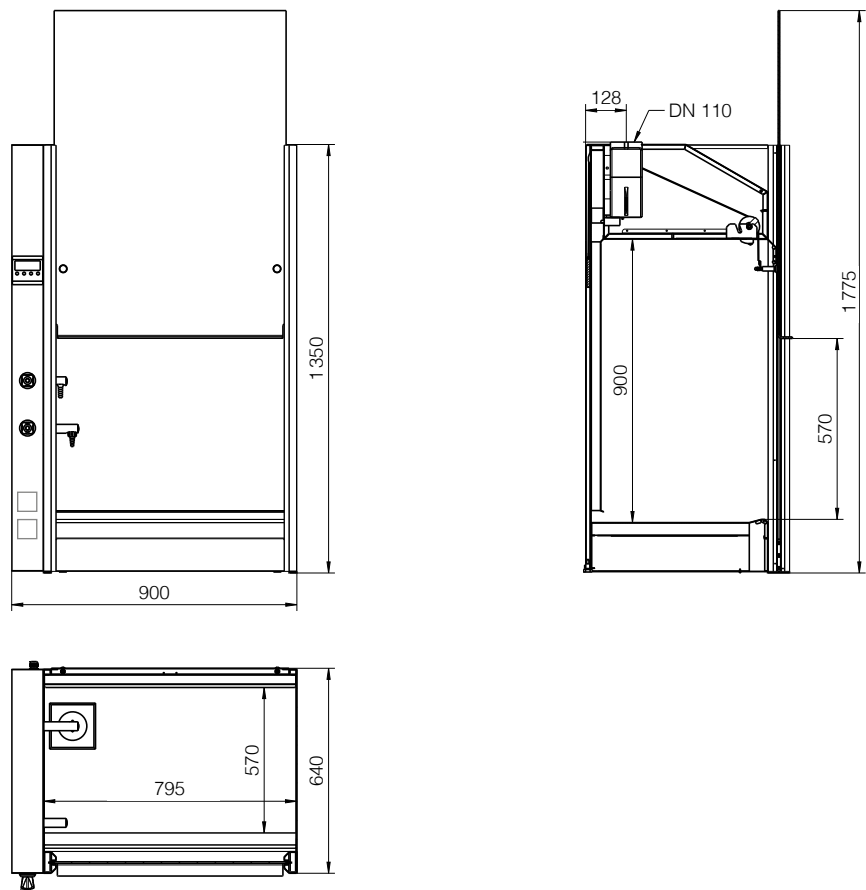
Pharmacy fume cupboards are always used when less toxic substances need to be extracted.

- Protection against harmful vapours
- Filling of volatile solvents
- Enclosing of small experiments
- Neutralisation of odours

Properties and benefits

- Tested according to DIN 12924 Part 4
- Sash: one-piece sash made of polyacrylic
- Well suited for small laboratories and rooms with low ceiling height
- Optimal placement on a table
- Integrated airflow monitoring
- For the connection to an exhaust air system available on site

Dimensions EXPLORIS® Pharmacy fume cupboard



Equipment

- Monitoring electronics
- Two sockets
- Interior lighting
- Infinitely adjustable acrylic glass sash
- Optionally with integrated fan
- Completely equipped with gas, water and power supply

Further exhaust air accessories

- Extraction arms
- Extract canopies
- Bench-type fume cupboard hood without services

EXPLORIS® EXPLORIS® Pharmacy fume cupboard

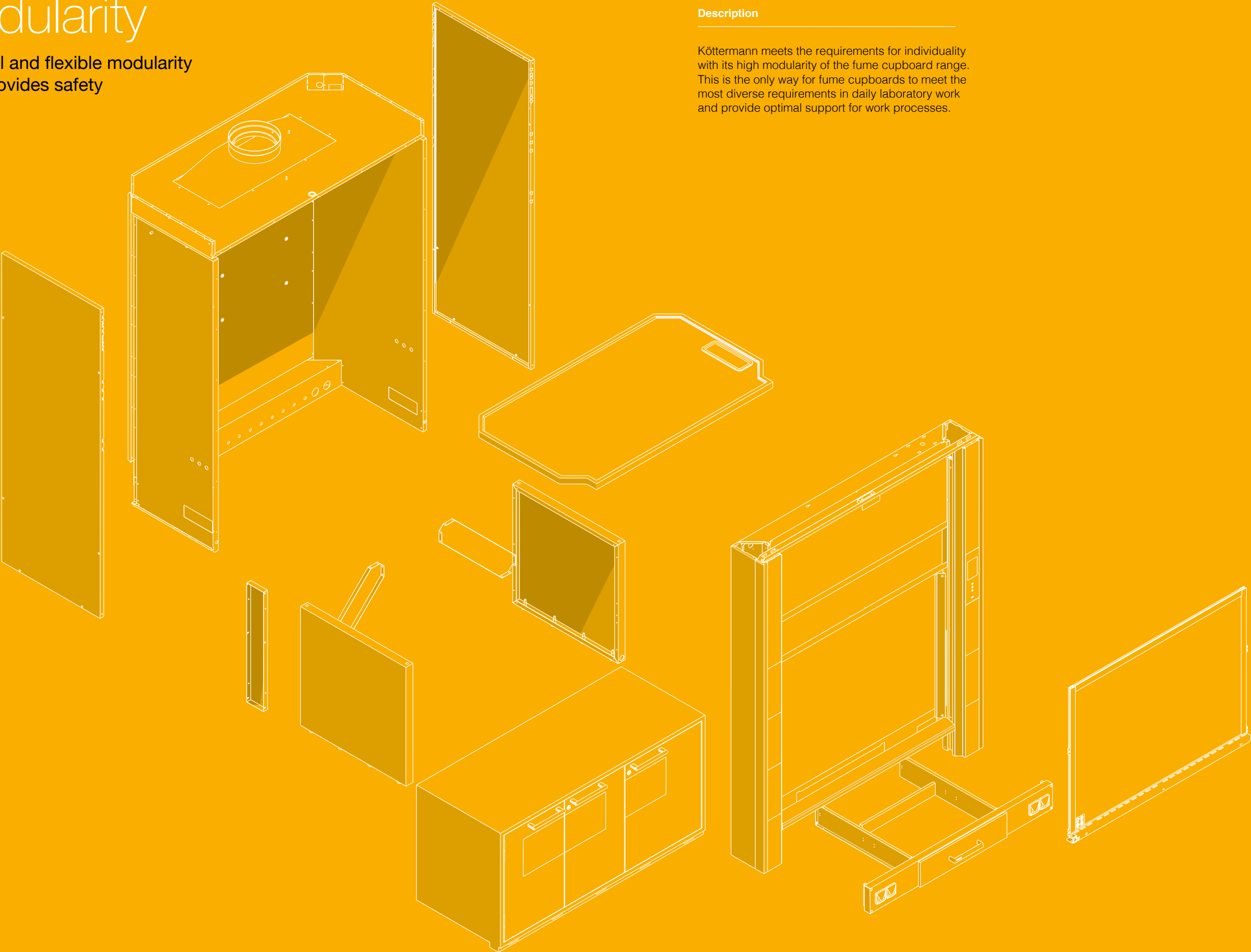
Dimensions in mm | Volume flow in m³/h

Width	900	900
Front height	1350	1350
Depth	640	640
Usable space width	795	795
Usable space height	900	900
Usable space depth	570	570
Fan	X	–
Services	X	X
Minimum required volume flow	250	250

Housing sides
<ul style="list-style-type: none">◦ Closed◦ With side window◦ With sockets◦ With cable bushing
Housing
<ul style="list-style-type: none">◦ Housing height 2250 mm◦ Housing height 2550 mm◦ Interior height ca. 1200 mm◦ Interior height ca. 1500 mm◦ Interior height ca. 1850 mm (distillation fume cupboard)◦ Interior height ca. 2400 mm (walk-in fume cupboard)◦ Ceramic lining◦ Polypropylene lining◦ Trespa® TopLab® <small>VERTICAL</small> lining
Exhaust air vent
<ul style="list-style-type: none">◦ DN 250 mm◦ DN 110 mm for pharmacy fume cupboards
Monitoring / Control
<ul style="list-style-type: none">◦ EXPLORIS AirMonitor® with pressure sensor for monitoring the volume flow◦ EXPLORIS AirMonitor® with flow sensor for monitoring the face velocity◦ EXPLORIS AirControl® fully variable volume flow control
Lighting
<ul style="list-style-type: none">◦ T5-fluorescent tube◦ LED lamp◦ LED lamp, explosion-proof
Front
<ul style="list-style-type: none">◦ Front height 2300 mm◦ Front height 2550 mm
Sash
<ul style="list-style-type: none">◦ One-piece with sliding glass panels◦ One-piece with fixed glass panel◦ Two-piece telescopic sash with sliding glass panels◦ Two-piece telescopic sash with fixed glass panels

Modularity

Individual and flexible modularity which provides safety



Description
Köttermann meets the requirements for individuality with its high modularity of the fume cupboard range. This is the only way for fume cupboards to meet the most diverse requirements in daily laboratory work and provide optimal support for work processes.

Material for glass panels
<ul style="list-style-type: none">◦ Two-piece laminated safety glass◦ Two-piece laminated safety glass with side sliding panels◦ Polycarbonate◦ Polyacrylic glove openings
Underbench frame
<ul style="list-style-type: none">◦ Unequipped◦ Sockets◦ Sockets and drawers◦ Individual service equipping (for example fluid services, high-purity gases)◦ Function display for scrubbers at high-performance fume cupboards◦ Drawers
A / C frames
<ul style="list-style-type: none">◦ Width 1200 mm◦ Width 1500 mm◦ Width 1800 mm◦ Width 2000 mm◦ Width 2100 mm
Worktops
<ul style="list-style-type: none">◦ Ceramic◦ Composite ceramic◦ Laminated glass◦ Epoxy◦ Polypropylene◦ Trespa® TopLab® <small>PLUS</small>◦ Stainless steel
Underbench cabinets
<ul style="list-style-type: none">◦ Without (knee-space panel)◦ Standard underbench cabinet (optionally extracted)◦ Chemical storage underbench cabinet◦ Acid and base underbench cabinet◦ Underbench safety cabinet for flammable liquids◦ Mobile underbench cabinet
Services
<ul style="list-style-type: none">◦ Gases / High-purity gases◦ Water / demineralised water◦ Cooling water / vacuum◦ 230V/400V◦ Fuses / RCCB

www.koettermann.com
www.kottermann.com

KÖTTERMANN GMBH & CO KG

Industriestraße 2-10
DE - 31311 Uetze/Hänigsen
Phone: + 49 5147 976-0
E-Mail: exploris@koettermann.com

AUSTRIA

KÖTTERMANN GMBH AUSTRIA

Autokaderstraße 29 – Bauteil 1
AT - 1210 Wien
Phone: + 43 1 544937420
E-Mail: exploris.at@koettermann.com

BELGIUM

KÖTTERMANN BVBA

Keesinglaan 26
BE - 2100 Antwerpen
Phone: + 32 3 3609790
E-Mail: exploris.be@kottermann.com

FRANCE

KÖTTERMANN SYSTEMLABOR S.A.S.

Parc Business Airport
Bât. Epsilon, 80 rue Condorcet
FR - 38090 Vaulx - Milieu
Phone: + 33 474 952380
E-Mail: exploris.fr@koettermann.com

POLAND

KÖTTERMANN SP. Z O.O.

ul. Szamocka 8
PL - 01 - 748 Warszawa
Phone: + 48 22 8324760
E-Mail: exploris.pl@koettermann.com

SPAIN

KÖTTERMANN SYSTEMLABOR, S.A.

Calle Consuegra 7, 3°C
ES - 28036 Madrid
Phone: + 34 91 7320110
E-Mail: exploris.es@koettermann.com

SWITZERLAND

KÖTTERMANN AG

Industriestrasse 37
CH - 8625 Gossau ZH
Phone: + 41 44 9361809
E-Mail: exploris.ch@koettermann.com

THE NETHERLANDS

KÖTTERMANN B.V.

Nieuwe Prinsenkade 3
NL - 4811 VC Breda
Phone: + 31 76 2030044
E-Mail: exploris.nl@kottermann.com

UK & IRELAND

KÖTTERMANN LTD.

3 The Courtyard
Furlong Road/Bourne End
UK - Buckinghamshire SL8 5AU
Phone: + 44 1628 532211
E-Mail: exploris.uk@koettermann.com