



köttermann  
The Steel Laboratory System

Köttermann Fume Cupboards – the new

**TRENDSETTER**  
**14175**

with **excellent** performance!



Even safer! New fume cupboards complying with EN 14175

# Köttermann fume cupboards to EN14175...

When the new European fume cupboard standard comes into effect, stricter controls will come into force. The new EN 14175 sets higher standards in the testing of the performance and safety of fume cupboards. The objective is to bring the various fume cupboard safety standards to a common standard throughout Europe by unifying the test methods employed. Two new test procedures are used to determine the containment of harmful substances (acceptable levels to be achieved in these tests were established in Germany by BG Chemie).

## 1. Outer grid test

This test demonstrates the performance of a fume cupboard in a static environment. The test is similar to the DIN 12924 standard employed in Germany. In this test the leakage of a gas discharged in the fume cupboard chamber is measured 50 mm in front of the sash (outer grid).

## 2. Robustness test

This practical test indicates the performance of the fume cupboard to contain fumes when subjected to external draughts. To test for leakage a large plate is moved horizontally in front of the fume cupboard to create a draught simulating a person walking in front of a fume cupboard.

In addition to the improved air flow characteristics, the new EN specifies design modification. One notable modification is the definition of the working sash opening height between 400-600 mm. This provides facial protection for the user.

500 mm



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## Safety for your eyes

The sash lock prevents the sash rising above the safe working height of 500 mm giving protection to the users eyes and maintaining the designed air flow and face velocity. To set up experiments the sash lock can be overridden by pulling the sash lock release mechanism. When the sash is lowered below the 500 mm level the sash lock automatically resets at 500 mm.



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## Our EN testing laboratory – fit for the standard

Our first class, certified testing laboratory is fully equipped to undertake testing to the new requirements of EN 14175.

# ...feature **outstanding quality**...

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## Everything under control

Exact, digital volumetric flow control. Trouble-free thanks to the new, processor-controlled air flow monitor.



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## Special requirements off-the-shelf

Fume cupboards are available in many variations. All components are flexible and modular to allow a vast choice in the size and selection of the fume cupboard with excellent performance at an affordable price.



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## Well supplied

Gas, water, vacuum, electrical outlets etc., no matter what services you require – the flexibility of our design allows many services to be selected. The underbench frame also allows the inclusion of a practical drawer if required.



# ...and **functionality** in every detail.

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## Great climate

An innovative exhaust air concept ensures rapid dilution and removal of harmful substances within the fume cupboard chamber.

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## Clean business

Cleanliness and hygiene are essential in all experimental work. Dispensing with a rear baffle with no loss of performance prevents the build up of dirt and contaminants in an inaccessible area.

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## Fast maintenance

Practical and convenient – all of the components that require regular maintenance are easily accessible through the front.

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## You can rely on that

Through its effective bypass the fume cupboard maintains constant air flow and constant air pressure. These features are a great benefit when utilising V.A.V. extract systems. V.A.V. systems are particularly useful when considering the overall energy and total air-handling costs of a building.

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## Make way!

Pleasant working conditions are maintained when bulky pieces of equipment are used or large scale experimental set ups are employed – due to the very deep chamber of 800 mm.



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# ...with excellent performance - for your safety!

As usual, with Köttermann all tests on its products achieve excellent results.

## Outer grid test:

In the outer grid test no emissions were recorded at all. This achievement cannot be surpassed.

## Robustness test:

And even in the demanding robustness test, the finding was clearly below the BG Chemie limit value. That is a fantastic result!

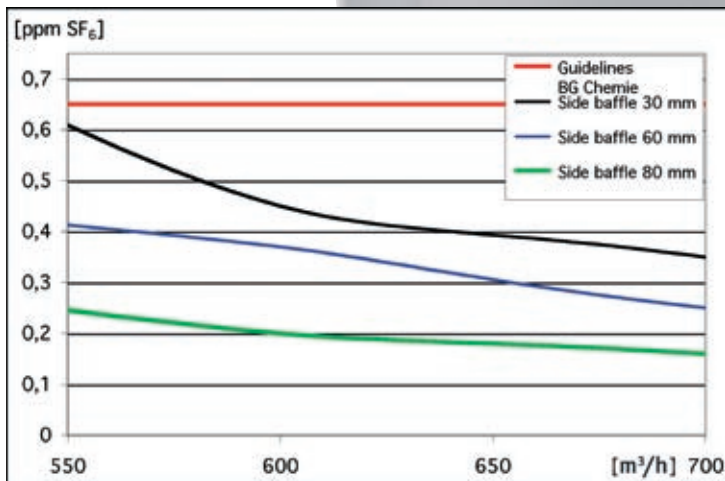
The excellent results were achieved with the use of a simple engineering solution. The introduction of vertical side inlet baffles (available in three sizes) and a stainless steel aerofoil along the front of the workbase. The exceptional aerodynamics of the fume cupboard are vastly improved and the requirements of EN 14175 are surpassed with ease. An additional benefit is that this minor modification improves the air flow characteristics (400 m<sup>3</sup>/h).

## Retrofittable at any time !

Existing Köttermann fume cupboards can be easily retrofitted with the new EN set at any time. Two side inlet baffles, an aerofoil along the front and a sash stop upgrade your fume cupboard quickly to the European standard.

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## Fantastic values in the robustness test



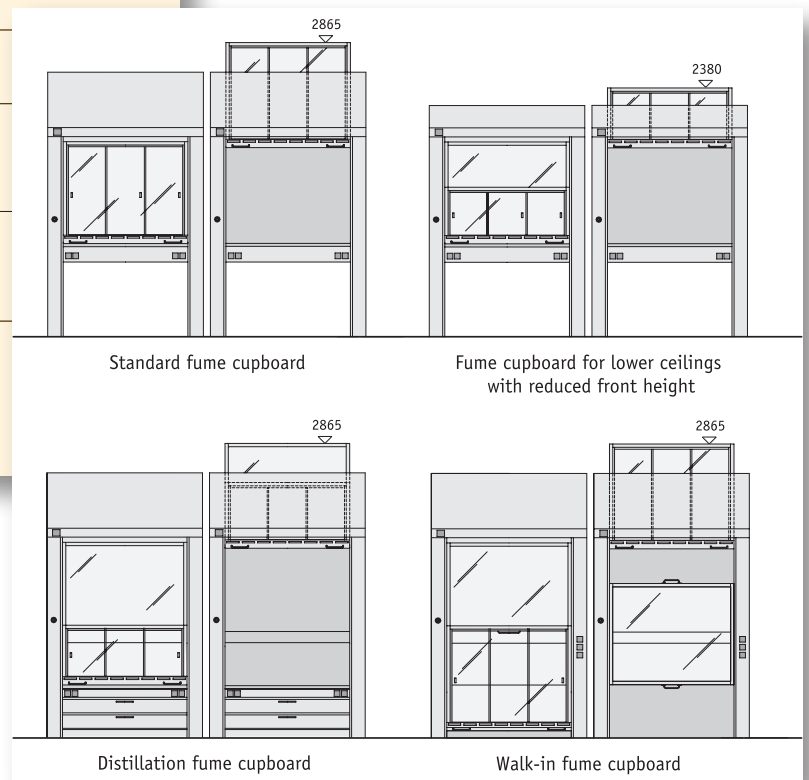
We are proud of this: all values in the robustness test are below the BG-Chemie guidelines. Three different volumetric flows with three different side inlet baffles are shown on a 1500 mm wide standard fume cupboard.

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# Entirely left to your wishes

Different heights, widths and work surfaces, various types of lining materials, many types of service fittings and electrical outlets are all readily available. This allows a fume cupboard to be tailored to your individual requirements. In this table you will find various combinations that will allow you to select the most suitable fume cupboard for your needs.

<b>Widths:</b>	1200, 1500, 1800, 2000, 2100 mm
<b>Heights:</b>	2550 mm 2250 mm (for use in low rooms) 2820 mm (industrial fume cupboard with special height)
<b>Sash:</b>	safety glass polycarbonate polyacrylics
<b>Linings:</b>	polypropylene ceramics
<b>Models</b>	general purpose fume cupboard high performance fume cupboard radio nuclide fume cupboard
<b>Working heights:</b>	standard fume cupboard: 900 mm distillation fume cupboard: 500 mm walk-in fume cupboard
<b>Optional:</b>	exhaust air control exhaust air scrubber exhaust air filter automatic sash controller



## Any more questions?

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