

**Well  
informed!**

- >>> Technical Highlights
- >>> Facts and Consequences  
of EN 14470-1 and EN 14470-2
- >>> New Products, Product innovations ...

— Edition —  
**compact 3**

**Professional Storage of Hazardous Materials**

**Edition compact 3**

**asecos®**

Safety and  
Environmental Protection





Ladies and Gentlemen,

It is a pleasure for us to introduce our new catalogue Edition compact 3.

#### Latest innovations

For 15 years asecos has been very successful in inventing and manufacturing safety storage cabinets. After the introduction of PHOENIX touchless, the first fully automatic folding door cabinet in the world we are proud to present a new generation of safety storage cabinets:

The ingenious cabinets PEGASUS and PHOENIX Vol. 2. Both enable you to open and close two doors using only one hand! Just pull the handle of the right door and as if by magic the left door will follow automatically without being touched. Find out more starting from page 14.

Another major innovation is the second generation of the G90 fire resistant gas cylinder cabinet for indoor use. The entire range is certified according to the new European standard EN 14470-2. This standard finally bridges the gap between 90 minutes fire rated solvent cabinets and 20 minutes fire rated gas cylinder cabinets. The result is maximum protection for personnel, rescue forces and property in the event of a fire. The G90 range has been completely redesigned in 2009 to reach a new degree of user-friendliness. See the whole new product range starting from page 86.

We would now like to draw your attention to our third novelty - the recirculating air filter system UFA.20.30 shown

on page 104: flexible, ready to plug-in ventilation for your safety storage cabinet, no need for any expensive, fixed pipework anymore. The system comes with a sophisticated activated carbon filter which reliably retains solvent vapours and safely prevents the occurrence of explosive atmosphere.

#### Laws and regulations

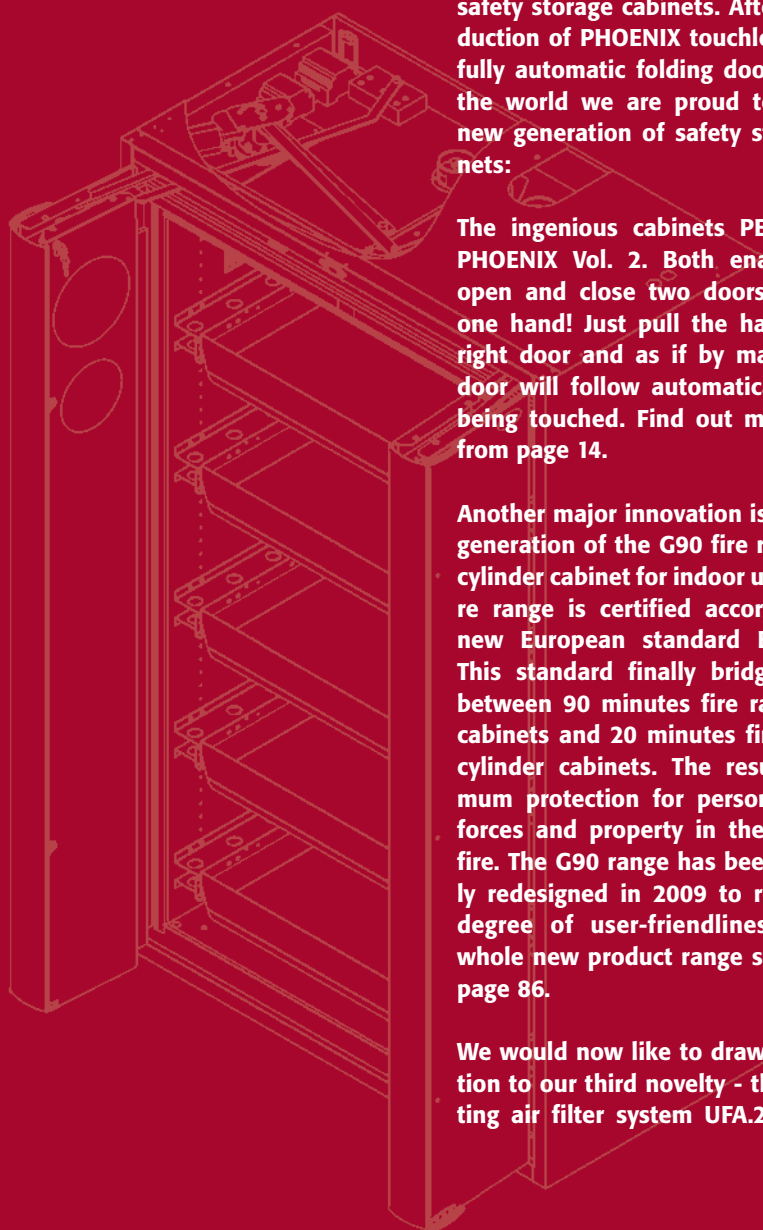
It is often difficult in these times to stay up to date, in particular with long and complicated legal texts and the constant changes and supplements. Therefore we have dedicated several information pages to the new European Standards EN 14470-1 and EN 14470-2 at the end of chapter 1 and chapter 2 as well as the new GHS. All the information is condensed and illustrated so that you can memorise it quickly and easily.

#### Quality made in Germany

We strongly believe that without quality there can be no safety. That's why we rely on first class raw materials, a highly skilled workforce and an excellent quality management system according to ISO 9001. All of our fire rated cabinets are entirely invented, manufactured and certified in Germany. We cooperate with several premium logistics partners to deliver our products fast and professionally to destinations all over the globe.

Now have a look inside and discover the world of safety.

Günther Rossdeutscher  
Michael Schrems  
(Managing Partners)




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## Type 90 Safety Storage Cabinets

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## Type 90 Safety Storage Cabinets

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## Type 90 Safety Storage Cabinets

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## Type 90 Safety Storage Cabinets

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## General information

This brochure is called Compact Catalogue 3 and contains our entire range of safety storage cabinets as well as several other selected products for the safe storage and handling of hazardous material. As we are frequently launching new products you might also want to check our website [www.asecos.com](http://www.asecos.com) for the latest developments and innovations and to subscribe for our newsletter.

### Structure of the catalogue:

The chapters 1 and 2 (fire rated safety storage cabinets) are always structured in the same fashion. At first you see an overview of the series (A) and on the next page the technical details and features are explained (B). The following pages show the specific models with all specifications and detailed information and article codes (C).

### Examples:

#### A) Page 6

**«« Safety Storage Cabinets**

**Safety storage cabinets with wing doors - Overview**

**The Classic**  
All-round efficiency.

Very smooth opening of the doors provides more convenience and safety when using the cabinets.  
The flexible interior equipment provides customised storage solutions for individual needs.

**Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 90)**

**Model VBF196.120 and VBF196.90**  
Cabinet width: 1200 mm  
with shelves (page 8)  
Cabinet width: 900 mm  
with shelves (page 12)

**Model VBF120.120-G**  
Cabinet width: 1200 mm  
with shelves (page 10)

**Model VBF196.111-T**  
Cabinet width: 1100 mm  
with drawers (page 13)

**Model VBF196.60-G**  
Cabinet width: 600 mm  
with shelves (page 10)

**Model VBF120.60**  
Cabinet width: 600 mm  
with shelves (page 13)

**EN 14470-1**

**90**

**Type tested according to EN 14470-1 (Type 90)**

#### B) Page 7

**Safety Storage Cabinets »»**

**Safety storage cabinets with wing doors - Detailed Description**

**Cabinets with wing doors - The Classic**

**Function**

- Smooth, air-damped door closing
- Minimal effort door opening
- Easy and safe
- Door closing system outside the storage compartment: increased protection of missing and safety relevant components against corrosion

**Locking**

- Cylinder locking (suitable for master-key systems)

**Shelves**

- Height adjustable (32 mm increments)
- Secured against tilting

**Bottom collecting sump**

- Easy to remove
- With three-sided lip seal, safe collection of leakage

**Wing doors**

- 90° opening, interior of the cabinet completely visible

**Adjusting aids**

- Integrated inside the cabinet
- Easy alignment of the cabinet to compensate for uneven floor

**Accessories**

- PC tray - protects shelves from corrosive materials
- Bin for chemicals - separate storage of mildly aggressive chemicals
- Storage box - lockable, separate storage of hazardous materials

**Locking**

The cabinets are equipped with a cylinder lock and can be integrated into existing master-key systems.

**Adjusting aids**

Integrated inside the cabinet. Easy alignment of the cabinet to compensate for uneven floor.

**Accessories**

PC tray, Bin for chemicals.

**Shelves**

- Height adjustable (32 mm increments)
- Secured against tilting

**Bottom collecting sump**

100% removable lip seal, safe collection of leakage.

#### C) Page 8

**«« Safety Storage Cabinets**

**Type 90 - Safety storage cabinets with wing doors**

**VBF196.120**

Approved storage of hazardous materials to workplaces

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- CE and CE conformity

Technical data at a glance:

**Cabinet**

Conformity W x D x H (mm):  
exterior approx. 1200 x 435 x 1968  
interior approx. 1050 x 420 x 1740  
Weight: approx. 420 kg  
Labelling in accordance with EN 14470-1

**Wing doors**

90° opening, interior of the cabinet completely visible;  
Smooth air-damped door closing

**Shelves**

Height adjustable (32 mm increments)  
Load capacity per shelf (evenly distributed load): approx. 75 kg  
Dimensions W x D x H (mm):  
approx. 1043 x 435 x 30

**Bottom collecting sump**

Capacity: approx. 33 ltr.

**Verification**

Conformation	mm	mm	mm
Change of air 10 times	75	75	75
Pressure drop	Pa	Pa	Pa

**Type 90 Safety storage cabinets with wing doors**

Model	Material, colour	recommended quantity	Order Code
VBF196.120, 2 wing doors, incl. interior equipment	1000 mm, 1000 mm	1	20959
VBF196.120, 2 wing doors, incl. interior equipment	1000 mm, 1000 mm	1	20959
<b>Interior equipment</b>			
Perforated insert (240x360)	1	5534	
Bottom collecting sump (240x360)	1	5535	
Shelf	1	5536	

Interior equipment in stainless steel available upon request.

### Picking the correct model and order codes:

For example, you would like to have a yellow wing door cabinet, Type 90, 1200 mm wide, 1968 mm high, with 3 shelves, perforated insert and bottom collecting sump, without automatic closing mechanism after 1 minute, no door open arrest system and no one-hand opening required.

Go to page 8. Firstly you pick the order code of the cabinet. In this case it would be "20959".

Important: By picking this order code you have only selected the plain cabinet without any interior equipment! Selecting the interior will be the next step. Use 3x 5534 (3 shelves), 1x 5535 (1 sump), 1x 5536 (1 perforated insert). The last step depending on your requirements will be packaging or freight. More information about packaging and freight can be found in the latest asecos price list.



# Frequently asked questions

## General information and FAQ:

### 1. You indicate several fire resistance classes. Type 30 and Type 90. What is the difference and when do I use which type?

The difference is the time it takes for the temperature on the inside to rise by more than 180 K (EN 14470 Part 1) or at the valve spanner flat by more than 50 K (EN 14470 Part 2). If you compare a Type 90 to Type 30, it means that the time until the contents may become unstable (auto-ignite, explode, blow-off etc.) is three times as long. To determine the appropriate safety level, it might help to ask the question, how much time is needed in the event of fire? Some considerations (there might be even more):

- Time until the fire is recognized
- Time until the employees have safely left the building
- Time for the fire brigade and rescue forces to arrive
- Time until the fire brigade arrives at the cabinet to cool it down and to rescue injured people
- ...

In most cases 90 minutes will be the best choice. In either case it makes sense to follow the strategy consequently. That means either everything is laid out in Type 30 or in Type 90.

### 2. What are the differences between fixed shelves and pull-out drawers?

The right choice of interior equipment depends on 3 factors: The size of the containers to be stored, the quantity and the frequency of use. Pull-out drawers are recommended whenever the

cabinet is accessed frequently and whenever many small bottles/containers are stored. The main advantage of a pull-out drawer is to enable the user to easily access the rear bottles without the need to remove other containers first. In addition you maximize storage space as there is no free space above the drawer needed to access the bottles. Furthermore there is less risk of knocking bottles over by accident. For bigger containers and cans or less frequent use, shelves are sufficient.

### 3. I like the ergonomic and space-saving aspects of pull-out drawers, but I am not sure if my bottles will fit in. Where can I obtain your standard usable storing heights?

You can either look into our catalogue or request a spread sheet with all available heights. Just contact us.

### 4. When do I need a bottom collecting sump?

This is a mandatory requirement of EN 14470-1. If you are ordering a cabinet which is exclusively equipped with pull-out drawers you don't need a separate bottom collecting sump. Each drawer is a sump by its own. BUT: As soon as you install only 1 shelf inside the cabinet, as bottom collecting sump is essential to retain any spillages. For your own safety, we will never deliver a cabinet without a bottom collecting sump, unless it is your explicit wish!

### 5. I have checked the standard usable storing heights but they do not fulfil my particular requirements. Is it possible to customize the heights?

Yes. Please contact us for advice and your individual quotation.

### 6. What is the difference between wing doors and folding doors?

Folding doors protrude 50 % less than wing doors. Therefore they are recommended, whenever space in front of the cabinet is limited.

### 7. Are your cabinets ventilated?

Ventilation is always an important aspect to consider. The EN 14470 requires every manufacturer to prepare the cabinets for technical ventilation. Please have a look at pages 102 - 103 for some guidance about ventilation.

### 8. What does AGT, TSA and TFA mean?

**AGT:** asynchronous coupled door opening mechanism  
Mechanism which opens two doors with only one grip. If you pull the handle of the right door, the left door will follow automatically without being touched. Increased safety when operating the cabinet, even while holding a container in one hand.

**TSA:** automatic door closing system  
The cabinet will close fully automatically. After approximately 60 seconds (adjustable) the arrested doors will be released and will close completely on their own. This way steady ventilation is guaranteed and the likelihood of explosive atmospheres minimized.

**TFA:** Plain Door open arrest system  
Door needs to be opened manually, door engages, door needs to be closed manually (except in the event of a fire; in this case the door will close by means of a thermal release element).

If you have any further questions, we always remain at your service. Please do not hesitate to contact us!

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## Safety storage cabinets with wing doors - Overview

### The Classic

#### All-round efficiency.

Very smooth opening of the doors provides more convenience and safety when using the cabinets.

The flexible interior equipment provides customised storage solutions for individual needs.



Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 90)



**Model VBF.196.120 and VBF.196.90**  
Cabinet width 1200 mm  
with shelves (page 8)  
Cabinet width 900 mm  
with shelves (page 12)



**Model VBF.129.120-G** (Height 1298 mm)  
Cabinet width 1200 mm  
with shelves (page 10)



**Model VBF.80.11.7-T** (Height 800 mm)  
Cabinet width 1100 mm  
with drawers (page 13)



**Model VBF.196.60-G**  
Cabinet width 600 mm  
with shelves (page 9)



**Model VBF.129.60** (Height 1298 mm)  
Cabinet width 600 mm  
with shelves (page 11)

RAL 1004

RAL 7035

EN



CE



with  
restrictions



Type tested according to EN 14470-1 (Type 90)

## Safety storage cabinets with wing doors - Detailed Description

### Cabinets with wing doors - The Classic

#### Function

- Smooth, air-damped door closing
- Minimal effort: door opening - easy and safe
- Door closing system outside the storage compartment: increased protection of moving and safety relevant components against corrosion

#### Wing doors

- 90° opening, interior of the cabinet completely visible

#### Locking

- Cylinder locking (suitable for master-key systems)

#### Shelves

- Height adjustable (32 mm increments)
- Secured against tilting

#### Bottom collecting sump

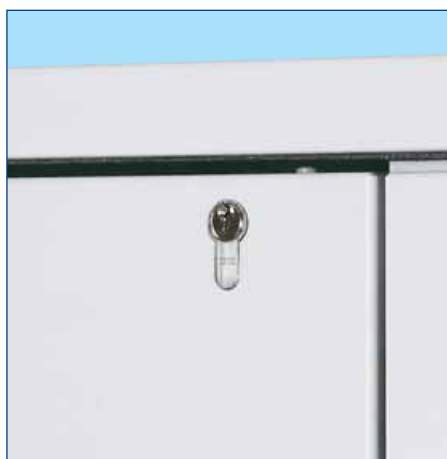
- Easy to remove
- With three-sided lip seal, safe collection of leakage

#### Adjusting aids

- Integrated inside the cabinet
- Easy alignment of the cabinet to compensate for uneven floor

#### Accessories

- PE tray - protects shelves from corrosive materials
- Box for chemicals - separate storage of mildly aggressive chemicals
- Storage box - lockable, separate storage of hazardous materials



#### Locking

The cabinets are equipped with a cylinder lock and can be integrated into existing master-key systems.



#### Extraction air inlet

The extraction air inlet is flush with the ceiling of the cabinet.



#### Adjusting aids

Integrated inside the cabinet. Easy alignment of the cabinet to compensate for uneven floor.



#### Shelves

Height adjustable (32 mm increments). Secured against tilting.



#### Bottom collecting sump

With three-sided lip seal, safe collection of leakage.



#### Accessories

PE trays.  
Box for chemicals.

## Type 90 Safety storage cabinets with wing doors



**Model VBF.196.120**  
with shelves



**Model VBF.196.120-G**  
with shelves

### VBF.196.120

#### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

#### Technical data at a glance:

##### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

##### Wing doors

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

##### Shelves

Height adjustable (32 mm increments)

Load capacity per shelf (evenly distributed load): **approx. 75 kg**

Dimensions W x D x H (mm):

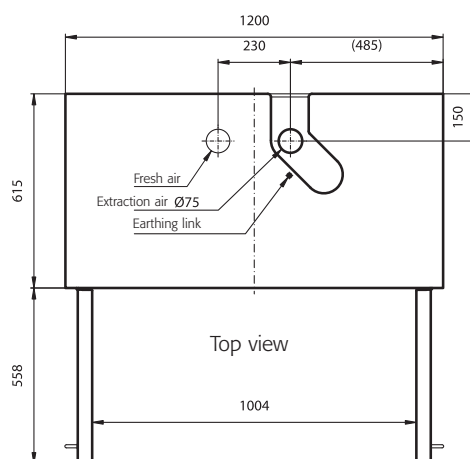
**approx. 1043 x 435 x 30**

##### Bottom collecting sump

Capacity: **approx. 33 ltr.**

##### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	9
Pressure drop	Pa	4



### Type 90 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
VBF.196.120, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20942</b>
VBF.196.120-G, 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20959</b>
<b>Interior equipment</b>			
Door open arrest system	with fusible link	1	<b>18332</b>
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>

Interior equipment in stainless steel available upon request.



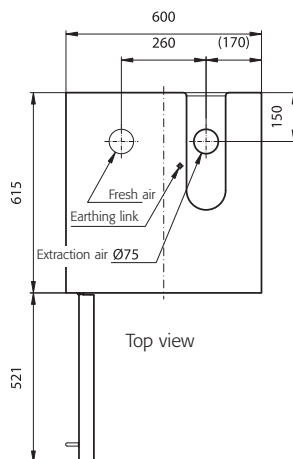
## Type 90 Safety storage cabinets with wing door



**Model VBF.196.60**  
with shelves



**Model VBF.196.60-G**  
with shelves



### VBF.196.60

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1968**

**interior approx. 450 x 520 x 1740**

Weight: **approx. 260 kg**

Labelling in accordance with EN 14470-1

#### Wing door

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

#### Bottom collecting sump

Capacity: **approx. 22 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	2
Pressure drop	Pa	2

### Type 90 Safety storage cabinets with wing door

Model	Material, colour	recommended quantity	Order Code
<b>VBF.196.60</b> , 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20966</b>
<b>VBF.196.60-R</b> , 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20979</b>
<b>VBF.196.60-G</b> , 1 wing door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20975</b>
<b>VBF.196.60-GR</b> , 1 wing door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20977</b>

#### Interior equipment

Door open arrest system	with fusible link	1	<b>18327</b>
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>

Interior equipment in stainless steel available upon request.



## Type 90 Safety storage cabinets with wing doors



**Model VBF.129.120-G**  
with shelves



**Model VBF.129.120**  
with shelves

### VBF.129.120

#### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

#### Technical data at a glance:

##### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1298**

**interior approx. 1050 x 520 x 1070**

Weight: **approx. 270 kg**

Labelling in accordance with **EN 14470-1**

##### Wing doors

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

##### Shelves

Height adjustable (32 mm increments)

Load capacity per shelf (evenly distributed load): **approx. 75 kg**

Dimensions W x D x H (mm):

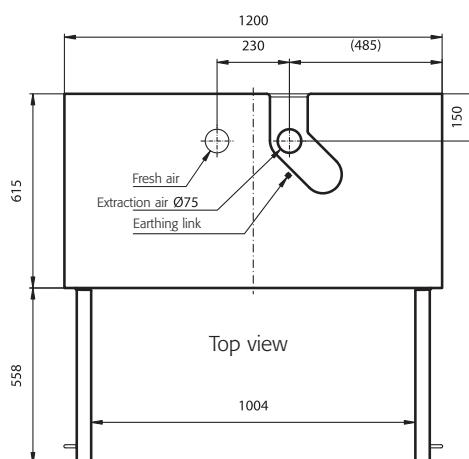
**approx. 1043 x 435 x 30**

##### Bottom collecting sump

Capacity: **approx. 33 ltr.**

##### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	5
Pressure drop	Pa	3



### Typ 90 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
VBF.129.120, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20907</b>
VBF.129.120-G, 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20911</b>
<b>Interior equipment</b>			
Door open arrest system	with fusible link	1	<b>18332</b>
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>

Interior equipment in stainless steel available upon request.

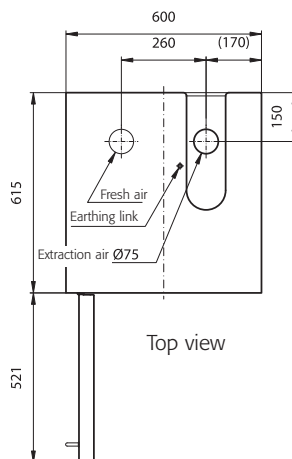
## Type 90 Safety storage cabinets with wing door



**Model VBF.129.60-G**  
with shelves



**Model VBF.129.60**  
with shelves



### VBF.129.60

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1298**

**interior approx. 450 x 520 x 1070**

Weight: **approx. 170 kg**

Labelling in accordance with EN 14470-1

#### Wing door

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

#### Bottom collecting sump

Capacity: **approx. 22 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	2
Pressure drop	Pa	2

### Type 90 Safety storage cabinets with wing door

Model	Material, colour	recommended quantity	Order Code
VBF.129.60, 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20913</b>
VBF.129.60-R, 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20922</b>
VBF.129.60-G, 1 wing door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20918</b>
VBF.129.60-GR, 1 wing door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20920</b>

#### Interior equipment

Door open arrest system	with fusible link	1	<b>18327</b>
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	2	<b>5553</b>

Interior equipment in stainless steel available upon request.

## Type 90 Safety storage cabinets with wing doors



**Model VBF.196.90-G**  
with shelves



**Model VBF.196.90**  
with shelves

### VBF.196.90

#### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

#### Technical data at a glance:

##### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 900 x 615 x 1968**

**interior approx. 750 x 520 x 1740**

Weight: **approx. 310 kg**

Labelling in accordance with **EN 14470-1**

##### Wing doors

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

##### Shelves

Height adjustable (32 mm increments)

Load capacity per shelf (evenly distributed load): **approx. 75 kg**

Dimensions W x D x H (mm):

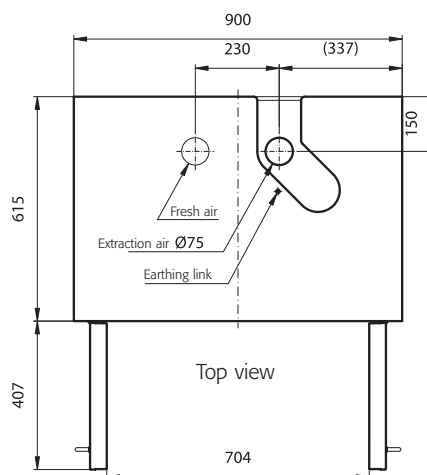
**approx. 743 x 435 x 30**

##### Bottom collecting sump

Capacity: **approx. 23 ltr.**

##### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	5
Pressure drop	Pa	3



### Type 90 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
<b>VBF.196.90</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20984</b>
<b>VBF.196.90-G</b> , 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20990</b>
<b>Interior equipment</b>			
Door open arrest system	with fusible link	1	<b>18332</b>
Bottom collecting sump (V=23 ltr.)	sheet-steel, plastic laminated	1	<b>11164</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>11165</b>
Shelf	sheet-steel, plastic laminated	3	<b>11166</b>

Interior equipment in stainless steel available upon request.

## Type 90 Safety storage cabinets with wing doors



Cabinet VBF.80.11.7-T with wing doors and 2 drawers



Cabinet VBF.80.11.7-T with wing doors, bottom collecting sump and perforated metal plate insert

### VBF.80.11.7-T

#### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

#### Technical data at a glance:

##### Cabinet

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 750 x 800**  
**interior approx. 980 x 625 x 690**  
 Weight: **approx. 200 kg**  
 Labelling in accordance with **EN 14470-1**

##### Drawers

Load capacity (evenly distributed): **60 kg**  
 Drawer dimensions W x D x H (mm):  
**approx. 820 x 605 x 80**  
 Collecting capacity: **approx. 35 ltr.**

#### Storage capacity for each drawer/container

(please note the height of the containers)

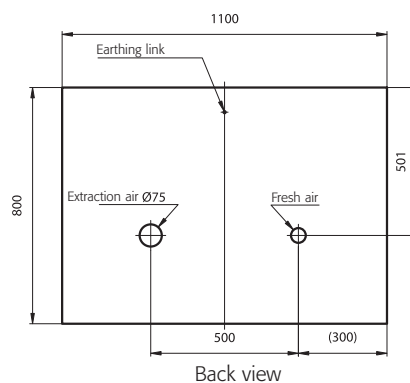
Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

##### Wing doors

- 100° opening, interior of the cabinet completely visible
- Doors can be arrested at any position
- Automatic closing of doors and drawers by an integrated thermal release system (fusible link)

##### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	2
Pressure drop	Pa	2



### Type 90 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
VBF.80.11.7-T, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>21209</b>
<b>Interior equipment (drawers)</b>			
2 drawers	sheet-steel, plastic laminated		<b>15298</b>
1 drawer	sheet-steel, plastic laminated		<b>15624</b>
<b>Interior equipment (sump + insert)</b>			
Bottom collecting sump (V=36 ltr.)	stainless steel 1.4301	1	<b>12783</b>
Perforated insert	stainless steel 1.4301	1	<b>15626</b>



## PEGASUS Safety storage cabinets with wing doors - Overview

**Ingeniously simple - simply ingenious**  
Convenient and efficient.

**AGT** - Open two doors with one grip of the hand - almost effortless  
+ **TSA** - Automatic door closing system  
= **Safe and user-friendly**

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 90)



**PEGASUS Model VBF.196.120+**  
Cabinet width 1200 mm with drawers or shelves (page 16)  
available also with middle wall (page 17)



**PEGASUS Model VBF.196.90-G+**  
Cabinet width 900 mm with drawers or shelves (page 18)



**PEGASUS Model VBF.196.60-G+**  
Cabinet width 600 mm with drawers or shelves (page 19)



**PEGASUS Model VBF.129.120-G+** (Height 1298 mm)  
Cabinet width 1200 mm with drawers or shelves (page 20)



**PEGASUS Model VBF.129.60-G+** (Height 1298 mm)  
Cabinet width 600 mm with drawers or shelves (page 21)

RAL 1004

RAL 7035

EN



CE



with restrictions



Type tested according to EN 14470-1 (Type 90).



## PEGASUS A technology which sets new standards

The new wing door cabinet PEGASUS - ergonomic and safe

**AGT = one hand opening mechanism**

- easy and safe operating of the cabinet, even while holding a container in your hand
- Opening of two doors with just one grip

**TSA = automatic door closing system**

**High convenience and safety**

- Integrated door open arrest system - the arrested doors enable you to safely store or remove containers
- Closing element with negative spring - almost effortless (approx. 10 Newton) opening; high force during automatic closing procedure; the doors are pulled safely and tightly into the cabinet frame and the sealing elements
- Time-controlled pulse generator -

The doors close automatically after approx. 60 seconds after the cabinet has been opened (adjustable)

- Pneumatic damping unit - consistent smooth and quiet closure of the doors
- The closing of the doors can be stopped at any time - simply arrest the doors again with the door open arrest system by using one hand; the pulse generator is activated again, it is possible to close the doors manually (by hand) at any time!

**Safety in the event of a fire**

- Fire resistance 90 minutes (type tested according to EN 14470-1, Type 90)
- Integrated thermal release systems, automatic closing of the doors and drawers

**Large variety**

- Either with shelves or drawers
- Optimal solutions for different needs
- Storage capacity of up to 235 ltr. (6 large drawers with 1 ltr. and 2.5 l laboratory bottles)



Pull the handle of the right door and as if by magic the left door will follow automatically without being touched due to an **asynchronous coupled door opening mechanism**.



Almost effortlessly you can arrest both doors with the **standard door open arrest system**, while holding the container safely in your hand.



The arrested doors enable you to safely store or remove containers.



Containers were stored or removed? Simply go back to your workplace, while the cabinet will do the rest.



Approx. 60 seconds after the cabinet has been opened the arrested doors will be released due to the **integrated automatic door closing system** and will close completely.

## PEGASUS Type 90 Safety storage cabinets with wing doors

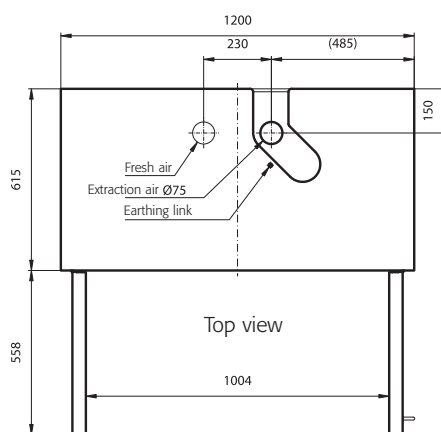


PEGASUS Model VBF.196.120-G+  
with shelves



PEGASUS Model VBF.196.120+  
with drawers

**AGT - Open two doors with one grip of the hand - almost effortless**  
**+**  
**TSA - Automatic door closing system**  
**+**  
**Door open arrest system**  
**➔ fitted as standard**



### VBF.196.120+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):  
**exterior approx. 1200 x 615 x 1968**  
 (height with base approx. 2090 mm)  
**interior approx. 1050 x 520 x 1740**  
 Weight: **approx. 420 kg**  
 Labelling in accordance with EN 14470-1

#### Drawers

Load capacity (evenly distributed): **60 kg**  
 Drawer dimensions W x D x H (mm):  
**approx. 840 x 490 x 90**  
 Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**  
 (please note the height of the containers)

Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)  
 Load capacity (evenly distributed): **75 kg**  
 Dimensions W x D x H (mm):  
**approx. 1043 x 435 x 30**  
 Capacity of the bottom collecting sump: **approx. 33 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	9
Pressure drop	Pa	4

### Type 90 PEGASUS Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
VBF.196.120+, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20955</b>
VBF.196.120-G+, 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20960</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>10053</b>
6 drawers	sheet-steel, plastic laminated		<b>10052</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PEGASUS Type 90 Safety storage cabinets with wing doors



**PEGASUS Model VBF.196.120-MG+**  
with middle wall and shelves

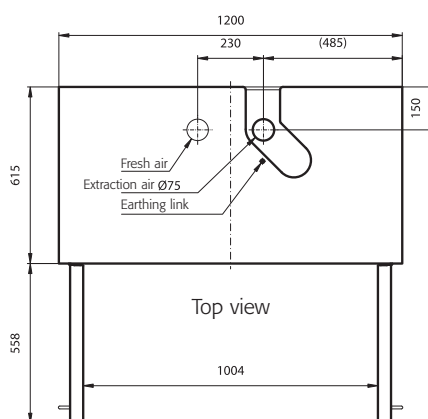


**PEGASUS Model VBF.196.120-M+**  
with middle wall and drawers

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	9
Pressure drop	Pa	4



### VBF.196.120-M+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**

(height with base approx. 2090 mm)

**interior approx. 2 x 450 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed):

storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Collecting capacity of the bottom

collecting sump: **approx. 22 ltr.**

### Type 90 PEGASUS Safety storage cabinets with wing doors with middle wall

Model	Material, colour	recommended quantity	Order Code
<b>VBF.196.120-M+</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20962</b>
<b>VBF.196.120-MG+</b> , 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20964</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.



# «« Safety Storage Cabinets

## PEGASUS Type 90 Safety storage cabinets with wing doors

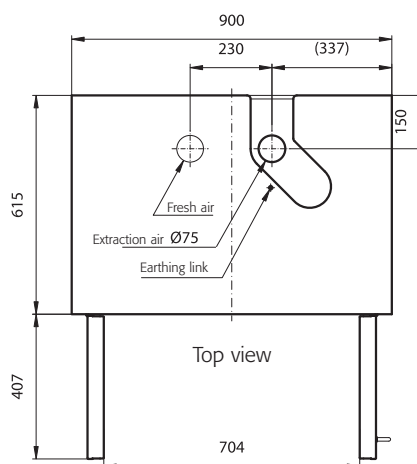


**PEGASUS Model VBF.196.90+**  
with shelves



**PEGASUS Model VBF.196.90-G+**  
with drawers

**AGT - Open two doors with one grip of the hand - almost effortless**  
+  
**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**



### VBF.196.90+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 900 x 615 x 1968**

**interior approx. 750 x 520 x 1740**

Weight: **approx. 310 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed): **60 kg**

Drawer dimensions W x D x H (mm):

**approx. 540 x 490 x 90**

Capacity: **approx. 19 ltr.**

**Storage capacity for each drawer/container**  
(please note the height of the containers)

Quantity	Type of container	Volume
<b>49</b>	aerosol can	400 ml
<b>23</b>	steel tin	1 litre
<b>23</b>	lab bottle (glass)	1 litre
<b>23</b>	lab bottle (PE)	1 litre
<b>9</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 743 x 435 x 30**

Collecting capacity of the bottom collecting sump: **approx. 23 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	6
Pressure drop	Pa	2

### Type 90 PEGASUS Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
<b>VBF.196.90+</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20988</b>
<b>VBF.196.90-G+</b> , 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20991</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=23 ltr.)	sheet-steel, plastic laminated	1	<b>11164</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>11165</b>
Shelf	sheet-steel, plastic laminated	3	<b>11166</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>15630</b>
6 drawers	sheet-steel, plastic laminated		<b>15292</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PEGASUS Type 90 Safety storage cabinets with wing door



**PEGASUS Model VBF.196.60-G+**  
with shelves

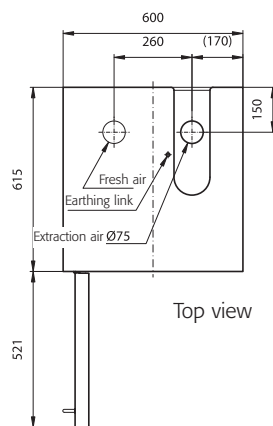


**PEGASUS Model VBF.196.60+**  
with drawers

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	4
Pressure drop	Pa	2



## VBF.196.60+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1968**

**interior approx. 450 x 520 x 1740**

Weight: **approx. 260 kg**

Labelling in accordance with EN 14470-1

### Drawers

Load capacity (evenly distributed):

storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Collecting capacity of the bottom

collecting sump: **approx. 22 ltr.**

### Type 90 PEGASUS Safety storage cabinets with wing door

Model	Material, colour	recommended quantity	Order Code
<b>VBF.196.60+</b> , 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20971</b>
<b>VBF.196.60-R+</b> , 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20983</b>
<b>VBF.196.60-G+</b> , 1 wing door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20976</b>
<b>VBF.196.60-GR+</b> , 1 wing door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20978</b>

### Interior equipment (shelves)

Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>

### Interior equipment (drawers)

4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.



## PEGASUS Type 90 Safety storage cabinets with wing doors

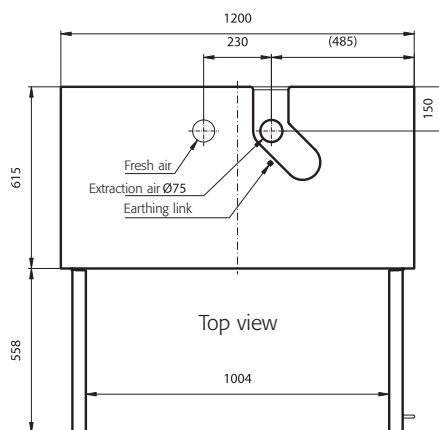


PEGASUS Model VBF.129.120+  
with shelves



PEGASUS Model VBF.129.120-G+  
with drawers

**AGT - Open two doors with one grip of the hand - almost effortless**  
**+**  
**TSA - Automatic door closing system**  
**+**  
**Door open arrest system**  
**➔ fitted as standard**



### VBF.129.120+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1298**  
(height with base approx. 1420 mm)

**interior approx. 1050 x 520 x 1070**

Weight: **approx. 270 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed): **60 kg**

Drawer dimensions W x D x H (mm):

**approx. 840 x 490 x 90**

Capacity: **approx. 30 ltr.**

**Storage capacity for each drawer/container**  
(please note the height of the containers)

Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 1043 x 435 x 30**

Collecting capacity of the bottom collecting sump: **approx. 33 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	5
Pressure drop	Pa	3

### Type 90 PEGASUS Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
VBF.129.120+, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20909</b>
VBF.129.120-G+, 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20912</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	2	<b>5534</b>
<b>Interior equipment (drawers)</b>			
2 drawers	sheet-steel, plastic laminated		<b>14419</b>
3 drawers	sheet-steel, plastic laminated		<b>12249</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PEGASUS Type 90 Safety storage cabinets with wing door

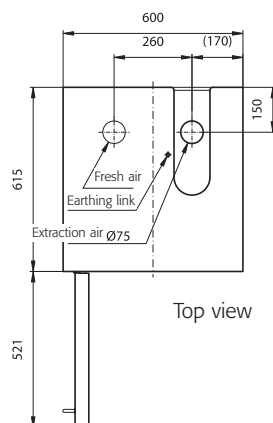


**PEGASUS Model VBF.129.60+**  
with shelves



**PEGASUS Model VBF.129.60-G+**  
with drawers

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**



### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	4
Pressure drop	Pa	2

## VBF.129.60+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1298**

**interior approx. 450 x 520 x 1070**

Weight: **approx. 170 kg**

Labelling in accordance with EN 14470-1

### Drawers

Load capacity (evenly distributed): **25 kg**

Drawer dimensions W x D x H (mm):

**approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 22 ltr.**

### Type 90 PEGASUS Safety storage cabinets with wing door

Model	Material, colour	recommended quantity	Order Code
<b>VBF.129.60+</b> , 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20914</b>
<b>VBF.129.60-R+</b> , 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20923</b>
<b>VBF.129.60-G+</b> , 1 wing door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20919</b>
<b>VBF.129.60-GR+</b> , 1 wing door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20921</b>

### Interior equipment (shelves)

Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	2	<b>5553</b>

### Interior equipment (drawers)

2 drawers	sheet-steel, plastic laminated		<b>13215</b>
3 drawers	sheet-steel, plastic laminated		<b>15651</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PHOENIX Safety storage cabinets with folding doors - Overview

### The Multiple

Easy to use, space saving, efficient.

Very smooth opening of the doors provides more convenience and safety when using the cabinets.

The flexible interior equipment provides customised storage for most situations.

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 90)



**PHOENIX Model VBFT196.120**  
with drawers (page 24)



**PHOENIX Modell VBFT196.120-M**  
with drawers and middle wall (page 25)



**750 mm**

**PHOENIX Model VBFT196.6.7**  
**special depth 750 mm.**  
with drawers (page 27)



**PHOENIX Model VBFT196.120-G**  
with shelves (page 24)



**PHOENIX Model VBFT196.60-G**  
with drawers or shelves (page 26)

**RAL 1004**

**RAL 7035**

**EN**



**CE**



with  
restrictions



Type tested according to EN 14470-1 (Type 90)



## with folding doors - Detailed Description

### Cabinets with folding doors The Multiple

#### Function

- Smooth, air-damped door closing
- Minimal effort: door opening - easy and safe
- Door closing system outside the storage compartment: increased protection of moving and safety relevant components against corrosion

#### Folding doors

- Protrude 50 % less than wing doors
- 90° opening, interior of the cabinet completely visible
- Vertical panel prevents pinching of the hands



#### Locking

The cabinets are equipped with a cylinder lock an can be integrated into existing master-key systems.

#### Locking

- Cylinder locking (suitable for master-key systems)

#### Door open arrest system (included)

- Holds door open and eases the storage and removal inside the cabinet

#### Your safety in the event of fire!

- Automatic closing of doors and drawers by an integrated thermal release system (fusible link)

#### Bottom collecting sump

- Easy to remove
- With three-sided lip seal, safe collection of leakage

#### Shelves

- Height adjustable (32 mm increments)
- Secured against tilting



#### Extraction air inlet

The extraction air inlet is flush with the ceiling of the cabinet.

#### Drawers

- Fully extractable, smooth running
- Handling safety when storing or removing bottles

#### Adjusting aids

- Integrated inside the cabinet
- Easy alignment of the cabinet to compensate for uneven floor

#### Accessories

- PE tray protects shelves or drawers from corrosive materials
- Rubber mats and bottle racks
- Box for chemicals - separate storage of less aggressive chemicals



#### Bottom collecting sump

With three-sided lip seal, safe collection of leakage.



#### Adjusting aids

Integrated inside the cabinet. Easy alignment of the cabinet to compensate for uneven floor.



#### Protective panel

Maximum protection from finger injuries.



#### Pull-out Drawers

Maximum storage capacity and usability.





## Type 90 Safety storage cabinets with folding doors



**PHOENIX Model VBFT196.120-G**  
with shelves

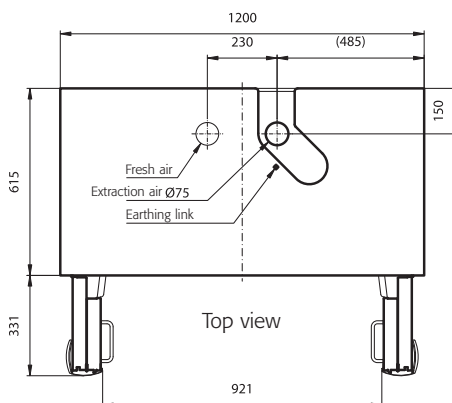


**PHOENIX Model VBFT196.120**  
with drawers

**Door open arrest system**  
➔ fitted as standard

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	9
Pressure drop	Pa	4



## VBFT196.120

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**  
(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with EN 14470-1

### Drawers

Load capacity (evenly distributed): **60 kg**

Drawer dimensions W x D x H (mm):

**approx. 840 x 490 x 90**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**  
(please note the height of the containers)

Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 1043 x 435 x 30**

Capacity of the bottom collecting sump: **approx. 33 ltr.**

### Door open arrest system

- Holds door open and eases the storage and removal inside the cabinet

### Type 90 PHOENIX Safety storage cabinets with folding doors

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.120</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>21233</b>
<b>VBFT196.120-G</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>21241</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>10053</b>
6 drawers	sheet-steel, plastic laminated		<b>10052</b>

Interior equipment in stainless steel and further drawer combinations available upon request.





## Type 90 Safety storage cabinets with folding doors



**PHOENIX Model VBFT196.120-MG**  
with middle wall, shelves and drawers

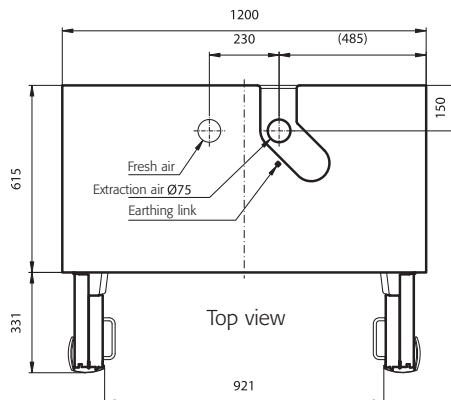


**PHOENIX Model VBFT196.120-M**  
with middle wall and drawers

**Door open arrest system**  
→ fitted as standard

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	9
Pressure drop	Pa	4



## VBFT196.120-M

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**  
(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Collecting capacity: **approx. 29 ltr.**

### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom collecting sump: **approx. 22 ltr.**

### Door open arrest system

- Holds door open and eases the storage and removal inside the cabinet

### Type 90 PHOENIX Safety storage cabinets with middle wall and folding doors

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.120-M</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>21243</b>
<b>VBFT196.120-MG</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>21249</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PHOENIX Type 90 Safety storage cabinets with folding door



**PHOENIX Model VBFT196.60-G**  
with shelves



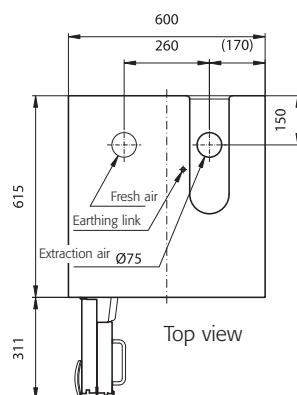
**PHOENIX Model VBFT196.60**  
with drawers

### Door open arrest system

➔ fitted as standard

### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	5
Pressure drop	Pa	3



## VBFT196.60

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1968**

**interior approx. 450 x 520 x 1740**

Weight: **approx. 260 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 22 ltr.**

#### Door open arrest system

- Holds door open and eases the storage and removal inside the cabinet

### Type 90 PHOENIX Safety storage cabinets with folding door

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.60</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21272</b>
<b>VBFT196.60-R</b> , 1 folding door, right hand, excl. interior equipment	light grey, RAL 7035		<b>21286</b>
<b>VBFT196.60-G</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21282</b>
<b>VBFT196.60-GR</b> , 1 folding door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>21284</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PHOENIX Type 90 Safety storage cabinets with folding door



**PHOENIX Model VBFT196.6.7**  
with drawers

750 mm



**PHOENIX Model VBFT196.6.7**  
with drawers

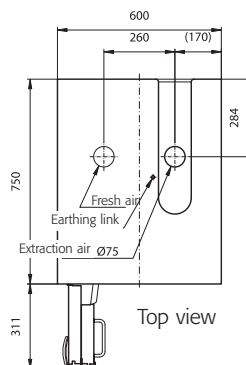
750 mm

### Door open arrest system

→ fitted as standard

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	5
Pressure drop	Pa	3



## VBFT196.6.7

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 750 x 1968**

**interior approx. 450 x 655 x 1740**

Weight: **approx. 310 kg**

Labelling in accordance with **EN 14470-1**

### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 630 x 50**

Capacity: **approx. 6 ltr.**

Disposal: **approx. 330 x 600 x 160**

Capacity: **approx. 30 ltr.**

### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>40</b>	aerosol can	400 ml
<b>17</b>	steel tin	1 litre
<b>17</b>	lab bottle (glass)	1 litre
<b>17</b>	lab bottle (PE)	1 litre
<b>8</b>	lab bottle (glass)	2,5 litres

### Door open arrest system

- Holds door open and eases the storage and removal inside the cabinet

### Type 90 PHOENIX Safety storage cabinets with folding door

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.6.7</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21251</b>
<b>VBFT196.6.7-R</b> , 1 folding door, right hand, excl. interior equipment	light grey, RAL 7035		<b>21266</b>
<b>VBFT196.6.7-G</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21262</b>
<b>VBFT196.6.7-GR</b> , 1 folding door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>21264</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated	1	<b>18390</b>
6 drawers	sheet-steel, plastic laminated	1	<b>18389</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## **PHOENIX Vol. 2** Safety storage cabinets with folding doors - Overview

**Ingeniously simple - simply ingenious**

Convenient and efficient.

AGT - Open two doors with one grip of the hand - almost effortless  
 + TSA - Automatic door closing system!  
 = Safe and user-friendly

**TYPE 90** EN 14470-1  
 Fire resistance  
**90 minutes**  
 FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials in workrooms in accordance with EN 14470-1 (Type 90)



**PHOENIX Vol.2 Model VBFT196.120+**  
with drawers (page 30)



**PHOENIX Vol.2 Model VBFT196.120-G+**  
with shelves (page 30)



**PHOENIX Vol.2 Model VBFT196.120-M+**  
with shelves or drawers (page 31)



**PHOENIX Vol.2 Model VBFT196.60-G+**  
with shelves (page 32)



**PHOENIX Vol.2 Model VBFT196.6.7+**  
special depth 750 mm.  
with drawers (page 33)

750 mm

RAL 1004 RAL 7035

EN GS CE



with restrictions



Type tested according to EN 14470-1 (Type 90).



## PHOENIX Vol. 2 A technology which sets new standards

### The new folding door cabinet PHOENIX Vol. 2 - ergonomic and safe

#### AGT = one hand opening mechanism

- easy and safe operating of the cabinet, even while holding a container in your hand
- Opening of two doors with just one grip

#### TSA = automatic door closing system High convenience and safety

- Integrated door open arrest system - **the arrested doors enable you to safely store or remove containers in the cabinet**
- Closing element with negative spring - **almost effortless (approx. 10 Newton) opening**; high force during automatic closing procedure; **the doors are pulled safely and tightly**

### into the cabinet frame and the sealing elements

- Time-controlled pulse generator - **The doors close automatically after approx. 60 seconds after the cabinet has been opened (adjustable)**
- Pneumatic damping unit - **consistent smooth and quiet closure of the doors**
- The closing of the doors can be stopped at any time - **simply arrest the doors again with the door open arrest system by using one hand**; the pulse generator is activated again
- Full covering anti-trapping door strip - maximum protection from injuries!

### Safety in the event of a fire

- Fire resistance 90 minutes (type tested)

according to EN 14470-1, Type 90)

- Integrated thermal release systems, automatic closing of the doors and drawers

### Large variety

- Either with shelves or drawers
- Optimal solutions for different needs
- Storage capacity of up to 235 ltr. (6 large drawers with 1 ltr. and 2.5 ltr. laboratory bottles)



Pull the handle of the right door and as if by magic the left door will follow automatically without being touched due to an **asynchronous coupled door opening mechanism**.



Almost effortlessly you can arrest both doors with the **standard door open arrest system**, while holding the container safely in your hand.



The arrested doors enable you to safely store or remove containers.



Containers were stored or removed? Simply go back to your workplace, while the cabinet will do the rest.



Approx. 60 seconds after the cabinet has been opened the arrested doors will be released due to the **integrated automatic door closing system** and will close completely.

## PHOENIX Vol. 2 Type 90 Safety storage cabinets with folding doors

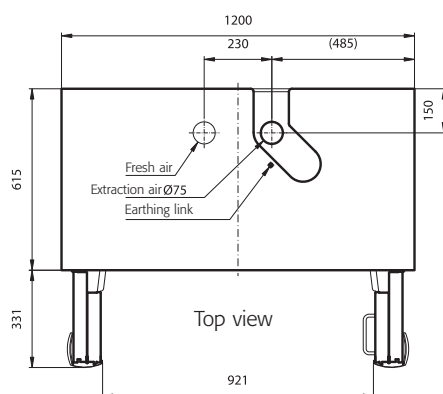


**PHOENIX Vol.2 Model VBFT196.120+**  
with drawers



**PHOENIX Vol.2 Model VBFT196.120-G+**  
with shelves

**AGT - Open two doors with one grip of the hand - almost effortless**  
+  
**TSA - Automatic door closing system**  
➔ **fitted as standard**



### VBFT196.120+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**

(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed): **60 kg**

Drawer dimensions W x D x H (mm):

**approx. 840 x 490 x 90**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 1043 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 33 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	9
Pressure drop	Pa	4

### Type 90 PHOENIX Vol.2 Safety storage cabinets with folding doors

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.120+</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>21239</b>
<b>VBFT196.120-G+</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>21242</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>10053</b>
6 drawers	sheet-steel, plastic laminated		<b>10052</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## PHOENIX Vol. 2 Type 90 Safety storage cabinets with folding doors

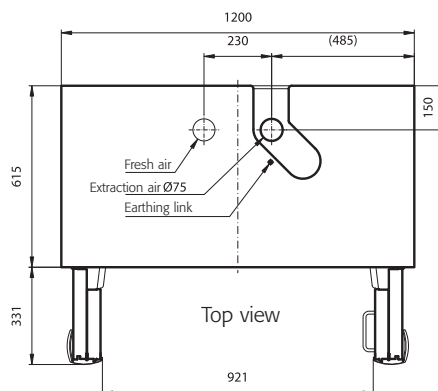


**PHOENIX Vol.2 Model VBFT196.120-MG+**  
with middle wall, shelves and drawers



**PHOENIX Vol.2 Model VBFT196.120-M+**  
with middle wall and drawers

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**



### VBFT196.120-M+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**  
(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed):

storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

used containers: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 22 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	9
Pressure drop	Pa	4

### Type 90 PHOENIX Vol.2 Safety storage cabinets with middle wall and folding doors

Model	Material, colour	recommended quantity	Order Code
<b>VBFT196.120-M+</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>21248</b>
<b>VBFT196.120-MG+</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>21250</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.



## PHOENIX Vol. 2 Type 90 Safety storage cabinets with folding door



**PHOENIX Vol.2 Model VBFT196.60+**  
with drawers

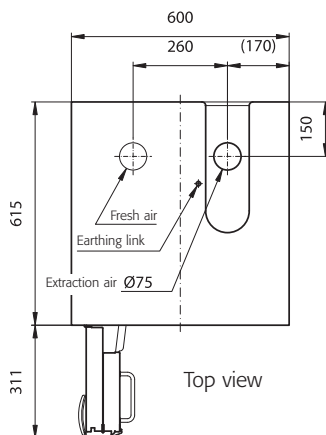


**PHOENIX Vol.2 Model VBFT196.60-G+**  
with shelves

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**

### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	4
Pressure drop	Pa	2



## VBFT196.60+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):  
**exterior approx. 600 x 615 x 1968**  
**interior approx. 450 x 520 x 1740**  
Weight: **approx. 260 kg**  
Labelling in accordance with **EN 14470-1**

### Drawers

Load capacity (evenly distributed):  
Storage: **25 kg**, for used containers: **50 kg**  
Drawer dimensions W x D x H (mm):  
Storage: **approx. 345 x 500 x 50**  
Capacity: **approx. 5 ltr.**  
Disposal: **approx. 330 x 465 x 200**  
Capacity: **approx. 29 ltr.**

**Storage capacity for each drawer/container**  
(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

### Shelves

Height adjustable (32 mm increments)  
Load capacity (evenly distributed): **75 kg**  
Dimensions W x D x H (mm):  
**approx. 443 x 435 x 30**  
Capacity of the bottom collecting sump: **approx. 22 ltr.**

### Type 90 PHOENIX Vol.2 Safety storage cabinets with folding door

Model	Material, colour	recommended quantity	Order No.
<b>VBFT196.60+</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21278</b>
<b>VBFT196.60-R+</b> , 1 folding door, right hand, excl. interior equipment	light grey, RAL 7035		<b>21291</b>
<b>VBFT196.60-G+</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21283</b>
<b>VBFT196.60-GR+</b> , 1 folding door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>21285</b>

### Interior equipment (shelves)

Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>

### Interior equipment (drawers)

4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.





750 mm

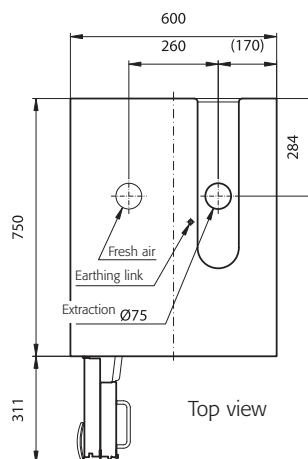
**PHOENIX Vol.2 Model VBFT196.6.7+**  
with drawers



750 mm

**PHOENIX Vol.2 Model VBFT196.6.7+**  
with drawers

**TSA - Automatic door closing system**  
+  
**Door open arrest system**  
➔ **fitted as standard**



## VBFT196.6.7+

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 750 x 1968**

**interior approx. 450 x 655 x 1740**

Weight: **approx. 310 kg**

Labelling in accordance with **EN 14470-1**

### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 630 x 50**

Capacity: **approx. 6 ltr.**

Disposal: **approx. 330 x 600 x 160**

Capacity: **approx. 30 ltr.**

### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>40</b>	aerosol can	400 ml
<b>17</b>	steel tin	1 litre
<b>17</b>	lab bottle (glass)	1 litre
<b>17</b>	lab bottle (PE)	1 litre
<b>8</b>	lab bottle (glass)	2,5 litres

### Ventilation

Connection	mm	75
Change of air 10 times	m <sup>3</sup> /h	5
Pressure drop	Pa	3

### Type 90 PHOENIX Vol.2 Safety storage cabinets with folding door

Model	Material, colour	Interior equipment	Order Code
<b>VBFT196.6.7+</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21258</b>
<b>VBFT196.6.7-R+</b> , 1 folding door, right hand, excl. interior equipment	light grey, RAL 7035		<b>21271</b>
<b>VBFT196.6.7-G+</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21263</b>
<b>VBFT196.6.7-GR+</b> , 1 folding door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>21265</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18390</b>
6 drawers	sheet-steel, plastic laminated		<b>18389</b>

Interior equipment in stainless steel and further drawer combinations available upon request.



## Storage of hazardous materials - easy and safe

### Sensor technology

- Opening and closing of the folding doors without being touched
- No more problems with doors left open
- Your third hand

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials in workrooms in accordance with EN 14470-1 (Type 90)



**PHOENIX touchless Model VBFA196.120**  
with drawers (page 36)



**PHOENIX touchless Model VBFA196.60**  
with drawers (page 37)



**PHOENIX touchless Model VBFA196.6.7-G**  
Cabinet depth 750 mm  
with drawers (page 38)



**PHOENIX touchless Model VBFA196.120-G**  
with shelves (page 36)



**PHOENIX touchless Model VBFA196.60-G**  
with shelves (page 37)

RAL 1004 RAL 7035

EN GS CE



with restrictions



Type tested according to EN 14470-1 (Type 90).



**The folding doors of the PHOENIX touchless are always closed when not in use and offer you:**

**To operate the cabinet without endangering yourself even when your hands are full**

- Opening and closing of the doors without being touched
- No need to put down containers to open cabinet doors

**High-level protection of staff against toxic vapours**

- No more problems with doors left open
- Vapours cannot escape into the working room
- Permanent effective ventilation of the cabinet if connected to an extraction air system

**Safety in the event of a fire**

- Fire resistance 90 minutes (type tested according to EN 14470-1, Type 90)
- Integrated thermal release systems, automatic closing of the doors and drawers

**Convenient to operate and safe to use**

- Convenient retaining and storing of containers
- Vertical panels to protect from finger injuries

**Lower operating costs**

- No more fingerprints on the surface of the doors
- Lower maintenance costs due to a guided path for the doors

**Sensor technology**

- Opening and closing of the doors without being touched through sensor detection
- Function control with integrated LED display

- The doors close automatically after use

**Your safety in case of power failure**

- Manual closing or opening of the doors is possible

**Folding doors**

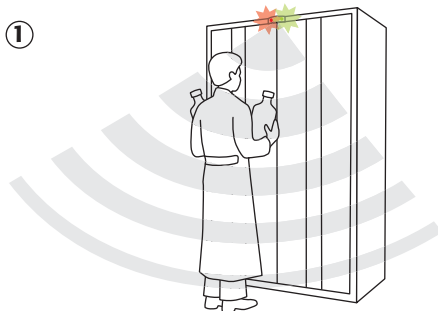
- Less protrusion, space saving
- 90° opening, interior of the cabinet completely visible

**Large variety**

- Either with shelves or drawers
- Optimal solutions for different needs
- Storage capacity of up to 235 ltr. (6 large drawers with 1 ltr. and 2.5 ltr. laboratory bottles)

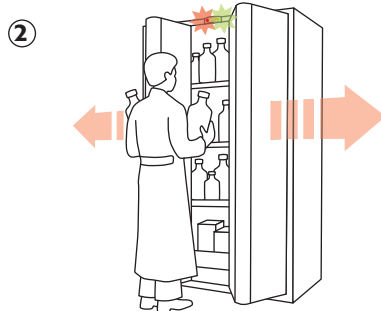
### Operating sequence:

①



The sensor detects a person within approx. 2 seconds.

②



After detection the folding doors open automatically within approx. 5 seconds.

③



The sensor recognises the person while operating and holds the folding doors open.

④



The person leaves the sensor-controlled area the doors close automatically after approx. 30 seconds.



The sensor indicates ready to use.



The sensor has detected the person in the sensor area.

# «« Safety Storage Cabinets

## PHOENIX touchless Type 90 Safety storage cabinet with folding doors



**PHOENIX touchless Model VBFA196.120-G**  
with shelves



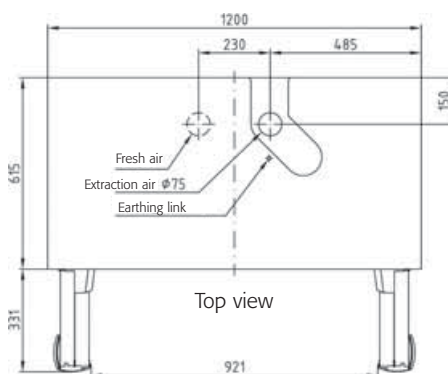
**PHOENIX touchless Model VBFA196.120**  
with drawers



### Technical data

Detection of a person	seconds	approx. 2
Opening time	seconds	approx. 5
Closing time *	seconds	approx. 30
Voltage	V	230
Frequency	Hz	50
Power consumption	A	0,35

\* period of time person leaving the sensor area to closing the doors



## VBFA196.120

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**

(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

### Drawers

Load capacity (evenly distributed): **60 kg**

Drawer dimensions W x D x H (mm):

**approx. 840 x 490 x 90**

Capacity: **approx. 30 ltr.**

**Storage capacity for each drawer/container**  
(please note the height of the containers)

Quantity	Type of container	Volume
<b>90</b>	aerosol can	400 ml
<b>40</b>	steel tin	1 litre
<b>40</b>	lab bottle (glass)	1 litre
<b>40</b>	lab bottle (PE)	1 litre
<b>15</b>	lab bottle (glass)	2,5 litres

### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 1043 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 33 ltr.**

### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	9
Pressure drop	Pa	4

### Type 90 PHOENIX touchless Safety storage cabinets with folding doors

Model	Material, colour	recommended quantity	Order Code
<b>VBFA196.120</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>21212</b>
<b>VBFA196.120-G</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>21214</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=33 ltr.)	sheet-steel, plastic laminated	1	<b>5535</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>5534</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>10053</b>
6 drawers	sheet-steel, plastic laminated		<b>10052</b>

Interior equipment in stainless steel and further drawer combinations available upon request.





## touchless Type 90 Safety storage cabinet with folding door



**PHOENIX touchless Model VBFA196.60-G**  
with shelves

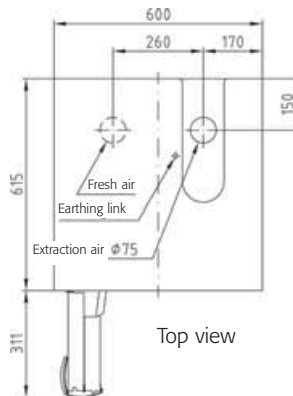


**PHOENIX touchless Model VBFA196.60**  
with drawers

### Technical data

Detection of a person	seconds	approx. 2
Opening time	seconds	approx. 5
Closing time *	seconds	approx. 30
Voltage	V	230
Frequency	Hz	50
Power consumption	A	0,35

\* period of time person leaving the sensor area to closing the doors



## VBFA196.60

**Approved storage of hazardous materials in workrooms.**

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 615 x 1968**

**interior approx. 450 x 520 x 1740**

Weight: **approx. 260 kg**

Labelling in accordance with EN 14470-1

#### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>30</b>	aerosol can	400 ml
<b>12</b>	steel tin	1 litre
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Shelves

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom

collecting sump: **approx. 22 ltr.**

#### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	4
Pressure drop	Pa	2

### Type 90 PHOENIX touchless Safety storage cabinets with folding door

Model	Material, colour	recommended quantity	Order Code
<b>VBFA196.60</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21220</b>
<b>VBFA196.60-G</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21221</b>
<b>Interior equipment (shelves)</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (drawers)</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

# «« Safety Storage Cabinets

## PHOENIX | touchless Type 90 Safety storage cabinet with folding door



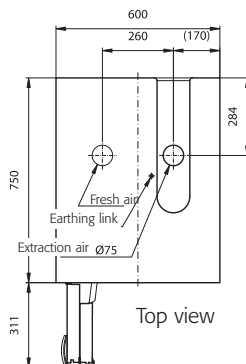
**PHOENIX touchless Model VBFA196.6.7**  
with drawers

**PHOENIX touchless Model VBFA196.6.7-G**  
with drawers

### Technical data

Detection of a person	seconds	approx. 2
Opening time	seconds	approx. 5
Closing time *	seconds	approx. 30
Voltage	V	230
Frequency	Hz	50
Power consumption	A	0,35

\* period of time person leaving the sensor area to closing the doors



## VBFA196.6.7

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 750 x 1968**

**interior approx. 450 x 655 x 1740**

Weight: **approx. 310 kg**

Labelling in accordance with **EN 14470-1**

#### Drawers

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 630 x 50**

Capacity: **approx. 6 ltr.**

Disposal: **approx. 330 x 600 x 160**

Capacity: **approx. 30 ltr.**

### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>40</b>	aerosol can	400 ml
<b>17</b>	steel tin	1 litre
<b>17</b>	lab bottle (glass)	1 litre
<b>17</b>	lab bottle (PE)	1 litre
<b>8</b>	lab bottle (glass)	2,5 litres

### Ventilation

Connection	mm	75
Change of air 10 times	m³/h	5
Pressure drop	Pa	3

### Type 90 PHOENIX touchless Safety storage cabinets with folding door

Model	Material, colour	recommended quantity	Order Code
<b>VBFA196.6.7</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>21216</b>
<b>VBFA196.6.7-G</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>21217</b>

### Interior equipment (drawers)

4 drawers	sheet-steel, plastic laminated	<b>18390</b>
6 drawers	sheet-steel, plastic laminated	<b>18389</b>

Interior equipment in stainless steel and further drawer combinations available upon request.

## Accessories - Your daily assistance, practical and safe



### PE / PP trays

- Increased protection of drawers when storing mildly corrosive liquids and in case of any spillages
- Removable; safe disposal of leakage and easy cleaning

### Rubber mats

- For optimal stability of containers on the drawer

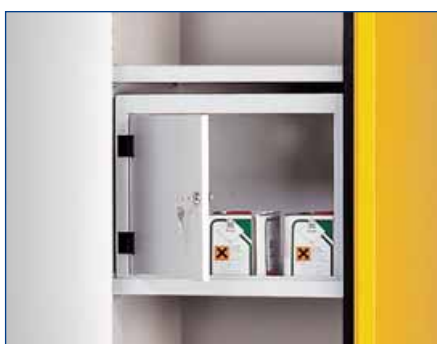


### PE trays for shelves

- Increased protection of shelves when storing mildly corrosive liquids and in case of any leakages
- Removable; safe disposal of leakage and easy cleaning

### Bottle racks

- Help to store small bottles clearly arranged inside the drawer



### Box for chemicals

- Separate storage of mildly corrosive chemicals inside the cabinet
- Optimal for safe indoor transport

### Storage box

- Lockable, separate storage of hazardous materials inside the cabinet



### Fire protected add-on

- Allows the installation of pipes or cables through the side or rear walls of Typ 90 cabinets, without compromising the fire resistance according to EN 14470-1
- Certificate by an independent material testing institute available upon request

## Safety storage cabinets with wing or folding doors - Overview

### The Basic

#### Standard Safety.

Very smooth opening of the doors provides more convenience and safety when using the cabinets.

The flexible interior equipment provides a customised storage solution for most situations.

**TYPE 30** EN 14470-1  
Fire resistance  
**30 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 30)



**Model F30.197.120**

Cabinet width 1200 mm  
with shelves (page 42)



**Model F30.197.60**

Cabinet width 600 mm  
with shelves (page 43)



**Model F30T197.120**

Cabinet width 1200 mm  
with shelves (page 44)



**Model F30T197.60-G**

Cabinet width 600 mm  
with shelves (page 45)

RAL 1004 RAL 7035

EN  CE



with  
restrictions



Type tested according to EN 14470-1 (Type 30).



## Safety storage cabinets with wing or folding doors - Detailed Description

### Cabinets with wing or folding doors

#### Function

- Smooth, air-damped door closing
- Minimal effort: door opening - easy and safe
- Door closing system outside the storage compartment: increased protection of moving and safety relevant components against corrosion

#### Wing doors

- 90° opening, interior of the cabinet completely visible

#### Folding doors

- Protrude 50 % less than wing doors

- 90° opening, interior of the cabinet completely visible
- Protection by vertical anti-trapping door strip

#### Door open arrest system

- Holds door open, eases the storage and removal inside the cabinet
- Your safety in the event of fire!
- Automatic closing of the door by an integrated thermal release system (fusible link)

#### Locking

- Cylinder locking

#### Bottom collecting sump

- Easy to remove
- With three-sided lip seal, safe collection of leakage

#### Shelves

- Height adjustable (32 mm increments)
- Secured against tilting

#### Base

- Integrated (100 mm ground clearance)
- Cabinet can be easily transported with a pallet truck, as the plinth has a removable faceplate

#### Accessories

- PE tray - protects shelves from corrosive materials
- Box for chemicals - separate storage of mildly aggressive chemicals
- Storage box - lockable, separate storage of hazardous materials



#### Locking mechanism

The cabinets are equipped with a cylinder lock on each door.



#### Extraction air inlet

The extraction air inlet is located on top of the cabinet.



#### Base

Easy and safe transportation of the cabinet with a pallet truck.



#### Protective panel

Maximum protection against finger injuries.



#### Door open arrest system

Convenient storage and removal. Safety in the event of fire due to integrated thermal release system, releasing the door at a defined temperature between 40 °C and 50 °C.



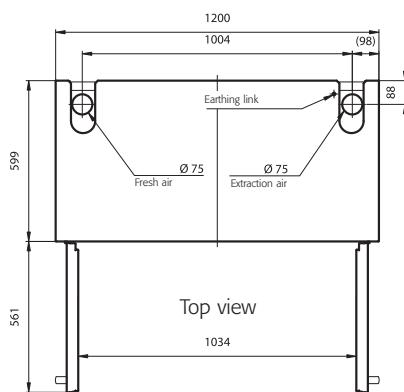
## Safety storage cabinet with wing doors



**Model F30.197.120**  
with shelves



**Model F30.197.120-G**  
with shelves



## F30.197.120

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (30 minutes fire rated - Type 30)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):  
**exterior approx. 1200 x 600 x 1970**  
**interior approx. 1130 x 505 x 1710**  
Weight: **approx. 280 kg**  
Labelling in accordance with EN 14470-1

### Wing doors

90° opening, interior of the cabinet completely visible;  
Smooth air damped door closing

### Shelves

Height adjustable (32 mm increments)  
Secured against tilting  
Load capacity (evenly distributed load):  
**approx. 75 kg**  
Dimensions W x D x H (mm):  
**approx. 1068 x 500 x 40**

### Bottom collecting sump

Capacity: **approx. 60 ltr.**

### Door open arrest system (optional)

Holds door open and eases the storage and removal inside the cabinet;  
Automatic closing of doors and drawer by an integrated thermal release system (fusible link)

### Ventilation

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	9
Pressure drop	Pa	4

### Type 30 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
<b>F30.197.120</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20222</b>
<b>F30.197.120-G</b> , 2 wing doors, excl. interior equipment	warning yellow, RAL 1004		<b>20224</b>
Door open arrest system	with fusible link	1	<b>18332</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=60 ltr.)	sheet-steel, plastic laminated	1	<b>9444</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>9386</b>

Interior equipment in stainless steel available upon request.

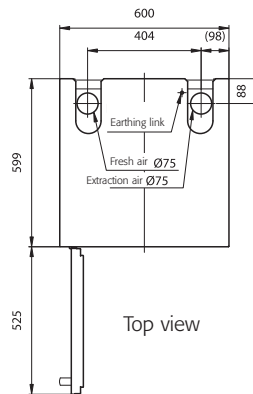
## Safety storage cabinet with wing door



**Model F30.197.60-G**  
with shelves



**Model F30.197.60**  
with shelves



## F30.197.60

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (30 minutes fire rated - Type 30)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 600 x 1970**

**interior approx. 530 x 505 x 1710**

Weight: **approx. 200 kg**

Labelling in accordance with EN 14470-1

#### Wing door

90° opening, interior of the cabinet completely visible;

Smooth air damped door closing

#### Shelves

Height adjustable (32 mm increments)

Secured against tilting

Load capacity (evenly distributed load):

**approx. 75 kg**

Dimensions W x D x H (mm):

**approx. 468 x 500 x 40**

#### Bottom collecting sump

Capacity: **approx. 27 ltr.**

#### Door open arrest system (optional)

Holds door open and eases the storage and removal inside the cabinet;

Automatic closing of doors and drawer by an integrated thermal release system (fusible link)

#### Ventilation

Extraction air connection ø	mm	75
Change of air (10 times)	m³/h	4
Pressure drop	Pa	2

### Type 30 Safety storage cabinets with wing doors

Model	Material, colour	recommended quantity	Order Code
<b>F30.197.60</b> , 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20226</b>
<b>F30.197.60-R</b> , 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20232</b>
<b>F30.197.60-G</b> , 1 wing door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20228</b>
<b>F30.197.60-GR</b> , 1 wing door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20230</b>
Door open arrest system	with fusible link	1	<b>18327</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=27 ltr.)	sheet-steel, plastic laminated	1	<b>9445</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>9432</b>

Interior equipment in stainless steel available upon request.

## Safety storage cabinet with folding doors

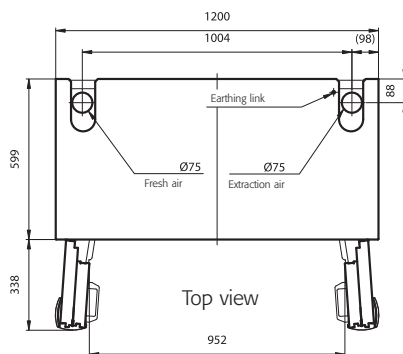


**Model F30T197.120**  
with shelves



**Model F30T197.120-G**  
with shelves

**Door open arrest system**  
➔ fitted as standard



### F30T197.120

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**30 minutes fire rated - Type 30**)
- GS and CE conformity

**Technical data at a glance:**

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 600 x 1970**

**interior approx. 1130 x 505 x 1710**

Weight: **approx. 280 kg**

Labelling in accordance with **EN 14470-1**

#### Wing doors

90° opening, interior of the cabinet completely visible;  
Smooth air damped door closing

#### Shelves

Height adjustable (32 mm increments)

Secured against tilting

Load capacity (evenly distributed load):

**approx. 75 kg**

Dimensions W x D x H (mm):

**approx. 1068 x 500 x 40**

#### Bottom collecting sump

Capacity: **approx. 60 ltr.**

#### Door open arrest system (standard)

Holds door open and eases the storage and removal inside the cabinet;  
Automatic closing of doors and drawer by an integrated thermal release system (fusible link)

#### Ventilation

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	9
Pressure drop	Pa	4

### Type 30 Safety storage cabinets with floding doors

Model	Material, colour	recommended quantity	Order Code
<b>F30T197.120</b> , 2 folding doors, excl. interior equipment	light grey, RAL 7035		<b>20242</b>
<b>F30T197.120-G</b> , 2 folding doors, excl. interior equipment	warning yellow, RAL 1004		<b>20243</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=60 ltr.)	sheet-steel, plastic laminated	1	<b>9444</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5536</b>
Shelf	sheet-steel, plastic laminated	3	<b>9386</b>

Interior equipment in stainless steel available upon request.



## Safety storage cabinet with folding door

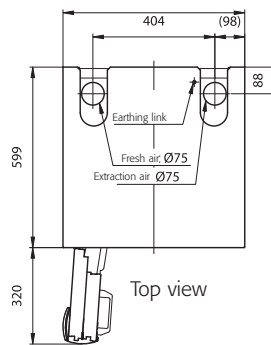


**Model F30T197.60**  
with shelves



**Model F30T197.60**  
with shelves

**Door open arrest system**  
→ fitted as standard



## F30T197.60

**Approved storage of hazardous materials in workrooms**

- Type tested in accordance with EN 14470-1 (**30 minutes fire rated - Type 30**)
- GS and CE conformity

**Technical data at a glance:**

### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 600 x 600 x 1970**

**interior approx. 530 x 505 x 1710**

**Weight: approx. 200 kg**

Labelling in accordance with EN 14470-1

### Wing door

90° opening, interior of the cabinet completely visible;  
Smooth air damped door closing

### Shelves

Height adjustable (32 mm increments)

Secured against tilting

Load capacity (evenly distributed load):

**approx. 75 kg**

Dimensions W x D x H (mm):

**approx. 468 x 500 x 40**

### Bottom collecting sump

Capacity: **approx. 27 ltr.**

### Door open arrest system (standard)

Automatic closing of doors and drawer by an integrated thermal release system (fusible link)

### Ventilation

Extraction air connection ø	mm	75
Change of air (10 times)	m³/h	4
Pressure drop	Pa	2

### Type 30 Safety storage cabinets with floding door

Model	Material, colour	recommended quantity	Order Code
<b>F30T197.60</b> , 1 folding door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20244</b>
<b>F30T197.60-R</b> , 1 folding door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20247</b>
<b>F30T197.60-G</b> , 1 folding door, left hand, excl. interior equipment	warning yellow, RAL 1004		<b>20245</b>
<b>F30T197.60-GR</b> , 1 folding door, right hand, excl. interior equipment	warning yellow, RAL 1004		<b>20246</b>

### Interior equipment

Bottom collecting sump (V=27 ltr.)	sheet-steel, plastic laminated	1	<b>9445</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>9432</b>

Interior equipment in stainless steel available upon request.

## Combi-Cabinets - Overview

### The Multifunctional

Two in one - central and safe.

#### Everything safe at access.

The combined cabinets offer the possibility to store hazardous materials and acids and alkalis without violating the rules of segregation.

The flexible interior equipment versions provide optimal customisation for all materials that have to be stored.

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED  
(Compartment VBFT)

Approved storage of hazardous materials in workrooms in accordance with EN 14470-1 (Type 90) and other chemicals (acids and alkalis)



**Model VBFT.SL+**

**VBFT** with 6 drawers / **SL** with 6 pull-out shelves incl. PP tray



**Model VBFT.SL+**

**VBFT** with 4 shelves / **SL** with 4 pull-out shelves incl. PP tray

RAL 7035

**EN**  **CE**



Type tested according to EN 14470-1 (Type 90).  
(Compartment VBFT).

## Combi-Cabinets - A technology which sets new standards

### Combi-Cabinet for flammable liquids, acids and alkalis

- Complete fire resistant construction of the cabinet exterior
- Compartment VBFT: 90 min. fire resistant in accordance with **EN 14470-1 (Type 90)**
- Fire resistant middle wall inside
- 1 central extraction air inlet on the top
- Adjusting aids to compensate for uneven floor
- Earthing link (standard)

### Cabinet with folding door VBFT

**TSA = automatic-door-closing system**

#### High convenience and safety

- Integrated door open arrest system - **the arrested doors enable you to safely store or remove containers in the cabinet**
- Closing element with negative spring, **almost effortless (approx. 10 Newton) when opening**; high force during automatic closing procedure - **the doors are pulled safely and tightly into the cabinet frame and the sealing elements**
- Time-controlled pulse generator - **the doors close automatically after approx. 60 seconds after the cabinet has been opened (adjustable)**
- Pneumatic damping unit - **consistent smooth and quiet closure of the doors**

- The closing of the doors can be stopped at any time - **simply arrest the doors again with the door open arrest system by using one hand**; the mechanically controlled pulse generator is activated again
- **It is possible to close the doors manually (by hand) at any time!**
- Full covering anti-trapping door strip - maximum protection from injuries!

### Standard configuration

- Door closing system outside the storage compartment: increased protection of moving and safety relevant components against corrosion
- Locking mechanism with cylinder lock (suitable for master-key systems)
- Extraction air inlet on top of the cabinet
- Integrated adjusting aids to compensate for uneven floor
- Earthing link

### Safety in the event of a fire

- Fire resistance 90 minutes (type tested according to EN 14470-1, Type 90)
- Integrated thermal release systems, automatic closing of the doors and drawers

### Large variety

- Either with shelves or drawers
- Optimal solutions for different needs

### Cabinet for acids and alkalis - SL

- Interior made from melamine for high chemical resistance
- Corrosion resistant air duct, non-metallic
- Two hermetically separated storage compartments
- Pull-out shelves with removable PP tray with high chemical resistance
- Capacity: 15 ltr.



**Drawers for storage** inside the fire resistant folding door cabinet. Safe and convenient storage and removal of small containers.



**Pull-out shelves** in the cabinet for acids and alkalis. Sturdy construction with removable PP trays.

## Combi-Cabinets

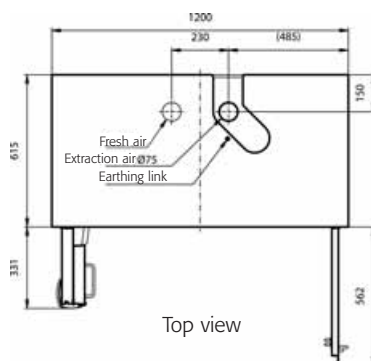


**Model VBFT.SL+**  
VBFT with 5 drawers / SL with 6 pull-out shelves  
incl. PP trays



**Model VBFT.SL+**  
VBFT with 4 drawers / SL with 4 pull-out shelves  
incl. PP trays

**Compartment VBFT**  
**Door open arrest system**  
+  
**TSA - Automatic door closing system**  
➔ fitted as standard



### Ventilation

Connection	mm	75
Change of air 30 times	m³/h	35
Pressure drop	Pa	45

## VBFT.SL+

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (90 minutes fire rated - Type 90)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**  
(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with EN 14470-1

#### Drawers (compartment VBFT)

Load capacity (evenly distributed):

Storage: **25 kg**, for used containers: **50 kg**

Drawer dimensions W x D x H (mm):

Storage: **approx. 345 x 500 x 50**

Capacity: **approx. 5 ltr.**

Disposal: **approx. 330 x 465 x 200**

Capacity: **approx. 29 ltr.**

#### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>12</b>	lab bottle (glass)	1 litre
<b>12</b>	lab bottle (PE)	1 litre
<b>6</b>	lab bottle (glass)	2,5 litres

#### Pull-out shelves (compartment SL)

Load capacity (evenly distributed): **25 kg**

Drawer dimensions W x D x H (mm):

**approx. 430 x 475 x 80**

Capacity: **approx. 15 ltr.**

#### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>16</b>	lab bottle (glass)	1 litre
<b>16</b>	lab bottle (PE)	1 litre
<b>8</b>	lab bottle (glass)	2,5 litres

### Combi-Cabinets with folding and wing door

Model	Material, colour	recommended quantity	Order Code
VBFT.SL+, Combi-Cabinet excl. interior equipment	light grey, RAL 7035		<b>21230</b>
<b>Interior equipment (drawers), compartment VBFT</b>			
4 drawers	sheet-steel, plastic laminated		<b>18398</b>
6 drawers	sheet-steel, plastic laminated		<b>18397</b>
<b>Interior equipment (pull-out shelves), compartment SL</b>			
4 pull-out shelves	incl. PP trays		<b>18412</b>
6 pull-out shelves	incl. PP trays		<b>18409</b>

Interior equipment (Compartment VBFT) in stainless steel and further drawer combinations available upon request.



## Combi-Cabinets

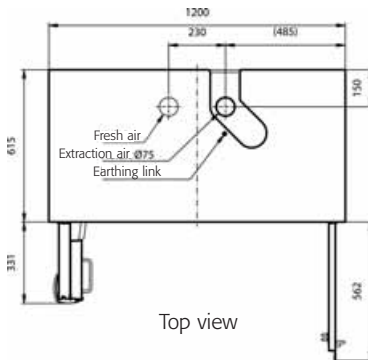


**Model VBFT.SL+**  
VBFT with 4 shelves / SL with 6 pull-out shelves  
incl. PP trays



**Model VBFT.SL+**  
VBFT with 4 shelves / SL with 4 pull-out shelves  
incl. PP trays

**Compartment VBFT**  
**Door open arrest system**  
+  
**TSA - Automatic door closing system**  
➔ fitted as standard



### Ventilation

Connection	mm	75
Change of air 30 times	m <sup>3</sup> /h	35
Pressure drop	Pa	45

## VBFT.SL+

### Approved storage of hazardous materials in workrooms

- Type tested in accordance with EN 14470-1 (**90 minutes fire rated - Type 90**)
- GS and CE conformity

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1200 x 615 x 1968**

(height with base approx. 2090 mm)

**interior approx. 1050 x 520 x 1740**

Weight: **approx. 420 kg**

Labelling in accordance with **EN 14470-1**

#### Shelves (compartment VBFT)

Height adjustable (32 mm increments)

Load capacity (evenly distributed): **75 kg**

Dimensions W x D x H (mm):

**approx. 443 x 435 x 30**

Capacity of the bottom collecting sump:

**approx. 22 ltr.**

#### Pull-out shelves (compartment SL)

Load capacity (evenly distributed): **25 kg**

Drawer dimensions W x D x H (mm):

**approx. 430 x 475 x 80**

Capacity: **approx. 15 ltr.**

#### Storage capacity for each drawer/container

(please note the height of the containers)

Quantity	Type of container	Volume
<b>16</b>	lab bottle (glass)	1 litre
<b>16</b>	lab bottle (PE)	1 litre
<b>8</b>	lab bottle (glass)	2,5 litres

### Combi-Cabinets with folding and wing door

Model	Material, colour	recommended quantity	Order Code
VBFT.SL+, Combi-Cabinet excl. interior equipment	light grey, RAL 7035		<b>21230</b>
<b>Interior equipment (shelves), compartment VBFT</b>			
Bottom collecting sump (V=22 ltr.)	sheet-steel, plastic laminated	1	<b>7455</b>
Perforated metal plate insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	3	<b>5553</b>
<b>Interior equipment (pull-out shelves), compartment SL</b>			
4 pull-out shelves	incl. PP trays		<b>18412</b>
6 pull-out shelves	incl. PP trays		<b>18409</b>

Interior equipment (Compartment VBFT) in stainless steel and further drawer combinations available upon request.

## Underbench cabinets - A technology which sets new standards

### Flexible - Safe - Convenient

Efficient storage and disposal of hazardous materials.

Fire resistant underbench cabinets are a standard in every laboratory. They can be easily integrated underneath laboratory fume hoods and in daily use ensure optimum and safe supply and disposal of flammables at the workplace. Also in the industry sector underbenches can be easily fitted underneath workbenches.

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED

Approved storage of hazardous materials at the workplace in accordance with EN 14470-1 (Type 90)  
All cabinets also available in 500 mm depth



**Cabinet width 1400 mm - 2 drawers**  
Model VBF.60.140-S - Depth 570 mm  
Model VBF.60.14.5-S - Depth 500 mm



**Cabinet width 1400 mm - 2 wing doors/1 drawer**  
Model VBF.60.140-T - Depth 570 mm  
Model VBF.60.14.5-T - Depth 500 mm



**Cabinet width 1100 mm - 1 drawer**  
Model VBF.60.110-S - Depth 570 mm  
Model VBF.60.11.5-S - Depth 500 mm



**Cabinet width 1100 mm - 2 drawers**  
Model VBF.60.110-2S - Depth 570 mm  
Model VBF.60.11.5-2S - Depth 500 mm



**Cabinet width 1100 mm - 2 wing doors**  
Model VBF.60.110-T - Depth 570 mm  
Model VBF.60.11.5-T - Depth 500 mm



**Cabinet width 1100 mm - 1 wing door/1 drawer**  
Model VBF.60.110-A - Depth 570 mm  
Model VBF.60.11.5-A - Depth 500 mm



**Cabinet width 890 mm - 1 drawer**  
Model VBF.60.89-S - Depth 570 mm  
Model VBF.60.89.5-S - Depth 500 mm



**Cabinet width 890 mm - 2 wing doors**  
Model VBF.60.89-T - Depth 570 mm  
Model VBF.60.89.5-T - Depth 500 mm



**Cabinet width 590 mm - 1 drawer**  
Model VBF.60.59-S - Depth 570 mm  
Model VBF.60.59.5-S - Depth 500 mm



**Cabinet width 590 mm - 1 wing door**  
Model VBF.60.59-T - Depth 570 mm  
Model VBF.60.59.5-T - Depth 500 mm

## Type 90 Underbench cabinets

### Underbench cabinets with drawers or wing doors

**Convenience** - smooth-running drawers and doors

**Safety in handling** - Drawers and doors remain open in every position

**Safety in the event of a fire** - Automatic closing of drawers and doors due to a thermal release system (fusible link)

**Earthing** - Earthing wire with clamp inside the drawers. Cabinet corpus with earthing connection as a standard

**Movable plinth** - Makes the cabinet fit perfectly underneath fume cupboards or workbenches. Rugged castors facilitate moving the cabinet

**Operation** - Effortless and safe opening of the drawers

### Drawers

- Remain open in every position
- Interior completely visible - easy and safe access to all containers
- Earthing wire with clamp inside the drawer for used containers (standard)
- Bottom collecting sump sealed by welding, impervious to fluids

### Second level drawer (optional)

- Perfect utilisation of the inside space when storing small units
- Remain open in every position
- Sealed by welding - Impervious to fluids
- Usable height approx. 225 mm (when using a rubber mat or PP-sump: 220 mm)

### Wing doors

- Remain open in every position
- 135° opening, interior of the cabinet completely visible

### Bottom air extraction

- Possible with a base

### Accessories

- Sump liners for drawers and second level drawers, precision fitted and removable
- Castors underneath the cabinet to easily move the cabinet from underneath the fume hood
- Rubber mats, bottle racks
- Certified fire protected add-on for access of pipes and cables through cabinet walls



**Earthing wire** with clamp, standard installed within the waste material drawer - safe transfilling of hazardous materials!



### Second level drawer

Ideal to store small containers in a drawer. Optimal use of storage capacities on 2 levels.



### Movable plinth - Improved handling

The cabinet can be easily pulled back and forth when installed underneath a fume cupboard or workbench. When exactly positioned, the plinth can be arrested.



Type tested according to EN 14470-1 (Type 90).

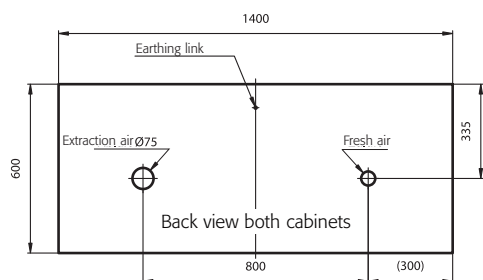
## Type 90 Underbench cabinets



Model VBF.60.140-S with 2 drawers



Model VBF.60.14.5-S with 2 drawers



### Ventilation (both cabinets)

Extraction air connection ø	mm	75
Change of air (10 times)	m³/h	3
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with  
**EN 14470-1 (90 minutes fire rated - Type 90)**  
 GS and CE conformity  
 Labelling in accordance with **EN 14470-1**

## VBF.60.140-S

Dimensions W x D x H (mm):  
**exterior approx. 1400 x 570 x 600**  
**interior approx. 770 x 450 x 500**  
**approx. 470 x 450 x 500**  
 Weight: **approx. 231 kg**

### Drawers

Dimensions W x D x H (mm):  
 Left: **approx. 722 x 442 x 80**  
 Capacity: **approx. 22 ltr.**  
 Right: **approx. 422 x 442 x 80**  
 Capacity: **approx. 12 ltr.**  
 Load capacity (evenly distributed load):  
**50 kg** each drawer  
 Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

## VBF.60.14.5-S

Dimensions W x D x H (mm):  
**exterior approx. 1400 x 500 x 600**  
**interior approx. 770 x 380 x 500**  
**approx. 470 x 380 x 500**  
 Weight: **approx. 208 kg**

### Drawers

Dimensions W x D x H (mm):  
 Left: **approx. 722 x 372 x 80**  
 Capacity: **approx. 20 ltr.**  
 Right: **approx. 422 x 372 x 80**  
 Capacity: **approx. 10 ltr.**  
 Load capacity (evenly distributed load):  
**50 kg** each drawer  
 Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 2 drawers

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.140-S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>21166</b>
<b>Interior equipment</b>			
Second level drawer, left side	sheet-steel, plastic laminated		<b>9609</b>
Second level drawer, right side	sheet-steel, plastic laminated		<b>9608</b>
<b>VBF.60.14.5-S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>18807</b>
<b>Interior equipment</b>			
Second level drawer, left side	sheet-steel, plastic laminated		<b>16589</b>
Second level drawer, right side	sheet-steel, plastic laminated		<b>16590</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21714</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21896</b>



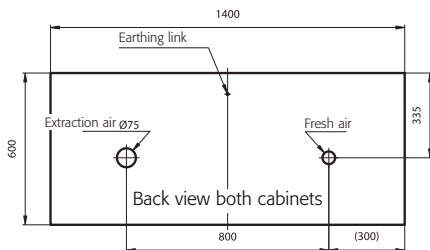
## Type 90 Underbench cabinets



Model VBF.60.140-T with 2 wing doors, 1 drawer



Model VBF.60.140-T with 2 wing doors, 1 drawer



### Ventilation (both cabinets)

Extraction air connection ø	mm	75
Change of air (10 times)	m <sup>3</sup> /h	3
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1 (90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## VBF.60.140-T

Dimensions W x D x H (mm):

**exterior approx. 1400 x 570 x 600**

**interior approx. 770 x 450 x 500**

**approx. 470 x 450 x 500**

Weight: **approx. 226,5 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 422 x 442 x 80**

Capacity: **approx. 12 ltr.**

Load capacity (evenly distributed load): **50 kg**

Useable interior height:

**approx. 460 mm** (without perforated metal plate insert)

### Shelf

Dimensions W x D x H (mm):

**approx. 762 x 415 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump:

**approx. 20 ltr.**

## VBF.60.14.5-T

Dimensions W x D x H (mm):

**exterior approx. 1400 x 500 x 600**

**interior approx. 770 x 380 x 500**

**approx. 470 x 380 x 500**

Weight: **approx. 203,5 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 422 x 372 x 80**

Capacity: **approx. 10 ltr.**

Load capacity (evenly distributed load): **50 kg**

Useable interior height: **approx. 460 mm** (without perforated metal plate insert)

### Shelf

Dimensions W x D x H (mm):

**approx. 762 x 345 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump:

**approx. 15 ltr.**

### Type 90 Underbench cabinets with 2 wing doors and 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.140-T</b> , Underbench cabinet, with wing doors + drawer	light grey, RAL 7035		<b>21173</b>
<b>Interior equipment (wing doors)</b>			
Bottom collecting sump (V=20 ltr.)	sheet-steel, plastic laminated	1	<b>12681</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>11165</b>
Shelf	sheet-steel, plastic laminated	1	<b>12680</b>
<b>Interior equipment (drawer)</b>			
Second level drawer, right side	sheet-steel, plastic laminated		<b>9608</b>
<b>VBF.60.14.5-T</b> , Underbench cabinet, with wing doors + drawer	light grey, RAL 7035		<b>18808</b>
<b>Interior equipment (wing doors)</b>			
Bottom collecting sump (V=18 ltr.)	sheet-steel, plastic laminated	1	<b>18810</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>18811</b>
Shelf	sheet-steel, plastic laminated	1	<b>16591</b>
<b>Interior equipment (drawer)</b>			
Second level drawer, right side	sheet-steel, plastic laminated		<b>16590</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21714</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21896</b>

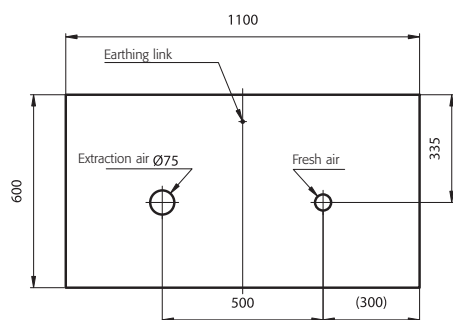
## Type 90 Underbench cabinets



Model VBF.60.110-S with 1 drawer



Model VBF.60.11.5-S with 1 drawer



Back view both cabinets

### Ventilation (both cabinets)

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with

**EN 14470-1 (90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## VBF.60.110-S

Dimensions W x D x H (mm):

**exterior approx. 1100 x 570 x 600**

**interior approx. 980 x 450 x 500**

Weight: **approx. 180,5 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 930 x 442 x 80**

Capacity: **approx. 27 ltr.**

Load capacity (evenly distributed load): **50 kg**

Useable interior height:

**approx. 460 mm** (without perforated metal plate insert)

## VBF.60.11.5-S

Dimensions W x D x H (mm):

**exterior approx. 1100 x 500 x 600**

**interior approx. 980 x 380 x 500**

Weight: **approx. 163,5 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 930 x 372 x 80**

Capacity: **approx. 24 ltr.**

Load capacity (evenly distributed load): **50 kg**

Useable interior height:

**approx. 460 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.110-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>21146</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>8053</b>
<b>VBF.60.11.5-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>16557</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>16592</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>

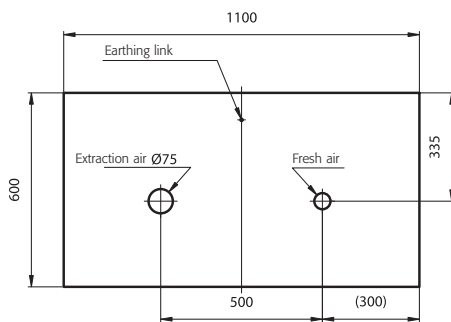
## Type 90 Underbench cabinets



Model **VBF.60.110-2S** with 2 drawers



Model **VBF.60.11.5-2S** with 2 drawers



Back view both cabinets

### Ventilation (both cabinets)

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with

**EN 14470-1 (90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## VBF.60.110-2S

Dimensions W x D x H (mm):

**exterior approx. 1100 x 570 x 600**

**interior 2 x approx. 470 x 450 x 500**

Weight: **approx. 185,5 kg**

### Drawers

Dimensions W x D x H (mm):

**2 x approx. 422 x 442 x 80**

Capacity: **approx. 22 ltr.**

Load capacity (evenly distributed load): **50 kg / drawer**

Useable interior height:

**approx. 460 mm** (without perforated metal plate insert)

## VBF.60.11.5-2S

Dimensions W x D x H (mm):

**exterior approx. 1100 x 500 x 600**

**interior 2 x approx. 470 x 380 x 500**

Weight: **approx. 167 kg**

### Drawers

Dimensions W x D x H (mm):

**2 x approx. 422 x 372 x 80**

Capacity: **approx. 20 ltr.**

Load capacity (evenly distributed load): **50 kg / drawer**

Useable interior height:

**approx. 460 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 2 drawers

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.110-2S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>21127</b>
<b>Equipment variations</b>			
Second level drawer, left or right	sheet-steel, plastic laminated		<b>9608</b>
<b>VBF.60.11.5-2S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>21118</b>
<b>Equipment variations</b>			
Second level drawer, left or right	sheet-steel, plastic laminated		<b>16590</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>

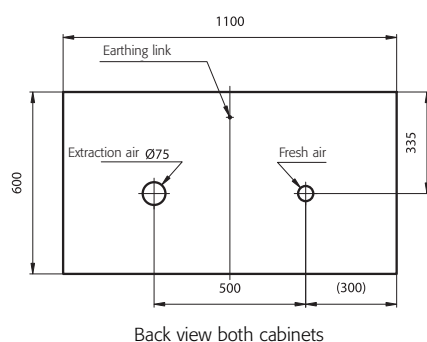
## Type 90 Underbench cabinets



Model VBF.60.110-T with 2 wing doors



Model VBF.60.11.5-T with 2 wing doors



### Ventilation (both cabinets)

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**  
**(90 minutes fire rated - Type 90)**  
 GS and CE conformity  
 Labelling in accordance with **EN 14470-1**

## VBF.60.110-T

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 570 x 600**  
**interior approx. 980 x 450 x 500**  
 Weight: **approx. 170,5 kg**

### Shelf

Dimensions W x D x H (mm):  
**approx. 970 x 415 x 20**  
 Load capacity (evenly distributed load): **75 kg**  
 Capacity of the bottom collecting sump: **approx. 30 ltr.**

Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

## VBF.60.11.5-T

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 500 x 600**  
**interior approx. 980 x 380 x 500**  
 Weight: **approx. 152 kg**

### Shelf

Dimensions W x D x H (mm):  
**approx. 970 x 345 x 20**  
 Load capacity (evenly distributed load): **75 kg**  
 Capacity of the bottom collecting sump: **approx. 25 ltr.**

Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 2 wing doors

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.110-T</b> , Underbench cabinet, with wing doors	light grey, RAL 7035		<b>21156</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=20 ltr.)	sheet-steel, plastic laminated	1	<b>8372</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>8374</b>
Shelf	sheet-steel, plastic laminated	1	<b>8376</b>
<b>VBF.60.11.5-T</b> , Underbench cabinet, with wing doors	light grey, RAL 7035		<b>21119</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=18 ltr.)	sheet-steel, plastic laminated	1	<b>18812</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>18813</b>
Shelf	sheet-steel, plastic laminated	1	<b>16593</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>



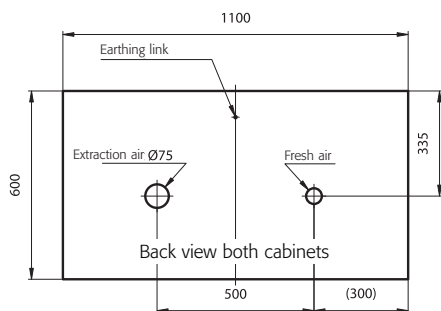
## Type 90 Underbench cabinets



Model VBF.60.110-A with 1 wing door, 1 drawer



Model VBF.60.11.5-A with 1 wing door, 1 drawer



### Ventilation (both cabinets)

Extraction air connection $\varnothing$	mm	75
Change of air (10 times)	m <sup>3</sup> /h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**  
**(90 minutes fire rated - Type 90)**  
 GS and CE conformity  
 Labelling in accordance with **EN 14470-1**

## VBF.60.110-A

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 570 x 600**  
**interior approx. 2 x 470 x 450 x 500**  
 Weight: **approx. 179 kg**

### Drawer

Dimensions W x D x H (mm):  
**approx. 422 x 442 x 80**  
 Capacity: **approx. 12 ltr.**  
 Load capacity (evenly distributed load): **50 kg**  
 Useable interior height: **approx. 460 mm**  
 (without perforated metal plate insert)

### Shelf

Dimensions W x D x H (mm):  
**approx. 460 x 415 x 20**  
 Load capacity (evenly distributed load): **75 kg**  
 Capacity of the bottom collecting sump: **approx. 14 ltr.**  
**Usable interior height**  
**approx. 455 mm** (without perforated metal plate insert)

## VBF.60.11.5-A

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 500 x 600**  
**interior approx. 2 x 470 x 380 x 500**  
 Weight: **approx. 159,5 kg**

### Drawer

Dimensions W x D x H (mm):  
**approx. 422 x 372 x 80**  
 Capacity: **approx. 10 ltr.**  
 Load capacity (evenly distributed load): **50 kg**  
 Useable interior height: **approx. 460 mm**  
 (without perforated metal plate insert)

### Shelf

Dimensions W x D x H (mm):  
**approx. 460 x 345 x 20**  
 Load capacity (evenly distributed load): **75 kg**  
 Capacity of the bottom collecting sump: **approx. 12 ltr.**  
**Usable interior height**  
**approx. 400 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 1 wing door and 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.110-A</b> , Underbench cabinet, with wing door + drawer	light grey, RAL 7035		<b>21140</b>
<b>Interior equipment (wing door)</b>			
Bottom collecting sump (V=14 ltr.)	sheet-steel, plastic laminated	1	<b>7270</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	1	<b>7275</b>
<b>Interior equipment (drawer)</b>			
Second level drawer, right side	sheet-steel, plastic laminated		<b>9608</b>
<b>VBF.60.11.5-A</b> , Underbench cabinet, with wing door + drawer	light grey, RAL 7035		<b>17638</b>
<b>Interior equipment (wing door)</b>			
Bottom collecting sump (V=12 ltr.)	sheet-steel, plastic laminated	1	<b>17671</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>18814</b>
Shelf	sheet-steel, plastic laminated	1	<b>16594</b>
<b>Interior equipment (drawer)</b>			
Second level drawer, right side	sheet-steel, plastic laminated		<b>16590</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>

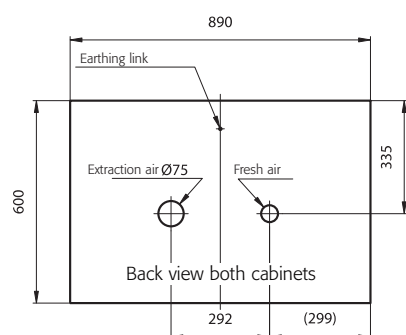
## Type 90 Underbench cabinets



Model VBF.60.89-S with 1 drawer



Model VBF.60.89.5-S with 1 drawer



### Ventilation (both cabinets)

Extraction air connection Ø	mm	75
Change of air (10 times)	m <sup>3</sup> /h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**  
**(90 minutes fire rated - Type 90)**  
 GS and CE conformity  
 Labelling in accordance with **EN 14470-1**

## VBF.60.89-S

Dimensions W x D x H (mm):  
**exterior approx. 890 x 570 x 600**  
**interior approx. 770 x 450 x 500**  
 Weight: **approx. 146 kg**

### Drawer

Dimensions W x D x H (mm):  
**approx. 722 x 442 x 80**  
 Capacity: **approx. 22 ltr.**  
 Load capacity (evenly distributed load): **50 kg**

Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

## VBF.60.89.5-S

Dimensions W x D x H (mm):  
**exterior approx. 890 x 500 x 600**  
**interior approx. 770 x 380 x 500**  
 Weight: **approx. 134 kg**

### Drawer

Dimensions W x D x H (mm):  
**approx. 722 x 372 x 80**  
 Capacity: **approx. 20 ltr.**  
 Load capacity (evenly distributed load): **50 kg**

Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

### Type 90 Underbench cabinets with 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.89-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>21201</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>9609</b>
<b>VBF.60.89.5-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>16558</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>16589</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21892</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21894</b>

## Type 90 Underbench cabinets



Model VBF.60.89-T with 2 wing doors



Model VBF.60.89.5-T with 2 wing doors

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**

**(90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

### VBF.60.89-T

Dimensions W x D x H (mm):

**exterior approx. 890 x 570 x 600**

**interior approx. 770 x 450 x 500**

Weight: **approx. 139 kg**

#### Shelf

Dimensions W x D x H (mm):

**approx. 762 x 415 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump: **approx. 20 ltr.**

Useable interior height:

**approx. 400 mm** (without perforated metal plate insert)

### VBF.60.89.5-T

Dimensions W x D x H (mm):

**exterior approx. 890 x 500 x 600**

**interior approx. 770 x 380 x 500**

Weight: **approx. 128 kg**

#### Shelf

Dimensions W x D x H (mm):

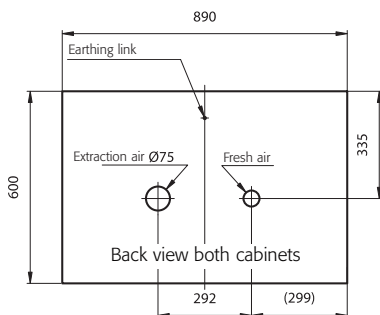
**approx. 762 x 455 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump: **approx. 15 ltr.**

Useable interior height:

**approx. 400 mm** (without perforated metal plate insert)



#### Ventilation (both cabinets)

Extraction air connection ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Type 90 Underbench cabinets with 2 wing doors

Model	Material, colour	recommended quantity	Order No.
<b>VBF.60.89-T</b> , Underbench cabinet, with wing doors	light grey, RAL 7035		<b>21206</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=20 ltr.)	sheet-steel, plastic laminated	1	<b>12681</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>11165</b>
Shelf	sheet-steel, plastic laminated	1	<b>12680</b>
<b>VBF.60.89.5-T</b> , Underbench cabinet, with wing doors	light grey, RAL 7035		<b>21196</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=18 ltr.)	sheet-steel, plastic laminated	1	<b>18810</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>18811</b>
Shelf	sheet-steel, plastic laminated	1	<b>16591</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21892</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21894</b>

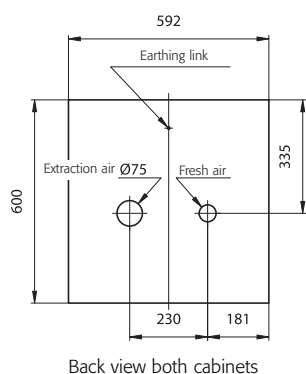
## Type 90 Underbench cabinets



Model **VBF.60.59-S** with 1 drawer



Model **VBF.60.59.5-S** with 1 drawer



### Ventilation (both cabinets)

Extraction air connection ø	mm	75
Change of air (10 times)	m <sup>3</sup> /h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**

**(90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## **VBF.60.59-S**

Dimensions W x D x H (mm):

**exterior approx. 590 x 570 x 600**

**interior approx. 470 x 450 x 500**

Weight: **approx. 123 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 422 x 442 x 80**

Capacity: **approx. 22 ltr.**

Load capacity (evenly distributed load): **50 kg**

## **VBF.60.59.5-S**

Dimensions W x D x H (mm):

**exterior approx. 590 x 500 x 600**

**interior approx. 470 x 380 x 500**

Weight: **approx. 113 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 422 x 372 x 80**

Capacity: **approx. 20 ltr.**

Load capacity (evenly distributed load): **50 kg**

### Type 90 Underbench cabinets with 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.59-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>21186</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>9323</b>
<b>VBF.60.59.5-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>21338</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>16595</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21712</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21893</b>



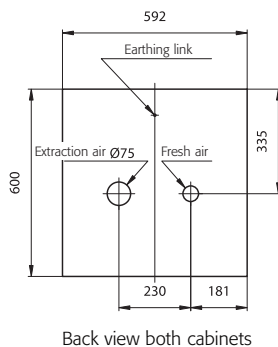
## Type 90 Underbench cabinets



Model VBF.60.59-T with 1 wing door



Model VBF.60.59.5-T with 1 wing door



Back view both cabinets

### Ventilation (both cabinets)

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**90 minutes** fire resistance in accordance with **EN 14470-1**

**(90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## VBF.60.59-T

Dimensions W x D x H (mm):

**exterior approx. 590 x 570 x 600**

**interior approx. 470 x 450 x 500**

Weight: **approx. 102 kg**

### Shelf

Dimensions W x D x H (mm):

**approx. 460 x 415 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump: **approx. 11 ltr.**

Useable interior height:

**approx. 400 mm** (without perforated metal plate insert)

## VBF.60.59.5-T

Dimensions W x D x H (mm):

**exterior approx. 590 x 500 x 600**

**interior approx. 470 x 380 x 500**

Weight: **approx. 96 kg**

### Shelf

Dimensions W x D x H (mm):

**approx. 460 x 345 x 20**

Load capacity (evenly distributed load): **75 kg**

Capacity of the bottom collecting sump: **approx. 10 ltr.**

Useable interior height:

**approx. 400 mm** (without perforated metal plate insert)

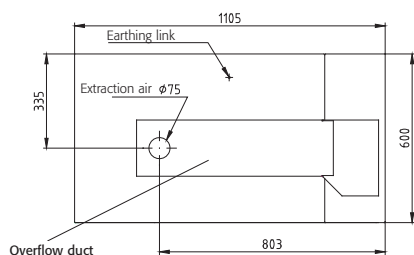
### Type 90 Underbench cabinets with 1 wing door

Model	Material, colour	recommended quantity	Order Code
<b>VBF.60.59-T</b> , Underbench cabinet, with wing door	light grey, RAL 7035		<b>21193</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=14 ltr.)	sheet-steel, plastic laminated	1	<b>7270</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>5555</b>
Shelf	sheet-steel, plastic laminated	1	<b>7275</b>
<b>VBF.60.59.5-T</b> , Underbench cabinet, with wing door	light grey, RAL 7035		<b>18809</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=12 ltr.)	sheet-steel, plastic laminated	1	<b>17671</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>18814</b>
Shelf	sheet-steel, plastic laminated	1	<b>16594</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21712</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21893</b>

## Type 90 Refrigerating underbench cabinet



Model VBFK60.110 with 1 drawer and 30 mm base



Back view

### Ventilation

Cooling performance	°C	+4*
Output	kW	0,65
Nominal voltage	V	230
Frequency	Hz	50
Current consumption	A	2,8
Ventilation		
Extraction air connection Ø mm		75
<b>Change of air min.</b>	<b>m<sup>3</sup>/h</b>	<b>80</b>
Pressure drop	Pa	100

\* by a constant room temperature of max. 22 °C

## VBFK60.110

### Safety Storage Cabinet

**90 minutes** fire resistance in accordance with **EN 14470-1**  
**(90 minutes fire rated - Type 90)**

CE conformity

Labelling in accordance with **EN 14470-1**

Dimensions W x D x H (mm):

**exterior approx. 1100 x 570 x 630**  
 (incl. 30 mm base)

**interior approx. 750 x 430 x 480**

### Drawer

Dimensions W x D x H (mm):

**approx. 722 x 442 x 80**

Capacity: **approx. 22 ltr.**

Load capacity (evenly distributed load):  
**50kg**

Useable interior height:

**approx. 415 mm** (without perforated metal plate insert)

Dimensions second level drawer

W x D x H (mm):

**approx. 722 x 442 x 220**

Useable interior height second

level drawer:

**First level approx. 225 mm**

**Second level approx. 170 mm**

Weight: **approx. 200 kg**

### Type 90 Refrigerating underbench cabinet with 1 drawer

Model	Material, colour	recommended quantity	Order Code
<b>VBFK60.110</b> , Refrigerating underbench cabinet, with drawer, 30 mm base	light grey, RAL 7035		<b>21226</b>
<b>Interior equipment</b>			
Second level drawer	steel, chromed		<b>18070</b>

## Accessories - Your daily assistance, practical and safe



### PE / PP trays

- Increased protection of drawers when storing mildly corrosive liquids and in case of any spillages
- Removable; safe disposal of leakage and easy cleaning

### Rubber mats

- For optimal stability of containers on the drawer

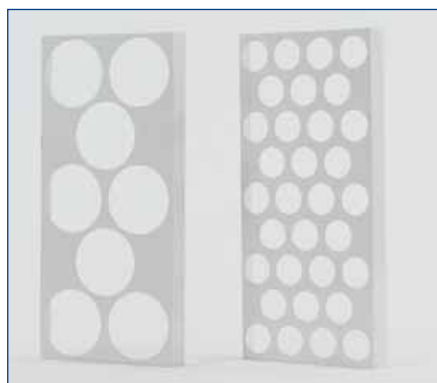


### PE trays for shelves

- Increased protection of shelves when storing mildly corrosive liquids and in case of any leakages
- Removable; safe disposal of leakage and easy cleaning

### Bottle racks

- Help to store small bottles clearly arranged on the drawer



### Box for chemicals

- Separate storage of mildly corrosive chemicals inside the cabinet
- Optimal for safe indoor transport

### Storage box

- Lockable, separate storage of hazardous materials inside the cabinet



### Fire protected add-on

- Allows the installation of pipes or cables through the side or rear walls of Typ 90 cabinets, without compromising the fire resistance according to EN 14470-1
- Certificate by an independent material testing institute available upon request

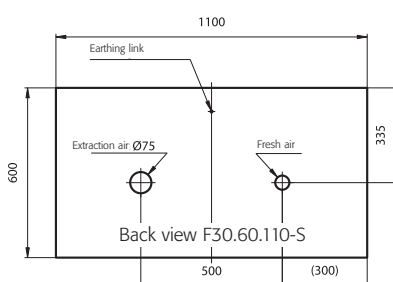
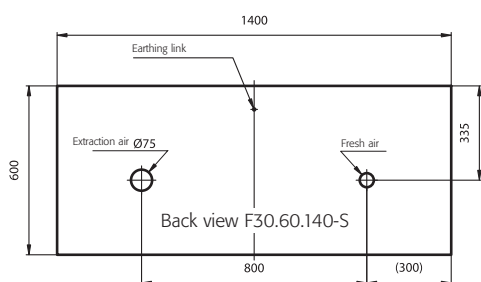
## Type 30 Underbench cabinets



Model F30.60.140-S with 2 drawers



Model F30.60.110-S with 1 drawer



Extraction air connection Ø	mm	75
Change of air (10 times)	m <sup>3</sup> /h	3
Pressure drop	Pa	1

Extraction air connection Ø	mm	75
Change of air (10 times)	m <sup>3</sup> /h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**30 minutes** fire resistance in accordance with **EN 14470-1**

**(30 minutes fire rated - Type 30)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

## F30.60.140-S

Dimensions W x D x H (mm):

**exterior approx. 1400 x 550 x 600**

**interior approx. left: 770 x 445 x 510**

**approx. 470 x 445 x 510**

Weight: **approx. 145 kg**

### Drawers

Dimensions W x D x H (mm):

Left: **approx. 722 x 442 x 80**

Capacity: **approx. 22 ltr.**

Right: **approx. 422 x 442 x 80**

Capacity: **approx. 12 ltr.**

Load capacity (evenly distributed load): **2 x 50 kg**

Useable interior height:

**approx. 470 mm** (without perforated metal plate insert)

## F30.60.110-S

Dimensions W x D x H (mm):

**exterior approx. 1100 x 550 x 600**

**interior approx. 980 x 445 x 510**

Weight: **approx. 120 kg**

### Drawer

Dimensions W x D x H (mm):

**approx. 930 x 442 x 80**

Capacity: **approx. 27 ltr.**

Load capacity (evenly distributed load): **50 kg**

Useable interior height:

**approx. 470 mm** (without perforated metal plate insert)

### Type 30 Underbench cabinets with 1 or 2 drawers

Model	Material, colour	recommended quantity	Order Code
<b>F30.60.140-S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>20241</b>
<b>Interior equipment</b>			
Second level drawer, left side	sheet-steel, plastic laminated		<b>9609</b>
Second level drawer, right side	sheet-steel, plastic laminated		<b>9608</b>
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21714</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21896</b>
<b>F30.60.110-S</b> , Underbench cabinet, with drawer	light grey, RAL 7035		<b>20237</b>
<b>Interior equipment</b>			
Second level drawer	sheet-steel, plastic laminated		<b>8053</b>
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>



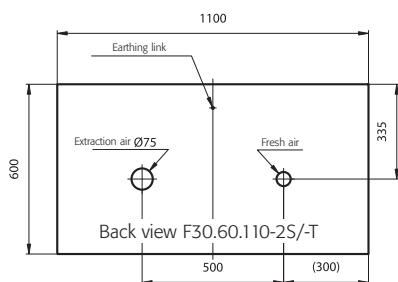
## Type 30 Underbench cabinets



Model F30.60.110-2S with 2 drawers



Model F30.60.110-T with 2 wing doors



Extraction air connection ø	mm	75
Change of air (10 times)	m³/h	2
Pressure drop	Pa	1

### Safety Storage Cabinets

**30 minutes** fire resistance in accordance with **EN 14470-1**  
**(30 minutes fire rated - Type 30)**  
 GS and CE conformity  
 Labelling in accordance with **EN 14470-1**

### F30.60.110-2S

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 550 x 600**  
**interior 2 x approx. 470 x 445 x 510**  
 Weight: **approx. 120 kg**

#### Drawers

Dimensions W x D x H (mm):  
**2 x approx. 422 x 442 x 80**  
 Capacity: **approx. 22 ltr.**  
 Load capacity (evenly distributed load): **2 x 50 kg**

Useable interior height:  
**approx. 470 mm** (without perforated metal plate insert)

### F30.60.110-T

Dimensions W x D x H (mm):  
**exterior approx. 1100 x 550 x 600**  
**interior approx. 980 x 445 x 500**  
 Weight: **approx. 110 kg**

#### Shelf

Dimensions W x D x H (mm):  
**approx. 970 x 415 x 20**  
 Load capacity (evenly distributed load): **75 kg**  
 Capacity of the bottom collecting sump: **approx. 30 ltr.**

Useable interior height:  
**approx. 460 mm** (without perforated metal plate insert)

### Type 30 Underbench cabinets with 2 drawers / 2 wing doors

Model	Material, colour	recommended quantity	Order Code
<b>F30.60.110-2S</b> , Underbench cabinet, with drawers	light grey, RAL 7035		<b>20235</b>
<b>Interior equipment</b>			
Second level drawer, left or right	sheet-steel, plastic laminated		<b>9608</b>
<b>F30.60.110-T</b> , Underbench cabinet, with wing doors	light grey, RAL 7035		<b>20239</b>
<b>Interior equipment</b>			
Bottom collecting sump (V=20 ltr.)	sheet-steel, plastic laminated	1	<b>8372</b>
Perforated insert	sheet-steel, plastic laminated	1	<b>8374</b>
Shelf	sheet-steel, plastic laminated	1	<b>8376</b>
<b>Accessories (both models)</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>

## Fire resistant drum cabinets

### Storage of drums and bulky containers

In daily use the fire resistant drum cabinets guarantee optimum and safe storage and supply of flammables at the workplace.

**TYPE 90** EN 14470-1  
Fire resistance  
**90 minutes**  
FIRE CHAMBER TESTED - TYPE PROVED  
(equivalent)

#### 90 minutes fire resistant drum cabinets for the storage of flammable liquids in 200 ltr. drums directly at the workplace

##### Operation

- Smooth and reliable closing of the doors
- High-quality slide bar door closer, optimal use of interior height, no door closer arm within the storage area
- Lifting height for the positioning of drums into the cabinet  
Model VBF.221.108 = 460 mm  
Model VBF.221.153 = 360 mm

##### Wing doors

- 100° opening, easy operation with a drum lifter or forklift truck

#### Your safety in the event of fire!

- Door open arrest system with an integrated thermal release system (fusible link), automatic closing of the doors

##### Earthing link (standard)

- Earthing inside at the rear panel
- Earthing link outside at the rear panel

##### Bottom collecting sump (standard)

- Removable
- Galvanised with grid
- Retention volume 220 ltr.

##### Shelf (optional)

- For small containers
- Load capacity (evenly distributed load): **75 kg**

#### Plinth (optional)

- Easy indoor transportation
- Steel profiles (100 x 100 mm) mounted underneath the cabinet with 100 mm ground clearance

#### Drum cabinet with rack system

Rack system consisting of:

- Completely installed rack incl. 3 shelves as storage levels
- Bottom collecting sump, galvanised steel (V=100 ltr.)



##### Slide-bar door closer

High-quality slide-bar door closer move the doors of the drum cabinets without effort. No inconvenient arm of the door closer inside the cabinet.



##### Bottom collecting sump

Sturdy, galvanised bottom collecting sump with galvanised grid. Safe and approved storage of 200 ltr. drums.



##### Base

Optionally the drum cabinets can be equipped with steel profiles. Safe transport with a forklift truck.



with  
restrictions

RAL 7035

EN



Type tested according to EN 14470-1 (Type 90).

## Fire resistant drum cabinets - Overview



**Model VBF.221.108** with additional plinth (page 68)



**Model VBF.221.108** with additional shelf (page 68)



**Model VBF.221.153** with additional shelf and plinth (page 69)



**Model VBF.221.153** with rack system and two drum mounts (page 69)

## Fire resistant drum cabinets



Model VBF.221.108 with additional shelf



Model VBF.221.108 with additional plinth

## VBF.221.108

### Safety Storage Cabinet

**90 minutes** fire resistance in accordance with **EN 14470-1**

**(90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1105 x 1015 x 2225**

(height with base approx. 2325 mm)

**interior approx. 935 x 850 x 2030**

Useable interior height: **approx. 1520 mm**

Lifting height for the positioning of drums into the cabinet: **approx. 460 mm**

Weight: **approx. 854 kg**

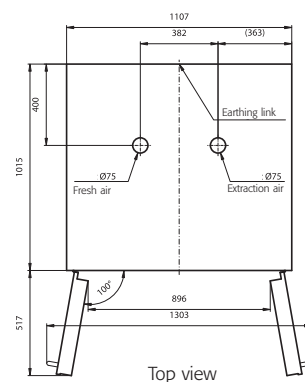
#### Shelf

Load capacity (evenly distributed load): **approx. 75 kg**

Dimensions W x D x H (mm):  
**approx. 920 x 490 x 25**

#### Bottom collecting sump

Capacity: **approx. 220 ltr.**



#### Ventilation

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	12
Pressure drop	Pa	15

### Type 90 drum cabinets

Model	Material, colour	recommended quantity	Order Code
VBF.221.108, Drum cabinet, wing doors	light grey, RAL 7035		<b>21087</b>
<b>Interior equipment</b>			
Shelf	sheet-steel, plastic laminated	1	<b>10057</b>
<b>Accessories</b>			
Plinth, height 100 mm	sheet-steel, plastic laminated	1	<b>12823</b>



## Fire resistant drum cabinets



Model VBF.221.153 with additional shelf and base



Model VBF.221.153 with rack system and two drum mounts

### Ventilation

Extraction air connection Ø	mm	75
Change of air (10 times)	m³/h	19
Pressure drop	Pa	15

## VBF.221.153

### Safety Storage Cabinet

**90 minutes** fire resistance in accordance with **EN 14470-1**

**(90 minutes fire rated - Type 90)**

GS and CE conformity

Labelling in accordance with **EN 14470-1**

### Technical data at a glance:

#### Cabinet

Dimensions W x D x H (mm):

**exterior approx. 1555 x 1015 x 2225**

(height with base approx.: ca. 2325 mm)

**interior approx. 1385 x 850 x 2030**

- Useable interior height:

**approx. 1620 mm**

- Lifting height for the positioning of drums into the cabinet :

**approx. 360 mm**

- Weight: **approx. 1148 kg**

#### Shelf

- Load capacity (evenly distributed load): **approx. 75 kg**

- Dimensions W x D x H (mm):

**approx. 1340 x 490 x 25**

#### Bottom collecting sump

Capacity: **approx. 220 ltr.**

#### Rack system

- Rack dimensions W x D x H (mm):

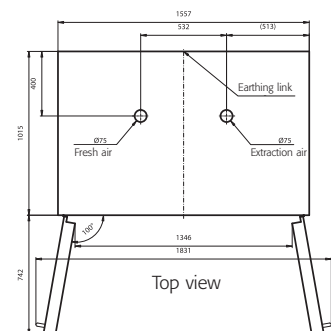
**approx. 1355 x 600 x 1820**

- Total load capacity of the rack:

**approx. 1300 kg**

- Load capacity (evenly distributed load) per shelf: **approx. 200 kg**

- Bottom collecting sump, galvanised steel (V=100 ltr.)



### Type 90 drum cabinets

Model	Material, colour	recommended quantity	Order Code
VBF.221.153, Drum cabinet, wing doors	light grey, RAL 7035		<b>21089</b>
<b>Interior equipment</b>			
Shelf	sheet-steel, plastic laminated	1	<b>10058</b>
<b>Interior equipment (optional)</b>			
Rack system with 4 shelves and bottom collecting sump (V=100 ltr.)	galvanised steel		<b>11184</b>
<b>Accessories</b>			
Plinth, height 100 mm	sheet-steel, plastic laminated	1	<b>11960</b>
Drum mount	galvanised steel, for one 60 ltr. drum		<b>2560</b>

## Cabinets for acids and alkalis

### The Resistant -

Even if it gets aggressive!

The cabinets for acids and alkalis offer an optimal safety for the storage of aggressive hazardous materials.

Two separated storage compartments with integrated drawers, allow the safe storage and removal of hazardous materials.

#### Safe and approved storage of aggressive hazardous materials at the workplace

**Special cabinet for safe storage of corrosive hazardous materials, especially acids and alkalis.**

**Not suitable for the storage of flammable liquids!**

##### Construction

- Outer corpus made of sheet-steel, plastic laminated
- Inner corpus made from melamine-coated special workplates for high chemical resistance
- Special plastic lip seals prevent dangerous vapours escaping from the inside of the cabinet
- **Two hermetically separated storage compartments**
- Adjusting aids to compensate for uneven floor
- **Entire door locking mechanism outside the storage compartment, increased protection of moving and safety relevant components against corrosion**

##### Wing doors

- Opening more than 90 °
- Each door can be used and locked separately (cylinder lock, can be integrated into existing master-key system)

##### Pull-out shelves

- Sturdy construction
- Removable PP tray with high chemical resistance - impervious to fluids

##### Ventilation

- **Corrosion proof, metal free air ducts**
- Separate extraction air of storage compartments.
- Permanent ventilation via only one extraction air inlet at the top of the cabinet

RAL 7035



Sturdy pull-out shelf



Removable PP tray

## Cabinets for acids and alkalis - Overview



**Model SL.196.120** Cabinet for acids and alkalis with 12 pull-out shelves incl. removable PP trays (page 72)



**Model SL.196.60** Cabinet for acids and alkalis with 6 pull-out shelves incl. removable PP trays (page 72)



**Model SL.60.110** Cabinet for acids and alkalis with 4 pull-out shelves incl. removable PP trays (page 73)



**Model SL.60.59** Cabinet for acids and alkalis with 2 pull-out shelves incl. removable PP trays (page 73)

## Cabinets for acids and alkalis



**Model SL.196.120**  
Cabinet for acids and alkalis with 12 pull-out shelves incl. removable PP trays



**Model SL.196.60**  
Cabinet for acids and alkalis with 6 pull-out shelves incl. removable PP trays

Special cabinet for safe storage of corrosive hazardous materials, especially acids and alkalis. Not suitable for the storage of flammable liquids!

### SL.196.120

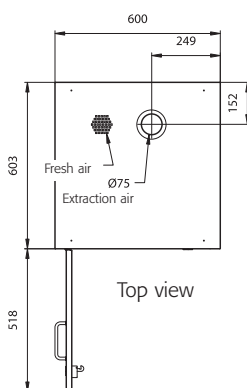
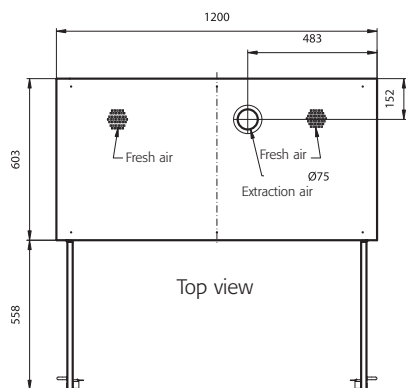
#### Technical data

- Dimensions W x D x H (mm):  
**exterior approx. 1200 x 605 x 1970**  
**interior approx. 485 x 565 x 1865**  
(per compartment)
- Weight: **approx. 216,5 kg**
- Drawer load capacity (evenly distributed load): **approx. 25 kg**
- Sump usable storage space  
W x D x H (mm):  
**approx. 415 x 425 x 76**
- Capacity: **approx. 15 ltr.**

### SL.196.60

#### Technical data

- Dimensions W x D x H (mm):  
**exterior approx. 600 x 605 x 1970**  
**interior approx. 485 x 565 x 930**  
(per compartment)
- Weight: **approx. 136,5 kg**
- Drawer load capacity (evenly distributed load): **approx. 25 kg**
- Sump usable storage space  
W x D x H (mm):  
**approx. 415 x 425 x 76**
- Capacity: **approx. 15 ltr.**



#### Cabinets for acids and alkalis

Model	Material, colour	recommended quantity	Order Code
<b>SL.196.120</b> , Cabinet for acids and alkalis	light grey, RAL 7035		<b>20762</b>
<b>Interior equipment</b>			
8 pull-out shelves	incl. removeable PP trays		<b>2 x 18412</b>
12 pull-out shelves	incl. removeable PP trays		<b>2 x 18409</b>
<b>SL.196.60</b> , Cabinet for acids and alkalis, left hand door	light grey, RAL 7035		<b>20763</b>
<b>SL.196.60-R</b> , Cabinet for acids and alkalis, right hand door	light grey, RAL 7035		<b>20764</b>
<b>Interior equipment</b>			
4 pull-out shelves	incl. removeable PP trays		<b>18412</b>
6 pull-out shelves	incl. removeable PP trays		<b>18409</b>



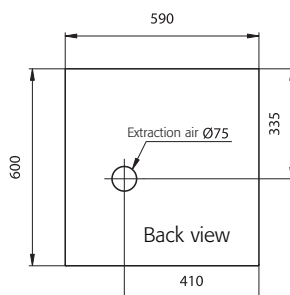
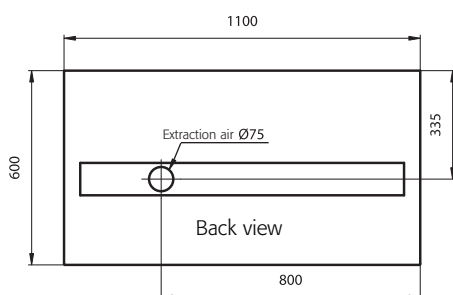
## Cabinets for acids and alkalis



**Model SL.60.110** Cabinet for acids and alkalis with 4 pull-out shelves incl. removable PP trays



**Model SL.60.59** Cabinet for acids and alkalis with 2 pull-out shelves incl. removable PP trays



**Special cabinet for safe storage of corrosive hazardous materials especially acids and alkalis**  
**Not suitable for the storage of flammable liquids!**

### SL.60.110

#### Technical data

- Dimensions W x D x H (mm):  
**exterior approx. 1100 x 570 x 600**  
 (total depth inc. duct: 620 mm)  
**interior approx. 485 x 550 x 530**  
 (per compartment)
- Weight: **approx. 54 kg**
- Drawer load capacity (evenly distributed load): **approx. 25 kg**
- Sump usable storage space  
 W x D x H (mm):  
**approx. 415 x 425 x 76**
- Capacity: **approx. 16 ltr.**

### SL.60.59

#### Technical data

- Dimensions W x D x H (mm):  
**exterior approx. 590 x 570 x 600**  
**interior approx. 485 x 550 x 560**
- Weight: **approx. 36 kg**
- Drawer load capacity (evenly distributed load): **approx. 25 kg**
- Sump usable storage space  
 W x D x H (mm):  
**approx. 415 x 425 x 76**
- Capacity: **approx. 16 ltr.**

#### Cabinets for acids and alkalis

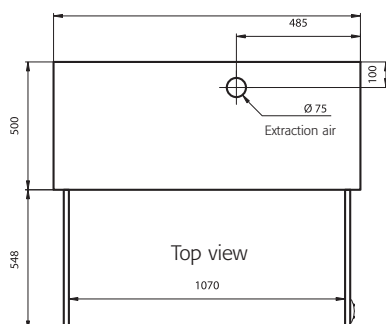
Model	Material, colour	recommended quantity	Order No.
<b>SL.60.110</b> , Underbench cabinet for acids and alkalis	light grey, RAL 7035		<b>20767</b>
<b>Interior equipment</b>			
2 pull-out shelves	incl. removeable PP trays		<b>12502</b>
4 pull-out shelves	incl. removeable PP trays		<b>12239</b>
<b>Accessories</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>19705</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21895</b>
<b>SL.60.59</b> , Cabinet for acids and alkalis, left hand door	light grey, RAL 7035		<b>20769</b>
<b>SL.60.59-R</b> , Cabinet for acids and alkalis, right hand door	light grey, RAL 7035		<b>20770</b>
<b>Interior equipment</b>			
1 pull-out shelves	incl. removeable PP trays		<b>18168</b>
2 pull-out shelves	incl. removeable PP trays		<b>12502</b>
<b>Accessories</b>			
Movable plinth, height 30 mm	sheet-steel, plastic laminated		<b>21712</b>
Movable plinth, height 65 mm (30 mm + 35 mm faceplate)	sheet-steel, plastic laminated		<b>21893</b>

## Cabinet for chemicals



### Model C.197.120-F

Cabinet for chemicals with 4 shelves, bottom collecting sump, 2 PE trays and 2 chemical boxes



### Extraction air connection

Connection	mm	75
Change of air 30 times	m <sup>3</sup> /h	30
Pressure drop	Pa	10



**RAL 7035**

**Cabinet for safe and approved storage of chemicals, toxic materials and other substances that have to be kept under lock in workrooms.**

**Not suitable for storage of flammable liquids!**

### Construction

- Cabinet made of sheet-steel plastic laminated, light grey RAL 7035

### Wing doors

- Lockable with safety cylinder

### Shelves

- Height adjustable (25 mm increments)

### Ventilation

- Extraction air inlet on top
- Vertical aeration via air grills at the bottom of the doors

### Technical data

- Cabinet dimensions W x D x H (mm): **approx. 1200 x 500 x 1970**
- Cabinet weight: **approx. 70 kg**
- Load capacity per shelf (evenly distributed load): **approx. 50 kg**
- Volume of the bottom collecting sump: **36 l**

### Accessories

- PE tray - protects shelves from corrosive materials
- Chemical box - separate storage of less amily corrosive
- Storage box - lockable, separate storage of hazardous materials

## Cabinet for chemicals with shelves

Model	Material, colour	recommended quantity	Order Code
<b>C.197.120</b> , Cabinet for chemicals	light grey, RAL 7035		<b>20108</b>
Shelf	plastic laminated	3	<b>7101</b>
Bottom collecting sump (V=36 ltr.)	plastic laminated	1	<b>7102</b>
Shelf	galvanised		<b>7323</b>
Bottom collecting sump (V=36 ltr.)	galvanised		<b>7325</b>
PE tray	for shelves		<b>7221</b>
Storage box	plastic laminated, lockable		<b>7107</b>
Box for chemicals	PP, with handles and cover		<b>18360</b>

## Cabinet for chemicals



### Model C.197.60

Cabinet for chemicals with 3 shelves, bottom collecting sump, 3 PE trays and storage box

**Cabinet for safe and approved storage of chemicals, toxic materials and other substances that have to be kept under lock in workrooms. Not suitable for storage of flammable liquids!**

### Construction

- Cabinet made of sheet-steel plastic laminated, light grey RAL 7035

### Wing doors

- Lockable with safety cylinder

### Shelves

- Height adjustable (25 mm increments)

### Ventilation

- Extraction air inlet on the top (type C.197.60) or at the back (type C.60.110)
- Vertical aeration due to air grills at the bottom of the doors

### Technical data

- Cabinet dimensions W x D x H (mm):  
Type C.60.110: **approx. 1100 x 500 x 600**  
Type C.197.60: **approx. 600 x 500 x 1970**
- Cabinet weight:  
**approx. 50 kg** (type C.197.60)  
**approx. 40 kg** (type C.60.110)
- Load capacity per shelf (evenly distributed load): **approx. 50 kg**
- Volume of the bottom collecting sump:  
Type C.197.60: **18 ltr.**  
Type C.60.110: **29 ltr.**

### Accessories

- PE tray - protects shelves from corrosive materials
- Chemical box - separate storage of mildly corrosive chemicals
- Storage box - lockable, separate storage of hazardous materials



**RAL 7035**

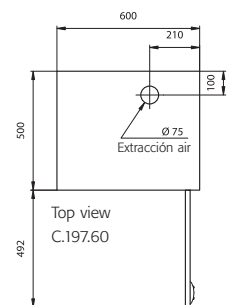
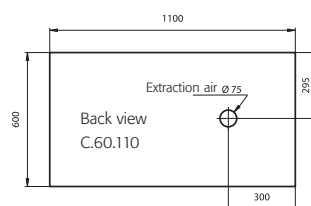
### Extraction air connection

Connection	mm	75
Change of air 30 times	m³/h	15/8
Pressure drop	Pa	10



### Model C.60.110

Underbench-cabinet for chemicals with 1 shelf and bottom collecting sump



## Cabinet for chemicals with shelves

Model	Material, colour	recommended quantity	Order No.
<b>C.197.60</b> , Cabinet for chemicals, left hand	light grey, RAL 7035		<b>20114</b>
<b>C.197.60-R</b> , Cabinet for chemicals, right hand	light grey, RAL 7035		<b>20116</b>
Shelf	plastic laminated	3	<b>7105</b>
Bottom collecting sump (V=18 ltr.)	plastic laminated	1	<b>7103</b>
Shelf	galvanised		<b>7324</b>
Bottom collecting sump (V=18 ltr.)	galvanised		<b>7326</b>
PE tray	for shelves		<b>7222</b>
Storage box	plastic laminated, lockable		<b>7106</b>
Box for chemicals	PP, with handles and cover		<b>18360</b>
<b>C.60.110</b> , Cabinet for chemicals	light grey, RAL 7035		<b>20118</b>
Base, height 30			<b>7212</b>
Base, height 65			<b>7213</b>
Shelf	plastic laminated	1	<b>7109</b>
Bottom collecting sump (V=18 ltr.)	plastic laminated	1	<b>7110</b>
PE sump inliner	for shelves		<b>7223</b>

## Safe storage of flammables? The workplace without a fire resistant Safety Storage Cabinet



**Dangers, risks and your disadvantages ...**

### **Transport/working time**

- Increased risk when transporting hazardous materials internally from the centralised storage room for hazardous material to the workplace
- Hazardous material which is used at the workplace is not always brought back to the storage place
- Precious working time is lost when bringing and taking dangerous material
- Containers and bottles have to be looked/searched for when they are stored chaotically and in an unstructured manner



### **Dangers, lack of fire protection**

- The quantity which is actually needed per day and which is allowed to store can easily be exceeded
- Hidden stocks of hazardous material are set up and contribute to an uncontrollable blaze. Protection of staff and fire fighters in case of a fire can no longer be ensured



### **Inappropriate/Faulty storage and its consequences**

- You are in breach with applicable regulations and laws
- In case of damage the insurance cover is lost
- The proprietor is personally liable for property and damage to persons
- In the event of an accident the risk of loss of production cannot be calculated/foreseen
- Long term loss of the suppliers' reputation with its customers



## Safe storage of hazardous materials! The workplace with a fire resistant Safety Storage Cabinet



### Safety, protection and your advantages...

#### Transportation/Working hours

- Minimizing internal transport of hazardous material from the storage room to the workplace
- All hazardous materials for the daily use can be stored safely directly at the workplace
- Efficient use of working time as there is no need to go long ways every day just to bring flammables in and out from the central storage room
- Quick access to the bottles and containers as they are clearly arranged

#### Maximum safety for the user

- Just the minimum quantities which are needed for a certain job are in use at the workplace. All other hazardous materials are stored safely in the fire resistant cabinet.
- Maximum fire protection due to the centralized storage of all flammables at the workplace in a fire resistant safety storage cabinet (**Type 90 – EN 14470-1**).
- Explosive atmospheres are avoided when hazardous material is stored in safety storage cabinets which are technically ventilated.



### Type 90 safety cabinets in accordance with EN 14470-1...

- Provide the highest degree of safety for human beings and the environment
- Give maximum safety to your investment
- Guarantee highest fire protection available today
- Prevents explosions
- Prevent an existing fire from spreading
- Provides sufficient time for the staff to safely leave the building and for the fire fighters to rescue people from the building and to extinguish the fire

## What must a Safety Storage Cabinet be able to do?

The primary protection for which a **Safety Storage Cabinet** is intended is to shield stored, hazardous materials from a temperature rise of more than 180 K in the event of fire for the defined period of time.

- » avoid explosions that accelerate the fire
- » adequate time for personnel to escape
- » adequate time for rescue services/fire service for fire-fighting and rescue missions

### What happens if 180 K is exceeded?

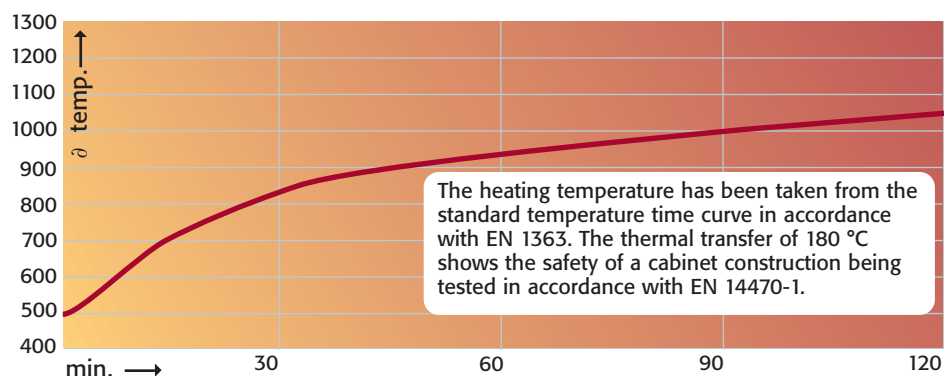
Combustion may begin if the temperature rise inside the Safety Storage Cabinet exceeds 180 K. From this value up, the majority of chemicals reach their ignition temperature: they explode.

### Fire is the same in all parts of the world!

Whether in London or Lisbon, a fire has

the same properties and temperatures. The temperature curve shows that after only 5 minutes a fire has reached a temperature of 576 °C.

After 30 minutes, 842 °C has been reached, and after 90 minutes the flames are at more than 1000 °C.



Time t/h	Furnace temp. t/°C	Time t/h	Furnace temp. t/°C
0	20	30	842
5	576	45	902
10	678	60	945
15	738	90	1006
20	781	120	1049

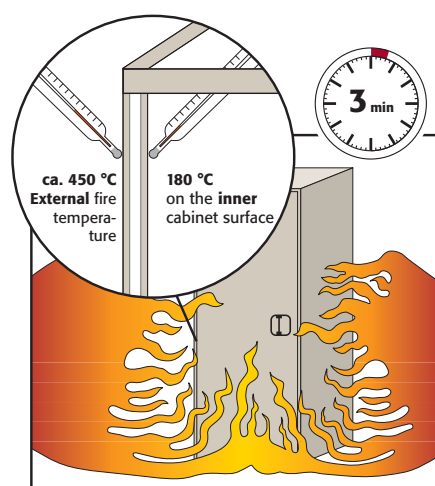
### A comparison of the fire resistance of cabinet constructions

How long do hazardous materials in a cabinet remain safe? The graphs clearly illustrate the differences: a **double-wall steel cabinet** provides no more than **three minutes of protection** before the interior has heated to 180 °C.

A **Type 30 EN Safety Storage Cabinet** as supplied by asecos provides **30 minutes of protection** before the interior has heated to 180 °C. **10-times more safety** in the event of fire compared with a double-wall steel cabinet.

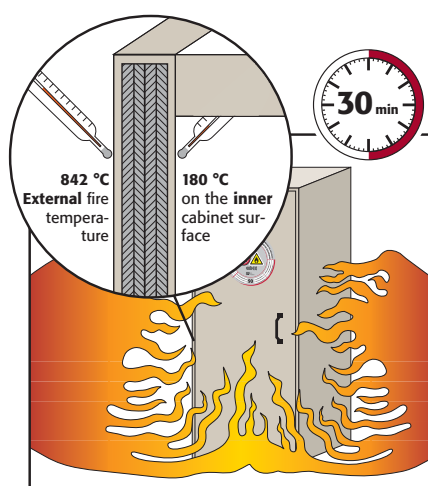
**Highest safety** is reached with a **Type 90 EN Safety Storage Cabinet** as supplied by asecos. These cabinets provide **90 minutes of protection** before the interior has heated to 180 °C. **30-times more safety** in the event of fire. Enough time for rescue and fire-fighting services to take action.

#### 1 Double wall steel cabinet



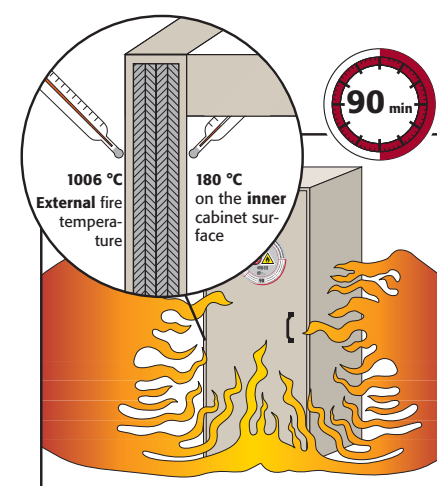
1 3 minutes: danger!

#### 2 Type 30 EN Safety Cabinet



2 30 minutes: safety!

#### 3 Type 90 EN Safety Cabinet



3 90 minutes: maximum safety

- » **Single wall or double wall steel cabinets** without any fire protection measures do not fulfill any requirements of the EN 14470-1.
- » **30 minutes of fire resistance** provide the basic protection for rescue services and personnel in the event of fire.
- » **90 minutes of fire resistance** means optimum quality and therefore the highest possible safety for people and the environment.
- » **Cabinets meeting EN 14470-1** give your investment maximum security.

## Safety Features - EN Safety Storage Cabinets

The special construction of asecos Safety Storage Cabinets guarantees the requested fire resistant types in



accordance with EN 14470-1. asecos stands for the highest quality and safety in the event of fire.

### Special Fire Resistant Plates and Insulation

Special fire resistant plates mounted in various combinations offer guaranteed protection against external fire for a defined period of time. Even over 90 minutes at an external temperature of 1000 °C you can rest assured that the temperature rise inside the cabinet will not exceed 180 °C. This result is measured at 13 air and inner surface points during the furnace test.



The primary protection offered by a Safety Storage Cabinet:  
protecting hazardous materials from a temperature rise of more than 180 K in the event of fire for the defined period of time.

- » avoid explosions that accelerate the fire
- » adequate time for personnel to escape
- » adequate time for rescue services/fire service for fire-fighting and rescue missions



**Insulation package** of a Type 90 EN Safety Storage Cabinet **in its original condition** and **after being exposed to fire in a furnace test** according to EN 14470-1

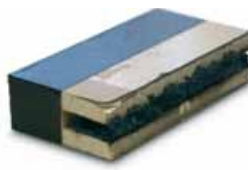
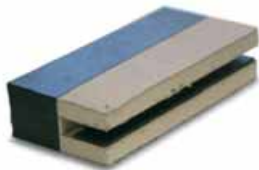


Seal at normal conditions



Seal expanding on exposure to fire

**Intumescent strip** heated up and expanding to more than 20 times of its original thickness.



Total sealing of gaps in the cabinet with expanding intumescent strips. **Highest fire protection of EN Safety Storage Cabinets.**

### Fusible links for safe operation of EN Cabinets and maximum protection



Door open arrest system



Fusible link (thermal release) for drawers

These fusible links with a defined and tested melting point are used with

- door open arrest systems
- drawer systems
- and inlet /extraction air valves.

### Doors and drawers in tall cabinets

Doors that are standing open and drawers that are pulled out during regular work shall be **closed securely** in the event of fire - **at a temperature of max. 50 °C (doors and drawers).**

### Drawers in underbench cabinets

Drawers that are pulled out during regular work shall be **closed securely** in the event of fire - **at a temperature of max. 50 °C.**



### Inlet/extraction air valves

The inlet and extraction air valves close securely in the event of fire - **at a temperature of max. 70 °C.**



## EN 14470-1 - European Standard for Safety Storage Cabinets

**The European Standard EN 14470-1 was implemented in April 2004 and has since been published as a national standard in many European countries as the Netherlands, France, Spain, UK, Italy etc.**

**Since the 1<sup>st</sup> of January 2005 the former German Standard DIN 12925-1 can no longer be taken into consideration for testing Safety Storage Cabinets.**

Test and construction requirements, compared to the DIN 12925-1, have become stricter and in some details stated more precisely.

The following points describe the basics and main safety, test and construction requirements.

### **The range of applications**

- The standard specifies the performance required of the design and fire resistance of safety storage cabinets used for storing flammable liquids in working areas.

### **The principal safety requirements**

- Minimisation of the fire risk associated with the storage of flammable materials.
- Protection of the contents of the cabinet in the event of fire for a known (and tested) period of time.
- Minimisation of the fumes released to the working environment.
- Retention of any possible leakage within the cabinet.
- Provision of enough time, in the event of fire, for personnel to leave the room, and sufficient time for fire service personnel to enter the building before the stored materials turn a small, fire into an uncontrollable blaze.

### **Fire protection**

- In the event of a fire the cabinet must ensure that, over a period of time defined by the manufacturer (but in any event at least 15 minutes), its contents do not present an additional risk that the fire will spread.

### **Doors**

- The cabinet doors must close entirely, starting from any position (closing time max. 20 seconds).
- Immobilising equipment fitted must release the locked doors at a temperature of 50 (-10) °C.
- Avoiding risk of injury: the closing force of the doors must not exceed 100 N.
- One-handed operation must be possible, and the doors must close entirely even if open and locked.

### **Side and rear walls**

- The side and rear walls of the cabinet must have the same thickness and comparable structures.

### **Air inlet and outlet openings**

- The cabinets must have openings for air inlet and outlet (for connection of the cabinet to an exhaust system).
- The ventilation openings must close automatically at a temperature of 70 °C.

### **Storage locations (shelves or drawers)**

- Storage surfaces must be able to support the loading specified by the manufacturer over the period of the test in the furnace. Design evidence of the load-carrying capacity of shelves and drawers in the event of fire based on EN 1365 (fire resistance tests for self-supporting components).

### **Spill containment sump**

- The spill containment sump must retain its ability to function after the fire resistance test. This is to be checked visually by filling the spill containment sump with water.

### **Fire resistance**

- Must be investigated by tests on a design sample.
- The fire resistant cabinet is exposed to flames in a suitable furnace.
- The doors, walls and ceiling of the cabinet being tested must be exposed to the same heating conditions.
- Cabinets must be tested as free-standing single cabinets. The example being tested must be positioned with its rear wall at least 100 mm from the furnace wall (see graphic p. 81).
- The flame exposure is carried out in accordance with the standard temperature curve of BS EN 1363-1 (5.1.1).
- The temperature rise is measured inside the cabinet.
- The cabinet must then be classed as type 15, 30, 60 or 90, according to the time that has elapsed before the temperature rose by 180 K.

### **Conclusion**

The standards that have been used up to now do not even come close to the realistic and necessary requirements for testing the fire resistance of a safety storage cabinet. The new EN 14470-1 has now ultimately defined clear, binding and realistic requirements for safety storage cabinets for flammable liquids.

**From now on, only invest in safety storage cabinets that fulfil all requirements of EN 14470-1.**

The entire asecos range of fire resistant safety storage cabinets are certified in accordance with EN 14470. Insist on your copy of the test certificate today!

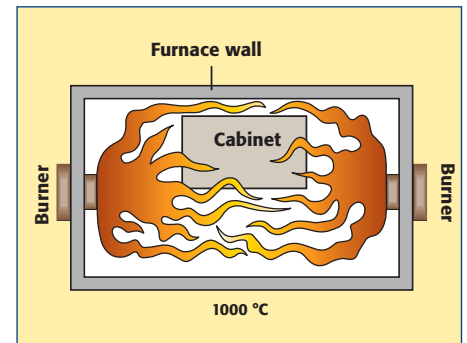


## EN 14470-1 Essential Requirements

EN 14470-1	Essential requirements
<b>Safety requirements</b>	<p>Primarily, EN 14470-1 covers the following major safety requirements:</p> <ul style="list-style-type: none"> <li>» Minimising the fire risks associated with storing flammable substances and protecting the cabinet's contents in the event of fire for a known (tested) minimum length of time (fire rating).</li> <li>» Minimising the amount of vapour released into the working environment.</li> <li>» Retention of accidental spillage within the cabinet.</li> <li>» For the first time fire fighters are also taken into consideration in the definition of target of protection, since the standard takes into account time both for personnel to leave the room and for fire fighters to enter the workplace before the flammable stored materials may turn into an uncontrollable blaze.</li> </ul>
<b>Fire resistance</b>	<ul style="list-style-type: none"> <li>» Testing in a suitable fire chamber as a free-standing single cabinet.</li> <li>» The entire cabinet must be exposed to the same heating conditions.</li> <li>» Flame exposure according to standard temperature curve of EN 1363-1 (5.1.1).</li> <li>» The temperature rise is measured inside the cabinet (measuring points on surfaces and in the air).</li> <li>» The cabinet must then be classified as Type 15, 30, 60 or 90. This is the time measured before the temperature rises more than 180 K at any measuring location.</li> </ul>
<b>Doors</b>	<ul style="list-style-type: none"> <li>» Must close completely, starting from any position (closing time max. 20 seconds).</li> <li>» Immobilising equipment fitted must release the locked doors at a temperature of 50 (-10) °C.</li> </ul>
<b>Fresh and extraction air inlet</b>	<ul style="list-style-type: none"> <li>» The cabinets must have air inlet and outlet openings.</li> <li>» The ventilation openings must close automatically at a temperature of 70 °C.</li> </ul>
<b>Shelves and drawers</b>	<ul style="list-style-type: none"> <li>» The shelves or drawers must be able to support the loading specified by the manufacturer over the period of the test in the fire chamber.</li> </ul>
<b>Spill containment sump</b>	<ul style="list-style-type: none"> <li>» The spill containment sump must retain its ability to function after the fire resistance test.</li> <li>» Visual check (filling spill containment sump with water).</li> </ul>
<b>Information to be supplied</b>	<ul style="list-style-type: none"> <li>» Operating manual including e.g. information about maximum load capacities of shelves and the cabinet itself, sump capacity, recommendations for regular inspections and maintenance, <b>the supplier's declaration of conformity or certificates of conformity from an authorised material testing institute.</b></li> </ul>
<b>Marking and labelling</b>	<ul style="list-style-type: none"> <li>» Advice that the doors must remain closed after every use.</li> <li>» Appropriate signs '<b>Caution: risk of fire</b>' and '<b>Fire: open light and smoking forbidden</b>' according to ISO 3864.</li> <li>» <b>The fire resistance according to EN 14470-1 specified in minutes.</b></li> <li>» Name and/or trademark of the manufacturer.</li> <li>» Model number and year of manufacturing.</li> </ul>

### Your decision – safety

- Type 15** – Some people like risk –  
*Do you?*
- Type 30** – 30 minutes are enough –  
*if the fire service is based nearby*
- Type 60** – That is 1 hour, after all –  
*still not enough?*
- Type 90** – *The state of the art of maximum fire protection for people and buildings*



Furnace test according to EN 14470-1



EN Safety Storage Cabinet tested in a furnace

## Full approval documentation asecos cabinets - quality with the stamp of excellence



### Safety in the event of fire

**Each cabinet model** has been successfully tested (by an independent material testing institute) in a furnace.

# DIN EN

### Safety in the event of fire

**Each cabinet** has a type-tested fire resistance in accordance with EN 14470-1. Documented in the testing certificates of an independent material testing institute.



### Safety in daily use

**Each cabinet** has been successfully tested in accordance with stated safety requirements. Documented in the testing certificates by independent testing organisations.



### External monitoring

The production of these safety cabinets is subject to voluntary, permanent monitoring by an authorised, independent material testing institute. This means that the cabinets are regularly retested in a furnace.

## asecos - Standard for safety and quality



**1 Testing certificates** of an authorized material testing institut for each cabinet. Approved fire resistance in accordance with EN 14470-1.

**2 Verification** for all cabinet models on observing the Equipment and Product Safety Law. Documented in the testing certificates by independent testing organisations.



**3 CE approval certificates** for each cabinet model. Verification that all relevant European guidelines are observed.

**4 Quality Management** in accordance to DIN EN ISO 9001. asecos quality from the quotation to the delivery.

## Basics & Background Knowledge

**Anyone who stores flammable liquids must be aware of their properties and hazards!**

### Definitions:

Flammable liquid = In very general terms, a liquid that has a flash point of 60 °C or below.



### R10 – Flammable liquids

Liquids with a flash point equal to or greater than 23 °C and less than or equal to 60 °C and which support combustion when tested at 60 °C.



### (F) R11, R15, R17 – Highly flammable liquids

Liquids with a flash point lower than 23 °C and with a boiling point higher than 35 °C



### (F+) R12 – Extremely flammable liquids

Liquids with a flash point lower than 0 °C and with a boiling point lower than or equal to 35 °C.

### Auto-ignition point

The auto-ignition point is defined as the lowest temperature at which vapours from a flammable liquid in contact with air or a hot object ignite themselves.

**Many widely-used chemicals (e.g. acetone) have an auto-ignition point of 200 °C or more.**

**This temperature was chosen to minimise possible risks from heat inside a safety storage cabinet.**

°C	
600 -	<b>Z 555° Benzene</b>
500 -	<b>Z 465° Xylene</b>
400 -	
300 -	
200 -	<b>Z ca. 220° Petrol/Fuel oil</b>
100 -	<b>Z 95° Carbon disulphide</b>

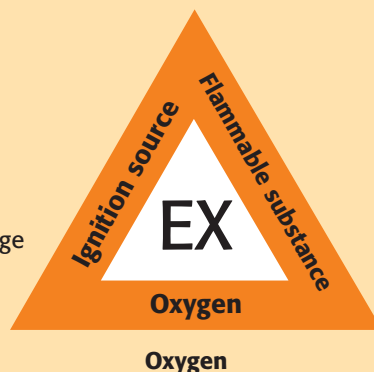
## Auto ignition

lowest temperature at which vapours from a flammable liquid in contact with air or a hot object ignites itself.

### FIRE TRIANGLE - 3 conditions for an explosion

#### Ignition source

- Mechanical spark
- Electric spark
- Chemical reaction
- Electrostatic discharge
- Hot surfaces
- Open flames



#### Flammable substances

- Gases
- Liquids
- Solids



### A vivid example:

**In a full drum, the mixture of vapour and air is too rich, the contents would burn without exploding.**

2 cl (a schnapps glass) of a highly flammable liquid are enough to generate an explosive atmosphere in an empty 200 ltr. drum.

The following quantities of flammable liquids can evaporate to form an explosive mixture:

4 drops	evaporate to 500 ml
2 cl	evaporate to 200 litres
1 litre	evaporate to 10.000 litres



## Information about the new GHS system

### What is it?

The **Globally Harmonized System of Classification and Labeling of Chemicals** or **GHS** is an internationally agreed upon system set to replace the various different classification and labeling standards used in different countries. The GHS is a common and consistent approach to defining and classifying hazards, and communicating hazard information on labels and safety data sheets (SDS) on a global level.

### Why is GHS needed?

Currently many different countries have their own standards for chemical hazard classification and communication. The GHS is intended to replace these multiple systems with one uniform system that all parties have adopted.

The European Union has implemented the United Nations' GHS into EU law as the CLP Regulation (**Regulation (EC) No 1272/2008** Regulation on classification, labelling and packaging of substances and mixtures).

It is expected to facilitate global trade and the harmonised communication of hazard information of chemicals and to promote regulatory efficiency.

The manufacturers of chemicals have until 1 December 2010 to propose classifications for these substances, which will be used for the labelling of pure substances from that date. The deadline for classifying mixtures is 31 May 2015.

### What are the goals of GHS?

The goals of the GHS are to enhance protection of mankind and the environment, by:

- Providing an internationally comprehensible system for hazard communication.
- Providing a recognized framework for those countries without an existing system.
- Facilitating international trade in chemicals whose hazards have been properly assessed and identified on an international basis.
- Reducing the need for animal testing and evaluation of chemicals.

### Hazard Classification

The GHS classification system is very complex. It consists of multiple physical hazards, health hazards and environmental hazards. A full explanation of the classification can be found at the United Nations website for the GHS at [http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html).

The most important standardized label elements included in the GHS are:

#### Symbols (hazard pictograms):

Pictograms include the harmonized hazard symbols plus other graphic elements, such as borders, background patterns or colors that are intended to convey specific information. The symbols are similar to current EU symbols, with a few exceptions.

#### Signal Words:

"Danger" or "Warning" will be used to emphasize hazards and indicate the relative level of severity of the hazard, assigned to a GHS hazard class and category.

#### Hazard Statements:

Standard phrases assigned to a hazard class and category that describe the nature of the hazard.

### Precautionary Statements:

Measures to minimize or prevent adverse effects.

### Examples of the new hazard pictograms:



Goal of the United Nations is broad international adoption by 2008. A legislative proposal was published by the UN to change the current system to one based on the GHS. It is expected that the new regulation will be passed in 2009 and come into force between 2010 and 2015. International implementation status of the GHS is closely monitored by the UN. A summary of the latest status can be found here:

[http://www.unece.org/trans/danger/publi/ghs/implementation\\_e.html](http://www.unece.org/trans/danger/publi/ghs/implementation_e.html)

If you like to receive more information about the new GHS and its implications, please do not hesitate to contact asecos. We will be pleased to assist you.

## Type G90 Fire resistant gas cylinder cabinets

### The fire resistant Maximum safety.

Temperature increase of less than 50 K on the cylinder after 90 minutes according to EN 14470-2.

**G90** EN 14470-2  
**90 minutes**  
max. 50 K increase of temperature  
FIRE CHAMBER TESTED - TYPE PROVED

#### Indoor storage and provision of pressurised gas cylinders according to EN 14470-2 (G90)

##### Optimal and maximum fire protection

- Optimum and highest possible fire protection: compliance with the max. temperature increase allowed on the surface of bottle valve bracket of 50 K after 90 minutes according to EN 14470-2
- Extraction air inlet on the top
- Adjusting aids to compensate for uneven floor
- Earthing link (standard)

##### Construction

- Large interior height (**1858 mm**), easy and convenient installation of gas fittings and pipes

##### Wing doors

- Door locks in place at 0° (even if the doors are not locked)



**1858 mm** interior height, easy and efficient installation of gas fittings and pipes.



- 180° max. opening angle, interior of the cabinet completely visible

##### Pipes

- Up to 72 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

##### Interior equipment

###### Rolling ramp:

- Rigidly fixed in the cabinet, lightweight
- Convenient and safe use, dampened folding down
- Low rolling edge, high safety when manoeuvring cylinders into the cabinet

###### Cylinder retainer:

- Across the whole width of the cabinet
- Distance between the cylinders and the rear panel, gives plenty of space for flexible spiral piping

##### Ventilation

- Complete, uniform ventilation of

cabinet interior (floor and ceiling)

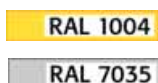
- Air extraction (120 times air change) with pressure drop below 150 Pa, confirmed by examination

##### Accessories

- Height adjustable and tilt-resistant shelf (loading capacity 75 kg, evenly distributed load), across the whole cabinet width
- Cylinder retainer, height adjustable for 10 ltr. cylinder types



**Cylinder locking** (suitable for existing master-key systems).



**Rolling ramp can be easily hinged down** without the need to bend down, easy and safe operation.

## Type G90 Fire resistant gas cylinder cabinets - Overview

Safe storage and provision of pressurised gas cylinders according to EN 14470-2 (G90)



**Model G90.205.140** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 88)



**Model G90.205.60** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 89)



**Model G90.205.120** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 88)

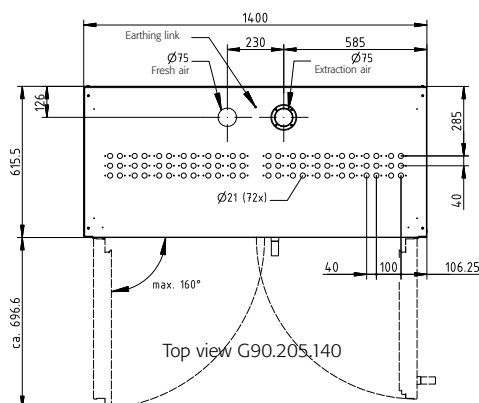


**Model G90.205.90** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 89)

## Type G90 Fire resistant gas cylinder cabinets

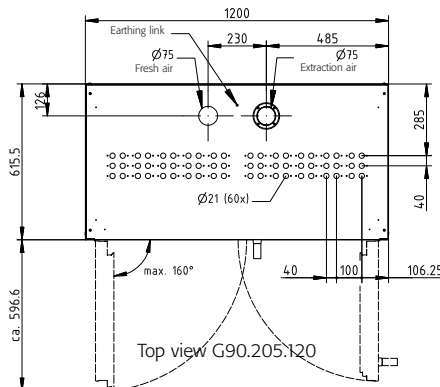


**Model G90.205.140** Fire resistant gas cylinder cabinet with standard interior equipment



### Extraction air connection

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 10
Pressure drop	(Pa)	3
Change of air	120 times	m <sup>3</sup> /h 118
Pressure drop	(Pa)	150



### Extraction air connection

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 8,5
Pressure drop	(Pa)	2
Change of air	120 times	m <sup>3</sup> /h 101
Pressure drop	(Pa)	110

### Gas cylinder cabinets

- Fire resistance **90 minutes** according to **EN 14470-2 (G90)**
- GS approved
- Labelling according to **EN 14470-2**

## G90.205.140

- Cabinet dimensions W x D x H (mm):  
**exterior: approx. 1400 x 615 x 2050**  
**interior: approx. 1240 x 425 x 1858**
- Weight: **approx. 690 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 4 cylinders

### Pipes

- Up to 72 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

## G90.205.120

- Cabinet dimensions W x D x H (mm):  
**exterior: approx. 1200 x 615 x 2050**  
**interior: approx. 1040 x 425 x 1858**
- Weight: **approx. 610 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 4 cylinders

### Pipes

- Up to 60 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

### G90 Gas cylinder cabinets

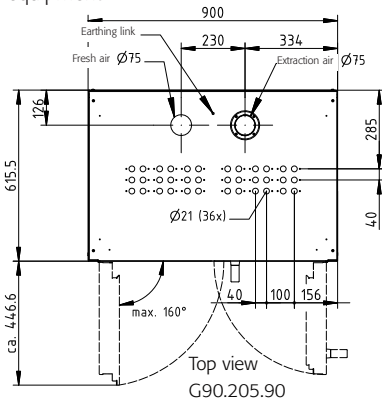
Model	Material, colour	recommended quantity	Order Code
<b>G90.205.140</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>17847</b>
<b>G90.205.140-G</b> , 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>18980</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer		<b>18567</b>
<b>Comfort interior equipment</b>	fold-away ramp comfort, mounting rails, cylinder retainer	1	<b>19552</b>
<b>G90.205.120</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>17578</b>
<b>G90.205.120-G</b> , 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>18977</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer		<b>18566</b>
<b>Comfort interior equipment</b>	fold-away ramp comfort, mounting rails, cylinder retainer	1	<b>19556</b>



## Type G90 – Fire resistant gas cylinder cabinets



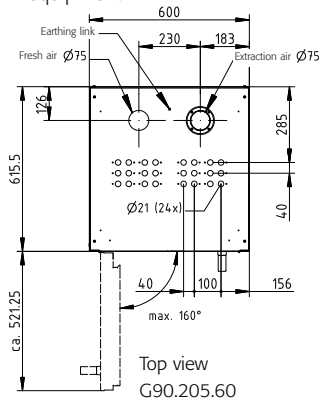
**Model G90.205.90** Fire resistant gas cylinder cabinet with standard interior equipment



**Extraction air connection**

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 6,5
Pressure drop	(Pa)	2
Change of air	120 times	m <sup>3</sup> /h 76
Pressure drop	(Pa)	63

**Model G90.205.60** Fire resistant gas cylinder cabinet with standard interior equipment



**Extraction air connection**

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 4
Pressure drop	(Pa)	1
Change of air	120 times	m <sup>3</sup> /h 51
Pressure drop	(Pa)	28

### Gas cylinder cabinets

- Fire resistance **90 minutes** according to **EN 14470-2 (G90)**
- GS approved
- Labelling according to **EN 14470-2**

## G90.205.90

- Cabinet dimensions W x D x H (mm):  
**exterior: approx. 900 x 615 x 2050**  
**interior: approx. 740 x 425 x 1858**
- Weight: **approx. 490 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 3 cylinders

### Pipes

- Up to 36 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

## G90.205.60

- Cabinet dimensions W x D x H (mm):  
**exterior: approx. 600 x 615 x 2050**  
**interior: approx. 440 x 425 x 1858**
- Weight: **approx. 365 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 2 cylinders

### Pipes

- Up to 24 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

### G90 Gas cylinder cabinets

Model	Material, colour	recommended quantity	Order Code
<b>G90.205.90</b> , 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>17812</b>
<b>G90.205.90-G</b> , 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>18974</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer		<b>18565</b>
<b>Comfort interior equipment</b>	fold-away ramp comfort, mounting rails, cylinder retainer	1	<b>19560</b>
<b>G90.205.60</b> , 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>17737</b>
<b>G90.205.60-R</b> , 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>18966</b>
<b>G90.205.60-G</b> , 1 wing door, left hand, excl. interior equipment	yellow, RAL 1004		<b>18969</b>
<b>G90.205.60-GR</b> , 1 wing door, right hand, excl. interior equipment	yellow, RAL 1004		<b>18971</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer		<b>18561</b>
<b>Comfort interior equipment</b>	fold-away ramp comfort, mounting rails, cylinder retainer	1	<b>19564</b>

## Type G90 Fire resistant gas cylinder cabinets

### Comparison of rolling ramps

#### Version Standard



- Galvanized sheet steel, length 250 mm
- chamfers to prevent slippage of cylinders
- Hand operation of the rolling ramp for
  - hinging down
  - easily lifting and
  - hinging upwithout the need to bend down
- Rolling ramp is flush with the floor of the cabinet, easy and safe pulling/rolling out of gas cylinders

#### Version Comfort



- Galvanized, corrugated sheet steel, cathodic dip-coated (black), sturdy, scratch and impact resistant
- Corrugated for optimal prevention from slippage of cylinders
- Length 350 mm, flat angle
- Hand operation of the rolling ramp with pneumatic damping for
  - hinging down
  - easily lifting and
  - hinging upwithout the need to bend down
- Rolling ramp is flush with the floor of the cabinet, easy and safe pulling/rolling out of gas cylinders

## Type G90 Fire resistant gas cylinder cabinets

### Complete approval documentation

asecos provides quality with the stamp of excellence



# DIN EN



**The new generation of G90 - cabinets**  
**Maximum safety in the event of a fire**

Each cabinet model has successfully passed the fire chamber test of an independent material testing institute.

Each cabinet model is classified G90 (90 minutes) in accordance with EN 14470-2. Compliance with limit value (max. temperature rise at the surface of cylinder valve bracket by 50 K after 90 minutes) was achieved with the tube connected and a three conductor electric cable without additional insulation.

The flame exposure is carried out in accordance with the standard temperature curve of EN 1363-1 for 90 minutes. The requirements of EN 14470-2 were fulfilled for 90 minutes.

### Safety in daily use

Each cabinet has been successfully tested in accordance with stated safety requirements.

Documented with testing certificates by independent testing organisations (Material Testing Institute Dresden).

### Quality check

The production of these safety cabinets is subject to, permanent monitoring by an authorised, independent material testing institute. This means that the cabinets are regularly tested again in a fire chamber.

## Type G30 Fire resistant gas cylinder cabinets

### The fire resistant Maximum safety.

Temperature increase of less than 50 K on the cylinder after 30 minutes according to EN 14470-2.

**G30** EN 14470-2  
30 minutes  
max. 50 K increase of temperature  
FIRE CHAMBER TESTED - TYPE PROVED

#### Indoor storage and provision of pressurised gas cylinders according to EN 14470-2 (G30)

##### Optimal and maximum fire protection

- Optimum and highest possible fire protection: compliance with the max. temperature increase allowed on the surface of bottle valve bracket of 50 K after 30 minutes according to EN 14470-2
- Extraction air inlet on the top
- Adjusting aids to compensate for uneven floor
- Earthing link (standard)

##### Construction

- Large interior height (1892 mm), easy and convenient installation of gas fittings and pipes

##### Wing doors

- Door locks in place at 0° (even if the doors are not locked)



1892 mm interior height, easy and efficient installation of gas fittings and pipes.

- Door can be held open at 90°
- 160° max. opening angle, interior of the cabinet completely visible

##### Interior equipment

###### Rolling ramp:

- Rigidly fixed in the cabinet, lightweight
- Convenient and safe use, dampened folding down
- Low rolling edge, high safety when manoeuvring cylinders into the cabinet

###### Cylinder retainer:

- Across the whole width of the cabinet
- Distance between the cylinders and the rear panel, gives plenty of space for flexible spiral piping

##### Ventilation

- Complete, uniform ventilation of cabinet interior (floor and ceiling)
- Air extraction (120 times air change) with pressure drop below 150 Pa, confirmed by examination



Wing doors with arm which locks in.

RAL 1004  
RAL 7035

Entspricht den technischen  
Regeln Druckgeräten  
**TRG 280**  
des  
Deutschen  
Druckbehälter-  
ausschusses  
DBA

**EN**



#### Accessories

- Height adjustable and tilt-resistant shelf (loading capacity 75 kg, evenly distributed load), across the whole cabinet width
- Cylinder retainer, height adjustable for 10 ltr. cylinder types



**Rolling ramp:** low edge for a safe manoeuvring of gas cylinders into the cabinet.





## Type G30 Fire resistant gas cylinder cabinets - Overview

Safe storage and provision of pressurised gas cylinders according to EN 14470-2 (G30)



**Model TRG.205.140-G** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 94)



**Model TRG.205.120** Fire resistant gas cylinder cabinet with standard interior equipment and height adjustable cylinder retainer (as an option) (cylinders and gas fittings are not included in supplied items) (page 94)



**Model TRG.205.90-G** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 95)

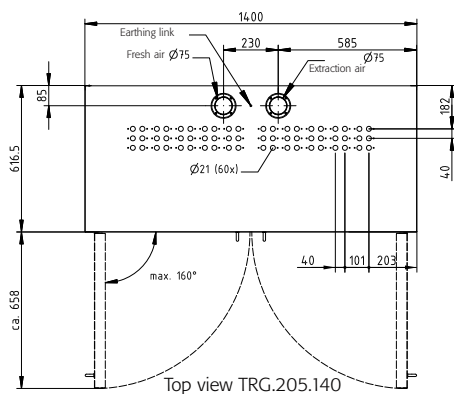


**Model TRG.205.60** Fire resistant gas cylinder cabinet with standard interior equipment (cylinders and gas fittings are not included in supplied items) (page 95)

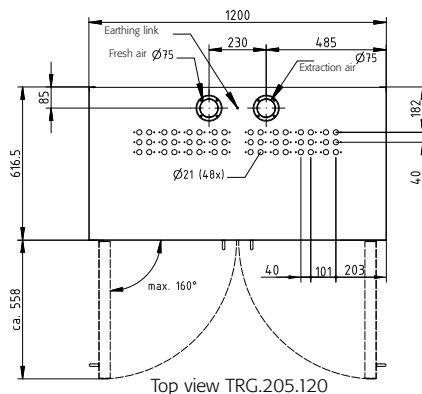
## Type G30 Fire resistant gas cylinder cabinets



Model TRG.205.140-G Fire resistant gas cylinder cabinet with standard interior equipment



Top view TRG.205.140



Top view TRG.205.120

### Extraction air connection

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 11
Pressure drop	(Pa)	3
Change of air	10 times	m <sup>3</sup> /h 132
Pressure drop	(Pa)	148

### Extraction air connection

Connection Ø	(mm)	75
Change of air	10 times	m <sup>3</sup> /h 9
Pressure drop	(Pa)	3
Change of air	10 times	m <sup>3</sup> /h 112
Pressure drop	(Pa)	121

### Gas cylinder cabinets

- Fire resistance **30 minutes** according to **EN 14470-2 (G30)**
- GS approved
- Labelling according to **EN 14470-2**

## TRG.205.140

### Technical data model TRG.205.140:

- Dimensions W x D x H (mm):  
**exterior: approx. 1400 x 615 x 2050**  
**interior: approx. 1290 x 450 x 1900**
- Weight: **approx. 510 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 4 cylinders

### Pipes

- Up to 60 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

## TRG.205.120

### Technical data model TRG.205.120:

- Dimensions W x D x H (mm):  
**exterior: approx. 1200 x 615 x 2050**  
**interior: approx. 1090 x 450 x 1900**
- Weight: **approx. 470 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 4 cylinders

### Pipes

- Up to 48 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

### G30 Gas cylinder cabinets

Model	Material, colour	recommended quantity	Order Code
TRG.205.140, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20867</b>
TRG.205.140-G, 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>20874</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer	1	<b>12848</b>
TRG.205.120, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20861</b>
TRG.205.120-G, 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>20866</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer	1	<b>12846</b>

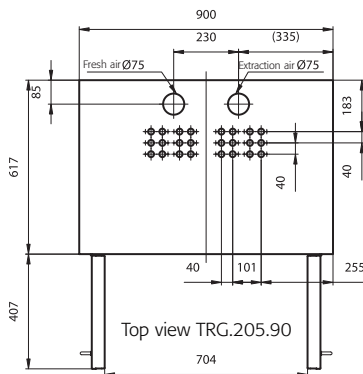
## Type G30 Fire resistant gas cylinder cabinets



**Model TRG.205.90-G** Fire resistant gas cylinder cabinet with standard interior equipment

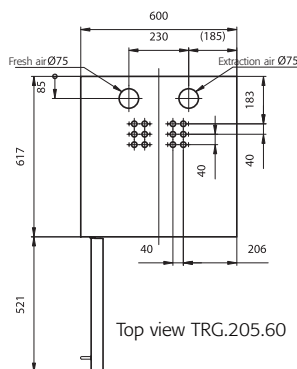


**Model TRG.205.60** Fire resistant gas cylinder cabinet with standard interior equipment



### Extraction air connection

Connection Ø		(mm)	75
Change of air	10 times	m <sup>3</sup> /h	7
Pressure drop		(Pa)	2
Change of air	10 times	m <sup>3</sup> /h	82
Pressure drop		(Pa)	65



### Extraction air connection

Connection Ø		(mm)	75
Change of air	10 times	m <sup>3</sup> /h	5
Pressure drop		(Pa)	2
Change of air	10 times	m <sup>3</sup> /h	51
Pressure drop		(Pa)	25

### Gas cylinder cabinets

- Fire resistance **30 minutes** according to **EN 14470-2 (G30)**
- GS approved
- Labelling according to **EN 14470-2**

## TRG.205.90

- Dimensions W x D x H (mm):  
**exterior: approx. 900 x 615 x 2050**  
**interior: approx. 790 x 450 x 1900**
- Weight: **approx. 340 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 3 cylinders

### Pipes

- Up to 24 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

## TRG.205.60

- Dimensions W x D x H (mm):  
**exterior: approx. 600 x 615 x 2050**  
**interior: approx. 490 x 450 x 1900**
- Weight: **approx. 260 kg**

### Standard interior equipment

- Rolling ramp made from galvanised, corrugated sheet steel (standard version)
- Adjustable rails to fix manifolds and fittings
- Cylinder retainer with ratched straps for 2 cylinders

### Pipes

- Up to 12 lead-through points possible for pipes, sensors etc. in the ceiling of the cabinet

### G30 Gas cylinder cabinets

Model	Material, colour	recommended quantity	Order Code
TRG.205.90, 2 wing doors, excl. interior equipment	light grey, RAL 7035		<b>20887</b>
TRG.205.90-G, 2 wing doors, excl. interior equipment	yellow, RAL 1004		<b>20893</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer	1	<b>12844</b>
TRG.205.60, 1 wing door, left hand, excl. interior equipment	light grey, RAL 7035		<b>20875</b>
TRG.205.60-R, 1 wing door, right hand, excl. interior equipment	light grey, RAL 7035		<b>20882</b>
TRG.205.60-G, 1 wing door, left hand, excl. interior equipment	yellow, RAL 1004		<b>20879</b>
TRG.205.60-GR, 1 wing door, right hand, excl. interior equipment	yellow, RAL 1004		<b>20880</b>
<b>Standard interior equipment</b>	fold-away ramp, mounting rails, cylinder retainer	1	<b>12842</b>

## The EN 14470-2 for gas cylinder cabinets

### Maximum safety in the storage, provision and withdrawal of gas cylinders in indoor areas

Due to the positive pressure and the contents (corrosive, toxic, inflammable, fire accelerating), gas cylinders represent a hazard potential. It is therefore usually recommended to store gas cylinders in outdoor areas. In practice this is often not possible or is associated with very high costs. With the publishing of the new European standard for gas cylinder cabinets, EN 14470-2, an economical and flexible option for the installation of gas cylinders in indoor areas is now available that offers a level of safety comparable to that of outdoor storage.

#### Consequences of the EN in Europe

Fire resistance is classified into 4 classes from G15 up to G90 (fire resistance of 15 up to 90 minutes).

Each type of cabinet and each cabinet size has to be type tested in a furnace. In case dimensional variation exceeds the tolerance, the cabinet has to be retested again. Tests can only be executed by an authorised material testing institute. Cabinets must be tested in a furnace as free-standing single cabinets.

In the new EN 14470-2 it is demanded to deliver with the cabinet the declaration of conformity or certificates of conformity.

#### Complete approval documentation by asecos includes for each safety storage cabinet:

- A test report of an authorised material testing institute stating/proving the successfully passed fire test.  
**(Important: only the test report of an approved material testing institute is evidence for a successfully passed fire test!)**
- Test certificate by independent testing organisation
- Declaration of CE conformity by the manufacturer

#### This means

- Use in accordance with regulations
- Safety for the user

- Clear identification of approval documents with the model of safety storage cabinet

#### Former DIN 12925-2 Safety storage cabinets for gas cylinders

Due to the changes and considerably stricter test requirements, safety storage cabinets in accordance with DIN 12925-2, do no longer comply with the increased safety standard of EN 14470-2. With the publication of EN 14470-2 and a transitional period of 6 months, DIN 12925-2 was replaced.

All manufacturers of safety storage cabinets had to adapt their cabinet models to the new requirements of construction and each cabinet model has to pass the test with the conditions of EN 14470-2.

The user is required by the EN to be supplied with complete approval documentation when obtaining safety storage cabinets.

#### Why type G90?

The classification type 90 for safety cabinets for the storage of flammable liquids has been established for many years in Germany as the state of the art.

This did not change even after the publication of DIN EN 14470-1.

Due to the absence until now of a 90-minute classification for gas cylinder cabinets, plant operators have so far had different safety levels for the storage of flammable liquids and gas cylinders. Nevertheless the demand for uniform protection concepts can increasingly be felt. In the past a standard for gas cylinder cabinets existed only in Germany. Here, the interior surfaces of the cabinet had to be protected for 20 minutes against heating up by more than 50 °K.

Due to the consistent pursuit of a 4-class strategy, also in the standardisation work for EN 14470-2, the operator now has the

possibility to select the same safety level for the storage and installation of gas cylinders as he has selected for the storage of flammable liquids.

This is more than understandable. The danger posed by gas cylinders is with certainty at least comparable to that of flammable liquids. Gases can escape due to excessive heating of the cylinder and the connected valves and this alone can have devastating consequences. Even stronger heating up can ultimately lead to the explosion of the gas cylinder. Such a gas cylinder explosion generally has an extremely destructive effect.

#### What makes the new G90 cabinets so safe?

The most critical part of a gas cylinder is its valve. It is therefore protected against damage during cylinder transport by a special screw cap. However, this protection no longer exists when cylinders are connected for drawing off compressed gases. In order to be able to ensure that the valve is not damaged or heated up too strongly in the case of fire (existing seals can be damaged and gas could leak out uncontrolled and ignite or even lead to a dangerous explosion), particular importance was placed on this in the new European standard for gas cylinder cabinets.

EN 14470-2 therefore specifies that additional temperature measuring points are to be attached to the cylinder valve holder during the tests. The measured rises in temperature may not exceed 50 °K over the entire testing period (90 minutes), whilst temperatures of over 1000° C already prevail in the inspection room.

This extreme tightening of the regulations guarantees that gas cylinders stored in safety cabinets of type G90 do not represent a hazard to employees and rescue services for more than 1,5 hours, even in the case of a full blaze.



## The EN 14470-2 for gas cylinder cabinets

### Facts and Consequences

Essential	EN 14470-2
Range of applications	Safety cabinets for the storage of gas cylinders with a total volume of max 220 liters in laboratories, for free standing single cabinets, for cabinets fixed at walls or those on castors.
Definition of aim of protection	Provision of enough time, in the event of fire, for personnel to leave the room and sufficient time for fire service personnel to enter the workplace before the gas cylinders become hazardous.
Denomination of fire resistance changed to	G
Classification expanded from one to four classes (time measured for temperature increase T at the bottle valve bracket by 50 K)	Type G90 Type G60 Type G30 Type G15
Testing conditions	<p>The fire resistance of the cabinet has to be proven by an independent authorised testing institute.</p> <p>During the fire test the cabinet being tested must be positioned with its rear wall at least 100 mm from the fire chamber wall. The entire cabinet (side walls, door top as well as rear wall) must be exposed to the same heating conditions.</p> <p>Changes in dimensions without new test are limited to a <b>reduction of one dimension</b>:</p> <ul style="list-style-type: none"> <li>- height and width by max. 100 mm</li> <li>- depth by max 150 mm</li> </ul> <p><b>Safety cabinets with a larger reduction of dimension or with 2 changes in dimensions have to be newly tested according to EN 14470-2</b></p> <p>The distance between interior ceiling of the cabinet and the highest point of the gas cylinder valve shall not exceed 175 mm.</p> <p>One stainless steel tube, dia 10 mm as well as an electric cable (3x 1,5 mm<sup>2</sup>) are lead through the cabinet ceiling.</p> <p>The length of stainless steel tube fixed at the gas cylinder bottle shall not exceed 500 mm when leaving the cabinet.</p>
Information to be delivered	Detailed instruction manual as well as declaration of conformity from the manufacturer or certificate of conformity of a testing institute.

## Single walled gas cylinder cabinets

### The Safe One

#### For external use.

High protection against corrosion through completely galvanised and powder coated surface and high-value stainless steel base for optimum protection against mechanical damages.

#### For safe installation of up to 5 gas cylinders (50 ltr.) in outside areas

- Replaces required protective areas around the gas cylinders (TRG 289)
- Dependant on the fire load it can also be used in inside areas (see TRG 280, BGR 120, TRGS 526)
- Marking with warning symbol

#### Construction

- High-quality sheet-steel construction with completely galvanised and powder coated surface for high protection against corrosion, light grey, RAL 7035
- Sloped roof to the front avoids water runoff and spoiling of walls
- High-value stainless steel base for optimum protection against mechanical damage
- Adjusting aids for easy levelling

#### Wing doors

- Large opening angle, interior of the cabinet completely visible
- Fixed or hinged windows as an option
- Lockable turning lever with robust



Adjusting aids for easy levelling on uneven floor.

3-point locking to protect against theft and tamper

#### Interior equipment

- Standard equipment with C-rails to fix gas fittings
- Bottle retainer with lashing straps for 10 l and 50 l gas cylinders
- 16 possible lead-through points fore seen in the ceiling (22 mm diameter) for piping
- Lead-through closed with plastic plugs

#### Ventilation

- Effective ventilation in accordance with TRG 280 through openings beneath the doors and at the rear walls

#### Multiple accessories

- Shelf across the whole cabinet width (loading capacity 75 kg), height adjustable without tools
- Lateral retainer shelf for small bottles (loading capacity 55 kg), height adjustable without tools
- Rolling ramp rigidly fixed



Shelf across the entire cabinet width, height adjustable without tools.



Retainer shelf (optional) height adjustable without tools.



Rolling ramp (optional) rigidly fixed in the cabinet.



RAL 7035



## Single walled gas cylinder cabinets - Overview



**Model LG.215.135** Single walled gas cylinder cabinet with standard interior equipment and fold away ramp (as an option) (cylinders and gas fittings not included in supplied items) (page 100)



**Model LG.215.100** Single walled gas cylinder cabinet with standard interior equipment (cylinders and gas fittings not included in supplied items) (Page 101)



**Model LG.215.70** Single walled gas cylinder cabinet with standard interior equipment (cylinders and gas fittings not included in supplied items) (page 101)

## Single walled gas cylinder cabinets



Model LG.215.135 with standard interior equipment and fold away ramp (as an option)

### Single walled gas cylinder cabinet

- Replaces required protective areas around the gas cylinders (TRG 280)
- Dependant on the fire load it can also be used in inside areas (see TRG 280, BGR 120, TRGS 526)

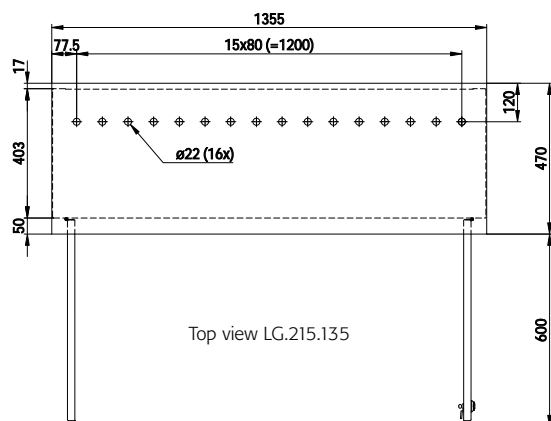
## LG.215.135

### Technical data model LG.215.135:

- Dimensions W x D x H (mm):  
 exterior: **approx. 1350 x 400 x 2150**  
 (without roof overhang)  
 interior: **approx. 1345 x 370 x 2070**  
 Dimensions of roof W x D (mm):  
 1356 x 470
- Weight: **approx. 138 kg**

### Interior equipment

- Standard equipment with C-rails to fix gas fittings
- Bottle retainer with lashing straps for 10 l and 50 l gas cylinders
- 16 possible lead-through points fore seen in the ceiling (22 mm diameter) for piping
- Lead-through closed with plastic plugs



### Single walled gas cylinder cabinet

Model	Material, colour	recommended quantity	Order Code
LG.215.135, 2 wing doors, incl. interior equipment	light grey, RAL 7035		20486
<b>Accessories</b>			
Shelf	sheet steel, plastic laminated RAL 7035		18406
Fold-away-ramp	galvanised		15409
Height adjustable cylinder retainer	for installation on the sidewall		18407
Document holder			10653



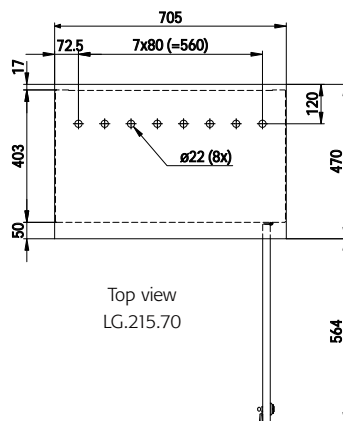
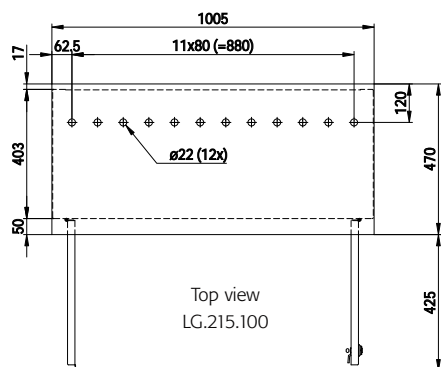
## Single walled gas cylinder cabinets



Model **LG.215.100** with standard interior equipment



Model **LG.215.70** with standard interior equipment



### Single walled gas cylinder cabinets

- Replaces required protective areas around the gas cylinders (TRG 280)
- Dependant on the fire load it can also be used in inside areas (see TRG 280, BGR 120, TRGS 526)

### LG.215.100

- Dimensions W x D x H (mm):  
exterior: **approx. 1000 x 400 x 2150**  
(without roof overhang)  
interior: **approx. 995 x 370 x 2070**  
Dimensions of roof W x D (mm):  
1006 x 470
- Weight: **approx. 113 kg**

#### Interior equipment

- Standard equipment with C-rails to fix gas fittings
- Bottle retainer with lashing straps for 10 l and 50 l gas cylinders
- 12 possible lead-through points foreseen in the ceiling (22 mm diameter) for piping
- Lead-through closed with plastic plugs

### LG.215.70

- Dimensions W x D x H (mm):  
exterior: **approx. 700 x 400 x 2150**  
(without roof overhang)  
interior: **approx. 695 x 370 x 2070**  
Dimensions of roof W x D (mm):  
706 x 470
- Weight: **approx. 85 kg**

#### Interior equipment

- Standard equipment with C-rails to fix gas fittings
- Bottle retainer with lashing straps for 10 l and 50 l gas cylinders
- 8 possible lead-through points foreseen in the ceiling (22 mm diameter) for piping
- Lead-through closed with plastic plugs

### Single walled gas cylinder cabinet

Model	Material, colour	recommended quantity	Order Code
<b>LG.215.100</b> , 2 wing doors, <b>incl.</b> interior equipment	light grey, RAL 7035		<b>20484</b>
<b>Accessories</b>			
Shelf	sheet steel, plastic laminated RAL 7035		<b>15408</b>
Fold-away-ramp	galvanised		<b>15411</b>
Height adjustable cylinder retainer	for installation on the sidewall		<b>18407</b>
Document holder			<b>10653</b>
<b>LG.215.70</b> , 1 wing door, <b>incl.</b> interior equipment	light grey, RAL 7035		<b>20489</b>
<b>Accessories</b>			
Shelf	sheet steel, plastic laminated RAL 7035		<b>18408</b>
Fold-away-ramp	galvanised		<b>15410</b>
Height adjustable cylinder retainer	for installation on the sidewall		<b>18407</b>
Document holder			<b>10653</b>

## About ventilation of cabinets

Nearly all governments place duties on employers to eliminate or control the risks from explosive atmospheres in the workplace.

When it comes to storing flammables, the risk of having an explosive atmosphere can never be totally eliminated!

But the risk can be controlled!

### Definition explosive atmosphere:

An explosive atmosphere is a mixture, under atmospheric conditions, of air and one or more dangerous substances in the form of gases, vapours, mists or dusts in which, after ignition has occurred, combustion spreads to the entire unburned mixture. (DSEAR 2002)

The existence of explosive atmospheres is quite common and oftentimes necessary. The petrol-engine for instance is based on the repeated, controlled build-up of explosive atmospheres. But: An explosive atmosphere can turn into something very dangerous whenever you don't expect it!

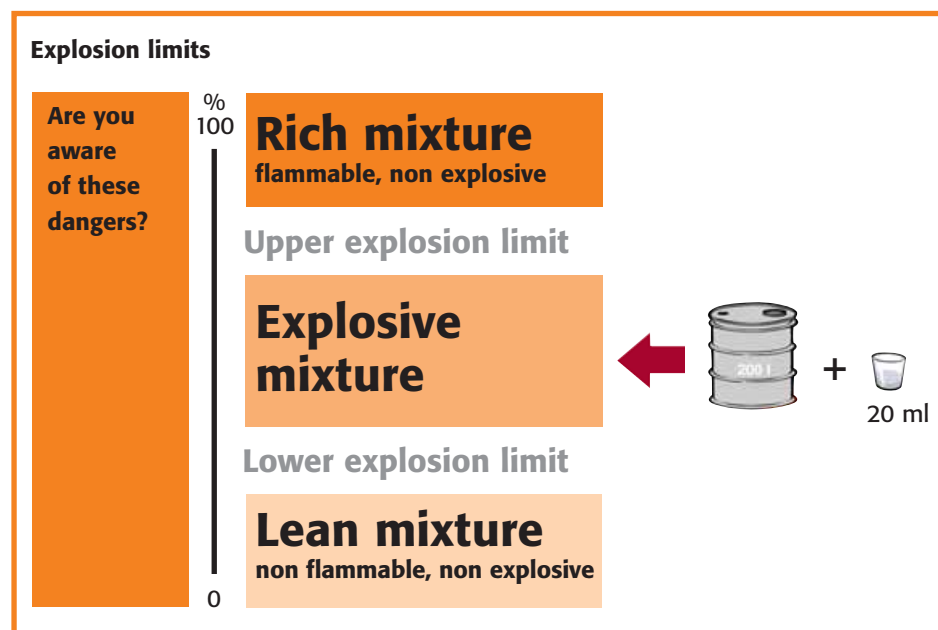
### Definition dangerous explosive atmosphere:

This is an atmosphere which could become explosive due to local and operational conditions. These would include maintenance activities and fault conditions such as leakages. (DSEAR 2002)

Remember that a solvent expands by a factor of 10,000 when turning into a vapour, so even a small spillage or leakage can create an explosive atmosphere within the entire safety storage cabinet. The lower explosion limit is reached, oxygen is always present and as soon as an ignition source (e.g. a spark caused by an electrostatic discharge) comes

into play, an explosion will occur with possibly disastrous effects. To give you a visual example, imagine an empty 200 l metal drum. Only 20 ml of a highly flammable liquid would suffice to create an explosive atmosphere within this drum.

- The openings shall close automatically in the event of a fire
- The entire air inside a ventilated cabinet shall be exchanged at a rate of at least 10 times per hour for flammable or fire supporting gases;



That's why the European Standard gives clear advice on ventilation.

### EN 14470-1 (safety storage cabinets for flammable liquids)

- Cabinets shall be equipped with openings for inlet and exhaust air
- The openings must close automatically when exposed to a temperature of 70 +/- 10 °C
- The entire air inside a ventilated cabinet shall be exchanged at a rate of at least 10 times per hour, at a maximum pressure drop of 150 pa
- Ventilation has to be effective directly above the bottom collecting sump

### EN 14470-2 (safety storage cabinets for pressurised gas cylinders)

- Cabinets shall be equipped with openings for inlet and exhaust air

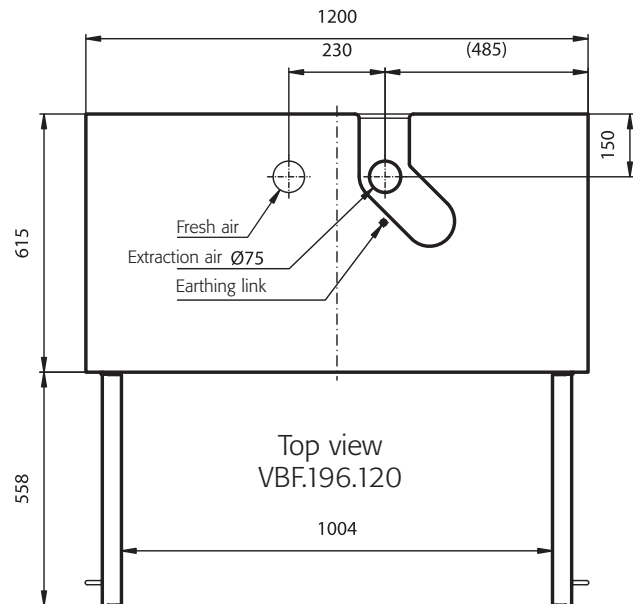
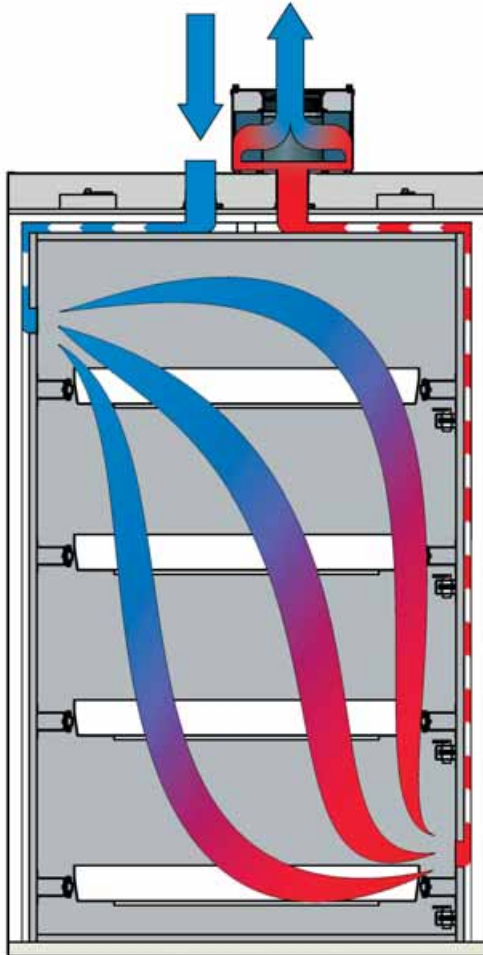
at least 120 times per hour for toxic gases; at a maximum pressure drop of 150 pa

- Air circulation system within the cabinet shall ensure adequate purging from minor leakage

You might want to check your national regulations, laws and codes of practice with regard to ventilation requirements. They might be even stricter than the recommendations of the EN standard. In general terms, it is always a good idea to connect any cabinet to a ventilation system to be prepared for the worst case.

## About ventilation of cabinets

### Ventilation schematic of an asecos cabinet according to EN 14470-1



**Ventilation must be effective directly at the bottom collecting sump!**

### Possibilities to prevent explosive atmospheres

1. Connecting the cabinet to an existing exhaust system, if available
2. Using an extraction add-on and install extensive ducting (see pages 106 - 107)
3. Using a certified recirculating air filter add-on (see page 104)



On the following pages you will find different kinds of extraction add-ons, radial ventilators and recirculating filter systems. Please do not hesitate to contact us if we can be of any assistance!

## Recirculating air filter system UFA.20.30

**You can avoid this in the future!**



**Plug-in recirculating air filter system for safety storage cabinets (tall cabinets) type VBFA, VBFT, VBF and drum cabinets.**

**Safe air extraction of safety cabinets in work areas.**

**Eliminates explosion risk area around the safety cabinet.**

**Ideal for use directly at the workplace - very low noise only approx. 39 dB (A).**

- Housing made of sheet-steel, plastic laminated in RAL 7035 light grey, red cover RAL 3002
- Dimensions W x D x H (mm): 305 x 555 x 210
- Complete with filter system and power cord.

**Order Code 21360**

**Filter for UFA.20.30**

**Order Code 17360**

**Adapter attachment 1 for UFA.20.30**

- Absolutely necessary for drum cabinets type VBF.221 and all asecos safety Storage cabinets type VBF.197

**Order Code 15776**

**Adapter attachment 2 for UFA.20.30**

- Absolutely necessary for asecos safety storage cabinets before type VBF.197 and F30, F30T and F15 types. Can also be used for non-asecos cabinets.

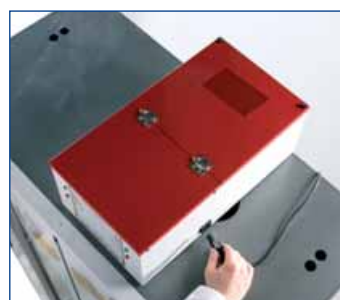
**Order Code 15784**



**UFA - Installation, easy and safe in two steps:**



Position the recirculating air filter unit on top of the safety cabinet.



Plug in the power cord.

### Your advantages

- No expensive extraction piping necessary, easy and safe installation of the recirculating air filter system in two steps
- Eliminates explosion risk area around the cabinet, high flexibility in choosing the installation location
- Active personal protection through safe capture of harmful vapours with retention in the filter system
- Very low noise only approx. 39 dB (A)



## Recirculating air filter system UFA.20.30



① Extraction air monitoring

② Filter monitoring

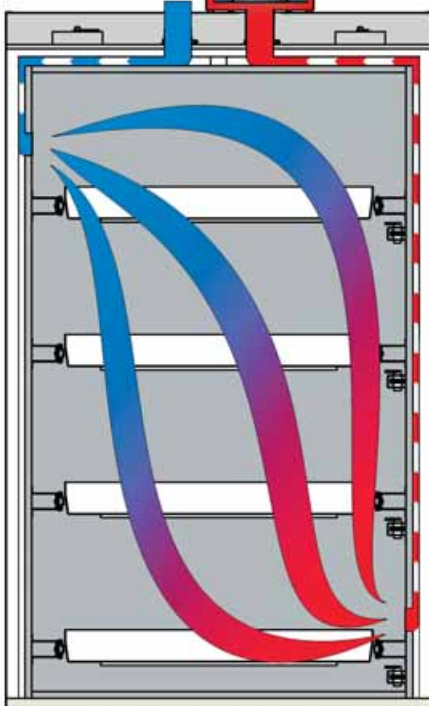
**Recirculating air filter system according to RL 94/9/EG (ATEX) RL 2006/95/EG (low voltage directive) Marking: CE II 3 G T4**

The recirculating air filter system from asecos. Successfully tested and certified by



### Operating principal of the recirculating air filter system

Fresh air supply from the work area  
Return of the cleaned air directly into the work area



### Type of investigation

Comparative measurement of the contamination of the extraction air flow by solvent vapours (hydrocarbons) with and without filter system. The tested solvents (hydrocarbons) display a typical cross section of the relevant materials, which have daily applications in laboratory and industrial practice and e.g. which are stored in safety cabinets. The polarity and boiling point are taken into account when choosing the materials as well as the specific variation in adsorption behaviour of the individual materials.

### Evaluation of the results

The plug-in recirculating air filter system UFA.20.30 is capable of retaining solvent vapours (hydrocarbons) permanently up to a filter saturation of **more than 99,999 %**, under normal operating conditions as well as for a simulated accident in the safety storage cabinet.

### The function - your safety

- The plug-in recirculating air filter system UFA.20.30 is capable of retaining solvent vapours (hydrocarbons) permanently up to a filter saturation of more than 99,999 %, under normal operating conditions as well as for a simulated accident in the safety cabinet
- Direct release of the cleaned extraction air from the safety storage cabinet into the work area
- No contact of the extraction air flow with live components
- Dry contact for further switching at a central control centre

#### ① Extraction air monitoring with:

- Permanent, electronic monitoring of the extraction air quantity
- Integrated pressure sensor
- Alarm activation: optical and via dry contact

#### ② Filter monitoring with:

- Permanent monitoring of filter saturation
- Two stage alarm activation: optical and via dry contact

### Filter change

- Filter change is recommended/necessary once a year for normal amount of contamination

### The tests - your safety

- ATEX and CE compliant
- Successful, complete testing of the recirculating air filter system by an independent testing institute (certified according to DIN ISO/IEC 17025 by the ZLS, German federal states central office for safety, as external measuring body for hazardous materials)
- Series of tests with small and large leak accident situations
- Investigations on various cabinet types and interior equipment

### Technical data

Motor rating	kw	0,03
Nominal voltage	V	230
Frequency	Hz	50
Current input	A	0,13
Noise level	dB (A)	39
Revolutions	rpm	2450
Weight (incl. filter)	kg	15

## Extraction units

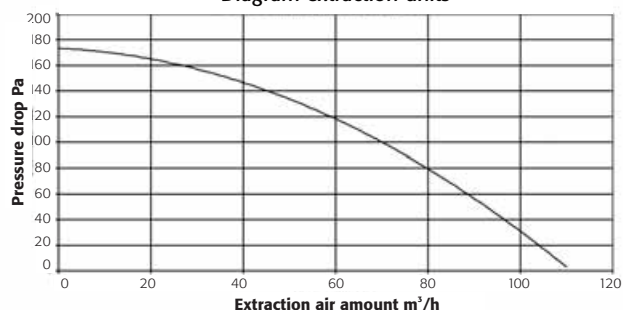


**Extraction unit Model HF.EA.8677**  
without extraction air monitoring



**Extraction unit Model HF.EA.11570**  
without extraction air monitoring, for  
installation on a wall

Diagram extraction units



**Extraction units suitable for up to 120 times air change inside the cabinet**  
**Safe and approved technical ventilation of safety storage cabinets**

- **Very low noise, ideal for direct installation at the workplace**
- Housing made of sheet-steel, plastic laminated RAL 7035 light grey
- Complete with power cord
- Green LED extinguishes in case of power failure
- Connection piece  $\varnothing$  75 mm
- Dimensions W x D x H (mm): approx. 200 x 400 x 200
- Weight: approx. 7 kg

### Model HF.EA.11570

- **For installation on a wall**
- Incl. installation consoles, flexible hose, hose clips and installation material
- other data see model HF.EA.8677

**Suitable for the following cabinets:**

### Safety Storage Cabinets

p. 6 - 49

### Cabinets for acids and alkalis

p. 70 - 73

### Cabinets for chemicals

p. 74 - 75

### Gas Cylinder Cabinets (with restrictions)

p. 86 - 89

### Technical data

Motor rating	kw	0,07
Nominal voltage	V	230
Frequency	Hz	50
Current input	A	0,3
Noise level	dB (A)	35
Revolutions	rpm	2450

**Extraction units according to RL 94/9/EG (ATEX) and RL 2006/95/EG (low voltage directive) Marking: CE II 3 G T4**

### Extraction units

Model	Material, colour	Order Code
HF.EA.8677 without extraction air monitoring	light grey, RAL 7035	14218
HF.EA.11570 without extraction air monitoring, for installation on a wall	light grey, RAL 7035	17178

## Extraction units



**Extraction unit  
Model HFEA.11442**  
with extraction air monitoring

**Extraction units according to RL 94/9/EG (ATEX) and RL 2006/95/EG (low voltage directive) Marking: CE II 3 G T4**

**Extraction units suitable for up to 120 times air change inside the cabinet**  
**Safe and approved technical ventilation of safety storage cabinets**

- **Very low noise, ideal for direct installation at the workplace**
- Housing made of sheet-steel, plastic laminated RAL 7035 light grey
- Complete with power cord
- Connection piece  $\varnothing$  75 mm
- Dimensions W x D x H (mm): approx. 200 x 400 x 200
- Weight: approx. 7 kg

### Extraction air monitoring system

- Monitoring with integrated pressure leak detector
- The green LED turns off in case of failure and the red LED lights up

### Voltage free switch contact

- Additionally available for units with extraction air monitoring

### Model HFEA.15575

- **For installation on a wall**
- Incl. installation consoles, flexible hose, hose clips and installation material
- other data see model HFEA.11442

### Suitable for the following cabinets:

#### Safety Storage Cabinets

p. 6 - 49

#### Cabinets for acids and alkalis

p. 70 - 73

#### Cabinets for chemicals

p. 74 - 75

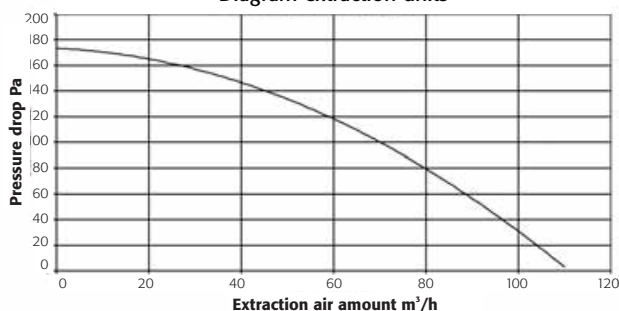
#### Gas Cylinder Cabinets (with restrictions)

p. 86 - 89



**Extraction unit Model HFEA.15575**  
with extraction air monitoring for installation on a wall

**Diagram extraction units**



Voltage free switch contact

### Technical data

Motor rating	kw	0,07
Nominal voltage	V	230
Frequency	Hz	50
Current input	A	0,3
Noise level	dB (A)	35
Revolutions	rpm	2450

## Extraction units

Model	Material, colour	Order Code
<b>HFEA.11442</b> with extraction air monitoring	light grey, RAL 7035	<b>14220</b>
<b>HFEA.15575</b> with extraction air monitoring, for installation on a wall	light grey, RAL 7035	<b>17177</b>
<b>HFEA.17447</b> with extraction air monitoring and voltage free switch contact	light grey, RAL 7035	<b>16454</b>
<b>HFEA.17448</b> with extraction air monitoring, for installation on a wall and voltage free switch contact	light grey, RAL 7035	<b>18568</b>

## Radial ventilators



Model EH.VE.5793

### Technical data EH.VE.5793

Circuit and connection version		Standard	Version II	Version III
Mode of operation/circuit		1 x 230V (with condensator)	3 x 230V Δ	3 x 400V Y
Motor rating	kw	0,09	0,09	0,09
Nominal voltage	V	230	230	400
Frequency	Hz	50	50	50
Power consumption	A	0,95	0,95	0,36
Cos 4		0,8	0,8	0,8
Noise level	dB (A)	45	45	45
Revolutions	rpm	2850	2850	2850

### Radial ventilators for a safe and approved technical ventilation of safety storage cabinets

- Housing and impeller made of polypropylene
- Sealed against gas emission
- Connection piece ø 75 mm
- VDMA an CE conformal
- Protection class IP IP 55
- Air flow 0-250m<sup>3</sup>/h, total pressure 240-175 Pa
- Incl. PA/GFK console

### Radial ventilator

- Winding shield TK
- Dimensions (W x D x H) mm: approx. 250 x 225 x 310
- Weight: approx. 3,5 kg

**Order Code 5793**

### Radial ventilator explosion proof

- Approved in accordance with RL94/9/EG-ATEX
- Ex EEx e II 2 G cIIB T3 X 04 ATEX D132
- Dimensions (W x D x H) mm: approx. 270 x 225 x 310.
- Weight: approx. 7 kg

**Order Code 5794**

**Due to the high noise level of the radial ventilators it is recommended to mount them only outside of the working environment**

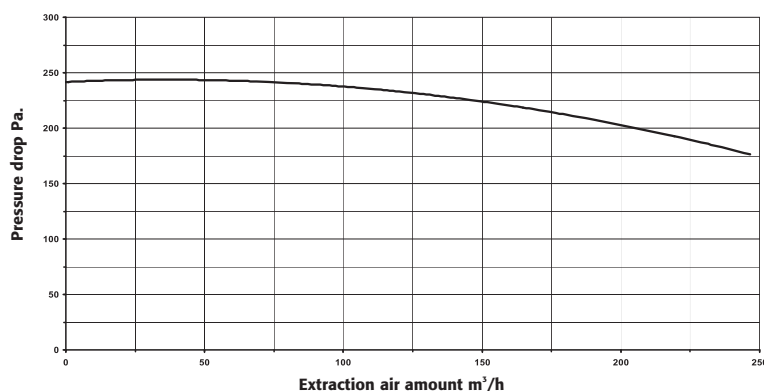


Model EH.VE.5794

### Technical data 5794

Circuit and connection version		Standard	Version II
Mode of operation/circuit		3 x 400V Y	3 x 230V Δ
Motor rating	kw	0,09	0,09
Nominal voltage	V	400	230
Frequency	Hz	50	50/60
Power consumption	A	0,33	0,58
Cos 4		0,8	0,8
Noise level	dB (A)	45	45
Revolutions	rpm	2850	2850

Diagramm for both ventilators





## Air exhaust and volume flow monitoring



Model APG.26.30-BL



Model APG.26.30-EL

### Safe and easy monitoring of air exhaust in safety storage cabinets

#### Air exhaust and volume flow monitoring

- Complete with connecting cable and connector
- Mounting between cabinet and on-site air exhaust-system
- Connection piece NW 75
- Measures W x D x H (mm): 200 x 400 x 275
- Suitable on safety cabinets
- ATEX conform: CE II 3 G T4

#### Modell Basic-Line

- Electro-pneumatic air exhaust monitoring
- Minimum volume flow 30 m<sup>3</sup>/h

#### Modell Comfort-Line

- Electronic volume flow monitoring
- Minimum volume flow 20 m<sup>3</sup>/h

#### Modell High-Line

- Electronic volume flow monitoring
- Minimum volume flow 20 m<sup>3</sup>/h
- Potential-free alarm contact
- Localisation of cabinet's or on-site dysfunction

#### Modell Exclusive-Line

- Electronic volume flow monitoring
- Minimum volume flow 20 m<sup>3</sup>/h
- Potential-free alarm contact
- Localisation of cabinet's or on-site dysfunction
- Digital display of the exact volume flow and acoustic alarm in case of a malfunction

Technical data	APG.26.30-BL	APG.26.30-CL	APG.26.30-HL	APG.26.30-EL
Nominal voltage (V)	230	230	230	230
Frequency (Hz)	50	50	50	50
Current input (A)	0,11	0,15	0,15	0,15
Noise level dB (A)	< 28	< 28	< 28	< 28
Extraction air amount (m <sup>3</sup> /h)	30	20	20	20
Pressure drop (Pa)	20	5	5	5

### Air exhaust and volume flow monitoring

Model	Material, colour	Order Code
APG.26.30-BL	light grey, RAL 7035	14945
APG.26.30-CL	light grey, RAL 7035	14372
APG.26.30-HL	light grey, RAL 7035	14371
APG.26.30-EL	light grey, RAL 7035	14352

## Suction hoods

### Suction hoods

**Safe working with open containers or other sources of harmful substances/vapours**

- **Ventilation testing of the air equipment in accordance with EN 14175-3 (5.4.4)**
- The prescribed specified workplace limit values are maintained
- Optimum for assembly on an existing workplace
- Made of chemically resistant, anodised aluminium profiles
- Fracture-resistant acrylic glass, 5 mm
- Mounting on an on-site air exhaust system
- Connecting pieces (DN 160) in the ceiling for connection to the on-site exhaust air system
- The air speed should be  $\geq 0,5$  m/s



Model ASE.90.9.6



Model ASE.50.6.4

#### Technical data

Extraction air connection  $\varnothing$  (mm)  
Recom. extraction air amount, (m<sup>3</sup>/h)  
Pressure drop (Pa)

#### ASE.50.6.4

160  
250  
45

#### ASE.50.9.4

160  
300  
64

#### ASE.90.9.6

160  
360  
93

#### ASE.90.12.6

160  
540  
208

### Suction hoods

Model	Material, colour	W x D x H (mm)	Order Code
ASE.50.6.4	light grey, RAL 7035	600 x 400 x 500	16553
ASE.50.9.4	light grey, RAL 7035	900 x 400 x 500	16554
ASE.90.9.6	light grey, RAL 7035	900 x 600 x 900	16555
ASE.90.12.6	light grey, RAL 7035	1200 x 600 x 900	16556

## Hazardous material workplaces

### APA.145.90 and APA.145.75



**Model APA.145.90**  
with optional media supply (gas, water, drain)

**Hazardous material workplace (pharmaceutical exhausts) according to DIN 12924 Part 4 for safe chemical handling, protection from hazardous fumes and potentially explosive atmospheres. Special exhausts for the requirements of pharmacies.**

#### Design

- Made of highly chemically resistant, antibacterial, plastic-coated high-grade steel plate
- Easily mounted on a table top
- Acrylic glass sliding windows with continuously adjustable height
- Integrated workplace lighting
- Robust polypropylene worktop
- Monitoring electronics as standard
- Incl. 2 earthed sockets (230 V/50 Hz)

#### Ventilation

- Air equipment tested by a recognised institute
- Integrated exhaust ventilator
- A connection nozzle in the roof area

#### Technical data

- min. loading capacity of the working table: 100 kg/m<sup>2</sup>
- Dimensions W x D x H (mm):

#### APA.145.75

Externally approx. 750 x 600 x 1450  
Internally approx. 740 x 440 x 930  
Weight: approx. 55 kg

#### APA.145.90

Externally approx. 900 x 600 x 1450  
Internally approx. 890 x 440 x 930  
Weight: approx. 65 kg

#### Wide range of accessories

- Support frame for standing work
- Media supplies



#### Extraction air connection, both models

Extraction air inlet NW	mm	100
Recommended exhaust air flow		
Standard setting at delivery	m <sup>3</sup> /h	250
Pressure loss through ducts	Pa	max. 190
Noise level	dB (A)	53
Waste water connection	Inches	1,5
Media connections	mm	12

### Hazardous material workplaces

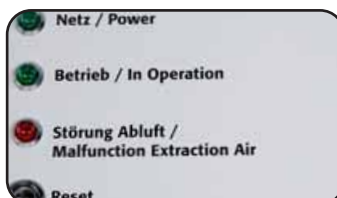
Model	Material, colour	W x D x H (mm)	Order Code
APA.145.90	light grey, RAL 7035	900 x 600 x 1450	20001
APA.145.75	light grey, RAL 7035	750 x 600 x 1450	20000
<b>Accessories for both models</b>			
Media supply	drinking water, cold, drain		1565
Media supply	natural gas		8237
Media supply	natural gas, drinking water, cold, drain		1245
Support frame for APA.145.90			8264
Support frame for APA.145.75			9500

## Hazardous material workplaces

### extraction of hazardous substances

*Thanks to a sophisticated ventilation technology, asecos hazardous material workplaces provide optimum capture of the hazardous vapours and gases that are released. Working with hazardous substances - convenient and safe!*

#### Exhaust air monitoring



#### Anti-glare lighting



#### Transparent side panes



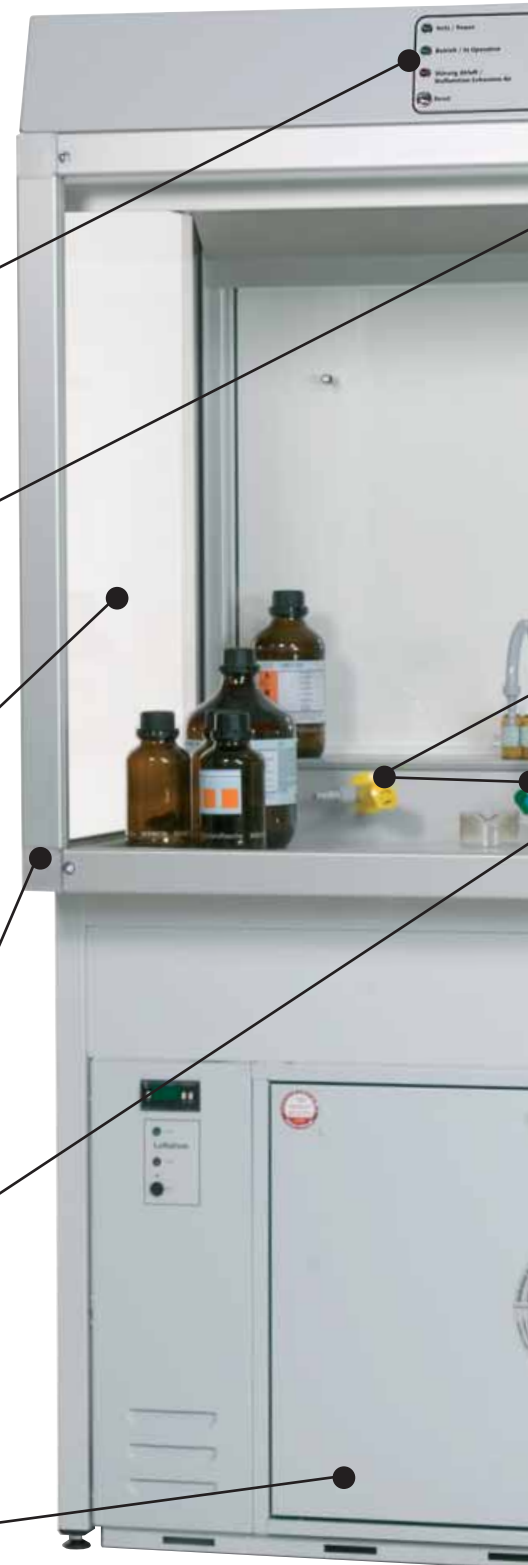
#### Aluminium tubular frame design



#### Power sockets with earthing contact



Can also be combined with a variety of underbench cabinets for storing inflammable liquids, acids, alkalis etc.





## Hazardous material workplaces



Rear wall



Medium duct

Working surfaces



Support frames



**NOW AVAILABLE!**

**Update 7.1** - PDF Version  
*The full range of the new  
 asecos hazardous material  
 workplaces.*

- all models, all sizes
- equipment variations
- helpful background information
- pharmaceutical and weighing workplaces
- ventilation equipment

and much more....



## Hazardous material workplaces Basic Line



Model GAP.95.9.6 Basic Line (Support frame not included)

**Hazardous material workplace with fresh air curtain**  
**Safe chemical handling**  
**Specified workplace limit values are maintained**  
**Maximum user safety**

### Design

- Made of chemically resistant, anodised aluminium profiles
- Glazed at the side (fracture-resistant acrylic glass)
- Integrated, workplace lighting mounted to avoid glare
- Monitoring electronics as standard
- 5 m of mains cable ready to plug in
- Modular design, can be extended in 300 mm steps (up to widths of 5400 mm by request)

### Ventilation

- Highly effective pollutant capture through special, internally mounted fresh air curtain equipment
- Adjustable air curtain power
- Chemically resistant exhaust air ducts
- Connecting pieces (DN160) in the ceiling region for connecting to the customer's exhaust air plant
- **Ventilation performance certified according to EN 14175-3 (5.4.4)**

### Technical data

- Dimensions W x D x H (mm):  
Externally approx.  
900/1200/1800 x 600 x 1100,  
Internally approx.  
865/855/1765 x 500 x 855
- Work surface dimensions W x D (mm):  
approx. 795/1095/1695 x 470  
(depending on model width)
- Weight: from approx. 70-130 kg  
(depending on model width)



### Extraction air connection

#### Model width

	mm	900	1200	1800
Extraction air inlet NW	mm	160	160	2 x 160
Recommended exhaust air flow	m³/h	300	310	575
approx. pressure loss	Pa	25	32	2 x 46

### Hazardous material workplaces

Model	Material, color	W x D x H (mm)	Order No.
GAP.95.9.6 Basic Line	light grey, RAL 7035	900 x 600 x 1100	20350
GAP.95.12.6 Basic Line	light grey, RAL 7035	1200 x 600 x 1100	20344
GAP.95.18.6 Basic Line	light grey, RAL 7035	1800 x 600 x 1100	20348
Electrical supply (all models) double earthed socket IP 54 without medium duct			17018

## Hazardous material workplaces Basic Line



**Model GAP.125.9.7 Basic Line** (stainless steel workbench not included)

**Hazardous material workplace with fresh air curtain**  
**Safe chemical handling**  
**Specified workplace limit values are maintained**  
**Maximum user safety**

### Design

- Made of chemically resistant, anodised aluminium profiles
- Glazed at the side (fracture-resistant acrylic glass)
- Integrated, workplace lighting mounted to avoid glare
- Monitoring electronics as standard
- 5 m of mains cable ready to plug in
- Modular design, can be extended in 300 mm steps (up to widths of 5400 mm by request)

### Ventilation

- Highly effective pollutant capture through special, internally mounted fresh air curtain equipment
- Adjustable air curtain power
- Chemically resistant exhaust air ducts
- Connecting pieces (DN160) in the ceiling region for connecting to the customer's exhaust air plant
- **Ventilation performance certified according to EN 14175-3 (5.4.4)**

### Technical data

- Dimensions W x D x H (mm):  
Externally approx.  
900/1200/1800 x 750 x 1400,  
Internally approx.  
865/1165/1765 x 650 x 1155
- Work surface dimensions W x D (mm):  
approx. 795/1095/1695 x 620  
(depending on model width)
- Weight: from approx. 70-130 kg  
(depending on model width)



### Extraction air connection

#### Model width

	mm	900	1200	1800
Extraction air inlet NW	mm	160	160	2 x 160
Recommended exhaust air flow	m <sup>3</sup> /h	380	440	800
approx. pressure loss	Pa	34	49	2 x 60

### Hazardous material workplaces

Model	Material, colour	W x D x H (mm)	Order Code
<b>GAP.125.9.7 Basic Line</b>	light grey, RAL 7035	900 x 750 x 1400	<b>20316</b>
<b>GAP.125.12.7 Basic Line</b>	light grey, RAL 7035	1200 x 750 x 1400	<b>20309</b>
<b>GAP.125.18.7 Basic Line</b>	light grey, RAL 7035	1800 x 750 x 1400	<b>20313</b>
<b>Electrical supply (all models)</b> double earthed socket IP 54 without medium duct			<b>17018</b>

## Hazardous material workplaces High Line



**Model GAP.95.12.6-V High Line**

(Underbench cabinets, support frame and facing panel not included, optionally available by request)

### Extraction air connection

#### Model width

	mm	900	1200	1800
Extraction air inlet NW	mm	160	160	2 x 160
Recommended exhaust air flow	m <sup>3</sup> /h	300	310	575
approx. pressure loss	Pa	25	32	2 x 46

**Hazardous material workplace with fresh air curtain**  
**Safe chemical handling**  
**Specified workplace limit values are maintained**  
**Maximum user safety**

### Design

- Made of chemically resistant, anodised aluminium profiles
- Glazed at the side (fracture-resistant acrylic glass)
- Integrated, workplace lighting mounted to avoid glare
- Monitoring electronics as standard
- 5 m of mains cable ready to plug in
- Modular design, can be extended in 300 mm steps (up to widths of 5400 mm by request)

### Ventilation

- Highly effective pollutant capture through special, internally mounted fresh air curtain equipment
- Adjustable air curtain power
- Chemically resistant exhaust air ducts
- Connecting pieces (DN160) in the ceiling region for connecting to the customer's exhaust air plant
- **Ventilation performance certified according to EN 14175-3 (5.4.4)**

### Technical data

- Dimensions W x D x H (mm):  
Externally approx.  
900/1200/1800 x 600 x 1100,  
Internally approx.  
865/855/1765 x 500 x 855
- Work surface dimensions W x D (mm):  
approx. 795/1095/1695 x 470  
(depending on model width)
- Weight: from approx. 70-130 kg  
(depending on model width)



### Hazardous material workplaces

Model	Working surface, material	W x D x H (mm)	Order Code
<b>GAP.95.9.6-M High Line</b> , incl. 2 sockets	melamine resin coated	900 x 600 x 1100	<b>upon request</b>
<b>GAP.95.9.6-V High Line</b> , incl. 2 sockets	Stainless steel 1.4301	900 x 600 x 1100	<b>12670</b>
<b>GAP.95.9.6-K High Line</b> , incl. 2 sockets	Technical ceramic	900 x 600 x 1100	<b>upon request</b>
<b>GAP.95.12.6-M High Line</b> , incl. 2 sockets	melamine resin coated	1200 x 600 x 1100	<b>upon request</b>
<b>GAP.95.12.6-V High Line</b> , incl. 2 sockets	Stainless steel 1.4301	1200 x 600 x 1100	<b>12671</b>
<b>GAP.95.12.6-K High Line</b> , incl. 2 sockets	Technical ceramic	1200 x 600 x 1100	<b>upon request</b>
<b>GAP.95.18.6-M High Line</b> , incl. 4 sockets	melamine resin coated	1800 x 600 x 1100	<b>upon request</b>
<b>GAP.95.18.6-V High Line</b> , incl. 4 sockets	Stainless steel 1.4301	1800 x 600 x 1100	<b>12689</b>
<b>GAP.95.18.6-K High Line</b> , incl. 4 sockets	Technical ceramic	1800 x 600 x 1100	<b>upon request</b>
<b>Water supply, cold (all models).</b>			<b>15984</b>
<b>Natural gas supply (all models)</b> Connection to the gas mains by hose nozzle			<b>15985</b>



## Hazardous material workplaces High Line



**Model GAP.125.12.7-V High Line**

(Underbench cabinets, support frame and facing panel not included, optionally available by request)

### Extraction air connection

#### Model width

	mm	900	1200	1800
Extraction air inlet NW	mm	160	160	2 x 160
Recommended exhaust air flow	m <sup>3</sup> /h	380	440	800
approx. pressure loss	Pa	34	49	2 x 60



**Hazardous material workplace with fresh air curtain**  
**Safe chemical handling**  
**Specified workplace limit values are maintained**  
**Maximum user safety**

### Design

- Made of chemically resistant, anodised aluminium profiles
- Glazed at the side (fracture-resistant acrylic glass)
- Integrated, workplace lighting mounted to avoid glare
- Monitoring electronics as standard
- 5 m of mains cable ready to plug in
- Modular design, can be extended in 300 mm steps (up to widths of 5400 mm by request)

### Ventilation

- Highly effective pollutant capture through special, internally mounted fresh air curtain equipment
- Adjustable air curtain power
- Chemically resistant exhaust air ducts
- Connecting pieces (DN160) in the ceiling region for connecting to the customer's exhaust air plant
- **Ventilation performance certified according to EN 14175-3 (5.4.4)**

### Technical data

- Dimensions W x D x H (mm):  
Externally approx.  
900/1200/1800 x 750 x 1400,  
Internally approx.  
865/1165/1765 x 650 x 1155
- Work surface dimensions W x D (mm):  
approx. 795/1095/1695 x 620  
(depending on model width)
- Weight: from approx. 70-130 kg  
(depending on model width)

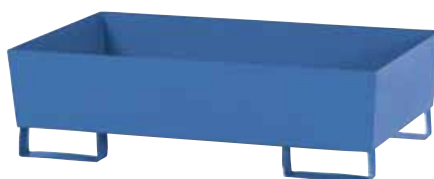
### Hazardous material workplaces

Model	Working surface, material	W x D x H (mm)	Order Code
<b>GAP.125.9.7-M High Line</b> , incl. 2 sockets	melamine resin coated	900 x 750 x 1400	<b>21548</b>
<b>GAP.125.9.7-V High Line</b> , incl. 2 sockets	Stainless steel 1.4301	900 x 750 x 1400	<b>21549</b>
<b>GAP.125.9.7-K High Line</b> , incl. 2 sockets	Technical ceramic	900 x 750 x 1400	<b>21550</b>
<b>GAP.125.12.7-M High Line</b> , incl. 2 sockets	melamine resin coated	1200 x 750 x 1400	<b>21551</b>
<b>GAP.125.12.7-V High Line</b> , incl. 2 sockets	Stainless steel 1.4301	1200 x 750 x 1400	<b>21552</b>
<b>GAP.125.12.7-K High Line</b> , incl. 2 sockets	Technical ceramic	1200 x 750 x 1400	<b>21553</b>
<b>GAP.125.18.7-M High Line</b> , incl. 4 sockets	melamine resin coated	1800 x 750 x 1400	<b>21554</b>
<b>GAP.125.18.7-V High Line</b> , incl. 4 sockets	Stainless steel 1.4301	1800 x 750 x 1400	<b>21555</b>
<b>GAP.125.18.7-K High Line</b> , incl. 4 sockets	Technical ceramic	1800 x 750 x 1400	<b>21556</b>
<b>Water supply, cold (all models).</b>			<b>15984</b>
<b>Natural gas supply (all models)</b> Connection to the gas mains by hose nozzle			<b>15985</b>

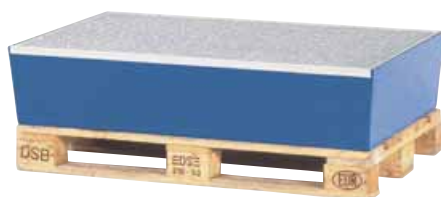
## Pallets and sumps-Steel



Pallet Model W.Z.2513



Pallet Model W.L.2508



Sump Model W.L.2504



Sump Model W.L.2500



Drum mounts for 1 drum  
Model W.Z.2560



Drum mounts for 2 drums  
Model W.Z.2561



Drum mounts for 2 drums  
Model W.Z.2562

### Safe and approved for the storage of pollutants and flammable liquids

- Meets all the requirements of current environmental regulations
- Suitable for storing two drums each holding 205 litres
- The sumps are available in painted or hot dip galvanized versions
- Drum mounts enable horizontal storage (see below)
- Fitted with forklift truck pockets for ease of transportation (pallets)

### Capacity with grid:

2 drums of 205 litres

### Capacity without grid:

1 drum of 205 litres + small containers

Maximum load: 850 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Pallet** (Models W.L.2508, W.Z.2509, W.L.2512, W.Z.2513)

Dimensions W x D x H (mm):  
approx. 1236 x 816 x 345

Weight: approx. 74 kg (with grid)

Weight: approx. 55 kg (without grid)

**Sump** (Models W.L.2500, W.Z.2501, W.L.2504, W.Z.2505)

Dimensions W x D x H (mm):  
approx. 1236 x 816 x 255

Weight: approx. 72 kg (with grid)

Weight: approx. 51 kg (without grid)

### Drum mounts

- To put on the grid of the sump
- Robust, galvanized construction
- Safe and easy dispensing

**Cap. for 1 drum** of 60 ltr. or 205 ltr.

Dimensions W x D x H (mm):  
approx. 600 x 600 x 380

**Cap. for 2 drums** of 50/60 ltr. or 205 ltr.

Dimensions W x D x H (mm):  
approx. 1180 x 600 x 380

**Cap. for 3 drums** of 50/60 ltr.

Dimensions W x D x H (mm):  
approx. 1180 x 600 x 380

### Pallets, sumps and drum mounts

Model	Material, colour	Grid	Order Code
Pallet, W.L.2512	painted, RAL 5010	galvanized	<b>2512</b>
Pallet, W.Z.2513	galvanized	galvanized	<b>2513</b>
Pallet, W.L.2508	painted, RAL 5010	-	<b>2508</b>
Pallet, W.Z.2509	galvanized	-	<b>2509</b>
Sump, W.L.2504	painted, RAL 5010	galvanized	<b>2504</b>
Sump, W.Z.2505	galvanized	galvanized	<b>2505</b>
Sump, W.L.2500	painted, RAL 5010	-	<b>2500</b>
Sump, W.Z.2501	galvanized	-	<b>2501</b>
Drum mounts, W.Z.2560	galvanized		<b>2560</b>
Drum mounts, W.Z.2561	galvanized		<b>2561</b>
Drum mounts, W.Z.2562	galvanized		<b>2562</b>

## Pallets and sumps-Steel



Pallet Model W.L.2514



Pallet Model W.L.2510



Pallet Model P.L.2516



Pallet Model P.L.2520



Polyethylene Drum Rest Model H.12124

### Safe and approved for the storage of pollutants and flammable liquids

- Meets all the requirements of current environmental regulations
- Suitable for storing four drums each holding 205 litres
- The sumps are available in painted or hot dip galvanized versions
- Fitted with forklift truck pockets for ease of transportation
- Drum mounts enable horizontal storage

### Capacity with grid:

4 drums of 205 litres (W.L.2510, W.L.2514, W.Z.2511, W.Z.2515, P.L.2520, P.L.2521)

1 drum of 205 litres (P.L.2516, P.Z.2517)

**Capacity without grid:** 1 drum of 205 litres and small containers

Maximum load: 850 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Pallet** (Models W.L.2510, W.L.2511, W.L.2514, W.L.2515)

Dimensions W x D x H (mm):

approx. 1236 x 1210 x 280

Weight: approx. 93 kg (with grid)

Weight: approx. 61 kg (without grid)

**Pallet** (Models P.L.2520, P.L.2521)

Dimensions W x D x H (mm):

approx. 2470 x 816 x 250

Weight: approx. 150 kg

**Pallet** (Models P.L.2516, P.L.2517, W.9844, W.9845)

Dimensions W x D x H (mm):

approx. 840 x 820 x 480

Weight: approx. 63 kg (with grid)

Weight: approx. 50 kg (without grid)

### Polyethylene Drum Rest

- Enables steel and plastic drums to be placed at an angle to facilitate final emptying of the drum

### Pallets, sumps and drum rest

Model	Material, colour	Grid	Order Code
Pallet, W.L.2514	painted, RAL 5010	galvanized	<b>2514</b>
Pallet, W.Z.2515	galvanized	galvanized	<b>2515</b>
Pallet, W.L.2510	painted, RAL 5010	-	<b>2510</b>
Pallet, W.Z.2511	galvanized	-	<b>2511</b>
Pallet, P.L.2516	painted, RAL 5010	galvanized	<b>2516</b>
Pallet, P.Z.2517	galvanized	galvanized	<b>2517</b>
Pallet, W.9844	painted, RAL 5010	-	<b>9844</b>
Pallet, W.9843	galvanized	-	<b>9843</b>
Pallet, P.L.2520	painted, RAL 5010	galvanized	<b>2520</b>
Pallet, P.L.2521	galvanized	galvanized	<b>2521</b>
Drum rest, H.12124			<b>12124</b>

## Sumps-Polyethylene System 2000



**Sump system-W Model W.K.7715 with W.9875**



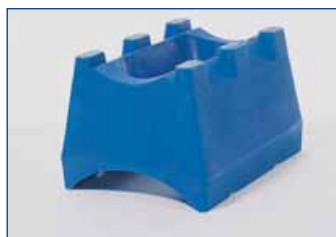
**Sump system-W Model W.K.7714**



**Sump system-K Model W.K.7725**



**Sump system-K Model W.K.7723**



**Reversible drum mount Model W.9875**  
Position for a drum of 60 ltr.



**Reversible drum mount Model W.9875**  
Position for a drum of 205 ltr.

**Safe and approved for the storage of pollutants, acids and alkalis**

- **Not suitable for the storage of flammable liquids!**
- High resistance against acids, alkalis, oil and other aggressive hazardous materials
- Lightweight, easy handling
- PE drum mount enables horizontal storage (see below)

**Capacity with grid:**

2 drums of 205 litres

**Capacity without grid:**

1 drum of 205 litres + small containers

**Sump System 2000-W for direct placing onto the ground or on a wooden pallet**

Dimensions W x D x H (mm):

approx. 1230 x 830 x 320

Maximum load: 500 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Sump System 2000-K with pallet base for transit within the factory by means of a fork-lift truck.**

**Suitable for storage racking.**

Dimensions W x D x H (mm):

approx. 1230 x 830 x 415

Maximum load: 500 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Reversible drum mount for 1 drum of 60 litres or 205 litres**

- Made for both sizes of drum by simply rotating the mount 180°
- Dimensions W x D x H (mm): approx. 475 x 620 x 390

### Sump systems and reversible drum mount

Model	Material, colour	Grid	Weight	Order Code
<b>Sump system-W, W.K.7714</b>	Polyethylene, black	-	approx. 21 kg	<b>7714</b>
<b>Sump system-W, W.K.7715</b>	Polyethylene, black	Polyethylene	approx. 45 kg	<b>7715</b>
<b>Sump system-W, W.K.7716</b>	Polyethylene, black	galvanized	approx. 37 kg	<b>7716</b>
<b>Sump system-K, W.K.7723</b>	Polyethylene, black	-	approx. 25 kg	<b>7723</b>
<b>Sump system-K, W.K.7724</b>	Polyethylene, black	Polyethylene	approx. 49 kg	<b>7724</b>
<b>Sump system-K, W.K.7725</b>	Polyethylene, black	galvanized	approx. 40 kg	<b>7725</b>
<b>Reversible drum mount, W.9875</b>	Polyethylene, black			<b>9875</b>



## Pallets and sumps-Polyethylene System 2000



Sump system-F Model W.K.7712



Sump system-F Model W.K.7711



Sump system-FS Model W.K.7722 with W.9875



Sump system-FS Model W.K.7720



Polyethylene Drum Rest Model H.12124

Safe and approved for the storage of pollutants, acids and alkalis

- Not suitable for the storage of flammable liquids!
- High resistance against acids, alkalis, oil and other aggressive hazardous materials
- Lightweight, easy handling
- PE drum mount enables horizontal storage (see page 186)

**Capacity with grid:**

2 drums of 205 litres

**Capacity without grid:**

1 drum of 205 litres + small containers

**Sump System 2000-F with 4 feet for transit within the factory by means of a fork-lift truck**

Dimensions W x D x H (mm):

approx. 1230 x 830 x 415

Maximum load: 500 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Mobile sump System 2000-FS with two fixed and two swivel wheels with brakes and a handle. Suitable for indoor transportation work.**

Dimensions W x D x H (mm):

approx. 1230 x 830 x 1170

Maximum load: 500 kg/m<sup>2</sup> (when the load is evenly distributed across the storage area)

**Polyethylene Drum Rest**

- Enables steel and plastic drums to be placed at an angle to facilitate final emptying of the drum

### Sump systems and drum rest

Model	Material, colour	Grid	Weight	Order Code
Sump system-F, W.K.7711	Polyethylene, black	-	approx. 23 kg	<b>7711</b>
Sump system-F, W.K.7712	Polyethylene, black	Polyethylene	approx. 47 kg	<b>7712</b>
Sump system-F, W.K.7713	Polyethylene, black	galvanized	approx. 39 kg	<b>7713</b>
Sump system-FS, W.K.7720	Polyethylene, black	-	approx. 25 kg	<b>7720</b>
Sump system-FS, W.K.7721	Polyethylene, black	Polyethylene	approx. 48 kg	<b>7721</b>
Sump system-FS, W.K.7722	Polyethylene, black	galvanized	approx. 41 kg	<b>7722</b>
Drum rest, H.12124	Polyethylene, black			<b>12124</b>

## Pallets-Polyethylene



Pallet Model W.K.2598



Pallet Model W.K.2601



Pallet Model W.13053



Pallet Model W.13050

Safe and approved for the storage of pollutants, acids and alkalis

- Not suitable for the storage of flammable liquids!
- High resistance against acids, alkalis, oil and other aggressive hazardous materials
- Lightweight, easy handling

### Capacity with grid:

4 drums of 205 litres

### Capacity without grid:

9 carboys of 60 litres

Polyethylene pallet with integrated forklift truck pockets for safe and easy transit within the factory by means of a fork-lift truck.

Dimensions W x D x H (mm):  
 approx. 1200 x 1200 x 265 (W.K.2598 - W.K.2601), sump capacity: 225 ltr.  
 approx. 2395 x 815 x 285 (W.13048 - W.13050), sump capacity: 405 ltr.  
 approx. 2395 x 815 x 285 (W.13051 - W.13053), sump capacity: 405 ltr.  
 Maximum load: 1200 kg (when the load is evenly distributed across the storage area)

### Pallets

Model	Material, colour	Grid	Weight	Order Code
Pallet, W.K.2598	Polyethylene	-	approx. 21 kg	<b>2598</b>
Pallet, W.K.2601	Polyethylene	galvanized	approx. 40 kg	<b>2601</b>
Pallet, W.K.2602	Polyethylene	Polyethylene	approx. 41 kg	<b>2602</b>
Pallet, W.13048	Polyethylene	-	approx. 21 kg	<b>13048</b>
Pallet, W.13049	Polyethylene	galvanized	approx. 72 kg	<b>13049</b>
Pallet, W.13050	Polyethylene	Polyethylene	approx. 82 kg	<b>13050</b>
Pallet, W.13051	Polyethylene	-	approx. 25 kg	<b>13051</b>
Pallet, W.13052	Polyethylene	galvanized	approx. 76 kg	<b>13052</b>
Pallet, W.13053	Polyethylene	Polyethylene	approx. 86 kg	<b>13053</b>

## Sumps and pallets-Polyethylene



**Sump Model W.9854**



**Sump Model W.9853**



**Pallet Model W.11511**  
with feet



**Sump Model W.11514**  
with swivel castors and handle



**Sump Model W.11514**  
with swivel castors and handle

**Safe and approved for the storage of pollutants, acids and alkalis**

**- Not suitable for the storage of flammable liquids!**

- High resistance against acids, alkalis, oil and other aggressive hazardous materials
- Lightweight, easy handling

### Capacity with grid:

2 drums of 60 litres

### Capacity without grid:

1 drum of 60 litres + small containers

Sump capacity: 60 ltr.

Maximum load: 150 kg

Maximum load: 120 kg (11512 - 11514)

### Sump

Dimensions W x D x H (mm):  
approx. 714 x 514 x 235

### Pallet with feet

Dimensions W x D x H (mm):  
approx. 714 x 514 x 330

### Sump with swivel castors and handle

Dimensions W x D x H (mm):  
approx. 714 x 514 x 380  
(height without handle)

### Sumps and pallets

Model	Material, colour	Grid	Weight	Order Code
<b>Sump, W.9853</b>	Polyethylene	-	approx. 5 kg	<b>18447</b>
<b>Sump, W.9854</b>	Polyethylene	galvanized	approx. 12 kg	<b>18448</b>
<b>Sump, W.9855</b>	Polyethylene	Polyethylene	approx. 13 kg	<b>18449</b>
<b>Pallet, W.11509 with feet</b>	Polyethylene	-	approx. 10 kg	<b>18073</b>
<b>Pallet, W.11510 with feet</b>	Polyethylene	galvanized	approx. 16 kg	<b>18074</b>
<b>Pallet, W.11511 with feet</b>	Polyethylene	Polyethylene	approx. 17 kg	<b>18075</b>
<b>Sump, W.11512 with swivel castors and handle</b>	Polyethylene	-	approx. 15 kg	<b>18076</b>
<b>Sump, W.11513 with swivel castors and handle</b>	Polyethylene	galvanized	approx. 20 kg	<b>18077</b>
<b>Sump, W.11514 with swivel castors and handle</b>	Polyethylene	Polyethylene	approx. 22 kg	<b>18078</b>

## IBC stations-Polyethylene



Model W.15477



Model W.15479



Model W.15480



Model W.K.2684



Model W.K.8437



Dispensing tray Model W.9420

Safe and approved for the storage of pollutants, acids and alkalis

- Not suitable for the storage of flammable liquids!
- Completely manufactured from acid and alkali resistant polyethylene
- Large storage area in pallet shape made of polyethylene
- No steel parts have been built in to guarantee complete corrosion protection
- Low self-weight, easy handling
- Produced with forklift pockets allowing the station to be loaded onto a forklift truck

### IBC Station for storing one KTC/IBC

Sump capacity: 1100 ltr.  
Maximum load: 1600 kg (per storage area)

### IBC Station for storing two KTC/IBC

Dimensions W x D x H (mm):  
approx. 2260 x 1430 x 710  
Sump capacity: 1100 ltr.  
Maximum load: 1600 kg (per storage area)

### IBC Station for the storage of 1 IBC

Sump capacity: 1100 ltr  
Maximum load: 2000 kg (when the load is evenly distributed across the storage area)

### IBC Station for the storage of 2 IBCs

Sump capacity: 1100 ltr  
Maximum load: 2000 kg (when the load is evenly distributed across the storage area)

### Accessories

#### Dispensing tray

Protects the surrounding area of the station

### IBC stations

Model	Material, colour	Grid/Storage area	W x D x H (mm)	Order Code
W.15477	Polyethylene	Polyethylene	approx. 1430 x 1430 x 965	<b>15477</b>
W.15479	Polyethylene	-	approx. 2260 x 1430 x 710	<b>15479</b>
W.15480	Polyethylene	2 x Polyethylene	approx. 2260 x 1430 x 710	<b>15480</b>
W.K.2683	Polyethylene	galvanized	approx. 1760 x 1410 x 660	<b>2683</b>
W.K.2684	Polyethylene	Polyethylene	approx. 1760 x 1410 x 660	<b>2684</b>
W.K.8833	Polyethylene	Polyethylene	approx. 2480 x 1410 x 490	<b>8833</b>
W.K.8437	Polyethylene	galvanized	approx. 2480 x 1410 x 490	<b>8437</b>
Dispensing tray, W.9420	Polyethylene	-	approx. 400 x 500 x 420	<b>9420</b>



## IBC stations-Polyethylene



Model W.13054



Model W.13055



Extension tap Model W.9891

**Safe and approved for the storage of pollutants, acids and alkalis**

**- Not suitable for the storage of flammable liquids!**

- Completely manufactured from acid and alkali resistant polyethylene
- Storage platform acts as a safety measure to prevent the IBCs from slipping
- No steel parts have been built in to guarantee complete corrosion protection
- Low self-weight, easy handling
- Produced with forklift pockets allowing the station to be loaded onto a forklift truck

### IBC Station with platform

Platform dimensions W x D x H (mm):

1350 x 1150 x 760

Sump capacity: 1000 ltr

Maximum load: 2000 kg

### IBC Station with platform and integrated area for dispensing

Platform dimensions W x D x H (mm):

1350 x 1150 x 760

Sump capacity: 1100 ltr

Maximum load: 2000 kg

### Accessories

Extension tap

### IBC stations

Model	Material, colour	W x D x H (mm)	Order Code
W.13054	Polyethylene	approx. 1400 x 1600 x 755	<b>13054</b>
W.13055	Polyethylene	approx. 1400 x 1830 x 755	<b>13055</b>
Extension tap, W.9891	Polyethylene	60	<b>9891</b>

## asecos products - safety and environmental protection

Safe handling, approved storage and environmental protection: asecos offers a wide range of safety products. As a matter of course all products comply with current regulations and approval documentations.



### Sorbents - if something is spilled

- Safe absorbing of spilled hazards
- Can be used as a preventive measure for protection against soiling on the work desk
- 3 product groups:
  - Oil** - safe absorbing of oil, water repellent. Optimal for outdoor usage.
  - Universal** - safe absorbing of oil, cooling liquids, petrol and non-aggressive hazards
  - Special** - safe absorbing of aggressive hazards
- Large product range for all kinds of application
- Mobile versions as a trolley or a transport box



### Safety containers

- Safe storage of daily used flammable liquids in working areas
- Large product range for all kinds of application
- Containers either made of steel, polyethylene or stainless steel
- Safe storage, distribution, cleaning or disposal of flammable liquids



### Drum accessories

- Safe and easy filling or emptying of drums
- Large product range for all kinds of application
- Drum funnel either made of steel or polyethylene
- Self-closing taps
- Level indicator
- Drum wrench

## asecos products – Solutions for clean air in smokers' rooms and all kinds of interior rooms



**DESIGN LINE**



**ECONOMY LINE**



**INDIVIDUAL LINE**



**HORECA LINE**

### smokers' cabins - Highly efficient extraction and filtering

Behind the smoke & talk smokers' cabins is a clever system for capturing smoke: tobacco smoke is captured and evacuated like lightning through the finely perforated ceiling by the quiet but powerful exhaust air unit. A 5-step filter system reliably retains pollutants:

The larger particles are first retained by a pre-filter stage. Filter stages 2, 3, 4 and 5 retain the very small particles, and all the gases in the tobacco smoke. The filtered, clean air is finally returned to the installation room.

The working method of the smokers' cabins has been tested and certified according to the German requirements for the testing and certification of systems for the protection of non-smokers, GS-BGIA-M14, edition 11/ 2007. For you, that means: clean air, guaranteed free of smoke!

Experience Variety!



**AirOne Air Purifier**



**Air Purifier XXL**

### Air Purifier technology

Air purifiers by asecos have a five-stage filter system with coarse filter, fine filter, HEPA filter, active carbon and formaldehyde trap. Filter stages 1 to 3 extract all particulate pollutants from the air. Stage 4 filters all gaseous pollutants and odorous substances. Filter stage 5 eliminates finally harmful aldehydes.

The polluted air is purified by the five filter stages and returned slowly to the installation room as clean air.

Two air purifier series offer the optimum solution for every application.



## Safety - hot off the press:

### Experimental lectures by asecos

Thousands of people die in Europe every year through fires and explosions; hundreds of thousands are injured, some seriously.

These disasters are often caused through careless handling of combustible and explosive materials by the user. Another factor is the unexpected existence of ignition sources. The extent of the damage, only in Germany, amounts to more than 3 bn Euro\*.

We would like to increase your awareness, and that of your customers, to the threat of danger caused through incorrect storage of hazardous materials. Knowledge of the elementary relationships between combustible material, air and the



ignition source not only helps to prevent fires and explosions, but also provides a basis for protective measures.

\* (quoted from Infracerv GmbH & Co., Höchst KG, Germany)

## Bang, Boom, Explosions - There's much happening!

During our experimental lectures we demonstrate detonations, explosions and other chemical reactions - close enough for you to see, but at a safe distance. Suitable protective and preventive measures are also described.

### Three modules are available:

#### Module 1

Includes the visit of an asecos expert and the presentation of our movie "experimental lecture" at your premises. The movie shows captivating experiments and educate thoroughly about hidden dangers of inappropriate storage of hazardous material. On top of that our expert provides you with important background information about laws, Ordinance on Hazardous Substances', EN 14470-1, EN 14470-2 ...  
If desired a round of inspection can take place after the presentation and you will get an on-site advisory service.

**Length of time:** approx. 2 h  
**Costs:** on request

#### Module 2

Includes an **experimental lecture "Live"** at your premises with PowerPoint presentation and important background knowledge about laws, Ordinance on Hazardous Substances', EN 14470-1, EN 14470-2 as well as neutral training and instruction material.

**Length of time:** approx. 2 h  
**Costs:** on request

#### Module 3

Includes an **experimental lecture "Live"** at your premises with captivating tests and demonstrations. We will inform you of laws and regulations and the EN 14470-1 as well as EN 14470-2. The **asecos-lorry** shows our products close enough to feel and touch on the spot.  
The lecture is held with a PowerPoint presentation and asecos training and instruction material is included.

**Length of time:** 1 day  
**Costs:** on request





## Safety to feel and touch:

On tour with the asecos-lorry/trade shows all over Europe



### asecos lorry

How long does it take before the fully automatic cabinet **PHOENIX touchless** opens? How perfect does the one-hand opening at **PEGASUS** wing door cabinet work? The answer to these and many other questions you will receive in one of our asecos lorries. Both demonstration trucks are on tour throughout Europe to show customers asecos products on the spot - close enough to feel and touch.

Product stocks in the vehicles are brought up to date continuously and therefore give an economic/reasonable change to teach your staff and be up-to-date technically.

Of course you can book our show-trucks for your own events, too.

Just contact us.



### Fairs

If you wish to see asecos products "live" you are most welcome to visit our booths at trade shows.

Being the European market leader, we are present at all important fairs in Europe. Come and see our product highlights.

You can find all dates on our homepage at [www.asecos.com](http://www.asecos.com).

We are looking forward to welcome in the near future.



## Latest developments in safety:

### asecos print service

Apart from our catalogue, we provide information for specialist suppliers and final customers through our brochures describing current activities.

The asecos print service serves as a sales aid and also helps in decision making, as well as providing you with the latest information on regulations for the storage of hazardous materials.



## Safety in Internet

### Discover asecos online

If you want to find information quickly, in a simple way and at anytime, we recommend you to visit one of the asecos homepages:

At **www.asecos.com** you will find an extensive overview of all asecos products, and you can broaden your knowledge on hazardous material. At "hazardous material" you can find terms and definitions concerning hazardous material described in a plain and clear manner.

An entirely new product line of asecos is "smoke&talk", the lobby for smokers and non-smokers.

At **www.smokeandtalk.com** you will find out more about how this innovative product brings together smokers and non-smokers. Be curious about it...

You will see that a visit is worth while. And of course you can contact us via internet to ask all kinds of questions concerning safe storage of hazardous material or ask for our latest publications.





## asecos – Setting Standards for Safety

The name asecos stands for security and ecology – for safety and environmental protection in handling hazardous materials. Multifunctional practical solutions ensure safety for users through storage of combustible and water-polluting materials in accordance with legal requirements.

Since its establishment in 1994 asecos has had significant influence on the way hazardous materials are stored. Our special field is the development, construction and manufacturing of safety storage cabinets. The introduction of Type 90 technology by asecos has given rise to a considerable innovative boost. Thanks to this the company is now regarded as the leading manufacturer of safety storage cabinets in Europe.

All fire rated cabinets are "Made in Germany".

Production is carried out in the parent company in Gründau, Germany and the products are delivered from here to all over the world. asecos have local presence in the UK, Netherlands, France, Spain and Italy through own subsidiaries. In many other countries we are represented by authorised distributors.

Speed, involvement, know-how and innovative ideas are qualities highly regarded by asecos' customers which form a solid basis for success. You can also profit from this, since deciding on asecos products will guarantee optimum storage of hazardous materials and the highest standards in safety, now and in the future.



### asecos in Europe:

- asecos subsidiaries
- sales partner





## Your partner for safety and environmental protection :

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