

SUPREME line plus und ECO line plus  
Safety cabinets in modern design



**Type G90**  
**Type G30**

Safe storage of  
pressurised gas cylinders

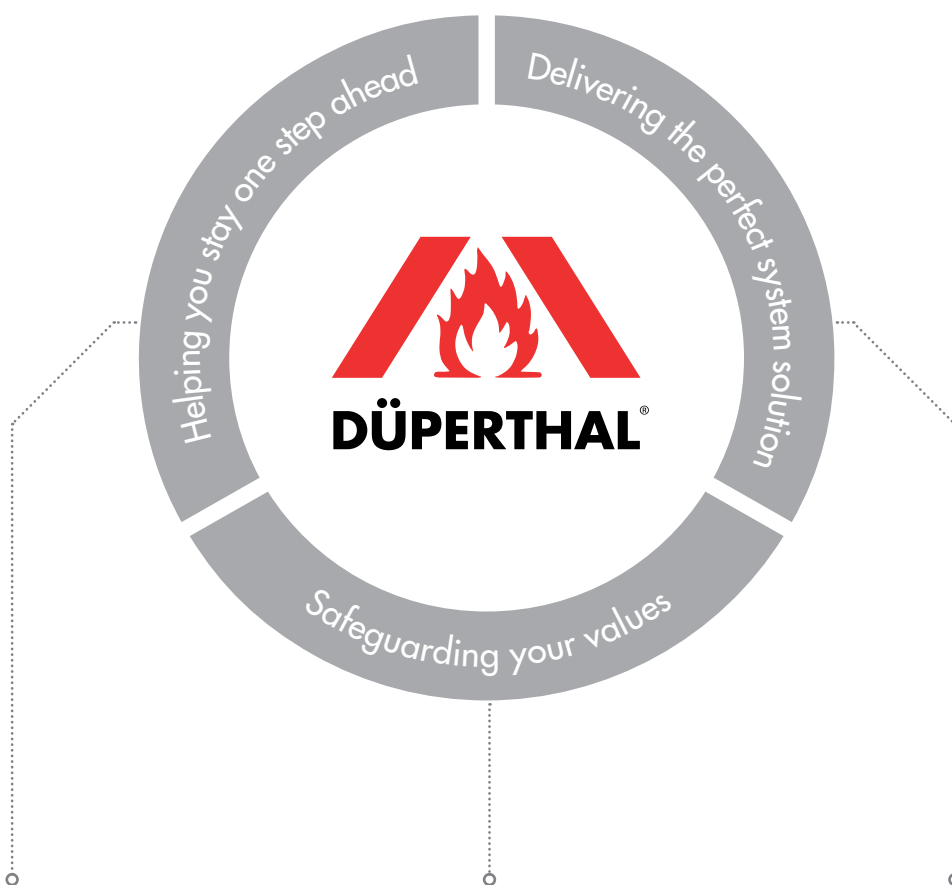
DÜPERTHAL – constant reassurance





# Welcome to DÜPERTHAL

As a leading German quality and technology enterprise, we set the standards when it comes to designing system solutions for the process-optimised storage of chemicals and hazardous materials. All of our products and solutions are tailored specifically to meet your requirements. In addition to maximum safety, they offer the highest levels of effectiveness and efficiency – also in situations where there is no risk of fire. We are therefore providing you with constant reassurance. This is what we, as a family-run company, stand for. The original is what we stand for.



## Always a step ahead

You get a strong and active partner with us. Our aim is to always stay one step ahead. All of our products exceed the prescribed standards. The same applies to our work with you. We provide honest analyses and openly discuss challenges and propose improvements, helping you to always identify the ideal solution.

## Safeguarding your values

For more than 40 years, we have been the industry standard as Europe's first manufacturer of safety storage cabinets. We have proven our technical and business management competency with successful projects world wide. And we always want to improve. We are continually enhancing our safety solutions - so that you can protect your values with us in the future.

## Delivering the perfect system solution

DÜPERTHAL is the only supplier with whom not only the high-quality, standard products are TÜV certified, but also your individually tailored system solutions. There is no need for on-site acceptance. Whether consultation, components, installation, or maintenance - we want to always offer you the best possible value. In product safety and from a business management perspective.



# Constant development for your safety

We don't rest on our good reputation. Because we are aware that your work is constantly becoming more complex. That's why your demands on our safety solutions are increasing. In order to meet these requirements, we are continuously pushing ahead with further developing our products. We invest time, money, passion and above all one thing: commitment.

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### Did you know that ...

- » the name DÜPERTHAL stands for full service?
- » DÜPERTHAL markets more than just products?
- » the internet-enabled Cabi2Net brings smart technologies into the workplace?
- » the system solutions from DÜPERTHAL are more than just cabinets?
- » you profit economically and technologically from the wide range of solutions

You can find detailed answers to these questions and further useful information on the following pages - compact, practical, and forward-looking!





# A ground-breaking innovation

## Cabi2Net

Simple, safe, effective – the Cabi2Net from DÜPERTHAL is revolutionising the central control of work processes. With every internet-enabled end device, Cabi2Net offers you a virtual look into your safety storage cabinet and information, example about fill: fill levels, ventilation functionali , and provides warning notices.

Cabi2Net can be easily scaled, expandable as necessary through additional modules and can even be integrated into general building automation.



### HARDWARE

- Internet capable system
- Processes sensor signals (fill level, pressure flow rate, and more)
- Controls signal lights, warnings, valves and more



### SOFTWARE

- All cabinets can be activated separately
- Digital real-time protocol
- Operate with keyboard, mouse or touch screen



### NEW FUNCTIONS

- One interface, everything under control
- Planning of resource-conserving container exchanges
- Remote access to important data and information



» FIND OUT MORE  
IN PRODUCT SECTION 6.



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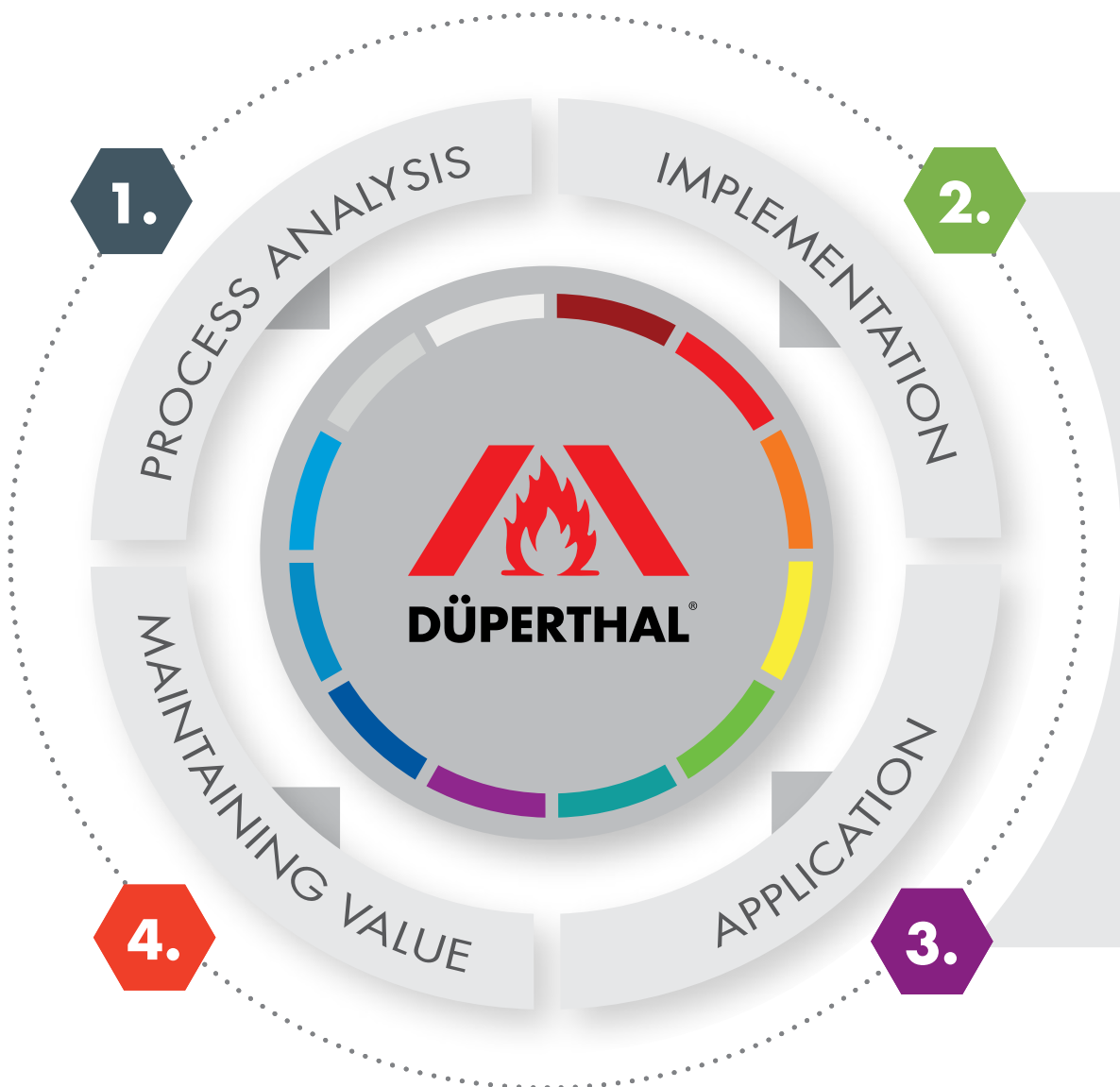
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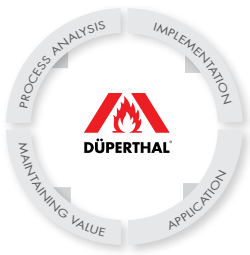


# From the process to realisation: We go with you

## We offer products and service for every requirement

DÜPERTHAL offers system solutions for process-optimised storage of chemicals and hazardous substances. for scientific research, development and production. Our goal is to always fulfil your individual requirements with customised solutions. This is why you can expect not only outstanding certified products from us, but also outstanding full service.





## Services throughout the process

One of our distinctive features is our profound knowledge of our customers' processes. For more than 40 years, we have stood by you as an active companion and consultant: from the analysis of your individual requirements, to the planning and implementation of the optimal solution, through to permanent maintenance.



## Innovative products for every situation

Our product portfolio for the storage, use and disposal of chemicals and hazardous substances is as diverse as the requirements for their handling. In addition to high-quality, certified safety storage cabinets, we offer a variety of fitting options and accompanying products for every need, however specific



### Technical added advantages

- » Safety storage cabinets and accompanying products for every application
- » More occupational safety and environmental protection through maximum fire protection
- » Maximum comfort during use and operation

### Economic added advantages

- » Optimisation of processes and work processes.
- » Continuous value retention
- » Excellent service throughout the process

## Tailored to your processes



### 1. Process analysis

#### Your problem is our challenge

Your processes should run optimally - in every respect. Our experts take a closer look at safety-relevant and profitability aspects. You are guaranteed the greatest possible flexibility in implementation. Because we have the right solution for every situation.



#### From process analysis to concept

Together with you on site, our experts will collect extensive data in an as-is analysis. Based on this information and your requirements, a target state is defined in a task folder.



#### Modular and tested system solutions

We use the full range of DÜPERTHAL's standard technologies and supplement them with modular and type-tested systems, adapted to your requirements.



### 2. Implementation

#### Safe and economical solutions

Not only do you get a technically perfect system from us, but we also make sure that you have to put in as little effort as possible. We deliver our products directly to the site and take over the implementation. Full service is our principle.



#### Shipment and delivery

Safety for us starts with the delivery of the product. The specialist carrier appointed by us works according to a detailed checklist and therefore ensures that our products are professionally transported to and installed in their final place of use - delivery just-in-time and just-in-place.



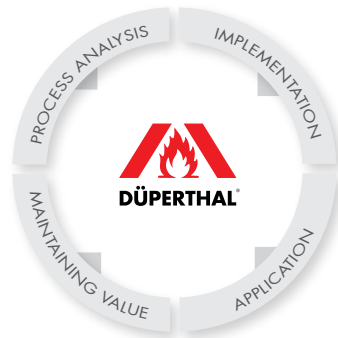
#### Project support on site

The professional handling of complex projects requires more than just delivering safety storage cabinets. DÜPERTHAL therefore provides comprehensive support for your national and international projects with planning, delivery service, construction site support and training of the lab managers and users.



#### Installation, implementation and final acceptance

Our team of specialists ensures a smooth and optimal assembly process on site. After complete installation of all components, the commissioning and joint final acceptance will be carried out with you.



### 3.

## Application

**Optimal integration – safe and economical solutions**  
We work conscientiously to optimise your process flows sustainably. This means that we attach great importance to documentation and training. In addition, the latest technology is used for evaluations. In this way, we integrate our products ideally into your existing structures.



#### Documentation

A detailed operations manual is supplied with each product, especially for complex projects. This already includes the CE certificate of conformance and the type certificate for the patented system solutions tested by independent third parties.



#### Training and risk assessment

In order that you are sure that our components can be used professionally and can be operated without any risk, we will be happy to train the responsible persons directly on the spot. The points treated can be included in your risk assessment.



#### Evaluation

With the Internet-capable Cabi2Net, all relevant operating parameters of the safety storage cabinets can be constantly monitored and evaluated. The query can be sent simply from a mobile phone, tablet or PC. This also safeguards your processes and helps you to make the internal value chain even more efficient

### 4.

## Maintaining value

#### Product life cycle - maximum safety

To ensure the functionality and safety of your system solution in the long term, we recommend an annual inspection. Our service agreement guarantees you maintenance and spare parts long after installation and commissioning.



#### Occupational safety and health OSHA / EU-OSHA

When dealing with hazardous substances, the highest priority is the protection of employees and the environment. Therefore, DÜPERTHAL safety storage cabinets guarantee compliance with the requirements of the Occupational Safety and Health Administration (OSHA and EU-OSHA). We will clarify all relevant topics and train you in the safe handling of our products

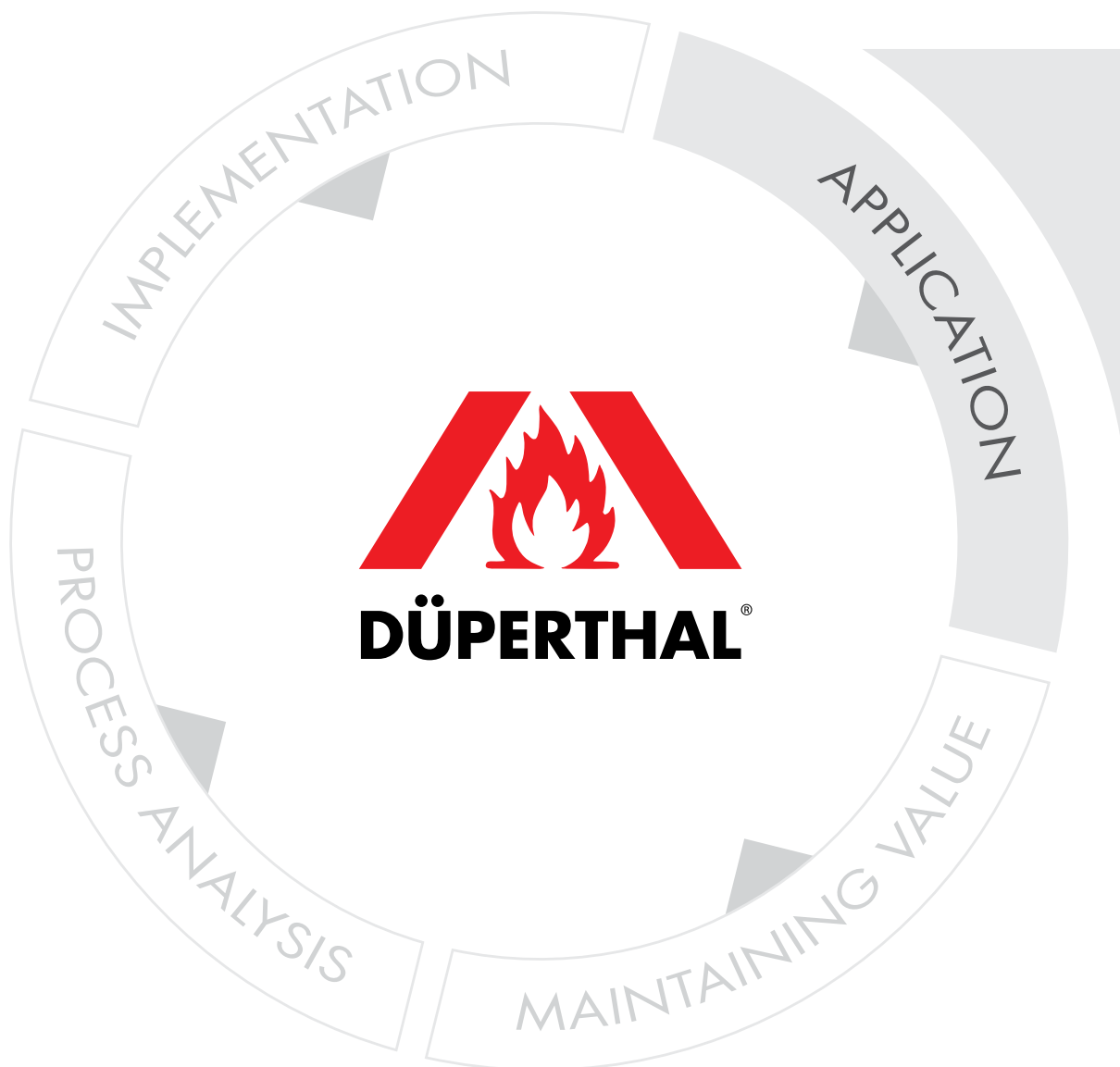


#### Permanent service agreement with regular maintenance and service

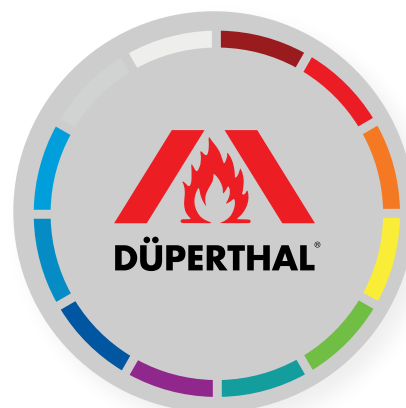
Highly complex processes rely on robust structures. With our service agreement, we can safeguard our reliable system solutions even better in your interest. The annual maintenance also extends the manufacturer's guarantee. A double benefit for you - in terms of safety and profitability .

## Your Challenge – Our Solution

The handling of hazardous substances is subject to stringent regulations – for good reason. DÜPERTHAL can help you to meet all the relevant requirements whilst at the same time optimising your work processes. Based on the analysis of the actual status and the jointly defined objective, you receive an individually tailored and modular system solution from us. Thanks to our varied product range, you can design your laboratory and workplace flexibly and as needed







## 1. Storage

### Safely storing hazardous substances

We offer a wide range of products for the safe storage of sensitive hazardous goods. Up to 90 minutes of protection in case of fire ensures maximum safety.



## 2. Use

### Using products ergonomically

In addition to a large range of standard solutions, we have tailor-made solutions that integrate seamlessly into your workflows and optimise them.



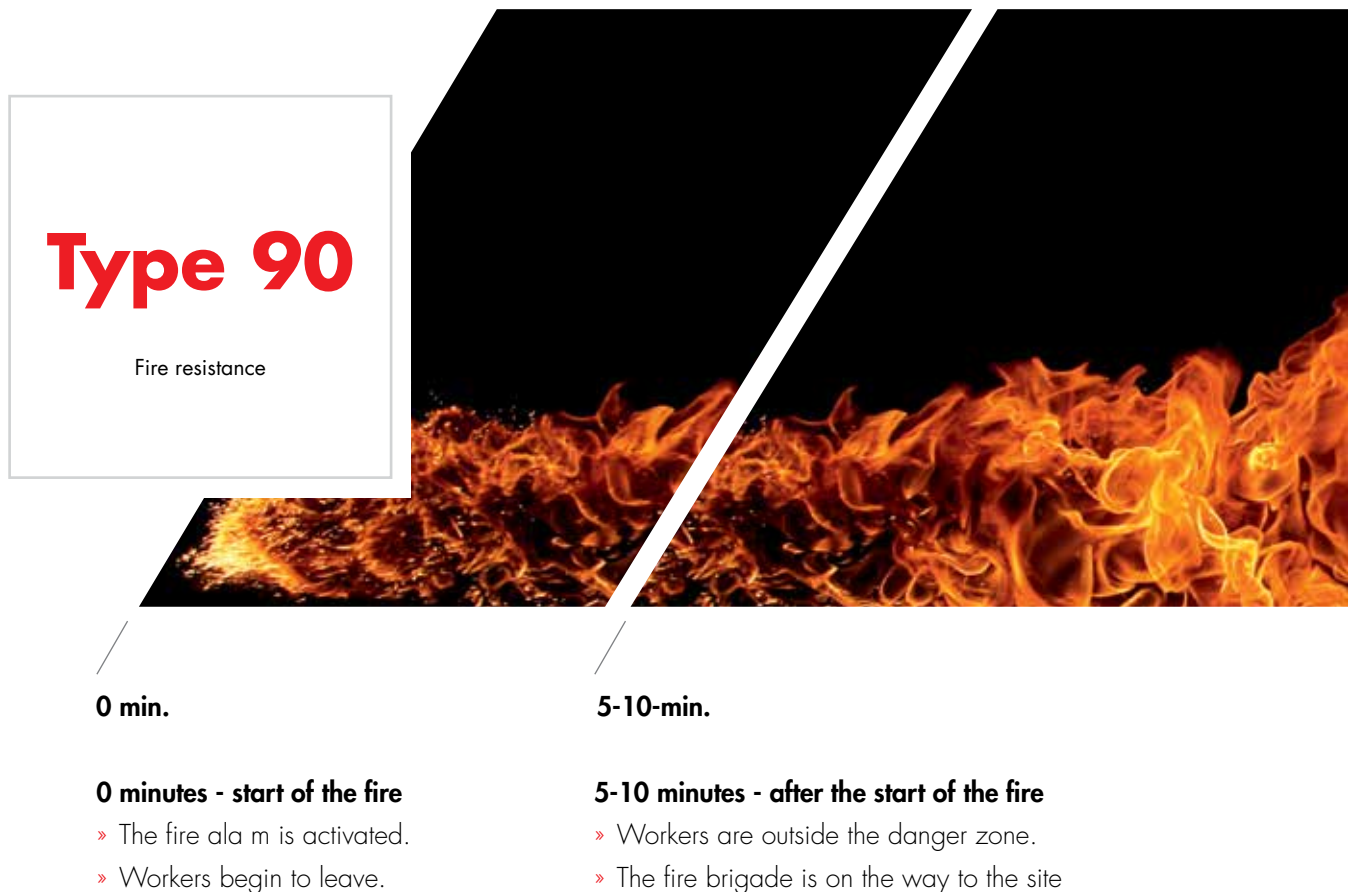
## 3. Disposal

### Disposing of materials in an environmentally sound manner

There are strict regulations for the disposal of dangerous goods. We provide a wide range of products and components for safe implementation in compliance with regulations.

## 90 minutes – Course of events and timetable of a fire

In the event of a fire, the 90 minutes of tested fire protection is the decisive factor in protecting people and minimising damage to property. DÜPERTHAL safety storage cabinets of fire resistance rating type 90 allow sufficient time for workers to leave the room in the event of a fire and allow the fire brigade sufficient time to get into the laboratory. Just before a smaller extinguishable fire from stored flammable substances causes an uncontrollable fire



The test of the cabinet under fire conditions is part of the standard. Each cabinet model is type-tested in a fire chamber in accordance with DIN EN 14470-1. The test parameters and test temperatures in the fire chamber and directly in the cabinet are specified in the standard, and further details are provided on the following pages.



10-15 min.

#### 10-15 minutes - after the start of the fire

- » The fire brigade is at the source of the fire

#### After 10 minutes of burn time

- » Safety storage cabinets with a fire resistance of 10 minutes are now losing their function.
- » The flammable substances are no longer safe
- » The fire brigade must fight the fire at a considerably increased risk.
- » Heavy damage is to be expected.

90 min.



#### Your benefits with the 90-minute technology

- » Safety storage cabinets Type 90 retain their function for 90 minutes.
- » The hazardous substances are stored safely for at least 90 minutes.
- » The fire brigade has considerably more time to extinguish the fire safely.
- » Reduction of the fire load and minimisation of damage.

## Fire chamber test according to DIN EN 14470-1

The fire resistance rating of safety storage cabinets in accordance with DIN EN 14470-1 is determined by the rise of temperature of the cabinet interior inside of a fire chamber according to the temperature-time curve in accordance with DIN EN 1363-1. Starting from an initial temperature of 20 +/- 5 °C and after the time until the temperature in the cabinet interior increases to 180 °C maximum, the cabinet is then classified as type 15, 30, 60 or 90 (analogous to time in minutes). Safety storage cabinets for pressurised gas cylinders are subjected to a comparable test in accordance with DIN EN 14470-2, details on this are provided on page 264.



### [ + Your economic advantage ]

Example calculation:  
(average values)

Cost of purchasing a  
safety storage cabinet  
tested fire resistance

**Profitability/Costs**

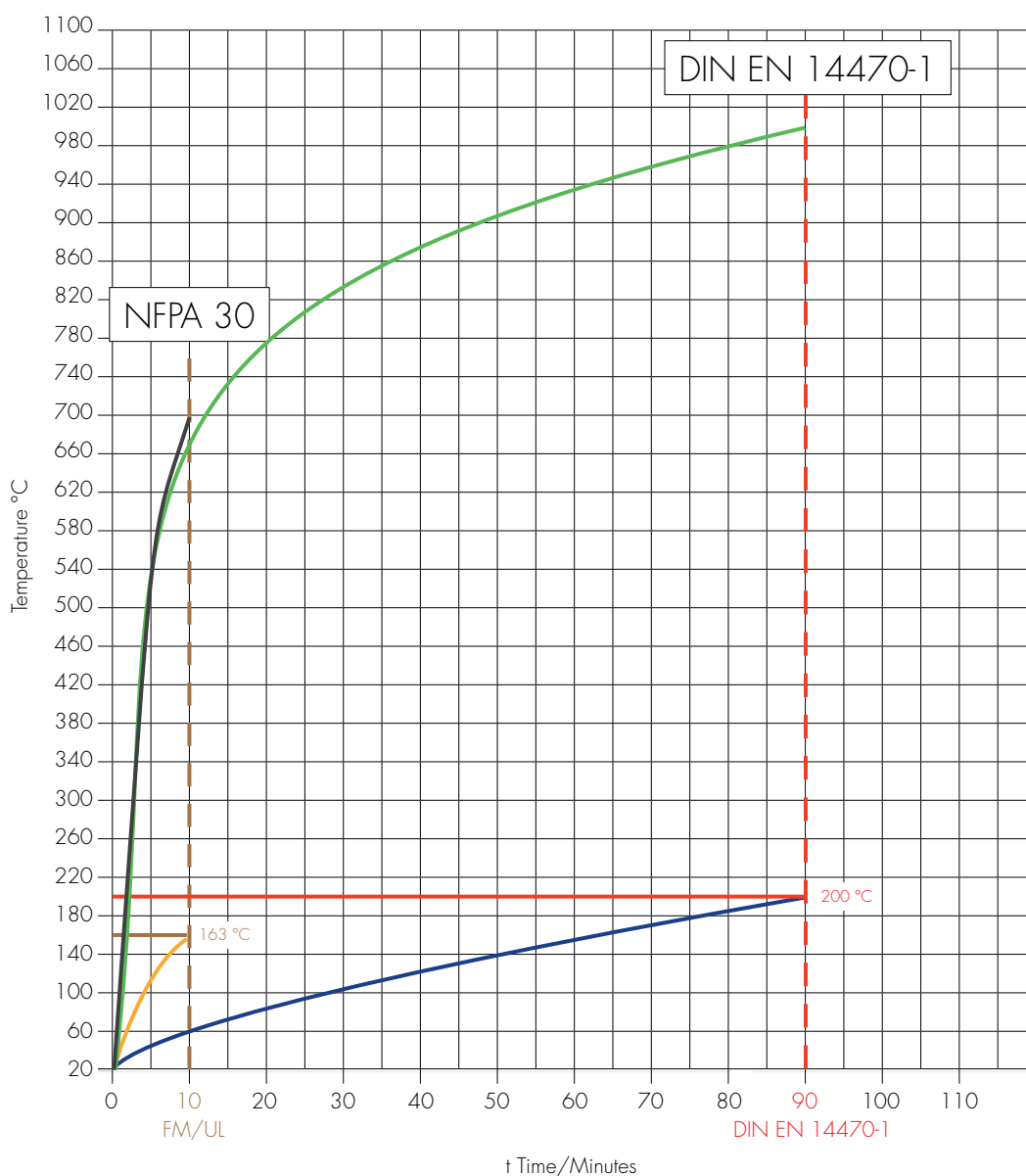
US standards      European standard  
FM/UL, NFPA 30      DIN EN 14470-1

€ 1,000                  € 2,430  
10 minutes              90 minutes

**100 € per min.      27 € per min.**

Video of an  
extreme test





Fire and explosion-proof safety storage cabinets Type 90 by DÜPERTHAL offer a reliable fire resistance of 90 minutes in accordance with DIN EN 14470-1.

#### US standards according to FM/UL, NFPA 30

- Maximum allowed temperature in the cabinet in acc. with FM/UL = 163 °C (325 °F).
- Temperature profile in accordance with NFPA 251 in the open fire chamber.
- Example of the rising temperature in an FM/UL cabinet during the fire test, monitored with 1 thermometer.

#### European standard DIN EN 14470-1.

- Maximum allowed temperature in the cabinet in acc. with DIN EN 14470-1 = 200 °C (392 °F).
- Temperature profile in accordance with DIN EN 1363-1 in the closed fire chamber.
- Example of the rising temperature in a Type 90 cabinet during the fire test, monitored with 11 thermometers.



## Fire resistance class – Type 90:

---

# 90 minutes of safety thanks to special construction

Utmost care is essential in the handling of hazardous substances. Our technology with maximum fire resistance helps you to achieve this. Thus, thanks to their special construction, our safety storage cabinets guarantee fire resistance of 90 minutes, type-tested according to DIN EN 14470-1.



**Type 90**

Fire resistance

### Construction:

- » The doors and the outer carcass are made of powder-coated sheet steel.
- » The inner carcass and the inside of the doors are made of high-quality decor panels.
- » There is a special insulation between the inner and outer carcasses, so that the heat cannot penetrate into the cabinet interior in case of fire
- » In case of fire, doors, drawers and ventilation openings for air supply and exhaust air are automatically closed and the door gaps as well as open joints are sealed by foam-forming gaskets.

ORIGINAL  
DÜPERTHAL



**Your benefits through DÜPERTHAL safety storage cabinets Type 90:**

- » A chain reaction will be avoided in case of fire
- » Workers, the fire brigade, and rescue services will be protected.
- » Maximum fire protection for buildings and systems
- » Reduction of insurance contributions for fire protection is possible
- » Financial security, e.g. by reducing the risk of default of production and buildings.
- » Fulfilment of the requirements of risk management in accordance with ISO 9000 and ISO 14001.
- » Use of high-quality safety storage cabinets conserves resources and strengthens the image of your company.

## Test criteria, protection objectives and minimum requirements

The three essential requirements of a safety storage cabinet in accordance with DIN EN 14470-1 are the minimisation of the risk of fire, the minimisation of fumes released into the work environment, and the retention of possible leakages. The test requirements of the laboratory furniture standard DIN EN 14727 also ensure a minimum of quality.



**DIN EN 14470-1**  
**DIN EN 14727**

### Extracts from DIN EN 14470-1

#### Ventilation

- » To prevent an explosive atmosphere, the ventilation must be effective directly above the bottom tray.
- » Ventilation openings for air supply and exhaust air must self-close when the temperature reaches 70 °C (158 °F).

#### Interior fittings

- » The bottom tray for the restraint of possible leakages must still be functional even after the fire resistance test.
- » The shelves must be made of non-absorbent material, bear the permissible load over the duration of the fire and be at most 1.75 m (5.74 ft) above the floor.

#### Door technology

- » Complete self-locking of the doors within a maximum of

20 seconds, optionally, an arrest system with temperature release at 50 °C (122 °F) is possible.

- » Closing force between the main closing and opposite closing edge of the door must not exceed 100 Newtons.
- » Each wing of the door must be operational with one hand.
- » If the doors are lockable, the locking device must not prevent self-closing in case of fire.

#### Fire chamber test

- » Each cabinet model and size is type-tested in a fire chamber test in accordance with DIN EN 14470-1 Type 90.

Tested safety at a very high level including:



## Extracts from DIN EN 14727

### Static endurance test

- » Standing surfaces, e.g. storage shelves, are subject to a static load and impact tests and must not show any breakage or other damage.

### Dynamic load test

- » All components that move mechanically such as pull-out shelves, drawers and doors are tested with 50,000 cycles each. After the tests, the doors must close exactly and snap into place.



### Tested safety at a very high level including

- » Type-testing according to DIN EN 14470-1 by recognised test institutes (TÜV Süd, iBMB Braunschweig, ift Rosenheim).
- » TÜV-tested according to DIN EN 14727 (laboratory furniture standard).
- » Type 90 classification in accordance with DIN EN 14470-1.
- » GS/CE mark.
- » High Quality mark of approval for upper-level style, user-friendliness and increased lifetime.

# High-quality safety storage cabinets with maximum fire protection



### Your added advantage with DÜPERTHAL safety storage cabinets!

» **Maximum fire protection for your safety**

Maximum safety with Type 90 technology and automatic self-closing doors in case of fire

» **Upper-level style for your health**

Ventilation in every cabinet level with visual inspection of the butterfly valves, with a continuous earthing concept as a standard.

» **Increased lifetime for your investment**

Continuous testing in accordance with DIN EN 14727, even 80,000 instead of 50,000 cycles in the dynamic load test.





### 1 Ventilation

Ventilation in **every cabinet level** and visual inspection of the venting cut-off flaps

### 2 Earthing (system)

To prevent ignition hazards through earthing in accordance with TRGS 727, the bearing surfaces are conductively connected as a standard to the equipotential bonding saddles.

### 3 Automatic closing of the doors

In case of fire, a the mocouple automatically triggers the uninterrupted closing system via the non-wearing safety feature (functional principle similar to the air bag system).

### 4 Base

A setback base is the solution to ergonomic working and a safe position.

### 5 Lock arrangement

The ergonomic lock arrangement at handle level increases handling convenience.

### 6 Transport

Due to the base construction with removable base boards, the cabinet is accessible from all sides. As a result, simple transport, for example with a hand pallet truck, is possible.

# Compliance mark for DÜPERTHAL safety storage cabinets

## Solved internally, confi med externally and independently

For DÜPERTHAL, quality is the main focus. Proof of this is provided by the quality marks of approval awarded to each of our safety storage cabinets, in recognition of our comprehensive quality management system as per DIN EN ISO 9001. One basic condition here is that, apart from our own in-house inspections, production of the safety storage cabinets is continuously monitored by external accredited test institutes.



### Tested safety - Made in Germany

#### Tested safety at the highest level including

- » Type-tested according to DIN EN 14470-1 as well as DIN EN 14470-2 by recognised test institutes (TÜV Süd, iBMB Braunschweig, ift Rosenheim).
- » TÜV testing according to DIN EN 14727 (laboratory furniture standard).
- » GS/CE mark.
- » High Quality mark of approval for upper-level style, user-friendliness and increased lifetime.



**DÜPERTHAL Innovation** – sustainably protected technical inventions based on well over **50 national and international patents!**

**DIN EN**





What else should you pay attention to?

## Explosion and health protection

In accordance with DIN EN 14470, safety storage cabinets must be provided with supply and exhaust air connection in order to prevent hazardous vapours escaping into the working area by means of a technical exhaust air system. In this case, the ventilation must be carried out to the open air in a safe place. Alternatively, ATEX-compliant (2014/34 / EU) recirculating air filter systems have been tried and tested in practice in safety storage cabinets for solvents. In accordance with TRGS 510, safety storage cabinets without industrial ventilation must be earthed due to the increased danger potential.



» Exhaust air systems

» Filter systems



### Your added advantage with industrial ventilation!

#### » Preventing an explosive atmosphere

A concentration dilution can already be achieved in the safety storage cabinet from a 10-fold air exchange per hour, so that an ex-zone around the cabinet is avoided. Please note that a lab bottle that has been opened once can already be a permanent source of emissions.

#### » Minimisation of health risks

With industrial ventilation, an increased risk of explosion as well as odour pollution can be

counteracted. In practice, it might be necessary to set a higher air exchange.

#### » Effectiveness / Functionality

The ventilation must be effective immediately above the bottom tray, since solvent vapours are often heavier than air. The laboratory directive also requires that the extraction is applied directly at the point of danger. Therefore, all DÜPERTHAL safety storage cabinets are equipped with ventilation at each cabinet level.

# Our commitment to sustainable action

As an internationally operating family business with a company culture characterised by the community, we maintain clear values that characterise our daily thinking and action. In this way, we always have the big picture in mind in order to achieve satisfaction and success together with our customers and partners. This vision is committed to bringing the requirements of customers, the environment and society into harmony.



### DÜPERTHAL Sustainability

Good economic sense, ecological long-term vision and social care - these are the ingredients for our daily thinking and action.



### Economic aspects

The holistic view of the processes of our customers is deeply rooted in our corporate philosophy. This is how we create the basic conditions for optimised, safe and ergonomic work processes. Retaining the value of the products not only reduces costs. The increased lifetime of the safety storage cabinets also saves resources and saves energy for production.



### Ecological aspects

DÜPERTHAL is committed to environmental protection and resource efficiency. We attach great importance to the commitment to use locally available raw materials. The short transport routes from suppliers in the surrounding area help to reduce emissions of harmful substances. At the same time, the use of recyclable materials relieves the environment during production.

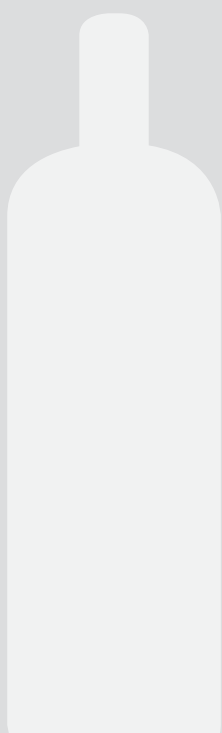


### Socio-cultural aspects

We promote and protect scientific research and development. With our products and services we increase safety in the workplace. We help our customers focus on the essentials - their work and the development of innovations that advance our society. Therefore, we do not limit ourselves to Germany. We document and certify our services in many countries and languages in order to implement our high standards on a comprehensive basis.

We continue the advancement of our company with the same diligence. For that is how we lay the the foundation stone for securing our future-oriented production sites and the preservation of valuable jobs in the region.

# Safe storage of pressurised gas cylinders





3



## Uniform fire protection concept

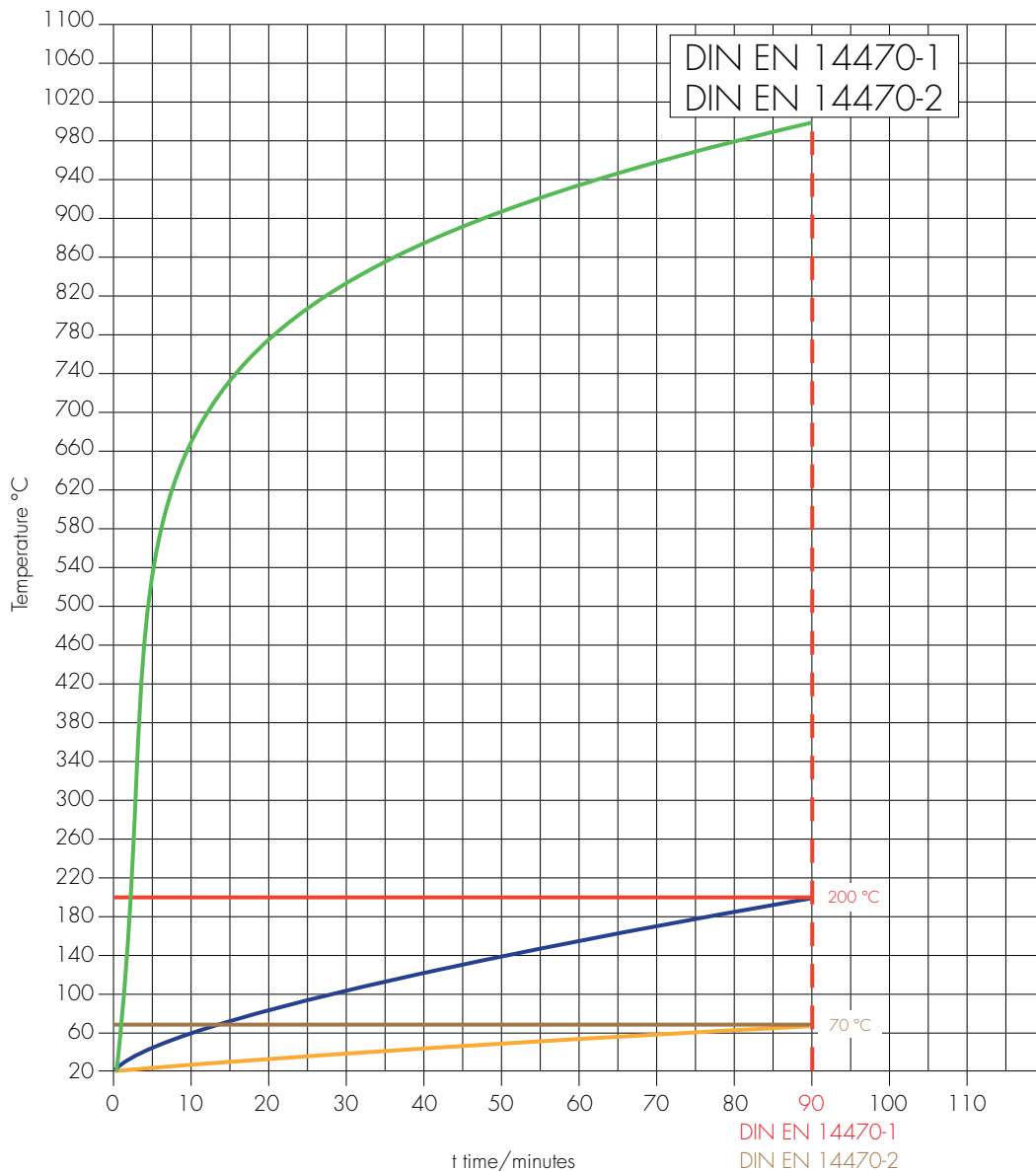
The fire resistance rating of safety storage cabinets in accordance with DIN EN 14470-1 is determined by the rise of temperature of the cabinet interior inside of a fire chamber according to the temperature-time curve in accordance with DIN EN 1363-1. On the basis of a starting temperature of 20 +/- 5 °C and after the temperature increase on the surface of the canister valve holder exceeds 50 Kelvin, the cabinet is then classified as type G15, G30, G60 or G90 (same as the time in minutes).



### Type G90 - 90 minutes of fire protection

The SUPREME line plus safety storage cabinets for pressurised gas cylinders help you to ensure 90-minute fire resistance continuously in your laboratory. In combination with DÜPERTHAL Type 90 safety storage cabinets compliant with DIN EN 14470-1, the SUPREME line plus models are the ideal solution for continuous fire protection concepts in line with the highest standards





## Comparison of DIN EN 14470-1 and DIN EN 14470-2

### DIN EN 14470-1 for flammable liquids

- Max. permissible temperature in the cabinet according to DIN EN 14470-1 = 200 °C (392 °F).
- Temperature history according to EN 1363-1 in the fire chamber.
- Example of the rising temperature of the Type 90 cabinet.

### DIN EN 14470-2 for pressurised gas cylinders

- Max. permissible temperature on the surface of the valve holder according to DIN EN 14470-2 = 70 °C (158 °F).
- Temperature history according to EN 1363-1 in the fire chamber.
- Example of the rising temperature in the Type G90 cabinet.

## Protection objectives and minimum requirements

Safety storage cabinets for the storage of pressurised gas cylinders in accordance with DIN EN 14470-2 must be designed and constructed in such a way that in case of fire, no additional risks of the fire spreading result from the content. The fire resistance should enable employees to leave the working area and allow the fire brigade to reach the area and contain the fire before the pressurised gas cylinders become unstable. Minor amounts of escaping gas within the cabinet must be extracted to protect health and prevent explosions.

**DIN EN 14470-2**  
**DIN EN 14727**



### Extracts from DIN EN 14470-2

#### Ventilation

- » The cabinets must have ventilation openings for air supply and exhaust air to enable connection to an exhaust air system.
- » The air stream must ensure that minor amounts of escaping gas within the cabinet are extracted.
- » For efficient purging, there must be at least a 10-fold air exchange, 120-fold for toxic gases, in the storage of flammable and oxidising gases
- » The ventilation must be in the upper and lower part of the cabinet.
- » The pressure drop in the cabinet must not exceed 150 Pa (0.022 Psi) .

#### Gas and electrical cables

- » The number of electrical cables and gas lines must be restricted to the absolute minimum.
- » A maximum of three gas pipes with  $\varnothing$  10 mm (0.39 inch) and two electrical cables with  $\varnothing$  20 mm (0.79 inch) are permitted per pressurised gas cylinder.
- » For the best possible fire resistance, tubes made of stainless steel or a material with similar thermal conductivity are recommended.
- » Unused penetrations must be sealed in accordance with manufacturer's specifications

#### Fire chamber test

- » Each cabinet model is type-tested in a fire chamber according to DIN EN 14470-2 Type G90/Type G30.



## Tested safety at a very high level including

- » Type testing according to DIN EN 14470-2 by recognised test institutes (TÜV Süd, ift Rosenheim).
- » TÜV-tested according to DIN EN 14727 (laboratory furniture standard).
- » Type G90/Type G30 classification in accordance with DIN EN 14470-2.
- » GS/CE mark.
- » High Quality mark of approval for upper-level style.
- » User-friendliness and increased lifetime.

Tested safety at a very high level including:



**DIN EN 14470-2**  
**DIN EN 14727**



### Storage capacity

- » The maximum storage capacity per safety storage cabinet including purging gas is 220 litres (58.12 gal), up to a maximum of four 50 litre (13.21 gal) gas cylinders or up to three 70 litre (18.5 gal) gas cylinders.
- » The pressurised gas cylinders in the cabinet may be used.

### Introduction, removal and fastening

- » A ramp or mechanical lifting equipment may be used, but this may not be made of aluminium.
- » In the cabinet, a suitable mounting system must be installed to prevent the pressurised gas cylinders from falling over.

### Extracts from DIN EN 14727

#### Static endurance test

- » Standing surfaces, e.g. intermediate shelves, are subjected to a static load test and shock test and may not be broken or damaged.

#### Dynamic load test

- » All mechanical (moving) components such as doors are tested with 50,000 cycles. After the tests, the doors must close exactly and snap into place.

# Safety storage cabinets for pressurised gas cylinders and handling

Door technologies

**3.1**

**SUPREME line plus**

Type  
G90

**3.2**

**ECO line plus**

Type  
G30

**3.3**

**Gas cylinder  
depots**

**3.4**

**Gas cylinder  
containers/boxes**

**3.5**

**Gas cylinder  
handling**



from page

**270**



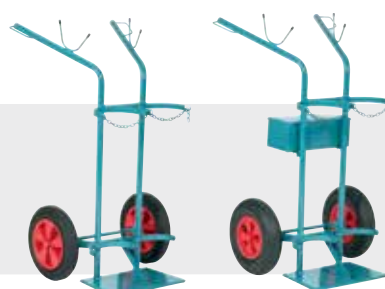
**281**



**291**



**292**



**293**



# SUPREME line plus 3.1



## Safety storage cabinets, Type G90 for pressurised gas cylinders



### Your added advantage with the SUPREME line plus!

- » **The highest fire protection for your safety**  
Maximum safety with Type G90 technology for a continuous fire protection concept that meets the highest standards.
- » **Upper-level style for your health**  
Optimised ventilation ducts provide an efficient air flow system to extract any escaping gas within the cabinet.
- » **Increased lifetime for your investment**  
Duration test according to DIN EN 14727, but 80,000 instead of 50,000 cycles in the dynamic load test.





### 1 Ventilation

Efficient ventilation in each cabinet level and the possibility of connecting the purging gas pipes directly to the exhaust air duct.

### 2 Penetration of gas pipes and cables

Drilling areas for the penetration of pipes or cables are marked on the cabinet roof and side panels.

### 3 Fittings

Maximum flexibility through adjustable installation rails as a standard - ideal to read the fittings ergonomically and without reflections. Alternatively, an upright installation is possible.

### 4 Door technology

The cabinet doors may be opened up to an angle of 170 degrees, thus offering the user maximum freedom of use. The opening angle can be adjusted continuously.

### 5 Use of space

The interior height is optimised for the installation and operation of gas cylinder fittings.

### 6 Transport

Gas cylinders can be easily put in place using the robust roll-in flap or the gas cylinder trolley for 10 litre (2.64 gal) gas cylinders.

## SUPREME line plus – Type G90

Discover the optimum solution from DÜPERTHAL for the storage of pressurised gas cylinders of all sizes with 90-minute fire protection. Experience the comfort and flexibility of being able to equip your workplace to meet your precise needs



SUPREME plus S



SUPREME plus M



SUPREME plus L



SUPREME plus XL



3.1



SUPREME plus XXL

#### Interior fittings:

- » Two installation rails for mounting gas fittings
- » One cylinder holder with one retaining belt per standing space.
- » A sturdy roll-in flap
- » Marked drilling areas for gas pipes and electrical cables.
- » Connection for purging gas pipe as a standard.

#### Colour standard version:

- » Wing doors in ruby red RAL 3003.
- » Carcass completely in light grey RAL 7035.
- » Individual colours possible.

#### Construction:

- » Wing doors, powder-coated sheet steel.
- » The doors are generally right-hinged for one-door cabinets. A left-hung door can be delivered at no extra charge.
- » Outer carcass, powder-coated sheet steel.
- » Inner carcass made of high-quality decor panels.

Golden yellow  
RAL 1004

Light grey  
RAL 7035

Ruby red  
RAL 3003

Pure white  
RAL 9010

## Ordering information



### SUPREME plus S

### SUPREME plus M

#### Ref. no.

with classical wing door technology

79-130660-021

79-200660-021

#### Details

1 cylinder holder with 2 retaining belts,  
2 horizontal installation rails and roll-in fla

1 cylinder holder with 2 retaining belts,  
2 horizontal installation rails and roll-in fla

#### Dimensions

|                                   |                |
|-----------------------------------|----------------|
| Outer<br>(width x depth x height) | [mm]<br>[inch] |
| Inner<br>(width x depth x height) | [mm]<br>[inch] |
| Weight                            | [kg]<br>[lbs]  |

595 x 610 x 1415  
23.43 x 24.02 x 55.71

595 x 610 x 2070  
23.43 x 24.02 x 81.5

430 x 388 x 1171  
16.92 x 15.28 x 46.1

430 x 388 x 1826  
16.92 x 15.28 x 71.89

256  
564.38

348  
767.21

#### Storage capacity/standing surface (approx. data)

|           |  |
|-----------|--|
| Volumes/Ø | [1 l/83 mm]<br>[0.26 gal/3.27 inch]    |
|           | [10 l/140 mm]<br>[2.64 gal/5.51 inch]  |
|           | [50 l/229 mm]<br>[13.21 gal/9.02 inch] |

6 pressurised gas cylinders

–

2 pressurised gas cylinders

2 pressurised gas cylinders

–

1 pressurised gas cylinder

#### Ref. no.

#### Additional interior fittings Material

|  |             |
|--|-------------|
| Intermediate shelf   | Sheet steel |
| Shelf for screw caps for connection to cylinder holder               | Sheet steel |
| Installation rails (2 pcs.)  | Sheet steel |
| Shelf for side installation incl. cylinder holder                    | Sheet steel |
| Cylinder rack for 6, 10, 14, 18 gas cylinders max. Ø 83 mm/3.27 inch | Sheet steel |

73-80660-122

73-80660-122

79-80660-140

79-80660-140

79-80660-152

79-80660-152

–

79-70000-119

on request

on request

Other accessories on page 278. Other technical details and dimensions from page 279 onwards.



Tested safety at a very high level including:



# 3.1

| SUPREME plus L   | SUPREME plus XL  | SUPREME plus XXL   |
|--|--|--|
| 79-200960-021  | 79-201260-021  | 79-201460-021  |
| 1 cylinder holder with 3 retaining belts,<br>2 horizontal installation rails and roll-in fla | 1 cylinder holder with 4 retaining belts,<br>2 horizontal installation rails and roll-in fla | 1 cylinder holder with 4 retaining belts,<br>2 horizontal installation rails and roll-in fla |
| 895 x 610 x 2070<br>35.24 x 24.02 x 81.5   | 1195 x 610 x 2070<br>47.04 x 24.02 x 81.5  | 1395 x 610 x 2070<br>54.92 x 24.02 x 81.5  |
| 730 x 404 x 1826<br>28.74 x 15.9 x 71.89   | 1030 x 404 x 1826<br>40.56 x 15.9 x 71.89  | 1230 x 404 x 1826<br>48.43 x 15.9 x 71.89  |
| 477<br>1051.6  | 595<br>1311.75   | 680<br>1499.14   |
| -  | -  | -  |
| 4 pressurised gas cylinders  | 6 pressurised gas cylinders  | 8 pressurised gas cylinders  |
| 2-3 pressurised gas cylinders  | 3-4 pressurised gas cylinders  | 4 pressurised gas cylinders  |
| 79-80960-122   | 79-81260-122   | 79-81460-122   |
| 79-80960-140   | 79-81260-140   | 79-81460-140   |
| 79-80960-152   | 79-81260-152   | 79-81460-152   |
| 79-70000-119   | 79-70000-119   | 79-70000-119   |
| on request   | on request   | on request   |

## Accessories - varied and flexible

Apart from maximum safety, our safety storage cabinets for pressurised gas cylinders also offer maximum comfort with their ergonomic construction and perfection down to the smallest detail. Using the sophisticated accessories you may adjust your safety storage cabinet individually to your applications.



**Intermediate shelves**  
Shelves for side installation allow for additional space to store further small pressurised gas cylinders, thus enabling the operator to use the cabinet volume optimally.



**Cylinder racks**  
Cylinder racks provide a secure hold of stored items such as ECOCYL cylinders.



**Screw caps**  
The gas cylinder screw caps may be safely positioned on a shelf.



**Profile half-cylinders**  
for the lock protect against unauthorised access and can be integrated into locking systems.

### Accessories

#### Locking systems:

Handle with aluminium profile half-cylinde

Handle with stainless steel profile half-cylinde

#### Optional extras

Gas cylinder trolley

Exhaust air system or ventilator

Safety container

Absorber

### Ref. no.

73-70000-089

73-70000-289

See programme section 3.5 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 7 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 8 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 10 or at [www.dueperthal.com](http://www.dueperthal.com)



# Tech specs SUPREME line plus – Type G90

## Technical details - SUPREME line plus

| Model size   |   | S                | M                | L                | XL               | XXL              |
|--|---|------------------|------------------|------------------|------------------|------------------|
| Volumetric flow rate with 10-fold air exchange   | approx. [m <sup>3</sup> /h]<br>approx. [cubic ft/h] | 1.8<br>63.56     | 3.0<br>105.93    | 5.3<br>168.24    | 7.5<br>264.83    | 8.9<br>314.26    |
| Pressure drop in cabinet/pressure loss at exhaust air (connection) socket acc. to EK5/AK4 09-10 with 10-fold air exchange  | [Pa]<br>[Psi]                                       | <1/<1<br><1/<1   | <1/<1<br><1/<1   | <1/<1<br><1/<1   | <1/<1<br><1/<1   | <1/<1<br><1/<1   |
| Volumetric flow rate with 120-fold air exchange  | approx. [m <sup>3</sup> /h]<br>approx. [cubic ft/h] | 21.8<br>765.79   | 35.1<br>1239.38  | 63.0<br>2224.53  | 89.4<br>3156.71  | 107.0<br>3778.17 |
| Pressure drop in cabinet/pressure loss at exhaust air (connection) socket acc. to EK5/AK4 09-10 with 120-fold air exchange | [Pa]<br>[Psi]                                       | <1/13<br><1/<1   | <1/41<br><1/<1   | <1/34<br><1/<1   | 10/85<br><1/<1   | 40/131<br><1/<1  |
| Load bearing capacity with uniformly distributed load/shelf for side installation  | [kg]<br>[lbs]                                       | 50/60<br>110/132 | 50/60<br>110/132 | 50/60<br>110/132 | 50/60<br>110/132 | 50/60<br>110/132 |

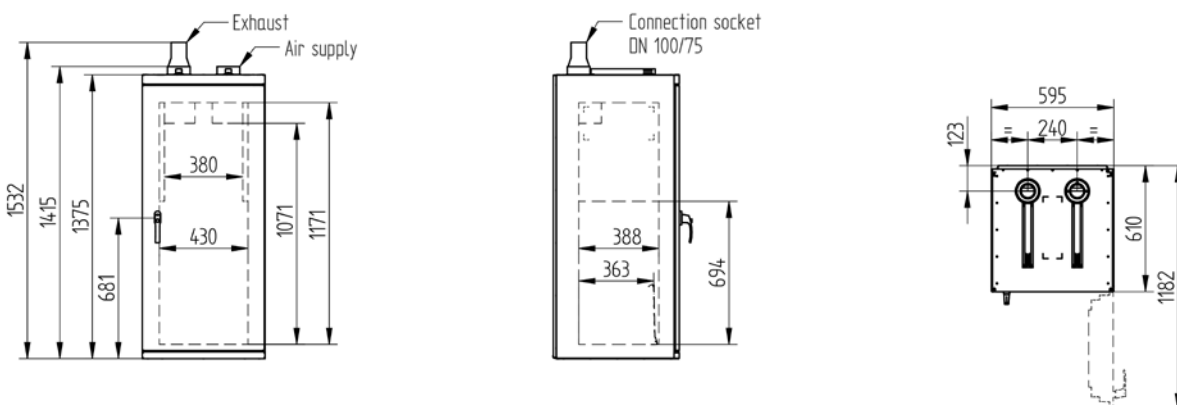
3.1

## Dimensions - Interior fittings [mm] - SUPREME line plus [inch]

| Model size  | S           |              |            | M           |              |             | L           |              |             | XL            |              |             | XXL           |              |             |
|---|-------------|--------------|------------|-------------|--------------|-------------|-------------|--------------|-------------|---------------|--------------|-------------|---------------|--------------|-------------|
|   | Width       | Depth        | Height     | Width       | Depth        | Height      | Width       | Depth        | Height      | Width         | Depth        | Height      | Width         | Depth        | Height      |
| Intermediate shelf                                | 424<br>16.7 | 350<br>13.78 | 35<br>1.38 | 424<br>16.7 | 350<br>13.78 | 35<br>1.38  | 724<br>28.5 | 350<br>13.78 | 35<br>1.38  | 1024<br>40.31 | 350<br>13.78 | 35<br>1.38  | 1224<br>48.19 | 350<br>13.78 | 35<br>1.38  |
| Shelf for side installation incl. cylinder holder | –           | –            | –          | 220<br>8.66 | 347<br>13.66 | 220<br>8.66 | 220<br>8.66 | 347<br>13.66 | 220<br>8.66 | 220<br>8.66   | 347<br>13.66 | 220<br>8.66 | 220<br>8.66   | 347<br>13.66 | 220<br>8.66 |

| Front view | Side view | Top view |
|------------|-----------|----------|
|------------|-----------|----------|

### SUPREME plus S



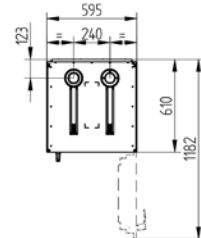
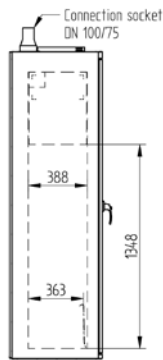
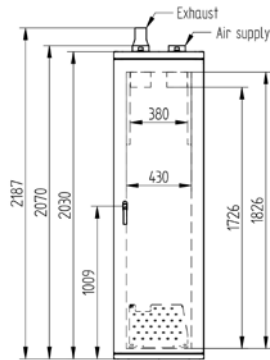
# Tech specs SUPREME line plus – Type G90

Front view

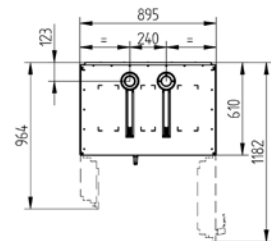
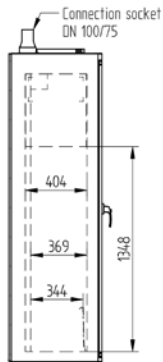
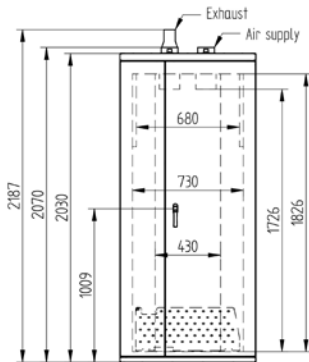
Side view

Top view

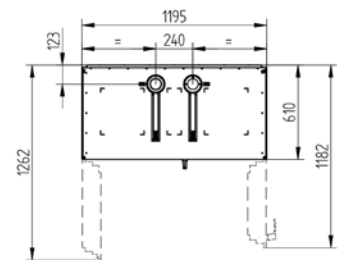
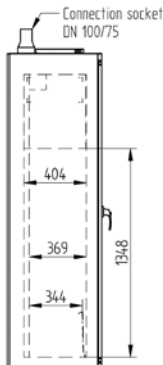
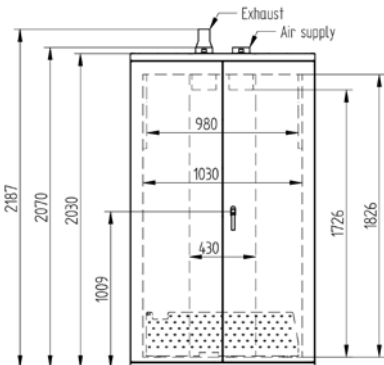
## SUPREME plus M



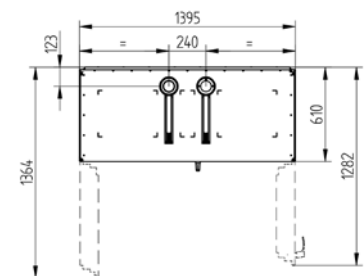
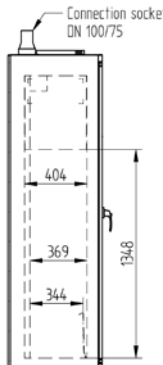
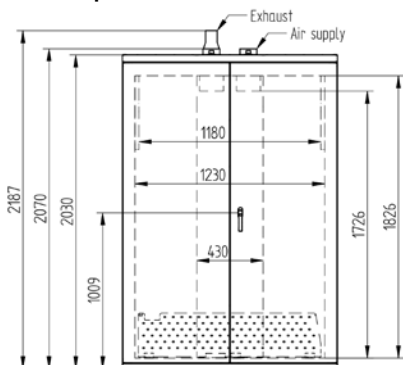
## SUPREME plus L



## SUPREME plus XL



## SUPREME plus XXL





# ECO line plus 3.2



# Safety storage cabinets, Type G30 for pressurised gas cylinders



## Your added advantage with the ECO line plus!

### » Economic fire protection for your safety

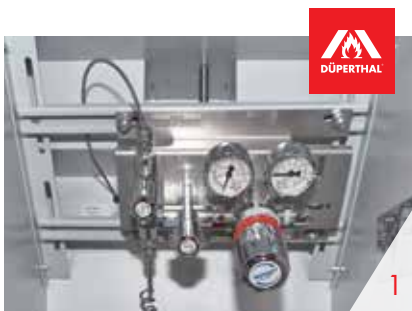
For the economical storage of pressurised gas cylinders with a 30-minute fire protection concept - the simple entry to a higher level of safety in your workplace.

### » Upper-level style for your health

Optimised ventilation ducts provide an efficient air flow system to extract any escaping gas within the cabinet.

### » Increased lifetime for your investment

Duration test according to DIN EN 14727, but 80,000 instead of 50,000 cycles in the dynamic load test.



### 1 Ventilation

Efficient ventilation in each cabinet level and the possibility of connecting the purging gas pipes directly to the exhaust air duct.

### 2 Penetration of gas pipes and cables

Drilling areas for the penetration of pipes or cables are marked on the cabinet roof and side panels.

### 3 Fittings

Maximum flexibility through adjustable installation rails as a standard - ideal to read the fittings ergonomically and without reflections. Alternatively, an upright installation is possible.

### 4 Door technology

The cabinet doors may be opened up to an angle of 170 degrees, thus offering the user maximum freedom of use. The opening angle can be adjusted continuously.

### 5 Use of space

The interior height is optimised for the installation and operation of gas cylinder fittings.

### 6 Transport

Gas cylinders can be easily put in place using the robust roll-in flap or the gas cylinder trolley for 10 litre (2.64 gal) gas cylinders.

# ECO line plus – Type G30

The ECO line plus Type G30 models from DÜPERTHAL are the ideal solution for the cost-effective storage of pressurised gas cylinders with 30-minute fire protection. Discover the smart way to increase comfort and flexibility in your custom-designed workplace.



ECO plus M



ECO plus L



ECO plus XL



ECO plus XXL



## 3.2

### Interior fittings:

- » Two installation rails for mounting gas fittings
- » One cylinder holder with one retaining belt per standing space.
- » A sturdy roll-in flap
- » Marked drilling areas for gas pipes and electrical cables.
- » Connection for purging gas pipe as a standard.

### Colour standard version:

- » Wing doors in ruby red RAL 3003.
- » Carcass completely in light grey RAL 7035.
- » Individual colours possible.

### Construction:

- » Wing doors, powder-coated sheet steel.
- » The doors are generally right-hinged for one-door cabinets. A left-hung door can be delivered at no extra charge.
- » Outer carcass, powder-coated sheet steel.
- » Inner carcass made of high-quality decor panels.

Golden yellow  
RAL 1004

Light grey  
RAL 7035

Ruby red  
RAL 3003

Pure white  
RAL 9010

## Ordering information



### ECO plus M

### ECO plus L

#### Ref. no.

with classical wing door technology

73-200660-011

73-200960-011

#### Details

1 cylinder holder with 2 retaining belts,  
2 horizontal installation rails and roll-in fla

1 cylinder holder with 3 retaining belts,  
2 horizontal installation rails and roll-in fla

#### Dimensions

|                                   |                |
|-----------------------------------|----------------|
| Outer<br>(width x depth x height) | [mm]<br>[inch] |
| Inner<br>(width x depth x height) | [mm]<br>[inch] |
| Weight                            | [kg]<br>[lbs]  |

595 x 596 x 2070  
23.43 x 23.46 x 81.5

895 x 596 x 2070  
35.24 x 23.46 x 81.5

599 x 386 x 1884  
23.58 x 15.2 x 74.17

800 x 440 x 1884  
31.5 x 17.32 x 74.17

283  
623.9

390  
859.8

#### Storage capacity/standing surface (approx. data)

|           |  |
|-----------|--|
| Volumes/Ø | [10 l/140 mm]<br>[2.64 gal/5.51 inch]  |
|           | [50 l/229 mm]<br>[13.21 gal/9.02 inch] |

2 pressurised gas cylinders

4 pressurised gas cylinders

1-2 pressurised gas cylinders

2-3 pressurised gas cylinders

#### Ref. no.

| Additional interior fittings  | Material    |
|---|-------------|
| Intermediate shelf  | Sheet steel |
| Shelf for screw caps for connection to cylinder holder                  | Sheet steel |
| Installation rails (2 pcs.)   | Sheet steel |
| Shelf for side installation incl. cylinder holder                       | Sheet steel |
| Cylinder rack for 6, 10, 14, 18 gas cylinders max.<br>Ø 83 mm/3.27 inch | Sheet steel |

73-80660-122

73-80960-122

79-80660-140

79-80960-140

79-80660-150

73-80960-150

73-70000-119

73-70000-119

on request

on request

Other accessories on page 288. Other technical details and dimensions from page 289 onwards.



Tested safety at a very high level including:



# 3.2

## ECO plus XL

## ECO plus XXL

73-201260-011

73-201460-021

1 cylinder holder with 4 retaining belts,  
2 horizontal installation rails and roll-in flange

1 cylinder holder with 4 retaining belts,  
2 horizontal installation rails and roll-in flange

1195 x 596 x 2070  
47.05 x 23.46 x 81.5

1395 x 596 x 2070  
54.92 x 23.46 x 81.5

1100 x 440 x 1884  
43.31 x 17.32 x 74.17

1294 x 435 x 1878  
50.94 x 17.13 x 73.94

462  
1018.53

560  
1234.59

6 pressurised gas cylinders

8 pressurised gas cylinders

3-4 pressurised gas cylinders

4 pressurised gas cylinders

73-81260-122

73-81460-122

79-81260-140

79-81460-140

73-81260-150

73-81460-152

73-70000-119

73-70000-119

on request

on request

## Accessories - varied and flexible

Apart from maximum safety, our safety storage cabinets for pressurised gas cylinders also offer maximum comfort with their ergonomic construction and perfection down to the smallest detail. Using the sophisticated accessories you may adjust your safety storage cabinet individually to your applications.



### Intermediate shelves

Shelves for side installation allow for additional space to store further small pressurised gas cylinders, thus enabling the operator to use the cabinet volume optimally.



### Cylinder racks

Cylinder racks provide a secure hold of stored items such as ECOCYL cylinders.



### Screw caps

The gas cylinder screw caps may be safely positioned on a shelf.



### Profile half-cylinders

for the lock protect against unauthorised access and can be integrated into locking systems.

### Accessories

#### Locking systems:

Handle with aluminium profile half-cylinde

Handle with stainless steel profile half-cylinde

#### Optional extras

Gas cylinder trolley

Exhaust air system or ventilator

Safety container

Absorber

### Ref. no.

73-70000-089

73-70000-289

See programme section 3.5 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 7 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 8 or at [www.dueperthal.com](http://www.dueperthal.com)

See programme section 10 or at [www.dueperthal.com](http://www.dueperthal.com)



# Tech specs ECO line plus – Type G30



## Technical details- ECO line plus

| Model size   |   | M                   | L                   | XL                   | XXL                     |
|--|---|---------------------|---------------------|----------------------|-------------------------|
| Volumetric flow rate with 10-fold air exchange   | approx. [m <sup>3</sup> /h]<br>approx. [cubic ft/h] | 4.1<br>144.77       | 6.6<br>233.04       | 8.9<br>314.26        | 10.5<br>370.76          |
| Pressure drop in cabinet/pressure loss at exhaust air (connection) socket acc. to EK5/AK4 09-10 with 10-fold air exchange  | [Pa]<br>[Psi]                                       | <1/<1<br><1/<1      | <1/<1<br><1/<1      | <1/<1<br><1/<1       | <1/<1<br><1/<1          |
| Volumetric flow rate with 120-fold air exchange  | approx. [m <sup>3</sup> /h]<br>approx. [cubic ft/h] | 49.5<br>1747.85     | 79.4<br>2803.61     | 107<br>3778.17       | 126.5<br>4466.72        |
| Pressure drop in cabinet/pressure loss at exhaust air (connection) socket acc. to EK5/AK4 09-10 with 120-fold air exchange | [Pa]<br>[Psi]                                       | <150/27<br><0.02/<1 | <150/69<br><0.02/<1 | <150/147<br><0.02/<1 | <150/220<br><0.02/<0.03 |
| Load bearing capacity with uniformly distributed load intermediate shelf/shelf for side installation                       | [kg]<br>[lbs]                                       | 50/60<br>110/132    | 50/60<br>110/132    | 50/60<br>110/132     | 50/60<br>110/132        |

3.2

## Dimensions - Interior fittings [mm] - ECO line plus [inch]

| Model size  | M           |              |             | L            |              |              | XL            |              |             | XXL           |              |              |
|---|-------------|--------------|-------------|--------------|--------------|--------------|---------------|--------------|-------------|---------------|--------------|--------------|
|   | Width       | Depth        | Height      | Width        | Depth        | Height       | Width         | Depth        | Height      | Width         | Depth        | Height       |
| Intermediate shelf                                | 424<br>16.7 | 350<br>13.78 | 35<br>1.38  | 724<br>28.5  | 350<br>13.78 | 35<br>1.38   | 1024<br>40.31 | 350<br>13.78 | 35<br>1.38  | 1224<br>48.19 | 350<br>13.78 | 35<br>1.38   |
| Shelf for side installation incl. cylinder holder | 220<br>8.66 | 347<br>13.66 | 220<br>8.66 | 347<br>13.66 | 220<br>8.66  | 347<br>13.66 | 220<br>8.66   | 347<br>13.66 | 220<br>8.66 | 347<br>13.66  | 220<br>8.66  | 347<br>13.66 |

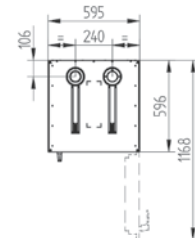
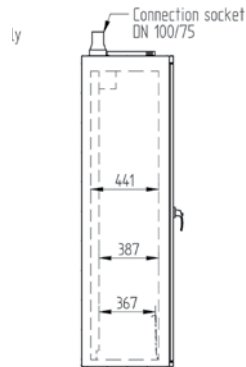
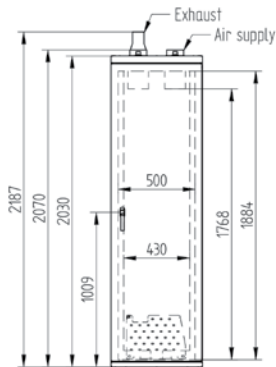
# Tech specs ECO line plus – Type G30

Front view

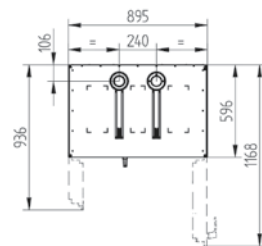
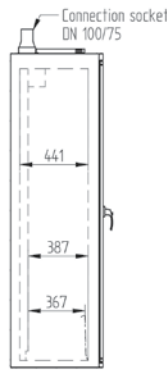
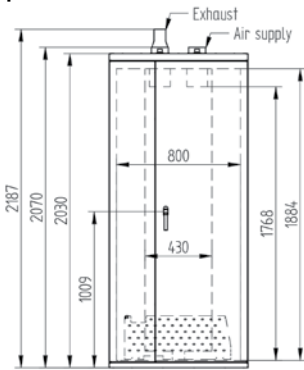
Side view

Top view

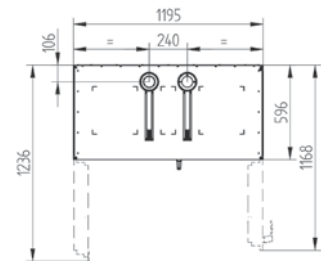
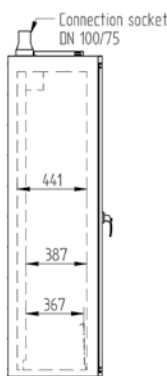
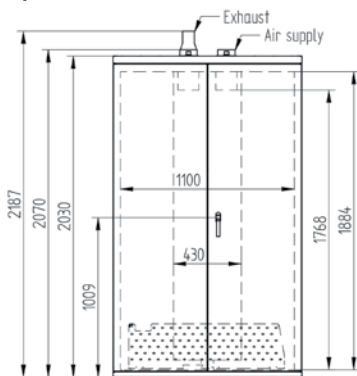
## ECO plus M



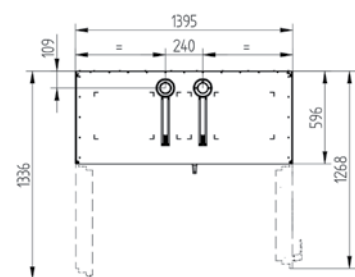
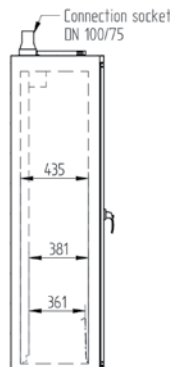
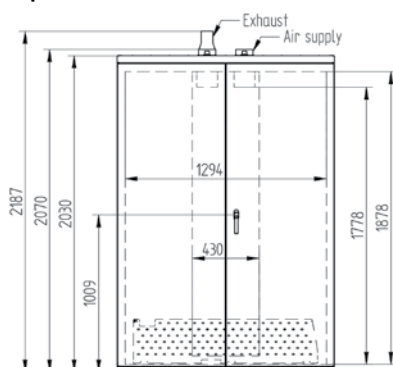
## ECO plus L



## ECO plus XL



## ECO plus XXL





# Gas cylinder depots

## 3.3 Gas cylinder depots



For storing gas cylinders outdoors in accordance with the regulations.

- » No safety distance around the gas cylinder depot necessary.
- » Good corrosion resistance with polyester powder coating RAL 9002 grey white on galvanised base material.
- » Robust construction made of sheet steel, material thickness 1.5 mm (0.6 inch).
- » 3-point locking system with door handle with security cylinder lock at an ergonomically favourable height.
- » Earthing possibility on the ceiling.
- » Chequer plate floor 4 mm (0.12 inch), including corrugation 4.5 mm (1.77 inch).
- » For each cylinder rack space, there are 2 penetrations in the ceiling, each Ø 22 mm (0.87 inch), for 13.5 (5,3 inch) PG fittings (closed with plastic plugs)
- » 2 horizontal installation rails for mounting fittings
- » One cylinder holder with one retaining belt per standing space.
- » Prepared for ground fixing
- » Natural ventilation in accordance with TRGS.
- » Labelling with warning symbol W19.

3.3



Intermediate shelf



Side shelf – 70-90040-115



Red-Box – 2.233.04

|   | M 1   | M 2                             | L 1                  | L 2                              | XL 1                 | XL 2                             |
|---|---|---------------------------------|----------------------|----------------------------------|----------------------|----------------------------------|
| <b>Ref. no.</b>   |   |                                 |                      |                                  |                      |                                  |
| <b>Gas cylinder depot</b>   | 70-200740-001                                   | 70-200740-003                   | 70-201040-001        | 70-201040-003                    | 70-201340-001        | 70-201340-003                    |
| <b>Details</b>  | 1 door  | 1 door with inspection window** | 2 doors              | 2 doors with inspection window** | 2 doors              | 2 doors with inspection window** |
| <b>Dimensions</b>   |   |                                 |                      |                                  |                      |                                  |
| Width x height  | [mm]<br>25.6 x 80.71                            | [mm]<br>25.6 x 80.71            | [mm]<br>37.4 x 80.71 | [mm]<br>37.4 x 80.71             | [mm]<br>49.2 x 80.71 | [mm]<br>49.2 x 80.71             |
| Depth   Depth incl. overhang  | [mm]<br>15.7   19.7                             | [mm]<br>15.7   19.7             | [mm]<br>15.7   19.7  | [mm]<br>15.7   19.7              | [mm]<br>15.7   19.7  | [mm]<br>15.7   19.7              |
| Weight  | [kg]<br>187.39                                  | [kg]<br>187.39                  | [kg]<br>227.08       | [kg]<br>227.08                   | [kg]<br>275.58       | [kg]<br>275.58                   |
| <b>Standing spaces/pressurised gas cylinders</b>                                  |   |                                 |                      |                                  |                      |                                  |
| Volumes/Ø [50 l/229 mm]<br>[13.21 gal/9.01 inch]                                  | 2   | 2                               | 3                    | 3                                | 4                    | 4                                |
| <b>Ref. no.</b>   |   |                                 |                      |                                  |                      |                                  |
| <b>Additional interior fittings</b>   | 70-90740-114                                    | 70-90740-114                    | 70-91040-114         | 70-91040-114                     | 70-91340-114         | 70-91340-114                     |
| Intermediate shelf, load bearing capacity* 150 kg/330.69 lbs                      |   |                                 |                      |                                  |                      |                                  |
| Side shelf with U-profile for all models, load bearing capacity* 40 kg/188.18 lbs | 70-90040-115                                    |                                 |                      |                                  |                      |                                  |
| Gas cylinder trolley  | See programme section 3.5 or www.dueperthal.com |                                 |                      |                                  |                      |                                  |
| Red-Box   | 2.233.04  |                                 |                      |                                  |                      |                                  |

\* Maximum load bearing capacity with evenly distributed load | \*\* one inspection window in each door wing

# Gas cylinder containers and boxes

## 3.4.1 Gas cylinder containers



Gas cylinder container - 7.80.128\* with roof and double wing gate - 7.80.328\*

For storing gas cylinders outdoors in accordance with the regulations. Stable frame construction - surface hot-dip galvanised according to EN ISO 1461.

- » Lockable wing gate.
- » Construction according to TRGS.
- » Prepared for ground fixing
- » Modular system with assembly instructions for self-assembly.



Holding device - 2x 7.80.198\* with chain



Gas cylinder rack - 2x 7.80.199\* individually or two on top of each other

### Ordering information/dimensions

| Max. number of gas cylinders, Ø 220 mm/8.66 inch | 32                                       | 48                           | 60                           | 78                            | 104                           |
|--|--|------------------------------|------------------------------|-------------------------------|-------------------------------|
| D x W  | [mm] 2100 x 1085<br>[inch] 82.68 x 42.72 | 2100 x 1500<br>82.68 x 95.06 | 2400 x 1500<br>94.49 x 95.06 | 3100 x 1500<br>122.05 x 95.06 | 3100 x 2100<br>122.05 x 82.68 |
| Height with roof                                 | [mm] 2180<br>[inch] 85.83                | 2180<br>85.83                | 2180<br>85.83                | 2180<br>85.83                 | 2180<br>85.83                 |
| <b>Ref. no.</b>                                  | <b>7.80.118*</b>                         | <b>7.80.124*</b>             | <b>7.80.128*</b>             | <b>7.80.136*</b>              | <b>7.80.154*</b>              |
| <b>Ref. no. Double-winged door</b>               | <b>7.80.318*</b>                         | <b>7.80.324*</b>             | <b>7.80.328*</b>             | <b>7.80.336*</b>              | <b>7.80.354*</b>              |

### Accessories

Holding device gas cylinders Ø 220 mm/8.66 inch

|   |   |           |           |           |           |
|---|---|-----------|-----------|-----------|-----------|
| Ref. no.  | 7.80.198*   | 7.80.198* | 7.80.198* | 7.80.198* | 7.80.198* |
| Gas cylinder rack for (W x D x H) 1300 x 1000 x 850 mm/51.18 x 39.37 x 33.46 inch |   |           |           |           |           |
| Ref. no.  | 7.80.199*   | 7.80.199* | 7.80.199* | 7.80.199* | 7.80.199* |
| Gas cylinder trolley  |   |           |           |           |           |
| Ref. no.  | See programme section 3.5 or <a href="http://www.dueperthal.com">www.dueperthal.com</a> |           |           |           |           |

## 3.4.2 Gas cylinder boxes



For storing gas cylinders outdoors in accordance with TRGS regulations.

- » Galvanised sheet steel.
- » Optionally available as a closed construction or with natural ventilation through perforated doors and side panels.
- » Including intermediate shelf.
- » Cylinder lock as a standard.
- » Disassembled upon delivery - easy installation.

### Ordering information/dimensions

| Number of doors/design | 1/perforated  | 2/perforated                               | 1/closed                                  | 2/closed                                   |
|------------------------|---|--|---|--|
| D x W x H              | [mm] 840 x 690 x 1475<br>[inch] 33.07 x 27.17 x 58.07 | 1680 x 690 x 1475<br>66.14 x 27.17 x 58.07 | 840 x 690 x 1475<br>33.07 x 27.17 x 58.07 | 1680 x 690 x 1475<br>66.14 x 27.17 x 58.07 |
| <b>Ref. no.</b>        | <b>7.90.100*</b>                                      | <b>7.90.150*</b>                           | <b>7.90.200*</b>                          | <b>7.90.250*</b>                           |

### Accessories

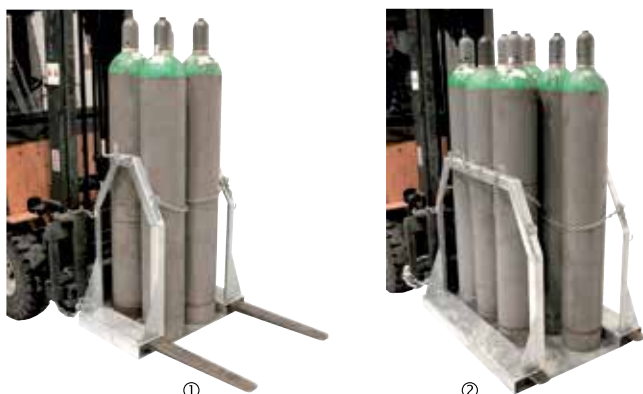
Gas cylinder trolley

|          |   |
|----------|---|
| Ref. no. | See programme section 3.5 or <a href="http://www.dueperthal.com">www.dueperthal.com</a> |
|----------|---|



# Gas cylinder handling

## 3.5.1 Gas cylinder pallets



Gas cylinder pallets ① - 7.00.800\* and ② - 7.00.810\*

For the safe, economic and effortless transport of 1 to 8 gas cylinders – surface hot-dip galvanised according to EN ISO 1461.

- » Sturdy base frame with forklift pockets.
- » Inner carcass of forklift pockets: 170 x 70 mm/6.7 x 2.76 inch (W x H), inner distance between forklift pockets 510 mm/20.08 inch.
- » Gas cylinders can be secured individually with chains.
- » Lateral tilt limiter.
- » With hook for hoses and screw caps.

### Ordering information/dimensions

| Max. number of gas cylinders, Ø 250 mm/9.84 inch | 4                  | 8                  |
|--|--------------------|--------------------|
| D x W x H [mm]                                   | 600 x 860 x 1000   | 1200 x 860 x 1000  |
|  | 23.6 x 33.9 x 39.4 | 47.2 x 33.9 x 39.4 |
| Load bearing capacity [kg]                       | 350                | 700                |
|  | 771.62             | 1543.24            |
| <b>Ref. no.</b>                                  | <b>7.00.800*</b>   | <b>7.00.810*</b>   |

3.4

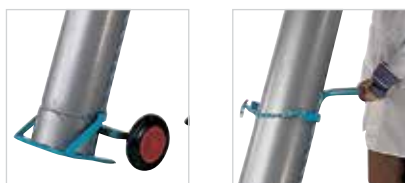
3.5

## 3.5.2 Gas cylinder trolley for 50 litre/13.2 gal gas cylinders



For the safe transport of a gas cylinder. Blue painted steel tube construction with solid rubber tyres.

- » Sturdy design.
- » Easy handling.
- » Including securing chain.
- » Red PVC handle for safe grip.



### Ordering information

Gas cylinder trolley for 50 litre/13.2 gal gas cylinders

|                 |                 |
|-----------------|-----------------|
| <b>Ref. no.</b> | <b>7.00.600</b> |
|-----------------|-----------------|

## 3.5.3 Gas cylinder trolley for 40 (10.56 gal)/50 litre (13.2 gal) gas cylinders



Gas cylinder trolley 7.00.630

For the safe transport of gas cylinders. Blue painted steel tube construction.

- » Sturdy design.
- » Easy handling.
- » Including securing chain.
- » Finger guard for safe grip.
- » Hose holder on the bars.
- » Optionally with lockable toolbox.

### Ordering information/dimensions

| Max. number of gas cylinders, Ø 229 mm/9.02 inch | 2               | 2               |
|--|-----------------|-----------------|
| Toolbox  | •               | —               |
| <b>Ref. no.</b>                                  | <b>7.00.630</b> | <b>7.00.620</b> |

# Gas cylinder handling

## 3.5.4 Gas cylinder trolley for 10 litre/2.64 gal gas cylinders



For the safe transport of small gas cylinders. Steel tube construction slate grey, with solid rubber tyres. Perfect for equipping gas cylinder cabinets such as SUPREME line plus, ECO line plus and depots.

- » Sturdy design.
- » Optimal radius of movement.
- » Easy handling.
- » Including securing belt.
- » Optionally with toolbox including suitable wrench for gas cylinder caps.

### Ordering information/dimensions

|  |                 |                 |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|
| Max. number of gas cylinders, 10 litres/2.64 gal | 1               | 1               | 2               | 2               |
| Toolbox  | •               | —               | •               | —               |
| Tyres  | Solid rubber    | Solid rubber    | Solid rubber    | Solid rubber    |
| <b>Bestell-Nr.</b>                               | <b>7.00.618</b> | <b>7.00.616</b> | <b>7.00.617</b> | <b>7.00.615</b> |

Gas cylinder trolley ① - 7.00.618 and ② - 7.00.616

## 3.5.5 Gas cylinder trolley for propane gas cylinders



For the safe transport of propane gas cylinders. Blue painted steel tube construction.

- » Sturdy design and easy handling.
- » Including securing chain.
- » Secure grip with finger guard or red PVC handle

### Ordering information/dimensions

|                              |                            |                             |
|------------------------------|----------------------------|-----------------------------|
| Max. number of gas cylinders | 1x 11 litres<br>1x 2.9 gal | 2x 33 litres<br>2x 8.72 gal |
| Tyres                        | Solid rubber               | Solid rubber                |
| <b>Ref. no.</b>              | <b>7.01.000</b>            | <b>7.01.010</b>             |

Gas cylinder trolley - 7.01.000



# Gas cylinder handling

## 3.5.6 Gas cylinder trolley for 20 litre/5.28 gal gas cylinders



For the safe transport of gas cylinders. Blue painted steel tube construction.

- » Sturdy design and easy handling.
- » Including securing chain.
- » Red PVC handle for safe grip.

### Ordering information/dimensions

|  |                 |
|--|-----------------|
| Max. number of gas cylinders, 20 litres/5.28 gal | 1               |
| Tyres  | Solid rubber    |
| <b>Ref. no.</b>                                  | <b>7.01.020</b> |

3.5

## 3.5.7 Gas cylinder trolley with tail wheel for 40 (10.56 gal)/50 litre (13.2 gal) gas cylinders



For the safe transport of gas cylinders. Blue painted steel tube construction. With fold-out tail wheel.

- » Optionally with lockable toolbox including hose and torch holder and two welding rod holders.
- » Finger guard for safe grip.

### Ordering information/dimensions

|  |                 |                 |
|--|-----------------|-----------------|
| Max. number of gas cylinders, 50 litres/13.2 gal | 2               | 2               |
| Toolbox  | •               | —               |
| Tyres  | Solid rubber    | Solid rubber    |
| <b>Ref. no.</b>                                  | <b>7.01.035</b> | <b>7.01.030</b> |

Gas cylinder trolley - 7.01.030



## Comfort Service Agreement

We thank you for the trust you have shown in purchasing DÜPERTHAL safety storage cabinets.

Please note that according to BetrSichV, TRGS 526, TRGS 510, ArbStättV and the maintenance interval indicated by the manufacturer, all safety-relevant features have to be checked by a qualified person once a in accordance with TRBS 1203. In order to meet these requirements and to guarantee the safe function of your safety storage cabinets, we recommend that the cabinets should be checked once a year by our service technicians.

### Your benefits: DÜPERTHAL Comfort\* Service Agreement

- » 5-year manufacturer's guarantee. \*\*
- » First inspection is free of charge.



### Your economic advantage

- » 5-year manufacturer's guarantee. \*\*
- » First inspection is free of charge.
- » Cost saving with regard to repairs, time expenditure is not billed separately (included in lump sum).
- » Travel expenses are included in the lump sum.
- » Guarantee systematic monitoring of your safety equipment for audits. We remind you about upcoming deadlines.

### Your technical advantage

- » Your cabinet's protective function is constantly maintained.
- » Support from trained and certified service technicians.
- » Inspection of safety storage cabinets and exhaust air filter systems.



**Preventive maintenance.**  
**Sustainable maintenance.**  
**Our service sets new standards.**

#### Your contact person - Service

Phone: +49 6188 9139-166

E-mail: [service@dueperthal.com](mailto:service@dueperthal.com)



DÜPERTHAL is certified acc. to  
DIN EN ISO 9001





**Customer:**

(please specify exact address and phone no.)

**Service agreement no.:**

between the recipient as the customer and the  
 DÜPERTHAL SICHERHEITSTECHNIK GmbH & Co. KG  
 Frankenstrasse 3  
 63791 Karlstein, Germany

In Germany, the annual inspection of safety storage cabinets including proof of the test is legally required by the BetrSichV, TRGS 526, TRGS 510, and the ArbStättV legislation. Employers are responsible for implementation.

**The DÜPERTHAL Comfort\* Service Agreement includes the following services:**

- » Annual safety inspection and maintenance
- » Test certificate and test labe
- » Time expenditure for repairs (spare parts are billed separately)
- » Travel expenses
- » 5-year manufacturer's guarantee\*\*



**Number of safety storage cabinets:**

(please enter quantity)

|           |  |
|-----------|--|
| 1         |  |
| 2-3       |  |
| 4 or more |  |

**Lump sum per safety storage cabinet/year:**

|  |
|--|
|  |
|  |
|  |

**Number of exhaust air filter systems:**

(please enter quantity)

|           |  |
|-----------|--|
| 1         |  |
| 2-3       |  |
| 4 or more |  |

**Lump sum per exhaust air filter system/year:**

|  |
|--|
|  |
|  |
|  |

The inspection and maintenance covers all safety-relevant parts, such as fire protection and air seals, fusible links, ventilation openings, door closers and locking systems as well as insulation. Furthermore, all mechanical components are checked to ensure that they are working properly and an exhaust air measurement is taken.

Deviations from this agreement are only valid if they have been agreed on in writing by both parties to the contract. Otherwise the service terms and conditions (supplement) must be complied with.

Karlstein,

Date

Place / Date

DÜPERTHAL SICHERHEITSTECHNIK GmbH & Co. KG

CLIENT

Date / Signature / Company stamp

Date / Signature / Company stamp

\* Only valid for cabinets not older than 2 years (from delivery date). \*\* Manufacturer's guarantee does not apply to cabinets of other manufacturers.

# Delivery checklist for safety storage cabinets

Simply complete and send back by e-mail to [info@dueperthal.com](mailto:info@dueperthal.com)

Dear Customer,

This checklist is part of the order. We would like to deliver and align your safety storage cabinets at the place of use. To ensure a timely and smooth delivery at the preferred installation location / place of use without complications, we need you to fill in the information below. If information is incomplete or received too late, substantial additional costs may arise, which we have to pass on to you. Please take notice of the delivery date mentioned in the order confirmation.

| 1. Order data    |  |
|------------------|--|
| <b>Customer</b>  |  |
| Customer no.:    |  |
| Company:         |  |
| Post code/city:  |  |
| Name:            |  |
| Phone:           |  |
| Department:      |  |
| <b>PO no:</b>    |  |
| <b>Order no:</b> |  |

| Delivery address                 |  |
|----------------------------------|--|
| Company:                         |  |
| Contact person on site:          |  |
| Phone:                           |  |
| Street:                          |  |
| Post code/city:                  |  |
| Cabinet model:                   |  |
| Dimensions:<br>(W x D x H in mm) |  |
| Weight:<br>(in kg)               |  |

| 2. Installation location and delivery date |   |
|--|---|
| 2.1  | When will the rooms/<br>transport routes be ready for use?<br>(This includes all lifts, staircases, corridors on the way) |
| 2.2  | Delivery possible from _____ to _____   |
| 2.3  | Installation location (building, room):   |
| 2.4  | Person to be notified by phone:   |
| 2.5  | Phone:  |

| 3. Access route/transport route outside the building |   |
|--|---|
| 3.1  | Is access possible with a 26 t truck, min. dimensions 3 x 1.2 x 4 m<br>(W x L x H)?   |
|  | <input type="checkbox"/> Yes, road width approx. W _____ x H _____ m <input type="checkbox"/> no                                  |
|  | <input type="checkbox"/> Roofing – max. clearance height only _____ m   |
|  | <input type="checkbox"/> Bridge – max. clearance height _____ m   |
|  | <input type="checkbox"/> Blocked, because _____   |
|  | <input type="checkbox"/> Route not suitable, because _____  |
| 3.2  | Distance to the building? _____ m   |
| 3.3  | Road surface?   |
| 3.4  | Pedestrian zone <input type="checkbox"/> yes <input type="checkbox"/> no. Delivery time from _____ to _____                       |
| 3.5  | At ground level <input type="checkbox"/> yes <input type="checkbox"/> no  |
| 3.5  | Steps into the building <input type="checkbox"/> yes, _____ steps <input type="checkbox"/> no                                     |
| 3.6  | Loading ramp available <input type="checkbox"/> yes <input type="checkbox"/> no   |
| 3.7  | Can the truck bridge the steps by<br>means of its rear lifting platform? <input type="checkbox"/> yes <input type="checkbox"/> no |
| 3.8  | Parking facilities <input type="checkbox"/> yes <input type="checkbox"/> no   |
| 3.9  | Forklift truck & driver available <input type="checkbox"/> yes <input type="checkbox"/> no  |
| 3.10   | Best access route by road?  |

| 4. Transport route inside the building |   |
|--|---|
| 4.1                                    | Is the load bearing capacity of the transport route sufficient for<br>the weight listed above? <input type="checkbox"/> yes <input type="checkbox"/> no |
| 4.2                                    | Installation location on ground floor <input type="checkbox"/> yes <input type="checkbox"/> no  |
| 4.3                                    | Installation location in basement/on upper floor <input type="checkbox"/> yes, _____ floor  |

| 5. Lift |  |
|---------|--|
| 5.1     | Lift available? <input type="checkbox"/> yes <input type="checkbox"/> no |
| 5.2     | Lift usable? <input type="checkbox"/> yes <input type="checkbox"/> no    |
| 5.3     | Load bearing capacity in kg  |
| 5.4     | Usable inner carcass (W x D x H)   |
| 5.5     | Door clearance dimensions (W x H)  |



## 6. Stairs

6.1 Transport by stairs?

yes, \_\_\_\_\_ floor  no

**Note:** In case of transport to buildings without a service lift and delivery above ground floor, any additional costs arising for additional personnel, equipment, load crane, etc. will be borne by the customer and will be billed separately at cost.

6.2 What kind of stairs are there on site? Please mark with a cross!

**Version 1**

A = Stair width = \_\_\_\_\_ cm

B = Landing depth = \_\_\_\_\_ cm

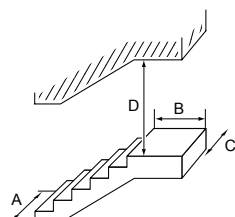
C = Landing width = \_\_\_\_\_ cm

D = Lintel height = \_\_\_\_\_ cm

No. of steps = \_\_\_\_\_

Step depth = \_\_\_\_\_ cm

Step height = \_\_\_\_\_ cm



**Version 2**

A = Stair width = \_\_\_\_\_ cm

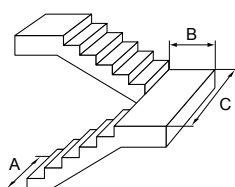
B = Landing depth = \_\_\_\_\_ cm

C = Landing width = \_\_\_\_\_ cm

No. of steps = \_\_\_\_\_

Step depth = \_\_\_\_\_ cm

Step height = \_\_\_\_\_ cm



**Version 3**

A = Stair width = \_\_\_\_\_ cm

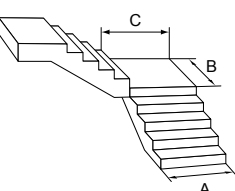
B = Landing depth = \_\_\_\_\_ cm

C = Landing width = \_\_\_\_\_ cm

No. of steps = \_\_\_\_\_

Step depth = \_\_\_\_\_ cm

Step height = \_\_\_\_\_ cm



**When giving the dimensions, please consider all obstructions like banisters, radiators or similar objects!**

6.3 Do all stairs along the transport route correspond to the version marked above?

yes  no. Differences:

6.4 Other stairs:

Description:

Sketch

**Note:** Delivery via a spiral staircase is only conditionally possible; please arrange with us a transport route inspection by our carrier in good time!

6.6 Number of stairs in total?

6.7 Type of stairs (e.g. concrete, wood, steel, etc.)?

To the building \_\_\_\_\_

Inside the building \_\_\_\_\_

**Note:** Rubber edges on steps may be damaged; we cannot accept liability for this.

6.8 Protruding edges  yes \_\_\_\_\_ cm overhang  no

6.9 Can each individual step be loaded with the cabinet's weight?  yes  no

## 7. Doors

7.1 How many doors are there along the transport route?

| 7.2 Door dimensions | Clear height [cm] | Clear width [cm] | Space available behind [m] |
|---------------------|-------------------|------------------|----------------------------|
| Door 1              |                   |                  |                            |
| Door 2              |                   |                  |                            |
| Door 3              |                   |                  |                            |
| Door 4              |                   |                  |                            |
| Door 5              |                   |                  |                            |

## 8. Requirements for the installation location/ceiling load

Please take into account the allowable ceiling/floor load at the installation location for all safety storage cabinets. In particular, the SUPREME plus XL and XXL safety cabinets for pressurised gas cylinders may not be installed without consulting a structural engineer first if the ceiling load is less than 600 kg/m<sup>2</sup>.

8.1 The surface must be level and flat and be able to bear the weight of the safety cabinet when fully loaded. Is the load bearing capacity of the installation location sufficient for the weight listed above?  
 yes  no

8.2 Is the floor at the installation location free of cables and underfloor heating?  
 yes  no

**Note:** Furthermore, the installation location must ensure that the safety storage cabinet

- cannot be damaged by vehicles.
- is not exposed to any direct or indirect heat source.
- is protected against moisture.
- is not exposed to an operating temperature below -5 °C or above +45 °C.

The lump sum price quoted for transport is subject to the condition that the installation location (place of use) is freely accessible and it is possible to complete the transport on site. The customer assures that they are aware of the dimensions of the safety storage cabinets to be delivered and that their information regarding the conditions on site at the place of delivery is completely accurate. Any additional costs will be borne by the customer. These may arise from differences between the information given above and the actual situation on site and consequent further action necessary to be taken, such as exceeding the delivery time and/or interventions in the building fabric (widening of door openings, dismantling and reassembly of banisters, etc.) or the installation of a crane to bring the safety storage cabinet to the place requested by the customer. If the transport company refuses transport for reasons of risk and the customer nevertheless insists on installation, all of the customer's rights of recourse are cancelled should the mentioned risks materialise, unless a case of deliberate intent or gross negligence exists.

Date / Signature / Company stamp

Offering you a personal service

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## Intelligent technology – Great service

There is more to safety than simply buying a safety storage cabinet. This is why we offer you our certified knowledge, comprehensive service and expertise – supporting you before, during and especially after your decision to buy a DÜPERTHAL safety storage cabinet. For a reassuring feeling of having done everything within your power.

**Individual advice.**  
**Intelligent solutions.**  
**Safety requires experts.**

### **Your contact person – for Germany**

Phone: +49 6188 9139-0

E-mail: [info@dueperthal.com](mailto:info@dueperthal.com)

### **Your contact person – for all other countries**

Phone: +49 6188 9139-150

E-mail: [info@dueperthal.com](mailto:info@dueperthal.com)

**Preventive inspections.**  
**Sustainable maintenance.**  
**Our service sets new standards.**

### **Your contact person – Technical Service**

Phone: +49 6188 9139-166

E-mail: [service@dueperthal.com](mailto:service@dueperthal.com)



**Safety means responsibility.**

DÜPERTHAL is one of the leading manufacturers of safety storage cabinets. There are good reasons for choosing DÜPERTHAL safety technology. Find out more about us and our entire product range on [www.dueperthal.com](http://www.dueperthal.com).

**We look forward to your call!**

Mondays to Thursdays from 8.00 am to 5.00 pm  
Fridays from 8.00 am to 4.00 pm

DÜPERTHAL Sicherheitstechnik GmbH & Co. KG  
Frankenstrasse 3 | 63791 Karlstein | Germany



# Metric Equivalents

## Commonly used measurements

[rounded]

Volume / Liquid measure equivalents

### Containers & Drum Sizes

|                |             |             |            |          |            |          |          |          |          |          |            |      |     |   |
|----------------|-------------|-------------|------------|----------|------------|----------|----------|----------|----------|----------|------------|------|-----|---|
| [ounce]        | 4           | 8           | 16         | 32       | [pint]     | 1        | [quart]  | 1        | 2        | [gallon] | 1          | 1.32 | 1 ½ | 2 |
| <b>[litre]</b> | <b>0.12</b> | <b>0.24</b> | <b>0.5</b> | <b>1</b> | <b>0.5</b> | <b>1</b> | <b>2</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7.5</b> |      |     |   |

|                |            |           |           |           |           |           |           |           |           |           |           |           |            |            |
|----------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| [gallon]       | 2 ½        | 2.64      | 3         | 3 ½       | 4         | 5         | 6         | 6.6       | 8         | 10        | 12        | 15.9      | 30         | 55         |
| <b>[litre]</b> | <b>9.5</b> | <b>10</b> | <b>11</b> | <b>13</b> | <b>15</b> | <b>19</b> | <b>23</b> | <b>25</b> | <b>30</b> | <b>38</b> | <b>45</b> | <b>60</b> | <b>110</b> | <b>200</b> |

|             |          |           |           |           |           |           |
|-------------|----------|-----------|-----------|-----------|-----------|-----------|
| [inch]      | ¼        | ⅜         | ½         | ¾         | 1 ½       | 2         |
| <b>[mm]</b> | <b>6</b> | <b>10</b> | <b>13</b> | <b>19</b> | <b>38</b> | <b>51</b> |

### Sheet Steel Sizes

|               |            |          |            |            |
|---------------|------------|----------|------------|------------|
| [gauge steel] | 24         | 18       | 16         | 14         |
| <b>[mm]</b>   | <b>0.5</b> | <b>1</b> | <b>1.5</b> | <b>1.9</b> |

### Weight Equivalents

|             |           |           |           |            |            |            |            |
|-------------|-----------|-----------|-----------|------------|------------|------------|------------|
| [pounds]    | 60        | 132       | 165       | 350        | 600        | 1000       | 1500       |
| <b>[kg]</b> | <b>27</b> | <b>60</b> | <b>75</b> | <b>159</b> | <b>272</b> | <b>454</b> | <b>680</b> |

### Pressure and Temperature

|              |            |             |                  |           |            |            |            |            |            |            |             |             |
|--------------|------------|-------------|------------------|-----------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| [psig]       | 3          | 5           | [Fahrenheit]     | 34°       | 50°        | 59°        | 68°        | 122°       | 158°       | 165°       | 325°        | 392°        |
| <b>[bar]</b> | <b>0.2</b> | <b>0.35</b> | <b>[Celcius]</b> | <b>1°</b> | <b>10°</b> | <b>15°</b> | <b>20°</b> | <b>50°</b> | <b>70°</b> | <b>74°</b> | <b>163°</b> | <b>200°</b> |



### Conversion Chart

Fahrenheit to Celcius:  
 $(^{\circ}\text{F} - 32) \times 0.5555 = ^{\circ}\text{C}$

Inches to Millimeters:  
Multiply by 25.4

Inches to Centimeters:  
Multiply by 2.54

Feet to Meters:  
Multiply by 0.3048

Feet to Centimeters:  
Multiply by 30.48

Feet to Millimeters:  
Multiply by 304.8

Ounces to Grams:  
Multiply by 28.35

Pounds to Kilograms:  
Multiply by 0.4536

Gallons to Litres:  
Multiply by 3.785

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