EN

EP.V.34173.00 | 10/2023

asecos®

G LINE

USER MANUAL

Gas cylinder cabinets
according to EN 14470-2

5 YEARS WARRANTY
Upon conclusion of an asecos service and maintenance agreement (BasicPlus tari) with a fixed term of 5 years, you will get a warranty extension for a maximum of 5 years for your safety storage cabinet.
For detailed information about our warranties please visit:

5 Years Warranty*

G LINE

G-CLASSIC-30

G30.205.140

G30.205.120

G30.205.090

G30.205.060
G30.205.060.R

G-ULTIMATE-90

G90.205.140

G90.205.120

G90.205.090

G90.205.060
G90.205.060.R

G90.205.060.2F
G90.205.060.2F.R

G90.145.060
G90.145.060.R

asecos GmbH
Customer service
Weiherfeldsiedlung 16–18
D-63584 Gründau

Fax: +49 60 51 - 92 20-10
email: service asecos.com

YOUR PERSONAL DOCUMENTATION TO THE asecos SAFETY CABINET

Dear Customer,

you have made a decisive investment in safety for your company by purchasing this asecos safety storage cabinet. You now own an innovative product made of top-quality materials guaranteeing the highest quality standards.

asecos safety storage cabinets have complete authorisation documents. We archive the authorisation documents for every individual cabinet, keeping them ready for you should you ever need them (e.g. for a works inspection or similar). Simply request them using this form.

Tear of or copy that page and return to us by fax with your address and serial number of the cabinet on it.

Yours sincerely
asecos GmbH

Contact

Company

Street | **Postal code** | **Town**

Name of contact person

email | **Phone No.**

Serial numbers of safety storage cabinets

.....	.....	.....
.....	.....	.....
.....	.....	.....

EN

OPERATING INSTRUCTIONS

Dear customer,

Thank you very much for purchasing a safety storage cabinet from our company, with which you have made a decisive investment in the safety within your company. Our safety storage cabinets make the storage of hazardous materials at the workplace safe and convenient for you.

Please read these operating instructions very carefully. Get to know the advantages and simple operability of our safety storage cabinets in detail. This simplifies the daily handling of hazardous materials for you.

Many thanks
Your asecos team

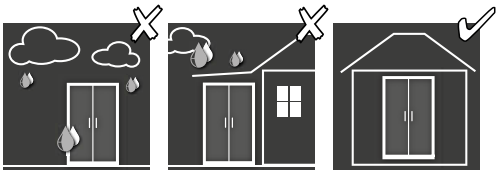
asecos

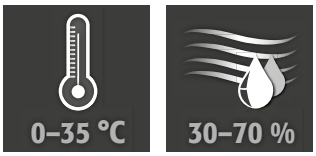
1. NOTES ▪ GUIDELINES ▪ GUARANTEE

1.1. GENERAL SAFETY NOTES

- Observe applicable statutes and regulations, and the notes in these operating instructions, when handling hazardous materials
- The on-site installation conditions are to be observed (e.g. bolting the cabinets to the building).
- The instructions of the supervisory engineering department must be followed.
- Observe accident prevention regulations and workplace ordinance
- **Ensure that the necessary safety checks are only carried out by authorised staff using original spare parts**
- Only use the cabinet after having been properly instructed; access is to be forbidden to unauthorised persons.
- By assigning trained/authorised technical personnel you can prevent the malfunctions, damage and corrosion damage that result from inappropriate transport.
- The pivoting area of the doors is to be kept free at all times; doors are to be kept closed
- Observe the upper limits for stored quantities, loading etc.
- To avoid explosive atmospheres and harmful vapours, sufficient technical ventilation is strongly recommended. Please observe the instructions for connection to an exhaust air system.
- Before the initial commissioning, the safety storage cabinet is to be examined by the user for possible damage.

Set-up requirements





1.2. GUARANTEE

The guarantee for this product is agreed between you (the customer) and your dealer (the seller). As the manufacturer, asecos guarantees the products listed in the operating instructions for a period of 24 months from the date of delivery. All model safety equipment are subject to a compulsory annual inspection by specialised staff authorised by the manufacturer. Otherwise the customer's guarantee claim against the manufacturer expires.

1.3. CABINET DETAILS

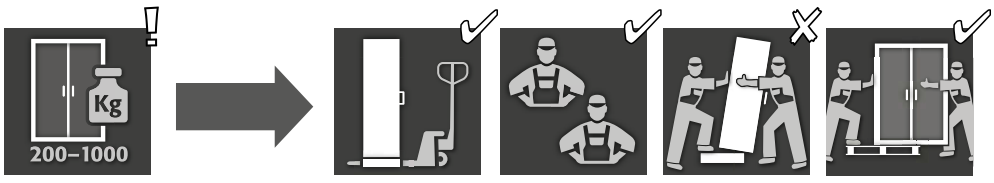
Cabinet data: logbook (included with the cabinet)
Technical drawing: see appenidix
Technical data: table in appendix

A complete overview of the models can be found at the start of the operating instructions.

G-CLASSIC-30 ▪ G-ULTIMATE-90
These models are tested, certified and marked according to requirements of BS EN 14470-2. They are intended for the storage and emptying of gas cylinders in buildings in accordance with the valid national regulations.

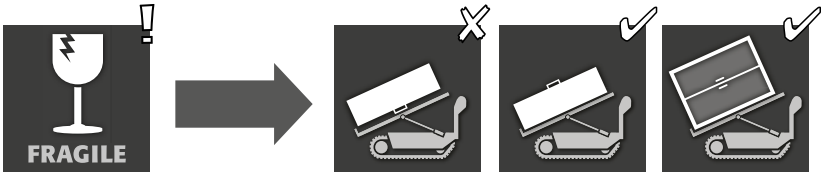
2. TRANSPORT

2.1. IN GENERAL



CAUTION:
Transport the cabinet in an upright position on a pallet truck, tied and secured against slipping, until the final place of installation is reached.The transport locks in the door joints may only be removed directly at the place of installation! Inappropriate transport can lead to concealed damage to the fire protection insulation! We can only guarantee the necessary quality if the cabinet is transported to the place of its use by our specially trained staff.

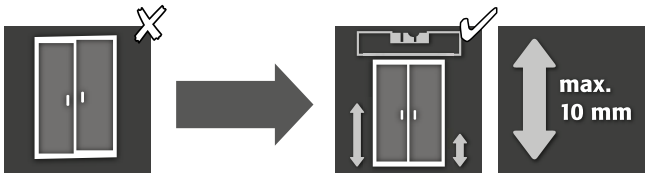
2.2. TILTING THE CABINET

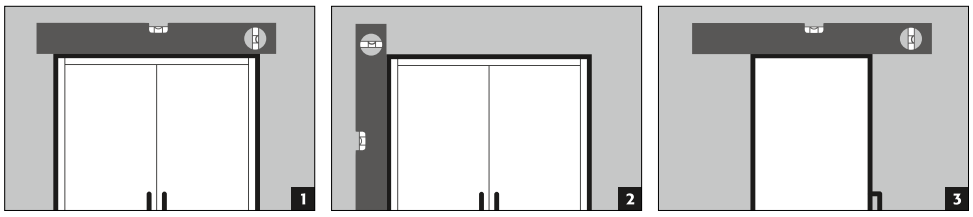


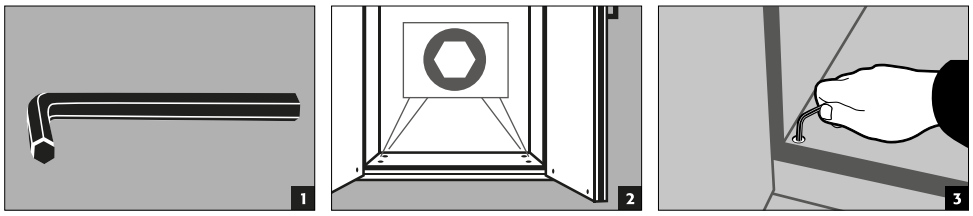
CAUTION:
Tilting the cabinet may only be done without jolts!

3. ERECTION ▪ COMMISSIONING ▪ FUNCTION

3.1. ALIGNMENT OF THE CABINETS







3.2. COMMISSIONING

- Before putting into operation for the first time, the user must carry out an examination of the safety storage cabinet for possible damage, such as defective or loose sealing elements, correct alignment and perfect functioning of the door elements.
  Use the cabinet and accessories only if they are in an orderly condition.

4. CLOSING MECHANISMS

4.1. TYPES OF CLOSING

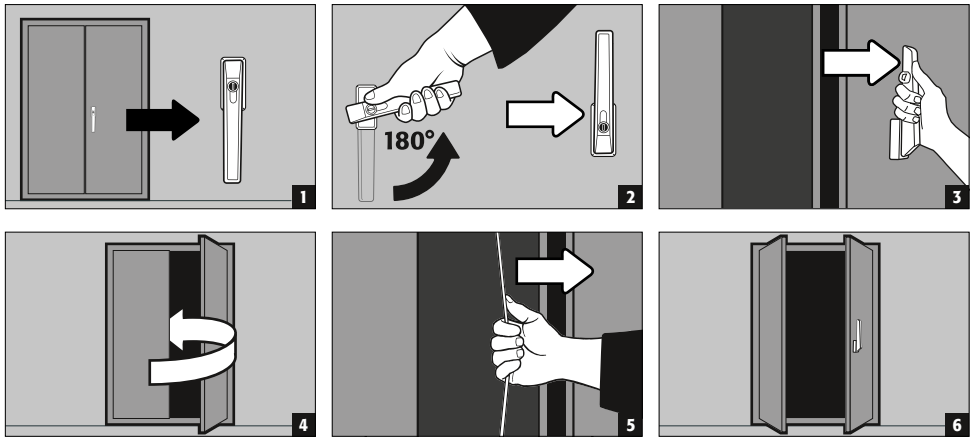
Doors closable only by hand

CYLINDER LOCK (suitable for master key systems)

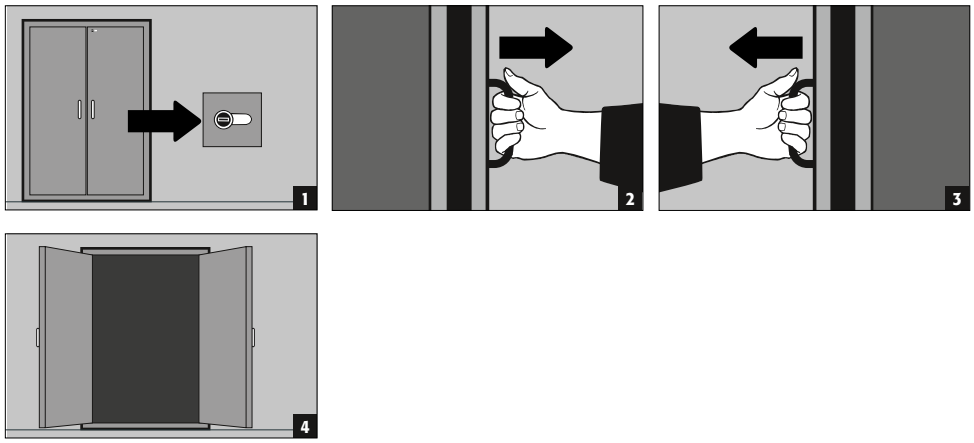
ATTENTION:
The owner/user must ensure that all doors are kept closed whenever the contents of the cabinet are not being accessed. In general, it must be noted that the cabinets do not possess an emergency unlocking facility. This means that persons trapped inside the cabinet cannot free themselves!

4.2. OPENING OF DOUBLE WING DOOR

G-ULTIMATE-90



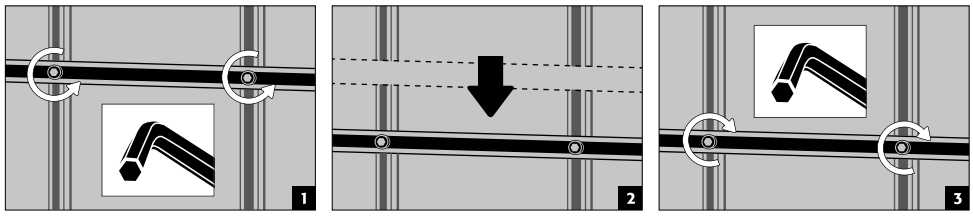
G-CLASSIC-30



5. INTERIOR FITTINGS

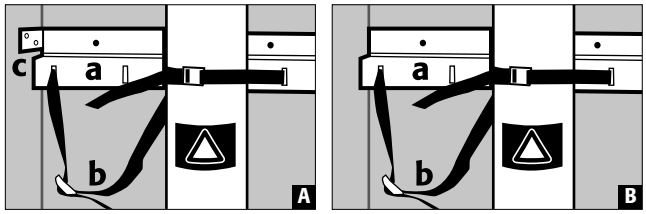
5.1. MOUNTING RAILS

- for fittings for pressurised gases, height-adjustable



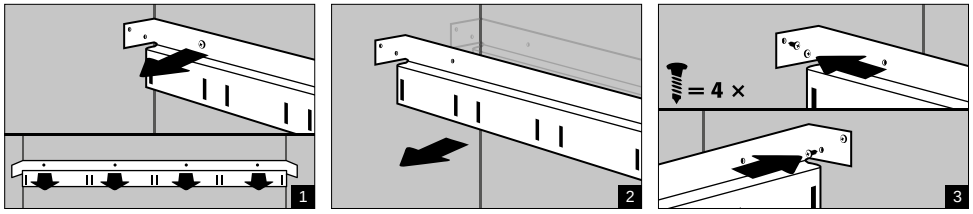
5.2. CYLINDER RETAINER

[A] G-ULTIMATE-90
[B] G-CLASSIC-30

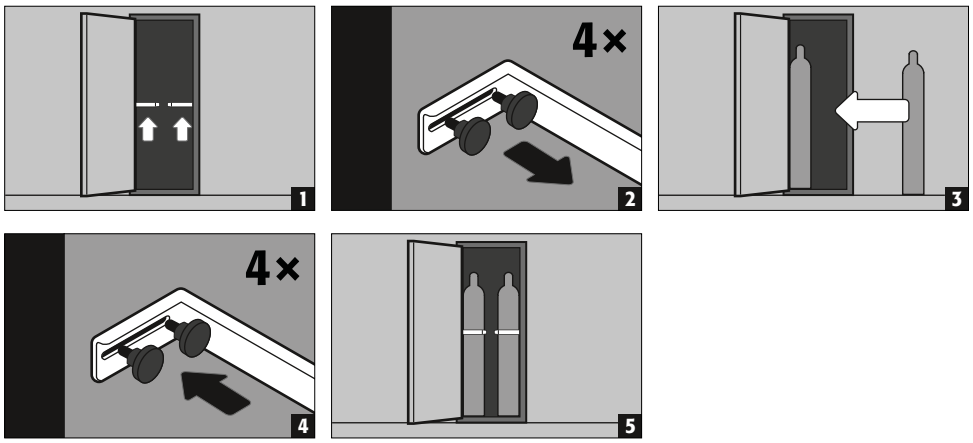


a permanently mounted on the rear wall
b tension belts for securing the gas cylinders
c adjustable in depth (G-ULTIMATE-90)

Adjustable in depth with G-ULTIMATE-90

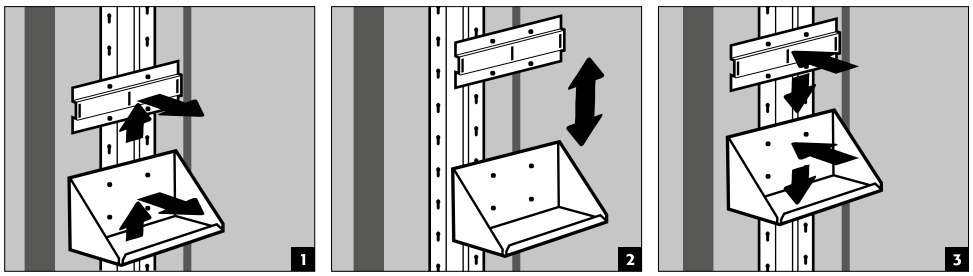


Cylinder retainer G90.205.060.2F



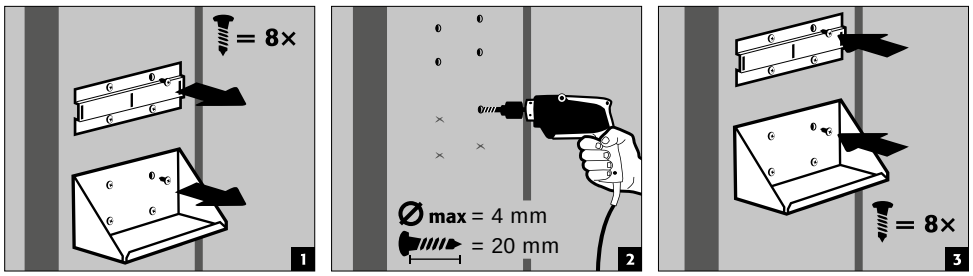
5.3. CYLINDER RETAINER SIDEWALL

SIDE CYLINDER RETAINER (adjustable without tools)



- is hooked into a mounting rail and is adjustable in height

SIDE CYLINDER RETAINER (bolted)



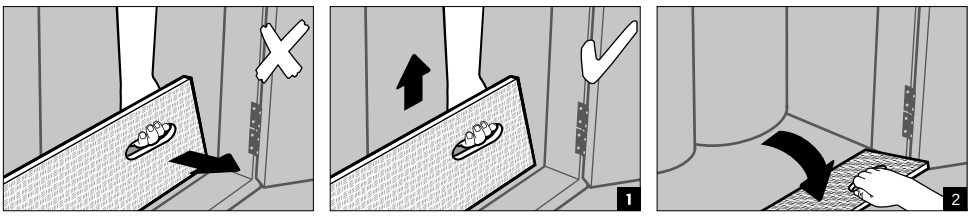
- is adjustable in height and bolted to the side wall

NOTE Model G90.205.060.2F(R)
Due to the use of special fire protection panels, it is strictly forbidden to mount components or drill holes on the side walls!

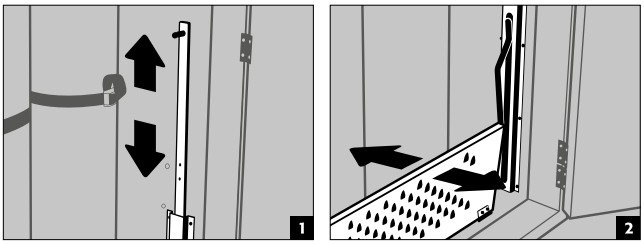
5.4. ROLLING RAMP

- latches automatically in the folded condition

STANDARD



COMFORT



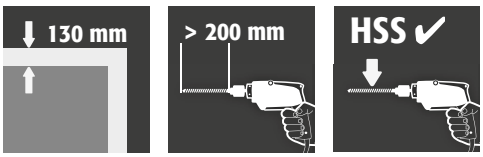
5.5. SHELF AND HEAVY DUTY GRID

The shelf or heavy duty grid will be installed in the factory at a height of 1100 mm. Special positions are possible but require prior technical clarifications as well as the creation of a chargeable approval / assembly drawing.

5.6. SHELF, INCLINED VERSION

Storage of small gas cylinders
The inclined shelves are installed in the factory in a predefined position. By default it is possible to store gas cylinders with a length of up to 590 mm and a diameter of 100 mm. The storage of gas cylinders with different dimensions as well as a special positioning of the shelves is possible, however this will require a prior technical clarification as well as the creation of a chargeable approval / assembly drawing.

6. PIPE / CABLE LEADTHROUGH



CAUTION
Do not use wood or flat drills. The exclusive type of drill is HSS.

6.1. DIAMETER / NUMBER OF PIPELINES / CABLES

NOTE
The max. permissible diameters according to DIN EN 14470-2 must be observed!

- Outer diameter 10 mm for pipes
- Outer diameter 20 mm for cable

The number of passes shall be reduced to the minimum necessary.
A maximum of 3 pipe penetrations and 2 cable penetrations per compressed gas cylinder are permitted.

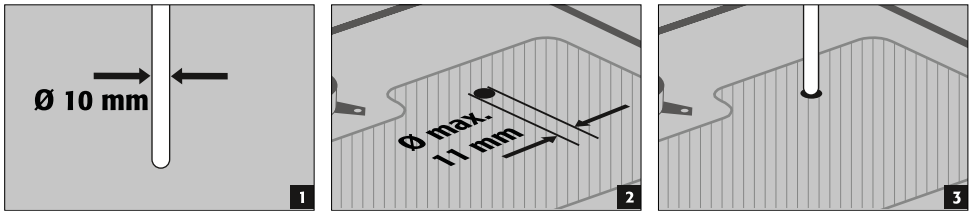
6.2. PIPELINE MATERIAL

It is recommended to use the tubes made of stainless steel or a material with similar thermal conductivity to maintain the fire resistance determined and specified during the test. The use of copper pipes with a maximum outer diameter of 10 mm is permitted without negatively affecting the tested fire resistance of the cabinets.

6.3. DRILL HOLES AND DRILLING DISTANCES

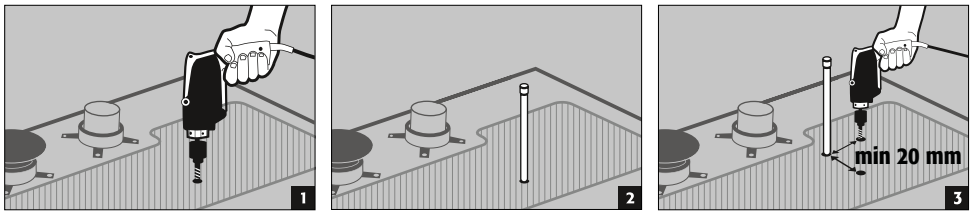
The drill hole may be drilled max. 1 mm larger than the outer diameter of the pipeline or electric cable used. The pipeline or cable can be routed through the cabinet ceiling without any further insulation measures.

Example



- Pipeline with 10 mm outer diameter = diameter from borehole 11 mm
- Cable with 20 mm outer diameter = diameter from drill hole 21 mm

CAUTION
A distance of min. 20 mm on all sides between the holes must be observed.



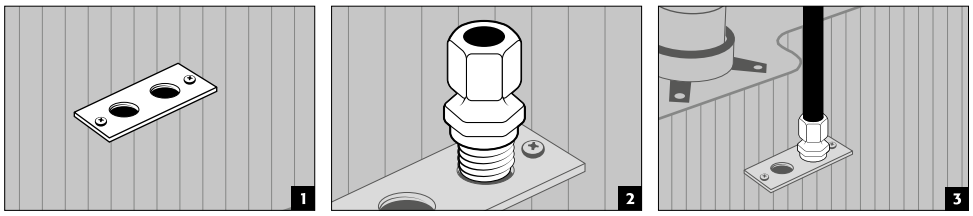
6.4. IMPLEMENTATION AREAS

The possible feed-through area for pipes and cables through the cabinet ceiling is marked accordingly on the inside and outside.

- The holes can be drilled from both directions (from the inside to the outside or vice versa)
- Note, however, that depending on the pressure during drilling, the hole may break out on the opposite side. For optical reasons, drilling from the inside out is therefore recommended.
- When drilling from the inside, you must maintain a distance of at least 5 cm from the rear wall. If you need to drill further back, drilling is then only possible from the outside in.

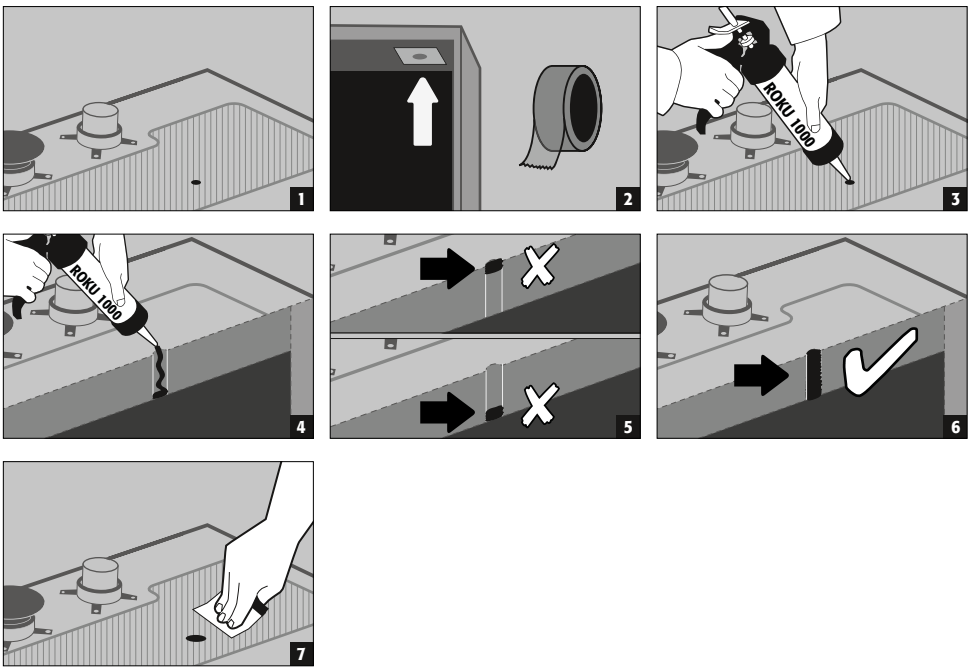
6.5. ERMETO SCREW CONNECTION

- Thanks to the R3/8" internal threads a conventional ermeto screw connection can be mounted in the second step.



6.6. CLOSING OPEN HOLES

CAUTION:
The max. permissible lead-through diameters in accordance with BS EN 14470-2 (10 mm for pipes, 20 mm for cables) are to be observed!
All unused holes in the cabinet wall must be properly sealed with suitable fire protection putty (ROKU 1000, order no. 6520) over the full area and the complete wall thickness.
It is recommendable to manufacture the pipes from rustproof stainless steel or a material with similar conductive properties in order to maintain the fire resistance characteristics established and specified during the test.



7. STORAGE

- The total volume of the stored gas cylinders must not exceed 210 l + 10 l (purging gas cylinder).

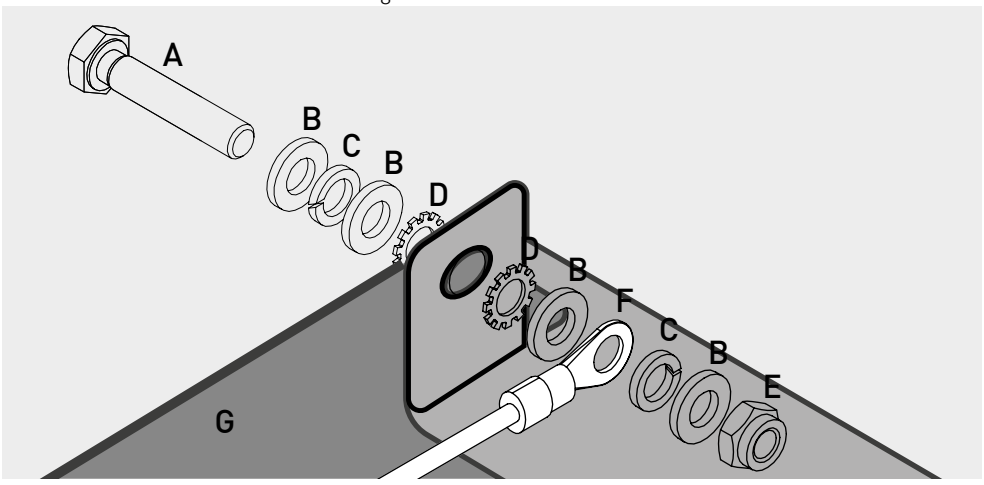
Applicable for all models: Depending on the type class of the cabinet, observe the respective valid national regulations!

8. EARTHING

8.1. GROUND CONNECTION

G-ULTIMATE-90
All G-ULTIMATE-90 models have a ground connection. The cabinet body (side and roof panels) is metallically conductively connected to each other via the ground connection. The ground connection is prepared for the creation of the on-site potential equalization. The corresponding material is included with the product and must be mounted on site at the appropriate location on the head section.

G-CLASSIC-30
The G-CLASSIC-30 models do not have a ground connection.



Legende	
A 1 × screw M6×30 **B** 4 × washer Ø 6,4 **C** 2 × spring washer Ø 6,4 **D** 2 × serrated lock washer Ø 6,4	**E** 1 × nut with clamping part **F** earthing wire with ring cable lug (on-site connection) **G** metal part of the safety storage cabinet

8.2. GROUNDING PREMIUM

Only available in conjunction with cabinet for factory assembly.
Optionally, the G-ULTIMATE-90 cabinets are equipped as follows for an additional charge:

- additional metallic conductive connection of door plates, door handles and baseboard with the cabinet body (article 39621 / HF.E.34157)

9. VENTILATION

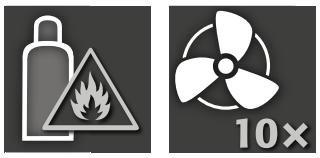
9.1. GENERAL FACTS

- If installed on an exhaust system, a check must be carried out to ensure proper connection to the system (e.g. using a smoke tube)

NOTES
The fire protection valves near the supply and extraction air connections are safety and maintenance-relevant components.

CAUTION:
In the case of gas cylinder cabinets that are connected to a technical exhaust system, the minimum air recirculation rate must be fulfilled according to BS EN 14470-2. The ventilation must be permanent in operation and must lead out to a safe place in the open air. The pressure drop of the cabinet must not exceed 150 Pa. The inflow velocity of the air must be at least 20 cm/s.

Minimum air recirculation rate during storage of:



flammable/oxidizing gases

toxic gases

9.2. NOTES FOR FIRE PROTECTION COLLARS ▪ AIR VENTS ▪ FIRE

PROTECTION VALVES

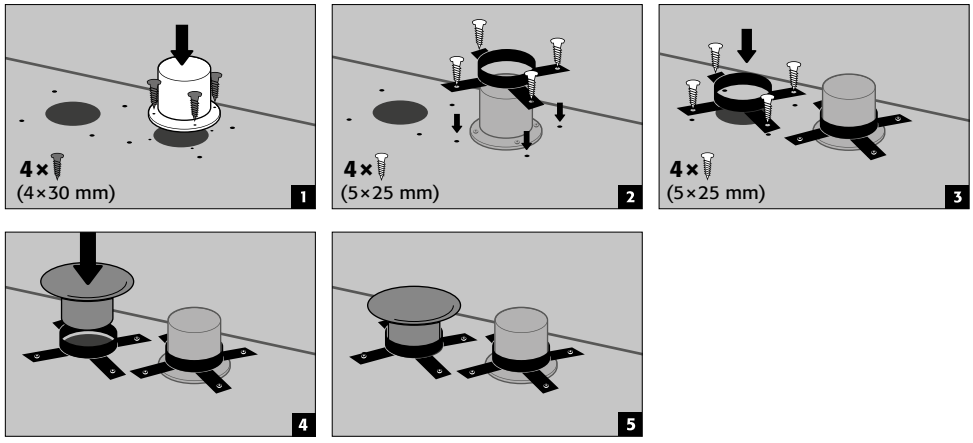
NOTE for mounting the fire protection collars, ventilation nozzles and fire protection valves

The fire protection collars, ventilation nozzles or fire protection valves are not mounted at the factory for transport reasons and are included with the cabinet.

- The fire protection valves/collars are also a decisive factor for the tested fire resistance of the cabinets in case of fire!
- It is therefore essential that these are fitted to the openings for supply and exhaust air after the safety storage cabinet has been installed at the place of use.
- The fire protection collars, ventilation nozzles or fire protection valves must also be installed if no technical ventilation of the safety cabinet is to take place!
- Any fire protection seals in the holes must not be removed! The connection to a technical exhaust air system is always made at the connection piece / fire protection valve on the right-hand side (seen from the front).

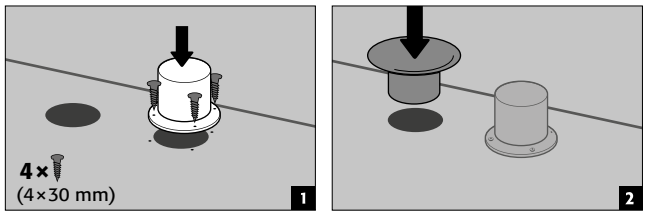
9.3. MONTAGE OF FIRE PROTECTION SLEEVE

FOR MODELS:
G90.205.140
G90.205.120



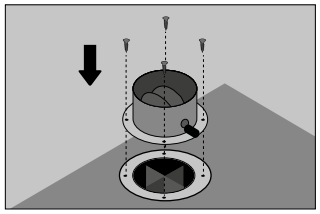
9.4. INSTALLATION OF THE VENTILATION SOCKET

For Models:
G90.205.090
G90.205.060(2F)



9.5. INSTALLATION OF THE FIRE PROTECTION VALVES

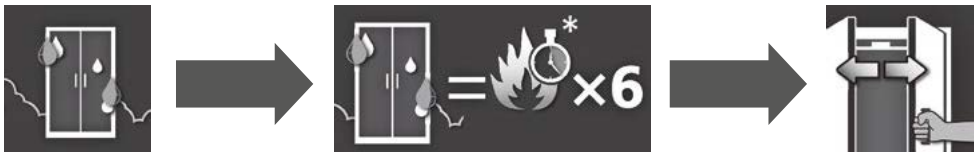
G-CLASSIC-30



After installation of the safety cabinet at the final point of use the fire protection valves (enclosed in the cabinet) which have been demounted to avoid transport damages have to be fixed on the air inlet and outlet again. The valves have also to be mounted even if there will be no technical ventilation of the safety cabinet! For mounting of the valves (see picture) position them on the air inlet and outlet and use the screws enclosed (4 pieces/valve) to fix them on the cabinet top (do not remove the fire protection sealings already installed in the air inlet and outlet!

10. FIRE ▪ DISPOSAL

10.1. OPENING THE CABINET AFTER THE FIRE



ATTENTION:
Only authorised personnel (e.g. fire brigade) may open the cabinet!
Depending upon the duration of the fire an ignitable vapour/air mixture may have formed; therefore remove all sources of ignition within a 10 metre radius of the cabinet before opening it.
Use only spark-free tools !
Open the cabinets with extreme caution !

10.2. DISPOSAL

The models can be disposed of once they have been dismantled and the materials sorted.

11. SAFETY CHECKS

As safety equipment the cabinets have to be checked for safety at least once per year. The next checking date can be taken from the service sticker on the outside of the door. This annual check can be carried out with the necessary care, and for securing your warranty claims in the case of fire, only by an authorised asecos employee (refer also to our service brochure regarding this).

In addition, we recommend that you carry out a daily and monthly functional check:

- perfect function of the doors:
  - hinges
  - locking system
  - door closer
  - door open arrest system
- correct seating and condition of the fire protection seals

Case of damage
In case of damage please contact your dealer in order to have the cabinet repaired using original spare parts. The cabinets can be cleaned with a mild household cleaner and a soft cloth.

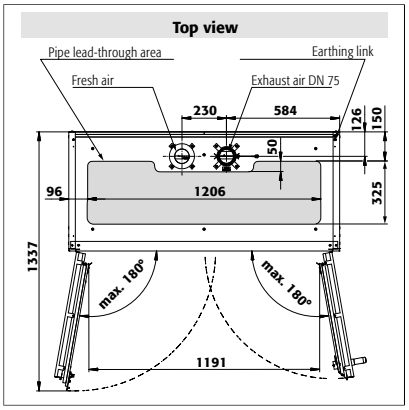
11.1. WEARING PARTS

Various safety-related components of the safety storage cabinet are wearing parts and must be replaced at regular intervals by asecos Service. A list of the parts affected for your safety cabinet is available on request from service@asecos.com.

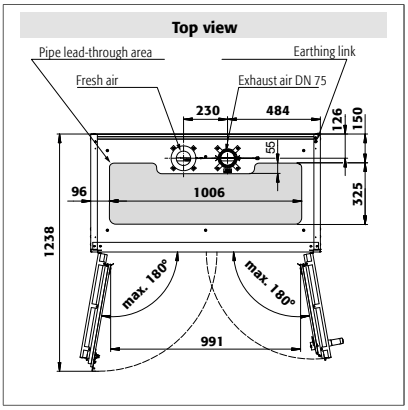
11.2. CONTACT

CONTACT:
In the case of defects or complaints about our products (within and also after the warranty period), and for requesting safety checks or taking out a service contract, please contact our service hotline on:
Tel: +44 1785 22 70-90 | info@asecos.co.uk (for great Britain and Ireland)
Tel: +49 1805 92 20 92 | service@asecos.com (international)

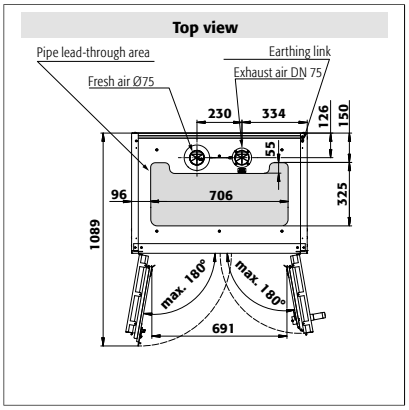
12. TECHNICAL DRAWING



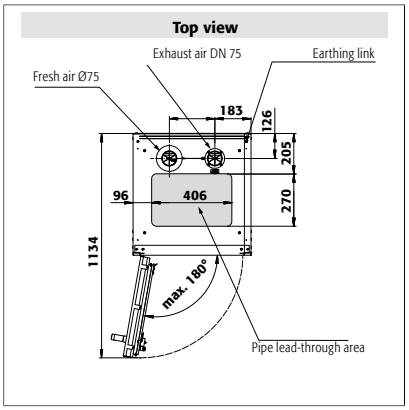
G90.205.140



G90.205.120

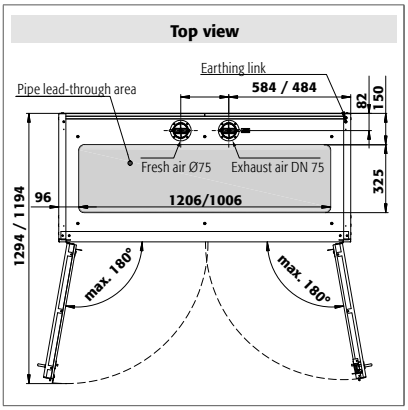


G90.205.090

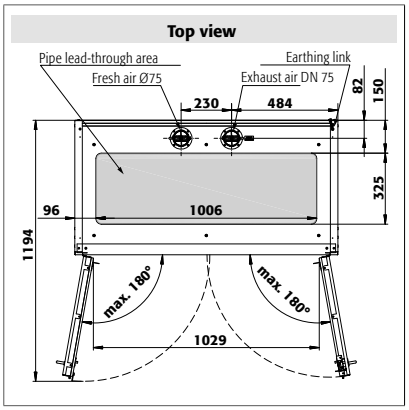


G90.205.060
G90.145.060
G90.205.060.2F

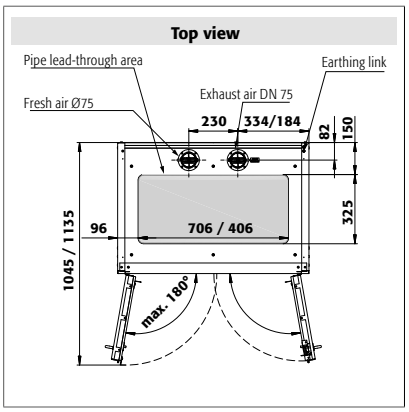
G90.205.060.R
G90.145.060.R
G90.205.060.2F.R



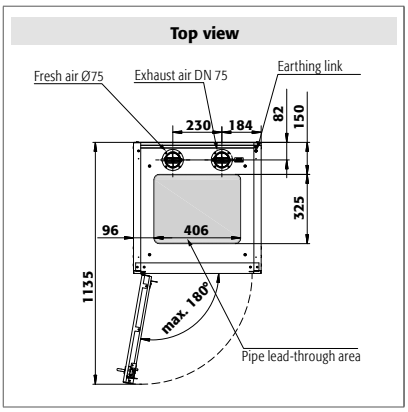
G30.205.140



G30.205.120



G30.205.090

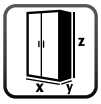


G30.205.060

G30.205.060.R

13. TECHNICAL DATA

Key for "Technical data" table

							
External dimensions W x D x H	**Internal dimensions W x D x H**	**Type**	**Weight of empty cabinet**	**Maximum load**	**Distributed load**	**Air change 120 times**	

								
G-LINE type 90				**kg**	**kg**	**kg/m²**	**m³/h**	**Pa**
G90.205.140	1398 x 615 x 2050 mm	1245 x 400 x 1858 mm	G90	690	600	571.00	111	143
G90.205.120	1198 x 615 x 2050 mm	1045 x 400 x 1858 mm	G90	610	600	625.00	93	103
G90.205.090	898 x 615 x 2050 mm	745 x 425 x 1858 mm	G90	490	600	752.00	66	147
G90.205.060	598 x 615 x 2050 mm	445 x 425 x 1858 mm	G90	365	600	999.00	42	85
G90.205.060.R	598 x 615 x 2050 mm	445 x 425 x 1858 mm	G90	365	600	999.00	42	85
G90.145.060	598 x 615 x 1450 mm	445 x 425 x 1246 mm	G90	278	600	909.00	28	42
G90.145.060.R	598 x 615 x 1450 mm	445 x 425 x 1246 mm	G90	278	600	909.00	28	42
G90.205.060.2F	598 x 615 x 2050 mm	445 x 425 x 1858 mm	G90	365	600	999.00	45	76
G90.205.060.2FR	598 x 615 x 2050 mm	445 x 425 x 1858 mm	G90	365	600	999.00	45	76

G-LINE type 30				**kg**	**kg**	**kg/m²**	**m³/h**	**Pa**
G30.205.120	1198 x 616 x 2050 mm	1094 x 479 x 1874 mm	G30	485	600	560.00	118	103
G30.205.090	898 x 616 x 2050 mm	794 x 479 x 1874 mm	G30	340	600	648.00	86	147
G30.205.060	598 x 616 x 2050 mm	494 x 479 x 1874 mm	G30	290	600	921.00	53	85
G30.205.060.R	598 x 616 x 2050 mm	494 x 479 x 1874 mm	G30	290	600	921.00	53	85

The surface load is calculated by dividing the total weight of the cabinet (empty cabinet plus load) by its loading area. This is calculated by multiplying the width of the cabinet by the depth (sum of the depth of the cabinet and 1000 mm of space in front of it). The specification of the surface load in the operating instructions is a theoretical value, as the specification of the load represents the maximum permissible value for the cabinet construction. The calculation of the individual surface load must always be based on the actual load (weight of the interior fittings and weight of the stored containers).

EXAMPLE of the theoretical surface load calculation model G90.205.120:

Weight of cabinet 610 kg

Load: 600 kg

Working area: 1200 mm × (616+1000) mm

Calculation: $\frac{610+600\ \text{kg}}{1{,}2\ \text{m} \times 1{,}615\ \text{m}} = \frac{1210\ \text{kg}}{1{,}938\ \text{m}^2} = 625\ \text{kg}$

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