

# Standard EN14470-2



The European harmonization with regard to the storage of chemicals and of gas cylinders has led to the evolution of the storage regulation of compressed gas cylinders.

That's why the new European standard EN14470-2 replaces standard DIN 12925-2.

## ➤ WHAT DOES THE STANDARD SAY?

CHEMISAFE puts at your disposal all the certification documents of its cabinets

### ➔ FIRE RESISTANCE TEST

The introduction of standard EN 14470-2 increases the safety level all over Europe.

This standard prescribes that a cabinet for storing gas cylinders in a building must be fire-resistant.

The cabinet must be conceived and manufactured so that in case of fire its contents do not contribute to increase the risks or to spread fire for at least 15 minutes.

The cabinet is conceived so as to ventilate the internal part in case of reduced gas leakages.

### ➔ CLASSIFICATION

A safety cabinet for gas cylinders must be classified according to one of the following Types : G15, G30, G60 or G90 minutes.

It is the time for a temperature rise  $> 50K$  (Temperature taken near the tightening plate of the gas cylinder valve).

The flammability class leaves a sufficient time to the staff to leave the area and to firefighters to enter it before the compressed gas cylinders become unstable.

### ➔ FIRE RESISTANCE

The fire resistance of the compressed gas cylinder storage cabinet must be established through a type test. This type test is carried out by heating the cabinet in an oven according to the time-temperature curve and by measuring the temperature increase on an empty gas cylinder surface located inside the cabinet. The temperature increase on the tightening plate surface of the cylinder valve must not exceed 50 K.

### ➔ CERTIFICATION

Each type of cabinet and each model must pass a fire test during which it will be tested. If a gap is detected in the measures above the tolerance limits set by the standard, the cabinet model must be tested again. **This test must be carried out by an independent approved body.** When the result of this test is obtained, a conformity certificate to standard EN14470-2 will be delivered and supplied with each cabinet model.

## ➤ MANUFACTURING

### ➔ VENTILATION

The cabinets must be equipped with some air inlet and outlet openings allowing connecting a drainage system

- if some inflammable gases that can maintain a fire are used, the cabinet air volume change will be of at least 10 times per hour
- if some toxic gases are used, the cabinet air volume change will be of at least 120 times per hour

The differential pressure must not exceed 150Pa. The ventilation system must keep a pressure inside the cabinet lower than the surrounding atmosphere.

### ➔ HOW TO HOLD THE GAS CYLINDER

A suitable system must be installed inside the cabinet, to prevent the gas cylinder from tilting.

### ➔ COMPRESSED GAS CYLINDER INSERTION AND WITHDRAWAL

The cabinet must be manufactured to allow inserting and withdrawing the cylinders with the utmost safety and with the minimum manual effort.

CHEMISAFE provides for an access ramp on all its models.

# Safety storage cabinets for gas cylinders

**FIRE-RESISTANT  
CERTIFIED**  
90 minutes (TYPE 90)

STORAGE CABINETS  
FOR GAS CYLINDERS



## → GAS SUPPLY LINE INSTALLATION

The number of supply line passages through the cabinet wall or roof must be reduced to the minimum necessary with a maximum of three for each cylinder. The unused holes must be closed. We recommend making the three holes with a diameter of 10 mm each.

## → MARKING

A label must be installed on the front part of the cabinet and it must be readable indicating: the fire resistance class, that the doors must be kept closed, a safety pictogram must signal the presence of compressed gas cylinders, the manufacturer's brand, the model number, the manufacturing year and the serial number.

## ➤ HOW DID THE FORMER STANDARD DIN 12925-2 CHANGE?

Due to the modifications on the gas cylinder safety cabinet tests, the former standard DIN12925-2 does not correspond any longer to the higher needs of standard NF EN 14470-2.

**After the official issue of standard NF EN 14470-2, standard DIN 12925-2 has been officially replaced starting from December 2006.**

## ➤ MAXIMUM PROTECTION FOR SAFETY FIRST, WHY G90?

For several years in Germany as well as in Europe, the Type 90 classification, for the inflammable liquid storage in safety cabinets has been set as the standard. That's why we chose to offer you only the maximum safety standard G90. Therefore, the safety cabinets for storing under pressure gas cylinders G90 CHEMISAFE meet the strictest manufacturing and test requirements of the new standard NF EN 14470-2.

Due to the lack of a classification for gas cylinder cabinets, the users on site had some different safety levels between the storage of inflammable liquids and of gas cylinders. Therefore, it can be expected that after the appearance of this standard several users will like to reach the same safety level in their gas cylinders of the one already reached for the storage of inflammable liquids thanks to safety cabinets resisting 90 minutes to fire (G90).

## ➤ WHAT DOES THIS MEAN FOR THE USER?

- A use complying with the regulation
- A certification documentation for each safety cabinet bought
- A maximum safety for the users since in case of fire the staff can leave the building without any danger and the assistance and the firefighters can intervene to reach the cylinder storage place before any more serious fire breaks out because of gas combustion.