

# Reliable refrigerant supply from HYFRA

Climate protection with the Fluorinated  
Gas Regulation

Customized. Cooling. Solutions.



# Less fluoridated gas, better climate

Fluoridated gases (partially fluorinated hydrocarbons) are components of highly effective refrigerant solutions. They also contribute to global warming. For this reason, the reduction of damaging fluoridated gases by converting to new refrigerants with low global warming potential (GWP) values is an important step toward limiting the greenhouse effect.

The EU Regulation on Fluorinated Greenhouse Gases (No. 517/2014) went into effect at the beginning of 2015. It has regulated a gradual decrease in consumed quantities of fluoridated gases since 2016. Depending on its potential to damage the climate, each refrigerant is assigned a specific GWP value. The level of the GWP value influences the gas' future price and availability on the market.

## Facts: Fluorinated Gas Regulation

### ✓ What is being reduced?

The available carbon equivalent of the refrigerant is being reduced, not its overall quantity. This will allow the market to concentrate on low-GWP refrigerants.

### ✓ Gradual phase down

The carbon equivalent of the fluoridated gas is being reduced gradually, by 79% until 2031 in comparison to the level in 2015.

### ✓ Quota system

To contain consumption, manufacturers and importers can apply to have fixed quotas assigned to them. They also have a duty to report their actual consumption.

### ✓ New rules

Emission reduction, labeling and leakage inspections are all subject to new rules. Regular inspections are stipulated as of a refrigerant level of  $\geq 5$  tons CO<sub>2</sub> equivalent (R134a  $\geq 3.5$  kg; R404A  $\geq 1.3$  kg).

### ✓ EU imports

Systems pre-filled with fluoridated gases (e.g., air conditioning units, heat pumps and refrigeration units) that are imported from countries outside the EU may only be sold if they are accounted for in the quota system. Manufacturers and importers also have a duty to report in this case.

# Future development Refrigerant market

The first regulated 7% reduction of the fluorinated gases available in the EU in 2015 took effect in 2017. It has not had serious consequences on price and availability yet. Since the beginning of 2018, availability has only been 63%. High-GWP refrigerants will experience higher price increases than low-GWP refrigerants.

It is not possible to make a fixed price list for refrigerants in the case of maintenance, repairs and commissioning since some refrigerants are only offered on a daily-price basis. Individual products with particularly high GWP value, such as R404A/R407C, are only available to a limited extent now.

## Basis 100% consumption in 2015

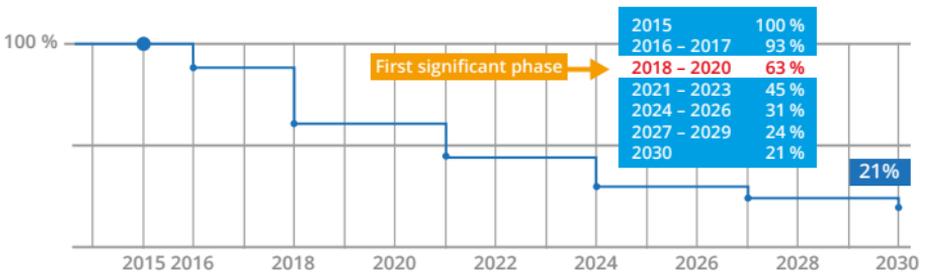


Fig. 1 Phase down until 2030

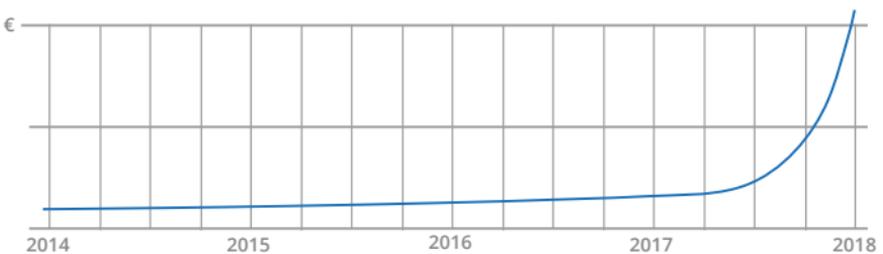


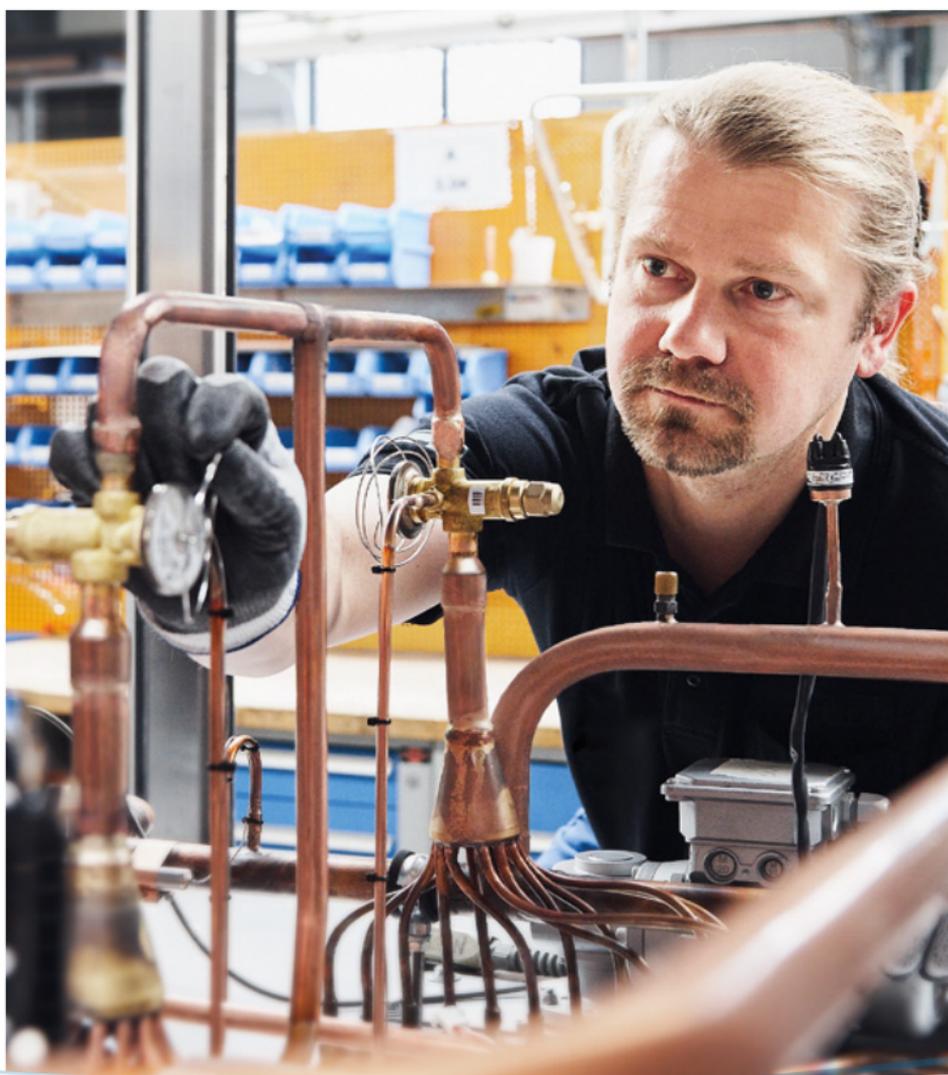
Fig. 2 Price increases 2017/2018

## Maximum supply security New technologies

Our customers have no need to worry about refrigerant supply bottlenecks due to product availability! As part of the global LENNOX Group, HYFRA was one of the first manufacturers in process cooling to secure fluorinated gas quotas.

To cushion the effect of price increases, we have also developed new cooling systems such as Microchannel technology that enable refrigerant savings of up to 70%. Our FleXX technology for needs-specific operation is another answer to more rigorous climate protection requirements.

And HYFRA is testing alternative refrigerants with lower GWP values.



✓ **Microchannel technology**

Up to 70% less refrigerant used in comparison to conventional systems.

✓ **FleXX Technology**

Needs-specific operation makes chillers with FleXX technology particularly efficient and low maintenance.

✓ **Alternative refrigerants**

Testing refrigerants with low GWP values.



**Firm support:  
LENNOX International**

HYFRA is part of globally active LENNOX International, Inc. The U.S. holding company has been a leading innovator for heating/chilling solutions for end consumers and industry for over 120 years.

Lennox is one of the sector's leading providers. The corporation's annual revenues were around \$3.6 billion in 2016.

**Customized. Cooling. Solutions.**

HYFRA is one of the most experienced suppliers of customized process cooling solutions. We cover the entire range of industrial process cooling solutions from plug & play compact devices to individually developed systems with extensive services. Our highly efficient, reliable machines are the key to our customers' success.

As a LENNOX International company, we help mechanical engineers in more than 50 countries to continually set new standards of performance.

## **Customer service hotline e-mail**

Telephone hotline:

+49 2687 898-998

[customerservice@hyfra.com](mailto:customerservice@hyfra.com)

### **HYFRA Industriekühlanlagen GmbH**

Industriepark 54

56593 Krunkel; Germany

+49 2687 898-0

[info@hyfra.com](mailto:info@hyfra.com)

2018-03-V1

[www.hyfra.com](http://www.hyfra.com)

