

## TB/004 PHASE DOWN OF HFC REFRIGERANTS

### 1 OBJECTIVE

The objective of this technical bulletin is to inform members of a new regulation that came into force in 2015. The amount of HFC that can be placed on the EU market is now controlled. The first step reduction of HFCs came into place in 2016, with a 7% drop. All companies must ensure they stay compliant with new F Gas regulations.

### 2 TECHNICAL INFORMATION

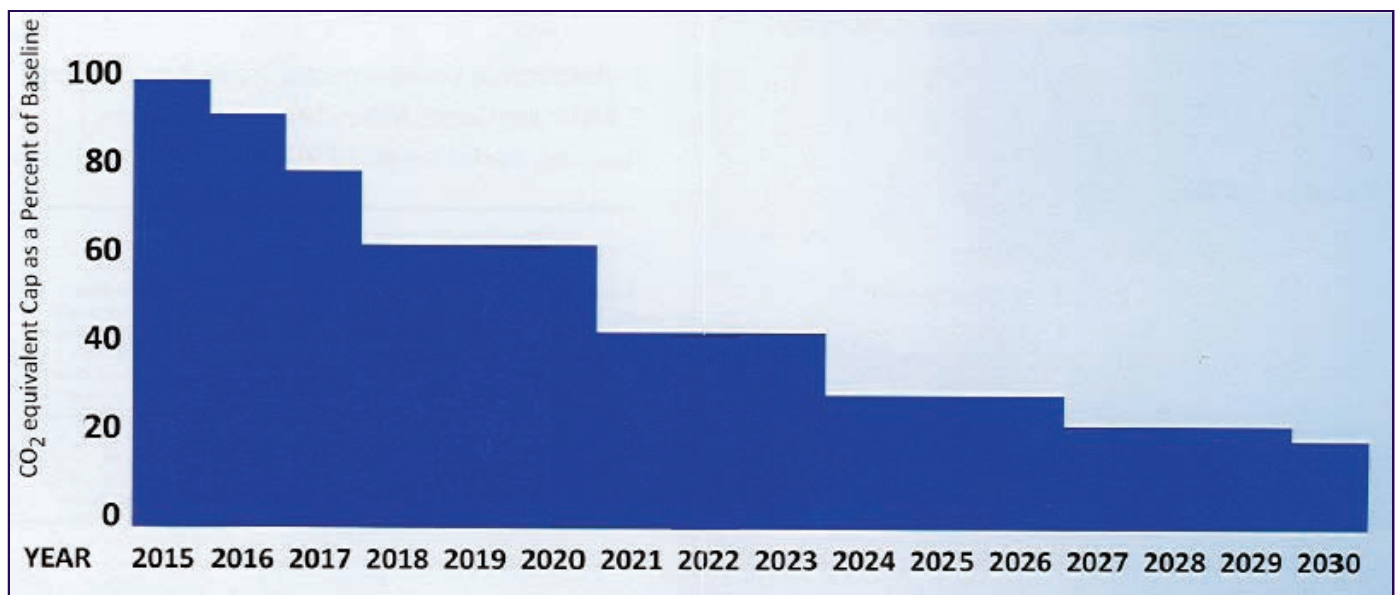
#### 2.1 CAP AND PHASE DOWN

The reduction of HFC's placed on the market is measured in CO<sub>2</sub> equivalent tonnes. Hence HFC's with high Global Warming Potential (GWP) will be most affected. The main step changes can be seen in the table right.

Year	Percentage Phase down
2016	7%
2018	37%
2024	69%
2030	79%

#### Key points

- ✓ There is a "hidden step" in 2017 as all imported pre-charged equipment must use HFCs from the EU quota from 2017 onwards. Under business-as-usual this will add a further 11% to EU demand. This makes the cut in 2017 equivalent to 18%.
- ✓ There is a very big cut in 2018. The cut is 37%. However, the pre-charged imports must be taken into account making the cut equivalent to 48%.
- ✓ The regulations target high GWP refrigerants, in particular R404A and R507. These are likely to become scarce and expensive from 2018 onwards.



#### 2.2 USE BANS

From 2022 there will be a ban on new commercial refrigeration systems being installed using refrigerants with a Global Warming Potential of 150 or more.

From 2020 there will be a ban on serving existing commercial refrigeration systems with a GWP of 2500 or more using new refrigerants and from 2030 using reclaimed refrigerants.

### 3 IMPLEMENTATION

#### 3.1 WHAT NEEDS TO BE DONE

To ensure compliance, companies should start to take the following steps.

- ✓ Do not install any new systems with R404A R 507 or any other high GWP refrigerants.
- ✓ For new systems make use of a refrigerant with the lowest GWP possible.
- ✓ For existing systems, retrofit to a lower GWP alternative.
- ✓ Ensure any R404A removed from systems is recovered for further use.

#### 3.2 REFRIGERATION OPTIONS AND RELEVANT GWP

The following is a list refrigerants currently on the market and their associated GWP. (GWP is the equivalent amount of CO<sub>2</sub> that would be needed to have the same warming impact on the environment.)

Refrigerant	Global Warming Potential
R507	3985
R404A	3922
R227	3220
R410A	2088
R407A	2127
R407C	1774
R407F	1825
R448	1380
Propane	3
CO <sub>2</sub>	1
Ammonia	0

#### Key Points

- ✓ R407A/F have roughly half GWP as R404A, with similar refrigeration capacity and greater efficiency
- ✓ R448 has roughly a third of GWP as R404A, with similar refrigeration capacity and greater efficiency.
- ✓ This list is not exhaustive. Other refrigerants are available and new products are being developed.

For more information please visit: <https://www.gov.uk/government/collections/eu-f-gas-regulation-guidance-for-users-producers-and-traders>

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