



Information for importers of equipment containing fluorinated greenhouse gases on their obligations under the EU F-gas Regulation

(Guidance document: Imports of pre-charged equipment:
version 2.3, February 2017)

This document is without prejudice to the obligations in the F-gas Regulation and should not be understood to have any legal status. The EU Member States are responsible for implementing Regulation (EU) No 517/2014. For enforcement issues, please contact the relevant person in your Member State.

Acknowledgement

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Contents

1.	Who this guidance is for	5
1.1.	Is this guidance relevant to my company?	5
1.2.	Obligations for importers of equipment containing fluorinated greenhouse gases.....	5
2.	General information and clarifications	7
2.1.	Who is the importer?.....	7
2.2.	What does 'placing on the market' mean?	7
2.3.	Fluorinated greenhouse gases and hydrofluorocarbons (HFCs).....	7
2.4.	What is pre-charged equipment?	8
2.5.	Pre-charged equipment (or product) that may contain F-gases or Annex II gases	8
2.6.	Global warming potential (GWP)	10
2.7.	How much F-gas is contained in the equipment.....	10
2.8.	'HFC phase-down' and the 'HFC quota system'	11
2.9.	Quota holders, incumbents and new entrants	11
3.	Compliance with the HFC phase-down and quota system	12
3.1.	Avoid HFCs and avoid the obligations	13
3.2.	Options to account for HFCs in imported pre-charged equipment under the quota system (complying with F-gas Regulation, Article 14).....	13
3.3.	Option 1: Obtaining an authorisation from a quota holder directly or via the manufacturer of equipment.....	13
3.4.	Option 2: Importing equipment filled with gases that were placed on the EU market previously (in special cases).....	17
4.	Registration in the F-gas portal and use of the HFC registry	19
4.1.	Initial registration of companies.....	19
4.2.	Receipt of an authorisation.....	19
4.3.	Delegation of an authorisation	23
5.	Declaration of conformity and related documentation	28
6.	Independent verification and submission of result	29
6.1.	What does the auditor verify?	29
6.2.	Levels of accuracy	30
6.3.	Submission of verification documents.....	30
7.	Other obligations for importers and manufacturers of equipment	32
7.1.	Reporting obligation	32

7.2. Placing on the market prohibitions for F-gas equipment.....	33
7.3. Labelling	33
7.4. Summary of obligations on EU manufacturer of F-gas equipment.....	34
8. Fluorinated greenhouse gases.....	35
8.1. F-gases listed in Annex I to the F-gas Regulation.....	35
8.2. Other fluorinated greenhouse gases listed in Annex II of the F-gas Regulation	37
8.3. Method for calculating the total GWP of a mixture	38
9. Common mixtures.....	39
10. Templates for declaration of conformity and statement on level of accuracy.....	41
10.1.Importer’s declaration of conformity	41
10.2.Verification and submission of verification documents.....	43
11. Further information.....	47

1. Who this guidance is for

1.1. Is this guidance relevant to my company?

This guidance covers the requirements under the Regulation (EU) No 517/2014 on fluorinated greenhouse gases¹ ('the F-gas Regulation') for companies importing equipment (including products) containing the gases listed in Annexes I and II to the F-gas Regulation. Keep in mind that the term 'equipment' in this document refers to **both stationary and mobile**² equipment, unless noted otherwise.

Ask yourself these questions to see if this document concerns your company:

- 1) Is your company the importer? (see section 2.1 Who is the importer?)
- 2) Is the equipment imported for free circulation in the EU?
- 3) Does the imported equipment contain³ gases listed in Annex I and/or Annex II of the F-gas Regulation?

If you answer 'yes' to all three questions, your company will have certain obligations under the F-gas Regulation.

The aim of this document is to help you **understand** and **comply** with those obligations.

If you have additional questions, please contact your national contact point for F-gases⁴. See section 11 Further information, you will also find the list of contact points on the website of the Directorate-General for Climate Action (DG Clima).⁵

Relevance for manufacturers of equipment:

If you are a **manufacturer of equipment producing outside the EU** (and do not import the equipment to the EU yourself), this document should also be useful to you, as it gives you a better understanding of the rules for importing equipment into the EU⁶ and enables you to raise your equipment importers' awareness related to these rules.

You should in particular be aware of the 'pooling option', as explained in sections 3 and 4.3, which allows companies such as manufacturers to play a role in complying with the HFC phase-down by centrally procuring authorisations from quota holders and delegating them to those companies which act as the importers of equipment into the EU.

Section 7.1 explains how equipment manufacturers may help equipment importers fulfilling importers' annual reporting obligation.

Furthermore, **obligations for EU manufacturers of equipment** are summarised in section 7.4.

This document has no legal status and is without prejudice to the obligations in the F-gas Regulation.

1.2. Obligations for importers of equipment containing fluorinated greenhouse gases

The main obligations for importers of equipment containing gases listed in Annex I (see section 8.1) and/or Annex II (see section 8.2) of the F-gas Regulation are:

¹ The 'F-Gas' Regulation (EU) No 517/2014 on fluorinated greenhouse gases:

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.150.01.0195.01.ENG

² Such as air-conditioning in vehicles.

³ The equipment is considered to contain F-gases even if those gases are only found in specific parts of the equipment (e.g. in insulation foams of appliances). However, for F-gas Regulation (Article 14) compliance (see sections 3 and 5) only the HFCs charged into the refrigeration circuits are relevant.

⁴ https://ec.europa.eu/clima/sites/clima/files/f-gas/docs/contact_list_en.pdf

⁵ http://ec.europa.eu/clima/policies/f-gas/documentation_en.htm.

⁶ See also box on p. 13

- Importers of stationary and mobile refrigeration, air conditioning and heat pumps (RAC) must make sure that all hydrofluorocarbons (HFCs) pre-charged into equipment is accounted for under the HFC quota system (see section 3). Importers will also need to register in the HFC Registry (see section 4) and draw up one or more declaration(s) of conformity (see section 5) at the time of import (F-gas Regulation Articles 14 and 17) and ensure that compliance is fully documented and verified (see section 6).
- Importers of any products or equipment containing gases listed in Annex I (see section 8.1) and/or Annex II (see section 8.2) of the F-gas Regulation must report yearly (see section 7.1) on imports by 31 March of the year following the import (F-gas Regulation Article 19).⁷
- Restrictions on placing on the market (see section 7.2) apply to certain types of equipment containing Annex I gases. The specific conditions are listed in Annex III of the F-gas Regulation (Article 11).
- Equipment containing Annex I gases needs to be labelled (see section 7.3).

This document focuses, in particular, on **obligations under the HFC quota system** related to imports of RAC equipment (refrigeration, air conditioning and heat pump equipment) pre-charged with HFCs (F-gas Regulation Article 14).

⁷ Note the threshold for the reporting obligation of 500 t CO₂ eq as explained in section 7.1.

2. General information and clarifications

2.1. Who is the importer?

The importer is the legal person importing the gas or the equipment when it clears EU customs. For complying with the F-gas Regulation, the paper documentation at customs is relevant as it provides proof of the importing entity. **The importer is identified in this documentation as the 'consignee'** (Field 8 of the customs declaration document or Single Administrative Document (SAD)).

Companies are only considered to be importers if they import equipment from countries outside the EU. Companies are not considered to be importers if they only buy or sell pre-charged equipment from or to companies in other Member States. Shipments between Member States are not considered to be imports/exports.

2.2. What does 'placing on the market' mean?

Article 2 of the F-gas Regulation defines 'placing on the market' as: '*supplying or making available to another party in the Union for the first time, for payment or free of charge, or using for its own account in the case of a producer, and includes customs release for free circulation in the EU.*'

For importers of equipment this means that **once the equipment is released for free circulation, it is considered to have been placed on the market.** However, if, for example, the equipment is imported under the inward processing procedure, it has not been placed on the market. Other customs procedures that are not considered placing on the market are import for transit, temporary storage, customs warehousing or duty free zone procedures.⁸

The same applies to bulk gases. If bulk gases are bought in the EU, they are considered to have been placed on the market by the vendor. If gases are imported into the EU, they are considered to have been placed on the market when they are released for free circulation.

2.3. Fluorinated greenhouse gases and hydrofluorocarbons (HFCs)

Fluorinated greenhouse gases are synthetic compounds used in numerous industrial sectors and applications, especially in refrigeration. In most cases, they are used to substitute certain ozone-depleting substances, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) that are being phased-out globally under the Montreal Protocol. Although fluorinated greenhouse gases do not have substantial ozone-depleting properties, they still contribute significantly to climate change. The climate impact of these gases across all applications is equivalent to that of the entire aviation sector. Under the definitions of the F-gas Regulation (Article 2) HFC-containing mixtures are also HFCs.

The term 'F-gases' refers to the gases listed in Annex I of the F-gas Regulation. They are:

1. hydrofluorocarbons (HFCs)
2. perfluorocarbons (PFCs)
3. sulfur hexafluoride (SF₆).

Annex II of the F-gas Regulation lists 'other fluorinated greenhouse gases' (Annex II gases). These include unsaturated hydro(chloro)fluorocarbons, fluorinated ethers and alcohols and other perfluorinated compounds.

⁸ Unless such imports remain in the customs territory of the EU longer than 45 days or that they are subsequently presented for release for free circulation in the EU or processed.

The terms 'F-gases', 'HFC' and 'Annex II gases' also cover any mixture containing any of these fluids. Gases and mixtures may be commonly known by multiple names. For example, HFC-134a is also known as R134a, and R404A is a mixture of R125, R143a and R134a, all of which are HFCs.

The F-gases from Annex I and other gases from Annex II of the F-gas Regulation are shown in section 8 'Fluorinated greenhouse gases' of this document and a list of the most commonly used mixtures containing HFCs can be found in section 9 'Common mixtures'.

The scope of the different obligations in the F-gas Regulation that are relevant for equipment importers varies according to gas type. Some obligations apply only to HFCs, others to F-gases or to both F-gases and Annex II gases (Table 1). The obligations regarding equipment under the HFC phase-down concern only specific RAC equipment that is pre-charged with the HFCs (listed in Section 1 of Annex I of the F-gas Regulation) including mixtures that contain at least one HFC.

Table 1: Scope of obligations concerning equipment by type of gas

	HFCs (Annex I, Section 1)	PFCs and SF ₆ (Annex I, Section 2 and 3)	Annex II gases
HFC phase-down	X		
Reporting	X	X	X
Product Bans	X	X	
Product Labelling	X	X	

2.4. What is pre-charged equipment?

Pre-charged equipment in the context of the F-gas Regulation⁹ refers to equipment that is already (or at least partially) charged with an HFC refrigerant or a mixture containing at least one HFC at the time of import. Often the pre-charging occurs during the manufacture of the equipment. During installation, it may sometimes be necessary to add an additional charge to the equipment, for example to accommodate for on-site conditions, such as pipes exceeding the standard length.

Other obligations on reporting and labelling, and restrictions on placing equipment on the market apply more generally to **equipment containing** F-gases and/or Annex II gases. This concerns both gas contained in the circuits of a piece of equipment and gases used in other parts of the equipment, such as insulation foams.

From 1 January 2017, refrigeration, air conditioning and heat pump (RAC) equipment charged with hydrofluorocarbons shall not be placed on the market unless hydrofluorocarbons charged into the equipment are accounted for within the quota system (F-gas Regulation, Article 14).

2.5. Pre-charged equipment (or product) that may contain F-gases or Annex II gases

List of equipment (and products) that could be pre-charged or contain F-gases (non-exhaustive):

- Hermetically sealed¹⁰ RAC equipment containing HFCs:
 - domestic refrigerators and freezers;
 - stand-alone ('plug-in') refrigeration units for commercial/other uses;
 - heat pump tumble dryers;
 - movable air conditioning (AC) units (monoblocs);

⁹ In the F-gas Regulation, the term 'pre-charged equipment' refers only to RAC equipment pre-charged with HFCs, e.g. in F-gas Regulation Article 14.

¹⁰ Distributors and end-users of pre-charged equipment must distinguish between hermetically sealed and non-hermetically sealed equipment, as the latter can only be installed by certified individuals (Articles 10, 11(4), and 11(5)).

- humidifiers;
- ...
- Non-hermetically sealed RAC equipment, or components thereof, using HFCs:
 - split AC units;
 - heat pumps;
 - multi-split AC units;
 - chillers;
 - mobile AC equipment (used e.g. in cars, buses, trains, ships);
 - mobile refrigeration equipment (used e.g. in refrigerated trucks and trailers);
 - ...
- Other equipment (non-RAC) and products using HFCs:
 - fire protection equipment (incl. in vehicles);
 - foam products (e.g. extruded polystyrene (XPS), polyurethane (PU), one component foam (OCF));
 - aerosol products
 - solvents;
 - ...
- Equipment and products using F-gases or Annex II gases (excluding HFCs):
 - switchgear;
 - fire protection equipment (incl. in vehicles);
 - solvent dispensers;
 - ...

2.6. Global warming potential (GWP)

Each F-gas and Annex II gas has a 'global warming potential' (GWP) assigned to it. For a mixture, the GWP is calculated on the basis of the individual components of that mixture¹¹). The GWP is an emission metric indicating the extent to which a gas warms the atmosphere. It is calculated based on the 100-year warming potential of one kilogram of an F-gas/Annex II gas relative to one kilogram of CO₂.

The GWP of F-gases and mixtures commonly used today is in the thousands. R404A (GWP 3 922) for example is 3 922 times more potent than CO₂. Preventing F-gases from entering the atmosphere is a very effective way of reducing emissions.

Table 2: Global warming potentials of common greenhouse gases, refrigerants and other fluorinated compounds

Gas	GWP (AR4 ¹² , 100 year)
CO ₂	1
Methane	25
Nitrous oxide	298
R134a	1 430
R407C (mixture)	1 774
R410A (mixture)	2 088
R404A (mixture)	3 922
HFC-125	3 500
PFC-14	7 390
SF ₆	22 800

2.7. How much F-gas is contained in the equipment

To comply with the HFC phase-down requirements or the reporting obligations for F-gases and Annex II gases, importers must know the quantity of gas pre-charged in the imported equipment, measured in tonnes CO₂ equivalent. From 1 January 2017 onwards, this quantity must be indicated on the equipment label in CO₂ equivalent, which must be affixed when the item is placed on the market (i.e. released for free circulation after import).

Example:

To calculate the HFC pre-charged in a shipment of 1 000 split residential air conditioning units, you must first calculate the amount of HFCs in each unit.

Let's assume that each unit contains 1 kg of R410a. R410a has a GWP of 2088.

This means that:

=> Each unit is pre-charged with an amount of HFCs equal to:

0.001 tonnes x 2088 = 2.088 tonnes CO₂ equivalent

=> The total imported quantity pre-charged in the equipment is equal to:

1000 x 2.088 tonnes CO₂ equivalent = 2088 tonnes CO₂ equivalent.

It is also important to identify the type of refrigerant used. If the air conditioning units were charged with 1 kg of R32 (GWP=675) instead, the total imported quantity for a shipment of 1 000 units would amount to 675 tonnes CO₂ equivalent (0,001 tonnes x 675 x 1000).

¹¹ The calculation method is explained in Annex IV to the F-gas Regulation. A simplified version can be found in section 8.3 Method for calculating the total GWP of a mixture in this document.

¹² AR4: Fourth Assessment Report of the International Panel on Climate Change (IPCC), Table 2.14: www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

For non-HFCs, such as hydrocarbons, there are no import restrictions under the phase-down. However, there are restrictions for any mixtures containing HFCs, even if they also contain other substances. Consider the mixture R-431A consisting of 71% R-290 (propane, GWP=3) and 29% R-152a (GWP=124). The total imported quantity for a shipment of 1000 units with 1 kg of R-431A would amount to only 38 tonnes CO₂ equivalent (0.001 tonnes x (71%*3 + 29% * 124) * 1000) due to the low GWP of this mixture. See also section 8.3 Method for calculating the total GWP of a mixture.

2.8. 'HFC phase-down' and the 'HFC quota system'

The F-gas Regulation requires that the amount of HFCs placed on the market in the EU must be reduced (or 'phased down') by 79% between 2015 and 2030. HFC amounts are calculated as CO₂ equivalent (Article 15). The phase-down is carried out using an HFC quota system (Article 16), as part of which producers and importers of **bulk gases** (only!) are given quotas that limit their right to place bulk gases on the market (see section 2.9).

2.9. Quota holders, incumbents and new entrants

Producers and importers of **bulk HFCs** must have a quota in order to place bulk HFCs on the market. A separation of quota holders into incumbents and new entrants is relevant for equipment importers as the processes differs slightly how authorisations to use quota may be obtained (see section 3).

'**Incumbents**' are companies that reported placing bulk gases on the market during the period 2009-2012 (F-gas Regulation, Article 16(1)). These companies are allocated a quota by the European Commission on the basis of their historic market share. A list of incumbents for 2015-2017 can be found here:

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL_2014_318_R_0008.¹³

'**New entrants**' are companies that did not report placing on the market of bulk HFCs during a specific reporting period (or the reference period initially), but intend to do so in the coming year. The Commission has allocated them a quota based on their declaration stating their intent to place bulk HFCs on the market (F-gas Regulation, Article 16(2)). The quota comes from a reserve set aside for this purpose, and is allocated on a pro-rata basis.

The Commission will make a recalculation on the basis of HFCs placed on the market since 2015, every three years (for the first time, for quotas for the year 2018 based on reported data from 2015 and 2016) to determine a new basis for deriving the quotas for incumbents. This means that current new entrant companies change status in the next recalculation round and become incumbents.

Importers of equipment pre-charged with HFCs are not importing bulk gases; they are neither incumbents nor new entrants. The terms incumbents and new entrants relate only to producers and importers placing bulk gases on the market.

Importers of equipment do not hold quotas but are still affected by the phase-down (see section 3 Compliance with the HFC phase-down and quota system).

¹³ Commission Implementing Decision of 31 October 2014 determining, pursuant to Regulation (EU) No 517/2014 of the European Parliament and of the Council on fluorinated greenhouse gases, reference values for the period 1 January 2015 to 31 December 2017 for each producer or importer who has reported placing on the market hydrofluorocarbons under Regulation (EC) No 842/2006 of the European Parliament and of the Council (notified under document C(2014) 7920).

3. Compliance with the HFC phase-down and quota system

Regulation (EU) No 517/2014 ('the F-gas Regulation') sets out a number of mandatory rules for importers of refrigeration, air conditioning and heat pump (RAC) equipment pre-charged with HFCs that will apply from 2017.

The F-gas Regulation introduces an HFC phase-down and a quota system for producers and importers of bulk HFCs, i.e. HFCs transported in gas containers or gas bottles. Note that importers and EU manufacturers of equipment pre-charged with HFCs do not place **bulk gases** on the EU market. **Therefore, they do not have an HFC quota.** But they are affected by the phase-down nonetheless.

The aim of the HFC phase-down is to gradually reduce the use of HFCs. If HFCs inside imported equipment could be imported without any restriction, it would not be possible to meet the environmental objective. However, the import of equipment pre-charged with HFCs has not been prohibited, it can still be carried out subject to certain conditions. Nevertheless, avoiding the import of HFC-charged RAC equipment, wherever possible, is the most straightforward option to comply with the HFC phase-down (see section 3.1)

From 1 January 2017¹⁴ onwards, **importers¹⁵ of RAC equipment pre-charged with HFCs need to ensure** (see F gas Regulation Article 14) **that the HFCs charged into the equipment are accounted for within the quota system when placing pre-charged equipment on the EU market.** The options how to account for HFC equipment imports in the quota system are explained in sections 3.2 to 3.4 below. Furthermore, **compliance with Article 14 must be fully documented and verified.** Related obligations for documentation and declarations of conformity are explained in section 5, independent verification is covered in section 6.

Thus, with regard to compliance with the HFC phase-down (Article 14) for importers of equipment it is important to distinguish between RAC equipment pre-charged with HFCs, and equipment other than RAC or equipment not charged with HFCs (see also section 2.5 Pre-charged equipment (or product) that may contain F-gases or Annex II gases).

Role of non-EU manufacturers of HFC-charged RAC equipment:

Compliance with the phase-down must be ensured when placing pre-charged equipment on the market, which is why it is principally the importers who are affected by this obligation. However, the manufacturer of equipment (producing outside the EU) can also play a role.

The role of a non-EU manufacturer might include where possible,

- raising awareness among its importers to comply with the F-gas Regulation, in particular related to the inclusion of RAC equipment in the HFC phase-down (Article 14 obligations, see sections 3 to 6) and the annual reporting obligation under Article 19 (see section 7.1);
- being actively involved in achieving HFC phase-down compliance by obtaining and delegating authorisations by means of the pooling option (see section 3.3, practical guidance on the use of the HFC registry in 4.3);
- enabling the importers to comply by providing the relevant paperwork required for the declaration(s) of conformity (see section 5); as well as
- ensuring the labelling of equipment (see section 7.3) according to F-gas Regulation, Article 12.

¹⁴ Important to note: The reporting obligations under Art. 19 for importers of pre-charged equipment already apply since 1 January 2015, see section 7.1.

¹⁵ Please see the description of "importer" in section 2.1: Who is the importer?

3.1. Avoid HFCs and avoid the obligations

The most straightforward option to comply with the HFC phase-down is to avoid, where possible, importing RAC equipment relying on HFCs altogether. For many types of equipment, comparable HFC-free models using e.g. hydrocarbons are already available.

Alternatively, importers could also import HFC equipment that is not pre-charged with HFCs ("empty"). The equipment could be imported with an HFC-free holding charge such as nitrogen and then charged with EU-bought (and thus accounted for under the quota system) HFCs in the EU (e.g. during installation). This would enable the importer to avoid having to obtain authorisations (see option 2 below) and the reporting requirements, but the "empty" equipment would still have to be labelled according to Art. 12 of the F-gas Regulation (see section 7.3).

3.2. Options to account for HFCs in imported pre-charged equipment under the quota system (complying with F-gas Regulation, Article 14)

There are two ways an importer of RAC equipment can ensure compliance with the obligation under the EU quota system to account for the HFCs in pre-charged equipment:

Option 1: Obtain an authorisation from a quota holder matching the quantity of HFCs in the pre-charged equipment. Authorisations can be obtained directly from the quota holder or via a company such as the manufacturer of equipment that has obtained authorisations from the quota holder in order to pass them on ("delegate them") to companies importing the equipment ('pooling arrangement'). Authorisations may only be used by the equipment importer for the purpose of their declarations of conformity (section 5 Declaration of conformity) if recorded in the HFC registry¹⁶.

The authorisation system is further explained in section 3.3 below. The practical use of the HFC registry for this purpose is covered in section 4.2.

Option 2: Demonstrate that the pre-charged **HFCs were placed on the EU market previously**. For an explanation, please refer to section 3.4 below.

Under both options, obligations for declarations of conformity accompanying each import of equipment and underlying documentation apply as explained in section 5. Declarations of conformity need to be verified annually as explained in section 6.

3.3. Option 1: Obtaining an authorisation from a quota holder directly or via a company (e.g. the manufacturer of equipment) that manages authorisations for importers of equipment

Under this option the importer of RAC equipment pre-charged with HFCs obtains **an authorisation from a quota-holding company** (i.e. producer or importer of gas) or a company managing authorisations **to make use of the quota** to comply with F-gas Regulation, Article 14.

Important: Equipment importers should not try to obtain quotas themselves for the purpose of importing pre-charged equipment!

What is an authorisation?

An authorisation is a contractual agreement between the quota holder (i.e. producer or importer of gas) and the importer of equipment or an undertaking such as an equipment manufacturer wishing to manage authorisations for equipment importers. In the latter case, the "authorisation manager"

¹⁶ For better understanding of the HFC registry please see section 4 Registration in the F-gas portal and use of the HFC registry.

delegates parts of the authorisation it has obtained from the quota holder to the importer of equipment.

The authorisation or the delegated authorisation allows the importer to use a specified amount of the quota (in CO₂ equivalent), held by the quota holder, to import its pre-charged equipment.

Authorisations are always given to another company (see F-gas Regulation, Article 18(2)), i.e. a quota holder cannot authorise itself to import equipment. **To be valid for the importer of equipment, it must be introduced and accepted (status: "valid") in the HFC registry.**

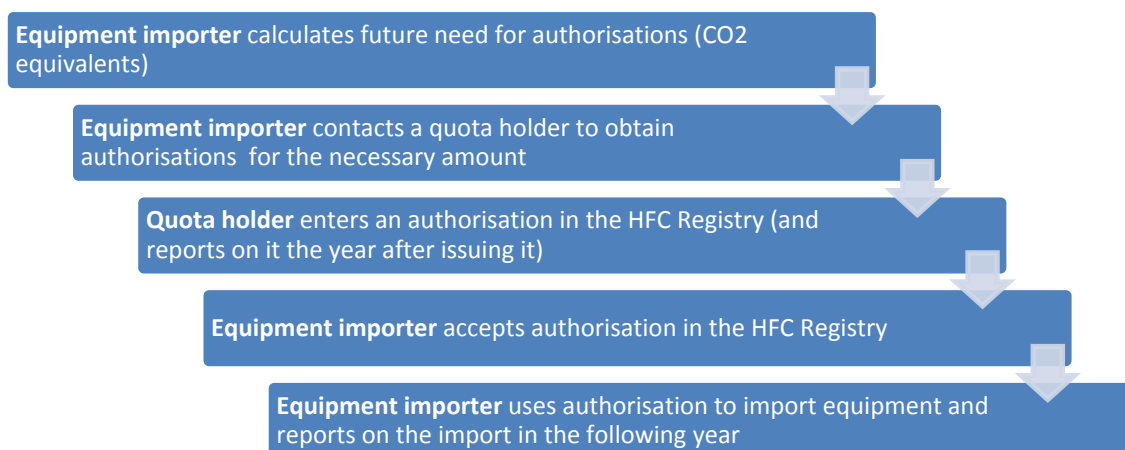
When the quota holder authorises parts of their quota, that part of the quota is considered, *for its own purposes*, as having been used up in that year and cannot be used any longer, e.g. for imports of bulk gas. In other words, quota holders must ensure that the total quantities they place on the market in a given year, including the quantities they authorised to others in that year, do not exceed their annual quota. Exceeding the quota is illegal and punishable under the F-gas Regulation (Art. 25) and national law of the Member State concerned.

Obtaining authorisations directly from the quota holder

To directly obtain authorisations, the equipment importer should approach a quota holder¹⁷ in order to request authorisations in good time. Authorisations are not time-limited, i.e. an authorisation obtained from a quota holder in 2015 can be used for importing pre-charged equipment in 2017 or later.

Importers should obtain sufficient authorisations to cover all the quantity of HFCs in the equipment at the time of import (release for free circulation). This quantity is calculated in CO₂ equivalents.

Companies must record their authorisations in the HFC registry, otherwise they will not be valid for importing equipment. Equipment importers are able to see in the registry the authorisations and amounts (in CO₂ equivalents) that have been directly authorised to them by quota holders.



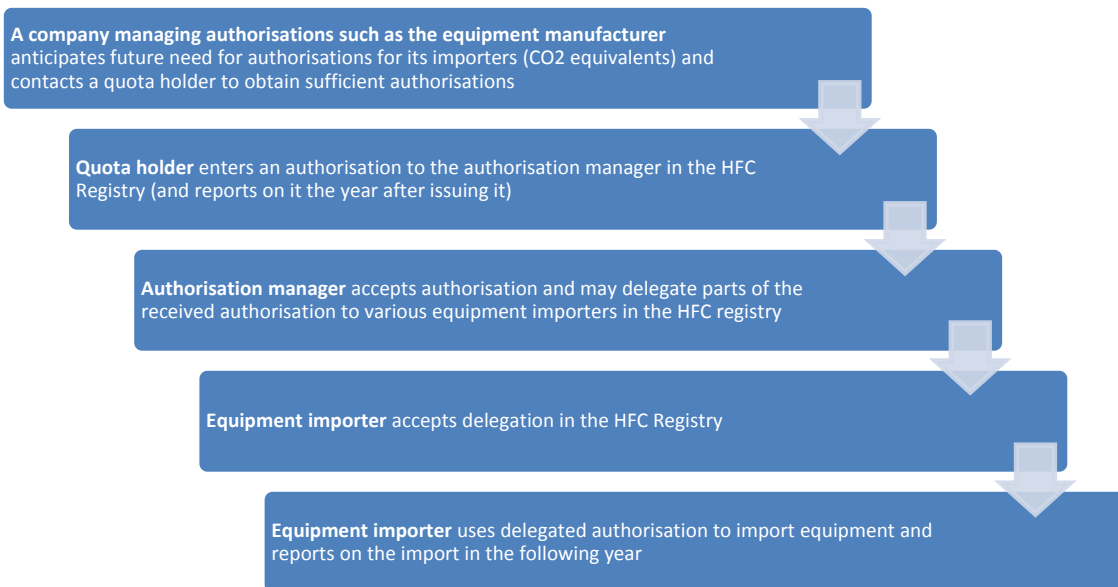
Obtaining authorisations via a company managing authorisations for importers such as the manufacturer of equipment ("pooling arrangement")

The pooling arrangement facilitates the acquisition of authorisations by smaller importers. In this arrangement, a company wishing to manage authorisations for the equipment importers, such as the manufacturer of equipment, establishes a pool of authorisations for use by importers of their equipment by acquiring a larger amount of authorisations from a quota holder. The authorisation manager can then delegate, within the HFC registry, the whole authorised amount or parts thereof

¹⁷ The list of incumbent quota holders is publicly available, see 2.9 Quota holders, incumbents and new entrants. A list of new entrant quota holders is not publically available.

to other companies that are registered as equipment importers. Delegation can only be done once, a further sub-delegation is not possible.

Quota holders and authorisation managers such as manufacturers are able to see in the HFC registry the amounts (in CO₂ equivalent) that they have authorised/delegated to equipment importers, by year.



Obtaining authorisations from incumbent or new entrant companies

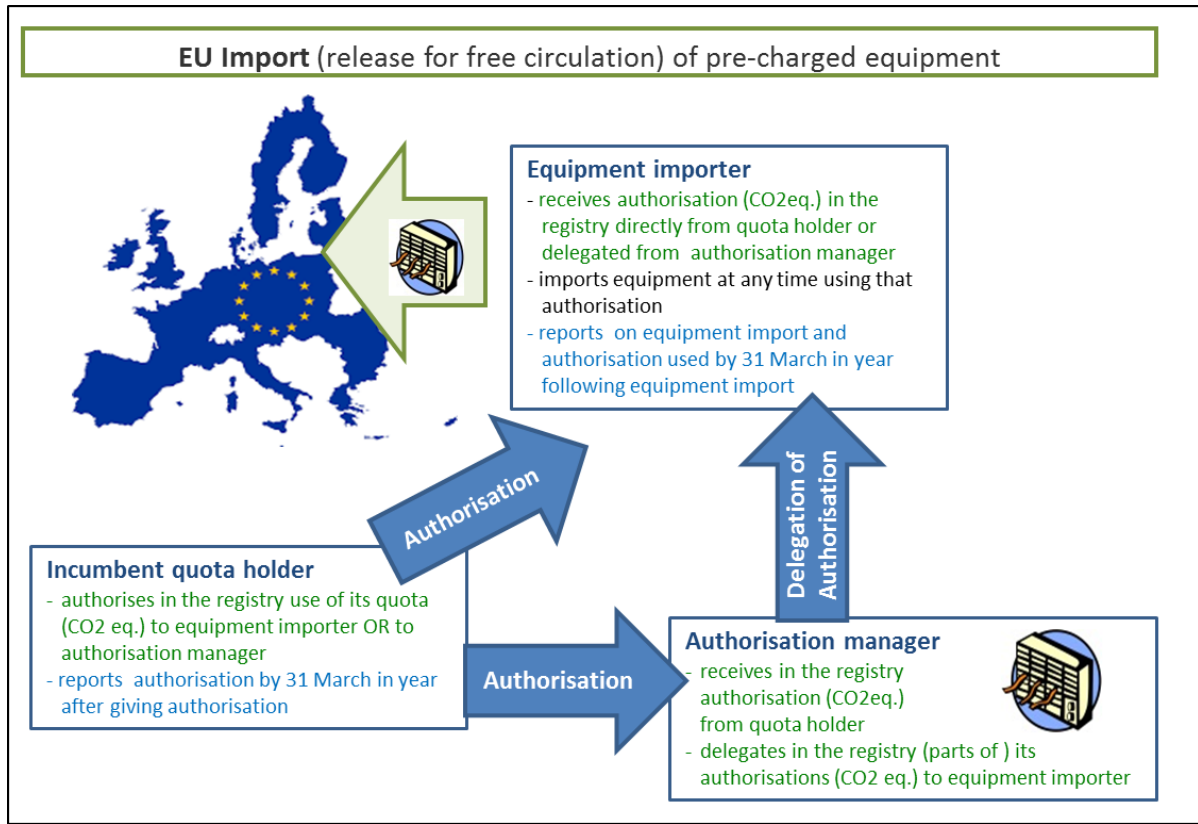
Quota holding companies are divided into incumbents and new entrants (see section 2.9). Both types of companies can grant an authorisation, **but new entrants must also physically sell the corresponding amount of gas when the authorisation is made** (which is not the case for incumbents). The new entrant or its only representative, in case of non-EU companies, must provide proof¹⁸ that this has been done (Article 18(2)).

The physical sale of the gas does not necessarily have to be to the recipient of the authorisation (i.e. the importer of equipment). For instance, the new entrant could sell the relevant amounts of gas to the manufacturer of equipment, which supplies the pre-charged units to the importer that receives the authorisation. This requirement to physically supply the gas prevents companies that are not in the F-gas business requesting quotas from the reserve for new entrants with the sole purpose of trading these rights.

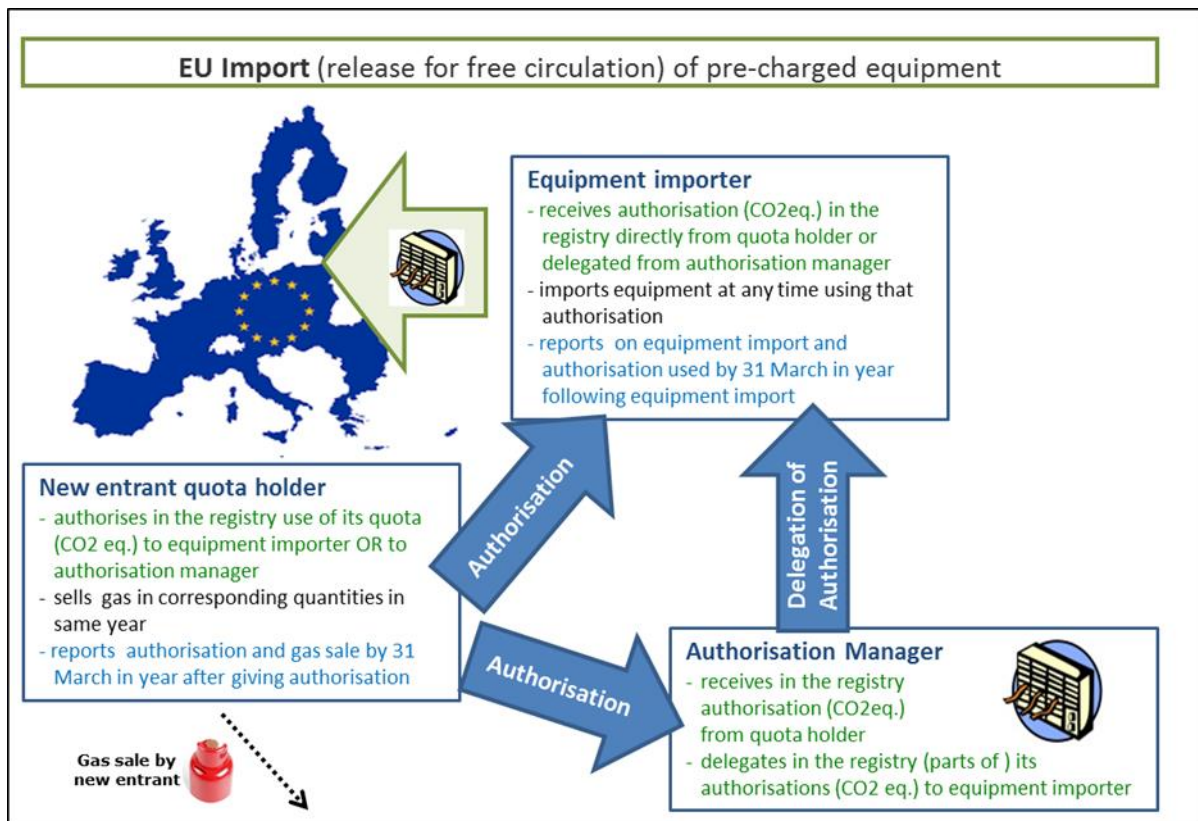
The flow diagrams below show the process of obtaining authorisations from (i) incumbents and (ii) new entrants.

¹⁸ This proof must be provided by the new entrant quota holder with its annual report (see section 7.1 Reporting obligation) due by 31st March of the year after giving the authorisation.

(i) Process for authorisations obtained from an incumbent quota holder:



(ii) Process for authorisation obtained from a new entrant quota holder:



Essentially, there is no difference for the importer of equipment (or the "authorisation manager") using an EU or a non-EU based new entrant company when obtaining an authorisation. The new entrant, if not based in the EU, uses its Only Representative to comply with the obligations of the F-gas Regulation, such as regarding reporting on authorisations, gas sales and imports.

How to report on authorisations

For compliance purposes, **(delegated) authorisations must be recorded in the HFC registry** (see section 4) **in order to allow them to be used by importers of equipment for their declarations of conformity** (see section 5). In addition, both parties (the quota holder and the equipment importer) cover the authorisation amounts in their annual reports (see section 7.1), however not necessarily in the same year:

- The equipment importer must report the use of the (delegated) authorisation in the calendar year following the year of import of the equipment (e.g. by 31 March 2018 for equipment imported in 2017). The equipment importer will state who issued or delegated the authorisation and when it was issued.

(Delegated) authorisations as received in the HFC Registry are automatically imported into the reporting tool, to facilitate reporting of importers of equipment. Importers are then asked to specify which amounts of available authorisations were used to cover the actual imports.

- For the quota holder, the date of issuing the authorisation is considered to be the time of the placing on the market, i.e. the year in which the quota is used. Therefore, the quota holder issuing the authorisation needs to report by 31 March in the subsequent calendar year (e.g. 31 March 2016 for an authorisation issued in 2015).

The data entered by both parties can be matched for control purposes by the European Commission and the responsible national authorities.

More information on reporting can be found in section 7.1 Reporting obligation and in the guidance document on reporting ('FAQ reporting').¹⁹

3.4. Option 2: Importing equipment filled with gases that were placed on the EU market previously (in special cases)

In principle, it is possible for an importer to use HFCs that have already been placed on the EU market in the past, prior to their (re-)import into the EU inside the pre-charged equipment. In other words, the HFC is placed on the EU market, exported, inserted into the equipment outside the EU, then re-imported into the EU inside the equipment. The bulk gases should be supplied directly by the exporting undertaking to the manufacturers of equipment outside the EU and relevant proof must be provided in this case. The requirement for documentation of this circumstance is in Article 2.2(d) of the Implementing Regulation No 2016/879 which states that:

where the hydrofluorocarbons contained in the equipment have been placed on the market in the Union, subsequently exported and charged into the equipment outside the Union, a delivery note or invoice, as well as a declaration by the undertaking that placed the hydrofluorocarbons on the market, stating that the quantity of hydrofluorocarbons has been or will be reported as placed on the market in the Union and that it has not been and will not be reported as direct supply for export in the meaning of Article 15(2)(c) of the F-Gas Regulation²⁰ and Section 5C of the Annex to Commission Implementing Regulation (EU) No 1191/2014²¹.

¹⁹ https://ec.europa.eu/clima/sites/clima/files/f-gas/docs/faq_reporting_en.pdf

²⁰ <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32014R0517>

²¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R1191>

Such documentation would be needed for the declaration of conformity (see section 5) issued by the equipment importer in such a case and would be subject to verification by an independent auditor (see section 6).

As this is a rather unusual business pattern, it is likely to be relevant only in a very small number of cases. Moreover, it requires accurate annual reporting (see section 7.1) of a) the company which had previously placed the bulk gas on the EU market, b) the bulk gas exporter and c) the equipment importers:

- a) The company which had previously placed the bulk gas on the EU market must have counted the exported quantity against his quota and must not have claimed the phase-down export exemption (F-gas Regulation, Article 15(2)(c)) in Section 5 of the reporting sheets.
- b) The bulk gas exporter needs to report those quantities as exported from own EU purchases (section 3C of the reporting sheet).
- c) The importer of equipment will need to specify the quantities imported in equipment in section 12 of the reporting sheets and identify the undertaking that exported the bulk gas and the year of export.

More information on annual reporting can be found in section 7.1 Reporting obligation below and in the special guidance document on reporting ('FAQ reporting').²²

²² https://ec.europa.eu/clima/sites/clima/files/f-gas/docs/faq_reporting_en.pdf

4. Registration in the F-gas portal and use of the HFC registry

The phase-down and the quota system is implemented using an online HFC registry (F-gas Regulation, Article 17) operated by the European Commission. The registry records the HFC quotas allocated to incumbents and new entrants. It also tracks transfers of quotas made between quota holders and authorisations from quota holders to equipment importers. All companies holding quotas, companies supplying or receiving exempted HFCs (F-gas Regulation, Article 15(2)), **and importers of equipment placing pre-charged RAC equipment containing HFCs on the market²³ have a legal obligation to register in the HFC registry.** Registering as a company managing authorisations is also possible, this allows e.g. manufacturers to receive authorisations, and delegate them to importers.

4.1. Initial registration of companies

The HFC registry forms part of the **F-gas portal** found on the website of DG CLIMA (<https://webgate.ec.europa.eu/ods2/resources/domain>). The F-gas portal is the entry point for both the HFC registry and the annual company reporting. It is relevant for equipment importers of both F-gases and Annex II gases. The first step of the reporting procedure is registering on the F-gas portal. A [Guidance on how to register](#) is available.

4.2. Receipt of an authorisation

When equipment importers or authorisation managers acquire authorisations, these should be recorded in the HFC registry by the quota holder. In fact, importers and authorisation managers acquiring authorisations should insist on having the authorisation recorded in the HFC registry as only then can the importer make use of the authorisation.

The following screenshots provide an overview over the 'authorisations' section of the HFC registry:

²³ Importers of other types of equipment must also register in the F-gas Portal in order to carry out their annual reporting.

European Commission
CLIMATE ACTION
F-Gas

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

FGAS UNDERTAKING TEST 01 HOME PROFILE **HFC REGISTRY** REPORTING

WELCOME TO THE HFC REGISTRY

This is the HFC Registry, as mandated by Art. 17 of Regulation (EU) No 517/2014.
Only producers and importers of HFCs, undertakings supplying or in receipt of exempted HFCs (according to Art. 15(2)) and importers of RAC equipment pre-charged with HFCs need to access the Registry. If any of these apply to your organisation, this must be specified in the business specifications of your profile.

MY QUOTAS:

This part of the HFC Registry is for Importers and producers of bulk HFCs. It allows them to see their allocated reference values and quotas as well as make and receive quota transfers.

NOT APPLICABLE

MY DECLARATIONS:

This part of the HFC Registry allows importers and producers of bulk HFCs to make their yearly declarations of quota need, thus bidding for a possible allocation of quota from the NEW ENTRANTS RESERVE.

NOT APPLICABLE

MY AUTHORIZATIONS:

This part of the HFC Registry allows importers and producers of bulk HFCs to authorise the use of quota allocated to them to importers of precharged refrigeration, air conditioning and heatpump equipment. Such an authorisation allows importers of precharged equipment to account for the HFCs imported inside the equipment under the quota system (Art. 14).

ACCESS MY AUTHORIZATIONS

Importers can see the authorisations granted to them and accept new ones: First, click on the green **'HFC registry'** button (see yellow arrow) > then click on the **'access my authorisations'** button (see red arrow above).

The next screen shows in the upper part an authorisation balance for your company and in the lower part a list of all received (for authorisation managers such as manufacturers also delegated) authorisations:

In the authorisation balance, received authorisations are added across years and delegated authorisations (in the case of authorisation managers) and used authorisations (use by means of actual import of RAC equipment after 1st January 2017) are subtracted. However, the parameter "authorizations used" is updated with a significant delay as this can only be done after the yearly reporting and verification exercise has been fully completed, which can lead to delays to up to two years after the actual use of the authorisation.

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

NMORGANIZATION--14445 HOME PROFILE **HFC REGISTRY** REPORTING

AUTHORIZATION BALANCE FOR NMORGANIZATION--14445

QUOTA AUTHORIZATION BALANCE PER YEAR

YEAR	BALANCE FROM PREVIOUS YEAR	AUTHORIZATION RECEIVED	AUTHORIZATION USED	AUTHORIZATION DELEGATED	END YEAR BALANCE
2015	0	564983	0	0	564983
2016	564983	500000	0	9010	1055973

In the lower part of that screen, received authorisations, and in the case of authorisation managers also given delegations (see section 4.3), are listed chronologically with the most recent authorisation or delegation listed on top.

AUTHORIZATIONS FOR NMORGANIZATION--14445

This part of the HFC Registry is for importers and producers of bulk HFCs as well as for importers and manufacturers of precharged equipment. The bulk HFC importers/producers can authorise the use of (parts of) their quota to equipment importers and manufacturers for compliance with Art. 14. Equipment importers and manufacturers can receive and list their authorisations obtained. The manufacturers of equipment can also delegate their received authorisations to importers of precharged RAC equipment.

LIST OF ALL MY AUTHORIZATIONS AND DELEGATIONS

SUBMISSION DATE	STATUS	TRANSACTION	TYPE	GRANTOR	BENEFICIARY	AMOUNT (TONNES OF CO2 EQUIVALENT)	ACTIONS
05/10/2016	WAITING FOR ISSUING	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--10086	- 1 500	
04/10/2016	VALID	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--10086	- 9 000	
20/09/2016	VALID	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--9914	- 10	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9937	NMORGANIZATION--14445	+ 64 983	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 500 000	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 500 000	
15/12/2015	CANCELLED	AUTHORIZATION	IN	NMORGANIZATION--9937	NMORGANIZATION--14445	+ 65 004	
15/12/2015	REJECTED	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 1	

Quota Unit = tonne CO2 equivalent

Incoming authorisations (i.e. those that have been submitted by a quota holder or delegated by authorisation manager) are marked as 'waiting for acceptance'. Click on the check mark (see blue arrow below) to see the detailed authorisation entered by the quota holder/authorisation manager.

QUOTA AUTHORIZATIONS 2015 FOR FGAS UNDERTAKING TEST 01

DATE OF AUTHORIZATION	AUTHORIZATION NUMBER	TYPE	STATUS	AMOUNT AUTHORIZED	UNDERTAKING NAME	ACTIONS
06/07/2015		IN	WAITING FOR ACCEPTANCE	+ 10 000	NMORGANIZATION--9415	

[BACK TO LIST](#)

The authorising entity (quota holder or authorisation manager) is identified along with the authorised amount (10 000 CO₂ eq. in this example). Equipment importers simply click 'accept' (see purple arrow below) to validate the authorisation.

QUOTA AUTHORIZATION BY NMORGANIZATION--9415

Status	Submission date
WAITING FOR ACCEPTANCE	06/07/2015

QUOTA HOLDER DETAILS

ORGANIZATION NAME* NMORGANIZATION--9415		TELEPHONE* +321239415	WEBSITE WEBSITE--9415
STREET* street--7507	NO. nrstreet--7507	POSTAL CODE* zipcode--7507	CITY* city--7507
VAT NUMBER* VAT9415		COUNTRY* Estonia	

RECIPIENT OF AUTHORISATION

Please provide the ID and the name of the beneficiary.
Please ask your beneficiary to give you this information (the ID of a company is found under the "Profile" tab).

BENEFICIARY ID* 16410	BENEFICIARY NAME* FGAS Undertaking Test 01
--------------------------	---

AMOUNT AUTHORISED

Please provide the amount of quota to be authorized.

YEAR 2015	AMOUNT AUTHORIZED (TONNES OF CO ₂ EQUIVALENT)* 10000
--------------	--

OTHER INFORMATION:

COMMENTS FROM UNDERTAKING

COMMENTS FROM BENEFICIARY * (REQUIRED IN CASE OF REJECTION)

REJECT
BACK TO SUMMARY
ACCEPT

Having accepted the authorisation, the authorisation is initially displayed in the status 'waiting for issuing'. After issuance, the authorisation is displayed in the status 'valid'.

Only 'valid' authorisations can be used to cover imports of HFC-containing RAC equipment and referred to in the declarations on conformity (see section 5) and in the annual reports (see section 7.1).

The authorisations obtained (status: 'valid') are listed with amounts of CO₂ equivalent (10000 CO₂ eq. in this example).

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

FGAS UNDERTAKING TEST 01
HOME
PROFILE
HFC REGISTRY
REPORTING

QUOTA AUTHORIZATIONS 2015 FOR FGAS UNDERTAKING TEST 01

DATE OF AUTHORIZATION	AUTHORIZATION NUMBER	TYPE	STATUS	AMOUNT AUTHORIZED	UNDERTAKING NAME	ACTIONS
06/07/2015	AUT-BA06-AUQT-2015-00000015	IN	VALID	+ 10 000	NMORGANIZATION--9415	D

BACK TO LIST

Quota Unit = tonne CO₂ equivalent

V1.10.1.1 (16/06/2015) | Top
Contact - Legal notice

4.3. Delegation of an authorisation

Companies wishing to delegate authorisations must make sure they are registered as 'Managing authorisations for importers of refrigeration, AC and heatpump equipment containing HFCs' in the company business profile in the registry (select "YES" at the yellow arrow below). Where this is not yet the case, this field can be activated retroactively by means of the 'Edit' button (purple arrow below). This field is also fully independent from (and can be additional to) the other fields selected under business profile, e.g. importer of bulk/equipment, exporter of bulk.

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

NMORGANIZATION--9914 HOME PROFILE HFC REGISTRY REPORTING

Status
VALID

PROFILE OF NMORGANIZATION--9914 (ID : 9914)

ORGANISATION DETAILS:

ORGANISATION NAME * NMORGANIZATION--9914 TELEPHONE * +321239914 WEBSITE http://www.x9914.com

STREET * str--7831 NUMBER 1 POSTAL CODE * cp7831 CITY * Cargovil, Vilvoorde COUNTRY * Belgium

VAT NUMBER * VAT9914

Check if your EU VAT number is valid or check with your Member State authority

USERS:

FIRST NAME	LAST NAME	E-MAIL	ACTIONS
Test ODS new	TEST LAST	ep.user002@gmail.com	
Iname--9661	Iname--9661	9661email@climaOds2010.yyy	
Oeko	INSTITUT	ecas.test@oeko.de	

QUESTIONS:

BUSINESS SPECIFICATIONS:

ARE YOU A PRODUCER/IMPORTER OF HFCS * Yes No

ARE YOU AN EXPORTER OF HFCS * Yes No

ARE YOU A PRODUCER/IMPORTER/EXPORTER OF OTHER FLUORINATED GREENHOUSE GASES (NON-HFCS) LISTED IN ANNEX I OR II * Yes No

ARE YOU AN UNDERTAKING USING FLUORINATED GREENHOUSE GASES LISTED IN ANNEX I OR II AS FEEDSTOCK * Yes No

ARE YOU AN UNDERTAKING IN RECEIPT OF EXEMPTED HFCS * Yes No

ARE YOU IMPORTING PRODUCTS AND EQUIPMENT CONTAINING FLUORINATED GREENHOUSE GASES LISTED IN ANNEX I OR II * Yes No

Importer of Refrigeration, AC and heatpump equipment containing HFCs

Importer of other products and equipment

ARE YOU AN UNDERTAKING DESTROYING FLUORINATED GREENHOUSE GASES LISTED IN ANNEX I OR II * Yes No

ARE YOU MANAGING AUTHORISATIONS FOR IMPORTERS OF REFRIGERATION, AC AND HEATPUMP EQUIPMENT CONTAINING HFCS? * Yes No

SHOW BUSINESS SPECIFICATIONS HISTORY

SHOW REGISTRATION HISTORY

EDIT

Authorisation managers may delegate (parts of) received authorisations. The receipt of authorisations is described in section 4.2 above.

In order to delegate (parts of) authorisations, authorisation managers first need to access the HFC Registry within the F-Gas portal (yellow arrow below) and then access the authorisations section (red arrow):

The screenshot shows the 'CLIMATE ACTION F-Gas' portal. The navigation bar includes 'HOME', 'PROFILE', 'HFC REGISTRY', and 'REPORTING'. The 'HFC REGISTRY' section is active. Below the header, there are three main sections: 'MY QUOTAS', 'MY DECLARATIONS', and 'MY AUTHORIZATIONS'. The 'MY AUTHORIZATIONS' section contains a button labeled 'ACCESS MY AUTHORIZATIONS'.

Here, authorisation managers can see authorisations received and delegations given. In order to make a delegation, first the respective received authorisation (status must be 'valid') has to be selected by clicking on the yellow 'View' button (see blue arrow in example below):

LIST OF ALL MY AUTHORIZATIONS AND DELEGATIONS

SUBMISSION DATE	STATUS	TRANSACTION	TYPE	GRANTOR	BENEFICIARY	AMOUNT (TONNES OF CO2 EQUIVALENT)	ACTIONS
20/09/2016	VALID	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--9914	- 10	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9937	NMORGANIZATION--14445	+ 64 983	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 500 000	
16/12/2015	VALID	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 500 000	
15/12/2015	CANCELLED	AUTHORIZATION	IN	NMORGANIZATION--9937	NMORGANIZATION--14445	+ 65 004	
15/12/2015	REJECTED	AUTHORIZATION	IN	NMORGANIZATION--9428	NMORGANIZATION--14445	+ 1	

In the authorisation overview, the available amount of authorisation is displayed (red marker below), used and delegated amounts are subtracted. For an additional authorisation, click 'Make a Delegation' (blue arrow).

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

NMORGANIZATION--14445 HOME PROFILE HFC REGISTRY REPORTING

QUOTA AUTHORIZATION BY NMORGANIZATION--9428

Status	Issued on	Long number
VALID	18/12/2015	PRO-DU03-APPL-2015-00000099

QUOTA HOLDER DETAILS

ORGANISATION NAME: NMORGANIZATION--9428 TELEPHONE: +321239428 WEBSITE: http://www.x9428.com

STREET: str--7515 NO: 1 POSTAL CODE: cp7515 CITY: Dordrecht COUNTRY: Netherlands

VAT NUMBER: VAT9428

RECIPIENT OF AUTHORISATION

Please provide the ID and the name of the beneficiary.
Please ask your beneficiary to give you this information (the ID of a company is found under the "Profile" tab).

BENEFICIARY ID: 14445 BENEFICIARY NAME: NMORGANIZATION--14445


AMOUNT AUTHORISED

Please provide the amount of quota to be authorized.


YEAR: 2015 AMOUNT (TONNES OF CO2 EQUIVALENT): 500000

DELEGATION OF AUTHORIZATIONS

HIDE DELEGATIONS

STATUS	DATE	BENEFICIARY NAME	BENEFICIARY COUNTRY	AMOUNT DELEGATED (TONNES OF CO2 EQUIVALENT)	ACTIONS
Valid	20/09/2016	NMORGANIZATION--9914 (ID: 9914)	Belgium (BE)	10	

Remaining from this authorization (tonnes of CO2 equivalent): 499990

MAKE A DELEGATION 

In the following Delegation dialogue, enter the ID and name of the beneficiary (red marker below), and the delegated amount (yellow marker). Finally click 'submit' (blue arrow below).

European Commission > Climate Action > Policies > Fluorinated Gases > Portal

NMORGANIZATION--14445 HOME PROFILE HFC REGISTRY REPORTING

DELEGATION OF AUTHORIZATION BY NMORGANIZATION--14445

GRANTOR DETAILS

ORGANISATION NAME* NMORGANIZATION--14445 TELEPHONE* +3212314445 WEBSITE http://www.x14445.com

STREET* str--11590 NO. 1 POSTAL CODE* cp11590 CITY* Wiesbaden COUNTRY* Germany

VAT NUMBER* VAT14445

RECIPIENT OF DELEGATION

Please provide the ID and the name of the beneficiary.
Please ask your beneficiary to give you this information (the ID of a company is found under the "Profile" tab).

BENEFICIARY ID* 10086 BENEFICIARY NAME* NMorganization--10086

AMOUNT DELEGATED

Please provide the amount of quotas to be delegated.

AMOUNT (TONNES OF CO2 EQUIVALENT)* 9000

Remaining from this authorization (tonnes of CO2 equivalent): 499990

OTHER INFORMATION:

COMMENTS FROM UNDERTAKING

BACK TO SUMMARY SUBMIT SAVE

You'll be asked to confirm the delegation by clicking 'yes'.

PLEASE CONFIRM

Are you sure you want to delegate 9000 tonnes of CO2 equivalent to company NMorganization--10086 ?


YES NO

In your authorisation overview, the new delegation is now listed as 'waiting for acceptance'.


LIST OF ALL MY AUTHORIZATIONS AND DELEGATIONS

SUBMISSION DATE	STATUS	TRANSACTION	TYPE	GRANTOR	BENEFICIARY	AMOUNT (TONNES OF CO2 EQUIVALENT)	ACTIONS
04/10/2016	WAITING FOR ACCEPTANCE	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--10086	- 9 000	
20/09/2016	VALID	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--9914	- 10	

Once the delegation has been accepted in the registry by the recipient (as explained in section 4.2 above) the given delegation is shown with the status 'waiting for issuing'.

LIST OF ALL MY AUTHORIZATIONS AND DELEGATIONS							
SUBMISSION DATE	STATUS	TRANSACTION	TYPE	GRANTOR	BENEFICIARY	AMOUNT (TONNES OF CO2 EQUIVALENT)	ACTIONS
04/10/2016	WAITING FOR ISSUING	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--10086	- 9 000	

After issuance, the delegation is shown with the status 'valid'.

04/10/201	VALID	DELEGATION	OUT	NMORGANIZATION--14445	NMORGANIZATION--10086	- 9 000	
-----------	-------	------------	-----	-----------------------	-----------------------	---------	---

Only 'valid' authorisations and delegations can be used by the recipient to cover imports of HFC-containing RAC equipment and referred to in the declarations on conformity (see section 5) and in the annual reports (see section 7.1).

5. Declaration of conformity and related documentation

The burden of proof that the HFCs contained in pre-charged equipment are accounted for under the EU HFC phase-down **lies with the importer of the equipment**, as the importer is required to ensure compliance when placing pre-charged equipment on the market (i.e. release for free circulation after import). Unless the importer can provide the necessary proof, the importer must not place the equipment on the market.

To this effect, from 1 January 2017, importers of RAC equipment containing HFCs shall draw up a **Declaration of Conformity**²⁴ when they import a shipment of equipment and release it for free circulation. The Implementing Regulation (EU) No 2016/879²⁵ sets out the detailed arrangements relating to the declarations of conformity: A template for a declaration of conformity taken from Annex I of the Implementing Regulation (EU) 2016/879 is included in section 10.1 Importer's declaration of conformity. In the declaration of conformity, the equipment importer specifies with which option (see sections 3.2 to 3.4) the HFCs contained in the imported equipment are accounted for under the HFC phase-down.

The declaration of conformity shall be signed by a legal representative of the importer of equipment. Importers must ensure that a copy of the declaration is available to the customs authorities at the time the customs declaration related to the release for free circulation in the Union is submitted.

For each declaration of conformity, the equipment importer must keep documentation related to the type and amount of equipment imported, and amounts of contained HFCs both in units of mass and converted into CO₂ equivalents. This documentation does not need to be included in the copy of the declaration of conformity made available to the customs authorities. In case of a re-import (Option 2, see section 3.4), additional documentation is necessary. For details on documentation needs, please see section 10.2.

The declarations of conformity and associated documentation must be retained by the importer for a period of at least five years after the placing on the market of that equipment.

Importers' declarations of conformity and the associated documentation are subject to verification as explained in section 6. Importers also need to annually report on the result of the verification process (see section 6).

Declarations of Conformity for EU-based equipment manufacturers

Manufacturers of pre-charged RAC equipment in the EU are also obliged to draw up a declaration of conformity, signed by a legal representative, when placing equipment on the EU market. The scope of the required documentation slightly deviates from the importers' scope of documentation, for details please see section 10.2. Just as importers, EU manufacturers need to retain the declarations of conformity and the associated documentation for at least five years.

However, EU manufacturers' declarations of conformity are not subject to verification.

Thus, section 6 of this guidance does not apply to EU manufacturers.

For a summary of obligations for EU manufacturers see also section 7.4.

²⁴ The legislation does not foresee any threshold for this obligation.

²⁵ <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32016R0879>

6. Independent verification and submission of result

Equipment importers' declarations of conformity and the associated documentation (see section 5) are subject to verification by an external independent auditor. Section 6.1 explains what exactly is verified by the auditor.

The auditor must be either accredited under Directive 2003/87/EC (for the verification of emission reports under the European Emission Trading Scheme) or accredited to verify financial statements in the Member State in which the importer is located.

In their verification document, the auditor will make a statement on the level of accuracy. For an explanation of the expected level of accuracy, please see section 6.2, a template for the auditor's statement is given in section 10.2.

It is the equipment importer's obligation, to submit to the European Commission (see section 6.3) the verification document and to report on the auditor's statement on the level of accuracy. The reporting template to be used by equipment importers with their submission to the European Commission is identical to the template proposed in this guidance to be used by auditors (see 10.2). In order to facilitate equipment importers unbiased reporting on the verification results, it is therefore recommended that an equipment importer requests the auditor to make use of this template in the verification report.

The deadline both for the auditor's verification (see section 6.1) and the equipment importer's submission of the verification report (see section 6.3, using the template in section 10.2) is 31st March of the calendar year following the placing on the market. The same date is the due date for the annual report (see section 7.1) which is also included in the verification process, as explained in 6.1.

For example, the equipment importer's submission of the verification document on the declarations of conformity related to imports in 2017, as well as the annual report related to imports in 2017, should be completed by 31 March 2018.

No declarations of conformity and thus no verification is required for equipment imports before 2017.

Please note that while the annual reporting obligation on equipment imports (see section 7.1) is subject to a threshold of annual imports exceeding 500 t CO₂ eq, no such threshold applies for the obligation to have the declaration(s) of conformity verified and submit the results to the European Commission.

6.1. What does the auditor verify?

The Implementing Regulation (EU) No 2016/879²⁵ sets out arrangements relating to verification by the independent auditor (on the basis of F-gas Regulation Article 14(4)). Article 3(1) of the Implementing Regulation specifies that the independent auditor shall verify importers' declarations of conformity and associated documentation (see section 5) with respect to the following:

- accuracy and completeness of the information contained in the declarations of conformity and the related documentation (see section 5) on the basis of the undertaking's records of relevant transactions;
- consistency of the declaration(s) of conformity and the related documentation (see section 5) with the annual reports submitted pursuant to Article 19 (see section 7.1);
- where an importer of equipment refers in the declaration of conformity (see section 5) to an authorisation (see option 1 for compliance, section 3.3): the availability of sufficient authorisations by comparing data in the HFC registry (see section 4) with documents evidencing the placing on the market;

- where an importer of equipment refers in the declaration of conformity (see section 5) to a re-import of HFCs previously placed on the market (see option 2 for compliance, section 3.4): the existence of a declaration²⁶ by the undertaking which had originally placed the HFCs on the market.

6.2. Levels of accuracy

Article 3(2) of the Implementing Regulation stipulates that the auditor will make a statement on the level of accuracy:

The independent auditor shall issue a verification document containing its findings following the verification ... [including] a statement on the level of accuracy of the relevant documentation and declarations.

The levels of accuracy for reporting are specified in Sections 11, 12 and 13 of the Annex to Commission Implementing Regulation (EU) No 1191/2014 and in Article 2(2)(b) of Commission Implementing Regulation (EU) 2016/879.

The auditor will verify that the levels of accuracy comply with Article 19 of Regulation (EU) No 517/2014 as well as Commission Implementing Regulation (EU) No 1191/2014 and Commission Implementing Regulation (EU) 2016/879, noting that:

- Section 11 of the Annex to Commission Implementing Regulation (EU) No 1191/2014 applies to total physical charges of gas placed on the market in categories of imported pre-charged equipment,
- Section 12 of the Annex to Commission Implementing Regulation (EU) No 1191/2014 applies to exported gas used to fill into equipment outside of the EU,
- Sections 11 and 12 of the Annex to Commission Implementing Regulation (EU) No 1191/2014 both specify reporting in "metric tonnes with accuracy to the third decimal place".
- Section 13 of the Annex to Commission Implementing Regulation (EU) No 1191/2014 applies to received quota authorisation used to cover HFCs placed on the market within imported pre-charged equipment and specifies reporting in "tonnes of CO₂ equivalents with accuracy to 1 tonne of CO₂ equivalent".
- Article 2(2)(b) of Commission Implementing Regulation (EU) 2016/879 requires information on the total quantities of hydrofluorocarbons to be stated in kilograms and in tonnes of CO₂ equivalent.
- Article 2(2)(b) of Commission Implementing Regulation (EU) 2016/879 also requires information on the quantity (charge) in each unit rounded to the nearest gram. Specific charges are not subject to reporting by companies under Article 19 of Regulation (EU) No 517/2014. Rather, they are calculated in the online reporting form as a means of quality control only.

A template for the statement on the level of accuracy is included in section 10.2 Verification and submission of verification documents.

6.3. Submission of verification documents

The importer needs to submit the verification document and supporting documentation online, by 31 March of the calendar year after the placing on the market. **The web address will be communicated via the HFC Registry in due time before it becomes relevant.**

The importer will be required to indicate in the online tool the auditor's findings about the level of accuracy of the relevant documentation and declarations.

²⁶ Declaration according to Article 2.2(d) of the Implementing Regulation No 2016/879, see sections 3.4 and 5.

According to Article 4 of Implementing Regulation No 2016/879:

The importer of equipment shall submit the verification document referred to in Article 3(2) of this Regulation using the reporting tool made available pursuant to Article 1 of Implementing Regulation (EU) No 1191/2014 by 31 March every year for the preceding calendar year and indicate in the tool the auditor's findings about the level of accuracy of the relevant documentation and declarations.

The information required in the online tool indicating the auditor's findings on the level of accuracy of the relevant documentation and declarations is in the same structure as part (2) *Substance of Verification* in the template (see section 10.2) for the statement on the level of accuracy which begins on page 46.

7. Other obligations for importers and manufacturers of equipment

7.1. Reporting obligation

The reporting obligations (F-gas Regulation Article 19) cover all importers of products and equipment²⁷ containing F-gases and Annex II gases. Each undertaking importing 500 t CO₂ equivalent or more per year in products or equipment containing such gases (including mixtures) is obliged to report the following information (Section 11 of the Annex to Implementing Regulation 1191/2014²⁸):

- quantity in metric tonnes of F-gases and Annex II gases contained in the equipment/products, by category;
- number of units per category;

This report is due by 31 March of the subsequent calendar year. The first reporting deadline was 31 March 2015 for transactions in 2014.

Converted into physical amounts of HFCs and mixtures commonly used as refrigerants, the reporting threshold of 500 t CO₂ equivalent corresponds to 350 kg of HFC-134a, 127 kg of R404A, 240 kg of R410A, or 282 kg of R407C.

Furthermore, importers of RAC equipment containing HFCs, have additional reporting tasks related to their compliance with the HFC phase-down under Article 14:

- Equipment importers making use of authorisations (compliance option 1, see section 3.3) report on the use and source of authorisations covering the HFCs contained in RAC equipment imports (Section 13 of the Annex to Implementing Decision 1191/2014²⁸): To this end, (delegated) authorisations as received in the HFC Registry are automatically imported into the reporting tool. Importers are then asked to specify which amounts of available authorisations were used to cover the actual imports in section 11 of the Annex to Implementing Decision 1191/2014²⁸.
- Equipment importers making use of compliance option 2 (re-import, see section 3.4) report on the respective amounts of HFCs and identify the exporting undertaking and the year of export (Section 12 of the Annex to Implementing Decision 1191/2014²⁸).

Reporting in sections 12 and 13 of the Annex to Implementing Decision 1191/2014²⁸ applies the first time in 2018 for reporting on imports in 2017.

A [Frequently Asked Questions \(FAQ\)](#) document on reporting can be found on the DG CLIMA website.²⁹

Role of non-EU manufacturers of products and equipment containing F-gases or Annex II gases:

As the reporting obligation is directed to the equipment importer, an equipment manufacturer cannot centrally submit a joint report covering several equipment importers across the EU. However, equipment importers may individually grant the equipment manufacturer access to their respective company accounts in the HFC registry (see section 4) and thus enable a representative of the equipment manufacturer to perform the reporting task on the importer's behalf.

²⁷ Not limited to RAC equipment.

²⁸ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL_2014_318_R_0004

²⁹ Frequently Asked Questions (FAQ) :

https://ec.europa.eu/clima/sites/clima/files/f-gas/docs/faq_reporting_en.pdf

7.2. Placing on the market prohibitions for F-gas equipment

The F-gas Regulation includes a number of **new** restrictions on placing equipment on the market of F-gas products and equipment (Article 11 and Annex III). Among the new restrictions are prohibitions to place on the market:

- domestic refrigerators and freezers that contain HFCs with GWP of 150 or more (from 1 January 2015);
- refrigerators and freezers for commercial use (hermetically sealed equipment):
 - containing HFCs with GWP of 2 500 or more (from 1 January 2020)
 - containing HFCs with GWP of 150 or more (from 1 January 2022)
- any stationary refrigeration equipment that contains HFCs with a GWP of 2 500 or more (from 1 January 2020);
- movable room air conditioning equipment (hermetically sealed equipment which can be moved between rooms by the end-user) that contain HFCs with a GWP of 150 or more (from 1 January 2020);
- single split air conditioning systems containing less than 3 kg of fluorinated greenhouse gases, that contain, or whose functioning relies upon, fluorinated greenhouse gases with a GWP of 750 or more (from 1 January 2025);
- fire protection equipment with HFC-23 (from 1 January 2016);
- technical aerosols that contain HFCs with a GWP of 150 or more (from 1 January 2018);
- XPS foams (banned from 1 January 2020) and other foams (from 1 January 2023) that contain HFCs with a GWP of 150 or more.

Some exemptions apply (e.g. for safety reasons, medical use, very low temperatures). Please refer to Annex III to the F-gas Regulation for the full list of prohibitions and further details.

7.3. Labelling

Equipment containing Annex I gases needs to be labelled³⁰ (F-gas Regulation Article 12 and Commission Implementing Regulation on labelling format³¹).

Labelling requirements for products and types of equipment containing F-gases have been updated in the F-gas Regulation to *inter alia* include foams (Article 12). The label must indicate that the equipment or product contains F-gases and the industry designation of the F-gas. From 2017 onwards, the quantity in weight and in CO₂ equivalent must also be included, along with the GWP of the gas. This information must also be included in instruction manuals and, in the case of F-gases with a GWP >150, also descriptions used for advertising. Furthermore, a Commission Implementing Regulation sets out the format for labelling³².

While the importer is responsible for the correct labelling of equipment placed on the market, usually the equipment is labelled by the manufacturer.

³⁰ Labelling will usually be carried out by the manufacturer of equipment.

³¹ Commission Implementing Regulation (EU) 2015/2068 on F-gas labelling format:
http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2015_301_R_0009

³² See http://ec.europa.eu/clima/policies/f-gas/legislation/documentation_en.htm under implementing acts (Implementing Regulation (EU) 2015/2068).

7.4. Summary of obligations on EU manufacturer of F-gas equipment

In principle, the obligations on EU manufacturers are the same as those on importers of equipment. However in practice there are some differences, since the HFC used in equipment by EU manufacturer have often already been placed on the market. The box below gives a short overview of the requirements related to EU manufacturer.

Equipment **manufacturers in the EU** have various obligations under the F-gas Regulation. These include:

- **Compliance with the HFC Phase-down and quota system:** Similar to importers, EU manufacturers of RAC equipment need to draw up a **Declaration of Conformity** confirming that HFCs charged into equipment placed on the EU market are covered by the HFC quota system, and need to keep full supporting documentation. For details, please refer to section 5;
- **No HFC phase-down exemption for gases exported in pre-charged equipment:** Upon sale of the gas by EU gas producers or upon release for free circulation after import, quota is needed. This applies also if the HFCs are sold to an equipment manufacturer that subsequently intends to export the HFC equipment. However, no quota is needed if the bulk HFCs are imported under customs procedures different from "release for free circulation", and exported inside equipment without ever being released in the EU;
- **Placing on the market restrictions** apply to both importers and EU manufacturers placing product and equipment on the EU market (F-gas Regulation Article 11 and Annex III; see also section 7.2 Placing on the market prohibitions for F-gas equipment in this document);
- Requirements for the **labelling of equipment** apply to both importers and EU manufacturers (Article 12 and Commission Implementing Regulation establishing the labelling format. See also section 7.3 Labelling in this document).

8. Fluorinated greenhouse gases

8.1. F-gases listed in Annex I to the F-gas Regulation

Fluorinated Greenhouse Gases listed in Annex I of F-gas Regulation No 517/2014, along with their Chemical Abstracts Service (CAS) number and typical applications:

Industrial designation	Chemical name (common name)	Chemical formula	GWP	CAS number	Typical applications
Section 1: Hydrofluorocarbons (HFCs)					
HFC-23	trifluoromethane (fluoroform)	CHF ₃	14800	75-46-7	Low temperature refrigerant Fire extinguishant
HFC-32	Difluoromethane	CH ₂ F ₂	675	75-10-5	Refrigerant Blend component for refrigerants
HFC-41	fluoromethane (methyl fluoride)	CH ₃ F	92	593-53-3	Semiconductor manufacturing
HFC-125	Pentafluoroethane	CHF ₂ CF ₃	3500	354-33-6	Blend component for refrigerants Fire extinguishant
HFC-134	1.1.2.2-tetrafluoroethane	CHF ₂ CHF ₂	1100	359-35-3	No typical applications at present
HFC-134a	1.1.1.2-tetrafluoroethane	CH ₂ FCF ₃	1430	811-97-2	Refrigerant Blend component for refrigerants Extraction solvent Propellant for medical and technical aerosols Blowing agent component for extruded polystyrene (XPS) polyurethane (PUR) foams
HFC-143	1.1.2-trifluoroethane	CH ₂ FCHF ₂	353	430-66-0	No typical applications at present
HFC-143a	1.1.1-trifluoroethane	CH ₃ CF ₃	4470	420-46-2	Blend component for refrigerants
HFC-152	1.2-difluoroethane	CH ₂ FCHF ₂	53	624-72-6	Not commonly used
HFC-152a	1.1-difluoroethane	CH ₃ CHF ₂	124	75-37-6	Propellant for specialised technical aerosols Blowing agent component for extruded polystyrene (XPS) foams Refrigerant
HFC-161	fluoroethane(ethyl fluoride)	CH ₃ CH ₂ F	12	353-36-6	Not commonly used. Tested as alternative to R22, not used at commercial scale
HFC-227ea	1.1.1.2.3.3.3-heptafluoropropane	CF ₃ CHF ₂ CF ₃	3220	431-89-0	Refrigerant Propellant for medical aerosols

Industrial designation	Chemical name (common name)	Chemical formula	GWP	CAS number	Typical applications
					Fire extinguishant Blowing agent for foams
HFC-236cb	1.1.1.2.2.3-hexafluoropropane	CH ₂ FCF ₂ CF ₃	1340	677-56-5	Refrigerant Blowing agent
HFC-236ea	1.1.1.2.3.3-hexafluoropropane	CHF ₂ CHFCF ₃	1370	431-63-0	Refrigerant Blowing agent
HFC-236fa	1.1.1.3.3.3-hexafluoropropane	CF ₃ CH ₂ CF ₃	9810	690-39-1	Fire extinguishant Refrigerant
HFC-245ca	1.1.2.2.3-pentafluoropropane	CH ₂ FCF ₂ CHF ₂	693	679-86-7	Refrigerant Blowing agent
HFC-245fa	1.1.1.3.3-pentafluoropropane	CHF ₂ CH ₂ CF ₃	1030	460-73-1	Foam blowing agent for polyurethane (PUR) Solvent for specialised applications
HFC-365 mfc	1.1.1.3.3-pentafluorobutane	CF ₃ CH ₂ CF ₂ CH ₃	794	406-58-6	Foam blowing agent for polyurethane (PUR) and phenolic foams Blend component for solvents
HFC-43-10 mee	1.1.1.2.2.3.4.5.5.5-decafluoropentane	CF ₃ CHFCHFCF ₂ CF ₃	1640	138495-42-8	Solvent for specialised applications Blowing agent for foams
Section 2: Perfluorocarbons (PFCs)					
PFC-14	tetrafluoromethane (perfluoromethane, carbon tetrafluoride)	CF ₄	7390	75-73-0	Semiconductor manufacturing Fire extinguishant
PFC-116	hexafluoroethane (perfluoroethane)	C ₂ F ₆	12200	76-16-4	Semiconductor manufacturing
PFC-218	octafluoropropane (perfluoropropane)	C ₃ F ₈	8830	76-19-7	Semiconductor manufacturing
PFC-3-1-10 (R-31-10)	decafluorobutane (perfluorobutane)	C ₄ F ₁₀	8860	355-25-9	Physics research Fire extinguishant
PFC-4-1-12 (R-41-12)	dodecafluoropentane (perfluoropentane)	C ₅ F ₁₂	9160	678-26-2	Precision cleaning solvent Low-use refrigerant
PFC-5-1-14 (R-51-14)	tetradecafluorohexane (perfluorohexane)	C ₆ F ₁₄	9300	355-42-0	Coolant fluid in specialised applications Solvent
PFC-c-318	octafluorocyclobutane (perfluorocyclobutane)	c-C ₄ F ₈	10300	115-25-3	Semiconductor manufacturing
Section 3: Other perfluorinated compounds					
	sulfur hexafluoride	SF ₆	22800	2551-62-4	Insulating gas in high-voltage switchgear Blanket gas for magnesium production Etching and cleaning in the semiconductors industry

8.2. Other fluorinated greenhouse gases listed in Annex II of the F-gas Regulation

Common name/industrial designation	Chemical formula	GWP
Section 1: Unsaturated hydro(chloro)fluorocarbons		
HFC-1234yf	$\text{CF}_3\text{CF}=\text{CH}_2$	4
HFC-1234ze	trans — $\text{CHF}=\text{CHCF}_3$	7
HFC-1336 mzz	$\text{CF}_3\text{CH}=\text{CHCF}_3$	9
HCFC-1233zd	$\text{C}_3\text{:}_2\text{ClF}_3$	4.5
HCFC-1233xf	$\text{C}_3\text{:}_2\text{ClF}_3$	1
Section 2: Fluorinated ethers and alcohols		
HFE-125	CHF_2OCF_3	14900
HFE-134	$\text{CHF}_2\text{OCHF}_2$	6320
HFE-143a	CH_3OCF_3	756
HCFE-235da2 (isofluorane)	$\text{CHF}_2\text{OCHClCF}_3$	350
HFE-245cb2	$\text{CH}_3\text{OCF}_2\text{CF}_3$	708
HFE-245fa2	$\text{CHF}_2\text{OCH}_2\text{CF}_3$	659
HFE-254cb2	$\text{CH}_3\text{OCF}_2\text{CHF}_2$	359
HFE-347 mcc3 (HFE-7000)	$\text{CH}_3\text{OCF}_2\text{CF}_2\text{CF}_3$	575
HFE-347pcf2	$\text{CHF}_2\text{CF}_2\text{OCH}_2\text{CF}_3$	580
HFE-356pcc3	$\text{CH}_3\text{OCF}_2\text{CF}_2\text{CHF}_2$	110
HFE-449sl (HFE-7100)	$\text{C}_4\text{F}_9\text{OCH}_3$	297
HFE-569sf2 (HFE-7200)	$\text{C}_4\text{F}_9\text{OC}_2\text{:}_5$	59
HFE-43-10pccc124 (H-Galden 1040x) HG-11	$\text{CHF}_2\text{OCF}_2\text{OC}_2\text{F}_4\text{OCHF}_2$	1870
HFE-236ca12 (HG-10)	$\text{CHF}_2\text{OCF}_2\text{OCHF}_2$	2800
HFE-338pcc13 (HG-01)	$\text{CHF}_2\text{OCF}_2\text{CF}_2\text{OCHF}_2$	1500
HFE-347 mmy1	$(\text{CF}_3)_2\text{CFOCH}_3$	343
2.2.3.3.3-pentafluoropropanol	$\text{CF}_3\text{CF}_2\text{CH}_2\text{OH}$	42
bis(trifluoromethyl)-methanol	$(\text{CF}_3)_2\text{CHOH}$	195
HFE-227ea	$\text{CF}_3\text{CHFOCF}_3$	1540
HFE-236ea2 (desfluoran)	$\text{CHF}_2\text{OCHF}_2\text{CF}_3$	989
HFE-236fa	$\text{CF}_3\text{CH}_2\text{OCF}_3$	487
HFE-245fa1	$\text{CHF}_2\text{CH}_2\text{OCF}_3$	286
HFE 263fb2	$\text{CF}_3\text{CH}_2\text{OCH}_3$	11
HFE-329 mcc2	$\text{CHF}_2\text{CF}_2\text{OCF}_2\text{CF}_3$	919
HFE-338 mcf2	$\text{CF}_3\text{CH}_2\text{OCF}_2\text{CF}_3$	552
HFE-338 mmz1	$(\text{CF}_3)_2\text{CHOCHF}_2$	380

Common name/industrial designation	Chemical formula	GWP
HFE-347 mcf2	$\text{CHF}_2\text{CH}_2\text{OCF}_2\text{CF}_3$	374
HFE-356 mec3	$\text{CH}_3\text{OCF}_2\text{CHF}_2\text{CF}_3$	101
HFE-356 mm1	$(\text{CF}_3)_2\text{CHOCH}_3$	27
HFE-356pcf2	$\text{CHF}_2\text{CH}_2\text{OCF}_2\text{CHF}_2$	265
HFE-356pcf3	$\text{CHF}_2\text{OCH}_2\text{CF}_2\text{CHF}_2$	502
HFE 365 mcf3	$\text{CF}_3\text{CF}_2\text{CH}_2\text{OCH}_3$	11
HFE-374pc2	$\text{CHF}_2\text{CF}_2\text{OCH}_2\text{CH}_3$	557
	$-(\text{CF}_2)_4\text{CH}(\text{OH})-$	73
Section 3: Other perfluorinated compounds		
perfluoropolymethylisopropylether (PFPMIE)	$\text{CF}_3\text{OCF}(\text{CF}_3)\text{CF}_2\text{OCF}_2\text{OCF}_3$	10300
nitrogen trifluoride	NF_3	17200
trifluoromethyl sulfur pentafluoride	SF_5CF_3	17700
Perfluorocyclopropane	$\text{C-C}_3\text{F}_6$	17340

8.3. Method for calculating the total GWP of a mixture

From Annex IV to Regulation (EU) No 517/2014. Method for calculating the total GWP of a mixture:

The GWP of a mixture is calculated as a weighted average, derived from the sum of the weight fractions of the individual substances multiplied by their GWP, including substances covered in Annex I, Annex II and Annex IV of Regulation (EU) No 517/2014 that are not fluorinated greenhouse gases.

$\Sigma [(\text{Substance X} \% \times \text{GWP}) + (\text{Substance Y} \% \times \text{GWP}) + \dots (\text{Substance N} \% \times \text{GWP})]$
where % is the contribution by weight with a weight tolerance of +/- 1 %.

Example 1: applying the formula to a blend of gases (R-404A) consisting fully of HFCs:
44 % HFC-125 (GWP=3500), 52 % HFC-143a (GWP=4470) and 4 % HFC-134a (GWP=1430):

$\Sigma (44 \% \times 3500) + (52 \% \times 4470) + (4 \% \times 1430)$
→ Total GWP = 3922

Example 2: applying the formula to a blend of gases (R-413A) containing also non HFCs:

88 % HFC-134a (GWP=1430), 9 % PFC-218 (GWP=8830) and 3 % Isobutane/R-600a (GWP=3):

$\Sigma (88 \% \times 1430) + (9 \% \times 8830) + (3 \% \times 3)$
→ Total GWP = 2053.19

Please note that according to the definitions of the F-Gas Regulation a mixture (like R-413A) containing both HFC and non-HFC constituents is considered an hydrofluorocarbon entirely. Thus when converting R-413A imports into CO₂ equivalents, the full GWP of 2053.19 is to be applied.

9. Common mixtures

List of common mixtures taken from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 3: Industrial Processes and Product Use Table 7.8, p. 7.44

Blend	Constituents	Composition (%)	GWP
R400	CFC-12/CFC-114 ³³	Should be specified ¹	
R401A	HCFC-22/HFC-152a/HCFC-124	(53.0/13.0/34.0)	
R401B	HCFC-22/HFC-152a/HCFC-124	(61.0/11.0/28.0)	
R401C	HCFC-22/HFC-152a/HCFC-124	(33.0/15.0/52.0)	
R402A	HFC-125/HC-290/HCFC-22	(60.0/2.0/38.0)	
R402B	HFC-125/HC-290/HCFC-22	(38.0/2.0/60.0)	
R403A	HC-290/HCFC-22/PFC-218	(5.0/75.0/20.0)	
R403B	HC-290/HCFC-22/PFC-218	(5.0/56.0/39.0)	
R404A	HFC-125/HFC-143a/HFC-134a	(44.0/52.0/4.0)	3922
R405A	HCFC-22/ HFC-152a/ HCFC-142b/PFC-318	(45.0/7.0/5.5/42.5)	
R406A	HCFC-22/HC-600a/HCFC-142b	(55.0/4.0/41.0)	
R407A	HFC-32/HFC-125/HFC-134a	(20.0/40.0/40.0)	2107
R407B	HFC-32/HFC-125/HFC-134a	(10.0/70.0/20.0)	2804
R407C	HFC-32/HFC-125/HFC-134a	(23.0/25.0/52.0)	1774
R407D	HFC-32/HFC-125/HFC-134a	(15.0/15.0/70.0)	1627
R407E	HFC-32/HFC-125/HFC-134a	(25.0/15.0/60.0)	1552
R407F	HFC-32/HFC-125/HFC-134a	(30.0/30.0/40.0)	1825
R408A	HFC-125/HFC-143a/HCFC-22	(7.0/46.0/47.0)	
R409A	HCFC-22/HCFC-124/HCFC-142b	(60.0/25.0/15.0)	
R409B	HCFC-22/HCFC-124/HCFC-142b	(65.0/25.0/10.0)	
R410A	HFC-32/HFC-125	(50.0/50.0)	2088
R410B	HFC-32/HFC-125	(45.0/55.0)	2229
R411A	HC-1270/HCFC-22/HFC-152a	(1.5/87.5/11.0)	
R411B	HC-1270/HCFC-22/HFC-152a	(3.0/94.0/3.0)	
R411C	HC-1270/HCFC-22/HFC-152a	(3.0/95.5/1.5)	
R412A	HCFC-22/PFC-218/HCFC-142b	(70.0/5.0/25.0)	
R413A	PFC-218/HFC-134a/HC-600a	(9.0/88.0/3.0)	2053
R414A	HCFC-22/HCFC-124/HC-600a/HCFC-142b	(51.0/28.5/4.0/16.5)	
R414B	HCFC-22/HCFC-124/HC-600a/HCFC-142b	(50.0/39.0/1.5/9.5)	
R415A	HCFC-22/HFC-152a	(82.0/18.0)	
R415B	HCFC-22/HFC-152a	(25.0/75.0)	
R416A	HFC-134a/HCFC-124/HC-600	(59.0/39.5/1.5)	
R417A	HFC-125/HFC-134a/HC-600	(46.6/50.0/3.4)	2346
R418A	HC-290/HCFC-22/HFC-152a	(1.5/96.0/2.5)	
R419A	HFC-125/HFC-134a/HE-E170	(77.0/19.0/4.0)	2967
R420A	HFC-134a/HCFC-142b	(88.0/12.0)	
R421A	HFC-125/HFC-134a	(58.0/42.0)	2631
R421B	HFC-125/HFC-134a	(85.0/15.0)	3190
R422A	HFC-125/HFC-134a/HC-600a	(85.1/11.5/3.4)	3143

³³ All blends containing CFCs or HCFCs are banned under Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Blend	Constituents	Composition (%)	GWP
R422B	HFC-125/HFC-134a/HC-600a	(55.0/42.0/3.0)	2526
R422C	HFC-125/HFC-134a/HC-600a	(82.0/15.0/3.0)	3085
R500	CFC-12/HFC-152a	(73.8/26.2)	
R501	HCFC-22/CFC-12	(75.0/25.0)	
R502	HCFC-22/CFC-115	(48.8/51.2)	
R503	HFC-23/CFC-13	(40.1/59.9)	
R504	HFC-32/CFC-115	(48.2/51.8)	
R505	CFC-12/HCFC-31	(78.0/22.0)	
R506	CFC-31/CFC-114	(55.1/44.9)	
R507A	HFC-125/HFC-143a	(50.0/50.0)	3985
R508A	HFC-23/PFC-116	(39.0/61.0)	13214
R508B	HFC-23/PFC-116	(46.0/54.0)	13396
R509A	HCFC-22/PFC-218	(44.0/56.0)	
¹ R400 can have various proportions of CFC-12 and CFC-114. The exact composition needs to be specified, e.g. R400 (60/40).			

Source: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 3: Industrial Processes and Product Use Table 7.8, p. 7.44 www.ipcc-nggip.iges.or.jp/public/2006gl

10. Templates for declaration of conformity and statement on level of accuracy

10.1. Importer's declaration of conformity

The declaration of conformity with Article 14 of the F-gas Regulation (EU) No 517/2014 is taken from the Annex 1 of the Implementing Regulation (EU) 2016/879 which is the implementing act that determines the detailed arrangements relating to the declaration of conformity and the verification by the independent auditor referred to in the F-gas Regulation Article 14.

The full template is on the following page (page 42).

Declaration of conformity with Article 14 of Regulation (EU) No 517/2014 of the European Parliament and of the Council⁽¹⁾

We *[name of company:]* ,
[VAT identification number:] ,
[for importers of equipment insert the F-gas Portal Registration ID:]

declare under our sole responsibility that when placing on the market pre-charged equipment, which we import to or manufacture in the Union, the hydrofluorocarbons contained in that equipment are accounted for within the quota system referred to in Chapter IV of Regulation (EU) No 517/2014 of the European Parliament and of the Council⁽¹⁾ as:

[please tick the relevant option(s); coverage by the quota system is achieved by one or more of the options below]

- A. we hold authorisation(s) issued in accordance with Article 18(2) of Regulation (EU) No 517/2014 and registered in the registry referred to in Article 17 of that Regulation, at the time of release for free circulation to use the quota of a producer or importer of hydrofluorocarbons subject to Article 15 of Regulation (EU) No 517/2014 that cover(s) the quantity of hydrofluorocarbons contained in the equipment.
- B. *[for importers of equipment only]* the hydrofluorocarbons contained in the equipment have been placed on the market in the Union, subsequently exported and charged into the equipment outside the Union, and the undertaking that placed the hydrofluorocarbons on the market made a declaration stating that the quantity of hydrofluorocarbons has been or will be reported as placed on the market in the Union and that it has not been and will not be reported as direct supply for export in the meaning of Article 15(2)(c) of Regulation (EU) No 517/2014 pursuant to Article 19 of Regulation (EU) No 517/2014 and Section 5C of the Annex to Commission Implementing Regulation (EU) No 1191/2014⁽²⁾.
- C. *[for equipment manufactured in the Union only]* the hydrofluorocarbons charged into the equipment were placed on the market by a producer or importer of hydrofluorocarbons subject to Article 15 of Regulation (EU) No 517/2014.

[name and position of legal representative]

[signature of legal representative]

[date]

⁽¹⁾ Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006 (OJ L 150, 20.5.2014, p. 195).

⁽²⁾ Commission Implementing Regulation (EU) No 1191/2014 of 30 October 2014 determining the format and means for submitting the report referred to in Article 19 of Regulation (EU) No 517/2014 of the European Parliament and of the Council on fluorinated greenhouse gases (OJ L 318, 5.11.2014, p. 5).

10.2. Verification and submission of verification documents

Article 3(2) of the Implementing Regulation stipulates that the auditor will make a statement on the level of accuracy:

The independent auditor shall issue a verification document containing its findings following the verification ... [including] a statement on the level of accuracy of the relevant documentation and declarations.

A template for the statement on the level of accuracy begins on the following page (page 45).

According to Article 4 of Implementing Regulation No 2016/879:

The importer of equipment shall submit the verification document referred to in Article 3(2) of this Regulation using the reporting tool made available pursuant to Article 1 of Implementing Regulation (EU) No 1191/2014 by 31 March every year for the preceding calendar year and indicate in the tool the auditor's findings about the level of accuracy of the relevant documentation and declarations.

The information required in the online tool on the level of accuracy of the relevant documentation and declarations, is in the same structure as part (2) *Substance of Verification* in the following template for the statement on the level of accuracy.

The documentation underpinning a declaration of conformity by importers of equipment for any equipment covered by one customs declaration for release of free circulation is as follows³⁴:

- a list identifying the equipment released for free circulation providing the following information:
 - (i) the model information,
 - (ii) the number of units per model,
 - (iii) the type of HFCs contained in each model,
 - (iv) the quantity of HFCs in each unit rounded to the nearest gram, and
 - (v) the total quantity of HFCs in kilograms and in tonnes of CO₂ equivalent.
- the customs declaration related to the release for free circulation of the equipment in the Union.
- only for the case that HFCs contained in the equipment have been placed on the market in the Union, subsequently exported and charged into the equipment outside the Union:
 - (i) a delivery note or invoice,
 - (ii) a declaration by the undertaking that placed the HFCs on the market, stating that the quantity of HFCs has been or will be reported as placed on the market and that it has not been and will not be reported as direct supply for export.³⁵

For manufacturers that charge their equipment with HFCs in the EU, the following documentation is needed:

- a list identifying the equipment, and the type and total quantity in kilograms per type of HFCs contained in the equipment; not required if the proof is available that the HFCs contained in the equipment were previously placed on the market prior to the charging, e.g. by acquiring them from another company.
- delivery note or invoice if HFCs previously placed on the market were supplied by another company.
- relevant customs declaration if HFCs were imported and released for free circulation by the manufacturer prior to charging.
- proof that relevant customs procedures are complied with when the equipment is placed on the market for HFCs that were imported and not released by the manufacturer prior to charging.

³⁴ Please note that the documentation to be kept for equipment charged with HFCs in the EU is slightly different; please refer to Art. 2(1) of Implementing Regulation (EU) 2016/879

³⁵ Please refer to Article 15(2)(c) and Article 19 of Regulation (EU) No 517/2014 as well as Section 5C of the Annex to Commission Implementing Regulation (EU) No 1191/2014 (1)

Guidance for equipment importers

- a list showing the quantity of HFCs contained in the equipment for HFCs produced by the manufacturer himself.

Statement on the level of accuracy of the relevant documentation and declarations³⁶

and

Indication of the auditor's findings about the level of accuracy in the reporting tool³⁷

(1) Identification of company, year and relevant report

The verified declaration(s) of conformity were drawn up by the following importer³⁸ of equipment:

Company name: _____
Registration ID in the HFC Registry ³⁹ : _____
For undertakings established within the EU:
VAT-No.: _____
For undertakings established outside the EU:
Country of establishment: _____
Name of mandated only representative established within the EU for the purpose of compliance with the requirements of Regulation (EU) No 517/2014: _____
VAT-No. of only representative: _____

The verified declaration(s) of conformity refer to the following calendar year:

Year: ____ [yyyy]

A report pursuant to Article 19 of Regulation (EU) No 517/2014 covering Sections 11, 12, and 13 of the Annex to Implementing Regulation (EU) No 1191/2014 for the calendar year specified above was submitted by the importer of equipment:

Yes:

- if yes, please specify this report pursuant to Article 19 of Regulation (EU) No 517/2014 to which the verification refers according to Article 3(1)(a) of Implementing Regulation (EU) No 2016/879

(report⁴⁰ URL in the EEA's business data repository, submission date and time):

URL: https://bdr.eionet.europa.eu/fgases/ ____ / ____ / ____ / ____ / Reported: ____ / ____ / ____ : ____ [dd/mm/yyyy hh:mm]
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No

³⁶ according to Article 3(2) of Commission Implementing Regulation (EU) 2016/879

³⁷ according to Article 4 of Implementing Regulation No 2016/879

³⁸ In case the undertaking is both a manufacturer of equipment addressed by Article 2(1) of Commission Implementing Regulation (EU) No 879/2016 and an importer addressed by Article 2(2) of that Regulation, this statement applies only to the undertaking's activities and obligations as an importer.

³⁹ As referred to in Article 17 of Regulation (EU) No 517/2014, established at <https://webgate.ec.europa.eu/ods2/>

⁴⁰ The XML-file in the referred envelope is considered to be the report (not any pdf files which may also be contained in the envelope).

(2) Substance of Verification

The independent auditor referred to in the second subparagraph of Article 14(2) of F-gas Regulation (EU) No 517/2014 verifies the following information about the importer of the equipment:

<p>Statement on the level of accuracy (as per Commission Implementing Regulation (EU) No 2016/879, Article 3(2) and Article 3(1a, b, c and d)):</p>
<p>(a) The information contained in the declaration(s) of conformity and the related documents is consistent with the report pursuant to Article 19 of F-gas Regulation (EU) No 517/2014^{41,42}:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>(b) The information contained in the declaration(s) of conformity and the related documents⁴³ is accurate and complete on the basis of the undertaking's records of relevant transactions, with a reasonable level of assurance:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>(c) In the HFC registry⁴⁴, there was by 31 December of the calendar year specified above sufficient availability of authorisations for all cases where option A⁴⁵ was chosen in the declaration(s) of conformity⁴⁶:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>(d) There is a declaration by the undertaking placing the hydrofluorocarbons on the market in accordance with Article 2(2)(d) of Commission Implementing Regulation (EU) No 879/2016 for all cases where option B⁴⁵ was chosen in the declaration(s) of conformity, covering the relevant quantities⁴⁷:</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

⁴¹ and Sections 11, 12, and 13 of the Annex to Implementing Regulation (EU) No 1191/2014

⁴² In cases where no report pursuant to Article 19 of Regulation (EU) No 517/2014 covering Sections 11, 12, and 13 of the Annex to Implementing Regulation (EU) No 1191/2014 was submitted or where the undertaking has submitted a NIL report stating that the company was not obliged to submit a report:

- It is appropriate to tick 'Yes' where the total amount of HFCs placed on the market during the calendar year in question in imported pre-charged RAC (refrigeration, air conditioning and heat pump) equipment was less than 500 t CO₂ eq. according to the declarations of conformity and the related documents.
- It is appropriate to tick 'No' where the total amount of HFCs placed on the market in imported pre-charged RAC equipment was 500 t CO₂ eq. or more for the calendar year in question according to the declarations of conformity and the related documents.

⁴³ The related documents are specified in Article 2(2) of Implementing Regulation (EU) No 879/2016 and do for example, include customs documentation.

⁴⁴ As referred to in Article 17 of Regulation (EU) No 517/2014

⁴⁵ According to Annex of Commission Implementing Regulation No 2016/879

⁴⁶ In case option A had not been used in any declaration of conformity for the calendar year in question it is appropriate to tick 'Yes'.

⁴⁷ Where option B has not been used in any declaration of conformity for the calendar year in question it is appropriate to tick 'Yes'.

11. Further information

National Contact Points for F-gases

https://ec.europa.eu/clima/sites/clima/files/f-gas/docs/contact_list_en.pdf

European Commission, Directorate General Climate Action (DG Clima)

Contact point for enquiries by e-mail: CLIMA-HFC-REGISTRY@ec.europa.eu

http://ec.europa.eu/clima/policies/f-gas/documentation_en.htm

http://ec.europa.eu/clima/policies/f-gas/reporting_en