



## Refrigerant information regarding the F-gas Regulation

### Overview:

- New F-gas Regulation aims at reducing greenhouse gases
- Changes in the refrigerants for air-conditioning required
- Weiss Klimatechnik offers future-proof solutions for new and existing systems

### What is the F-gas Regulation (EU 2024/573)?

Fluorinated gases, including hydrofluorocarbons (HFCs), are greenhouse gases with a high global warming potential (GWP). On 11 March 2024, Regulation (EU) No. 2024/573 on fluorinated greenhouse gases (F-gas Regulation for short) came into force. It regulates the market circulation and export of fluorinated gases and of devices that contain f-gases. The Regulation provides for the

gradual reduction of HFC use between 2024 and 2049 before a complete ban in 2050. The Regulation distinguishes between new and existing systems and sets out correspondingly differentiated requirements (see tables on pages 2-4).

What does the F-gas Regulation mean for Weiss Klimatechnik?

Weiss Klimatechnik offers air-conditioning systems and chillers that, in accordance with Annex IV, are affected by the F-gas Regulation. It is therefore important to take steps in good time for the individual phases of F-gas reduction and to research and introduce alternative refrigerants with lower GWPs.

What is changing in the areas of maintenance and spare parts?

The F-gas Regulation does not introduce any prohibitions on maintenance work or spare parts for devices already on the market before the dates set out in Annex IV. This means that there are no changes here and operation is secured for the long term. Reclaimed refrigerants may have to be used in maintenance work, however. (For details, see table below)

What changes are there at Weiss Klimatechnik?

Until now, Weiss Klimatechnik's air-conditioning systems have been equipped with refrigerants such as R407C (GWP = 1744), R449A (GWP = 1397) and R410A (GWP = 2088). In recent years, these have been gradually replaced by new, more environmentally friendly solutions with considerably reduced GWPs. In particular, Weiss Klimatechnik has introduced the refrigerant R513A with a significantly reduced GWP of 631.

What advantages does refrigerant R513A offer?

R513A is a non-flammable (A1) and non-toxic gas with a significantly reduced GWP of 631. It offers a medium to long-term perspective, especially for split systems, for which a GWP of 750 is allowed until 2032. It is suitable for all types of air-conditioning systems for IT applications (monoblock and split)

as well as for data centres (precision air conditioning). It also enables high condensation temperatures, making it ideal for use in particularly hot climates and complex installations. A further advantage: with R513A, Weiss Klimatechnik already meets the export requirements (GWP ≤ 1000).

What refrigerants does Weiss Klimatechnik plan to use?

Weiss Klimatechnik is examining and testing A2L refrigerants (low flammability) and natural refrigerants in order to offer safe solutions for future requirements. The A2L refrigerants used presently have a GWP of between 20 and 150 and are therefore currently the only way besides natural refrigerants to achieve a GWP value of less than 150. Most A2L refrigerants are halogenated refrigerants, as they are pure refrigerants or refrigerant mixtures with HFC / FC content.

What opportunities does the F-gas Regulation offer Weiss Klimatechnik?

The new F-gas regulation poses challenges for the entire industry. Weiss Klimatechnik sees this as an opportunity to further strengthen its commitment to innovative, environmentally friendly and legally compliant refrigerants. Examples include the shift to low GWP refrigerants such as R513A and ongoing research into A2L refrigerants as well as natural refrigerants. By doing so, Weiss Klimatechnik not only helps to significantly reduce greenhouse gas emissions, but also ensures future viability and competitiveness.

What deadlines under the F-gas Regulation apply to new systems?

Year	Closed Refrigeration systems	Refrigeration systems	Chillers < 12kW	Chillers > 12 kW	Air-conditioning/heat pumps closed systems < 12 kW	Air-conditioning/heat pumps closed systems > 12 kW < 50 kW	Air-conditioning/heat pumps closed systems > 50 kW	Split-system air-conditioning/heat pumps < 12 kW	Split-system air-conditioning/heat pumps > 12 kW
2025	GWP 150	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500
2026	GWP 150	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500	GWP 2500
2027	GWP 150	GWP 2500	GWP 150	GWP 750	GWP 150	GWP 150	GWP 2500	GWP 2500	GWP 2500
2028	GWP 150	GWP 2500	GWP 150	GWP 750	GWP 150	GWP 150	GWP 2500	GWP 2500	GWP 2500
2029	GWP 150	GWP 2500	GWP 150	GWP 750	GWP 150	GWP 150	GWP 2500	GWP 150	GWP 750
2030	GWP 150	GWP 150	GWP 150	GWP 750	GWP 150	GWP 150	GWP 150	GWP 150	GWP 750
2031	GWP 150	GWP 150	GWP 150	GWP 750	GWP 150	GWP 150	GWP 150	GWP 150	GWP 750
2032	GWP 150	GWP 150	no F-gases	GWP 750	no F-gases	GWP 150	GWP 150	GWP 150	GWP 750
2033	GWP 150	GWP 150	no F-gases	GWP 750	no F-gases	GWP 150	GWP 150	GWP 150	GWP 150
2034	GWP 150	GWP 150	no F-gases	GWP 750	no F-gases	GWP 150	GWP 150	GWP 150	GWP 150

Limit values must be undercut

Weiss Klimatechnik devices belong to the following categories (selection)

Refrigeration systems:

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Chillers:

Closed-system air-conditioning/heat pumps:

Vindur Compact DX with internal condenser

Vindur Coolmaster DX with internal condenser

Vindur RoomIn DX with internal condenser

Split-system air-conditioning/heat pumps:

Vindur Compact DX with air-cooled condenser

Vindur Coolmaster DX with air-cooled condenser

Vindur RoomIn DX with air-cooled condenser

Vindur Top DX

## What deadlines under the F-gas Regulation apply to the maintenance and repair of existing systems?

Year	Refrigeration systems Virgin refrigerants	Refrigeration systems Reclaimed refrigerants	Air-conditioning systems and heat pumps Virgin refrigerants	Air-conditioning systems and heat pumps Reclaimed refrigerants
2025	GWP 2500	No restrictions	No restrictions	No restrictions
2026	GWP 2500	No restrictions	GWP 2500	No restrictions
2027	GWP 2500	No restrictions	GWP 2500	No restrictions
2028	GWP 2500	No restrictions	GWP 2500	No restrictions
2029	GWP 2500	No restrictions	GWP 2500	No restrictions
2030	GWP 2500	GWP 2500	GWP 2500	No restrictions
2031	GWP 2500	GWP 2500	GWP 2500	No restrictions
2032	GWP 750*	GWP 2500	GWP 2500	GWP 2500
2033	GWP 750*	GWP 2500	GWP 2500	GWP 2500
2034	GWP 750*	GWP 2500	GWP 2500	GWP 2500
2035	GWP 750*	GWP 2500	GWP 2500	GWP 2500
2036	GWP 750*	GWP 2500	GWP 2500	GWP 2500

\*GWP 750 does not apply to chillers

The GWP limit values must be undercut