Systcold JDC
Soluciones Frigorificas Inteligentes
systcold@systcoldjdc.com
www.systcoldjdc.com

Systcold JDC nº 5 · F-Gas: prohibition calendar for the installer

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## Topic of the week: F-Gas: prohibition calendar for the installer

### F-Gas: the prohibition calendar, seen from the worksite

Regulation (EU) 2024/573 is the current F-Gas and replaces 517/2014. For the installer, the question is practical: what gas can I install, what can I recharge and how much will the kilo cost me? Here we do not repeat dates from memory: the official calendar is on the Regulations page of Systcold, with its source.

### What the database says today

- **R-404A:** GWP 3922. Prohibited in new equipment in the EU since 2022.
- **R-507A:** GWP 3985. Prohibited in new equipment in the EU.
- **R-410A:** GWP 2088. Prohibited in new residential systems in the EU (2025, according to the database).
- **R-134a:** GWP 1430. Restricted in the EU, with gradual phase-out.
- **R-22:** HCFC with production prohibited in Annex I countries.

Prohibiting new equipment is not the same as prohibiting the servicing of existing ones. Before deciding with the customer, confirm in the current regulation what can be recharged in each case.
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The tax also matters

In Spain, the tax on fluorinated gases (Law 16/2013, amended by Law 7/2022) is 0.015 € × GWP per kg, with a maximum of 100 €/kg. Gases with GWP ≤ 150 are not subject to it. It is an indicative amount: always check the current regulations.

- 10 kg of R-404A: 58.83 €/kg, about 588 €.
- 10 kg of R-448A: 20.81 €/kg, about 208 €.
- R-454B: 6.99 €/kg. R-513A: 9.47 €/kg.

These figures count in the budget when proposing a gas change.

"Direct" does not mean "without touching anything"

No HFC/HFO is drop-in without checking valve, oil and superheat. Two examples from Systcold's theoretical calculation (CoolProp, same compressor):

- **R-404A to R-448A:** capacity +1 % in MT and −2 % in LT. Discharge temperature +9 K, condensation pressure −8 %. Readjust superheat and pressure switches, and monitor the compressor limit.
- **R-410A to R-454B:** capacity −2 % in MT and LT. Discharge +6 K. It is A2L, so check the orifice or valve element and review safety requirements.

These are theoretical calculations and do not replace manufacturer data.

If the substitute is A2L

R-32, R-454B, R-1234yf and R-1234ze are A2L according to the ISO 817 safety classification. EN 378 (safety and environment in refrigerating systems) is the reference standard for these safety requirements. Before proposing an A2L, review this point with the project in hand.

Retrofit checklist

- Expansion valve: check orifice or element and readjust superheat.
- Oil: POE, confirmed with the compressor manufacturer.
- Pressure switches and discharge temperature.
- Equipment label and record with the new gas and charge.

Check the calendar, the tax per kg and the capacity loss for each change on the **Systcold JDC F-Gas Regulations page**. Then, use the Refrigerant Retrofit to see what to readjust on your equipment before opening the bottle.

Industry advances

- **BITZER presents new compressors and CO2 units at Chillventa 2026 (ECOLINE 6-cylinder and ECOLITE)**. BITZER expands its ECOLINE CO2 range for transcritical applications with 6-cylinder reciprocating compressors, so the series covers 2 to 8 cylinders. It also presents ECOLITE CO2 air-cooled condensing units, for medium and low temperature with plug-and-play concept, and the ACP SINGLE solution for industrial ammonia. **BITZER (press room) · 2026-10-13**
- **Chillventa 2026: Castel presents components for CO2 systems**. Castel presents a stainless steel reversing valve with swivel connections (3032 ORS), an electronic oil level regulator and a vibration damper for 140 bar. According to the manufacturer, CO2 now accounts for 30 % of their business. **NaturalRefrigerants.com (successor to R744.com) · 2026-11-05**
- **Daikin's CO2 VRV system debuts at new Denns BioMarkt store in Germany**. The system provides 28 kW of cooling and 31.5 kW of heating. It is part of an integrated HVAC&R solution with natural refrigerants. **NaturalRefrigerants.com (successor to R744.com) · 2026-11-09**

Technical summary by Systcold JDC from 09/11/2026 to 09/11/2026. All figures come from manufacturer catalogues loaded in the database.

The database today

- 15.594 condensing unit from 20 manufacturers
- 6.821 compressor from 16 manufacturers
- 3.026 evaporators from 7 manufacturers
- 2.390 thermostatic expansion valves from 4 manufacturers
- 937 evaporator from 3 manufacturers
- 820 electronic expansion valves from 4 manufacturers

New or updated technical sheets

- **FRASCOLD D SERIES 2 CYLINDERS**
- **FRASCOLD Q V SERIES 4 6 CYL**

Gas of the month: R-32

HFC (Difluoromethane) · ASHRAE A2L · GWP 675 · ODP 0.

Direct substitutes: —.

With adjustment: R-410A (similar pressures).

Regulations: Approved; low GWP; slight A2L flammability.

Complete R-32 sheet

Featured compressor: COPELAND (Emerson) ZF / ZO Series

108 models in the database. Manufacturer oil: **POE ISO 32** (100 % of models). Gases: R-407A, R-448A, R-449A, R-407F, R-404A. Power: 1–17 HP.

Complete sheet

Complete and free technical catalogue: **systcoldjdc.com/gases** · Sheets: **systcoldjdc.com/gases/fichas**

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systcold@systcoldjdc.com · systcoldjdc.com
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