

R404A REFRIGERANT - THE NEXT PHASE

WHAT YOU NEED TO KNOW

BACKGROUND

R404A is the most commonly used high GWP refrigerant gas. It's mainly used for chilled and frozen food refrigeration but is also widely seen in the commercial sector for industrial refrigeration and cold storage. However R404A is now subject to a phase down.

LEGISLATION

The amended F-Gas Regulations came into force from 1st January 2015. As with the previous regulations, it covers the containment, control of use, maintenance and reporting of HCF's, but goes further in the requirements for leak checking and introduces a timetable for production phase down of HCF's based on their GWP - the higher the GWP, the more accelerated the phase down.

PHASE-DOWN PERIOD

2020 will see a ban of R404A in new stationary refrigeration equipment (along with all other refrigerants with a GWP of more than 2,500).

At the same time, a service ban will be applied to all systems with a charge size of more than 40 tonnes CO₂ equivalent.

IN PRACTICE...

Some manufacturers of R404A have already stated that they intend to stop selling high GWP refrigerants such as R404A from 2018. This has already contributed to a rise in the cost of the refrigerant. Therefore, although 2020 may seem like a while away, it would be wise and possibly economical to start thinking about the alternatives now. The following gases are possible alternatives to R404A:

R407A
R407F
R442A



R404a : Ban

2022 - Stationary refrigeration equipment
Service & Maintenance



R407A

R407F

R442A

Possible Alternatives

INSTALLATION CONSIDERATIONS

When using alternative refrigerants, engineers should update training with specific knowledge in transporting and handling these refrigerants.

RECORD KEEPING

All F Gas Registers should now incorporate equivalent tonnes of CO₂ emissions, variable in respect of refrigerant type and quantity, to demonstrate to the customer the overall carbon impact. This is not a regulatory requirement within revised design guides.

MAINTENANCE CONSIDERATIONS

Frequency of leak checking is now amended in the updated F Gas Regulations, and is now based on equivalent CO₂ emissions rather than on refrigerant charge. F Gas Registers should be amended to reflect this, plus all equipment should be labelled with the CO₂ emissions in tonnes.

With over 50 years' experience in the air conditioning and refrigeration industry, we have the expertise to guide you through legislation and industry changes.

Get in touch with us for further advice:-