



# ATMO sphere

The unknown of alternative refrigerants

# The first expertise center for natural refrigerants in the Netherlands



Training for accreditation in

- \*Ammonia
- \*CO<sub>2</sub>
- \*Hydro Carbons

for 6 years

Accreditation is required in the Netherlands

» We're talking about it all, see how good ammonia, CO2, HC refrigerants.

» Energy



» Of the approximately 160.000 European technicians trained for the use of F- gases, only 2% have also been trained in working with the alternative refrigerant ammonia, CO<sub>2</sub> and HC

	Ammonia	CO <sub>2</sub>	Hydrocarbons: small hermetic systems	Hydrocarbons: larger systems (split systems, chillers)
Training available in country (% of Member States)	71%	52%	48%	35%
Proportion of certified fluorinated gas personnel trained in alternative refrigerants	2.3%	2.2%	0.7%	0.05%

The background is a vibrant blue space scene. On the right side, a bright sun is visible, creating a lens flare effect. Several planets of different sizes and colors (including purple and white) are scattered across the sky. The bottom right corner shows the curved horizon of Earth with white clouds. The left side of the image is a dark space filled with numerous small white stars.

» *What do the technicians do with these alternative refrigerants?*





» How we can get technicians (installers, especially) much more involved and trained in natural refrigerants?

» The technicians also wants to go to his family  
in the evening







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**Thank you very much!**

