

CASE STUDY

Refrigerant Recovery from Rooftop Coolers

How Evolution Cooling and A-Gas Collaborated to Recover 220kg of R134a Using Rapid Recovery

BACKGROUND

About Evolution Cooling

Evolution Cooling is a UK-based specialist in bespoke, energy-efficient cooling solutions. Known for their precision and innovation, the company serves a variety of critical industries, delivering cooling systems tailored to specific process needs.

About A-Gas

A-Gas is a world leader in the supply and lifecycle management of refrigerants and associated products and services. Through our first-class recovery, reclamation, and repurposing processes, we capture refrigerants and fire protection gases for future re-use or safe destruction, preventing harmful release into the atmosphere.

For over 30 years, A-Gas has supported our clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries we serve, building a sustainable future.

CHALLENGE

Evolution Cooling was recently contracted to decommission two large rooftop chillers containing R134a, a hydrofluorocarbon (HFC) refrigerant commonly used in cooling systems. The task was inherently complex due to:

- Rooftop location and accessibility issues.
- Non-operational units, which meant refrigerant couldn't be pumped out.
- Environmental regulations, requiring strict control over refrigerant release.
- The total refrigerant volume was estimated at 220kg, a significant quantity with potential environmental consequences if not handled properly.

AT A GLANCE

Challenges

- Safe recovery from two rooftop chillers.
- Inaccessible and unpowered systems.
- Environmental compliance.

Benefits

- 220kg of R134a recovered.
- Process completed in under 5 hours.
- Full regulatory compliance.
- Refrigerant recovery and reclamation reduces the need for virgin refrigerants, driving the circular economy within our industry.



"Great service from A-Gas Rapid Recovery.

Thanks for helping us decant the refrigerant from the large rooftop coolers before replacement.

They really are rapid."

EVOLUTION COOLING

SOLUTION

To address the challenges, Evolution Cooling partnered with A-Gas, a global leader in Lifecycle Refrigerant Management. A-Gas deployed their Rapid Recovery service, a mobile, high-speed refrigerant recovery solution designed for safety, efficiency, and sustainability.

PROJECT EXECUTION

- A-Gas began with an on-site inspection to estimate refrigerant volume and recovery time.
- Long flexible hoses were run to the rooftop, connecting the chillers to ground-level recovery machines.
- Using a **pull-pull method**, technicians ensured a steady and optimal fill rate into recovery cylinders.
- Despite logistical constraints, the entire process was completed in **under five hours**.



RESULTS

- 220kg of R134a was successfully recovered.
- No emissions or leakage during recovery.
- Zero downtime for the client's operation.
- Waste material is safely shipped off-site for reclamation.
- Recovered refrigerant transported to A-Gas' site for processing.

CONCLUSION

This case exemplifies how environmentally conscious industrial practices can be implemented at scale through A-Gas' Rapid Recovery:

- Evolution Cooling avoided environmental harm from refrigerant emissions.
- Time and labour were saved through fast, on-site recovery.
- Valuable refrigerant was reclaimed for future reuse, minimising waste or its potentially harmful release to the atmosphere.

June 2025

A-Gas effectively manages the complete lifecycle of refrigerants, from providing the recovery solution to supplying the lower GWP alternatives.

www.evolution-cooling.com | www.agas.com