



CLADE

UK manufacturer of natural refrigerant heat pumps for commercial and industrial use

- + 100% natural refrigerants for the lowest carbon footprint
- + Naturally quieter than the competition
- + Full design, commissioning and service support available
- + Proven heating designs for all building types
- + No buffer domestic hot water generation
- + Finance options for zero capital cost
- + Grid flexibility ready controls
- + Designed and manufactured in the UK



Clade Standard Products

Clade use only natural refrigerants in our heat pumps. These are the future of heating with the lowest climate impact. Natural refrigerants also deliver high temperatures, high efficiencies and are future proofed against regulatory changes.

Choosing natural refrigerants is a no regret choice!

Model	R744 – CO ₂
Acer	<ul style="list-style-type: none"> Air source – Low Noise 60-75°C flow & 30-35°C return 50, 75 & 100 KW models at -5°C ambient SCOP 3.40 • EN14825 COP 3.50
Maple	<ul style="list-style-type: none"> Air source – Compact 60-75°C flow & 30-35°C return 200KW to 500KW models at -5°C ambient SCOP 3.40 • EN14825 COP 3.50
Oak	<ul style="list-style-type: none"> Air source – V-block high capacity 60-80°C flow & 30-35°C return 100KW to 600KW models at -5°C ambient SCOP 3.60 • EN14825 COP 3.85
Spruce	<ul style="list-style-type: none"> AHU pack with DX heat pump 30°C air Up to 400KW Heating or cooling from one unit COP 4.2

- CO₂ is the King of refrigerants with a GWP of 1.
- CO₂ loves high temperatures and will produce 80C water with a COP of 3.15!
- CO₂ is non toxic, non flammable, widely available and the cheapest of all refrigerants.

Check out our case studies of CO₂ heat pumps providing heating and hot water.
clade-es.com/case-studies
 Come and visit us in Leeds and see the quality for yourself.

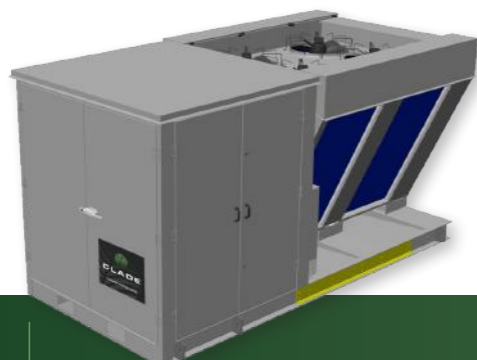
Model	R290 – Propane
Birch	<ul style="list-style-type: none"> Air Source - Low noise 50-65°C Flow & 40-55°C return 50 & 75KW models at -5°C ambient SCOP 4.37 • EN14825 COP 4.69
Rowan	<ul style="list-style-type: none"> Air Source - Compact 50-65°C Flow & 40-55°C return 150, 225, 300, 375KW models at -5°C ambient SCOP 4.47 • EN14825 COP 4.79
Aspen	<ul style="list-style-type: none"> Air source - V-Block high capacity 50-65°C Flow & 40-55°C return 106, 160, 211KW at -5°C ambient SCOP 4.47 • EN14825 COP 4.79
Larch	<ul style="list-style-type: none"> Air source cascade 70-85°C flow & 60-70°C return 150, 250, 350KW models at -5°C ambient SCOP 2.1 at design

- Propane is great for retrofit projects with temperature differentials that match many heating systems or can be achieved with minimal system changes.
- With a GWP of 3 or 0.02 (depending on the period considered) propane is extremely low climate impact.
- Propane can be paired with other hydrocarbons such as isobutane to deliver very high temperatures on a small DT directly replacing a boiler.

Clade publish a wide range of COPs at different operating conditions. See website and product data sheets for details.



Rowan and Maple



Aspen and Oak



Acer and Birch

Bespoke Options

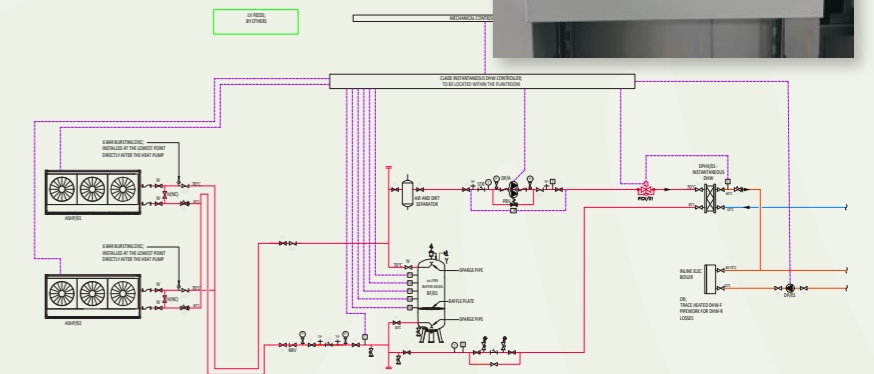
Silencers

For low noise environments available on Compact and V-Block models.



Multi unit and system controllers

To easily integrate heat pumps with BMS systems. Standard example schematics available for most system configurations.



UK based heat pump and applications engineering team to assist with challenging projects.



Clade Services

As well as manufacturing heat pumps in Leeds UK, Clade provide a full range of support services to give our customers peace of mind.

If you need a quick bit of advice or a full design, the final connections or the full installation just give us a call and we're here to help make your project a success.

Feasibility studies	Clade can carry out or support site surveys and provide info for funding applications or early design.
Design and design support	From quick advice to full stage 5 designs Clade's team are always available to help.
Install and project management	Clade will manage the full installation or provide services to support your team.
Aftercare and support	Fully comprehensive to statutory compliance – we offer Gold, Silver and PAYG cover to suit your needs.
Optimisation of heat pump operation	During the first year of operation it is critical to tune up the heat pump to achieve best efficiency. Clade will use data analytics to optimise performance and provide insights to improve operation.
Performance guarantee	We're so confident about our heat pump performance we will guarantee it. Design and commissioning of the full system have to be verified by our team.

About us

At Clade we lead, we don't follow. We proactively find ways to innovate in the heating and cooling industry so that we can halt and reverse the effects of global warming.

Recently achieving B Corp certification highlights our unwavering commitment, extending beyond financial success to social and environmental responsibility. We recognise the immense responsibility our generation has and we take it as a challenge.

Our vision: a carbon-neutral world, made possible by Clade technology. From hiring some of the smartest minds in global green technology to becoming the first UK manufacturer of refrigeration plant to exclusively use natural refrigerants, to building innovative ultra-efficient heat pumps, we have consistently been at the forefront of the green revolution in our sector.

With over 30 years' experience of design, installation, manufacturing and service, Clade Engineering Systems has become a trusted brand to many large blue-chip companies in the UK.

Indeed, Clade has developed carbon reduction solutions which have been transformative for a number of customers, helping to reduce energy bills whilst reducing carbon emissions.

Leading the energy transition in heating and cooling

For more information, call 0113 887 9604 or email sales@clade-es.com

Technology Centre & Manufacturing Site
Units R1-R3 Gildersome Spur Industrial Estate,
Stone Pits Lane, Morley, LEEDS LS27 7JZ

Head Office & Registered Office
Bristol & Bath Science Park, Dirac Crescent,
Emersons Green, BRISTOL BS16 7FR

Certified



Corporation

In 2023, Groupe Atlantic made a significant investment in Clade, expanding their portfolio which already includes renowned UK brands such as Ideal Heating, Hamworthy Heating, Keston, Gledhill, ACV and Atlantic.

A BRAND OF  GROUPE ATLANTIC
UK, ROI & NORTH AMERICA DIVISIONS