



CLADE

ASPEN 100KW //

Hydrocarbon AIR SOURCE HEAT PUMPS

Aug 2022//



THE ASPEN //

LOW CARBON HEATING TECHNOLOGY

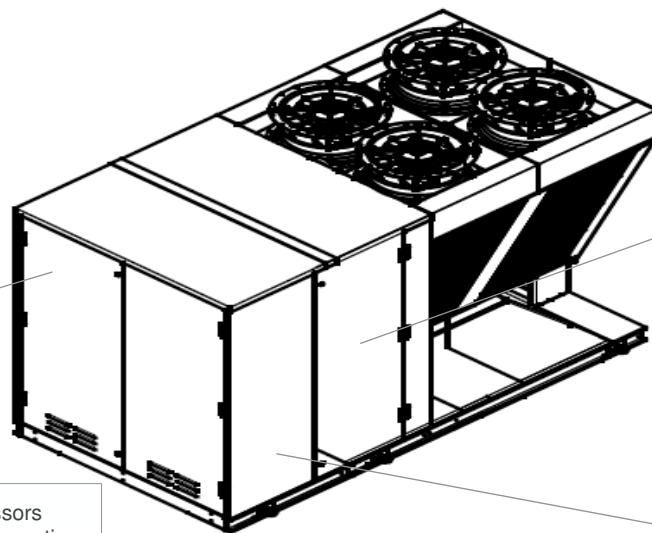
Clade Hydrocarbon heat pumps will reduce carbon emissions whilst maximising efficiency with existing cooling and heating systems. Our full-service offering makes heat pumps a simple and low risk way to improve your ESG and operational performance.





BENEFITS OF THE CLADE ASPEN HC RANGE //

100 KW of heating capacity, single unit for easy installation



Integrated electrical control panel to work seamlessly alongside client selected BMS system.

Specialist compressors provide a greater operating temperature range and increased COP.

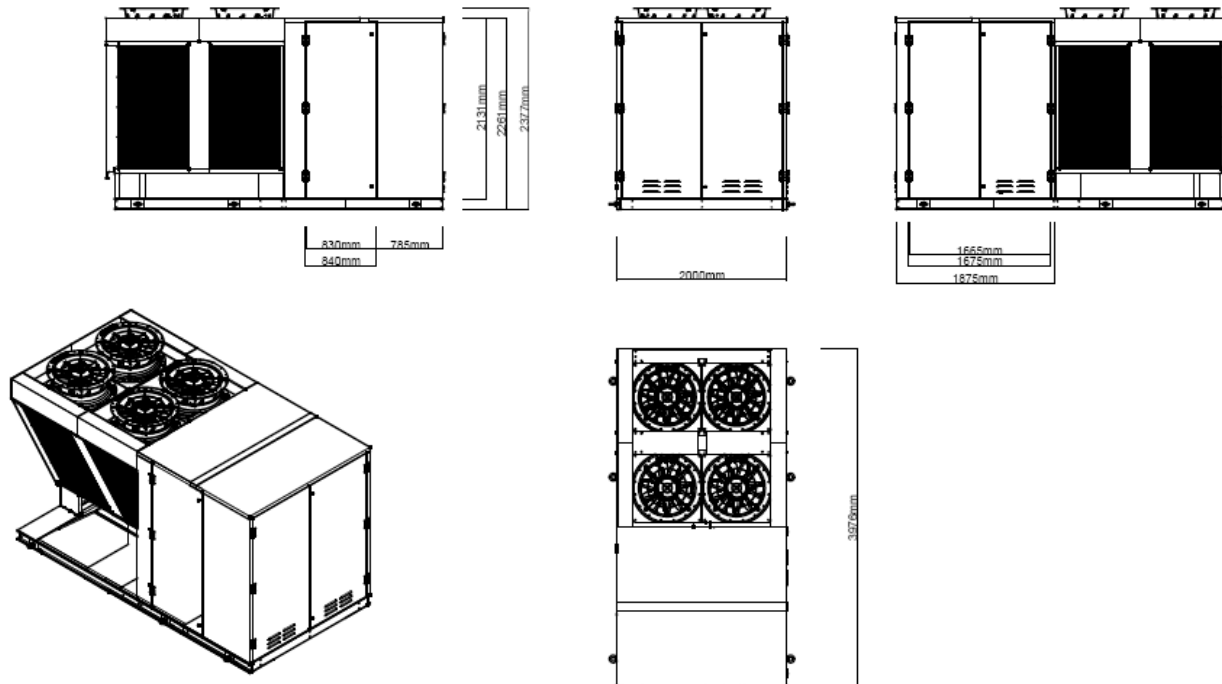
All components are easily accessible for quick and effective maintenance.

Weather proof housing and galvanised lifting frame for easy positioning on site





DIMENSIONAL INFORMATION //



Rev	Date	Details
Drawing Title:		
R290 100kw 45HP		
Drawing No.:		
Aspen - 100 - R3		
Site Address:		
-		
Client Org:		
-		
Project Manager:	Designed By:	Dated:
Scale:	Drawn By:	Revision:
1:50	1/A	A

**CLADE**

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HEAT PUMP PERFORMANCE //

Noise Performance Characteristics

Model name	Nameplate output (kW)	Output Temp (°C)	Noise Data db(A)		
			Sound Power	Sound Pressure @ 1m	Sound Pressure @ 10m
Aspen 100Kw	100	65	87	59	47
		70	87	59	47
		75	88	60	48
		80	88	60	48

Clade Heat Pump Performance Charateristics

Model name	Nameplate output (kW)	Output Temp (°C)	Return Temp (°C)	SCOP	SPF	-10°C External			-5°C External			0°C External			5°C External			10°C External		
						kW(th)	kW(e)	COP	kW(th)	kW(e)	COP	kW(th)	kW(e)	COP	kW(th)	kW(e)	COP	kW(th)	kW(e)	COP
Aspen 100	100	50.0	30.0	3.5	3.6	84.0	31.1	2.7	91.8	30.7	3.0	102.0	30.9	3.3	116.0	31.9	3.6	133.2	33.1	4.0
		55.0	30.0	3.2	3.3	83.1	33.2	2.5	91.8	33.6	2.7	102.0	34.1	3.0	116.0	35.2	3.3	133.2	37.0	3.6
		60.0	30.0	2.9	3.0	87.8	38.0	2.3	91.8	36.7	2.5	102.0	37.4	2.7	116.0	38.7	3.0	133.2	40.4	3.3
		65.0	30.0	2.7	2.7	87.8	40.6	2.2	91.8	39.7	2.3	102.0	40.8	2.5	116.0	43.0	2.7	133.2	44.4	3.0
Aspen 100	100	50.0	40.0	3.3	3.4	79.8	31.1	2.6	87.2	30.7	2.8	96.9	30.9	3.1	110.2	31.9	3.5	126.5	33.1	3.8
		55.0	40.0	3.0	3.1	78.9	33.2	2.4	87.2	33.6	2.6	96.9	34.1	2.8	110.2	35.2	3.1	126.5	37.0	3.4
		60.0	40.0	2.8	2.8	83.4	38.0	2.2	87.2	36.7	2.4	96.9	37.4	2.6	110.2	38.7	2.9	126.5	40.4	3.1
		65.0	40.0	2.5	2.6	83.4	40.6	2.1	87.2	39.7	2.2	96.9	40.8	2.4	110.2	43.0	2.6	126.5	44.4	2.9
Aspen 100	100	50.0	45.0	3.2	3.3	77.3	31.8	2.4	84.5	31.4	2.7	93.8	31.6	3.0	106.7	32.6	3.3	122.5	33.9	3.6
		55.0	45.0	2.9	3.0	76.5	34.0	2.3	84.5	34.4	2.5	93.8	34.9	2.7	106.7	35.9	3.0	122.5	37.8	3.2
		60.0	45.0	2.6	2.7	80.8	38.9	2.1	84.5	37.5	2.3	93.8	38.2	2.5	106.7	39.5	2.7	122.5	41.3	3.0
		65.0	45.0	2.4	2.5	80.8	41.6	1.9	84.5	40.6	2.1	93.8	41.7	2.3	106.7	43.9	2.4	122.5	45.4	2.7



BUILDING CONNECTIONS //

POWER

3 phase.

Connection box mounted in position shown.

Isolation at control panel only.

Installer to provide local isolator external to heat pump.

HEATING

Supplied with primary pump with 14m spare head.

Flow and return located in position shown.

PN 10 Flanged steel connections with butterfly valve.

CONDENSATE

Condensate from the evaporator will drain centrally from the base of the unit.

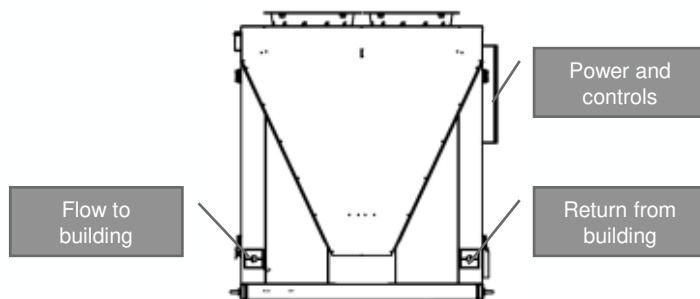
It is recommended that a gully be installed below the heat pump and lead to a soak away.

CONTROLS

The heat pump has self contained controls that manage its operation and the primary pump.

Alarms

- 1 Hardwired shut down signal for fire alarm
- 1 CO₂ detection
- 1 Other fault
- 1 High return water temperature.





PROVEN PERFORMANCE //



In 2019 Clade supplied a HC heat pump for the Trago Mills store in Devon, which at 12,500 square feet was one of Co-op's larger format stores in the portfolio.

The store has operated for over a year and the measured results are a fantastic reflection of the standard of engineering that Clade delivers.

Seasonal COP is 3.7

	COP		
	MAX	AVERAGE	MIN
June	6.9	4	2.9
July	6.8	4	3.1
August	6.8	4	3.1
September	6.5	3.9	3
October	5.9	3.8	3.1
November	6.5	3.8	2.9
December	7.4	3.5	2.8
January	5.6	3.6	2.8
February	5.2	3.4	2.8
March	5.6	3.4	2.8
April	5.3	3.4	2.8
May	5.6	3.6	2.8



LEEDS MANUFACTURING CENTRE //



- UK based
- 35 years of engineering experience
- Leeds manufacturing division
- Committed to sustainable business and sustainable products
- Investing in people, diversity & inclusion
- Non leveraged, owner operated



ACCREDITATIONS

ISO 9001:2015
ISO 14001:2015
OHSAS ISO 18001:2007



CERTIFICATIONS

Altius Assured Vendor Award
Altius CDM Vendor Award
CHAS
Sales Contractor





THANK YOU //

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