



# CLADE

ASPEN 50KW //

Hydrocarbon AIR SOURCE HEAT PUMPS

Aug 22 //



THE ASPEN //



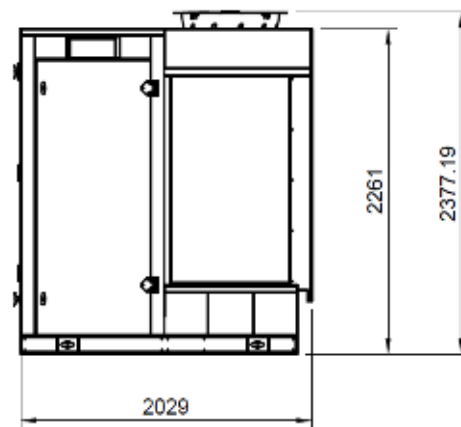
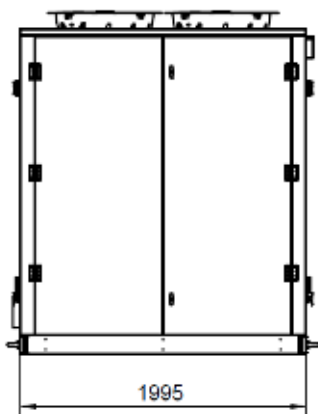
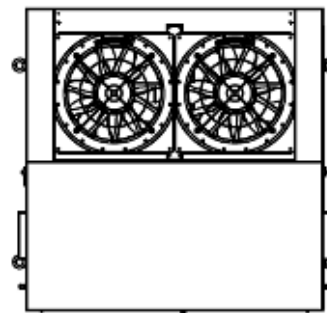
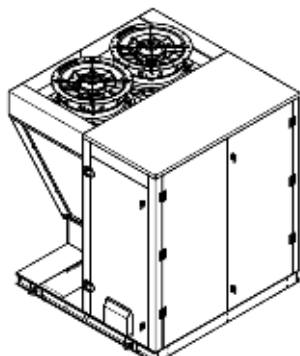
# LOW CARBON HEATING TECHNOLOGY

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.





# DIMENSIONAL INFORMATION //





## 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 50kW	50	65	75	64	46
		70	75	64	46
		75	77	65	47
		80	77	65	47

### Clade Heat Pump Performance Characteristics

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 50	50	50.0	30.0	3.5	3.6	43.9	16.1	2.7	45.9	15.4	3.0	51.0	15.5	3.3
Aspen 50	50	55.0	30.0	3.2	3.3	43.9	17.6	2.5	45.9	16.8	2.7	51.0	17.1	3.0	58.0	17.6	3.3	66.6	18.5	3.6
		60.0	30.0	2.9	3.0	43.9	19.0	2.3	45.9	18.4	2.5	51.0	18.7	2.7	58.0	19.3	3.0	66.6	20.2	3.3
		65.0	30.0	2.7	2.7	43.9	20.3	2.2	45.9	19.9	2.3	51.0	20.4	2.5	58.0	21.5	2.7	66.6	22.2	3.0
Aspen 50	50	50.0	40.0	3.3	3.4	41.7	16.1	2.6	43.6	15.4	2.8	48.5	15.5	3.1	55.1	15.9	3.5	63.3	16.6	3.8
		55.0	40.0	3.0	3.1	41.7	17.6	2.4	43.6	16.8	2.6	48.5	17.1	2.8	55.1	17.6	3.1	63.3	18.5	3.4
		60.0	40.0	2.8	2.8	41.7	19.0	2.2	43.6	18.4	2.4	48.5	18.7	2.6	55.1	19.3	2.9	63.3	20.2	3.1
Aspen 50	50	65.0	40.0	2.5	2.6	41.7	20.3	2.1	43.6	19.9	2.2	48.5	20.4	2.4	55.1	21.5	2.6	63.3	22.2	2.9
		50.0	45.0	3.2	3.3	40.4	16.4	2.5	42.2	15.7	2.7	46.9	15.8	3.0	53.4	16.3	3.3	61.3	16.9	3.6
		55.0	45.0	2.9	3.0	40.4	18.0	2.3	42.2	17.2	2.5	46.9	17.4	2.7	53.4	18.0	3.0	61.3	18.9	3.2
		60.0	45.0	2.6	2.7	40.4	19.4	2.1	42.2	18.8	2.3	46.9	19.1	2.5	53.4	19.8	2.7	61.3	20.6	3.0
		65.0	45.0	2.4	2.5	40.4	20.8	1.9	42.2	20.3	2.1	46.9	20.9	2.3	53.4	22.0	2.4	61.3	22.7	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.

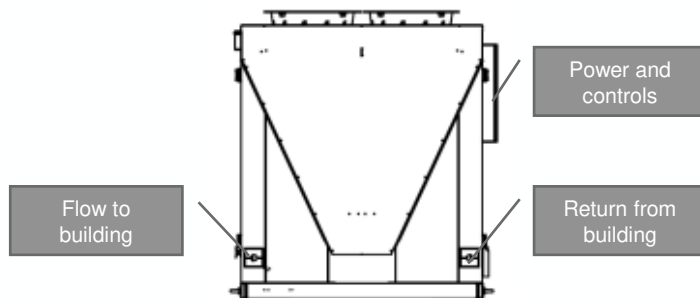
It is recommended that a gully be installed below the heat pump and lead to a soak away.

### CONTROLS

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

#### Alarms

- Hardwired shut down signal for fire alarm
- CO<sub>2</sub> detection
- Other fault
- 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.

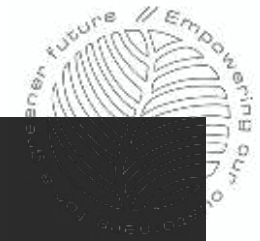
The store has operated for over a year and the measured results are a fantastic reflection of the standard of engineering that Clade delivers.

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 ODM Vendor Award  
 CHAS  
 Sales Contractor



———— THANK YOU //

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