



CLADE

ACER 65 / 50

65KW at +7°C ambient
50KW at -5°C ambient

LOW NOISE CO2 HEAT PUMP
for HEATING AND HOT WATER

July 23 //



ACER 65/50 //

The UK's leading low noise natural refrigerant heat pump for heating and hot water.

Up to 65KW of low carbon heat

- Future proof refrigerant which is non toxic and non flammable
- GWP = 1
- ODP = 0
- Low and standard noise models
- Up to 75°C hot water
- Positioned against a wall for low space take
- Light and dark grey colour options
- Coated coil option
- Can be multiplexed using Clade Multi Controller

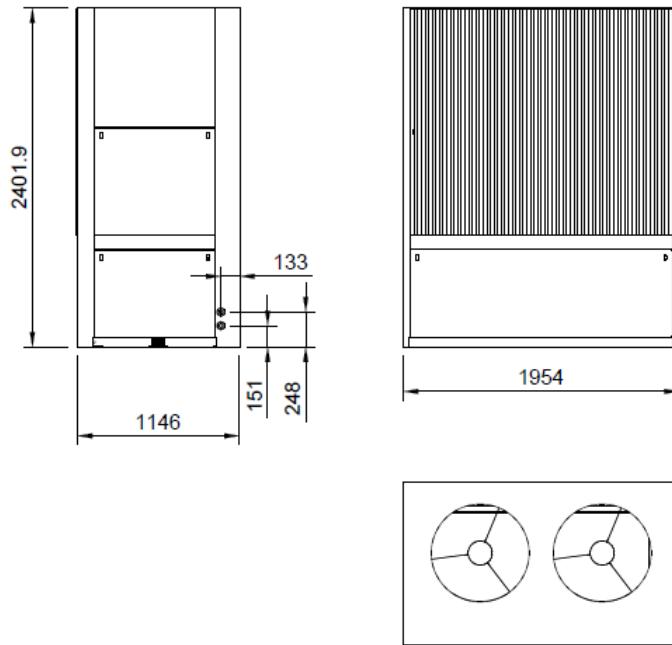
- Manufactured in the UK
- Full UK based technical support
- Performance guarantee





DIMENSIONAL INFORMATION //

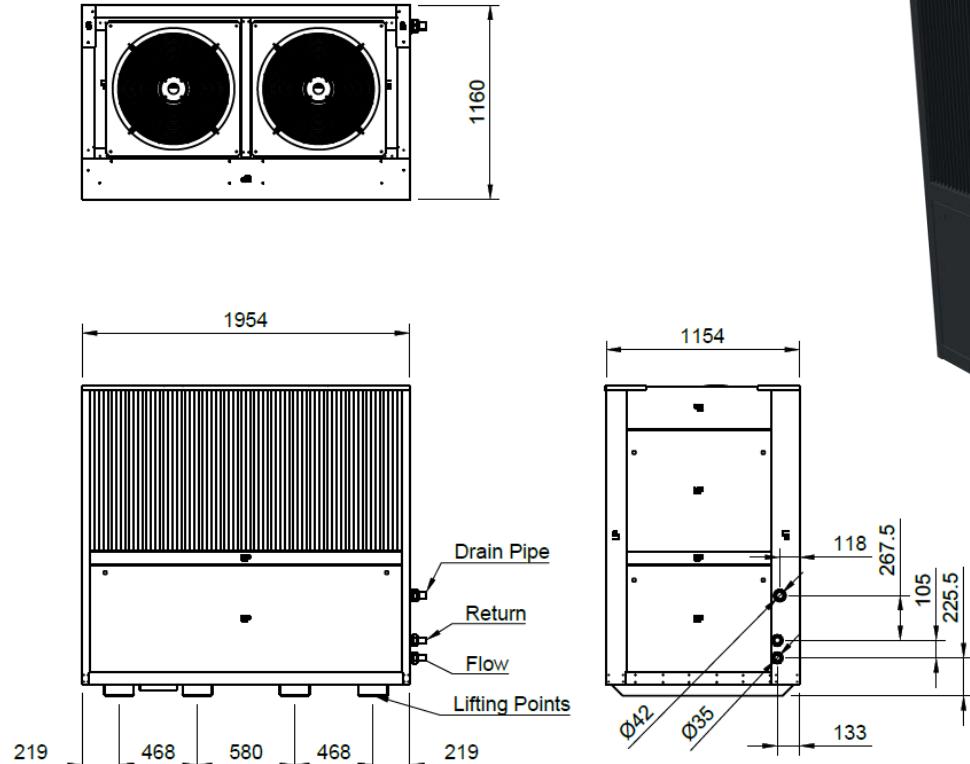
Acer Low Noise Dimensional Data





DIMENSIONAL INFORMATION //

Acer Standard Noise Dimensional Data





TECHNICAL SPECIFICATION //

Clade Acer 50kW ASHP - v1		
Nominal conditions: Water side		flow 30 °C to 65 °C, Ambient air temperature +3°C (85% RH) and -9°C evaporation
Nominal conditions: CO ₂ side		
Compressor Manufacturer		Dorin
Compressor Qty	Pcs.	1
Compressor Power @ Design total	kW	20.5
Evaporator fans Power at design	kW	1.8
Total	kW	22.3
Total Amps	A	45
Variable speed drive (VSD)	Pcs.	1
Refrigerant charge (CO ₂)	kg	4.5
Electrical supply	-	3~ 400V 50 HZ
Unit Weight (Operational)	kg	1,008
Unit Weight (Empty)	kg	1,000
Water Volume	L	3
Sound Power – low noise model	dB(A)	67.3
Sound Power – standard noise model	dB(A)	72.0
Sound Pressure 1m – low noise model	dB(A)	49.3
Sound Pressure 1m – standard noise model	dB(A)	54.6
Sound Pressure 10m – low noise model	dB(A)	35.3
Sound Pressure 10m – standard noise model	dB(A)	40.1
Connections waterside flow	DN	28mm Copper
Connections waterside Return	DN	28mm Copper
Waterside Flow/Return Temp	C	65/30
Communication protocol	-	MODBUS/BACNET
IP-Class	-	IP54
Evaporators Type		Flat bed
No. evaporators	Pcs.	1
Fin Material	-	AL/MG
Defrost Type	-	Cool Gas CO ₂
Defrost medium	-	CO ₂
Defrost design/condition	-	> +6c ambient Off Cycle / < +6c ambient Cool Gas
Fan regulation	-	0-10v
Colour	-	Anthracite Grey & Black
SCOP at design conditions		3.0

ACER PERFORMANCE V COMPETITOR CO2 //

Model	Clade Acer CO2	Leading competitor CO2 unit
Name plate heating capacity	50KW	40KW
+6°C ambient		
65°C flow temperature	65KW	40KW
29°C return temperature		
-6°C ambient		
65°C flow temperature	50KW	31KW
29°C return temperature		
Price comparison per KW at different ambient conditions		
Per KW nameplate	100%	96%
Per KW at +6	100%	125%
Per KW at -6	100%	124%

In order to properly compare heat pumps it is important to use the same conditions;

- The ambient temperature
- The flow temperature
- The return temperature

The actual heat power in KW generated by the heat pump is a result of the type of refrigerant and the above factors.

The table to the left shows a comparison of the Acer to a leading competitor. This show that at both ambient temperature points the **Acer out performs the competitor** and is therefore **more cost effective** per KW of heat.

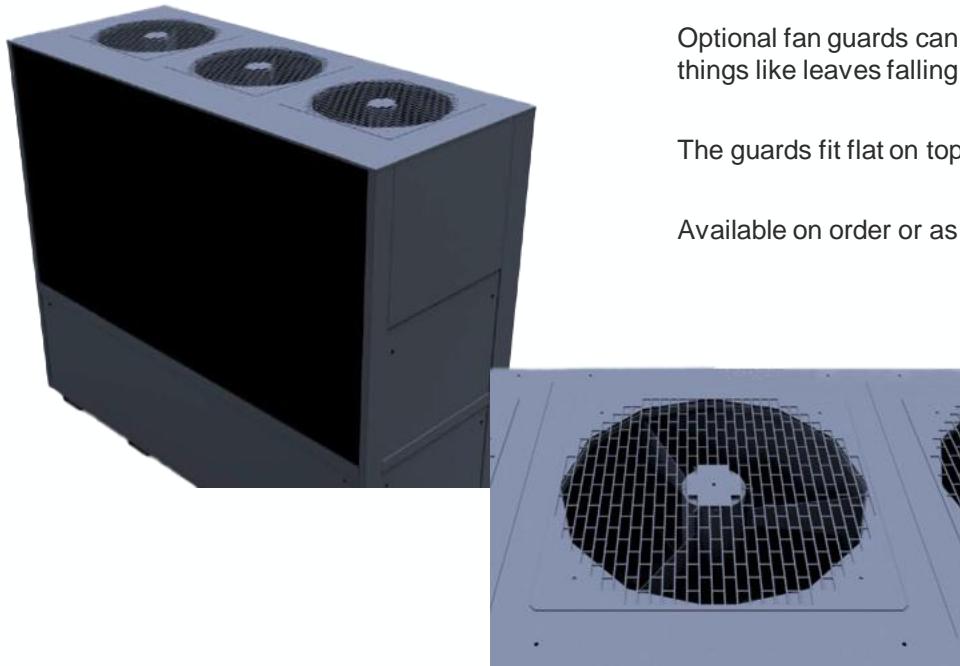


HEAT PUMP PERFORMANCE //

Clade Heat Pump Performance Characteristics - v1																					
Model name	Nameplate output (kW)	Output Temp (°C)	Return Temp (°C)	-10°C External		-5°C External		0°C External		5°C External		7°C External		10°C External		15°C External		20°C External		25°C External	
				Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP	Heat (kW)	COP		
Acer 65/50	50	55	35	40	1.9	50	2.1	55	2.2	57	2.5	58	2.55	62	2.7	65	3	65	3.1	65	3.2
		60	35	40	1.9	50	2.1	55	2.2	57	2.5	58	2.55	62	2.7	65	3	65	3.1	65	3.2
		65	35	40	1.9	50	2.1	55	2.2	57	2.5	58	2.55	62	2.7	65	3	65	3.1	65	3.2
		70	35	40	1.85	50	2.05	55	2.15	57	2.45	58	2.5	62	2.65	65	2.95	65	3.05	65	3.15
		75	35	40	1.85	50	2.05	55	2.15	57	2.45	58	2.5	62	2.65	65	2.95	65	3.05	65	3.15
		55	30	43	2.1	54	2.3	60	2.55	63	2.9	65	3	65	3.2	65	3.3	65	3.5	65	3.9
		60	30	43	2.1	54	2.3	60	2.55	63	2.9	65	3	65	3.2	65	3.3	65	3.5	65	3.9
		65	30	43	2.1	54	2.3	60	2.55	63	2.9	65	3	65	3.2	65	3.3	65	3.5	65	3.9
		70	30	43	2.05	54	2.25	60	2.45	63	2.85	65	2.9	65	3.1	65	3.25	65	3.4	65	3.8
		75	30	43	2.05	54	2.25	60	2.45	63	2.85	65	2.9	65	3.1	65	3.25	65	3.4	65	3.8



FAN GUARDS //



Optional fan guards can be provided for areas with higher risk of things like leaves falling in to the fans when not operational.

The guards fit flat on top of the Acer and can be removed for cleaning.

Available on order or as after market item.



— THANK YOU //

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