



CLADE

ACER 95 / 75

95KW at +7°C ambient

75KW at -5°C ambient

**LOW NOISE CO2 HEAT PUMP
for HEATING AND HOT WATER**

July 23 //



ACER 95/75 //

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

Up to 95KW 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

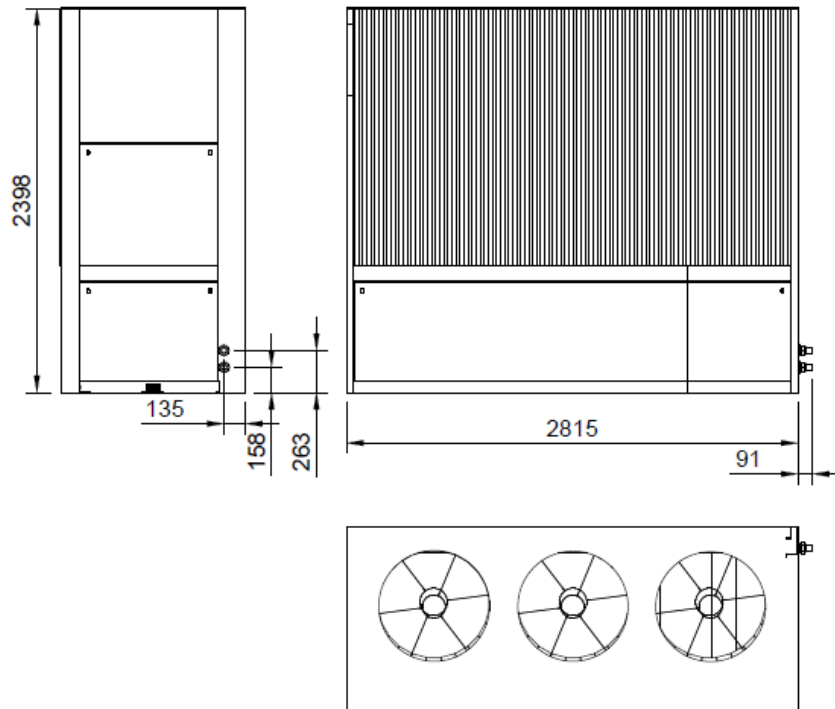
- Manufactured in the UK
- Full UK based technical support
- Performance guarantee





DIMENSIONAL INFORMATION //

Acer Low Noise Dimensional Data



Standard Noise Variant

The standard noise variant has the same base dimensions with a height of 1805mm



TECHNICAL SPECIFICATION //

Clade Acer 75kW ASHP - v1			
Nominal conditions: Water side			flow 30 °C to 65 °C,
Nominal conditions: CO ₂ side			Ambient air temperature +3°C (85% RH) and -9°C evaporation
Compressor Manufacturer			Dorin
Compressor Qty	Pcs.		1
Compressor Power @ Design total	kW		33.1
Evaporator fans Power at design	kW		2.5
Total Power	kW		38.04
Total Amps	A		67.55
Variable speed drive (VSD)	Pcs.		1
Refrigerant charge (CO ₂)	kg		6.5
Electrical supply	-		3~ 400V 50 HZ
Unit Weight (Operational)	kg		1,375
Unit Weight (Empty)	kg		1,365
Water Volume	L		3
Sound Power – low noise model	dB(A)		68.7
Sound Pressure 1m – low noise model	dB(A)		56.2
Sound Pressure 10m – low noise model	dB(A)		36.7
Sound Power – standard noise model	dB(A)		73.7
Sound Pressure 1m – standard noise model	dB(A)		50.7
Sound Pressure 10m – standard noise model	dB(A)		41.8
Connections waterside flow	DN		35mm Copper
Connections waterside Return	DN		35mm 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	65KW	40KW
65°C flow temperature		
29°C return temperature		
-6°C ambient	50KW	31KW
65°C flow temperature		
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 //

ACER 95/75kW //

Clade Heat Pump Performance Characteristics																					
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	Heat (kW)	COP
Acer 95/75	75	55	35	60	1.9	75	2.1	80	2.2	83	2.5	84	2.55	90	2.7	95	3	95	3.1	95	3.2
		60	35	60	1.9	75	2.1	80	2.2	83	2.5	84	2.55	90	2.7	95	3	95	3.1	95	3.2
		65	35	60	1.9	75	2.1	80	2.2	83	2.5	84	2.55	90	2.7	95	3	95	3.1	95	3.2
		70	35	60	1.85	75	2.05	80	2.15	83	2.45	84	2.5	90	2.65	95	2.95	95	3.05	95	3.15
		75	35	60	1.85	75	2.05	80	2.15	83	2.45	84	2.5	90	2.65	95	2.95	95	3.05	95	3.15
		55	30	65	2.1	81	2.3	87	2.55	92	2.9	95	3	95	3.2	95	3.3	95	3.5	95	3.9
		60	30	65	2.1	81	2.3	87	2.55	92	2.9	95	3	95	3.2	95	3.3	95	3.5	95	3.9
		65	30	65	2.1	81	2.3	87	2.55	92	2.9	95	3	95	3.2	95	3.3	95	3.5	95	3.9
		70	30	65	2.05	81	2.25	87	2.45	92	2.85	95	2.9	95	3.1	95	3.25	95	3.4	95	3.8
		75	30	65	2.05	81	2.25	87	2.45	92	2.85	95	2.9	95	3.1	95	3.25	95	3.4	95	3.8



THANK YOU //

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