



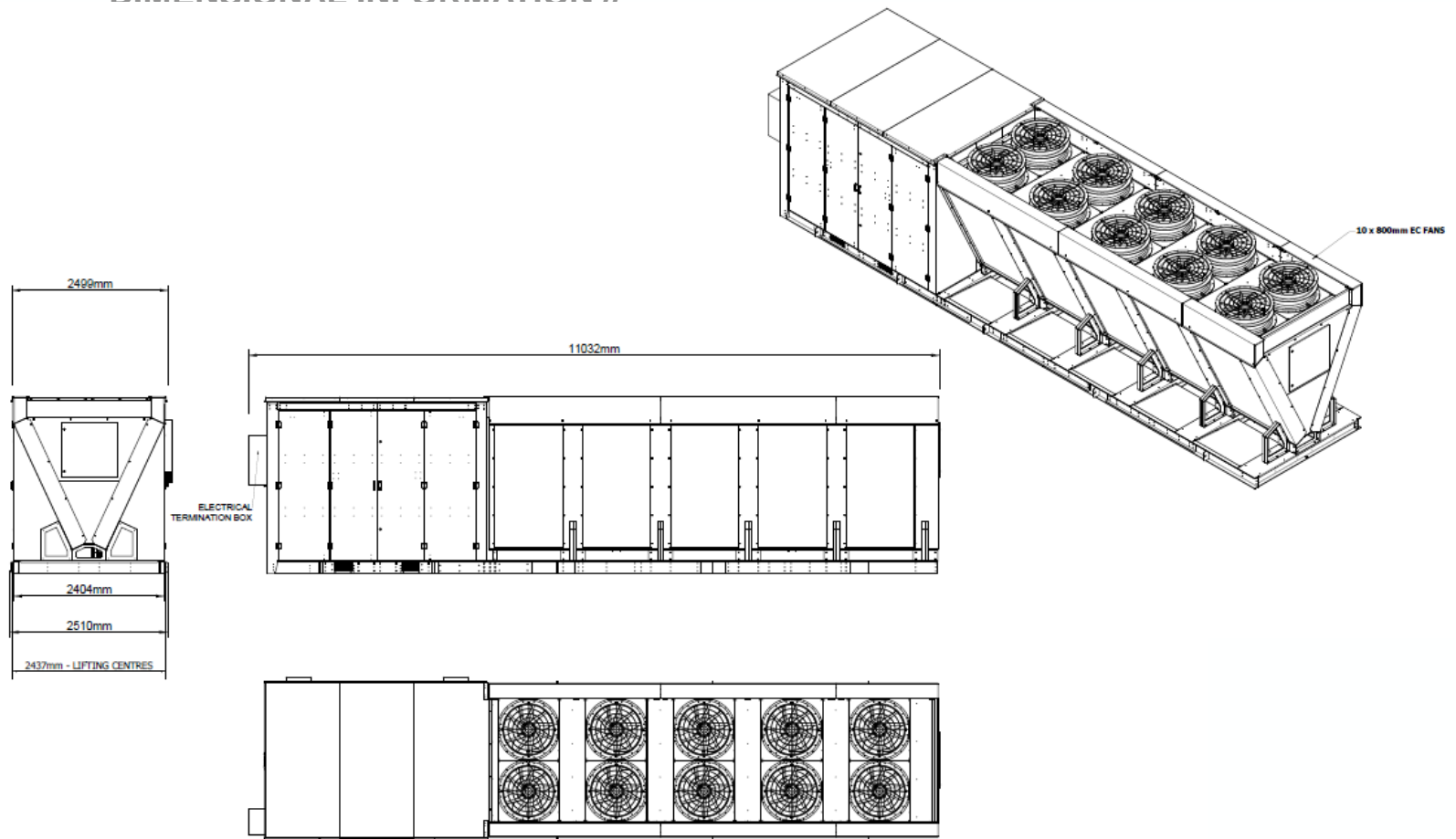
CLADE

Oak 600kW HEAT PUMP //

Jan 2023 //



DIMENSIONAL INFORMATION //





TECHNICAL INFORMATION //

Clade 600kW Oak ASHP - v1.1			
Nominal conditions: Water side		flow 45c to 85c Return temperature <35°C	
Nominal conditions: CO ₂ side		Ambient air temperature +3°C (85% RH) and -9°C evaporation	
Compressor Manufacturer			Dorin
Compressor Heating Qty	Pcs.		4
Compressor Paralell Qty	Pcs.		1
Compressor Power @ Design total	kW		227
Evaporator fans Power at design	kW		21.6
Total	kW		251.1
Total Amps	A		421
Variable speed drive (VSD)	Pcs.		2
Refrigerant charge (CO ₂)	kg		520
Electrical supply	-		3- 400V 50 HZ
Housing Weight (empty)	kg		9,138
Housing Weight (operational)	kg		9,658
Water Volume	L		15
Sound Power	dB(A)		86
Sound Pressure 1m	dB(A)		62
Sound Pressure 10m	dB(A)		52
Connections waterside flow	DN		76mm Copper
Connections waterside Return	DN		76mm Copper
Connections waterside Pressure Rating			6
Waterside Burst Disk			6
Waterside Flow/Return Temp	C		65/30
Communication protocol	-		MODBUS/BACNET
IP-Class	-		IP54
Evaporators Type			V Block
No. evaporators	Pcs.		10
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	-		BS4800 00A05 Goosewing Grey Textured paint





HEAT PUMP PERFORMANCE //

Clade Heat Pump Performance Characteristics - v1.1																													
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			15°C External			20°C External			25°C External		
						QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)
Oak 600kW	600	55	35	2.8	2.9	480	233	2.06	600	262	2.29	660	257	2.57	720	252	2.86	720	230	3.13	720	212	3.39	720	198	3.63	720	182	3.95
		60	35	2.8	2.9	480	233	2.06	600	262	2.29	660	257	2.57	720	252	2.86	720	230	3.13	720	212	3.39	720	198	3.63	720	182	3.95
		65	35	2.8	2.9	480	233	2.06	600	262	2.29	660	257	2.57	720	252	2.86	720	230	3.13	720	212	3.39	720	198	3.63	720	182	3.95
		70	35	2.8	2.9	480	239	2.01	600	273	2.2	660	264	2.5	720	257	2.8	720	236	3.05	720	218	3.3	720	203	3.55	720	185	3.9
		75	35	2.8	2.9	480	240	2	600	273	2.2	660	264	2.5	720	257	2.8	720	236	3.05	720	218	3.3	720	203	3.55	720	185	3.9
		80	35	2.8	2.9	480	240	2	600	273	2.2	660	264	2.5	720	257	2.8	720	236	3.05	720	218	3.3	720	203	3.55	720	185	3.9

Clade Heat Pump Performance Characteristics v1.1																													
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			15°C External			20°C External			25°C External		
						QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)	QH (kW)	PI (kW)	COPH (-)
Oak 600kW	600	55	30	3	3.1	480	216	2.22	600	242	2.48	660	237	2.78	720	233	3.09	720	212	3.39	720	197	3.66	720	183	3.93	720	169	4.27
		60	30	3	3.1	480	216	2.22	600	242	2.48	660	237	2.78	720	233	3.09	720	212	3.39	720	197	3.66	720	183	3.93	720	169	4.27
		65	30	3	3.1	480	216	2.22	600	242	2.48	660	237	2.78	720	233	3.09	720	212	3.39	720	197	3.66	720	183	3.93	720	169	4.27
		70	30	3	3.1	480	223	2.15	600	250	2.4	660	244	2.7	720	240	3	720	218	3.3	720	200	3.6	720	187	3.85	720	171	4.2
		75	30	3	3.1	480	223	2.15	600	250	2.4	660	244	2.7	720	240	3	720	218	3.3	720	200	3.6	720	187	3.85	720	171	4.2
		80	30	3	3.1	480	223	2.15	600	250	2.4	660	244	2.7	720	240	3	720	218	3.3	720	200	3.6	720	187	3.85	720	171	4.2



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.

CONDENSATE

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

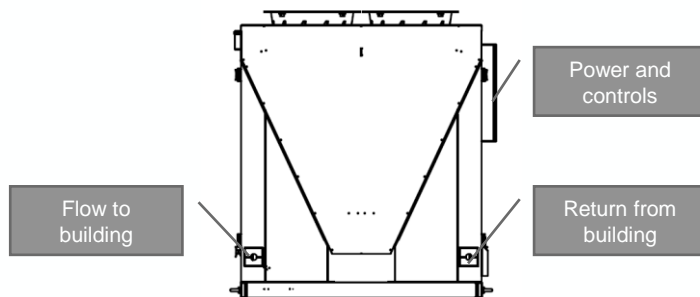
It is recommended that a gully be installed below the heat pump and lead to a soak away.

CONTROLS

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

Alarms

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





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

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

HEALTH & SAFETY
CERTIFICATIONS
Altus Assured Vendor Award
Altus CDM Vendor Award
CHAS
Sales Contractor



THANK YOU //

www.clade-es.com

Sales@clade-es.com

Aftersales@clade-es.com

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

The Technology Centre //
Unit R3 Gildersome Spur Industrial Estate,
Stone Pits Lane, Morley,
LEEDS LS27 7JZ

