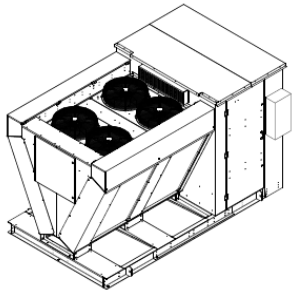
CLADE

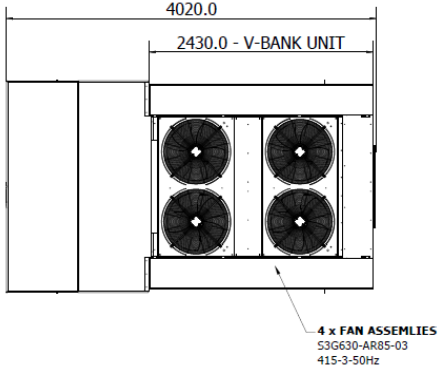
OAK 100kW HEAT PUMP //

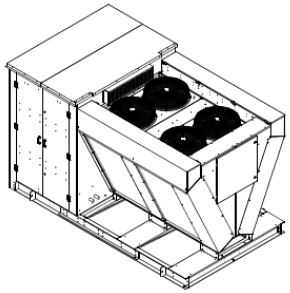
Jan 2023 //

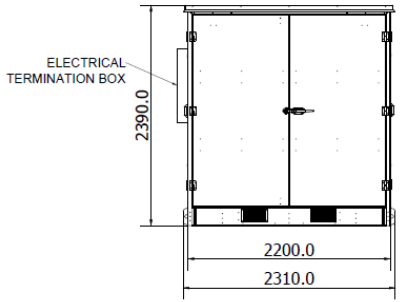
CLADE

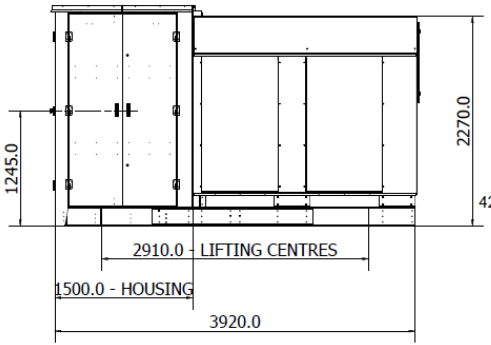
DIMENSIONAL INFORMATION //

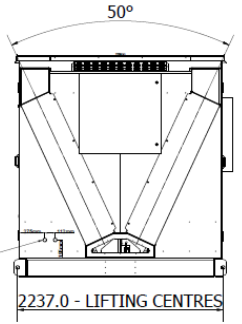












APPROX WEIGHT = 3253Kg

DIMENSIONED OUTSIDE (mm) UNLESS STATED

TECHNICAL INFORMATION //

Clade Oak 100kW 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.	1
Compressor Paralell Qty	Pcs.	0
Compressor Power @ Design total	kW	40.4
Evaporator fans Power at design	kW	3.6
Total	kW	44
Total Amps	A	84
Variable speed drive (VSD)	Pcs.	1
Refrigerant charge (CO_2)	kg	90
Electrical supply	-	3~ 400V 50 HZ
Unit Weight (Operational)	kg	3,202
Unit Weight (Empty)	kg	3,105
Water Volume	L	7
Sound Power	dB(A)	80.2
Sound Pressure 1m	dB(A)	60
Sound Pressure 10m	dB(A)	48
Connections waterside flow	DN	35mm Copper
Connections waterside Return	DN	35mm Copper
Connections waterside Pressure Rating	PN	6
Waterside Burst Disk	PN	6
Waterside Flow/Return Temp	C	65/30
Communication protocol	-	MODBUS/BACNET
IP-Class	-	IP54
Evaporators Type		V Block
No. evaporators	Pcs.	4
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 100kW	100	55	35	2.8	2.9	80	39	2.06	100	44	2.29	110	43	2.57	120	42	2.86	120	38	3.13	120	35	3.39	120	33	3.63	120	30	3.95
		60	35	2.8	2.9	80	39	2.06	100	44	2.29	110	43	2.57	120	42	2.86	120	38	3.13	120	35	3.39	120	33	3.63	120	30	3.95
		65	35	2.8	2.9	80	39	2.06	100	44	2.29	110	43	2.57	120	42	2.86	120	38	3.13	120	35	3.39	120	33	3.63	120	30	3.95
		70	35	2.8	2.9	80	40	2.01	100	45	2.2	110	44	2.5	120	43	2.8	120	39	3.05	120	36	3.3	120	34	3.55	120	31	3.9
		75	35	2.8	2.9	80	40	2	100	45	2.2	110	44	2.5	120	43	2.8	120	39	3.05	120	36	3.3	120	34	3.55	120	31	3.9
		80	35	2.8	2.9	80	40	2	100	45	2.2	110	44	2.5	120	43	2.8	120	39	3.05	120	36	3.3	120	34	3.55	120	31	3.9

Clade Heat Pump Performance Characteristics - v1.1																													
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						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 100kW	100	55	30	3	3.1	80	36	2.22	100	40	2.48	110	40	2.78	120	39	3.09	120	35	3.39	120	33	3.66	120	31	3.93	120	28	4.27
		60	30	3	3.1	80	36	2.22	100	40	2.48	110	40	2.78	120	39	3.09	120	35	3.39	120	33	3.66	120	31	3.93	120	28	4.27
		65	30	3	3.1	80	36	2.22	100	40	2.48	110	40	2.78	120	39	3.09	120	35	3.39	120	33	3.66	120	31	3.93	120	28	4.27
		70	30	3	3.1	80	37	2.15	100	42	2.4	110	41	2.7	120	40	3	120	36	3.3	120	33	3.6	120	31	3.85	120	29	4.2
		75	30	3	3.1	80	37	2.15	100	42	2.4	110	41	2.7	120	40	3	120	36	3.3	120	33	3.6	120	31	3.85	120	29	4.2
		80	30	3	3.1	80	37	2.15	100	42	2.4	110	41	2.7	120	40	3	120	36	3.3	120	33	3.6	120	31	3.85	120	29	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
- CO_2 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

ACCREDITATIONS

ISO 9001: 2015
ISO14001: 2015
OHSAS ISO 18001: 2007

CERTIFICATIONS

Altius Assured Vendor Award
Altius 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