



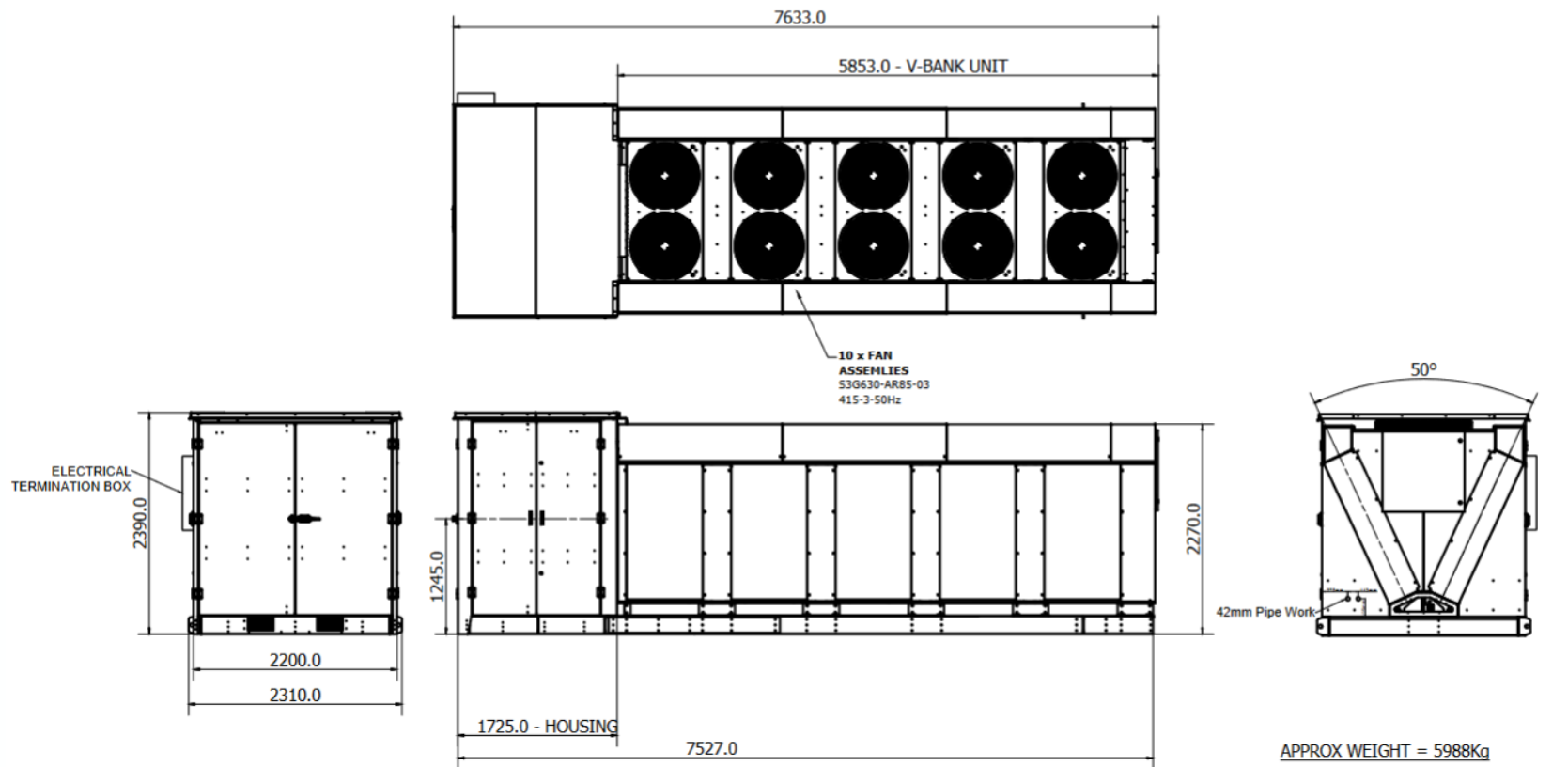
CLADE

OAK 250kW HEAT PUMP //

Jan 2023 //



DIMENSIONAL INFORMATION //



DIMENSIONED OUTSIDE (mm) UNLESS STATED



TECHNICAL INFORMATION //

OAK 250kW //

Clade 250kW 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.	2
Compressor Paralell Qty	Pcs.	1
Compressor Power @ Design total	kW	93.2
Evaporator fans Power at design	kW	8.8
Total	kW	104.63
Total Amps	A	184
Variable speed drive (VSD)	Pcs.	2
Refrigerant charge (CO ₂)	kg	220
Electrical supply	-	3~ 400V 50 HZ
Unit Weight (empty)	kg	5,055
Unit Weight (operational)	kg	5,287
Water Volume	L	12
Sound Power	dB(A)	82
Sound Pressure 1m	dB(A)	61
Sound Pressure 10m	dB(A)	49
Connections waterside flow	DN	54mm Copper
Connections waterside Return	DN	54mm 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																													
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 250kW	250	55	35	2.8	2.9	200	97	2.06	250	109	2.29	275	107	2.57	300	105	2.86	300	96	3.13	300	88	3.39	300	83	3.63	300	76	3.95
		60	35	2.8	2.9	200	97	2.06	250	109	2.29	275	107	2.57	300	105	2.86	300	96	3.13	300	88	3.39	300	83	3.63	300	76	3.95
		65	35	2.8	2.9	200	97	2.06	250	109	2.29	275	107	2.57	300	105	2.86	300	96	3.13	300	88	3.39	300	83	3.63	300	76	3.95
		70	35	2.8	2.9	200	100	2.01	250	114	2.2	275	110	2.5	300	107	2.8	300	98	3.05	300	91	3.3	300	85	3.55	300	77	3.9
		75	35	2.8	2.9	200	100	2	250	114	2.2	275	110	2.5	300	107	2.8	300	98	3.05	300	91	3.3	300	85	3.55	300	77	3.9
		80	35	2.8	2.9	200	100	2	250	114	2.2	275	110	2.5	300	107	2.8	300	98	3.05	300	91	3.3	300	85	3.55	300	77	3.9

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			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 250kW	250	55	30	3	3.1	200	90	2.22	250	101	2.48	275	99	2.78	300	97	3.09	300	88	3.39	300	82	3.66	300	76	3.93	300	70	4.27
		60	30	3	3.1	200	90	2.22	250	101	2.48	275	99	2.78	300	97	3.09	300	88	3.39	300	82	3.66	300	76	3.93	300	70	4.27
		65	30	3	3.1	200	90	2.22	250	101	2.48	275	99	2.78	300	97	3.09	300	88	3.39	300	82	3.66	300	76	3.93	300	70	4.27
		70	30	3	3.1	200	93	2.15	250	104	2.4	275	102	2.7	300	100	3	300	91	3.3	300	83	3.6	300	78	3.85	300	71	4.2
		75	30	3	3.1	200	93	2.15	250	104	2.4	275	102	2.7	300	100	3	300	91	3.3	300	83	3.6	300	78	3.85	300	71	4.2
		80	30	3	3.1	200	93	2.15	250	104	2.4	275	102	2.7	300	100	3	300	91	3.3	300	83	3.6	300	78	3.85	300	71	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.



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