



DUNNAIR
(Aust) Pty Ltd

R407c Refrigerant
PHE200
Economy Cycle Rooftop Package

Performance Data

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING AIR TEMPERATURE °C											
		30°C			35°C			40°C			45°C		
		Tot Cap KW	Sens Cap KW	LWB °C	Tot Cap KW	Sens Cap KW	LWB °C	Tot Cap KW	Sens Cap KW	LWB °C	Tot Cap KW	Sens Cap KW	LWB °C
DB °C	WB °C												
21	17	198.1	122.0	11.8	187.8	117.7	12.1	177.0	113.0	12.6	169.5	113.0	12.8
	18	205.1	110.1	12.5	194.5	105.6	13.3	183.1	100.6	13.6	175.9	97.5	14.0
	19	212.2	97.6	14.3	201.2	93.1	14.6	189.4	88.1	15.1	182.5	85.3	15.3
	20	220.1	84.5	15.3	208.6	79.8	15.7	196.1	74.9	16.1	189.3	71.8	16.5
23	17	198.8	145.8	11.7	188.6	141.6	12.1	177.8	136.9	12.5	170.2	133.8	12.8
	18	205.1	133.7	12.9	194.5	129.1	13.2	183.1	124.2	13.6	175.9	121.1	14.0
	19	212.2	121.2	14.1	201.4	116.7	14.5	189.5	112.0	15.0	182.5	108.9	15.3
	20	220.3	108.1	15.3	208.6	103.4	15.7	196.2	98.5	16.1	189.5	95.4	16.4
	21	228.2	95.1	16.4	216.4	190.4	16.8	203.9	85.1	17.2	196.6	82.0	17.6
25	17	200.8	167.7	11.6	190.5	163.0	11.9	179.8	157.9	12.5	172.8	154.7	12.7
	18	205.6	162.1	13.0	195.0	153.8	13.3	183.7	148.8	13.8	176.5	145.7	14.1
	19	212.3	154.4	14.1	201.4	140.2	14.5	189.5	135.5	15.0	182.8	132.5	15.2
	20	220.3	145.5	15.3	208.9	127.2	15.7	196.5	121.9	16.1	189.5	119.2	16.4
	21	228.3	135.8	16.4	216.4	105.9	16.8	203.9	108.6	17.2	196.6	105.9	17.4
27	17	203.9	185.9	11.5	194.7	180.4	11.8	184.2	174.0	12.2	177.5	170.1	12.6
	18	208.0	181.8	12.8	196.9	177.4	13.1	185.6	172.4	13.5	180.3	169.3	13.8
	19	214.4	168.7	13.9	201.8	164.3	14.3	190.0	159.3	14.7	183.1	156.3	15.0
	20	220.5	156.8	15.2	208.9	152.1	15.5	196.5	147.3	15.9	189.5	144.4	16.1
	21	228.4	142.1	16.4	210.6	137.4	16.8	203.9	132.2	17.2	196.7	129.4	17.4
29	17	209.5	192.2	11.4	200.0	194.8	11.8	189.5	187.1	12.2	181.8	183.0	12.5
	18	211.4	188.9	12.7	201.1	191.8	13.1	190.0	185.9	13.5	183.1	177.4	13.8
	19	214.4	185.6	14.0	203.6	189.5	14.3	191.7	184.6	14.7	183.8	174.1	15.1
	20	220.5	179.9	15.2	209.1	175.1	15.5	196.7	169.6	16.0	189.8	167.1	16.3
	21	228.4	165.7	16.4	216.6	160.9	16.8	203.9	155.8	17.2	196.7	152.9	17.4
31	17	216.1	214.8	11.0	207.0	206.6	11.4	195.9	197.1	11.8	189.8	191.4	12.0
	18	217.2	212.3	12.5	207.2	205.6	12.8	196.7	196.5	13.2	190.8	190.7	13.5
	19	218.3	210.0	13.8	208.0	204.8	14.2	196.7	195.5	14.6	190.8	190.1	14.8
	20	221.9	204.5	15.1	210.8	200.1	15.5	198.3	193.0	15.9	191.4	189.6	16.3
	21	228.9	191.0	16.4	216.9	186.2	16.8	203.9	188.9	17.2	196.9	178.2	17.6



Technical Specification PHE200 Economy Cycle Rooftop Package

Total Cooling Capacity (kW)	201.8	Number of Compressors	2
Sensible Cooling Capacity (kW)	164.3	Power V / Ph	415 / 3
Heating Capacity (kW)	196.2	Nominal Max.Current (A)	190.3
Nominal Evaporator Air Flow (l/s)	10500	Power Input (kW)	85.8
*Cooling cap entering air 27°/19°C (DB/WB) Ambient 35°C		** Heating cap entering air 21°C Outdoor ambient 7°C	

Cooling Performance Correction

Capacity	% Rated Air Flow				
	80	90	100	110	120
Total	0.95	0.98	1.00	1.02	1.04
Sensible	0.89	0.95	1.00	1.05	1.09

Heating Capacity

Amb. °C DB	0	4	8	12	18
Cap kW	147.3	162.6	188.4	207.0	249.0
Heating cap is based on 21°C DB. Frost formation will have greatest effect at amb 4 to 6°C. Above 8°C defrost is unlikely and a factor of 1 may be used.					

Heating Performance Correction

% Air Flow	×	Return Air Temp °C	×	O/door Air Temp °C	Approx. Defrost Factor
80	0.93	15	1.05	0	0.80
90	0.97	18	1.03	2	0.78
100	1.00	21	1.00	4–6	0.75
110	1.03	24	0.97	7	0.87
120	1.05	27	0.95	8	1.00

Compressors

Number Per Unit	2
Type	Hermetic Scroll
Nominal RPM	2900
Nominal Max. Amps	2 × 57.7
Locked Rotor Amps	2 × 320
Displacement (m³/h)	2 × 111.6

Electrical Controls and Safeties

Indoor Fan Overload	Internal	Defrost Cycle Start °C	-4
Outdoor Fan Overload	Internal	Defrost Cycle End °C	10
Compressor Delay Timer	300 sec	Min. Defrost Cycle	33 mins
High Pressure Switch (kPa)	2800	Max. Defrost Period	4 mins
Low Pressure Switch (kPa)	100		

Standard Features

HP/LP Cutouts	Thermal Overload Protection
Crankcase Heater	Limit Start Timer
Automatic De-Ice	Indoor 25mm Insulation
Gas Separator	240 Volt Control

Evaporator Coil

Type	Copper tube alum. fins
Face Area (m²)	2 × 1.78

Condenser Coil

Type	Copper tube alum. fins
Face Area (m²)	2 × 1.9

Evaporator Fan

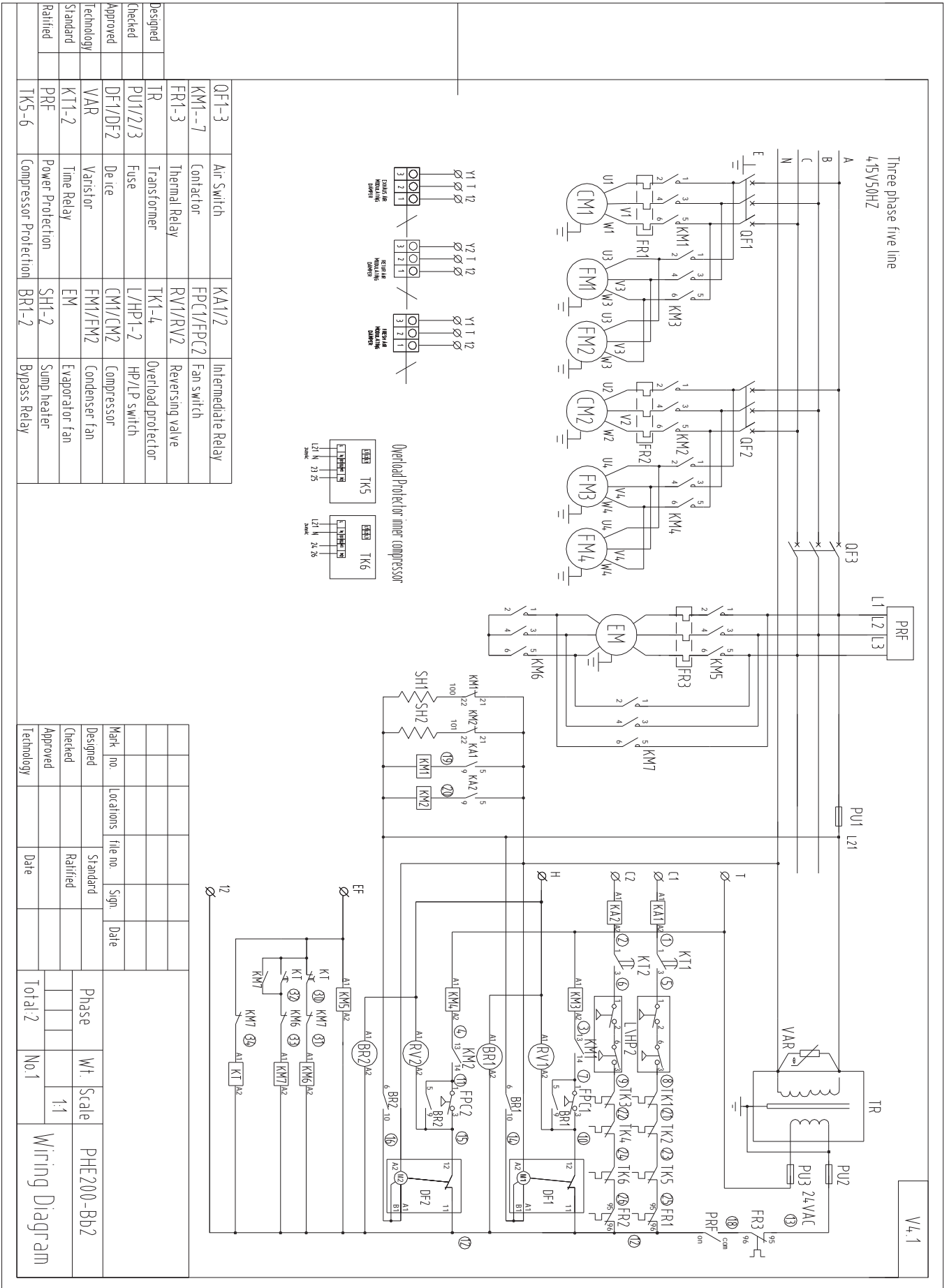
Number of Fans	1
Type	Centrifugal
Drive	Belt
Motor V / Ph / Hz	415 / 3 / 50
Motor Output Power (kW)	15
Max. Fan Speed (rpm)	600

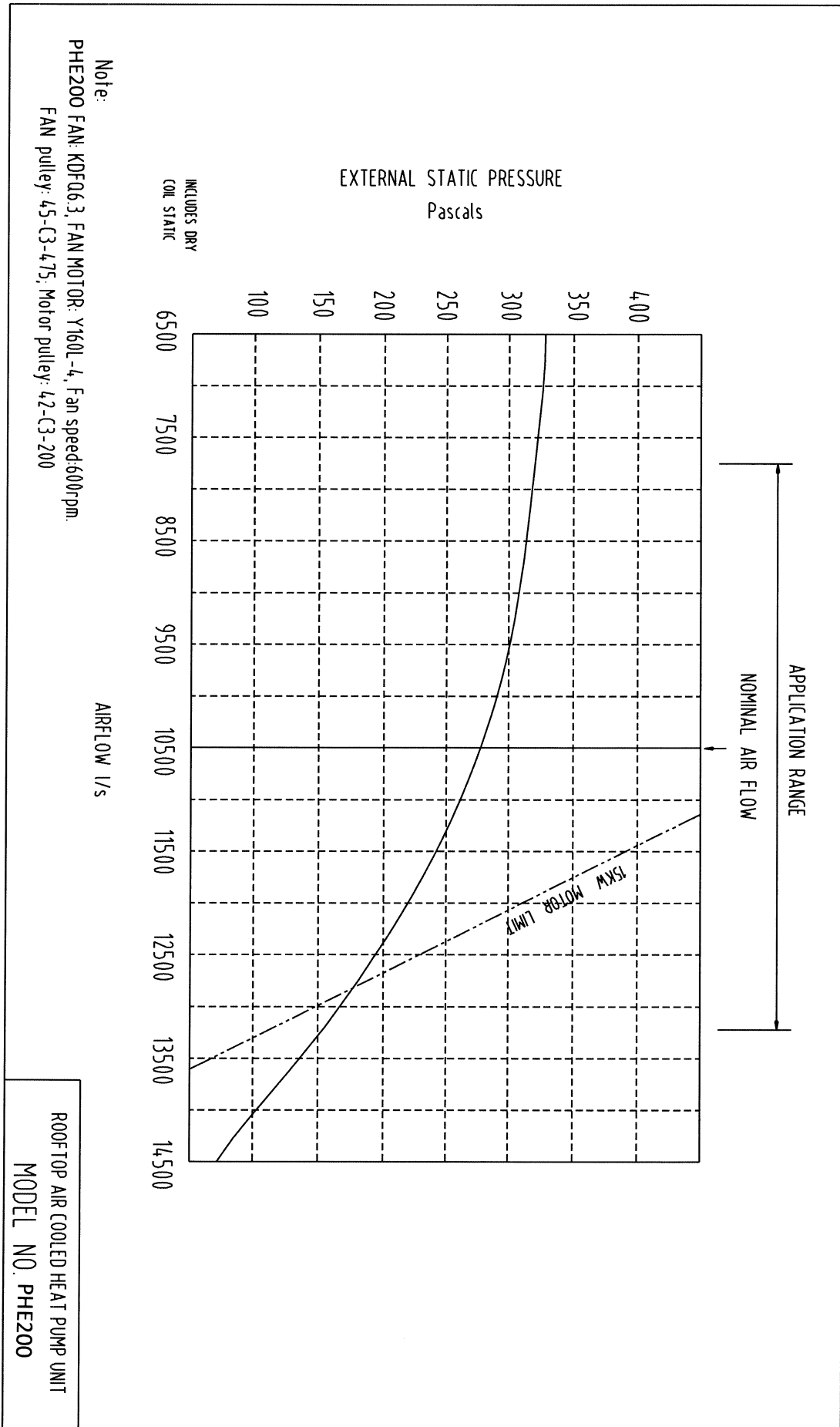
Condenser Fan

Number of Fans	4
Type	Axial
Drive	Direct
Motor Output Power (kW)	4 × 1.5
Motor V / Ph / Hz	415 / 3 / 50

Refrigerant System

Refrigerant Type	R407c
Nominal Charge Required	2 × 25.4kg
Service Connection	Rotor Lock Valve
Expansion Control	TX Valve





PHE200 Noise rate analysing chart

A Class: 89.4dB

Hz	dB
64Hz	95.4
125Hz	89.5
250Hz	88.2
500Hz	85.1
1000Hz	84.5
2000Hz	82.4
4000Hz	77.8
8000Hz	70.5

Noise rate analysing chart (A Class: 89.4dB) dB

