



DUNNAIR
(Aust) Pty Ltd

PHSE25

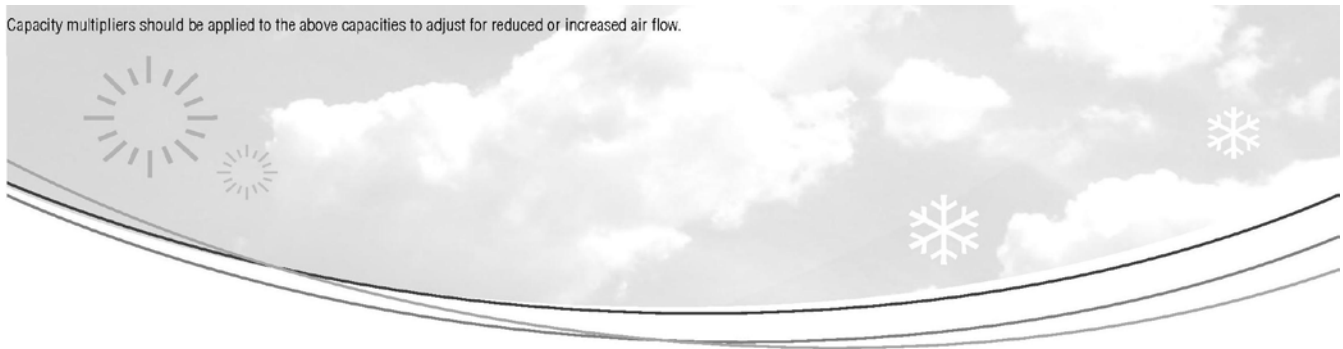
Economy Cycle Rooftop Packaged

R410a Refrigerant

PERFORMANCE DATA

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING 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	23.4	13.8	11.6	22.2	13.4	11.9	21.1	12.9	12.2	19.9	12.9	12.5
	18	24.2	12.4	12.0	23.0	12.0	13.0	21.8	11.5	13.3	20.7	11.1	13.5
	19	24.9	11.1	13.8	23.7	10.6	14.1	22.6	10.2	14.4	21.4	9.8	14.6
	20	25.8	9.7	14.9	24.5	9.2	15.2	23.3	8.7	15.5	22.2	8.3	15.8
23	17	23.4	16.4	11.6	22.2	15.9	11.9	21.1	15.5	12.2	19.9	15.0	12.5
	18	24.2	15.1	12.7	23.0	14.6	13.0	21.9	14.1	13.3	20.7	13.6	13.5
	19	24.9	13.6	13.7	23.7	13.2	14.0	22.6	12.7	14.2	21.4	12.3	14.5
	20	25.7	12.2	14.9	24.5	11.8	15.2	23.3	11.3	15.5	22.1	10.9	15.8
	21	26.6	10.9	16.0	25.3	10.4	16.2	24.1	10.0	16.5	22.9	9.6	16.8
25	17	23.5	18.8	11.6	22.3	18.3	11.9	21.3	17.8	12.1	20.1	17.3	12.4
	18	24.1	18.2	12.7	23.0	17.1	13.0	21.8	16.7	13.3	20.7	16.2	13.5
	19	24.9	17.5	13.7	23.7	15.7	14.0	22.6	15.3	14.2	21.4	14.8	14.5
	20	25.7	1.9	14.8	24.5	14.5	15.1	23.3	14.1	15.3	22.1	13.6	15.6
	21	26.5	16.2	15.9	25.3	13.0	16.2	24.1	12.6	16.5	22.9	12.1	16.8
27	17	23.7	20.9	11.5	22.7	20.3	11.8	21.6	19.7	12.0	21.0	19.1	12.3
	18	24.2	20.2	12.7	23.1	19.7	12.9	22.0	19.2	13.2	21.0	18.7	13.5
	19	24.9	18.7	13.6	23.8	19.1	13.7	22.5	17.9	14.2	22.0	17.4	14.5
	20	25.7	17.5	14.8	24.1	16.9	15.1	23.3	16.6	15.3	22.2	16.1	15.6
	21	26.5	16.0	16.0	24.9	15.6	16.2	24.1	15.1	16.5	22.9	14.7	16.8
29	17	24.1	22.9	11.4	23.1	22.1	11.6	22.1	21.4	11.9	21.1	21.1	12.1
	18	24.6	22.1	12.6	23.4	21.5	12.9	22.4	20.9	13.1	21.3	20.9	13.4
	19	25.0	21.4	13.7	23.8	20.9	14.0	22.7	20.5	14.3	21.5	20.0	14.5
	20	25.7	20.0	14.8	24.5	19.6	15.0	23.3	19.2	15.3	22.1	18.7	15.6
	21	26.5	18.6	15.9	25.3	18.1	16.2	24.0	17.7	16.5	22.9	17.2	16.8
31	17	24.7	24.7	11.2	23.7	23.7	11.5	22.8	22.8	11.7	21.9	21.9	12.0
	18	25.0	23.9	12.4	24.0	23.2	12.7	22.8	22.8	12.9	21.9	21.9	13.2
	19	25.4	23.3	13.5	24.3	22.7	13.8	22.8	22.8	14.0	21.9	21.9	14.3
	20	25.8	22.5	14.7	24.6	22.0	15.0	23.4	21.6	15.2	22.3	21.2	15.5
	21	26.5	21.2	15.9	25.2	20.7	16.2	24.0	20.2	16.5	22.9	19.8	16.7

Capacity multipliers should be applied to the above capacities to adjust for reduced or increased air flow.



Technical Specification PHSE25 Economy Cycle Rooftop Packaged Model

Total Cooling Capacity (kW)*	23.8	Number of Compressors	1
Sensible Cooling Capacity (kW)*	19.1	Power Requirements (Volt /Phase)	415 / 3
Heating Capacity (kW)**	24.2	Normal Max. Current (Amps /Phase)	22.4
Nominal Evaporator Air Flow (L/S)	1390	Power Input (kW)	10.1
*Entering air @ 27/19 °C and ambient 35°C		** Entering air @ 21 °C DB and 7°C ambient	

Air Quantity Multiplying Factors

Capacity	% Rated Air Quantity - Nominal 1390 l/s				
	80	90	100	110	120
Total Cooling	0.95	0.98	1.00	1.02	1.04
Sensible Cooling	0.89	0.95	1.00	1.05	1.09

Heating Performance Data

Outdoor Coil Entering DB temperature °C					
	0	4	8	12	18
Heating Capacity (kW)	20.4	22.0	25.2	26.5	30.0

Heating Performance Correction

% Rated Air Quantity	Multiplier	Return Air Temp °C	Multiplier	Outdoor 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

Compressor

Number Per Unit	1
Type	Scroll
RPM (Nom)	2900
Normal Max Current (Amps /Phase)	18.0
Locked Rotor Current (Amps /Phase)	96
Displacement (m ³ /h)	17.6

Electrical Controls and Safeties

High Pressure Switch (Setting kPa)	4000	Defrost	
Low Pressure Switch (Setting kPa)	300	Initiation Temperature (°C)	-2
Indoor Fan Overload	Internal	Termination Temperature (°C)	18
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	30
Compressor Delay Timer	300 sec	Max De-Ice Period (min)	10

Standard Features

Auto reset high pressure and auto reset low pressure cutouts	
Thermal overload protection on all motors	Suction line accumulator
Compressor crankcase heater	Automatic de-ice system
Limit start timer (anti short cycling)	Thermally insulated indoor unit

Evaporator Coil

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	0.61
Air Quantity (l/s)	1390

Evaporator Fan

Number of Fans	1
Type	Centrifugal
Drive	Direct
Motor Voltage /Phase /Frequency	415 /3 /50
Motor Power (kW)	1.1
Maximum Fan Speed (rpm)	1147

Electrical

Power Requirements	3 Phase /415V /50Hz
Normal Max. Current (Amps /Phase)	22.4

Condenser Coil

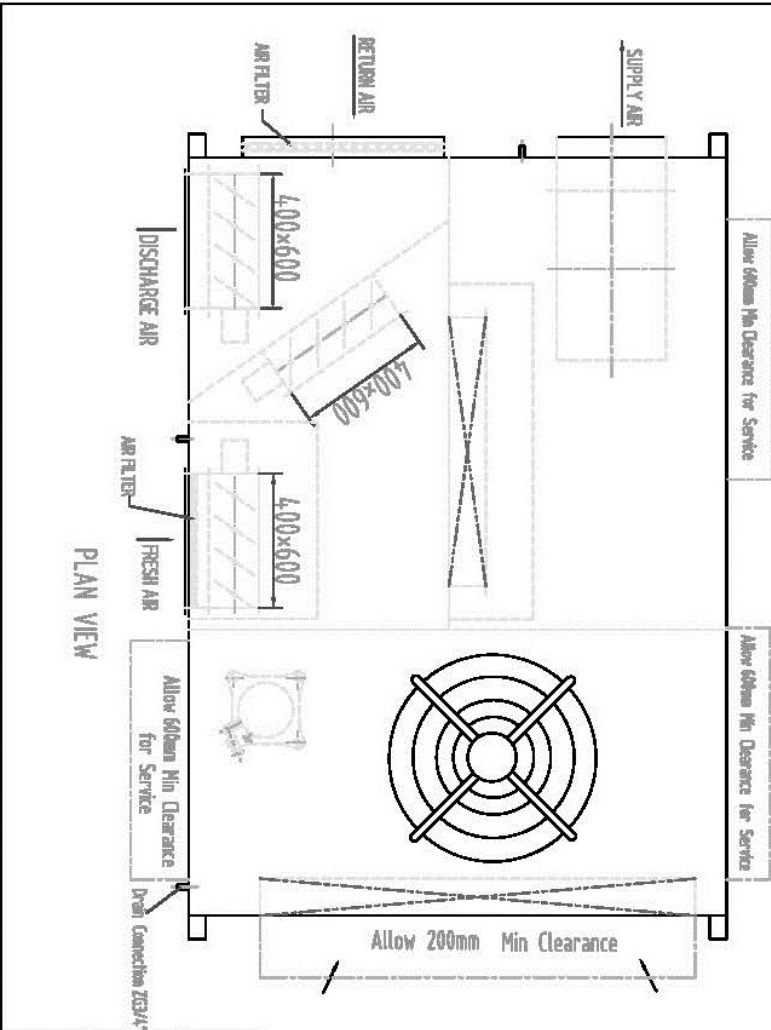
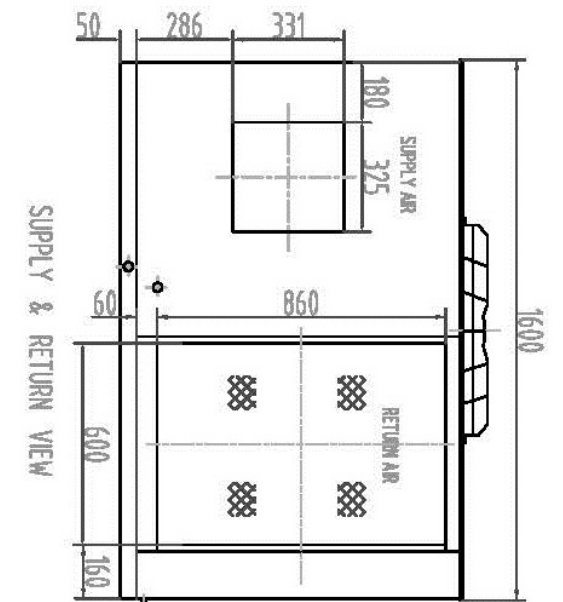
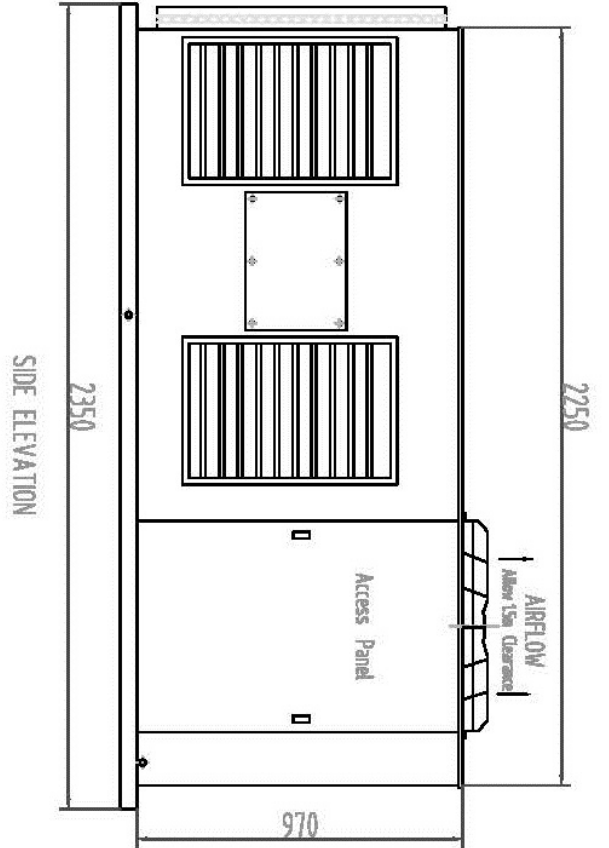
Type	Copper Tube /Aluminium Fins
Face Area(m ²)	1.0

Condenser Fan


Number of Fans	1
Type	Axial
Drive	Direct
Motor Watts /rpm	370 / 950
Motor Voltage /Phase /Frequency	415 / 3 / 50

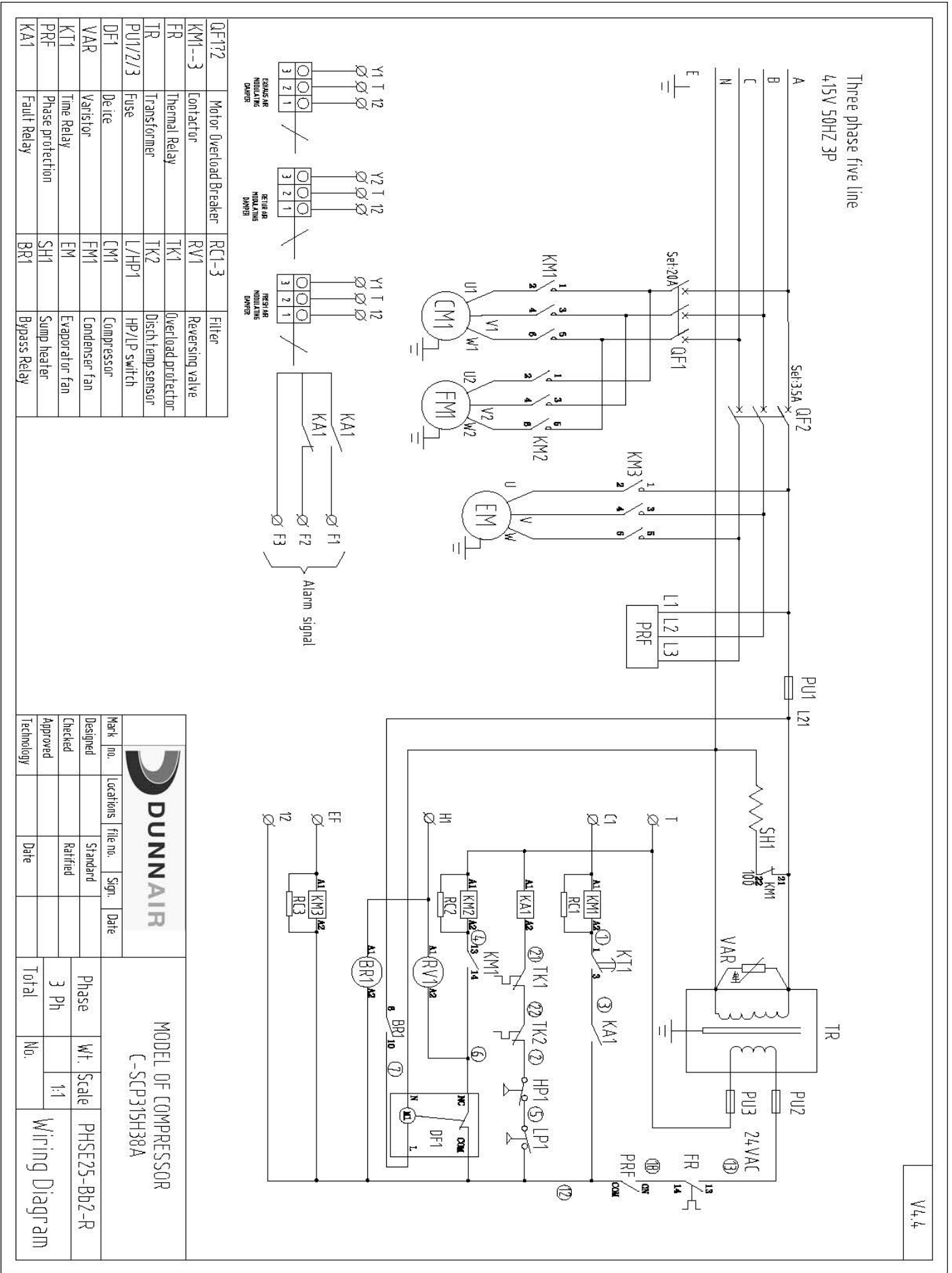
Refrigeration System

Refrigerant Type	R410A
Charge(kg)	7.2
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor unit	TX Valve



Fan : KDE3.5WS
 Motor: YDW1.1KW-6P
 INSTALLED WEIGHT 520Kg

DRAWN BY: Chen Cheng		DATE: 28th Feb.2014			
APPROVED O.A.: Zhu Junquan		APPROVED ENG.: LI Melfan			
TITLE: Package Air Cooled Heat Pump Unit With Economy Cycle					
PHSE TYPE					
MODEL: PHSE25-BB2	DRAWING NO.: 01		ISSUE: 01	SHEET SIZE: A4	

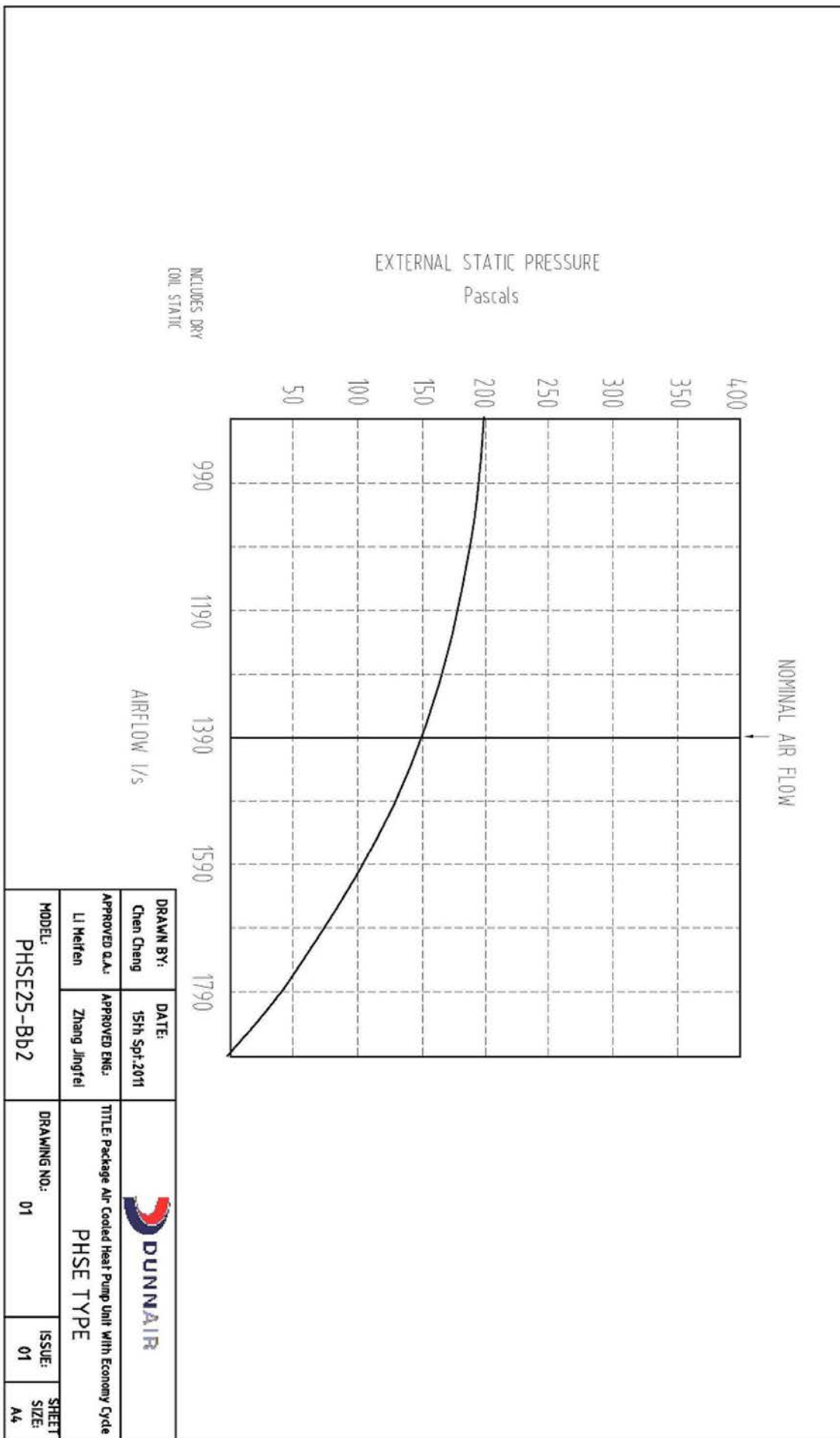


V4.4



MODEL OF COMPRESSOR
C-SCP315H38A

Mark no.	Locations	file no.	Sign.	Date	Phase	Wt. Scale	PHSE25-Bb2-R
Designed		Standard			3 Ph	1:1	Wiring Diagram
Checked		Ratified					
Approved							
Technology					Total	No.	

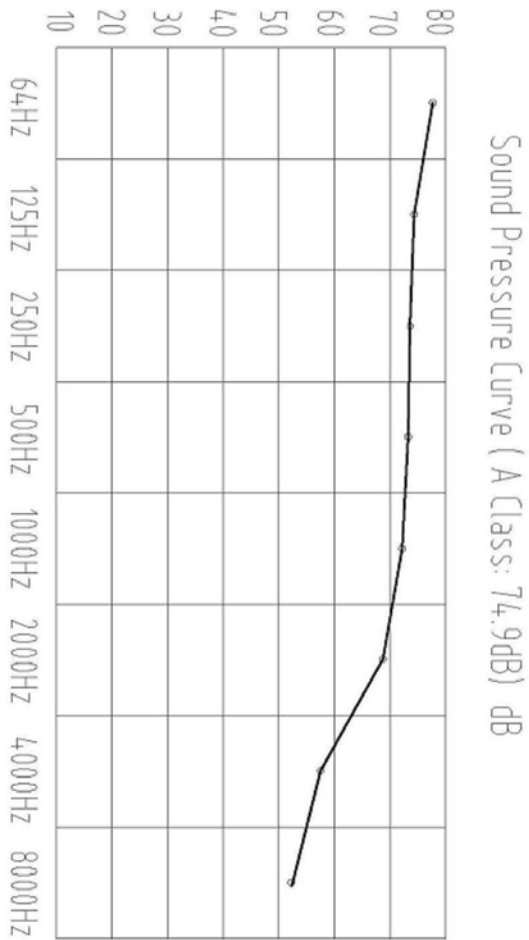



PHSE25 Sound Pressure Curve

A Class: 74.9dB

Hz	dB
64Hz	78.1
125Hz	74.0
250Hz	73.8
500Hz	73.1
1000Hz	71.5
2000Hz	69.3
4000Hz	58.7
8000Hz	51.9

Note: Occupant at least 1.0m from sound source.



DRAWN BY: Chen Cheng	DATE: 24th Dec 2011	 DUNNAIR	
APPROVED Q.A.: LI Meifen	APPROVED ENG.: Zhang Jingfei		
TITLE: Packaged Air Cooled Heat Pump Unit		PHS TYPE	
MODEL: PHSE25-Bb2	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4