



DUNNAIR
(Aust) Pty Ltd

PHS35

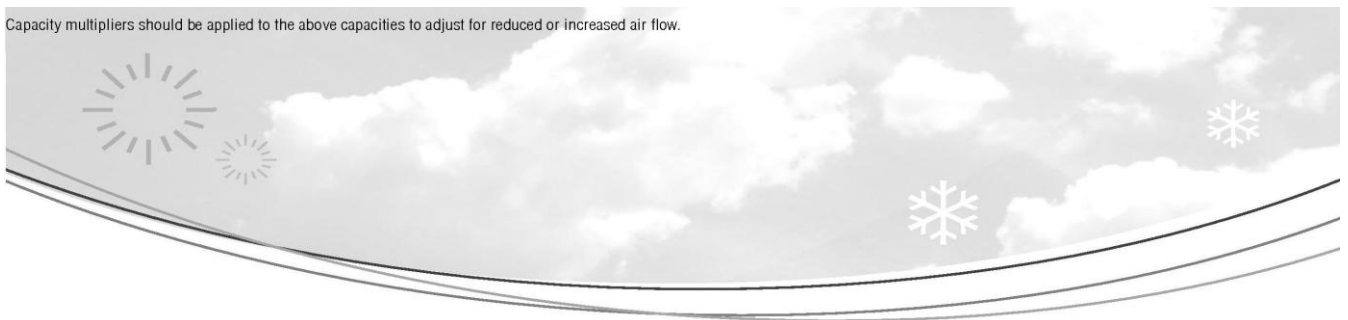
R410a Refrigerant

Rooftop Packaged

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	34.1	21.1	11.4	32.5	20.4	11.7	30.8	19.7	12.0	29.9	19.7	12.2
	18	35.3	18.9	12.0	33.7	18.2	12.8	31.9	17.5	13.1	31.1	17.1	13.2
	19	36.5	16.5	13.6	34.8	15.8	13.9	33.0	15.0	14.2	32.2	14.7	14.3
	20	37.7	14.3	14.7	36.0	13.6	15.0	34.1	12.8	15.3	33.4	12.5	15.5
23	17	34.1	25.5	11.5	32.6	24.8	11.7	30.8	24.1	12.1	30	23.7	12.2
	18	35.2	22.9	12.4	33.6	22.2	12.7	31.8	21.5	13	31	21.1	13.2
	19	36.4	20.7	13.5	34.8	20	13.8	33	19.2	14.2	32.2	18.9	14.3
	20	37.7	18.5	14.7	36	17.8	15	34.1	17	15.3	33.4	16.7	15.4
	21	38.9	16.3	15.7	37.2	15.7	16	35.3	14.9	16.3	34.6	14.7	16.4
25	17	34.3	29.7	11.4	32.7	29.0	11.7	31.0	28.3	12.0	30.2	27.9	12.1
	18	35.3	28.7	12.5	33.7	26.8	12.8	31.9	26.1	13.1	31.1	25.7	13.2
	19	36.4	27.5	13.5	34.7	24.2	13.8	32.9	23.5	14.1	32.1	23.2	14.3
	20	37.6	26.2	14.7	36.0	22.0	15.0	34.1	21.2	15.3	33.3	20.9	15.4
	21	38.9	27.9	15.7	37.2	19.8	16.0	35.2	19.1	16.3	34.6	18.8	16.4
27	17	34.9	32.4	11.2	33.4	31.6	11.5	31.7	30.7	11.7	31.0	30.2	11.9
	18	35.4	31.5	12.4	33.8	30.8	12.7	32.1	30.0	13.0	32.0	29.7	13.2
	19	36.4	29.5	13.5	34.8	28.8	13.7	33.0	28.1	14.1	33.0	27.8	14.2
	20	37.6	26.9	14.7	35.9	26.2	15.0	34.0	25.5	15.3	33.3	25.2	15.4
	21	38.9	24.7	15.7	37.2	24.0	16.0	35.2	23.3	16.3	34.5	23.0	16.4
29	17	35.8	35.0	11.1	34.4	33.9	11.4	32.8	32.8	11.7	32.1	32.1	11.8
	18	36.0	34.5	12.3	34.5	33.7	12.6	32.8	32.8	12.9	32.1	32.1	13.0
	19	36.6	33.5	13.5	34.8	32.9	13.8	33.1	32.1	14.1	32.1	32.1	14.3
	20	37.7	31.3	14.6	36.0	30.6	14.9	34.1	29.8	15.2	33.4	29.5	15.3
	21	38.8	28.9	15.7	37.1	28.3	15.9	35.1	27.5	16.3	34.5	27.2	16.4
31	17	37.0	37.0	10.9	35.6	35.6	11.2	34.1	34.1	11.6	33.5	33.5	11.7
	18	37.1	36.8	12.1	35.6	35.6	12.3	34.1	34.1	12.6	33.5	33.5	12.8
	19	37.1	36.7	13.3	35.6	35.6	13.6	34.1	34.1	13.9	33.5	33.5	14.1
	20	37.8	35.7	14.5	36.1	35.0	14.7	34.2	34.3	15.1	33.5	33.5	15.2
	21	38.9	32.9	15.7	37.2	32.2	16.0	35.3	31.4	16.4	34.6	31.1	16.5

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



Technical Specification PHS35 Rooftop Packaged Model

Total Cooling Capacity (kW)*	34.8	Number of Compressors	1
Sensible Cooling Capacity (kW)*	28.3	Power Requirements (Volt /Phase)	415 / 3
Heating Capacity (kW)**	34.2	Normal Max. Current (Amps /Phase)	28.7
Nominal Evaporator Air Flow (L/S)	2000	Power Input (kW)	13.0

*Entering air @ 27/19 °C and ambient 35°C

** Entering air @ 21 °C DB and 7°C ambient

Cooling Performance Correction

Capacity	% Rated Air Quantity - Nominal 2000 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

Evaporator Coil

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	0.87
Air Quantity (l/s)	2000

Heating Performance Data

	Outdoor Coil Entering DB temperature °C				
	0	4	8	12	18
Heating Capacity (kW)	26.1	29.1	33.3	36.9	43.7

Evaporator Fan

Number of Fans	1
Type	Centrifugal
Drive	Direct
Motor Voltage /Phase /Frequency	415 /3 /50
Motor Power (kW)	1.5
Maximum Fan Speed (rpm)	1014

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

Electrical

Power Requirements	3 Phase /415V /50Hz
Normal Max. Current (Amps /Phase)	28.7

Compressor

Number Per Unit	1
Type	Scroll
RPM (Nom)	2900
Normal Max Current (Amps /Phase)	22.1
Locked Rotor Current (Amps /Phase)	102
Displacement (m ³ /h)	26.4

Condenser Coil

Type	Copper Tube /Aluminium Fins
Face Area(m ²)	2 x 0.57

Condenser Fan

Number of Fans	2
Type	Axial
Drive	Direct
Motor Watts /rpm	2 x 370 / 950
Motor Voltage /Phase /Frequency	415 / 3 / 50

Electrical Controls and Safeties

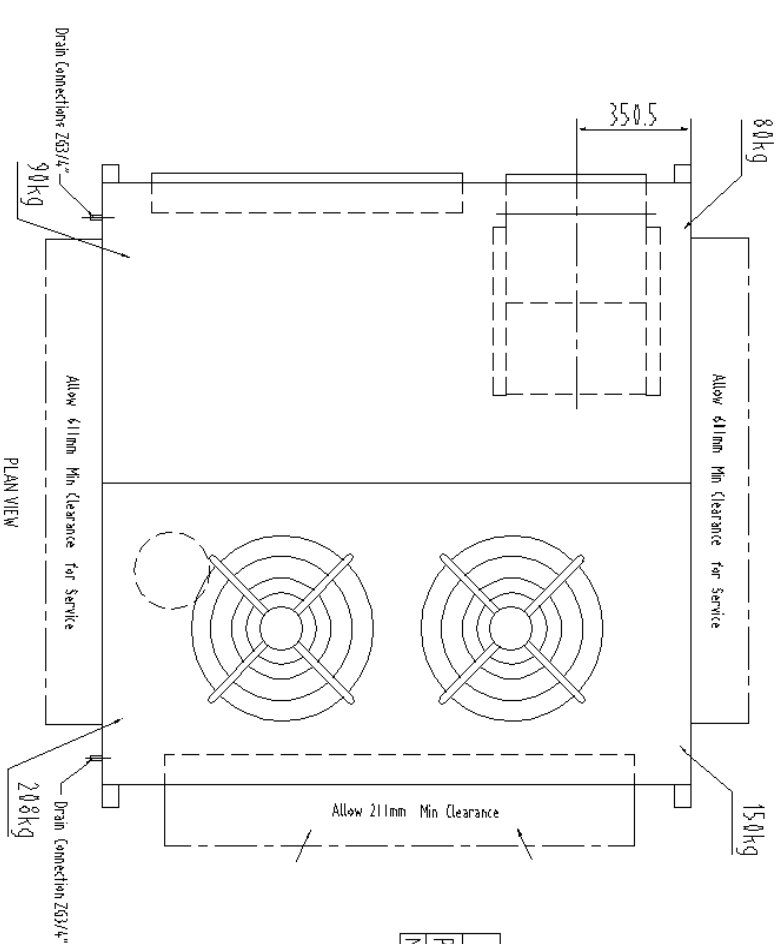
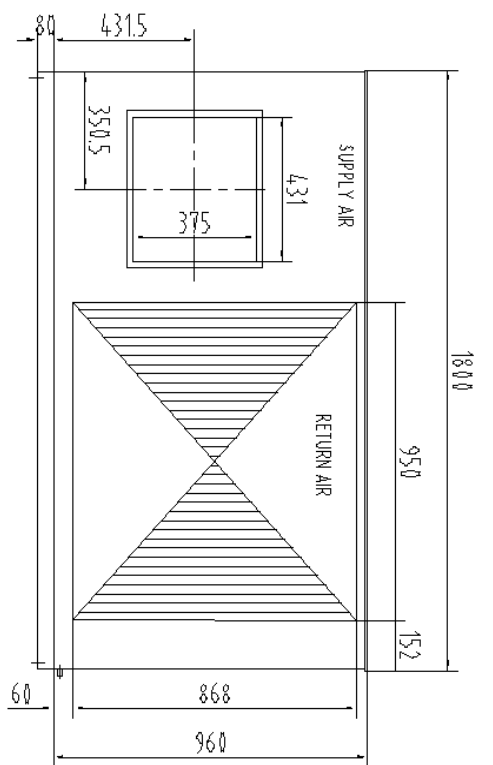
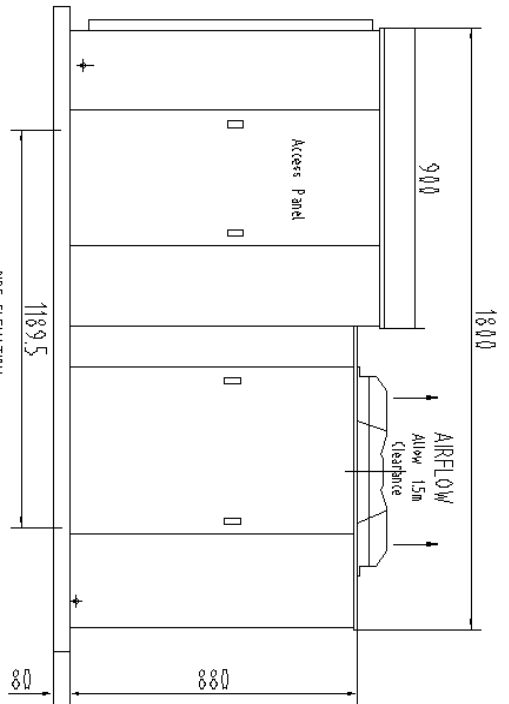
High Pressure Switch (Setting kPa)	4000	Defrost	
Low Pressure Switch (Setting kPa)	300	Initiation Temperature (°C)	-2
Indoor Fan Overload	Internal	Termination Temperature (°C)	18
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	30
Compressor Delay Timer	300 sec	Max De-Ice Period (min)	10

Refrigeration System

Refrigerant Type	R410A
Charge(kg)	7.6
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor unit	TX Valve

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




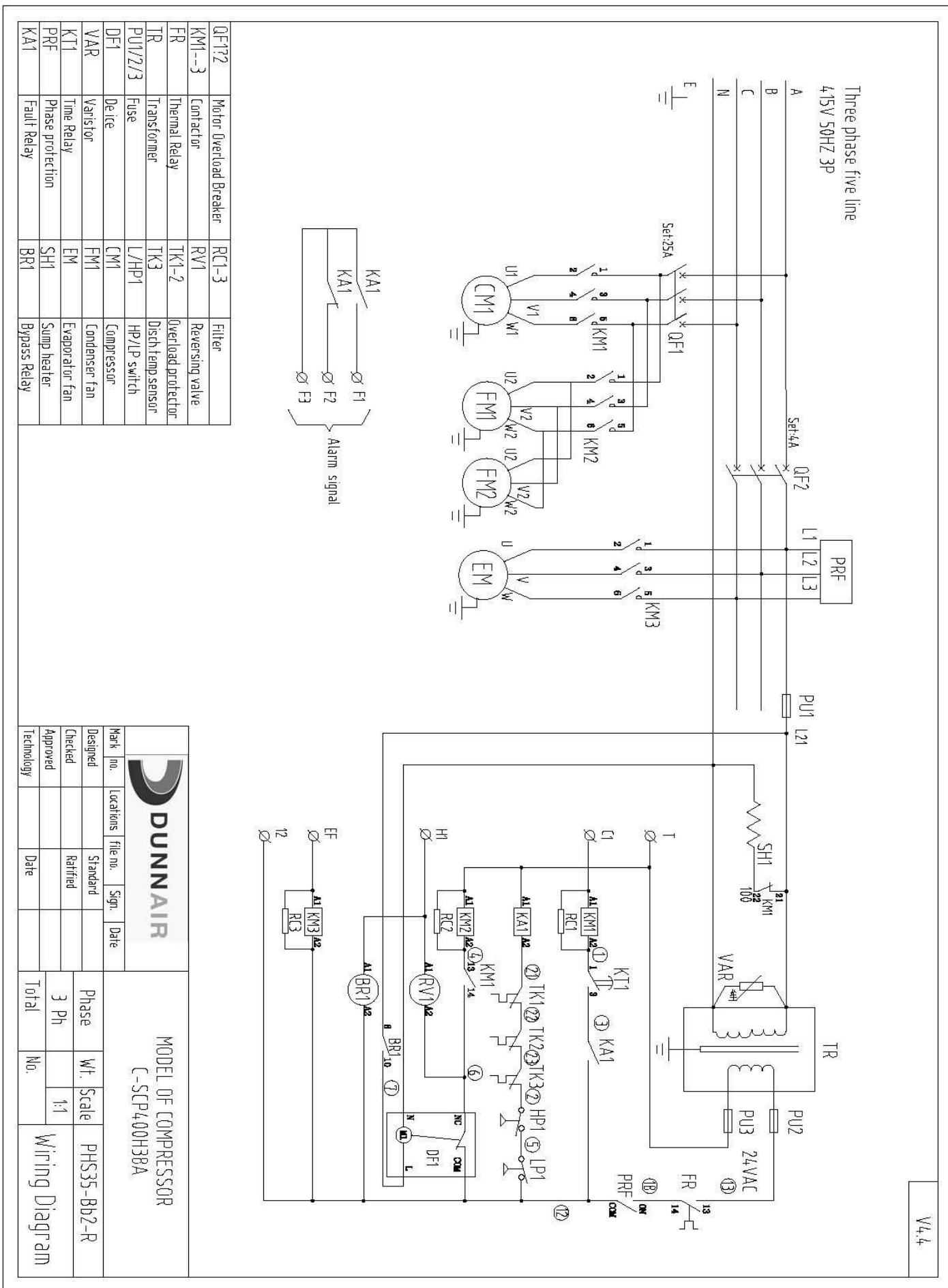
Fan : SYB355 II (1800W-6P)
 INSTALLED WEIGHT 528Kg

Model	Total Cooling (kw)	Sensible Cooling (kw)	Heater Cap.	Rated Airflow	Enthalpic Pressure	Input Power	Max Current	Power
PHS35Bb2-R	34.8kW	28.8kW	32.4kW	2100 l/s	210Pa	74.1kW	315A	4.15V/3Ph/50Hz

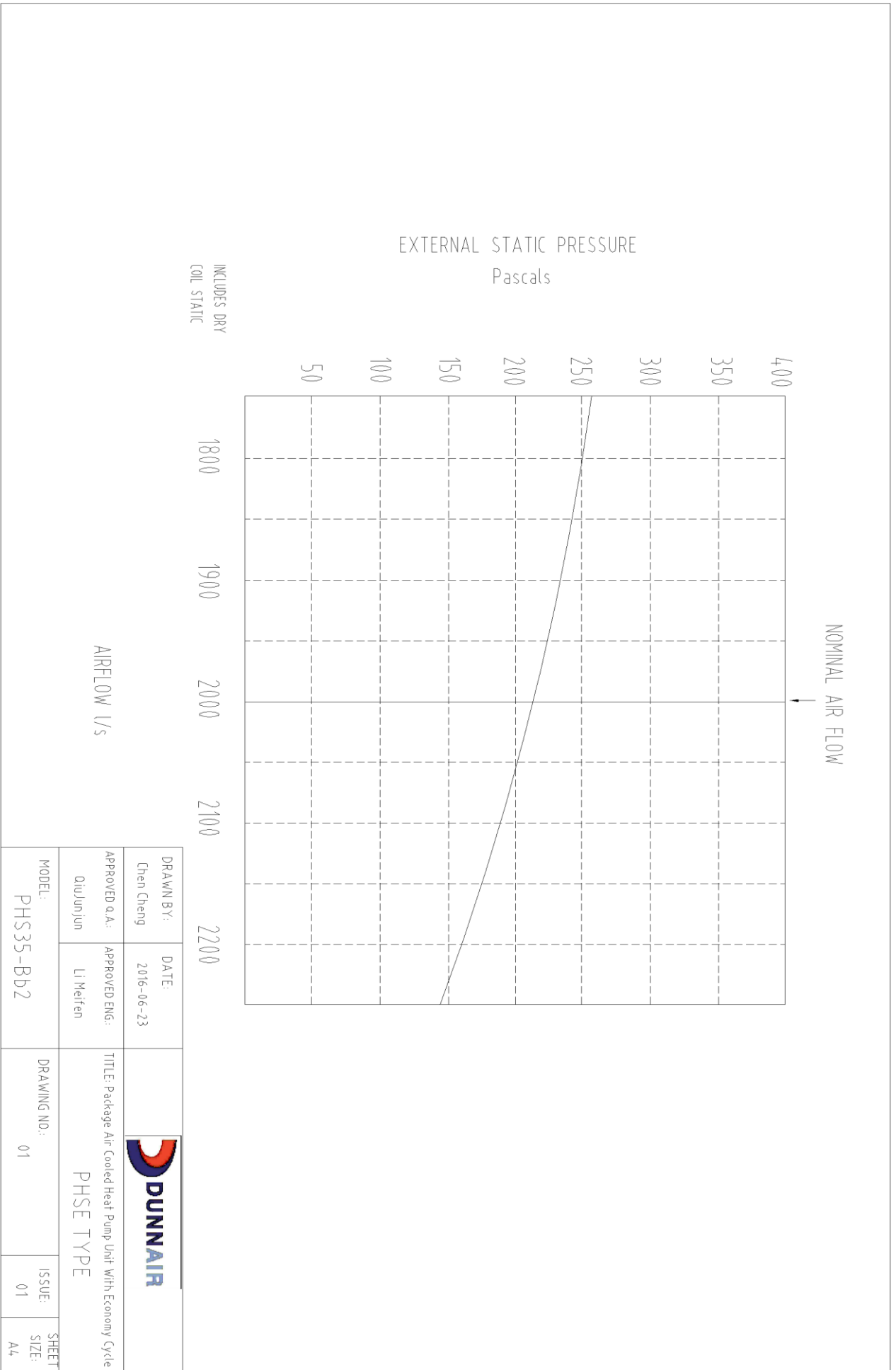
Note: Cooling cap.: enter air temperature 27°C(DB)/19°C(WB), 35°C ambient.


Note: If the sizes in the brackets have any changes, pls take the production drawing as standard, without prior notice.

DRAWN BY: Chen Cheng	DATE: 2016-13-22		
APPROVED a.A.: Qiu Junjun	APPROVED ENG.: Li Meiren		TITLE: Package Air-Cooled Heat Pump Unit PHS TYPE
MODEL: PHS35Bb2-R	DRAWING NO.:	ISSUE:	SHEET SIZE: A4
SCALE:			



V4.4



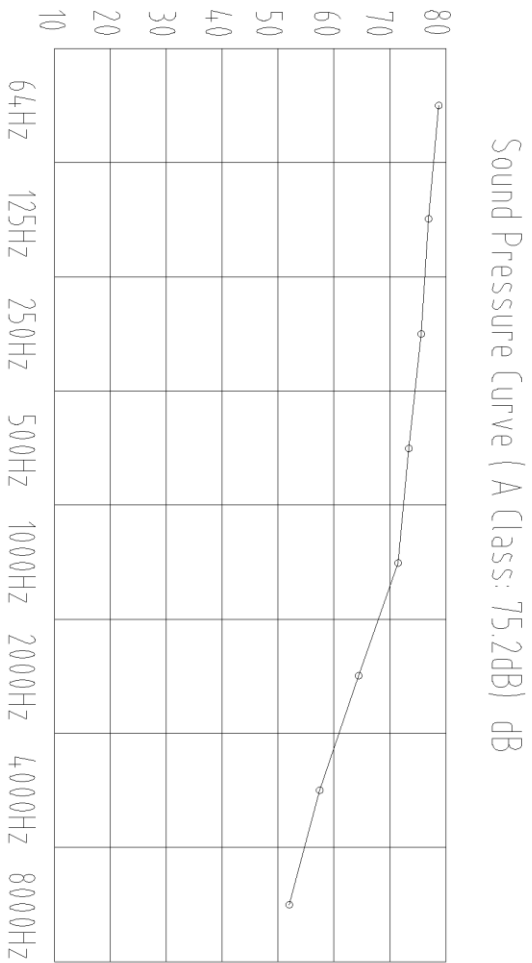
DRAWN BY: Chen Cheng	DATE: 2016-06-23	 DUNNAIR	TITLE: Package Air Cooled Heat Pump Unit With Economy Cycle
APPROVED Q.A.: QiuJunjun	APPROVED ENG.: Li Meifen		PHSE TYPE
MODEL: PHS35-BD2	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4


PHS35 Sound Pressure Curve

A Class: 75.2dB

Hz	dB
64Hz	79.5
125Hz	77.2
250Hz	76.1
500Hz	72.6
1000Hz	70.8
2000Hz	64.8
4000Hz	58.3
8000Hz	52.9

Note: Occupant at least 1.0m from sound source.



DRAWN BY: Chen Cheng		DATE: 2016-06-25			
APPROVED Q.A.: QiuJunjun		APPROVED ENG.: LiMeifen			
MODEL: PHS35		DRAWING NO.: 01		ISSUE: 01	
		TITLE: Packaged Air-Cooled Heat Pump Unit		SHEET SIZE: A4	
		PHS TYPE			