



**DUNNAIR**  
(Aust) Pty Ltd

**PHSE30**

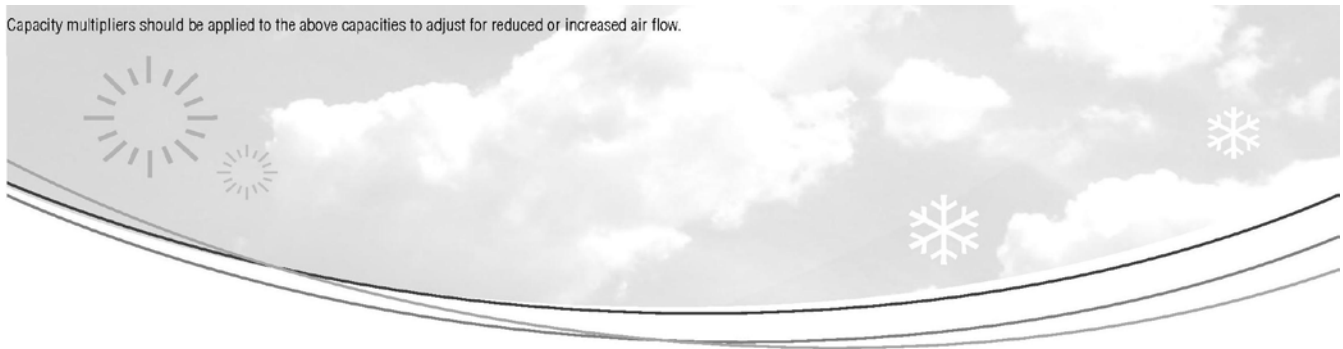
*Economy Cycle Rooftop Packaged*

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	30.1	18.8	11.5	28.6	18.2	11.8	27.1	17.5	12.1	26.0	17.5	12.3
	18	31.2	16.6	12.1	29.7	15.9	12.8	28.2	15.3	13.2	27.1	14.8	13.4
	19	32.3	14.6	13.6	30.8	13.9	13.9	29.1	13.3	14.3	28.1	12.8	14.5
	20	33.4	12.6	14.8	31.8	11.9	15.2	30.2	11.2	15.5	29.1	10.8	15.7
23	17	30.1	22.5	11.5	28.6	21.9	11.8	27.1	21.2	12.1	26.0	20.7	12.3
	18	31.1	20.5	12.6	29.6	19.9	12.9	28.0	19.2	13.2	26.9	18.7	13.4
	19	32.3	18.4	13.6	30.7	17.7	13.9	29.1	17.1	14.2	28.1	16.6	14.4
	20	33.4	16.4	14.8	31.8	15.7	15.1	30.1	15.0	15.5	29.1	14.6	15.7
	21	34.5	14.5	15.8	32.9	13.8	16.1	31.2	13.2	16.4	30.2	12.8	16.6
25	17	30.2	26.4	11.4	28.8	25.8	11.7	27.3	25.1	12.0	26.2	24.6	12.2
	18	31.1	25.3	12.5	29.7	23.7	12.8	28.1	23.1	13.1	27.0	22.6	13.4
	19	32.1	24.2	13.7	30.6	21.6	14.0	29.0	21.0	14.4	27.9	20.5	14.6
	20	33.4	22.8	14.8	31.8	19.5	15.1	30.1	18.8	15.4	29.1	18.4	15.6
	21	34.5	21.4	15.8	32.9	17.6	16.1	31.2	17.0	16.4	30.2	16.6	16.6
27	17	30.8	29.1	11.3	29.4	28.0	11.6	27.9	26.3	12.0	27.0	27.0	12.2
	18	31.3	28.2	12.6	29.8	27.0	12.9	28.3	25.7	13.2	27.2	24.5	13.5
	19	32.1	26.1	13.7	30.6	24.9	14.0	29.0	24.8	14.3	27.9	24.3	14.6
	20	33.2	24.1	14.7	31.7	23.0	15.0	30.0	22.7	15.4	29.0	22.3	15.6
	21	34.5	22.0	15.8	32.9	21.0	16.1	31.2	20.7	16.4	30.2	20.4	16.6
29	17	31.7	31.2	11.2	30.4	29.9	11.5	28.7	28.7	11.8	27.9	27.3	12.0
	18	31.8	30.8	12.4	30.4	30.3	12.7	28.7	28.7	13.1	27.8	26.9	13.3
	19	32.3	30.1	13.6	30.8	29.5	13.9	29.2	28.7	14.2	28.2	26.6	14.4
	20	33.2	27.9	14.7	31.6	27.2	15.0	30.0	26.5	15.3	28.4	26.1	15.4
	21	34.4	25.9	15.7	32.8	25.3	16.0	31.0	24.6	16.3	30.0	24.2	16.4
31	17	32.8	32.7	11.0	31.3	31.2	11.3	30.0	30.0	11.6	29.0	28.9	11.8
	18	32.8	32.1	12.1	31.4	30.7	12.4	30.0	29.5	12.7	29.0	28.6	12.9
	19	32.8	31.4	13.5	31.3	30.2	13.8	30.0	29.3	14.1	29.0	28.4	14.4
	20	33.4	29.9	14.7	31.8	28.6	15.0	30.2	29.0	15.3	29.1	26.0	15.5
	21	34.4	29.6	15.7	32.8	28.0	16.0	31.1	28.3	16.4	30.0	27.9	16.6

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



## Technical Specification PHSE30 Economy Cycle Rooftop Packaged Model

Total Cooling Capacity (kW)*	30.6	Number of Compressors	1
Sensible Cooling Capacity (kW)*	24.9	Power Requirements (Volt /Phase)	415 / 3
Heating Capacity (kW)**	30.6	Normal Max. Current (Amps /Phase)	27.0
Nominal Evaporator Air Flow (L/S)	1800	Power Input (kW)	12.1
*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 1800 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)	26.3	28.4	31.3	33.7	38.4

### 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)	20.4
Locked Rotor Current (Amps /Phase)	96
Displacement (m <sup>3</sup> /h)	20.3

### 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 <sup>2</sup> )	0.82
Air Quantity (l/s)	1800

### 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)	990

### Electrical

Power Requirements	3 Phase /415V /50Hz
Normal Max. Current (Amps /Phase)	27.0

### Condenser Coil

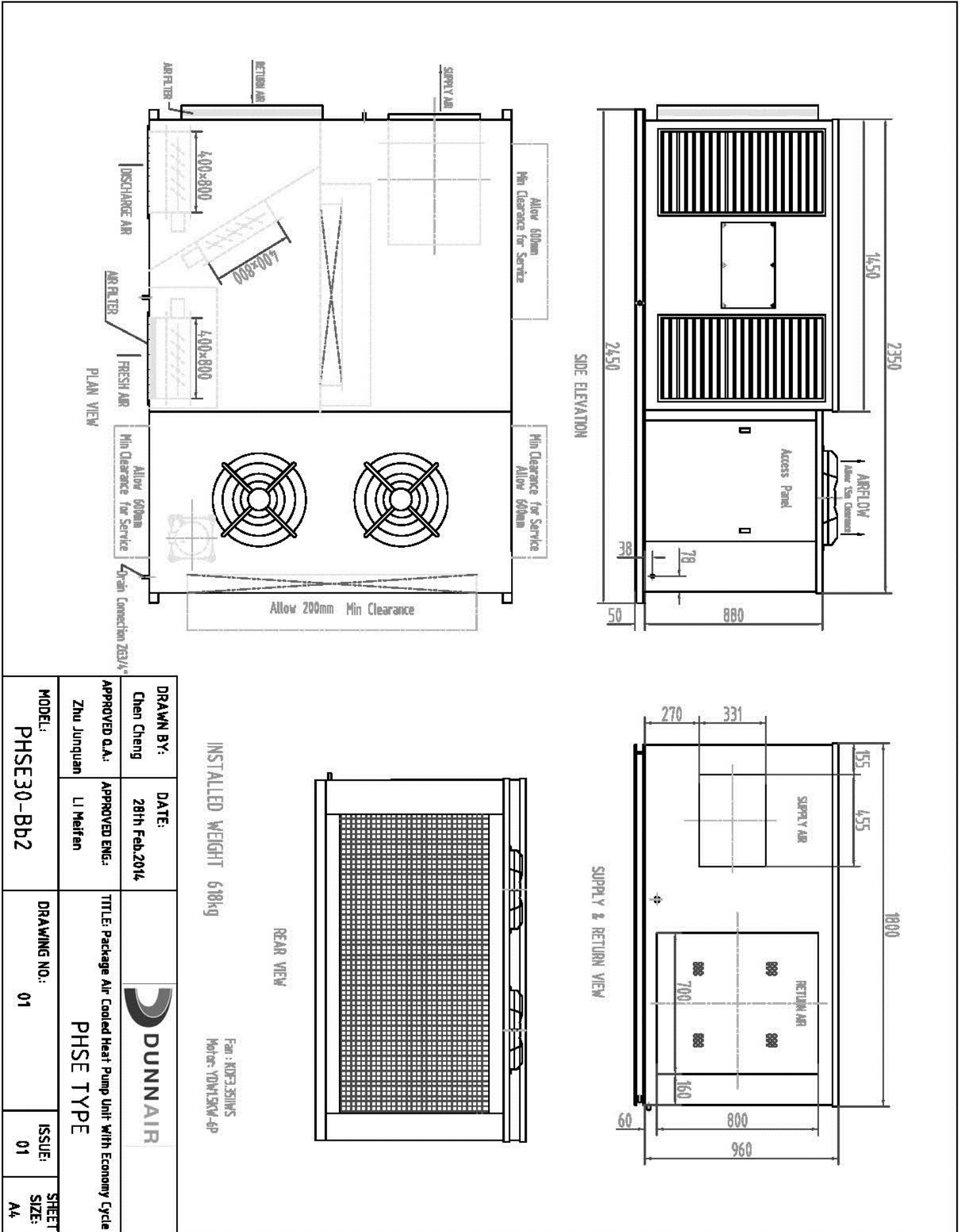
Type	Copper Tube /Aluminium Fins
Face Area(m <sup>2</sup> )	2 x 0.57

### Condenser Fan

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


### Refrigeration System

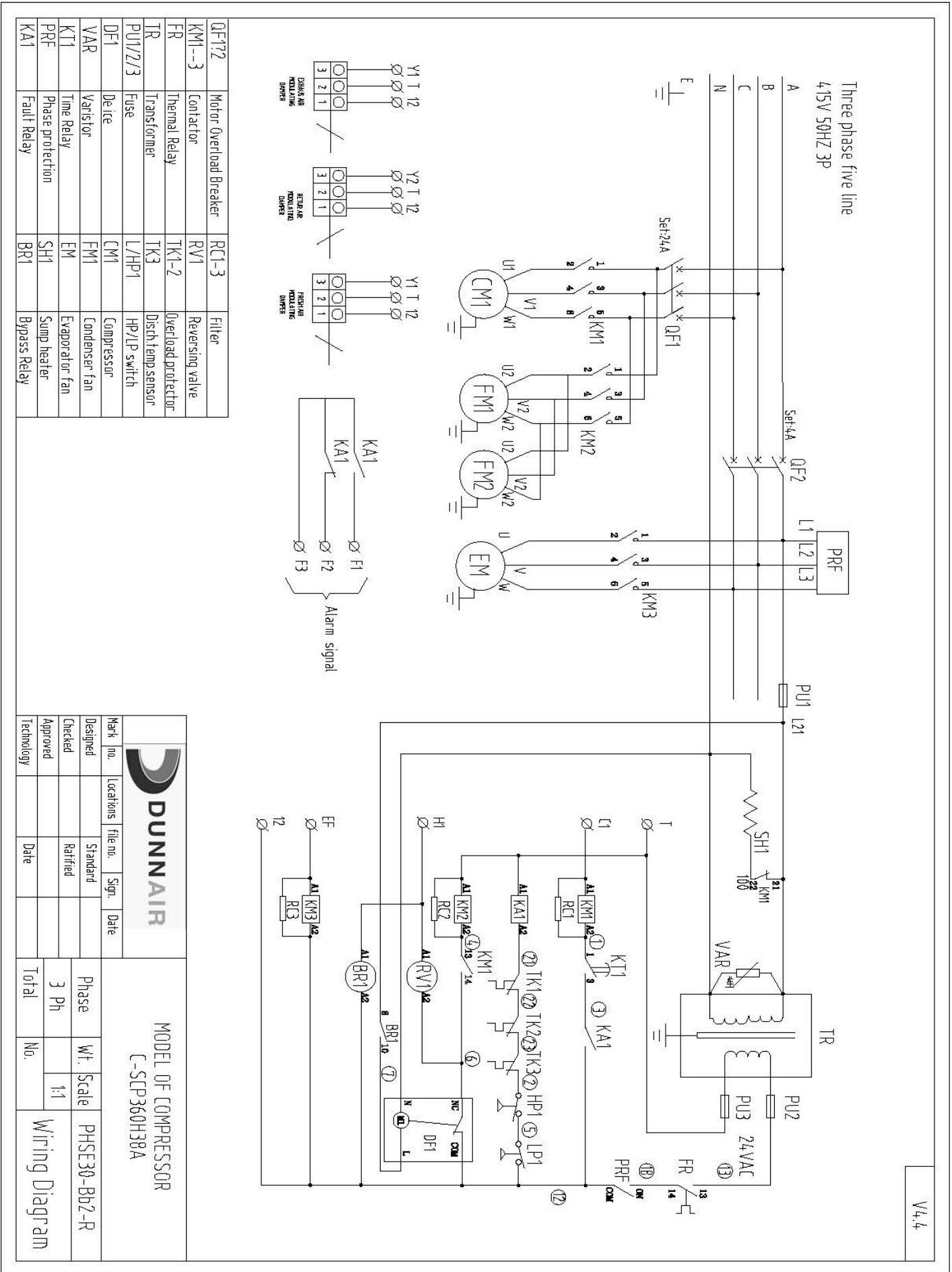
Refrigerant Type	R410A
Charge(kg)	7.4
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor unit	TX Valve



INSTALLED WEIGHT 618kg

Fan: KOREA SHINUS  
Motor: YONMISRW-4P

DRAWN BY: Chen Cheng		DATE: 28th Feb. 2014			
APPROVED D.A.: Zhu Junquan		APPROVED ENG.: LI Meifen			
MODEL: PHSE30-BB2		DRAWING NO.: 01		ISSUE: 01	
				SHEET SIZE: A4	
TITLE: Package Air Cooled Heat Pump Unit with Economy Cycle PHSE TYPE					



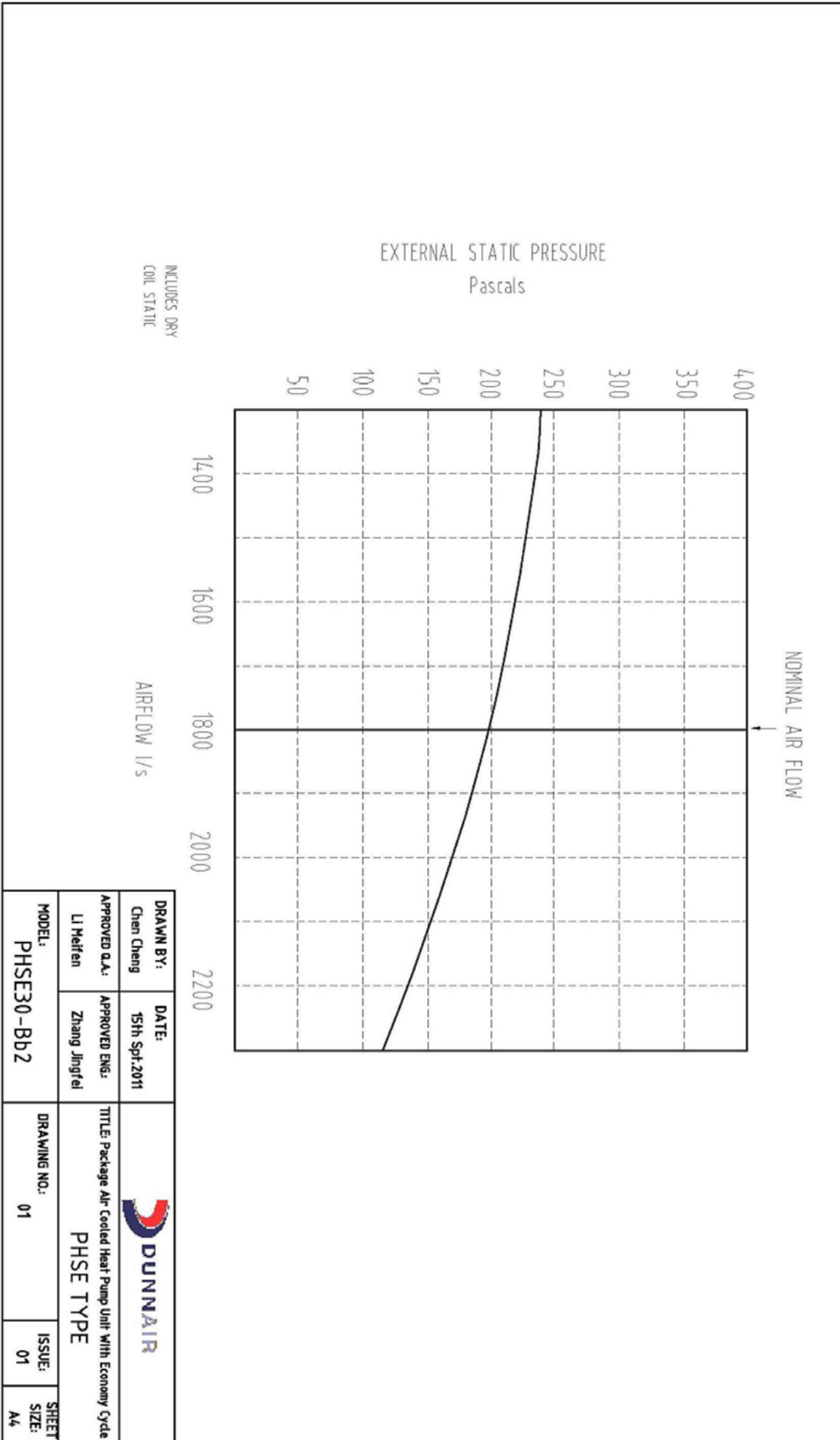
V4.4



MODEL OF COMPRESSOR  
C-SCP360H3BA

Mark	Ino.	Locations	file no.	Sign.	Date
Designed			Standard		
Checked			Ratified		
Approved					
Technology					

Phase	Wt. Scale	PHSE30-BD2-R
3 Ph	1:1	
Total	No.	Wiring Diagram

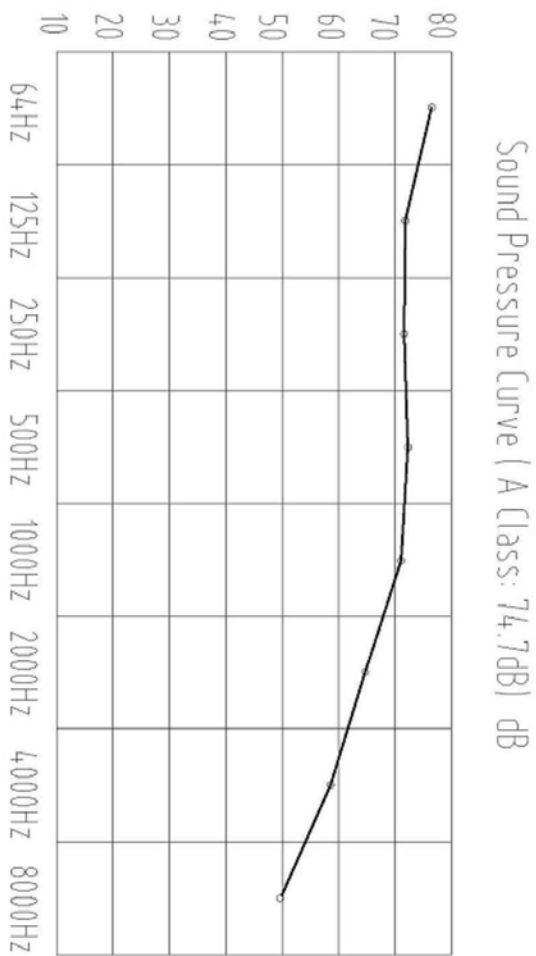



PHSE30 Sound Pressure Curve

A Class: 74.7dB

Hz	dB
64Hz	77.2
125Hz	71.8
250Hz	71.5
500Hz	72.4
1000Hz	71.0
2000Hz	65.6
4000Hz	59.7
8000Hz	49.8

Note: Occupant at least 1.0m from sound source.



<b>DRAWN BY:</b> Chen Cheng	<b>DATE:</b> 24th,Dec,2011	 <b>DUNNAIR</b>
<b>APPROVED Q.A.:</b> Li Meifen	<b>APPROVED ENG.:</b> Zhang Jingfei	
<b>TITLE:</b> Packaged Air-Cooled Heat Pump Unit <b>PHS TYPE</b>		
<b>MODEL:</b> PHSE30-BB2	<b>DRAWING NO.:</b> 01	<b>ISSUE:</b> 01
		<b>SHEET SIZE:</b> A4