



**DUNNAIR**  
(Aust) Pty Ltd

**PHS30**

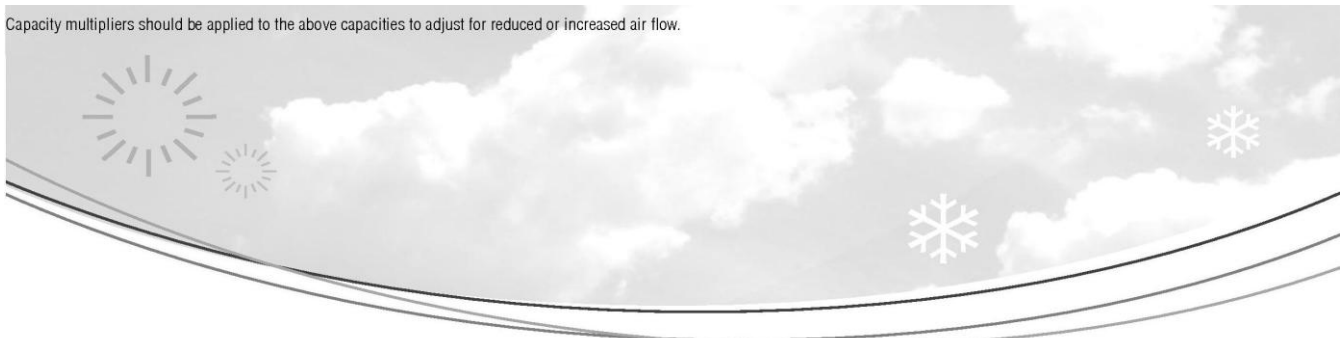
R410a Refrigerant

*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	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 PHS30 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	

### Cooling Performance Correction

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 (m³/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 (m²)	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

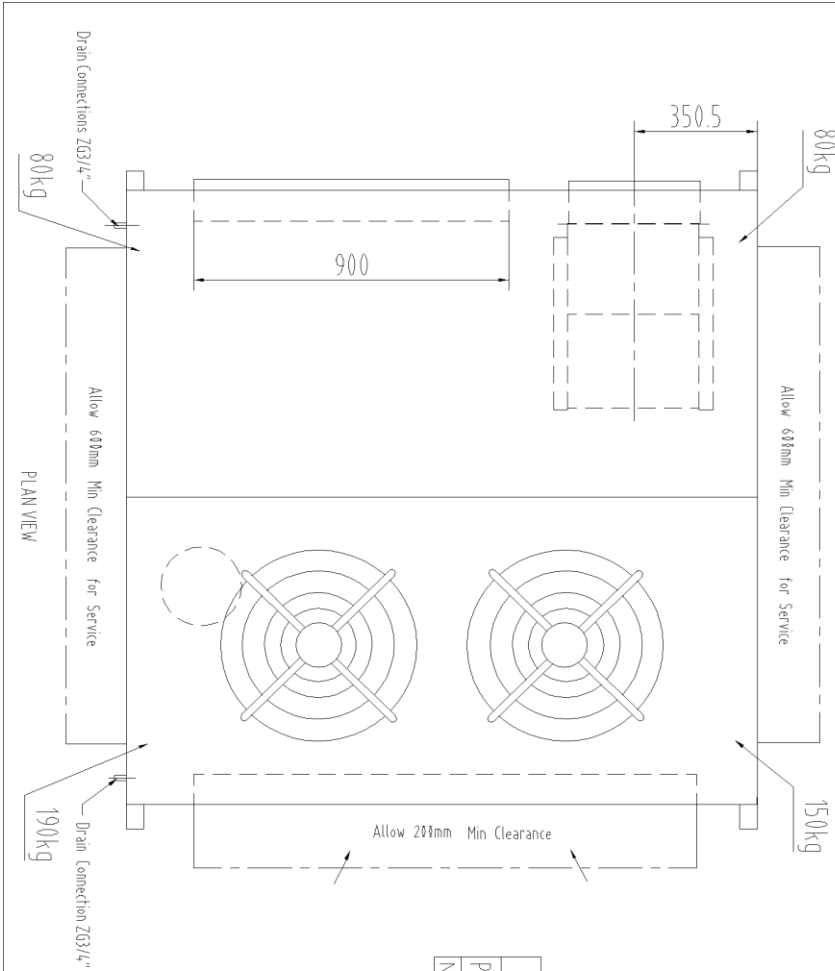
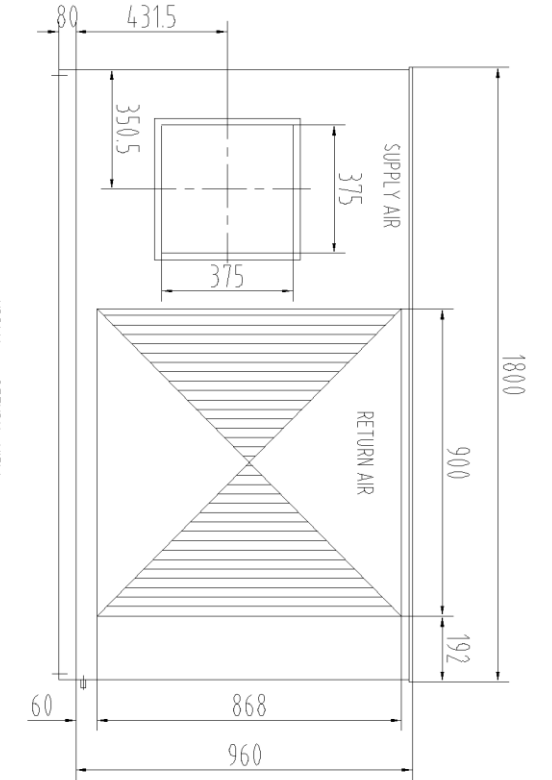
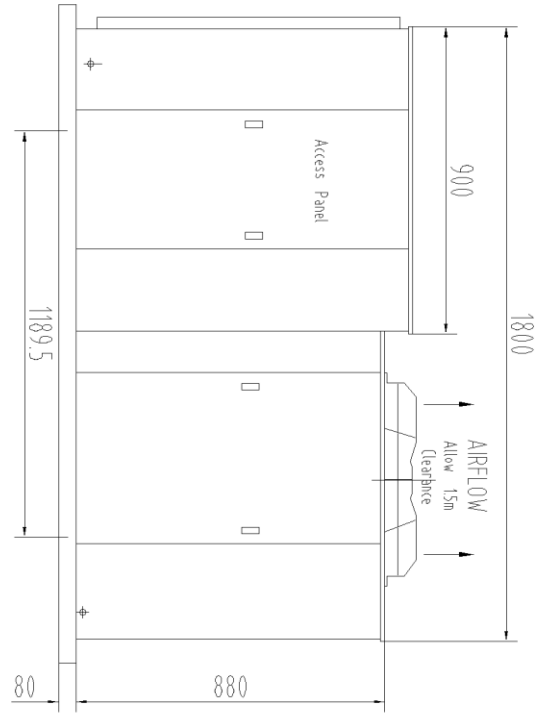
Type	Copper Tube /Aluminium Fins
Face Area(m²)	2 x 0.57

### Condenser Fan Motor

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




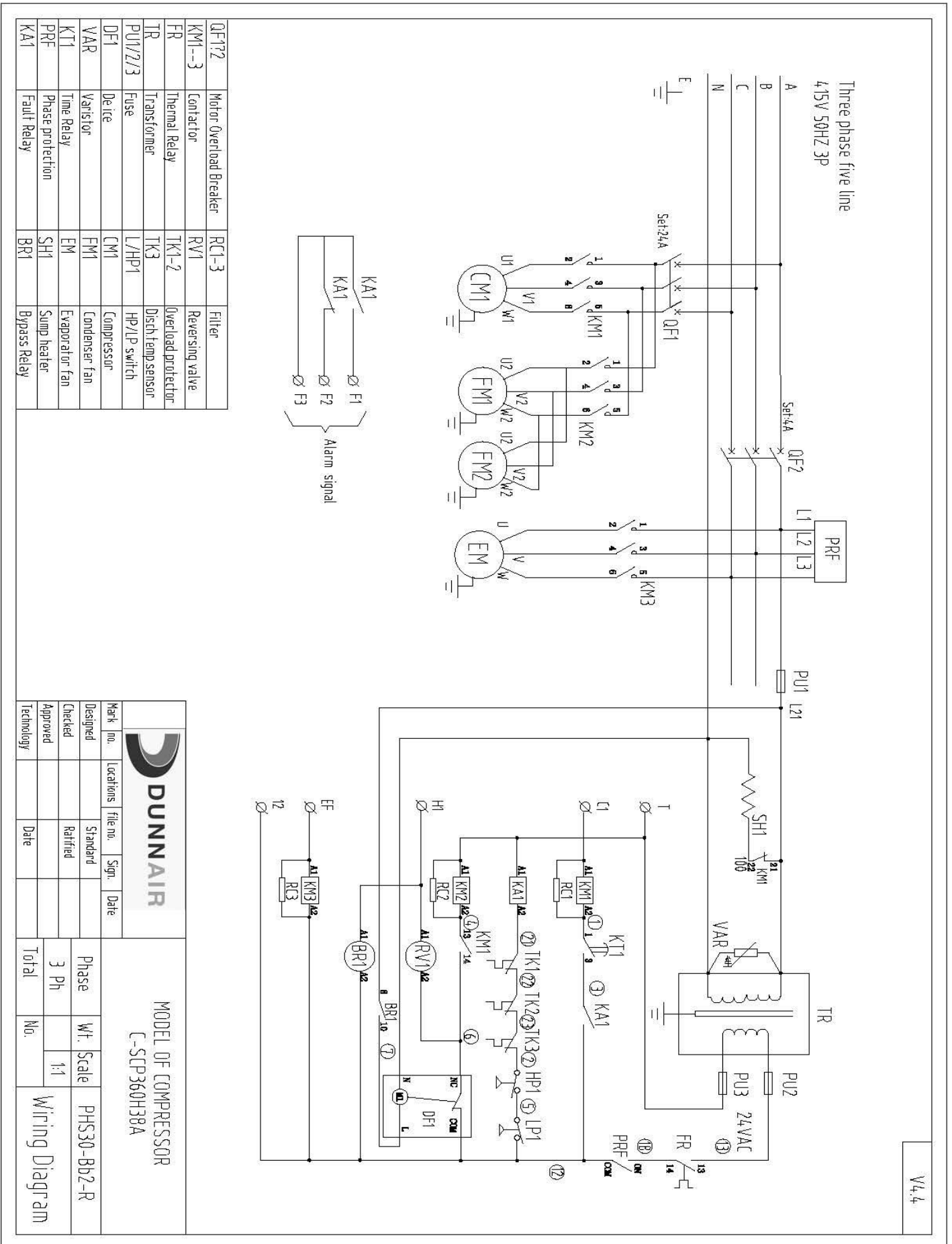
Model	Total cooling cap	Sensible cooling cap	Heater Cap	Rated Airflow	Ext. Static Pressure	Input Power	Max current	Power
PHS30BB2-R	30.6kW	25.4kW	30.6kW	1800l/s	200Pa	12.1kW	27A	4/15V/3Ph/50HZ

Note: Cooling cap: enter air Temperature 27.1(DBI)/19.1(WB)735L ambient.

Fan : SYB355 i (1500w-6P)  
 INSTALLED WEIGHT 500Kg

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: 2016-03-22		TITLE: Package Air Cooled Heat Pump Unit PHS TYPE
APPROVED Q.A.: Qiu Jun Jun	APPROVED ENG.: Li Meifen		
MODEL: PHS30BB2-R	DRAWING NO.:	ISSUE:	SHEET SIZE: A4
SCALE:			

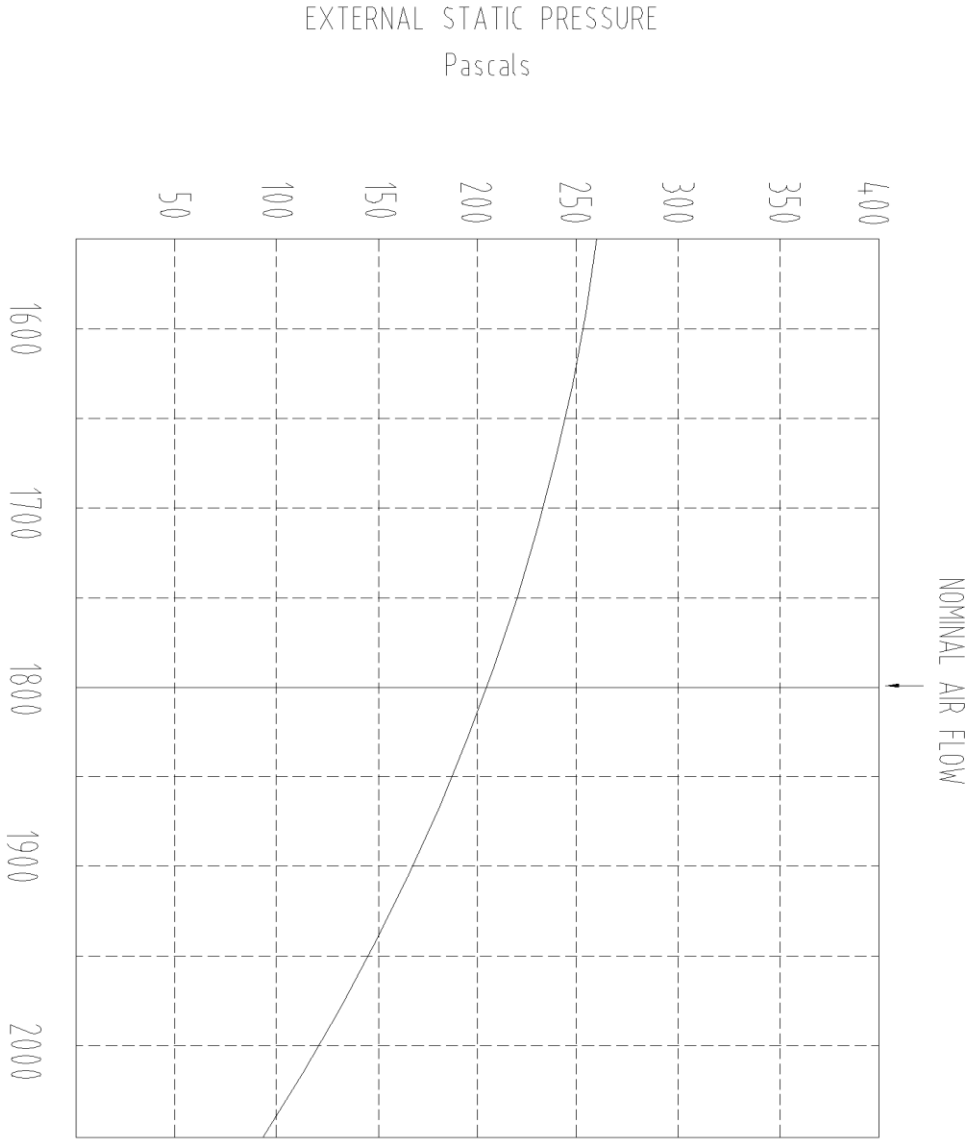



QF1-12	Motor Overload Breaker	RC1-3	Filter
KM1--3	Contact	RV1	Reversing valve
FR	Thermal Relay	TK1-2	Overload protector
TR	Transformer	TK3	Disch Temp sensor
PU1/2/3	Fuse	L/HP1	HP/LP switch
DF1	Deice	CM1	Compressor
VAR	Varistor	FM1	Condenser fan
KT1	Time Relay	EM	Evaporator fan
PRF	Phase protection	SH1	Sump heater
KA1	Fault Relay	BR1	Bypass Relay

Mark no.	Locations	file no.	Sign.	Date
Designed		Standard		
Checked		Ratified		
Approved				
Technology				
MODEL OF COMPRESSOR C-SCP360H38A			Phase	Wt. Scale
			3 Ph	1:1
			Total	No.
Wiring Diagram				

INCLUDES DRY  
COIL STATIC

AIRFLOW l/s



DRAWN BY: Chen Cheng		DATE: 2016-06-23			
APPROVED Q.A.: QiuJunJun		APPROVED ENG.: Li Meifen			
MODEL: PHS30-BD2		DRAWING NO.: 01		ISSUE: 01	
				SHEET SIZE: A4	
TITLE: Package Air-Cooled Heat Pump Unit with Economy Cycle PHSE TYPE					

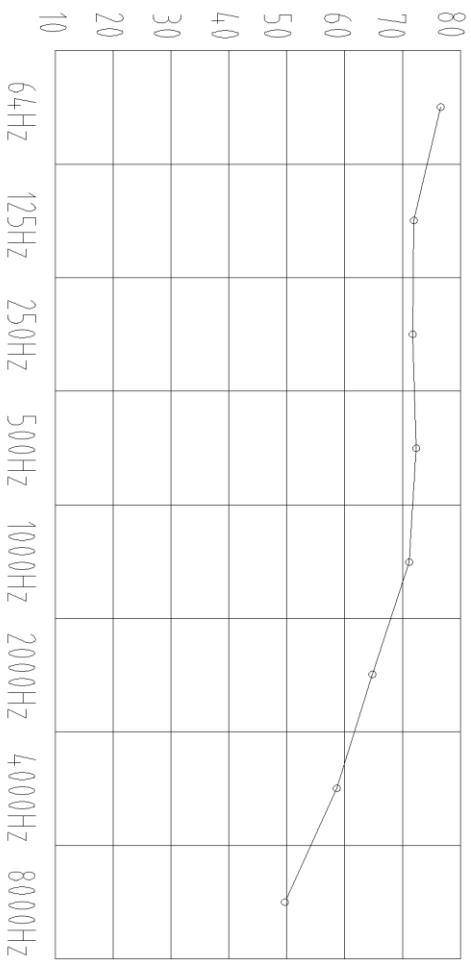
PHS30 Sound Pressure Curve


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.

Sound Pressure Curve (A Class: 74.7dB) dB



DRAWN BY: Chen Cheng		DATE: 2016-06-25			
APPROVED Q.A.:		APPROVED ENG.:			
QiuJunjun		Li Meifan		TITLE: Packaged Air-Cooled Heat Pump Unit	
MODEL: PHS30		DRAWING NO.:		PHS TYPE	
		01		ISSUE:	
				01	
				SHEET	
				SIZE:	
				A4	