



DUNNAIR
(Aust) Pty Ltd

SHS15

Split Ducted Model

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	14.0	9.1	9.8	13.1	8.8	9.0	12.6	8.5	12.9	11.5	8.5	13.3
	18	14.5	8.1	9.0	13.5	7.8	13.6	13.0	7.5	14.0	11.9	7.0	14.3
	19	14.7	7.1	7.8	13.7	6.8	14.8	13.1	6.5	15.0	12.4	6.0	15.3
	20	15.0	6.0	6.7	14.2	5.7	15.8	13.6	5.5	16.0	12.8	5.0	16.3
23	17	14.0	11.1	12.3	13.3	11.0	12.6	13.0	10.6	13.0	11.7	10.2	13.1
	18	14.4	9.1	13.4	13.7	10.8	13.7	13.2	9.5	14.0	12.0	9.0	14.1
	19	14.8	9.1	15.4	13.9	9.8	14.7	13.3	8.5	15.0	12.6	8.1	15.2
	20	15.2	8.0	15.4	14.4	8.8	15.8	13.8	7.5	16.0	13.0	7.3	16.2
	21	15.3	7.0	16.4	14.8	7.7	16.8	14.3	6.4	17.0	13.6	6.0	17.1
25	17	14.2	12.8	12.4	13.5	12.7	12.4	13.0	12.2	12.8	12.0	11.7	13.0
	18	14.5	12.5	13.4	13.9	12.5	13.7	13.3	11.7	13.9	12.2	11.0	14.1
	19	15.0	12.0	14.4	14.1	11.9	14.7	13.5	10.5	15.0	13.0	10.1	15.2
	20	15.6	11.3	15.4	14.6	10.8	15.7	13.9	9.5	16.0	13.2	8.8	16.1
	21	16.1	10.7	16.6	15.0	10.0	17.3	14.5	8.2	17.0	13.8	7.3	17.1
27	17	14.4	14.1	12.0	13.8	13.8	12.4	13.3	12.8	12.5	12.7	12.6	12.8
	18	14.7	13.8	13.2	14.1	13.5	13.5	13.4	11.7	13.9	12.8	12.6	13.9
	19	15.1	13.6	14.3	14.3	13.0	14.8	13.7	10.9	15.0	13.2	12.1	15.2
	20	15.4	12.7	15.4	14.9	11.6	15.3	14.2	10.5	16.0	13.4	9.7	16.2
	21	16.1	11.6	16.5	15.3	10.7	16.0	14.8	9.4	17.0	13.9	8.6	17.2
29	17	15.0	14.3	12.0	14.1	14.2	12.0	13.6	14.0	12.1	13.1	13.2	12.5
	18	15.1	14.0	13.0	14.3	13.9	13.3	13.8	14.0	13.5	13.2	13.2	14.0
	19	15.2	13.7	14.4	14.5	13.5	15.0	13.9	14.0	15.0	13.4	13.2	15.2
	20	15.7	13.1	15.6	15.0	13.0	16.1	14.4	13.5	16.0	13.6	11.4	16.3
	21	16.2	12.7	16.5	15.4	12.7	17.0	15.0	12.0	17.0	14.0	9.9	17.3
31	17	15.2	15.2	11.5	14.3	15.0	12.0	13.7	14.6	13.5	13.2	14.0	12.5
	18	15.4	15.1	12.9	14.5	15.0	13.0	13.9	14.6	14.0	13.4	14.0	13.9
	19	15.7	14.9	13.9	14.6	14.9	15.4	14.1	14.6	15.0	13.6	14.1	15.0
	20	15.8	14.8	15.4	15.1	14.8	16.6	14.4	14.3	15.9	13.8	13.9	16.1
	21	16.3	14.5	16.4	15.6	14.6	16.7	15.0	14.0	17.1	14.4	13.6	17.4

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



Technical Specification SHS15 Split Ducted Model

Indoor Unit Model Number	SHS15N	Nominal Evaporator Air Flow (l/s)	840
Outdoor Unit Model Number	SHS15W	Number of Compressors	1
Total Cooling Capacity (kW)*	14.3	Power Requirements (Volt/Phase)	415/3
Sensible Cooling Capacity (kW)*	13.0	Normal Max. Current (Amps/Phase)	13.9
Heating Capacity (kW) **	14.2	Power Input (kW)	4.85
*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 840 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)	11.0	13.0	15.0	16.1	18.2

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)	2880
Normal Max. Current (amps /phase)	9.0
Locked Rotor Current (amps /phase)	64
Displacement (m ³ /h)	9.6

Electrical Controls and Safeties

High Pressure Switch (Setting kPa)	4500	Defrost	
Low Pressure Switch (Setting kPa)	50	Timing cycle	
Indoor Fan Overload	Internal	Defrost time	4
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	45
Compressor Delay Timer	180 sec	Max De-Ice Period (min)	4

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 (Indoor Coil)

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	0.38
Air Quantity (l/s)	840

Evaporator (Indoor fan)

Number of Fans	1
Type	Centrifugal
Drive	Direct
Motor Voltage /Phase /Frequency	240 / 1 / 50
Motor Power (kW)	0.4
Maximum Fan Speed (rpm)	1260

Electrical

Power Requirements	3 phase / 415V / 50Hz
Normal Max. Current (Amps /Phase)	13.9

Condenser (Outdoor Coil)

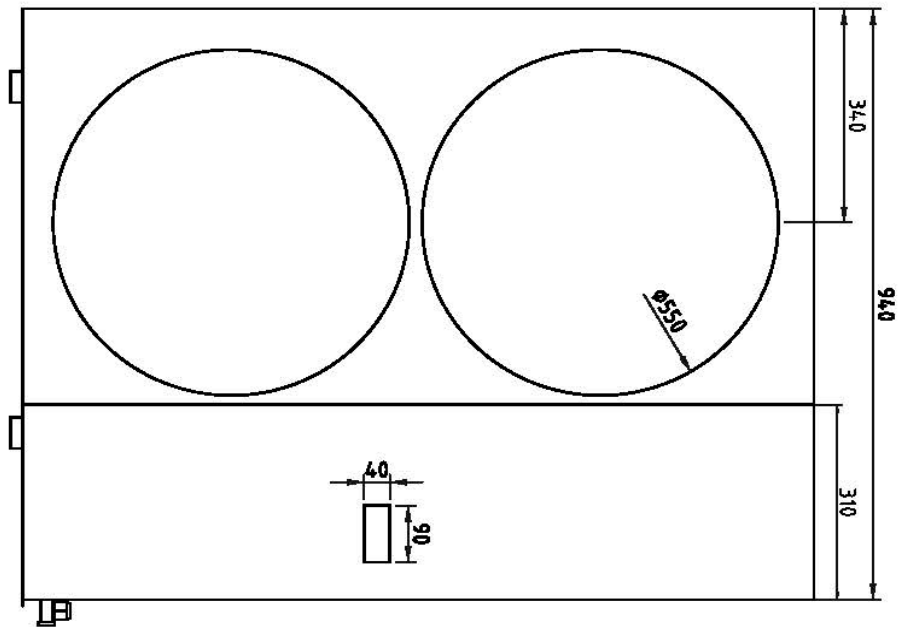
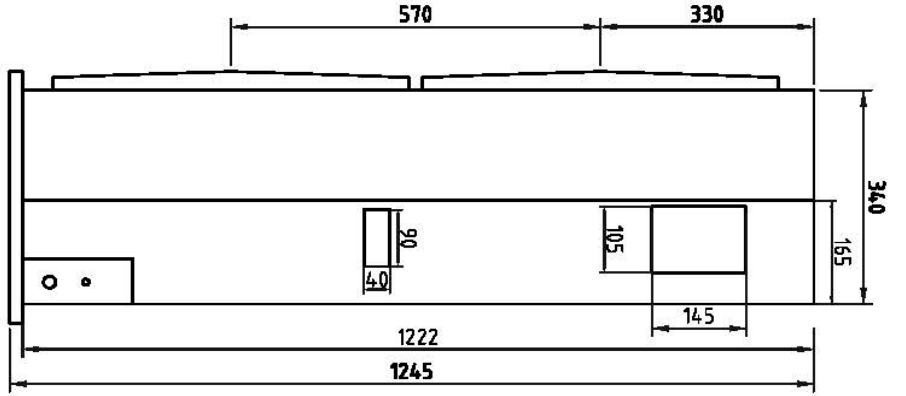
Type	Copper Tube / Aluminium Fins
Face Area (m ²)	1.09

Condenser (Outdoor Fan)


Number of Fans	2
Type	Axial
Drive	Direct
Motor Watts /rpm	50 / 850
Motor Voltage /Phase /Frequency	240 / 1 / 50

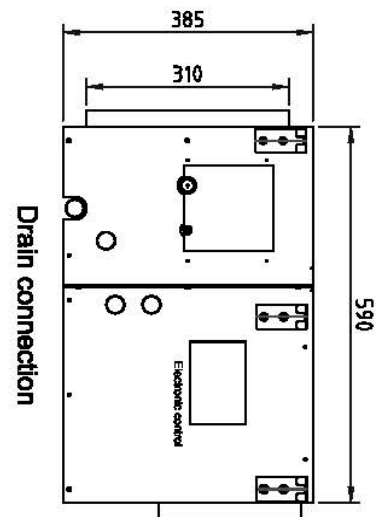
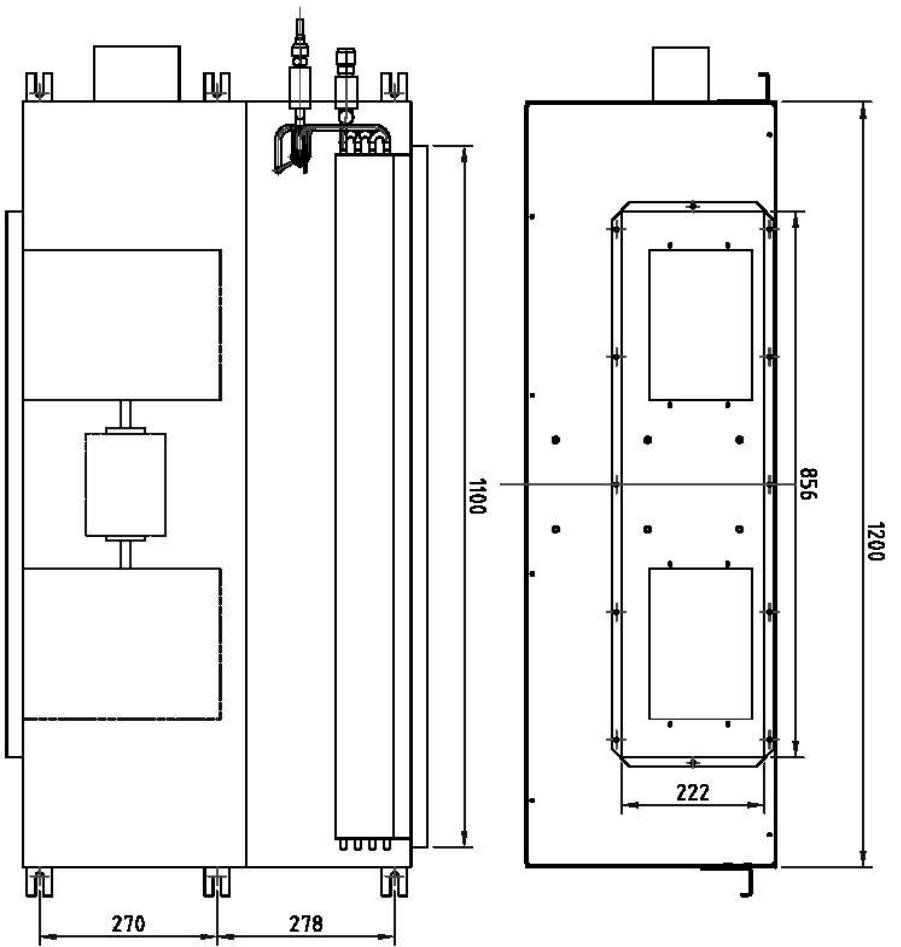
Refrigeration System

Refrigerant Type	R410A
Charge (kg)	3.6
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor Unit	TXV
Line Size (mm)	
Liquid Line 0 – 50 Meters	9.52 (3/8")
Gas Line 0 – 50 Meters	19 (3/4")




OUTDOOR UNIT INSTALLED
WEIGHT 112 kg

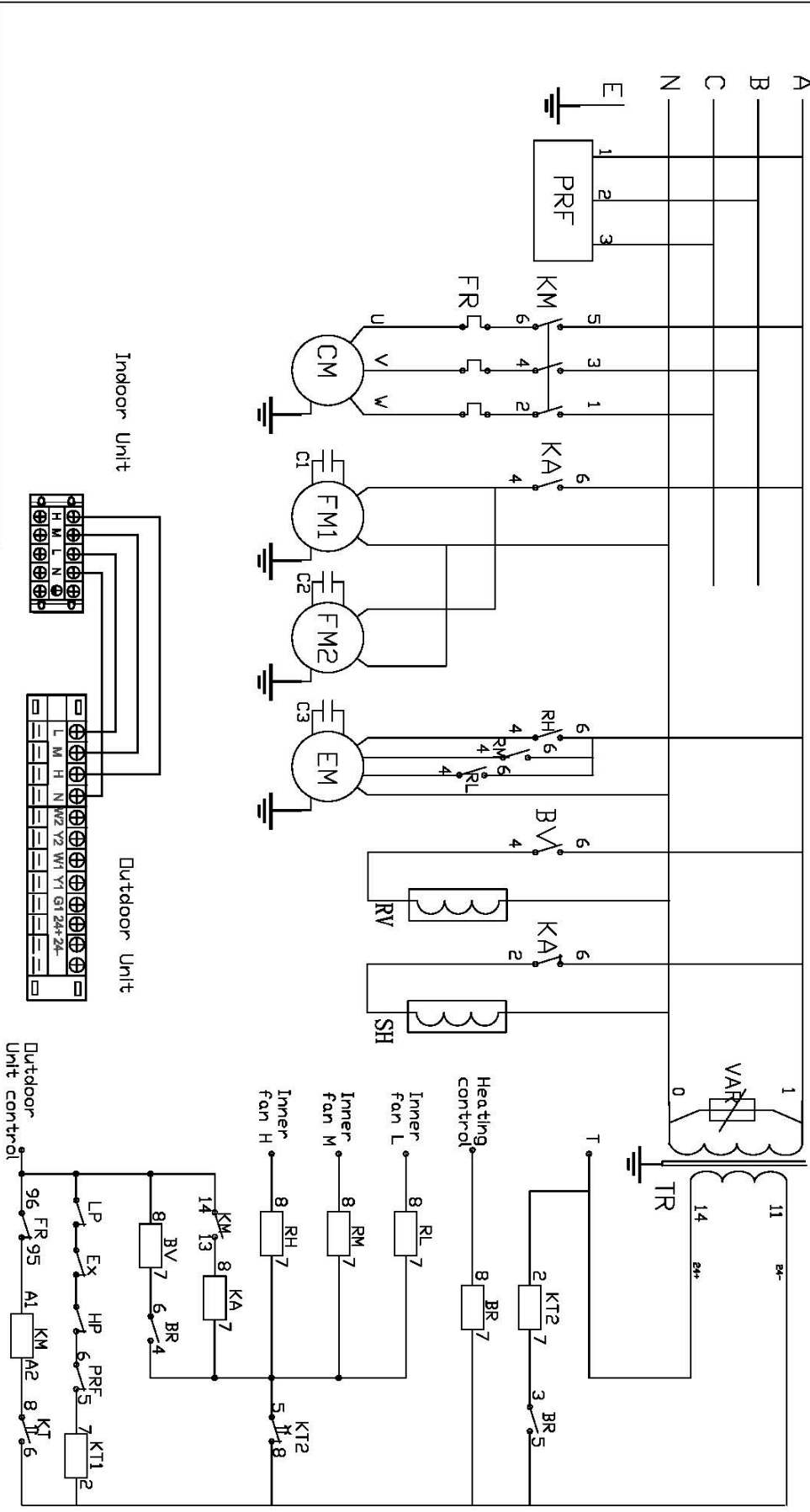
DRAWN BY: Fa Jun Lv		DATE: 4 Feb 2015			
APPROVED Q.A.:		APPROVED ENGR.:			
Nina Zhou		Jeffy Bai		TITLE: Split System Air Cooled Heat Pump Unit	
MODEL: SHS15W-HBb		DRAWING NO.:		SHS TYPE	
		01			
ISSUE:		SHEET			
01		A4			



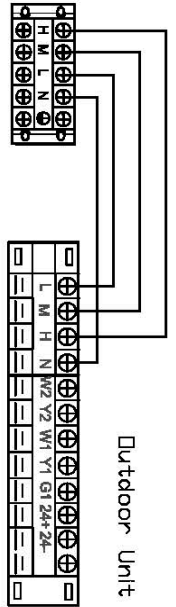
Evaporator Motor: YLK400-4
 INDOOR UNIT INSTALLED WEIGHT 58 kg

DRAWN BY: Fajun Lv		DATE: 4 Feb 2015			
APPROVED Q.A.: Nina Zhou		APPROVED ENGR: Jeffy Bai			
MODEL: SHS15N-HBd		DRAWING NO.:		ISSUE:	
		01		01	
		TITLE: Split System Air Cooled Heat Pump Unit		SHEET SIZE:	
		SHS TYPE		A4	

Three phase five line
415V 50Hz 3P



KM	Contactor	RV	Reversing valve
RH/RM/RL	Power relay	H/LP	HP/LP switch
TR	Transformer	CM	Compressor
KT1	Time Relay	FM	Condenser fan
C1-3	Capacitor	EM	Evaporator fan
KA	Relay	SH	Sumpp heater
PRF	Phase protection	BR	Bypass Relay
Ex	Exhaust switch	KT2	Time defrosting
BV	Reversing valve Relay	VAR	Varistor



Mark no.	Locations	File no.	Sign.	Date
Designed		Standard		
Checked		Ratified		
Approved				
Technology		Date	2014-11-06	

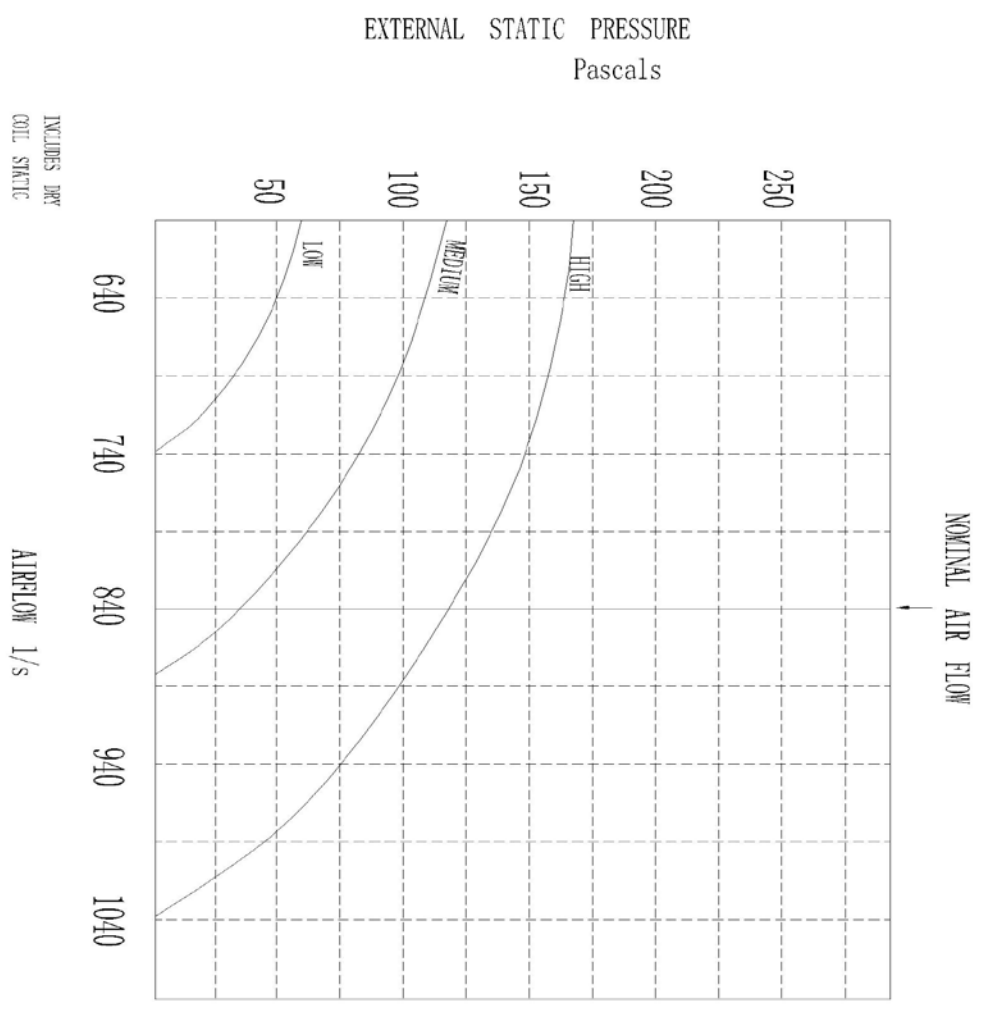
DUNNAIR

MODEL OF COMPRESSOR
C-SBN373H8D

Phase	3 PH	Scale	SHS15-HBb
Total		No:	

Wt.	1:1
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Note:
 SHS15N FAN: 2-1222/208 FAN MOTOR: YLK-400W-4

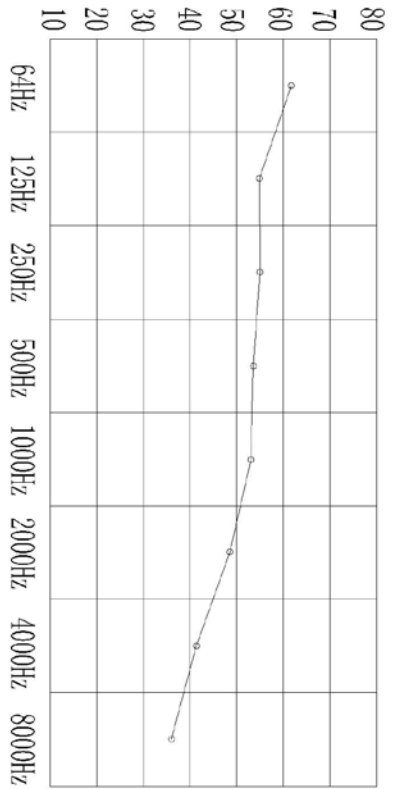


SPLIT SYSTEM AIR COOLED HEAT PUMP UNIT
 MODEL NO. SHS15

SHS15W Sound Pressure Curve
A Class: 58.2dB

Hz	dB
64Hz	60.5
125Hz	55.4
250Hz	56.0
500Hz	52.6
1000Hz	52.4
2000Hz	49.0
4000Hz	41.2
8000Hz	37.0

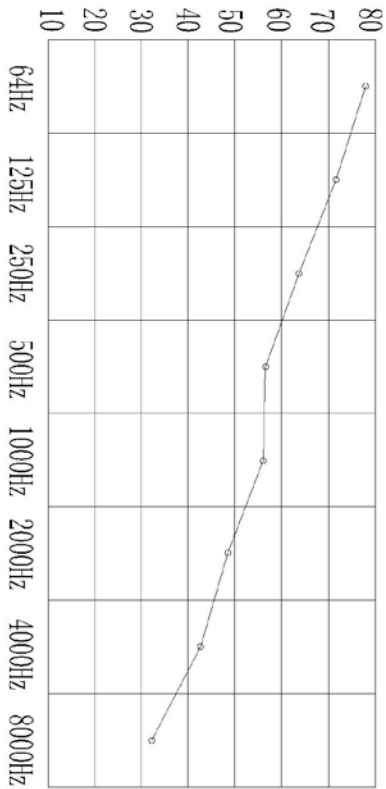
Sound Pressure Curve (A Class: 58.2dB) dB




SHS15N Sound Pressure Curve
A Class: 61.8dB

Hz	dB
64Hz	78.7
125Hz	71.2
250Hz	63.0
500Hz	57.8
1000Hz	57.1
2000Hz	49.0
4000Hz	41.8
8000Hz	31.5

Sound Pressure Curve (A Class: 61.8dB) dB



Note: Occupant at least 1.0m from sound source.

DRAWN BY:	DATE:		
APPROVED Q. A.:	2014-10-10		
APPROVED ENG.:	TITLE: Split System Air Cooled Heat Pump Unit	SHS TYPE	
MODEL: SHS15	DRAWING NO. : 01		
ISSUE: 01	SHEET SIZE: A1		