



DUNNAIR
(Aust) Pty Ltd

SHS10

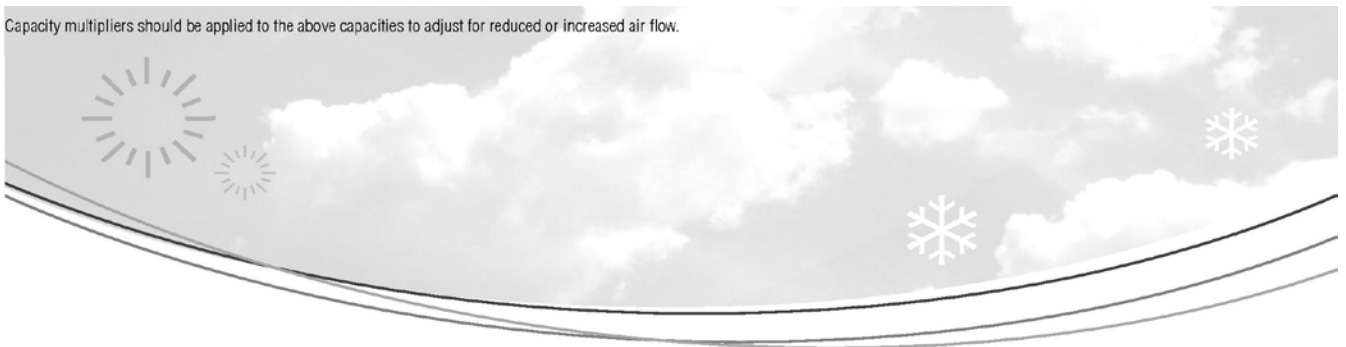
Split Ducted Model

R410a Refrigerant

PERFORMANCE DATA

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING TEMPERATURE °C											
		30			35			40			45		
		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	9.2	5.5	11.5	8.7	5.2	11.8	8.3	5.2	12.0	7.9	5.2	12.3
	18	9.5	5.0	11.9	9.0	4.8	12.9	8.6	4.6	13.2	8.1	4.5	13.5
	19	9.8	4.4	13.5	9.3	4.2	13.8	8.9	4.0	14.1	8.4	3.8	14.4
	20	10.1	3.8	14.6	9.7	3.6	14.9	9.2	3.4	15.2	8.8	3.6	15.5
23	17	9.2	6.6	11.5	8.7	6.4	11.8	8.3	6.2	12.0	7.9	6.0	12.3
	18	9.5	6.0	12.6	9.0	5.8	12.9	8.6	5.6	13.1	8.1	5.4	13.4
	19	9.8	5.4	13.5	9.3	5.3	13.8	8.9	5.1	14.1	8.4	4.9	14.4
	20	10.1	4.9	14.6	9.7	4.7	14.9	9.2	4.5	15.2	8.7	4.3	15.6
	21	10.5	4.3	15.8	10.0	4.1	16.1	9.5	4.0	16.4	9.1	3.8	16.6
25	17	9.2	7.6	11.4	9.1	7.4	11.7	8.4	7.2	12.0	7.9	7.0	12.2
	18	9.5	7.4	12.6	9.4	7.2	11.8	8.6	6.8	13.1	8.1	6.6	13.4
	19	9.8	7.1	13.5	9.6	7.1	12.8	8.9	6.2	14.1	8.4	6.0	14.4
	20	10.1	6.9	14.6	9.9	6.4	13.8	9.2	5.6	15.2	8.6	5.4	15.5
	21	10.5	6.6	15.8	10.1	5.9	16.0	9.5	5.0	16.3	9.1	4.9	16.6
27	17	9.3	8.5	11.2	9.4	8.6	11.7	8.5	8.0	11.8	8.1	7.7	12.1
	18	9.5	8.1	12.4	9.6	8.1	12.0	8.6	7.8	13.0	8.4	7.1	13.3
	19	9.8	7.6	13.5	9.8	8.0	12.8	8.9	7.2	14.1	8.7	6.5	14.4
	20	10.1	7.0	14.5	9.9	7.0	14.8	9.2	6.7	15.1	9.0	5.9	15.4
	21	10.5	6.4	15.7	10.2	6.4	16.0	9.5	6.1	16.3	9.4	5.3	16.6
29	17	9.5	9.2	11.1	9.1	8.9	11.3	8.8	8.6	11.6	8.4	8.2	11.9
	18	9.7	8.9	12.3	9.2	8.7	12.6	8.8	8.4	12.9	8.4	8.1	13.2
	19	10.0	8.6	13.4	9.9	8.5	13.7	8.9	8.3	13.9	8.7	7.6	14.2
	20	10.1	8.1	14.5	10.0	7.9	14.8	9.2	7.7	15.1	9.0	6.9	15.4
	21	10.5	7.5	15.6	10.2	7.4	15.9	9.5	7.1	16.2	9.4	5.7	16.4
31	17	9.8	9.8	11.1	9.4	9.4	11.3	9.1	9.1	11.7	8.7	8.7	12.0
	18	9.9	9.7	12.2	9.5	9.3	12.5	9.1	9.0	12.7	8.7	8.7	13.0
	19	10.2	9.4	13.4	10.1	9.2	13.7	9.1	8.9	14.0	8.7	8.7	14.0
	20	10.3	9.2	14.6	10.2	9.0	14.9	9.2	8.8	15.2	8.8	8.7	15.4
	21	10.4	8.5	15.6	10.3	8.4	15.9	9.5	8.2	16.1	9.1	8.0	16.4

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



Technical Specification SHS10 Split Ducted Model

Indoor Unit Model Number	SHS10N	Nominal Evaporator Air Flow (l/s)	611
Outdoor Unit Model Number	SHS10W	Number of Compressors	1
Total Cooling Capacity (kW)*	9.8	Power Requirements (Volt/Phase)	240/1
Sensible Cooling Capacity (kW)*	8.0	Normal Max. Current (Amps/Phase)	20.8
Heating Capacity (kW) **	10.1	Power Input (kW)	3.53
*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 611 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)	7.6	7.9	10.0	10.8	12.8

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	0.75
110	1.03	24	0.97	6	0.87
120	1.05	27	0.95	8	1.06

Compressor

Number Per Unit	1
Type	Scroll
RPM (Nom)	2900
Normal Max. Current (amps /phase)	16
Locked Rotor Current (amps /phase)	97
Displacement (m ³ /h)	6.3

Electrical Controls and Safeties

High Pressure Switch (Setting kPa)	4200	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)	611

Evaporator (Indoor fan)

Number of Fans	2
Type	Centrifugal
Drive	Direct
Motor Voltage /Phase /Frequency	240 / 1 / 50
Motor Power (kW)	0.4
Maximum Fan Speed (rpm)	1250

Electrical

Power Requirements	1 phase / 240V / 50Hz
Normal Max. Current (Amps /Phase)	20.8

Condenser (Outdoor Coil)

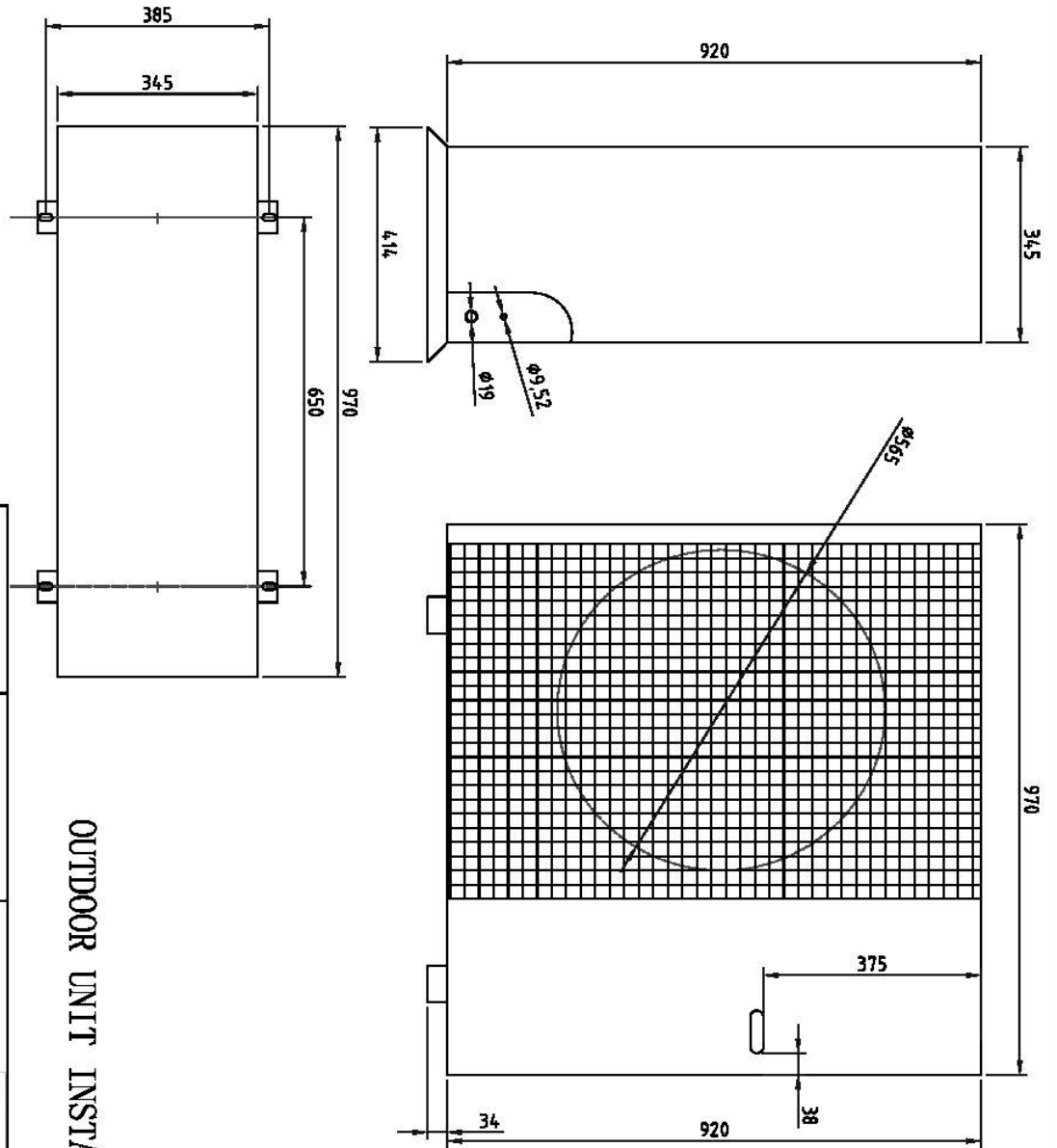
Type	Copper Tube / Aluminium Fins
Face Area (m ²)	0.81

Condenser (Outdoor Fan)

Number of Fans	1
Type	Axial
Drive	Direct
Motor Watts /rpm	250 /850
Motor Voltage /Phase /Frequency	240 / 1 / 50

Refrigeration System

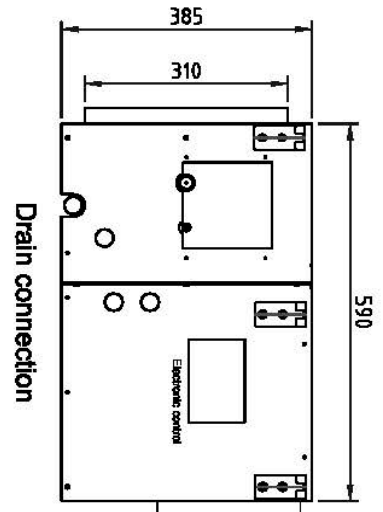
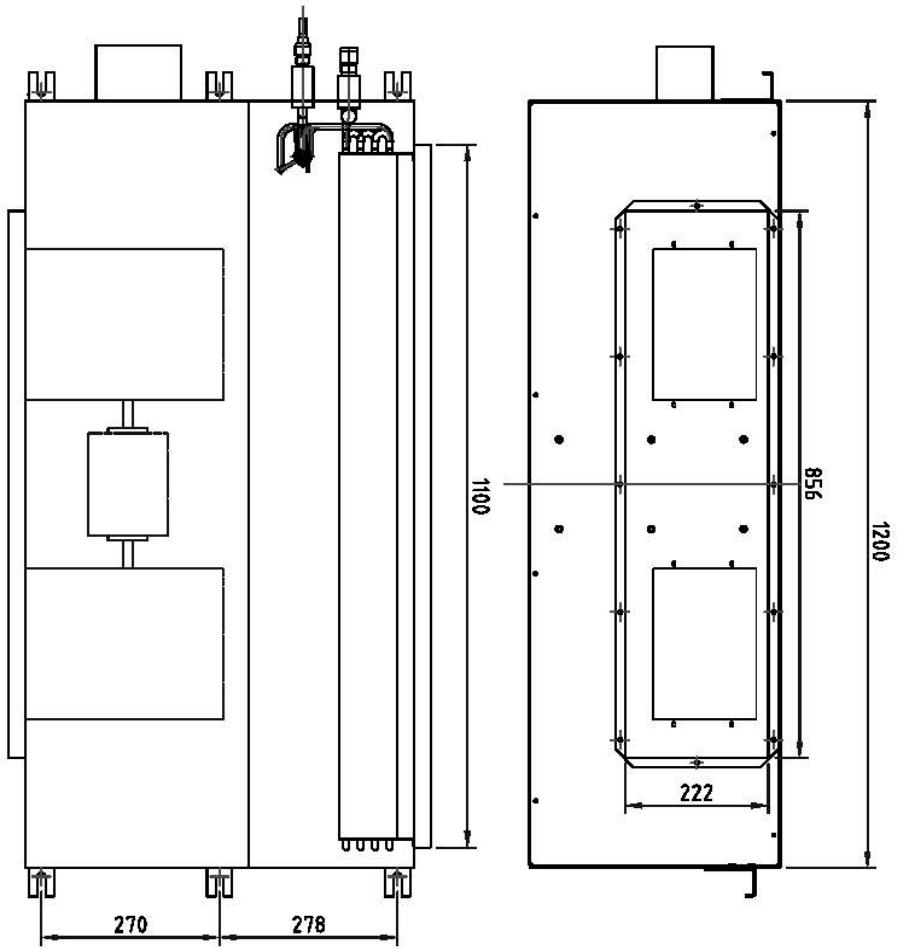
Refrigerant Type	R410A
Charge (kg)	3.2
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor Unit	TXV
Line Size (mm)	
Liquid Line 0 – 50 Meters	9.52
Gas Line 0 – 50 Meters	19.02




OUTDOOR UNIT INSTALLED WEIGHT 85 kg



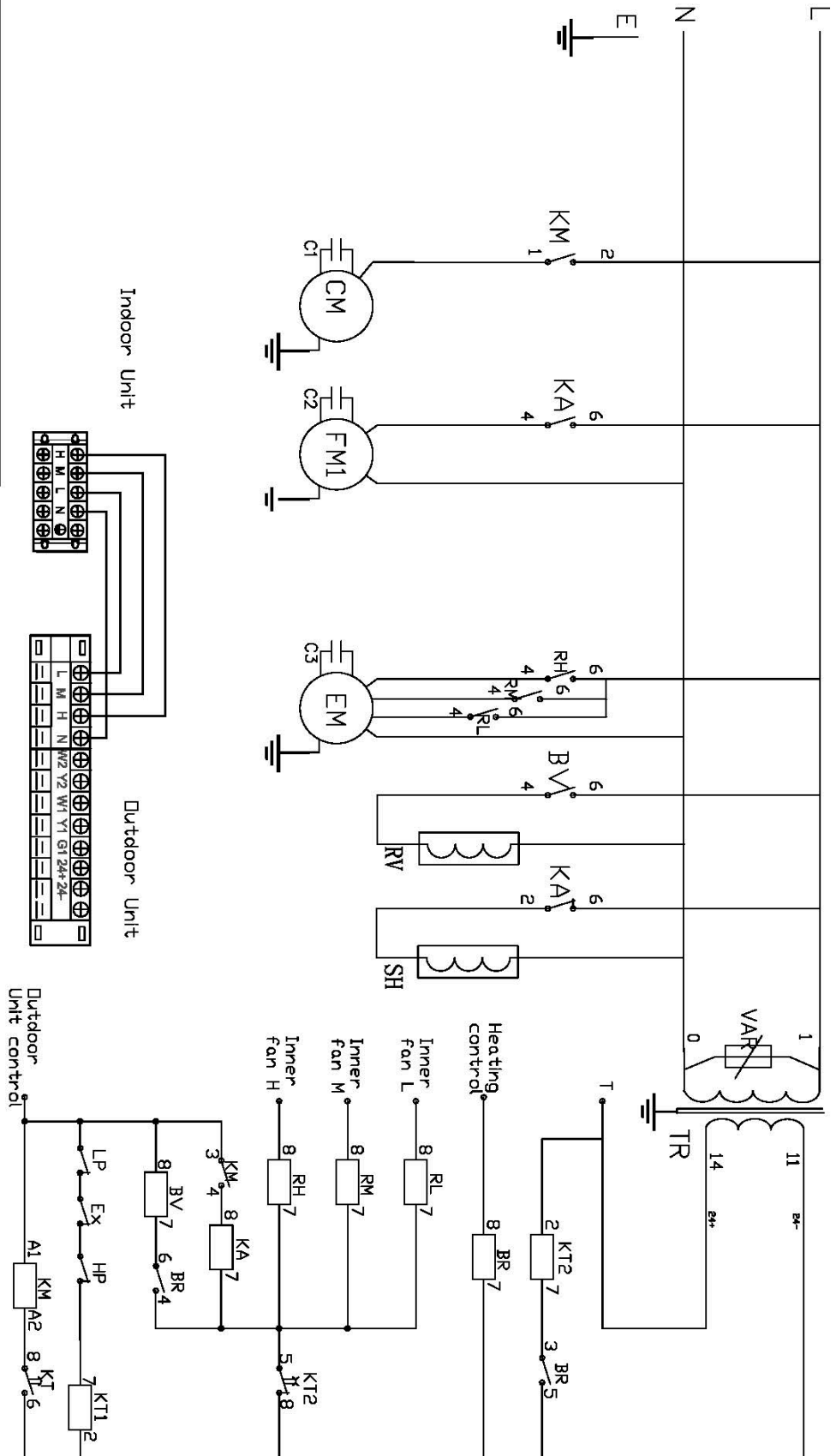
DRAWN BY: Fa Jun Lv	DATE: 4 Feb 2015		
APPROVED Q.A.: Nina Zhou	APPROVED ENG.: Jeffry Bai		
TITLE: Split System Air Cooled Heat Pump Unit		SHS TYPE	
MODEL: SHS10W-HBd	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4



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

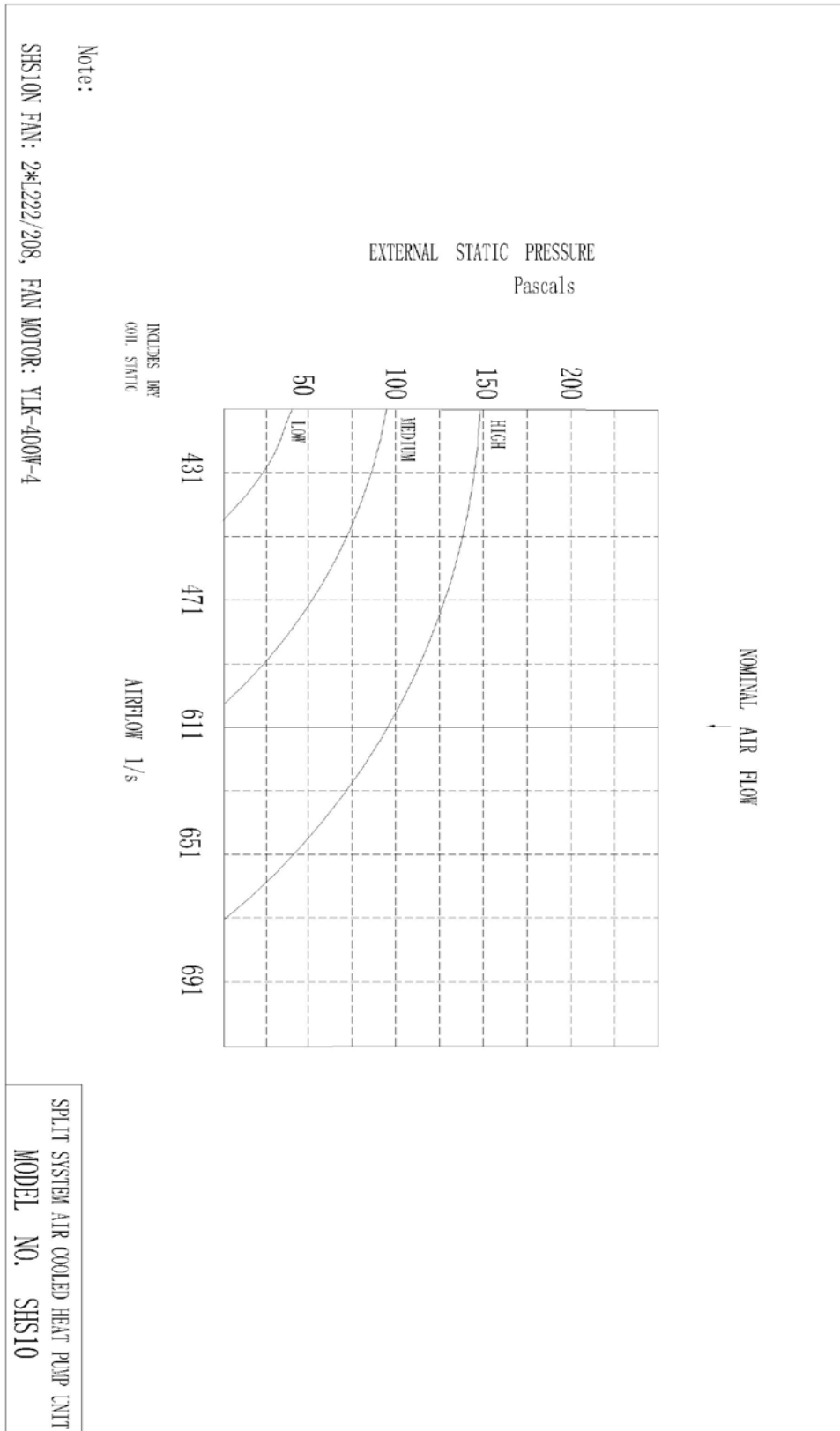
DRAWN BY: Fa Jun Lv		DATE: 4 Feb 2015			
APPROVED Q.A.:		APPROVED ENGR:			
Nina Zhou		Jeffy Bai		TITLE: Split System Air Cooled Heat Pump Unit	
MODEL: SHS10N-HBd		DRAWING NO.:		SHS TYPE	
		01		ISSUE:	
				01	
				SHEET SIZE:	
				A4	

240V 50Hz 1P



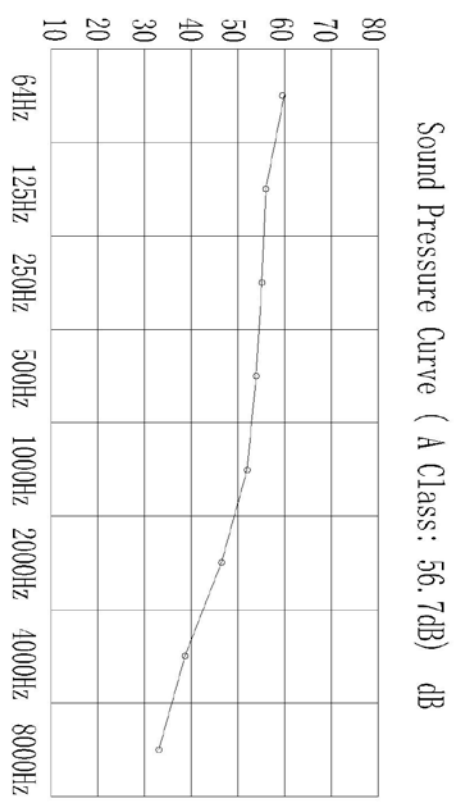
KM	Contactor	RV	Reversing valve
RH/RM/RL	Power relay	H/LP	HP/LP switch
TR	Transformer	CM	Compressor
KT1	Time Relay	FM	Condenser fan
C1-3	Capacitor	EM	Evaporator fan
KA	Relay	SH	Sump heater
Ex	Exhaust switch	BR	Bypass Relay
BV	Reversing valve Relay	KT2	Time defrosting
		VAR	Varistor

				MODEL OF COMPRESSOR C-SBN301H5D			
Mark no.	Locations	File no.	Sign.	Date	Phase	Wt.	Scale
Designed		Standard			1 PH		SHS10-HBD
Checked		Ratified					1:1
Approved					Total	No:	
Technology		Date		2014-11-06			



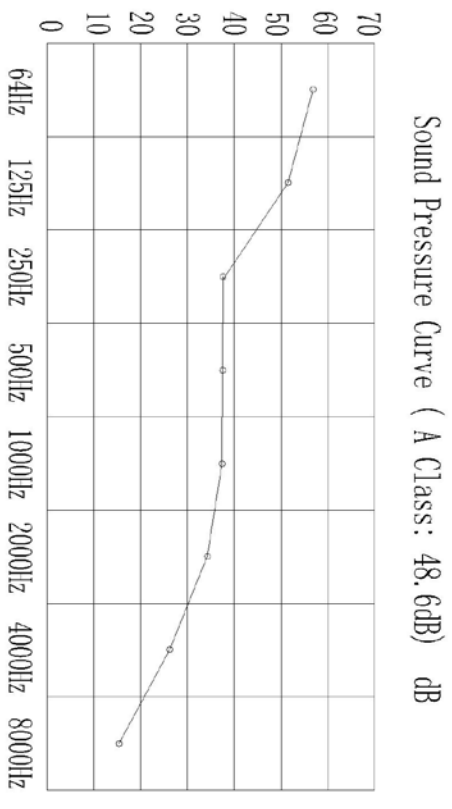
SHS10W Sound Pressure Curve
A Class: 56.7dB

Hz	dB
64Hz	59.7
125Hz	56.0
250Hz	55.4
500Hz	52.5
1000Hz	50.4
2000Hz	47.0
4000Hz	39.2
8000Hz	34.3




SHS10N Sound Pressure Curve
A Class: 48.6dB

Hz	dB
64Hz	57.3
125Hz	51.1
250Hz	38.5
500Hz	38.4
1000Hz	38.0
2000Hz	35.4
4000Hz	27.3
8000Hz	17.8



Note: Occupant at least 1.0m from sound source.

DRAWN BY:	DATE:		
APPROVED Q. A.:	2014-10-10		
APPROVED ENG.:	TITLE:	SHS TYPE Split System Air Cooled Heat Pump Unit	
MODEL:	DRAWING NO.:		
SHS10	01	ISSUE:	SHEET
		01	SIZE:
			A1