



DUNNAIR
(Aust) Pty Ltd

R410a Refrigerant

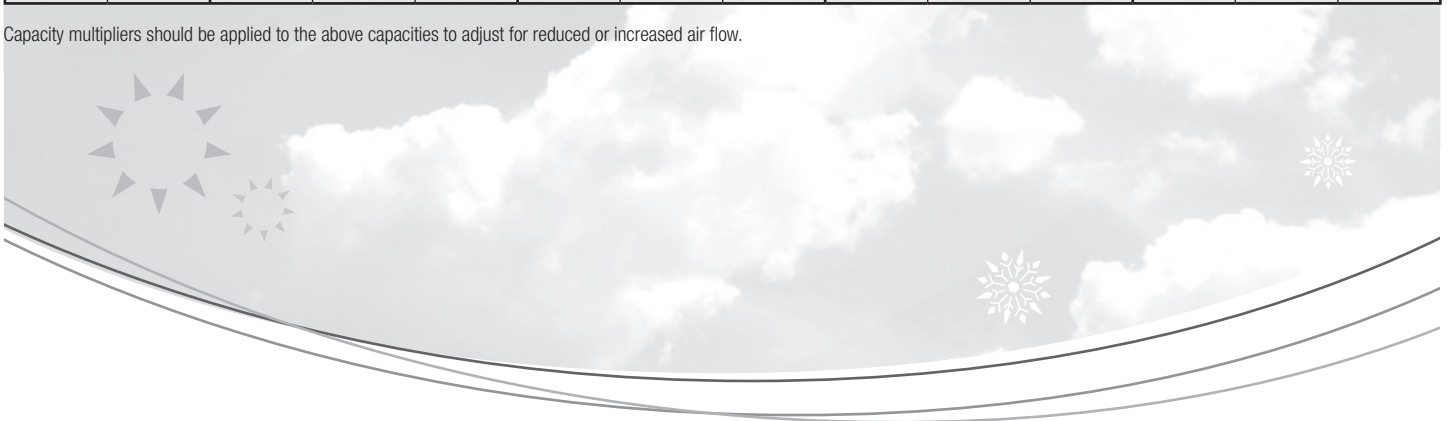
SHS15

Split Ducted Model

Performance Data

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING AIR 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	13.2	8.8	9.0	12.6	8.5	12.9	11.7	8.5	13.3
	18	14.7	8.1	9.0	13.7	7.8	13.6	13.0	7.5	14.0	12.2	7.0	14.3
	19	15.0	7.1	7.8	14.4	6.8	14.8	13.7	6.5	15.0	12.7	6.0	15.3
	20	16.0	6.0	6.7	15.0	5.7	15.8	14.3	5.5	16.0	13.3	5.0	16.3
23	17	14.0	11.1	12.3	13.3	11.0	12.6	12.8	10.6	13.0	11.7	10.2	13.1
	18	14.4	9.1	13.4	13.7	10.8	13.7	13.4	9.5	14.0	12.2	9.0	14.1
	19	15.0	9.1	15.4	14.3	9.8	14.7	13.6	8.5	15.0	12.8	8.1	15.2
	20	15.7	8.0	15.4	14.7	8.8	15.8	14.4	7.5	16.0	13.3	7.3	16.2
	21	16.3	7.0	16.4	15.4	7.7	16.8	15.0	6.4	17.0	14.0	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	11.7	13.0
	18	14.5	12.5	13.4	14.0	12.5	13.7	13.3	11.7	13.9	12.2	11.0	14.1
	19	15.0	12.0	14.4	14.3	11.9	14.7	13.6	10.5	15.0	12.8	10.1	15.2
	20	15.6	11.3	15.4	14.9	10.8	15.7	14.2	9.5	16.0	13.7	8.8	16.1
	21	16.3	10.7	16.6	15.6	10.0	17.3	15.0	8.2	17.0	14.0	7.3	17.1
27	17	14.5	14.1	12.0	14.0	13.8	12.4	13.3	12.8	12.5	12.6	12.6	12.8
	18	14.7	13.8	13.2	14.1	13.5	13.5	13.4	11.7	13.9	12.6	12.6	13.9
	19	15.1	13.6	14.3	14.3	13.0	14.8	13.7	10.9	15.0	12.7	12.1	15.2
	20	15.6	12.7	15.4	15.0	11.6	15.3	14.2	10.5	16.0	13.4	9.7	16.2
	21	16.3	11.6	16.5	15.8	10.7	16.0	15.0	9.4	17.0	14.0	8.6	17.2
29	17	15.0	14.3	12.0	14.4	14.2	12.0	14.0	14.0	12.1	13.2	13.2	12.5
	18	15.1	14.0	13.0	14.5	13.9	13.3	14.0	14.0	13.5	13.2	13.2	14.0
	19	15.2	13.7	14.4	14.5	13.5	15.0	14.0	14.0	15.0	13.2	13.2	15.2
	20	15.7	13.1	15.6	14.9	13.0	16.1	14.4	13.5	16.0	13.6	11.4	16.3
	21	16.3	12.7	16.5	15.8	12.7	17.0	15.0	12.0	17.0	14.0	9.9	17.3
31	17	15.6	15.2	11.5	15.0	15.0	12.0	14.6	14.6	13.5	14.0	14.0	12.5
	18	15.7	15.1	12.9	15.0	15.0	13.0	14.6	14.6	14.0	14.1	14.0	13.9
	19	15.7	14.9	13.9	15.0	15.0	15.4	14.6	14.6	15.0	14.2	14.1	15.0
	20	15.8	14.8	15.4	15.0	15.0	16.6	14.8	14.3	15.9	14.2	13.9	16.1
	21	16.3	14.5	16.4	15.8	14.6	16.7	15.4	14.0	17.1	14.2	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)	850
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	Normal Max. Current (Amps / Phase)	12.1
Heating Capacity (kW)**	14.2		

*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 850 l/s				
	80	90	100	110	120
Total	0.95	0.98	1.00	1.02	1.04
Sensible	0.89	0.95	1.00	1.05	1.09

Heating Performance Data

Heating Capacity kW	Outdoor Coil Entering DB temp				
	0	4	8	12	18
	11	13	15	16.1	18.2

Heating Performance Correction

% Rated Air Quality	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)	8.6
Locked Rotor Current (Amps / Phase)	65.8
Displacement (m ³ /h)	17.5

Electrical Controls and Safeties

High Pressure Switch (Setting kPa)	2800	Defrost	
Low Pressure Switch (Setting kPa)	100	Initiation Temperature (°C)	-4
Indoor Fan Overload	Internal	Termination Temperature (°C)	10
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	33
Compressor Delay Timer	300 sec	Max. De-Ice Period (min)	4

Standard Features

Manual 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

Type	Copper Tube / Aluminium Fins
Face Area (m)	0.36
Air Quantity (l/s)	850

Evaporator (Indoor)

Number of Fans	2
Type	Centrifugal
Drive	Direct
Motor Voltage / Phase / Frequency	240 / 1 / 50
Motor (kW) Standard	2 × 0.37
Max. Fan Speed (rpm)	1260

Electrical

Power Requirements	3 Phase / 415V / 50Hz
Normal Max. Current (Amps / Phase)	12.1

Condenser

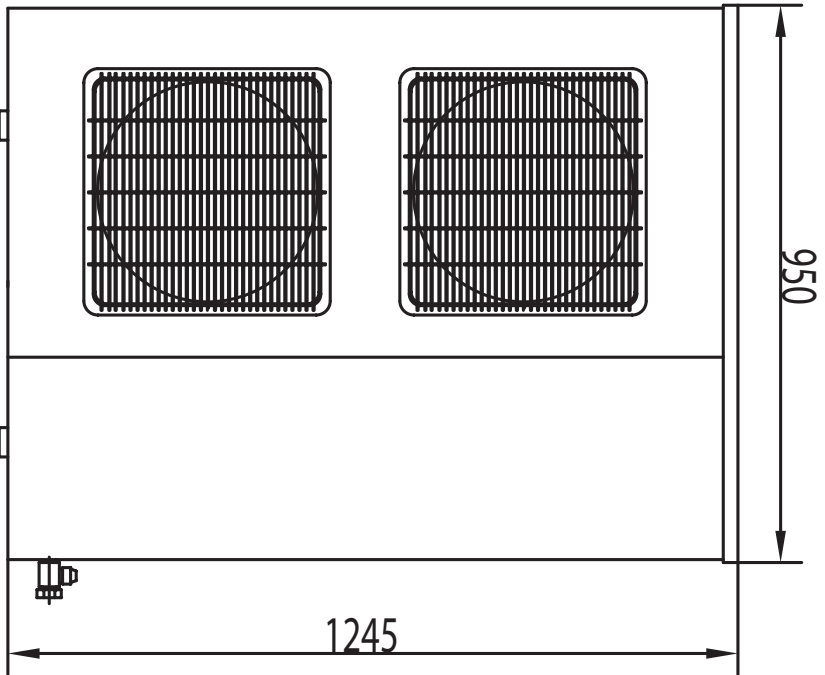
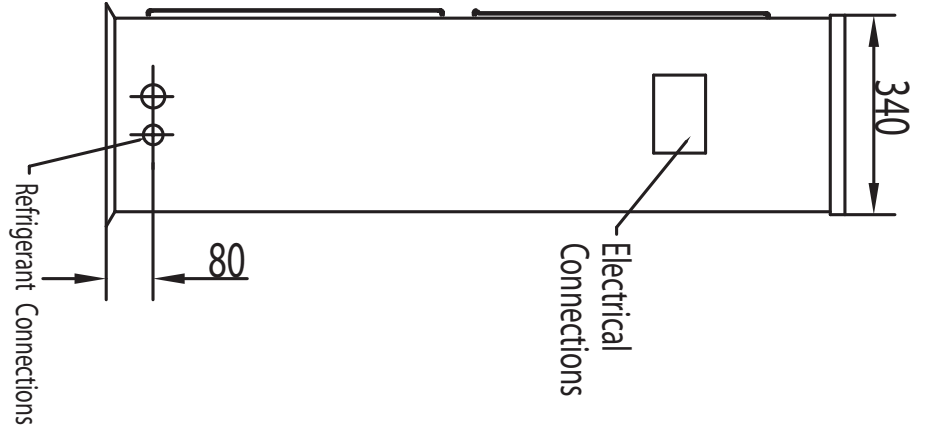
Type	Copper Tube / Aluminium Fins
Face Area	1

Condenser (Outdoor)

Number of Fans	2
Type	Axial
Drive	Direct
Type	Enclosed
Motor Watts / rpm	2 × 240 / 900
Motor Voltage / Phase / Frequency	240 / 1 / 50

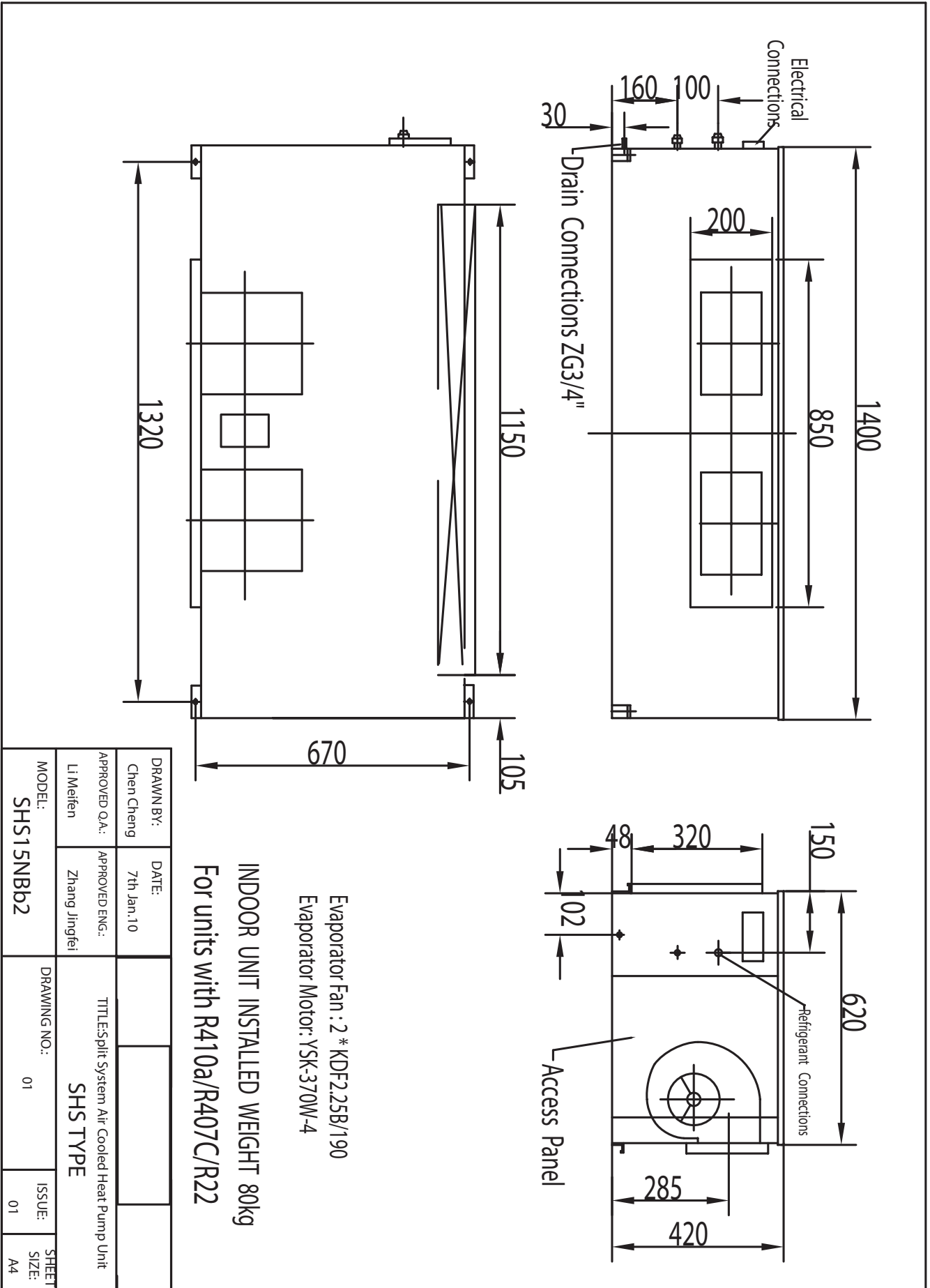
Refrigerant System

Refrigerant Type	R410a
Charge (kg)	4.6
Line Size (mm)	
Liquid 0–10 metres	13
Gas 0–10 metres	19
Liquid 10–20 metres	–
Gas 10–20 metres	–
Service Connections	Rotor Lock Valve
Expansion Control – in outdoor unit	Capillary



OUTDOOR UNIT INSTALLED WEIGHT 105 kg
For units with R410a/R407C/R22

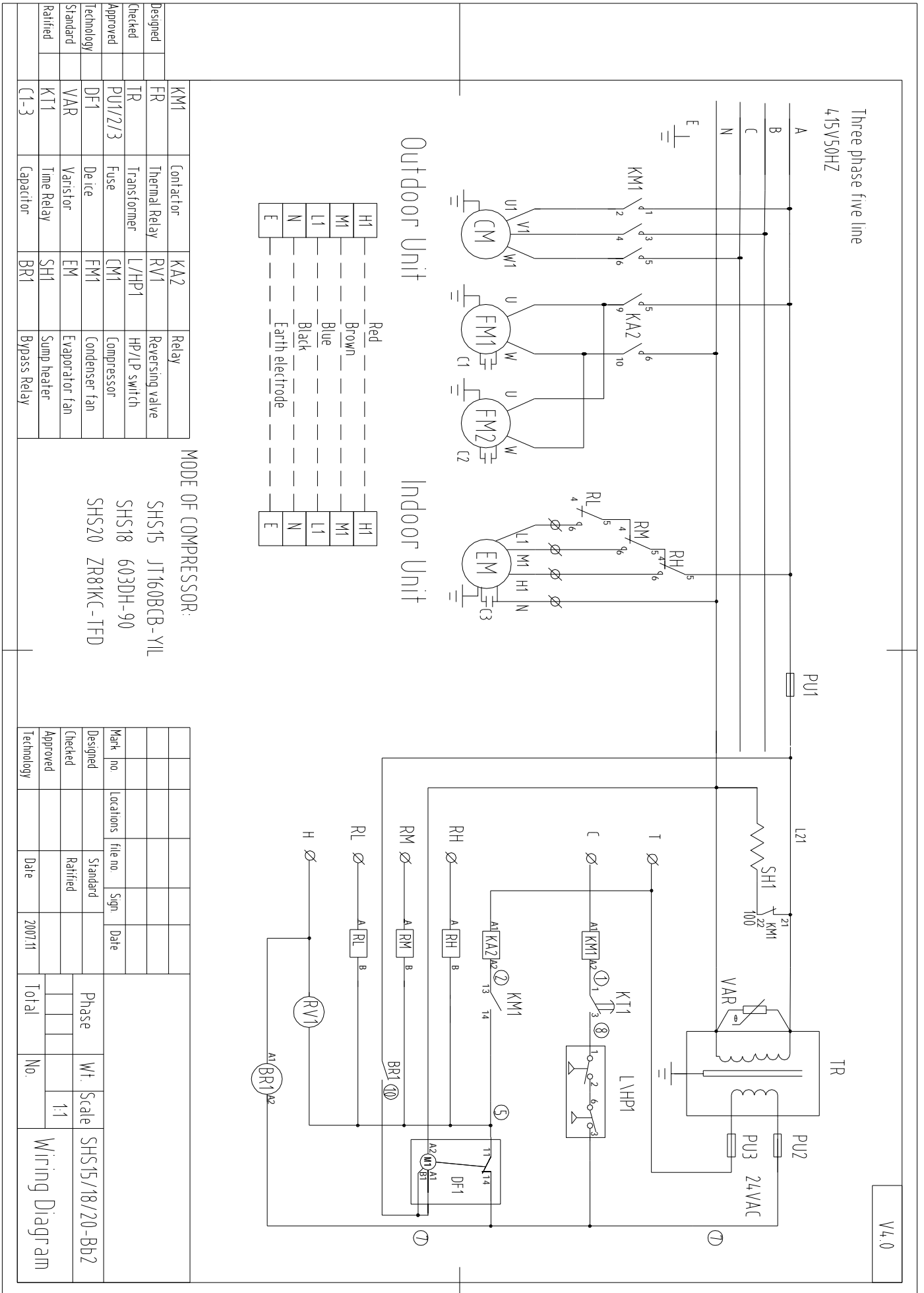
DRAWN BY: Chen Cheng		DATE: 7th Jan.10		TITLE:Split System Air Cooled Heat Pump Unit	
APPROVED Q.A.: Li Meifen		APPROVED ENG.: Zhang Jingfei		SHS TYPE	
MODEL: SHS15WBb2		DRAWING NO.: 01			



Evaporator Fan : 2 * KDF2.25B/190
 Evaporator Motor: YSK-370W-4

INDOOR UNIT INSTALLED WEIGHT 80kg
For units with R410a/R407C/R22

DRAWN BY: Chen Cheng	DATE: 7th Jan. 10	TITLE: Split System Air Cooled Heat Pump Unit	
APPROVED O.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	SHS TYPE	
MODEL: SHS15NBb2	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4



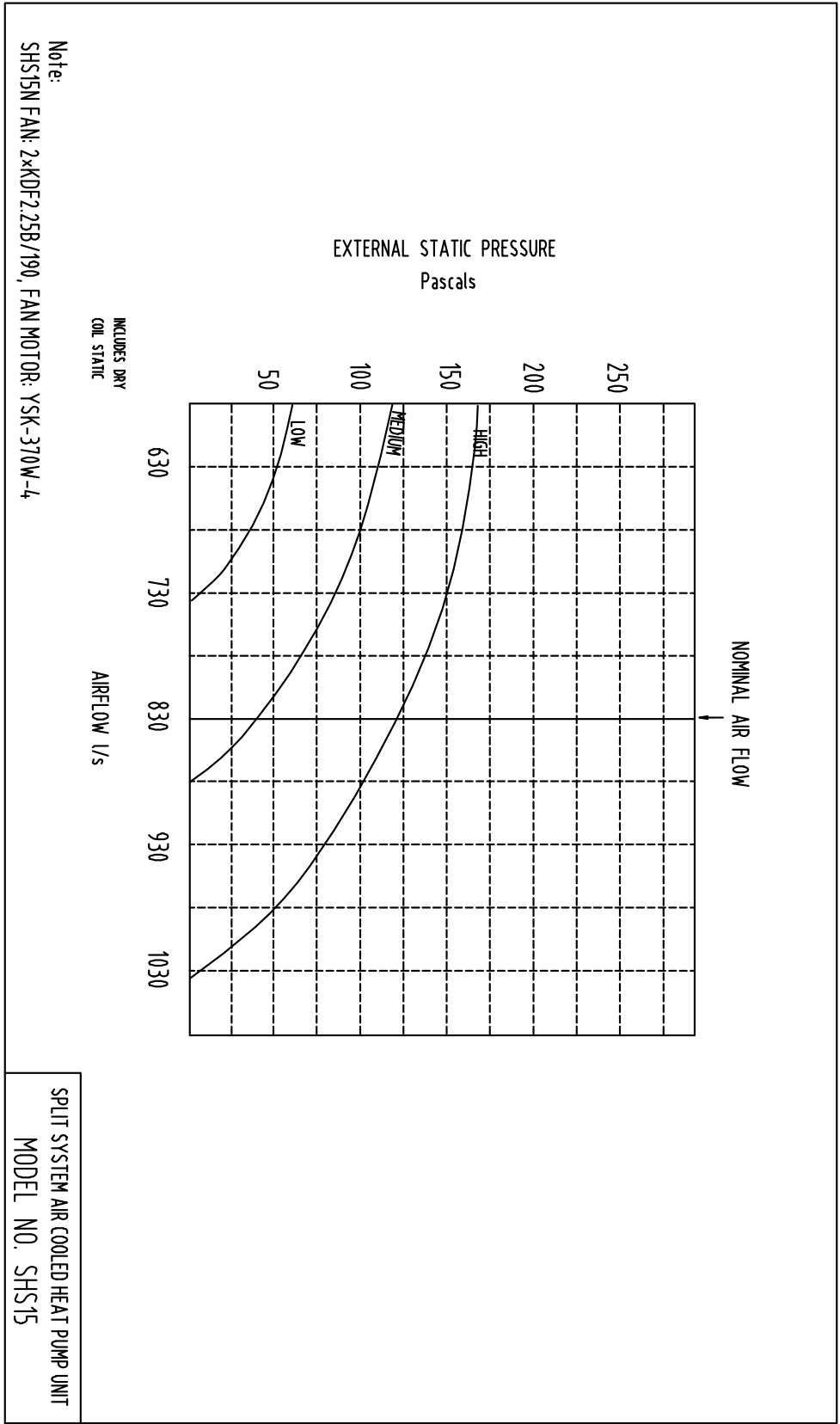
V4.0

Designed	FR	Thermal Relay	RV1	Reversing valve
Checked	TR	Transformer	L/HP1	HP/LP switch
Approved	PU1/2/3	Fuse	CM1	Compressor
Technology	DF1	De ice	FM1	Condenser fan
Standard	VAR	Varistor	EM	Evaporator fan
Ratified	KT1	Time Relay	SH1	Sump heater
	C1-3	Capacitor	BR1	Bypass Relay

MODE OF COMPRESSOR:

- SHS15 JT160BCB-YIL
- SHS18 603DH-90
- SHS20 ZR81KC-TFD

Mark no	Locations	file no	Sign	Date	Phase	Wt. Scale	SHS15/18/20-Bb2
Designed		Standard				1:1	
Checked		Ratified					
Approved							
Technology							
		Date	2007.11		Total	No.	Wiring Diagram

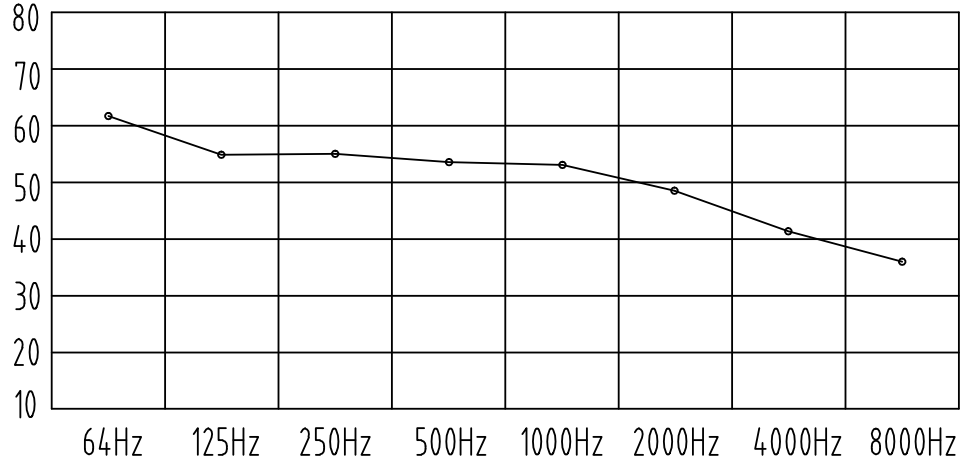


SHS15W Noise rate analysing chart

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

Noise rate analysing chart (A Class: 58.2dB) dB



SHS15N Noise rate analysing chart

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

Noise rate analysing chart (A Class: 61.8dB) dB

