



DUNNAIR
(Aust) Pty Ltd

R410a Refrigerant

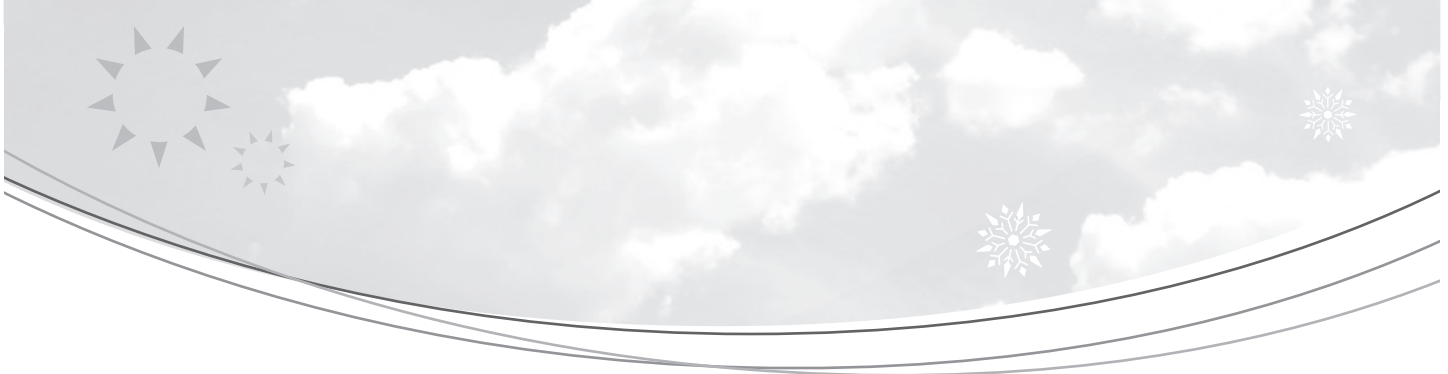
SH45

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	44.1	27.1	12.0	41.8	26.1	12.3	39.5	25.1	12.6	37.5	25.1	12.8
	18	45.5	24.0	12.4	43.2	23.1	13.3	40.8	22.1	13.6	38.9	21.3	13.8
	19	47.0	21.2	14.0	44.7	20.2	14.3	42.2	19.2	14.6	40.4	18.4	14.8
	20	48.6	18.3	15.1	46.1	17.3	15.4	43.6	16.4	15.7	41.8	15.7	15.9
23	17	44.0	32.6	11.9	41.7	31.7	12.2	39.4	30.8	12.5	37.5	30.0	12.8
	18	45.6	29.9	13.0	43.2	28.9	13.3	40.9	28.0	13.6	39.0	27.3	13.8
	19	47.0	26.6	14.0	44.6	25.6	14.3	42.1	24.6	14.6	40.3	23.9	14.8
	20	48.5	23.7	15.1	46.1	22.7	15.4	43.6	21.8	15.7	41.8	21.1	15.9
	21	50.1	20.9	16.3	47.6	20.0	16.6	45.0	19.0	16.9	43.3	18.4	17.1
25	17	44.4	37.8	11.8	42.1	36.8	12.0	39.8	35.7	12.3	37.9	34.9	12.6
	18	45.5	36.6	13.0	43.2	34.4	13.3	40.8	33.4	13.6	38.9	32.7	13.8
	19	47.0	35.0	14.0	44.6	31.3	14.3	42.2	30.3	14.6	40.3	29.6	14.8
	20	48.5	33.5	15.1	46.0	28.2	15.4	43.5	27.2	15.7	41.7	26.5	15.9
	21	50.1	31.9	16.1	47.6	25.4	16.4	45.0	24.4	16.7	43.2	23.8	16.9
27	17	45.2	41.6	11.7	43.0	40.4	12.0	40.8	39.1	12.3	39.0	38.0	12.5
	18	45.8	40.5	12.9	43.5	39.5	13.2	41.1	38.6	13.5	39.3	37.8	13.7
	19	47.0	37.7	14.0	44.6	36.8	14.3	42.1	35.8	14.6	40.3	35.0	14.8
	20	48.5	34.9	15.0	46.1	33.9	15.3	43.6	33.0	15.6	41.8	32.3	15.8
	21	49.9	31.8	16.2	47.5	30.9	16.5	44.9	30.0	16.9	43.1	29.3	17.1
29	17	46.2	45.0	11.5	44.2	43.4	11.7	42.1	42.1	12.0	40.4	40.4	12.2
	18	46.7	44.1	12.8	44.5	42.9	13.0	42.2	41.6	13.3	40.4	40.4	13.6
	19	47.2	43.1	13.8	44.9	42.2	14.1	42.5	41.2	14.4	40.4	40.4	14.6
	20	48.4	39.9	15.0	46.0	39.0	15.3	43.5	38.0	15.6	41.7	37.3	15.8
	21	50.0	37.2	16.1	47.5	36.2	16.4	44.9	35.3	16.7	43.1	34.6	16.9
31	17	47.9	47.9	11.4	45.7	45.7	11.7	43.7	43.7	12.0	42.2	42.2	12.2
	18	47.9	47.9	12.6	45.7	45.7	12.9	43.7	43.7	13.2	42.2	42.2	13.4
	19	47.9	47.9	13.8	45.7	45.7	14.1	43.7	43.7	14.4	42.2	42.2	14.6
	20	48.7	45.9	15.1	45.7	45.7	15.4	43.7	43.7	15.7	42.2	42.2	15.9
	21	50.0	42.5	15.9	47.5	41.6	16.2	44.9	40.6	16.5	43.2	40.0	16.7

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



Technical Specification SH45 Split Ducted Model

Indoor Unit Model Number	SH45N	Nominal Evaporator Air Flow (l/s)	2700
Outdoor Unit Model Number	SH45W	Number of Compressors	2
Total Cooling Capacity (kW)*	44.8	Power Requirements (Volt / Phase)	415 / 3
Sensible Cooling Capacity (kW)*	37.6	Normal Max. Current (Amps / Phase)	32.8
Heating Capacity (kW)**	44.2		

*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 2700 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
	26.1	29.1	33.3	36.9	43.7

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	2
Type	Scroll
RPM (Nom)	2900
Normal Max. Current (Amps / Phase)	2 × 12
Locked Rotor Current (Amps / Phase)	2 × 101
Displacement (m³/h)	2 × 19.2

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

Indoor Coil

Type	Copper Tube / Aluminium Fins
Face Area (m)	1.0
Air Quantity (m³/h)	2700

Indoor Fan

Number of Fans	1
Type	Centrifugal
Drive	Belt
Motor Voltage / Phase / Frequency	415 / 3 / 50
Motor (kW) Standard	3.0
Max. Fan Speed (rpm)	825

Electrical

Power Requirements	3 Phase / 415V / 50Hz
Normal Max. Current (Amps / Phase)	32.4

Outdoor Coil

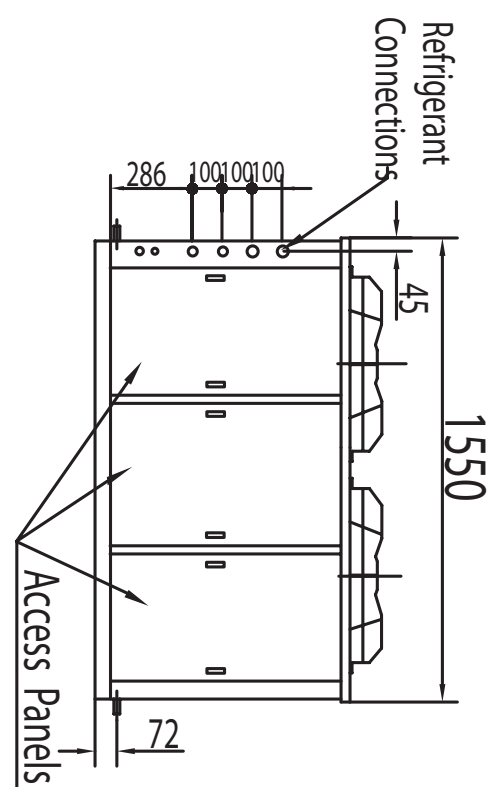
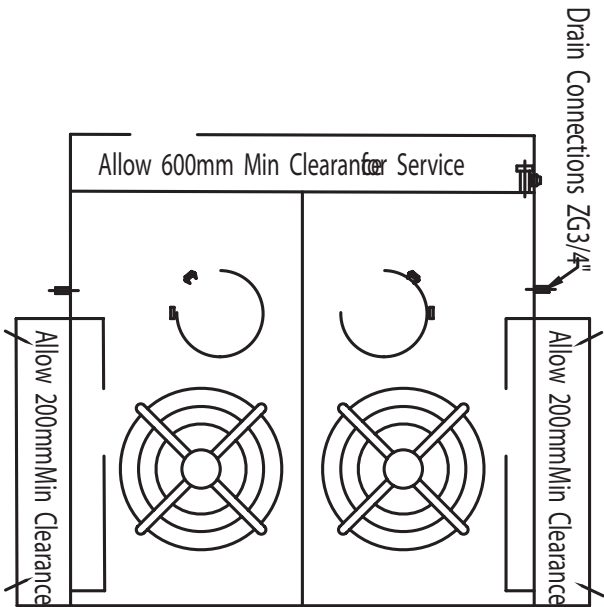
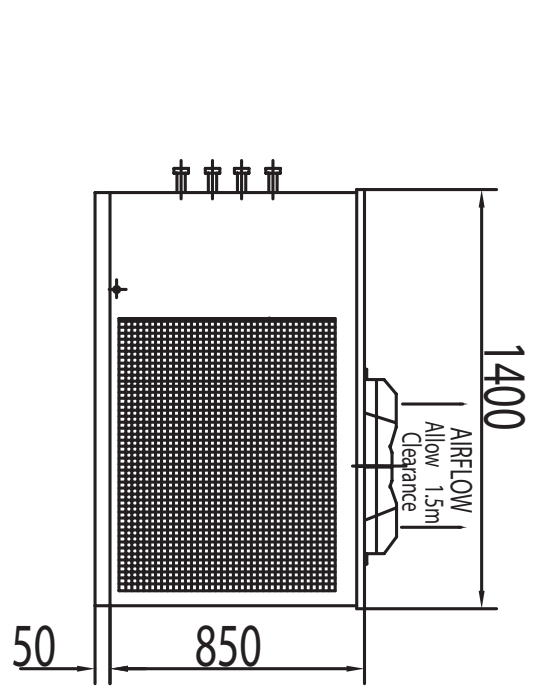
Type	Copper Tube / Aluminium Fins
Face Area	2 × 0.73

Outdoor Fan

Number of Fans	2
Type	Axial
Drive	Direct
Motor Watts / rpm	2 × 300 / 950
Motor Voltage / Phase / Frequency	415 / 3 / 50

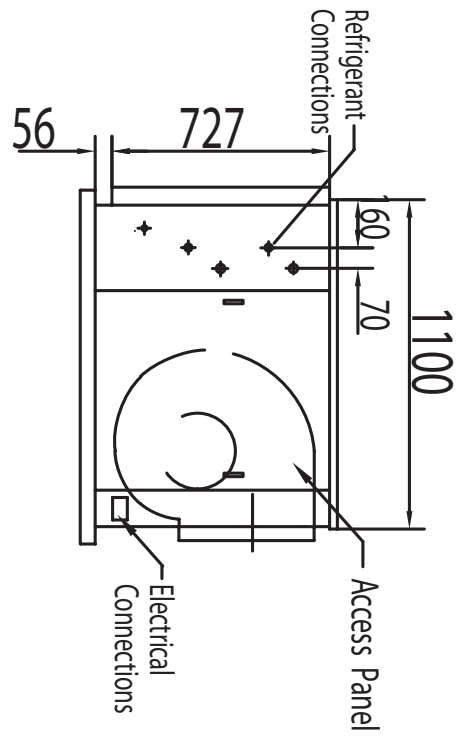
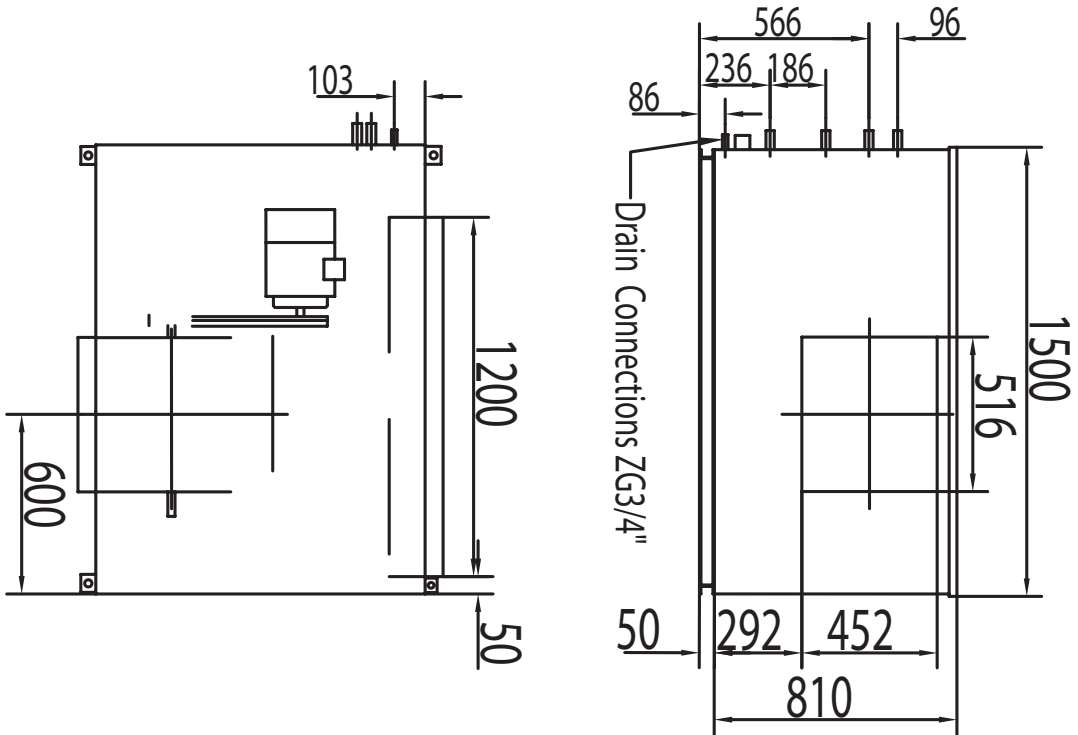
Refrigerant System

Refrigerant Type	R410a
Charge (kg)	2 × 5.6
Line Size (mm)	
Liquid 0–10 metres	16
Gas 0–10 metres	22
Liquid 10–20 metres	19
Gas 10–20 metres	28
Service Connections	Rotor Lock Valve
Expansion Control – in outdoor unit	TX Valve



OUTDOOR UNIT INSTALLED WEIGHT 365 kg
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	SH TYPE	
MODEL: SH45WBb2	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4

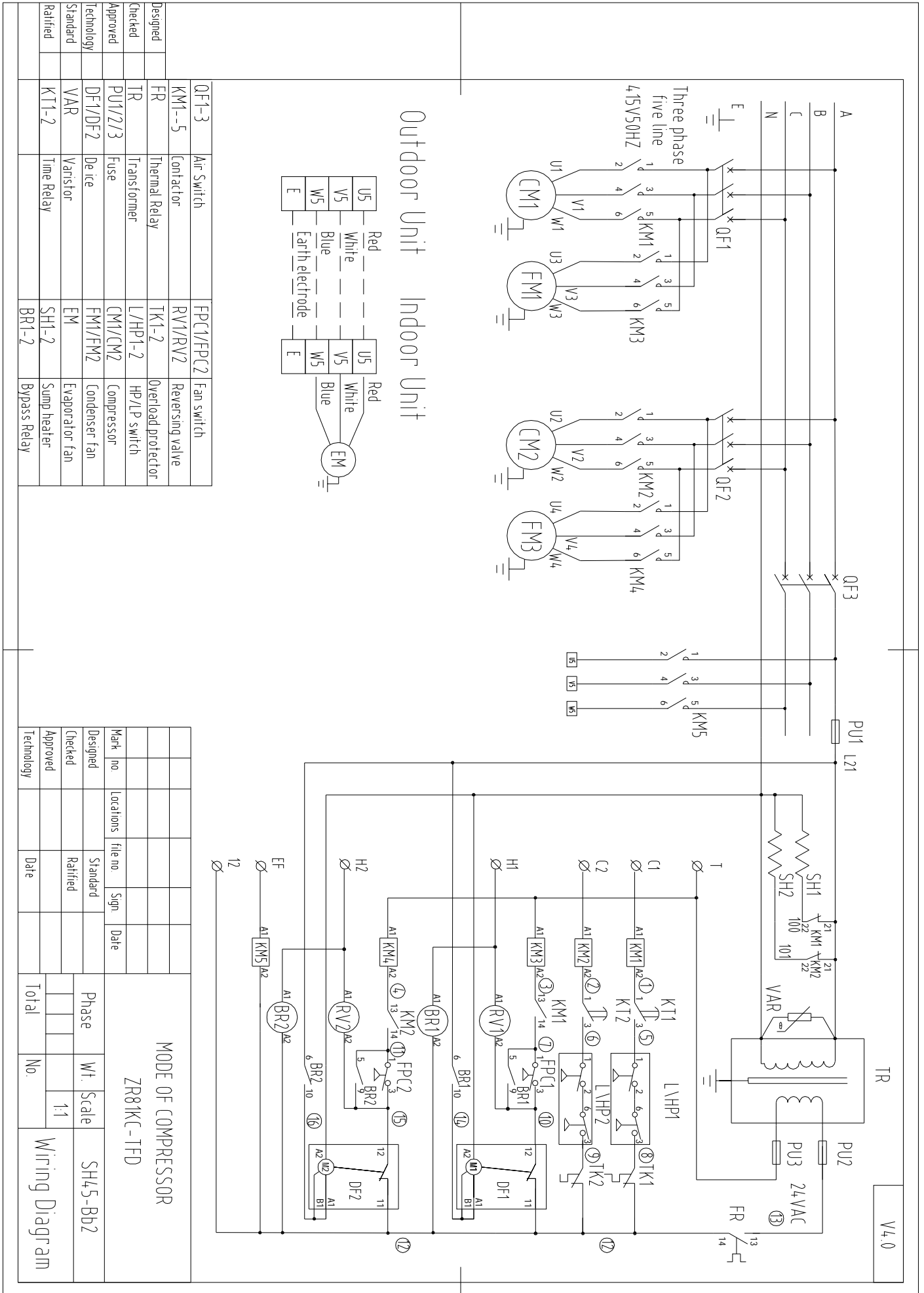


INDOOR UNIT INSTALLED WEIGHT 240 kg

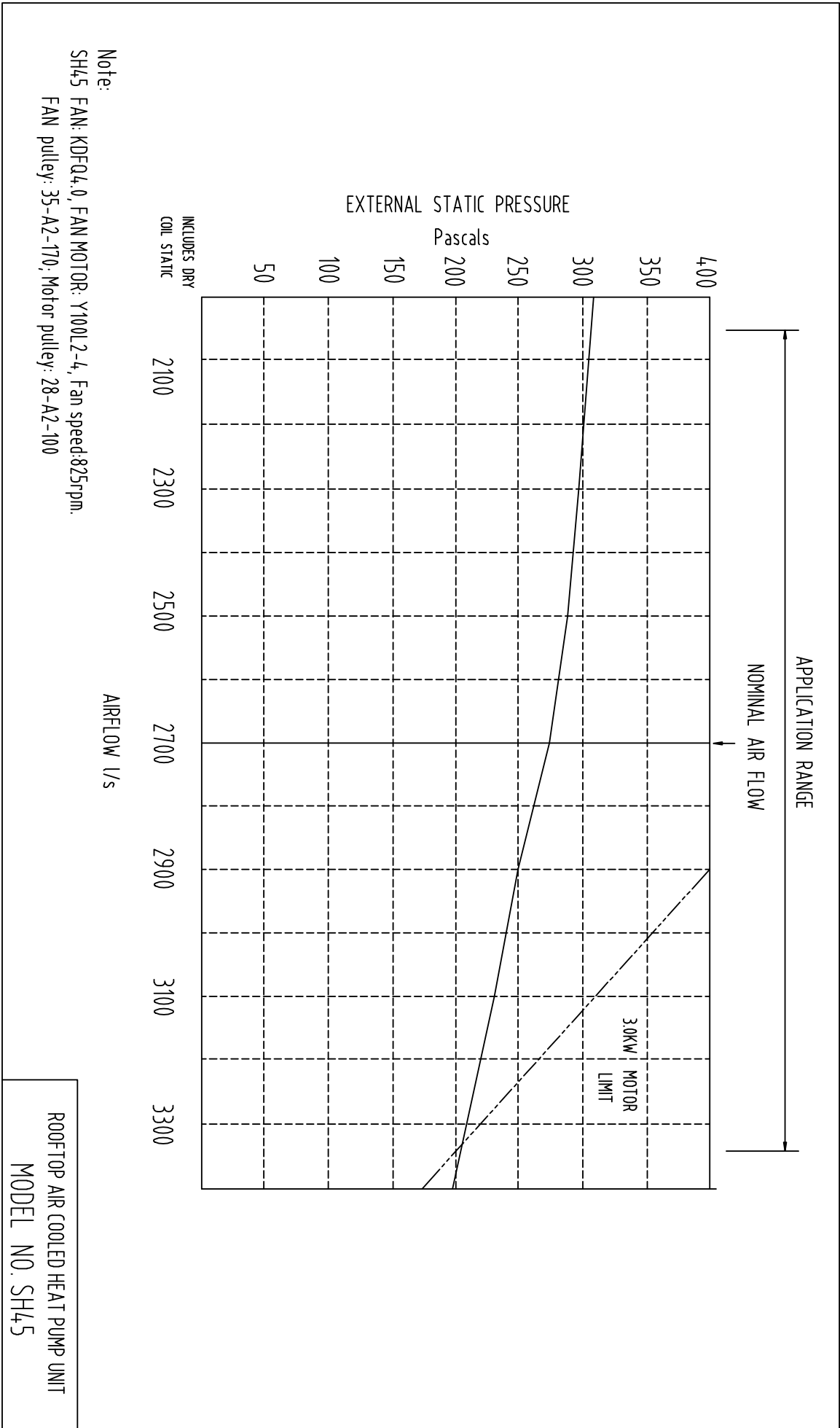
Fan : KDFQ4.0
 Motor: Y100L2-4 (2.2KW-4)
 Fan pulley: 35-A2-170
 Motor pulley: 28-A2-100
 Fan speed: 825rpm

For units with
R410a/R407C/R22

DRAWN BY: Chen Cheng	DATE: 7th Jan.10		
APPROVED Q.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Split System Air Cooled Heat Pump Unit	
MODEL: SHS45NBb2		SHEET SIZE: A4	
DRAWING NO.: 01	ISSUE: 01	SH TYPE	



MODE OF COMPRESSOR			
ZR8KC-TFD			
Mark no.	Locations	file no.	Sign
Designed		Standard	
Checked		Ratified	
Approved			
Technology		Date	
Phase		Wt. Scale	SH45-Bb2
Total		No.	Wiring Diagram

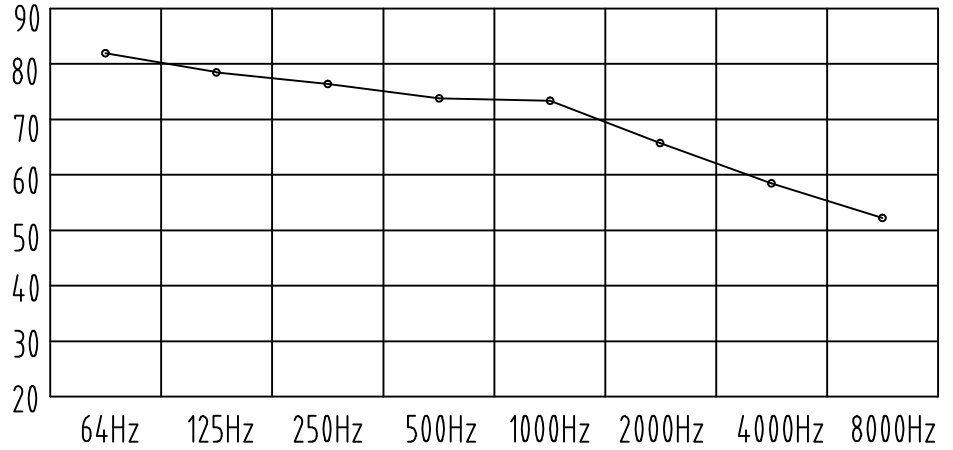


SH45W Noise rate analysing chart

A Class: 76.2dB

Hz	dB
64Hz	81.4
125Hz	78.6
250Hz	76.5
500Hz	72.5
1000Hz	72.4
2000Hz	66.3
4000Hz	58.6
8000Hz	52.2

Noise rate analysing chart (A Class: 76.2dB) dB



SH45N Noise rate analysing chart

A Class: 72.2dB

Hz	dB
64Hz	80.3
125Hz	78.4
250Hz	71.8
500Hz	68.1
1000Hz	67.4
2000Hz	63.4
4000Hz	59.6
8000Hz	54.6

Noise rate analysing chart (A Class: 72.2dB) dB

