



**DUNNAIR**  
(Aust) Pty Ltd

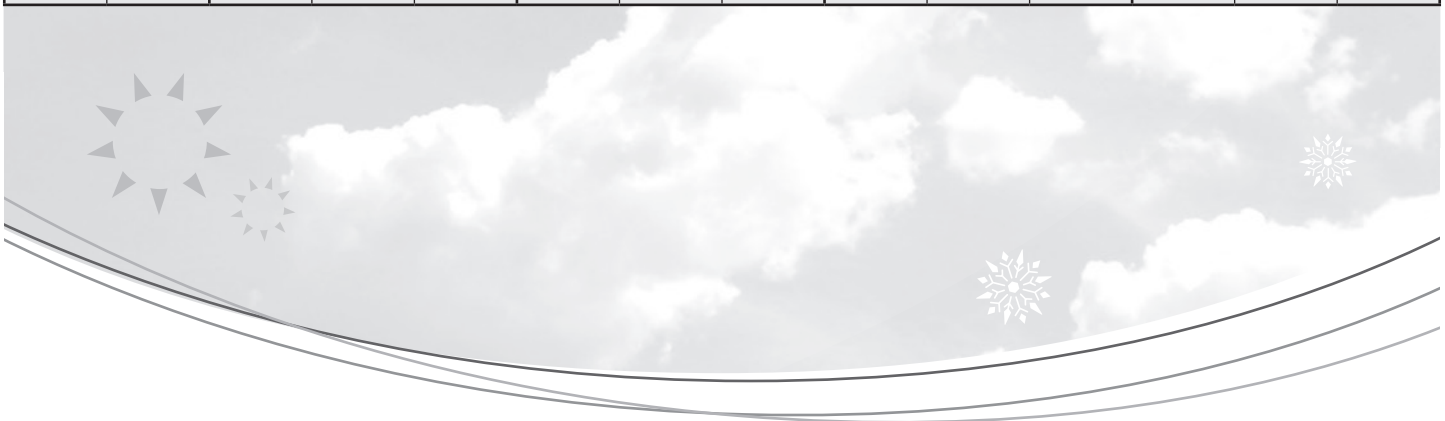
R407c Refrigerant

**SH160**

**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	153.1	94.6	10.9	145.3	91.4	11.2	136.9	87.8	11.6	131.1	87.8	11.8
	18	158.6	85.4	11.5	150.4	81.9	12.3	141.5	78.1	12.6	136.0	75.7	12.9
	19	164.3	75.7	13.2	155.9	72.3	13.5	146.8	68.4	13.9	141.1	66.2	14.1
	20	170.6	65.6	14.1	161.7	61.9	14.5	152.1	58.0	14.9	146.8	55.7	15.2
23	17	153.8	113.1	10.8	145.9	109.9	11.2	137.5	106.2	11.5	131.7	103.9	11.8
	18	158.6	103.7	11.9	150.4	100.2	12.2	141.5	96.4	12.6	136.0	93.9	12.9
	19	164.3	93.9	13.0	155.7	90.6	13.4	146.6	86.9	13.8	141.1	84.5	14.1
	20	170.4	83.9	14.1	161.7	80.2	14.5	152.1	76.3	14.9	146.6	74.0	15.1
	21	177.0	73.8	15.1	167.7	70.1	15.5	157.7	66.0	15.9	152.3	63.6	16.2
25	17	155.3	130.1	10.7	147.3	126.4	11.0	139.0	122.6	11.4	137.3	120.0	11.7
	18	159.0	125.8	12.0	150.8	119.3	12.3	142.0	115.5	12.7	136.4	113.1	13.0
	19	164.1	119.8	13.0	155.7	108.8	13.4	146.6	105.2	13.8	140.9	102.8	14.0
	20	170.4	112.9	14.1	161.5	98.7	14.5	151.9	94.6	14.9	146.6	92.5	15.1
	21	176.6	105.4	15.1	167.7	82.1	15.5	157.7	84.3	15.9	152.3	82.1	16.1
27	17	162.0	144.3	10.6	150.6	140.0	10.9	142.4	135.1	11.3	137.3	132.0	11.6
	18	163.5	141.1	11.8	152.3	137.6	12.1	143.5	133.8	12.5	139.5	131.4	12.7
	19	165.8	130.9	12.8	156.2	127.5	13.2	146.9	123.7	13.6	141.5	121.3	13.8
	20	170.6	121.7	14.0	161.5	118.1	14.3	151.9	114.2	14.7	146.6	112.1	14.9
	21	176.6	110.3	15.1	167.5	106.6	15.5	157.5	102.6	15.9	152.1	100.4	16.1
29	17	162.0	149.1	10.5	154.6	151.2	10.9	146.6	145.1	11.3	141.5	141.5	11.5
	18	163.5	146.6	11.7	155.5	148.8	12.1	146.9	144.3	12.5	141.5	141.5	12.7
	19	165.8	144.0	12.9	157.5	147.1	13.2	148.2	143.2	13.6	141.5	135.2	13.9
	20	170.6	139.6	14.0	161.7	135.9	14.3	152.1	131.6	14.8	146.8	129.7	15.0
	21	176.6	128.6	15.1	167.5	124.9	15.5	157.5	120.9	15.9	152.1	118.7	16.1
31	17	167.1	166.7	10.2	160.0	160.0	10.5	152.1	152.0	10.9	147.5	147.5	11.1
	18	168.0	164.7	11.5	160.2	159.6	11.8	152.1	152.0	12.2	147.5	147.5	12.5
	19	168.8	163.0	12.7	160.6	159.0	13.1	152.1	151.7	13.5	147.5	147.5	13.7
	20	171.7	158.7	13.9	163.0	155.2	14.3	150.8	149.8	14.7	148.0	147.1	15.0
	21	176.8	148.2	15.1	167.7	144.5	15.5	140.1	139.7	15.9	152.3	138.3	16.2



### Technical Specification SH160 Split Ducted Model

Indoor Unit Model Number	SH160N	Nominal Evaporator Air Flow (l/s)	8500
Outdoor Unit Model Number	SH160W	Number of Compressors	2
Total Cooling Capacity (kW)	156.2	Power V / Ph	415 / 3
Sensible Cooling Capacity (kW)	127.5	Nominal Max. Current (A)	140.2
Heating Capacity (kW)	152.5	Power Input (kW)	64.7
*Cooling cap entering air 27°/19°C (DB/WB) Ambient 35°C		** Heating cap entering air 21°C Outdoor ambient 7°C	

### Cooling Performance Correction

Capacity	% Rated Air Flow				
	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 Capacity

Amb. °C DB	0	4	8	12	18
Cap kW	119.2	131.6	152.5	167.6	201.6

Heating cap is based on 21°C DB. Frost formation will have greatest effect at amb 4 to 6°C. Above 8°C defrost is unlikely and a factor of 1 may be used.

### Heating Performance Correction

% Air Flow	×	Return Air Temp °C	×	O/door 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

### Compressors

Number Per Unit	2
Type	Hermetic Scroll
Nominal RPM	2900
Nominal Max. Amps	2 × 49.3
Locked Rotor Amps	2 × 270
Displacement (m³/h)	2 × 76.1

### Electrical Controls and Safeties

Indoor Fan Overload	Internal	Defrost Cycle Start °C	-4
Outdoor Fan Overload	Internal	Defrost Cycle End °C	10
Compressor Delay Timer	300 sec	Min. Defrost Cycle	33 mins
High Pressure Switch (kPa)	2800	Max. Defrost Period	4 mins
Low Pressure Switch (kPa)	100		

### Standard Features

HP/LP Cutouts	Thermal Overload Protection
Crankcase Heater	Limit Start Timer
Automatic De-Ice	Indoor 25mm Insulation
Gas Separator	240 Volt Control

### Evaporator Coil

Type	Copper tube alum. fins
Face Area (m²)	3.1

### Condenser Coil

Type	Copper tube alum. fins
Face Area (m²)	2 × 1.8

### Evaporator Fan

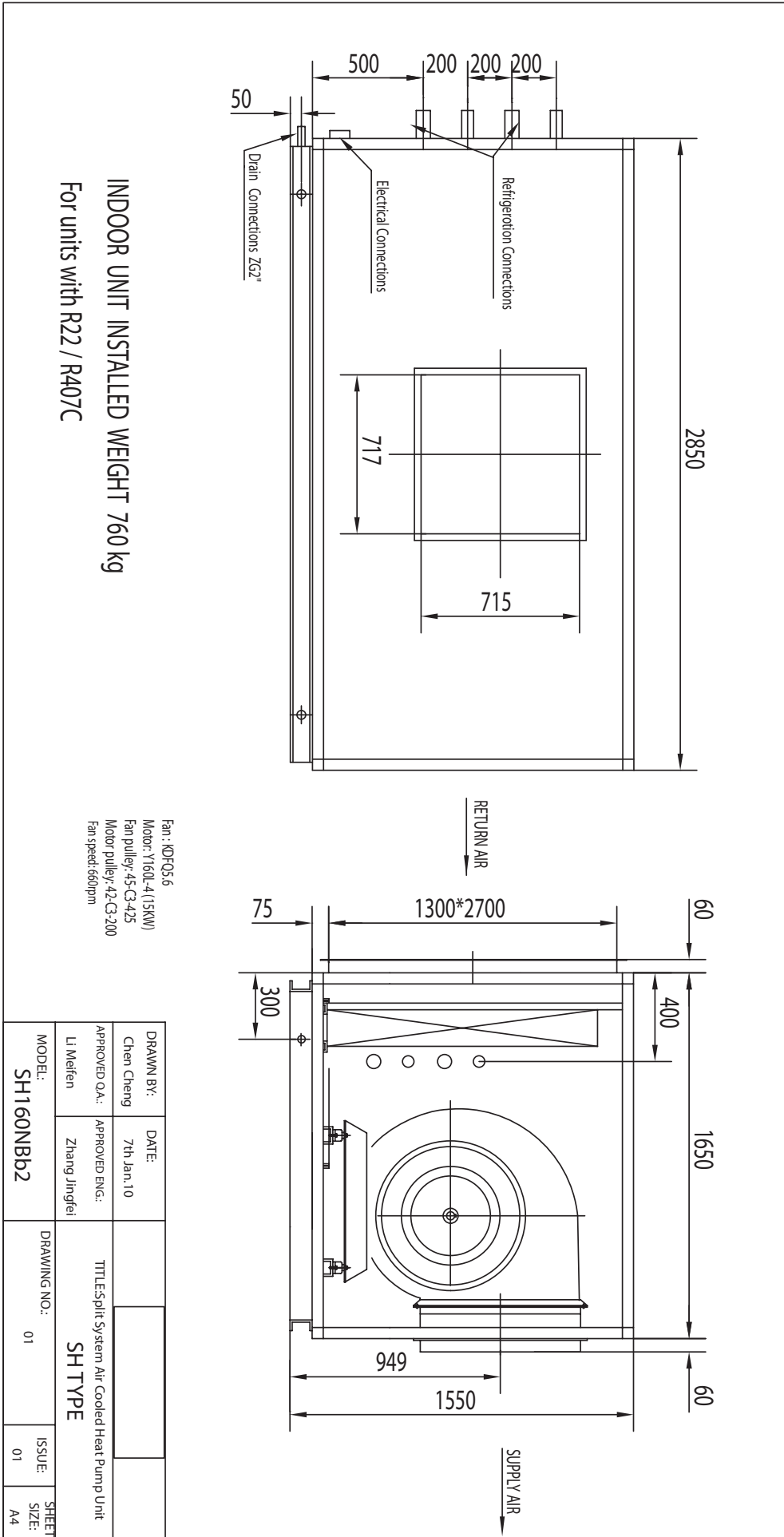
Number of Fans	1
Type	Centrifugal
Drive	Belt
Motor V / Ph / Hz	415 / 3 / 50
Motor Output Power (kW)	15
Max. Fan Speed (rpm)	660

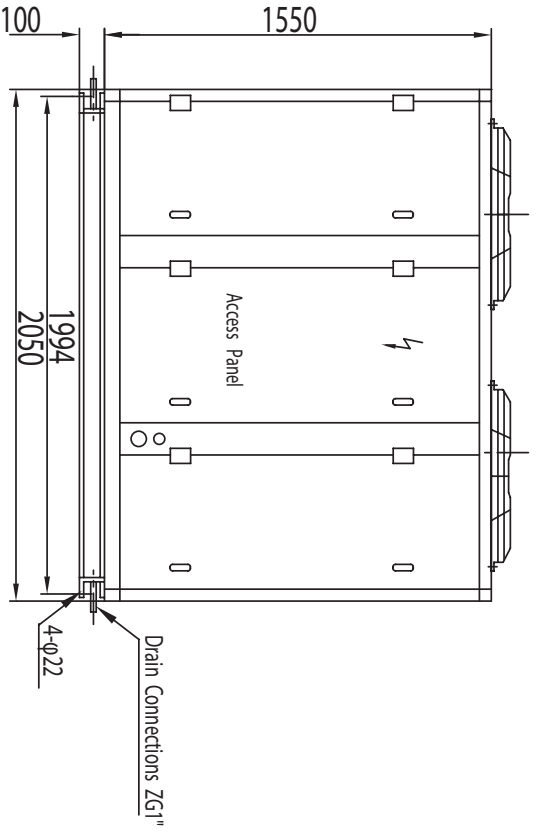
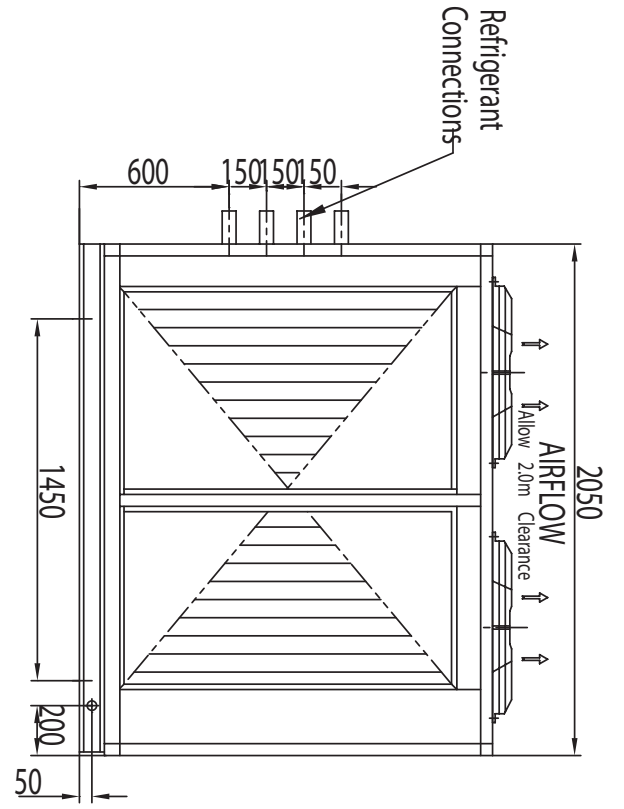
### Condenser Fan

Number of Fans	4
Type	Axial
Drive	Direct
Motor Output Power (kW)	4 × 0.75
Motor V / Ph / Hz	415 / 3 / 50

### Refrigerant System

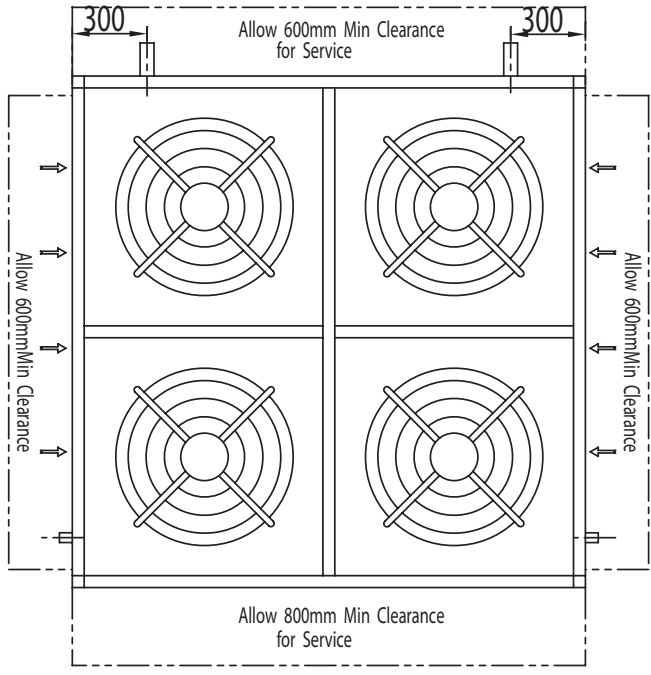
Refrigerant Type	R407c
Nominal Charge Required	2 × 18.8kg
Line Size (mm)	
Liquid 0–15 metres	28
Gas 0–15 metres	41
Liquid 15–30 metres	28
Gas 15–30 metres	42
Service Connection	Rotor Lock Valve
Expansion Control	TX Valve





SIDE ELEVATION

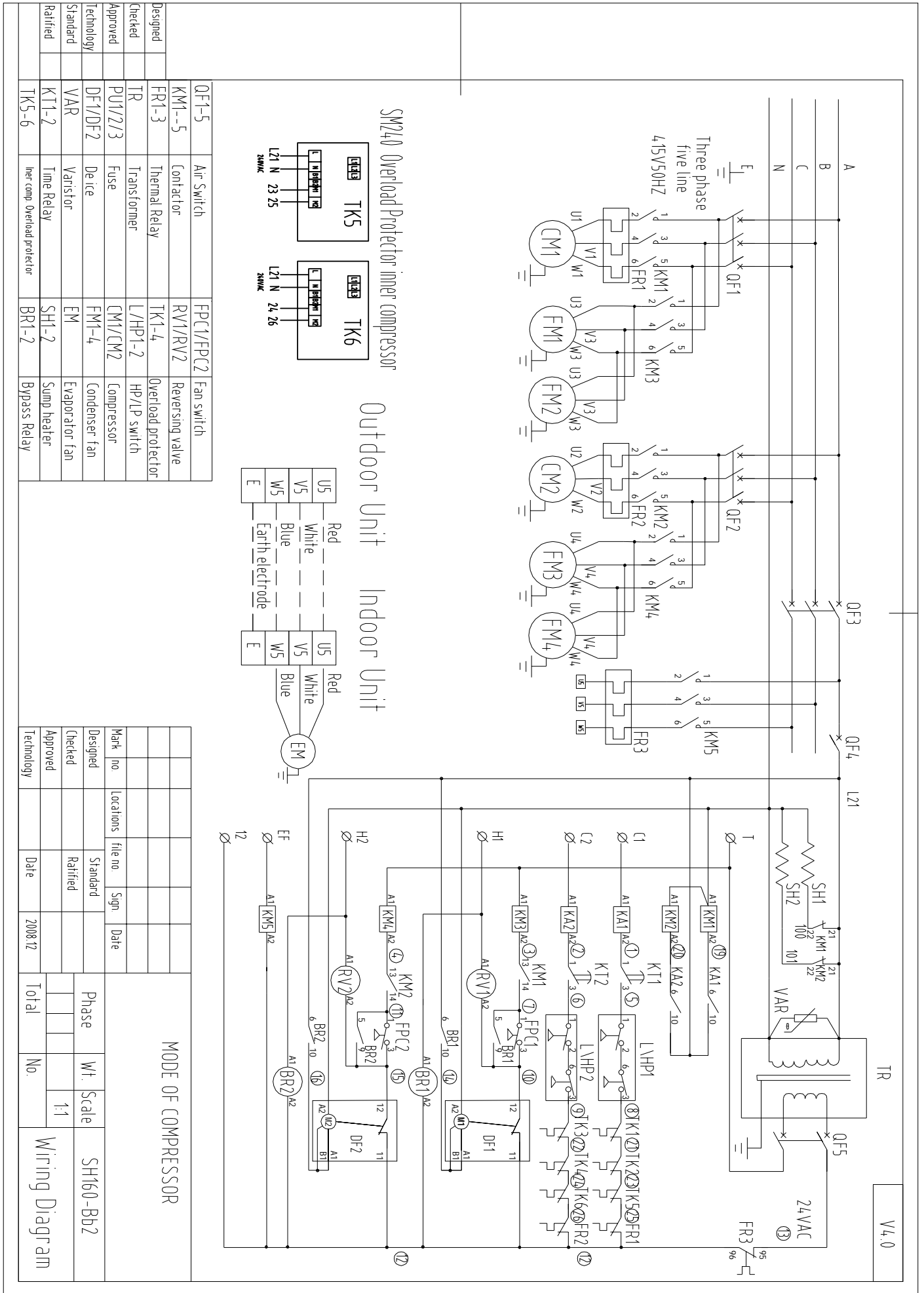
RERA VIEW

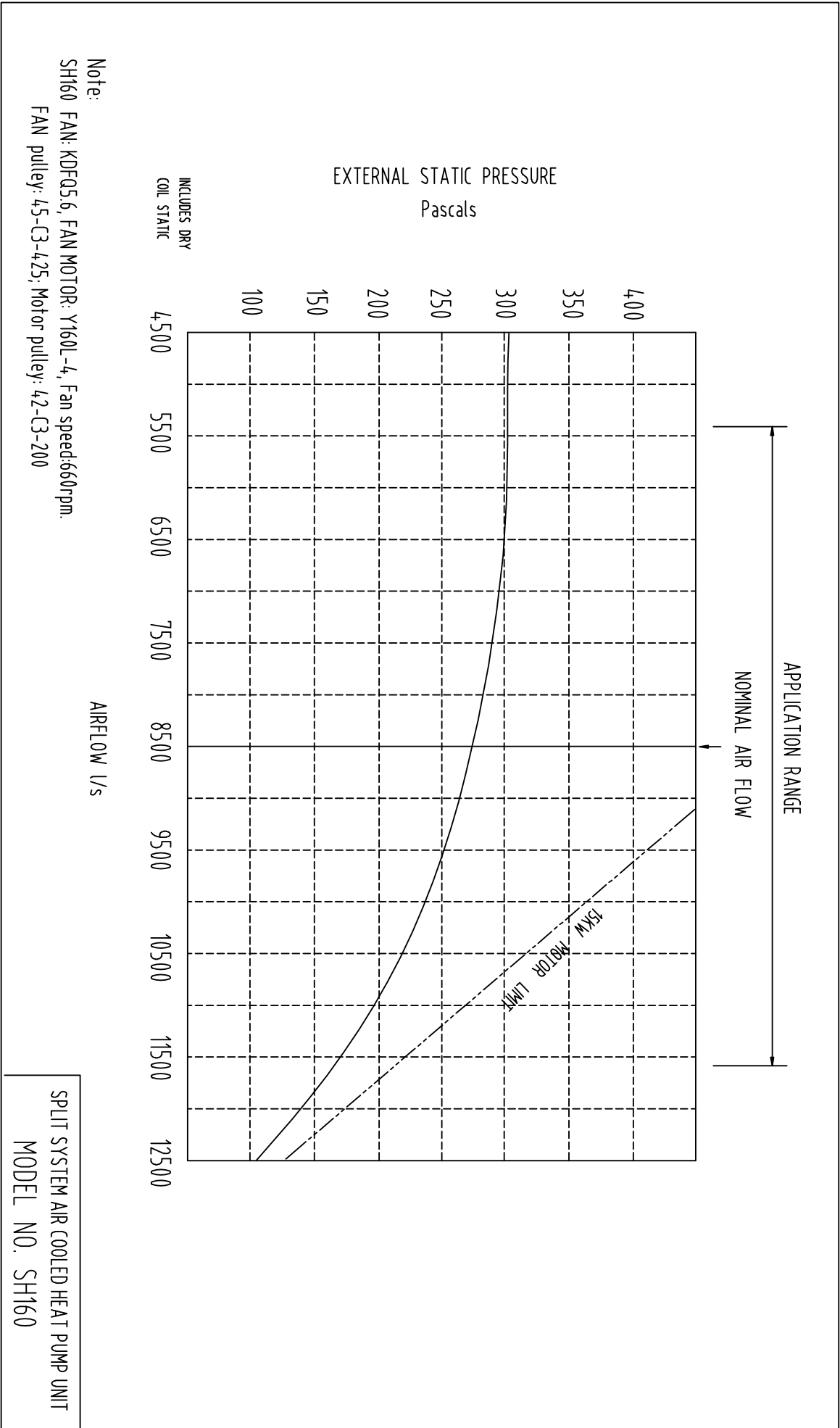


PLAN VIEW

**OUTDOOR UNIT INSTALLED WEIGHT 1250 kg**  
**For units with R22 / R407C**

DRAWN BY: Chen Cheng	DATE: 7th Jan.10	TITLE: Split System Air Cooled Heat Pump Unit
APPROVED QA: Li Meifen	APPROVED ENG.: Zhang Jingfei	<b>SH TYPE</b>
MODEL: SH160WBb2	DRAWING NO.: 01	ISSUE: 01
		SHEET SIZE: A4



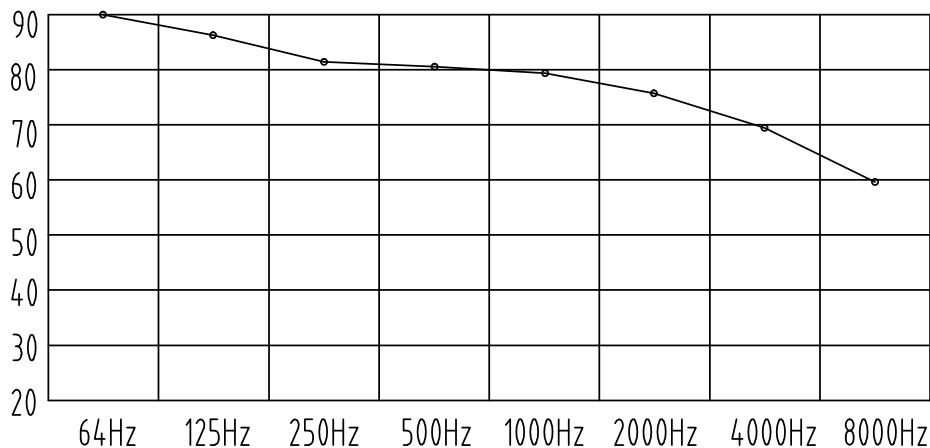


SH160W Noise rate analysing chart

A Class: 83.7dB

Hz	dB
64Hz	90.0
125Hz	86.5
250Hz	82.2
500Hz	80.4
1000Hz	79.2
2000Hz	76.2
4000Hz	69.3
8000Hz	59.8

Noise rate analysing chart ( A Class: 83.7dB) dB



SH160N Noise rate analysing chart

A Class: 80.1dB

Hz	dB
64Hz	89.8
125Hz	84.2
250Hz	77.9
500Hz	76.1
1000Hz	74.9
2000Hz	72.9
4000Hz	69.4
8000Hz	60.1

Noise rate analysing chart ( A Class: 80.1dB) dB

