



DUNNAIR
(Aust) Pty Ltd

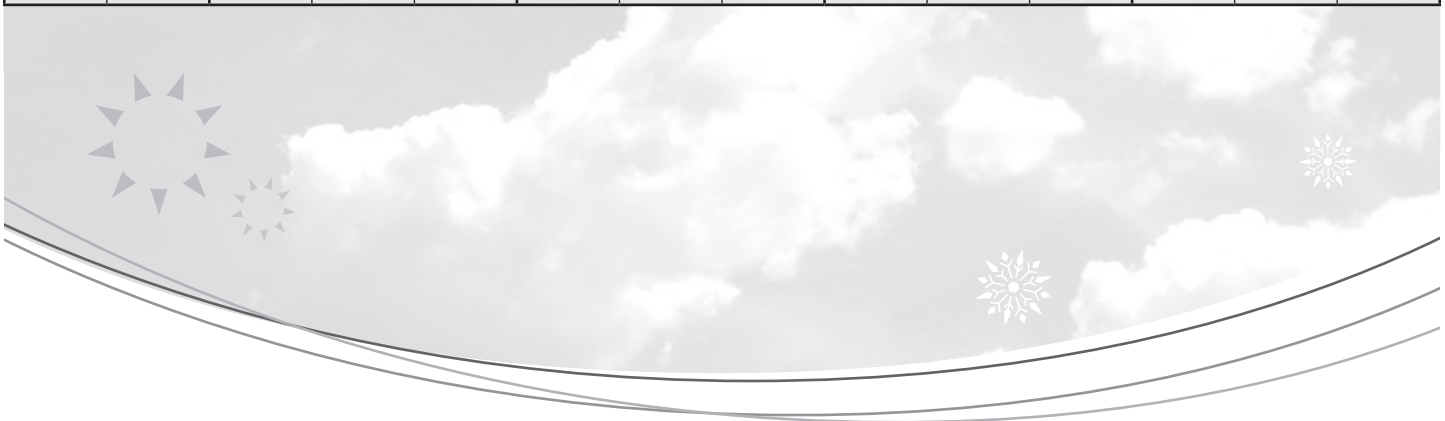
R407c Refrigerant

SH180

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	173.4	106.6	11.2	164.4	102.9	11.5	154.9	98.8	12.0	148.4	98.8	12.2
	18	179.5	96.2	11.8	170.2	92.3	12.7	160.3	87.9	13.0	154.0	85.3	13.3
	19	186.0	85.3	13.6	176.2	81.4	13.9	166.1	77.0	14.3	159.8	74.6	14.5
	20	192.6	73.9	14.5	182.8	69.7	14.9	171.8	65.4	15.4	165.8	62.7	15.7
23	17	174.1	127.4	11.1	165.0	123.8	11.5	155.7	119.7	11.8	149.1	117.0	12.2
	18	179.5	116.8	12.3	170.2	112.9	12.6	160.3	108.5	13.0	154.0	105.8	13.3
	19	183.0	105.8	13.4	176.3	102.0	13.8	166.2	97.9	14.2	159.8	95.2	14.5
	20	192.8	94.5	14.5	182.8	90.3	14.9	171.8	86.0	15.4	165.9	83.3	15.6
	21	199.8	83.1	15.6	189.6	79.0	16.0	178.5	74.4	16.4	172.1	71.7	16.7
25	17	175.8	146.5	11.0	166.8	142.4	11.3	157.4	138.1	11.8	151.3	135.2	12.1
	18	179.9	141.7	12.4	170.7	134.4	12.7	160.8	130.1	13.1	154.5	127.4	13.4
	19	186.5	134.9	13.4	176.3	122.6	13.8	166.2	118.5	14.2	159.9	115.8	14.4
	20	192.8	127.2	14.5	182.9	111.2	14.9	171.9	106.5	15.4	165.9	104.2	15.6
	21	199.9	118.7	15.6	189.6	92.6	16.0	178.5	94.9	16.4	172.1	92.6	16.6
27	17	178.6	162.5	10.9	170.5	157.7	11.2	161.2	152.2	11.6	155.4	148.7	12.0
	18	182.1	158.9	12.2	172.4	155.0	12.5	162.5	150.7	12.9	157.9	148.0	13.1
	19	187.7	147.4	13.2	176.8	143.6	13.6	166.3	139.2	14.0	160.3	136.6	14.2
	20	193.0	137.1	14.4	182.9	133.0	14.7	171.9	128.7	15.1	165.9	126.2	15.4
	21	199.9	124.3	15.6	189.7	120.1	16.0	178.5	115.5	16.4	172.2	113.1	16.6
29	17	183.4	168.0	10.8	175.1	170.3	11.2	165.9	163.5	11.6	159.1	159.1	11.8
	18	185.1	165.1	12.1	176.1	167.6	12.5	166.3	162.5	12.9	160.3	155.1	13.1
	19	187.7	162.3	13.3	178.2	165.7	13.6	167.8	161.3	14.0	160.9	152.2	14.3
	20	193.0	157.2	14.4	183.1	153.0	14.7	172.2	148.3	15.2	166.1	146.1	15.5
	21	199.9	144.8	15.6	189.7	140.7	16.0	178.5	136.1	16.4	172.2	133.7	16.6
31	17	189.2	187.7	10.5	181.2	180.5	10.8	171.5	171.5	11.2	166.2	166.2	11.4
	18	190.1	185.5	11.8	181.4	179.7	12.2	172.2	171.4	12.6	167.1	166.2	12.9
	19	191.1	183.6	13.1	182.1	179.0	13.5	172.2	170.9	13.9	167.1	166.1	14.1
	20	194.3	178.8	14.3	184.6	174.9	14.7	173.6	168.7	15.1	167.5	165.7	15.5
	21	200.1	166.9	15.6	189.9	162.8	16.0	178.5	165.1	16.4	172.4	155.8	16.7



Technical Specification SH180 Split Ducted Model

Indoor Unit Model Number	SH180N	Nominal Evaporator Air Flow (l/s)	9500
Outdoor Unit Model Number	SH180W	Number of Compressors	2
Total Cooling Capacity (kW)	176.8	Power V / Ph	415 / 3
Sensible Cooling Capacity (kW)	143.6	Nominal Max. Current (A)	170.2
Heating Capacity (kW)	169.4	Power Input (kW)	71.4
*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	132.4	146.0	169.4	186.0	223.8

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	49.3 / 57.7
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

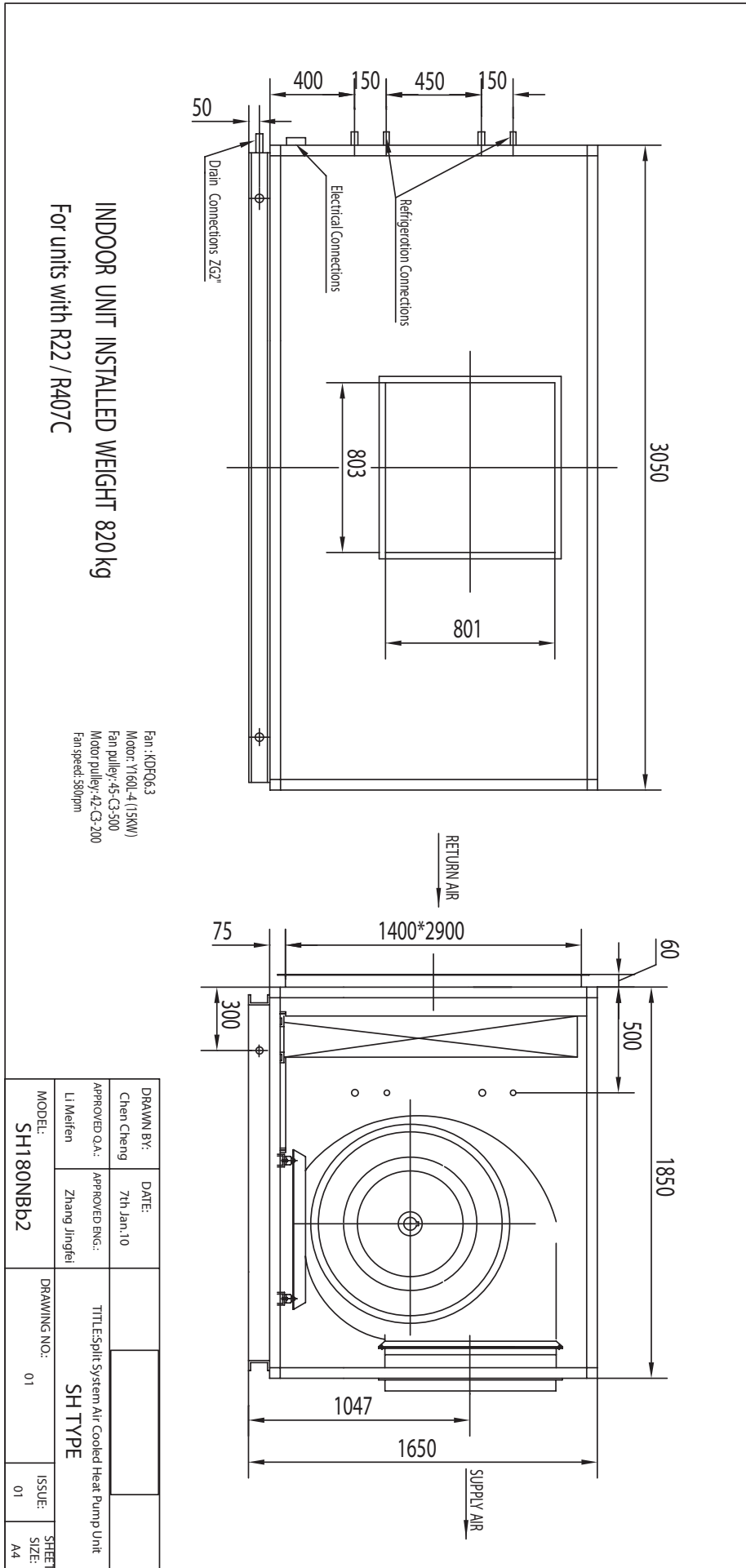
Type	Copper tube alum. fins
Face Area (m²)	3.6

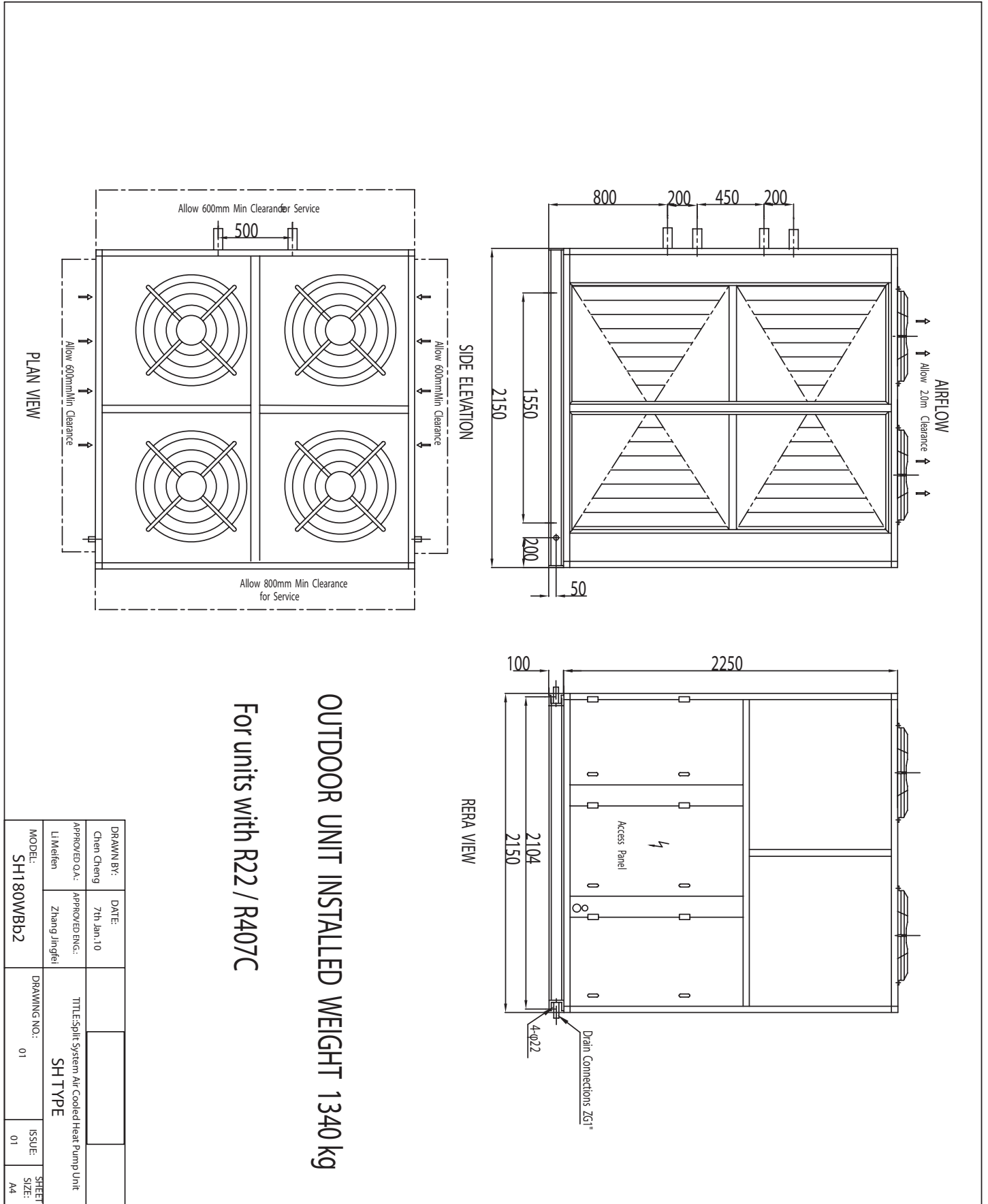
Type	Copper tube alum. fins
Face Area (m²)	2 × 1.88

Number of Fans	1
Type	Centrifugal
Drive	Belt
Motor V / Ph / Hz	415 / 3 / 50
Motor Output Power (kW)	15
Max. Fan Speed (rpm)	580

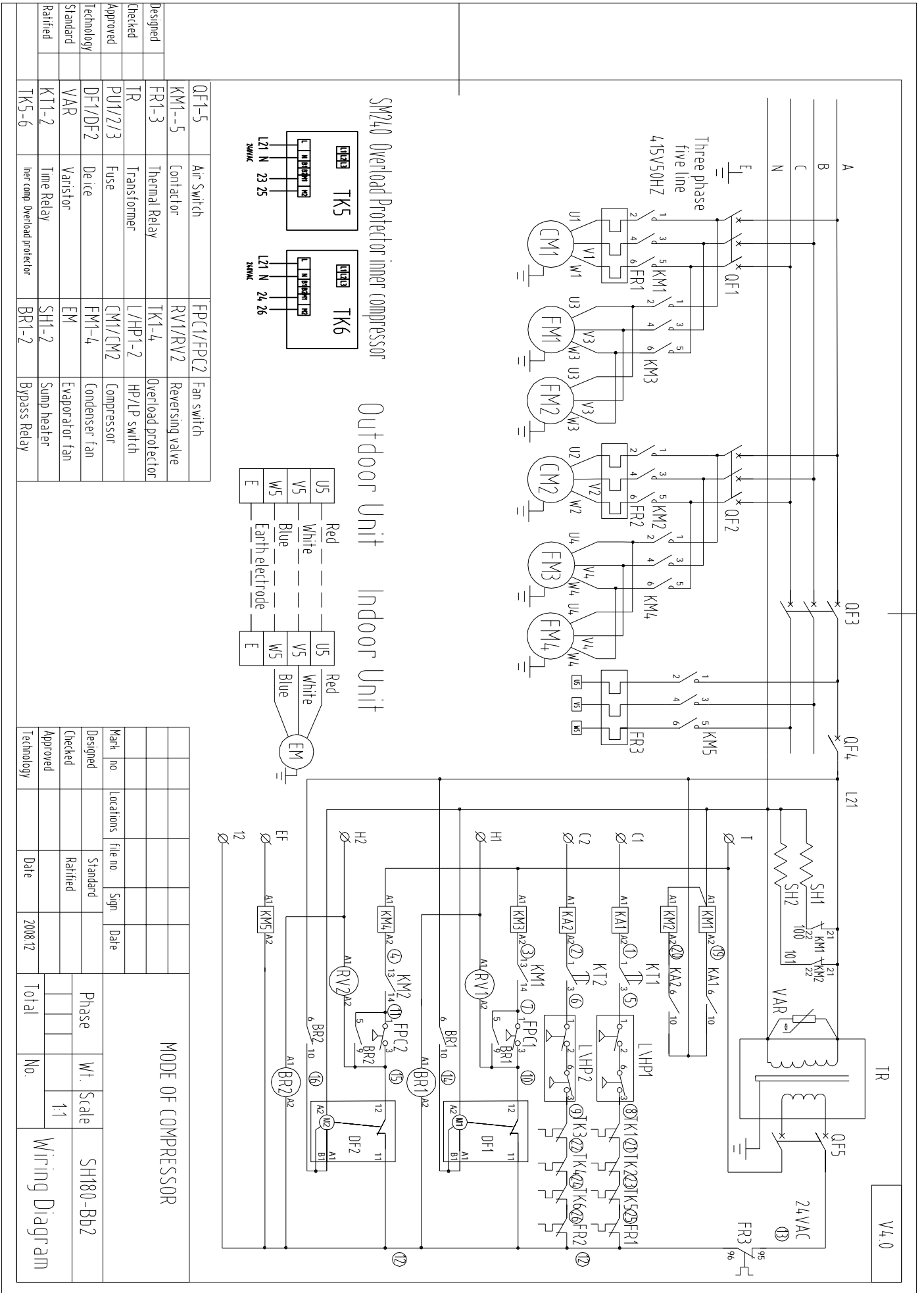
Number of Fans	4
Type	Axial
Drive	Direct
Motor Output Power (kW)	4 × 1.5
Motor V / Ph / Hz	415 / 3 / 50

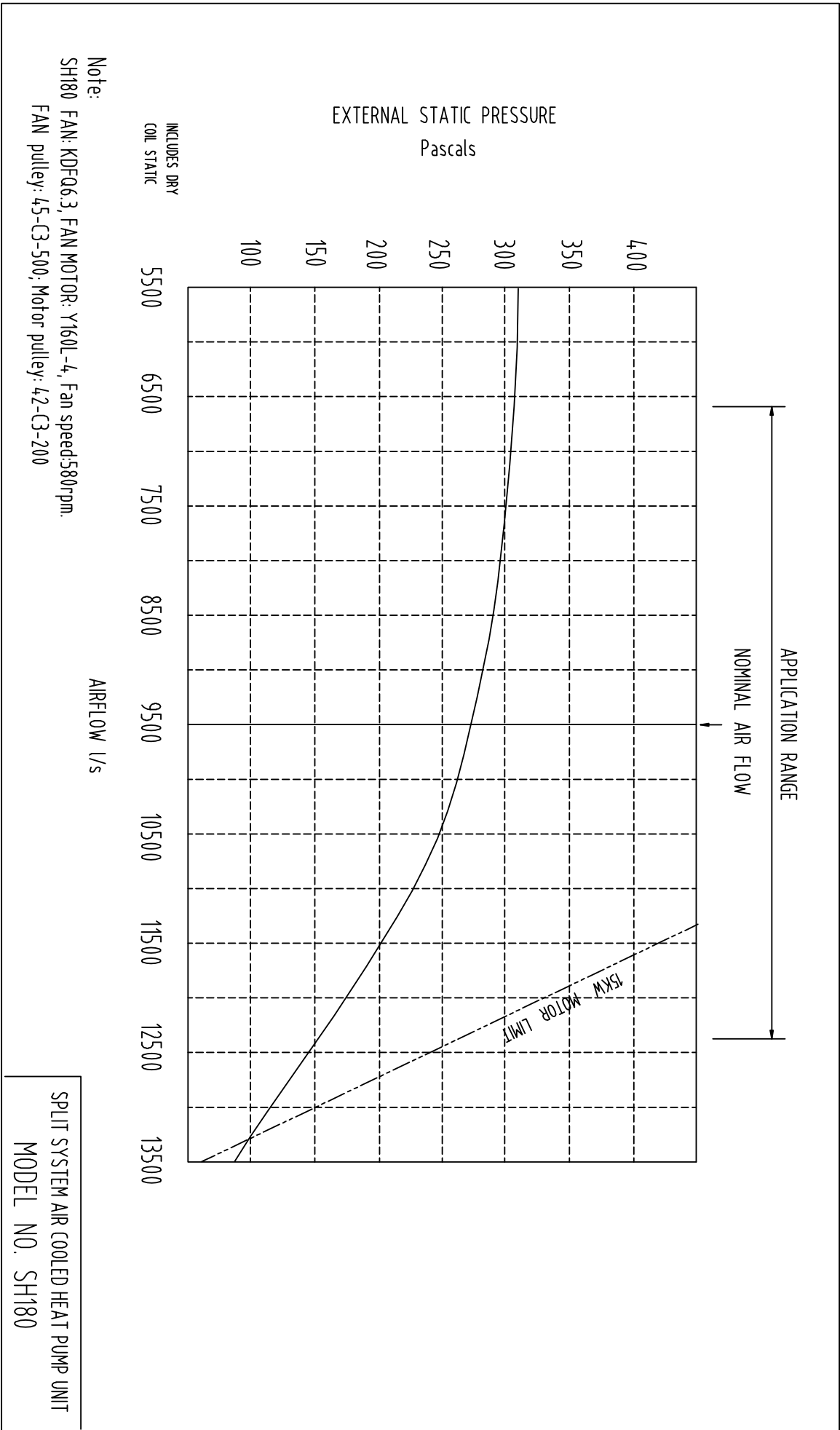
Refrigerant Type	R407c
Nominal Charge Required	18.8 / 25.4kg
Line Size (mm)	
Liquid 0–15 metres	28
Gas 0–15 metres	41
Liquid 15–30 metres	28
Gas 15–30 metres	35
Service Connection	Rotor Lock Valve
Expansion Control	TX Valve





DRAWN BY: Chen Cheng	DATE: 7th Jan.10		
APPROVED O.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Split System Air Cooled Heat Pump Unit	
MODEL: SH180WBB2	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4
SH TYPE			



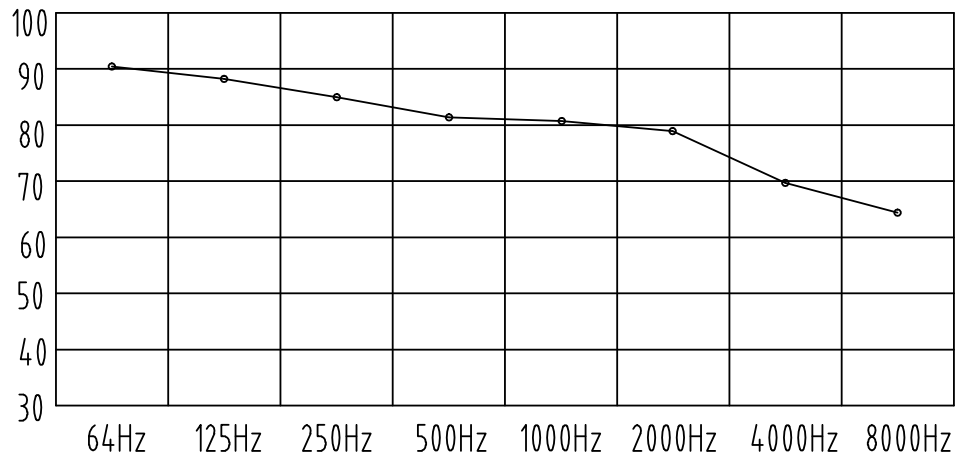


SH180W Noise rate analysing chart

A Class: 85.4dB

Hz	dB
64Hz	90.1
125Hz	87.8
250Hz	84.3
500Hz	82.1
1000Hz	80.6
2000Hz	78.2
4000Hz	69.8
8000Hz	64.1

Noise rate analysing chart (A Class: 85.4dB) dB



SH180N Noise rate analysing chart

A Class: 82.5dB

Hz	dB
64Hz	87.8
125Hz	84.6
250Hz	80.9
500Hz	78.4
1000Hz	78.8
2000Hz	73.1
4000Hz	71.4
8000Hz	64.1

Noise rate analysing chart (A Class: 82.5dB) dB

