



SH85

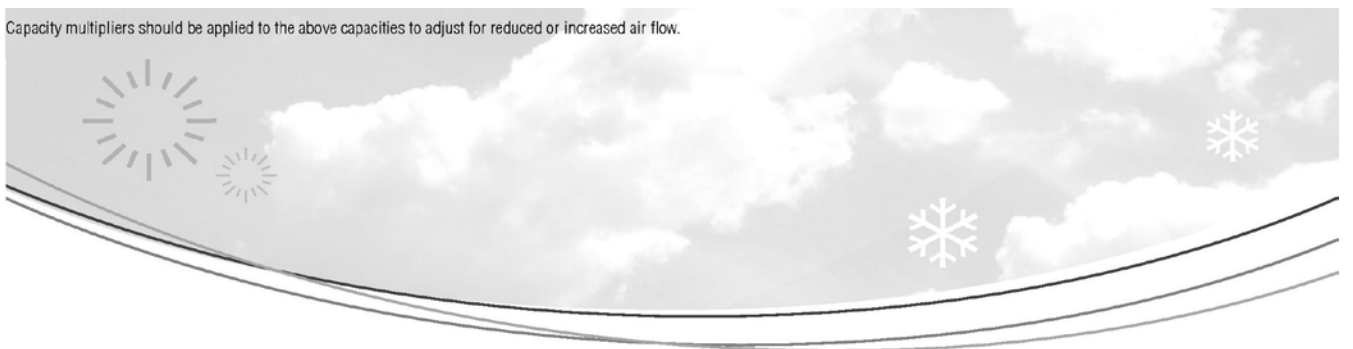
Split Ducted Model

R410A Refrigerant

PERFORMANCE DATA

INDOOR COIL ENTERING AIR TEMP °C		OUTDOOR COIL ENTERING 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	82.1	64.5	10.4	78.1	62.5	10.7	73.1	60.5	11.1	69.8	58.5	11.3
	18	82.6	54.1	11.0	78.6	52.1	11.8	73.6	50.1	12.1	70.3	48.1	12.4
	19	85.6	46.2	12.7	81.6	44.2	13.0	76.6	42.2	13.4	73.3	40.2	13.6
	20	86.1	41.6	13.6	82.1	39.6	14.0	77.1	37.6	14.4	73.8	35.6	14.7
23	17	83.1	64.5	10.3	79.1	62.5	10.7	74.9	60.5	11.0	71.6	58.5	11.3
	18	83.6	64.1	11.3	79.6	62.1	11.7	74.6	60.1	11.6	71.3	58.1	12.4
	19	86.6	56.2	12.6	82.6	54.2	13.0	77.6	52.5	13.4	74.3	50.5	13.7
	20	87.1	51.6	13.7	83.1	49.6	14.1	78.3	47.6	14.5	75	45.6	14.7
	21	87.8	44.5	14.6	83.8	42.5	15.1	78.8	40.5	15.5	75.5	45.6	15.8
25	17	85.1	72.5	10.3	81.1	70.5	10.6	76.1	68.5	11.0	72.8	66.5	11.3
	18	85.6	72.1	11.5	81.6	70.1	11.9	76.5	68.1	12.3	73.2	66.1	12.8
	19	88.6	64.2	12.6	84.6	62.2	13.0	79.6	60.2	13.4	76.3	58.2	13.7
	20	89.1	59.6	13.7	85.1	57.6	14.1	80.1	55.6	14.5	76.8	53.6	14.7
	21	90.8	52.5	14.8	86.8	50.5	15.1	81.8	48.5	15.5	78.5	46.5	15.7
27	17	87.1	78.5	10.3	83.1	76.5	10.6	78.3	74.5	11.0	75	72.5	11.3
	18	87.6	78.1	11.5	83.6	76.1	11.8	78.6	74.1	12.2	75.3	72.1	12.4
	19	90.6	70.2	12.5	86.6	68.2	12.9	81.6	66.2	13.3	78.3	64.2	13.5
	20	91.1	65.6	13.7	87.1	63.6	14.0	82.1	61.6	14.4	78.8	59.6	14.6
	21	92.8	58.5	14.8	88.8	56.5	15.2	83.8	54.5	15.6	80.5	52.5	15.8
29	17	89.1	84.5	10.1	85.1	82.5	10.5	80.1	76.5	10.9	76.8	74.5	11.1
	18	89.6	84.1	11.3	85.6	82.1	11.7	83.6	76.4	12.1	80.3	74.4	12.3
	19	92.6	76.2	12.5	88.6	74.2	12.8	86.6	72.2	13.2	83.3	70.2	13.4
	20	93.1	71.6	13.6	89.1	69.6	13.9	87.1	66.6	14.4	83.8	64.6	14.6
	21	94.8	64.5	14.7	90.8	62.5	15.1	88.8	60.5	15.5	85.8	58.5	15.7
31	17	91.1	89.5	9.6	87.1	85.5	10.2	85.1	82.5	10.6	81.8	80.5	10.8
	18	91.6	88.1	11.2	87.6	86.1	11.5	85.7	79.5	11.7	82.4	77.5	12.1
	19	94.6	81.2	12.4	90.6	79.2	12.8	88.6	77.2	13.1	85.3	75.2	13.3
	20	95.1	76.6	13.5	91.1	74.6	14.0	89.1	72.6	14.3	85.8	70.6	14.6
	21	96.8	68.5	14.7	92.8	66.5	15.1	90.8	64.5	15.5	87.5	62.5	15.9

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



Technical Specification SH85 Split Ducted Model

Indoor Unit Model Number	SH85N	Nominal Evaporator Air Flow (l/s)	4500
Outdoor Unit Model Number	SH85W	Number of Compressors	2
Total Cooling Capacity (kW)*	86.6	Power Requirements (Volt /Phase)	415 / 3
Sensible Cooling Capacity (kW)*	68.2	Normal Max. Current (Amps /Phase)	63.2
Heating Capacity (kW) **	87.1	Power Input (kW)	29.3
*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 4300 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)	49.1	54.2	62.8	69.0	83.0

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 - 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 x 28.8
Locked Rotor Current (amps /phase)	N/A *
Displacement (m ³ /h)	2 x 29.8

Electrical Controls and Safeties

High Pressure Switch (Setting kPa)	4000	Defrost	
Low Pressure Switch (Setting kPa)	300	Initiation Temperature (°C)	-2
Indoor Fan Overload	Internal	Termination Temperature (°C)	18
Outdoor Fan Overload	Internal	Min. Period Between De-Ice (min)	30
Compressor Delay Timer	300 sec	Max De-Ice Period (min)	10

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 Coil

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	1.62
Air Quantity (l/s)	4500

Evaporator Fan

Number of Fans	1
Type	Centrifugal
Drive	Belt
Motor Voltage /Phase /Frequency	415 / 3 / 50
Motor Power (kW)	5.5
Maximum Fan Speed (rpm)	758

Electrical

Power Requirements	3 phase / 415V / 50Hz
Normal Max. Current (Amps /Phase)	63.2

Condenser Coil

Type	Copper Tube / Aluminium Fins
Face Area (m ²)	2 x 1.37

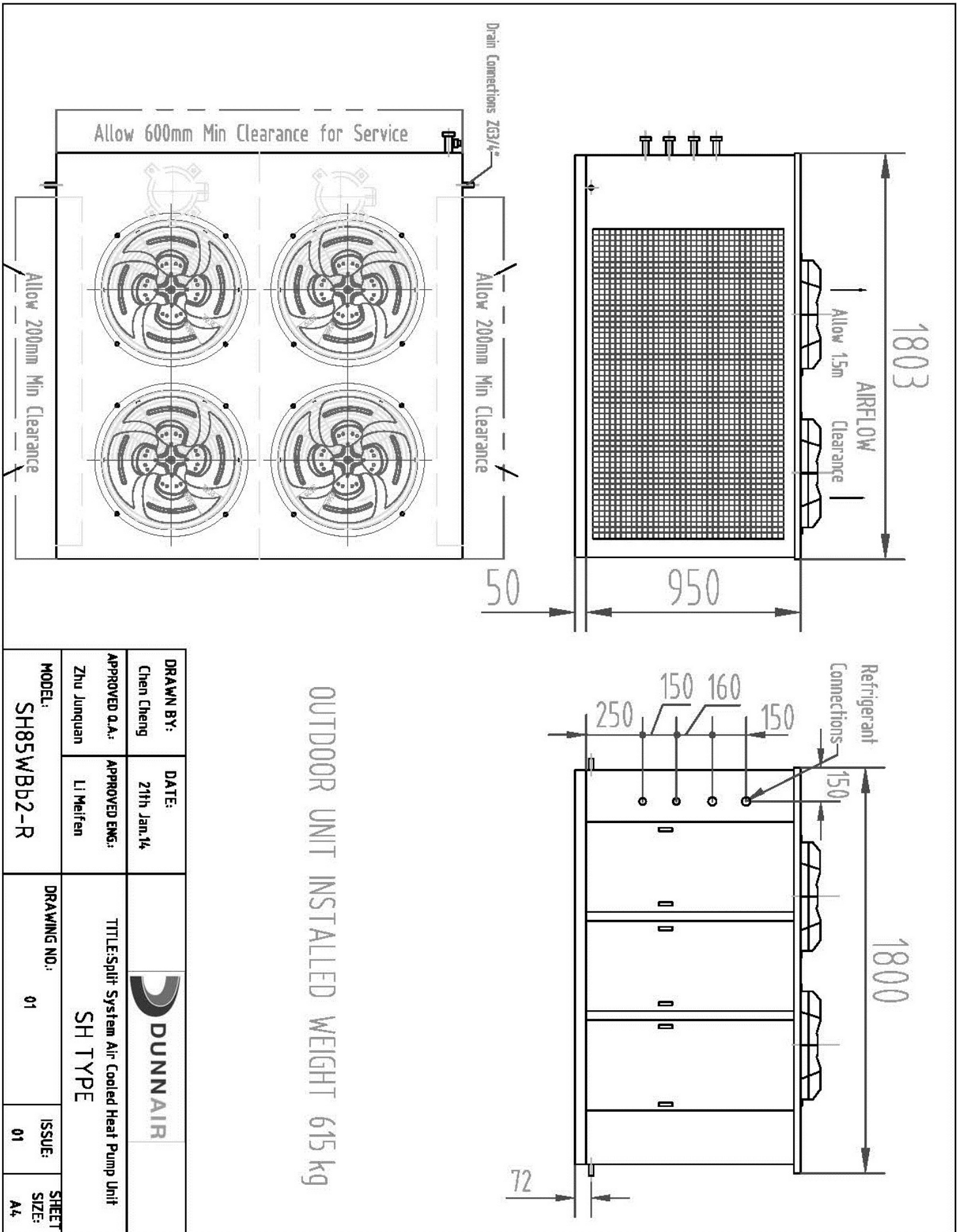
Condenser Fan

Number of Fans	4
Type	Axial
Drive	Direct
Motor Watts /rpm	4 x 370 / 950
Motor Voltage /Phase /Frequency	415 / 3 / 50


Refrigeration System

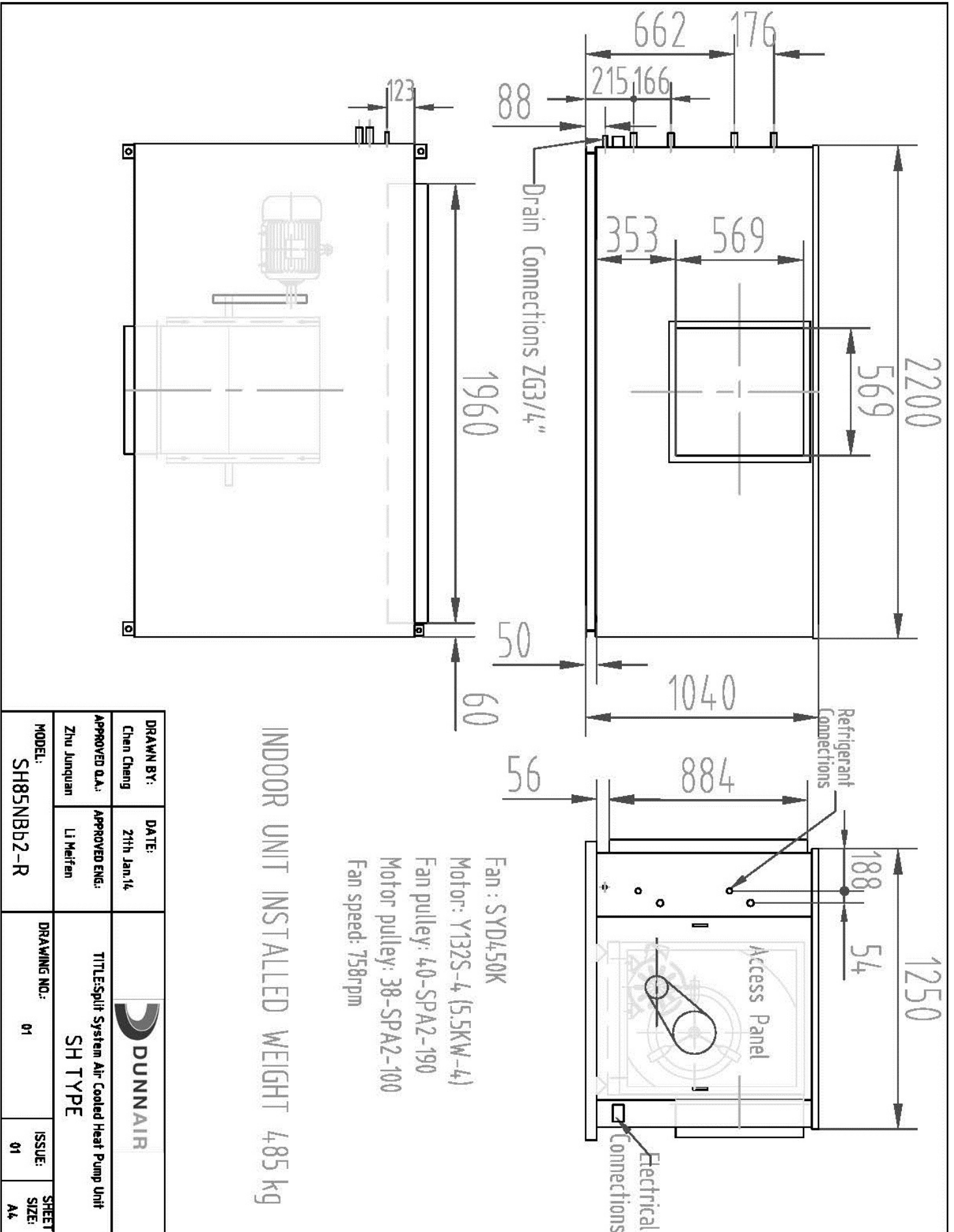
Refrigerant Type	R410A
Charge (kg)	2 x 10.0
Service Connections	Rotor Lock Valves
Expansion Control - In / Outdoor Unit	TX Valve
Line Size (mm)	
Liquid Line 0 - 15 Meters	22 (7/8")
Gas 0 Line - 15 Meters	29 (1 1/8")
Liquid Line 15 - 30 Meters	29 (1 1/8")
Gas Line 15 - 30 Meters	35 (1 3/8")

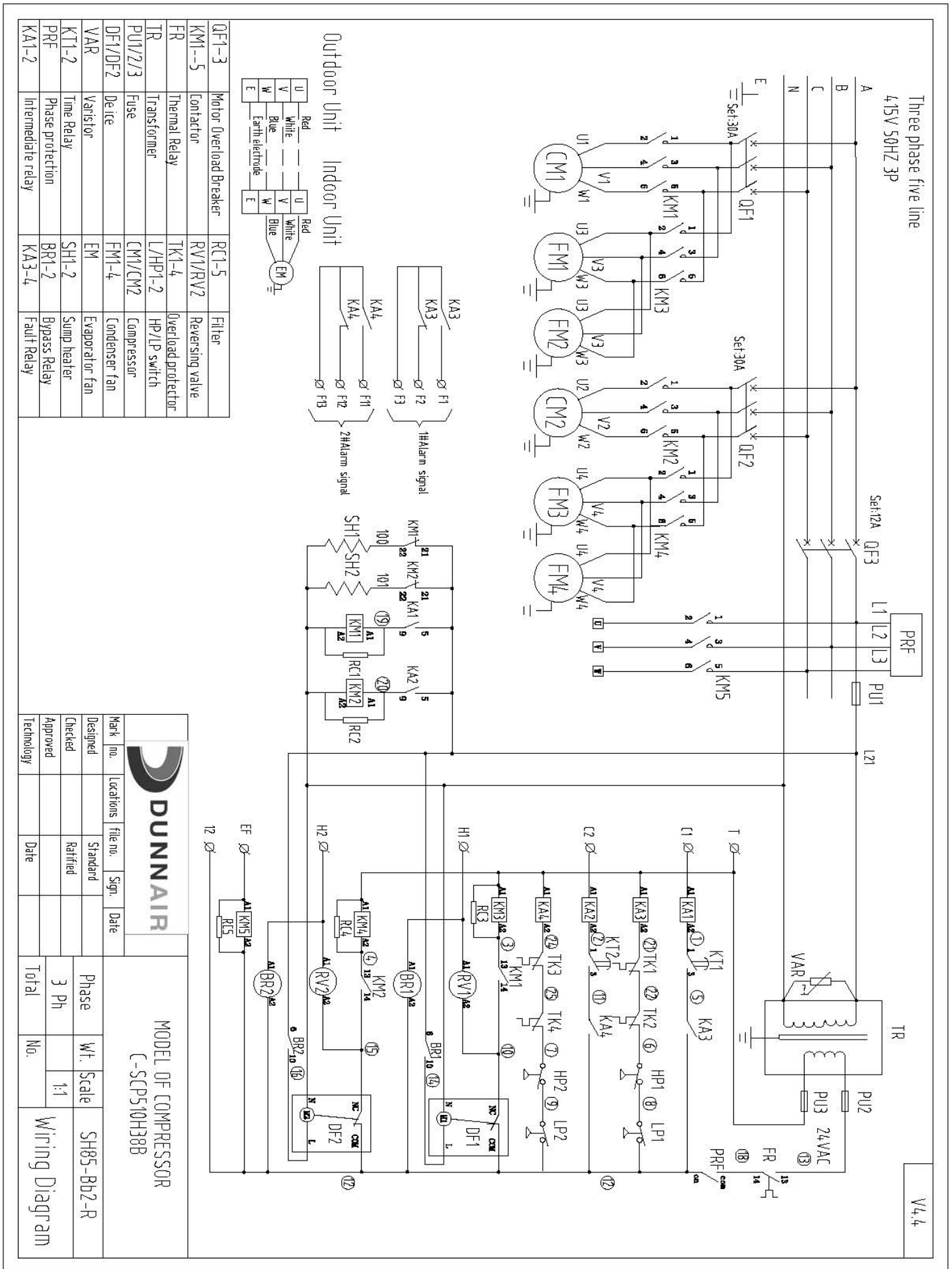
* SANYO compressor: Manufacturer does not offer this information



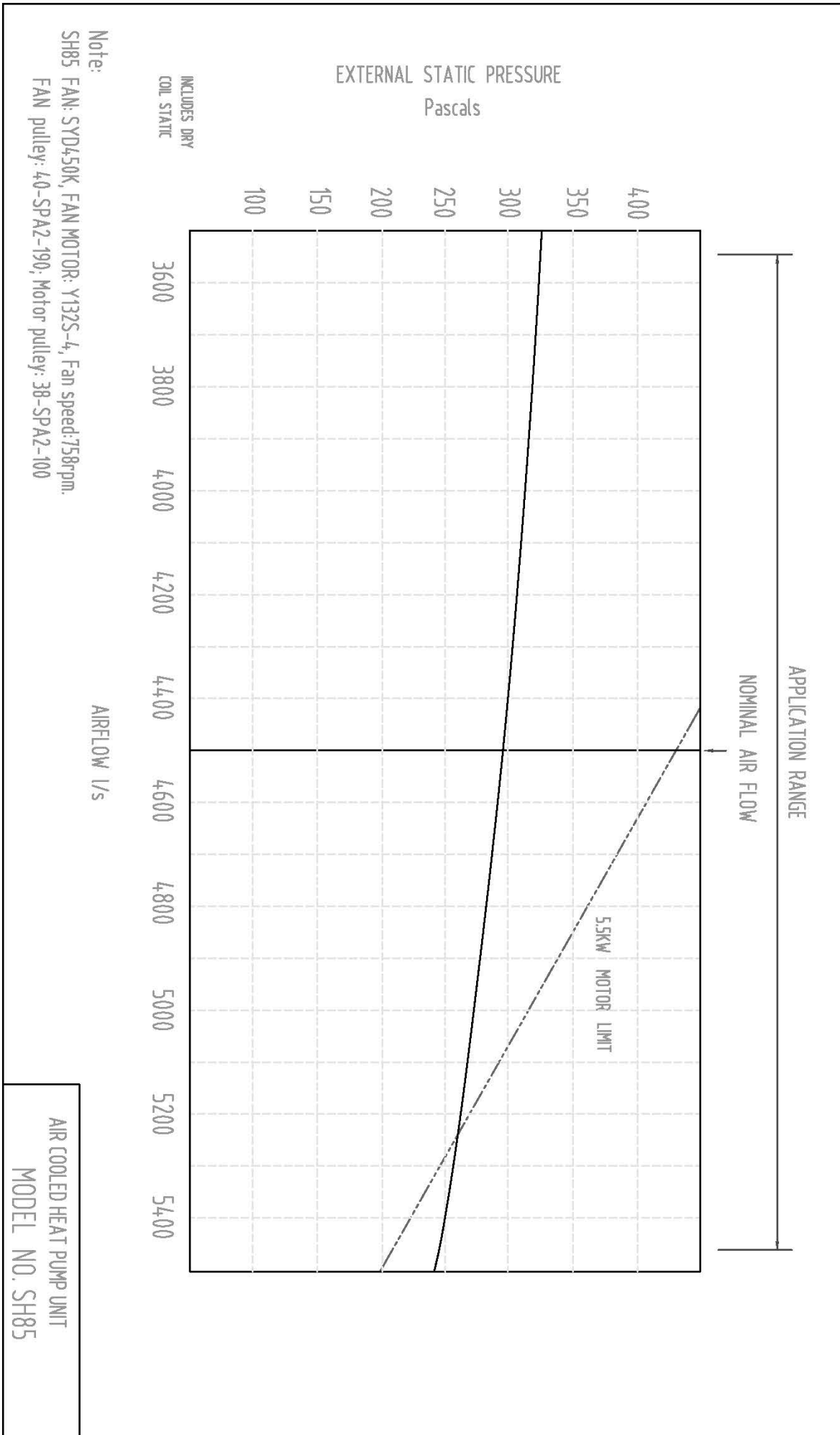
OUTDOOR UNIT INSTALLED WEIGHT 615 kg

DRAWN BY: Chen Cheng	DATE: 21th Jan. 14		
APPROVED O.A.: Zhu Junquan	APPROVED ENG.: Li Meifen		
MODEL: SH85WBB2-R		TITLE: Split System Air Cooled Heat Pump Unit SH TYPE	
DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4	





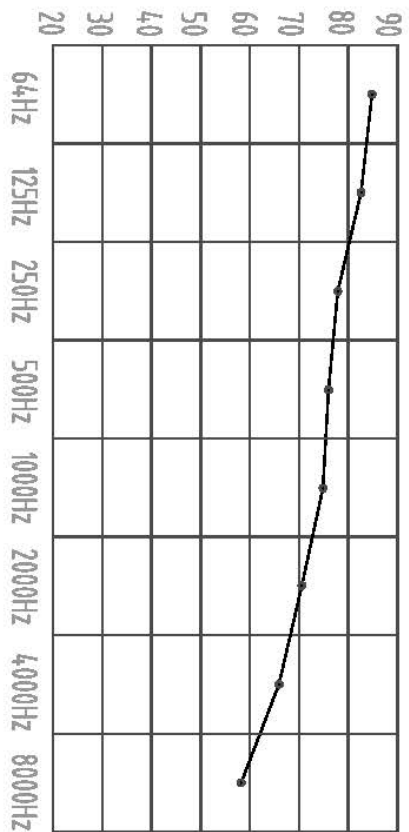
V4.4



SH85W Sound Pressure Curve
A Class: 79.0dB

Hz	dB
64Hz	84.6
125Hz	82.2
250Hz	77.6
500Hz	76.2
1000Hz	74.4
2000Hz	70.2
4000Hz	66.0
8000Hz	58.5

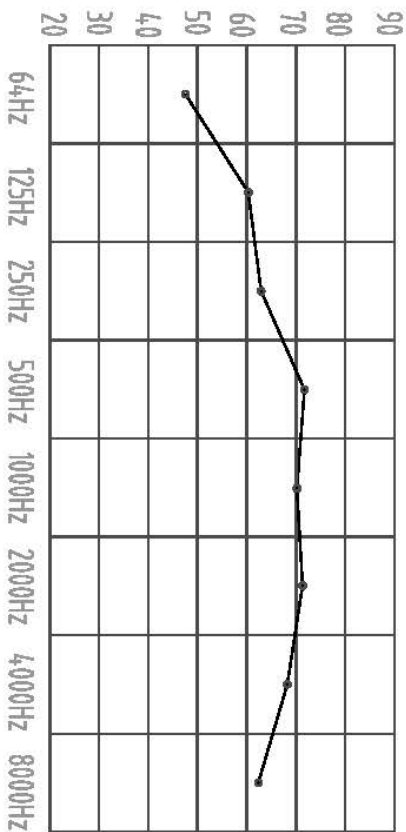
Sound Pressure Curve (A Class: 79.0dB) dB




SH85N Sound Pressure Curve
A Class: 77.2dB

Hz	dB
64Hz	48
125Hz	60
250Hz	63
500Hz	72
1000Hz	71
2000Hz	72
4000Hz	69
8000Hz	62

Sound Pressure Curve (A Class: 77.2dB) dB



Note: Occupant at least 1.0m from sound source.

DRAWN BY: Chen Cheng		DATE: 2014-3-5			
APPROVED O.A.: Zhu Junquan		APPROVED ENG.: Li Meifen			
MODEL: SH85		DRAWING NO.: 01		TITLE: Split System Air Cooled Heat Pump Unit SH TYPE	
		ISSUE: 01		SHEET SIZE: A4	