



DUNNAIR
(Aust) Pty Ltd

WPR5L

**Ducted Water Cooled
R410a Refrigerant**

Packaged Vertical Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	4.8 kW	Refrigerant	R410A
Electrical Input (Cooling)	1.3kW	Refrigerant Charge	0.9 kg
E.E.R.(Cooling)	3.69	Minimum Water Flow	0.3 l/s
Running Amps (Total)	6.3 A	Water Coil Pressure Drop	38 kPa
Fan Motor Full Load Amps	0.6A	Filter (Option)	EU1
Electrical Supply Required	1 Ph.240V.50Hz	Electric Heater (Option)	5.5kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)		248				
COIL E.A.T.	DB °C	23	27	31		
	WB °C	17	19	21		
Entering Water Temperature (E.W.T) °C	20	T	5.1	5.4	5.6	
		S	3.7	4.3	4.8	
		FL	0.35	0.35	0.35	
		HR	6.2	6.5	6.8	
	25	T	4.9	5.2	5.7	
		S	3.7	4.2	4.8	
		FL	0.35	0.35	0.35	
		HR	6.0	6.3	6.9	
	30	T	4.6	4.8	5.4	
		S	3.5	3.9	4.7	
		FL	0.35	0.35	0.35	
		HR	5.7	6.0	6.6	
	35	T	4.3	4.5	4.7	
		S	3.4	3.9	4.4	
		FL	0.35	0.35	0.35	
		HR	5.5	5.7	5.9	
40	T	4.1	4.2	4.4		
	S	3.3	3.8	4.3		
	FL	0.35	0.35	0.35		
	HR	5.3	5.3	5.6		

T = Total Capacity (kW)
FL = Water Flow (l/s)
__ = Nominal Capacity (kW)

S = Sensible Capacity (kW)
E.A.T.= Entering Air Temperature (°C)
HR = Heat Rejection

- Note:** 1. Capacities are gross and do not include allowance for fan motor heat loss. For fan motor heat loss refers to Air Handling Performance.
2. Water flow and cooling capacity based on 5°C water temperature difference.

HEATING CAPACITY (kW)

Reverse Cycle Version

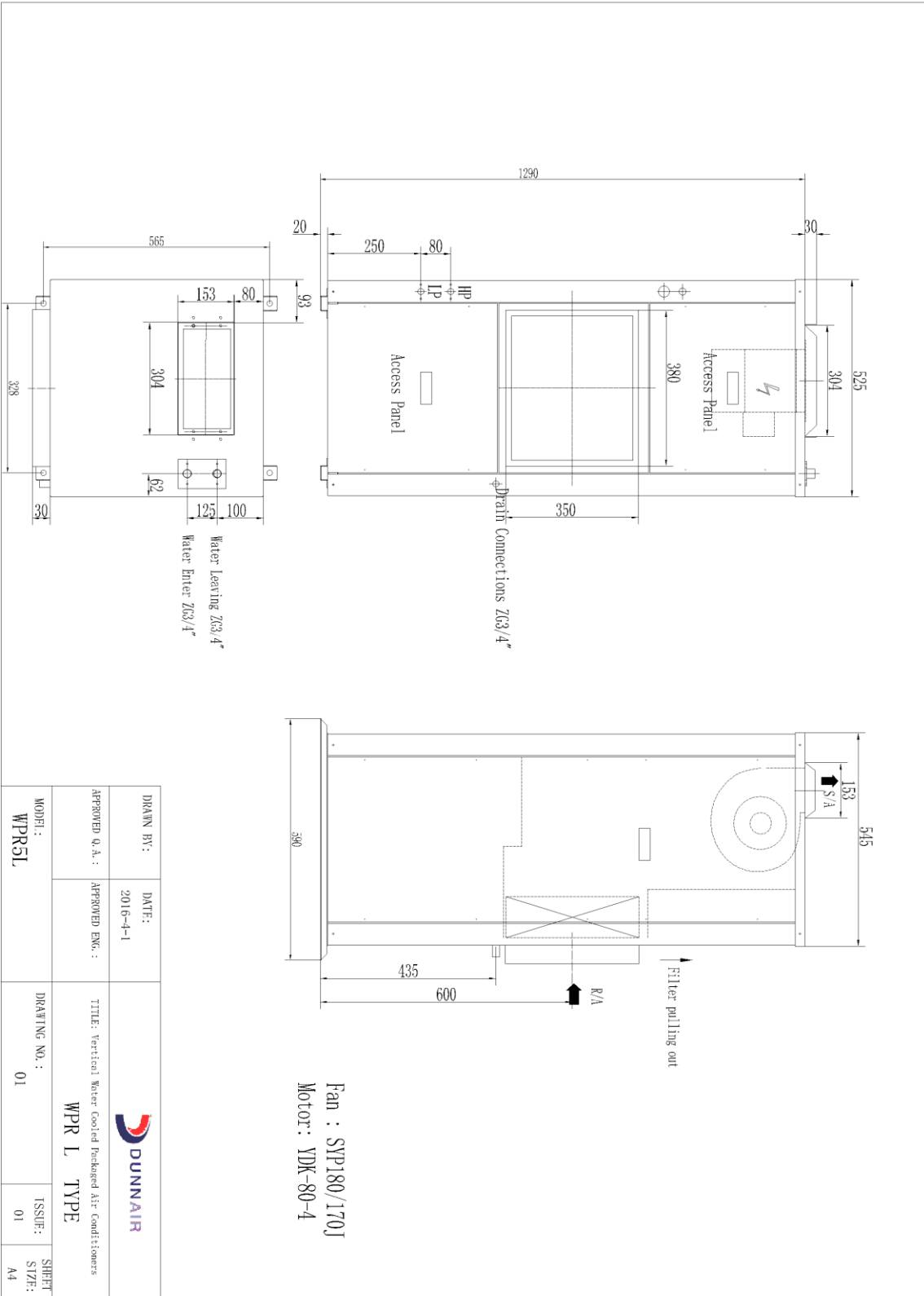
AIR FLOW RATE (L/S)		248				
WATER FLOW RATE (L/S)		0.35				
COIL E.A.T.	DB °C	18	21	25		
Entering Water Temperature (E.W.T) °C	15	HC	4.8	4.8	4.5	
		Hab	3.6	3.6	3.3	
		LWT	11.1	11.2	11.4	
		INPT	1.2	1.2	1.2	
	20	HC	5.2	5.1	4.8	
		Hab	3.9	3.8	3.6	
		LWT	15.9	15.9	16.1	
		INPT	1.2	1.2	1.3	
	25	HC	5.6	5.5	5.3	
		Hab	4.2	4.2	4.0	
		LWT	20.5	20.6	20.8	
		INPT	1.3	1.3	1.3	

HC = Heating Capacity (kW) Hab = Heat Absorbed (kW)
L.W.T.= Leaving Water Temperature (°C) E.A.T.= Entering Air Temperature (°C)
INPT = Compressor Input Power (kW) __ = Nominal Capacity (kW)

Note: All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

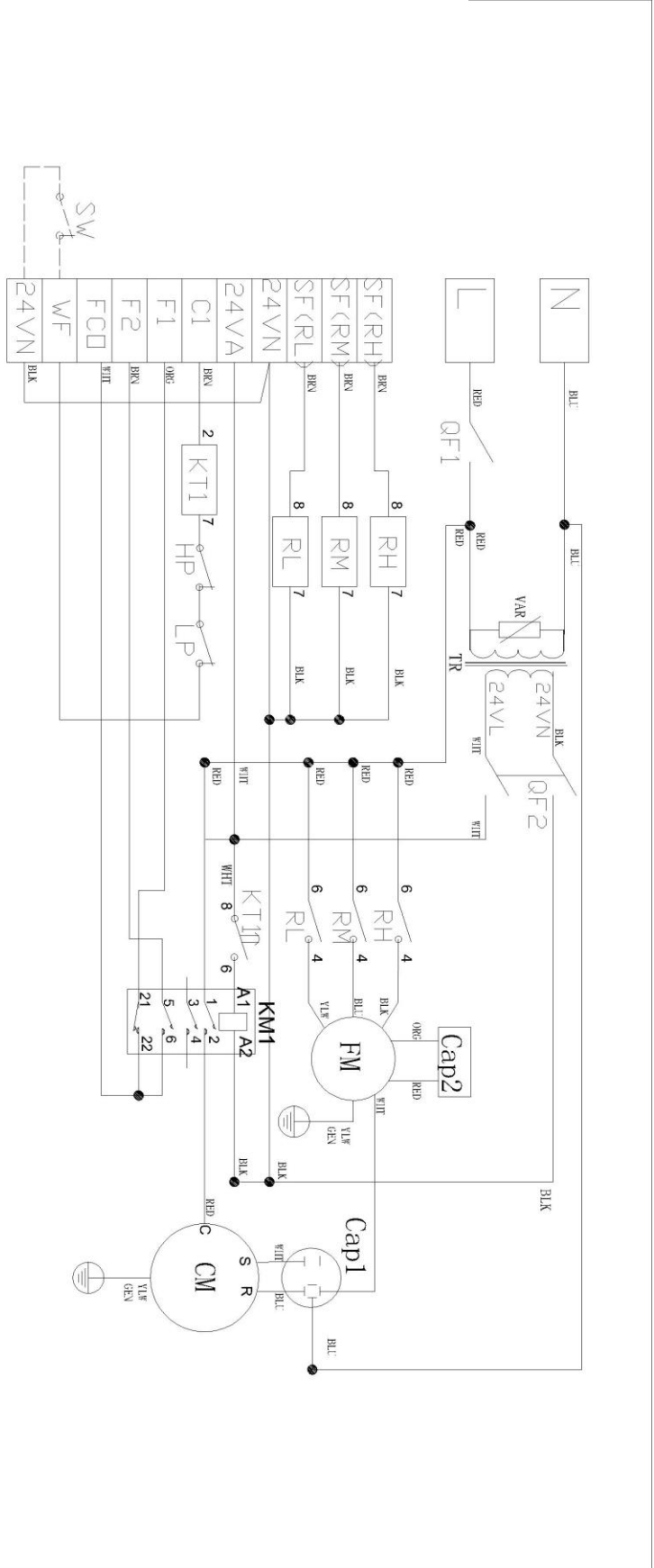
DUNNAIR (Aust) Pty Ltd supports a policy of continuous improvement. Therefore specifications and designs are subject to change without prior notice.


DIMENSIONS (mm)



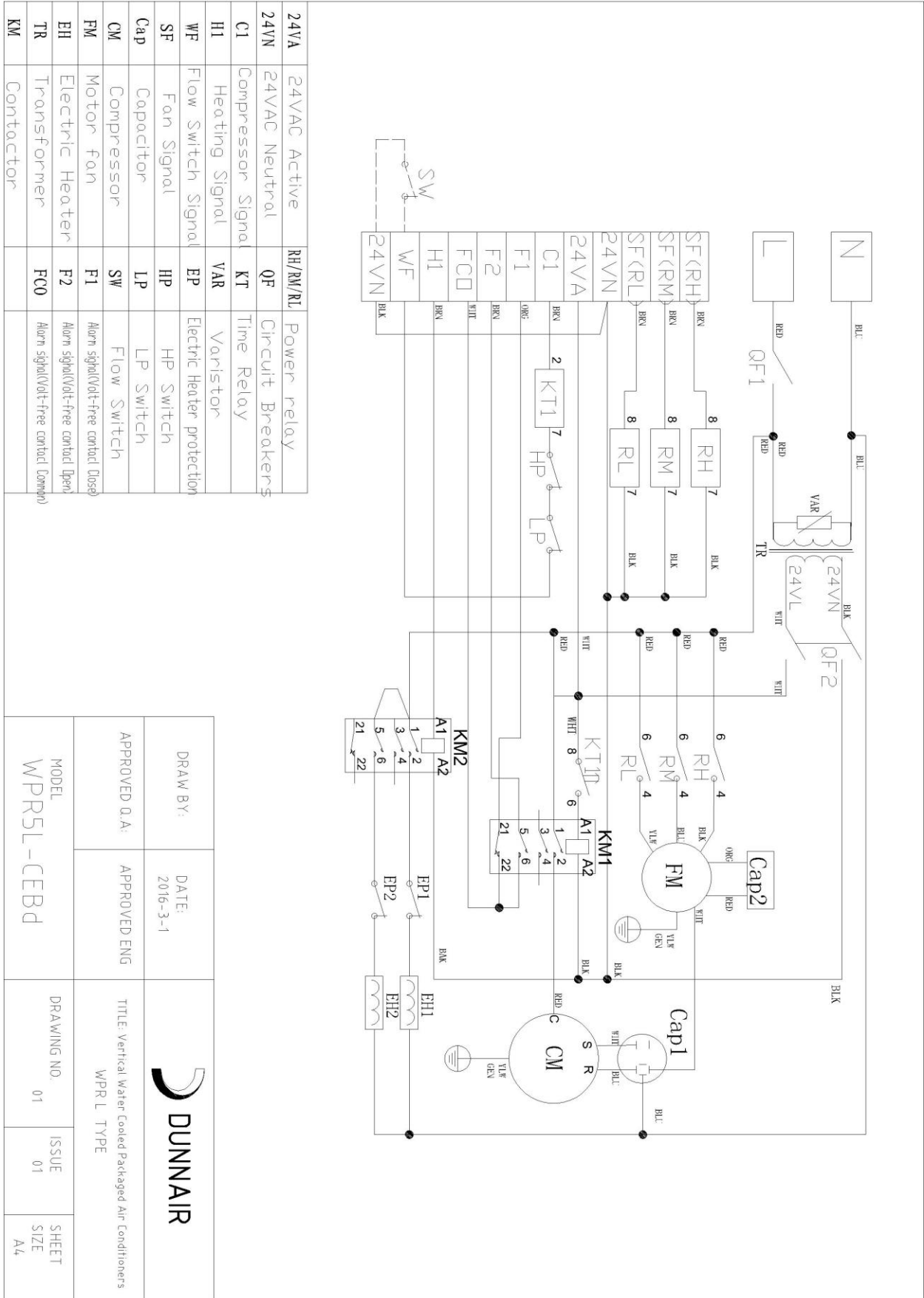
WIRING DIAGRAMS – Cooling Only

24VA	24VAC Active	RH/RM/RL	Power relay
24VN	24VAC Neutral	QF	Circuit Breakers
C1	Compressor Signal	KT	Time Relay
H1	Heating Signal	VAR	Varistor
WF	Flow Switch Signal	EP	Electric Heater protection
SF	Fan Signal	HP	HP Switch
Cap	Capacitor	LP	LP Switch
CM	Compressor	SW	Flow Switch
FM	Motor Fan	F1	Alarm signal(Volt-free contact Close)
EH	Electric Heater	F2	Alarm signal(Volt-free contact Open)
TR	Transformer	FC0	Alarm signal(Volt-free contact Common)
KM	Contactator		



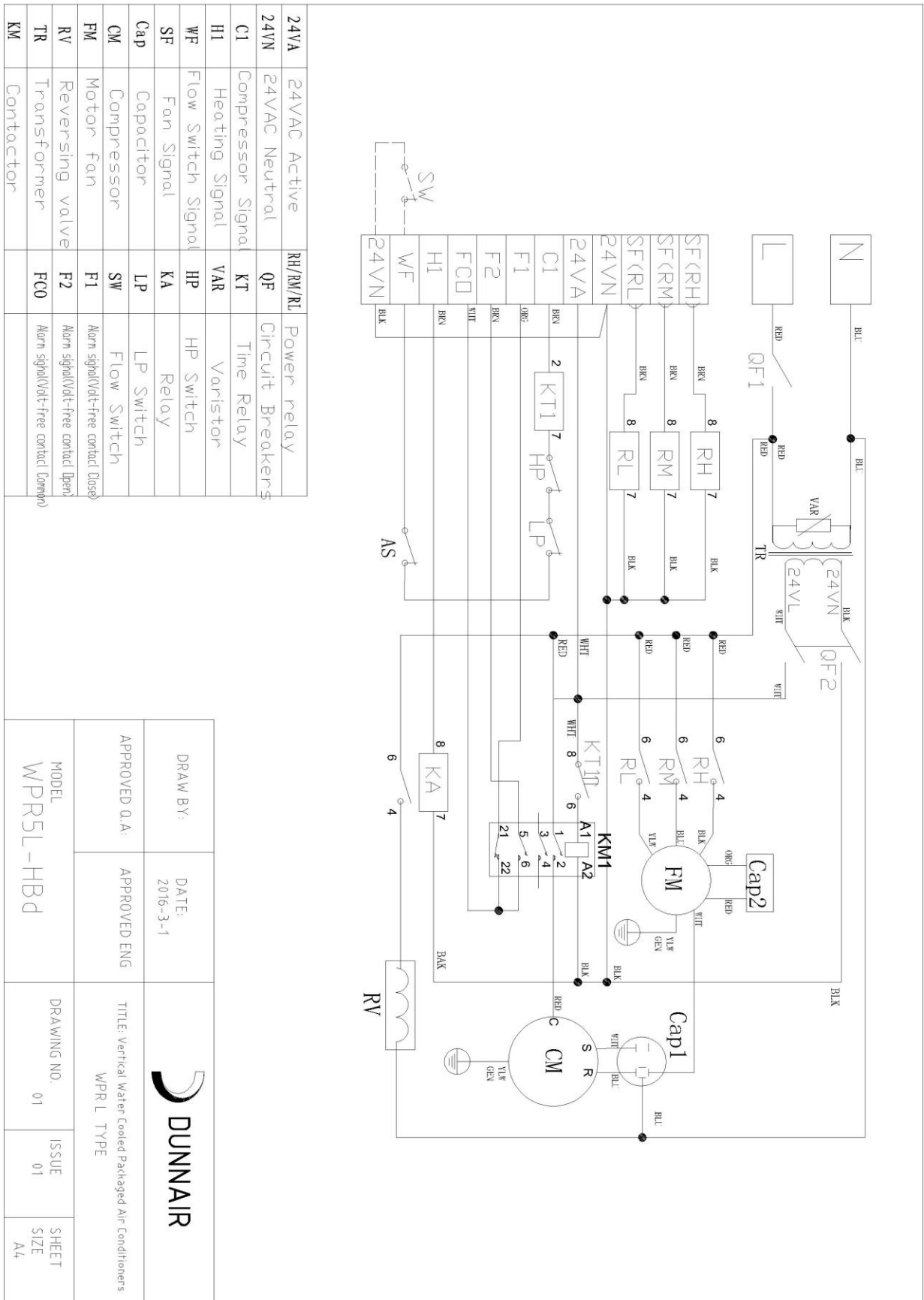
DRAW BY:	DATE:		
APPROVED O.A:	APPROVED ENG		
MODEL	TITLE: Vertical Water Cooled Packaged Air Conditioners		
WPR5L-CBD	WPR L TYPE		
DRAWING NO.	ISSUE	SHEET	
01	01	SIZE	
		A4	

WIRING DIAGRAMS – Cooling Only with Electric Heater



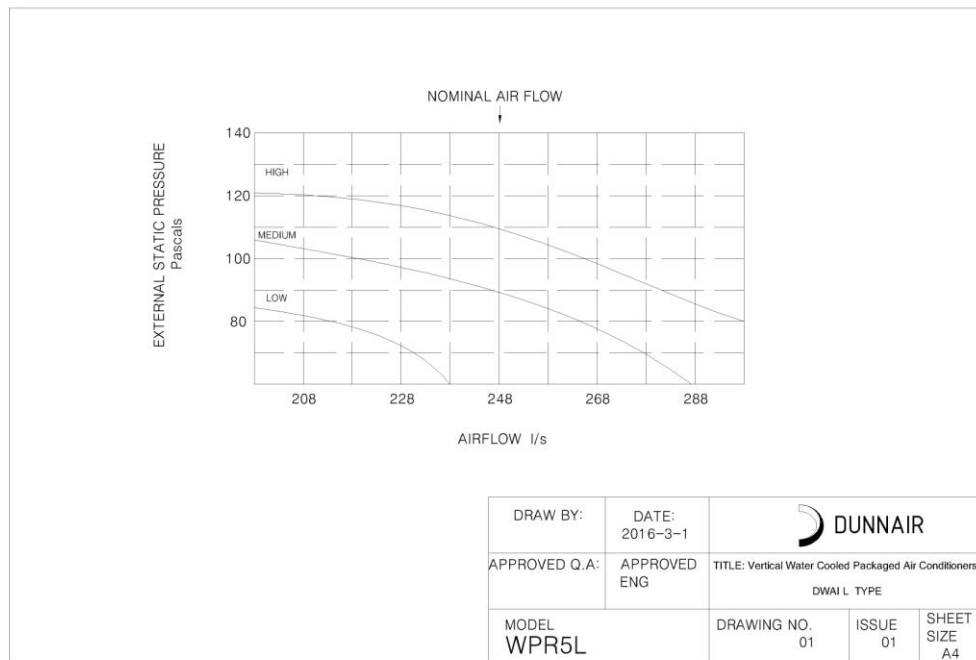
DRAW BY:	DATE:	
APPROVED Q.A.:	2016-3-1	
APPROVED ENG:	TITLE: Vertical Water Cooled Packaged Air Conditioners	WPR L TYPE
MODEL:	WPR5L-CEBD	
DRAWING NO. 01	ISSUE 01	SHEET SIZE A4

WIRING DIAGRAMS – Reverse Cycle



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



Note:

1. In tropical (high humidity) conditions, care must be taken to select an air flow which gives a suitable coil face air velocity, to prevent water carry over.
2. For applications with low resistance, be sure not to exceed the fan motor full load Amps.
3. Applications using full or high proportions of fresh air should be referred to DUNNAIR engineering office to establish of unit model.
4. EU1 rate filter pressure loss 15Pa.

AIR HANDLING PERFORMANCE

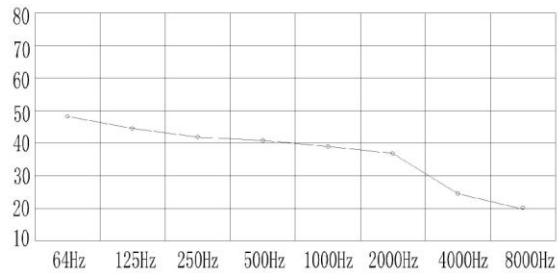
Sound Curve

WPR5L Noise rate analysing chart

A Class: 45dB

Hz	dB
64Hz	48.6
125Hz	45.1
250Hz	43.0
500Hz	41.1
1000Hz	39.7
2000Hz	37.0
4000Hz	25.9
8000Hz	20.8

Noise rate analysing chart (A Class: 45dB) dB



Note: 1m from source with 1m insulated duct.

DRAWN BY:	DATE: 2016-3-1		
APPROVED G.A.:	APPROVED ENG.:		
		DWA/L TYPE	
MODEL: WPR5L	DRAWING NO.:	ISSUE:	SHEET SIZE:
	01	01	A4