



**DUNNAIR**  
(Aust) Pty Ltd

**WPR4**

**Packaged Horizontal Type**

**Ducted Water Cooled  
R410a Refrigerant**

**TECHNICAL SPECIFICATION**

Total Cooling Capacity	4.1 kW	Refrigerant	R410A
Electrical Input (Cooling)	1.08 kW	Refrigerant Charge	0.9 kg
E.E.R.(Cooling)	3.80	Minimum Water Flow	0.2 l/s
Running Amps (Total)	6.3 A	Water Coil Pressure Drop	38 kPa
Fan Motor Full Load Amps	1.0A	Filter (Option)	EU1
Electrical Supply Required	1 Ph.240V.50Hz	Electric Heater (Option)	3.0 kW

**COOLING CAPACITY (kW)**

AIR FLOW RATE (L/S)		210			
COIL E.A.T.	DB °C	23	27	31	
	WB °C	17	19	21	
Entering Water Temperature (E.W.T) °C	20	T	4.4	4.6	4.8
		S	3.1	3.6	4.0
		FL	0.25	0.25	0.25
		HR	5.5	5.7	6.0
	25	T	4.1	4.4	4.8
		S	3.1	3.5	4.0
		FL	0.25	0.25	0.25
		HR	5.3	5.5	6.0
	30	T	3.9	<u>4.1</u>	4.6
		S	2.9	<u>3.4</u>	3.9
		FL	0.25	<u>0.25</u>	0.25
		HR	5.0	<u>5.2</u>	5.7
	35	T	3.6	3.8	4.0
		S	2.8	3.2	3.6
		FL	0.25	0.25	0.25
		HR	4.7	4.9	5.0
	40	T	3.5	3.6	3.7
		S	2.7	3.1	3.6
		FL	0.25	0.25	0.25
		HR	4.5	4.5	4.8

T = Total Capacity (kW)                      S = Sensible Capacity (kW)  
 FL = Water Flow (l/s)                        E.A.T.= Entering Air Temperature (°C)  
 \_\_\_ = Nominal Capacity (kW)                HR = Heat Rejection

**HEATING CAPACITY (kW)**

**WPR Reverse Cycle Version**

AIR FLOW RATE (L/S)		210			
WATE FLOW RATE (L/S)		0.25			
COIL E.A.T.	DB °C	18	21	25	
Entering Water Temperature (E.W.T) °C	15	HC	4.1	4.0	3.9
		Hab	3.1	3.0	2.9
		LWT	11.1	11.1	11.2
		INPT	1.0	1.1	1.1
	20	HC	4.3	<u>4.3</u>	4.2
		Hab	3.3	<u>3.2</u>	3.2
		LWT	15.8	<u>15.9</u>	15.9
		INPT	1.0	<u>1.1</u>	1.1
	25	HC	4.7	4.6	4.6
		Hab	3.6	3.5	3.4
		LWT	20.5	20.6	20.6
		INPT	1.1	1.1	1.2

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)

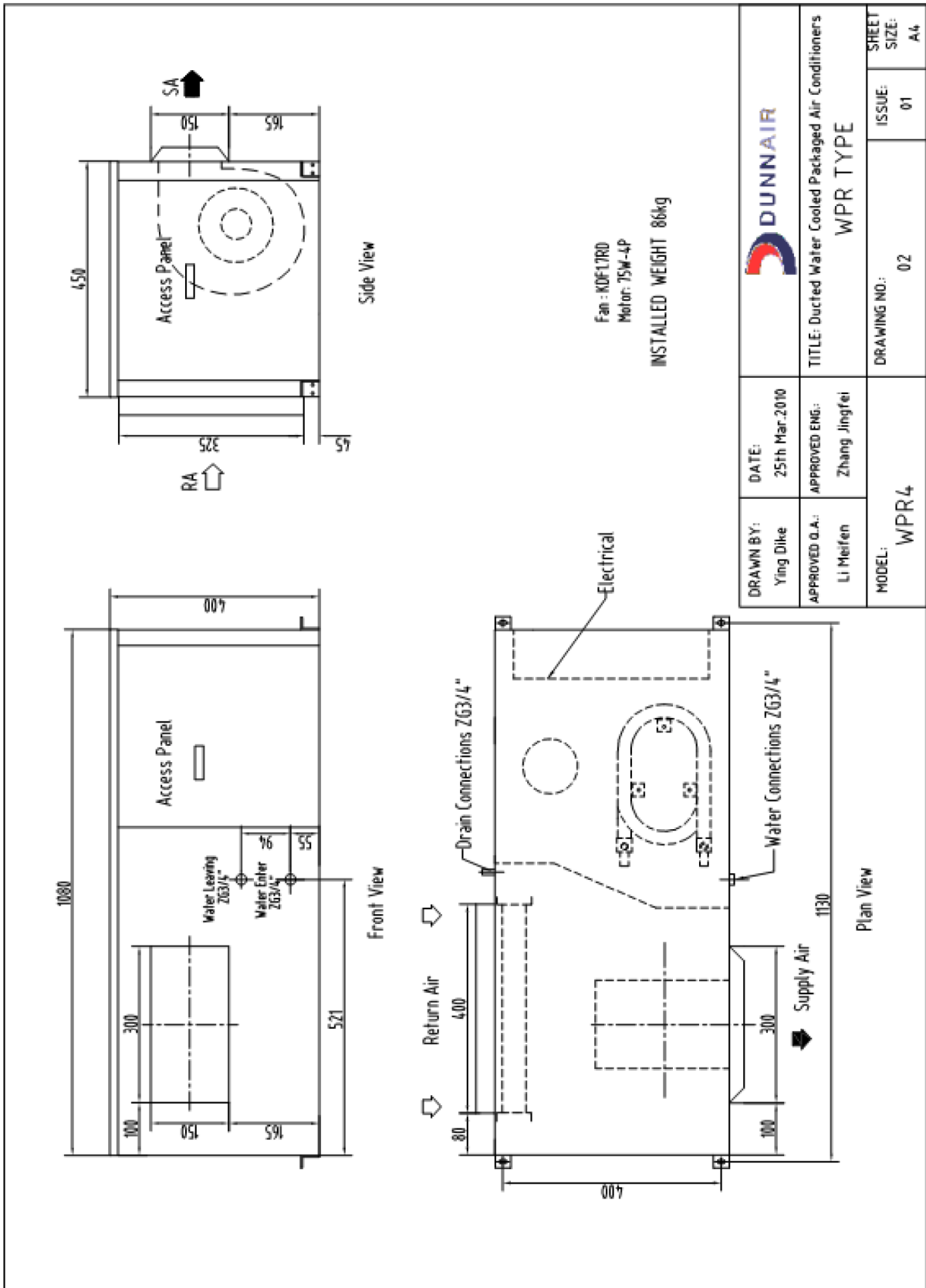
**Note:** All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

**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.

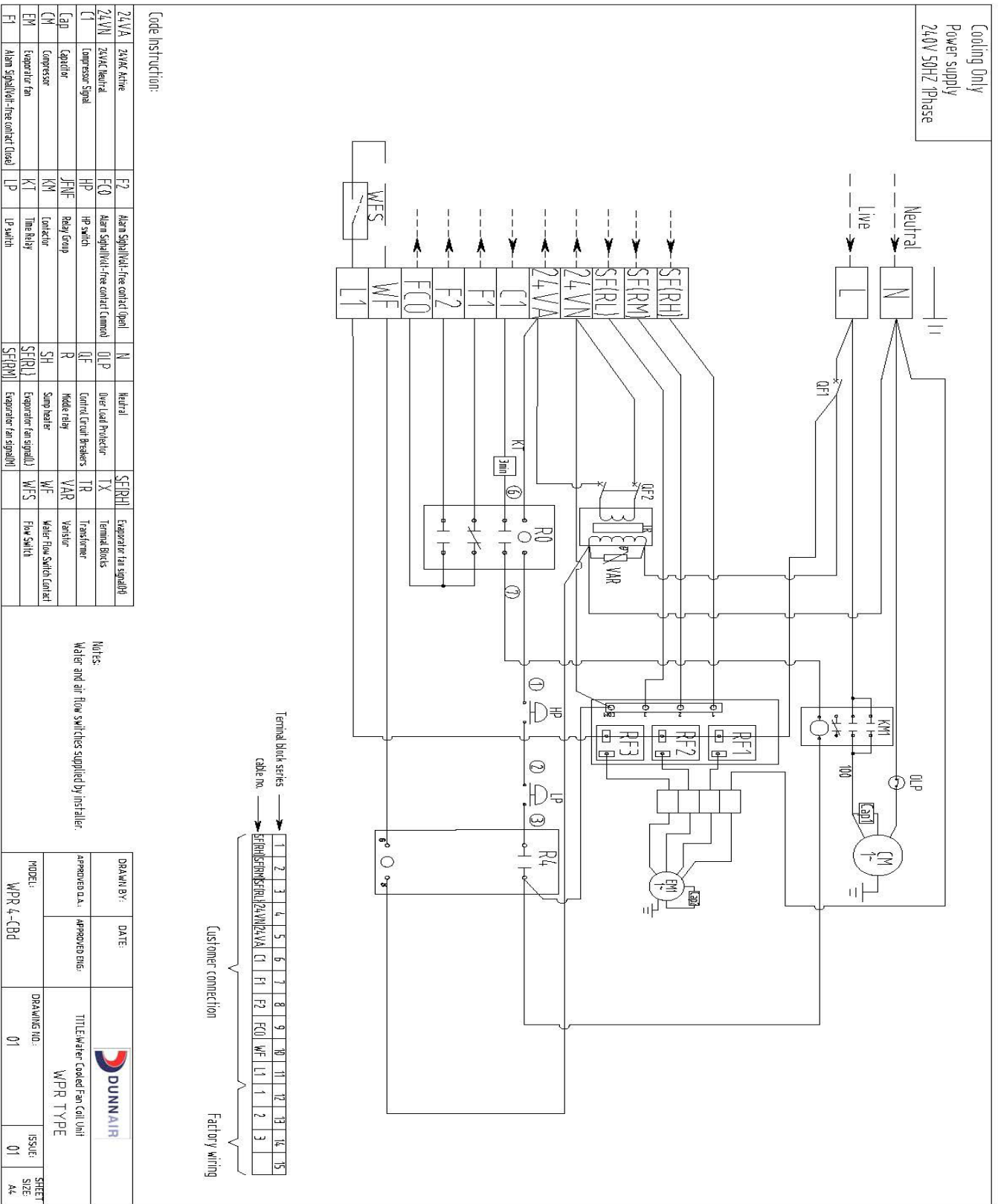
2. Water flow and cooling capacity based on 5°C water temperature difference.

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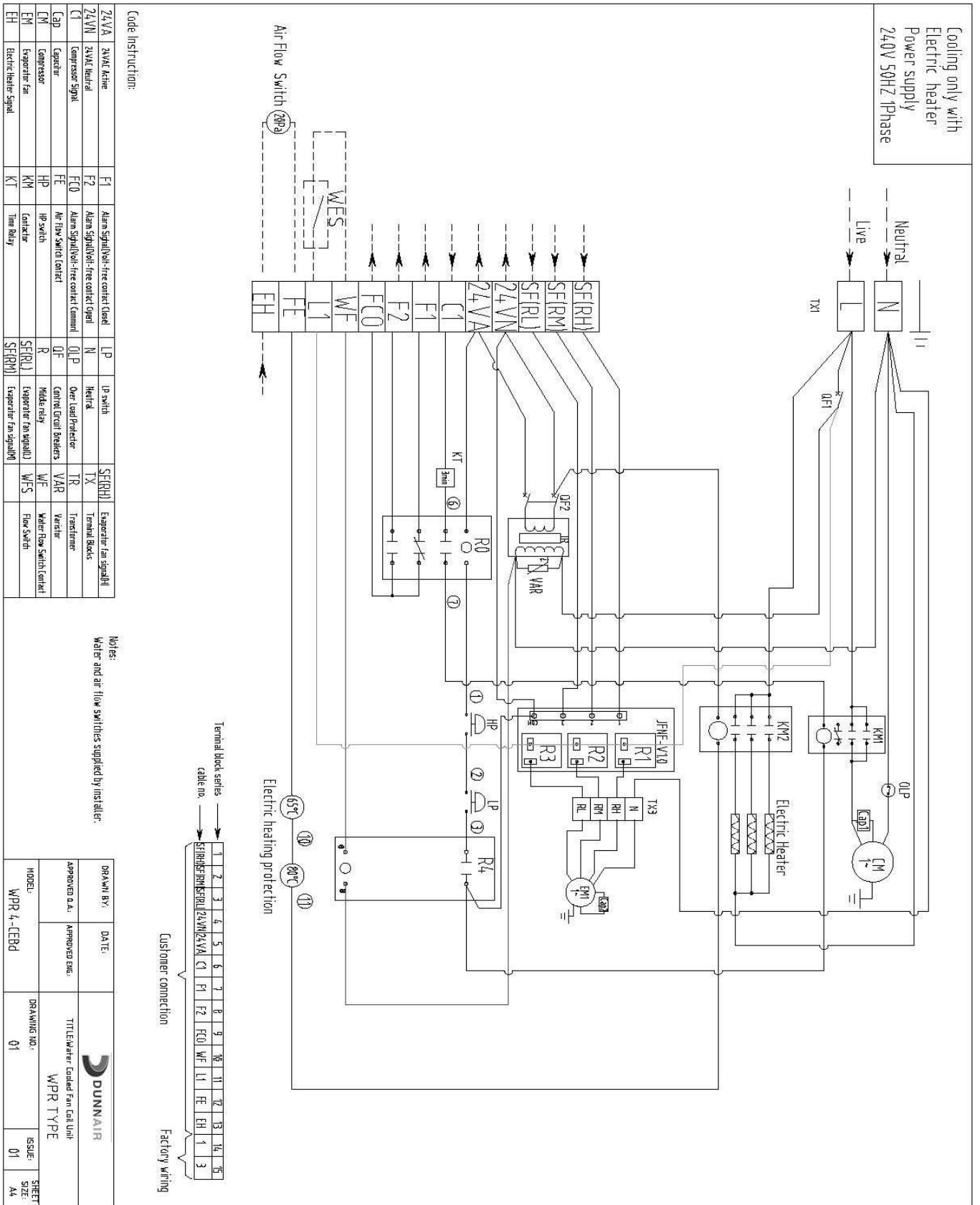
### DIMENSIONS (mm)



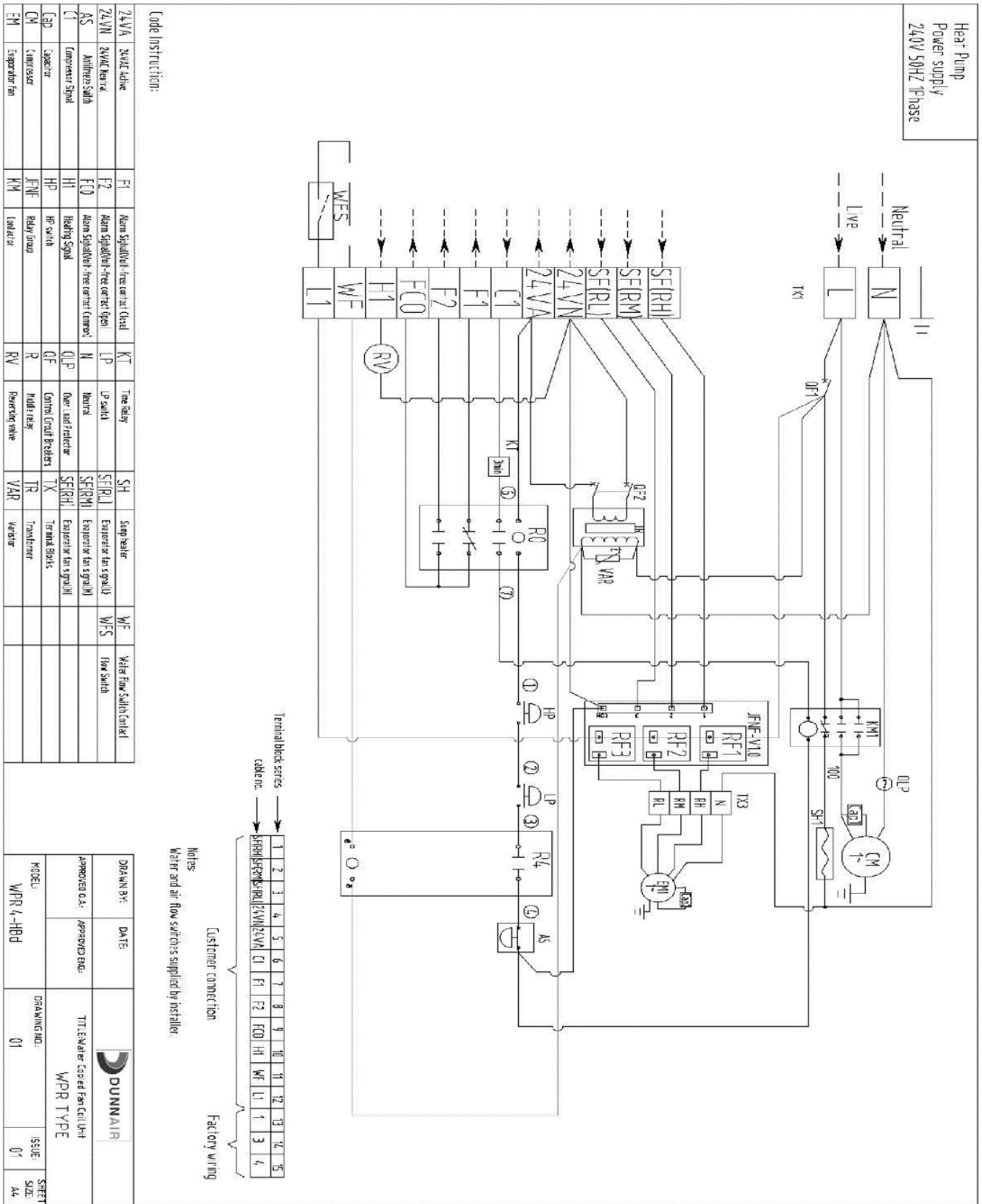
# WIRING DIAGRAMS – Cooling Only



# WIRING DIAGRAMS – Cooling Only with Electric Heater

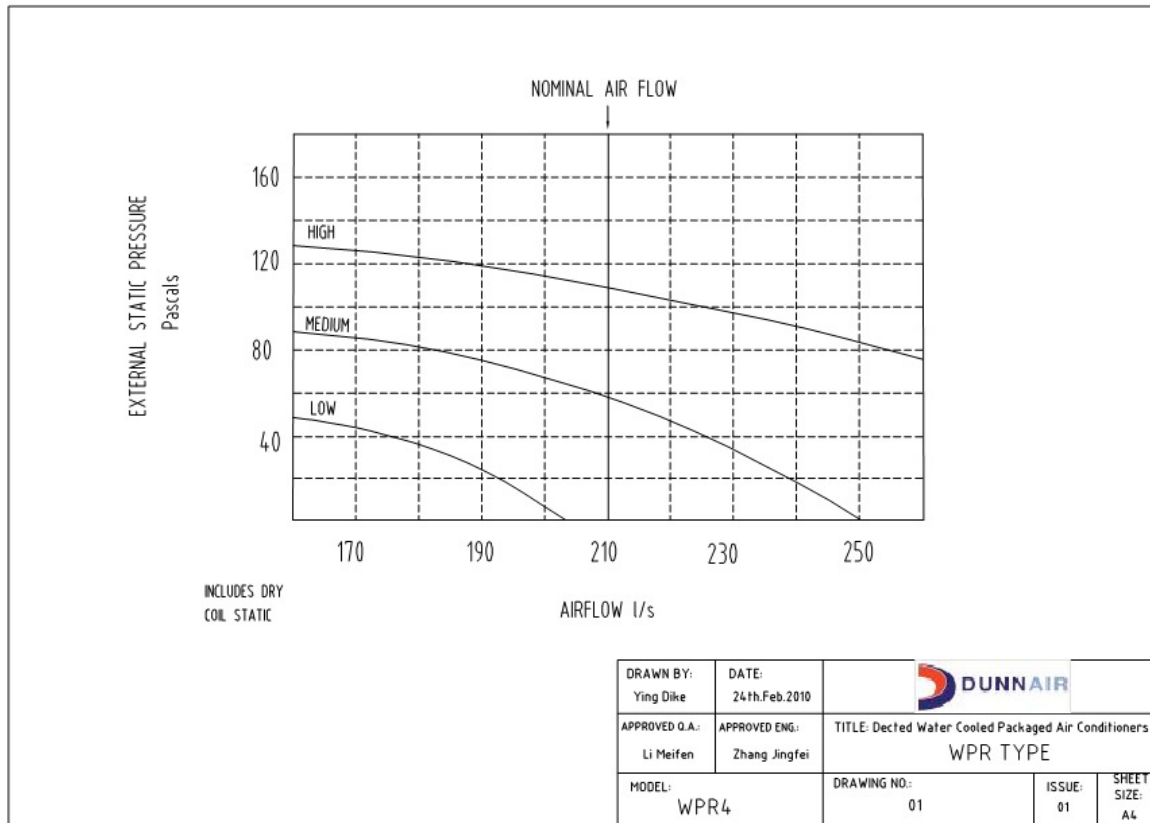


# WIRING DIAGRAMS – Reverse Cycle



# AIR HANDLING PERFORMANCE

## Fan Curve (Without Filter)



**Note:**

1. In tropical (high humidity) conditions, care must be taken to select 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.

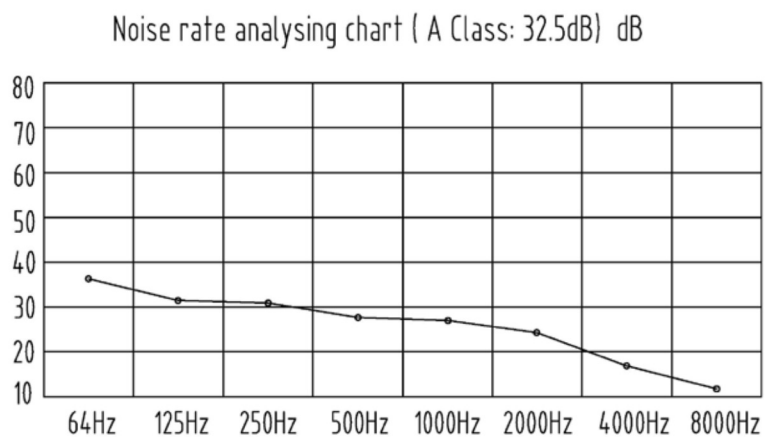
# AIR HANDLING PERFORMANCE

## Sound Curve


WPR4 Noise rate analysing chart

A Class: 32.5dB

Hz	dB
64Hz	36.8
125Hz	33.0
250Hz	32.4
500Hz	29.4
1000Hz	27.2
2000Hz	25.6
4000Hz	17.2
8000Hz	12.3



Note:1m from source with 1m insulated duct and fully reflective surface surrounding unit.

DRAWN BY: Ying Dike	DATE: 10th.Dec.2010			
APPROVED Q.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Dected Water Cooled Packaged Air Conditioners WPR TYPE		
MODEL: WPR4	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4	