DUNNAIR (Aust) Pty Ltd

WPR9.5

Ducted Water Cooled
R410a Refrigerant

Packaged Horizontal Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	9.3 kW	Refrigerant	R410A
Electrical Input (Cooling)	2.6kW	Refrigerant Charge	1.7 kg
E.E.R.(Cooling)	3.6	Minimum Water Flow	0.48 l/s
Running Amps (Total)	15.8A	Water Coil Pressure Drop	40 kPa
Fan Motor Full Load Amps	2.6A	Filter (Option)	EU1
Electrical Supply Required	1 Ph.240V.50Hz	Electric Heater (Option)	6.6 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			475		
COIL E.A.T.	DB ℃		23	27	31
	WB ℃		17	19	21
Entering Water Temperature (E.W.T) ℃	20	T	9.9	10.4	10.9
		S	7.1	8.1	9.0
		FL	0.6	0.6	0.6
		HR	12.6	13.1	13.7
	25	T	9.4	10.0	11.0
		S	7.1	7.9	9.0
		FL	0.6	0.6	0.6
		HR	12.1	12.6	13.8
	30	T	8.8	9.3	10.4
		S	6.6	7.6	8.8
		FL	0.6	0.6	0.6
		HR	11.4	11.9	13.1
	35	T	8.3	8.7	9.0
		S	6.3	7.3	8.3
		FL	0.6	0.6	0.6
		HR	10.8	11.2	11.6
	40	T	7.9	8.1	8.5
		S	6.3	7.1	8.0
		FL	0.6	0.6	0.6
		HR	10.4	10.6	11.1

T = Total Capacity (kW)
S = Sensible Capacity (kW)
FL = Water Flow (l/s)
E.A.T.= Entering Air Temperature (℃)
__ = Nominal Capacity (kW)
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℃ water temperature difference.

HEATING CAPACITY (kW)

WPR Reverse Cycle Version

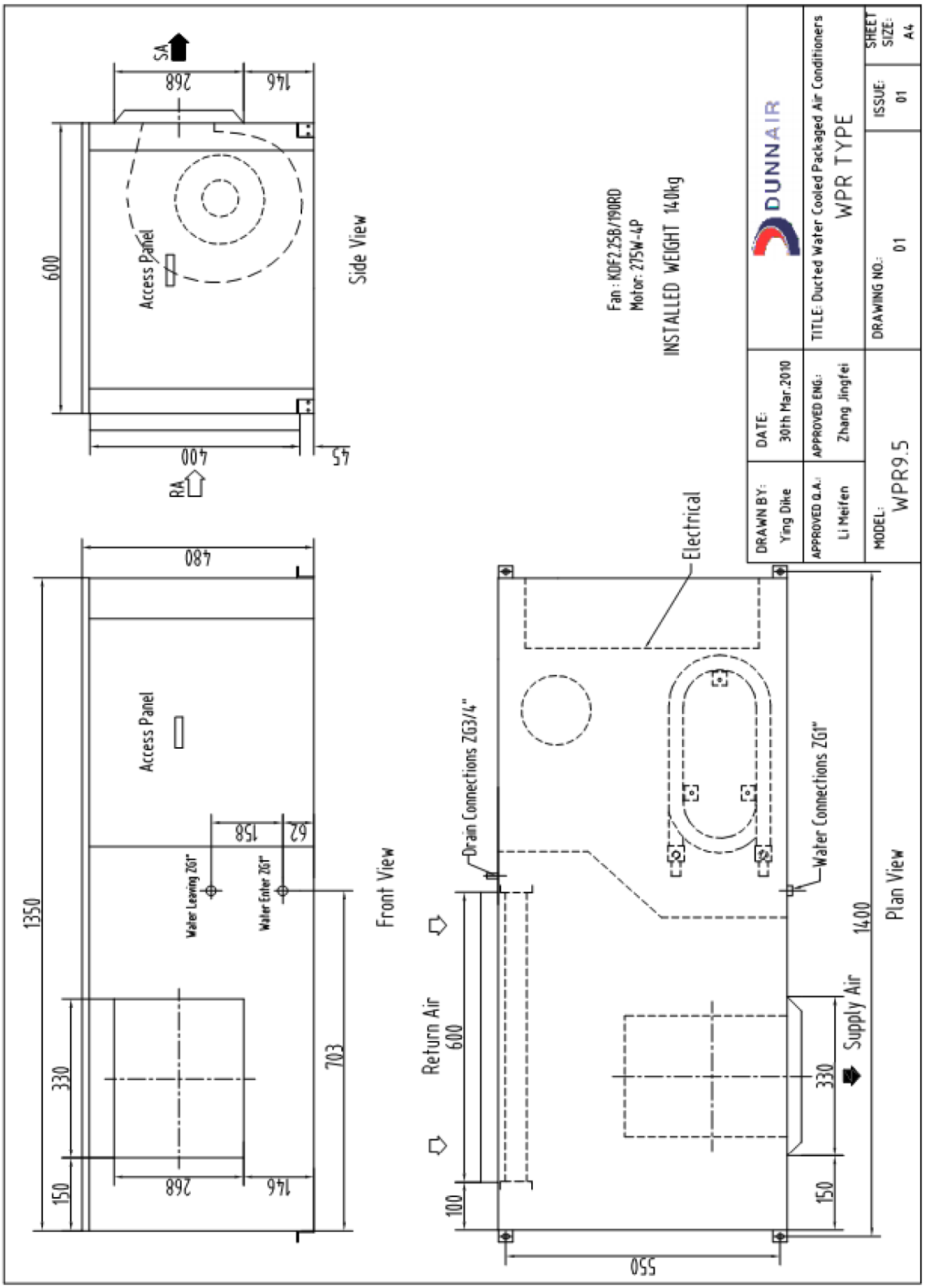
AIR FLOW RATE (L/S)			475		
WATE FLOW RATE (L/S)			0.6		
COIL E.A.T.	DB ℃		18	21	25
Entering Water Temperature (E.W.T) ℃	15	HC	9.4	9.3	8.9
		Hab	6.9	6.8	6.3
		LWT	11.3	11.3	11.5
		INPT	2.5	2.5	2.6
	20	HC	10.0	9.9	9.4
		Hab	7.5	7.4	7.0
		LWT	16.0	16.1	16.3
		INPT	2.5	2.5	2.4
	25	HC	10.9	10.7	10.3
		Hab	8.2	8.0	7.7
		LWT	20.7	20.7	20.9
		INPT	2.7	2.7	2.7

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

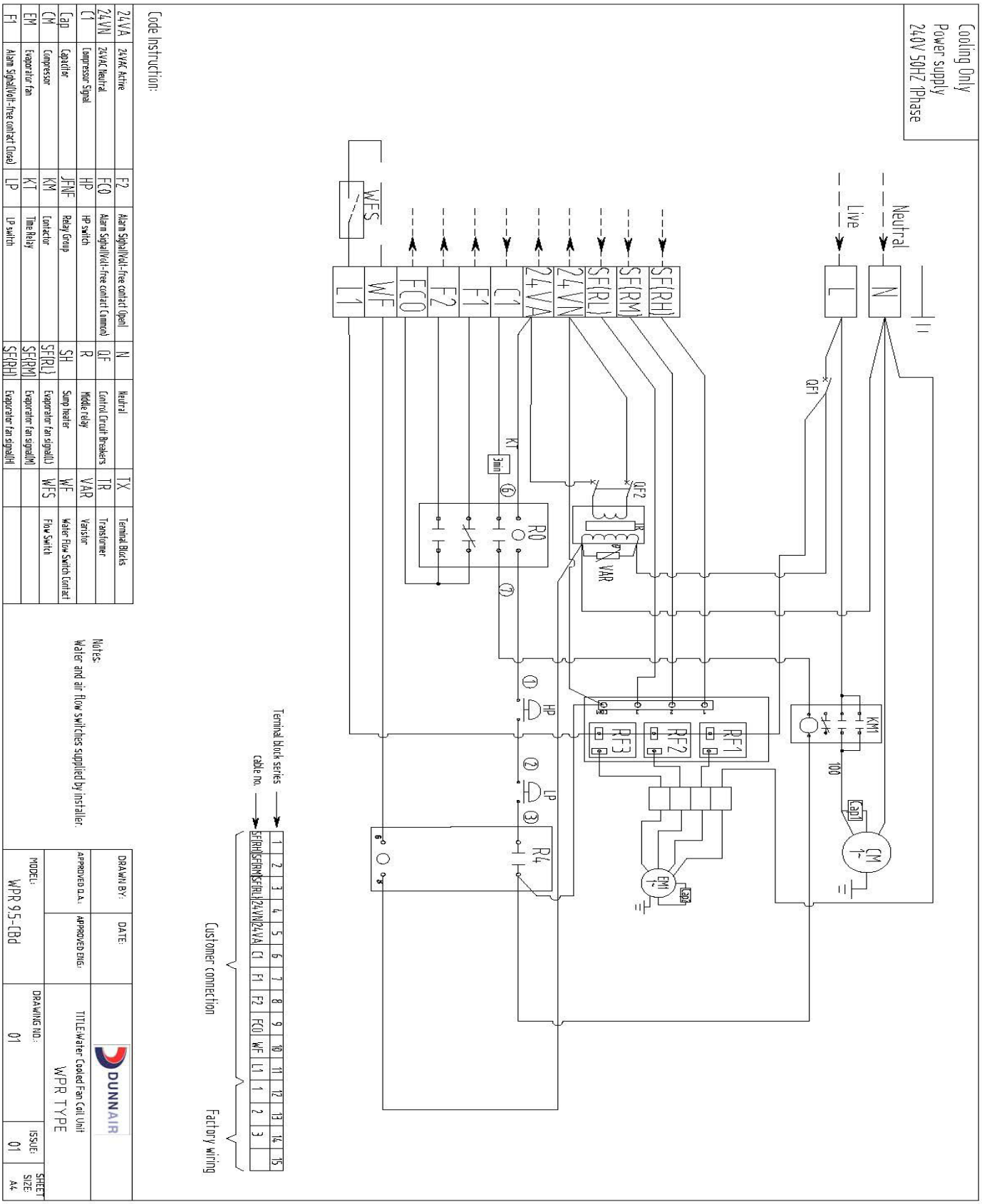
Note: All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

May 2014

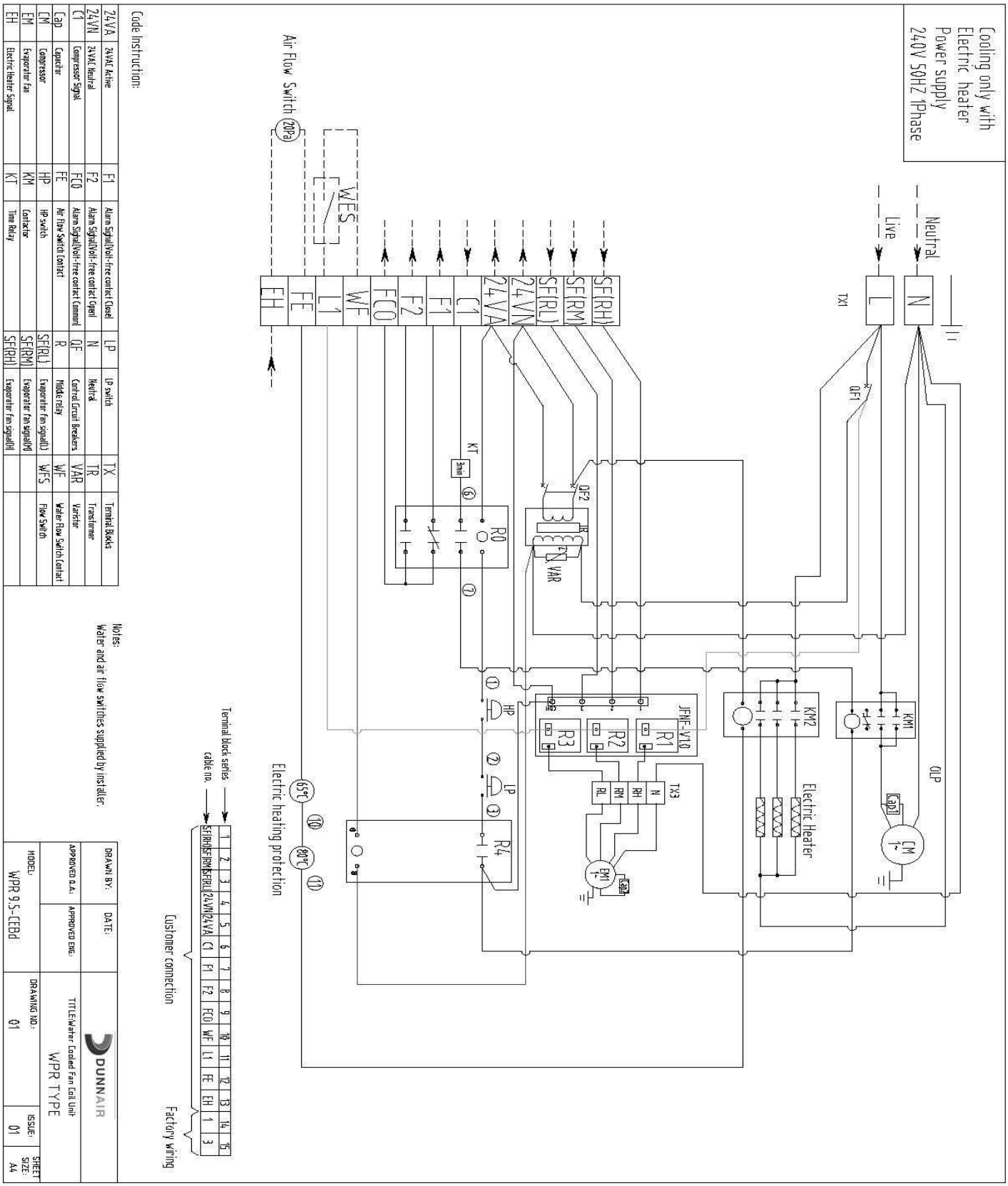
DIMENSIONS (mm)



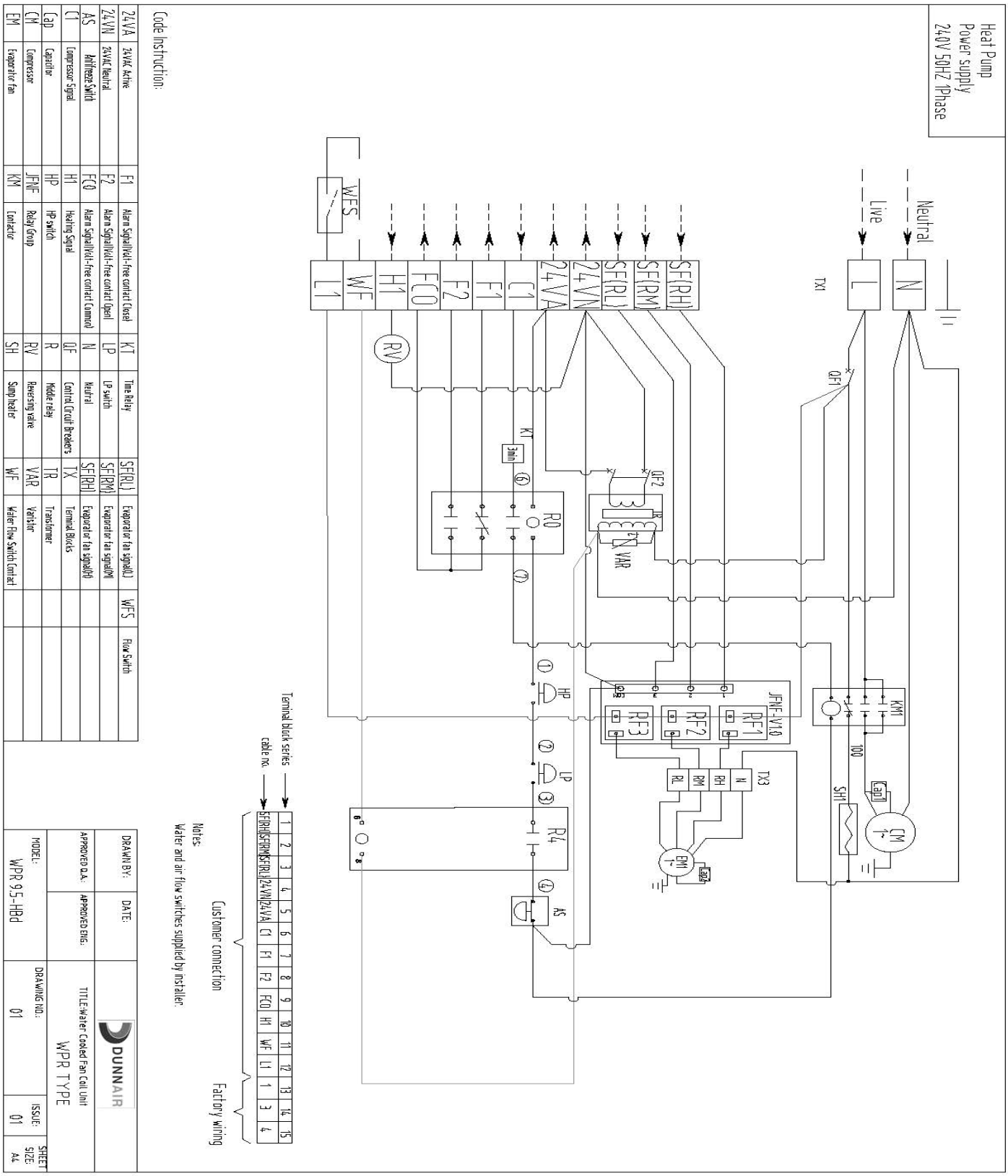
WIRING DIAGRAMS – Cooling Only



WIRING DIAGRAMS – Cooling Only with Electric Heater

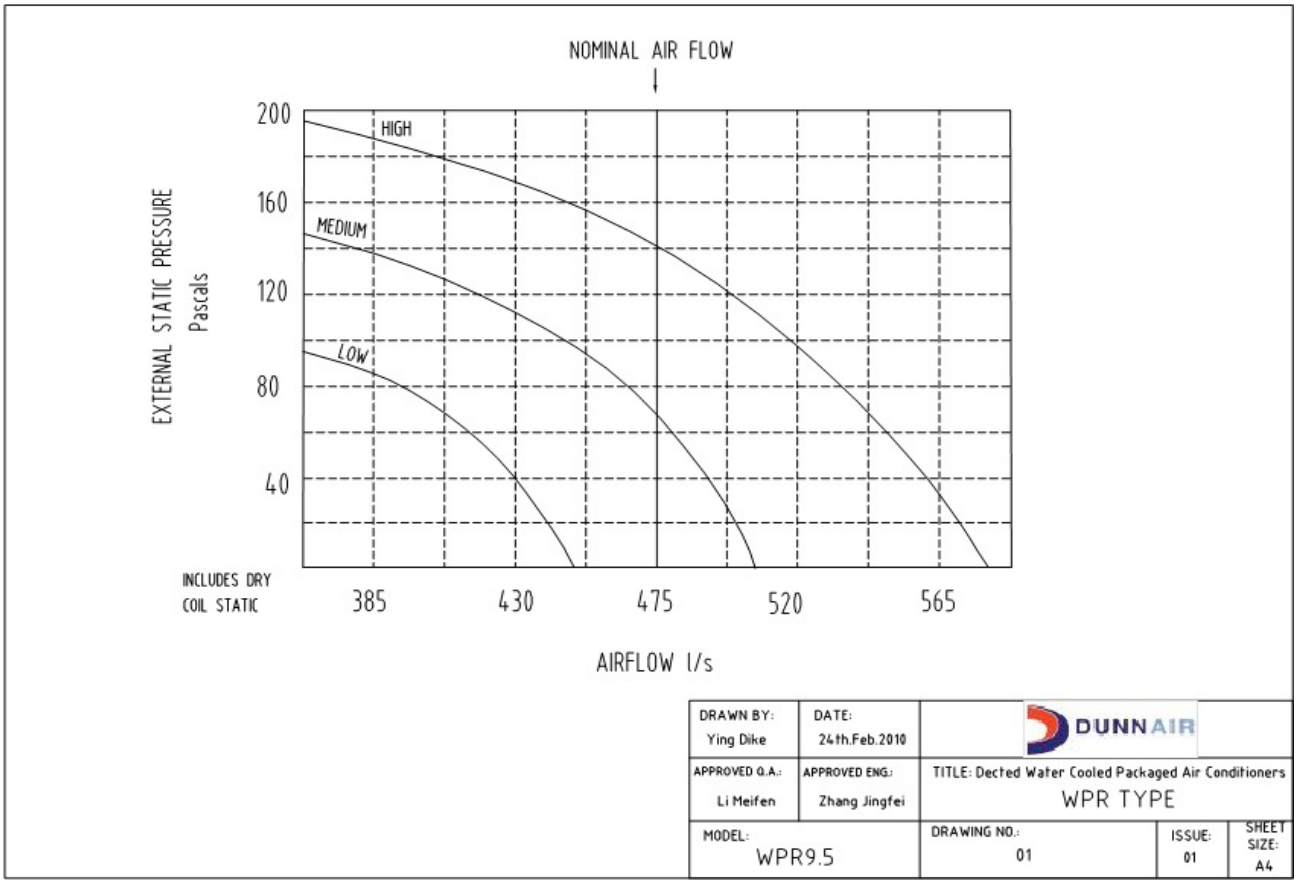


WIRING DIAGRAMS – Reverse Cycle



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



Note:

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

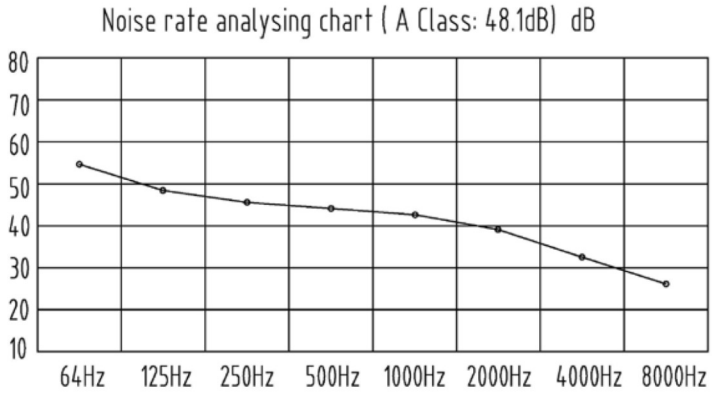
AIR HANDLING PERFORMANCE

Sound Levels

WPR9.5 Noise rate analysing chart

A Class: 48.1dB

Hz	dB
64Hz	54.7
125Hz	48.6
250Hz	46.8
500Hz	43.4
1000Hz	41.8
2000Hz	39.8
4000Hz	32.6
8000Hz	26.2



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

DRAWN BY: Ying Dike	DATE: 10th.Dec.2010	DUNNAIR	
APPROVED Q.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Dected Water Cooled Packaged Air Conditioners WPR TYPE	
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