DUNNAIR (Aust) Pty Ltd

WPR25

Ducted Water Cooled
R410a Refrigerant

Packaged Horizontal Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	23.1 kW	Refrigerant	R410A
Electrical Input (Cooling)	5.6 kW	Refrigerant Charge	3.5 kg
E.E.R.(Cooling)	4.1	Minimum Water Flow	1.05l/s
Running Amps (Total)	18.8A	Water Coil Pressure Drop	44kPa
Fan Motor Full Load Amps	6.0 A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heater (Option)	15 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			1150		
COIL E.A.T.	DB ℃		23	27	31
	WB ℃		17	19	21
Entering Water Temperature (E.W.T) ℃	20	T	24.5	25.8	27.1
		S	17.4	19.8	22.1
		FL	1.3	1.3	1.3
		HR	30.2	31.4	32.8
	25	T	23.3	24.8	27.3
		S	17.5	19.4	22.2
		FL	1.3	1.3	1.3
		HR	29.1	30.5	33.3
	30	T	21.9	23.1	25.8
		S	16.2	18.6	21.5
		FL	1.3	1.3	1.3
		HR	27.4	28.7	31.6
	35	T	20.5	21.6	22.5
		S	15.6	18.0	20.2
		FL	1.3	1.3	1.3
		HR	26.1	27.2	28.2
	40	T	19.6	20.1	21.1
		S	15.2	17.4	19.7
		FL	1.3	1.3	1.3
		HR	25.2	25.6	26.9

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

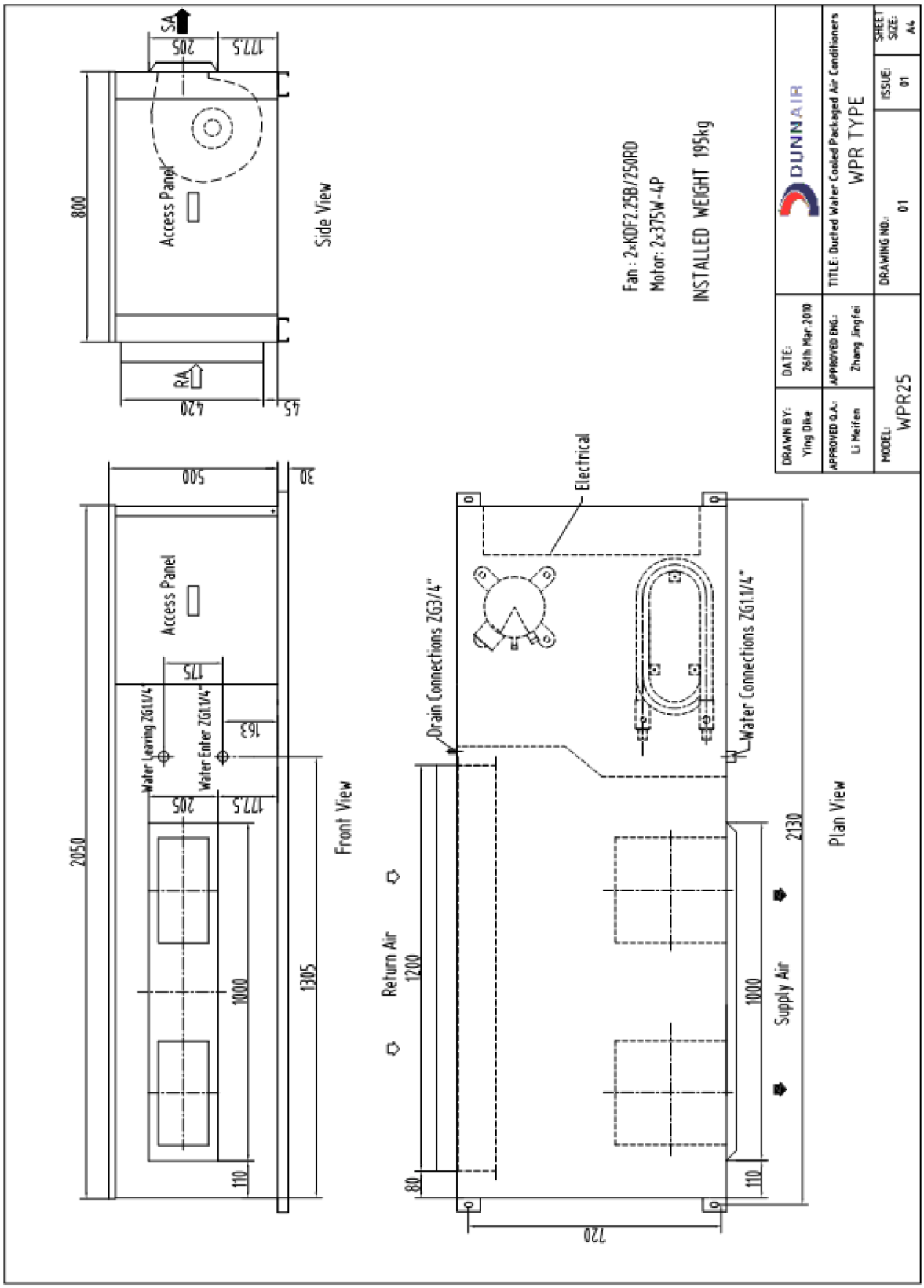
AIR FLOW RATE (L/S)			1150		
WATE FLOW RATE (L/S)			1.3		
COIL E.A.T.	DB ℃		18	21	25
Entering Water Temperature (E.W.T) ℃	15	HC	21.0	20.8	19.8
		Hab	15.7	15.4	14.6
		LWT	11.1	11.2	11.4
		INPT	5.3	5.3	5.3
	20	HC	22.3	22.1	21.0
		Hab	16.9	16.6	15.7
		LWT	15.9	15.9	16.1
		INPT	5.5	5.5	5.3
	25	HC	24.2	23.9	23.0
		Hab	18.5	18.1	17.3
		LWT	20.5	20.6	20.8
		INPT	5.8	5.8	5.8

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)

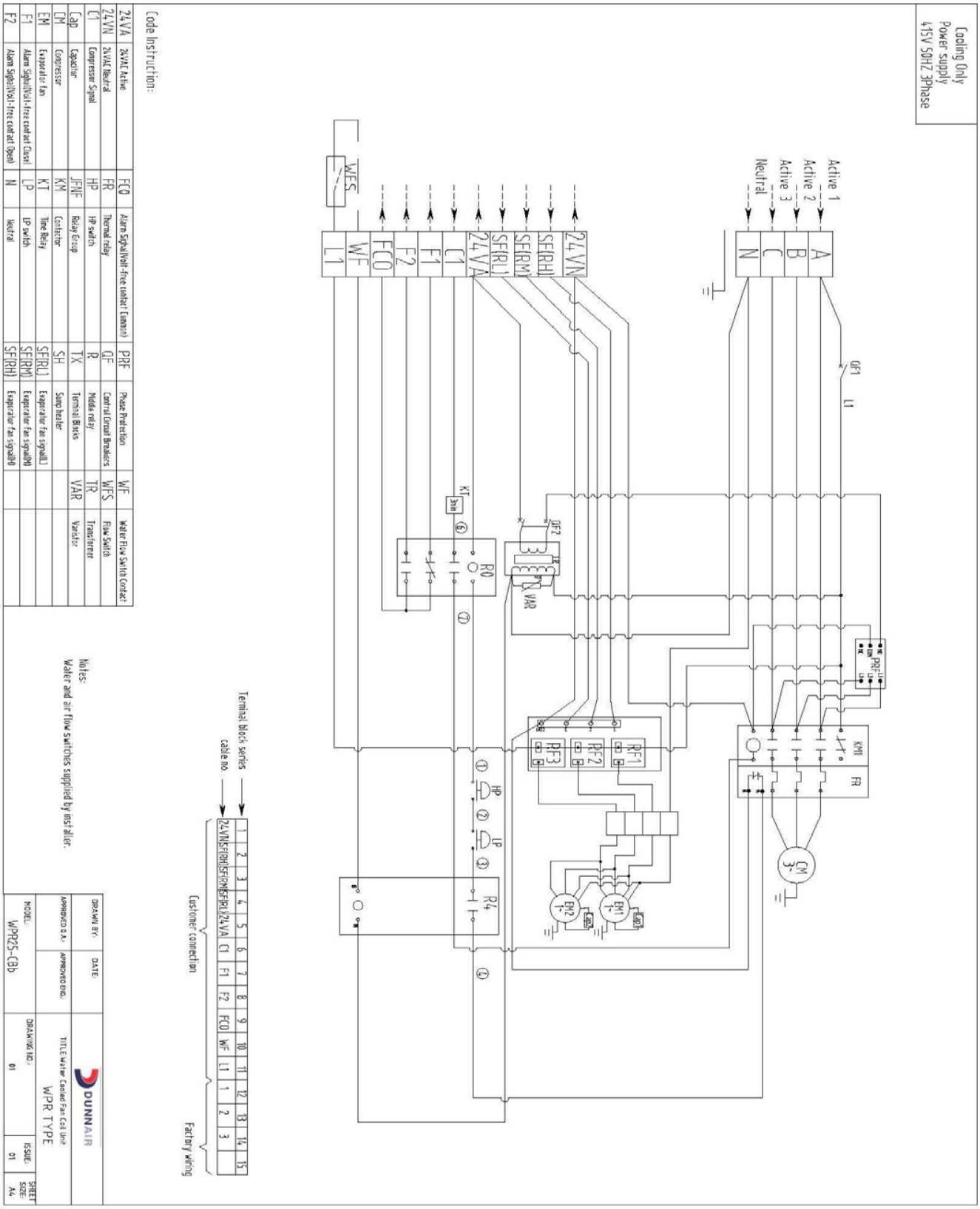
Note: All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

May 2014

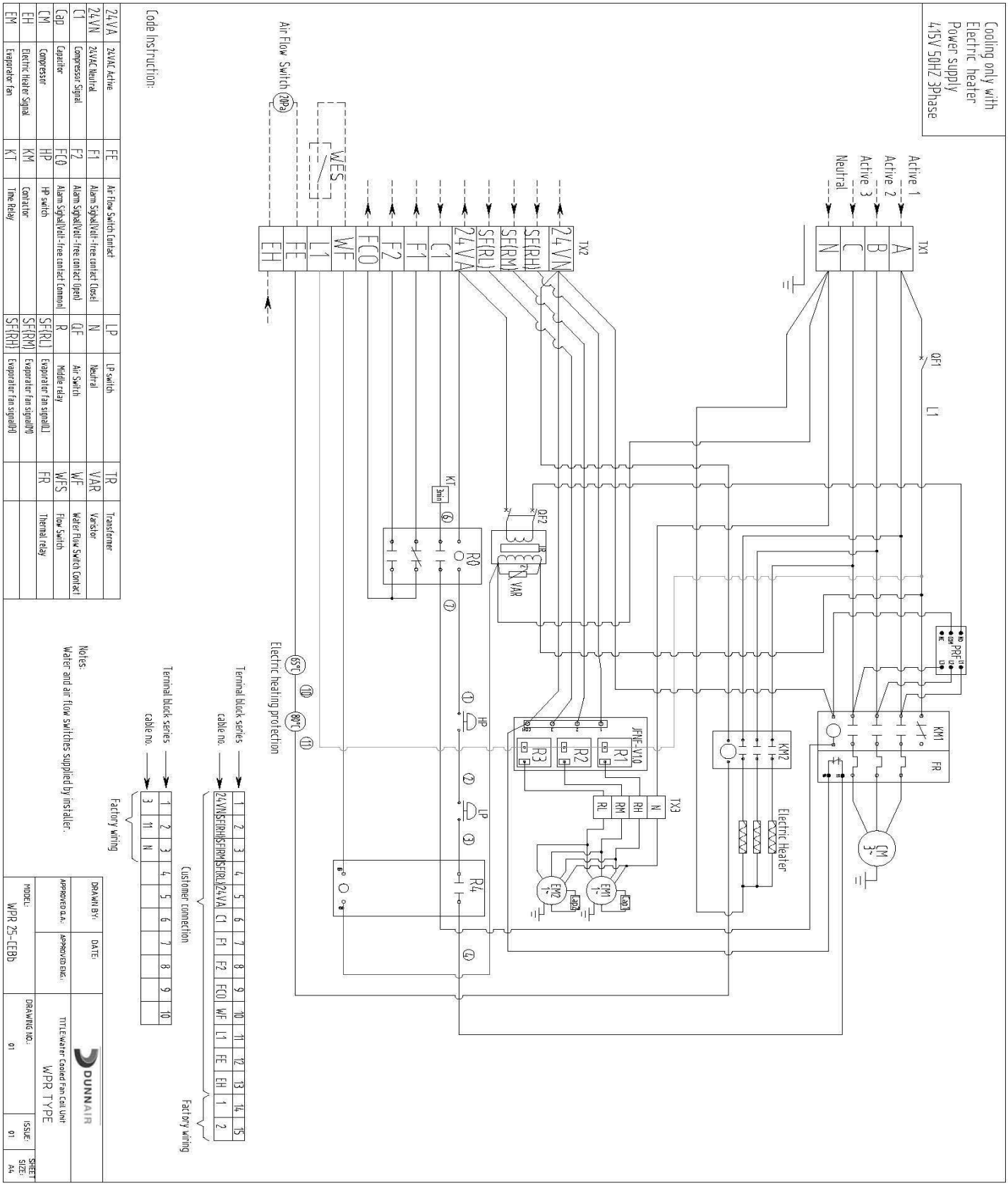
DIMENSIONS (mm)



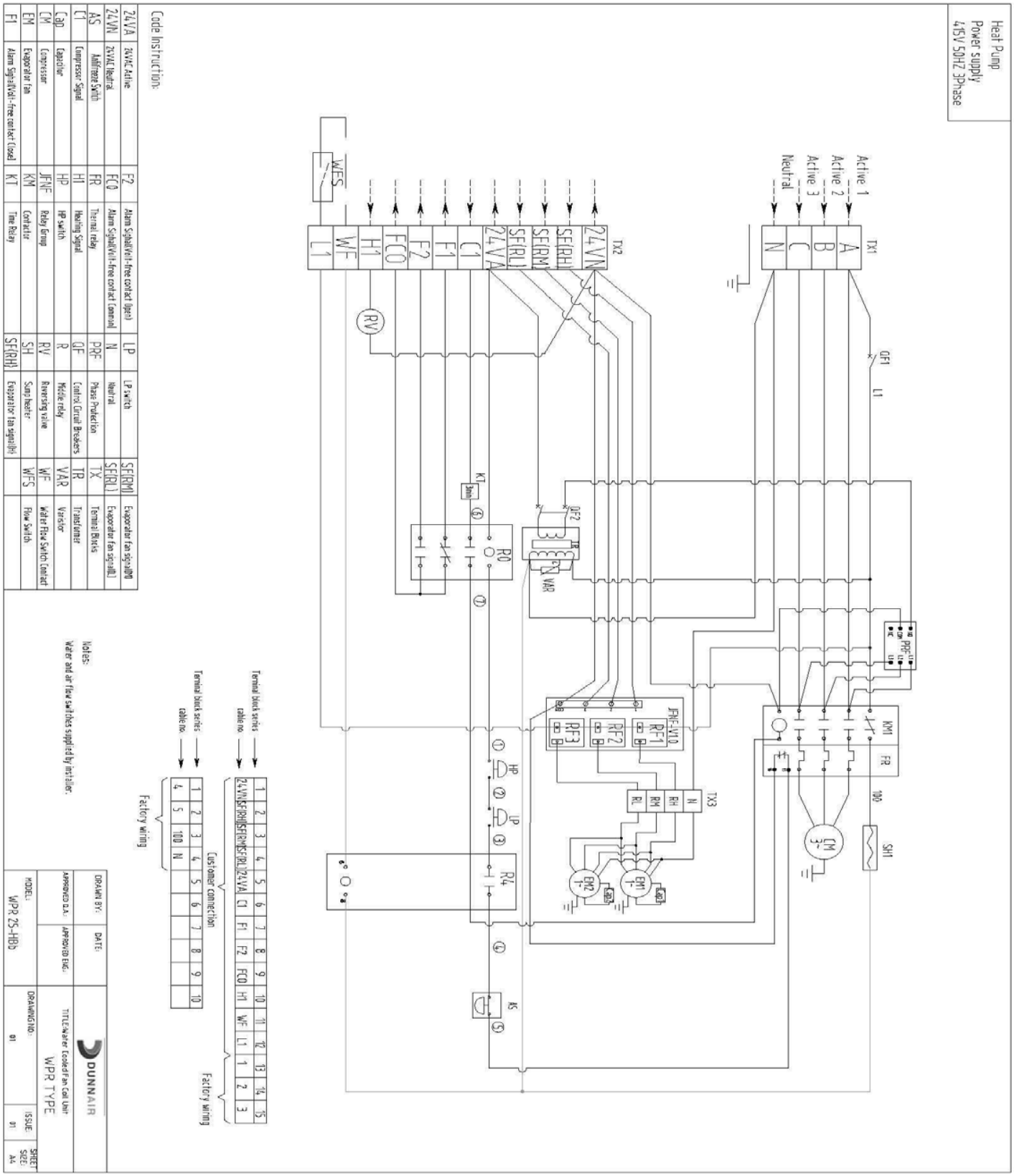
WIRING DIAGRAMS – Cooling Only



WIRING DIAGRAMS – Cooling Only with Electric Heater

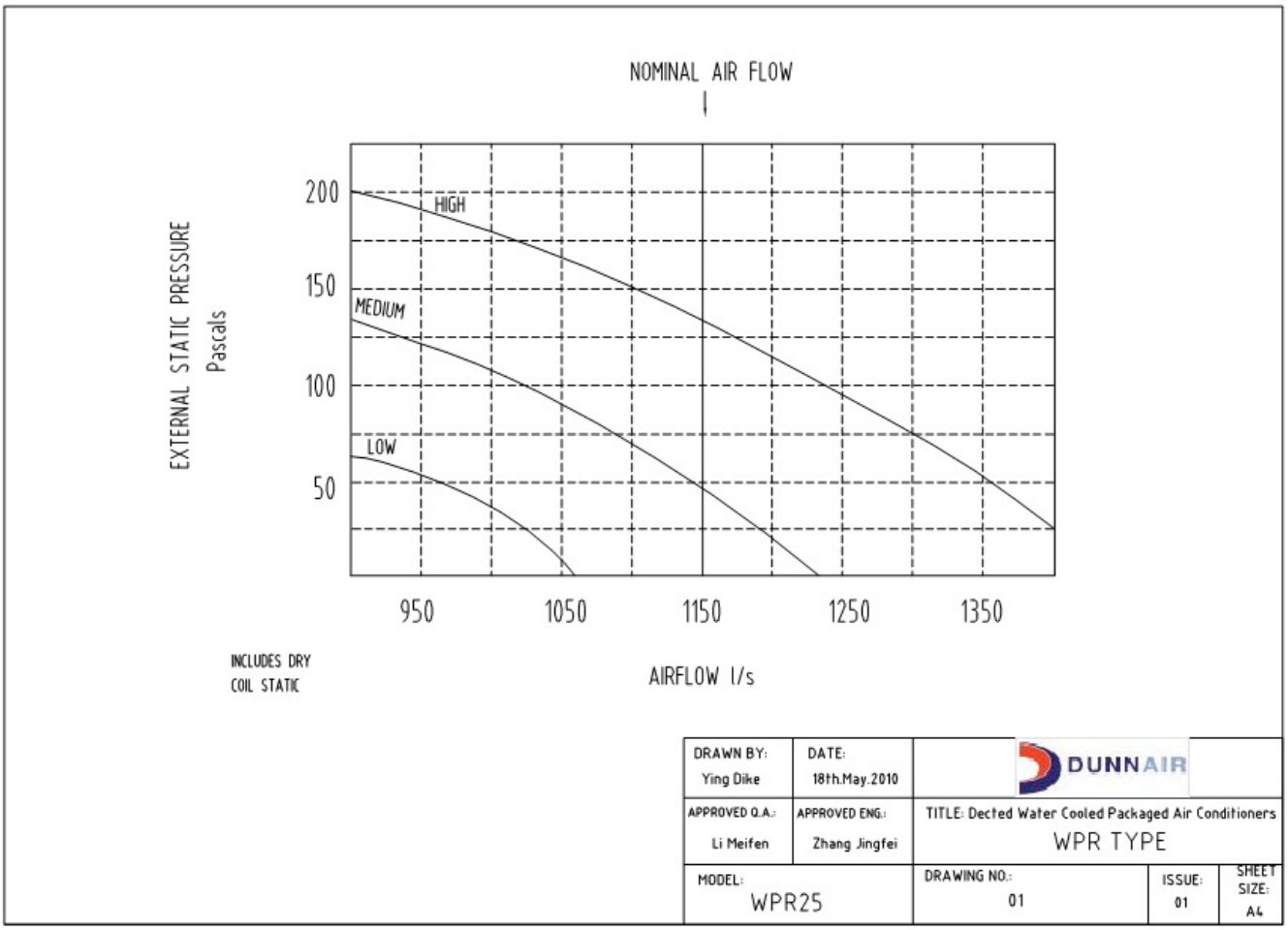


WIRING DIAGRAMS – Reverse Cycle



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.

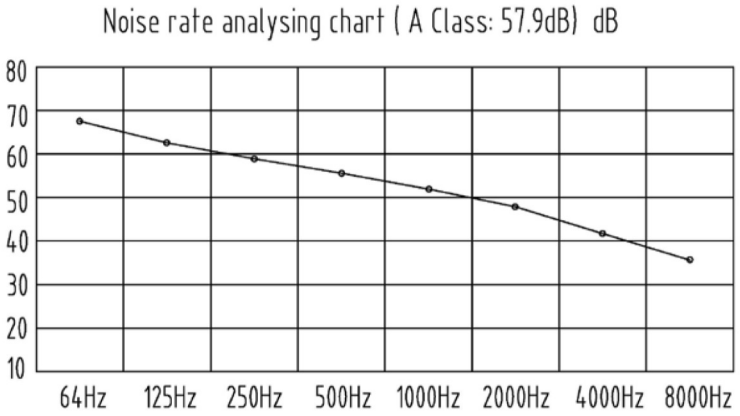
AIR HANDLING PERFORMANCE

Sound Levels

WPR25 Noise rate analysing chart

A Class: 57.9dB

Hz	dB
64Hz	68.5
125Hz	63.3
250Hz	60.8
500Hz	55.9
1000Hz	53.1
2000Hz	48.0
4000Hz	42.4
8000Hz	36.3



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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