DUNNAIR (Aust) Pty Ltd

WPR16 L

Ducted Water Cooled
R410a Refrigerant

Packaged Vertical Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	15.8 kW	Refrigerant	R410A
Electrical Input (Cooling)	4.29 kW	Refrigerant Charge	2.2 kg
E.E.R.(Cooling)	3.7	Minimum Water Flow	0.8 l/s
Running Amps (Total)	13.0A	Water Coil Pressure Drop	40 kPa
Fan Motor Full Load Amps	4.8 A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heater (Option)	12.0 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			850		
COIL E.A.T.	DB ℃		23	27	31
	WB ℃		17	19	21
Entering Water Temperature (E.W.T) ℃	20	T	16.8	17.7	18.5
		S	12.2	14.0	15.7
		FL	1.0	1.0	1.0
		HR	21.0	21.8	22.8
	25	T	16.0	17.0	18.7
		S	12.3	13.7	15.8
		FL	1.0	1.0	1.0
		HR	20.2	21.1	23.0
	30	T	15.0	15.8	17.6
		S	11.4	13.2	15.4
		FL	1.0	1.0	1.0
		HR	19.0	19.9	21.9
	35	T	14.0	14.8	15.4
		S	11.0	12.8	14.5
		FL	1.0	1.0	1.0
		HR	18.1	18.9	19.5
	40	T	13.4	13.7	14.4
		S	10.7	12.4	14.1
		FL	1.0	1.0	1.0
		HR	17.4	17.7	18.6

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

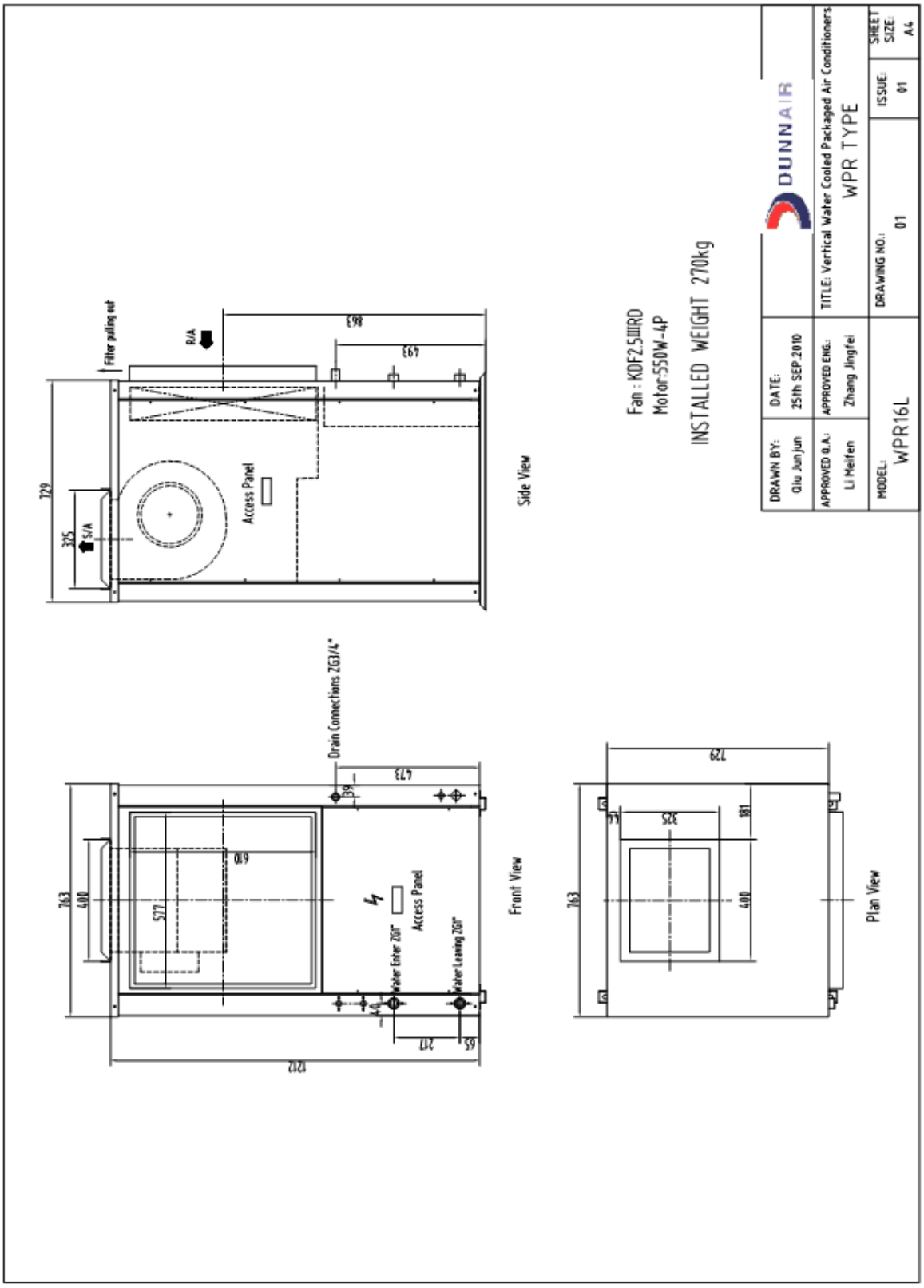
AIR FLOW RATE (L/S)			850		
WATE FLOW RATE (L/S)			1.0		
COIL E.A.T.	DB ℃		18	21	25
Entering Water Temperature (E.W.T) ℃	15	HC	16.1	16.0	15.3
		Hab	12.0	11.8	11.2
		LWT	11.1	11.2	11.4
		INPT	4.2	4.2	4.0
	20	HC	17.2	17.0	16.2
		Hab	12.9	12.8	12.1
		LWT	15.9	15.9	16.1
		INPT	4.2	4.2	4.1
	25	HC	18.6	18.4	17.7
		Hab	14.2	13.9	13.3
		LWT	20.5	20.6	20.8
		INPT	4.5	4.5	4.4

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)

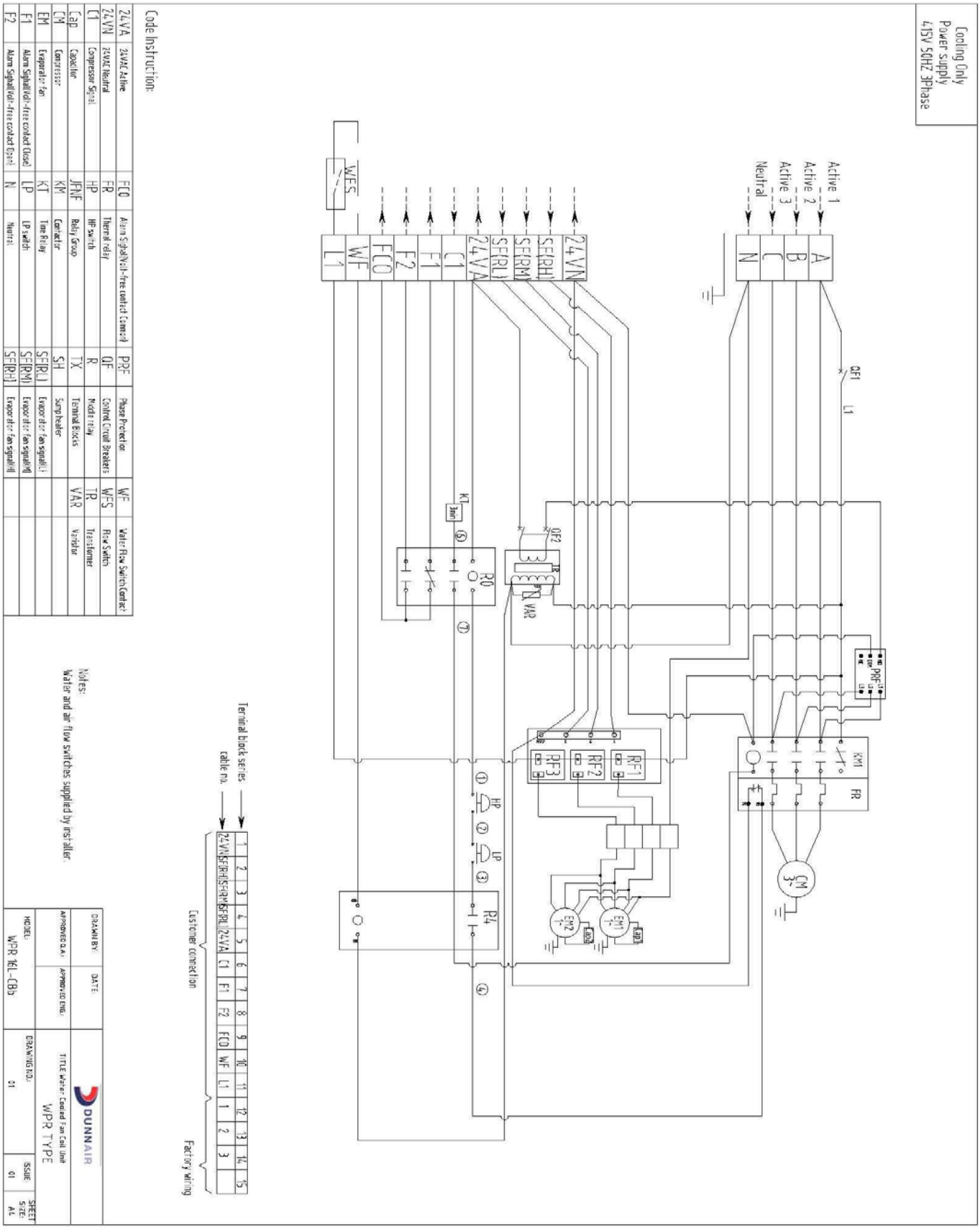
Note: All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

May 2014

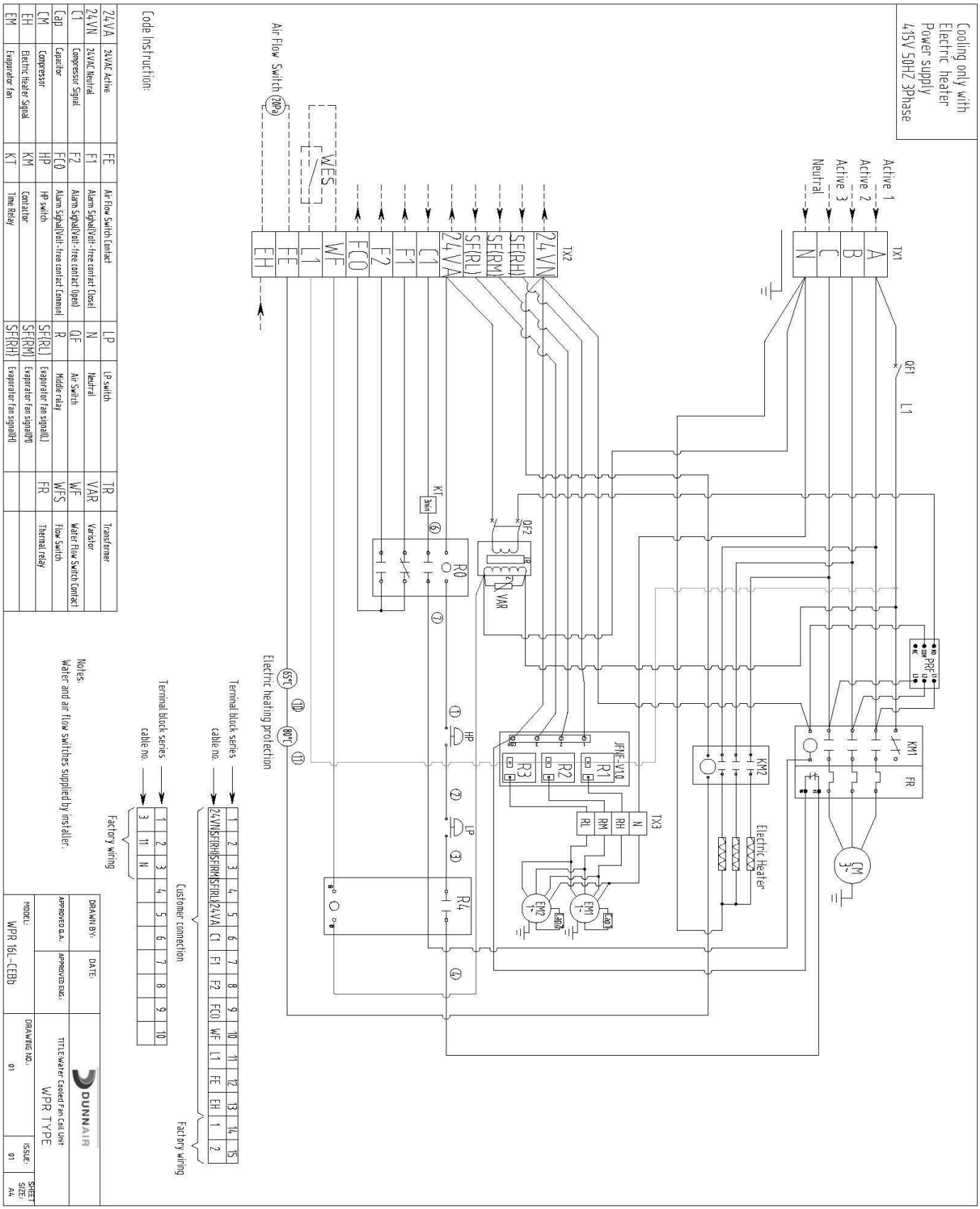
DIMENSIONS (mm)



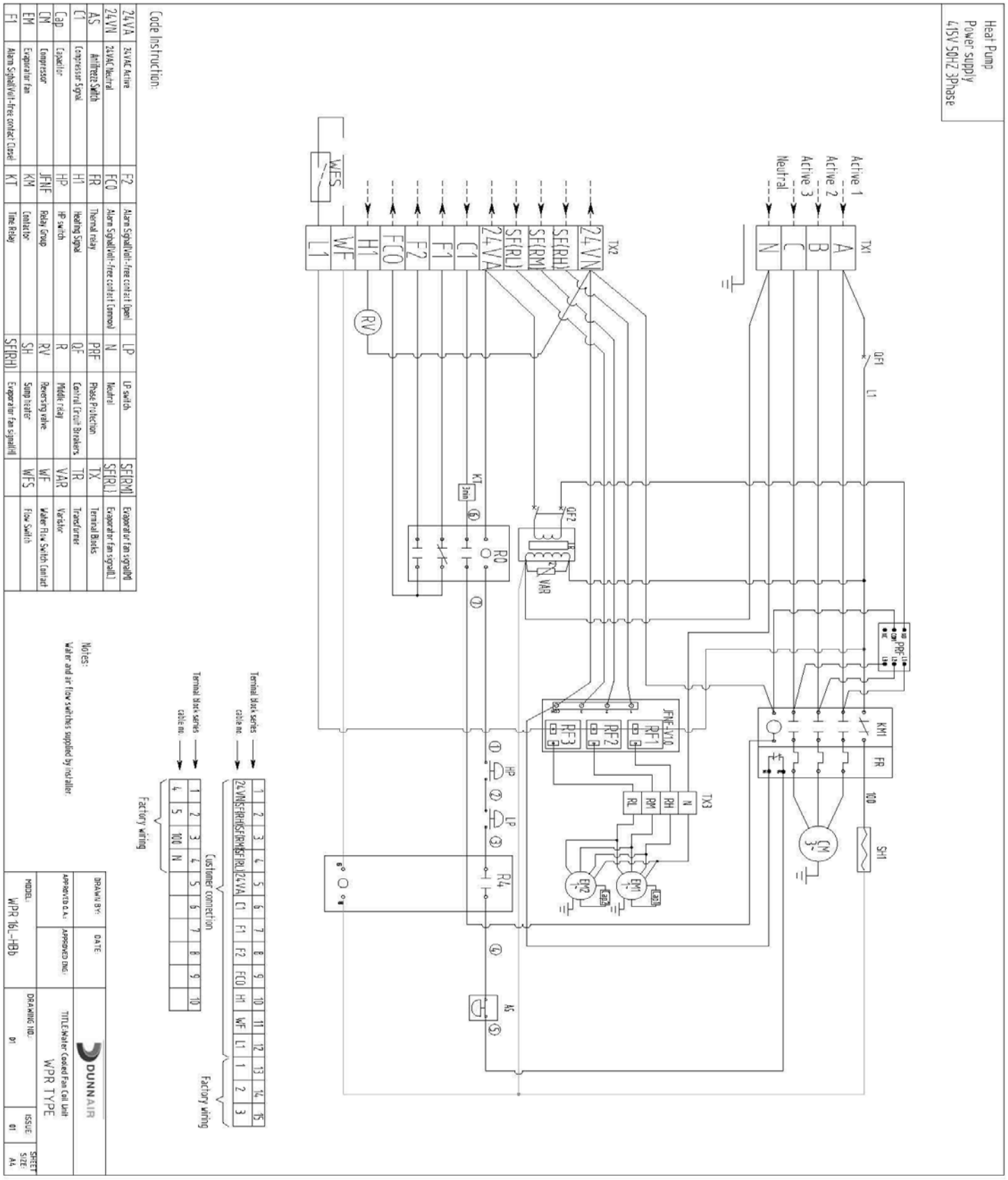
WIRING DIAGRAMS – Cooling Only



WIRING DIAGRAMS – Cooling Only with Electric Heater

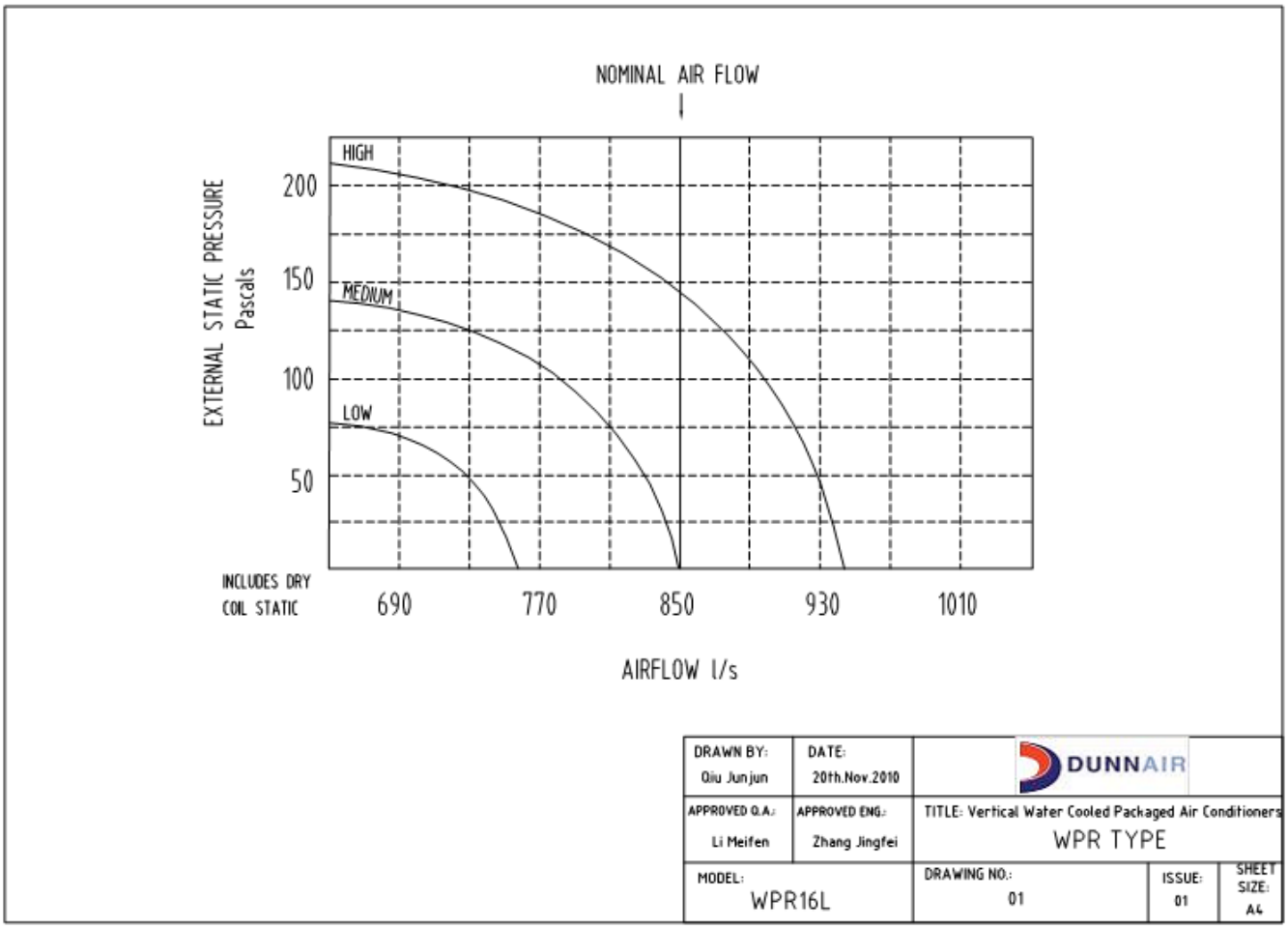


WIRING DIAGRAMS – Reverse Cycle



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



Note:

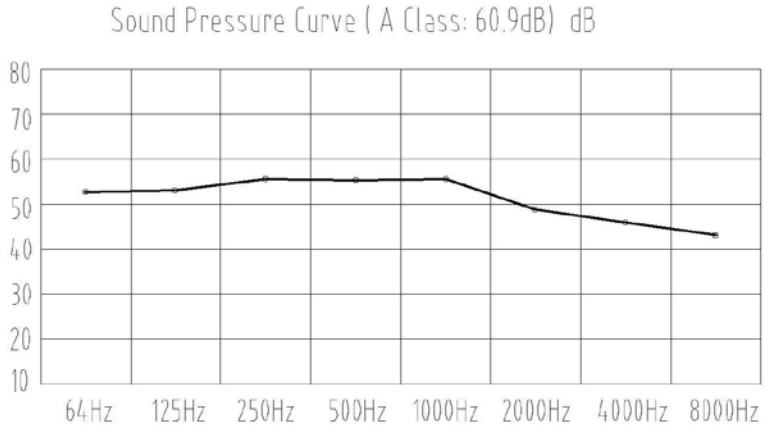
1. In tropical (high humidity) conditions, care must be taken to select an air flow which gives a suitable coil face air velocity, to prevent water carry over.
2. For applications with low resistance, be sure not to exceed the fan motor full load Amps.
3. Applications using full or high proportions of 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

WPR16L Sound Pressure Curve
A Class: 60.9dB

Hz	dB
64Hz	51.9
125Hz	52.8
250Hz	56.3
500Hz	54.5
1000Hz	55.9
2000Hz	49.3
4000Hz	46.5
8000Hz	42.1



Note: Occupant at least 1.0m from sound source.

DRAWN BY: Qiu Junjun	DATE: 15th.Dec.2010	DUNNAIR		
APPROVED Q.A.: LI Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Vertical Water Cooled Packaged Air Conditioners WPR TYPE		
MODEL: WPR16L		DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4