



DUNNAIR
(Aust) Pty Ltd

WPR30L

**Ducted Water Cooled
R410a Refrigerant**

Packaged Vertical Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	29.6 kW	Refrigerant	R410A
Electrical Input (Cooling)	7.18 kW	Refrigerant Charge	4.2 kg
E.E.R.(Cooling)	4.1	Minimum Water Flow	1.36l/s
Running Amps (Total)	24.6A	Water Coil Pressure Drop	48kPa
Fan Motor Full Load Amps	6.6 A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heater (Option)	21 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)		1500				
COIL E.A.T.	DB °C	23	27	31		
	WB °C	17	19	21		
Entering Water Temperature (E.W.T) °C	20	T	31.4	33.1	34.7	
		S	22.4	25.6	28.6	
		FL	1.7	1.7	1.7	
		HR	38.5	40.1	41.9	
	25	T	29.9	31.8	35.0	
		S	22.6	25.0	28.7	
		FL	1.7	1.7	1.7	
		HR	37.1	38.9	42.5	
	30	T	28.1	<u>29.6</u>	33.1	
		S	20.9	<u>24.1</u>	27.9	
		FL	1.7	<u>1.7</u>	1.7	
		HR	35.2	<u>36.7</u>	40.5	
	35	T	26.3	27.7	28.8	
		S	20.1	23.3	26.2	
		FL	1.7	1.7	1.7	
		HR	33.4	34.9	36.1	
40	T	25.1	25.7	27.0		
	S	19.6	22.5	25.5		
	FL	1.7	1.7	1.7		
	HR	32.3	32.8	34.5		

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

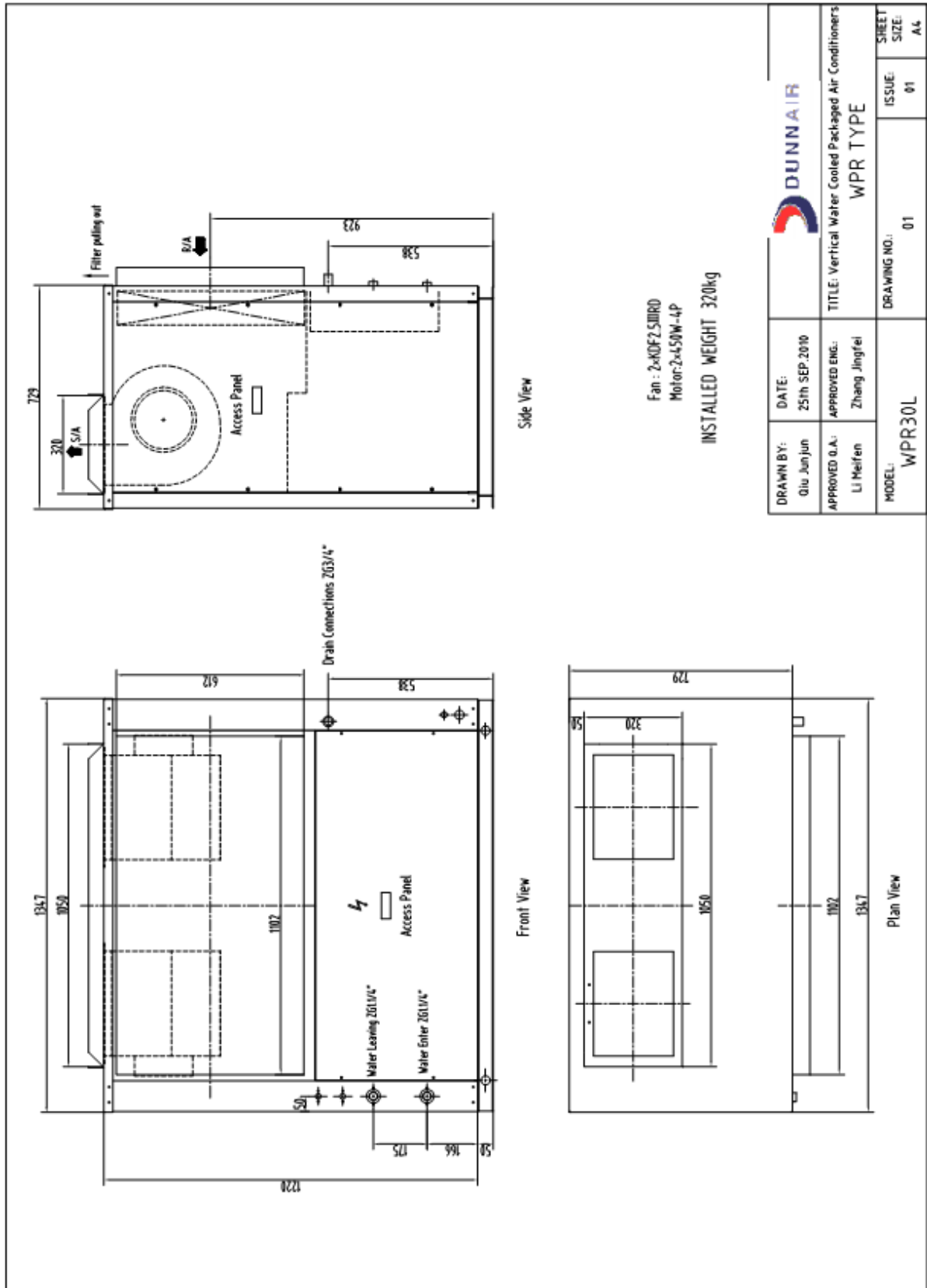
AIR FLOW RATE (L/S)		1500				
WATE FLOW RATE (L/S)		1.7				
COIL E.A.T.	DB °C	18	21	25		
Entering Water Temperature (E.W.T) °C	15	HC	29.1	28.8	27.5	
		Hab	21.7	21.4	20.2	
		LWT	10.9	11.0	11.1	
		INPT	7.4	7.3	7.3	
	20	HC	30.9	<u>30.6</u>	29.1	
		Hab	23.3	<u>23.0</u>	21.8	
		LWT	15.7	<u>15.7</u>	15.9	
		INPT	7.6	<u>7.6</u>	7.4	
	25	HC	33.5	33.0	31.9	
		Hab	25.6	25.1	23.9	
		LWT	20.3	20.4	20.5	
		INPT	8.0	8.0	8.0	

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.

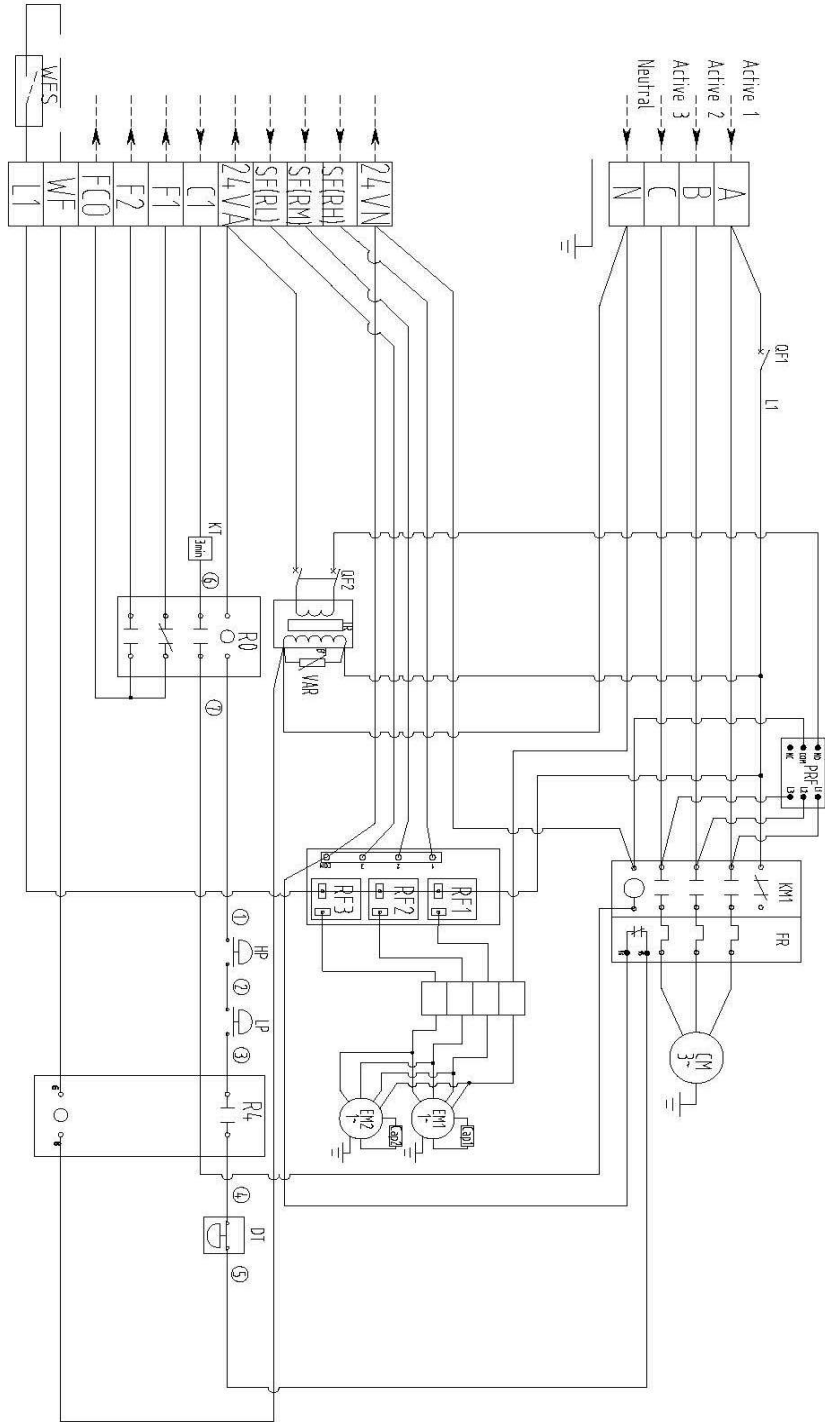
Note: 1. Capacities are gross and do not include allowance for fan motor heat loss. For fan motor heat loss refers to Air Handling Performance.
 2. Water flow and cooling capacity based on 5 °C water temperature difference.

DIMENSIONS (mm)



WIRING DIAGRAMS – Cooling Only

Cooling Only
Power supply
4.15V 50HZ 3Phase



Code Instruction:

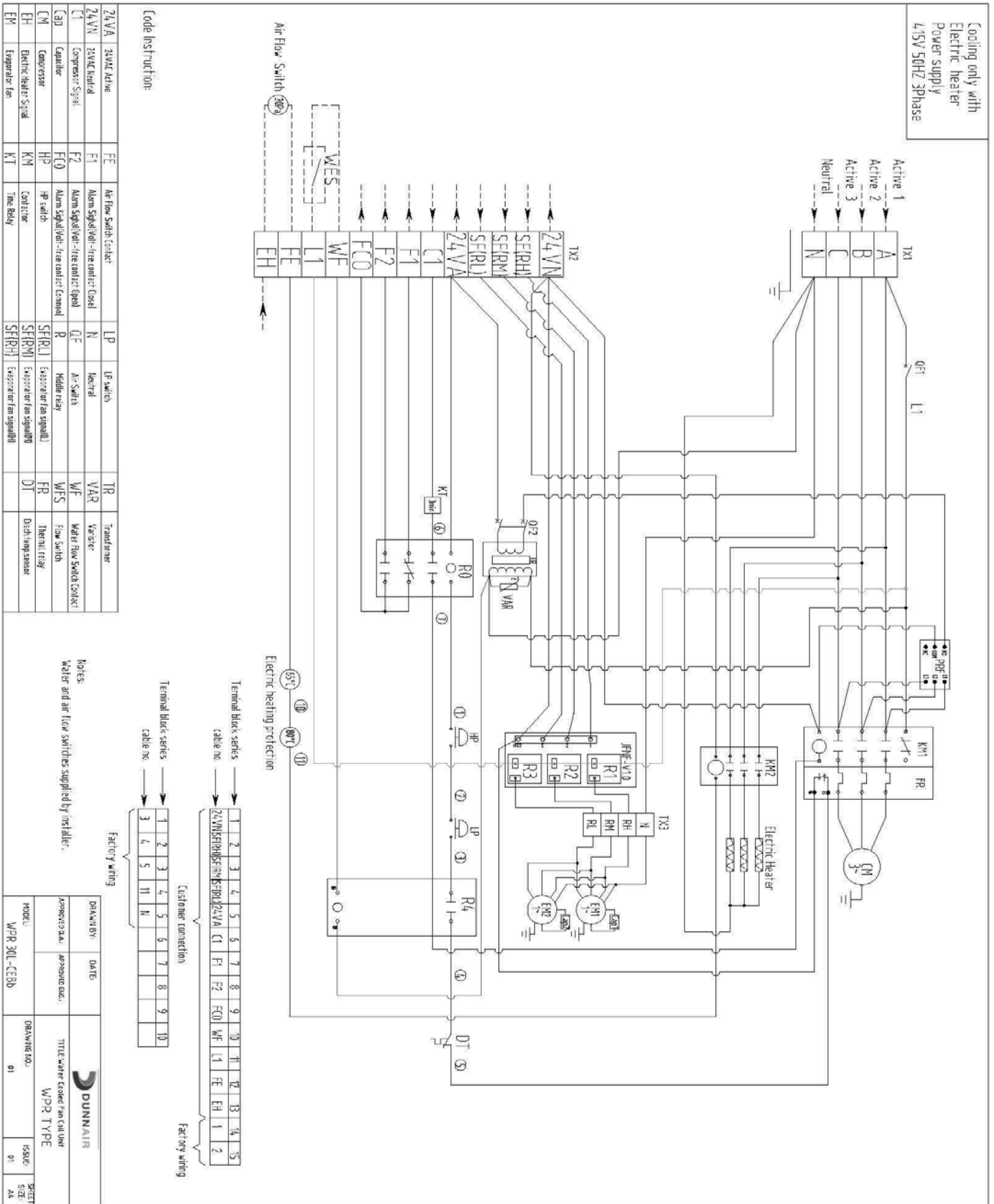
24VA	24VAC Active	FC0	Alarm Signal(Volt-free contact) Common	PPF	Phase Protection	WFS	Water Flow Switch Contact
C1	24VAC Neutral	FR	Thermal relay	WFS	Control Circuit Breakers	TR	Transformer
EM	Compressor Signal	HP	HP switch	R	Relay	VAR	Variable
F1	Compressor	JNF	Relay Group	TX	Terminal Blocks	DT	Duct Temperature Sensor
F2	Compressor fan	KM	Contact	SH	Simple Heater		
		KT	Time Relay	SEFR1	Evaporator Fan signal(L)		
		LP	LP switch	SEFR2	Evaporator Fan signal(H)		
		N	Neutral	SEFR3	Evaporator Fan signal(H)		

Notes:
Water and air flow switches supplied by installer.

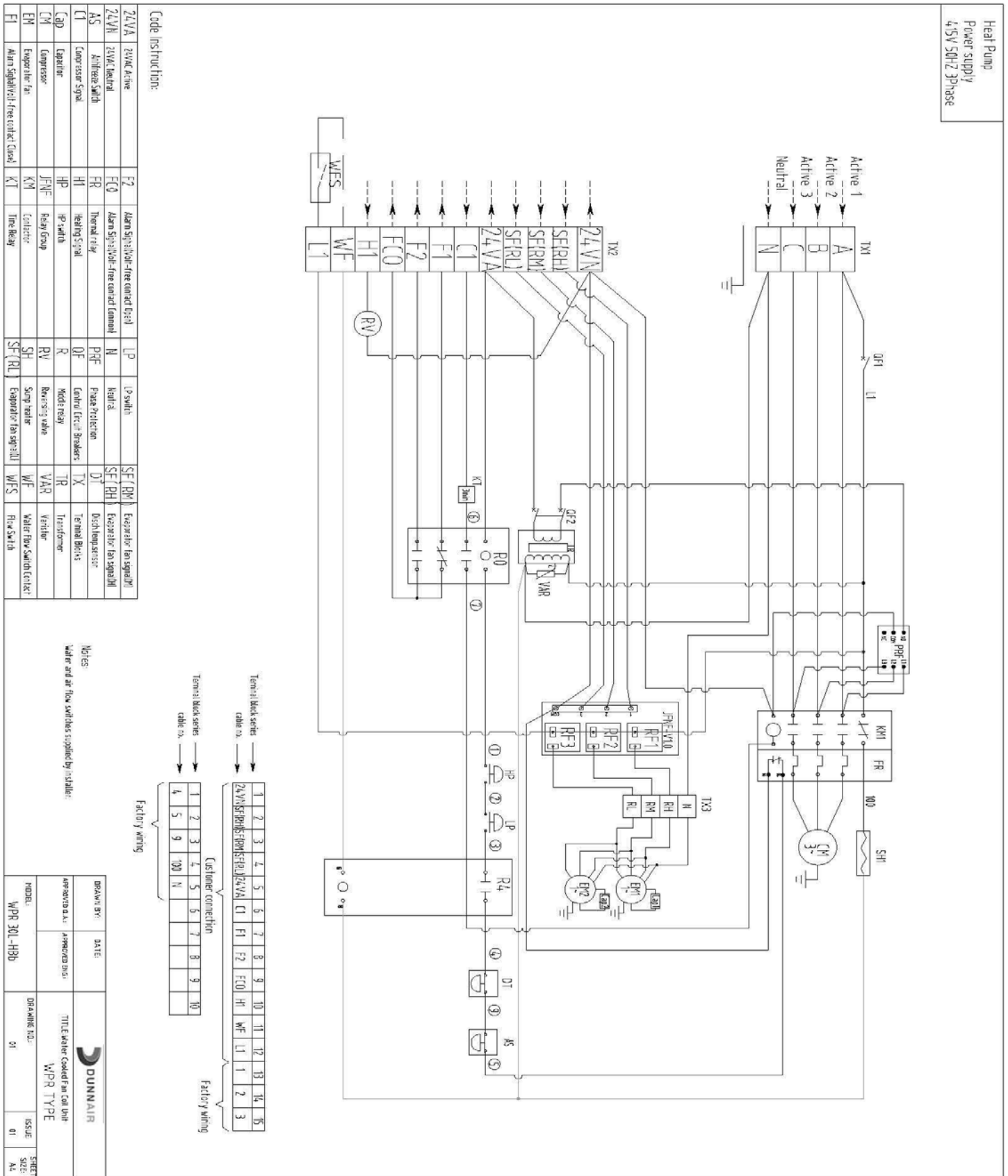


DRAWING BY:	DATE:	DUNNAIR
APPROVED BY:	APPROVED DATE:	
MODEL:	WPR30L-CB0	DRAWING NO:
TITLE:	Water Cooled Fan Coil Unit	WPR TYPE:
ISSUE:	01	SHEET:
SIZE:	AA	

WIRING DIAGRAMS – Cooling Only with Electric Heater

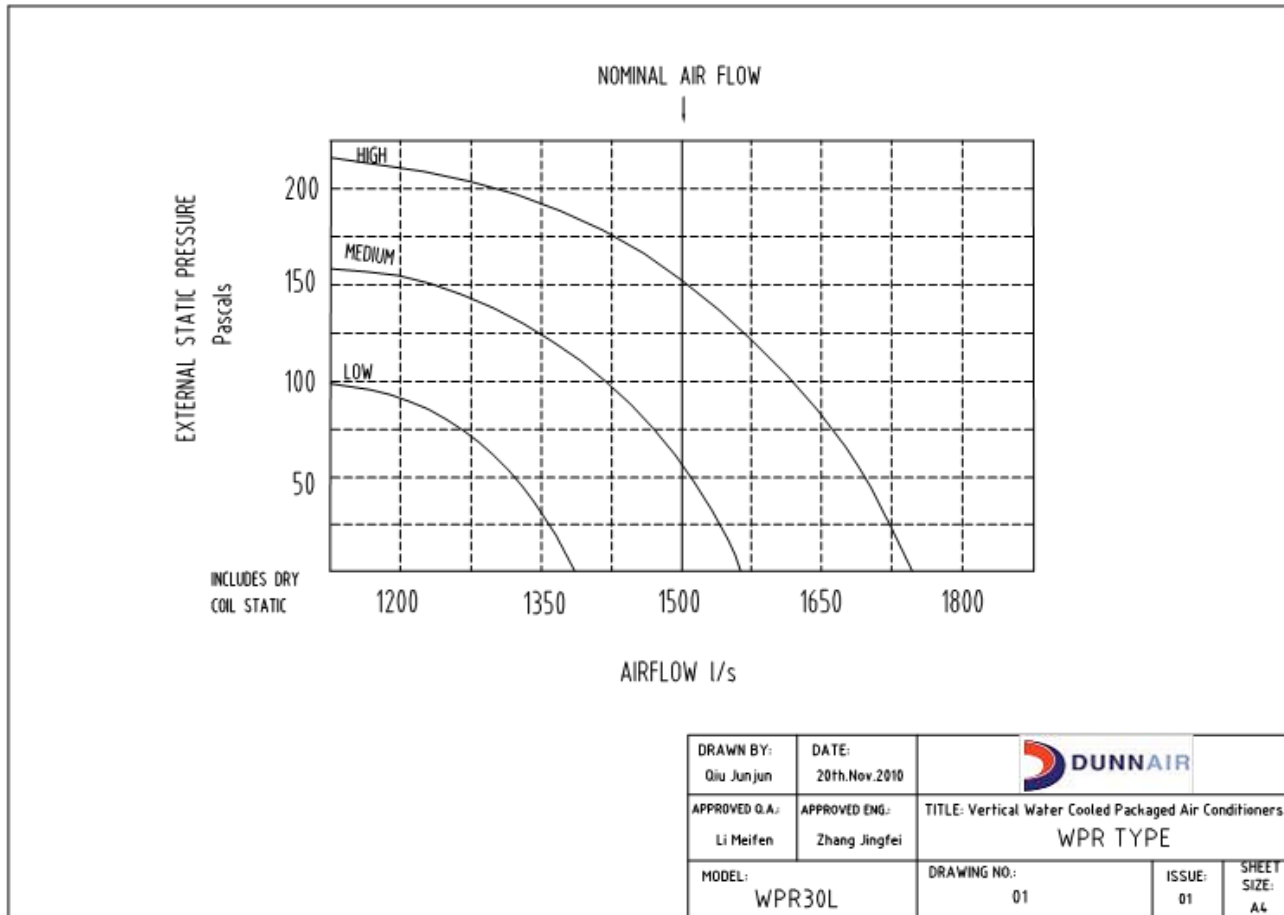


WIRING DIAGRAMS – Reverse Cycle



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

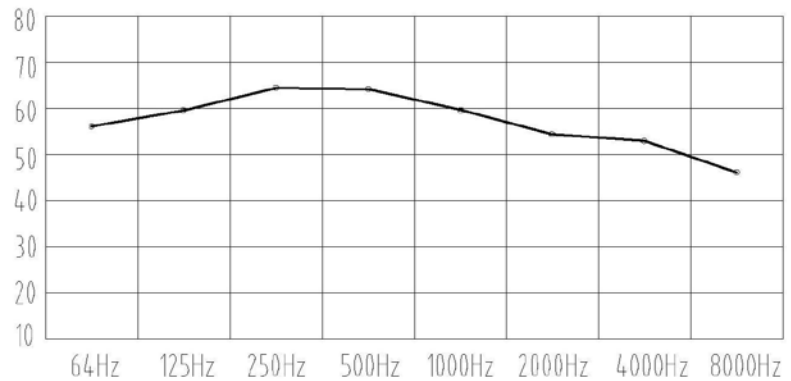
Sound Levels

WPR30L Sound Pressure Curve


A Class: 64.8dB

Hz	dB
64Hz	56.1
125Hz	59.3
250Hz	63.6
500Hz	62.9
1000Hz	59.8
2000Hz	54.0
4000Hz	52.7
8000Hz	46.5

Sound Pressure Curve (A Class: 64.8dB) dB



Note: Occupant at least 1.0m from sound source.

DRAWN BY: Qiu Junjun	DATE: 15th.Dec.2010			
APPROVED Q.A.: Li Meifen	APPROVED ENG.: Zhang Jingfei	TITLE: Vertical Water Cooled Packaged Air Conditioners WPR TYPE		
MODEL: WPR30L	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4	