



DUNNAIR
(Aust) Pty Ltd

WPR38

Packaged Horizontal Type

**Ducted Water Cooled
R410a Refrigerant**

TECHNICAL SPECIFICATION

Total Cooling Capacity	37.2 kW	Refrigerant	R410A
Electrical Input (Cooling)	9.1 kW	Refrigerant Charge	5.0 kg
E.E.R.(Cooling)	4.1	Minimum Water Flow	1.76l/s
Running Amps (Total)	31.8A	Water Coil Pressure Drop	48kPa
Fan Motor Full Load Amps	9.6A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heater (Option)	24 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)		1900			
COIL E.A.T.	DB °C	23	27	31	
	WB °C	17	19	21	
Entering Water Temperature (E.W.T) °C	20	T	39.5	41.6	44.1
		S	28.2	32.3	36.2
		FL	2.2	2.2	2.2
		HR	48.6	50.6	53.3
	25	T	37.6	40.0	44.0
		S	28.4	31.6	36.2
		FL	2.2	2.2	2.2
		HR	46.8	49.1	53.5
	30	T	35.3	<u>37.2</u>	41.6
		S	26.3	<u>30.4</u>	35.2
		FL	2.2	<u>2.2</u>	2.2
		HR	44.3	<u>46.3</u>	51.0
	35	T	33.0	34.8	36.2
		S	25.3	29.4	33.0
		FL	2.2	2.2	2.2
		HR	42.2	44.0	45.6
40	T	31.5	32.3	34.0	
	S	24.7	28.4	32.2	
	FL	2.2	2.2	2.2	
	HR	41.0	41.6	43.7	

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

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.

HEATING CAPACITY (kW)

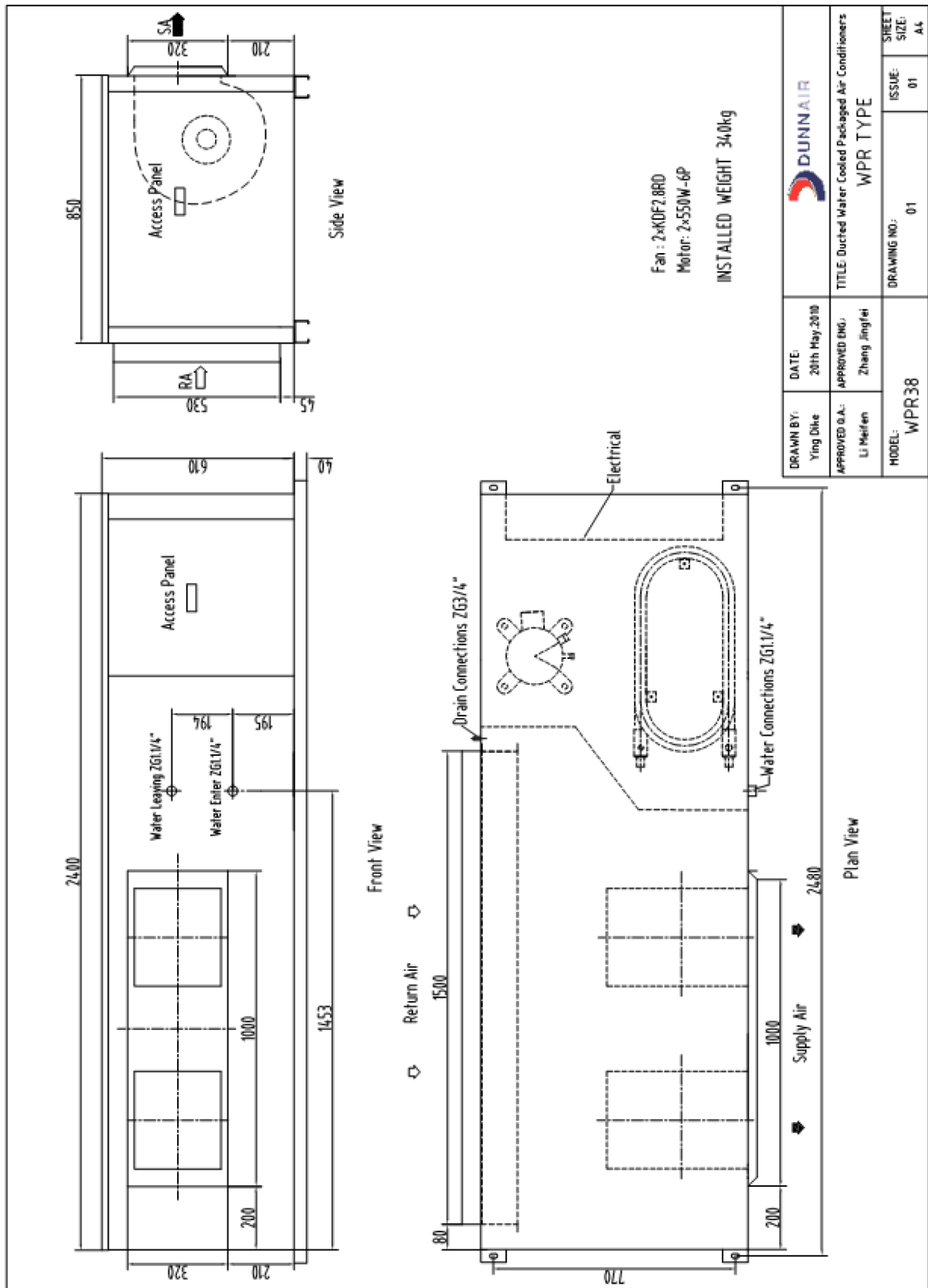
WPR Reverse Cycle Version

AIR FLOW RATE (L/S)		1900			
WATE FLOW RATE (L/S)		2.2			
COIL E.A.T.	DB °C	18	21	25	
Entering Water Temperature (E.W.T) °C	15	HC	36.3	35.7	34.4
		Hab	26.9	26.4	25.0
		LWT	11.1	11.1	11.3
		INPT	9.3	9.3	9.3
	20	HC	38.4	<u>37.8</u>	36.1
		Hab	28.8	<u>28.2</u>	26.8
		LWT	15.8	<u>15.9</u>	16.1
		INPT	9.6	<u>9.6</u>	9.3
	25	HC	41.8	41.0	39.8
		Hab	31.7	30.9	29.6
		LWT	20.5	20.5	20.7
		INPT	10.2	10.2	10.2

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)

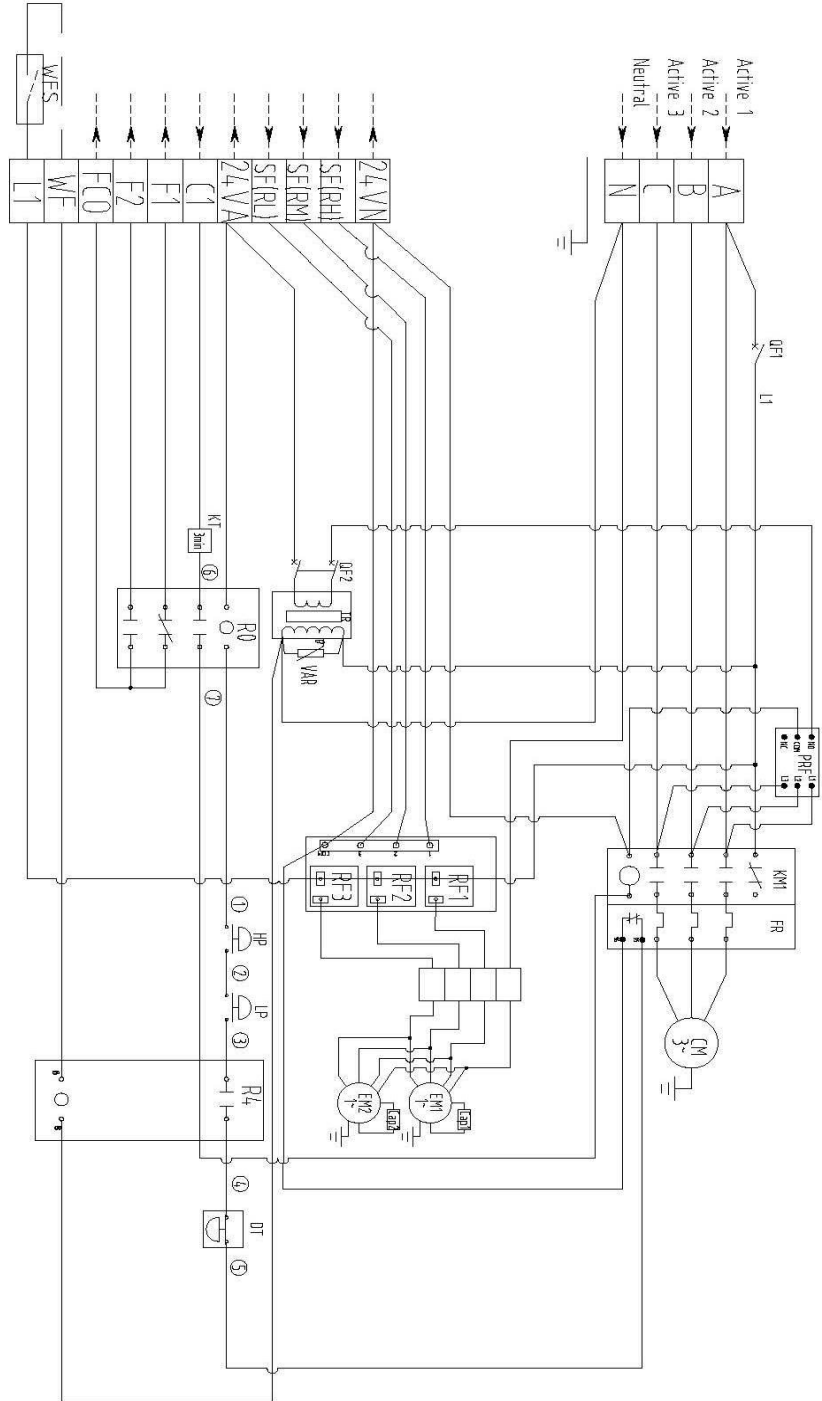
Note: All units are reverse cycle heat pump units. Models can also be provided as cooling only or cooling only with electric heater.

DIMENSIONS (mm)



WIRING DIAGRAMS – Cooling Only

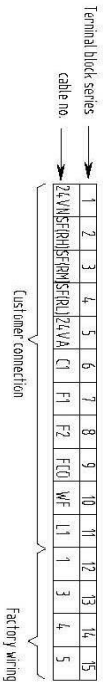
Cooling Only
Power supply
4/15V 50Hz 3Phase



Code Instruction:

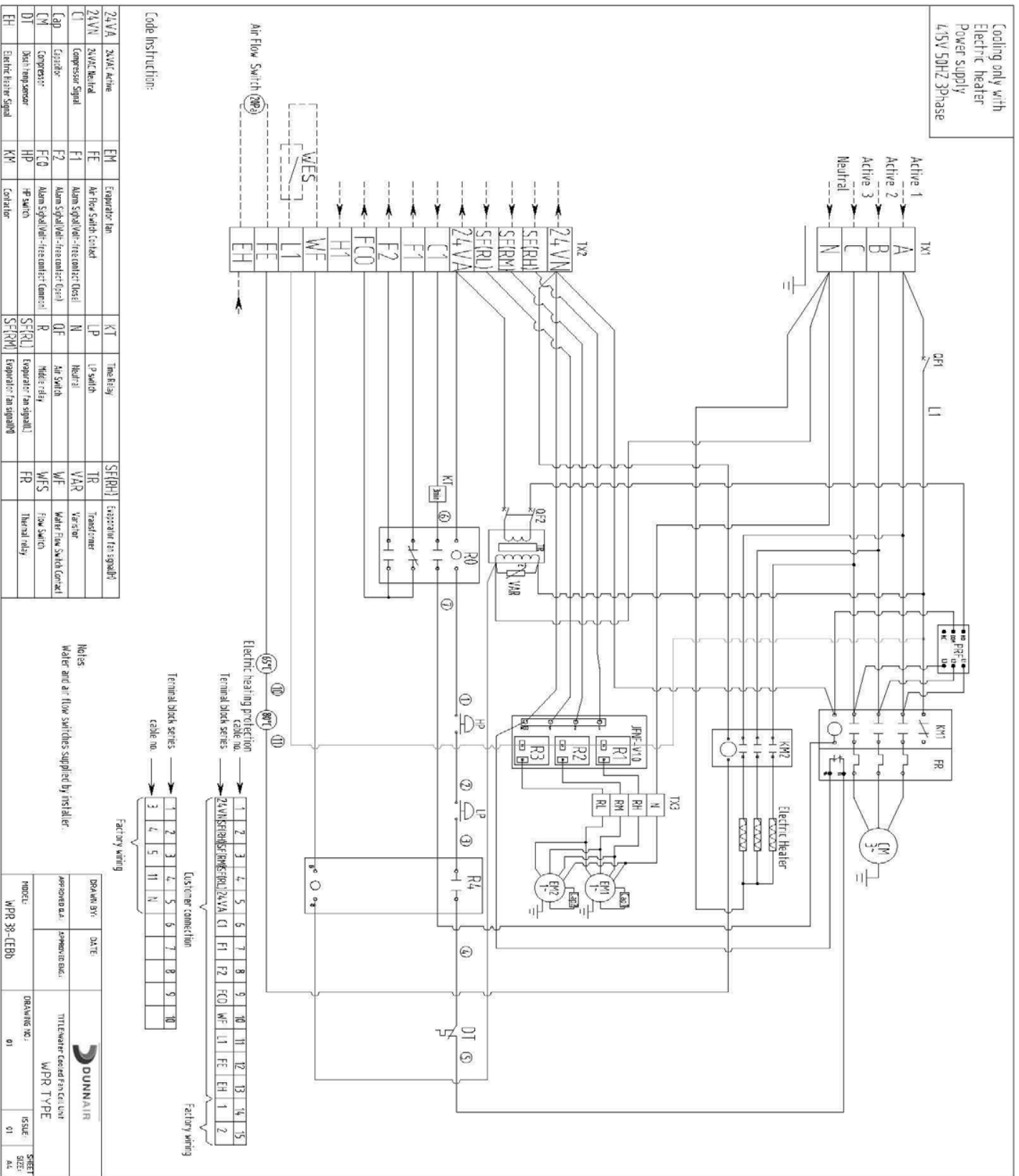
24V A	24V Active	F0	Alarm signal/Volt-free contact (closed)	PRF	Phase Protection	TX	Terminal Blocks
24V N	24V Neutral	FR	Thermal relay	DF	Control Circuit Breakers	TR	Transformer
C1	Compressor Signal	HP	HP switch	R	Middle relay	VAR	Varistor
CM	Compressor	JNF	Relay group	SH	Sump heater	WFS	Water flow Switch/Contact
EM	Evaporator fan	KM	Contact	SE(R)H	Evaporator fan signal(H)	DT	Disch. temperature
F1	Alarm signal/Volt-free contact (closed)	KT	Time Relay	SE(R)M	Evaporator fan signal(M)		
F2	Alarm signal/Volt-free contact (open)	LP	LP switch	SE(R)L	Evaporator fan signal(L)		
		N	Neutral	TK	Disch. temperature		

Notes:
Water and air flow switches supplied by inst. filler



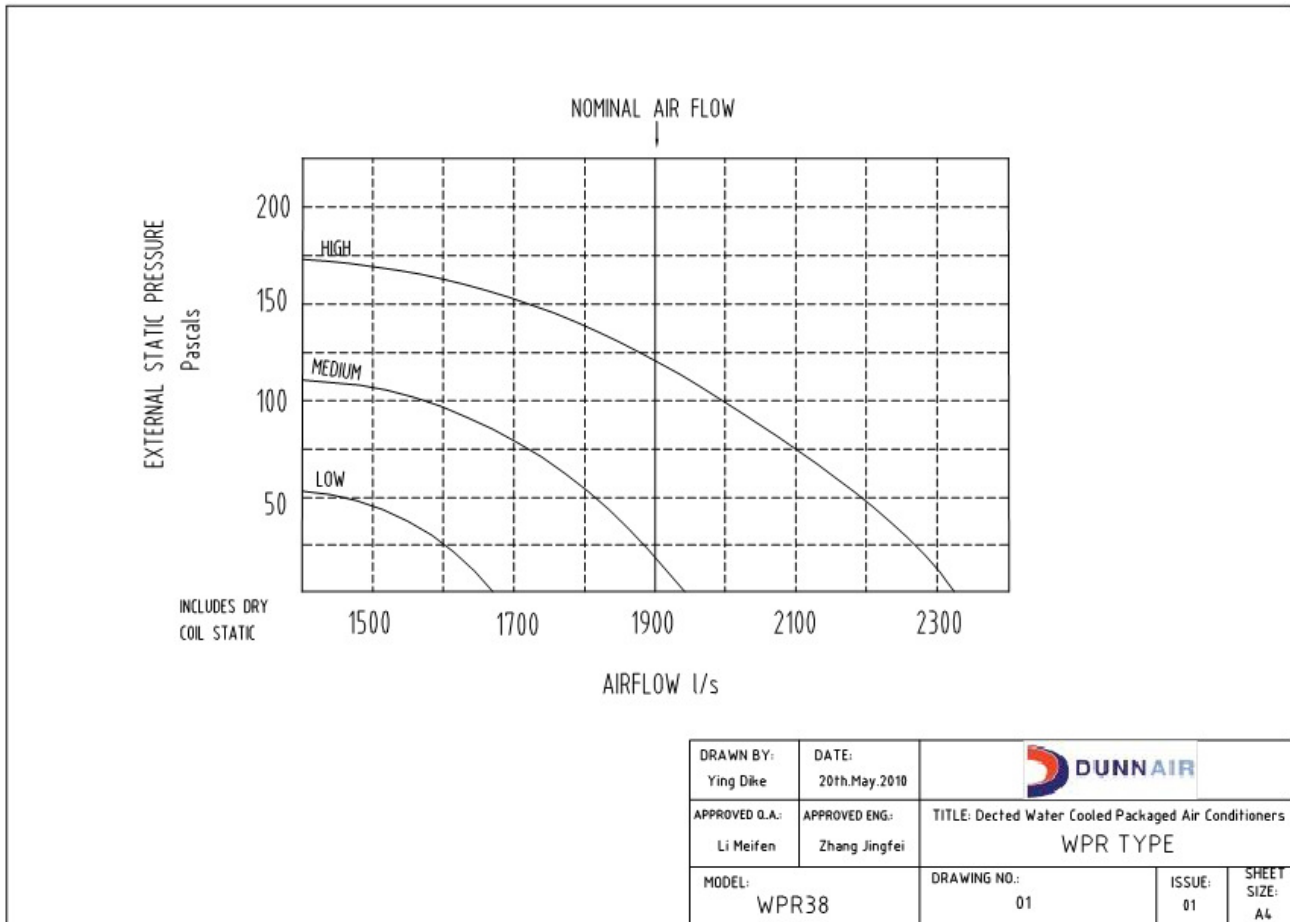
DRAWN BY:	DATE:	DUNN AIR
APPROVED BY:	APPROVED DATE:	TITLE: Water Cooled Fan coil unit
WPR 38-CB	01	WPR T TYPE
DRAWING NO.:	ISSUE:	SHEET
01	01	SIZE: A4

WIRING DIAGRAMS – Cooling Only with Electric Heater



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

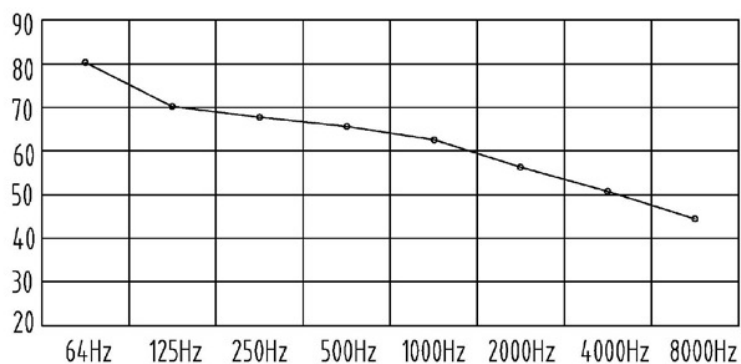
Sound Levels

WPR38 Noise rate analysing chart


A Class: 69.5dB

Hz	dB
64Hz	80.1
125Hz	70.4
250Hz	67.1
500Hz	64.9
1000Hz	62.1
2000Hz	56.4
4000Hz	50.4
8000Hz	43.9

Noise rate analysing chart (A Class: 69.5dB) dB



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: Ducted Water Cooled Packaged Air Conditioners WPR TYPE		
MODEL: WPR38	DRAWING NO.: 01	ISSUE: 01	SHEET SIZE: A4	