



**DUNNAIR**  
(Aust) Pty Ltd

**WPR38L**

**Ducted Water Cooled  
R410a Refrigerant**

*Packaged Vertical Type*

**TECHNICAL SPECIFICATION**

Total Cooling Capacity	37.2 kW	Refrigerant	R410A
Electrical Input (Cooling)	9.24 kW	Refrigerant Charge	5.0 kg
E.E.R.(Cooling)	4.0	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	

**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

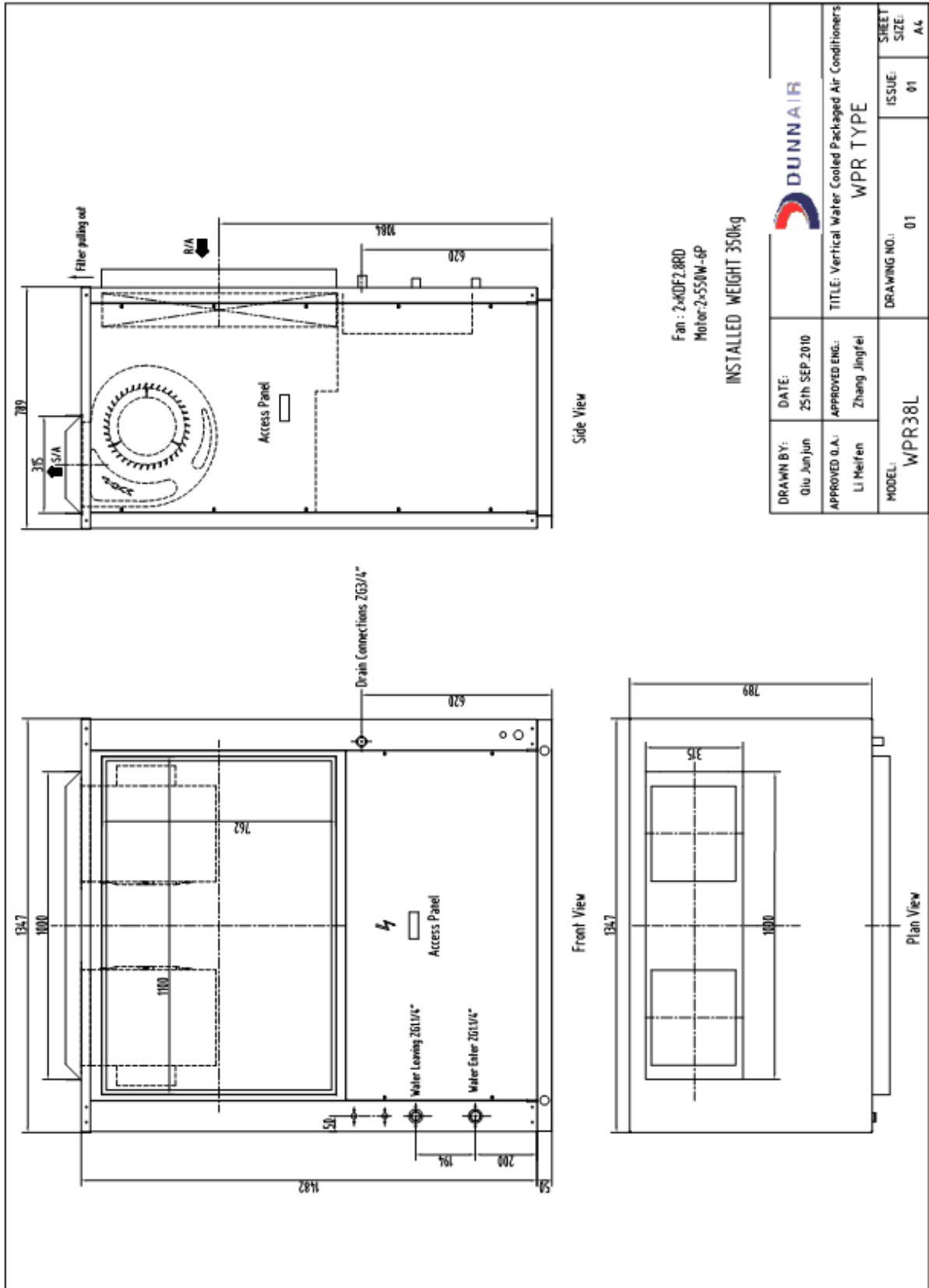
HC = Heating Capacity (kW)      Hab = Heat Absorbed (kW)  
 L.W.T.= Leaving Water Temperature (°C)      E.A.T.= Entering Air Temperature (°C)  
 INPT = Compressor Input Power (kW)      \_\_\_ = Nominal Capacity (kW)

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

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

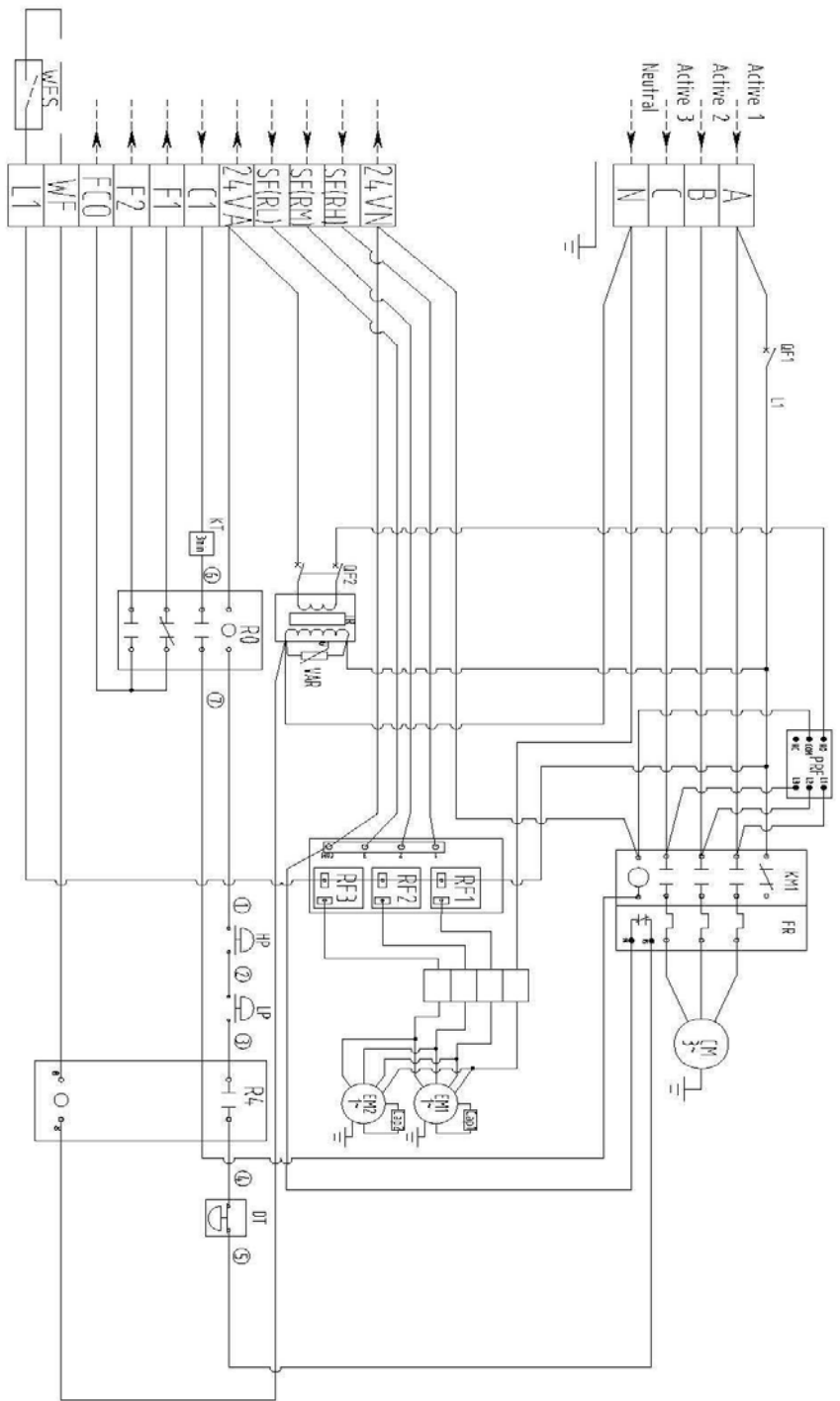
**Note:** 1. Capacities are gross and do not include allowance for fan motor heat loss. For fan motor heat loss refers to Air Handling Performance.  
 2. Water flow and cooling capacity based on 5°C water temperature difference.

# DIMENSIONS (mm)



# WIRING DIAGRAMS – Cooling Only

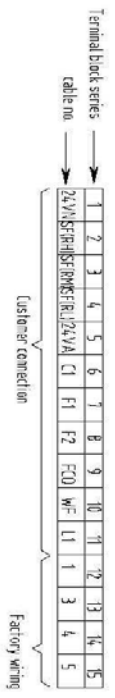
Cooling Only  
Power supply  
4.15V 50Hz 3Phase



Code Instructions:

24VVA	24VAC Active	Alarm Signal/Volt-free contact (Common)	PPF	Phase Protection	WF	Water flow Switch/Contact
24VVA	24VAC Neutral	Thermal relay	CF	Control Circuit Breakers	WFS	Flow Switch
CT	Compressor Signal	HP switch	R	Motor relay	TR	Transformer
CDP	Condenser Fan	JFNFC	TX	Terminal Block	VAR	Variable
CM	Compressor	KVI	SH	Speed switch	DT	Dehydrator
EM	Exhaustor fan	KT	Time Relay	SFRM1		
F1	Alarm Signal/Volt-free contact (Used)	LP	LP switch	SFRM2		
F2	Alarm Signal/Volt-free contact (Open)	N	Neutral	SFRM3		

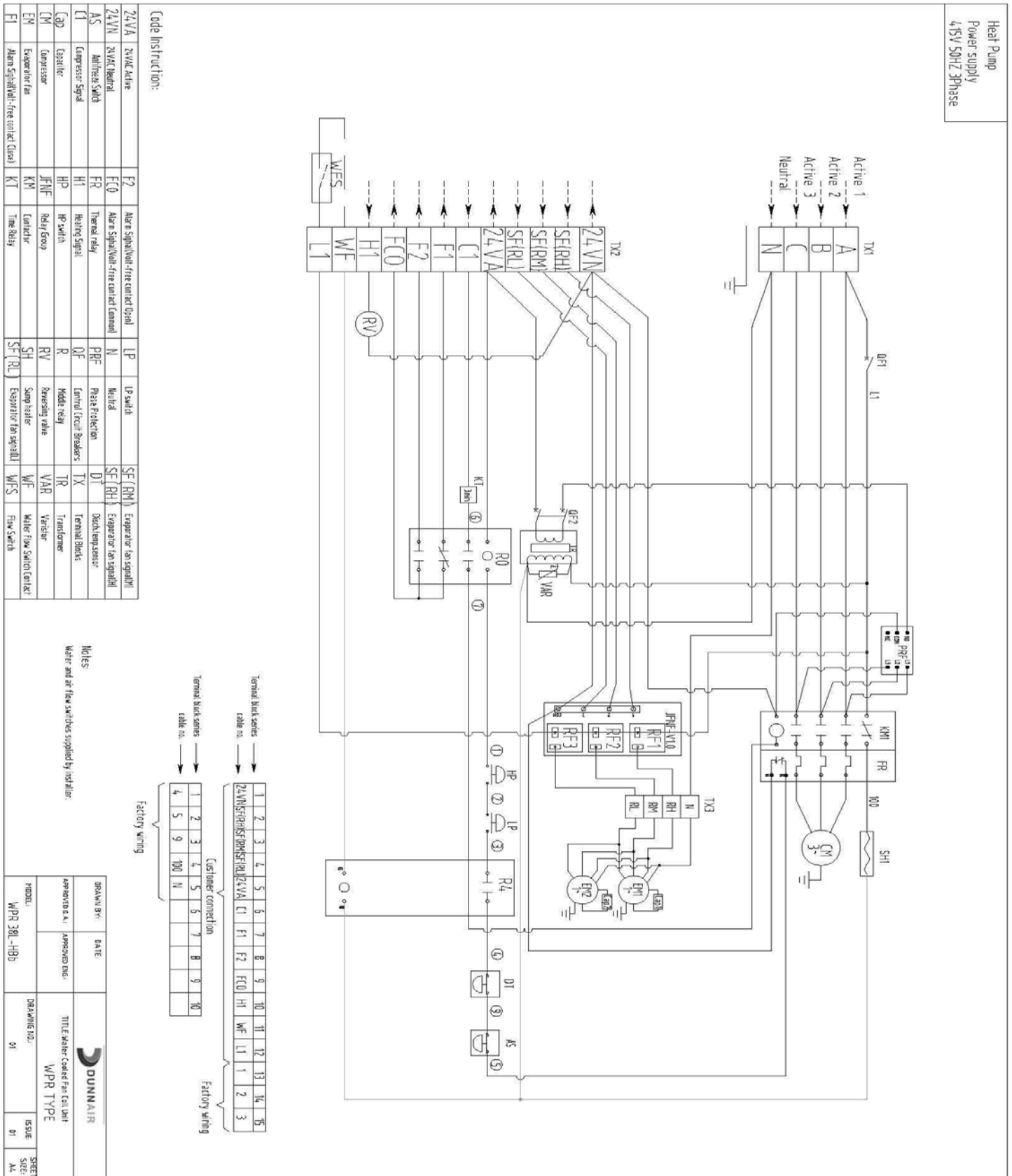
Notes:  
Water and air flow switches supplied by installer



DRAWN BY:	DATE:	DUNNAIR	
APPROVED BY:	APPROVED DATE:	TITLE: Water Cooled Fan Coil Unit WPR TYPE	
MODEL:	WPR38L-CB	DRAWING NO.:	01
SHEET:	01	SHEET:	01

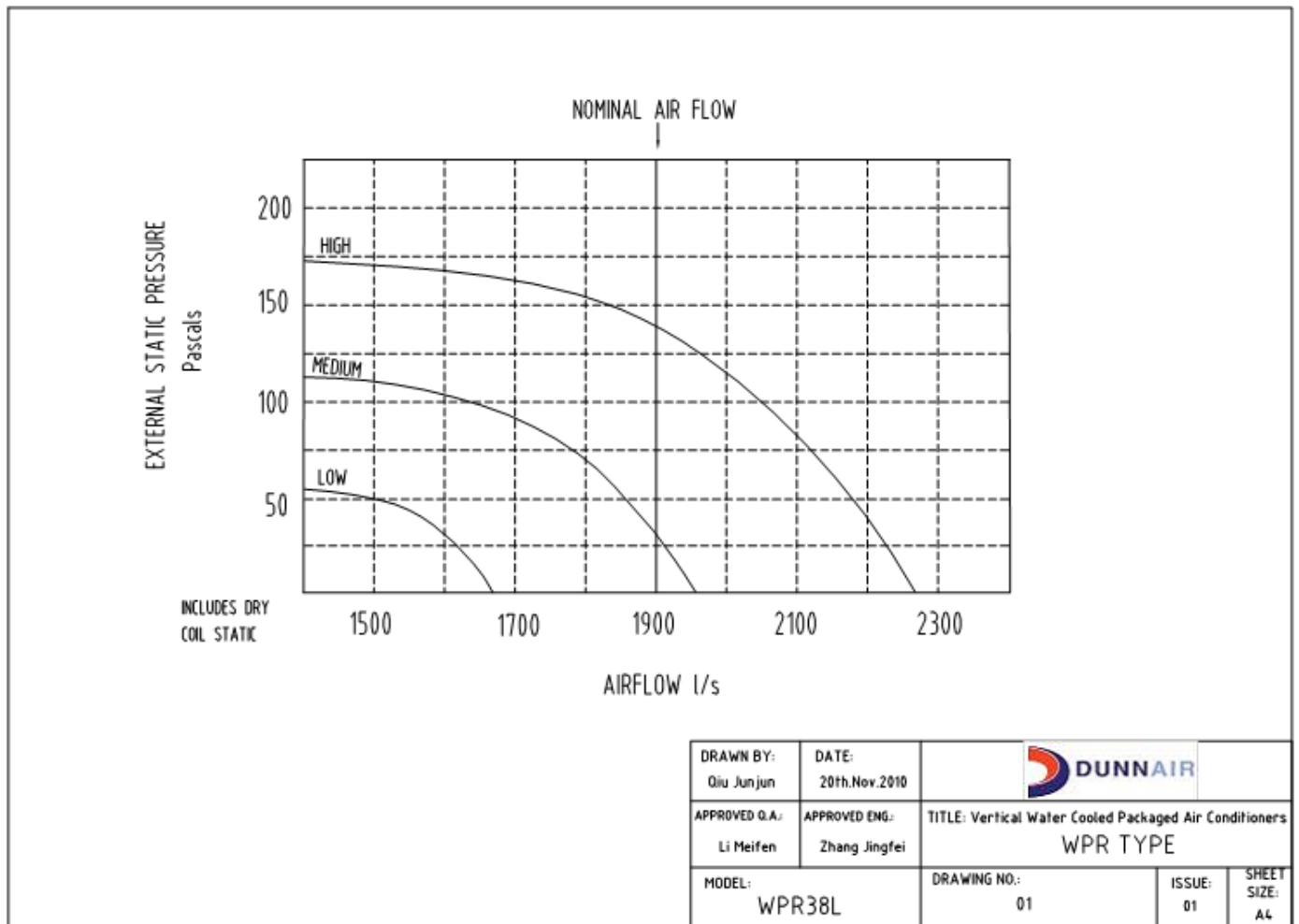


# WIRING DIAGRAMS – Reverse Cycle



# 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.

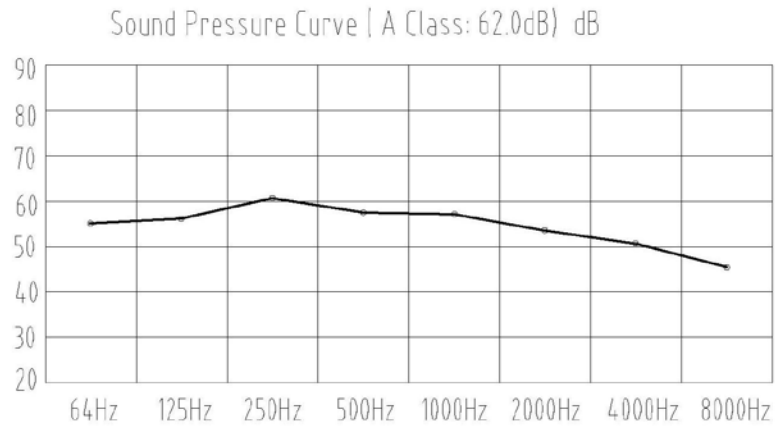
# AIR HANDLING PERFORMANCE

## Sound Levels

WPR38L Sound Pressure Curve

A Class: 62.0dB

Hz	dB
64Hz	55.8
125Hz	56.7
250Hz	60.2
500Hz	58.4
1000Hz	57.3
2000Hz	53.2
4000Hz	50.5
8000Hz	46.1



Note: Occupant at least 1.0m from sound source.

<b>DRAWN BY:</b> Qiu Junjun	<b>DATE:</b> 15th.Dec.2010			
<b>APPROVED Q.A.:</b> Li Meifen	<b>APPROVED ENG.:</b> Zhang Jingfei	<b>TITLE: Vertical Water Cooled Packaged Air Conditioners</b> <b>WPR TYPE</b>		
<b>MODEL:</b> WPR38L		<b>DRAWING NO.:</b> 01	<b>ISSUE:</b> 01	<b>SHEET SIZE:</b> A4