



DUNNAIR
(Aust) Pty Ltd

Ducted Water Cooled



DWAI-10HAB

Packaged Horizontal Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	10.1 kW	Refrigerant	R410A
Electrical Input (Cooling)	2.7 kW	Refrigerant Charge	1.5 kg
E.E.R.(Cooling)	3.74	Minimum Water Flow	0.50 l/s
Running Amps (Total)	10.9A	Water Coil Pressure Drop	40 kPa
Fan Motor Full Load Amps	1.0A	Filter (Option)	
Electrical Supply Required	1 Ph.240V.50Hz	Electric Heater (Option)	

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)		445			
COIL E.A.T.	DB °C	23	27	31	
	WB °C	17	19	21	
Entering Water Temperature (E.W.T) °C	20	T	10.1	10.3	10.5
		S	8.1	8.5	8.9
		FL	0.56	0.56	0.56
		HR	11.6	11.8	12.1
	25	T	9.8	10.1	10.5
		S	8.0	8.3	8.8
		FL	0.56	0.56	0.56
		HR	11.3	11.5	12.0
	30	T	9.7	<u>10.1</u>	10.3
		S	7.8	<u>8.2</u>	8.7
		FL	0.56	<u>0.50</u>	0.56
		HR	11.0	<u>11.2</u>	11.6
	35	T	9.3	9.5	9.8
		S	7.6	7.9	8.3
		FL	0.56	0.56	0.56
		HR	10.6	10.8	11.0
	40	T	9.1	9.3	9.4
		S	7.4	7.8	8.3
		FL	0.56	0.56	0.56
		HR	10.3	10.3	10.7

HEATING CAPACITY (kW)

WPR Reverse Cycle Version

AIR FLOW RATE (L/S)		445			
WATE FLOW RATE (L/S)		0.50			
COIL E.A.T.	DB °C	18	21	25	
Entering Water Temperature (E.W.T) °C	15	HC	10.1	9.8	9.7
		Hab	8.4	8.3	8.1
		LWT	11.6	11.7	11.8
		INPT	2.49	2.52	2.55
	20	HC	10.1	<u>9.5</u>	9.9
		Hab	8.6	<u>8.5</u>	8.4
		LWT	15.6	<u>15.7</u>	15.8
		INPT	2.56	<u>2.65</u>	2.64
	25	HC	10.6	10.4	10.3
		Hab	8.9	8.7	8.6
		LWT	20.4	20.6	20.7
		INPT	2.70	2.75	2.78

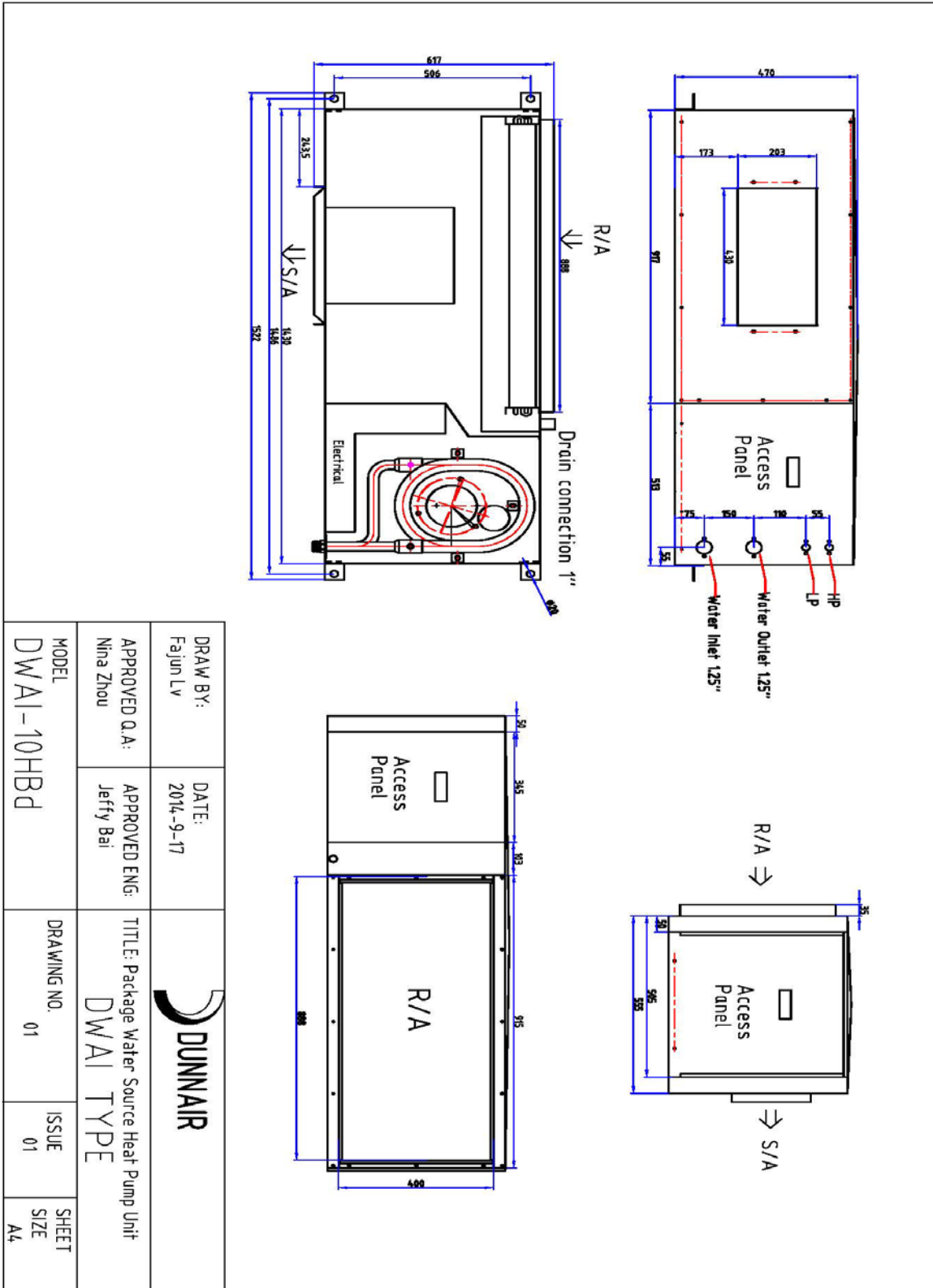
HC = Heating Capacity (kW) Hab = Heat Absorbed (kW)
 L.W.T.= Leaving Water Temperature (°C) E.A.T.= Entering Air Temperature (°C)
 INPT = Compressor Input Power (kW) ___ = Nominal Capacity (kW)


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

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

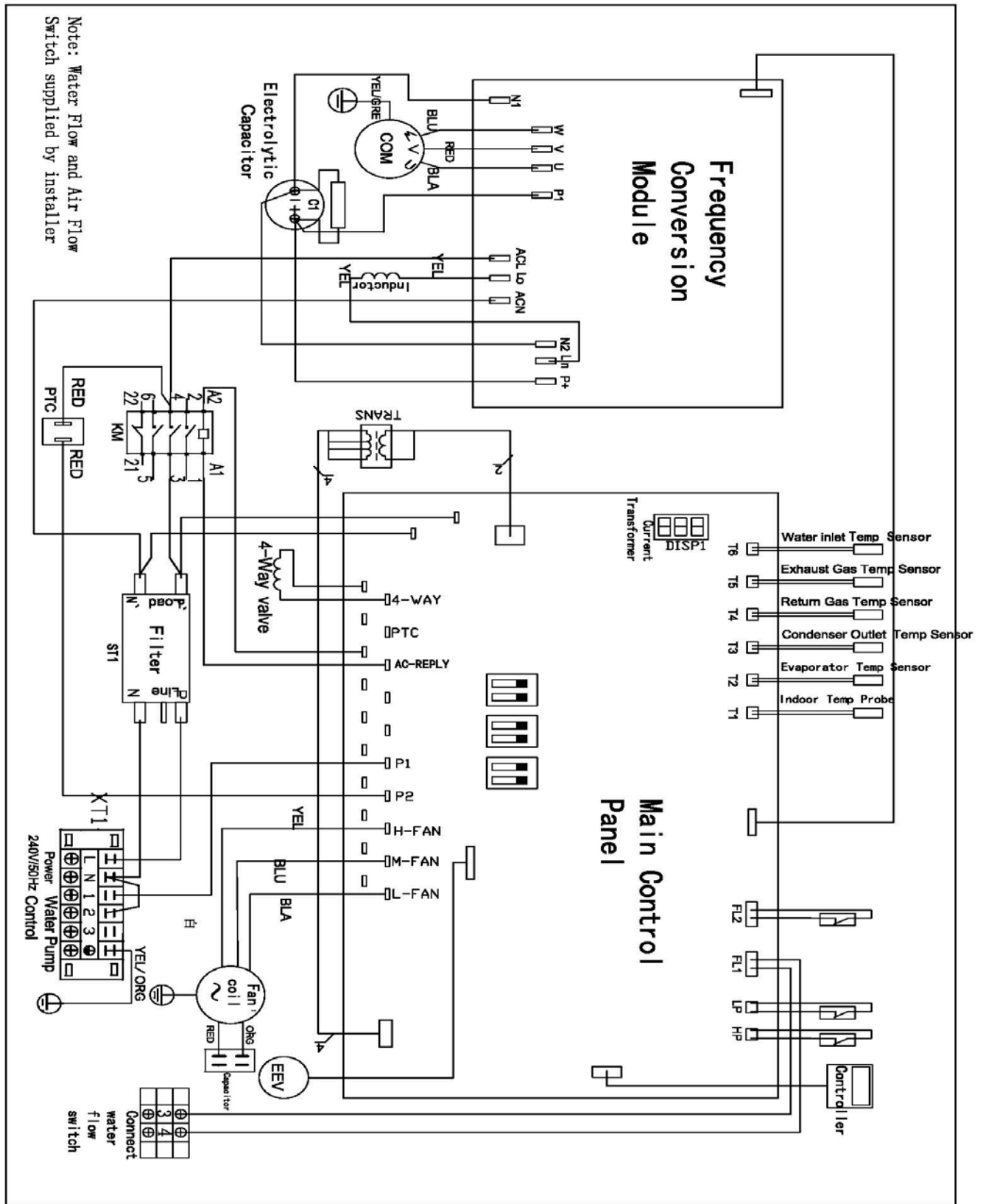
Note: 1. Capacities are gross and do not include allowance for fan motor heat loss. For fan motor heat loss refers to Air Handling Performance.
 2. Water flow and cooling capacity based on 5°C water temperature difference.

DIMENSIONS (mm)



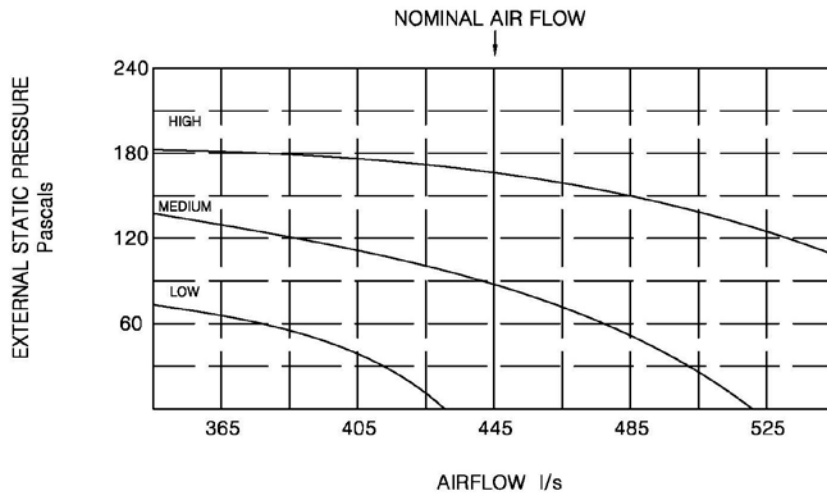
DRAWN BY: Fajun Lv		DATE: 2014-9-17			
APPROVED Q.A.: Nina Zhou		APPROVED ENG: Jeffy Bai			
MODEL DWAI-10HBD		DRAWING NO. 01		TITLE: Package Water Source Heat Pump Unit DWAI TYPE	
		ISSUE 01		SHEET SIZE A4	


WIRING DIAGRAMS – Reverse Cycle



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



DRAW BY:	DATE: 2014-9-11	 TITLE: Split Ducted Water Source Heat Pump Unit DWAI TYPE		
APPROVED Q.A.:	APPROVED ENG			
MODEL DWAI-10HAB		DRAWING NO. 01	ISSUE 01	SHEET SIZE A4

Note:

1. In tropical (high humidity) conditions, care must be taken to select 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.

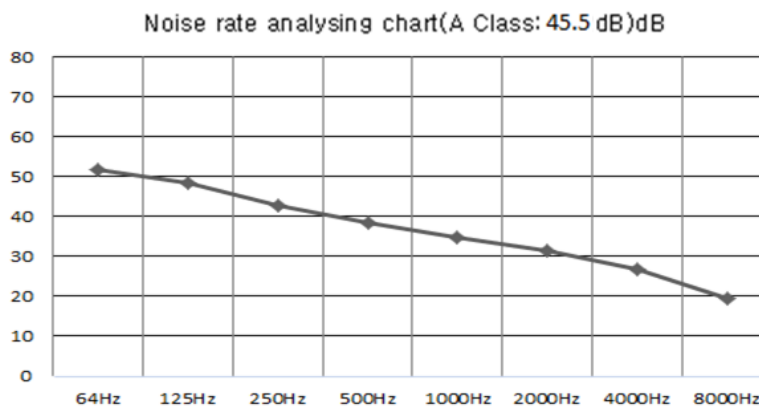
AIR HANDLING PERFORMANCE

Sound Curve

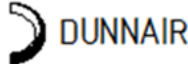
DWAI-10HAB Noise rate analysing chart

A Class: 45.5

Hz	dB
64Hz	51.8
125Hz	48.5
250Hz	42.6
500Hz	38.5
1000Hz	34.6
2000Hz	31.5
4000Hz	26.8
8000Hz	19.5



Note: 1m from source with 1m insulated duct.

DRAW BY:	DATE: 2013-5-4			
APPROVED Q.A.:	APPROVED ENG	TITLE: Package Water Source Heat Pump Unit DWAI TYPE		
MODEL DWAI-10HAB		DRAWING NO. 01	ISSUE 01	SHEET SIZE A4