DUNNAIR (Aust) Pty Ltd

Water Cooled INVERTER

DWAIS12

Split Ducted Type

TECHNICAL SPECIFICATION

Total Cooling Capacity	11.4 (2.6-11.8) kW	Refrigerant	R410A
Electrical Input (Cooling)	3.08 kW	Refrigerant Charge	2.3kg
E.E.R.(Cooling)	3.70	Minimum Water Flow	0.52 l/s
Running Amps (Total)	16A	Water Coil Pressure Drop	45 kPa
Fan Motor Full Load Amps	1.0A	Electrical Supply Required	1 Ph.240V.50Hz

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			540		
COIL E.A.T.	DB ℃		23	27	31
	WB ℃		17	19	21
Entering Water Temperature (E.W.T) ℃	20	T	11.8	12.1	12.3
		S	8.6	9.1	9.6
		FL	0.66	0.66	0.66
		HR	13.6	13.8	14.1
	25	T	11.4	11.7	12.1
		S	8.6	8.1	9.4
		FL	0.66	0.66	0.66
		HR	13.4	13.6	14.1
	30	T	11.3	**11.4**	11.8
		S	8.2	**8.4**	9.3
		FL	0.66	**0.66**	0.66
		HR	13.0	**13.2**	13.6
	35	T	11.2	11.4	11.6
		S	8.3	8.5	9.0
		FL	0.66	0.66	0.66
		HR	12.7	12.9	13.0
	40	T	10.6	10.7	10.8
		S	8.2	8.3	8.7
		FL	0.66	0.66	0.66
		HR	12.5	12.5	12.8

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)

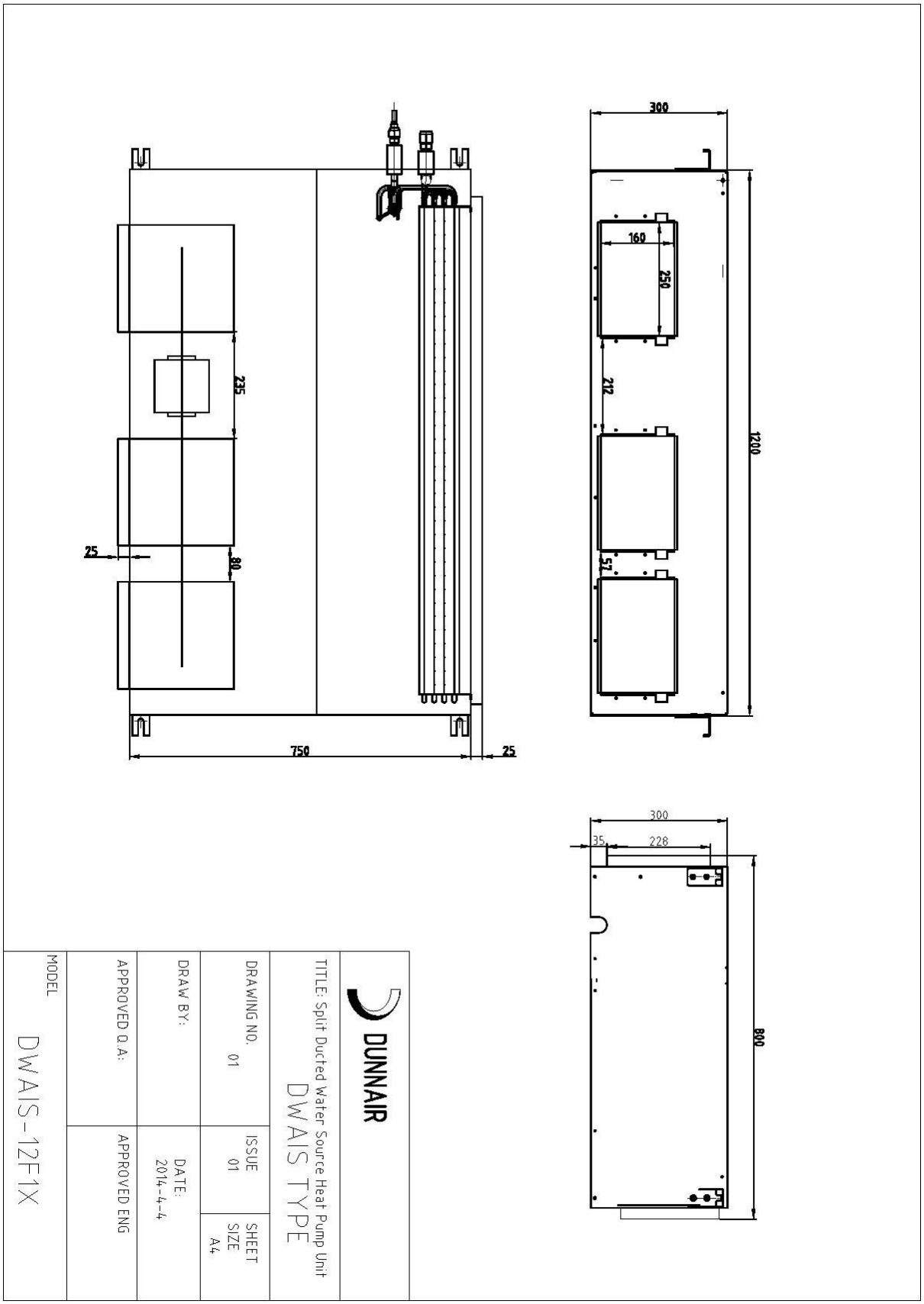
AIR FLOW RATE (L/S)			540		
WATE FLOW RATE (L/S)			0.66		
COIL E.A.T.	DB ℃		18	21	25
Entering Water Temperature (E.W.T) ℃	15	HC	11.5	11.4	11.2
		Hab	9.2	9.0	8.8
		LWT	11.6	11.7	11.8
		INPT	3.02	3.04	3.06
	20	HC	11.8	**11.7**	11.6
		Hab	9.5	**9.4**	9.3
		LWT	15.6	**15.7**	15.8
		INPT	3.07	**3.08**	3.14
	25	HC	12.2	12.0	11.9
		Hab	9.8	9.7	9.6
		LWT	20.4	20.6	20.7
		INPT	3.21	3.25	3.31

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)

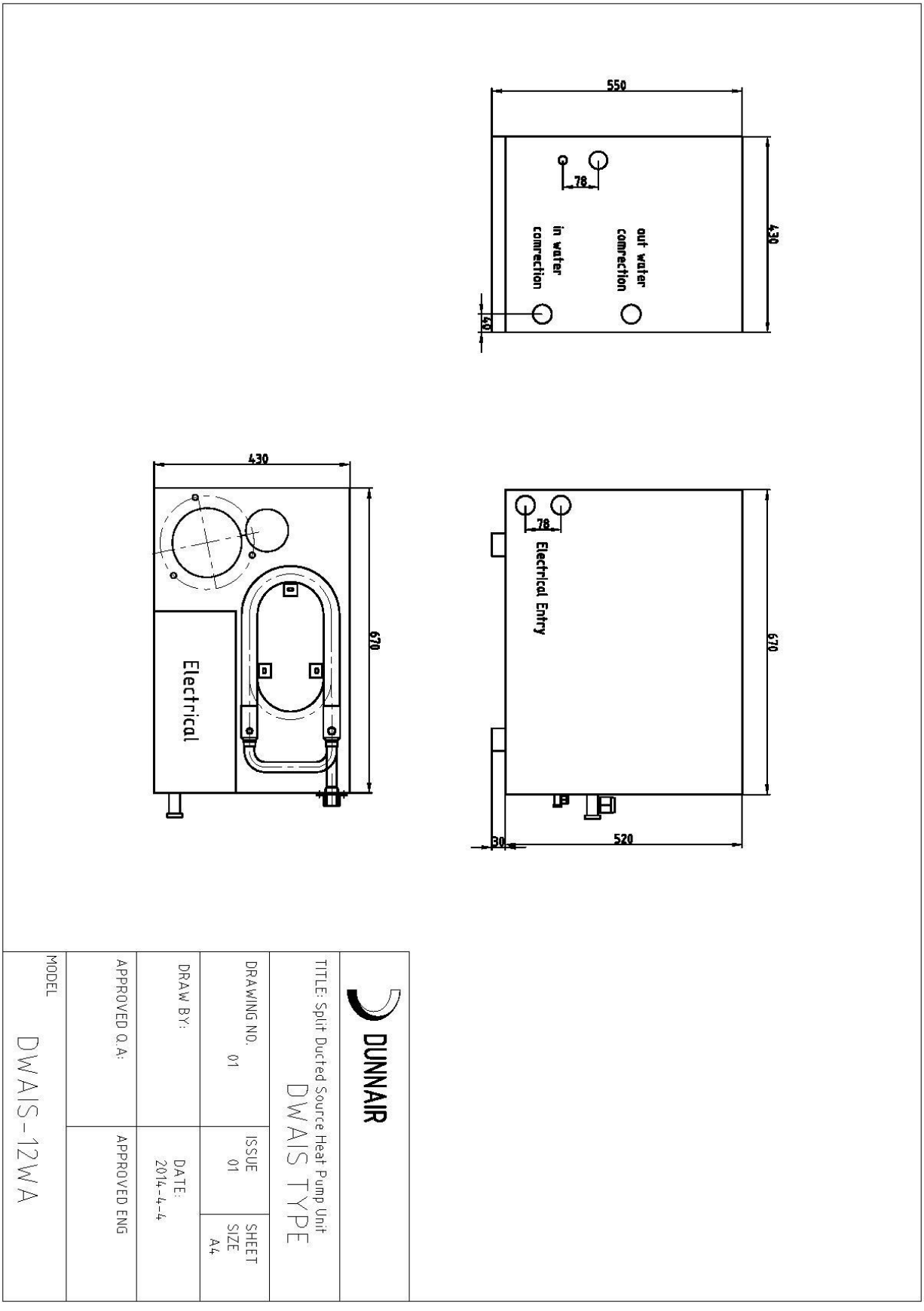
Note:
All units are reverse cycle heat pump units. Models can also be provided as cooling only.
Unit comes with EU1 rated Nylon filter.
Water flow switch shall be prepared by installer.

Sep 2014

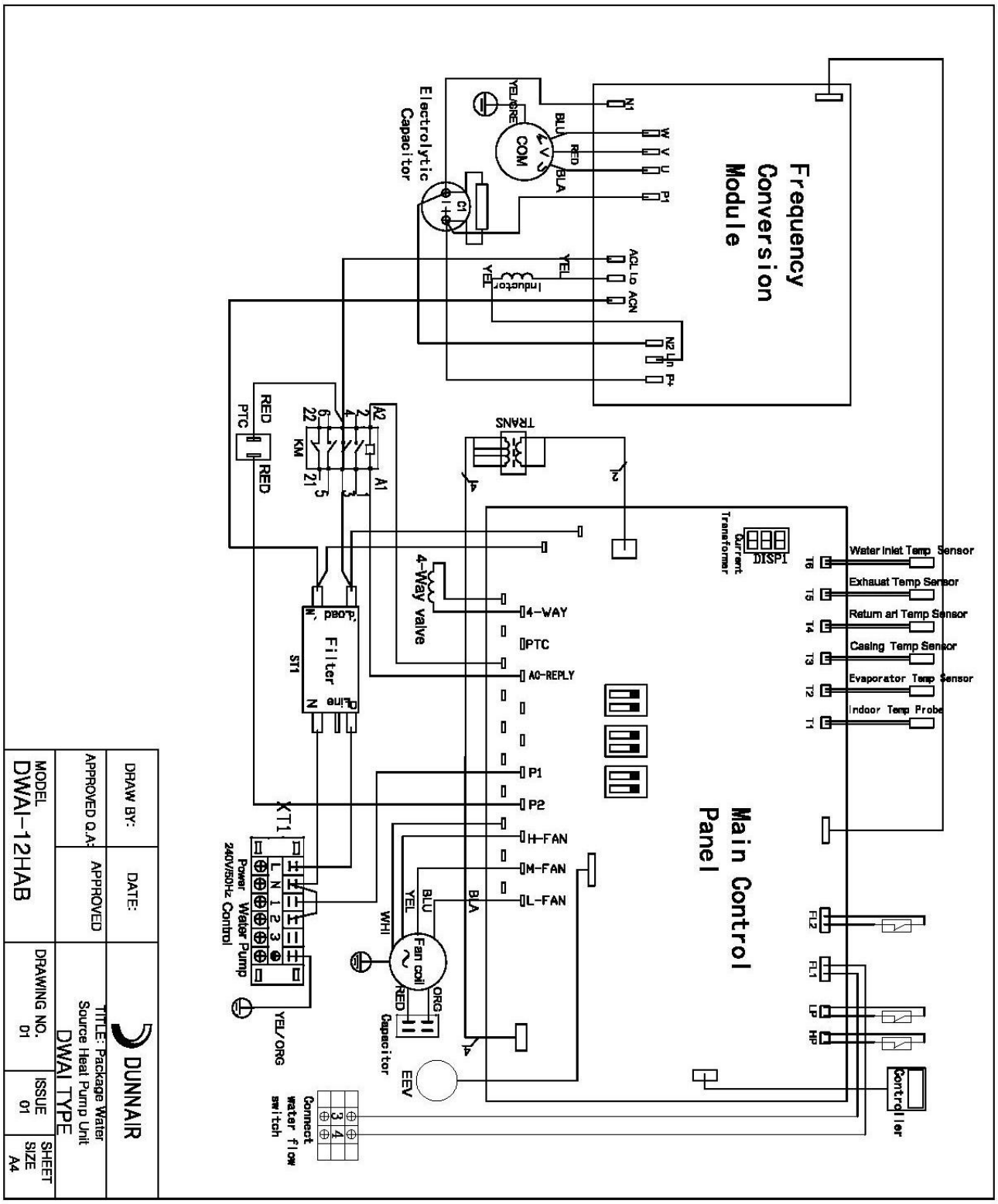
INDOOR UNIT DIMENSIONS (mm)



OUTDOOR UNIT DIMENSIONS (mm)

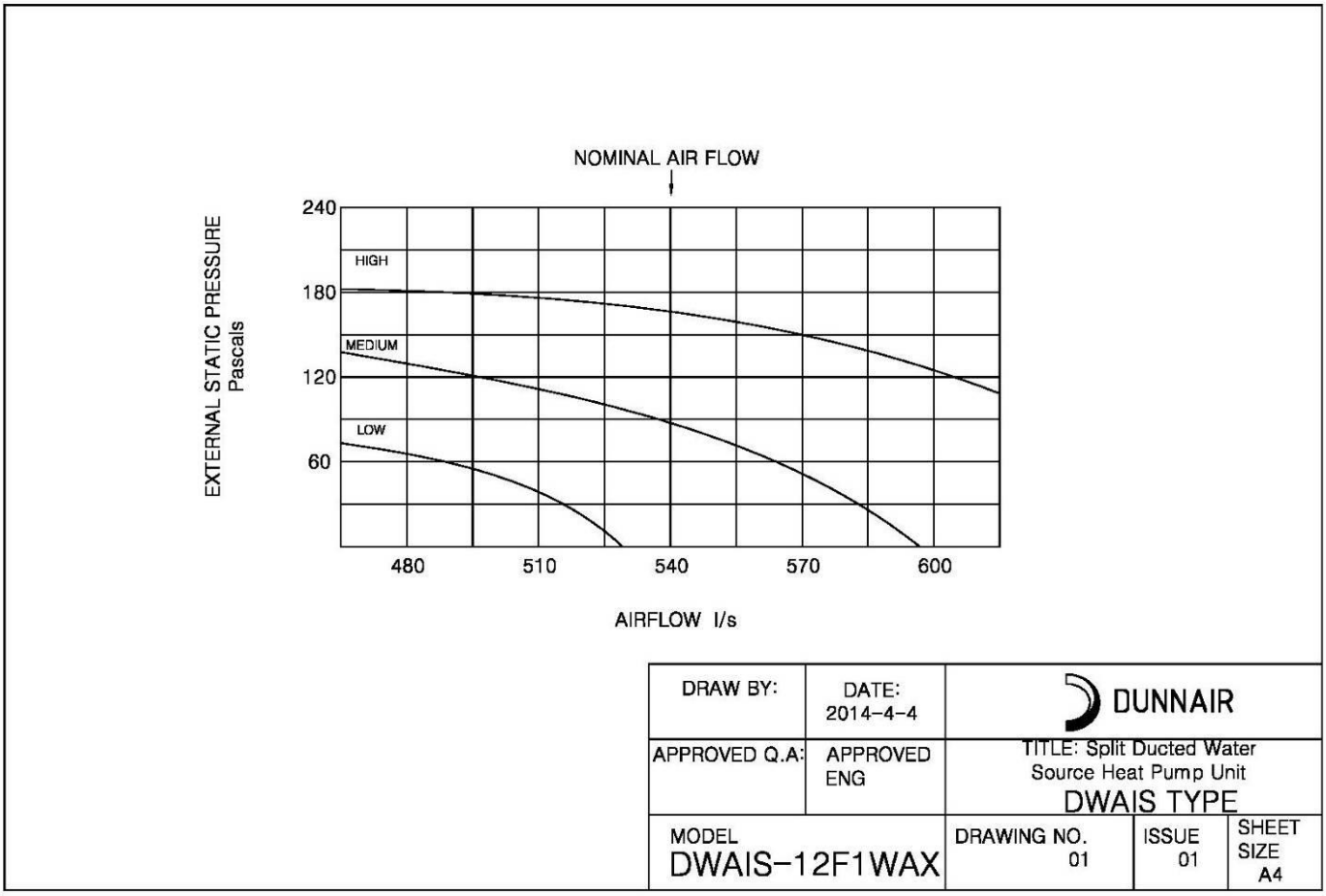


WIRING DIAGRAMS – Reverse Cycle



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



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

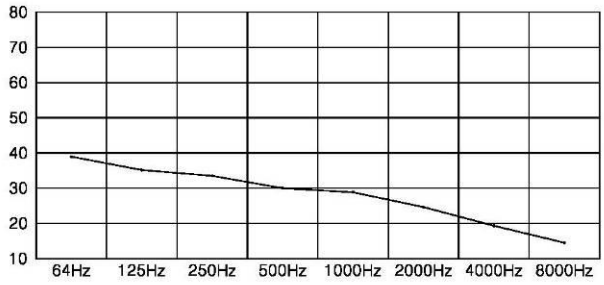
Indoor Unit

DWAIS-12F1WAX Noise rate analysing chart

A Class:36.3

Hz	dB
64Hz	39.4
125Hz	36.3
250Hz	34.5
500Hz	30.5
1000Hz	28.2
2000Hz	26.4
4000Hz	19.2
8000Hz	14.3

Noise rate analysing chart(A Class:36.3dB)dB



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

DRAW BY:	DATE: 2014-4-4	DUNNAIR	
APPROVED Q.A:	APPROVED ENG	TITLE: Split Ducted Water Source Heat Pump Unit DWAIS TYPE	
MODEL DWAIS-12F1WAX		DRAWING NO. 01	ISSUE 01 / SHEET SIZE A4

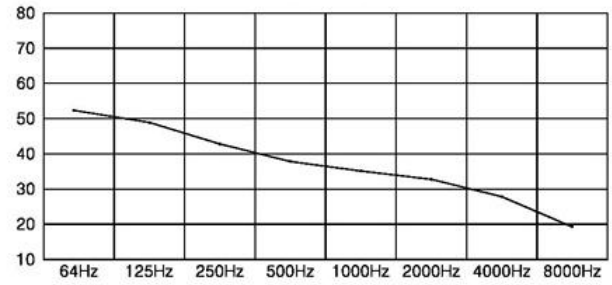
Outdoor Unit

DWAIS-12F1WAX Noise rate analysing chart

A Class:49.2

Hz	dB
64Hz	53.2
125Hz	49.2
250Hz	43.5
500Hz	37.1
1000Hz	35.2
2000Hz	33.4
4000Hz	28.2
8000Hz	19.3

Noise rate analysing chart(A Class:49.2dB)dB



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

DRAW BY:	DATE: 2014-4-4	DUNNAIR	
APPROVED Q.A:	APPROVED ENG	TITLE: Split Ducted Water Source Heat Pump Unit DWAIS TYPE	
MODEL DWAIS-12F1WAX		DRAWING NO. 01	ISSUE 01 / SHEET SIZE A4