DUNNAIR (Aust) Pty Ltd

WPR160L

R410a Refrigerant

Vertical Water Cooled Packaged

TECHNICAL SPECIFICATION

Total Cooling Capacity	155.7 kW	Refrigerant	R410A
Electrical Input (Cooling)	39.7kW	Refrigerant Charge	4*4.5kg
E.E.R.(Cooling)	3.92	Minimum Water Flow	7.84 l/s
Running Amps (Total)	111.0A	Water Coil Pressure Drop	52kPa
Fan Motor Full Load Amps	22.6A	Filter (Option)	EU1
Electrical Supply Required	3 Ph.415V.50Hz	Electric Heat (Option)	105 kW

COOLING CAPACITY (kW)

AIR FLOW RATE (L/S)			7500		
COIL E.A.T.	DB ℃		23	27	31
	WB ℃		17	19	21
Entering Water Temperature (E.W.T) ℃	20	T	164.5	174.1	182.8
		S	115.6	131.7	146.5
		FL	9.8	9.8	9.8
		HR	205.7	214.0	223.5
	25	T	157.3	167.4	184.1
		S	116.5	128.7	147.0
		FL	9.8	9.8	9.8
		HR	197.7	207.4	226.1
	30	T	147.9	155.7	173.9
		S	107.7	123.7	142.8
		FL	9.8	9.8	9.8
		HR	186.8	195.4	214.8
	35	T	138.3	145.6	151.4
		S	103.5	119.5	133.8
		FL	9.8	9.8	9.8
		HR	177.7	185.4	191.6
	40	T	132.0	135.4	142.2
		S	100.7	115.2	130.2
		FL	9.8	9.8	9.8
		HR	173.1	175.7	183.3

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)

WPR Reverse Cycle Version

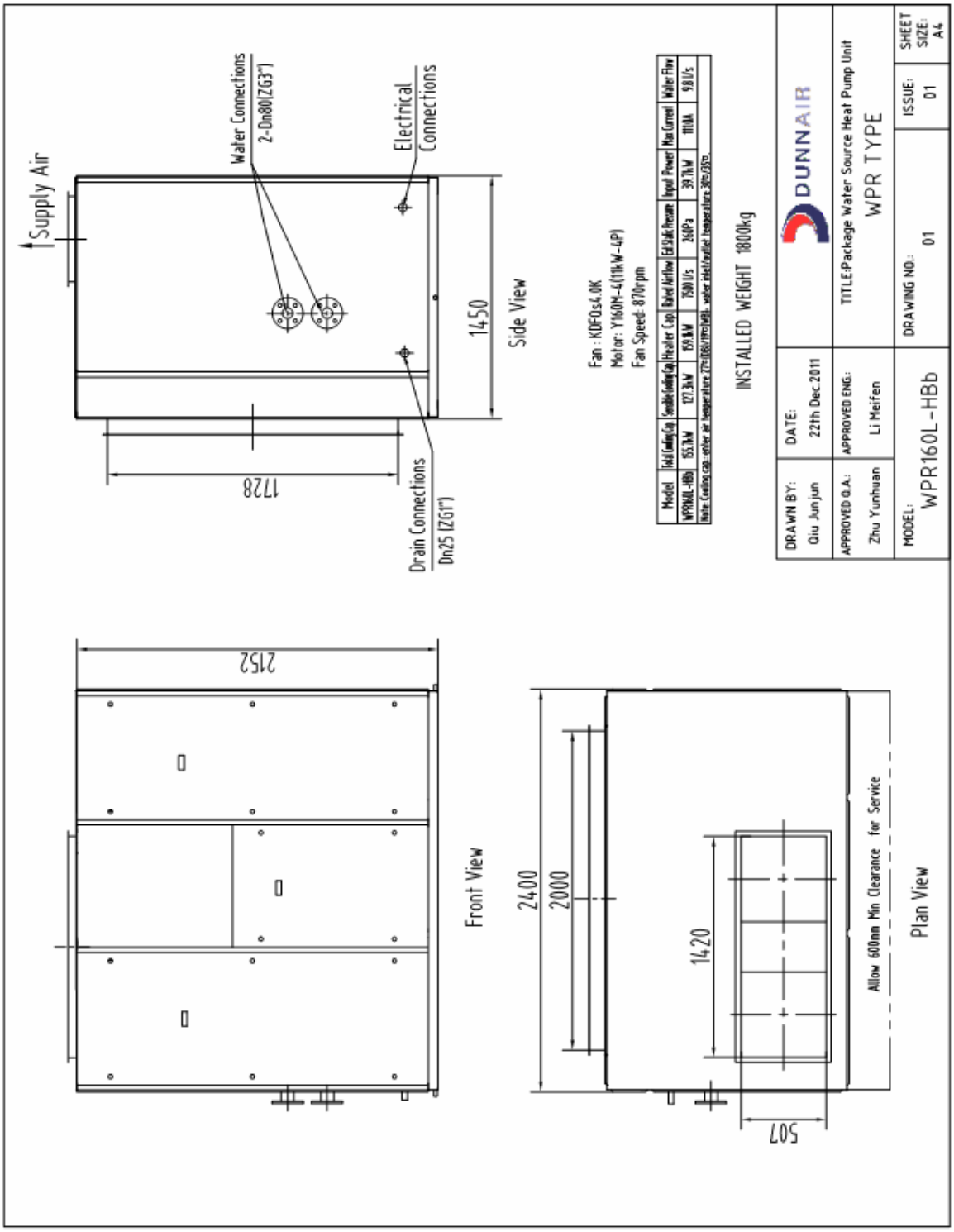
AIR FLOW RATE (L/S)			7500		
WATE FLOW RATE (L/S)			9.8		
COIL E.A.T.	DB℃		18	21	25
Entering Water Temperature (E.W.T) ℃	15	HC	151.0	149.6	142.8
		Hab	113.5	111.8	105.9
		LWT	11.3	11.4	11.5
		INPT	37.6	37.4	36.9
	20	HC	160.7	159.1	151.1
		Hab	121.3	119.8	112.9
		LWT	16.1	16.1	16.3
		INPT	39.4	39.3	38.3
	25	HC	174.4	171.8	165.8
		Hab	132.1	129.8	124.4
		LWT	20.7	20.8	21.0
		INPT	42.3	42.0	41.5

HC = Heating Capacity (kW) Hab = Heat Absorbed (kW) L.W.T.= Leaving Water Temperature (℃)

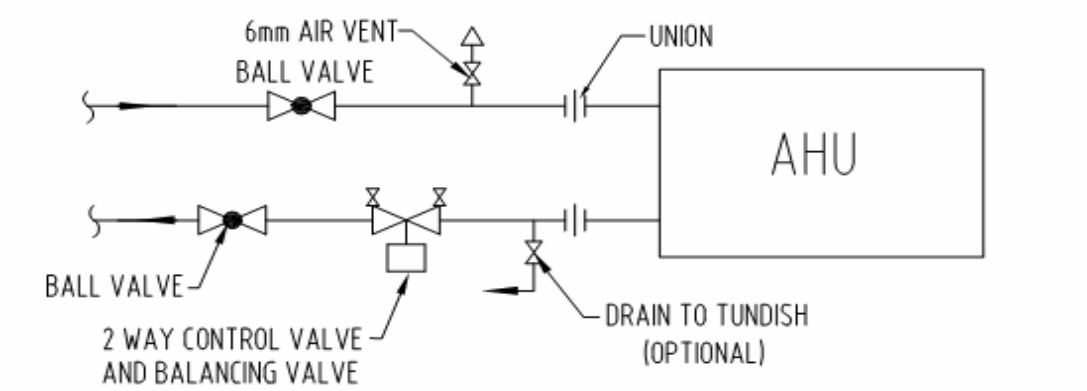
E.A.T.= Entering Air Temperature (℃) INPT = Compressor Input Power (kW) __ = Nominal Capacity (kW)

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

DIMENSIONS (mm)

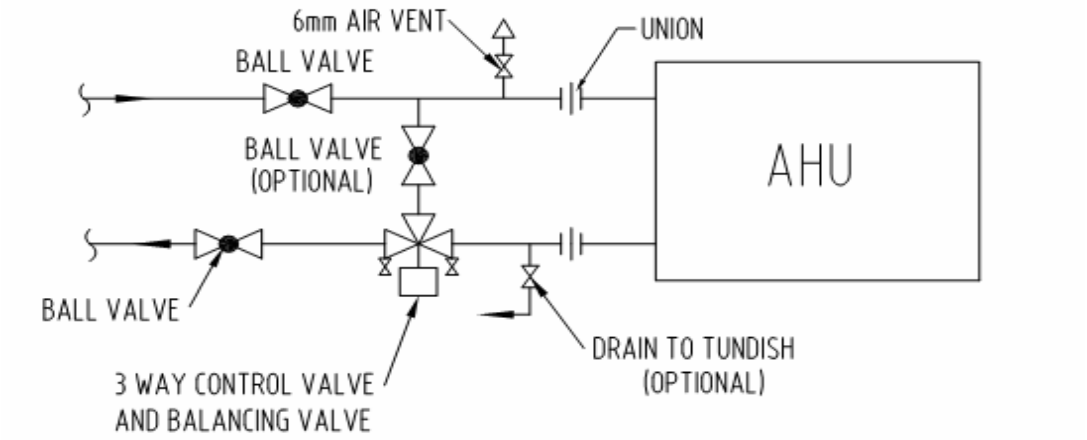


WATER SUPPLY &RETURN



TYP.TWO-WAY VALVE INSTALLATION DETALI "B"

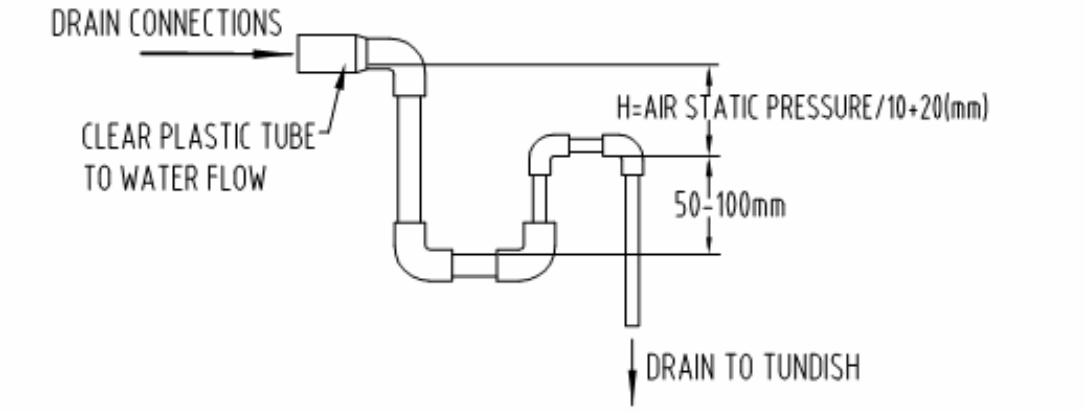
N.T.S.



TYP. THREE-WAY VALVE INSTALLATION DETALI "A"

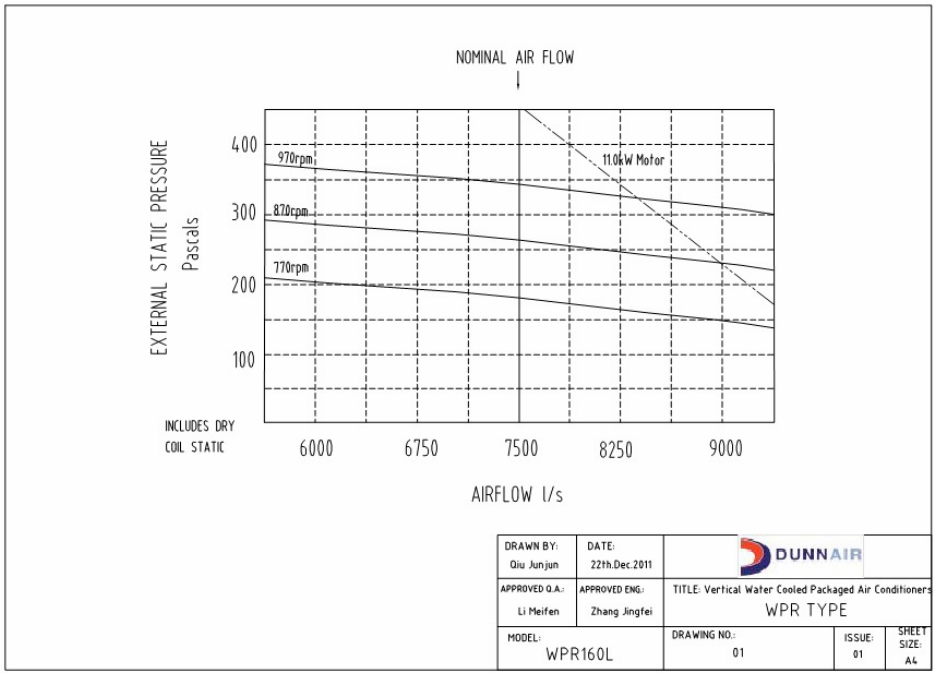
N.T.S.

CONDENSATE DRAIN



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



Note:

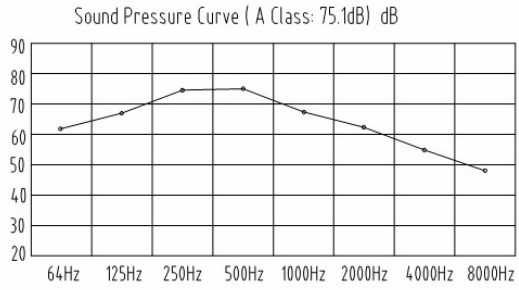
1. In tropical (high humidity) conditions, care must be token to select an air flow which gives a suitable coil face air velocity, to prevent water carry over.
2. For applications with low resistance, be sure not to exceed the fan motor full load Amps.
3. Applications using full or high proportions of fresh air should be referred to DUNNAIR engineering office to establish of unit model.
4. EU1 rate filter pressure loss 15Pa.

Sound Levels

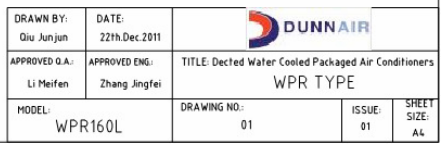
WPR160L Sound Pressure Curve

A Class: 75.1dB

Hz	dB
64Hz	61.5
125Hz	67.2
250Hz	74.5
500Hz	75.3
1000Hz	68.4
2000Hz	61.9
4000Hz	55.0
8000Hz	48.3



Note: Occupant at least 1.0m from sound source.



WIRING DIAGRAM