DUNNAIR (Aust) Pty Ltd

# WPR70L

**R410a Refrigerant**

***Vertical Water Cooled Packaged***

## TECHNICAL SPECIFICATION

| | | | |
|---|---|---|---|
| Total Cooling Capacity | 69.4 kW | Refrigerant | R410A |
| Electrical Input (Cooling) | 17.7kW | Refrigerant Charge | 3*2.5kg |
| E.E.R.(Cooling) | 3.92 | Minimum Water Flow | 3.36 l/s |
| Running Amps (Total) | 47.3A | Water Coil Pressure Drop | 52kPa |
| Fan Motor Full Load Amps | 8.9A | Filter (Option) | EU1 |
| Electrical Supply Required | 3 Ph.415V.50Hz | Electric Heat (Option) | 45 kW |

## COOLING CAPACITY (kW)

| AIR FLOW RATE (L/S) | | | 3600 | | |
|---|---|---|---|---|---|
| COIL E.A.T. | DB℃ | | 23 | 27 | 31 |
| | WB ℃ | | 17 | 19 | 21 |
| Entering Water Temperature (E.W.T) ℃ | 20 | T | 73.7 | 77.6 | 82.2 |
| | | S | 52.9 | 60.6 | 68.1 |
| | | FL | 4.2 | 4.2 | 4.2 |
| | | HR | 91.4 | 95.1 | 100.1 |
| | 25 | T | 70.1 | 74.6 | 82.1 |
| | | S | 53.3 | 59.3 | 68.0 |
| | | FL | 4.2 | 4.2 | 4.2 |
| | | HR | 87.9 | 92.2 | 100.0 |
| | 30 | T | 65.9 | 69.4 | 77.5 |
| | | S | 49.5 | 57.1 | 66.1 |
| | | FL | 4.2 | 4.2 | 4.2 |
| | | HR | 83.3 | 87.1 | 95.8 |
| | 35 | T | 61.6 | 64.9 | 67.5 |
| | | S | 47.6 | 55.3 | 62.2 |
| | | FL | 4.2 | 4.2 | 4.2 |
| | | HR | 79.3 | 82.7 | 85.6 |
| | 40 | T | 58.8 | 60.3 | 63.4 |
| | | S | 46.4 | 53.4 | 60.6 |
| | | FL | 4.2 | 4.2 | 4.2 |
| | | HR | 77.1 | 78.2 | 82.2 |

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)

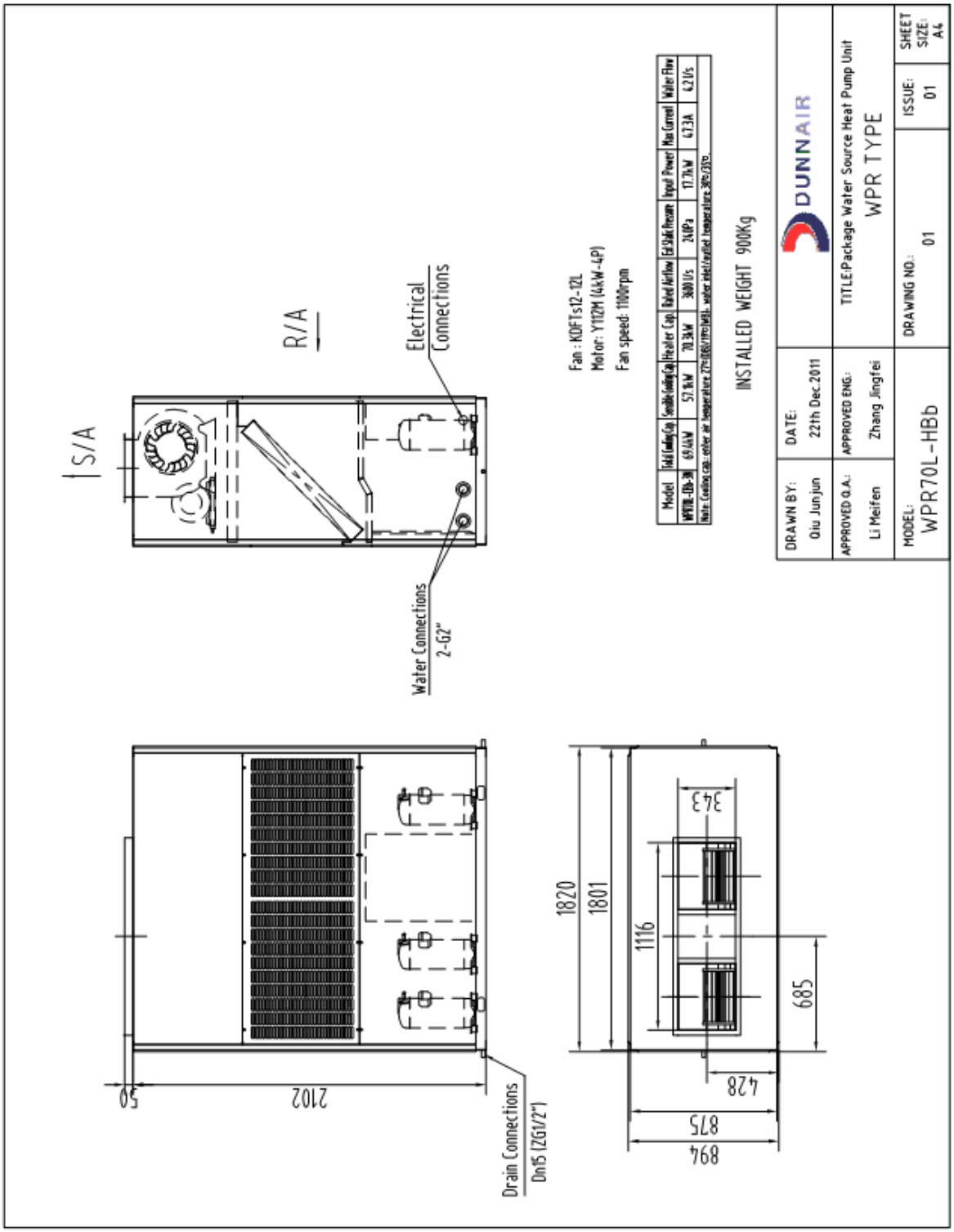
WPR Reverse Cycle Version

| AIR FLOW RATE (L/S) | | | 3600 | | |
|---|---|---|---|---|---|
| WATE FLOW RATE (L/S) | | | 4.2 | | |
| COIL E.A.T. | DB℃ | | 18 | 21 | 25 |
| Entering Water Temperature (E.W.T) ℃ | 15 | HC | 67.1 | 66.3 | 63.5 |
| | | Hab | 50.6 | 49.6 | 47.1 |
| | | LWT | 11.2 | 11.2 | 11.4 |
| | | INPT | 16.6 | 16.6 | 16.4 |
| | 20 | HC | 71.2 | 70.3 | 67.0 |
| | | Hab | 54.0 | 53.1 | 50.4 |
| | | LWT | 15.9 | 16.0 | 16.2 |
| | | INPT | 17.2 | 17.2 | 16.6 |
| | 25 | HC | 77.5 | 76.1 | 73.7 |
| | | Hab | 58.8 | 58.4 | 55.9 |
| | | LWT | 20.6 | 20.7 | 20.8 |
| | | INPT | 18.6 | 17.7 | 17.7 |

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.

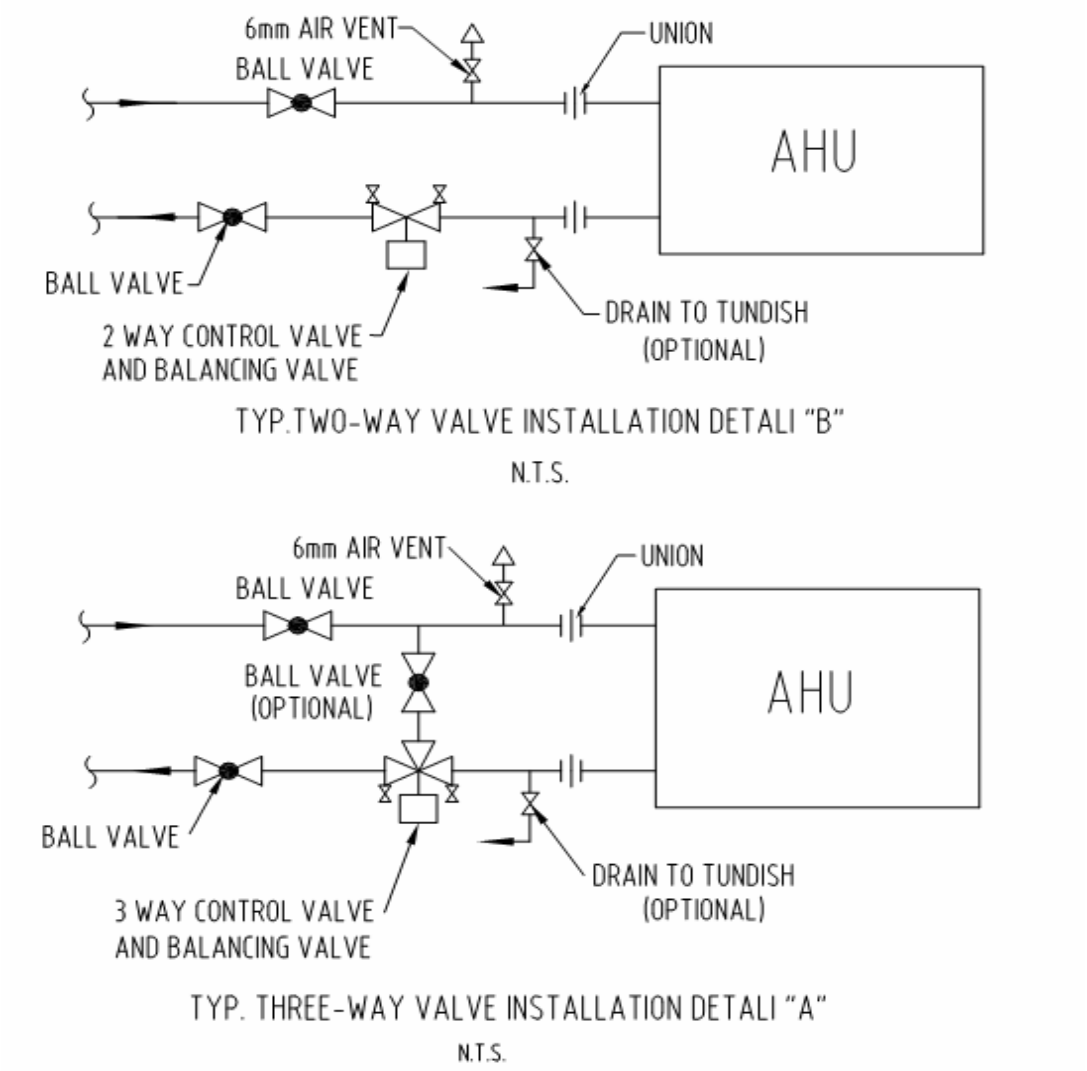
# DIMENSIONS (mm)



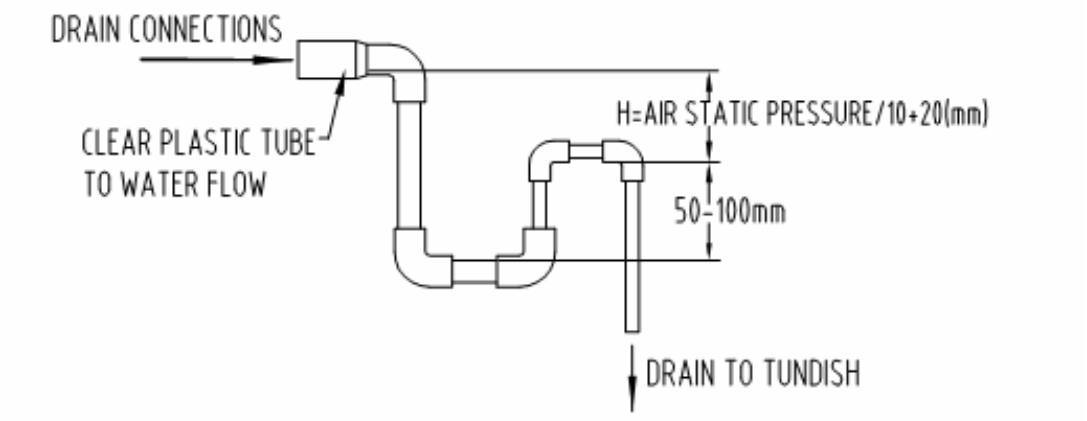

| Model | Cooling Cap | Sensible Cooling Cap | Heater Cap | Rated Airflow | Ext.Static Pressure | Input Power | Max Current | Water Flow |
|---|---|---|---|---|---|---|---|---|
| WPR70L-HBb | 69.6kW | 57.1kW | 70.3kW | 3600l/s | 2kPa | 17.7kW | 47.3A | 4.2l/s |

Note: Cooling con: water air temperature 27°C(80.6°F)DB/19°C(66.2°F)WB, water inlet/outlet temperature 30°C/35°C

## WATER SUPPLY &RETURN

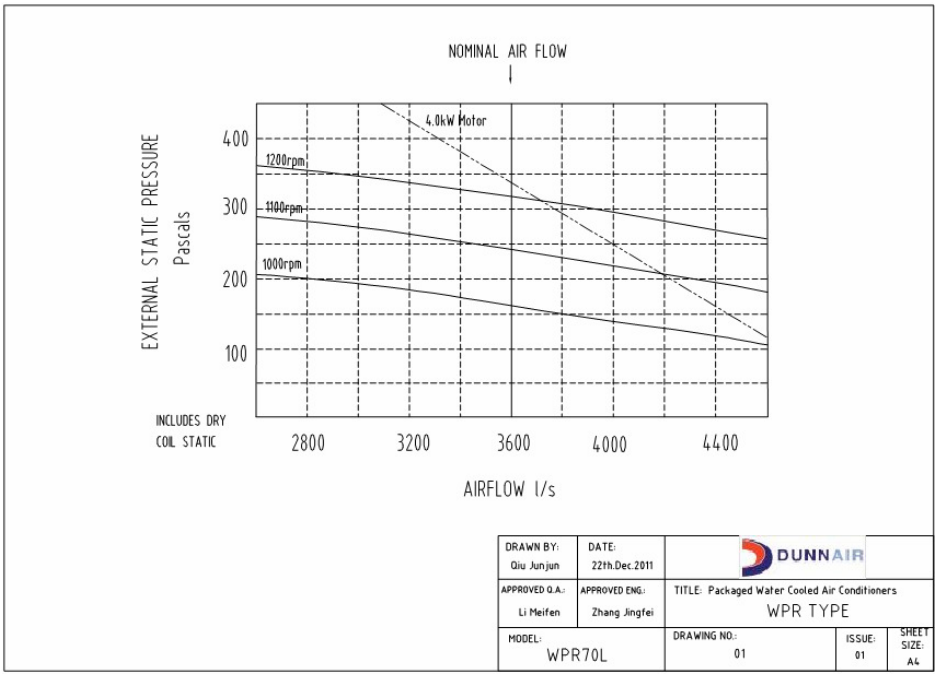



## CONDENSATE DRAIN



# AIR HANDLING PERFORMANCE

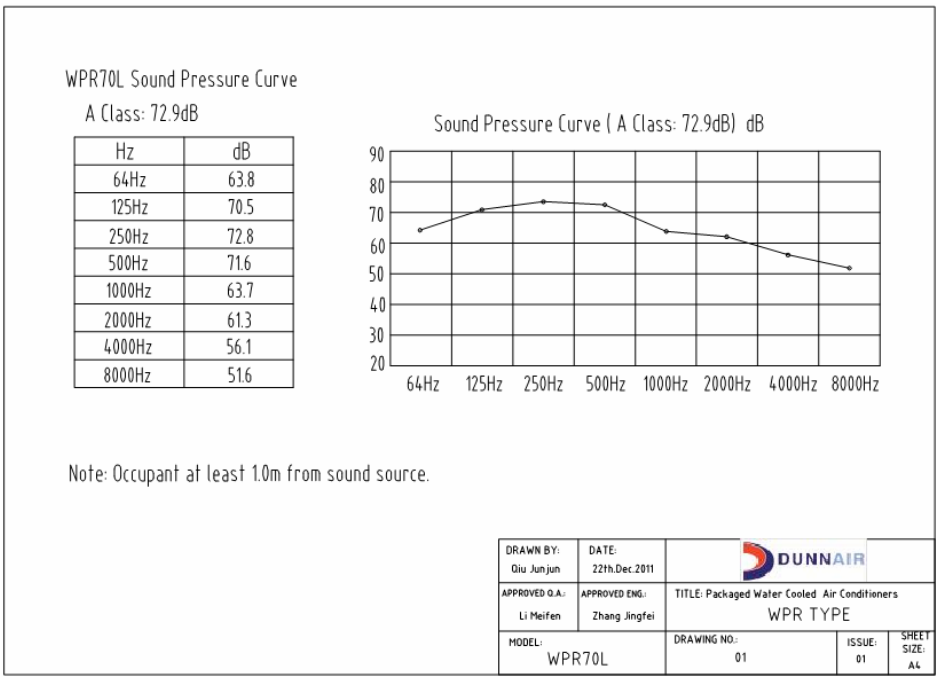
## Fan Curve (Without Filter)




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



# WIRING DIAGRAM