



DUNNAIR
(Aust) Pty Ltd

Ducted Water Cooled



DWAI-04HAB

Packaged Horizontal Type

TECHNICAL SPECIFICATION

| | | | |
|----------------------------|----------------|--------------------------|----------|
| Total Cooling Capacity | 4.1 kW | Refrigerant | R410A |
| Electrical Input (Cooling) | 1.12 kW | Refrigerant Charge | 0.86 kg |
| E.E.R.(Cooling) | 3.80 | Minimum Water Flow | 0.24 l/s |
| Running Amps (Total) | 4.2A | Water Coil Pressure Drop | 35 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) | | 236 | | | |
|---------------------------------------|-------|-----|------|-------------|------|
| COIL E.A.T. | DB °C | | 23 | 27 | 31 |
| | WB °C | | 17 | 19 | 21 |
| Entering Water Temperature (E.W.T) °C | 20 | T | 4.4 | 4.6 | 4.8 |
| | | S | 3.1 | 3.6 | 4.0 |
| | | FL | 0.24 | 0.24 | 0.24 |
| | | HR | 5.5 | 5.7 | 6.0 |
| | 25 | T | 4.1 | 4.4 | 4.8 |
| | | S | 3.1 | 3.5 | 4.0 |
| | | FL | 0.24 | 0.24 | 0.24 |
| | | HR | 5.3 | 5.5 | 6.0 |
| | 30 | T | 3.9 | <u>4.1</u> | 4.6 |
| | | S | 2.9 | <u>3.4</u> | 3.9 |
| | | FL | 0.24 | <u>0.24</u> | 0.24 |
| | | HR | 5.0 | <u>5.2</u> | 5.7 |
| | 35 | T | 3.6 | 3.8 | 4.0 |
| | | S | 2.8 | 3.2 | 3.6 |
| | | FL | 0.24 | 0.24 | 0.24 |
| | | HR | 4.7 | 4.9 | 5.0 |
| | 40 | T | 3.5 | 3.6 | 3.7 |
| | | S | 2.7 | 3.1 | 3.6 |
| | | FL | 0.24 | 0.24 | 0.24 |
| | | HR | 4.5 | 4.5 | 4.8 |

T = Total Capacity (kW)
FL = Water Flow (l/s)
___ = Nominal Capacity (kW)

S = Sensible Capacity (kW)
E.A.T.= Entering Air Temperature (°C)
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.

HEATING CAPACITY (kW)

WPR Reverse Cycle Version

| AIR FLOW RATE (L/S) | | 236 | | | |
|---------------------------------------|-------|------|------|-------------|------|
| WATE FLOW RATE (L/S) | | 0.24 | | | |
| COIL E.A.T. | DB °C | 18 | 21 | 25 | |
| Entering Water Temperature (E.W.T) °C | 15 | HC | 4.1 | 4.0 | 3.9 |
| | | Hab | 3.1 | 3.0 | 2.9 |
| | | LWT | 10.8 | 10.9 | 11.1 |
| | | INPT | 0.91 | 0.93 | 0.95 |
| | 20 | HC | 4.3 | <u>4.3</u> | 4.2 |
| | | Hab | 3.3 | <u>3.2</u> | 3.2 |
| | | LWT | 15.4 | <u>15.5</u> | 15.6 |
| | | INPT | 0.96 | <u>1.12</u> | 1.03 |
| | 25 | HC | 4.7 | 4.6 | 4.6 |
| | | Hab | 3.6 | 3.5 | 3.4 |
| | | LWT | 20.1 | 20.2 | 20.4 |
| | | INPT | 1.1 | 1.1 | 1.2 |

HC = Heating Capacity (kW)

Hab = Heat Absorbed (kW)

L.W.T.= Leaving Water Temperature (°C)

E.A.T.= Entering Air Temperature (°C)

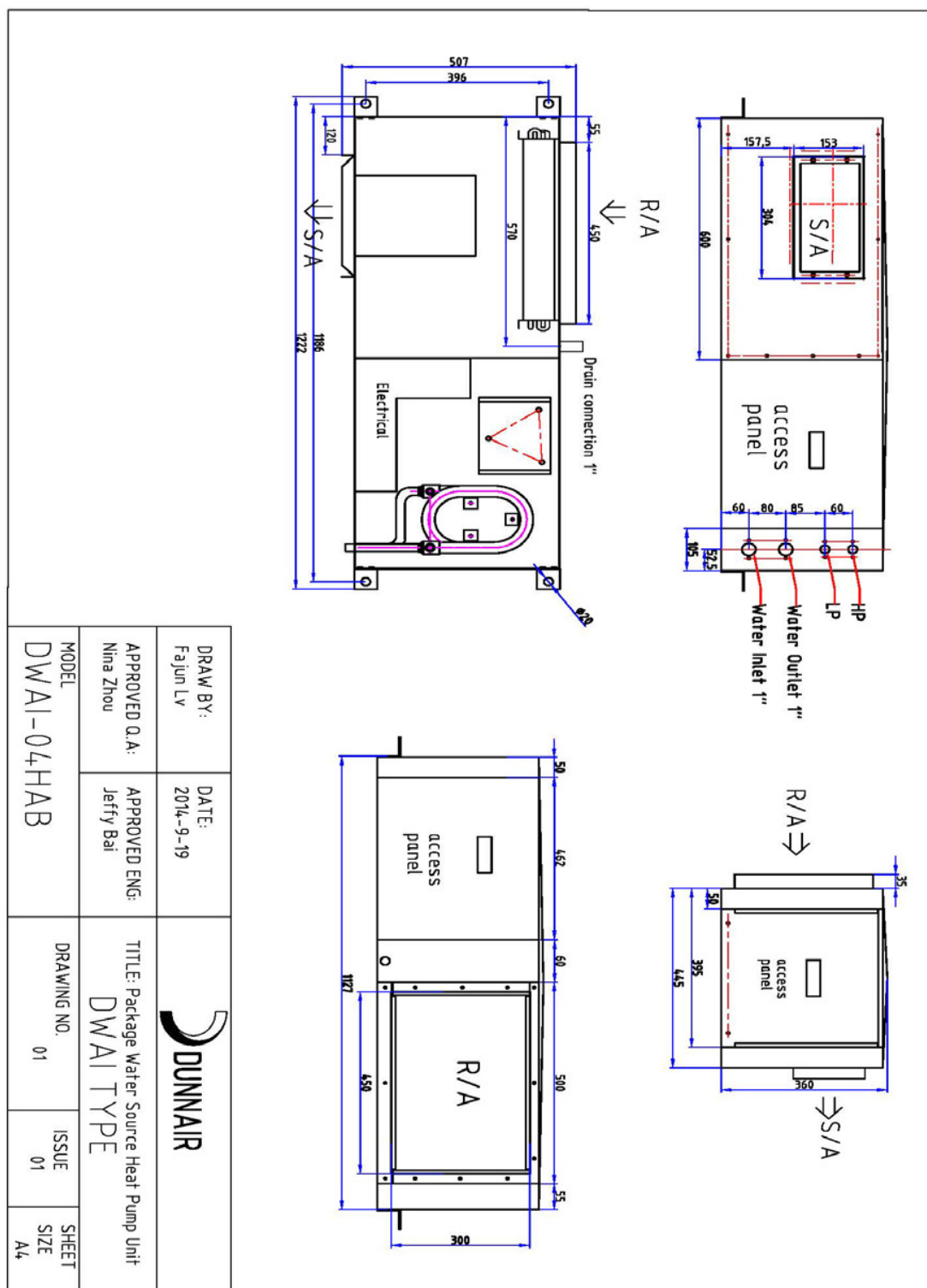
INPT = Compressor Input Power (kW)

___ = 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 upon request.

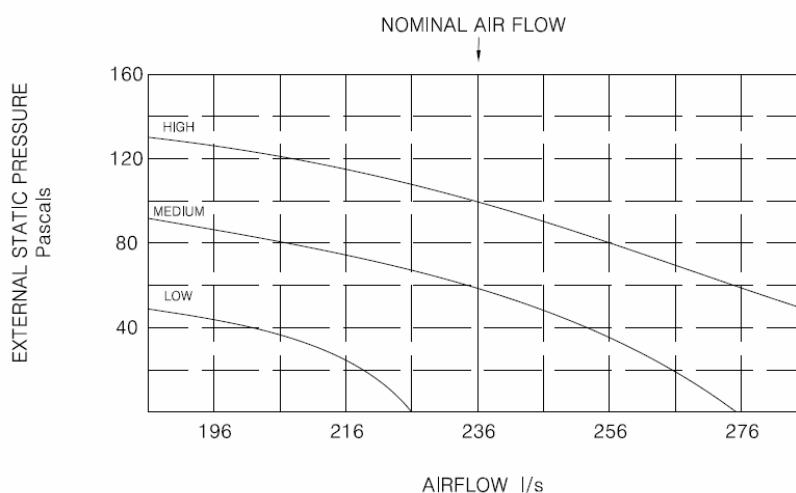
May 2015 V1.2D


DIMENSIONS (mm)



AIR HANDLING PERFORMANCE

Fan Curve (Without Filter)



| | | | | |
|---------------------|--------------------|---|-------------|---------------------|
| DRAW BY: | DATE: 2014-9-11 |  DUNNAIR | | |
| APPROVED Q.A: | APPROVED ENG | TITLE: Split Ducted Water Source Heat Pump Unit DWAI TYPE | | |
| MODEL DWAI-04HAB | | 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

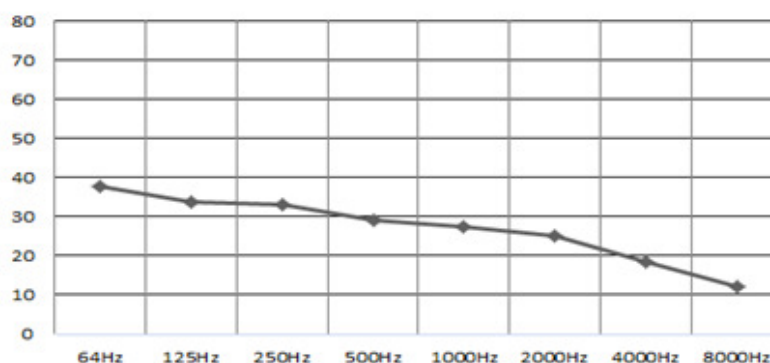
Sound Curve

DWAI-04HAB Noise rate analysing chart


A Class:33.4

| Hz | dB |
|--------|------|
| 64Hz | 37.8 |
| 125Hz | 33.7 |
| 250Hz | 33.2 |
| 500Hz | 28.9 |
| 1000Hz | 27.5 |
| 2000Hz | 24.9 |
| 4000Hz | 18.3 |
| 8000Hz | 12.1 |

Noise rate analysing chart(A Class:33.4dB)dB



Note:1m from source with 1m insulated duct and fully reflective surface surrounding unit.

| | | | | |
|---------------------|-------------------|---|-------------|---------------------|
| DRAW BY: | DATE: 2013-5-4 |  | | |
| APPROVED Q.A: | APPROVED ENG | TITLE: Package Water Source Heat Pump Unit DWAI TYPE | | |
| MODEL DWAI-04HAB | | DRAWING NO. 01 | ISSUE 01 | SHEET SIZE A4 |