

|               |  |
|---------------|--|
| Project Name: |  |
| Location:     |  |
| Engineer:     |  |
| Submitted to: |  |
| Submitted by: |  |
| Reference:    |  |

|               |  |
|---------------|--|
| Approval:     |  |
| Date:         |  |
| Construction: |  |
| Unit #:       |  |
| Drawing #:    |  |

Description: Hi-Ultra, 4.0 Ton Multi-Position Air Handler, Heat Pump



Air Handler Model:  
AUH-48UX3SEH2



Condensing Unit Model:  
AUWR-48U3SP2

KEY FEATURES

Air Handler Features

- ❑ Highly efficient totally enclosed ECM motor.
- ❑ External static pressure: 0.80 In.W.C. for 2Ton-5Ton.
- ❑ Multi-position installation: horizontal (left or right), vertical (up or down).
- ❑ Optional electric heat kit for additional heat capacity.
- ❑ High anti-corrosion coils.
- ❑ Universal 24V 3<sup>rd</sup> party thermostat is available.

Condensing Unit Features

- ❑ Easy installation for new construction or retrofit application. Compatible with most of other brands air handler or A-coil. No need additional 24V interface module.
- ❑ Quieter outdoor with variable speed compressor.
- ❑ Low operating temp: -13°F(-25 °C) for heating, and 5 °F(-15 °C) for cooling.
- ❑ Standard with Base Pan Heater to melt the ice and snow.
- ❑ Rating with Aspen indoor units in AHRI: **LEM48E4, LEM60B4, LEM60C4, LEM60D4**

ESP - Air Flow Table

Airflow performance data is based on cooling performance with a coil and no filter in place. Check the performance table for appropriate unit size selection. External static pressure should stay within the minimum and maximum limits shown in the table below in order to ensure proper cooling, heating ,and electric heating operation.



Bold outlined areas represent airflow outside of the required 300-450 cfm/ton range.

Air Flow Table

| Air Handler Model | Motor Speed                |       | External Static Pressure in.H2O[KPa] |           |             |           |          |           |           |           |           |
|-------------------|----------------------------|-------|--------------------------------------|-----------|-------------|-----------|----------|-----------|-----------|-----------|-----------|
|                   |                            |       | 0[0]                                 | 0.1[0.02] | 0.18[0.045] | 0.3[0.07] | 0.4[0.1] | 0.5[0.12] | 0.6[0.15] | 0.7[0.17] | 0.8[0.20] |
| 48K               | Tap(1)<br>-Default Setting | CFM   | 1756                                 | 1701      | 1626        | 1579      | 1520     | 1468      | 1425      | 1386      | 1346      |
|                   |                            | Watts | 348                                  | 357       | 369         | 378       | 387      | 395       | 407       | 410       | 424       |
|                   | Tap(2)                     | CFM   | 1799                                 | 1746      | 1678        | 1634      | 1571     | 1522      | 1449      | 1402      | 1241      |
|                   |                            | Watts | 366                                  | 377       | 388         | 398       | 410      | 419       | 428       | 444       | 440       |
|                   | Tap(3)                     | CFM   | 1828                                 | 1794      | 1749        | 1719      | 1670     | 1633      | 1589      | 1553      | 1510      |
|                   |                            | Watts | 376                                  | 387       | 401         | 413       | 428      | 437       | 452       | 465       | 482       |
|                   | Tap(4)                     | CFM   | 1888                                 | 1855      | 1813        | 1782      | 1735     | 1701      | 1665      | 1626      | 1585      |
|                   |                            | Watts | 415                                  | 428       | 445         | 456       | 469      | 481       | 495       | 510       | 525       |

Electric Heater

| Model   | Electric Heat Kit Model | Electric Heat (kW) | MIN. Circuit Ampacity |           | MAX. Fuse or Breaker (HACR) Ampacity |        | Fan Speed Tap |   |   |   |
|---------|-------------------------|--------------------|-----------------------|-----------|--------------------------------------|--------|---------------|---|---|---|
|         |                         |                    | 230VAC                | 208VAC    | 230VAC                               | 208VAC | 2             | 3 | 4 | 5 |
| 48K/60K | HS-EH5                  | 5                  | 31.8                  | 29.4      | 35                                   | 30     | ●             | ● | ● | ● |
|         | HS-EH75                 | 7.5                | 44.8                  | 40.7      | 45                                   | 45     | ×             | ● | ● | ● |
|         | HS-EH10                 | 10                 | 56.7                  | 51.9      | 60                                   | 55     | ×             | × | ● | ● |
|         | HS-EH15                 | 15                 | 44.8+36.9             | 40.7+33.8 | 50+40                                | 50+35  | ×             | × | ● | ● |
|         | HS-EH20                 | 20                 | 56.7+49.9             | 51.9+45.2 | 60+50                                | 60+50  | ×             | × | × | ● |

## Technical Spec.

### PERFORMANCE

#### DATA

|              |         |                     |
|--------------|---------|---------------------|
| Power supply | Ph-V-Hz | 208-230V, 1Ph, 60Hz |
|--------------|---------|---------------------|

#### Cooling

|                   |       |             |
|-------------------|-------|-------------|
| Capacity          | Btu/h | 48000       |
| Input             | W     | 4750        |
| Capacity(min-max) | Btu/h | 18300-52000 |
| EER2              | Btu/w | 10.1        |
| SEER2             | Btu/w | 17.5        |

#### Heating

|                           |       |             |
|---------------------------|-------|-------------|
| Capacity                  | Btu/h | 47000       |
| Input                     | W     | 4170        |
| Capacity(min-max)         | Btu/h | 17600-52000 |
| COP2(47°F)                | W/W   | 3.3         |
| HSPF2                     | Btu/w | 8.5         |
| COP @ 5F (@Max. Capacity) | W/W   | 1.9         |

#### Electrical

|                          |   |                           |
|--------------------------|---|---------------------------|
| MINIMUM CIRCUIT AMPACITY | A | 6.8                       |
| MAX. FUSE                | A | Outdoor50 / Indoor15      |
| Connection wiring        |   | outdoor3×8, Indoor3×16AWG |

#### Compressor

|                            |    |             |
|----------------------------|----|-------------|
| Type                       |    | Twin ROTARY |
| Brand                      |    | GMCC        |
| Rated current(RLA)         | A  | 26          |
| Locked rotor Amp(LRA)      | A  | ---         |
| Thermal protector          |    | ---         |
| Thermal protector position |    | ---         |
| Refrigerant oil/oil charge | ml | VG74 /1000  |

#### SYSTEM DATA

|                              |        |                         |
|------------------------------|--------|-------------------------|
| Design pressure              | PSIG   | 550/240                 |
| Refrigerant type             | oz     | R410A/142.9             |
| Refrigerant precharge        | ft     | 25                      |
| Additional charge per ft.    | oz     | 0.6                     |
| Liquid side/ Gas side        | mm(in) | Φ9.52/Φ22.22(3/8"/7/8') |
| Max. refrigerant pipe length | ft     | 246                     |
| Max. difference in level     | ft.    | 98                      |

#### ESP

|           |         |               |
|-----------|---------|---------------|
| ESP range | ln. wg. | 0-0.8 (0-200) |
|-----------|---------|---------------|

## Technical Spec.

**INDOOR UNIT  
DATA****Indoor fan motor**

|                    |               |                  |
|--------------------|---------------|------------------|
| Model              |               | ZKSD-560-8-50-14 |
| Type               |               | DC               |
| Input              |               | 3/4              |
| RLA                | A             | 5.0~5.4          |
| LRA                | A             | ---              |
| Winding Resistance | $\Omega$      | ---              |
| Capacitor          | $\mu\text{F}$ | ---              |
| Speed(Hi/Mi/Lo)    | r/min         | 350~1400         |

**Air flow & Noise level**

|                            |       |      |
|----------------------------|-------|------|
| Indoor air flow (Hi/Lo)    | CFM   | 1588 |
| Indoor noise level (Hi/Lo) | dB(A) | 64   |

**Indoor unit**

|                  |      |                      |
|------------------|------|----------------------|
| Dimension(W*H*D) | inch | 22×53-7/8 × 24       |
| Packing (W*H*D)  | inch | 25-1/4 × 55-1/2 × 28 |
| Net/Gross weight | lbs. | 187.2/214            |

**OUTDOOR UNIT DATA****Outdoor fan motor**

|                    |               |                                   |
|--------------------|---------------|-----------------------------------|
| Model              |               | SIC-71FW-D8121-1/SIC-71FW-D8121-2 |
| Type               |               | DC                                |
| Input              |               | 121                               |
| RLA                | A             | 1.00                              |
| LRA                | A             | ---                               |
| Winding Resistance | $\Omega$      | ---                               |
| Capacitor          | $\mu\text{F}$ | ---                               |
| Speed              | r/min         | 850                               |

**Air flow & Noise level**

|                     |       |      |
|---------------------|-------|------|
| Outdoor air flow    | CFM   | 3525 |
| Outdoor noise level | dB(A) | 59   |

**Outdoor unit**

|                  |      |                      |
|------------------|------|----------------------|
| Dimension(W*H*D) | inch | 37-3/8×54-5/8×13-3/8 |
| Packing (W*H*D)  | inch | 43-3/4×60-1/4×18-1/8 |
| Net/Gross weight | lbs. | 227.1/253.5          |

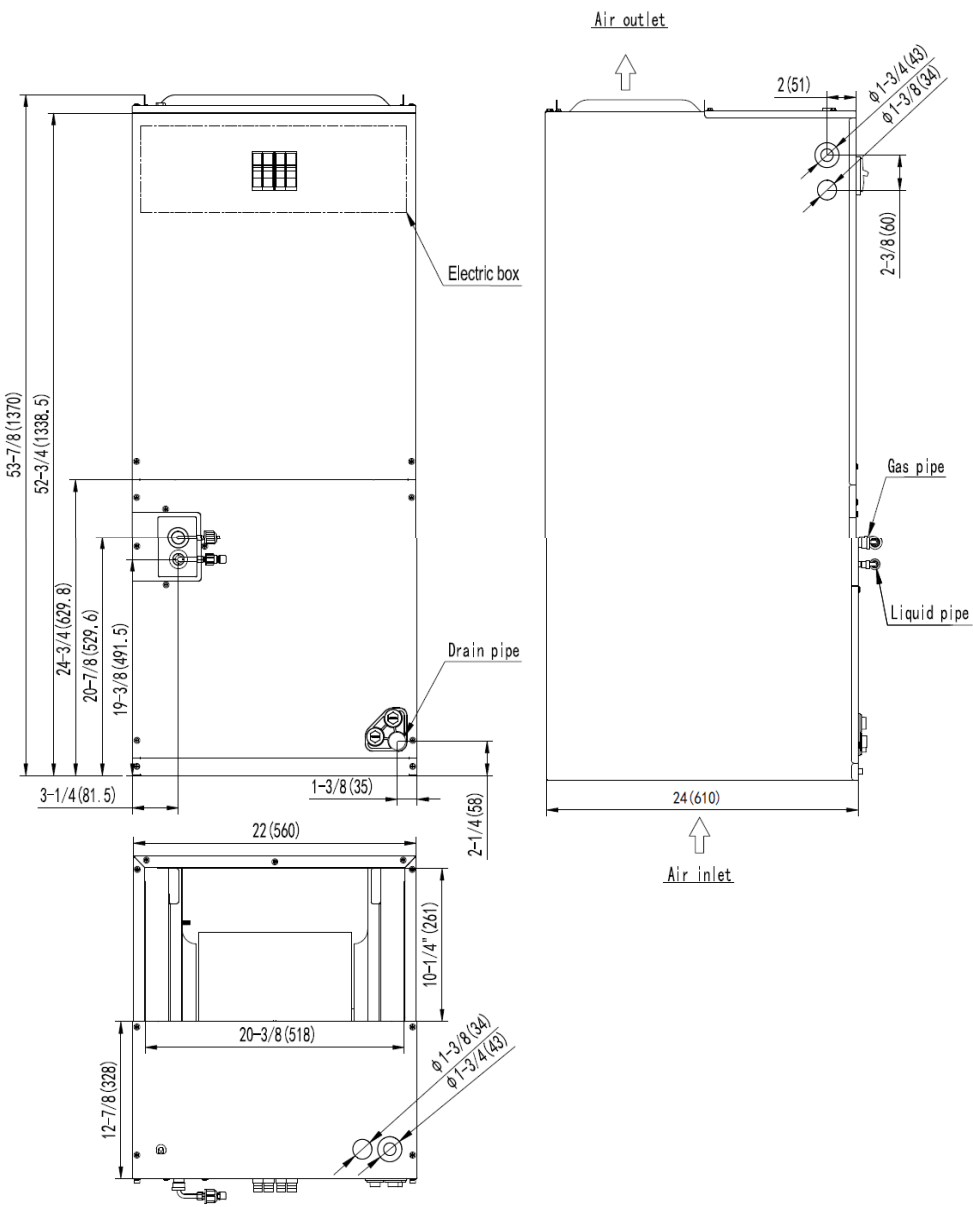
**Operation temperature**

|                          |        |              |
|--------------------------|--------|--------------|
| Indoor(cooling/ heating) | Deg. F | 62~90/32~86  |
| Outdoor(cooling/heating) | Deg. F | 5~118/ -4~75 |

DIMENSIONAL DRAWING  
Air Handler

48K/60K

Unit : in.(mm)



## DIMENSIONAL DRAWING Condensing Units

Unit: inch(mm)

