

# R454b Refrigerant

# SUBMITTAL DATA SHEET



Series Name: Slim Duct Energy Star Series  
Model Number: MDHUU-H12B-2A/MO1ES-H12B-2A

## Slim Duct Heat Pump System

|               |               |
|---------------|---------------|
| Location:     | Approval:     |
| Engineer:     | Date:         |
| Submitted to: | Construction: |
| Submitted by: | Unit #:       |
| Reference:    | Drawing #:    |



## INDOOR SPECIFICATION

|   |                               |
|---|-------------------------------|
| Indoor Air Flow (Turbo/H/M/L/Si) (CFM)    | 419 / 350 / 256 / 216 / 135   |
| Indoor Noise Level (Turbo/H/M/L/Si) (dBA) | 34 / 34 / 33 / 31 / 29        |
| Indoor static pressure range              | 0-0.8                         |
| Dimension (W×D×H)                         | inch 27-1/2 x 29-1/2 x 9-5/8  |
|   | mm 700 x 750 x 245            |
| Package (W×D×H)                           | inch 36-3/8 x 33-1/2 x 11-3/4 |
|   | mm 925 x 850 x 298            |
| Net/Gross Weight                          | lbs 64 / 74                   |
|   | kg 29.1 / 33.5                |

## OUTDOOR SPECIFICATION

|                              |                               |
|------------------------------|-------------------------------|
| Compressor Type              | ROTARY                        |
| Compressor Model             | KSK103D33UEZ3                 |
| Refrigerant                  | R454B                         |
| Refrigerant Oil Charge(mL)   | 310                           |
| Refrigerant Oil              | 5.65                          |
| Outdoor Air Flow (Max) (CFM) | 1,236                         |
| Outdoor Noise Level (dBA)    | 55.5                          |
| Dimension (W×D×H)            | inch 30-1/8 x 11-7/8 x 21-7/8 |
|                              | mm 765 x 303 x 555            |
| Package (W×D×H)              | inch 34-7/8 x 13-1/4 x 24     |
|                              | mm 887 x 337 x 610            |
| Net/Gross Weight             | lbs 63 / 68                   |
|                              | kg 28.2 / 30.7                |

## EFFICIENCY

| Cooling |      | Heating |      |
|---------|------|---------|------|
| SEER2   | 19.5 | HSPF2-4 | 10.5 |
| EER2    | 12.0 | COP     | 3.78 |

## PERFORMANCE of Cooling

| Cooling (Btu/hr)                |   |
|---------------------------------|---|
| Rated Capacity                  | 12,000  |
| Min/Max Capacity                | 2,200~12,900  |
| Moisture Removal(L/h)           | 1.30  |
| Standard Operating Range(°F/°C) | -13~122 (-25 ~ 50)                                  |
| Conditions:                     | Indoor: 80°F DB/67°F WB<br>Outdoor: 95°F DB/75°F WB |

## PERFORMANCE of Heating

| Heating (Btu/hr)                |   |
|---------------------------------|---|
| 1. @ 47°F Rated                 | 12,000  |
| 1. @ 47°F Min/Max Capacity      | 3,700~15,700  |
| 2. @ 17°F Rated                 | 9,100   |
| 3. @ 5°F Rated: Capacity / COP  | 8,900/2.44  |
| 3. @ 5°F Max: Capacity          | 8,900   |
| Standard Operating Range(°F/°C) | -13~75 (-25 ~ 24)                                   |
| 1. Conditions:                  | Indoor: 70°F DB/60°F WB<br>Outdoor: 47°F DB/43°F WB |
| 2. Conditions:                  | Indoor: 70°F DB/60°F WB<br>Outdoor: 17°F DB/15°F WB |
| 3. Conditions                   | Indoor: 70°F DB/60°F WB<br>Outdoor: 5°F DB/5°F WB   |

## ELECTRICAL

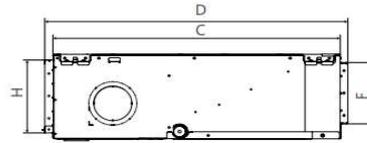
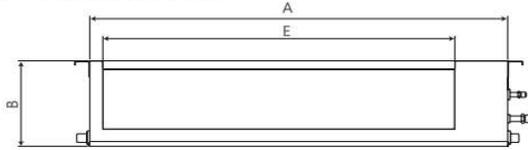
|                                  |  |
|----------------------------------|--|
| Power Supply                     | 208/230V,60Hz,1Ph                      |
| System MCA                       | 12.0                                   |
| Connection Wiring                | AWG 14/4                               |
| System MOCP                      | 15.0                                   |
| Compressor RLA                   | 7.3                                    |
| Outdoor Fan Motor RLA            | 0.6                                    |
| Outdoor Fan Motor W              | 34                                     |
| Indoor Fan Motor RLA             | 1.5                                    |
| Indoor Fan Motor W               | 165                                    |
| System Power Input @ Cooling (W) | 999 (220 ~ 1,200)                      |
| System Power Input @ Heating (W) | 952 (255 ~ 1,380)                      |
| MCA: Min. circuit amps (A)       | MOCP: Max. over current protection (A) |
| RLA: Rated load amps (A)         | W: Fan motor rated output (W)          |

## PIPING

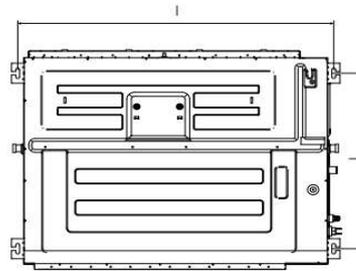
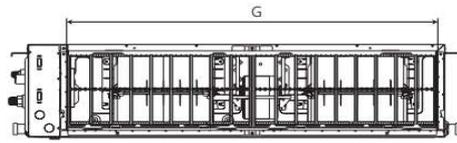
|  |               |
|--|---------------|
| Throttle type(Indoor)                          | N/A           |
| Throttle type(Outdoor)                         | EXV           |
| Liquid Size                                    | 1/4" (6.35mm) |
| Gas Size                                       | 3/8" (9.52mm) |
| Max. Piping Length(ft/m)                       | 82 (25)       |
| Max. Height Difference(ft/m)                   | 49 (15)       |
| Max. Pre-charged Length(ft/m)                  | 25 (7.5)      |
| Refrigerant Pre-charged Amount(oz/kg)          | 32 (0.92)     |
| Additional Charge of Refrigerant((oz/ft)/(g/m) | 0.16 (15)     |
| Connection Method                              | Flared        |

### Indoor Unit Dimension

#### Air outlet dimensions



#### Air inlet dimensions

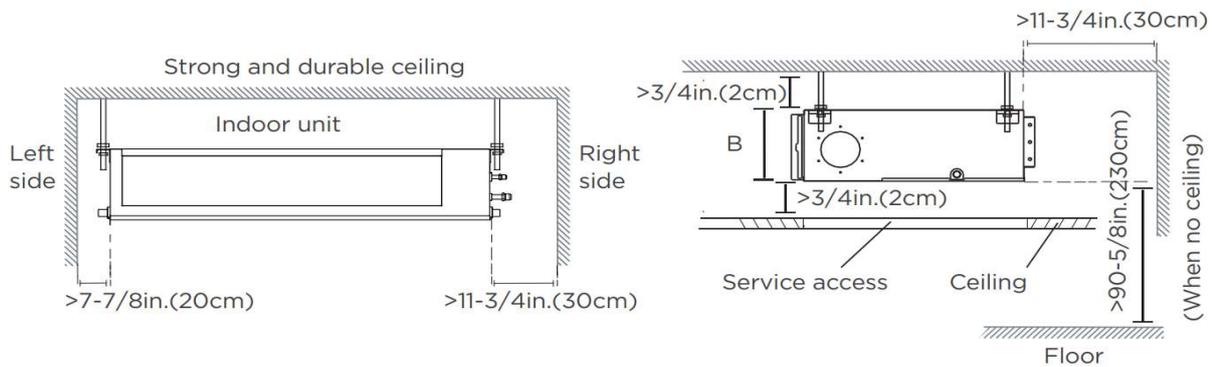


Unit: inch (mm)

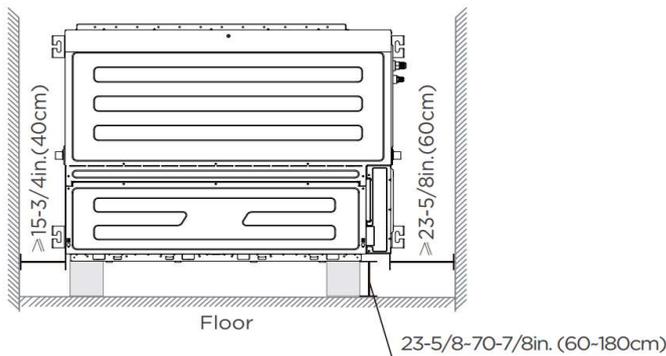
| MODEL   | OUTLINE DIMENSION  |                   |                 |                  | AIR OUTLET OPENING SIZE |                 | AIR RETURN OPENING SIZE |                 | SIZE OF MOUNTED LUG |                  |
|---------|--------------------|-------------------|-----------------|------------------|-------------------------|-----------------|-------------------------|-----------------|---------------------|------------------|
|         | A                  | B                 | C               | D                | E                       | F               | G                       | H               | I                   | J                |
| 9K/12K  | 27-5/8<br>(700)    | 9-5/8<br>(245)    | 29-1/2<br>(750) | 31-5/16<br>(795) | 20-3/4<br>(527)         | 7<br>(178)      | 23-5/16<br>(592)        | 8-5/16<br>(212) | 29-3/32<br>(740)    | 25-1/4<br>(640)  |
| 18K/24K | 39-7/16<br>(1,000) | 9-5/8<br>(245)    | 29-1/2<br>(750) | 31-5/16<br>(795) | 32-5/8<br>(827)         | 7<br>(178)      | 35-3/32<br>(892)        | 8-5/16<br>(212) | 40-7/8<br>(1,040)   | 25-1/4<br>(640)  |
| 36K/48K | 47-1/4<br>(1,200)  | 11-13/16<br>(300) | 29-1/2<br>(750) | 31-5/16<br>(795) | 40-7/16<br>(1,027)      | 9-1/4<br>(233)  | 43<br>(1,092)           | 10-1/2<br>(267) | 48-13/16<br>(1,240) | 25-1/4<br>(640)  |
| 55K/60K | 55-3/32<br>(1,400) | 14-7/8<br>(380)   | 29-1/2<br>(750) | 31-5/16<br>(795) | 48-3/32<br>(1,223)      | 12-5/8<br>(320) | 50-3/32<br>(1,272)      | 13<br>(330)     | 56-13/16<br>(1,440) | 26-5/16<br>(668) |

### Installation Instruction

#### 1) Ceiling-mounted

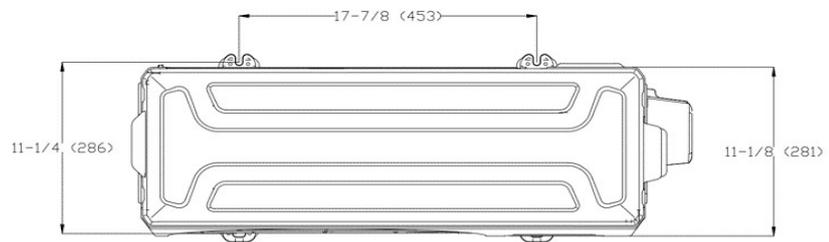
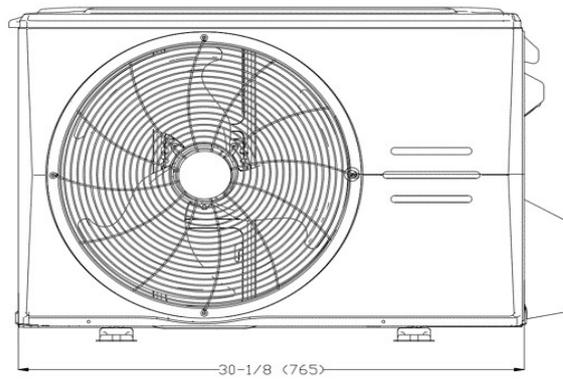
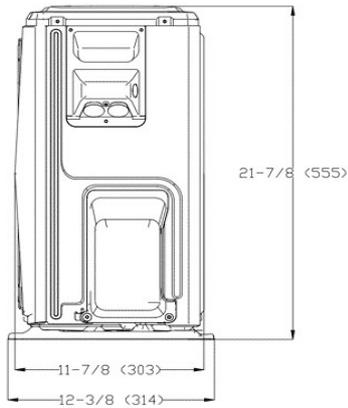


#### 2) Wall-mounted

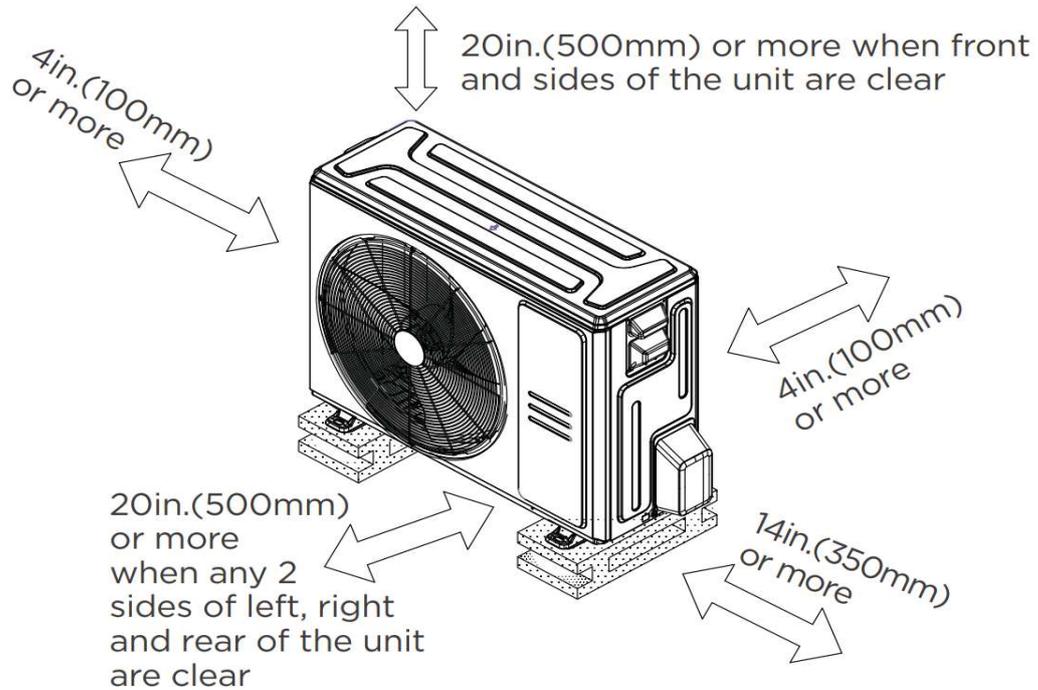


### Outdoor Unit Dimension

Unit: inch (mm)

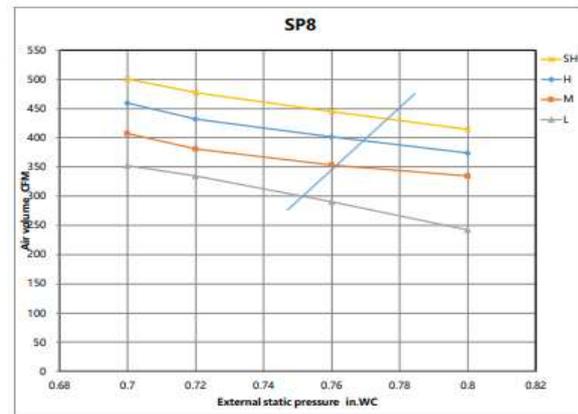
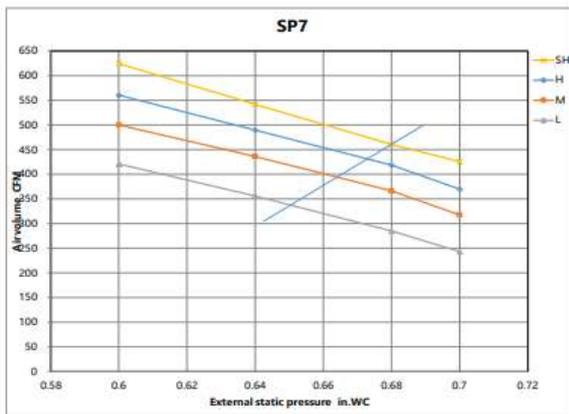
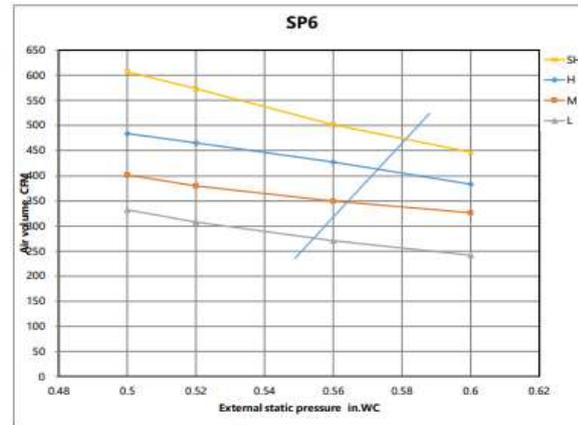
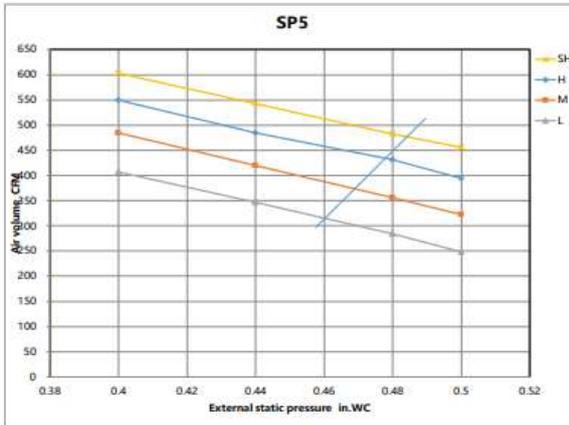
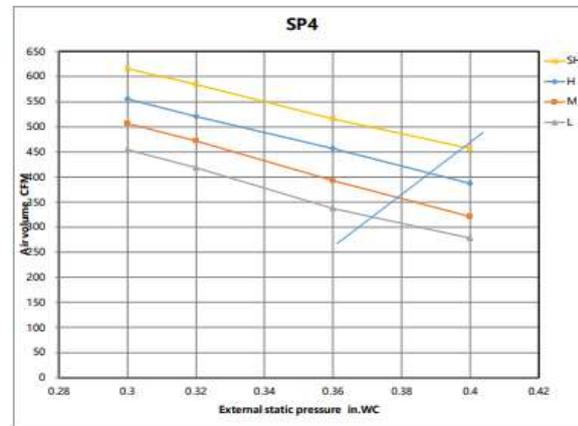
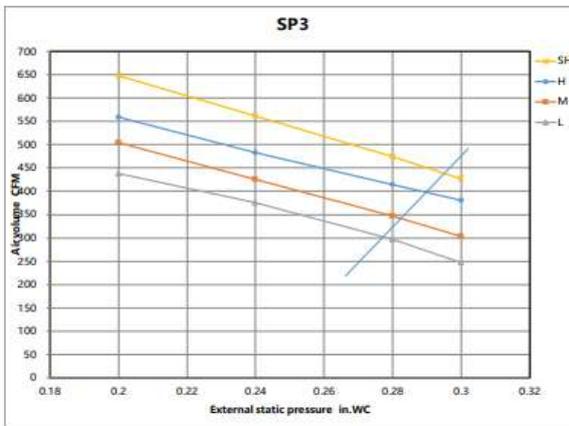
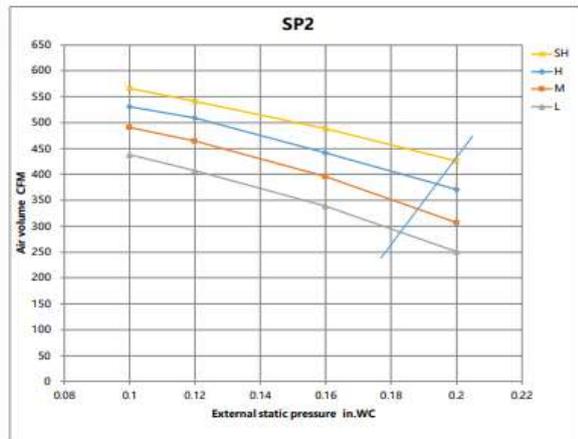
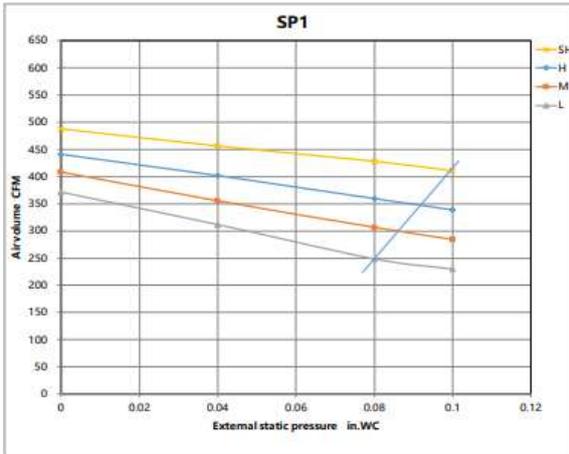


### Installation Instruction

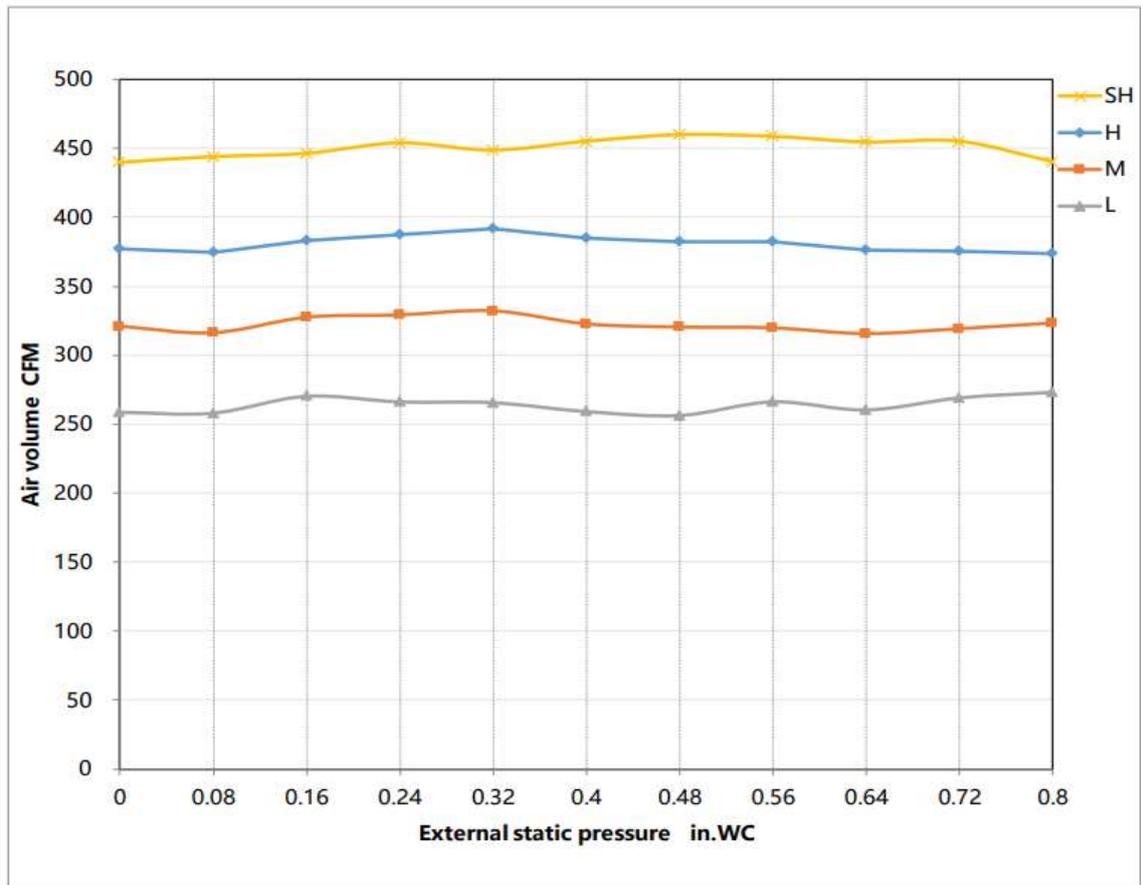


### Fan performance

The default setting is SP1, which can be changed to SP2,3,4,5,6,7,8 using the wired controller.



### Constant air volume



## FEATURES

- Compatible with both horizontal and vertical installation
- Static pressure up to 0.8 in.w.g(for all models)
- Static pressure setting stages: 8
- Refrigerant leakage detection sensor
- Constant airflow
- Built-in pump
- i-clean
- Fan speed stages: 1~100%
- WiFi capability: through wired controller with built-in WiFi
- OTA(by using wired controller 120N(X6W))
- 2-pin connector(HA/HB) for programmable wired controller
- Multiple control options available:
  - Two way communication wired controller with built-in WiFi:120N(X6W)
  - Wireless remote controller
  - Third-Party 24V Thermostat\*

\*24V interface is required.