

NEXTAIRE GHP OUTDOOR UNIT

Size Range:

8 & 15 tons nominal

NextAire AC Model Numbers:

AXGP096D1NHS

AXGP180D1NHS

A. General:

The variable capacity, gas heat pump air conditioning system shall be a NextAire Variable Refrigerant volume (heat or cool model) split system as specified. The system shall consist of multiple evaporators, REFNET™ joints and headers, a two pipe refrigeration distribution system using PID control, and NextAire VRV outdoor unit. The outdoor unit is a water-cooled straight 4-cycle OHV gas driven engine, direct expansion (DX), air-cooled heat pump, multi-zone air-conditioning system with variable speed driven compressors using R-410A refrigerant. The outdoor unit may connect an indoor evaporator capacity up to 130% of the outdoor condensing unit capacity. All zones are each capable of operating separately with individual temperature control. Two-pipe systems requiring separation of the gas and liquid refrigerant are not acceptable.

The NextAire GHP-MZ outdoor unit shall be used specifically with NextAire/Daikin indoor fan coil units. The outdoor units shall be equipped with multiple circuit boards that interface to the NextAire I-touch control network solution and shall perform all functions necessary for operation.

1. The sum of connected capacity of all indoor air handlers shall range from 50% to 130% of outdoor rated capacity. The indoor units shall be FXAQ, FXDQ, FXFQ, FXHQ, FXLQ, FXMQ, FXNQ, FXTQ, & FXZQ. They will range in capacity from 7,500 Btuh to 96,000 Btuh in accordance with Daikin's engineering data handbook detailing each available indoor unit.
2. Outdoor unit shall have a sound rating no higher than 58 dB(A).
3. Both refrigerant lines from the outdoor unit to the indoor fan coil units shall be insulated.
4. The outdoor unit shall have a high pressure safety switch, fuse, over-current protection and crank case heater.
5. The outdoor unit shall be capable of operating in heating down to +4°F ambient temperature without additional low ambient controls.

B. Unit Cabinet:

1. The casing(s) shall be fabricated of galvanized steel, bonderized, and finished with a powder coated baked enamel.

C. Fan:

1. The outdoor unit shall be furnished with three direct-drive, variable speed propeller type fans.
2. All fan motors shall have inherent protection, have permanently lubricated bearings, and be completely variable speed.

| Model Number | Fan Motor Output & Quantity (hp) |
|--------------|----------------------------------|
| AXGP096D1NHS | 1/3 x 2 |
| AXGP180D1NHS | 1/3 x 3 |

3. All fan motors shall be mounted for quiet operation.

| Model Number | Sound Level dB(A) |
|--------------|-------------------|
| AXGP096D1NHS | 57 |
| AXGP180D1NHS | 57 |

4. All fans shall be provided with a raised guard to prevent contact with moving parts.
5. The outdoor unit shall have vertical discharge airflow.
6. Condenser fan rated air flow for the 8-ton unit is 10,241 CFM.
7. Condenser fan rated air flow for the 15-ton unit is 15,362 CFM.

D. Refrigerant

1. R-410A refrigerant shall be required for outdoor unit systems.
2. Amount to be 25.4 lbs.

E. Coil:

1. The outdoor coil shall be of nonferrous construction with lanced or corrugated plate fins on copper tubing.
2. The coil shall be protected with an integral metal guard.
3. Refrigerant flow from the outdoor unit shall be controlled by means of capacity modulation capable vapor injection scroll compressor.

F. Compressor:

1. The outdoor units shall be equipped with four capacity modulation capable vapor injection gas engine driven scroll compressors.

| Tonnage | Number of Compressors | Compressor Types |
|---------|-----------------------|------------------|
| 8 | 2 | Scroll |
| 15 | 4 | Scroll |

2. The outdoor unit compressor shall have a variable modulation technology to modulate capacity. The capacity shall be completely variable down to 10% of rated capacity.
3. The compressor will be equipped with an internal thermal overload.
4. The compressor shall be mounted to avoid the transmission of vibration
5. The compressor refrigerant oil shall be AISIN NL 10 (4.2 liters).

G. Electrical:

1. The outdoor unit electrical power shall be 208 volts, 1 phase, 60 hertz.
2. The outdoor unit shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz).

| Model | MCA | MOP | Cooling Power Consumption (kW) | Heating Power Consumption (kW) |
|--------------|------------|------------|---------------------------------------|---------------------------------------|
| AXGP096D1NHS | 7.0 | 20 | 0.82 | 0.86 |
| AXGP180D1HNS | 11.5 | 20 | 1.23 | 1.29 |

3. The outdoor unit shall be controlled by integral microprocessors.
4. The control circuit between the indoor units, MCU(Mode Change Unit) and the outdoor unit shall be 12VDC completed using stranded, annealed copper conductor, two-core cable to provide total integration of the system. (Twisted pair shielded cable would be recommended.)
5. Starting current will be at a maximum of 20 amps.