

## Unit Control Options

### Microprocessor

The optional microprocessor controller is factory programmed, wired and tested prior to shipment. The controller can operate stand-alone or integrate with a building management system (BMS) using BACnet® MS/TP or IP, or Modbus® RTU protocols. Control features include:

- LCD display with built-in keypad for easy set point adjustment
- Integral 7-day time clock
- Night setback option
- Auto changeover based on outdoor air conditions
- Heating and cooling temperature lockouts
- Building freeze protection
- Room temperature control
- Override controls for ease of start-up

### Remote Touchscreen Interface

The remote touchscreen interface for Make-Up Air unit control offers advanced capabilities for control of Make-Up Air units with the simplicity of an intuitive LCD display. This cutting-edge accessory allows the end user to control any Make-Up Air unit with heating and cooling from the space, allowing maximum flexibility and convenience. The remote touchscreen interface supports fan enable and disable, unit set points, password protection, the ability to communicate with a BMS through BACnet® MS/TP, and much more!



### Remote Panel

An optional remote panel is available in either an industrial Permator™-coated NEMA-1 enclosure or severe-duty stainless steel NEMA-4X enclosure. The panel consists of enable switches, indicator lights, discharge temperature dial or room thermostat, and optional fan control devices.



### Terminal Strip

Stand-alone electromechanical unit components to be used with a field-supplied unit enabled contact closure.



## Optional Accessories

- Curbs
- Coatings for Corrosive Environments
- Dirty Filter Sensors
- Double-Wall Construction
- Exhaust Fan Starters
- Filters (Aluminum mesh, MERV 8, 13 & 14)
- Flame Safeguard Display
- Freeze Protection
- Inlet Air Sensor(s)
- Inlet Damper End Switch
- Night Setback (unoccupied mode)
- Remote Panels
- Service Receptacle
- Smoke Detector

## Common Applications

- Animal Shelters
- Kitchens
- Industrial
- Institutions
- Locker Rooms
- Manufacturing
- Multifamily Homes
- Nursing Homes
- Office Buildings
- Paint Booths
- Parking Garages
- Repair Garages
- Schools
- Warehouses

## Product Certifications



ETL Listed for electrical and overall unit safety. Every unit is tested at the factory before it is shipped to the jobsite.



AHRI Certified coils. To guarantee your coil will perform as required, check for AHRI Certification.



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# MUA



## MAKE-UP AIR



## Direct Gas-Fired Heating

### Model DGX

- 800 - 48,000 cfm and 4 in. wg
- Up to 4,800,000 Btu/h
- Cooling options: packaged direct expansion, chilled water, or evaporative cooling
- Optional
  - Supply fan(s): belt drive, forward-curved; direct drive, backward-curved plenum; or direct drive, mixed flow plenum
  - VAV operation (VFD)
  - Recirculation (80/20)



### Model TSU

- 33,000 - 64,000 cfm and 3 in. wg
- Up to 7,000,000 Btu/h
- Optional
  - VAV operation (VFD)
  - Recirculation (80/20)



### Model VSU

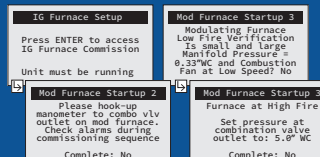
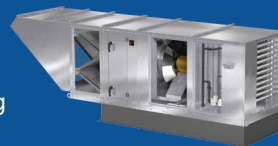
- 800 - 64,000 cfm and 3 in. wg
- Up to 7,000,000 Btu/h
- Optional
  - VAV operation (VFD)
  - Recirculation (80/20)



## Indirect Gas-Fired Heating

### Model IGX

- 800 - 15,000 cfm and 3 in. wg
- Up to 1,200,000 Btu/h
- Assisted commissioning sequence
- Cooling options: chilled water or evaporative cooling
- Built-in furnace commissioning guide
- Optional
  - High turndown furnace (up to 16:1)
  - VAV operation (VFD)
  - Recirculation

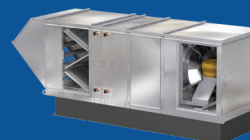


## Hot Water, Steam, Electric or No Heat

### Model MSX

Configurable

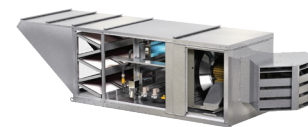
- 800 - 48,000 cfm and 4 in. wg
- Electric heat: Up to 220 kW, SCR/VSCR controls, single point power standard
- Cooling options: packaged direct expansion, chilled water, or evaporative cooling
- Optional
  - Supply fan(s): belt drive, forward-curved; direct drive, backward-curved plenum; or direct drive, mixed flow plenum
  - VAV operation (VFD)
  - Recirculation
  - Non-tempered arrangement



## Industrial Space Heating

### Greenheat 80/20 Recirculation

- Up to 7,000,000 Btu/h
- Varying outside air from 20-100%
- Discharge air temperature (110°F)



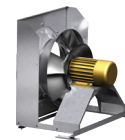
### Greenheat 100% Outdoor Air

- Up to 2,800,000 Btu/h
- High discharge temperature (140°F)
- Minimizes infiltration losses

## Options & Features

### Direct Drive Plenum Supply Fan

Models DGX, IGX, & MSX



Mixed flow fans are hybrid designs that incorporate the best features of axial and centrifugal fans. The unique mixed flow plenum fan is optimized for typical make-up air applications below 3 in. wg:

- 800 - 25,000 cfm
- Up to 50% reduction in operating horsepower
- 40% less energy usage than forward-curved fan
- VFD as standard means push button air balancing
- Soft-start provides less wear and tear on equipment
- No belt/bearing maintenance
- Easily change discharge location (except IGX)
- Non-overloading fan design
- Up to 50% reduction in sones (6-8 decibels) compared to a forward-curved fan
- Optional Grease Rated Utility Set or Inline Fan

### Packaged DX Cooling

Models DGX & MSX

- 800 - 5,000 cfm
- 3, 5, 8, 10 tons (sensible cooling)
- Low sound condenser fans
- Optional VAV operation (VFD)



## Selection Software

Greenheck's free online eCAPS® Engineering Application Suite can simplify and optimize your selection of make-up air units. Just CLICK on the Make-Up Air product category. ENTER your project requirements. REVIEW your selections for size, performance, weight and electrical load specifications. Then create a SCHEDULE. eCAPS also helps you locate and contact your nearest Greenheck rep. It's easy to use and always up-to-date.

