



# Division 233700

# Air Inlets and Outlets

## DESIGN GUIDE

## 1 General

### 1.1 General

- A. Reserved for future.

## 2 Materials

### 2.1 Louvers

- A. Louvers are an integral part of the mechanical system and shall be provided in Division 23 but fully coordinated and integrated with the architectural elevations and details.
  - 1. If not provided in Division 23, engineer shall review and approve proposed louver performance for: Screen, air pressure drop, free area, moisture mitigation.
- B. Aluminum with drainable blade with grain gutters in the blade and head and downspouts in the jambs and mullions with all welded construction. Minimum 6" deep. AMCA certified.
- C. High quality finish. Paint shall have a manufacturer's 20-year warranty.
- D. Mesh on louver shall be largest size permitted by code due to campus wide hoar frost issues. See 230500.
- E. Project architect shall approve all colors.



## 2.2 Gravity Ventilators

- A. Roof cowls such as Greenheck Fabrahood are preferred over louvered penthouse due to weather resistance and to minimize snow/rain entry) and for increased load bearing strength.
- B. Roof Cowl shall have lift off the base by removal of bolts on all support members facilitating to allow access to screens and damper.
- C. Provide with insulation on underside of hood to prevent condensation.
- D. Accessories as required: curb, motorized damper (24-volt Belimo actuator). Provide curb extension on intakes to elevate opening a minimum of 18" above finished roof surface due to snow loads.

## 2.3 Grilles, Registers, Diffusers

- A. Frame style to suit ceiling system. Coordinate with architectural ceiling systems.

# 3 Execution

## 3.1 Louvers

- A. See 230500-Hoarfrost.

## 3.2 Grilles/Registers/Diffusers

- A. All final air delivery devices shall have diffusers
- B. Install diffusers to ductwork with air-tight connection.
- C. Provide balancing dampers on duct take-off to diffusers, and grilles and registers, regardless of whether dampers are specified as part of the diffuser, or grille and register assembly and regardless of whether they are shown on the drawings.



## 4 Appendix

### 4.1 Reserved for future.

