SECTION 233300 – AIR DUCT ACCESSORIES

1.1 SMOKE DAMPERS

A. Damper Motors: [Proportional] [or] [two-position] action.

1. Manufactured, brand labeled or distributed by Belimo.
2. New construction damper actuators shall be provided by the damper manufacturer and sized per UL 555S test listings.
3. Coupling: V-bolt dual nut clamp with a V-shaped toothed cradle. Aluminum clamps or set screws are not acceptable.
4. Overload Protection: Microprocessor or an electronic based motor controller providing burnout protection if stalled before full rotation is reached. The actuator shall electronically cut off at full open to eliminate noise generation with the holding noise level to be inaudible.
5. Temperature rating: Actuator shall have UL 555S listings by the damper manufacturer for [250 DegF (121 DegC)] [350 DegF (176 DegC)].
6. Housing: Steel or plastic; aluminum is not acceptable. UL 2043 Listed for low smoke generation in environmental air spaces (plenums) per requirements of IMC 602.2 and NFPA 70 (NEC) section 300.22(c).
8. Proportional Smoke Damper Actuators shall meet all requirements specified above and shall modulate 0-100% open in response to a 2-10vdc or 4-20mA control signal. A 2-10vdc feedback output shall be available for position indication.
10. A manual override winder and locking mechanism shall be provided for operation upon loss of power.
11. The manufacturer shall warrant all components for a period of 5 years from the date of production, with the first two years unconditional.

B. Accessories:

1. Integral actuator auxiliary switches shall be provided on all actuators connected to the Firefighters’ Smoke Control System (FSCS) panel. One switch to open when damper starts to open; one switch to close when the damper reaches the open position.
2. [Momentary test switch] [Test and reset switches], [damper] [remote] mounted.

1.2 COMBINATION FIRE AND SMOKE DAMPERS

A. Damper Motors: [Proportional] [or] [two-position] action.

1. Manufactured, brand labeled or distributed by Belimo.
2. New construction damper actuators shall be provided by the damper manufacturer and sized per UL 555 and UL 555S test listings.
3. Coupling: V-bolt dual nut clamp with a V-shaped toothed cradle. Aluminum clamps or set screws are not acceptable.
4. Overload Protection: Microprocessor or an electronic based motor controller providing burnout protection if stalled before full rotation is reached. The actuator shall electronically cut off at full open to eliminate noise generation with the holding noise level to be inaudible.

5. Temperature rating: Actuator shall have UL 555 and UL 555S listings by the damper manufacturer for [250 DegF (121 DegC)] [350 DegF (176 DegC)].

6. Housing: Steel or plastic; aluminum is not acceptable. UL 2043 Listed for low smoke generation in environmental air spaces (plenums) per requirements of IMC 602.2 and NFPA 70 (NEC) section 300.22(c).


8. Proportional Fire and Smoke Damper Actuators shall meet all requirements specified above and shall modulate 0-100% open in response to a 2-10vdc or 4-20mA control signal. A 2-10vdc feedback output shall be available for position indication.


10. A manual override winder and locking mechanism shall be provided for operation upon loss of power.

11. The manufacturer shall warrant all components for a period of 5 years from the date of production, with the first two years unconditional.

B. Accessories:

1. Integral actuator auxiliary switches shall be provided on all actuators connected to the Firefighters’ Smoke Control System (FSCS) panel. One switch to open when damper starts to open; one switch to close when the damper reaches the open position.

2. [Momentary test switch] [Test and reset switches], [damper] [remote] mounted.