**SUGGESTED SPECIFICATIONS**

11/21/2017

**TAMCO SERIES 1000 SM-M UL/ULC APPROVED MODULATING SMOKE DAMPER**

1. Extruded aluminum (6063-T5) damper frame shall not be less than 0.080” (2.03 mm) in thickness. Damper frame shall be 4” (101.6 mm) deep x 1" (25.4 mm), with duct mounting flanges on both sides of frame. Damper frame shall have a 2" (50.8 mm) mounting flange on the rear of the damper, when installed as Extended Rear Flange install type. Frame to be assembled using zinc-plated steel mounting fasteners. Welded frames shall not be acceptable.
2. Blades shall be maximum 6.0” (152.4 mm) deep extruded aluminum (6063-T5) air-foil profiles with a minimum wall thickness of 0.06” (1.52mm). All blades shall be symmetrically pivoted.
3. Blade seals shall be specially designed and engineered extruded silicone, secured in an integral slot within the aluminum blade extrusions and shall be mechanically fastened to prevent shrinkage and movement over the life of the damper. Adhesive or clip-on type blade seals will not be approved.
4. Frame seals shall be specially designed and engineered extruded silicone, secured in an integral slot within the aluminum frame extrusions and shall be mechanically fastened to prevent shrinkage and movement over the life of the damper. Metallic compression type jamb seals will not be approved.
5. Bearings shall be a dual bearing system composed of a bronze oilite inner bearing (fixed around a 7/16" (11.11 mm) aluminum hexagon blade pivot pin), rotating within a bronze oilite outer bearing inserted in the frame. Single axle bearing, rotating in an extruded or punched hole shall not be acceptable.
6. Hexagonal control shaft shall be 7/16" (11.11 mm). It shall have an adjustable length and shall be an integral part of the blade axle. A field-applied control shaft shall not be acceptable. All parts shall be zinc-plated steel.
7. Linkage hardware shall be aluminum and corrosion-resistant zinc-plated steel, installed in the frame side, out of the airstream, and accessible after installation. Linkage hardware shall be complete with cup-point trunnion screws to prevent linkage slippage. Trunnion bearings shall be bronze oilite. Linkage that consists of steel rubbing steel will not be approved.
8. Smoke dampers are to be designed for operation in temperatures ranging between -40°F (-40°C) and 250°F (121°C).
9. Smoke dampers shall be UL/ULC rated Leakage Class 1.
10. Smoke damper shall be AMCA certified for Air Performance under the AMCA Certified Ratings Program.
11. Smoke dampers shall be parallel or opposed blade action, as indicated on the plans.
12. Smoke dampers shall be custom made to required size, with blade stops not exceeding 1¼” (31.7 mm) in height. The blade stop shall be a continuous and integral part of the head/sill. Welded and caulked blade stops shall not be acceptable.
13. Smoke dampers shall be installed in the following manner: Flanged to Duct, Installed in Duct, Extended Rear Flange, or Square to Round Transition. (Specify one.)
14. Actuators shall be factory-mounted as required by UL 555S/ULC-S112.1.
15. Approved actuators shall be Belimo or Honeywell - Voltage: 24 vac/vdc, single phase and 2-10 vdc modulating control. (Specify one voltage.)
16. Actuator mounting location shall be: Internal or External. (Specify one.) All smoke dampers with internally mounted actuators shall be mounted on a jackshaft.
17. Auxiliary switches shall be available as an actuator option.
18. Installation of dampers must be in accordance with TAMCO’s current UL/ULC Approved Smoke Damper Installation Guidelines, provided with each damper shipment.
19. Acceptable product shall be TAMCO Series 1000 SM-M, UL/ULC Approved Modulating Smoke Damper, as manufactured by
T. A. Morrison & Co., Inc. (Tel: 1-800-561-3449, USA & Canada).

**OPTIONS** *(For each option listed, replace the specification lines above with their corresponding specification lines below.)*

**MR - MOISTURE RESISTANCE OPTION:**

1. Extruded aluminum (6063-T5) damper frame shall not be less than 0.080” (2.03 mm) in thickness. Damper frame shall be 4” (101.6 mm) deep x 1" (25.4 mm), with duct mounting flanges on both sides of frame. Damper frame shall have a 2" (50.8 mm) mounting flange on the rear of the damper, when installed as Extended Rear Flange install type. Frame shall be assembled using stainless steel screws. Welded frames shall not be acceptable.

6. Hexagonal control shaft shall be 7/16" (11.11 mm). It shall have an adjustable length and shall be an integral part of the blade axle. A field-applied control shaft shall not be acceptable. All parts shall be stainless steel.

7. Linkage hardware shall be aluminum and stainless steel, installed in the frame side, out of the airstream, and accessible after installation. Linkage hardware shall be complete with stainless steel cup-point trunnion screws to prevent linkage slippage. Trunnion bearings shall be bronze oilite. Linkage that consists of steel rubbing steel will not be approved.

**SW - SALT WATER RESISTANCE OPTION:**

1. Extruded aluminum (6063-T5) damper frame shall not be less than 0.080” (2.03 mm) in thickness. Damper frame shall be 4” (101.6 mm) deep x 1" (25.4 mm), with duct mounting flanges on both sides of frame. Damper frame shall have a 2" (50.8 mm) mounting flange on the rear of the damper when installed as Extended Rear Flange install type. Aluminum frame shall be clear anodized to a minimum thickness of 0.7 mil (18 microns) deep. Frame shall be assembled using stainless steel screws. Welded frames shall not be acceptable.

2. Blades shall be maximum 6" (152.4 mm) deep extruded aluminum (6063-T5) air-foil profiles with a minimum wall thickness of 0.06” (1.52mm), clear anodized to a minimum thickness of 0.7 mil (18 microns) deep. All blades shall be symmetrically pivoted.

6. Hexagonal control shaft shall be 7/16" (11.11 mm). It shall have an adjustable length and shall be an integral part of the blade axle. A field-applied control shaft shall not be acceptable. All parts shall be stainless steel.

7. Linkage hardware shall be aluminum and stainless steel, installed in the frame side, out of the airstream, and accessible after installation. Linkage hardware shall be complete with stainless steel cup-point trunnion screws to prevent linkage slippage. Trunnion bearings shall be bronze oilite. Linkage that consists of steel rubbing steel will not be approved.