

Model FB-4101Z Damper Assembly

**Corrugated Blade, Electric Actuator
24VDC Power to Open, Power to Close**

Overview

Gas turbines used for power generation, compressors, and other applications are often required to be inside an enclosure in order to reduce noise emissions, for personnel safety, proper system operation, and compliance with governmental regulations.

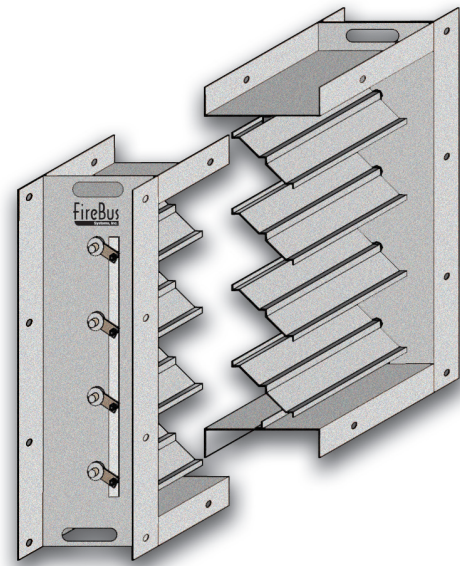
These turbine enclosures require inlet and outlet dampers for ventilation purposes and these dampers must also be used by the Fire & Gas Safety System (F&G) to properly isolate the enclosure during the activation of the fire suppression system.

The FireBus Model FB-4101Z Series of corrugated blade dampers are designed specifically for turbine package airflow shutoff during normal or emergency shutdown situations and feature a power to open / power to close electric actuator that interfaces to the F&G Safety System. This actuator arrangement is ideal for F&G Safety System service as it has a minimal impact on backup battery requirements using power only during its 10 second approximate travel time.

The FB-4101Z Damper assembly is manufactured from 316 stainless steel including press fit stainless steel bearings for the 1/2" (12.7 mm) diameter blade shafts which hold the 16 ga. blades on 6 in. (152 mm) centers.

The damper assemblies are designed for a 250°F (121°C) operating temperature and can handle approximately 2,000 ft/min airflow with a maximum pressure of 3" w.g.

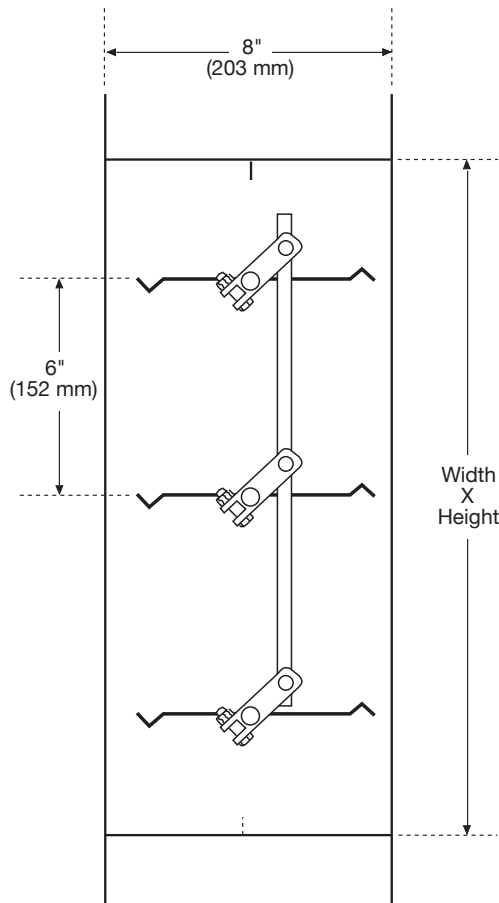
The FB-4101Z series of damper assemblies can be manufactured in a range of sizes and blade counts to allow their use on a variety of turbine enclosure inlet and outlet configurations.



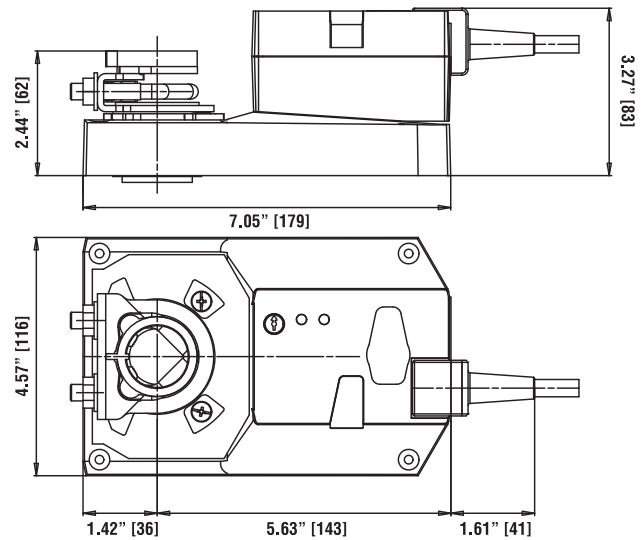
Key Features

- **Overlapping corrugated blade design for tight shutoff minimizes suppression agent leakage in the event of a fire.**
- **All 316 Stainless Steel design for corrosion resistance and durability.**
- **Available with Standard or Explosion-Proof electric actuators for use in either ordinary or hazardous locations.**
- **Utilizes a direct mount 24VDC powered actuator compatible with the Fire & Gas Safety System.**
- **Actuator uses a brushless DC motor with built in overload protection.**
- **Consistent travel times adjustable between 7 and 20 seconds easily fine tuned to the enclosure size and extinguishing agent flooding time.**
- **Power only used when damper is changing position and not during normal steady state operation.**
- **Limit switch for positive damper position feedback to the Fire & Gas Safety System.**

<p>Damper Assembly Model FB-4101Z</p> <p>ENVIRONMENTAL: Standard: NEMA 2, IP54</p> <p>Explosion-Proof: Class I, Division 1</p> <p>Temperature ranges: Damper mechanical assembly: 250°F (121°C)</p> <p>Actuator: -40°F (-40°C) to 176°F (+80°C) 5 to 95% RH non-condensing</p> <p>Approvals: UL Listed</p>	<p>ELECTRICAL</p> <p>Operating voltage: 24 VDC,</p> <p>Operating current: 24 VDC: 0.50 amps</p> <p>Standby current: 24 VDC: 0.06 amps</p> <p>Input impedance: 1000Ω</p> <p>Operating time: 7, 10, 15 or 20 Sec. Adjustable</p>	<p>MATERIALS:</p> <p>Damper Assembly Frame: 14 ga 316 SS</p> <p>Damper Assembly Blades: 16 ga 316 SS</p> <p>Blade Shaft Bearings: Stainless Steel</p> <p>Operating Linkages: 316 Stainless Steel</p>	<p>ACTUATOR ACCESSORIES: Weather Shield - SS</p> <p>Weather Shield - Polycarbonate</p> <p>NEMA 4X Housing</p> <p>Explosion-Proof Housing</p> <p>Auxilliary Switch</p> <p>Shaft mounted Auxiliary Switch.</p>
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Typical Multi-blade Damper Assembly



Actuator (excluding explosion-proof enclosure)

Ordering information:

Due to the variety sizes and custom nature of these damper assemblies, consult the factory for ordering information.