

## Introducing a New Expansion Joint Design for 501F/G Turbine Exhaust

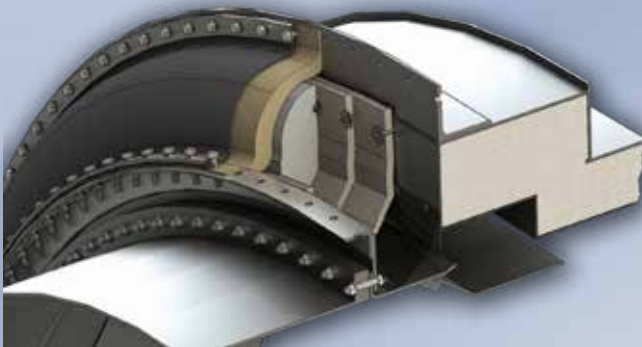
New Designs for 501F&G Turbines  
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With peaker plants more prevalent today, units are experiencing many more thermal cycles per year with higher operating temperatures. End users are demanding improved warranties with longer intervals between maintenance outages. One way to improve operational reliability and increased service life is to invest in expansion joints that are designed with breakthrough materials that extend the life of your 501F and 501G turbine exhaust unit.

### EagleBurgmann's new expansion joint design for 501F & 501G turbine users offer:

- Rugged construction that is mechanically more sound than previous designs; protective wire mesh in the inner and outer layers
- Insulation is compartmentalized in glass fabric; insulation and the glass fabric are quilted to prevent any shifting of the insulation material during cycling
- These glass fabric pockets fasten into the backing bars, but insulating materials do not. This improves clamping uniformity and greatly eliminates the likelihood of leakage
- Biosoluble insulating materials are safer for the personnel working in and around this equipment
- Firing temperatures can be raised to 1300 deg. F with no deterioration in expansion joint performance
- Better component materials extend the life of the expansion joint.



EagleBurgmann Expansion Joint Solutions has expanded our full warranty for this new design to three years on our scope of supply. Expected interval between maintenance cycles is significantly increased with this design.

Contact your local product specialist today to discuss a **FREE** inspection of your existing expansion joints by one of our factory trained, highly qualified field engineers to assist you with selecting the optimal solution for your system.

# Fabric Expansion Joint Technology

## 501F/G Combine-X Turbine Exhaust Expansion Joints

EagleBurgmann Research and Development has designed a 501F/G Combine-X Turbine Exhaust Expansion Joints for Siemens with the following features:

### Outer Layer:

- Rugged HF3 Construction is mechanically more sound than our previous design
- Protective wire mesh in the inner and outer layers

### Outer Bolster:

- Insulation is compartmentalized in KE-1400 glass fabric
- Insulation and glass fabric is QUILTED to prevent any shifting of the insulation material during cycling
- KE-1400 glass fabric pockets fasten into the backing bars, but insulating materials do not. This improves clamping uniformity and greatly eliminates the likelihood of leakage

### Large CF 250 Insulation Media Pocket:

- Encased in KE-1400 glass fabric and quilted to prevent insulation media shifting
- Increased density of the insulating media improves vibration dampening capability as well as noise attenuation.

### Gas Side Bolsters:

- Two gas side bolsters are pinned in place to precisely position these bolsters and anchor them to eliminate shifting in the insulation media.
- The Pinned bolsters stay aligned against the metal frame components to insure that the insulation returns to original shape after compression

### Wire Mesh – Two Layers:

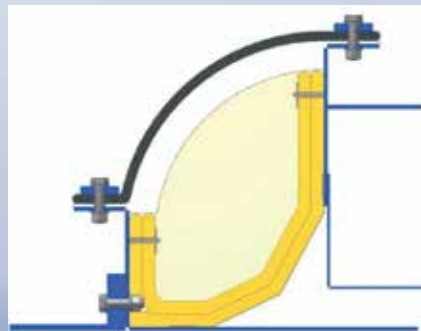
- The wire mesh contains the insulation and prevents it from extending into the gap between the sleeve and the frame. Damage to the insulation is prevented.
- The two layers of mesh are rugged enough to protect the fabric and insulation from flutter. Though quite rugged, they retain maximum flexibility during thermal expansion and contraction.

### Horizontal Mounted Flanges:

- Less Fiber Breakage at the downstream flange reduces the likelihood of premature failure
- Backing Bar Bolt Heads cannot impinge on the gas tight outer layer during compression; causing premature wear or failure. These flanges can be ordered with a vertical downstream flange to avoid frame modification expense.



Ex. 1: Fabric EJ with gas side bolster and horizontal mounted flanges.



Ex. 2: Fabric EJ with gas side bolster and horizontal mounted flanges.

### Benefits of the design:

- Better component materials extend the life of the expansion joint
- The warranty is three years on our scope of supply
- Expected interval between maintenance cycles is significantly expanded with the design
- Bio-Soluble Insulating materials are safer for the humans working in and around this equipment
- Firing Temperatures can be raised to 1300F with no deterioration in expansion joint performance

## All fabric expansion joints and Pen-Seals are 100% ceramic free.

EB EJ has delivered fabric gas turbine expansion joint units to Original Equipment Manufacturers since 1996. EB EJ is a proud supplier to Mitsubishi Heavy Industries, Ltd. (MHI), Siemens and Dongfang Electronics Co., Ltd. EB EJ is an awarded supplier to MHI.

### Experience with these turbines:

- UT 100
- V94.2
- V94.3
- V64.2
- V64.3
- SGT 100
- SGT 200
- SGT 400
- SGT 800
- M501-series
- M701-series
- Frame 7-series
- Frame 9-series
- LM 6000
- Alstom GT 24
- Alstom GT 26
- Alstom GT 13
- Alstom GT 11
- Typhoon
- Tornado
- Cyclone

### EagleBurgmann Expansion Joint Solutions comprehensive service includes:

- Evaluations and troubleshooting
- Initial dimensional measurements
- Pipe stress analysis
- Installation and refurbishment
- Supervision and training
- Onsite Repair – online and offline
- Emergency services
- Final Inspection
- Experienced Service Engineers
- Final Inspection and experience

### Service Engineers 24 hours hotline:

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