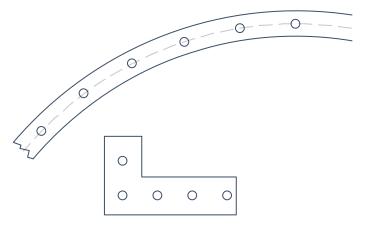
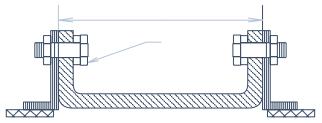
# **STYLE REJU, REJW AND REJV RUBBER DUCTING JOINTS**

Global-Flex Mfg. Style REJU expansion joints are elastomeric in both body and flange and are available in Neoprene, Hypalon, EPDM, Butyl, or flour-elastomer Viton. Thinner in overall gauge than pressure piping expansion joints to protect thin wall duct systems. Standard circular expansion joints have integral duck and rubber flanges, drilled to order. The rectangular style also incorporates rubber flanges, utilizing square corners and special drilling. "Continuous corners" eliminate splices through the body of the expansion joint near the corners. The inherent flexibility of rubber provides long service life even in applications of high vibration or flutter. Style "REJU", U-joint without arch, designed for normal ducting movements. Metallic backing rings or bars are required. Typical retaining bars are made of 3/8" x 2" A-36 chamfered or rounded edge bar stock. Tube & Cover Neoprene, EPDM, Hypalon, Butyl, or Viton Reinforcement Synthetic fiber reinforcement pressure range 3 PSIG to 5 PSIG depending on number of plies.







Tube & Cover: EPDM, Hypalon, Butyl, or Viton

Reinforcement: Synthetic fiber reinforcement Pressure Range: 3 PSIG to 5 PSIG (Depending on number of plies)

Accessories: Recommended Metallic retaining rings or bars

**Compression:** 2-1/4" to 5" (Depending on size)

Face-To-Face Dimension: 6", 9", 12", or 16"

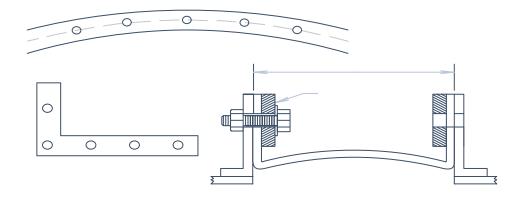
Temperature Rating: 250°F to 400°F (Depending on elastomer

**Global-Flex Mfg. Style REJW** expansion joints are elastomeric in both body and flange and are available in Neoprene, Hypalon, EPDM, Butyl, or flour-elastomer Viton. Thinner in overall gauge than pressure piping expansion joints to protect thin wall duct systems. Standard circular expansion joints have integral duck and rubber flanges, drilled to order. The rectangular style also incorporates rubber flanges, utilizing square corners and special drilling. "Continuous corners" eliminate splices through the body of the expansion joint near the corners. The inherent flexibility of rubber provides long service life even in applications of high vibration or flutter. Style "REJW", a rounded arch type joint, is designed for increased axial movement capabilities without pre-extension or compression metallic backing rings or bars are required. Typical retaining bars are made of 3/8" x 2" A-36 chamfered or rounded edge bar stock.

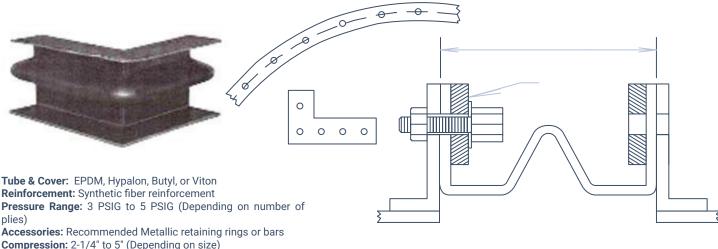


Tube & Cover: EPDM, Hypalon, Butyl, or Viton Reinforcement: Synthetic fiber reinforcement Pressure Range: 3 PSIG to 5 PSIG (Depending on number of plies)

Accessories: Recommended Metallic retaining rings or bars Compression: 2-1/4" to 5" (Depending on size) Face-To-Face Dimension: 6", 9", 12", or 16" Temperature Rating: 250°F to 400°F (Depending on elastomer



**Global-Flex Mfg. Style REJV** expansion joints are elastomeric in both body and flange and are available in Neoprene, Hypalon, EPDM, Butyl, or flour-elastomer Viton. Thinner in overall gauge than pressure piping expansion joints to protect thin wall duct systems. Standard circular expansion joints have integral duck and rubber flanges, drilled to order. The rectangular style also incorporates rubber flanges, utilizing square corners and special drilling. "Continuous corners" eliminate splices through the body of the expansion joint near the corners. The inherent flexibility of rubber provides long service life even in applications of high vibration or flutter. Style "REJV", a sharp arch type joint, is designed for large movement capabilities without pre-extension or compression. Metallic backing rings or bars are required. Typical retaining bars are made of 3/8" x 2" A-36 chamfered or rounded edge bar stock.



Face-To-Face Dimension: 6", 9", 12", or 16"

Temperature Rating: 250°F to 400°F (Depending on elastomer

# **STYLE-GFTC FLU-DUCT EXPANSION JOINTS**

**GFTC Expansion Joints** are Non-Metallic Flue Duct Expansion Joints or flexible connectors, which when properly designed, provide stress relief for piping and ducting systems by absorbing thermal growth & shock, isolating mechanical vibration and allowing for misalignments.

Flue duct expansion joints are custom engineered products designed to handle low-pressure ( $\pm$ 5 PSIG) applications with temperatures from -100 F to +2000 deg. F. The expansion joints are manufactured using innovative non-metallic materials and designs.



# **INDUSTRIES AND APPLICATIONS**

#### **POWER GENERATION:**

Fossil Fired Plants Combined Cycle Plants Industrial Gas Turbines CF Bs (Fluidized Bed Boilers) Nuclear Plants

#### **PULP & PAPER PLANTS:**

Chemical Applications Paper Processing Power and Recovery Boilers Fans/Blowers

#### **PETROCHEMICAL:**

By product Incineration. Elevated Temperatures (2,000 degrees F) Severe Chemical Attack Refineries

### **ENVIRONMENTAL APPLICATIONS**

SCR & Nox Systems Waste Water Treatment Plants Waste & Recycling Incinerators Stack & Chimney Seals CEMs

#### **HEAVY INDUSTRIAL:**

Foundries Steel Mills Cement Plants Aluminum Plants Kilns & Smelters

OTHERS:

HVAC Marine Food Processing HRSG / Co-generation Chemical Processing

# DESIGN ADVANTAGES OF NON-METALLIC DUCTING EXPANSION JOINTS

- 1. Large movement capability I Multi-plane movements.
- 2. Corrosion I Chemical Resistance
- 3. Range of Design Temperature Capability(-110 F to +2000 F)
- 4. Negligible Spring Rates / Loads

- 5. Vibration Dampening & Sound Attenuation
- 6. Lower Overall Costs (Design, Installation, Replacement & Repair)
- 7. Easily Repairable / Installable
- 8. High Cycle Life
- 9. Unique Application Solutions

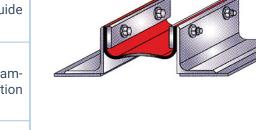
#### **APPLICATIONS**

Industrial applications can be separated into general categories based on the media composition (Air or Gas) and temperature. The following section is designed to aid in the selection of the appropriate expansion joint for the specific application range. All plants are different, therefore the service locations and temperatures may vary, This section is only a guide and should be confirmed with a Global-Flex Engineer.

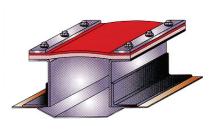
#### AMBIENT AIR SERVICES (-40 degrees F to 150 degrees F)

Ambient temperature clean air without particulate or chemicals to damage the flexible element. Expansion Joint is used frequently for vibration and sound attenuation from fan equipment.

**LOCATIONS:** FD Fan Inlet/Outlet Service Air Intakes Primary Air Fan to Air Heater Primary Air to Recovery Boiler



An integrally flanged elastomeric joint is suggested. Either Neoprene or EPDM single layer belts are frequently used.



**AMBIENT AIR SERVICES** (500 degrees F to 800 degrees F)] Clean air after coming in contact with hot flue gases at the Air Pre-Heat-

er where temperatures are elevated with minimal particulate and/or gas carryover. Expansion joint will see thermal movements and vibration. Elevated temperatures require a composite flexible element and a flow liner.

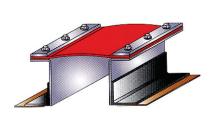
LOCATIONS: Air Heater Air Outlet Over Fire Air Fans Secondary Air Fan Mill Air

A flat composite belt with a bolt or weld-in frame design and flow liner is suggested. The weld-in outboard angle frame design with field welded flow liner is shown.

### LOW TO MODERATE TEMPERATURE FLUE GAS

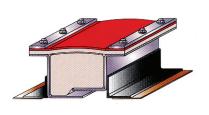
#### SERVICES (150 degree F to 600 degree F)

Flue gas which has passed through an air pre-heater and dust collector to reduce the temperature and particulate levels. Flue gas may cycle near the dew point where condensation can occur and chemicals are present. Expansion joint may see thermal movements, vibration, and chemical attack.



LOCATIONS: Precip. Outlet Scrubber Inlet / Outlet Re-heater I D Fan Inlet/Outlet HRSG Outlet Inlet/Outlet

A single layer belt with chemical barrier is suggested in either integrally flanged or flat belt type. Such as the weld-in outboard angle frame design and Teflon® coated single layer belt with gas film shown.



**HOT FLUE GAS SERVICES** (600 Degree F to 1200 Degree F) Flue gas directly after combustion stage at elevated temperatures with possible particulate present. Expansion Joint is used for possible large thermal movements at elevated temperatures.

LOCATIONS: Economizer Outlet Cyclone Inlet! Outlet Precip Inlet

Recovery Boiler Outlet Air Heater Gas Inlet/Outlet Gas Re-circulation System

High temperature composite flat belt style with setback frames, cavity pillow and flow liners is suggested. The standard "Z" frame design with telescoping flow liners or "J" frame design with shop liner are two designs frequently used in these applications.