Global-Flex Mfg.
1580 Charles Drive Redding, CA 96003

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

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APPLICATIONS

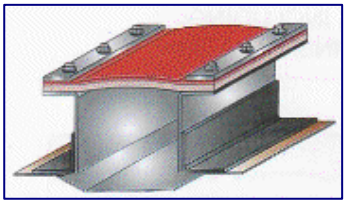
Industrial applications can be separated into general categories based on the media composition (Air or Gas) and temperature. The following section is designed to aid in the selection of the appropriate expansion joint for the specific application range. All plants are different, therefore the service locations and temperatures may var., 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



HOT AIR SERVICES (500 degrees F to 800 degrees F)

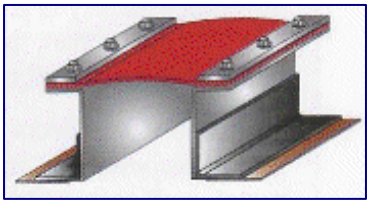
Clean air after coming in contact with hot flue gases at the Air Pre-Heater where temperatures are elevated with minimal particulate and/or gas carryover. Expansion joint will see thermal movements and vibration. Elevated temperatures require a composite flexible element and a flow liner.

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.

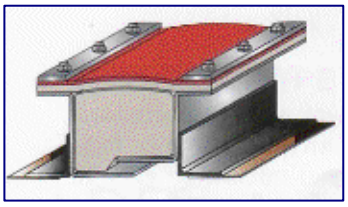
LOW TO MODERATE TEMPERATURE FLUE GAS SERVICES (150 degree F to 600 degree F)

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 I D Fan Inlet/Outlet	Scrubber Inlet / Outlet HRSG Outlet	Re-heater 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