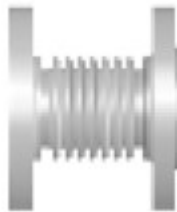




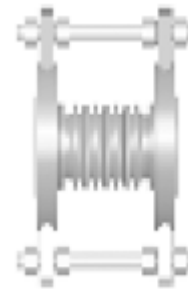
## Expansion Joint Options

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**US** - Unrestrained Single



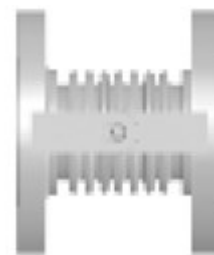
**TS** - Tied Single



**HS** - Hinged Single



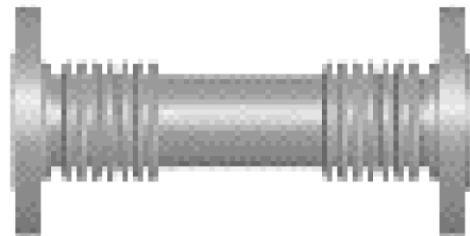
**SHS** - Slotted Hinged Single



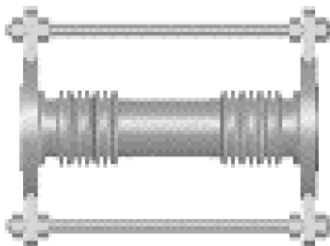
**GS** - Gimbaled Single



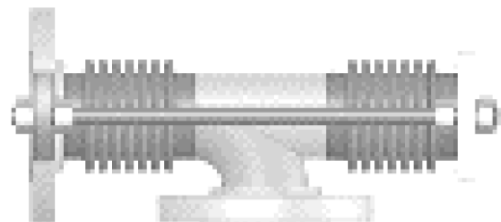
**UU** - Unrestrained Universal



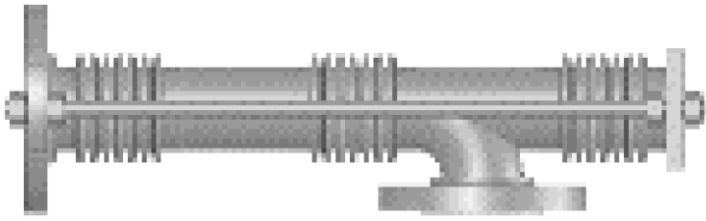
**TU** - Tied Universal



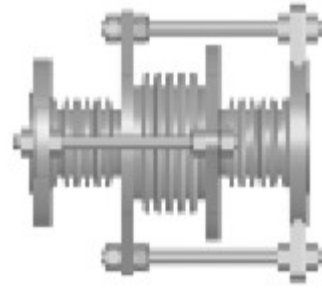
**PBS** - Pressure-Balanced, Elbow, Single



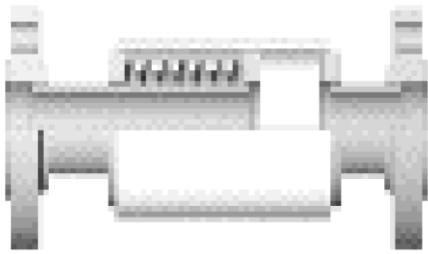
**PBU** – Pressure-Balanced, Elbow, Universal



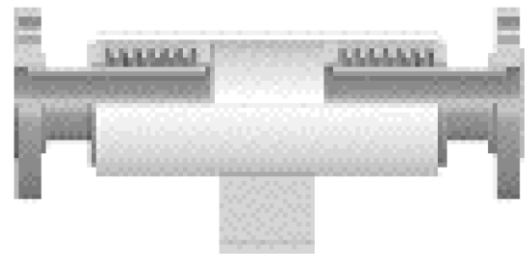
**PBI** – Pressure-Balanced In-Line



**EPS** – Externally-Pressurized Single



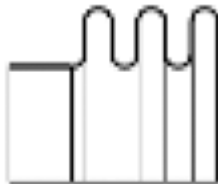
**EPD** – Externally-Pressurized Dual



## End Connections

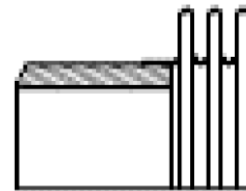
### **BB – Banded Bellows**

Ideal for slipping over pipe and welding in place.



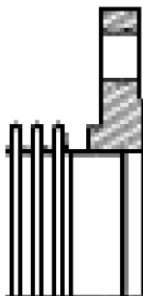
### **WE – Welded End**

Beveled to facilitate pipe-to-pipe welding. Most common end connection.



### **FF – Fixed Flange**

Recommended for ease of replacement. Requires accurate flange hole alignment.



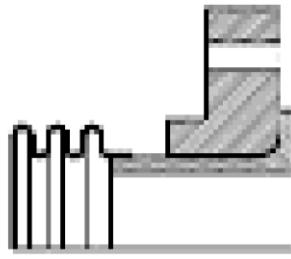
### **VF – Vanstone Flange**

Economical solution for piping systems with misaligned bolt holes.



### **LJ – Lap-Joint Flange**

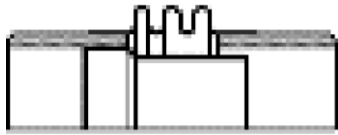
Commonly used when Vanstone flanges are not an option.



## Internal Liners

### SW – Single Welded Liner

Most common type of internal liner.  
Maximum durability.



### TW – Telescoping Welded Liner

For large axial movements.



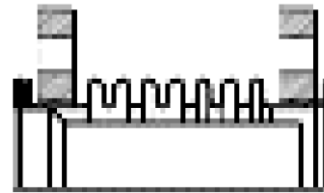
### FW – Flush Welded Liner

No protrusion into flow-stream. Minimal  
pressure drop. Recommended for refractory-  
lined pipe.



### SD – Single Drop-in Liner

Can be removed and cleaned.



### TD – Telescoping Drop-in Liner

For large axial movements. Can be removed and cleaned.

