

Non-Metallic Expansion Joint

2. Type of Non-Metallic Expansion Joint















1. Single-Layer Expansion Joints

A single-layer expansion joint is made of a single layer of material only. Depending upon the area of application, the layer is made from fabric, various (fluoro) elastomers or fluoropolymers accompanied by fabric reinforcement as composite materials. Single-layer expansion joints provide the tightness and chemical resistance necessary when exposed to heavy condensate.

Pre-Assembled Units

Usage of fabric expansion joints that are pre-assembled onto steel components offers a number of advantages:

- All pre-assembling work is completed in Yongkwang's state-of-the-art facility
- Installing unit into the duct is quick and easy
- Transport brackets secure the unit into place during the transport and installation process
- Larger units are transported in sections and are welded on-site for easier handling, transportation and installation
- Clamping bar, belt and gasket assembly is done by factory-trained technicians which provides maximum pressure sealing capacity
- Final assembly quality inspections (ISO 9000) insure maximum durability and performance

Model	Composition	Application Conditions
SLE-300 NORMAL 6mm	 EPDM  FG FABRIC  EPDM  FG FABRIC  EPDM	1. Continuous operation at 300°F(149°C) 2. Pressure of 2108 mmW.G 3. Wet/Dry flue gas
SLV-400 NORMAL 5mm	 FKM  FG FABRIC  FKM  FG FABRIC  FKM	1. Continuous operation at 400°F(205°C) 2. Pressure of 2108 mmW.G 3. Wet/Dry flue gas 4. Exterior insulting allowed
SLT-600 NORMAL 1.2mm	 PTFE COAT  FG FABRIC  PTFE COAT  FG FABRIC	1. Continuous operation at 600°F(316°C) 2. Pressure of 3505 mmW.G 3. Wet/Dry flue gas 4. Exterior insulting allowed

2. Multi-Layer Expansion Joints






























The design of multi-layer expansion joints consists of four groups of materials. By combining different materials and considering their thermal, chemical, mechanical resistance, in addition to their fatigue properties, we can construct an expansion joint that provides the best solution in both technical and economical respects.

The four essential materials in the construction of fabric expansion joints include:

- Outer covering material: This material ensures stability and provides protection to the expansion joint from pressure and temperature. Typically, this outer covering material is coated or laminated and can serve as a gas sealing barrier. Specially-designed fabric expansion joints may be constructed with stainless steel wire mesh and steel bands to provide additional mechanical protection and dimensional stability.
- Gas sealing foil: This is the sealing element typically embedded between the layers of fabric or integrated throughout the outer cover. This element is impermeable and chemically resistant.
- Insulating materials: These materials are utilized for the protection of both the gas sealing foil and other materials from effects of high temperatures.
- Temperature-resistant fabrics: These types of fabrics are extremely strong and temperature resistant and are utilized for the protection of the gas sealing foil or insulation materials.
- Insulating materials: These materials are utilized for the protection of both the gas sealing foil and other materials from effects of high temperatures.
- Temperature-resistant fabrics: These types of fabrics are extremely strong and temperature resistant and are utilized for the protection of the gas sealing foil or insulation materials.

Important variables to consider when deciding the design and type of expansion joint needed:

- Medium: The type of expansion joint needed is largely determined by possible chemical influences. Effects of abrasion from solid matter are largely preventable through the use of sleeve/baffle construction.
- Temperature: Reducing temperature effects on an expansion joint require a specific number of insulating materials. Our experts determine this through calculation of temperatures in a complete expansion joint. The temperature range depends upon the expansion joint design.
- Pressure: Determining whether the expansion joint will be used in a positive pressure or negative pressure area will have a great influence on the type and design selected.
- Tightness (sealing): Tightness requirements ultimately influence the design and configuration of the expansion joint's flange area.

Model	Composition	Application Conditions
MLE-500 NORMAL 18mm	 EPDM/REINFORCED(3.2mm)  INSULATION(12mm)  TEFLON(0.125mm)  FG FABRIC(0.8mm)	1. Continuous operation at 500°F (260°C) 2. Pressure of 1397mm W.G 3. Dry chemical gas
MLS-600 NORMAL 17mm	 SILICONE/REINFORCED(1.0mm)  FG FABRIC(0.8mm)  INSULATION(12mm)  TEFLON(0.125mm)  FG FABRIC(0.8mm)	1. Continuous operation at 600°F (315°C) 2. Pressure of 1397mm W.G 3. Dry hot air 4. Non-corrosive
MLT-800 NORMAL 17.5mm	 TEX-FILM(0.86mm)  FG FABRIC(0.8mm)  TEFLON(0.125mm)  FG FABRIC(0.8mm)  INSULATION(12mm)  FG FABRIC(0.8mm)	1. Continuous operation at 800°F (425°C) 2. Pressure of 1397mm W.G 3. Dry flue gas / Chemical gas 4. Corrosive
MLT-1000 NORMAL 31mm	 TEX-FILM(0.86mm)  FG FABRIC(0.8mm)  TEFLON(0.125mm)  FG FABRIC(0.8mm)  INSULATION(25mm)  FG FABRIC(0.8mm)  FG FABRIC(0.8mm)	1. Continuous operation at 1000 1000°F (540°C) 2. Pressure of 1397mm W.G 3. Dry flue gas / Chemical gas 4. Corrosive
MLT-1200 NORMAL 33mm	 TEX-FILM(0.86mm)  FG FABRIC(0.8mm)  TEFLON(0.125mm)  FG FABRIC(0.8mm)  CERAMIC INSULATION(25mm)  CERAMIC FAB(1.6mm)  CERAMIC FAB(1.6mm)	1. Continuous operation at 1200 1200°F (650°C) 2. Pressure of 1397mm W.G 3. Dry flue gas / Chemical gas 4. Corrosive