



EXPANSION JOINTS

A key component of any turbine system is the expansion joint. Expansion Joints have been installed on Gas Turbine Intake and exhaust ducts since they were first introduced for Power Generation applications. Expansion Joints are required to isolate the delicately balanced turbine from the stresses induced by thermal movements and vibration within the duct system. With the increased demand of more efficient turbine systems and increased emphasis on workplace safety, the importance of quality expansion joints in those systems is vital.

Expansion joints can be found on the intake and exhaust side of turbine systems and are created from various materials such as rubber, fabric, stainless steel mesh, silicone, and others depending on the needs of a particular system and its environment. The exact location of the expansion joint also varies within the intake and exhaust systems based on the needs and safety requirements of an individual turbine system. The most important needs of a turbine system is noise/vibration reduction and thermal stress. Some other Concerns that need to be worried about are the issues that come from multi directional movement as well as thermal expansion.

Expansion joints can be manufactured with precut flanges and bolting patterns for existing and newly manufactured turbine systems for easy onsite assembly. When a new system is being built the expansion joint will typically be manufactured simultaneously. Even with the fabrication of the new expansion joint with each new system the movement and in some cases Heat exposure that an expansion joint goes through they are typically Replaced more often than an entire system.

