

INS and OUTS OF VIBRATION

Vibration is one of the most destructive elements in industrial environments and mechanical systems. Attention and consideration given to vibration emitted and transmitted from mechanical equipment onto components and piping systems is often times an afterthought or not included at all. Vibration will shorten the life of industrial systems and equipment, causing it to become a maintenance issue earlier than necessary.

Often unmitigated vibration will cause: equipment, system and components to fail, bolts will loosen and work their way out, disruption of smaller and more sensitive pieces of equipment, inefficient operation of the machine, pipe fittings and welds will leak. The monetary and time cost of these potential impacts can be as small as retightening a bolt to complete system or equipment failure.

Major Equipment Vibration Isolation

Skid Packages	Boilers	Chillers	Compressors
Condensers	Fan Coils	Heat Pumps	Pumps
Furnaces	Heat Exchangers	Return and Supply	Cooling Towers
Generators	Piping System	Air Handlers	Industrial Dryers
Blowers	Tanks (storage and transfer)	Digesters	Loading and Unloading

The only way to inhibit and stop the destructive nature of vibration and (vibration induced noise) is to isolate the vibration. All paths must be isolated; vibration will take the path of least resistance. Typically, in the immediate proximity or directly off the equipment is the proper area to isolate the vibration. TCH has two product lines with multiple configurations that are designed to isolate vibration, metal hose assemblies and rubber expansion joints.

Metal hose assemblies are an excellent choice for vibration isolation, dampening and stopping vibration transmission from equipment onto the system. Metal hose assemblies also have outstanding temperature resistance up to 1500 F and elevated pressure capabilities up to 1,000 WPSI. Metal hose assemblies have a service life that outlasts all other vibration isolation products in the market and require no maintenance but should be included in routine system maintenance checks. Metal hose assemblies are available in a wide variety of configurations to suit your system and equipment requirements.



Rubber Expansion joints assemblies are another excellent choice for vibration isolation, dampening and eliminating of vibration transmission from equipment onto the system. Rubber expansion joints also have a maximum temperature rating up to 250 F and pressure capabilities up to 250 WPSI. Rubber expansion joints have a service life that is limited based on service conditions, typically 2-7 years similar and must be included in routine system maintenance checks. Available in a wide variety of elastomers to suit your system and equipment requirements.

Vibration isolation products from metal hose to rubber expansion joints are very inexpensive when compared to the cost of unchecked and overlooked unmitigated vibration damage caused to equipment, components, system and building.



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