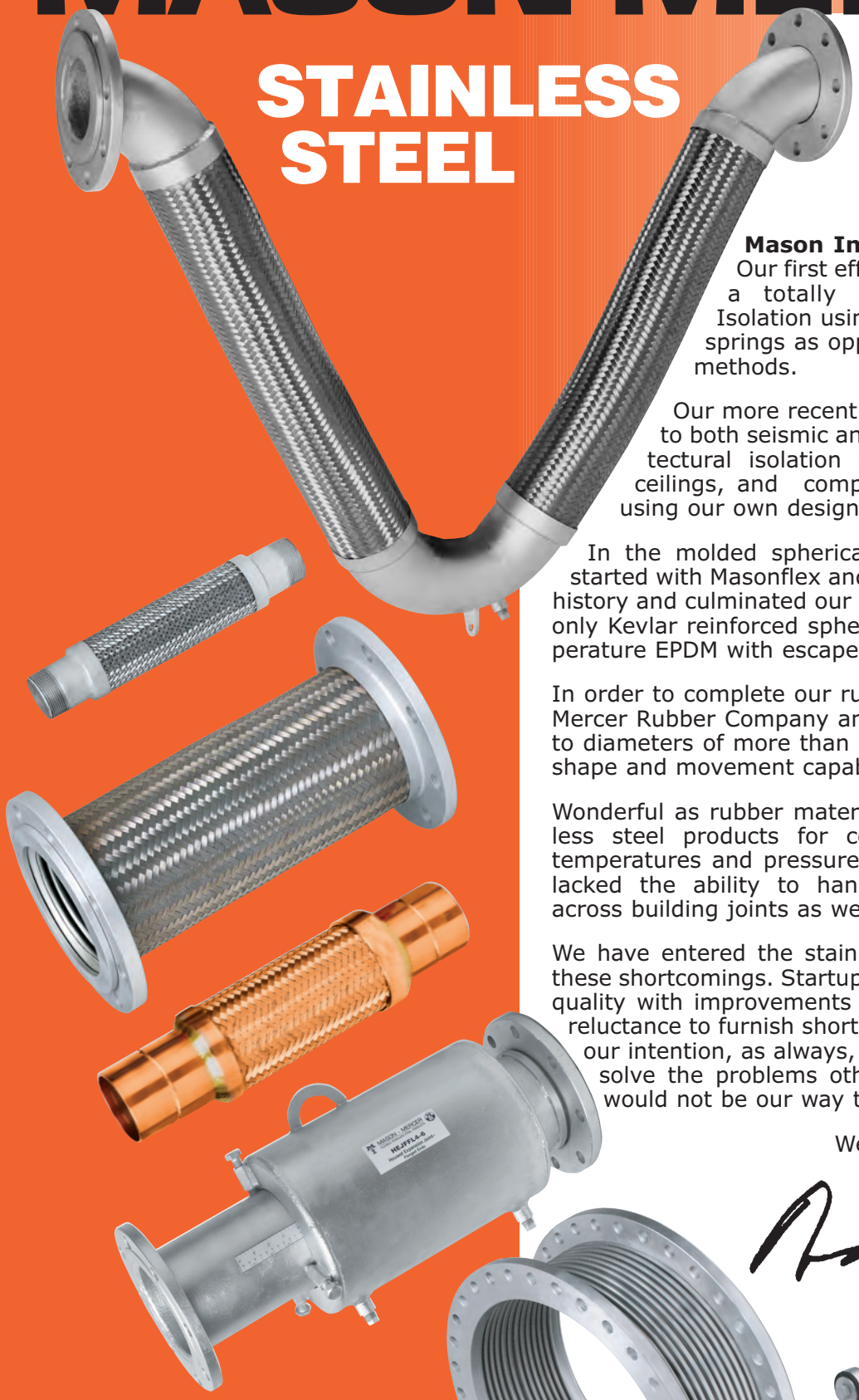
MASON-MERCER

STAINLESS STEEL



INTRODUCING MASON STAINLESS STEEL FLEXIBLE HOSE AND EXPANSION JOINTS

Mason Industries was started in 1958. Our first effort went toward the creation of a totally new approach to Vibration Isolation using high deflection free standing springs as opposed to traditional inadequate methods.

Our more recent work includes new approaches to both seismic and bomb blast protection, architectural isolation for floating floors, walls and ceilings, and complete building isolation, always using our own designs or new methods.

In the molded spherical rubber expansion world we started with Masonflex and Superflex that have a 35 year history and culminated our development with Safeflex, the only Kevlar reinforced spherical joint molded in high temperature EPDM with escape proof flanges.

In order to complete our rubber offering, we acquired the Mercer Rubber Company and increased our size capability to diameters of more than 12 feet with virtually unlimited shape and movement capability.

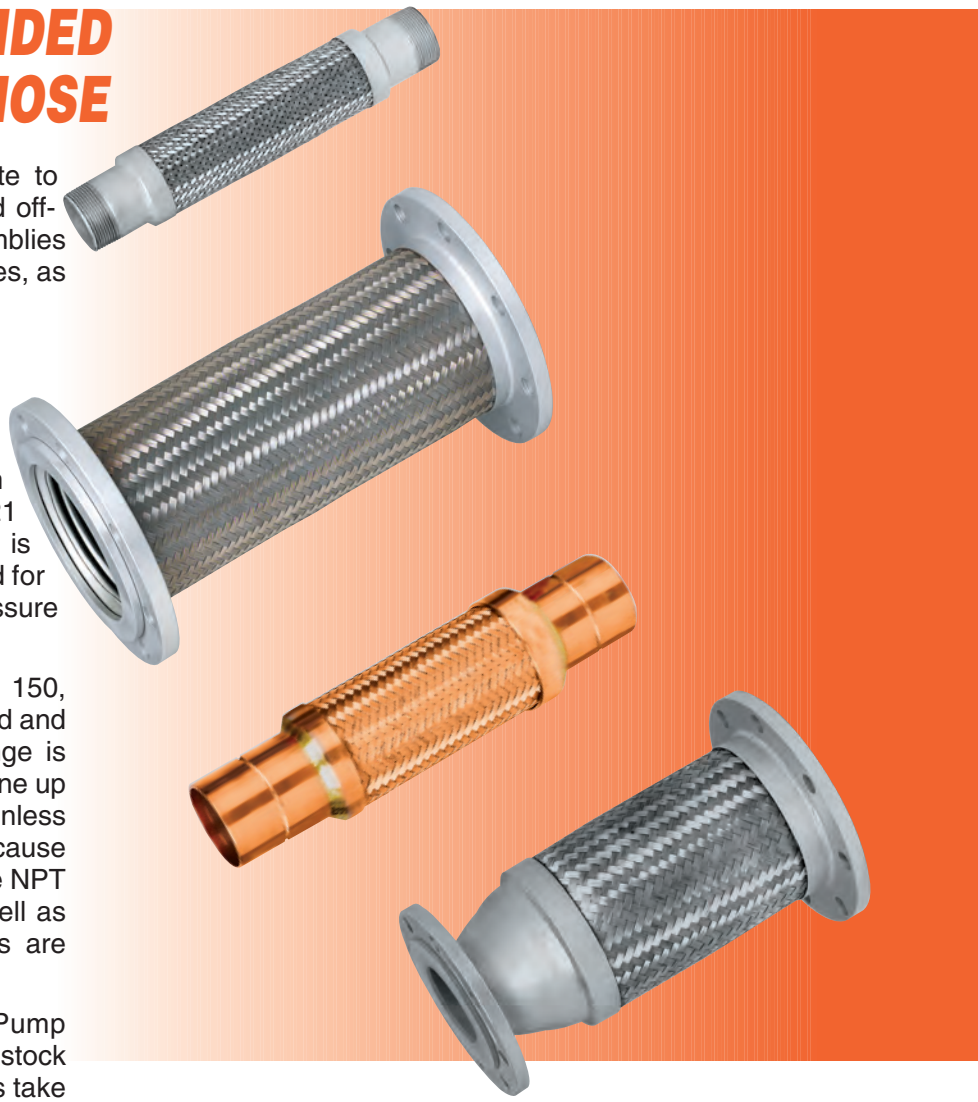
Wonderful as rubber materials are, we still needed stainless steel products for corrosive fluids and gases or temperatures and pressures out of the rubber range. We lacked the ability to handle extreme seismic motions across building joints as well.

We have entered the stainless steel market to overcome these shortcomings. Startup includes basic products of high quality with improvements such as floating flanges and a reluctance to furnish short, cheap ineffective lengths. It is our intention, as always, to build on this base and try to solve the problems other people walk away from. It would not be our way to do it any differently.

Welcome aboard.



STAINLESS STEEL BRAIDED ANNULAR FLEXIBLE HOSE



Stainless Steel Flexible Connectors contribute to the solution of vibration, noise, expansion and off-set motion problems in piping systems. Assemblies are designed for both high and low temperatures, as well as high pressure and full vacuum.

Stock sizes include 1/2" (13mm) through 16" (400mm) pipe diameter. Temperature ranges are from below 0°F (-18°C) to 850°F (454°C) when using our standard 304 stainless steel. On rare occasions, when temperatures as high as 1500°F (816°C) are needed, Type 316 or 321 are available too. Most standard construction is single braided, but we can provide double braid for higher pressures or omit the braid for low pressure venting or exhaust applications.

Standard end fittings include a fixed ASA 150, carbon steel raised face plate flange on one end and a floating flange on the other. A floating flange is very important as twisting full strength pipe to line up bolt holes is not an issue, but torquing a stainless hose to make up for poor alignment can cause immediate or early failure. Other fittings include NPT Carbon Steel Nipples or Grooved Ends, as well as any combination. Metric threads and drillings are available for export applications.

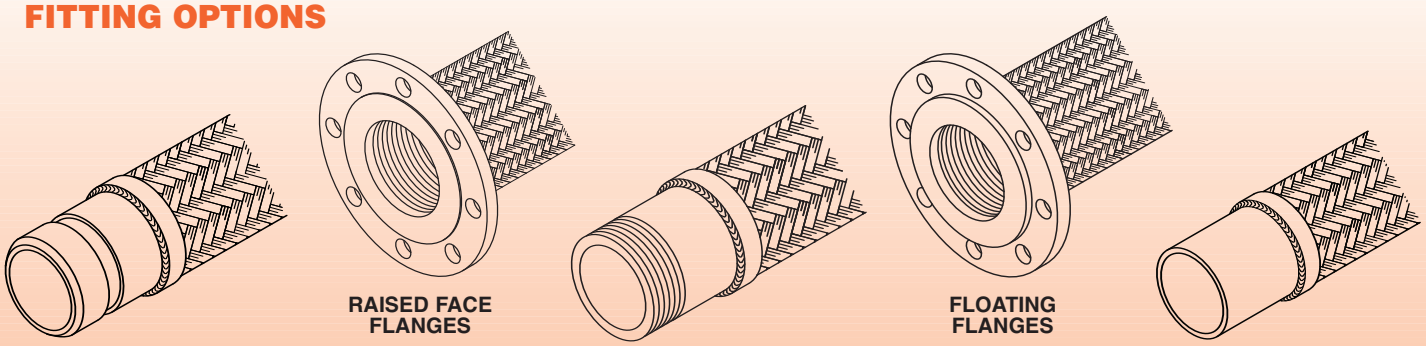
Stock lengths vary from the minimum "Pump Connectors" to as many as three additional stock lengths for greater movements. Special lengths take a little longer.

Commercial pricing pressure forces us to include the very short Nippled or Flanged Pump Connectors that range from 1/2" x 6 1/2" (13 x 165mm) thru 16" x 16" (400 x 400mm). These very short lengths are a travesty with a barely functional length of flexible hose connecting 2 long nipples. They have been shortened year after year from the old standards until no one dares make them shorter. We sell them when specified but recommend our longer lengths at a minor addition in cost, but a tremendous improvement in performance.

In addition to the equal ended flexible connectors, we also manufacture concentric reducers that act as a flexible transition piece between different sizes of piping, particularly at pump suction and discharge. They are usually used with an ASA 150 Carbon Raised Face Steel Plate Flange on one end and a Floating Flange on the other. Other configurations are available as well.

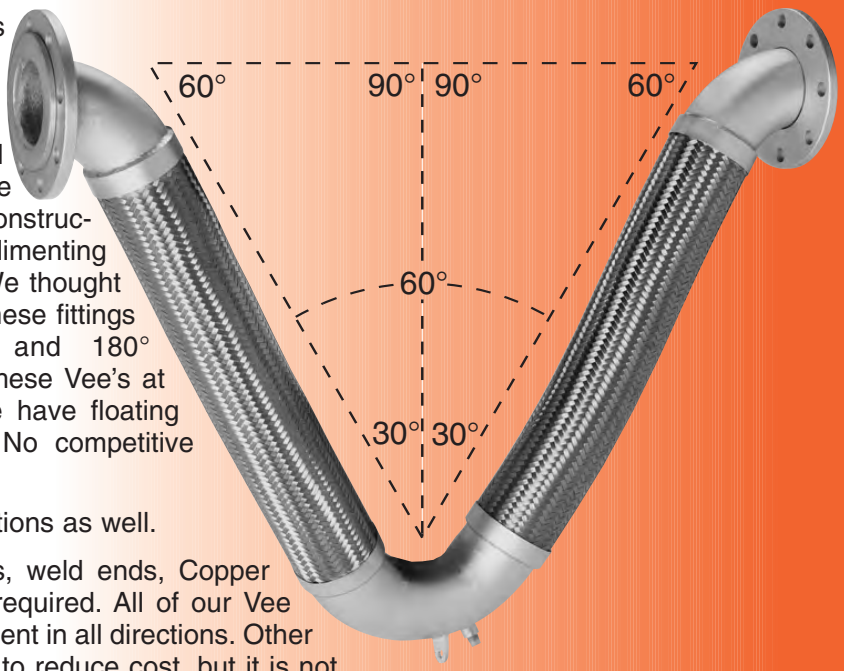
To complete this flexible connector offering, we stock bronze braided hoses with copper female ends for sweating into copper piping systems and the usual copper ended Freon connectors.

FITTING OPTIONS



SEISMIC "Vee" ASSEMBLIES

Many buildings are separated by expansion joints through the walls and floors. During an earthquake, the two adjacent parts resonate with relative motion of as much as ± 4" (100mm) in shear as well as toward and away from one another. Vertical motion is minimal. We have developed a unique product to handle this seismic motion. Our Vee construction is based on two 30, 60, 90 triangles complimenting one another to form a 60° "Vee" at the bottom. We thought the concept so interesting that we tooled up for these fittings rather than use the common 45°, 90° and 180° configurations. Since it may be necessary to fit these Vee's at odd angles, depending on space conditions, we have floating ASA 150 carbon steel flanges on both ends. No competitive product can be rotated this way.



Vee's are often used in simple expansion applications as well.

Other fittings include Carbon Steel NPT Nipples, weld ends, Copper Female Sweat Couplings or Grooved Ends, as required. All of our Vee assemblies are designed for ± 4" (100mm) movement in all directions. Other manufacturers offer ± 2" (50mm) designs as well to reduce cost, but it is not worth the risk of misapplication.



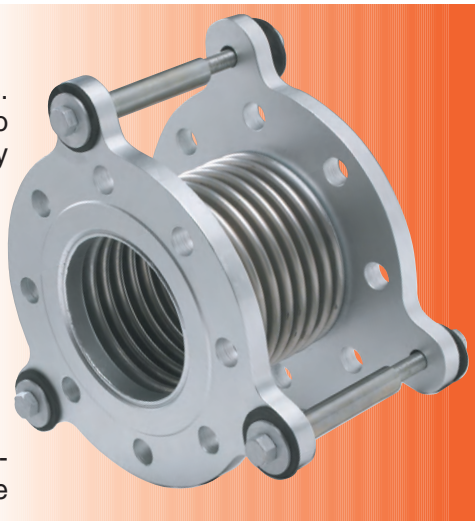
LARGE DIAMETER SPECIAL ORDER EXPANSION JOINTS

Many expansion joints are custom manufactured to diameters as large as 8 feet (2.4m). The construction varies, depending on the operating pressure and the required movements. We can provide these unusual constructions in virtually every configuration. We can build to your specific product description or complete our own recommendations based on your movement and pressure requirements. There are too many variations for any company to have a meaningful inventory, so they are always built to order.

Please let us have your inquiries.

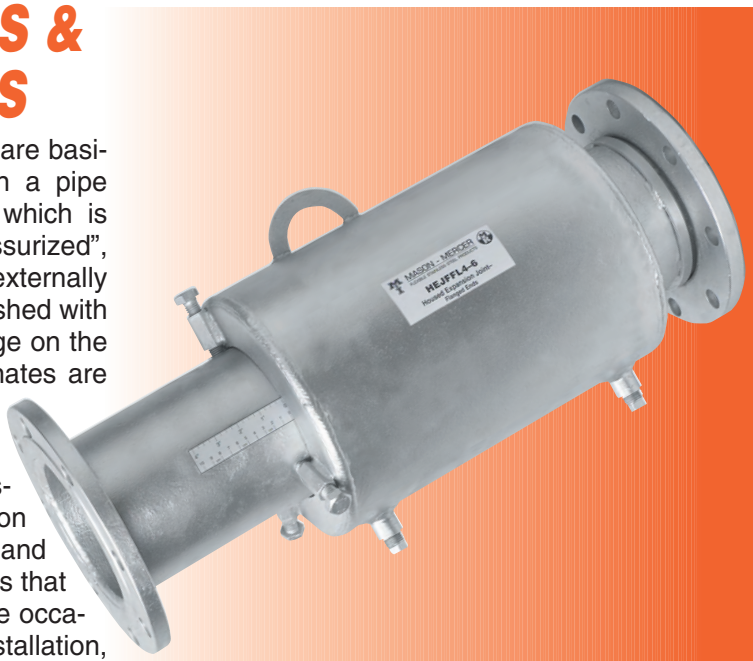
BELLOWS PUMP CONNECTORS

All bellows differ from Stainless Steel Hose in the corrugation configurations. Bellows are deeper and wider, and they are made of heavier material, to handle the pressures without braid. A very common location for our 2 ply Bellows is at the pumps. The face to face dimension is equal to the length of most Single Sphere Rubber Molded Expansion Joints. This product should be used when a combination of short length with greater movement capabilities along with the other benefits of stainless steel (high temperature and pressure) are required. If the equipment is solidly mounted, and there is an anchor somewhere in the line on the other side of the bellows, they will accept 1" (25mm) of compression and 3/8" (9mm) of elongation. Transverse movement varies between 1/8" (3mm) and 3/8"(9mm) , depending on diameter.



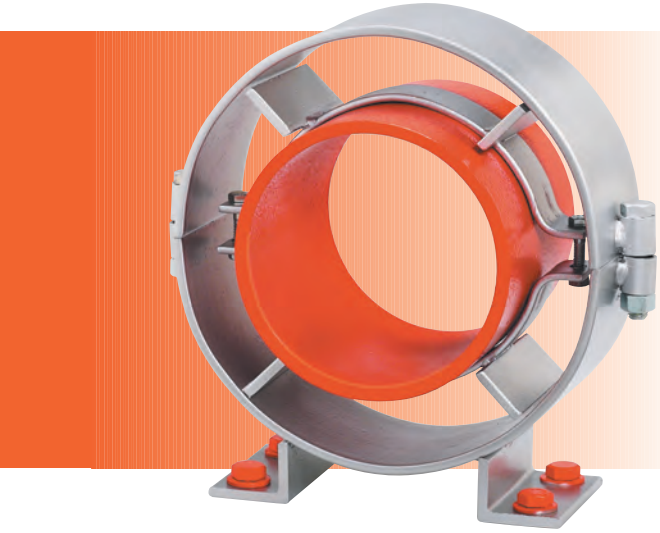
If no anchors are provided, the joint will always remain in the full open position against the rubber isolated control rods and only serve to reduce transverse misalignment.

EXPANSION COMPENSATORS & HOUSED EXPANSION JOINTS



Expansion Compensators and Housed Expansion Joints are basically a bellows that is protected by and guided within a pipe housing. While the industry offers two styles, one of which is referred to as “internally” and the other “externally pressurized”, they both serve the same function and we prefer the “externally pressurized” for improved bellows stability. They are furnished with a Fixed ASA150 Drilling Raised Face Carbon Steel Flange on the one end and a Floating Flange on the other. The alternates are Carbon Steel Threaded Nipples, Weld or Grooved Ends or Copper Female Sweat Ends as needed.

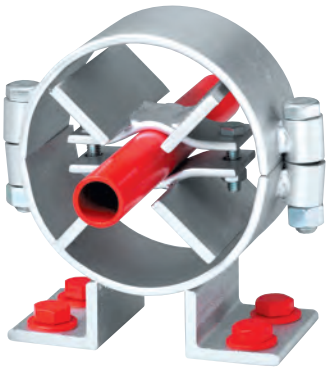
There are three movement choices: 2” (50mm) compression and 1/2” (13mm) extension, 4” (100mm) compression and 3/4” (19mm) extension or 8” (200mm) compression and 1 1/2” (38mm) extension. They are all designed for systems that will run hot and the slight extension is only there for those occasions when ambient temperatures are fairly high during installation, and the installation drops to some very low temperatures before they are put into hot water or steam service.



PIPE ALIGNMENT GUIDES

We carry a complete line of spider guides. We can manufacture Teflon Sliding Guides or any of the configurations used for this purpose.

Anchors are manufactured to order as well.



We hope you have found this introduction interesting. We have certification prints on all products, and will add to our catalog with specific bulletins in each category as quickly as possible.

We look forward to working with you, and are very receptive to any suggestions you might make, as you have in the past, to improve our offering and approach. It is great to work with you on these Stainless Steel Products along with all the other things we do together.

Please contact Representative.

If unstamped, contact home office.

MASON – MERCER

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