INSTALLATION INSTRUCTIONS
SPOOL TYPE ELASTOMER EXPANSION JOINTS

SERVICE CONDITIONS: Make sure the expansion joint ratings for temperature, pressure, vacuum, and movements match the system requirements. Check to make sure the elastomer selected is chemically compatible with the process fluid or gas.

ALIGNMENT: Expansion joints are normally not designed to compensate for piping misalignment errors. Piping should be lined up within 1/8". Misalignment reduces the rated movements of the expansion joint. Pipe guides should be installed to keep the pipe aligned and to prevent undue displacement.

ANCHORING: Proper anchoring (consult factory) is required wherever the pipeline changes direction, and expansion joints should be located as close as possible to anchor points. If piping is not adequately anchored, control units must be used to prevent excessive elongation and damage to the expansion joints and piping.

PIPE SUPPORT: Piping must be supported with proper pipe supports so expansion joints do not carry any pipe loads.

MATING FLANGES: Install the expansion joint against the mating pipe flanges and install bolts so that the bolt head and washer are against the retaining rings. If washers are not used, flange leakage can result – particularly at the split in the retaining rings. Flange-to-flange dimensions of the expansion joint must match the breech opening. Make sure the mating flanges are clean and flat-face type or no more than 1/16" raised-face type. Never install expansion joints that utilize split retaining rings next to wafer type check or butterfly valves. Serious damage can result to a rubber joint of this type unless installed against full face flanges.
Do not use lap joint flanges with these expansion joints.

TIGHTENING BOLTS: Tighten bolts in stages by alternating around the flange. If the joint has integral fabric and rubber flanges, the bolts should be tight enough to make the rubber flange O.D. bulge between the retaining rings and the mating flange. Torque bolts sufficiently to assure leak-free operation at hydrostatic test pressure. Bolt torquing values are: [1"-2": 20ft/lbs, 2.5"-5": 25ft/lbs, 6"-12": 35ft/lbs, 14"-18": 50ft/lbs, 20"-24" 60ft/lbs]

STORAGE: Ideal storage is a warehouse with a relatively dry, cool location. Store flange face down on a pallet or wooden platform. Do not store other heavy items on top of an expansion joint. Ten-year shelf life can be expected with ideal conditions. If storage must be outdoors joints should be placed on wooden platforms and should not be in contact with the ground. Cover with a tarpaulin.

LARGE JOINT HANDLING: Do not lift with ropes or bars through the bolt holes. If lifting through the bore, use padding or a saddle to distribute the weight. Make sure cables or forklift tines do not contact the rubber. Do not let expansion joints sit vertically on the edges of the flanges for any period of time.

ADDITIONAL TIPS:
A. Do not insulate over elastomer expansion joints at elevated temperatures.
B. It is acceptable (but not necessary) to lubricate the expansion joint flanges with a thin film of graphite dispersed in glycerin or water to ease disassembly at a later time.
C. Do not weld in the near vicinity of an elastomer joint.
D. If expansion joints are to be installed underground or will be submerged in water, contact manufacturer for specific recommendations.
E. If the elastomer joint will be installed outdoors, make sure the cover material will withstand ozone, sunlight, etc. Materials painted with weather-resistant paint will give additional ozone and sunlight protection.
F. Check the tightness of leak-free flanges two or three days after installation & periodically thereafter. Re-tighten if necessary.

WARNING: Expansion joints may operate in pipelines or equipment carrying fluids and/or gases at elevated temperatures and pressures, and may transport hazardous materials. Precautions should be taken to protect personnel in the event of leakage or splash. Rubber joints should not be installed in inaccessible areas where inspection is impossible. Make sure proper drainage is available in the event of leakage when operating personnel are not available.