

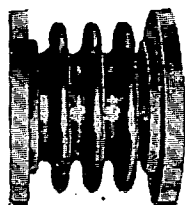
Badger Manufacturing Company

230 Bent St., Cambridge 41, Mass. • 60 East 42nd St., New York 17, N. Y.

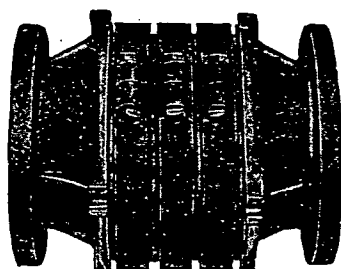
Representatives in principal cities
Also in Canada and Mexico

"BADGER PACKLESS CORRUGATED EXPANSION JOINTS"

To compensate for thermal expansion and contraction in pipe lines carrying hot gases or fluids; also used to absorb vibrations. Hinged, Tandem, and Balanced Expansion Joints are available for complex piping problems where forces are critical.



Badger Non-Equalizing Expansion Joint, Multiple Corrugation. Single corrugation type available. Wide range of sizes.



Badger Self-Equalizing Expansion Joint, Directed Flexing Type. Wide range of sizes and traverses available.

INSTALLATION, OPERATING, MAINTENANCE FEATURES

Packless—Each Badger Packless Expansion Joint is formed from a single tube hence, no packing is needed etc.

Engineered Relationship—Between diameter of joint, depth of corrugation and allowable traverse.

Heat Treatment—Successive heat treating operations during manufacture removes forming stresses and increases life.

Wide Pressure Range—Standard joints for pressures up to 300 psig.

Wide Temperature Range—Standard joints for temperatures up to 900 F.

Wide Traverse Range—In standard in-

crements up to 7½ in. for single joints; up to 15¼ in. for double joints.

Connections—Flanged or welding ends available.

Materials—Standard joints fabricated from stainless steel or copper.

Compact, Easy to Install—Outside diameters of all Badger Expansion Joints are approximately the same as standard pipe flanges; joints are as easily installed in the line as any fitting.

Special Designs—Our Engineering Department will be pleased to consult with you regarding applications involving large sizes, special alloys, or abnormal operating conditions.

Flexonics Corporation

EXPANSION JOINT DIVISION

1329 S. Third Ave.

Maywood, Illinois

DISTRICT OFFICES

ATLANTA BOSTON BUFFALO CINCINNATI CLEVELAND DETROIT FT. WORTH KANSAS CITY
LOS ANGELES MEMPHIS MILWAUKEE NEW YORK PHILADELPHIA SAN FRANCISCO
IN CANADA: FLEXONICS CORPORATION OF CANADA, LTD., BRAMPTON, ONTARIO

FLEXON EXPANSION COMPENSATORS FOR STEAM AND HOT WATER HEATING SYSTEMS

Model L for pressures to 40 psig

The Flexon Model L Expansion Compensator consists of a two ply phosphor bronze bellows with copper tube end connections enclosed in a floating protective shroud of brass. It is especially designed for control of expansion in finned type convectors, baseboard, radiator or heating supply and return lines.

Sizes from ¾ in. through 1¼ in. Suitable for temperatures from -60 F to 250 F and for pressures up to 40 psig. A single unit will handle motion up to ½ in. (½ in. compression, ½ in. extension). Available with all commonly used fittings.



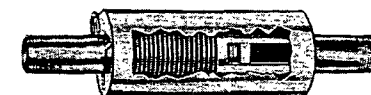
Sizes and Dimensions

Pipe Size (in.)	Overall Length, in.		Max. O.D., in.	
	Sweat Ends	Female Threaded Ends	Sweat Ends	Female Threaded Ends
¾	5⅞	7⅞	1½	1½
1	6¼	8¼	1⅞	1⅞
1¼	7¾	9⅞	2¼	2¼
2		10⅞		3⅞

Model H for pressures to 150 psig

The Flexon Model H Expansion Compensator is used primarily on vertical risers for high pressure steam and hot water lines. However it may also be used on horizontal runs. The Model H consists of a corrosion resistant Flexon bellows enclosed in an all-welded steel housing. The unit is provided with a positive anti-torque device to prevent possible bellows damage during installation.

Sizes from ¾ in. through 3 in. Suitable for temperatures from -60 F to 750 F. A single unit will handle motion up to 1¼ in. (1½ in. compression, ¼ in. extension). Mild steel male NPT pipe nipples on both ends are standard. Ground joint unions or weld ends are optional.



Sizes and Dimensions

Pipe Size (in.)	O/A Length (in.)	Max. O.D. (in.)	Working Press (psi)	Unit Wt. (lb.)
¾	9⅞	2⅞	150	2.6
1	9⅞	2⅞	150	2.8
1¼	13½	3¼	100	7.7
1½	13½	3¼	100	8.0
2	12¾	4¼	100	10.3
2½	13⅞	5	100	13.7
3	14⅞	5½	100	17.4

FLEXION EXPANSION JOINTS

FOR POWER AND PROCESS PIPING

For medium and high pressure piping, Flexonics offers a complete line of corrugated expansion joints in free-flexing and controlled flexing types. Free-flexing units are available in standard sizes from 3 in. to 48 in., I.D. for pressures to 30 psi, temperatures to 850 F. Designed for expansion travel up to 3¼ in. per unit.

Controlled-flexing units are available in standard sizes from 3 in. to 48 in., I.D. for pressures to 300 psi, temperatures to 850 F. Designed for expansion travel up to 7½ in. per unit. Both free-flexing and controlled flexing types are available with flanged or welding ends.