



HOLZ
Rubber Company, Inc.

Metallic Expansion Joints



The Expansion Joint Experts

Holz provides application-matched expansion joints for a wide range of industries and uses. Whether it is an elastomeric, fabric or metal expansion joint, Holz has engineered products and application expertise to solve your specific issue or problem.

Holz Rubber is the leading supplier of elastomeric, fabric and metal expansion joints serving the power generation, refining, cement, pulp and paper, waste water and all other heavy industrial applications.

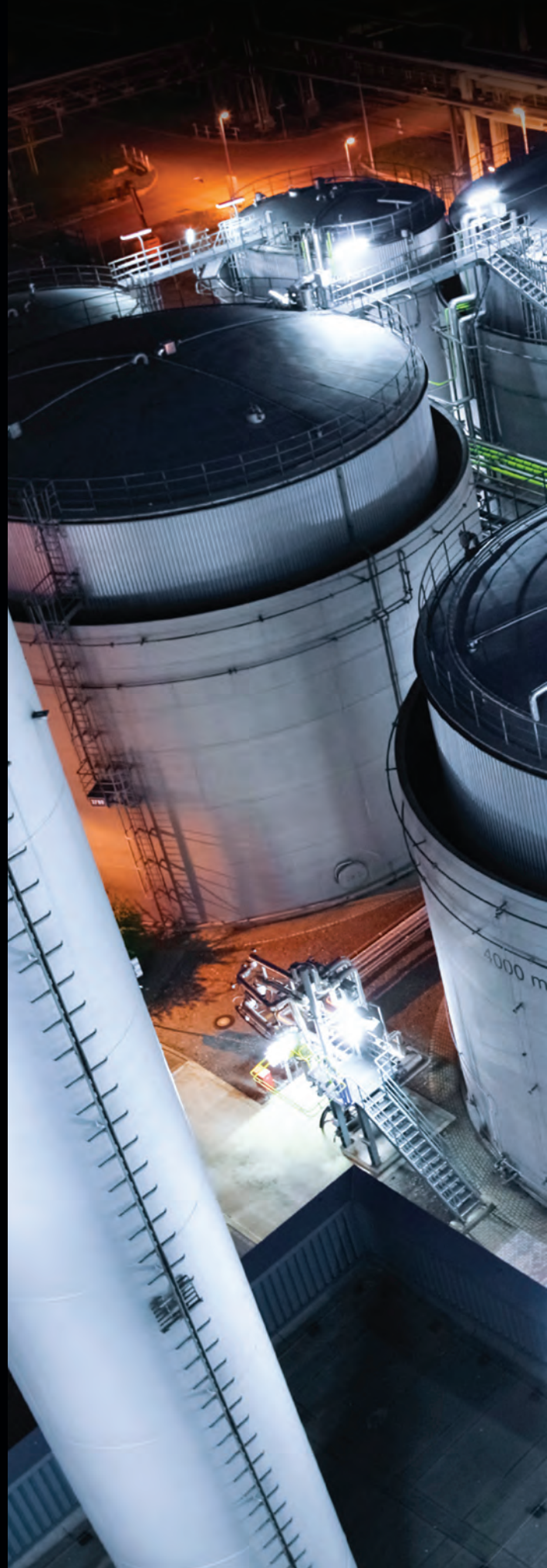
Metallic Expansion Joints

Our specially designed metal expansion joints are directed at solving the most demanding challenges faced by industrial facilities in air, gas and media problems within complex piping and ducting systems. Let Holz Rubber's experienced team solve your application.

Metallic Expansion Joint Applications

Holz Metal Expansion Joints have a wide range of applications and each expansion joint is designed based on its unique environmental and installation conditions; pressure, temperature, movements, space and/or corrosion, etc. *The applications of our expansion joints include the following:*

- Fossil Fuel Power Generation
- Pressure Vessel Manufacturing
- Desalination Power Plant
- Petrochemical Industry
- Oil Refineries Industry
- Chemical and Pharmaceutical Industry
- Marine Applications
- District Heating
- Pulp and Paper
- Iron and Steel Mills
- Cryogenics Industry
- Automotive Industry
- Instrumentation Industry
- Waste Water Treatment



Types of Metal Expansion Joints *(up to 120" dia.)*

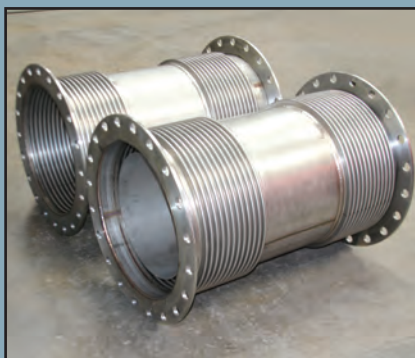
Holz Single Bellows

The most fundamental form of metal expansion joints consists of a single bellows (flex element) typically welded to flanged and/or pipe ends. The single bellows will compensate for movements that occur within the pipe section into which it is installed. Sufficient guides and anchors must be considered for a proper installation.



Holz Universal Expansion Joint

This expansion joint consists of two bellows connected by a common center spool with flanged and/or pipe ends. This arrangement allows greater lateral movements than a single bellows. Sufficient guides and anchors must be considered for proper installation.



Holz Externally Pressurized Expansion Joint

Line pressure acts on the external surface of the bellows by means of an external pressure chamber. This allows a greater number of convolutions to be used for large axial movements, without losing bellows stability. Externally pressurized expansion joints naturally incorporate self-draining convolutions if standing media is a concern. Sufficient guides and anchors must be considered for proper installation.

Pressure Balanced *(elbow and inline)*

A design to address pressure thrust while absorbing axial/lateral movements. This is accomplished by the addition of an equalizing bellows tied to the flow bellows in such a way as to cancel opposing forces induced by pressure.

Rectangular/Square – Folded Corner *(camera bellows style)* and Mitered

Low-pressure bellows designed for ducting and fan applications.



Types of Connections

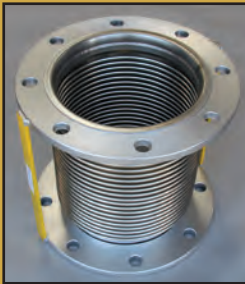
Weld End (*pipe or rolled plate*)

Typically constructed from ASTM A53 Gr. B or A106 Gr. B pipe up to 24-inch diameter and pipe or rolled plate for larger sizes. Stainless and alloys are also available.

Flanged

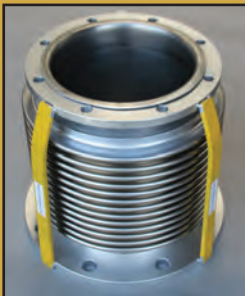
(*forged or plate and angle*)

Standard ANSI flanges are selected to match the specified design pressure and are available up to 24-inch diameter. Larger flanges are fabricated from plate steel. All flanges can be made of stainless and other alloys available in plate form.



Van Stone (*floating flange*)

This special arrangement allows for the rotation of the flanges about the centerline to accommodate the misalignment of bolt patterns flange to flange. This design also prevents the flanges from contacting wet and corrosive processes, thus allowing lesser grades of steel for the flanges - substantially reducing final cost.



Accessories

Control/Limiting Devices

These devices are designed to restrict or distribute movements during typical operation.

Tie Rods

Tie rods are used to restrain full pressure thrust during typical operation while permitting only lateral movement.

Hinges

Hinges restrict movement to angular only.

Liners

Also known as flow shields or sleeves, this accessory is designed to minimize flow induced erosion and/or vibration. Liners can be very simple or somewhat complex depending on the application.

Covers (*shrouds*)

Covers protect the external surface of the bellows from mechanical damage, debris, nearby weld spatter, etc. and can be permanently attached or removable.

Experience The Difference...

Industry leaders from around the world have relied on Holz Rubber Company's expertise and quality products for more than 75 years.

We are expansion joint experts. Our team of engineers and product experts will help solve your unique application or problem. If required, our team can assist you in the field with our network of professional distributors and factory-trained sales and application specialists.

Holz Rubber offers a complete line of metallic, fabric and elastomeric expansion joints giving you single source accountability for all your expansion joint requirements.

Contact Holz Rubber Company at **(800) 285-1600** or visit **www.holzrubber.com** to learn more.





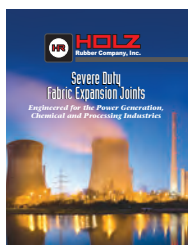
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Holz Rubber offers a complete line of expansion joints including elastomeric, high-temperature fabric and metallic expansion joints.

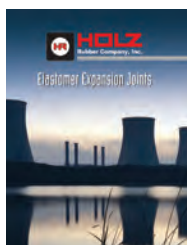


- Coal Fired Power Plants
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- Environmental Systems
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- Refineries
- HVAC
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Holz – For All Your Expansion Joint Needs



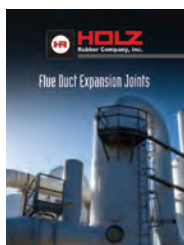
Fabric



Elastomer



Metal



Flue Duct



HOLZ
Rubber Company, Inc.

1129 S. Sacramento Street
Lodi, California 95240
United States and Canada

Phone: 800-285-1600 • Fax: 800-756-9998

Outside Of United States

Phone: 209-368-7171 • Fax: 209-368-3246

www.holzrubber.com

