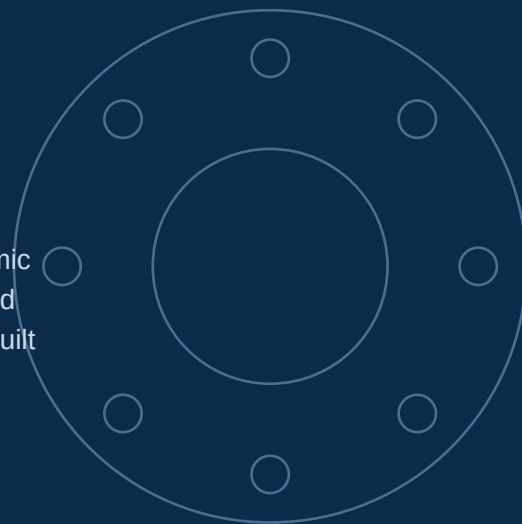


PRODUCT FAMILY BROCHURE

# Expanders

Piping expansion joints absorb thermal, mechanical and seismic movement. Pressure expanders provide controlled volume and flow regulation in process and utility systems. Both lines are built to project-specific movement, pressure and material requirements.



## DOCUMENT Family brochure

|               |                   |
|---------------|-------------------|
| FAMILY        | Expanders         |
| PRODUCT TYPES | 13                |
| RANGE PAGES   | 2                 |
| REVISION      | Rev. 04           |
| ISSUED        | 15 September 2026 |

# Expanders

Expansion joints for pipe movement and pressure expanders for process systems.

Piping expansion joints absorb thermal, mechanical and seismic movement. Pressure expanders provide controlled volume and flow regulation in process and utility systems. Both lines are built to project-specific movement, pressure and material requirements.

## RANGE PAGES

| ITEM               | VALUE                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------|
| Expansion Joints   | Gimbal, multi-plane, pressure-balanced, thermal, bellows, hinged and rubber expansion joints.  |
| Pressure Expanders | Pressure, flow control, cooling tower, industrial and precision expanders for process systems. |

## STANDARDS

- EJMA
- ASME B31.3
- ASTM A240 / A312
- ASTM A106 / A182
- Manufacturer standard
- ASTM D2000
- ASME Section VIII
- PED 2014/68/EU

## MATERIALS

ASTM A312 TP304 · ASTM A312 TP316L · ASTM A240 321 · Alloy 625 on request · Carbon steel · Stainless steel · EPDM · NBR · Neoprene · Nylon reinforcement · Cast iron · Butyl / EPDM bladder · Brass · 316L stainless steel · Ductile iron · Cast steel · Titanium

### Ordering and technical support

sales@belvantaglobal.com · +1 (713) 555-0140 · www.belvantaglobal.com

1200 Industrial Parkway, Houston, TX 77032, United States

Quotations are prepared against the released specification. Certified drawings are issued with the order.

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## PRODUCT TYPES

The family brochure is supported by type-level datasheets and range drawings.

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### Gimbal Expansion Joint

EJMA

Two-plane angular movement with gimbal rings and pinned hinges.

- Angular movement in any plane
- Gimbal rings and pins carry pressure thrust
- Bellows protected from torsion

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### Multi-Plane Expansion Joint

EJMA

Universal joint for combined axial, lateral and angular movement.

- Combined axial, lateral and angular movement
- Two bellows with center spool
- Tie rods for pressure thrust control

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### Pressure Balanced Expansion Joint

EJMA

Balanced bellows arrangement that removes pressure thrust from anchors.

- Pressure thrust contained within the joint
- Reduced anchor and nozzle loads
- Suitable for high-pressure lines

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### Thermal Expansion Joint

EJMA

High-temperature bellows joint for thermal growth in process piping.

- Designed for thermal growth
- High-temperature alloys and liners
- Insulation and personnel covers

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### Bellows Expansion Joint

EJMA

Standard metallic bellows joint for axial movement and vibration.

- Formed metal bellows
- Axial movement and vibration isolation
- Flanged or weld-end connections

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**PRODUCT TYPES**

The family brochure is supported by type-level datasheets and range drawings.

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## Hinged Expansion Joint

EJMA

Single-plane angular movement with hinge pins and structural supports.

- Single-plane angular movement
  - Hinge pins carry pressure thrust
  - No tie rods required in the movement plane
- 

## Mechanical Pipe Expander

ASME B31.3

Packed slip-type joint for axial movement in low-maintenance piping.

- Sliding packed sleeve
  - Axial movement with low spring rate
  - Field-replaceable packing
- 

## Rubber Expansion Joint

ASME B31.3

Elastomeric joint for vibration isolation, movement and corrosive service.

- Vibration and noise isolation
  - Axial, lateral and angular movement
  - EPDM, NBR and neoprene options
- 

## Pressure Expander

ASME Section VIII

Bladder or diaphragm vessel for pressure stabilization and water hammer control.

- Bladder or diaphragm construction
  - Replaceable bladder on larger sizes
  - System pressure stabilization
- 

## Flow Control Expander

ISO 9001 manufacturing

Compact device for stable low-flow regulation in process systems.

- Stable low-flow regulation
  - Compact inline or panel-mount body
  - Brass and stainless steel options
-

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## PRODUCT TYPES

The family brochure is supported by type-level datasheets and range drawings.

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### Cooling Tower Expander

ASME Section VIII

Large-volume expander for cooling tower and condenser water systems.

- Large-volume pressure stabilization
- Corrosion-resistant lining options
- Sized for cooling tower loops

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### Industrial Expander

ASME Section VIII

Heavy-duty expander for process, utility and industrial water systems.

- Heavy-duty industrial construction
- Flanged or threaded connections
- Protective lining options

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### Precision Expander

ISO 9001 manufacturing

Low-volume precision unit for analytical and micro-flow systems.

- Low dead volume
- Precision-machined internals
- 316L and titanium construction

## ORDERING AND DOCUMENTATION

Every order is confirmed against the released specification. The documentation package can include material certificates, dimensional inspection records, pressure test reports and NDE records. Project-specific drawings and certificates are issued against the order.

## RANGE AT A GLANCE

| PRODUCT TYPE                      | PRIMARY STANDARD       | RANGE PAGE         |
|-----------------------------------|------------------------|--------------------|
| Gimbal Expansion Joint            | EJMA                   | Expansion Joints   |
| Multi-Plane Expansion Joint       | EJMA                   | Expansion Joints   |
| Pressure Balanced Expansion Joint | EJMA                   | Expansion Joints   |
| Thermal Expansion Joint           | EJMA                   | Expansion Joints   |
| Bellows Expansion Joint           | EJMA                   | Expansion Joints   |
| Hinged Expansion Joint            | EJMA                   | Expansion Joints   |
| Mechanical Pipe Expander          | ASME B31.3             | Expansion Joints   |
| Rubber Expansion Joint            | ASME B31.3             | Expansion Joints   |
| Pressure Expander                 | ASME Section VIII      | Pressure Expanders |
| Flow Control Expander             | ISO 9001 manufacturing | Pressure Expanders |
| Cooling Tower Expander            | ASME Section VIII      | Pressure Expanders |
| Industrial Expander               | ASME Section VIII      | Pressure Expanders |
| Precision Expander                | ISO 9001 manufacturing | Pressure Expanders |

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