PRODUCT CATALOG

# EXPANSION JOINT FABRIC

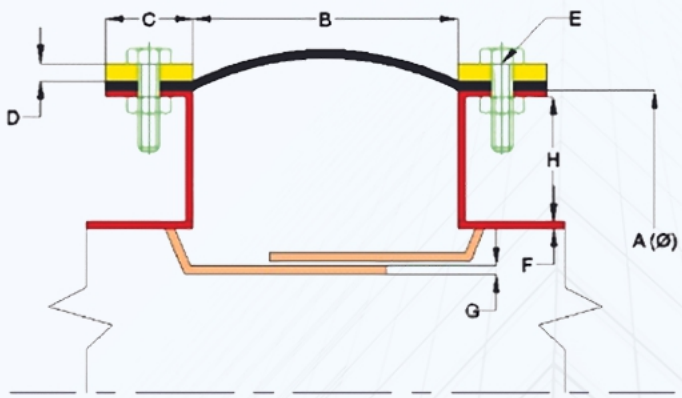

**PT AQPA INDONESIA**

Jl. Raya Kedaung No. 20 RT.001 RW.004
Cimuning Mustikajaya, Kota Bekasi - Jawa Barat 17156

# WHAT IS FABRIC EXPANSION JOINT ?

Fabric expansion joint is a connection used in industrial equipment to compensate thermal expansion. This type of joint is made of special woven fabric coated with elastomers or fluoropolymers.

Fabric expansion joint are used to insulation & reduce vibration. Fabric expansion joint is highly flexible and offers various alternatives for the piping design. Besides, it is also customizable that it is easily suited to any mechanical operating system and it is perfectly easy to install and transport. fabric expansion joint can only be installed in a system that involves low pressure and dry material.




## HOW DOES A FABRIC EXPANSION JOINT WORK?

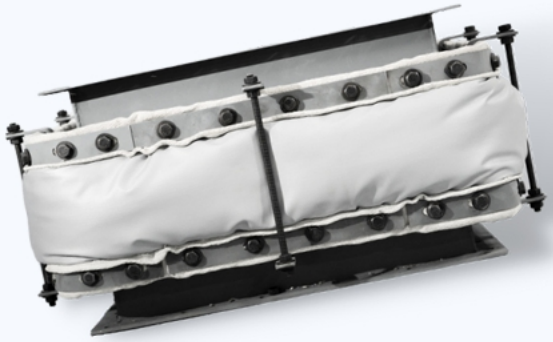
Fabric expansion joint is inserted into the area where the movement will occur. There are two components of fabric expansion joint: the fabric gas seal, and the metal frames. The fabric gas seal is like a belt with two edges clamped together to the metal frames and formed a closed loop. As the ducting contracted, the fabric belt expands.

The fabric material could withstand this occurrence without tearing or leaking despite being exposed to high temperatures and/or corrosive material. Sometimes, insulation equipment is utilized to protect the fabric material.

**APPLICATIONS :**

- Chemical process Plants
- Cement manufacturing
- Pulp and paper industry
- Power stations
- Shipbuilding
- Steel plants
- Sugar plants
- Gas turbine

# PRODUCT RANGE



**Type** : Circular and rectangular

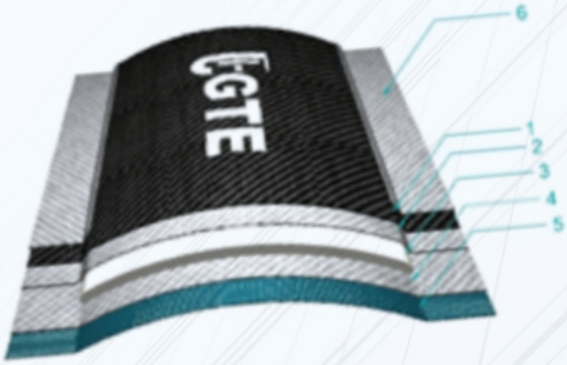
**Dimension** : All sizes and with or without steel parts. For installation in existing duct and/or pipework the fabric expansion joints are supplied with either closed or open band.

**Temperature** : Up to +1200°C

**Pressure** : Up to 3.0 bar

# CONSTRUCTION

Free design for fabric expansion joint since its construction depends on various factors for the application. Fabric expansion joint is available in both configurations, single-layer and multi-layer fabric elements. The multi-layer fabric element consists of :




**1** Outer cover: to withstand mechanical loads

**2 & 3** Insulation material: to withstand high temperature

**4** Internal material: to prevent abrasion

**5** Reinforcement: protection for strong construction

**6** Sealing foil: for gas-tight construction

# MOVEMENTS

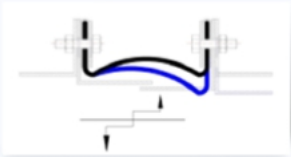
Fabric expansion joint is so versatile that it couldwithstand a single or even a combination of movements such as:

### AXIAL COMPRESSION

The narrowing of the breach opening along the duct's axis which resulted from the ducting's thermal expansion.

### AXIAL EXTENSION

The expansion of the breach opening along the duct's axis. In some systems, the expansion joint may be extended as a result of the duct thermal expansion.

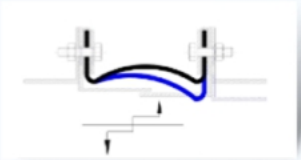


### LATERAL MOVEMENT

The relative movement of the upstream and downstream faces in the direction perpendicular to the axis of the duct.

### TORSIONAL ROTATION

The twisting of one side of the duct about the longitudinal axis.



### ANGULAR ROTATION

The twisting of one side of the duct about an axis perpendicular of the longitudinal axis.

# DESIGN STYLES

Fabric expansion joint is commonly provided as a belt, but as previously mentioned, there is no template design for its construction. The proper construction depends on the condition of the work area and the system temperature.

1

Clamp type expansion joint attached directly onto the outside of the duct using clamping bands normally used for :

1. Low temperatures (up to 300°C)
2. Low to medium velocity
3. Low to medium dust load

i.e.: Clean air ducts

2

Convoluted fabric expansion joints are attached directly onto the outside of the duct using clamping bands normally used for:

1. Large movements
2. Low velocity
3. Low dust content
4. Low temperature

i.e.: Pulp and paper industry

3

Fabric expansion joints mounted on vertical flanges, typically used in systems with :

1. Low flow velocity
2. Low dust content
3. Low temperature (up to 450°C)

The design can be made both with and without sleeve. The sleeve primarily acts to protect the fabric expansion joint from the particles in the flow medium
i.e.: Chemical industry (wet and dry)

4

Fabric expansion joints mounted on parallel flanges, typically used in ductwork with :

1. Medium temperature range (up to 500°C)
2. Higher fow velocities
3. Medium dust content in the fow

i.e.: High temperature flue gas duct systems in conventional power stations

5

Fabric expansion joints mounted on parallel flanges with insulation bolster, typically used in plants with:

1. High temperatures (up to 600°C)
2. High dust content
3. High flow

i.e.: High temperature flue gas duct systems in conventional power stations

6

Fabric expansion joints with floating sleeve, construction are typically used in plants with:

1. Medium to high temperatures (up to 600C)
2. Very high dust content
3. Low to high flow velocities

The floating sleeve gives good protection againts dust whilst allowing lateral movement.
i.e: Cement industry

# ONSITE SERVICES FOR FABRIC EXPANSION JOINTS

We extend our service in providing fabric expansion joint to the onsite services. Our service started from the initial design, construction, installation and even continued evermore throughout the use of the equipment. We are armed with a team full of highly skilled and experienced installers who have mastered various site conditions, and work with high compliancy to the safety regulation.


Our Service
For Fabric Expansion Joints Includes :

- **Installation**
- **Replacement (dismantling and installation)**
- **Maintenance and repair**
- **Supervision of installation**
- **Assisting installation**
- **Inspection**

# Fabric Expansion Joint Data Sheet

| Customer : Pelanggan | Address : Alamat | Contact : Kontak |
|---|---|---|
| Phone : Telephone | Fax number : Nomor Fax | Email : E-mail | Date : Tanggal |
| Industry : Perusahaan | Location : Lokasi | Area : Tempat | Item/Tag : Barang / menandai | Quantity : Jumlah |

☐ New Expansion Joint (Complete set) / Expansion Joint Baru (Set lengkap)
☐ Repair Expansion Joint / Perpaikan Expansion Joint
☐ New Fabric Expansion Joint / Kain Baru Expansion Joint

## Expansion joint Style / Options — Pilihan Model Expansion Joint


☐ BNS01B


☐ BNS02B


☐ BNS03B

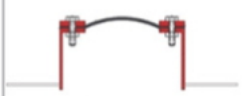

☐ BNS04B


☐ BNS05B

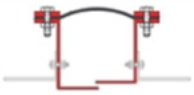

☐ BNS01W

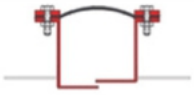

☐ BNS02W


☐ BNS03W


☐ BNS04W


☐ BSS01B


☐ BDS01B


☐ BDS01W


☐ FNS01B


☐ FSS01B


☐ FDS01B

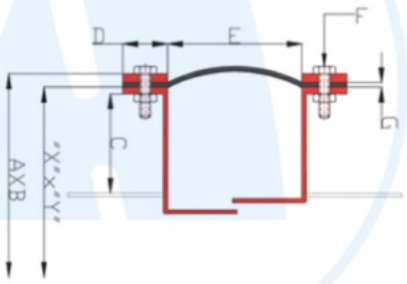
**Options: Pilihan**

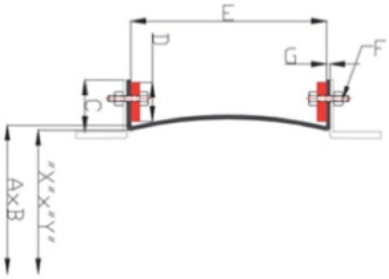
☐ Include pillow / Termasuk Pillow
☐ Use Bolt / Menggukan Baut
☐ Weld In the Field Weld / Las di lapangan

**Other: lainnya**

## Fabric Only

| | |
|---|---|
| "A,B" Size expansion joint (Ø OD / P X L) / Luas ukuran permukaan luar Expansion Joint | |
| "X,Y" Size expansion joint (Ø ID / P X L) / Luas ukuran dalam Expansion Joint | |
| "C" Size ducting / pillow / Ukuran ducting (Untuk mengetahui Pillow ) | |
| "D" Width And Thiknes Back up Flange Expansion joint / Lebar dan tebal Back up flange | |
| "E" Length Expansion joint / Lebar Expansion Joint | |
| "F" Bolt & Nut / Baut dan mur | |
| "G" Thicknes Cuff Expansion Joint / Tebal Cuff Expansion joint | |
| Corner Radius (Rect. Only) / Jari - Jari Expansion Joint (Hanya untuk Persegi) | |




☐ Close Band / Tersambung
☐ Open Band / Lembaran
☐ Factory Holes / Melubangi di pabrik
☐ Field Holes / Melubangi di lapangan

## Frame Assy

☐ Fully Assembled / Perakitan dan pemasangan
☐ Expansion Joint Fabric only with welding and splices in the field / Kain Expansion Joint saja dan pengelasan di lapangan
☐ Unassembled , Field Welds ,Fabric Splice and Drill / Belum dirakit , pengelasan,pengeboran di lapangan
☐ Fabric Expansion Joint Only / Kain Expansion joint

## Application / Aplikasi

| | Operating / Operasi | Design / Desain | Excursion / Excursi | Duration (min) / Durasi (min) |
|---|---|---|---|---|
| Temperature (°C) / Suhu (°C) | | | | |
| Pressure (BAR) / Tekanan (BAR) | | | | |
| | Compration / Kompresi | Extension / Extensi | Lateral / Lateral | Other / Lainnya |
| | | | | |
| Movements / Pergerakan | | | | |

Media :
☐ Air (clean) / Udara (bersih) ☐ Flue Gas / Gas Buang ☐ Dirty Flue Gas / Gas Buang Kotor ☐ Wet Flue Gas / Gas Buang Basah — Other / Lainnya

Flow Direction / Arah Aliran

Flow Velocity (Ft.Sec) / Kecepatan Aliran(Ft. Sec)

Note Actual Lapangan :

| Teknisi Lapangan | User | Marketing | Date |
|---|---|---|---|
| | | | |

## AUTHORIZED DISTRIBUTOR :


Jl. Raya Kedaung No. 20
RT.001 RW.004 Cimuning
Mustikajaya, Kota Bekasi
Jawa Barat 17155

021 - 2908 1526
021 - 8241 5897
021 - 8241 5898

www.aqpa-indonesia.com

info@aqpa-indonesia.com

instabio.cc/Aqpa-1d