



Fabric Expansion Joints

TYPE BELMAN-FG

FEATURES & APPLICATION

The Fabric Expansion Joints within the Belman-FG series are designed especially for use in Flue Gas systems (**FG**)

Fabric Expansion Joint type Belman-FG is a multilayer design that safely absorbs movements caused by thermal expansions in pipelines and duct systems and can be optionally designed to accommodate misalignments on request.

DESIGN FEATURES

- Multilayer Fabric Expansion Joint
- For dry operation (aggressive and non-aggressive)
- Customized to application and project
- Absorbing multiplane movements simultaneously

APPLICATIONS

- Oil & gas
- Power plant
- Pulp & Paper
- Cement industry
- Steel plants
- Process industry
- Flue gas systems
- Boilers and stacks
- ...and many more

ADVANTAGES

- Chemical resistance
- Reduced heat loss by low surface temperature
- Minimal reaction forces
- Excellent movement absorption and flexibility
- Noise reduction
- Can accommodate misalignments and a large amount of lateral offset (a special design may be required and needs to be specified at the inquiry stage)

TYPES & SPECIFICATIONS

OPERATING FEATURES

Temperature range:

Up to +750°C,
minimum temperature:-35°C
For temperatures above 550°C an insulation bolster is required for standard constructions (With refractory constructions even higher temperatures than 750°C can be achieved).

Pressure range:

Up to +/- 20.000 Pa (+/- 2000 mmWg)

Medium

Flue gas (dry)

MOVEMENTS

Absorbs movements in multiple directions (several planes) simultaneously. Due to the multilayer construction this type is able to absorb large movements within short built-in lengths.

CONNECTION ENDS & HARDWARE

Fabric Expansion Joint type Belman-CH is delivered as a customized design (either closed or as open belt for joining on-site) with bellows designed to solve the movement absorption in the application as well as meet requirements resulting

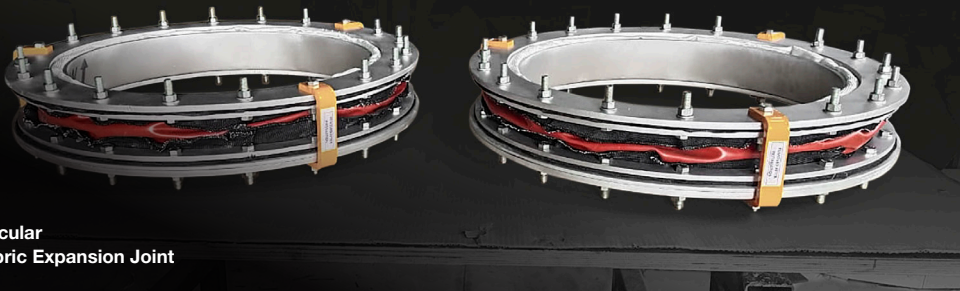
from a gap in the pipeline. Belman-CH is as standard supplied as a stand-alone Fabric Expansion Joint (with parallel or vertical fixing flange arrangement) that may be supplied with customized connection ends and including hardware, but not limited to:

- Complete units (flanged or with welding ends)
- With loose flanges
- With clamping bands
- Special transport fixtures
- Flowliners / inner sleeves
- Pre-setting construction

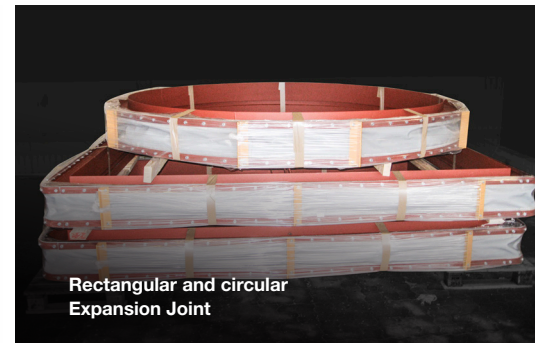
PRODUCT RANGE				
Expansion Joint	Temperature limit	Pressure limit	Media	Comments
FG-GP-0250-S	250°C	+/-20000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-GP-0400-S	400°C	+/-20000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-GP-0550-S	550°C	+/-15000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-GS-0250-S	250°C	+/-20000 Pa	Flue gas (dry)	-
FG-GS-0400-S	400°C	+/-20000 Pa	Flue gas (dry)	-
FG-GS-0550-S	550°C	+/-15000 Pa	Flue gas (dry)	-
FG-WP-0250-S	250°C	+/-20000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-WP-0400-S	400°C	+/-20000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-WP-0550-S	550°C	+/-15000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-WP-0750-S	750°C	+/-10000 Pa	Flue gas (dry)	Requires special tooling for joining on-site
FG-WS-0250-S	250°C	+/-20000 Pa	Flue gas (dry)	-
FG-WS-0400-S	400°C	+/-20000 Pa	Flue gas (dry)	-
FG-WS-0550-S	550°C	+/-15000 Pa	Flue gas (dry)	-
FG-WS-0750-S	750°C	+/-10000 Pa	Flue gas (dry)	-

CUSTOMIZED SOLUTION

All Belman Fabric Expansion Joints are customized to the application and operating data of the plant. From a large selection of material types and combinations Belman is able to tailor the type of Belman-FG that meets client specifications. Here are some examples:



**Circular
Fabric Expansion Joint**



**Rectangular and circular
Expansion Joint**

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