EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

Combine-X expansion joints

Expansion joints | Fabric expansion joints

Features
- Multi layer design
- Compensates for movements in several directions simultaneously
- Excellent form stability
- Can be delivered as fabric only or as preassembled unit
- Custom made to fit actual working conditions
- Specifically designed for gas turbine systems

Advantages
- Highly flexible
- High chemical resistance
- High flutter resistance
- Reduce heat loss
- Low reaction forces
- Good resistance against abrasion
- Suitable for high temperature applications

Operating range
Temperature:
-35 °C ... +650 °C (-31 °F ... +1,202 °F)
Pressure:
-0.14 bar ... 0.07 bar (-2.03 PSI ... 1.02 PSI)
Maximal axial movements: ... 160 mm (6 1/2")
Maximal lateral movements: ... 80 mm (3")

Standards and approvals
Documentation:
- EN 10204-2.2 certificate
- Safety Data Sheets (SDS) for individual materials

Recommended applications
- Oil and gas industry
- Power plant technology
- Gas turbine exhausts
- Bypass channels
- HRSG inlets

Functional description
Combine-X expansion joints safely absorb thermal expansion and misalignments of pipe and duct systems in dry, high temperature and high velocity area. Combine-X products compensate for movements in multiple directions simultaneously.

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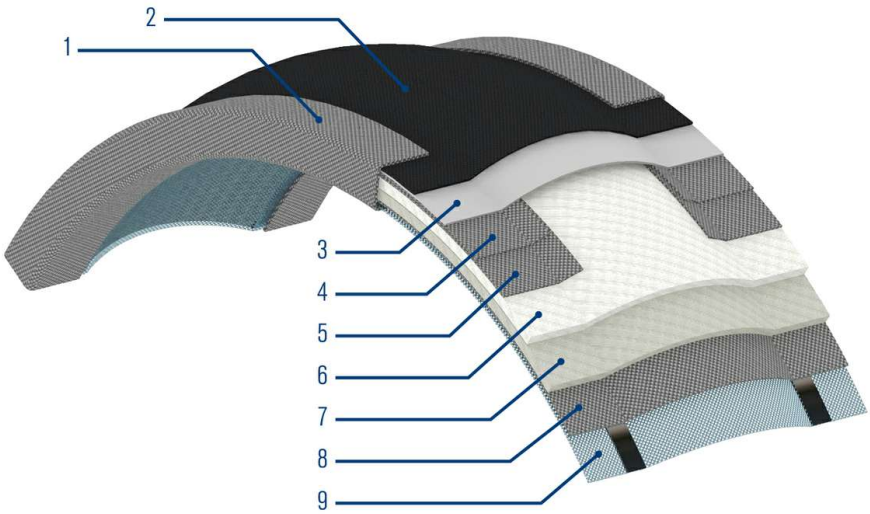


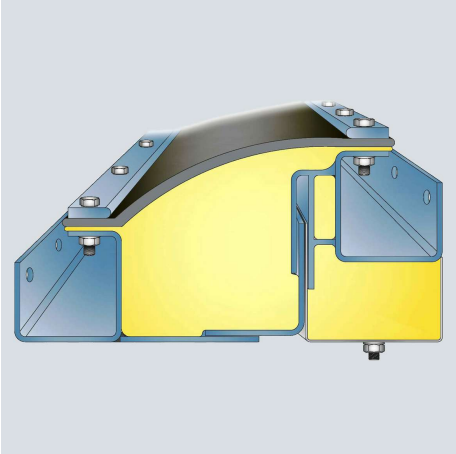
Item	Description
1	Flange reinforcement
2	Pressure carrying layer
3	Gas seal layer
4, 5	Insulation strips
6, 7	Insulation layer
8	Support layer
9	Mechanical reinforcement

Installation, details, options

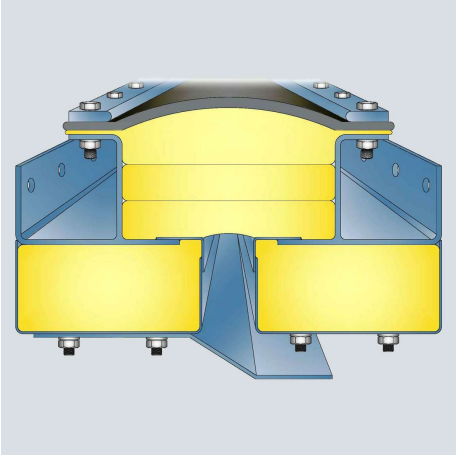
Combine-X product properties

Type	Agressive media	Non-aggressive media	Max. temperature P-Flange	Min. temperature	Max. pressure	Min. pressure	Axial flexibility	Lateral flexibility
A	Dry	Dry	550 °C (1,022 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	40 %	20 %
B	Dry	Dry	500 °C (932 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	13 %
CC*	Dry	Dry	650 °C (1,202 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	50 %	20 %
E	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	13 %
G	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	40 %	15 %
R	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	13 %
V	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	15 %
W	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	40 %	15 %
E-L	Dry	Dry	600 °C (1,112 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	15 %
HF (1+2)	Dry	Dry	650 °C (1,202 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	10 %
HF3	Dry	Dry	650 °C (1,202 °F)	-35 °C (-31 °F)	0.07 bar (1.02 PSI)	-0.14 bar (-2.03 PSI)	35 %	10 %

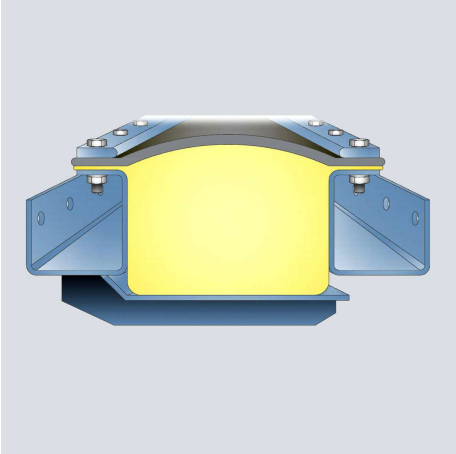
* Requires internal duct insulation
or refractory lining



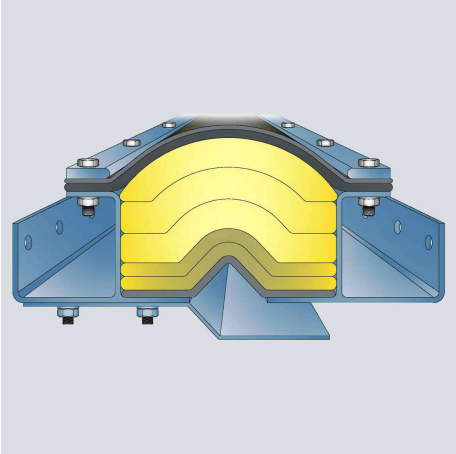
Cold-to-hot floating ring
Temperature:
max. 600 °C (1,110 °F)



Cold-to-cold
Temperature:
max. 650 °C (1,202 °F)



Hot-to-hot
Temperature:
max. 600 °C (1,100 °F)



Hot-to-hot high velocity
Temperature:
max. 600 °C (1,100 °F)

Product variants

Pre-assembled units
Pre-assembled expansion joint units consist of:

- Fabric expansion joint
- Metal frames / inner sleeves
- Bolster (internal insulation)
- Gaskets (optional)
- Fasteners

Frame material:

- Carbon steel
- Stainless steel
- Heat resistant steel

Pre-assembled expansion joint units can be supplied with surface treatment that is corrosion resistant (standard) and resistant to high temperatures. EagleBurgmann offers any RAL color code for the units. Units can be delivered with seaworthy packing or standard packing for road transportation.