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 system

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.

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

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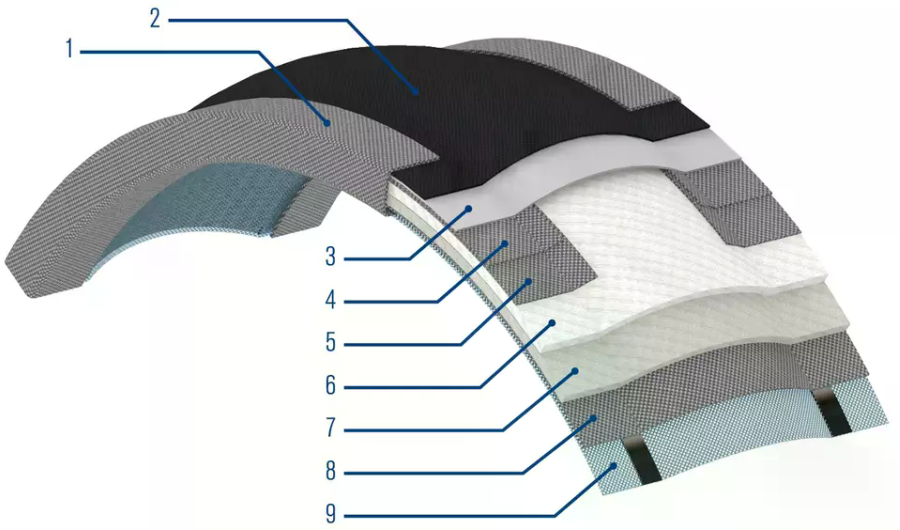
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.



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

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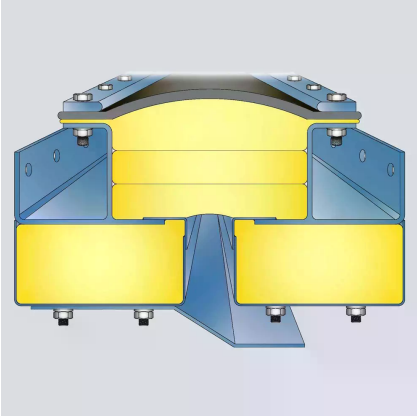
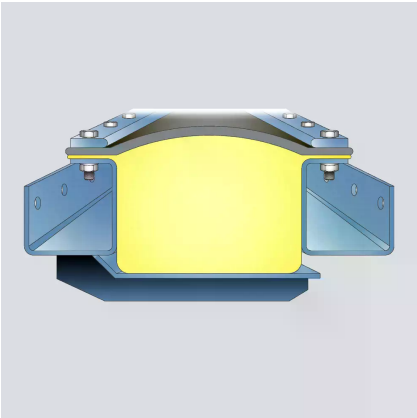
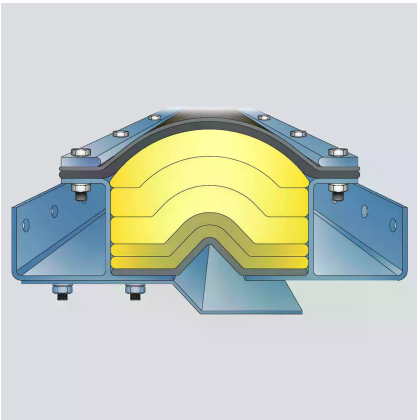
Installation, details, options



Temperature:
max. 650 °C (1,202 °F)



Temperature:
max. 600 °C (1,100 °F)



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

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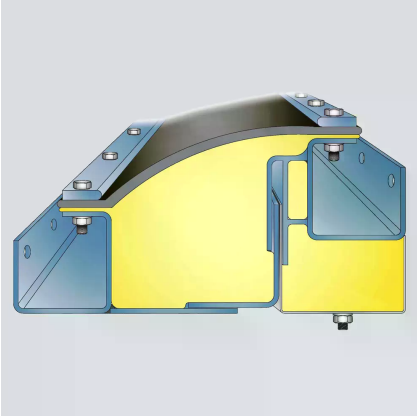

Cold-to-hot floating ring
Temperature:
max. 600 °C (1,110 °F)

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Product variants

Type	Agressivemedia	Non-aggressivemedia	Max. temperatureP-Flange	Min. temperature	Max. pressure	Min. pressure	Axialflexibility	Lateralflexibility
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

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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.

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