

BUNDLETEC® HIGH PERFORMANCE ENGINEERING

GtTec™ Fabric Expansion Joint

Advanced multi-tier expansion joint engineered for 1000°C gas turbine exhausts and rapid HRSG thermal cycling.

TEMPERATURE RANGE
+400°C / +1000°C

DESIGN PRESSURE
±10,000 Pa
(Exhaust Velocity:
35 - 65 m/s)

MOVEMENTS
Axial ±80mm

ATTENUATION
22 -

MAX GAS VELOCITY
**< 65 m/s (with
liner)**

HELIUM LEAK RATE
 $Q \leq 1 \times 10^{-3}$



Certified Factory Assembly & Inspection

1 MULTI-LAYER COMPOSITE MATERIAL ARCHITECTURE

LAYER 1: ATMOSPHERIC OUTER SHIELD

Heavy fluoropolymer / silicone coated composite fabric, weatherproof

LAYER 2: ULTRA-PURE THERMAL CUSHION

Pure woven silica fabric & high-density bio-ceramic bolster core

LAYER 3: THERMAL GAS VAPOR BARRIER

Multi-laminated pure PTFE membrane with high fatigue resistance

LAYER 4: INCONEL MESH & FLOW LINER

Double-tier Inconel 625 knitted wire mesh + telescopic stainless liner

2 TECHNICAL SPECIFICATIONS & DESIGN MATRIX

TECHNICAL PARAMETER	ENGINEERING SPECIFICATION & MATERIAL DEFINITION
Operating Temperature	+400°C to +1000°C (+752°F to +1832°F)
Design Pressure	±10,000 Pa (high-velocity aerodynamic stability)
Authority Standards	RAL-GZ 719 Group 5 / FSA-DSJ / CE
Rapid Cycling Resilience	Zero delamination under rapid 0°C → 650°C startup ramps
Internal Flow Liner	AISI 310S / AISI 321 Telescopic Aerodynamic Flow Sleeve
Frame & Backing Bars	AISI 309 / 310S / 321 Creep-Resistant High-Alloy Steel

3 INDUSTRIAL APPLICATIONS & QUALITY ASSURANCE

- Heavy-frame gas turbine diffuser & exhaust ducts
- HRSG (Heat Recovery Steam Generator) inlet ducts
- Combined cycle power plants (CCPP) and peaking gas units
- Industrial aero-derivative cogeneration exhaust systems

INTERNATIONAL STANDARD COMPLIANCE

All BundleTec compensators are engineered referencing RAL-GZ 719 technical recommendations and FSA-DSJ guidelines with certified helium leak tightness and DIN EN ISO 13934-1 tensile compliance.

RAL-GZ 719

FSA-DSJ

ISO 9001:2015

CE

ATEX 2014/34/EU

BUNDLETEC MANUFACTURING FACILITIES

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