Gasket tests according to ASTM, Shell, EN 13555, VDI 2440, VDI 2200, DIN 3535 DIN 28090, DIN 52913, DIN 28090, DIN 52913,

Determination of gasket characteristics

**SERVICE OFFER valid from 2013-08**

**American Standards ASTM**

**Room Temperature Tightness Test (ROTT) – ASTM WK10193**

Draft 10.2 (dated October 2006)
- leakage test
  - single test (High Pressure)
  - single test (Low Pressure)
  - double test (High Pressure)
  - double test (Low Pressure)

**Hot Blow-Out Test (HOBT) – ASTM WK18046 (dated March 2008)**
- leakage test
  - single test
  - double test
  - single test (with thermal cycles)
  - double test (with thermal cycles)

**ASTM F36-99 (dated 2003)**
- compressibility and recovery test
  - single test
  - triple test

**ASTM F37-06 (dated 2006)**
- sealability test – test method B
  - single test
  - triple test

**ASTM F38-00 (dated 2006)**
- creep relaxation test – test method B
  - single test
  - triple test

**ASTM F2837-11 (dated 2011)**
- hot compression test
  - single test
  - triple test
Gasket tests according to
ASTM, Shell, EN 13555,
VDI 2440, VDI 2200, DIN 3535
DIN 28090, DIN 52913,

Determination of gasket characteristics

SERVICE OFFER valid from 2013-08

American Standards ASTM

ASTM F1574-03a (dated 2009)
- compressive strength test
  single test (one gasket stress level)
  triple test (one gasket stress level)
  single test (6 gasket stress levels)
  Triple test (6 gasket stress levels)

Hot Mechanical Test (HOMT)
- creep test (thermal cycles)
  single test
  double test

API 6FB (dated 1998)
- fire test – leakage test

FSA-G-605-11 (dated 2011)
- leakage test
  determination y-Factor
  determination m-Factor
Gasket tests according to
ASTM, Shell, EN 13555,
VDI 2440, VDI 2200, DIN 3535
DIN 28090, DIN 52913,

Determination of gasket characteristics

SERVICE OFFER valid from 2013-08

Shell-Type Acceptance Testing

MESC SPE 85/300 (dated September 2012)
- 3.3.2 Fugitive Emissions
  leakage test – RT
  leakage test - T (≤ 400 °C)
- 3.3.3 Fire Test
  API 6FB (dated 1998)
- 3.3.4 Room Temperature Operation Tightness Test (ROTT)
  DIN EN 13555 (dated February 2005)
  compression test - RT
  compression test – T (≤ 400 °C)
  creep-/ relaxation test – RT
  creep-/ relaxation test – T (≤ 400 °C)
  leakage test
- 3.3.5 High Temperature Operational Tightness Test (HOTT)
  leakage test with thermal cycles (T≤ 400 °C)
- 3.3.6 Hot Blowout Test
  leakage test (T≤ 400 °C)
- 3.3.11 Cold Compression / Hot Recovery Test
  Compression test ASTM F36-99 (dated 2003)
- 3.3.12 Leak Test
  leakage test ASTM F37-06 (dated 2006 – test method B)
- 3.3.13 Gasket Adhesion
Gasket tests according to ASTM, Shell, EN 13555, VDI 2440, VDI 2200, DIN 3535, DIN 28090, DIN 52913,

Determination of gasket characteristics

**SERVICE OFFER** valid from 2013-08

**European Standards EN**

**DIN EN 13555 (dated February 2005)**
- compression test at ambient temperature
  determination of compression curve at ambient temperature
- compression test at ambient temperature
  determination of the characteristics $Q_{SMAX}$ and $E_G$ at ambient temperature
- compression test at elevated temperature $T \leq 400 \, ^\circ C$
  determination of the characteristics $Q_{SMAX}$ and $E_G$ at elevated temperature
- creep-/relaxation test at ambient temperature
  determination of the characteristic $P_{QR}$
- creep-/relaxation test at elevated temperature – $T \leq 400 \, ^\circ C$
  determination of the characteristic $P_{QR}$
- leakage test
  1 internal pressure level
  diagram for increasing gasket stress ($Q_{MINL}$)
  diagram for decreasing gasket stress ($Q_{SMINL}$)

- gasket characteristics for one gasket material:
  Leakage test at 1 pressure level,
  Compression tests at ambient and 2 elevated temperatures,
  creep relaxations tests at 3 different stress levels and 3 temperatures
  single test (13 tests)
  double test (26 tests)

**BS 7531 (dated 2006)**
- compressibility test
  Triple test
- residual stress test
  Double test
- gas permeability test
  Triple test
Gasket tests according to
ASTM, Shell, EN 13555,
VDI 2440, VDI 2200, DIN 3535
DIN 28090, DIN 52913,

Determination of gasket characteristics

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**German Standards DIN and VDI**

**DIN 28090-1 (dated September 1995)**
- compression test at ambient temperature
  - max. initial compressive stress at room temperature ($\sigma_{VO}$)
  - modulus of elasticity ($E_D$)
- compression test at elevated temperature ($T \leq 400 \, ^{\circ}C$)
  - modulus of elasticity ($E_D$)
- creep compression test at elevated temperature $T(\leq 400 \, ^{\circ}C)$
  - max. initial compressive stress at ambient temperature ($\sigma_{VO}$)
- creep-/relaxation test
  - creep factor ($\Delta h_D$)
- leakage test
  - 1 internal pressure level
  - diagram for increasing stress ($\sigma_{VUL}$)
  - diagram for decreasing stress ($\sigma_{BUL}$)

**DIN 28090-2 (dated September 1995)**
- compressive creep test
  - compression modulus at ambient temperature ($\varepsilon_{KSW}$)
  - percentage creep relaxation at ambient temperature ($\varepsilon_{KRW}$)
  - compression modulus at elevated temperature ($\varepsilon_{WSW,T}$)
  - percentage creep relaxation at elevated temperature ($\varepsilon_{WRW,T}$)
- leakage test
  - leak rate

**DIN 3535-6 (dated January 2011)**
- leakage test
  - leak rate

**DIN 52913 (dated April 2002)**
- compression creep test
  - compression creep strength ($\sigma_{de/16}$)

**VDI 2440 (dated November 2000)**
- leakage test – TA-Luft

**VDI 2200 (dated June 2007)**
- leakage test – safety against blow-out

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Gasket tests according to ASTM, Shell, EN 13555, VDI 2440, VDI 2200, DIN 3535, DIN 28090, DIN 52913,
Determination of gasket characteristics

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High temperature tests (up to 600 °C) on request.

High pressure test up to 500 bar on request.

Special tests, leakage tests and long term tests on request.

Tests according to API 6FB, FAS-G-605-11, ASTM F1574-03a und ASTM F2837-11 are not part of the accreditation.