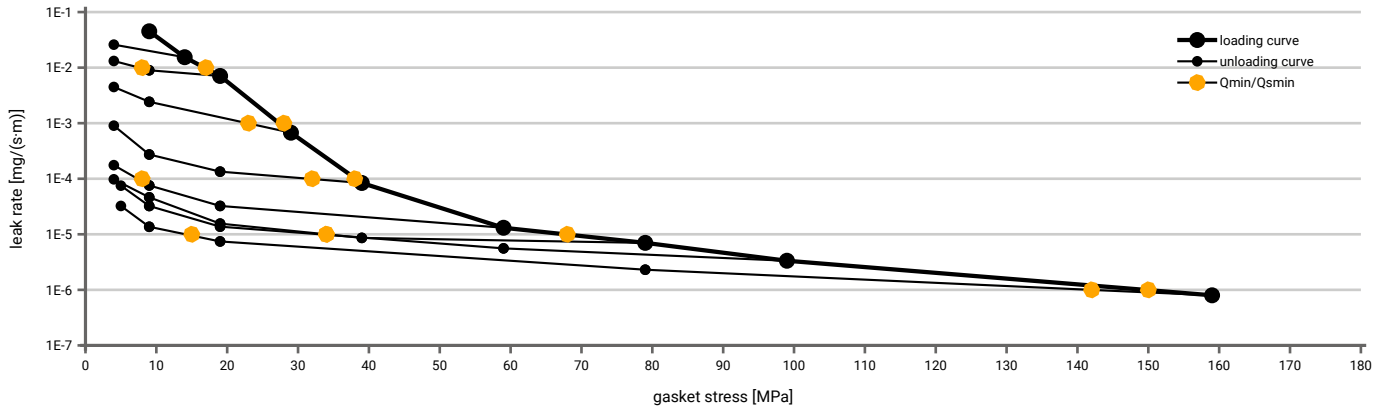
| Manufacturer address | TEADIT International Produktions GmbH, Europastraße 12, 6322 Kirchbichl, AT | According to |
|---|---|---|
| Product name | TF 1590 | **EN 13555** |
| Product dimensions | 92 x 49 x 3 mm | **2021-4** |

**Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 10 bar (T = 23 ± 2 °C)**

| L [mg/(s·m)] | $Q_{min(L)}$ [MPa] | $Q_{smin(L)}$ [MPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $Q_A$ = 10 [MPa] | $Q_A$ = 15 [MPa] | $Q_A$ = 20 [MPa] | $Q_A$ = 30 [MPa] | $Q_A$ = 40 [MPa] | $Q_A$ = 60 [MPa] | $Q_A$ = 80 [MPa] | $Q_A$ = 100 [MPa] | $Q_A$ = 160 [MPa] |
| 1E-0 | 10 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1E-1 | 10 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1E-2 | 18 | | | 9 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1E-3 | 28 | | | | 24 | 5 | 5 | 5 | 5 | 5 |
| 1E-4 | 39 | | | | | 32 | 8 | 5 | 5 | 5 |
| 1E-5 | 68 | | | | | | | 35 | 34 | 15 |
| 1E-6 | 150 | | | | | | | | | 143 |
| 1E-7 | | | | | | | | | | |

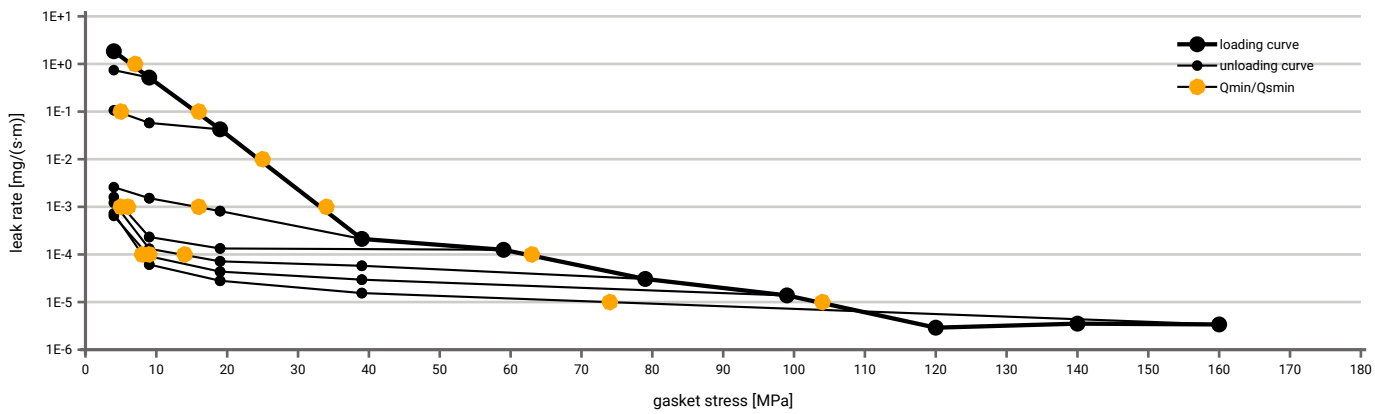
**Leakage - 23 ± 2 °C / 10 bar**




**Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 40 bar (T = 23 ± 2 °C)**

| L [mg/(s·m)] | $Q_{min(L)}$ [MPa] | $Q_{smin(L)}$ [MPa] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $Q_A$ = 5 [MPa] | $Q_A$ = 10 [MPa] | $Q_A$ = 20 [MPa] | $Q_A$ = 40 [MPa] | $Q_A$ = 60 [MPa] | $Q_A$ = 80 [MPa] | $Q_A$ = 100 [MPa] | $Q_A$ = 120 [MPa] | $Q_A$ = 140 [MPa] | $Q_A$ = 160 [MPa] |
| 1E+1 | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | | | 5 |
| 1E-0 | 7 | | 5 | 5 | 5 | 5 | 5 | 5 | | | 5 |
| 1E-1 | 16 | | | 5 | 5 | 5 | 5 | 5 | | | 5 |
| 1E-2 | 25 | | | | 5 | 5 | 5 | 5 | | | 5 |
| 1E-3 | 34 | | | | 17 | 6 | 5 | 5 | | | 5 |
| 1E-4 | 63 | | | | | | 14 | 10 | | | 9 |
| 1E-5 | 104 | | | | | | | | | | 74 |
| 1E-6 | | | | | | | | | | | |
| 1E-7 | | | | | | | | | | | |

**Leakage - 23 ± 2 °C / 40 bar**




| Note: the content of darkened cells was not determined respectively is unnecessary | Rev.-No.: **3** | Creation date of this sheet: **2023-09-07** |
|---|---|---|

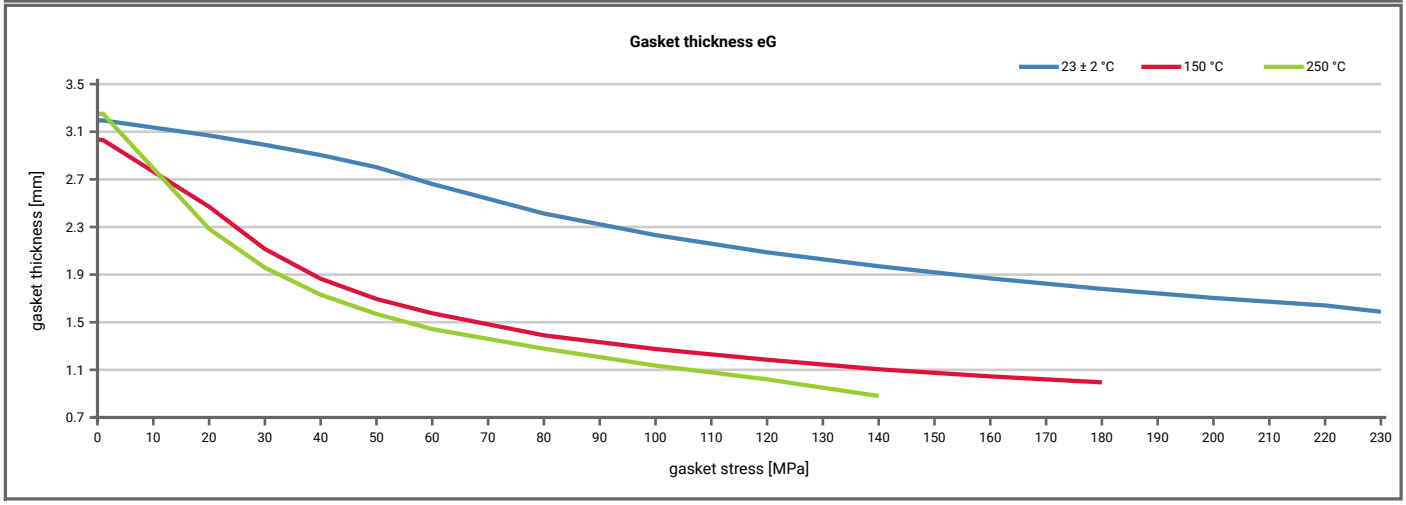
| | | |
|---|---|---|
| **Manufacturer address** | TEADIT International Produktions GmbH, Europastraße 12, 6322 Kirchbichl, AT | According to **EN 13555 2021-4** |
| **Product name** | TF 1590 | |
| **Product dimensions** | 92 x 49 x 3 mm | |

**Relaxation ratio $P_{QR}$ for stiffness C = 500 [kN/mm]**

| Gasket stress | 23 ± 2 °C | | Temperature 1 [150 °C] | | Temperature 2 [250 °C] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $P_{QR}$ | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] | $P_{QR}$ | $\Delta e_{Gc}$ [µm] |
| Stress level 1 [10 MPa] | 0.95 | 5 | 0.79 | 18 | 0.53 | 39 | | | | |
| Stress level 2 [30 MPa] | 0.90 | 25 | 0.43 | 145 | 0.29 | 180 | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| **$P_{QR}$ and $\Delta e_{Gc}$ at maximum gasket stress to be applied ($Q_{smax}$)** | | | | | | | | | | |
| **$P_{QR}$ at $Q_{smax}$** | 0.93 | 145 | 0.60 | 604 | 0.48 | 617 | | | | |
| **$Q_{smax}$** | 230 MPa | | 180 MPa | | 140 MPa | | | | | |

**Sekant unloading modulus of the gasket $E_G$ [MPa] and gasket thickness $e_G$ [mm]**

| Gasket stress [MPa] | 23 ± 2 °C | | Temperature 1 [150 °C] | | Temperature 2 [250 °C] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $E_G$ [MPa] | $e_G$ [mm] | $E_G$ [MPa] | $e_G$ [mm] | $E_G$ [MPa] | $e_G$ [mm] | $E_G$ [MPa] | $e_G$ [mm] | $E_G$ [MPa] | $e_G$ [mm] |
| 0 | 0 | 3.195 | 0 | 3.035 | 0 | 3.250 | | | | |
| 1 | 0 | 3.195 | 0 | 3.030 | 0 | 3.250 | | | | |
| 20 | 1690 | 3.069 | 1300 | 2.470 | 638 | 2.284 | | | | |
| 30 | 1762 | 2.990 | 1926 | 2.115 | 842 | 1.958 | | | | |
| 40 | 2678 | 2.904 | 2185 | 1.865 | 1179 | 1.731 | | | | |
| 50 | 3629 | 2.802 | 2382 | 1.695 | 1423 | 1.569 | | | | |
| 60 | 4442 | 2.661 | 2459 | 1.575 | 1573 | 1.442 | | | | |
| 80 | 5742 | 2.413 | 2732 | 1.390 | 2195 | 1.278 | | | | |
| 100 | 7213 | 2.232 | 2992 | 1.275 | 2125 | 1.136 | | | | |
| 120 | 7836 | 2.087 | 3126 | 1.185 | 3045 | 1.020 | | | | |
| 140 | 8303 | 1.970 | 3348 | 1.105 | 5587 | 0.880 | | | | |
| 160 | 10514 | 1.868 | 3458 | 1.045 | | | | | | |
| 180 | 7157 | 1.780 | 3672 | 0.995 | | | | | | |
| 200 | 6487 | 1.704 | | | | | | | | |
| 220 | 6940 | 1.641 | | | | | | | | |
| 230 | 7200 | 1.588 | | | | | | | | |




Fields marked: Intrusion into bore was detected. Determined after the corresponding $P_{QR}$-Test.

| | | |
|---|---|---|
| Note: the content of darkened cells was not determined respectively is unnecessary | Rev.-No.: **3** | Creation date of this sheet: **2023-09-07** |